



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

November 12, 2020

20-ECD-0056

Ms. Stephanie N. Schleif
Acting Program Manager
Nuclear Waste Program
Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354

Dear Ms. Schleif:

NOVEMBER 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 – JULY 1, 2020, THROUGH SEPTEMBER 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 July 1, 2020, through September 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, 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: 2020.11.12 17:18:41 -08'00'

Brian T. Vance
Manager

ECD:BRT

Attachment

cc: See page 2

Ms. Stephanie N. Schlieff
20-ECD-0056

-2-

November 12, 2020

cc w/attach:

L. Contreras, YN
J. S. Decker, Ecology
M. A. Gilbertson, EM-4
J. J. Lyon, Ecology
J. D. McDonald, Ecology
K. A. Ott, EM-3
S. R. Ross, EM-4.31
M. J. Turner, MSA
M. Woods, Oregon Energy
Administrative Record (D-16C-03R)
Environmental Portal

cc w/o attach:

J. Bell, 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-0056

U.S. Department of Energy, Office of River Protection
Quarterly Report, July 1, 2020, through September 30,
2020, and Tank Farm / Waste Treatment and
Immobilization Plant Direction Letters

(62 Pages Including Cover Sheet)

Office of River Protection
Quarterly Reporting Period
July 1, 2020, through September 30, 2020¹

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)²



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

Digitally signed by Thomas W.
Fletcher
Date: 2020.11.12 13:33:26 -08'00'

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

Date

¹ Except where otherwise expressly stated, the narrative descriptions of progress in this report cover the period from July 1, 2020, through September 30, 2020. Earned Value Management System data and descriptions cover the period ending August 31, 2020.

² 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.

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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 |
| 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 |
| ORP | U.S. Department of Energy, Office of River Protection |
| 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 July 1, 2020, through September 30, 2020. Earned Value Management System (EVMS) data and descriptions cover the period ending August 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 ¹ | Amendment Proposed ³ |
| 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 ¹ | Under Analysis ² / Amendment Proposed ³ |

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

² 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.

³ 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 United States 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

Tank Farms Assistant Manager: Rob Hastings

Technical Lead: Jeff Rambo

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.

On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing coronavirus disease 2019 (COVID-19) concerns. During this time, the majority of the Hanford Site workforce transitioned to telework and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, region, and the environment.

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, “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.³ DOE is continuing to evaluate the information and COVID-19 potential impacts on the Consent Decree, and if other actions may be necessary.

The Hanford Site transitioned to Phase 2 beginning on August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework generally continued to telework. The majority of the workforce whose work was not portable returned to the site incrementally through September 30 to progress work activities leveraging established COVID-19 controls.

³ 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.

Since March 24, 2020, when moving to the essential mission-critical operations posture due to COVID-19 concerns, the site experienced numerous impacts related to COVID-19 restrictions and requirements. The following highlight some examples of impacts occurring March 24, 2020, through September 2020:

- Installation and testing of waste retrieval electrical equipment in Tank AX-104 was interrupted through June 8, 2020, and since has been performed with inefficiencies due to COVID-19-related safety and health requirements.
- Installation of electrical and support infrastructure for Tank AX-103 retrieval was interrupted through June 8, 2020, and since has been performed with inefficiencies due to COVID-19-related restrictions and requirements.
- Installation and testing of waste retrieval mechanical equipment in Tank AX-104 was interrupted through July 20, 2020, and since has been performed with inefficiencies due to COVID-19-related safety and health requirements.
- Removal of long-length equipment from tanks AX-101 and A-101 was unable to be performed due to COVID-19-related restrictions and requirements.
- Equipment exposure to a radiation field longer than planned, during the COVID-19 delays, may have resulted in equipment damage. In order to determine if there has been equipment damage due to COVID-19-related work delays, some previously installed retrieval equipment will be tested before retrieval operations can resume. For example, testing of the first extended reach sluicer system (ERSS) installed in Tank AX-104 was required.
- Limited A and AX tank farms facility ingress/egress capacity. Change trailers having historical occupancies of 25 to 30 workers were limited to eight workers to meet social distancing requirements, impacting the efficiency of planned work activities.
- Training related to COVID-19 controls, as well as the required qualifications training, are performed at the HAMMER (Hazardous Materials Management and Emergency Response) facility, which had to be reconfigured to meet social distancing requirement, reducing the number of students per class.
- Contact tracing due to COVID-19 testing and potential exposures resulted in approximately 50 to 70 workers at a time being quarantined throughout the period.
- Due to COVID-19 restrictions, workers were unable to attend required training and medical exams. For example, in mid-June, Washington River Protection Solutions LLC had a peak of over 200 employees who were delinquent on medical clearances required to conduct fieldwork.
- On entering Phase 2, it was necessary to place the field crews on a revised day/swing shift work schedule, to achieve COVID-19 social distancing protocols. The crews will remain on shift work as necessary to accommodate social distancing protocols (including at briefing meetings), until it is possible to return to the more efficient work schedules.

Accomplishments in the Reporting Period

Completed Accomplishments:

- Mobilized equipment to start removal of AY Tank Farm to AP Tank Farm hose-in-hose transfer line (HIHTL) in support of future A Tank Farm HIHTL installation
- Completed small HIHTL hose barn and shield plate removal between AX Tank Farm and AP Tank Farm
- Completed large HIHTL hose barn and shield plate removal between AX Tank Farm and AP Tank Farm
- Completed removal of AY Tank Farm to AP Tank Farm HIHTL (six sections) in support of future A Tank Farm HIHTL installation
- Completed A Tank Farm exhaust ventilation system and turnover to the Operations organization
- Completed the HIHTL in-service leak testing at the POR412 (splitter box)
- Completed Tank AX-104 D Pit ERSS installation
- Completed Tank AX-104 D (No. 3) ERSS functional in-service leak testing
- Completed Tank AX-104 C (No. 2) ERSS functional in-service leak testing
- Completed Tank AX-101 B Pit saltwell screen removal
- Completed Tank A-101 standard hydrogen monitoring system removal.

Ongoing Activities:

- The residual volume measurement system is in final development and will be deployed, after the camera / Computer Aided Design modeling system, to calculate the Tank AX-102 residual waste volume.
- Work continued on the development of a Tank AX-102 third retrieval technology practicability evaluation. A chemical dissolution (acid) study and, an alternative mechanical retrieval options study, are underway in addition to the chemical analysis of Tank AX-102 post retrieval samples, which will support the decision to forgo a third Tank AX-102 retrieval technology.
- Continued Tank AX-104 mechanical and electrical system installation, in preparation for construction acceptance testing, operations acceptance testing, readiness, and retrieval operations.
- Continued Tank AX-103 on-dome electrical system installation.
- Continued Tank AX-103 HIHTL system installation.
- Continue Tank A-101 equipment removal activities.

Accomplishments Expected in the Next Reporting Period

- Complete post retrieval residual waste sampling of Tank AX-102
- Complete Tank AX-102 Computer Aided Design modeling system videos
- Complete Tank AX-104 mechanical and electrical system installation
- Complete Tank A-101 riser 12 thermocouple removal.

Issues Encountered in the Reporting Period

- The week of September 14, 2020, Tank AX-102 sampling, Computer Aided Design modeling system, equipment removal activities and related activities were impacted (-7 days) due to hazardous air quality from regional wildfires.
- 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)⁴. 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 (planned 83 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. This activity was originally planned for 83 days, but the actual durations was 235 days.
 - Removal of Tank A-106 riser 2 thermocouple was removed in sections, with the lower section left in the tank. Removal the thermocouple was planned for 113 days, but required 246 days.
 - A stuck shield plug in Tank A-101 01C Pit required an alternative method (core drilling) to tie in the ventilation system. Removal of the shield plug was expected to require 12 days, but was completed in 31 days.

⁴ 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.

- A stuck shield plug in Tank AX-102 02B Pit prevented the installation of the planned third extended reach sluicer. Eighty days were expended (planned 12 days) on the attempts to remove the plug, until it was decided the plug could not be removed and to retrieve Tank AX-102 with two ERSSs.
- 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 multiple times to attempt to develop a shared understanding of existing conditions and establish a compliant and cost effective path forward. DOE and Ecology ultimately engaged in mediation and on May 8, 2020, DOE and Ecology reached an agreement in principle regarding the Hanford Site ambient air boundary. The parties signed a memorandum of agreement resolving the ambient air boundary issue in July 2020.
- On January 28, 2019, ORP received a Washington River Protection Solutions LLC letter (WRPS-1900243, “Contract Number DE-AC27-08RV14800 – Washington River 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 was able to complete retrieval of Tank AX-102 to the limits of two technologies. Due to the limited airflow, the original plan to retrieve two tanks at a time is not possible. The intent of the two-tank retrieval would allow retrieval of a second tank, if the retrieval of the first tank was impacted due to equipment failure. DOE will continue to assess retrieval performance at the allowed airflow rate, but there remains the potential for fogging at various stages of the retrieval process that may affect the schedule.
- On April 18, 2019, Ecology provided a notice of incompleteness determination for the A and AX tank farms (19-NWP-063). DOE provided a response on May 14, 2019 (19-ECD-0038), which set forth how the original application met the regulations and asked Ecology to continue processing the application. DOE submitted a revised application on October 31, 2019 (19-ECD-0080), to provide supplemental information. DOE has resumed work on this application now that the ambient air boundary issue is resolved.

Issues Expected in the Next Reporting Period

- Work restrictions related to the COVID-19 pandemic are expected to continue into the next reporting period.

- 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 2020, on-dome electrical installation for Tank AX-103 workers began using air purifying respirators rather than self-contained breathing air. This transition has increased the efficiency of the work and has resulted in a significant cost savings over using self-contained breathing air.
- 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.

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.

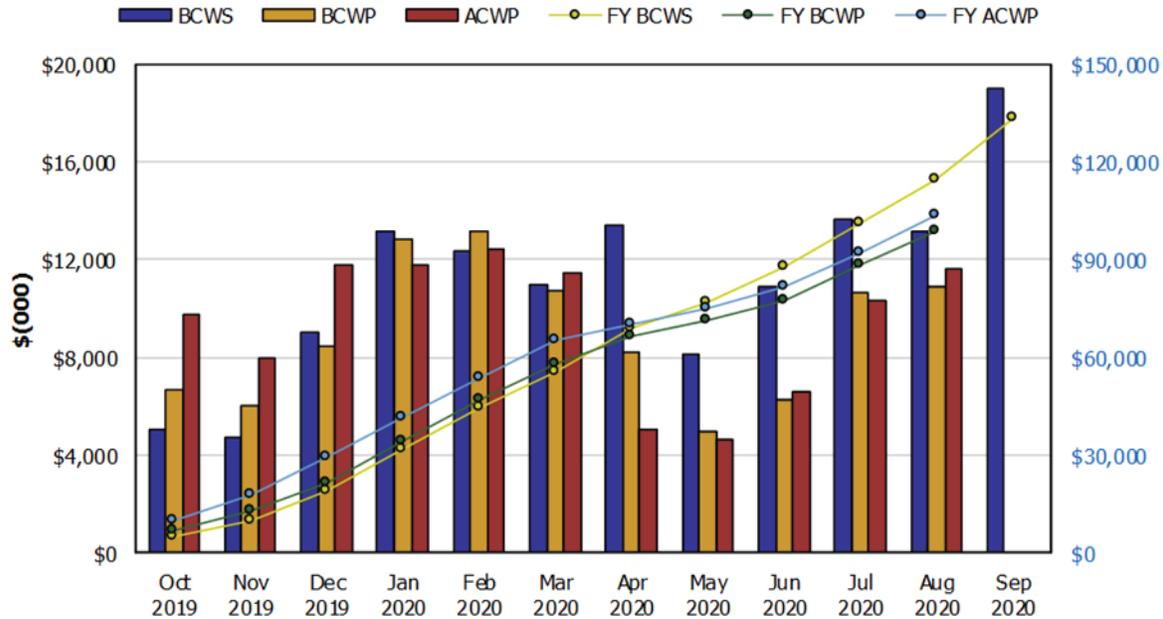
Tank Farm Earned Value Management System Quarterly Analysis

Earned Value Data: Fiscal Year 2020

August-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 | \$10,857 | \$6,262 | \$6,619 | 0.58 | 0.95 | \$87,702 | \$77,437 | \$81,585 | 0.88 | 0.95 |
| Jul 2020 | \$13,648 | \$10,678 | \$10,292 | 0.78 | 1.04 | \$101,350 | \$88,115 | \$91,877 | 0.87 | 0.96 |
| Aug 2020 | \$13,193 | \$10,903 | \$11,608 | 0.83 | 0.94 | \$114,543 | \$99,019 | \$103,484 | 0.86 | 0.96 |
| Sep 2020 | \$19,005 | | | 0.00 | 0.00 | \$133,549 | | | 0.00 | 0.00 |

| | | | | | |
|-----|-------------|-------------|-------------|------|------|
| CTD | \$1,198,805 | \$1,160,360 | \$1,222,267 | 0.97 | 0.95 |
|-----|-------------|-------------|-------------|------|------|

- | | |
|---|--|
| 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)⁵

Project EVMS reflects data for June 2020, July 2020, and August 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 June unfavorable SV of (\$4,595,300) is primarily due to the following:

- Delays in the receipt of procured equipment due to COVID-19-related restrictions that impacted the availability of warehouse personnel on site to accept arriving equipment
- Delays in installation of the Tank AX-104 retrieval system, due to the COVID-19 impacts delayed the start of Tank AX-104 retrieval operations
- Delays in the installation of Tank AX-101 and Tank AX-103 infrastructure equipment were incurred due to the COVID-19 restrictions.

The July unfavorable SV of (\$2,970,000) is primarily due to the following:

- Delays in the receipt of procured equipment due to vendors having difficulty obtaining raw materials for fabrication of equipment due to COVID-19
- Delays in installation of the Tank AX-104 retrieval system due to COVID-19 have in turn delayed Tank AX-104 retrieval operations
- Positive SV offsets due to delivery of tanks AX-101 and AX-103 pit heaters and in-tank cameras and lights.

The August unfavorable SV of (\$2,290,600) is primarily due to the following:

- Delays in installation of the Tank AX-104 retrieval system due to COVID-19 have in turn delayed Tank AX-104 retrieval operations.
- Installation of Tank AX-103 in-tank retrieval system components were delayed due to higher priority work on the installation of the Tank AX-104 retrieval system.
- COVID-19 protocols for social distancing impacted tank farm ingress/egress facility flow-through capacity, resulting in flow-through capacity less than half of the pre-COVID-19 capacity. This reduced the amount of “in-field” work time each day.

⁵ “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.”

Cost Variance Summary:

The June unfavorable cost variance (CV) of (\$356,900) is primarily due to the following:

- Carrying a small retrieval operations crew on payroll during the transition of retrieval operations ending at Tank AX-102 and starting at Tank AX-104, which was scheduled to start in May 2020. The length of the transition period was longer than planned due to COVID-19-related restrictions.

The July favorable CV of \$386,400 is primarily due to the following:

- Efficiencies in construction closeout and demobilization activities in A Tank Farm. Rather than tearing down craft support stations and removing them from the tank farm at the completion of fiscal year 2019 carryover workscope, crews were able to relocate the stations elsewhere within the tank farm for future equipment removal activities, thereby saving the cost of transporting materials out of the tank farm and then transporting them back in later.

The August unfavorable CV of (\$704,700) is primarily due to the following:

- The COVID-19 protocols for social distancing resulted in less “in-field” work time each day, which lead to longer durations to complete tasks and increased costs for completing those tasks.

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
 July 1, 2020, through September 30, 2020.

| | SCBA Direct Labor Hours | SCBA Subcontractor Hours¹ | Total SST Operation Hours | Total Hours² | Total Percent on SCBA | Detrimental Impacts Days³ |
|-----------------|--------------------------------|---|----------------------------------|--------------------------------|------------------------------|---|
| C Tank Farm | 0 | 0 | 0 | 0 | 0 | 56 |
| A/AX Tank Farms | 2,932 | 4,992 | 7,924 | 151,637 | 5% | 69 |
| Total | 2,932 | 4,992 | 7,924 | 151,637 | 5% | |

¹ 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.

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

³ 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 five written directives to the Tank Operations Contractor from July 1, 2020, through September 30, 2020, for work required by the consent decrees. The letters are listed below and copies are attached:

- 20-CPM-0091, “Contract No. DE-AC27-08RV14800 – Memorandum of Understanding between Department of Energy and the Benton-Franklin Health District,” dated July 30, 2020
- 20-CPM-0101, “Contract No. DE-AC27-08RV14800 – Contracting Officer Authorization to Implement Phase 2 of Remobilization Plan,” dated August 27, 2020
- 20-CPM-0104, “Hanford Prime Contractors COVID-19 Direction and Guidance Request,” dated August 31, 2020
- 20-CPM-0115, “Contract No. DE-AC27-08RV14800 – Expiration of Partial Stop Work Order (Non-portable Work Only),” dated September 24, 2020
- 20-CPM-0118, “Request for Advance Agreement for Special Coronavirus Leave after Expiration of the Coronavirus Aid, Relief, and Economic Security Act on September 30, 2020,” dated September 30, 2020.

Waste Treatment and Immobilization Plant Milestones

| Milestone | Title | Due Date | Status |
|---|---|------------|---------------------------------|
| Waste Treatment and Immobilization Plant (WTP) Project | | | |
| 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 ¹ |
| D-00A-01 | Achieve Initial Plant Operations for WTP | 12/31/2036 | At Risk ¹ |
| Pretreatment (PT) Facility | | | |
| 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 ¹ |
| D-00A-13 | Complete Installation of Pretreatment Feed Separation Vessels FEP-SEP-O0001A/1B | 12/31/2031 | At Risk ¹ |
| D-00A-14 | PT Facility Construction Substantially Complete | 12/31/2031 | At Risk ¹ |
| D-00A-15 | Start PT Facility Cold Commissioning | 12/31/2032 | At Risk ¹ |
| D-00A-16 | PT Facility Hot Commissioning Complete | 12/31/2033 | At Risk ¹ |
| High-Level Waste (HLW) Facility | | | |
| 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 ¹ |
| D-00A-03 | Start HLW Facility Cold Commissioning | 06/30/2032 | At Risk ¹ |
| D-00A-04 | HLW Facility Hot Commissioning Complete | 12/31/2033 | At Risk ¹ |
| Low-Activity Waste (LAW) Facility | | | |
| D-00A-07 | LAW Facility Construction Substantially Complete | 12/31/2020 | Amendment Proposed ² |
| D-00A-08 | Start LAW Facility Cold Commissioning | 12/31/2022 | Amendment Proposed ² |
| D-00A-09 | LAW Facility Hot Commissioning Complete | 12/31/2023 | Amendment Proposed ² |
| Balance of Facilities | | | |
| D-00A-12 | Steam Plant Construction Complete | 12/31/2012 | Complete |

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

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

² Certain Consent Decree-related work at the Hanford Site has been interrupted since March 23, 2020, due to the coronavirus disease 2019 pandemic. On May 21, 2020, the United States Department of Justice, on behalf of the U.S. Department of Energy, 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.

Waste Treatment and Immobilization Plant Project

Federal Project Director: Tom Fletcher

Deputy Federal Project Director: Mat Irwin

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 August 2020, DFLAW modifications for the WTP Project were 94 percent complete, engineering design was 99 percent complete, procurement was 100 percent complete, and construction was 91 percent complete. As of August 2020, total LBL facilities were 87 percent complete, engineering design was 98 percent complete, procurement was 99 percent complete, construction was 97 percent complete, and startup and commissioning was 62 percent complete.

In 2018, at DOE’s request, the U.S. Army Corps of Engineers conducted a parametric analysis of 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 a low probability that DOE could meet construction and commissioning milestones for these facilities as established by the Amended Consent Decree under the current funding profile. The DOE Office of Project Management subsequently conducted an independent assessment of the U.S. Army Corps of Engineers’ report.

Based on the review, on September 4, 2019, DOE notified Ecology that there was a serious risk DOE may be unable to meet milestones for the HLW and PT facilities in the Amended Consent Decree.⁶ 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

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

determined based on the final report's conclusions and the Department's consultations with Ecology.⁷

Pursuant to Section IV-C-3(b) of the Amended Consent Decree⁸, 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.

DOE set up the WTP HLW Treatment Analysis of Alternatives (AoA) contractor team in June 2019. 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*. DOE and Ecology staff have been participating in the AoA team plans, discussions and review of reports. DOE 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 the Steering Committee members to include the method, approach, and schedule to be used in conducting an independent AoA for the identified mission need.

The AoA team draft report, *The Waste Treatment and Immobilization Plant High-Level Waste Treatment Analysis of Alternatives Final Report*, was submitted to Ecology for review and comment. Ecology was provided 10 days to review the report. Rather than provide detailed comments, Ecology communicated some "significant" broader concerns via a letter (20-NWP-107, dated June 11, 2020) to Tom Fletcher.

On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, region, and the environment.

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 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 a letter 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

⁷ Footnotes 3 and 4 were omitted from this quote.

⁸ *State of Washington v. Dept. of Energy*, No. 2:08-CV-5085-RMP (March 11, 2016).

pandemic.⁹ 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.

The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the WTP Project returned the Building Trades back in the field by September 30 while the majority of nonmanual workers continuing to telework to the degree workscope allows.

Since March 24, 2020, when the site moved to the essential mission-critical operations posture due to COVID-19 concerns, the site has experienced numerous impacts related to restrictions or requirements based on COVID-19.

The following highlight some examples of impacts occurring March 24, 2020, through September 2020:

- All fieldwork, with the exception of minimum monitoring of plant systems, was stopped beginning on March 23, 2020. All systems were placed in a safe shutdown configuration. No critical path work was performed between March 24, 2020, and June 2020.
- Beginning on May 26, 2020, personnel were trained, systems were inspected, and the WTP site slowly and systematically resumed construction and testing. To support a safe return to work WTP implemented, and continues to maintain, the following safety measures:
 - To support remobilization in May, training was provided to all staff for social distancing and use of face coverings, facilities were configured to promote social distancing, and increased disinfecting of high touch areas was established.
 - Meeting areas and fieldwork locations are evaluated for social distancing requirements and allowed occupancy signage is posted and updated when appropriate.
 - Sanitization stations were built and health-monitoring stations are staffed.
 - Sanitization protocols were developed to address areas that become exposed.
- Social distancing requirements are in place for worker safety and continue to significantly impact overall efficiency:
 - Reducing the number of workers allowed in a given area at the same time decreases the number of tasks that can be performed in parallel.
 - For example, most of the work (e.g., LAW Facility 304G) during July was performed with limited staff and in a serial nature to control worker density. In addition, a crew was established, up to 30 percent, to perform work during back shift to support reduced density and allow for continued work progress. Approximately 25 percent of

⁹ 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.

- the normal craft work hours were logged for the month of July, compared to what was performed immediately prior to the partial stop work order.
- COVID-19 decontamination protocols are put into place when any worker exhibits symptoms in the work place or tests positive. These activities require the temporary evacuation and isolation of work areas for cleaning.
 - Communications through remote means, such as the use of meeting software and electronic devices, are not as efficient as traditional face-to-face communications.

Accomplishments During the Reporting Period:

- 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:

- 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 Earned Value Management System Quarterly Analysis

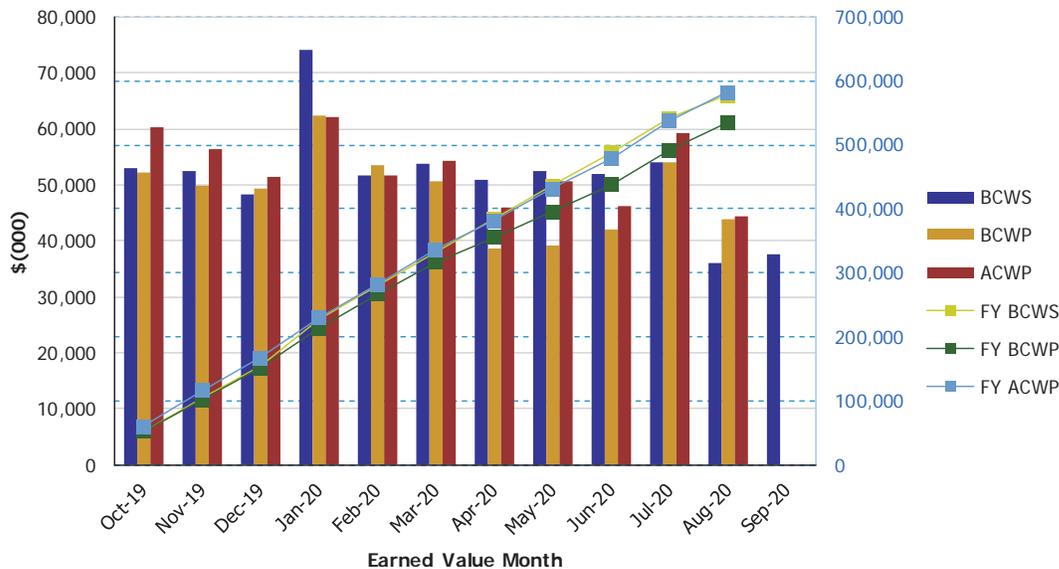
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2020 Earned Value Data

Data as of: August 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 | \$52,019 | \$42,059 | \$46,219 | 0.81 | 0.91 | \$488,379 | \$437,546 | \$478,940 | 0.90 | 0.91 |
| Jul 2020 | \$53,942 | \$54,031 | \$59,260 | 1.00 | 0.91 | \$542,321 | \$491,577 | \$538,199 | 0.91 | 0.91 |
| Aug 2020 | \$36,029 | \$43,828 | \$44,306 | 1.22 | 0.99 | \$578,350 | \$535,405 | \$582,505 | 0.93 | 0.92 |
| Sep 2020 | \$37,691 | | | | | | | | | |

| | | | | | |
|-----|--------------|--------------|--------------|------|------|
| PTD | \$12,456,578 | \$12,313,466 | \$12,332,236 | 0.99 | 1.00 |
|-----|--------------|--------------|--------------|------|------|

- | | | | | | |
|------|---|----------------------------------|------|---|---------------------------------|
| 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)

| Performance Tracking | Schedule Variance | Cost Variance |
|----------------------------------|--------------------------|----------------------|
| Cumulative (through August 2020) | (\$143,112) | (\$18,770) |
| Fiscal Year 2020 to-date | (\$42,945) | (\$47,100) |
| June 2020 | (\$9,960) | (\$4,160) |
| July 2020 | \$89 | (\$5,229) |
| August 2020 | \$7,799 | (\$478) |

For the June 2020 EVMS reporting period, a net unfavorable SV of approximately (\$10.0 million) was reported, primarily due to the following:

- LAW Facility Plant Management reported an unfavorable SV due to the delay in award and subsequent receipt of several procurements, as well as changes in training execution and activities that were not in alignment with current testing strategy. Additionally, LAW Facility Startup reported an unfavorable SV due to delays in testing/turnover resulting from COVID-19-related restrictions requiring reducing the number of personnel allowed on site to complete scheduled activities.
- BOF Construction reported an unfavorable SV due to the delays from the reduction in craft support and subcontractor installations during essential mission-critical operations.
- HLW Facility Engineering reported an unfavorable SV due to multiple factors, including, completion of some documents ahead of time and diversion of resources to support emerging changes, as well as taking a longer time to confirm calculations and performing melter structural and thermal analysis.

For the July 2020 EVMS reporting period, a net favorable SV of approximately \$0.1 million was reported, primarily due to the following:

- LAB reported a favorable SV due to the completion of maintenance training activities in July.
- DFLAW Construction reported a favorable SV due to completion of construction activities including subcontract work associated with coatings; heat trace; insulation; and heating, ventilation, and air-conditioning previously behind schedule.
- BOF reported a favorable SV due to completing site paving activity previously behind schedule.

The favorable SV was offset by:

- LAW Facility unfavorable SV due to changes in the execution strategies for commissioning procurements, which are now being performed later than initially planned. Additionally, because of the Hanford Site Essential Mission-Critical Operations

posture imposed due to COVID-19, many planned activities for Startup and Construction could not be performed.

For the August 2020 EVMS reporting period, a net favorable SV of approximately \$7.8 million was reported, primarily due to the following:

- LAW Facility reported a favorable SV because Plant Engineering procurement support activities were completed earlier than planned and more punch list items were completed than planned. Additionally, Startup recovered schedule for component/system testing and procedure development.
- LAB reported a favorable SV due to Startup completion of activities that were scheduled in the past.
- DFLAW reported a favorable SV due to completion of construction activities for piping, electrical, site work, and subcontracted work associated with heat trace, insulation, special protective coatings and penetration seal, which were previously behind schedule.
- BOF reported a favorable SV due to recovery of training that was planned in a prior period.

For the June 2020 EVMS reporting period, a net unfavorable CV of approximately (\$4.2 million) was reported, primarily due to the following:

- Project Services reported significant unfavorable CV due to COVID-19-related restrictions. Some of this was offset by LAW Facility Plant Management reporting a favorable CV due to maintenance and commissioning technician underruns caused by work being paused because of Hanford Site COVID-19 restrictions.

For the July 2020 EVMS reporting period, a net unfavorable CV of approximately (\$5.2 million) was reported, primarily due to the following:

- Project Services reported significant unfavorable CV due to COVID-19 protocols related to the Hanford Site Essential Mission-Critical Operation posture, change order accounting, and cost segregation of *Coronavirus Aid, Relief, and Economic Security Act*-related costs.
- BOF reported an unfavorable CV due to continued demand for nonradioactive waste disposal system wastewater pumping under the GrayMar subcontract. This pumping was required due to high iron concentrations in the BOF nonradioactive liquid waste disposal tank.
- DFLAW Construction reported an unfavorable CV due to subcontracts costing more for coatings; heat trace; insulation; and heating, ventilation, and air-conditioning activities. Additionally, continued field nonmanual support needed to be maintained since construction activities are behind schedule.

The unfavorable CV was offset by:

- LAW Facility favorable CV due to lower demands for system automation scope, which is planned as level of effort; efficiencies in development of LAW Facility training materials and administration of subsequent training and operations.
- HLW Facility Engineering reported favorable CV due to lower wage rate than budgeted and a 2020 rate rebill credit, efficient update of piping and instrumentation diagram and process data, and low relocation cost.

For the August 2020 EVMS reporting period, a net unfavorable CV of approximately (\$0.5 million) was reported, primarily due to the following:

- Project Services reported a significant unfavorable CV due to COVID-19 protocols related to the Hanford Site Essential Mission-Critical Operation posture, change order accounting, and cost segregation of *Coronavirus Aid, Relief, and Economic Security Act*-related costs.
- DFLAW reported an unfavorable CV due to the need to continue construction support for activities behind schedule.
- BOF reported an unfavorable CV due to higher demands for work planning and fieldwork activities associated with preventive maintenance and corrective maintenance, and due to incorrectly charged costs of LAW Facility-related training to BOF. Cost corrections have been submitted and charging guidance has been updated.

The unfavorable CV was offset by:

- LAW Facility reported a favorable CV due to the addition of earned value for the LAW Facility spare melter procurement, which was mistakenly accounted in the spare parts category in the past and lower maintenance training cost due to decreased staffing.
- LAB reported a favorable CV due to actualization of earned value on the startup activities this month, which were scheduled in the past.

WTP Project Cumulative through August 2020

The WTP Project is behind the planned work scheduled by approximately (\$143.1 million) through August 2020; it has cost approximately (\$18.8 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 Bechtel National, Inc. (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.

DOE and BNI completed resolution of all technical issues identified in the Third Order Regarding Motions to Modify Consent Decrees¹⁰. Additionally, resolution of technical issues (T6 in relation to design redundancy and in-service inspection, and T7 in relation to seismic ground motion criteria changes in 2005) not included in the Third Order Regarding Motions to Modify Consent Decrees have also been completed.

Design and construction of the PT Facility remain on hold. The results of the ongoing HLW Facility AoA will inform the path forward on the PT Facility. Key ongoing activities include maintenance of the facility and discussions with vendors regarding suspended procurements in order to reduce liabilities.

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

Accomplishments during the Reporting Period:

- Completed vendor negotiations for termination of 16 of the 17 priority one purchase orders that have been in suspension to reduce the procurement liabilities.

Accomplishments Expected in the Next Reporting Period:

- Continue to manage suspended Plant Equipment purchase orders to reduce storage and suspension costs and evaluate ways to reduce procurement liability.
- Continue to implement asset maintenance at the PT Facility to protect equipment and structures and to ensure design documents are maintained.

Issues Encountered during the Reporting Period:

- None.

¹⁰ *State of Washington v. Dept. of Energy*, No: 2:08-CV-5085-RMP (March 11, 2016) (ECF-221).

Issues Expected in the Next Reporting Period:

- None.

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 fiscal year 2017 through fiscal year 2021 Interim Work Plan, which was initially for work primarily associated with asset maintenance and key ongoing procurement activities.

Since 2019, HLW Facility design activities have been ramping up as the engineering staff have been transitioning from DFLAW/LBL activities based on the availability of funds. System designs for completing preliminary design (60 percent) and detailed design (90 percent) reviews, and updating the hazards analysis and safety basis based on the updated design are the key ongoing activities. Additionally, because of the revision of the natural phenomena hazards that increased the ashfall criteria significantly, strategy and planning activities for developing the path forward for the updated ashfall criteria are being conducted to minimize the potential impact to the project.

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:

- All of the five planned system design reviews for 2020 have been completed successfully ahead of schedule. These systems are ammonia reagent system, melter process system, melter offgas treatment system, pulse jet ventilation system, and process vessel ventilation system.

Accomplishments Expected in the Next Reporting Period:

- Continue to advance system designs and hazard analysis for key mechanical and process systems
- Continue activities to develop path forward for the updated (increased) ashfall criteria
- Continue to manage suspended Plant Equipment purchase orders to reduce storage and suspension costs and to evaluate ways to reduce procurement liability
- 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:

- 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 Facility¹¹

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 August 2020, the LAW Facility was 86 percent complete overall, with engineering design 98 percent complete, procurement 100 percent complete, construction 99 percent complete, and startup and commissioning 49 percent complete. Construction has been completed and startup testing initiated for 96 percent of LAW Facility systems. Startup testing has been completed for 40 percent of LAW Facility systems, and custody of these systems has been transferred to the Plant Management organization for operations.

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

Accomplishments During the Reporting Period:

- Completed handover of the chilled water system (CHW-L-01) to the Plant Management organization for operation
- Completed pressurization of the LAW Facility fire-water service system
- Completed deenergized testing of the LAW Facility melter process system
- Completed process system flushing for the radioactive liquid drain system RLD-L-01.

Accomplishments Expected in the Next Reporting Period:

- Construction is expected to complete turnover of the remaining LAW Facility systems to the Startup organization for testing.
- The WTP simulator is expected to receive authorization to operate from the DOE cybersecurity organization.

Issues Encountered during the Reporting Period:

- WTP simulator usage has been delayed pending review of the simulator software and issuance of an authorization to operate by the DOE cybersecurity organization.

¹¹ 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).

Additionally, delays in the development of simulator software and procedures associated with loss-of-power testing continue to present a risk to the operator training schedule.

- *Actions expected to be initiated or taken to address potential project schedule slippage:* BNI is coordinating with DOE and Hanford Site contractors to facilitate an authorization to operate for the WTP simulator.

Issues Expected in the Next Reporting Period:

- None.

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 August 2020, BOF was 92 percent complete overall, engineering design was 98 percent complete, procurement was 100 percent complete, construction was 96 percent complete, and startup and commissioning was 82 percent complete. Design of the Effluent Management Facility (EMF) was 100 percent complete.

Construction has been completed and startup testing initiated for all BOF systems. Startup testing has been completed for all systems except the Glass Former Storage Facility system (GFR-B-01). Custody of these systems has been transferred to the Plant Management organization for operations. System operation and maintenance, operator training, and procedure refinement continues as BNI prepares for increased BOF demands to support LAB operation and LAW Facility system testing.

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

Accomplishments During the Reporting Period:

- The Startup testing organization completed handover of the medium voltage electrical system for the standby diesel generator (MVE-B-03) to the Plant Management organization for operations.
- BNI completed the connection of waste transfer piping to the piping manifold above the EMF low-point drain.
- Construction completed excavating around the EMF for installation of waste transfer piping.
- Construction completed installation and backfill of the piping between the EMF low-point drain and the tank farms low-activity waste feed interface point.
- The Startup testing organization completed flushing of the deionized water system (DIW-E-2, DIW-E-3, and DIW-E-4) in EMF.
- The Startup testing organization completed flushing of the potable water system (DOW-E-1, DOW-E-2, DOW-E-3, DOW-E-4, DOW-E-5, DOW-E-7, DOW-E-8, and DOW-E-9) in EMF.
- Construction initiated pressure testing on the transfer piping between the EMF low-point drain and Liquid Effluent Retention Facility / Effluent Treatment Facility interface.

Accomplishments Expected in the Next Reporting Period:

- Continue Steam Plant system testing.
- Construction is expected to complete Phase 2 of the WTP site paving plan.

- Construction will continue EMF system walkdowns to support turnover to the Startup organization.
- Engineering will continue to provide design support for EMF construction and BOF startup activities.

Issues Encountered during the Reporting Period:

- Consistent high iron content in the BOF nonradioactive liquid drain system has prevented transfers from WTP to the Treated Effluent Disposal Facility.
 - *Impact:* High iron content in the BOF nonradioactive liquid drain 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:*
 - Plant Management completed the installation of a filter system to remove iron from the nonradioactive liquid drain system and allow offsite discharges to recommence.
- Operation of the BOF Steam Plant has been inconsistent due to issues with the diesel fuel oil system and challenges with boiler operation and tuning.
 - *Impact:* When the Steam Plant is out of service, comfort steam, which is used to heat the building is not available to the LAB, and analytical methods development activities cannot be performed. Additionally, LAB ventilation for the administrative areas must be secured to reduce the cold weather impacts.
 - *Actions initiated or taken to address potential project schedule slippage:*
 - Plant Management has identified the issue and initiated repairs for the diesel fuel oil system.
 - Plant Management has adjusted the boiler jetting to reduce carbon buildup and support sustained operations.

Issues Expected in the Next Reporting Period:

- None.

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 August 2020, the LAB was 91 percent complete overall, engineering design was 99 percent complete, procurement was 100 percent complete, construction was 100 percent complete, and startup and commissioning was 72 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 preparations, and perform methods validation activities in support of the transition to facility operations.

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

Accomplishments during the Reporting Period:

- Plant Management completed commissioning for the LAB high purity gas systems.
- LAB technicians completed all fieldwork in support of LAB methods validation.
- Plant Engineering identified a potential cause for the LAB fume hood flowrate challenges. A design change has been implemented and fume hood modifications have been completed.
- Plant Management progressed WTP program implementation activities to support the LAB ready to operate evaluation.
- Plant Management and Maintenance organizations completed replacement of LAB radioactive liquid waste disposal transfer pump and initiated retest activities.
- Continued resolution of outstanding punch list activities.

Accomplishments Expected in the Next Reporting Period:

- Plant Management is expected to complete certification of the LAB fume hoods.
- Plant Management is expected to approve all remaining LAB method reports and complete the methods validation process for sealed sources.
- Plant management is expected to conduct the formal contractor assessment for the LAB ready to operate contract milestone.
- Continue to progress program implementation activities to support LAB readiness for operation.

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 July 1, 2020, through September 30, 2020, for work required by the consent decrees.

Nine 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 below¹² and copies are attached:

- 20-WTP-0069, “Contract No. DE-AC27-01RV14136 – Comments Required to be Addressed for Review of 24590-HLW-BODCN-SYSE-19-0005 and Approval of 24590-WTP-CORCN-SYSE-19-00003,” dated July 22, 2020
- 20-WTP-0070, “Contract No. DE-AC27-01RV14136 – Comments Required to be Addressed on 24590-HLW-BODCN-SYSE-20-0001, Waste Acceptance Impacting (WAI) Requirements,” dated August 6, 2020
- 20-WTP-0071, “Contract No. DE-AC27-01RV14136 – Approval of Contract Deliverable 8.0, 24590-WTP-PL-SS-02-001, Hanford Tank Waste Treatment and Immobilization Plant Safeguards and Security Plan, Rev. 15,” dated July 28, 2020
- 20-WTP-0072, “Contract No. DE-AC27-01RV14136 – Approval of Point Adjustment Associated with Baseline Change Proposal (BCP) 24590-WTP-TN-PC-20-0060, “LBL - 2018 Craft Sick Time (MOD 479),” and Internal Forecast Trend 24590-WTP-IFT-PC-20-0026, “PS – 2018 Craft Sick Time REA Prep (Mod 479),” dated July 29, 2020
- 20-WTP-0080, “Contract No. DE-AC27-01RV14136 – Approval of use of ASME B31.3 Category D Fluid Service and Initial Service Leak Testing for Applicable Pipelines in HLW and PT Facilities,” dated September 2, 2020
- 20-WTP-0083, “Contract No. DE-AC27-01RV14136 – Approval of Nuclear Maintenance Management Plan Program Description,” dated September 15, 2020
- 20-WTP-0085, “Contract No. DE-AC27-01RV14136 – Approval of 24590-WTP-RPT-RACO-CO-0001, “Conduct of Operations Implementation Matrix,” Rev. 2,” dated September 22, 2020
- 20-WTP-0086, “Contract No. DE-AC27-01RV14136 – Approval of Training Implementation Matrix for Commissioning and Training Exceptions Procedure,” dated October 1, 2020.

¹² Written directives are listed in chronological order in accordance with the stamp date on each letter.

Enclosure
20-WTP-XXXX

Written Directives from July 1, 2020, through September 30, 2020

(XX Pages Including Cover Sheet)

Enclosure
20-ECD-0056

Written Directives from July 1, 2020, through September 30, 2020

(21 Pages Including Cover Sheet)



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

July 30, 2020

20-CPM-0091

Ms. Katie Downing, Contracts Manager
Washington River Protection Solutions LLC
2425 Stevens Center Place
Richland, Washington 99354

Dear Ms. Downing:

**CONTRACT NO. DE-AC27-08RV14800 – MEMORANDUM OF UNDERSTANDING
BETWEEN DEPARTMENT OF ENERGY AND THE BENTON-FRANKLIN HEALTH
DISTRICT**

The purpose of this letter is to inform you of the efforts agreed to in the attached Memorandum of Understanding (MOU), such that Washington River Protection Solutions LLC can incorporate the correct points of contact and integrate with its appropriate internal procedures. The attached MOU describes the actions the U. S. Department of Energy and the Benton-Franklin Health District will take regarding notification of Hanford Site personnel who test positive for COVID-19 and notification of those who have been in close contact during their work at Hanford with such employees. This MOU outlines a cooperative and coordinated agreement between the parties and does not confer any rights or enforceable obligations on either party, and thus should not be considered a basis for a request for any equitable adjustment or other relief.

If you have any questions, please contact me on (509) 376-2760.

Sincerely,

Marc T. McCusker
Contracting Officer
Office of River Protection

CPM:MTM

Attachment

cc w/attach:
WRPS Correspondence



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

20-CPM-0101

Ms. Katie Downing, Contracts Manager
Washington River Protection Solutions LLC
2425 Stevens Center Place
Richland, Washington 99354

Dear Ms. Downing:

**CONTRACT NO. DE-AC27-08RV14800 – CONTRACTING OFFICER AUTHORIZATION
TO IMPLEMENT PHASE 2 OF REMOBILIZATION PLAN**

Consistent with the stop work order extension modified into the subject contract (see Modification No. 577), this letter authorizes Washington River Protection Solutions LLC to implement Phase 2 activities identified in your Remobilization Plan starting August 31, 2020.

As a reminder, 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.

If you have any questions, please contact me on (509) 376-3388.

Sincerely,

Wade E. Hader
Contracting Officer
Office of River Protection

CPM:WEH

cc: 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

August 31, 2020

20-CPM-0104

Mr. Robert E. Gregory, Chief Operating Officer
Washington River Protection Solutions LLC
Post Office Box 850
Richland, Washington 99352

Dear Mr. Gregory:

HANFORD PRIME CONTRACTORS COVID-19 DIRECTION AND GUIDANCE REQUEST

This letter is in response to the Hanford Prime Contractors direction and guidance as stated in WRPS-2002901, dated August 13, 2020.

Maintaining consistency in actions and messages related to the COVID-19 pandemic amongst the contractors is essential. As such, the U.S. Department of Energy (DOE) appreciates that the contractors are in alignment in recognizing that HPMC, as the occupational medical provider, is the interpretive authority on COVID-19 testing and contact tracing and other medically related advice. Direction and guidance on COVID-19 related matters comes from the Centers for Disease Control. Hanford Contractors should be relying on HPMC to provide its expertise to interpret and relay such direction and guidance as well as communicate with the Site leadership and workforce. With that said, each Contractor has the ultimate responsibility for the health and safety of their own employees.

With regard to the request that DOE assess the current staffing levels of HPMC Occupational Medical Services for COVID related services, DOE has done so and will continue to do so as conditions warrant based on input from HPMC. As the Site continues to remobilize and the pandemic causes continual fluctuations in its causes and effects, DOE and HPMC will work together to ensure its services meet workforce needs.

If you have any questions, please contact me on (310) 386-4602. For programmatic questions, please contact the HPMC Contracting Officer's Representative, Jill Conrad on (509) 376-0288.

Sincerely,

Wade E. Hader
Contracting Officer
Office of River Protection

HCS:JAC

cc: K. A. Downing, WRPS
WRPS Correspondence



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

20-CPM-0115

Ms. Katie Downing, Contracts Manager
Washington River Protection Solutions LCC
2425 Stevens Center Place
Richland, Washington 99354

Dear Ms. Downing:

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

The purpose of this letter is to inform Washington River Protection Solutions LLC (WRPS) that the U.S. Department of Energy (DOE) has determined that no further extension of the subject partial stop work order (PSWO) is required. The PSWO was initially issued under 20-CPM-0038, dated March 24, 2020, and later incorporated into the subject contract in modification 577 and expires September 30, 2020. DOE's determination is based on the fact that WRPS' remobilization plan indicates that 100% of the non-portable workers (for both Prime and Subcontractors) will be remobilized by September 30, 2020. Because DOE is not extending the PSWO, WRPS is reminded that it has 30 days after the end of the partial stop work period to assert its rights to an equitable adjustment. If WRPS chooses to pursue an equitable adjustment, it is reminded to work with the Contracting Officer on the timing and format of the request for equitable adjustment.

Although DOE is not extending the PSWO, WRPS is still urged to continue maximum telework for those individuals who have portable work, and the use of virtual meeting and collaboration tools to facilitate social distancing. Authorization to move to different phases of WRPS' remobilization plan will be provided by separate direction from the Contracting Officer, as appropriate.

If you have any questions concerning this matter, please contact me on (509) 376-3388.

Sincerely,

Wade E. Hader
Contracting Officer
Office of River Protection

CPM:WEH

cc: WRPS Correspondence



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

20-CPM-0118

Mr. Robert E. Gregory, Chief Operating Officer
Washington River Protection Solutions LLC
Post Office Box 850
Richland, Washington 99352

Dear Mr. Gregory:

**REQUEST FOR ADVANCE AGREEMENT FOR SPECIAL CORONAVIRUS LEAVE
AFTER EXPIRATION OF THE CORONAVIRUS AID, RELIEF, AND ECONOMIC
SECURITY ACT ON SEPTEMBER 30, 2020**

This letter responds to your September 1, 2020, letter WRPS-2003122, requesting Department of Energy (DOE) advance agreement on charging and allowability of novel coronavirus (COVID-19) related costs after the expiration of Coronavirus Aid, Relief, and Economic Security (CARES) Act Section 3610. If Section 3610 of the CARES Act is extended beyond September 30, 2020, by the legislative process, DOE will modify the Tank Operations Contract and Washington River Protection Solutions LLC (WRPS) may continue to follow its company policies and procedures related to implementation of the Act. If Section 3610 is not extended, then WRPS shall proceed as if no COVID-19 relief will be provided and follow its company leave policies and COVID-19 remobilization plan. DOE provisions granting authority to charge weather and safety leave due to COVID-19 related circumstances under DOE Order 350.1 will not be extended at Hanford after September 30, 2020.

If you have any questions, please contact me on (509) 376-3388 or at wade_e_hader@orp.doe.gov.

Sincerely,

Wade E. Hader
Contracting Officer
Office of River Protection

CPM:MTM

cc: K. A. Downing, WRPS
WRPS Correspondence



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

07/22/2020

20-WTP-0069

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 FOR REVIEW OF 24590-HLW-BODCN-SYSE-19-0005 AND APPROVAL OF 24590-WTP-CORCN-SYSE-19-00003

Bechtel National, Inc. transmitted letter CCN: 317574, “Transmittal of 24590-WTP-CORCN-SYSE-19-00003 to 24590-WTP-COR-MGT-15-00001, Rev 2, for ORP Review and Approval and Contract Deliverable 3.3(A)- Transmittal of 24590-WTP-BODCN-ENG-19-0005 Change to 24590-WTP-DB-ENG-01-001, Rev 10, for ORP Review and Comment.”

The Waste Treatment and Immobilization Plant Engineering Division and Nuclear Safety Division Staff have reviewed the request and the associated technical detail which is applicable to the DFLAW mission of WTP. The attachment to this letter contains comments that need to be addressed prior to implementation of the change. Approval, approval with comment, and comments are provided as outlined below:

- Implementation of DOE-STD-1228-2019 into the Code of Record is approved.
- Clarification of DOE-STD-1195-2011 in the Code of Record is approved with comment (Comment 3)
- Clarification on ANSI/ISA 84.00.01-2004 Part 1 in the Code of Record is approved with comment.
 - COR Listing of the Standard (Comment 10)
 - Applicability of the Standard (Comments 4, 9, 11, & 12)

Valerie McCain
20-WTP-0069

-2-

- The deletion of ANSI/ISA S84.01-1996 is approved provided comments on the 2004 edition are addressed
- Comments with regards to the BODCN are also included in the attachment for resolution.

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.

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,

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



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

August 6, 2020

20-WTP-0070

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-20-0001, WASTE ACCEPTANCE IMPACTING (WAI)
REQUIREMENTS**

Bechtel National, Inc. transmitted letter CCN: 317578, “Transmittal of 24590-WTP-BODCN-SYSE-20-0001 Change to 24590-WTP-DB-ENG-18-001, Rev 0, for ORP Review and Comment.”

The Waste Treatment and Immobilization Plant Engineering Division has reviewed the request and the associated technical detail. The attachment to this letter contains comments that were added to ensure the change was acceptable. They are transmitted for Bechtel National Inc.’s information and use.

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.

August 6, 2020

Valerie McCain
20-WTP-0070

-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 M.
Irwin

 Digitally signed by Robert
M. Irwin
Date: 2020.08.06
09:01:40 -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



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

20-WTP-0071

Mr. B. D. Ponte, Prime Contract Manager
Bechtel National, Inc.
450 Hills Street
Richland, Washington 99354

Dear Mr. Ponte:

**CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF CONTRACT
DELIVERABLE 8.0, 24590-WTP-PL-SS-02-001, HANFORD TANK WASTE TREATMENT
AND IMMOBILIZATION PLANT SAFEGUARDS AND SECURITY PLAN, REV. 15**

The U.S. Department of Energy, Office of River Protection (ORP) has reviewed the Bechtel National, Inc. June 11, 2020, submittal of CCN: 320860, “Contract No. DE-AC27-01RV14136 – Contract Deliverable 8.0 – 24590-WTP-PL-SS-02-001, Rev 15, Hanford Tank Treatment and Immobilization Plant Safeguards and Security Plan,” which has incorporated ORP comments. Based on the review, ORP approves the submitted document, 24590-WTP-PL-SS-02-001.

If you have any questions, please contact Wahed Abdul, Federal Project Director, Low-Activity Waste, High-Level Waste, and Pretreatment Facilities, Waste Treatment and Immobilization Plant, Office of River Protection on (509) 438-0455.

Sincerely,

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

WTP:WA

cc : BNI Correspondence



U.S. Department of Energy Hanford Site

20-WTP-0072

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 (BCP) 24590-WTP-TN-PC-20-0060, “LBL - 2018 CRAFT SICK TIME (MOD 479),” AND INTERNAL FORECAST TREND 24590-WTP-IFT-PC-20-0026, “PS – 2018 CRAFT SICK TIME REA PREP (MOD 479)”

The U.S. Department of Energy, Office of River Protection received the Bechtel National, Inc. submittal via CCN: 319669 dated July 13, 2020, “Baseline Change Proposal 24590-WTP-TN-PC-20-0060, LBL – 2018 Craft Sick Time Prep (Contract Modification No. 479), and Internal Forecast Trend 24590-WTP-IFT-PC-20-0026, PS-2018 Craft Sick Time Prep (Contract Modification No. 479).”

The U.S. Department of Energy, Office of River Protection hereby approves implementation of the historical Point Adjustment associated with the subject Baseline Change Proposal and Internal Forecast Trend. The Baseline Change Proposal and Internal Forecast Trend incorporates the final negotiated Request for Equitable Adjustment No. 2019-002, Rev 0, *Washington State Initiative Measure No. 1433 - Craft Sick Leave, Calendar Year 2018*, into the existing baseline. The Baseline Change Proposal increases the budget in the Performance Measurement Baseline by \$1,033,352, and was done in accordance with the 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-0072

-2-

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

Sincerely,

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

WTP:JJD

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



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

July 30, 2020

20-WTP-0080

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

Dear Mrs. McCain:

**CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF USE OF ASME B31.3
CATEGORY D FLUID SERVICE AND INITIAL SERVICE LEAK TESTING FOR
APPLICABLE PIPELINES IN HLW AND PT FACILITIES**

Bechtel National, Inc. transmitted letter CCN: 317580, “Transmittal of 24590-WTP-BODCN-SYSE-20-0002 Change to 24590-WTP-DB-ENG-18-001, Rev 0, for ORP Review and Comment.” The change requests the utilization of ASME B31.3 Category D fluid service for specific piping systems in HLW and PT facilities that meet the pressure, temperature, and fluid handling criteria of the code. There are additional limitations communicated in the change. The change further requests approval to utilize initial service leak testing of the Category D lines in accordance with the code.

The Waste Treatment and Immobilization Plant Engineering Division has reviewed the request and the associated technical details. There are no technical issues with implementing Category D fluid service including initial service leak testing. The code has specific criteria that must be met to implement it. The utilization of Category D fluid service to this point on the project has been on a case by case basis. The primary reason has been that a definitive cost benefit was not provided. Bechtel National Inc. has developed an opportunity in the risk program under risk identification number 1455 to allow for capturing and realizing the associated cost savings.

The Office of River Protection approves the use of Category D fluid service as proposed in CCN: 317580 for examination and testing of piping that meets the specified criteria. Bechtel National Inc. shall develop and proceduralize the process for executing an initial service leak test.

July 30, 2020

Valerie McCain
20-WTP-0080

-2-

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.

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,

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

WTP:KDT

cc:

B. Cron, BNI
J. McGrath, BNI
I. Milgate, BNI
C. Musick, BNI
L. Roy, BNI
R. Schreiner, BNI
BNI Correspondence



U.S. Department of Energy Hanford Site

July 30, 2020

20-WTP-0083

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

Dear Mrs. McCain:

CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF NUCLEAR MAINTENANCE MANAGEMENT PLAN PROGRAM DESCRIPTION

- References:
1. BNI letter from V. McCain to T. W. Fletcher, U.S. Department of Energy, Office of River Protection, “BNI Submission of Direct Feed Low-Activity Waste Nuclear Maintenance Management Program Description for ORP Review and Approval,” CCN: 318822, dated March 31, 2020.
 2. BNI letter from V. McCain to T. W. Fletcher, U.S. Department of Energy, Office of River Protection, “Resubmission of Direct Feed Low-Activity Waste Nuclear Maintenance Management Program Description for ORP Approval,” CCN: 321438, dated September 10, 2020

Bechtel National, Inc. submitted References 1 and 2 for U.S. Department of Energy, Office of River Protection (ORP) Contracting Officer Representative’s approval. ORP approves Reference 2 with the following condition:

- Condition of approval is contingent upon implementation of the radiation control procedures that define the process expectations for key maintenance program interface points (e.g., radiological work planning that ensure identification of radiological controls, contaminated tool and equipment segregation process/expectations, free release of material, tools and equipment identified for excess).

ORP and Bechtel National, Inc. will provide oversight of the condition of approval items. ORP would like to recognize the tremendous effort into development of this product and the teamwork that led to accomplishment of issuing the document.

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If you have questions, please contact me, or your staff may contact Joseph Renevitz, Startup Engineer, Office of River Protection on (509) 376-2368.

Sincerely,

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

WTP:JAR

cc: BNI Correspondence



U.S. Department of Energy Hanford Site

July 30, 2020

20-WTP-0085

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

Dear Mrs. McCain:

CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF 24590-WTP-RPT-RACO-CO-0001, “CONDUCT OF OPERATIONS IMPLEMENTATION MATRIX,” REV. 2

- References:
1. BNI letter from V. McCain to T. W. Fletcher, ORP, “Submittal of 24590-WTP-RPT-RACO-CO-0001, Conduct of Operations Implementation Matrix for ORP Approval,” CCN: 321439, dated September 17, 2020.
 2. ORP letter from T. W. Fletcher to V. McCain, BNI, “Submission of 24590-WTP-RPT-RACO-CO-0001, “Conduct of Operations Implementation Matrix”, Rev. 0, for U.S. Department of Energy, Office of River Protection Review and Approval,” 20-WTP-0056, dated May 18, 2020.
 3. BNI letter from V. McCain to T. W. Fletcher, ORP, “Submission of 24590-WTP-RPT-RACO-CO-0001, Rev 0, *Conduct of Operations Implementation Matrix*, for ORP Review and Approval,” CCN: 318823, dated March 31, 2020.

The U.S. Department of Energy, Office of River Protection (ORP) received Reference 1 requesting ORP approval. Submission of 24590-WTP-RPT-RACO-CO-0001, *Conduct of Operations Implementation Matrix for ORP Approval*, was the culmination of multiple meetings between Bechtel National, Inc. (BNI) and ORP working together to reach resolution regarding ORP comments (Reference 2), which resulted in a revision to 24590-WTP-RPT-RACO-CO-0001 (Reference 3) meeting the requirements of DOE O 422.1, *Conduct of Operations*.

ORP approves 24590-WTP-RPT-RACO-CO-0001, Rev. 2, subject to the following two conditions:

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- Implementation of BNI change management plan “Transition Notifications, Fact-Finding, and Occurrence Reporting” (which addresses recommendation 24590-WTP-GRN-MGT-20-00306, “Transition of Notifications and Occurrence Reporting”) to transfer responsibilities for notifications, fact finding, and occurrence reporting from the Safety and Health organization to the Plant Management organization as part of the transition from an engineering, procurement, and construction project to an operating plant. Included in the change management plan is the transition and revision of related procedures (e.g., 24590-WTP-GPP-RAES-ES-0003, *Event Notification, Management, and Investigation* and 24590-WTP-GPP-RAES-ES-0002, *DOE Occurrence Reporting*).
- Implementation of DOE-0336, *Hanford Site Lockout/Tagout Procedure*, in accordance with 16-CPM-0072, “Contract No. DE-AC27-01RV14136 – Direction on U.S. Department of Energy Orders and Directives.”

Implementation of the above conditions will more closely align the following sections to the requirements of DOE O 422.1 for a transition to an operational direct-feed low-activity waste:

- Section 2f, “Investigation of Abnormal Events, Conditions, and Trends”
- Section 2g, “Notifications”
- Section 2i, “Lockouts and Tagouts.”

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.

If you have any questions, please contact me, or your staff may contact Roger Gordon, Operations Oversight Division Director, Office of River Protection, on (509) 372-2139.

Sincerely,

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

WTP:RMG

cc: BNI Correspondence



U.S. Department of Energy Hanford Site

July 30, 2020

20-WTP-0086

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

Dear Mrs. McCain:

CONTRACT NO. DE-AC27-01RV14136 – APPROVAL OF TRAINING IMPLEMENTATION MATRIX FOR COMMISSIONING AND TRAINING EXCEPTIONS PROCEDURE

- References:
1. BNI letter, from V. McCain to T.W. Fletcher, ORP, “Contract No. DE-AC27-01RV14136 – Submission of Training Implementation Matrix for Commissioning and Nuclear Facility Training Exceptions Procedure for ORP Review and Approval,” CCN: 319646, dated April 16, 2020.
 2. BNI letter, from V. McCain to T.W. Fletcher, ORP, “Contract No. DE-AC27-01RV14136 – Submittal of Hanford Tank Waste Treatment and Immobilization Plant Training Implementation Matrix for Commissioning and Nuclear Facility Training Exceptions Procedures for ORP Approval,” CCN: 321445, dated September 25, 2020.

Bechtel National, Inc. submitted References 1 and 2 for the U.S. Department of Energy, Office of River Protection (ORP) Contracting Officer’s Representative’s approval. ORP approves document 24590-WTP-GPP-RATQ-TQ-0004, *Nuclear Facility Training Exceptions*, Rev. 4 submitted in Reference 2 and approves the training implementation matrix with the following editorial correction:

Inclusion of “security programs” as a required element in General Employee Training programs in the Training Implementation Matrix in accordance with DOE O 426.2 *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities* Chapter 1. 4.b.(1)(a). to align with 24590-WTP-GPP-RATQ-TQ-0001.

ORP would like to recognize the tremendous effort that went into development of this product and the teamwork that led to accomplishment of issuing the Training Implementation Matrix.

July 30, 2020

V. McCain
20-WTP-0086

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If you have questions, please contact me, or your staff may contact Joseph Renevitz, Startup Engineer, Office of River Protection on (509) 376-2368.

Sincerely,

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

WTP:JAR

cc: BNI Correspondence