



**U.S. Department of Energy  
Hanford Site**

August 12, 2020

20-ECD-0041

Ms. Alexandra K. Smith, Program Manager  
Nuclear Waste Program  
Washington State  
Department of Ecology  
3100 Port of Benton Blvd.  
Richland, Washington 99354

Dear Ms. Smith:

AUGUST 2020 QUARTERLY REPORT FOR THE STATE OF WASHINGTON VS.  
U.S. DEPARTMENT OF ENERGY, CASE NO. 08-5085-RMP, FOR WASTE TREATMENT  
AND IMMOBILIZATION PLANT CONSTRUCTION AND STARTUP ACTIVITIES AND  
TANK RETRIEVAL ACTIVITIES – APRIL 1, 2020, THROUGH JUNE 30, 2020

This letter transmits the U.S. Department of Energy August 2020 Quarterly Report (Attachment) under Section IV-C-1 of the subject Consent Decree, for the period of April 1, 2020, through June 30, 2020. Pursuant to the Consent Decree, this report provides the status and progress made during the reporting period.

As requested by the Washington State Department of Ecology, copies of the directives given to contractors for work required by the Consent Decree are included in the Attachment.

If you have any questions, please contact Thomas W. Fletcher, Assistant Manager, Waste Treatment and Immobilization Plant Project, Office of River Protection, on (509) 376-4941, or Robert G. Hastings, Assistant Manager, Tank Farms Project, Office of River Protection, on (509) 376-9824.

Sincerely,

A handwritten signature in blue ink that reads "Brian T. Vance".

Digitally signed by Brian T. Vance  
DN: cn=Brian T. Vance, o=Office of River  
Protection, ou=Department of Energy,  
email=brian.t.vance@orp.doe.gov, c=US  
Date: 2020.08.12 10:38:43 -07'00'

Brian T. Vance  
Manager

ECD:BRT

Attachment

cc: See page 2

Ms. Alexandra K. Smith  
20-ECD-0041

-2-

August 12, 2020

cc w/attach:

E. A. Connell, EM-4.4  
L. Contreras, YN  
J. S. Decker, Ecology  
J. J. Lyon, Ecology  
J. D. McDonald, Ecology  
K. Niles, Oregon Energy  
K. A. Ott, EM-3  
S. R. Ross, EM-4.31  
M. J. Turner, MSA  
Administrative Record (D-16C-03P)  
Environmental Portal

cc w/o attach:

J. Bell, NPT  
G. Bohnee, NPT  
R. Buck, Wanapum  
S. L. Dahl, Ecology  
D. R. Einan, EPA  
S. Leckband, HAB  
M. Murphy, CTUIR  
J. B. Price, Ecology

Attachment  
20-ECD-0041

U.S. Department of Energy, Office of River Protection  
Quarterly Report, April 1, 2020, through June 20, 2020, and  
Tank Farm / Waste Treatment and Immobilization Plant  
Direction Letters

(57 Pages Including Cover Sheet)

# Office of River Protection Quarterly Reporting Period April 1, 2020, through June 30, 2020<sup>1</sup>

Consent Decree, *State of Washington v. Dept. of Energy*, No: 08-5085-FVS (October 25, 2010)

Amended Consent Decree, *State of Washington v. Dept. of Energy*, No: 2:08-CV-5085-RMP (March 11, 2016)

Second Amended Consent Decree, *State of Washington v. Dept. of Energy*, No: 2:08-CV-5085-RMP (April 12, 2016)

Third Amended Consent Decree, *State of Washington v. Dept. of Energy*, No: 2:08-CV-5085-RMP (October 12, 2018)<sup>2</sup>



**2440 Stevens Center Place  
Richland, Washington 99352  
Office of River Protection**

**BENTON HARP**

Digitally signed by BENTON  
HARP  
Date: 2020.08.12 08:56:38 -07'00'

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B.J. Harp, Deputy Manager  
Office of River Protection

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Date

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<sup>1</sup> Except where otherwise expressly stated, the narrative descriptions of progress in this report cover the period from April 1, 2020, through June 30, 2020. Earned Value Management System data and descriptions cover the period ending May 31, 2020.

<sup>2</sup> The Consent Decree, Amended Consent Decree and Second Amended Consent Decree are between the State of Washington and U.S. Department of Energy. For each of these decrees, there are companion, separate consent decrees with the State of Oregon, as Intervener, under the same case numbers.

<b>Topic</b>	<b>Page</b>
ACRONYMS AND ABBREVIATIONS .....	II
INTRODUCTION .....	1
TANK FARM ACTIONS AND MILESTONES .....	2
SINGLE-SHELL TANK RETRIEVAL PROGRAM .....	3
TANK WASTE RETRIEVAL WORK PLAN STATUS.....	8
TANK FARM EARNED VALUE MANAGEMENT SYSTEM QUARTERLY ANALYSIS.....	9
RETRIEVAL LABOR HOURS ON SELF-CONTAINED BREATHING APPARATUS .....	13
WRITTEN DIRECTIVES FOR TANK FARMS PROJECT.....	14
WASTE TREATMENT AND IMMOBILIZATION PLANT PROJECT .....	15
WASTE TREATMENT AND IMMOBILIZATION PLANT MILESTONES .....	19
PRETREATMENT FACILITY .....	24
HIGH-LEVEL WASTE FACILITY.....	27
LOW-ACTIVITY WASTE FACILITY .....	29
BALANCE OF FACILITIES .....	31
ANALYTICAL LABORATORY .....	33
WRITTEN DIRECTIVES FOR WASTE TREATMENT AND IMMOBILIZATION PLANT PROJECT .....	34

## Acronyms and Abbreviations

AoA	analysis of alternatives
BNI	Bechtel National, Inc.
BOF	Balance of Facilities
COVID-19	Coronavirus Disease 2019
CV	cost variance
DFLAW	direct-feed low-activity waste
DOE	U.S. Department of Energy
Ecology	Washington State Department of Ecology
EMF	effluent management facility
ERSS	extended reach sluicer system
EVMS	Earned Value Management System
FY	fiscal year
HEPA	high-efficiency particulate air
HIHTL	hose-in-hose transfer line
HLW	High-Level Waste (Facility)
LAB	Analytical Laboratory
LAW	Low-Activity Waste (Facility)
LBL	Low-Activity Waste Facility, Balance of Facilities, and Analytical Laboratory
NLD	nonradioactive liquid drain
ORP	Office of River Protection
PJM	pulse-jet mixer
PPR	Project Review Team
PT	Pretreatment (Facility)
SV	schedule variance
WTP	Waste Treatment and Immobilization Plant

## **Introduction**

The U.S. Department of Energy’s (DOE), Office of River Protection (ORP) submits the following information to satisfy its obligation to provide “a written report documenting the WTP construction and startup activities and tank retrieval activities,” as required by Section IV-C-1 of the Second Amended Consent Decree in *State of Washington v. United States Department of Energy*, No: 2:08-CV-5085-RMP (April 12, 2016).

Except where otherwise stated, the narrative descriptions of progress in this report cover the period from April 1, 2020, through June 30, 2020. Earned Value Management System (EVMS) data and descriptions cover the period ending May 31, 2020; this includes the facility completion percentage estimates within various locations in the Waste Treatment and Immobilization Plant (WTP) section.

As the Washington State Department of Ecology (Ecology) has requested, written directives, not previously submitted for the period addressed by this report for work required by the Amended Consent Decree, are included with this report.

## Tank Farm Actions and Milestones

Numbers	Titles	Due Date	Status
<i>Actions</i>			
D-16E-01	DOE must purchase by December 31, 2016, a spare E-A-1 reboiler for the 242-A Evaporator.	12/31/2016	Complete
D-16E-02	Have a spare E-A-1 reboiler available by December 31, 2018.	12/31/2018	Complete
<i>Milestones</i>			
D-16B-03	“Of the 12 SSTs referred to in B-1 and B-2, complete retrieval of tank waste in at least 5.”	06/30/2021 <sup>1</sup>	Amendment Proposed <sup>3</sup>
D-16B-01	“Complete retrieval of tank waste from the following remaining SSTs in WMA-C: C-102, C-105, and C-111.”	03/31/2024	Complete
D-16B-02	“Complete retrieval of tank wastes from the following SSTs in Tank Farms A and AX: A-101, A-102, A-104, A-105, A-106, AX-101, AX-102, AX-103, and AX-104. Subject to the requirements of Section IV-B-3, DOE may substitute any of the identified 9 SSTs and advise Ecology accordingly.”	09/30/2026 <sup>1</sup>	Under Analysis <sup>2</sup> / Amendment Proposed <sup>3</sup>

<sup>1</sup> Third Amended Consent Decree, *State of Washington v. Dept. of Energy*, No: 2:08-CV-5085-RMP (October 12, 2018).

<sup>2</sup> As discussed in the joint motion to amend the Consent Decree filed on October 1, 2018, DOE is engaged in ongoing analysis of non-vapors-related retrieval challenges and tank condition issues associated with Tanks A-104 and A-105 (i.e., two of the nine tanks currently specified for retrieval under the B-2 Milestone). These issues are under analysis, and could require issuance of a “serious risk” notice or another request for amendment of the Consent Decree (including the B-2 Milestone). DOE met with Ecology and attorneys from the Washington State Office of the Attorney General on August 30, 2018, to discuss the retrieval challenges and issues with the condition of tanks A-104 and A-105. Since August 2018, DOE has had several discussions with Ecology on this topic.

<sup>3</sup> Certain Consent Decree-related work at the Hanford Site has been interrupted since March 23, 2020, due to the COVID-19 pandemic. On May 21, 2020, the U.S. Department of Justice, on behalf of DOE, submitted a proposal to the State of Washington to amend the Consent Decree in *State of Washington v. Brouillete, et al.*, No. 2:08-cv-5085-RMP (E.D. Wash.) due to a Force Majeure event. ENV\_DEFENSE-#919846, 2020, “Proposal to Amend Consent Decree in *State of Washington v. Brouillete, et al.*, No. 2:08-cv-5085-RMP (E.D. Wash.), Due to Force Majeure Event,” external letter to A.A. Fitz, Office of the Attorney General, Ecology Division, from A.D. Saylor, C.H. Kolman, and S. Shea, United States Department of Justice, Environmental Defense Section, Washington, D.C., May 21.

DOE = U.S. Department of Energy.

Ecology = Washington State Department of Ecology.

SST = single-shell tank.

WMA-C = C Tank Farm waste management area.

## **Single-Shell Tank Retrieval Program**

**Quarterly Statement:** Tank retrieval activities have complied with milestones already come due as of the date of this report. There are no missed milestones that may affect compliance with other milestones.

On October 1, 2018, the United States and the state of Washington filed a joint motion to amend the Consent Decree, along with a proposed stipulation and order modifying the Amended Consent Decree between DOE and the state of Washington in *State of Washington v. Dept. of Energy*, No: 2:08-CV-5085-RMP. The parties requested that the court amend the Amended Consent Decree by extending the completion dates for the B-2 and B-3 milestones. On October 12, 2018, the court granted the joint motion and entered the Third Amended Consent Decree, which extended the B-3 Milestone due date to June 30, 2021, and the B-2 Milestone to September 30, 2026.

Essential mission-critical operations and limited onsite activities were undertaken in light of restrictions relating to coronavirus disease 2019 (COVID-19). Additional work on planning for remobilization, engineering analysis, permitting documentation development, etc. by both DOE and site contractors progressed as conditions allowed.

On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.

***Tank Farms Assistant Manager:*** Rob Hastings

***Federal Program Manager:*** Jeff Rambo

### **Accomplishments in the Reporting Period**

#### ***Completed Accomplishments:***

- Completed the AX-104 Pit B extended reach sluicer system (ERSS) and in-pit equipment installations and hookups, and are ready for the integrated construction acceptance tests.
- Completed the AX-104 Pit C ERSS installation and made the hose-in-hose transfer line (HIHTL) connections.
- Completed shipment of two long-length equipment removals (AX-101-01D pump and A-103 saltwell screen) to Environmental Restoration Disposal Facility.
- Completed shipment of one long-length equipment removal (AX-101-01B pump) to Environmental Restoration Disposal Facility.
- Completed the A Tank Farm ventilation system cold operations acceptance tests.
- Completed hot operational testing of the A Tank Farm exhauster and ventilation system.

***Ongoing Activities:***

- Continue assess remaining waste in Tank-102 to determine the amount and composition of the waste..
- Continue the procurement of the residual volume measurement system. The residual volume measurement system and camera / Computer Aided Design modeling system will be deployed to calculate the Tank AX-102 residual waste volume.
- If allowed during COVID controls, continue Tank AX-104 installation and testing of waste retrieval equipment.
- If allowed during COVID controls, continue Tank AX-103 installation of electrical and support infrastructure.
  - Conduit installation, backfilling, compacting, and wire pulling.
  - HIHTL installation, backfilling, compacting, shielding placement, and testing.
- If allowed during COVID controls, continue Tank AX-101 removal of long-length equipment.
- Continue removal of AY to AP HIHTL removal in support of future A Tank Farm HIHTL installation.
- Continue Tank A-101 cover block removals, pit cleaning, and removal of long-length equipment in preparation for future retrieval equipment installation.

***Accomplishments Expected in the Next Reporting Period***

- Complete commissioning of the A Tank Farm ventilation system.

**Issues Encountered in the Reporting Period**

- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. While the majority of the Hanford Site workforce continues to telework, there are a limited number of workers reporting to the site to perform activities necessary to maintain the site in a safe condition, continuing to protect the community, region, and the environment. DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the Consent Decree and, if other actions may be necessary. On May 21, 2020, the United States Department of Justice, on behalf of DOE, sent letter ENV\_DEFENSE-#919846, “Proposal to Amend Consent Decree in *State of Washington v. Brouillete, et al.*, No. 2:08-cv-5085-RMP (E.D. Wash.), Due to *Force Majeure* Event, to the Washington State Office of the Attorney General with a proposal to amend the Consent Decree in *State of Washington v. Brouillete, et al.*, No. 2:08-cv-5085-RMP (E.D. Wash.). The proposal included schedule extensions due to force majeure events associated with the COVID-19 pandemic.
- Reduced worker efficiencies associated with use of supplied air continued to impact work in the tank farms. The use of full-face air purifying respirators has been approved for use

in the AX Tank Farm during operation of the AX Tank Farm exhausters (POR126/POR127). Mandatory use of supplied air respirators is required when the AX Tank Farm exhausters are not operating or during retrieval operations.

- DOE is engaged in ongoing analysis of retrieval challenges and condition issues associated with tanks A-104 and A-105 (i.e., two of the nine tanks currently specified for retrieval under the B-2 Milestone)<sup>3</sup>. These issues are under analysis and could require issuance of a “serious risk” notice or another request for amendment of the Consent Decree (including the B-2 Milestone).
- The as-found condition of existing abandoned equipment in AX and A tank farms has affected DOE’s ability to remove the equipment efficiently and is affecting the cost and schedule.
  - Removal of Tank A-103 Riser 2 thermocouple required a duration of 209 days to complete. The lower section of the thermocouple was damaged and could not be removed. Unique tooling was required to lower the remaining section to the tank bottom.
  - Removal of Tank A-101 Riser 2 thermocouple required the top sections to be removed in two sections and the remaining third section to be lowered to the tank bottom.
  - Removal of Tank A-106 Riser 2 thermocouple was removed in sections, with the lower section left in the tank.
  - A stuck shield plug in Tank A-101 01C Pit required an alternative method (core drilling) to tie in the ventilation system.
  - A stuck shield plug in Tank AX-102 02B Pit prevented the installation of the planned third extended reach sluicer.
- On December 3, 2018, Ecology sent ORP and the DOE Richland Operations Office a letter (18-NWP-177, “Hanford Site Ambient Air Boundary Concerns”) regarding the Hanford Site ambient air boundary. Ecology expressed its concern that the ambient air boundary appears to have changed because of increased public access to parts of the Hanford Site. DOE, Ecology, and the Washington State Department of Health met several times to attempt to develop a shared understanding of existing conditions and establish a compliant and cost effective path forward. DOE and Ecology engaged in mediation to try and resolve the issue. On May 8, 2020, DOE and Ecology reached a mediated agreement to resolve Ecology’s concerns about the Hanford Site ambient air boundary. The parties are developing a Memorandum of Agreement to capture revisions to the boundary and other agreements.
- On January 28, 2019, ORP received a Washington River Protection Solutions LLC letter (WRPS-1900243, “Contract Number DE-AC27-08RV14800 – Washington River

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<sup>3</sup> The U.S. Department of Energy met with the Washington State Department of Ecology and attorneys from the Washington State Office of the Attorney General on August 30, 2018, to discuss the retrieval challenges and issues with the condition of Tanks A-104 and A-105. The U.S. Department of Energy has had several discussions with Ecology on this topic since August 2018.

Protection Solutions LLC Anticipated Consent Decree Milestone Impacts due to Lack of State of Washington, Department of Ecology Approval Order”), outlining potential impacts to tank retrievals at A and AX tank farms, due to a lack of Ecology regulatory approval associated with exhausters in the 241-A and 241-AX tank farms. On March 4, 2019, DOE transmitted WRPS-1900243 to ensure Ecology was aware of potential impacts to A and AX tank farm retrievals, and possibly associated Consent Decree milestones, if Ecology did not approve a pending notice of construction application in the near future. DOE is continuing to evaluate the information in the letter, as well as whether amendment of the Consent Decree (including potential invocation of force majeure provisions) or other actions may be necessary. Retrieval of Tank AX-102 began on August 31, 2019, with the exhausters running at 1,000 scfm. DOE will continue to assess retrieval performance at this airflow rate, due to the potential for fogging at various stages of the retrieval process that may affect schedule.

- On April 18, 2019, Ecology provided a notice of incompleteness for the A and AX tank farms notice of construction letter (19-NWP-063, “Notice of Incompleteness Determination for the Criteria and Toxics Air Emissions Notice of Construction for the Operation of Portable Exhausters Supporting Single-Shell Tank Waste Retrieval at the 241-A and 241-AX Tank Farms, (COT-ENV-NOC-5252”). ORP provided a response on May 14, 2019 (19-ECD-0038, “Response to Notice of Incompleteness Determination for the Criteria and Toxics Air Emissions Notice of Construction for the Operation of Portable Exhausters Supporting Single-Shell Tank Waste Retrieval at the 241-A and 241-AX Tank Farms, (COT-ENV-NOC-5252”), which set forth how the original application met the regulations and asked Ecology to continue processing the application. ORP submitted a revised application on October 31, 2019 (19-ECD-0080, “U.S. Department of Energy, Office of River Protection Submittal of Revised Notice of Construction Application for the Operation of Portable Exhausters Supporting Single-Shell Tank Waste Retrieval at the 241-AX Tank Farm”), to provide supplemental information to address Ecology’s comments.

### **Issues Expected in the Next Reporting Period**

- Work restrictions related to the COVID-19 pandemic are expected to continue into the next reporting period.
- Reduced worker efficiencies associated with the use of supplied air are expected to continue to impact work in the tank farms.
- DOE expects the retrieval challenges and tank condition issues associated with tanks A-104 and A-105 to continue.
- The as-found condition of existing abandoned equipment in the A and AX tank farms is expected to affect the efficient removal of the equipment negatively and is expected to continue to impact cost and schedule.

### **Actions Initiated or Taken to Address Potential Schedule Slippage**

- Starting the month of January, on-dome electrical installation for Tank AX-103 is using air purifying respirators. This is a significant cost savings over the baseline plan of using self-contained breathing air.
- The expanding use of air purifying respirators, when possible, is increasing productivity.
- Washington River Protection Solutions LLC will continue to address reduced worker efficiencies by hiring additional personnel such as health physics technicians, industrial hygiene technicians, and skilled construction workforce to support tank waste retrieval efforts in the A and AX tank farms. The increase in personnel may take place through additional hiring or transfers from other onsite contractors; however, there are challenges with availability of certain craft and excess personnel.
- DOE expects to continue analysis of, and discussions with, Ecology about the retrieval challenges and tank conditions associated with tanks A-104 and A-105.
- On March 4, 2019, DOE transmitted WRPS-1900243 to ensure Ecology was aware of potential impacts to A and AX tank farm retrievals, and possibly associated Consent Decree milestones, if Ecology did not approve a pending notice of construction application in the near future for 241-A and 241-AX tank farm exhausters. DOE is continuing to evaluate the information in the letter, as well as whether amendment of the Consent Decree (including potential invocation of force majeure provisions) or other actions may be necessary. Retrieval of Tank AX-102 began on August 31, 2019, with the exhausters running at 1,000 scfm. DOE is assessing retrieval performance at this airflow rate, due to the potential for fogging at various stages of the retrieval process that may affect schedule.

### Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	First	Second	Third
AX-101	RPP-RPT-58932, Rev. 1	Complete	Sluicing with ERSS	High-Pressure Water deployed with ERSS	–
AX-102	RPP-RPT-58933, Rev. 1	Complete	Sluicing with ERSS	High-Pressure Water deployed with ERSS	–
AX-103	RPP-RPT-58934, Rev. 1	Complete	Sluicing with ERSS	High-Pressure Water deployed with ERSS	–
AX-104	RPP-RPT-58935, Rev. 1	Complete	Sluicing with ERSS	High-Pressure Water deployed with ERSS	–

ERSS = extended reach sluicer system.

TWRWP = tank waste retrieval work plan.

#### Accomplishments in the Reporting Period

- None.

#### Accomplishments Expected in the Next Reporting Period

- None.

#### Issues Encountered in the Reporting Period

- None.

#### Issues Expected in the Next Reporting Period

- None.

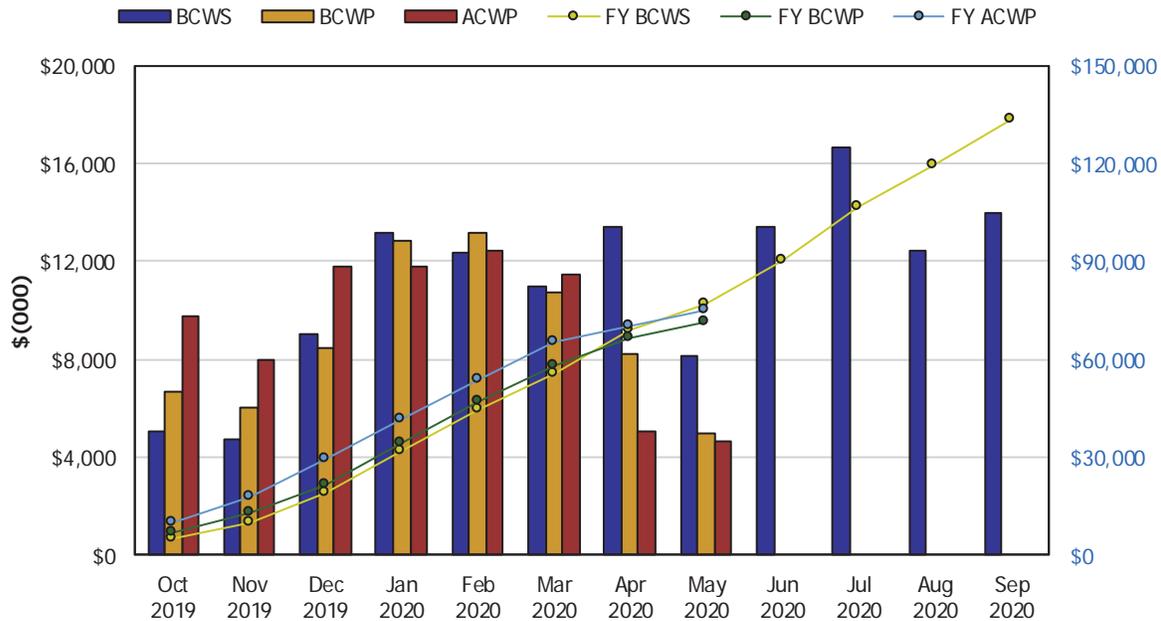
## Tank Farm Earned Value Management System Quarterly Analysis

Earned Value Data: Fiscal Year 2020

May-2020

**Tank Farms ORP-0014**  
**WBS 5.2 - Retrieve and Close SSTs**

EVMS Monthly and Fiscal Year Values



Earned Value Month

Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2019	\$5,039	\$6,662	\$9,772	1.32	0.68	\$5,039	\$6,662	\$9,772	1.32	0.68
Nov 2019	\$4,722	\$6,050	\$7,940	1.28	0.76	\$9,761	\$12,712	\$17,711	1.30	0.72
Dec 2019	\$9,040	\$8,482	\$11,822	0.94	0.72	\$18,801	\$21,193	\$29,534	1.13	0.72
Jan 2020	\$13,201	\$12,877	\$11,828	0.98	1.09	\$32,003	\$34,070	\$41,362	1.06	0.82
Feb 2020	\$12,323	\$13,174	\$12,473	1.07	1.06	\$44,326	\$47,245	\$53,834	1.07	0.88
Mar 2020	\$10,984	\$10,744	\$11,497	0.98	0.93	\$55,310	\$57,989	\$65,331	1.05	0.89
Apr 2020	\$13,412	\$8,230	\$5,011	0.61	1.64	\$68,722	\$66,218	\$70,343	0.96	0.94
May 2020	\$8,123	\$4,957	\$4,623	0.61	1.07	\$76,845	\$71,175	\$74,966	0.93	0.95
Jun 2020	\$13,399			0.00	0.00	\$90,244			0.00	0.00
Jul 2020	\$16,637			0.00	0.00	\$106,881			0.00	0.00
Aug 2020	\$12,436			0.00	0.00	\$119,317			0.00	0.00
Sep 2020	\$14,021			0.00	0.00	\$133,338			0.00	0.00

CTD	\$1,161,107	\$1,132,517	\$1,193,749	0.98	0.95
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- |      |   |                                  |      |   |                                 |
|------|---|----------------------------------|------|---|---------------------------------|
| ACWP | = | actual cost of work performed.   | CTD  | = | contract to date.               |
| BCWP | = | budgeted cost of work performed. | EVMS | = | earned value management system. |
| BCWS | = | budgeted cost of work scheduled. | FY   | = | fiscal year.                    |
| CPI  | = | cost performance index.          | SPI  | = | schedule performance index.     |

## Earned Value Management System Quarterly Analysis

### Retrieve and Close Single-Shell Tanks (5.02)<sup>4</sup>

Project EVMS reflects data for March 2020, April 2020, and May 2020.

#### Schedule Variance Summary:

Work completed ahead of the planned schedule is reported as a favorable schedule variance (SV) for the month in which it is completed, but results in an unfavorable SV in the month the work was planned.

The March 2020 unfavorable SV of (\$240,000) was primarily due to:

- Deferral of AX-102 third retrieval technology operations, on hold pending the outcome of a request to forego a third retrieval technology, as provided for in the Consent Decree.
- The rotary coring system project has encountered challenges during the bidding process, causing delays. It was originally planned as a prototype, but has been redirected to be a deployable unit, resulting in changes to the statement of work.
- The SV was positively impacted by schedule recovery of AX-104 equipment installation activities that had been delayed in order to make retrofits to the ERSS/HIHTL connections, replacing the Purex connectors with Chem-Joints.
- The SV was positively impacted by schedule recovery of fiscal year (FY) 2019 carryover activities associated with removing equipment from the A Tank Farm to support ventilation system tie-ins.

The April 2020 unfavorable SV of (\$5,183,000) was primarily due to:

- Implementation of the COVID-19 partial stop work order placed all site fieldwork on hold. The following activities incurred the greatest schedule impact in April:
  - Installation of AX-104 retrieval system equipment.
  - Removal of unusable equipment from AX-101.
  - Removal of unusable equipment from A Tank Farm.
  - Removal of the expiring HIHTL that was used for the AY-102 Tank retrieval.
- The rotary coring system project has encountered challenges during the bidding process, causing delays. It was originally planned as a prototype, but has been redirected to be a deployable unit, resulting in changes to the statement of work.
- The rotary coring system project was delayed due to the change in scope from a prototype procurement to a deployable system.

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<sup>4</sup> “Closure” activities are expressly excluded from the Consent Decree. See 2010 Consent Decree, Appendix C, first paragraph: “Processes not covered by a TWRWP (e.g., tank closure) are not established under this Consent Decree.”

- Development of new technology for the dry waste retrieval tool was delayed due to vendor's inability to procure the long-length equipment.
- Convening an expert panel to support the tank electro-resistivity system took longer than planned and delayed the development of the statement of work.

The May 2020 unfavorable SV of (\$3,166,000) was primarily due to:

- Delays in the release of contracts for procurement of A Tank Farm retrieval system equipment (ERSS, slurry pump and hydraulic pressure unit, and the receipt of HIHTL raw material) due to engineering resources supporting higher priority work.
- Delays in installation of the AX-104 retrieval system, due to the COVID-19 partial stop work order, have in-turn delayed the start of AX-104 retrieval operations.

### **Cost Variance Summary:**

The March 2020 unfavorable cost variance (CV) of (\$753,000) was primarily due to:

- Subcontractor resources working overtime in support of the A Tank Farm ventilation system installation. Crews were supporting fabrication work on duct spool weldments and in-service leak tests on condensate lines.
- Subcontractor personnel and equipment for the TX Evapotranspiration Basin project had mobilized to the project site, but were prevented from starting work due to questions related to the cultural resources review. The work was suspended, pending the preparation of a cultural resource review.
- Three unsuccessful attempts to remove the saltwell screen from AX-101 Pit B Riser 01B resulted in additional work package planning and engineering support, as well as crews working multiple overtime shifts in attempts to remove the equipment.
- The CV was positively impacted by crews working more efficiently in AX Tank Farm on equipment installation activities utilizing air purifying respirators rather than self-contained breathing apparatus equipment.

The April 2020 favorable CV of \$3,218,000 was primarily due to:

- Implementation of the COVID-19 partial stop work order resulted in many craft employees and subcontractor personnel being placed in a "Ready to Serve" status, and costs have not been charged to project accounts. This resulted in many level of effort accounts still earning performance for the month without incurring costs.
- Implementation of baseline change request RPP-20-050, SX barrier vapor impact alignment to contract Mod 562, which was negotiated in March and aligned the budget with the completed scope.

The May 2020 favorable CV of \$334,000 was primarily due to:

- Implementation of the COVID-19 partial stop work order resulted in many craft employees and subcontractor personnel being placed in a “Ready to Serve” status, and costs have not been charged to project accounts. This resulted in many level of effort accounts still earning performance for the month without incurring costs.

## Retrieval Labor Hours on Self-Contained Breathing Apparatus

*Tank Farms Assistant Manager:* Rob Hastings

*Federal Program Manager:* Jeff Rambo

Labor Hours Expended on Single-Shell Tank Retrieval Self-Contained Breathing Apparatus  
 April 1, 2020, through June 30, 2020.

	<b>SCBA Direct Labor Hours</b>	<b>SCBA Subcontractor Hours<sup>1</sup></b>	<b>Total SST Operation Hours</b>	<b>Total Hours<sup>2</sup></b>	<b>Total Percent on SCBA</b>	<b>Detrimental Impacts Days<sup>3</sup></b>
C Tank Farm	0	0	0	154	0	56
A/AX Tank Farms	867	77	944	76,921	1%	69
<b>Total</b>	<b>867</b>	<b>77</b>	<b>944</b>	<b>77,075</b>	<b>1%</b>	

<sup>1</sup> Subcontractor hours include labor hours from subcontractors including North Point Electrical Contracting, Inc.; Geophysical Survey, Inc.; Fowler General Construction; American Electric; BNL Technical Services; and Intermech Inc. Improvements were made in the process for collecting subcontractor hours, resulting in more accurate accounting.

<sup>2</sup> Includes all labor hours supporting SST farms in retrieval including support outside farm fence (Engineering, Project Management, and other support accounts).

<sup>3</sup> Detrimental impacts are presented as the total number of days in which a stop work related to SCBA use prevented field operations from continuing. It is limited to SCBA stop works only and excludes vapor impacts (i.e., AOP-15 events).

SCBA = self-contained breathing apparatus.

SST = single-shell tank.

## **Written Directives for Tank Farms Project**

DOE issued two written directives to the Tank Operations Contractor from April 1, 2020, through June 30, 2020, for work required by the consent decrees. The letters are listed below and copies are attached:

- 20-CPM-0057, “Contract No. DE-AC27-08RV14800 – Extension to Partial Stop Work Order (Non-Potable Work Only),” dated April 22, 2020
- 20-CPM-0072, “Contract No. DE-AC27-08RV14800 – Extension to Partial Stop Work Order (Non-Potable Work Only),” dated May 20, 2020.

## Waste Treatment and Immobilization Plant Project

**Quarterly Statement:** The WTP Project has complied with applicable milestones already come due as of the date of this report. There are no missed milestones that may affect compliance with other milestones.

The WTP Project continues to focus on completion of the Low-Activity Waste (LAW) Facility, Balance of Facilities (BOF), and Analytical Laboratory (LAB) (collectively known as LBL, including direct-feed low-activity waste [DFLAW] and LBL facility services).

As of May 2020, DFLAW modifications for the WTP Project were 92 percent complete, engineering design was 98 percent complete, procurement was 100 percent complete, and construction was 87 percent complete. As of May 2020, total LBL facilities were 86 percent complete, engineering design was 98 percent complete, procurement was 98 percent complete, construction was 96 percent complete, and startup and commissioning was 60 percent complete.

At DOE's request, the U.S. Army Corps of Engineers conducted a parametric analysis of certain options and funding scenarios to evaluate the likelihood of achieving certain milestones established by the Amended Consent Decree for the High-Level Waste (HLW) and Pretreatment (PT) facilities. The analysis indicated there is a low probability that DOE can meet the milestones for constructing and commissioning these facilities established by the Amended Consent Decree under the current funding profile.

The DOE Office of Project Management conducted an independent assessment of the U.S. Army Corps of Engineers report. As noted previously, the Office of Project Management's assessment concluded the U.S. Army Corps of Engineers' analyses were generally accurate, although not sufficiently detailed for budget purposes, and they potentially understate the funding needed to complete the HLW and PT facilities on the schedule established by the Amended Consent Decree.

As previously noted, Ecology sent ORP and the Richland Operations Office a letter (18-NWP-177) on December 3, 2018, regarding the Hanford Site ambient air boundary. Ecology expressed its concern that the ambient air boundary appears to have changed because of increased public access to parts of the Hanford Site. DOE, Ecology, and the Washington State Department of Health have met several times to attempt to develop a shared understanding of existing conditions and a path forward. DOE and Ecology engaged in mediation to try to resolve the issue. On May 8, 2020, DOE and Ecology reached a mediated agreement to resolve Ecology's concerns about the Hanford Site ambient air boundary. The parties are developing a Memorandum of Agreement to capture revisions to the boundary and other agreements.

ORP held initial meetings with the WTP HLW Treatment Analysis of Alternatives (AoA) contractor team in June 2019, with Ecology participation. The purpose of the AoA is to identify and evaluate a broad set of alternatives to meet the mission need; analyze the life-cycle cost, schedule, and risks associated with each alternative; and present the evaluation results to DOE leadership, pursuant to the requirements of DOE O 413.3B, *Program and Project Management for the Acquisition of Capital Assets*.

Membership on the DOE AoA Steering Committee was revised in July 2019 to include senior-level representation from DOE’s Office of Project Management, Office of Cost Estimating and Program Evaluation, Office of the Chief Financial Officer, Office of Environmental Management, and Acquisition and Project Management for the National Nuclear Security Administration.

ORP approved the *Waste Treatment and Immobilization Plant High-Level Waste Treatment Analysis of Alternatives Study Plan* (Rev. 3). The study plan was updated to incorporate comments from new DOE AoA Steering Committee members to include the method, approach, and schedule to be used in conducting an independent AoA for the identified mission need.

On September 4, 2019, DOE notified Ecology via letter 19-ORP-0007, “Discussion of Amended Consent Decree – State of Washington v. Perry (E.D. Wash. No. 2:08-CV-5085),” that there is a serious risk DOE may be unable to meet milestones for the HLW and PT facilities in the Amended Consent Decree. The notification stated:

...it is appropriate, out of an abundance of caution, to provide this notice of serious risk as described in the Amended Consent Decree ... Specifically, the Department is providing notice of a “serious risk ... that DOE may be unable to meet” Milestones A-1 and A-17 (Waste Treatment Plant), Milestones A-2 to A-4 (HLW Facility), and A-13 to A-16 and A-19 (PT Facility) of that Decree. With respect to the “preliminary recovery plan” required by the Amended Consent Decree, completion of the AoA is the first and most critical aspect of that plan. The steps that follow the completion of the AoA will be determined based on the final report's conclusions and the Department’s consultations with Ecology.<sup>5</sup>

Pursuant to Section IV-C-3(b) of the Amended Consent Decree<sup>6</sup>, as requested by Ecology in a letter dated September 25, 2019, DOE staff met with Ecology on October 16, 2019, to answer questions Ecology had concerning the serious risk as well as to discuss mitigation options, cooperative solutions, and problem-solving opportunities.

The Office of Project Management conducted a Project Peer Review (PPR) of the WTP Project in late November 2019. The PPR focused on DFLAW programs and projects for delivering waste from tanks, pretreating the waste to remove radioactive cesium and solids, vitrifying the low-activity waste, treating effluent waste from the LAW Facility, and disposing of the treated effluent wastes. The PPR team also reviewed infrastructure projects needed to provide essential services to all facilities that will play a role in the DFLAW Program. The PPR team issued its final report to ORP in December 2019. The PPR team’s report concluded that DOE’s DFLAW Program is effective, with readiness planning across all contractors and facilities. The report concluded the WTP Project has made considerable progress to transition from construction to testing and commissioning in anticipation of operations. The report also concluded DOE and WTP contractor Bechtel National, Inc. (BNI) are highly focused on

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<sup>5</sup> Footnotes 3 and 4 were omitted from this quote.

<sup>6</sup> *State of Washington v. Dept. of Energy*, No: 2:08-CV-5085-RMP (March 11, 2016).

completing the project and are working together to eliminate barriers and realize opportunities for improving costs and schedules. The report included 19 recommendations representing opportunities to continue safe and effective project performance. The recommendations were entered into the Hanford Site integrated issues management tracking system, and each will be addressed and tracked to closure.

As of February 23, 2020, 76 percent of the WTP scoped systems supporting DFLAW have been turned over from the Construction organization to the Startup organization. In addition, the Plant Management organization accepted handover of 48 percent of the WTP scoped systems supporting DFLAW from, the Startup organization.

On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. While the majority of the Hanford Site workforce continues to telework, there are a limited number of workers reporting to the site to perform activities necessary to maintain the site in a safe condition, continuing to protect the community, region, and the environment. DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the Consent Decree and, if other actions may be necessary.

On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added. On May 21, 2020, the United States Department of Justice, on behalf of DOE, sent letter ENV\_DEFENSE-#919846 to the Washington State Office of the Attorney General with a proposal to amend the Consent Decree in *State of Washington v. Brouillete, et al.*, No. 2:08-cv-5085-RMP (E.D. Wash.). The proposal included schedule extensions due to force majeure events associated with the COVID-19 pandemic.

Essential mission-critical operations and Phase 1 activities will continue in light of restrictions related to the COVID-19 pandemic and DOE's authorization for the Hanford Site to move to Phase 1. Additional work on planning for remobilization, engineering analysis, permitting documentation development, etc. by both DOE and site contractors will progress as conditions support.

#### **Accomplishments During the Reporting Period:**

- The AoA team worked to finalize alternative flowsheets, sketches, diagrams, descriptions, and establish risk profiles, which will be incorporated into the AoA report. The AoA team also received the balance of the technical and cost modeling results from the modeling team. An Ecology representative has been attending these meetings and discussions.
- Other significant accomplishments during the reporting period are noted in project reports for the PT Facility, HLW Facility, LAW Facility, BOF, and LAB.

**Accomplishments Expected Next Reporting Period:**

- ORP expects to continue Leadership Forum meetings with Ecology and the U.S. Environmental Protection Agency to discuss the tank waste treatment mission and high-level waste treatment approaches.
- Other significant planned activities in the reporting period are noted in project reports for the PT Facility, HLW Facility, LAW Facility, BOF, and LAB.

**Issues Encountered During the Reporting Period:**

- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. While the majority of the Hanford Site workforce continues to telework, there are a limited number of workers reporting to the site to perform activities necessary to maintain the site in a safe condition, continuing to protect the community, region, and the environment. DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the Consent Decree and, if other actions may be necessary. On May 21, 2020, the United States Department of Justice, on behalf of DOE, sent letter ENV\_DEFENSE-#919846 to the Washington State Office of the Attorney General with a proposal to amend the Consent Decree in *State of Washington v. Brouillete, et al.*, No. 2:08-cv-5085-RMP (E.D. Wash.). The proposal included schedule extensions due to force majeure events associated with the COVID-19 pandemic.
- Other significant issues encountered during the reporting period are noted in project reports for the PT Facility, HLW Facility, LAW Facility, BOF, and LAB.

**Issues Expected in the Next Reporting Period:**

- Work restrictions related to the COVID-19 pandemic are expected to continue into the next reporting period.
- Other significant issues expected in the next reporting period are noted in project reports for the PT Facility, HLW Facility, LAW Facility, BOF, and LAB.

### Waste Treatment and Immobilization Plant Milestones

Milestone	Title	Due Date	Status
<b>Waste Treatment and Immobilization Plant (WTP) Project</b>			
D-00A-06	Complete Methods Validations	06/30/2032	On Schedule
D-00A-17	Hot Start of Waste Treatment Plant	12/31/2033	At Risk <sup>1</sup>
D-00A-01	Achieve Initial Plant Operations for WTP	12/31/2036	At Risk <sup>1</sup>
<b>Pretreatment (PT) Facility</b>			
D-00A-18	Complete Structural Steel Erections Below Elevation 56' in PT Facility	12/31/2009	Complete
D-00A-19	Complete Elevation 98' Concrete Floor Slab Placements in PT Facility	12/31/2031	At Risk <sup>1</sup>
D-00A-13	Complete Installation of Pretreatment Feed Separation Vessels FEP-SEP-O0001A/1B	12/31/2031	At Risk <sup>1</sup>
D-00A-14	PT Facility Construction Substantially Complete	12/31/2031	At Risk <sup>1</sup>
D-00A-15	Start PT Facility Cold Commissioning	12/31/2032	At Risk <sup>1</sup>
D-00A-16	PT Facility Hot Commissioning Complete	12/31/2033	At Risk <sup>1</sup>
<b>High-Level Waste (HLW) Facility</b>			
D-00A-20	Complete Construction of Structural Steel to Elevation 14' in HLW Facility	12/31/2010	Complete
D-00A-21	Complete Construction of Structural Steel to Elevation 37' in HLW Facility	12/31/2012	Complete
D-00A-02	HLW Facility Construction Substantially Complete	12/31/2030	At Risk <sup>1</sup>
D-00A-03	Start HLW Facility Cold Commissioning	06/30/2032	At Risk <sup>1</sup>
D-00A-04	HLW Facility Hot Commissioning Complete	12/31/2033	At Risk <sup>1</sup>
<b>Low-Activity Waste (LAW) Facility</b>			
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2020	Amendment Proposed <sup>2</sup>
D-00A-08	Start LAW Facility Cold Commissioning	12/31/2022	Amendment Proposed <sup>2</sup>
D-00A-09	LAW Facility Hot Commissioning Complete	12/31/2023	Amendment Proposed <sup>2</sup>
<b>Balance of Facilities</b>			
D-00A-12	Steam Plant Construction Complete	12/31/2012	Complete

Milestone	Title	Due Date	Status
<b>Analytical Laboratory (LAB)</b>			
D-00A-05	LAB Construction Substantially Complete	12/31/2012	Complete

<sup>1</sup> 19-ORP-0007, 2019, “Discussion of Amended Consent Decree – State of Washington v. Perry (E.D. Wash. No. 2:08-CV-5085).”

<sup>2</sup> Certain Consent Decree-related work at the Hanford Site has been interrupted since March 23, 2020, due to the COVID-19 pandemic. On May 21, 2020, the U.S. Department of Justice, on behalf of DOE, submitted a proposal to the State of Washington to amend the Consent Decree in *State of Washington v. Brouillete, et al.*, No. 2:08-cv-5085-RMP (E.D. Wash.) due to a Force Majeure event. ENV\_DEFENSE-#919846, 2020, “Proposal to Amend Consent Decree in *State of Washington v. Brouillete, et al.*, No. 2:08-cv-5085-RMP (E.D. Wash.), Due to *Force Majeure* Event,” external letter to A.A. Fitz, Office of the Attorney General, Ecology Division, from A.D. Saylor, C.H. Kolman, and S. Shea, United States Department of Justice, Environmental Defense Section, Washington, D.C., May 21.

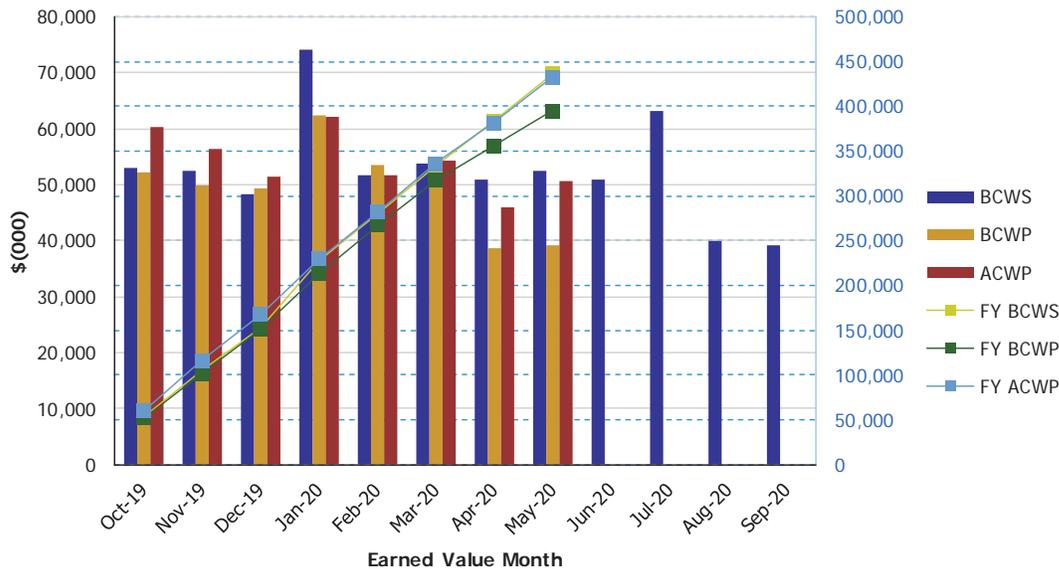
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2020 Earned Value Data

Data as of: May 2020

**River Protection Project  
 Waste Treatment Plant (WTP) Project**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2019	\$52,863	\$52,079	\$60,216	0.99	0.86	\$52,863	\$52,079	\$60,216	0.99	0.86
Nov 2019	\$52,457	\$49,780	\$56,387	0.95	0.88	\$105,320	\$101,859	\$116,603	0.97	0.87
Dec 2019	\$48,219	\$49,369	\$51,429	1.02	0.96	\$153,538	\$151,228	\$168,032	0.98	0.90
Jan 2020	\$74,007	\$62,261	\$62,070	0.84	1.00	\$227,545	\$213,489	\$230,102	0.94	0.93
Feb 2020	\$51,722	\$53,420	\$51,766	1.03	1.03	\$279,267	\$266,908	\$281,867	0.96	0.95
Mar 2020	\$53,763	\$50,732	\$54,238	0.94	0.94	\$333,030	\$317,640	\$336,106	0.95	0.95
Apr 2020	\$50,878	\$38,578	\$45,969	0.76	0.84	\$383,908	\$356,218	\$382,075	0.93	0.93
May 2020	\$52,452	\$39,269	\$50,645	0.75	0.78	\$436,360	\$395,487	\$432,720	0.91	0.91
Jun 2020	\$50,994									
Jul 2020	\$63,275									
Aug 2020	\$40,049									
Sep 2020	\$39,208									

PTD	\$12,314,588	\$12,173,548	\$12,182,451	0.99	1.00
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- |      |   |                                  |      |   |                                 |
|------|---|----------------------------------|------|---|---------------------------------|
| ACWP | = | actual cost of work performed.   | EVMS | = | earned value management system. |
| BCWP | = | budgeted cost of work performed. | FY   | = | fiscal year.                    |
| BCWS | = | budgeted cost of work scheduled. | PTD  | = | project to date.                |
| CPI  | = | cost performance index.          | SPI  | = | schedule performance index.     |

**Project Schedule and Cost Variance Performance (\$x1,000)**

<b>Performance Tracking</b>	<b>Schedule Variance</b>	<b>Cost Variance</b>
Cumulative (through May 2020)	(\$141,040)	(\$8,903)
Fiscal Year 2020 to-date	(\$40,873)	(\$37,233)
March 2020	(\$3,032)	(\$3,507)
April 2020	(\$12,300)	(\$7,392)
May 2020	(\$13,182)	(\$11,376)

For the March 2020 EVMS reporting period, a net unfavorable SV of approximately (\$3.0 million) was reported, primarily due to the following:

- LAW Facility unfavorable SV was negatively affected because planned classroom training was not completed due to simulator fidelity issues (simulator response to inserted plant conditions), and startup testing of some systems was delayed.
- BOF unfavorable SV was due to delays in the delivery of standby diesel generator load bank and associated subcontract workscope.
- DFLAW Construction reported a favorable SV due to schedule recovery in piping, electrical, architectural, instrumentation, heating, ventilation and air-conditioning installation, and fire protection by subcontractors for the Effluent Management Facility (EMF) and Island Completion Team.

For the April 2020 EVMS reporting period, a net unfavorable SV of approximately (\$12.3 million) was reported, primarily due to the following:

- LAW Facility Startup and Plant Management unfavorable SV was due to work performance delays because of restrictions related to the COVID-19 pandemic.
- EMF/BOF Construction and Startup unfavorable SV was due to work performance delays because of restrictions related to the COVID-19 pandemic.

For the May 2020 EVMS reporting period, a net unfavorable SV of approximately (\$13.2 million) was reported, primarily due to the following:

- LAW Facility Plant Management reported an unfavorable SV due to delays in discrete planned activities, consumables award delay, and extended testing tasks.
- BOF Construction reported an unfavorable SV due to direct hire craft, mostly working on essential mission critical operations only.
- BOF Startup reported an unfavorable SV due to delays in system and component testing.

For the March 2020 EVMS reporting period a net unfavorable CV of approximately (\$3.5 million) was reported, primarily due to the following:

- LAW Facility unfavorable CV was due to higher construction field non-manual support for construction activities and higher subcontract cost for insulation and penetration seal scope. Additionally, startup testing costs were elevated due to delays.
- BOF Plant Management unfavorable CV was due to emergent corrective maintenance to support Startup Testing, continued preservation maintenance and preventative maintenance occurring at higher levels than planned, and purchase of emergent aging and obsolete items.
- DFLAW Construction unfavorable CV was due to extended overtime and weekend work undertaken to recover schedule and more time spent than planned for piping and electrical installations in congested areas.

For the April 2020 EVMS reporting period, a net unfavorable CV of approximately (\$7.4 million) was reported, primarily due to the following:

- Most of the unfavorable CV was in the Project Services account and was due to work performance delays because of restrictions related to the COVID-19 pandemic, which required change order accounting and cost segregation to implement the *Coronavirus Aid, Relief, and Economic Security Act* passed by Congress.

For the May 2020 EVMS reporting period, a net unfavorable CV of approximately (\$11.4 million) was reported, primarily due to the following:

- Project Services reported an unfavorable CV due to the essential mission critical operations posture.
- BOF Plant Management reported an unfavorable CV primarily driven by correction of historical craft wage rate adders during the current period; partially offset by level of effort work that continued to earn during the month.

### **WTP Project Cumulative through May 2020**

The WTP Project is behind the planned work scheduled by approximately (\$141.0 million) through May 2020, it has cost approximately (\$8.9 million) more to perform the work than originally estimated. The cumulative-to-date SVs and CVs are reported against the DFLAW/LBL Performance Measurement Baseline.

Note: Because the baselines for HLW Facility, PT Facility, and Project Services have not been updated since 2012, the variances for the PT Facility and Project Services are reported against interim 2-year BNI work plans, while the HLW Facility is reported against a 5-year work plan (also referred to as the Internal Forecast).

## Pretreatment Facility

*Federal Project Director:* Tom Fletcher

*Facility Federal Project Director:* Wahed Abdul

The PT Facility is intended to separate radioactive tank waste into high-level waste and low-activity waste fractions then transfer each waste type to the respective facility for immobilization. As of September 2012, the PT Facility was 56 percent complete overall, engineering design was 85 percent complete, procurement was 56 percent complete, construction was 43 percent complete, and startup and commissioning was 3 percent complete. The physical percent complete analysis for the PT Facility was frozen in September 2012, pending development of a revised baseline to address technical and design issues.

ORP and BNI completed resolution of all of the following technical issues identified in the Third Order Regarding Motions to Modify Consent Decrees<sup>7</sup>:

- “Preventing Potential Hydrogen Build-Up” (i.e., T1 in relation to hydrogen gas events in vessels and T3 in relation to hydrogen in piping and ancillary vessels)
- “Preventing Criticality” (i.e., T2 in relation to criticality in pulse-jet mixer [PJM] vessels)
- “Ensuring Control of the Pulse Jet Mixers” (i.e., T4 in relation to PJM vessel mixing and control)
- “Protecting Against Possible Erosion and Corrosion” (i.e., T5 in relation to erosion/corrosion in piping and ancillary vessels)
- “Ensuring Ventilation Balancing” (i.e., T8 in relation to facility ventilation/process offgas treatment).<sup>8</sup>

In addition, ORP and BNI completed resolution of technical issues not included in the Third Order Regarding Motions to Modify Consent Decrees (i.e., T6 in relation to design redundancy and in-service inspection, and T7 in relation to seismic ground motion criteria changes in 2005).

ORP notified BNI in July 2019 via letter 19-WTP-0078, “Contract No. DE-AC27-01RV14136 – Concurrence on the Resolution of Technical Issues (T1 – T8) for the Waste Treatment and Immobilization Plant Pretreatment Facility,” that it was concurred with BNI’s determination that the PT Facility’s technical issues have been resolved.

**Quarterly Statement:** There are no missed milestones that may affect compliance with other milestones.

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<sup>7</sup> *State of Washington v. Dept. of Energy*, No: 2:08-CV-5085-RMP (March 11, 2016) (ECF-221).

<sup>8</sup> At the outset of U.S. Department of Energy’s identification of the technical issues, the issues were grouped into eight issues. During the litigation, some issues were combined with others into five groups of issues. Consequently, the descriptions of the issues listed may be both different by number and somewhat different by description.

**Accomplishments during the Reporting Period:**

- BNI continued to manage suspended plant equipment purchase orders to reduce storage and suspension costs and evaluate ways to reduce project procurement liability.
- BNI continued to implement ongoing asset maintenance at the PT Facility to protect equipment and structures and ensure design documents were maintained.

**Accomplishments Expected in the Next Reporting Period:**

- BNI is expected to continue to manage suspended plant equipment purchase orders to reduce storage and suspension costs and evaluate ways to reduce project procurement liability.
- BNI will implement ongoing asset maintenance at the PT Facility to protect equipment and structures and ensure design documents are maintained.

**Issues Encountered during the Reporting Period:**

- None.

**Issues Expected in the Next Reporting Period:**

- None.

**Status of Outstanding WTP Technical Issues**

ORP and BNI completed resolution of the five technical issues identified in the Third Order Regarding Motions to Modify Consent Decrees:

- “Preventing Potential Hydrogen Build-Up” (i.e., T1 and T3)
- “Preventing Criticality” (i.e., T2)
- “Ensuring Control of the Pulse Jet Mixers” (i.e., T4)
- “Protecting Against Possible Erosion and Corrosion” (i.e., T5)
- “Ensuring Ventilation Balancing” (i.e., T8).

ORP worked with BNI to develop closure packages for each technical issue, defining workscope, required deliverables, and technical issue closure criteria. The status of each of the five technical issues identified in the Third Order Regarding Motions to Modify Consent Decrees is provided below:

- Preventing Potential Hydrogen Build-Up:
  - *Issue:* This issue encompasses two separate but related hydrogen risks:
    - Risk of combustion in vessel headspace due to hydrogen accumulation (i.e., T1).
    - Risk of hydrogen in piping and ancillary vessels that could lead to a hydrogen deflagration or detonation in a piping system (i.e., T3).

- *Status:*
  - *Hydrogen in Vessels*: As noted in previous quarterly reports, this technical issue has been sufficiently resolved to allow engineering to proceed in support of design and safety basis development.
  - *Hydrogen in Piping and Ancillary Vessels*: As noted in previous quarterly reports, this technical issue has been sufficiently resolved to allow engineering to proceed in support of design and safety basis development.
- Preventing Criticality:
  - *Issue*: A total of 16 Hanford waste tanks may contain plutonium particles of the size and density making them prone to settling in a WTP process vessel into a configuration that could result in an inadvertent criticality event (i.e., T2).
  - *Status*: As noted in previous quarterly reports, this technical issue has been sufficiently resolved to allow engineering to proceed in support of design and safety basis development.
- Ensuring Control of the PJM:
  - *Issue*: Concern with adequacy of PJMs and PJM controls to mix high-solids slurries in PT Facility process vessels (i.e., T4) adequately.
  - *Status*: The actions completed in reference to this technical issue have been noted in previous quarterly reports. This technical issue has been sufficiently resolved to allow engineering to proceed in support of design and safety basis development. The resolution of this technical issue is likely to require significant design changes to the PT Facility.
- Protecting against Possible Erosion and Corrosion:
  - *Issue*: Uncertainties exist in waste feed characteristics and the ability to meet a 40-year service life, requiring confirmation of the erosion/corrosion design basis, including margin, through testing and analysis (i.e., T5).
  - *Status*: The actions completed in reference to this technical issue have been noted in previous quarterly reports. This technical issue has been sufficiently resolved to allow engineering to proceed in support of design and safety basis development.
- Ventilation System:
  - *Issue*: There are multiple technical challenges associated with the PT Facility ventilation system, including cascading airflows from lower to higher contaminated areas and performance of high-efficiency particulate air (HEPA) filters (i.e., T8).
  - *Status*: The actions completed in reference to this technical issue have been noted in previous quarterly reports. This technical issue has been sufficiently resolved to allow engineering to proceed in support of design and safety basis development.

## High-Level Waste Facility

*Federal Project Director:* Tom Fletcher

*Facility Federal Project Director:* Wahed Abdul

The HLW Facility is intended to receive the separated high-level waste concentrate from the PT Facility. This concentrate would then be blended with glass formers, converted into molten glass in one of the two HLW Facility melters, and then poured into cylindrical stainless steel canisters. After cooling, the canisters would then be sealed and decontaminated before shipping to interim storage.

As of September 2012, the HLW Facility was 62 percent complete overall, engineering design was 89 percent complete, procurement was 81 percent complete, construction was 43 percent complete, and startup and commissioning was 4 percent complete. The physical percent complete analysis for the HLW Facility was frozen in September 2012, pending development of a revised baseline to address technical and design issues.

Work on the HLW Facility is being performed in accordance with the FY 2017 through FY 2021 Interim Work Plan, which initially was for work primarily associated with asset maintenance and key ongoing procurement activities.

Engineering staff have been transitioning to HLW Facility design activities as they complete their DFLAW/LBL activities based on the availability of funds.

In March 2019, DOE awarded the AoA contract for the high-level waste treatment mission. The purpose of the AoA is to identify all viable options to meet mission needs and reduce risk, while providing decision-quality analysis and results to inform the acquisition authority and other stakeholders of all the alternatives to meet both Headquarters and DOE Office of Environmental Management policy requirements. Additional information regarding the AoA process is included in the WTP section at the beginning of this report.

**Quarterly Statement:** There are no missed milestones that may affect compliance with other milestones.

### **Accomplishments during the Reporting Period:**

- BNI continued to perform engineering design activities and hazard analyses for the key mechanical and process systems (melter feed process and the primary offgas process systems).
- BNI continued to manage suspended plant equipment purchase orders to reduce storage and suspension costs and evaluated ways to reduce project procurement liability.
- BNI continued to implement asset maintenance at the HLW Facility to protect equipment and structures and to ensure design documents were maintained.

### **Accomplishments Expected in the Next Reporting Period:**

- BNI is expected to continue to perform engineering design activities and hazard analyses for key mechanical and process systems. Priority systems for FY 2020 include the design of the HLW Facility melter feed process and the primary offgas process systems.
- BNI is planning to conduct a 60 percent design review of the HLW Facility melter offgas system (which includes offgas treatment process system, process vessel vent exhaust system, and pulse jet ventilation system) in July 2020.
- BNI is expected to continue to manage suspended plant equipment purchase orders to reduce storage and suspension costs and to evaluate ways to reduce project procurement liability.
- BNI will continue to implement asset maintenance at the HLW Facility to protect equipment and structures and to ensure design documents are maintained.

### **Issues Encountered during the Reporting Period:**

- The HLW Facility planned work has been reprioritized because of the need for additional resources to support DFLAW/LBL activities. Reduced resources resulted in limited engineering assets to perform production work and in construction curtailment. Reprioritizing work activities affected design and construction such that installation of roofing and siding on the facility was delayed.
  - *Impact:* Delay in completing HLW Facility redesign and remaining design activities.
  - *Actions initiated or taken to address potential project schedule slippage:* Engineering resources from DFLAW/LBL modifications will be transitioned to support production-engineering efforts for the HLW Facility as they become available.

### **Issues Expected in the Next Reporting Period:**

- The HLW Facility planned work is influenced by reduced FY 2020 funding. Engineering resources will continue to transition to HLW Facility activities as they complete higher priority DFLAW/LBL activities.
  - *Impact:* The HLW Facility redesign will progress only to the extent that additional funding and engineering resources allow.
  - *Actions initiated or taken to address potential project schedule slippage:* As discussed above, BNI has developed a plan for additional HLW Facility activities, in accordance with funding received for the HLW Facility. BNI will continue seeking and transitioning engineering resources to support HLW Facility engineering restart.

## **Low-Activity Waste Facility<sup>9</sup>**

***Federal Project Director:*** Tom Fletcher

***Facility Federal Project Director:*** Wahed Abdul

The LAW Facility will process concentrated low-activity waste, which will be mixed with silica and other glass-forming materials. The mixture will be fed into the LAW Facility's two melters at a design capacity of 30 metric tons per day, heated to 2,100°F, and vitrified into glass. The 300-ton melters are approximately 20 feet by 30 feet and 16 feet high. The glass mixture will then be poured into stainless steel containers, which are 4 feet in diameter, 7 feet tall, and weigh more than 7 tons. These containers are anticipated to be disposed of on the Hanford Site in the Integrated Disposal Facility.

As of May 2020, the LAW Facility was 85 percent complete overall, engineering design was 98 percent complete, procurement was 100 percent complete, construction was 99 percent complete, and startup and commissioning was 45 percent complete.

Recent BNI efforts at the LAW Facility have focused on implementing design changes against the approved safety basis and completion of procurement and construction activities. Additionally, Construction is walking down completed systems with the Startup organization in support of turnover for testing and subsequent handover to the Plant Management organization for facility commissioning.

To date, 94 percent of LAW Facility systems have been turned over from the Construction to the Startup organization. In addition, the Plant Management organization has accepted handover of 38 percent of the LAW Facility systems from the Startup organization.

**Quarterly Statement:** There are no missed milestones that may affect compliance with other milestones.

### **Accomplishments During the Reporting Period:**

- BNI completed handover of the radiological personnel monitoring system (RPJ-L-01) to the Plant Management organization.
- BNI completed turnover of the safety component portion of the C3 ventilation system (C3V-L-02) to the startup organization for testing.
- BNI completed turnover of the safety component portion of the LAW Facility vessel vent system (LVP-L-03) to the Startup organization for testing.
- BNI continued pressurization of the LAW Facility fire water service system.

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<sup>9</sup> Information about the related Low-Activity Waste Pretreatment System and tank-side cesium removal is included in the monthly reports submitted under the *Hanford Federal Facility Agreement and Consent Order* (also known as the Tri-Party Agreement or TPA).

- BNI continued punch list resolution and preparations for LAW Facility system testing where possible via telework.
- BNI Plant Management continued operability preparations for LAW Facility systems.

**Accomplishments Expected in the Next Reporting Period:**

- None.

**Issues Encountered during the Reporting Period:**

- None.

**Issues Expected in the Next Reporting Period:**

- Completion of simulator software and procedures associated with loss-of-power testing has been identified as a risk.
  - *Actions expected to be initiated or taken to address potential project schedule slippage:* While testing is not scheduled until August 2020, BNI is providing senior-level attention to support the timely completion of operator training.

## **Balance of Facilities**

*Federal Project Director:* Tom Fletcher

*Facility Federal Project Director:* Jason Young

BOF will provide services and utilities to support operation of the main production facilities: PT, HLW, LAW, and LAB. As of May 2020, BOF was 91 percent complete overall, engineering design was 97 percent complete, procurement was 100 percent complete, construction was 94 percent complete, and startup and commissioning was 82 percent complete. Design of EMF was 100 percent complete.

BOF has completed construction and turnover to the Startup organization for all systems. BNI has completed startup testing for 93 percent of BOF systems and custody of these systems has been transferred to the Plant Management organization for operations. BNI is working to resolve outstanding punch list items, progress procedure preparation, and perform planning activities as much as possible via telework. Limited onsite activities are coordinated to maintain systems and perform key work activities.

**Quarterly Statement:** There are no missed milestones that may affect compliance with other milestones.

### **Accomplishments During the Reporting Period:**

- BNI continued limited testing and tuning of the steam plant boilers.
- BNI continued the glass former system testing.
- BNI continued limited construction activities where possible.
- BNI completed excavating around EMF for installation of transfer piping.
- BNI completed the connection of waste transfer piping to the piping manifold above the EMF low point drain.
- BNI initiated site paving activities.

### **Accomplishments Expected in the Next Reporting Period:**

- None.

### **Issues Encountered during the Reporting Period:**

- None.

**Issues Expected in the Next Reporting Period:**

- Consistent high iron content in the BOF nonradioactive liquid drain (NLD) system has prevented transfers from WTP to the Treated Effluent Disposal Facility.
  - *Impact:* High iron content in the BOF NLD system has required the use of trucks to transport water offsite for treatment. This is affecting operations of the BOF steam plant and the ability to perform system flushing in the LAW Facility. However, the effect of these delays on the project schedule are not anticipated to affect DOE’s ability to achieve Amended Consent Decree milestones for the LAW Facility at this time.
  - *Actions initiated or taken to address potential project schedule slippage:*
    - BNI was initially able to do select batch discharges from the BOF NLD.
    - As the site remobilizes and work commences, all transfers from BOF NLD will be made to trucks for offsite disposal.
    - A filtration system has been installed for final system cleanup and to control iron levels going forward.

## **Analytical Laboratory**

***Federal Project Director:*** Tom Fletcher

***Facility Federal Project Director:*** Jason Young

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. As of May 2020, the LAB was 90 percent complete overall, engineering design was 99 percent complete, procurement was 100 percent complete, construction was 100 percent complete, and startup and commissioning was 68 percent complete.

The LAB has completed construction and startup testing for all LAB systems and custody of these systems has been transferred to the Plant Management organization for operations. BNI is working to resolve outstanding punch list items, progress procedure preparation, and perform planning activities as much as possible via telework. Limited onsite activities are coordinated to maintain systems and perform key work activities.

**Quarterly Statement:** There are no missed milestones that may affect compliance with other milestones.

### **Accomplishments during the Reporting Period:**

- BNI continued fume hood testing and certification to support methods validation activities.
- BNI prepared to recommence high purity gas system commissioning.
- BNI continued preparation of analytical procedures to support methods development activities.
- BNI continued activities to support LAB readiness and operability where possible via telework.
- BNI completed procedure preparations for LAB methods validation where possible via telework.

### **Accomplishments Expected in the Next Reporting Period:**

- None.

### **Issues Encountered during the Reporting Period:**

- None.

### **Issues Expected in the Next Reporting Period:**

- None.

## Written Directives for Waste Treatment and Immobilization Plant Project

Written directives given by DOE to the WTP contractor from April 1, 2020, through June 30, 2020, for work required by the consent decrees.

Seven letters of direction were issued to BNI during the reporting period in reference to Contract No. DE-AC27-01RV14136, *Design, Construction, and Commissioning of the Hanford Tank Waste Treatment and Immobilization Plant*. The letters are listed below<sup>10</sup> and copies are attached:

- 20-WTP-0033, “Contract No. DE-AC27-01RV14136 – Approval of Point Adjustment Associated with Baseline Change Proposal 24590-WTP-TN-PC-20-0003, ‘Chemical Safety Management Program Implementation Phase 1A’,” dated May 4, 2020
- 20-WTP-0037, “Contract No. DE-AC27-01RV14136 – Approval of Request to Pneumatically Test LAW Melter Feed Lines in Accordance with ASME B31.3 345.1(B),” dated April 27, 2020
- 20-WTP-0038, “Contract No. DE-AC27-01RV14136 – Approval of Code of Record Change Notices for Contract Deliverable 3.3(C) – Transmittal of 24590-HLW-CORCN-SYSE-19-00002 to 24590-WTP-COR-MGT-18-00001, Rev. 0,” dated April 27, 2020
- 20-WTP-0046, “Contract No. DE-AC27-01RV14136 – Issuance of 180-Day Suspension and Exercise of Enforcement Discretion for Certain Safety Requirements During Pendency of the COVID-19 Crisis,” dated April 27, 2020
- 20-WTP-0050, “Contract No. DE-AC27-01RV14136 – Approval of the Code of Record Change Notice 24590-WTP-CORCN-ENG-19-00003 to 24590-WTP-COR-MGT-15-00001, Rev. 2, and 24590-HLW-CORCN-SYSE-19-00003 to 24590-WTP-COR-MGT-18-00001, Rev. 0, Used to Update AMSE AG-1 Section FK from the 2007 Edition to the 2015 Edition,” dated May 11, 2020
- 20-WTP-0051, “Contract No. DE-AC27-01RV14136 – Approval of the Transmittal of 24590-HLW-SRDCN-SYSE-19-00001, Changes to 24590-WTP-SRD-ESH-18-001-01, Rev 0, and 24590-WTP-SRDCN-ENG-19-00001, Changes to 24590-WTP-SRD-ESH-01-001-02, Rev 10, Used to Update ASME AG-1 Section FK from the 2007 Edition to the 2015 Edition,” dated May 5, 2020
- 20-WTP-0066, “Contract No. DE-AC27-01RV14136 – Comments Required to be Addressed on 24590-HLW-BODCN-SYSE-19-0001, Revision to Section 11,” dated July 8, 2020.

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<sup>10</sup> Written directives are listed in chronological order in accordance with the stamp date on each letter.

Enclosure  
20-ECD-0041

Written Directives from April 1, 2020, through June 30, 2020

(19 Pages Including Cover Sheet)



## U.S. Department of Energy Hanford Site

April 22, 2020

20-CPM-0057

Mr. John R. Eschenberg, President and Project Manager  
Washington River Protection Solutions LLC  
Post Office Box 850  
Richland, Washington 99352

Dear Mr. Eschenberg:

### CONTRACT NO. DE-AC27-08RV14800 – EXTENSION TO PARTIAL STOP WORK ORDER (NON-PORTABLE WORK ONLY)

The partial stop work issued pursuant to FAR 52.242-15, Stop Work Order (Aug 1989) – Alternate 1 (Apr 1984), on March 24, 2020, in letter 20-CPM-0038, is hereby extended through May 23, 2020, unless the Contracting Officer directs an earlier date. Consistent with the initial partial stop work order, this extended partial stop work order covers non-portable work activities that cannot be performed in a safe and compliant manner due to COVID-19 pandemic response actions and applicable guidelines. Non-portable work activities are work activities that cannot be performed in a remote manner (e.g., telework from home). You are also directed to extend actions to ensure safe operations along with maximum utilization of telework, including continuation of at least continuity of minimum-safe operations at the physical site location.

Plans for performing non-portable work shall account for limitations of existing personal protective equipment (PPE), consumables, and the supply chains, in order to sustain necessary Hanford site essential functions. All ongoing portable work activities shall be continued on a remote telework basis until normal operations are resumed. All costs associated with this partial stop work order shall be segregated under a unique charge code. This partial stop work order shall flow down to applicable subcontracts impacted by this notice.

In light of the current crisis, it is essential to maintain stability and resiliency with the contractor workforce during the COVID-19 pandemic to ensure the availability of critical skills, ensure a mobile ready state, and minimize re-mobilization impacts. DOE's intention is to maintain stability in the existing workforce to the extent practicable to ensure a timely and orderly ramp up to full performance capabilities at the conclusion of this partial stop work period.

Pursuant to FAR 42.1303(d), you should promptly discuss this stop work order with DOE, and the Contracting Officer may modify the order, if necessary, in light of the discussions.

As a reminder, any notices that you intend to issue to your workforce, the media, or the general public related to this letter or the circumstances surrounding this letter need to be approved by the Contracting Officer in advance of issuance.

Please provide an updated plan describing how you intend to execute these instructions to the undersigned no later than close of business on April 28, 2020. This plan may be updated as necessary consistent with changing COVID-19 response actions and/or changes to the Hanford Site conditions. The updated plan shall include what was in the original plan plus specifically address the following:

- (1) Identification of all required activities and the estimated costs, if applicable, in 30-day increments for portable and non-portable activities you believe will be necessary to ensure at least continuity of minimum-safe operations (including continuation of contract performance, maximization of telework (including additional IT needs), minimization of idle time, and workforce stability (inclusive of any building trades and union workers) at the prime and subcontract levels);
- (2) Identification of estimated costs in 30-day increments, if applicable, for any indirect activities, such as online training, you believe can be performed remotely for workers that are otherwise assigned to non-portable work activities; and,
- (3) Any proposed work activities that the existing workforce (including the subcontractor workforce) could be leveraged and retooled to perform in support of the national pandemic response while maintaining at least min-safe operations.

The Contractor shall ensure that policies prohibit employees from taking both unemployment compensation and paid leave concurrently; and shall track all leave separately that is taken as related to the COVID-19 pandemic. Requests for equitable adjustments shall include any applicable tax credits, including credits allowed pursuant to division G of Public Law 116-127, and credits allowed under the CARES Act, including applicable credits for loan guarantees.

Pursuant to FAR 52.242-15, you have 30 days after the end of the extended partial stop work period to assert rights to an equitable adjustment. To that end, DOE may act upon a proposal submitted at any time by the Contractor to mitigate any ongoing impacts caused by the pandemic. DOE's intention is to maintain stability in the existing workforce with ready mobilization to the extent practicable to ensure a timely and orderly ramp up to full performance capabilities at the conclusion of this short-term partial stop work period.

Mr. John R. Eschenberg  
20-CPM-0057

-3-

April 22, 2020

As a reminder, for any request for equitable adjustment that the Contractor proposes to submit as a result of this partial stop work order or due to the excusable delay clause associated with this pandemic, it will also need to provide the associated baseline change proposal (BCP) for the Department's consideration, if applicable. The BCP should be in alignment with the applicable request for equitable adjustment.

If you have any questions, please contact me on (509) 376-2760 or at [marc\\_t\\_mccusker@orp.doe.gov](mailto:marc_t_mccusker@orp.doe.gov).

Sincerely,

Marc T. McCusker  Digitally signed by Marc T. McCusker  
Date: 2020.04.22 12:27:05 -07'00'

Marc T. McCusker  
Contracting Officer  
Office of River Protection

CPM:MTM

cc: K. A. Downing, WRPS  
W. E. Hader, ORP  
B. A. Harkins, ORP  
B. J. Harp, ORP  
R. G. Hastings, ORP  
B. T. Vance, ORP



## U.S. Department of Energy Hanford Site

May 20, 2020

20-CPM-0072

2001642

Mr. John R. Eschenberg, President and Project Manager  
Washington River Protection Solutions LLC  
Post Office Box 850  
Richland, Washington 99352

Dear Mr. Eschenberg:

**CONTRACT NO. DE-AC27-08RV14800 – EXTENSION TO PARTIAL STOP WORK ORDER (NON-PORTABLE WORK ONLY)**

The partial stop work issued pursuant to FAR 52.242-15, Stop Work Order (Aug 1989) – Alternate 1 (Apr 1984), on March 24, 2020, in letter 20-CPM-0038, and extended on April 22, 2020, in letter 20-CPM-0057, is hereby extended through June 22, 2020, unless the Contracting Officer directs an earlier date. Consistent with the initial partial stop work order, this extended partial stop work order covers non-portable work activities that cannot be performed in a safe and compliant manner due to COVID-19 pandemic response actions and applicable guidelines. Non-portable work activities are work activities that cannot be performed in a remote manner (e.g., telework from home). You are also directed to extend actions to ensure safe operations along with utilization of telework, including continuation of minimum-safe operations at the physical site location. In addition, you are authorized to implement Phase 1 activities identified in your remobilization plan.

Plans for performing non-portable work shall account for limitations of existing personal protective equipment (PPE), consumables, and the supply chains, in order to sustain necessary Hanford site essential functions. Ongoing portable work activities shall be continued on a remote telework basis in accordance with your remobilization plan. All costs associated with this partial stop work order shall be segregated under a unique charge code. This partial stop work order shall flow down to applicable subcontracts impacted by this notice.

In light of the current pandemic, it is essential to maintain stability and resiliency with the contractor workforce to ensure the availability of critical skills, ensure a mobile ready state, and minimize re-mobilization impacts. DOE's intention is to maintain stability in the existing workforce to the extent practicable to ensure a timely and orderly ramp up to full performance capabilities at the conclusion of this partial stop work period.

Pursuant to FAR 42.1303(d), you should promptly discuss this stop work order with DOE, and the Contracting Officer may modify the order, if necessary, in light of the discussions.

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*Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352*

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*Office of River Protection  
P.O. Box 450  
Richland, Washington 99352*

WRPS Corr Recvd: 5/21/2020

Mr. John R. Eschenberg  
20-CPM-0072

-2-

May 20, 2020

Pursuant to FAR 52.242-15, you have 30 days after the end of the extended partial stop work period to assert rights to an equitable adjustment. To that end, DOE may act upon a proposal submitted at any time by the Contractor to mitigate any ongoing impacts caused by the pandemic.

If you have any questions, please contact me on (509) 376-2760 or at [marc\\_t\\_mccusker@orp.doe.gov](mailto:marc_t_mccusker@orp.doe.gov).

Sincerely,

Marc T. McCusker

Digitally signed by Marc T.  
McCusker  
Date: 2020.05.20 13:25:50 -07'00'

Marc T. McCusker  
Contracting Officer  
Office of River Protection

CPM:MTM

cc: K. A. Downing, WRPS  
W. E. Hader, ORP  
B. A. Harkins, ORP  
B. J. Harp, ORP  
R. G. Hastings, ORP  
B. T. Vance, ORP  
WRPS Correspondence



**U.S. Department of Energy  
Hanford Site**

May 4, 2020

20-WTP-0033

Valerie McCain, Project Director  
Bechtel National, Inc.  
450 Hills Street  
Richland, Washington 99354

Dear Mrs. McCain:

CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF POINT ADJUSTMENT  
ASSOCIATED WITH BASELINE CHANGE PROPOSAL 24590-WTP-TN-PC-20-0003,  
“CHEMICAL SAFETY MANAGEMENT PROGRAM IMPLEMENTATION PHASE IA”

Bechtel National, Inc. transmitted letter CCN: 319668, “Baseline Change Proposal  
24590-WTP-TN-PC-20-0003, Chemical Safety Management Program Implementation  
Phase 1A,” dated March 31, 2020, to the U.S. Department of Energy, Office of River Protection.

The Office of River Protection hereby approves implementation of the historical Point Adjustment of **(\$212,140)** associated with the subject Baseline Change Proposal (BCP). The BCP incorporates DOE-STD-1228-2019, *Preparation of Documented Safety Analysis for Hazard Category 3 DOE Nuclear Facilities*, into the existing baseline updating training qualifications, procedures, and technical and programmatic requirements. In addition, staffing hours have been adjusted based on the revised requirements. The BCP decreases the budget in the Performance Measurement Baseline by **(\$4,019,401)** and was done in accordance with contractor procedures.

The action taken herein is considered to be within the scope of work of the existing contract and does not authorize the Contractor to incur any additional costs (either direct or indirect) or delay delivery to the Government. If the Contractor considers that carrying out this action will increase contract/project costs or delay of delivery, the Contractor shall promptly notify the Contracting Officer orally, confirming and explaining the notification in writing within ten (10) calendar days, and otherwise comply with the requirements of the Contract clause I.84 FAR 52.243-7, -- “Notification of Changes (APR 1984).” Following submission of the written notice of impacts, the Contractor shall await further direction from the Contracting Officer.

Valerie McCain  
20-WTP-0033

-2-

May 4, 2020

If you have any questions, please contact me, or you may contact Jeff Daniels, Acting Director, Waste Treatment and Immobilization Plant Project Controls Division, Office of River Protection on (509) 376-0864.

Sincerely,



Digitally signed by Thomas W.  
Fletcher  
Date: 2020.05.04 16:36:58 -07'00'

Thomas W. Fletcher  
Assistant Manager, Federal Project Director  
Waste Treatment and Immobilization Plant  
Office of River Protection

WTP: JJD

cc: G.T. Lengenfelder, BNI  
M.G. McCluskey, BNI  
BNI Correspondence



**U.S. Department of Energy  
Hanford Site**

20-WTP-0037

April 27, 2020

Valerie McCain, Project Director  
Bechtel National, Inc.  
450 Hills Street  
Richland, Washington 99354

Dear Mrs. McCain:

CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF REQUEST TO  
PNEUMATICALLY TEST LAW MELTER FEED LINES IN ACCORDANCE WITH ASME  
B31.3 345.1(b)

Bechtel National, Inc. transmitted letter CCN: 319419, “Approval Request of Alternative to Hydrostatic Testing Under B31.3 for Melter Feed Lines,” to the U.S. Department of Energy, Office of River Protection for review and approval per the requirements of ASME B31.3 Paragraph 345.1(b). The letter requests The Office of River Protection to approve the use of a pneumatic leak test on the final assembled configuration of the Low Activity Waste Facility Melter Feed Lines. The primary justification provided was concern with inadvertently introducing water into the melters.

The Office of River Protection, Waste Treatment and Immobilization Plant Project reviewed the proposed request transmitted in the reference above. The request to test the system pneumatically at 1.1 times the design pressure in accordance with ASME B31.3 345.5 is approved.

The action taken herein is considered to be within the scope of work of the existing contract and does not authorize the Contractor to incur any additional costs (either direct or indirect) or delay delivery to the Government. If the Contractor considers that carrying out this action will increase contract/project costs or delay of delivery, the Contractor shall promptly notify the Contracting Officer orally, confirming and explaining the notification in writing within ten (10) calendar days, and otherwise comply with the requirements of the Contract clause I.84 FAR 52.243-7, -- “Notification of Changes (APR 1984).” Following submission of the written notice of impacts, the Contractor shall await further direction from the Contracting Officer.

Valerie McCain  
20-WTP-0037

-2-

April 27, 2020

If you have any questions, please contact me, or your staff may contact Larry D. Earley, Director, Waste Treatment and Immobilization Plant Engineering Division, Office of River Protection on (509) 373-9309.

Sincerely,



Digitally signed by Thomas W.  
Fletcher  
Date: 2020.04.27 08:45:57 -07'00'

Thomas W. Fletcher  
Assistant Manager, Federal Project Director  
Waste Treatment and Immobilization Plant Project  
Office of River Protection

WTP:KDT

cc: I. Milgate, BNI  
M. Prytherck, BNI  
J. Minichiello, BNI  
BNI Correspondence



## U.S. Department of Energy Hanford Site

April 27, 2020

20-WTP-0038

Valerie McCain, Project Director  
Bechtel National, Inc.  
450 Hills Street  
Richland, Washington 99354

Dear Mrs. McCain:

CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF CODE OF RECORD CHANGE NOTICES FOR CONTRACT DELIVERABLE 3.3(C) – TRANSMITTAL OF 24590-HLW-CORCN-SYSE-19-00002 TO 24590-WTP-COR-MGT-18-00001, REV. 0

- References:
1. BNI letter from V. McCain to T. W. Fletcher, ORP, “Contract No. DE-AC27-01RV14136 – Contract Deliverable 3.3(C) – Transmittal of 24590-HLW-CORCN-SYSE-19-00002 to 24590-WTP-COR-MGT-18-00001, Rev 0, for ORP Review and Approval,” CCN: 317568, dated March 2, 2020.
  2. 24590-WTP-COR-MGT-15-00001, 2019, *Code of Record for LAW, BOF and LAB*, Bechtel National, Inc., Richland, Washington, dated August 5.

The U.S. Department of Energy, Office of River Protection, Waste Treatment and Immobilization Plant (WTP) evaluated the changes proposed in Reference 1 and agrees on a portion of the changes. Justification for the changes concurred to is further documented in Reference 2. However, the deletion of specific environmental regulations including the *Clean Air Act* and *Clean Water Act* does not appear appropriate. Thus, the WTP Project management approves the change to the code of record with the comment that Bechtel National, Inc. will retain reference in the code of record to the *Clean Air Act* and *Clean Water Act* since there were no sufficient justifications on how these regulations did not apply to WTP.

Valerie McCain  
20-WTP-0038

-2-

April 27, 2020

If you have any questions, please contact me, or your staff may contact Larry D. Earley, Director, WTP Engineering Division, Office of River Protection on (509) 373-9309.

Sincerely,



Digitally signed by Thomas W.  
Fletcher  
Date: 2020.04.27 08:46:28 -07'00'

Thomas W. Fletcher  
Assistant Manager, Federal Project Director  
Waste Treatment and Immobilization Plant  
Office of River Protection

WTP:KOS

cc: S. Barker, BNI  
R. Hagaard, BNI  
I. Milgate, BNI  
L. Roy, BNI  
R. Schreiner , BNI  
BNI Correspondence



## U.S. Department of Energy Hanford Site

April 27, 2020

20-WTP-0046

Valerie McCain, Project Director  
Bechtel National, Inc.  
450 Hills Street  
Richland, Washington 99354

Dear Mrs. McCain:

**CONTRACT NO. DE-AC27-01RV14136 – ISSUANCE OF 180-DAY SUSPENSION AND EXERCISE OF ENFORCEMENT DISCRETION FOR CERTAIN SAFETY REQUIREMENTS DURING PENDENCY OF THE COVID-19 CRISIS**

- References:
1. ORP Letter from R.L. Dawson to V. McCain, BNI, “Contract No. DE-AC27-01RV14136 – Extension to Partial Stop Work Order (Non-Portable Work Only),” 20-CPM-0056, dated April 22, 2020.
  2. DOE HQ Memorandum from D. Brouillette to M.W. Menezes, HQ, P.M. Dabbar, HQ, and L.E. Gordon-Hagerty, HQ, “Temporary Suspension and Exercise of Enforcement Discretion for Certain Safety Requirements and Requirements During Pendency of the COVID-19 Crisis,” dated April 22, 2020.

In recognition of the novel coronavirus (COVID-19) pandemic, the Hanford Site moved into an essential mission-critical operations posture and issued an extension to the Partial Stop Work Order, effective April 24, 2020. This order covers all non-portable work activities that cannot be performed in a safe and compliant manner due to COVID-19 pandemic response actions and applicable guidelines (Reference 1). During this time, a vast majority of the workforce is teleworking to ensure their safety, which has impacted the ability to adhere to some of the safety and security requirements contained in certain U.S. Department of Energy Orders and Directives. Keeping safety at the forefront of our mission, we want to ensure that our facilities and personnel are in compliance with these requirements as we continue the important work of the Department. As such, obligations imposed by the specific requirements outlined in Reference 2 are suspended, beginning March 13, 2020, for 180 days from the date they would otherwise apply.

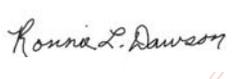
Valerie McCain  
20-WTP-0046

-2-

April 27, 2020

If you have questions, please contact Thomas W. Fletcher on (509) 376-3434, or your staff may contact Ronnie L. Dawson, Contracting Officer, Office of River Protection on (509) 372-0098.

Sincerely,

  
Digitally signed by Ronnie L. Dawson  
DN: c=us, o=U.S. government, ou=department of  
energy, ou=Energy IT Services, ou=Hanford Site,  
ou=People, cn=Ronnie L. Dawson  
Date: 2020.04.27 13:31:06 -07'00'  
Adobe Acrobat Reader version: 2017.011.30166

Ronnie L. Dawson  
Contracting Officer  
Office of River Protection

  
Digitally signed by Thomas W.  
Fletcher  
Date: 2020.04.27 14:31:55  
-07'00'

Thomas W. Fletcher  
Assistant Manager, Federal Project Director  
Waste Treatment and Immobilization Plant Project  
Office of River Protection

WTP:RMI

cc w/attach: R. Holmes, BNI  
F. Presti, BNI  
BNI Correspondence



**U.S. Department of Energy  
Hanford Site**

May 11, 2020

20-WTP-0050

Valerie McCain, Project Director  
Bechtel National, Inc.  
450 Hills Street  
Richland, Washington 99354

Dear Mrs. McCain:

CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF THE CODE OF RECORD CHANGE NOTICE 24590-WTP-CORCN-ENG-19-00003 TO 24590-WTP-COR-MGT-15-00001, REV. 2, AND 24590-HLW-CORCN-SYSE-19-00003 TO 24590-WTP-COR-MGT-18-00001, REV. 0, USED TO UPDATE ASME AG-1 SECTION FK FROM THE 2007 EDITION TO THE 2015 EDITION

The U.S. Department of Energy, Office of River Protection, Waste Treatment and Immobilization Plant Project has evaluated the change proposed in letter CCN: 316348, “Contract No. DE-AC27-01RV14136 – Contract Deliverable 3.3(C) – Transmittal of 24590-WTP-CORCN-ENG-19-00003 to 24590-WTP-COR-MGT-15-00001, Rev 2, and 24590-HLW-CORCN-SYSE-19-00003 to 24590-WTP-COR-MGT-18-00001, Rev 0, for ORP Review and Approval.” The change has been reviewed by the Office of River Protection technical staff and is considered acceptable. The change ensures alignment with the project to update ASME AG-1 Section FK from the 2007 edition to the 2015 edition. This change to the Code of Record ensures compliance with the governing rule. The Office of River Protection therefore approves the change to the Code of Record.

If you have any questions, please contact me, or your staff may contact Larry D. Earley, Director, Waste Treatment and Immobilization Plant Engineering Division, Office of River Protection, on (509) 373-9309.

Sincerely,

 Digitally signed by  
Thomas W. Fletcher  
Date: 2020.05.11  
12:35:20 -0700'

Thomas W. Fletcher  
Assistant Manager, Federal Project Director  
Waste Treatment and Immobilization Plant Project  
Office of River Protection

WTP:BMC

cc: BNI Correspondence

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*Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352*

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*Office of River Protection  
P.O. Box 450  
Richland, Washington 99352*



**U.S. Department of Energy  
Hanford Site**

May 5, 2020

20-WTP-0051

Valerie McCain, Project Director  
Bechtel National, Inc.  
450 Hills Street  
Richland, Washington 99354

Dear Mrs. McCain:

CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF THE TRANSMITTAL OF 24590-HLW-SRDCN-SYSE-19-00001, CHANGES TO 24590-WTP-SRD-ESH-18-001-01, REV 0, AND 24590-WTP-SRDCN-ENG-19-00001, CHANGES TO 24590-WTP-SRD-ESH-01-001-02, REV 10, USED TO UPDATE ASME AG-1 SECTION FK FROM THE 2007 EDITION TO THE 2015 EDITION

The U.S. Department of Energy, Office of River Protection (ORP), Waste Treatment and Immobilization Plant Project received and evaluated the subject deliverables via CCN: 317571, “Contract No. DE-AC27-01RV14136 – Regulatory Deliverable 9.1 – Transmittal of 24590-HLW-SRDCN-SYSE-19-00001, Change to 24590-WTP-SRD-ESH-18-001-01, Rev 0, and 24590-WTP-SRDCN-ENG-19-00001, Change to 24590-WTP-SRD-ESH-01-001-02, Rev 10, for ORP Approval,” dated March 2, 2020. After evaluation, ORP, Waste Treatment and Immobilization Plant Project approves the proposed changes to documents 24590-WTP-SRD-ESH-18-001-01, *Safety Requirements Document for the High-Level Waste (HLW) and Pretreatment (PTF) Facilities*, Rev. 0 and 24590-WTP-SRD-ESH-01-001-02, *Safety Requirements Document Volume II*, Rev. 10.

The action taken herein is considered to be within the scope of work of the existing contract and does not authorize the Contractor to incur any additional costs (either direct or indirect) or delay delivery to the Government. If the Contractor considers that carrying out this action will increase contract/project costs or delay of delivery, the Contractor shall promptly notify the Contracting Officer orally, confirming and explaining the notification in writing within ten (10) calendar days, and otherwise comply with the requirements of the Contract Clause I.84 FAR 52.243-7, -- “Notification of Changes (APR 1984).” Following submission of the written notice of impacts, the Contractor shall await further direction from the Contracting Officer.

Valerie McCain  
20-WTP-0051

-2-

May 5, 2020

If you have any questions, please contact me, or you may contract Mat Irwin, Deputy Federal Project Director, Waste Treatment and Immobilization Plant Project, ORP, on (509) 373-9820.

Sincerely,

**BENTON  
HARP**

Digitally signed by  
BENTON HARP  
Date: 2020.05.05  
09:32:46 -07'00'

Ben J. Harp  
Safety Basis Approval Authority  
Office of River Protection

WTP:MLR

Attachment:  
Technical Evaluation Report

cc w/attach:  
BNI Correspondence



**U.S. Department of Energy  
Hanford Site**

July 8, 2020

20-WTP-0066

Valerie McCain, Project Director  
Bechtel National, Inc.  
405 Hills Street  
Richland, Washington 99354

Dear Mrs. McCain:

CONTRACT NO. DE-AC27-01RV14136 – COMMENTS REQUIRED TO BE ADDRESSED  
ON 24590-HLW-BODCN-SYSE-19-0001, REVISION TO SECTION 11

Bechtel National, Inc. transmitted letter CCN: 317576, “Transmittal of 24590-HLW-BODCN-SYSE-19-0001 Change to 24590-WTP-DB-ENG-18-001, Rev 0, for ORP Review and Comment,” for review and comment.

The Waste Treatment and Immobilization Plant Engineering Division Staff have reviewed the request and the associated technical detail. The attachment to this letter contains comments that need to be addressed prior to implementation of the change. Closure of comments can be addressed by issuing an updated Basis of Design Change Notice.

The action taken herein is considered to be within the scope of work of the existing contract and does not authorize the Contractor to incur any additional costs (either direct or indirect) or delay delivery to the Government. If the Contractor considers that carrying out this action will increase contract/project costs or delay of delivery, the Contractor shall promptly notify the Contracting Officer orally, confirming and explaining the notification in writing within ten (10) calendar days, and otherwise comply with the requirements of the Contract Clause I.84 FAR 52.243-7, -- “Notification of Changes (APR 1984).” Following submission of the written notice of impacts, the Contractor shall await further direction from the Contracting Officer.

July 8, 2020

Valerie McCain  
20-WTP-0066

-2-

If you have any questions, please contact me, or your staff may contact Larry D. Earley, Director, Waste Treatment and Immobilization Plant Engineering Division, Office of River Protection on (509) 373-9309.

Sincerely,

**ROBERT  
IRWIN**

Digitally signed by  
ROBERT IRWIN  
Date: 2020.07.08  
10:50:58 -07'00'

Thomas W. Fletcher  
Assistant Manager, Federal Project Director  
Waste Treatment and Immobilization Plant Project  
Office of River Protection

WTP:KDT

Attachment

cc w/ attach:  
I. Milgate, BNI  
L. Roy, BNI  
R. Schreiner, BNI  
BNI Correspondence