

1.3S Methodology

For COL applications that do not refer to an early site permit, NRC regulations under 10 CFR 52.79(a)(2) require an Environmental Report (ER) be prepared in accordance with the provisions of Subpart A of 10 CFR Part 51. Regulatory Guide (RG) 4.2 (Reference 1.3S3S-1) provides guidance to applicants preparing ERs for nuclear power stations. NUREG-1555 provides guidance for the NRC's environmental reviews of applications related to nuclear power plants. As discussed in RG 1.206 (Reference 1.3S-4), Section C.II.2, NUREG-1555 has been updated to recognize the alternative licensing structure under 10 CFR Part 52. Therefore, because RG 4.2 is an earlier NRC document and NUREG-1555 reflects the Part 52 regulatory structure, STPNOC chose to look to the latter for guidance in establishing the format and content of the STP 3 & 4 ER. STPNOC has provided additional information and organization in the material presented, as deemed appropriate, when applying lessons learned from Early Site Permit applications. In Table 1.3S-1, verification of conformance with regulatory requirements is provided, including an identification of each requirement and indication of where in the ER STPNOC has responded to the requirement. Table 1.3S-2 provides a summary of additional sections added to this ER and the contents of each section. As shown in that table, STPNOC has designated the additional sections with an "S" to distinguish those sections from the sections specified in NUREG-1555.

STPNOC also evaluated the conclusions provided in NUREG-1437 for input in assessing the impacts of the new [ABWR Advanced Boiling Water Reactor \(ABWR\)](#) units on the STP site (References 1.3S-2 and 1.3S-3). Based on this review, STPNOC concluded that if characteristics of the proposed ABWR reactors are similar to those of the existing fleet, the NUREG-1437 environmental issues, significance determination criteria, and significance conclusions could provide insights in the COL environmental review. The applicable sections of this ER identify where NUREG-1437 has been used in assessing environmental impacts for STP 3 & 4 at the STP site. Where appropriate, these sections supplement the information provided in NUREG-1437 to account for more recent studies and site-specific information.

1.3S.1 References

- 1.3S-1 "Preparation of Environmental Reports for Nuclear Power Stations," Regulatory Guide 4.2, Revision 2, July 1976.
- 1.3S-2 "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," NUREG-1437, Volumes 1 and 2, May 1996.
- 1.3S-3 "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Section 6.3, "Transportation," and Table 9-1, "Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants," NUREG-1437, Volume 1, Addendum 1, August 1999.
- 1.3S-4 Regulatory Guide 1.206, Combined License Applications for Nuclear Power Plants (LWR Edition).

Table 1.3S-1 ER Responses to Combined Operating License Regulatory Requirements

Regulatory Requirement (10 CFR)	ER Section Containing the Response
51.45(a), Signed original	Transmittal letter
51.45(b), Description of proposed action	Chapter 3, "Plant Description"
51.45(b), Statement of purpose of proposed action	Section 1.1.1, "Purpose and Need"
51.45(b), Description of environment affected by proposed action	Chapter 2, "Environmental Description"
51.45(b)(1), Environmental impact of proposed action	Chapters 4, "Environmental Impacts of Construction"; 5, "Environmental Impacts of Operation"; 7, "Environmental Impact of Postulated Accidents Involving Radioactive Materials", and 10, "Environmental Consequences of the Proposed Action"
51.45(b)(2), Unavoidable adverse impacts	Section 10.1, "Unavoidable Adverse Environmental Impacts"
51.45(b)(3), Alternatives to proposed action	Chapter 9, "Alternatives to the Proposed Action"
51.45(b)(4), Relationship between short-term use and long-term productivity	Section 10.3, "Relationship Between Short Term Uses and Long Term Productivity of the Human Environment"
51.45(b)(5), Irreversible and irretrievable commitments of resources	Section 10.2, "Irreversible and Irretrievable Commitments of Resources"
51.45(c), Comparison of environmental effects of proposed action and alternatives	Chapters 4, "Environmental Impacts of Construction"; 5, "Environmental Impacts of Operation"; 7, "Environmental Impact of Postulated Accidents Involving Radioactive Materials"; 9, "Alternatives to the Proposed Action", and 10, "Environmental Consequences of the Proposed Action"
51.45(c), Alternatives for reducing or avoiding adverse environmental impacts	Sections 4.6, "Measures and Controls to Limit Adverse Impacts During Construction" and 5.10, "Measures and Controls to Limit Adverse Impacts During Operation"
51.45(c), Economic, technical, and other benefits and costs of proposed action and alternatives	Section 10.4, "Benefit-Cost Balance"
51.45(d), Federal permits and other entitlements and status of compliance	Section 1.2, "Status of Reviews, Approvals, and Consultations"
51.45(d), Compliance with Federal and other environmental quality standards and requirements	Section 1.2, "Status of Reviews, Approvals, and Consultations"
51.45(d), Compliance for alternatives	Section 9.2, "Energy Alternatives" and Section 9.3, "Alternative Sites"

**Table 1.3S-1 ER Responses to Combined Operating License Regulatory Requirements
(Continued)**

Regulatory Requirement (10 CFR)	ER Section Containing the Response
51.45(e), Adverse information	Section 10.1, "Unavoidable Adverse Environmental Impacts"
51.50 and 51.51(a), Uranium fuel cycle	Section 5.7, "Uranium Fuel Cycle Impacts"
51.50 and 51.52, Fuel and waste transportation	Sections 3.8, "Transportation of Radioactive Materials," 5.11, "Transportation of Radioactive Materials," and 7.4, "Transportation Accidents"
51.50, Reporting and record keeping procedures	Chapter 6, "Environmental Measurements and Monitoring Programs"
51.50, Conditions and monitoring	Chapter 6, "Environmental Measurements and Monitoring Programs"

Table 1.3S-2 Additional Sections in STP ER

Section/Title	Description
1.3S - Methodology	STP ER responsiveness to 10 CFR 51.49 /51.50 and explanation of additional sections
2.9S - Existing Plant Parameters and Site Characteristics	STP 1 & 2 site and plant parameters relevant to cumulative impacts of STP 1-4
3.9S - Construction Activities	Constructing activities conceptual discussion
3.10S - Workforce Characterization	STP 3 & 4 construction and operation workforce characterization
4.7S - Non-Radiological Health Impacts - Construction	Non-radiological health impacts of STP 3 & 4 construction
5.11S - Transportation Of Radioactive Materials	Transportation modes and radioactivity impacts
5.12S - Non-Radiological Health Impacts - Operation	Non-radiological health impacts of STP 3 & 4 operation
10.5S - Cumulative Impacts	Cumulative impacts of STP 1-4