

# Safety and Environmental Review Panels

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# SERP Functions

- **Safety and Environmental Review Panel (SERP)**
- **Included as part of the performance-based license condition (usually License Condition 9.4)**
- **Reviews changes to facility and procedures**
- **Reviews tests and experiments**
- **Determines whether changes, tests, or experiments require a license amendment**
- **Minimum SERP members management, operations, and the radiation safety officer (RSO).**



# Performance-Based License Condition

- **Modeled after 10 CFR 50.59**
- **Paragraph A – Categories of changes that licensee may make without a license amendment**
- **Paragraph B – Criteria to determine if a license amendment is required**
- **Paragraph C – Requirement of consistency with previous safety and environmental determinations**
- **Paragraph D – Requirement for and the specifications of the SERP**
- **Paragraph E – Requirement for recordkeeping**



# Performance-Based License Condition (cont'd.)

## 9.4 Change, Test, and Experiment License Condition

- A) The licensee may, without obtaining a license amendment pursuant to 10 CFR 40.44, and subject to conditions specified in (B) of this condition:
- i Make changes to the facility as described in the license application;
  - ii Make changes to the procedures as described in the license application; and
  - iii Conduct tests or experiments not described in the license application.



# Performance-Based License Condition (cont'd.)

- B) The licensee shall obtain a license amendment pursuant to 10 CFR 40.44 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would:
  - i Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the license application;
  - ii Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a facility structure, equipment, or monitoring system (SEMS) important to safety previously evaluated in the license application;
  - iii Result in more than a minimal increase in the consequences of an accident previously evaluated in the license application;
  - iv Result in more than a minimal increase in the consequences of a malfunction of an SEMS previously evaluated in the license application;

# Performance-Based License Condition (cont'd.)

- v Create a possibility for an accident of a different type than any previously evaluated in the license application;
- vi Create a possibility for a malfunction of an SEMS with a different result than previously evaluated in the license application;
- vii Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report (FSER), environmental impact statement (EIS), environmental assessment (EA) or technical evaluation reports (TERs) or other analysis and evaluations for license amendments.
- viii For purposes of this paragraph as applied to this license, SEMS means any SEMS that has been referenced in a staff SER, TER, EA, or EIS and supplements and amendments thereof.

# Performance-Based License Condition (cont'd.)

- C) Additionally, the licensee must obtain a license amendment unless the change, test, or experiment is consistent with the NRC staff's previous conclusions, or the basis of or analysis leading to those conclusions, regarding actions, designs, or design configurations analyzed and selected in the site or facility SER, TER, and EIS or EA. This includes all supplements and amendments to the license, as well as all SERs, TERs, EAs, and EISs associated with amendments to this license.
- D) The licensee's determinations concerning (B) and (C) of this condition shall be made by a Safety and Environmental Review Panel (SERP). The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management (e.g., a Plant Manager) and shall be responsible for financial approval for changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and one member shall be the radiation safety officer (RSO) or equivalent, with the responsibility of assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP, as appropriate, to address technical aspects such as groundwater or surface water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants.

# Performance-Based License Condition (cont'd.)

E) The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations made by the SERP that provide the basis for determining changes are in compliance with (B) of this condition. The licensee shall furnish, in an annual report to the NRC, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation for each. In addition, the licensee shall annually submit to the NRC changed pages, which shall include both a change indicator for the area changed (e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed) and a page change identification (date of change, change number, or both) for the operations plan and reclamation plan of the approved license application that reflects changes made under this condition.



# Basic SERP Process

- **Determine if action falls into one of the Paragraph A categories**
- **Determine if the action meets all the criteria in Paragraph B**
- **Determine if the action is consistent with previous safety and environmental conclusions (Paragraph C)**
- **Ensure that proper personnel are included in SERP**
- **If Paragraphs A through C are met, then SERP can approve action**
- **Maintain Records per Paragraph E and provide annual SERP report to NRC**

# Observations/Suggestions

- **SERP cannot amend a license condition**
- **Each action should be documented separately and signed off by each SERP member.**
- **SERP Quality and Completeness**
  - **Do not provide a simple Paragraph B checklist**
  - **Need to justify each Paragraph B criterion**
  - **SERP decisions should be stand-alone**
- **If a SERP action fails, document that failure**
- **If the action does not fall into Paragraph A, it either requires amendment or no SERP action is required**

# Activities Previously Approved by SERP

- **Wellfield packages**
- **Radiation staff qualifications**
- **Start operations and header houses and new wells**
- **Test processing of new resins**
- **Start new reverse osmosis units**
- **Operate pond water treatment circuit**
- **Change organizational structure**
- **Approval to operate a new deep disposal well**

