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Description of document: Department of Energy (DOE) Savannah River Site (SRS) Tritium Extraction Facility (TEF) FY14 Annual Operating Plan. August 25, 2013

Requested date: 17-March-2014

Released date: 17-June-2015

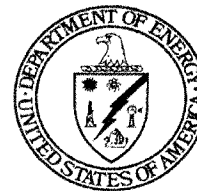
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Department of Energy
National Nuclear Security Administration
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JUN 17 2015

SENT VIA EMAIL

This letter is the final response to your March 17, 2014, Freedom of Information Act (FOIA) request for a copy of the two most recent reports on the status of the Tritium Readiness Project and a copy of the most recent status report of the Savannah River Site Tritium Extraction Facility.

We contacted NA-10 about your request. NA-10 searched, and NA-10 does publish reports on the status of the Tritium Readiness Project or status reports of the Savannah River Site Tritium Extraction Facility. The closest report matching your request, which provides an over status of the Tritium Readiness Program, can be found at:
<http://www.nnsa.energy.gov/ourmission/managingthestockpile/ssmp>.

We also contacted the Savannah River Field Office (SRFO), which has oversight responsibility for the Savannah River Site (SRS). SRFO searched all records and located one document responsive to your request. The document has been reviewed and is being provided to you with deletions made pursuant to 5 USC § 552 (b)(4) (Exemption 4 of the FOIA).

Exemption 4 of FOIA protects trade secrets and commercial or financial information obtained from a person that is privileged or confidential. This exemption is intended to protect the interests of both the government and submitters of information. The very existence of Exemption 4 encourages submitters to voluntarily furnish useful commercial or financial information to the government and provides the government with an assurance that required submissions will be reliable. The exemption also affords protection to those submitters who are required to furnish commercial or financial information to the government for safeguarding them from the competitive disadvantages that could result from disclosure. The exemption covers two distinct categories of information in federal records: (1) trade secrets; and (2) information that is (a) commercial or financial, and (b) obtained from a person, and (c) privileged or confidential.

The information being withheld pursuant to Exemption 4 consists of staffing levels. The release of the redacted information would cause harm to current government contractors by

offering an unfair advantage to opposing contractors that could be used when the contract is up for rebid.

Pursuant to 10 CFR § 1004.7 (b)(2) I am the individual responsible for the withholding of the information mentioned above pursuant to Exemption 4 of the FOIA.

Pursuant to 10 CFR § 1004.8, you may appeal our withholding of information, and our inability to located records in writing, within 30 calendar days after receipt of this letter, to the Director, Office of Hearings and Appeals, Department of Energy, L'Enfant Building, 1000 Independence Avenue, SW, Washington, DC 20585. The written appeal, including envelope, must clearly indicate that a Freedom of Information Act appeal is being made, and the appeal must contain all other elements required by 10 CFR § 1004.8. Judicial review will thereafter be available to you in the District of Columbia or in the district where: (1) you reside, (2) you have your principal place of business, or (3) the Department's records are situated.

There are no charges to you for processing your FOIA request.

If you have questions, please contact Ms. Erica White by e-mail at erica.white@nnsa.doe.gov or write to the address at the top of the first page. Please reference Control Number FOIA 14-00130-K.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Summerson', with a long horizontal flourish extending to the right.

Jane Summerson
Authorizing and Denying Official

Enclosure

**TRITIUM FACILITIES
SAVANNAH RIVER SITE**


**TRITIUM EXTRACTION FACILITY
FY14 Annual Operating Plan**


August 25, 2013

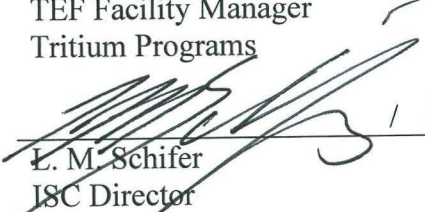
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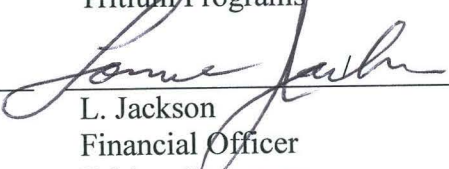
 1 27 Aug 13
R. E. Snyder, Jr.
TEF Program Manager
Tritium Programs

APPROVALS

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1.0 INTRODUCTION

The mission of the Tritium Extraction Facility is to extract tritium gas from Tritium Producing Burnable Absorber Rods (TPBARs) irradiated in Commercial Light Water Reactors (CLWR) by the Tennessee Valley Authority (TVA). Operations performed in TEF include receiving TPBARs for extraction, extracting tritium gas from the TPBARs in a furnace, and performing a preliminary separation of tritium from other gases prior to transfer to the H-Area New Manufacturing Facility (HANM).

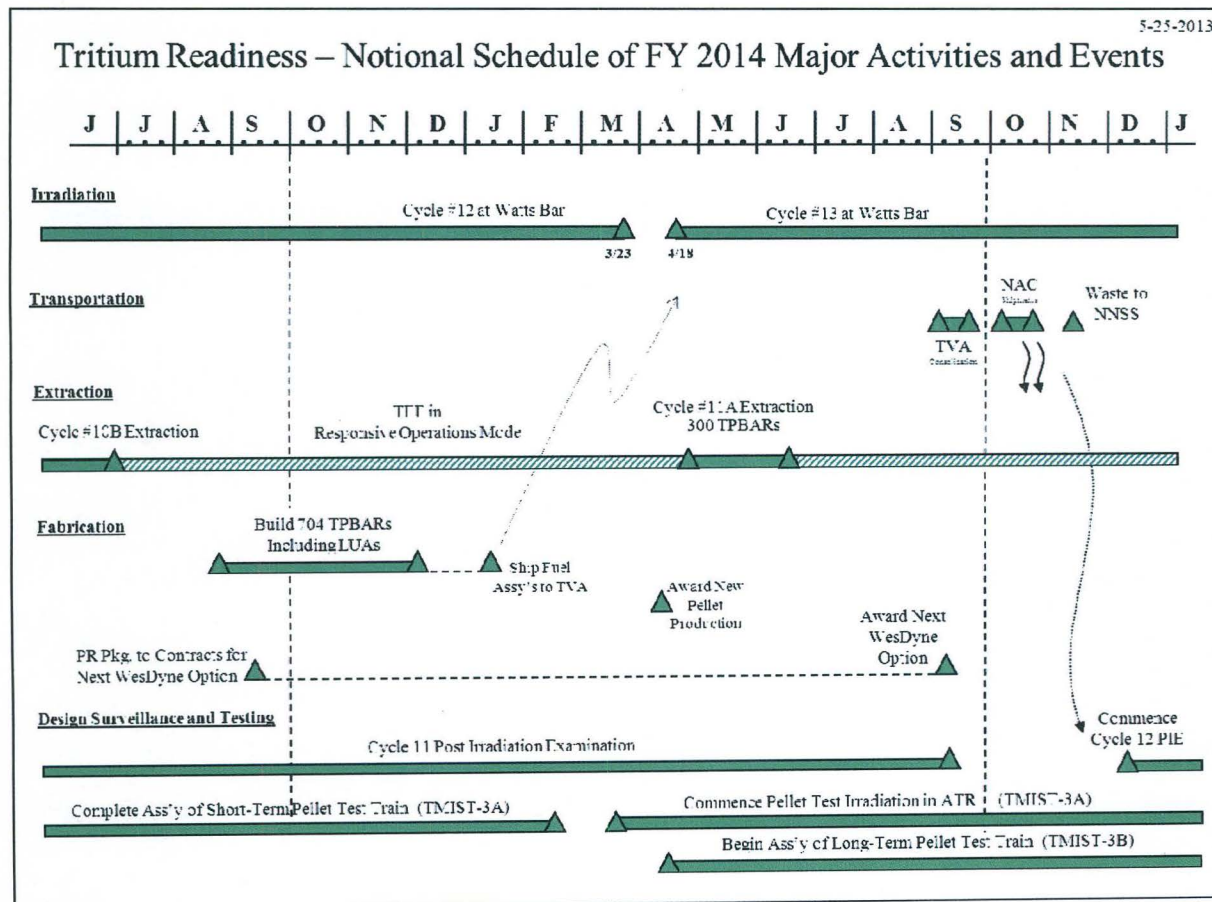
This document provides the TEF Annual Operating Plan for FY14 and includes the extraction schedule and budget for FY14. This document incorporates tasking guidance from the Tritium Readiness Subprogram FY2014 Program Implementation Plan. The scope of work includes 1) direct support to operate and maintain TEF and 2) support to the Tritium Readiness Subprogram in the areas of scheduling, risk management, TPBAR transportation, extraction technology development, TPBAR design and fabrication, and overall program management.

The associated costs included in this document are based on the TEF operating experience accumulated to date and the Responsive Operations strategy which is documented in WSRC-RP-2007-00791, TEF Responsive Operations Plan, dated 9/11/07.

The TEF extraction schedule is directly related to the TPBAR irradiation schedules at TVA reactors. The irradiation schedules are directed by NNSA HQ and documented in the Tritium Readiness Subprogram FY14 Program Implementation Plan. The irradiation schedule is shown in Figure 1 below. The Major Activities and Events schedule is shown in Figure 2. For planning purposes the TPBARs for a given cycle are assumed to start arriving at TEF 180 days after shutdown of the reactor, and TEF will receive one shipment per month until all containers are received.

	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
TVA Reactor										
Watts Bar Unit 1	#10 240 Actual TPBARs Planned TPBARs	#11 544 Submit License Amendment Request to NRC Issue SEIS ROD	#12 544 Restart Pellet Prod'n Procure Liners	#13 544 Build C#13 TPBARs	#13 544 704 Restart Getter Plating	#14 1104 1024 1280 Resume Coated Cladding	#14 1504 1424 1664 Bare Getters & Cladding	#15 1696 1726	#16	
						NA-10 Approved BCP	Proposed BCP Under Review			

Figure 2: This notional schedule is to assist with planning for FY 2014 and is not an official schedule. The FY 2014 work scope is based on receiving the President's Budget request.



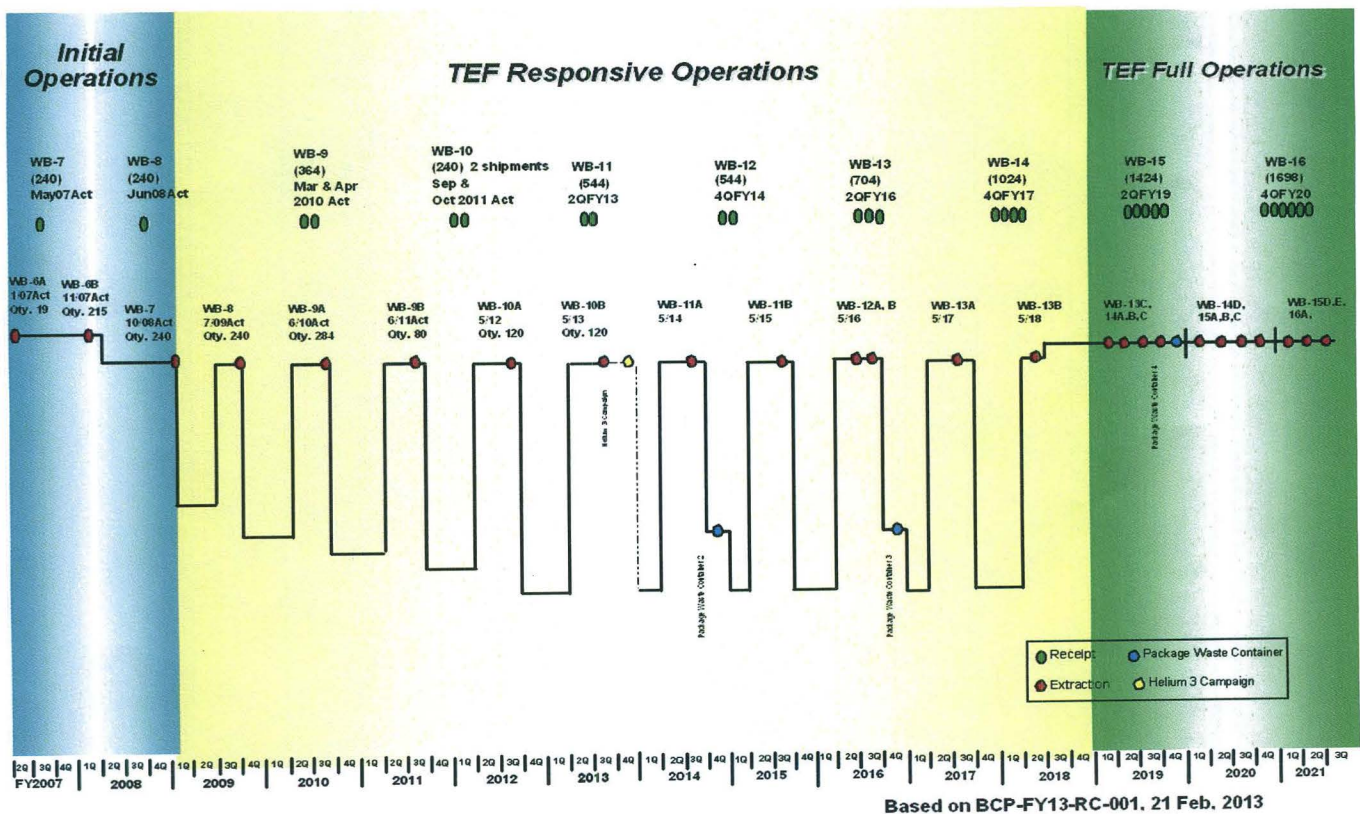
3.0 TEF OPERATING STRATEGY

The TEF operating strategy is divided into Initial Operations and Responsive Operations as shown in Figure 3. The Initial Operations phase is complete and Responsive Operations was implemented in FY09 and will extend through FY18. During Responsive Operations the activities and staffing levels will fluctuate to perform receipt and storage of TPBARS as required and to perform one furnace extraction run per year with the exception of FY16 which will perform 2 extractions. In the out years beyond the current FYNSP period TEF will be in full operations

3.1 Schedule

Figure 3 shows the extraction schedule for TEF and the receipt schedule of TPBARS from TVA. Minor changes to receipt schedules, defined as plus or minus 3 months, may occur and will have virtually no impact on the TEF operating strategy. .

Figure 3: Operations Strategy – Schedule for Receipt of TPBARS from TVA and Annual Extraction Schedule



3.2 Staffing Levels

Table 1 shows the FY14 projected staffing FTEs (full time equivalents) for all organizations that are directly assigned to TEF. Personnel are directly assigned to TEF to support the operation, maintenance, engineering, and radiological control of the facility equipment and systems as well as to provide the necessary resources for training and procedures, quality assurance, emergency response, scheduling, and program management. Commensurate with the reduction in operations activities in TEF and the lower staffing level during the Non-Extraction period, the Operations and Radiological Control staffing levels are reduced during the Non-Extraction months. The other support groups staffing levels remain constant during the Extraction and Non-Extraction months.

Table 1: Tritium Extraction Facility Staffing (FTEs) for FY14

Organization	Responsive Ops Extraction 3 months duration	Responsive Ops Non- Extraction 9 months duration	Avg. FTEs
Operations (Process)	(b)(4)	(b)(4)	
Operations (Training and Procedures)			
Maintenance			
Engineering			
Radiological Control			
Quality & Support Services			
Business Planning			
Total			

4.0 SCOPE OF WORK, PERFORMANCE MILESTONES AND FUNDING REQUIREMENTS

The Scope of Work activities are directly from the Tasking Guidance in the Tritium Readiness Subprogram Program Implementation Plan for FY14.

4.1 FY14 Scope of Work

- Plan and manage the safe, secure and economical operation of the TEF to meet stockpile inventory requirements
- Extract TPBARs from Cycle 11A by 15 June 2014
- Decontaminate NAC-LWT casks as required
- Act as the Shipper of Record for TPBARs shipments to SRS
- Share extraction data with PNNL and update extraction code as needed
- Provide support to the Tritium Production Working Group, as requested, in coordinating core design, reactor operations and TPBAR performance.
- Submit an update of the TEF operating plan, with extraction schedule and budget forecast for FY2014 through FY2019 by 16 Dec 2013
- Maintain technical communications with subprogram participants regarding changes to the TPBAR design, irradiation and transportation processes, and changes in TEF requirements that might require design or process changes.
- Participate in TPBAR design reviews, risk management activities, quarterly management meetings and weekly conference calls
- Provide systems engineering support for risk management facilitation, coordination, and administration including annual updates of the risk report, quarterly risk process metrics, and expediting closure of risk handling actions.
- Participate in TPBAR risk management activities, quarterly management meetings, and weekly conference calls.
- Provide data collection, updates and management of the Integrated Program Schedule (IPS) including metrics for monthly tracking of internal milestones
- Provide technical support to other Tritium Readiness activities, such as extraction predictions and risk management initiatives
- Participate in compliance with the Tritium Readiness QA and CM programs.
- Support NNSA independent technical reviews as required
- Participate as a member of the Transportation Working Group
- Coordinate with Savannah River Field Office in support of Tritium Readiness activities
- Plan and authorize a project to provide direct stacking capability to the TEF by 30 Sept, 2014
- Continue plans for the project to upgrade the worker protection system to Delta V technology by 30 Sept, 2014
- Continue plans for the project to upgrade the distributed control system to Delta V, by 30 Sept, 2014

4.2 Helium 3 Activities

- There will be continuing Helium-3 activities in FY14 that will occur in TEF, these activities are funded by DOE Office of Science, and will be managed on a non-interference basis with Tritium Readiness Program items.
- The DOE Office of Science, Isotope Sales has provided funding to SRS to support a Helium 3 task to Extract Spent Hydride Beds in the TEF Extraction Furnace and collect the Helium 3. These beds were used in the H-Area New Manufacturing Facility which is adjacent to TEF and the beds have reached end of life. The plan is to process the spent beds in a TEF Extraction Furnace in FY14. The FY14 scope is to prepare and extract this He3, which will require support from several TEF dedicated personnel. That work will be charged to the appropriate DOE Office of Science account.

FY14 Funding Requirements

The funding requirements for FY14 as shown in Figure 3 are based on performing scope as defined in this AOP and continuing the Responsive Operations strategy. Cost and schedule performance evaluation reporting will be submitted monthly to NNSA-HQ using an Earned Value Management System (EVMS) format.

Assumptions

- 1) Budget requirements were based on funding levels specified in the AFP and estimated \$2.3M in carryover (based on July 2013 Fiscal Year-end Forecast (FYF)).
- 2) Expected funding is as follows:
 - a. $\$32.866\text{M AFP} + \$2.3\text{M FY13 Carryover} = \$35,166\text{M}$
- 3) Costs are in fully burdened dollars.
- 4) Labor costs assume that for 3 months of the year TEF is at a higher staffing level to support TPBAR breaching and extraction operations.

Figure 3: TEF Operating and Capital Funding Requirements FY14

	\$M
Labor	\$12,300
Materials	\$2,193
Other Non-Labor & Subcontracts	\$2,750
Site Support WADS	\$7,523
Helium 3	\$0
Management Reserve	\$2,300
OPERATING- Burdened \$	\$27,066
CE and GPP (New) (Burdened \$)	
Direct Stacking Project	\$2,900
DCS Replacement Project	\$1,800
PLC Replacement Project	\$1,500
TOTAL CE / GPP	\$6,200
FEE	\$1,900
TOTAL REQUIREMENTS	\$35,166