Entergy

Entergy Operations, Inc.
Pre-submittal Meeting

River Bend Station
Planned License Amendment Request

Proposed License Condition Concerning the Receipt, Possession, and Use of Byproduct Materials from other Entergy Stations

January 25, 2021

Introductions

- Ron Gaston – Director, Licensing – Entergy Corporate
- Brad Cole – Senior Manager, Fleet Radiation Protection
- Tim Schenk – Regulatory Assurance Manager – RBS
- Joshua Engel – Manager, Radiation Protection - RBS
- John Schrage – Licensing Engineer - Entergy Corporate

Background

River Bend Station (RBS) License Conditions 2.B.(4), 2.B.(5), and 2.B.(6) address the receipt, possession, and use of byproduct and special nuclear material:

2.B.(4) EOI, pursuant to Section 103 of the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

2.B.(5) EOI, pursuant to Section 103 of the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

2.B.(6) EOI, pursuant to Section 103 of the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

Background (cont.)

In order to maximize efficient use of resources, Entergy would like the ability to ship radioactive samples, radioactive sources, and equipment contaminated with low levels of radioactive material between Entergy nuclear stations for analysis, repair, calibration, and return shipment. Examples include:

- Analysis of radioactive samples (i.e., to utilize specialized analytical equipment that a particular Entergy site may not possess)
- Repair and calibration of M&TE (e.g., Gauges, Torque Wrenches, and MOV Test Equipment)
- Repair of valves, motors, bearings, and switches
- Repair and calibration of detectors with self-contained radioactive sources
- Use of reactor and fuel services equipment (e.g., stud tensioners, stud turn-out tooling, stud cleaning machines, computers, and refueling consoles)
- Use of dry cask storage equipment (e.g., upenders, slings, forced dehydration and cooling apparatus)

The existing RBS license conditions that address the receipt, possession, and use of byproduct material do not explicitly allow for these types of activities.

Proposed Amendment

- The proposed change will add a license condition concerning the receipt, possession, and use of byproduct materials, such that RBS would be able to receive and use radioactive samples and equipment contaminated with low levels of radioactive material from the other Entergy facilities.

  EOI, pursuant to Section 103 of the Act and 10 CFR Parts 30 and 70 to receive, possess, but not separate, such byproduct materials as may be produced by the operation of Arkansas Nuclear One, Units 1 and 2; Grand Gulf Nuclear Station, Unit 1; and Waterford Steam Electric Station, Unit 3 for the purposes of sample analysis, equipment calibration, or equipment repair.

- The proposed change will enable Entergy to more efficiently analyze radioactive samples and conduct calibration and maintenance on equipment contaminated with low levels of radioactive material.

Precedent

- Other licensees have similar license conditions – Brunswick, Shearon Harris, Prairie Island, LaSalle, and Peach Bottom

Brunswick Steam Electric Plant, Units 1 and 2

2.B.(5) Pursuant to the Act and 10 CFR Parts 30 and 70 to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Brunswick Steam Electric Plant, Unit Nos. 1 and 2, and H. B. Robinson Steam Electric Plant, Unit No. 2.

Shearon Harris Nuclear Power Plant, Unit 1

2.B.(7) Pursuant to the Act and 10 CFR Parts 30 and 40, Duke Energy Progress, LLC to receive, possess and process for release or transfer to the Shearon Harris site such byproduct material as may be produced by the Shearon Harris Energy and Environmental Center;

2.B.(8) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, Duke Energy Progress, LLC to receive and possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Brunswick Steam Electric Plant, Units 1 and 2, and H. B. Robinson Steam Electric Plant, Unit 2.

Precedent (cont.)

Prairie Island Nuclear Generating Plant, Unit Nos.1 and 2

2.B.(6) Pursuant to the Act and 10 CFR Parts 30 and 70, to transfer by-product materials from other NSP job sites for the purposes of volume reduction and decontamination.

LaSalle County Station, Units 1 and 2

2.B.(5) Exelon Generation Company, LLC, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of LaSalle County Station, Units 1 and 2, and such byproduct materials as may be produced by the operation of Braidwood Station, Units 1 and 2, Byron Station, Unit Nos. 1 and 2, and Clinton Power Station, Unit 1.

Peach Bottom Atomic Power Station, Units 2 and 3

2.B.(5) Exelon Generation Company, pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility, and such Class B and Class C low-level radioactive waste as may be produced by the operation of Limerick Generating Station, Units 1 and 2.

Technical Basis for Approval

Current Entergy procedures for the receipt and control of radioactive materials, as well as the control of radiation exposure, are consistent with the applicable chapters of NUREG-0800, "U.S. Nuclear Regulatory Commission Standard Review Plan," (SRP):

12.1	Assuring that Occupational Radiation Exposures are As Low As is Reasonably Achievable
12.2	Radiation Sources
12.3-12.4	Radiation Protection Design Features
12.5	Operational Radiation Protection Program

These procedures will ensure continued compliance with 10 CFR 20 and 10 CFR 50, Appendix A, "General Design Criteria" (GDC)

- Criterion 60 - Control of releases of radioactive materials to the environment.
- Criterion 64 - Monitoring radioactivity releases.

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