C.2.12 Operational Programs for COLs

OVERVIEW

The "operational programs"[1] are a subset of the multiple programs supporting nuclear facility operation which the NRC staff has identified for increased scrutiny. Operational programs have the following characteristics: 1) programs are required by NRC regulations; 2) programs are reviewed by the NRC staff as part of the COL application review process; and, 3) programs are inspected by NRC staff subsequent to license issuance to verify implementation.

The NRC regulations require a COL applicant to address varied programs to support operation of the nuclear facility. For example, 10 CFR 52.79 requires the application to include both the description and the implementation of programs such as the inservice testing (IST) and inspection programs, primary containment leakage rate testing program, reactor vessel material surveillance program, operator training program, and a program for monitoring the effectiveness of maintenance.

The NRC staff will use applicable sections of NUREG-0800 to review the COL applicant's identification and descriptions of operational programs and make a reasonable assurance (high assurance for physical protection programs as described in 10 CFR 73.55 (b)) finding on each operational program and its implementation schedule. In addition, the staff will include a license condition on subsequent implementation milestones for each operational program description for which specific implementation requirements are not specified in the regulations.

GUIDANCE

Program Description and Implementation

COL applicants should fully describe each operational program, including implementation and milestones, in the FSAR. If the applicant "fully describes" an operational program and its implementation and milestones, the applicant is not required to propose inspections, tests, analyses, and acceptance criteria (ITAAC) in accordance with 10 CFR 52.80(a) for that operational program. The term "fully described" means that the operational program is clearly and sufficiently described in terms of scope and level of detail to allow the NRC staff to make a reasonable assurance or high assurance finding (as applicable) of the acceptability of that program. The applicant should describe each operational program at a functional level and, additionally, at an increased level of detail where implementation choices could materially affect program effectiveness and acceptability.

For a COL applicant referencing a DC, the referenced DCD typically identifies COL action Items which specify that the COL applicant will provide a full description of each operational program. The COL applicant should satisfy these COL action Items in the COL FSAR. If the DCD does not include such COL action Items, the COL applicant remains obligated to provide a full description of each operational program to avoid the need for programmatic inspections, tests, analyses, and acceptance criteria (ITAAC).

[1] The NRC staff addressed operational programs in correspondence to the Commission – SECY-05-0197, "Review of Operational Programs in Combined License Applications and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria," October 28, 2005 (ML052770257). The Commission endorsed the staff recommendations regarding operational programs in Staff Requirements - SECY-05-0197, February 22, 2006 (ML060530316).

NUREG-0800, Section 13.4, Operational Programs, identifies the operational programs to be fully described in the FSAR and provides guidance for the content and format of information to be included. Table 13.4-x identifies the list of operational programs and the associated regulatory requirements and implementation milestones. This table illustrates an acceptable method of presenting the information in Section 13.4 of the COL FSAR.

Other sections of NUREG-0800 describe the technical information that should be included in the FSAR to fully describe each specific operational program. For example, Section 3.9.6, "Functional Design, Qualification, and Inservice Testing Programs for Pumps, Valves, and Dynamic Restraints," specifies the information that should be provided in the FSAR to fully describe the IST operational program for pumps, valves, and dynamic restraints. The COL applicant may incorporate by reference in its FSAR specific provisions provided in the DCD of the referenced DC that describe operational programs. In such instances, the staff will review the combination of the information in the COL FSAR and the provisions in the DCD to determine whether it constitutes a full description of the specific operational program.

The commitments for implementation of the operational programs should include specific implementation milestones (e.g., prior to fuel load, or prior to commercial service). Some operational programs have specific regulatory requirements for their implementation milestones (such as IST programs in 10 CFR 50.55a) while other operational programs will have implementation milestones specified by a license condition. The number of implementation milestones depends on whether the program will be implemented on a phased basis. For example, the staff expects that the radiation protection program will have four implementation milestones (sources on site, fuel on site, fuel load, and first shipment of waste), whereas the motor-operated valve testing program will be fully implemented at a specific milestone or before initial fuel load. Many Fitness for Duty program requirements under 10 CFR Part 26 will be implemented prior to construction activities.

License Conditions

The NRC will use license conditions to verify the implementation of those operational programs for which the regulations do not specify an implementation milestone. Licensees shall implement the operational programs, or portions thereof, as specified in the regulations and the license conditions.

COL applicants should propose license conditions to address implementation milestones for the operational programs for which implementation milestones are not addressed by regulations. Additionally, applicants should propose a license condition to support NRC post-license inspection of the programs and should determine whether any license conditions are necessary to verify the implementation of specific aspects of an operational program. For example, the NRC imposed license conditions for the IST surveillance program for pyrotechnic-actuated valves (squib valves) at several nuclear power plants to verify that the provisions in the applicable FSARs for the IST program for squib valves were implemented.

The recommended format for license conditions is provided by the following examples:

> *[Name of licensee] shall implement the programs or portions of programs identified below, on or before the date [name of licensee] achieves the following milestones.*

- *Environmental Qualification Program implemented before initial fuel load*

- *Reactor Vessel Material Surveillance Program implemented before initial criticality*

- *Radiation Protection Program (RPP) or applicable portions as identified in FSAR Section 12.5:*
  - *RPP features applicable to receipt of by-product, source, or special nuclear materials (excluding exempt quantities as described in 10 CFR 30.18) implemented before initial receipt of such materials*
  - *RPP features (including the ALARA principle) applicable to new fuel implemented before receipt of initial fuel on site*
  - *All other RPP features (including ALARA principle) except for those applicable to control radioactive waste shipment implemented before initial fuel load*
  - *RPP features (including ALARA principle) applicable to radioactive waste shipment implemented before first shipment of radioactive waste*

[Name of licensee] shall, no later than 12 months after issuance of the COL, submit to the Director of NRO, or the Director's designee, a schedule for implementation of the operational programs listed in FSAR Table [13.4-xx], including the associated estimated date for initial loading of fuel. The schedule shall be updated every 6 months until 12 months before scheduled fuel loading, and every month thereafter until all the operational programs listed in FSAR Table [13.4-xx] have been fully implemented

Operational Program Options

COL applicants may incorporate by reference a generic operational program (e.g., authored by Nuclear Energy Institute (NEI)) for which the NRC staff has previously prepared a safety evaluation report. In such cases, the COL applicant would 1) submit to the NRC the plant-specific operational program and the stated implementation milestone for staff review, and 2) implement the program consistent with the milestones identified in FSAR Section 13.4 and the program description in applicable section(s) of the FSAR.

COL applicants may choose to use the operational program approach discussed above for other plant-specific programs that are not explicitly required by regulation. For example, a COL applicant might adopt a sump strainer cleanliness program to satisfy the emergency core cooling system (ECCS) requirements in the regulations. In such instances, the COL applicant should 1) add the program to its list of operational programs in Section 13.4 of the FSAR, 2) fully describe the program and its implementation in the respective section of the FSAR, and 3) propose an appropriate license condition for program implementation.