



U.S. NUCLEAR REGULATORY COMMISSION

STANDARD REVIEW PLAN

13.4 OPERATIONAL PROGRAMS-

REVIEW RESPONSIBILITIES-

Primary - Licensing organization

Secondary - Cognizant review organization per the SRP sections identified in the attached sample final safety analysis report (FSAR) Table 13.4-x.

I. AREA OF REVIEW

The areas of review for this standard review plan (SRP) section ~~has~~have been changed to address ~~review~~ and implementation of ~~operation~~operational programs required by regulations for a combined license (COL) application ~~submitted under Title 10 of the Code of Federal Regulations (10 CFR), Part 52,~~¹ "Licenses, Certifications, And Approvals For Nuclear Power Plants." The former content regarding the review of the applicant's plan for conducting reviews of operating phase quality assurance activities that are important to safety is addressed in SRP ~~section~~Section 17.5, "Quality Assurance Program Description -- Design Certification, Early Site Permit and New License Applicants." _

¹ This section is not applicable to an application submitted in accordance with 10 CFR Part 50. In 2007, the NRC issued a revised SRP Section 13.4 to address operational programs in lieu of prospective submittals under 10 CFR Part 52. The content of former SRP Section 13.4, Draft Rev. 3, "Operational Review," is addressed in SRP Section 17.5. This SRP Section is procedural in nature and provides guidance for treatment of operational programs.

Revision 3 - March 2007

Draft Revision 4 - September 2018

USNRC STANDARD REVIEW PLAN

This Standard Review Plan, NUREG-0800, has been prepared to establish criteria that the U.S. Nuclear Regulatory Commission staff responsible for the review of applications to construct and operate nuclear power plants intends to use in evaluating whether an applicant/licensee meets the NRC's regulations. The Standard Review Plan is not a substitute for the NRC's regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide an acceptable method of complying with the NRC regulations.

The standard review plan sections are numbered in accordance with corresponding sections in Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)." Not all sections of Regulatory Guide 1.70 have a corresponding review plan section. The SRP sections applicable to a combined license application for a new light-water reactor (LWR) are based on Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)."

These documents are made available to the public as part of the NRC's policy to inform the nuclear industry and the general public of regulatory procedures and policies. Individual sections of NUREG-0800 will be revised periodically, as appropriate, to accommodate comments and to reflect new information and experience. Comments may be submitted electronically by email to NRO_SRP@nrc.gov.

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The specific area of review is as follows:

Operational Program Description and Implementation. For a COL application, the staff reviews the final safety analysis report (FSAR) Table 13.4-x to ensure that all required operational programs are included. The staff review of ~~the each~~ operational program description and the proposed implementation milestones is performed within the identified substantive SRP ~~sections~~section reviews.

~~The~~ Review Interfaces

The SRP sections referenced in the attached sample FSAR Table 13.4-x include the specific acceptance criteria and review procedures.

~~II.~~ II. ACCEPTANCE CRITERIA

Requirements

There are no specific requirements for this SRP section. The applicable requirement for each operational program is identified in the attached sample FSAR Table 13.4-x.

SRP Acceptance Criteria

The SRP sections referenced in the attached sample FSAR Table 13.4-x include SRP acceptance criteria for operational programs.

Technical Rationale

In the Staff Requirements Memorandum on SECY-05-0197, the Commission provided the following directions regarding operational programs:

- ~~1.~~ 1. Include license conditions ~~for to govern the implementation of~~ operational programs in the COL, ~~where if~~ implementation requirements are not specified in the regulations.
- ~~2.~~ 2. Identify the list of operational programs required to be included in a COL application.
- ~~3.~~ 3. Use ~~of proposed the~~ generic emergency planning/emergency preparedness (EP) inspections, tests, analyses, and acceptance criteria (ITAAC) in Attachment 2 to SECY-05-0197 as a model for EP ITAAC to be included in COL applications, but review proposed plant-specific EP ITAAC on a case-by-case basis.

The required operational programs are referenced in the attached sample FSAR Table 13.4-x.

~~III.~~ III. REVIEW PROCEDURES

- ~~1.~~ 1. The licensing organization coordinates the overall review of operational programs. ~~The respective~~ The staff performs the substantive review ~~occurs within the of each~~ operational program in accordance with the guidance in the SRP section identified ~~for each~~

program in the attached sample FSAR Table 13.4-x. The review ensures that the COL applicant fully describes ~~the each~~ operational ~~programs~~program required by regulations and ~~their~~its implementation, including ~~emergency preparedness~~ (EP) and security, each of which is listed in the attached sample FSAR Table 13.4-x. In addition, non-programmatic aspects of ~~the~~ EP, security, and ~~the~~ fire protection ~~program~~programs (e.g., fire detection/suppression systems and fire barriers), will be subject to ITAAC. The review of ITAAC is performed under SRP Section 14.3, "Inspections, Tests, Analyses, ~~And~~and Acceptance Criteria."

In this context, "fully described"² indicates that the program is clearly and sufficiently described in terms of the scope and level of detail to allow a reasonable assurance finding of acceptability. Required programs should always be described at a functional level and at an increased level of detail when implementation choices could materially and negatively affect the program effectiveness and acceptability.

~~The~~
~~2.~~

If an applicant included ITAAC in lieu of implementation information for a specific operational program, staff reviews the ITAAC information under SRP Section 14.3. The staff also notes that unique circumstances involving a particular application may raise an implementation issue on an operational program that is best resolved by an ITAAC. The staff expects such circumstances to be rare. Any The staff should inform the Commission of any such licensee-proposed ITAAC ~~information will be reviewed under SRP Section 14.3.~~

~~3.~~

3. COL applicants may choose to use an operational program not explicitly required by regulation. For example, a COL applicant might adopt a sump strainer cleanliness program to satisfy the emergency core cooling system requirements in the regulations. In such instances, the COL applicant should add the operational program to ~~its~~ list of programs in Section ~~13.4-x~~ of the FSAR and should fully describe the program and its implementation in the FSAR.

~~IV.~~ IV. EVALUATION FINDINGS

The staff should include in the SER evaluation findings similar to the following:

The staff of the ~~U.S. Nuclear Regulatory Commission~~NRC has reviewed FSAR Table 13.4-x and concludes that it is an accurate summary of the operational programs evaluated in the sections of the safety evaluation report noted in the table. The COL will contain suitable license conditions regarding those operational programs ~~wherefor~~ for which implementation requirements are not specified in the regulations.

The license should include the following conditions:

- ~~1. (Name of the licensee) shall implement and maintain in effect the provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility (or as~~

² Defined by the Commission in a May 14, 2004, SRM for SECY-04-0032, "Programmatic Information Needed for Approval of a Combined License Application without Inspections, Tests, Analyses, and Acceptance Criteria."

described in submittals dated _____) and as approved in the SER dated _____ (and Supplements dated _____).

2. ~~The licensee shall fully implement and maintain in effect all provisions of the physical security plan, security training and qualification plan, and safeguards contingency plan, and all amendments made pursuant to the authority of 10 CFR 50.90, 50.54(p), 52.97 [, and Section VIII of Appendix _____ to Part 52] when fuel is first received onsite, and continuing until all nuclear fuel is permanently removed from the site.⁴~~

- 3.1. The licensee shall implement the programs or portions of programs identified in Table __ on or before the associated milestones in Table __.

[The table referenced in this license condition will be included in the license. It will be as shown in the attached FSAR Table 13.4-x except it will specify only those operational programs that do not have implementation requirements in the regulations at the time the COL is issued. The resulting table will contain operational program milestones acceptable to the NRC staff. The number of implementation milestones would depend on whether the program ~~was~~will be implemented on a phased basis or all at once. For example, the staff expects that the radiation protection program will have 4 implementation milestones (radioactive sources on site, fuel on site, fuel load, and first shipment of waste) whereas the motor-operated valve (MOV) program will be fully implemented at a specific milestone before plant startup. The portion of the program implemented at a particular milestone would be described in the implementation section of the FSAR.]

- 4.2. Within 12 months after issuance of the COL or 12 months after the start of construction as defined at 10 CFR 50.10(a), whichever is later, (Name of the licensee) shall submit to the Director, (the identification of the NRC Headquarters office responsible for oversight of the COL after issuance), or the Director's designee, a schedule, ~~12 months after issuance for implementation~~ of the COL, ~~that supports planning for and conduct of NRC inspections of operational programs listed in [Table 13.x-xxx, the operational program FSAR table-], including the associated estimated date for initial loading of fuel.~~ The ~~schedule~~[name of licensee] shall ~~be updated~~update the schedule every 6 months until 12 months before scheduled fuel loading, and every month thereafter until ~~either~~ the operational programs in the FSAR table have been fully implemented ~~or the plant has been placed in commercial service, which ever comes first.~~

~~V.~~ V. IMPLEMENTATION

The staff will use this SRP section in performing safety evaluations of ~~DC applications and~~ license applications submitted by applicants pursuant to 10 CFR Part 52. Except when the applicant proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the staff will use the method described herein to evaluate conformance with Commission regulations.

The provisions of this SRP section apply to reviews of applications submitted six months or more after the date of issuance of this SRP section, unless superseded by a later revision.

~~VI.~~ VI. REFERENCES

1. ~~SECY-05-0197~~U.S. Nuclear Regulatory Commission, "Review of Operational Programs in Combined License Applications and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria," SECY-05-0197, October 28, 2005. (ADAMS Accession No. ML052770225)
2. ~~"Staff Requirements - SECY-05-0197 - U.S. Nuclear Regulatory Commission~~, "Review of Operational Programs in Combined License Applications and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria," Staff Requirements - SECY-05-0197, February 22, 2006. (ADAMS Accession No. ML060530316)

PAPERWORK REDUCTION ACT STATEMENT

~~The~~This Standard Review Plan contains voluntary information collections ~~contained in the Standard Review Plan are covered by the requirements of 10 CFR Part~~Parts 50 and 10 CFR Part, 52, and Part 100 that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These information collections were approved by the Office of Management and Budget, approval number (OMB), under control numbers 3150-0011 and, 3150-0151, and 3150-0093, respectively. Send comments regarding this information collection to the Information Services Branch, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0011, 3150-0151, and 3150-0093) Office of Management and Budget, Washington, DC 20503.

PUBLIC PROTECTION NOTIFICATION

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a ~~request for collection of information or an information collection requirement~~ unless the document requesting document or requiring the collection displays a currently valid OMB control number.

ATTACHMENT

Sample FSAR Table 13.4-x
Operational Programs Required by NRC ~~Regulation and Program Implementation~~ Regulations

| Item | Program Title | Program Source- (Required By) | FSAR (SRP) Section³ Section³ | Implementation | |
|---------------|--|--|---|---|---|
| | | | | Milestone | Requirement |
| 1. | Inservice Inspection Program | 10 CFR 50.55a(g) | 5.2.4 5.4.2.2 6.6 | Prior to Commercial service | 10 CFR 50.55a(g). ASME Section XI IWA 2430(b) |
| 2. | Inservice Testing Program | 10 CFR 50.55a(f) 10 CFR Part 50, Appendix A | 3.9.6 5.2.4 | After main generator on-line on nuclear heat | 10 CFR 50.55a(f) ASME OM Code |
| 3. | Environmental Qualification Program | 10 CFR 50.49(a) | 3.11 | None specified Prior to initial fuel load | License Condition |
| 4. | Preservice Inspection Program | 10 CFR 50.55a(g) | 5.2.4 5.4.2.2 6.6 | Completion prior to initial plant start-up. | 10 CFR 50.55a(g). ASME Code Section XI IWB-2200(a) |
| 5. | Reactor Vessel Material Surveillance Program | 10 CFR 50.60; 10 CFR Part 50, Appendix H | 5.3.1 | None specified | License Condition |
| 6. | Preservice Testing | 10 CFR 50.55a(f) | 3.9.6 | None specified Prior to | License Condition |
| 7. | Containment Leakage Rate Testing Program | 10 CFR 50.54(o); 10 CFR Part 50, Appendix A (GDC-32); 10 CFR Part 50, Appendix J; 10 CFR 52.47(a)(1) | 6.2.6 | Fuel Prior to initial fuel load | 10 CFR 50, Appendix J License condition . Option A-Section III- Option B-Section III.A |
| 8. | Fire Protection Program | 10 CFR 50.48 | 9.5.1 | None specified Prior to fuel receipt for elements of the Fire Protection Program necessary to | License Condition |

| Item | Program Title | Program Source- (Required By) | FSAR (SRP) Section³ <u>Section³</u> | Implementation | |
|-----------|---|--|---|--|--|
| | | | | Milestone | Requirement |
| | | | | <u>support receipt and storage of fuel on-site.</u> <u>Prior to initial fuel load for elements or the Fire Protection Program necessary to support fuel load and plant operation.</u> | |
| | <u>(portions applicable to radioactive material)⁴</u> | <u>10 CFR 70.22</u> <u>10 CFR 30.32</u> <u>10 CFR 40.31</u> | | <u>Prior to byproduct, source, or special nuclear materials (excluding Exempt Quantities as described in 10 CFR 30.18) receipt for elements of the Fire Protection Program necessary to support receipt and storage of byproduct, source, or special nuclear materials</u> | <u>10 CFR 70.22(a)</u> <u>10 CFR 70.23(a)(3)-(4)</u> <u>10 CFR 30.32(g)</u> <u>10 CFR 30.33(a)(2)</u> <u>10 CFR 40.31(a)</u> <u>10 CFR 40.32(j)</u> |
| <u>9.</u> | <u>Process and Effluent Monitoring and Sampling Program:</u> | | | | |
| | <u>(a) Radiological Effluent Technical Specifications/Standard Radiological Effluent Controls (RETS/SREC)</u> | <u>10 CFR 20.1301 and 20.1302 20.1301(e) for 40 CFR Part 190</u> <u>10 CFR 50.34a</u> <u>10 CFR 50.36a</u> <u>10 CFR Part 50, Appendix I, Section II, III, and IV</u> | <u>11.5</u> | <u>Prior to fuel load</u> | <u>License Condition</u> |

| Item | Program Title | Program Source- (Required By) | FSAR (SRP) Section³ Section³ | Implementation | |
|------------|---|---|--|--|--------------------------|
| | | | | Milestone | Requirement |
| | <u>(b) Offsite Dose Calculation Manual (ODCM)</u> | <u>Same as above</u> | <u>11.5</u> | <u>Prior to fuel load</u> | <u>License Condition</u> |
| | <u>(c) Radiological Environmental Monitoring Program (REMP)</u> | <u>Same as above</u> | <u>11.5</u> | <u>Prior to fuel load</u> | <u>License Condition</u> |
| | <u>(d) Process Control Program (PCP)</u> | <u>Same as above</u> | <u>11.4</u> | <u>Prior to fuel load</u> | <u>License Condition</u> |
| | | | | | |
| <u>10.</u> | <u>Radiation Protection Program</u> | <u>10 CFR 20.1101</u> | <u>12.5</u> | | <u>License Condition</u> |
| | <u>(a) Radiation Protection element</u> | <u>10 CFR 20.1101</u> | | <u>Prior to receiving reactor fuel</u> | |
| | <u>(b) ALARA element</u> | <u>10 CFR 20.1101</u> | | <u>Prior to initial loading of fuel in the reactor</u> | |
| | <u>(c) Minimization of contamination element</u> | <u>10 CFR 20.1406</u> | | <u>Prior to initial transfer, transport or disposal of radioactive materials</u> | |
| | <u>(d) Source control element⁴</u> | <u>10 CFR 30, 40, 70</u> <u>10 CFR Part 37</u> | | <u>Prior to receipt of Special Nuclear Material</u> <u>Prior to initial receipt of by-product, source, or special nuclear materials (excluding Exempt Quantities as described in 10 CFR 30.18) for those elements of the Radiation Protection</u> | |

| Item | Program Title | Program Source- (Required By) | FSAR (SRP) Section³ Section³ | Implementation | |
|------------|--|---|---|---|--|
| | | | | Milestone | Requirement |
| | | | | <u>Program necessary to support such receipt</u> | |
| <u>11.</u> | <u>Non licensed Plant Staff Training Program</u> | <u>10 CFR 50.120</u> | <u>13.2.2</u> | <u>18 months prior to scheduled fuel load</u> | <u>10 CFR 50.120(b)</u> |
| | <u>(portions applicable to radioactive material)⁴</u> | <u>10 CFR 30.32</u> <u>10 CFR 40.31</u> <u>10 CFR 70.22</u> | | <u>Prior to initial receipt of byproduct, source, or special nuclear materials (excluding Exempt Quantities as described in 10 CFR 30.18)</u> | <u>10 CFR 30.32(a)</u> <u>10 CFR 40.31(a)</u> <u>10 CFR 70.22(a)</u> |
| <u>12.</u> | <u>Reactor Operator Training Program</u> | <u>10 CFR 55.13;</u> <u>10 CFR 55.31;</u> <u>10 CFR 55.41;</u> <u>10 CFR 55.43;</u> <u>10 CFR 55.45</u> | <u>13.2.1</u> | <u>18 months prior to initial fuel load</u> | <u>License Condition</u> |
| <u>13.</u> | <u>Reactor Operator Regualification Program</u> | <u>10 CFR 50.34(b);</u> <u>10 CFR 50.54(i);</u> <u>10 CFR 55.59</u> | <u>13.2.1</u> | <u>Within 3 months after issuance of an operating license or the date, the Commission makes the finding under 10 CFR 52.103(g)</u> | <u>10 CFR 50.54 (i-1)</u> |
| <u>14.</u> | <u>Emergency Planning</u> | <u>10 CFR 50.47</u> <u>10 CFR Part 50, Appendix E</u> | <u>13.3</u> | <u>Full participation exercise conducted within 2 yrs. before the issuance of first full power operating license.</u> <u>Onsite exercise conducted within 1 yr before issuance of full</u> | <u>10 CFR Part 50, Appendix E.IV.F.2a(i) (10 CFR Part 50 applicant)</u> <u>10 CFR Part 50, Appendix E.IV.F.2a(i) (10 CFR Part 50 applicant)</u> |

| Item | Program Title | Program Source- (Required By) | FSAR (SRP) Section³ Section³ | Implementation | |
|------------|-------------------------|----------------------------------|---|---|---|
| | | | | Milestone | Requirement |
| | | | | <p><u>power operating license.</u></p> <p><u>Applicants detailed implementing procedures for it's emergency plan submitted no less than 180 days prior to scheduled issuance of an operating license.</u></p> <p><u>Full participation exercise conducted within 2 yrs of scheduled date for initial loading of fuel.</u></p> <p><u>Onsite exercise conducted within 1 yr before the schedule date for initial loading of fuel.</u></p> <p><u>Applicant's detailed implementing procedures for its emergency plan submitted no less than within 180 days prior to scheduled date for initial loading of fuel.</u></p> | <p><u>10 CFR Part 50, Appendix E.V (10 CFR Part 50 applicant)</u></p> <p><u>10 CFR Part 50, Appendix E.IV.F.2a(ii)</u></p> <p><u>10 CFR Part 50, Appendix E.IV.F.2a(ii)</u></p> <p><u>10 CFR Part 50, Appendix E.V.</u></p> |
| <u>15.</u> | <u>Security Program</u> | | | | |

| Item | Program Title | Program Source- (Required By) | FSAR (SRP) Section³ Section³ | Implementation | |
|------|--|--|---|---|---|
| | | | | Milestone | Requirement |
| | <u>(a) Physical Protection Program (applicable to protection of special nuclear material prior to the protected area being declared operational)</u> | <u>10 CFR 73.1,</u> <u>10 CFR 73.67</u> | <u>13.5.2.2.8</u> <u>13.6</u> | <u>Prior to initial receipt of special nuclear material</u> | <u>10 CFR 73.1(a),</u> <u>10 CFR 73.67</u> |
| | <u>(b) Physical Security Program</u> | <u>10 CFR 73.55(b);</u> <u>10 CFR 73.55(c)(3);</u> <u>10 CFR 73.56;</u> <u>10 CFR 73.57</u> | <u>13.6</u> | <u>Prior to receipt of fuel onsite (protected area)</u> | <u>10 CFR 73.55(a)(4)</u> |
| | <u>(c) Safeguards Contingency Program</u> | <u>10 CFR 73.55(c)(5);</u> <u>10 CFR 73.55(k);</u> <u>10 CFR Part 73, Appendix C</u> | <u>13.6</u> | <u>Prior to receipt of fuel onsite (protected area)</u> | <u>10 CFR 73.55(a)(4)</u> |
| | <u>(d) Training and Qualification Program</u> | <u>10 CFR 73.55(c)(4);</u> <u>10 CFR 73.55(d)(3);</u> <u>10 CFR Part 73, Appendix B</u> | <u>13.6</u> | <u>Prior to receipt of fuel onsite (protected area)</u> | <u>10 CFR 73.55(a)(4)</u> |
| | <u>(e) Fitness for Duty (FFD) Program for Construction (workers and first-line supervisors)</u> | <u>10 CFR 26.3(c)</u> | <u>13.7</u> | <u>Prior to initiating 10 CFR Part 26 construction activities</u> | <u>10 CFR Part 26, Subpart K</u> |
| | <u>(f) Fitness for Duty (FFD) Program for Construction (management and oversight personnel)</u> | <u>10 CFR 26.3(c)</u> | <u>13.7</u> | <u>Prior to initiating 10 CFR Part 26 construction activities</u> | <u>10 CFR Part 26, Subparts A-H, N, and O</u> |
| | <u>(g) FFD Program for Security Personnel</u> | <u>10 CFR 26.4(c)(3)</u> | <u>13.7</u> | <u>Prior to initiating 10 CFR Part 26 construction activities</u> | <u>10 CFR Part 26, Subparts A-H, N, and O</u> |

| Item | Program Title | Program Source- (Required By) | FSAR (SRP) Section 3 Section 3 | Implementation | |
|------|---|--|---|---|---|
| | | | | Milestone | Requirement |
| | | | | Prior to the earlier of: <u>A. Licensee's receipt of SNM in the form of fuel assemblies, or</u> <u>B. Establishment of a protected area, or</u> <u>C. The 10 CFR 52.103(g) finding</u> | <u>10 CFR Part 26, Subparts A-I, N, and O</u> |
| | <u>(h) FFD Program for FFD Program personnel</u> | <u>10 CFR 26.3(c);</u> | <u>13.7</u> | <u>Prior to initiating 10 CFR Part 26 construction activities</u> | <u>10 CFR Part 26, Subparts A, B, D– H, N, O, and C, per licensee's discretion</u> |
| | <u>(i) FFD Program for persons required to physically report to the Technical Support Center (TSC) or Emergency Operations Facility (EOF)</u> | <u>10 CFR 26.4(c)</u> | <u>13.7</u> | <u>Prior to the conduct of the first full participation emergency preparedness exercise under 10 CFR Part 50, App. E, Section F.2.a</u> | <u>10 CFR Part 26, Subparts A-I, N, and O, except for §§ 26.205-209</u> |
| | <u>j. FFD Program for Operation</u> | <u>10 CFR 26.4(a) and (b)</u> | <u>13.7</u> | Prior to the earlier of: <u>A. Establishment of a protected area, or</u> <u>B. The 10 CFR 52.103(g) finding</u> | <u>10 CFR Part 26, Subparts A-I, N, and O, except for individuals listed in § 26.4(b), who are not subject to §§ 26.205-209</u> |
| | <u>k. Cyber Security Program</u> | <u>10 CFR 73.54(b);</u> <u>10 CFR 73.55(b)(8);</u> <u>10 CFR 73.55(c)(6)</u> | <u>13.6</u> | <u>Prior to receipt of fuel onsite (protected area)</u> | <u>10 CFR 73.55(a)(4)</u> |
| | <u>l. SNM Material Control and Accounting Program</u> | <u>10 CFR 74, Subpart B (§§ 74.11 – 74.19, excl. § 74.17)</u> | <u>13.5.2.2.9</u> | <u>Prior to receipt of special nuclear material</u> | <u>License Condition</u> |
| | <u>m. Security Program for</u> | <u>10 CFR 37.41(a)(1)</u> | <u>13.5.2.2.8</u> | <u>Prior to the</u> | <u>10 CFR 37.41(a)(1)</u> |

| Item | Program Title | Program Source- (Required By) | FSAR (SRP) Section³ Section³ | Implementation | |
|------------|---|--|---|---|---------------------------|
| | | | | Milestone | Requirement |
| | <u>aggregated category 1 or category 2 quantity of radioactive material (applicable to protection of aggregated quantity of radioactive material prior to fuel on site)</u> | | <u>13.5.2.2.10</u> <u>13.6</u> <u>11.4</u> | <u>accumulation of aggregated category 1 or category 2 quantity of radioactive material</u> | |
| <u>16.</u> | <u>Quality Assurance Program - Operation</u> | <u>10 CFR 50.54(a);</u> <u>10 CFR Part 50, Appendix A (GDC 1);</u> <u>10 CFR Part 50, Appendix B</u> | <u>17.5</u> | <u>30 days prior to scheduled date for the initial loading of fuel.</u> | <u>10 CFR 50.54(a)(1)</u> |
| <u>17.</u> | <u>Maintenance Rule</u> | <u>10 CFR 50.65</u> | <u>17.6</u> | <u>Fuel load authorization per 10 CFR 52.103(g)</u> | <u>10 CFR 50.65(a)(1)</u> |
| <u>18.</u> | <u>Motor-Operated Valve Testing</u> | <u>10 CFR 50.55a(b)(3)(ii)</u> | <u>3.9.6</u> | <u>Prior to initial fuel load</u> | <u>License Condition</u> |
| | | | | | |

| Item | Program Title | Program Source (Required By) | FSAR (SRP) Section ² | Implementation | |
|------|--|--|---------------------------------------|---|--------------------|
| | | | | Milestone | Requirement |
| 9. | Process and Effluent Monitoring and Sampling Program: | | | | |
| | • Radiological Effluent Technical Specifications/Standard Radiological Effluent Controls (RETS/SREC) | 10 CFR 20.1301 and 20.13.2 10 CFR 50.34a 10 CFR 50.36a 10 CFR 50, Appendix I, section II and IV | 11.5 | None Specified | License Condition |
| | • Offsite Dose Calculation manual (ODCM) | Same as above | 11.5 | None Specified | License Condition |
| | • Radiological Environmental Monitoring Program (REMP) | Same as above | 11.5 | None Specified | License Condition |
| | • Process Control Program (PCP) | Same as above | 11.4 | None Specified | License Condition |
| 10. | Radiation Protection Program | 10 CFR 20.1101 | 12.5 | None specified | License Condition |
| 11. | Non-licensed Plant Staff Training Program | 10 CFR 50.120 10 CFR 52.78 | 13.2.2 | 18 months prior to scheduled fuel load | 10 CFR 50.120(b) |
| 12. | Reactor Operator Training Program | 10 CFR 55.13; 10 CFR 55.31; 10 CFR 55.41; 10 CFR 55.43; 10 CFR 55.45 | 13.2.1 | None specified | License Condition |
| 13. | Reactor Operator Requalification Program | 10 CFR 50.34(b); 10 CFR 50.54(i); 10 CFR 55.59 | 13.2.1 | Within 3 months after issuance of an operating license or the date, the Commission makes the finding under 10 CFR 52.103(g) | 10 CFR 50.54 (i-1) |

| Item | Program Title | Program Source (Required By) | FSAR (SRP) Section ² | Implementation | |
|------|--------------------|-------------------------------------|---------------------------------------|---|--|
| | | | | Milestone | Requirement |
| 14. | Emergency Planning | 10 CFR 50.47 Part 50, Appendix E | 13.3 | <p>Full participation exercise conducted within 2 yrs before the issuance of first full power operating license. Onsite exercise conducted within 1 yr before issuance of full power operating license.</p> <p>Applicants detailed implementing procedures for it's emergency plan submitted no less than 180 days prior to scheduled issuance of an operating license.</p> <p>Full participation exercise conducted within 2 yrs of scheduled date for initial loading of fuel.</p> <p>Onsite exercise conducted within 1 yr before the schedule date for initial loading of fuel.</p> <p>Applicant's detailed implementing procedures for its emergency plan submitted no less than within 180 days prior to scheduled date for initial loading of fuel.</p> | <p>10 CFR Part 50, Appendix E.IV.F.2a(i) (10 CFR Part 50 applicant)</p> <p>10 CFR Part 50 Appendix E.IV.F.2a(i) (10 CFR Part 50 applicant)</p> <p>10 CFR Part 50, Appendix E.V (10 CFR Part 50 applicant)</p> <p>10 CFR 50, Appendix E.IV.F.2a(ii) (10 CFR Part 52 applicant)</p> <p>10 CFR Part 50, Appendix E.IV.F.2a(ii) (10 CFR Part 52 applicant)</p> <p>10 CFR Part 50, Appendix E.V. (10 CFR Part 52 applicant)</p> |

| Item | Program Title | Program Source (Required By) | FSAR- (SRP) Section ² | Implementation | |
|------|--|---|--|--|---|
| | | | | Milestone | Requirement |
| 15. | Security Program: Physical Security Program Safeguards Contingency Program Training and Qualification Program | 10 CFR 50.34(c) 10 CFR 73.55 10 CFR 73.56 10 CFR 73.57 10 CFR 26 10 CFR 50.34(d) 10 CFR Part 73, Appendix C 10 CFR Part 73, Appendix B | 13.6.4 | None specified | License Condition License Condition License Condition |
| 16. | Quality Assurance Program— Operation | 10 CFR 50.54(a); 10 CFR 50, Appendix A (GDC 1); 10 CFR 50, Appendix B | 17.5 | 30 days prior to scheduled date for the initial loading of fuel. | 10 CFR 50.54(a)(1) |
| 17. | Maintenance Rule | 10 CFR 50.65 | 17.6 | Fuel load authorization per 10 CFR 52.103(g) | 10 CFR 50.65(a)(1) |
| 18 | Motor-Operated Valve- Testing | 10 CFR 50.55a(b)(3)(ii) | 3.9.6 | None specified | License Condition |
| 19 | Initial Test Program | 10 CFR 50.34, 10 CFR 52.79(a)(28) | 14.2 | None specified | License Condition |

²~~Additional~~³ Additional FSAR (SRP) sections may be identified under broad operational programs required by regulation (e.g., ISI, IST, etc.).

⁴ If the COL applicant submits within the Part 52 application a request for Part 30, 40, and 70 licenses, the COL applicant should identify implementation milestones related to these licenses.

SRP Section 13.4, “Operational Programs”

Description of Changes

The technical changes incorporated in Revision 4, dated August 2018, include incorporation of lessons learned from previous reviews to provide a more detail description of the program requirements and implementation milestones that should be encompassed by an application submitted under 10 CFR Part 52.

Descriptions of the changes in each SRP section are as follows:

I. AREAS OF REVIEW

1. Added footnote to clarify the applicability of this SRP section.

III. REVIEW PROCEDURES

1. Added text to address the review of a generic program template that has been accepted by the staff
2. Added text to address the possibility of an applicant relying on an operational program to meet a requirement.

IV. EVALUATION FINDINGS

1. Remove license condition text for Fire Protection Program, Physical Security, Training, and Qualification Plan, and Safeguards Contingency Plan because they are addressed in the sample table.

VI. REFERENCES

1. Added accession numbers.

ATTACHMENT

1. Updated the sample table to identified new operational programs and more detailed implementation milestones and requirements due to lessons learned from previous reviews or new regulations.