

ATTACHMENT 3

Early Site Permit
Scope and Associated Review Criteria for Environmental Report
Primary Source of Review Guidance: NUREG-1555, “Standard Review Plans for
Environmental Reviews for Nuclear Power Plants” (1999)

| Area of Review | Primary Review Branch | Secondary Review Branch | SRP Section | Comment/Additional Guidance |
|--|-----------------------|-------------------------|-------------|---|
| Primary Review Branch: RLEP | | | | |
| Introduction to the Environmental Impact Statement | RLEP | None | 1.0 | |
| The Proposed Project | RLEP | None | 1.1 | |
| Status of Reviews, Approvals, and Consultations | RLEP | None | 1.2 | |
| Environmental Description | RLEP | SPSB | 2.0 | |
| Station Location | RLEP | SPSB | 2.1 | |
| Land | RLEP | SPSB | 2.2 | |
| The Site and Vicinity | RLEP | SPSB | 2.2.1 | |
| Transmission Corridors and Offsite Areas | RLEP | None | 2.2.2 | |
| The Region | RLEP | SPSB | 2.2.3 | |
| Water | RLEP | EMEB | 2.3 | |
| Hydrology | RLEP | EMEB | 2.3.1 | Also consider requirements of Section 404 of the Clean Water Act. |
| Water Use | RLEP | EMEB | 2.3.2 | Also consider requirements of Section 404 of the Clean Water Act. |
| Water Quality | RLEP | EMEB | 2.3.3 | |
| Ecology | RLEP | None | 2.4 | |

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|--------------------------------------|-----------------------|-------------------------|-------------|--|
| Terrestrial Ecology | RLEP | None | 2.4.1 | |
| Aquatic Ecology | RLEP | None | 2.4.2 | |
| Socioeconomics | RLEP | SPSB | 2.5 | |
| Demography | RLEP | SPSB | 2.5.1 | |
| Community Characteristics | RLEP | None | 2.5.2 | |
| Historic Properties | RLEP | None | 2.5.3 | Section 800.3 of the revised National Historic Preservation Act (NHPA) strengthened need for early identification and contact with Tribes/others. To reflect revision, insert following wording on pg. 2.5.3-3, "Acceptance criteria:" - add new paragraph to the first bullet stating "The revisions to NHPA require early consultation with any Indian tribe that attaches religious and cultural significance to resources or properties that may be affected by an undertaking." |
| Environmental Justice | RLEP | SPSB | 2.5.4 | Revise reference to Office Letter 906 to Office Instruction LIC-203. |
| Geology | RLEP | EMEB | 2.6 | |
| Meteorology and Air Quality | RLEP | SPSB | 2.7 | |
| Related Federal Project Activities | RLEP | None | 2.8 | |
| Plant Description | RLEP | None | 3.0 | |
| External Appearance and Plant Layout | RLEP | None | 3.1 | |
| Reactor Power Conversion System | RLEP | None | 3.2 | |
| Plant Water Use | RLEP | EMEB | 3.3 | |

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|--|-----------------------|-------------------------|-------------|---|
| Water Consumption | RLEP | EMEB | 3.3.1 | |
| Water Treatment | RLEP | None | 3.3.2 | |
| Cooling System | RLEP | None | 3.4 | |
| Description and Operational Modes | RLEP | None | 3.4.1 | |
| Component Descriptions | RLEP | None | 3.4.2 | |
| Radioactive Waste Management System | RLEP | IEHB | 3.5 | Defer to COL stage unless specific plant design is given. |
| Nonradioactive Waste Systems | RLEP | None | 3.6 | |
| Effluents Containing Chemicals or Biocides | RLEP | None | 3.6.1 | |
| Sanitary System Effluents | RLEP | None | 3.6.2 | |
| Other Effluents | RLEP | None | 3.6.3 | Address Solid Waste Disposal Act of 1965. |
| Power Transmission Systems | RLEP | None | 3.7 | |
| Transportation of Radioactive Materials | RLEP | IEHB | 3.8 | |
| Environmental Impacts of Construction | RLEP | None | 4.0 | |
| Land Use Impacts | RLEP | SPSB | 4.1 | |
| The Site and Vicinity | RLEP | SPSB | 4.1.1 | Includes review criteria for review of redress plan (if submitted). |
| Transmission Corridors and Offsite Areas | RLEP | None | 4.1.2 | Includes review criteria for review of redress plan (if submitted). |
| Historic Properties | RLEP | None | 4.1.3 | |
| Water-Related Impacts | RLEP | EMEB | 4.2 | |

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|--|-----------------------|-------------------------|-------------|--|
| Hydrologic Alterations | RLEP | EMEB | 4.2.1 | |
| Water Use Impacts | RLEP | EMEB | 4.2.2 | |
| Ecological Impacts | RLEP | None | 4.3 | |
| Terrestrial Ecosystems | RLEP | None | 4.3.1 | <ul style="list-style-type: none"> - Section III(2)(a), Page 4.3.1-7, top of page, add bullets- (1) "the cumulative impacts of construction on terrestrial resources," (2) "effects of dust on "important" species," (3) "migration/nesting," and (4) "nuisance species." -Page 4.3.1-7, existing 4th bullet, remove "vertebrates" and insert "animals." -Page 4.3.1-7, last bullet under item (b), change "good practice" to "best management practices." |
| Aquatic Ecosystems | RLEP | None | 4.3.2 | <ul style="list-style-type: none"> -Page 4.3.2-7, item (b), insert "or critical habitat" after "endangered species," and before "evaluating." -Page 4.3.2-9, insert new item before issue (n), "Examine cumulative impacts of construction activities on aquatic resources." Page 4.3.2-10, add a new bullet entitled "Evaluate nuisance species" to the bullet list right before "evaluation findings." |
| Socioeconomic Impacts | RLEP | SPSB | 4.4 | |
| Physical Impacts | RLEP | None | 4.4.1 | |
| Social and Economic Impacts | RLEP | SPSB | 4.4.2 | |
| Environmental Justice Impacts | RLEP | SPSB | 4.4.3 | Revise reference to Office Letter 906 to Office Instruction LIC-203. |
| Measures and Controls to Limit Adverse Impacts during Construction | RLEP | None | 4.6 | |

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|--|-----------------------|-------------------------|-------------|--|
| Environmental Impacts of Station Operation | RLEP | None | 5.0 | |
| Land Use Impacts | RLEP | SPSB | 5.1 | |
| The Site and Vicinity | RLEP | SPSB | 5.1.1 | |
| Transmission Corridors and Offsite Areas | RLEP | None | 5.1.2 | |
| Historic Properties | RLEP | None | 5.1.3 | |
| Water-Related Impacts | RLEP | EMEB | 5.2 | |
| Hydrologic Alterations and Plant Water Supply | RLEP | EMEB | 5.2.1 | |
| Water Use Impacts | RLEP | EMEB | 5.2.2 | |
| Cooling System Impacts | RLEP | None | 5.3 | |
| Intake System | RLEP | None | 5.3.1 | |
| Hydrodynamic Descriptions and Physical Impacts | RLEP | EMEB | 5.3.1.1 | Need to address scouring, dredging, turbidity and silt buildup issues. Include consideration of new Environmental Protection Agency (EPA) requirements for intake structures (40 CFR Part 9, §122 through 125 - 66 FR 65256, December 18, 2001). |

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| Aquatic Ecosystems | RLEP | None | 5.3.1.2 | <p>Page 5.3.1.2-3, "Acceptance Criteria", first line-change "construction" to "operational"; add "40 CFR Part 9, §122 through 125 - 66 FR 65256, December 18, 2001 with respect to the design requirements of intake structures."</p> <p>-Page 5.3.1.2-5, replace Section III(1) (starting with "Determine whether") with "Determine whether the applicant is in compliance with "NPDES"- regulations addressing cooling water intake structures for new facilities."</p> <p>-Page 5.3.1.2-6, under item (3) change "HIGH, MEDIUM, or LOW" to "LARGE, MODERATE or SMALL."</p> <p>-Page 5.3.1.2-7, change the first bullet to read "Access mortality for all entrained biota, considering the following:" Delete the first bullet under item (7).</p> <p>-Page 5.3.1.2-9, add reference for 40 CFR Part 9, §122 through 125 - 66 FR 65256, December 18, 2001.</p> |
| Discharge System | RLEP | None | 5.3.2 | |
| Thermal Description and Physical Impacts | RLEP | None | 5.3.2.1 | |
| Aquatic Ecosystems | RLEP | None | 5.3.2.2 | |
| Heat Discharge System | RLEP | None | 5.3.3 | |
| Heat Dissipation to the Atmosphere | RLEP | SPSB | 5.3.3.1 | |

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|-------------------------------------|-----------------------|-------------------------|-------------|--|
| Terrestrial Ecosystems | RLEP | None | 5.3.3.2 | <p>-Page 5.3.3.2-2, under “Data and Information Needs,” insert a new bullet stating “cooling tower design information for noise and aesthetics.”</p> <p>-Page 5.3.3.2-4, in the 4th paragraph, 3rd line, replace “cooling towers” with “elevated structures.”</p> <p>-Page 5.3.3.2-5, include additional consideration: Consider impacts to birds from cooling towers and their operation</p> <ul style="list-style-type: none"> • elevated structures • elevated structure vision obstructed by vapor plume <p>Page 5.3.3.2-6, 5th bullet, insert “small” for the word “minor”; 6th bullet, insert “moderate” for the word “adverse” in the first line of that bullet; 7th bullet, insert “large” for the word “adverse” in the first line of that bullet.</p> |
| Impacts to Man | RLEP | None | 5.3.4 | Analysis should include review of microorganisms from heating systems (thermophillic microorganisms). This analysis can be conducted at the ESP stage with adequate information related to the cooling system (type of heat sink) but it will be important to look for new and significant information for issues like thermophillic microorganisms at the COL stage. |
| Environmental Impacts of Waste | RLEP | None | 5.5 | |
| Nonradioactive Waste System Impacts | RLEP | None | 5.5.1 | |
| Mixed Waste Impacts | RLEP | IEHB | 5.5.2 | |
| Transmission System Impacts | RLEP | None | 5.6 | |
| Terrestrial Ecosystems | RLEP | None | 5.6.1 | |
| Aquatic Ecosystems | RLEP | None | 5.6.2 | |

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|---|-----------------------|-------------------------|-------------|-----------------------------|
| Impacts to Man | RLEP | None | 5.6.3 | |
| Uranium Fuel Cycle Impacts | RLEP | None | 5.7 | |
| Socioeconomic Impacts | RLEP | SPSB | 5.8 | |
| Physical Impacts of Station Operation | RLEP | None | 5.8.1 | |
| Social and Economic Impacts of Station Operation | RLEP | SPSB | 5.8.2 | |
| Environmental Justice Impacts | RLEP | SPSB | 5.8.3 | |
| Decommissioning | RLEP | None | 5.9 | |
| Measures and Controls to Limit Adverse Impacts during Operation | RLEP | None | 5.10 | |
| Environmental Measurements and Monitoring Programs | RLEP | None | 6.0 | |
| Thermal Monitoring | RLEP | None | 6.1 | |
| Hydrological Monitoring | RLEP | EMEB | 6.3 | |
| Meteorological Monitoring | RLEP | SPSB | 6.4 | |
| Ecological Monitoring | RLEP | None | 6.5 | |
| Terrestrial Ecology and Land Use | RLEP | None | 6.5.1 | |
| Aquatic Ecology | RLEP | None | 6.5.2 | |
| Chemical Monitoring | RLEP | None | 6.6 | |
| Summary of Monitoring Programs | RLEP | None | 6.7 | |
| Environmental Impacts of Postulated Accidents Involving Radioactive Materials | RLEP | SPSB | 7.0 | |

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|--|-----------------------|-------------------------|-------------|---|
| Severe Accidents | RLEP | SPSB | 7.2 | |
| Transportation Accidents | RLEP | None | 7.4 | |
| Need for Power | RLEP | None | 8.0 | Need not be included unless applicant seeks approval. |
| Description of Power System | RLEP | None | 8.1 | Need not be included unless applicant seeks approval. |
| Power Demand | RLEP | None | 8.2 | Need not be included unless applicant seeks approval. |
| Power and Energy Requirements | RLEP | None | 8.2.1 | Need not be included unless applicant seeks approval. |
| Factors Affecting Growth of Demand | RLEP | None | 8.2.2 | Need not be included unless applicant seeks approval. |
| Power Supply | RLEP | None | 8.3 | Need not be included unless applicant seeks approval. |
| Assessment of Need for Power | RLEP | None | 8.4 | Need not be included unless applicant seeks approval. |
| Alternatives to the Proposed Action | RLEP | None | 9.0 | Includes unresolved conflicts concerning alternative uses of available resources. See 10 CFR 51.45(b)(3). |
| No-Action Alternatives | RLEP | None | 9.1 | |
| Energy Alternatives | RLEP | None | 9.2 | |
| Alternatives Not Requiring New Generating Capacity | RLEP | None | 9.2.1 | |
| Alternatives Requiring New Generating Capacity | RLEP | None | 9.2.2 | Should also include consideration of a combination of different alternatives. |
| Assessment of Alternative Energy Sources and Systems | RLEP | None | 9.2.3 | |
| Alternative Sites | RLEP | None | 9.3 | |
| Alternative Plant and Transmission Systems | RLEP | None | 9.4 | |
| Heat Dissipation Systems | RLEP | None | 9.4.1 | |

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| Circulating Water Systems | RLEP | None | 9.4.2 | |
| Transmission Systems | RLEP | None | 9.4.3 | Environmental Justice should also be considered in evaluation. |
| Environmental Consequences of the Proposed Action | RLEP | None | 10.0 | |
| Unavoidable Adverse Environmental Impacts | RLEP | None | 10.1 | |
| Irreversible and Irrecoverable Commitments of Resources | RLEP | None | 10.2 | |
| Relationship Between Short-Term Uses and Long-Term Productivity of the Human Environment | RLEP | None | 10.3 | |
| Benefit-Cost Balance | RLEP | None | 10.4 | Need not be included unless applicant seeks approval. |
| Benefits | RLEP | None | 10.4.1 | Need not be included unless applicant seeks approval. |
| Costs | RLEP | None | 10.4.2 | Need not be included unless applicant seeks approval. |
| Summary | RLEP | None | 10.4.3 | Need not be included unless applicant seeks approval. |

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|---|-----------------------|-------------------------|-------------|--|
| Primary Review Branch: IEHB | | | | |
| Radiation Exposure to Construction Workers | IEHB | None | 4.5 | See Note 1. Also: references to 10 CFR 20.1205 should be changed to 10 CFR 20.1502. Footnote should be added after the term "construction worker" which states: "During the ESP stage, the term 'construction worker' also refers to all other personnel on the proposed site who may be performing surveys, taking measurements, clearing land, etc." |
| Radiological Impacts of Normal Operation | IEHB | RLEP | 5.4 | |
| Exposure Pathways | IEHB | RLEP | 5.4.1 | 10 CFR Part 50 Appendix I is applicable at COL stage. If ER provides adequate information on dose receptors and pathways, analysis can be performed at ESP stage; otherwise, it will be deferred to COL stage. |
| Radiation doses to Members of the Public | IEHB | RLEP | 5.4.2 | |
| Impacts to Man | IEHB | RLEP | 5.4.3 | |
| Impacts to Biota other than Members of the Public | IEHB | RLEP | 5.4.4 | |
| Radiological Monitoring | IEHB | RLEP | 6.2 | If ER provides adequate information on dose receptors and pathways, analysis can be performed at ESP stage; otherwise, it will be deferred to COL stage. |
| Primary Review Branch: SPSB | | | | |
| Design Basis Accidents | SPSB | None | 7.1 | |
| Severe Accident Mitigation Design Alternatives | SPSB | None | 7.3 | Requires detailed design information and design-specific probabilistic risk assessment. If not available in ESP application, review and staff findings on these sections will be deferred to COL stage. |

NOTE 1: The following paragraphs address the radiation protection/dosimetry/site monitoring related responsibilities as they pertain to an ESP site.

Where a proposed ESP site is not adjacent to or near an existing operating reactor or materials facility and where it is apparent that no individual, in the course of employment related to a proposed ESP site, will exceed applicable exposure limits for members of the public, then the ESP application need not address radiological assessment or protection for workers associated with the proposed site (or with construction of a reactor at that site).

If the proposed site is adjacent to or near an existing operating reactor or materials facility, and

- 1) the ESP applicant and the other facility licensee are the same, that licensee is responsible for ensuring that the radiation dose to members of the public (including workers associated with the proposed site or any facility that might be constructed on the proposed site) will comply with the applicable requirements of 10 CFR Part 20. The licensee (ESP applicant) will also be responsible for providing, in the Environmental Report that supports the ESP application, the impact analysis with respect to construction worker doses as discussed in Section 4.5 (Radiation Exposure to Construction Workers) of NUREG-1555.
- 2) the ESP applicant and the other facility licensee are not the same, the licensee for the other facility alone is responsible for ensuring that dose to members of the public at the proposed site will comply with the applicable requirements of 10 CFR Part 20. The ESP applicant, however, will be responsible for providing, in the Environmental Report in Section 4.5 (Radiation Exposure to Construction Workers) of NUREG-1555.