



Office of Environmental Management

U.S. Department of Energy

Categorical Exclusion Determination Form

Proposed Action Title: TEF P-Evac and Mini-TCAP I/O Module Conversion

Program or Field Office: Savannah River Site

Location(s) (City/County/State): Aiken/Aiken County/South Carolina

Proposed Action Description:

Rev. 0:

The current Tritium Extraction Facility (TEF) D/3 Distributed Control System (DCS) Instrument Control System (ICS) Process Control System (PCS) Quantum Input/Output I/O Modules in Process Control Module PCM 23A/23B dedicated to Product Flush and Evacuation (PFES) (PES) will be replaced with DeltaV DCS Platform compatible Valmet Series 8000 I/O Modules. This includes replacing the current DCS I/O Modules interfacing with the PFES. This includes providing new DCS I/O Modules for the new PFES Mini-TCAP Thermal Cycling Absorption Process System. This may include replacing the current DCS I/O Modules in a different PCM for the two new and larger size replacement Liquid Nitrogen (LN) Tanks. This includes replacing associated power supplies and cables as needed. Replace front end DCS components dedicated to the PFES, new Mini T-CAP and new LN Tank with Delta V DCS components compatible with Delta V DCS Platform.

Rev. 1:

Revision 1 entries in this EEC are complete re-writes and are the valid entries. Entries un-marked by a revision number are Revision 0-only entries and are the valid entries.

The Tritium Extraction Facility (TEF) Instrument Control System (ICS) Process Control System (PCS) D/3 Distributed Control System (DCS) supports operation and alarm of the TEF Product Evacuation (P-Evac) System and the new TEF P-Evac Mini-Thermal Cycling Absorption Process (TCAP) System. The TEF P-Evac System ICS PCS and the new TEF P-Evac Mini-TCAP System ICS PCS are classified [Reference: J-SYD-H-00003, Figure 2-1].

The TEF ICS PLC Network D/3 DCS supports operation and alarm of the two TEF Inert Gas System (IGS) replacement and larger Liquid Nitrogen (LN) Tanks. The TEF IGS ICS PLC Network is unclassified [Reference: J-SYD-H-00003, Figure 2-1].

The Proposed Activity will replace obsolete ICS PCS D/3 DCS Quantum I/O Modules with Valmet Series 8000 I/O Modules to support operation and alarm of the TEF P-Evac System. The Proposed Activity will add ICS PCS Valmet Series 8000 I/O Modules to the ICS PCS to support operation and alarm of the new TEF P-Evac Mini-TCAP System. The Proposed Activity construction work of the I/O module replacements for the TEF P-Evac System ICS PCS and of the I/O module additions for the new TEF P-Evac Mini-TCAP System ICS PCS will be located in ICS PCS PCM-23A/B in cabinet PCM-48 in TEF 264-H Instrument Equipment Room (IER) Room 102.

The Proposed Activity will replace obsolete TEF ICS PLC Network D/3 DCS Quantum I/O Modules with Valmet Series 8000 I/O Modules to support operation and alarm of the two IGS replacement and larger LN Tanks. The Proposed Activity construction work of the I/O module replacements for the TEF ICS PLC Network for the two replacement and larger IGS LN Tanks will be located either in ICS PCS PCM-23A/B in cabinet PCM-48 in TEF 264-H IER Room 102 or in a location designated during the design process.

The Proposed Activity will replace associated power supplies and cables as needed. The Proposed Activity will add conduits and fire wall penetrations as needed. The Proposed Activity described in this EEC is the Proposed Activity described in MT-TRI-2025-00012.

Categorical Exclusion(s) Applied:

B1.3 ROUTINE MAINTENANCE

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of [10 CFR Part 1021](#).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

☒ The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds,

or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

☒ There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

☒ The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1))* , is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

*In accordance with Executive Order 14154, effective April 11, 2025, CEQ has removed the regulations implementing NEPA (40 CFR 1500-1508). DOE will continue to comply with the National Environmental Policy Act (NEPA) of 1969, as amended, (42 U.S.C. §§ 4321 et seq.) and DOE's NEPA Implementing Procedures (10 CFR 1021).

Based on my review of the proposed action, I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer:

Date Determined: 07/16/2025

Comments: EEC No: SRTE-H-2025-00027 Rev No: 1