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FINAL

Office of River Protection
Consent Decree
Monthly Report
September 2018[1]

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) [2]

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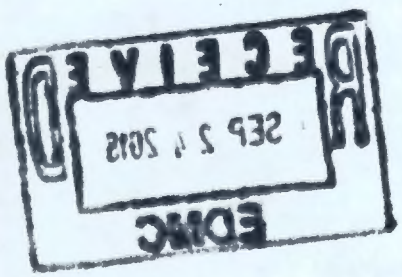
[1] Except where otherwise expressly stated, the narrative descriptions of progress in this report cover the period through August 31, 2018. Earned Value Management System data and descriptions cover the period through July 31, 2018; this includes the facility completion percentage estimates included at various locations in the Waste Treatment and Immobilization Plant section.

[2] The cited consent decrees 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 Intervenor, under the same case numbers.



Acronyms and Abbreviations

BNI	Bechtel National, Inc.
BOF	Balance of Facilities
C#V	C# ventilation
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
FY	fiscal year
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
USACE	U.S. Army Corps of Engineers
WTP	Waste Treatment and Immobilization Plant

Consent Decree Milestone Statistics/Status

Milestone	Title	Due Date	Completion Date	Status
Fiscal Year 2021				
D-00A-07 Interim	LAW Facility Construction Substantially Complete	12/31/2020		On Schedule
D-16B-03	Of the 12 SSTs referred to in B-1 and B-2, complete retrieval of tank waste in at least 5	12/31/2020		Notice given that a serious risk has arisen. See letter 16-ORP-0097[1].
Fiscal Year 2023				
D-00A-08 Interim	Start LAW Facility Cold Commissioning	12/31/2022		On Schedule
Fiscal Year 2024				
D-00A-09 Interim	LAW Facility Hot Commissioning Complete	12/31/2023		On Schedule
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	03/31/2024		Notice given that a serious risk has arisen. See letter 16-ORP-0097[1].
Fiscal Year 2031				
D-00A-02 Interim	HLW Facility Construction Substantially Complete	12/31/2030		Under Analysis[2]
Fiscal Year 2032				
D-00A-13 Interim	Complete Installation of Pretreatment Feed Separation Vessels FEP-SEP-OOOO1A/1B	12/31/2031		Under Analysis[2]

Milestone	Title	Due Date	Completion Date	Status
D-00A-14 Interim	PT Facility Construction Substantially Complete	12/31/2031		Under Analysis[2]
D-00A-19 Interim	Complete Elevation 98 feet Concrete Floor Slab Placements in PT Facility	12/31/2031		Under Analysis[2]
D-00A-03 Interim	Start HLW Facility Cold Commissioning	06/30/2032		Under Analysis[2]
D-00A-06 Interim	Complete Methods Validations	06/30/2032		On Schedule
Fiscal Year 2033				
D-00A-15 Interim	Start PT Facility Cold Commissioning	12/31/2032		Under Analysis[2]
Fiscal Year 2034				
D-00A-04 Interim	HLW Facility Hot Commissioning Complete	12/31/2033		Under Analysis[2]
D-00A-16 Interim	PT Facility Hot Commissioning Complete	12/31/2033		Under Analysis[2]
D-00A-17	Hot Start of WTP	12/31/2033		Under Analysis[2]
Fiscal Year 2037				
D-00A-01	Achieve Initial Plant Operations for the WTP	12/31/2036		Under Analysis[2]

1 16-ORP-0097, 2016, "State of Washington v. Moniz, Case No. 2:08-CV-5085-RMP (E.D. WA)," (external letter to M. Bellon, Washington State Department of Ecology), from K.W. Smith, U.S. Department of Energy, Office of River Protection, Richland, Washington, December 6.

2 As described in this report, DOE received the U.S. Army Corps of Engineers' final report on its parametric analysis of certain options and funding scenarios used to evaluate the likelihood of achieving PT- and HLW-related milestones. Based on the results of this analysis, DOE considers the milestones for the HLW and PT facilities as "Under Analysis." DOE also considers milestones A-1 and A-17 as being "Under Analysis" because the definition of Section IV-A-2: "'Hot Start of Waste Treatment Plant' means the initiation of simultaneous operation of the Pretreatment (PT) Facility, High-Level Waste (HLW) Facility and Low-Activity Waste (LAW) Facility (including as needed the operations of the Analytical Laboratory (LAB) and the Balance of Facilities) treating Hanford tank wastes and producing a waste glass product."

DOE = U.S. Department of Energy.
Ecology = Washington State Department of Ecology.
HLW = high-level waste.
LAW = low-activity waste.
PT = pretreatment.
SST = single-shell tank.
WMA-C = C Tank Farm waste management area.
WTP = Waste Treatment and Immobilization Plant.

Consent Decree Reports/Reviews

D-16C-03 series, Submit to State of Washington and State of Oregon Quarterly Report

Due: 45 days following after each calendar year quarter (due November 14, 2018).
Status: On Schedule.

D-00C-02 series, Submit to State of Washington and State of Oregon Monthly Summary Reports

Due: End of each month.
Status: On Schedule.

D-006-00-B1, Provide State of Oregon notice of meetings in D-006-00-B, etc. no less than 30 days before they are scheduled

Due: See below.
Status: On Schedule.

D-006-00-B, Meet Approximately Every Three Years after Entry of Decree to review requirements of the Consent Decree

Due: Approximately 3 years from March 16, 2017.
Status: On Schedule.

D-16E-01, DOE must purchase by December 31, 2016 a spare E-A-1 reboiler for the 242-A Evaporator.

Due: December 31, 2016.
Status: Complete (November 15, 2016).

D-16E-02, Have available spare E-A-1 reboiler for the 242-A Evaporator.

Due: December 31, 2018.
Status: Complete (May 8, 2018).

Single-Shell Tank Retrieval Program

Tank Farms Assistant Manager: Glyn Trenchard

Federal Program Manager: Jeff Rambo

Milestone	Title	Due Date	Status
D-16B-03	Of the 12 SSTs referred to in B-1 and B-2, complete retrieval of tank waste in at least 5	12/31/2020	Notice given that a serious risk has arisen. See letter 16-ORP-0097[1].
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.	03/31/2024	Notice given that a serious risk has arisen. See letter 16-ORP-0097[1].

[1] 16-ORP-0097, 2016, "State of Washington v. Moniz, Case No. 2:08-CV-5085-RMP (E.D. WA)," (external letter to M. Bellon, Washington State Department of Ecology), from K.W. Smith, U.S. Department of Energy, Office of River Protection, Richland, Washington, December 6.

DOE = U.S. Department of Energy.
Ecology = Washington State Department of Ecology.
SST = single-shell tank.
WMA-C = C Tank Farm waste management area.

Significant Accomplishments during the Prior Month:

Completed Accomplishments:

- Shipped the Tank AX04 Pit B-R14 pump
- Completed construction of A Tank Farm exhauster pads (concrete placement)
- Completed the disposal of Tank C-105 hydraulic power units (20) (C Tank Farm layup)
- Completed riser investigations at Tanks A-101, A-103, A-106, and A-104
- The U.S. Department of Energy (DOE) met with the Washington State Department of Ecology (Ecology) on August 30, 2018, to discuss the retrieval challenges and tank conditions issues associated with Tank A-104 and Tank A-105.

Ongoing Activities:

- Continue installation of the electrical infrastructure (power and control systems) inside the AX Tank Farm
- Continue riser investigation at Tank AX-101 and Tank AX-103
- Continue engineering evaluation of the high definition videos of Tanks A-104/A-105
- Continue installation of caustic and water system piping from POR496 to the AX Tank Farm
- Continue direct-push sampling of soil at Tank A-104 and Tank A-105 (installation of boreholes)
- Continue Phase II of the AX-102/AX-104 Tanks control trailer installation (POR471)
- Continue installation of A Tank Farm ventilation system:
  - Install exhausters and structural steel
  - Install ventilation manifold supports
  - Remove thermocouple trees from risers (connections for ventilation system)
- Continue cleanout of Tank AX-101 Pit cleanout (AX01A), as resources allow.

Significant Planned Activities in the Next Month:

- Ship the AX04 Pit 05B pump components
- Complete disconnecting and removing hose-in-hose transfer lines in C Tank Farm and AN Tank Farm
- Complete C Tank Farm layup activities by disconnecting and disposing of portable power, heat trace and temperature monitoring, and leak detection systems.

Issues:

- Reduced worker efficiencies associated with mandatory use of supplied air continues to impact work in the tank farms.

Tank Waste Retrieval Work Plan Status

Tank Farms Assistant Manager: Glyn Trenchard

Federal Program Manager: Jeff Rambo

			Retrieval Technology		
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.

Significant Accomplishments during the Prior Month:

- None.

Significant Planned Activities in the Next Month:

- None.

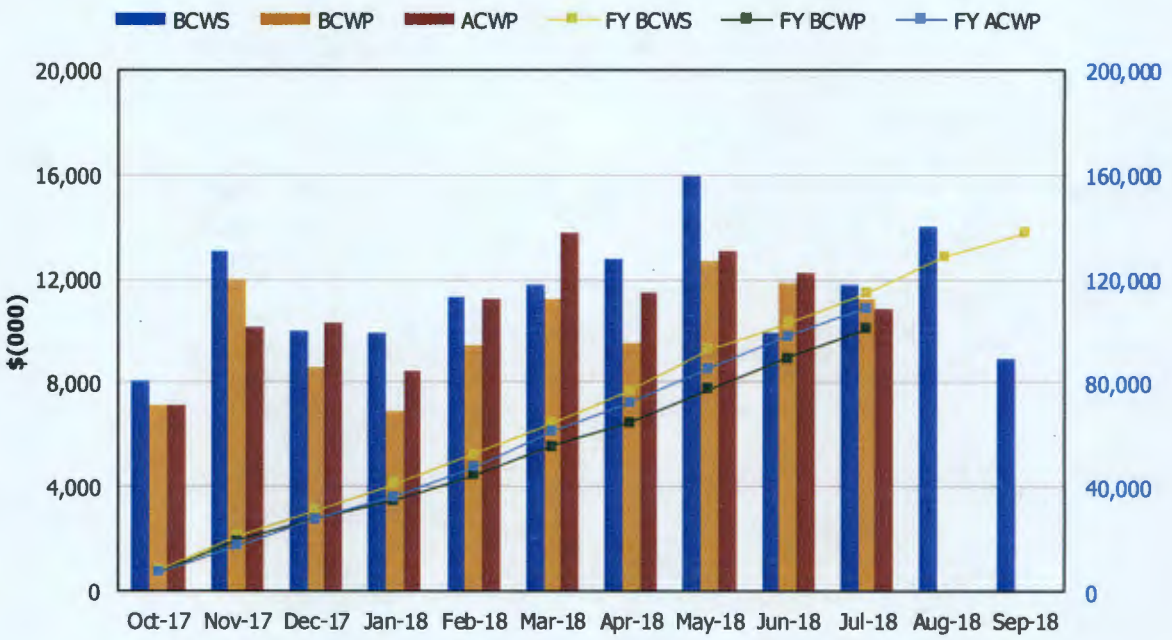
Issues:

- None.

Earned Value Data: Fiscal Year 2018 July-18

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

EVMS Monthly and Fiscal Year Values



Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2017	$8,053	$7,119	$7,127	0.88	1.00	$8,053	$7,119	$7,127	0.88	1.00
Nov 2017	$13,058	$11,996	$10,119	0.92	1.19	$21,111	$19,115	$17,246	0.91	1.11
Dec 2017	$9,964	$8,572	$10,318	0.86	0.83	$31,075	$27,686	$27,563	0.89	1.00
Jan 2018	$9,940	$6,911	$8,464	0.70	0.82	$41,015	$34,597	$36,027	0.84	0.96
Feb 2018	$11,310	$9,456	$11,225	0.84	0.84	$52,326	$44,053	$47,252	0.84	0.93
Mar 2018	$11,787	$11,248	$13,799	0.95	0.82	$64,113	$55,301	$61,051	0.86	0.91
Apr 2018	$12,763	$9,509	$11,495	0.75	0.83	$76,875	$64,810	$72,546	0.84	0.89
May 2018	$15,972	$12,694	$13,076	0.79	0.97	$92,848	$77,504	$85,622	0.83	0.91
Jun 2018	$9,930	$11,819	$12,233	1.19	0.97	$102,778	$89,323	$97,855	0.87	0.91
Jul 2018	$11,803	$11,257	$10,812	0.95	1.04	$114,581	$100,580	$108,667	0.88	0.93
Aug 2018	$13,994					$128,575				
Sep 2018	$8,893					$137,468				
CTD	$918,152	$905,243	$947,219	0.99	0.96					

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.

Retrieve and Close Single-Shell Tanks (5.02)[3]

The July 2018 **unfavorable** schedule variance (SV) of ($546,000) was due to:

- Schedule delays in excavation and site preparation at the north section of the SX barrier have occurred due to issues related to self-contained breathing apparatus usage and the requirement for hand excavation due to underground interferences.
- The installation of the Tank AX-102 and Tank AX-104 diversion box has been delayed due to issues with hand excavation in soil contamination areas associated with the installation of the north/south electrical conduit system.

The July 2018 **favorable** cost variance (CV) of $444,900 was due to:

- The installation of the SX south section barrier gravel base has benefited from the use of grading and compaction equipment.
- Riser investigations at Tanks A-101, A-103, A-106, and A-104, finished earlier than planned.

[3] "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."

Waste Treatment and Immobilization Plant Project

Federal Project Director: Tom Fletcher

Deputy Federal Project Director: Vacant

Milestone	Title	Due Date	Status
D-00A-06	Complete Methods Validations	06/30/2032	On Schedule
D-00A-17	Hot Start of Waste Treatment Plant	12/31/2033	Under Analysis[1]
D-00A-01	Achieve Initial Plant Operations for WTP	12/31/2036	Under Analysis[1]

[1] As described in this report, DOE received the U.S. Army Corps of Engineers' final report on its parametric analysis of certain options and funding scenarios used to evaluate the likelihood of achieving PT- and HLW-related milestones. Based on the results of this analysis, DOE considers the milestones for the HLW and PT facilities as "Under Analysis." DOE also considers milestones A-1 and A-17 as being "Under Analysis" because the definition of Section IV-A-2: "'Hot Start of Waste Treatment Plant' means the initiation of simultaneous operation of the Pretreatment (PT) Facility, High-Level Waste (HLW) Facility and Low-Activity Waste (LAW) Facility (including as needed the operations of the Analytical Laboratory (LAB) and the Balance of Facilities) treating Hanford tank wastes and producing a waste glass product."

DOE = U.S. Department of Energy.
HLW = high-level waste.
PT = pretreatment.
WTP = Waste Treatment and Immobilization Plant.

The Waste Treatment and Immobilization Plant (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 July 2018, DFLAW modifications for the WTP Project were 49 percent complete, engineering design was 82 percent complete, procurement was 45 percent complete, and construction was 35 percent complete. As of July 2018, total LBL facilities were 66 percent complete, engineering design was 90 percent complete, procurement was 78 percent complete, construction was 78 percent complete, and startup and commissioning was 33 percent complete.

The WTP Project has 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.

Significant Accomplishments during the Prior Month:

- DOE continued to evaluate the U.S. Army Corp of Engineers (USACE) report on its parametric analysis of certain options and funding scenarios used to evaluate the potential achievement of the Pretreatment (PT) Facility construction substantially complete milestone (13 years from now) and the High-Level Waste (HLW) Facility construction substantially complete milestone (12 years from now). Once the DOE evaluation of the USACE report is complete, a path forward focused on meeting treatment objectives to achieve the mission will be developed.

- DOE provided a copy of the final USACE report and two Bechtel National, Inc. (BNI) presentations (related to funding needed to meet the milestones for the PT and HLW facilities under certain scenarios) to Ecology on August 13, 2018.
- Other significant accomplishments during the prior month are noted in project reports for the PT Facility, HLW Facility, LAW Facility, BOF, and LAB.

Significant Planned Activities for the Next Month:

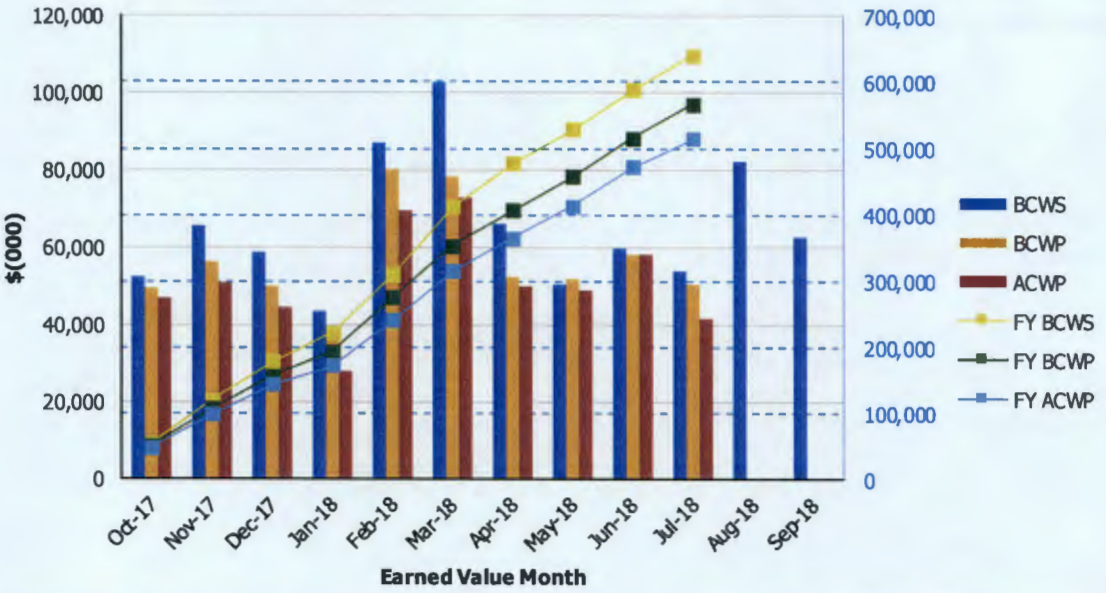
- DOE will continue to evaluate the USACE report and the BNI presentations. The DOE Office of River Protection (ORP) will continue to meet with Ecology about the matters discussed in these documents and will update Ecology as circumstances develop.
- Other significant planned activities in the next month, are noted in project reports for the PT Facility, HLW Facility, LAW Facility, BOF, and LAB.

EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2018 Earned Value Data Data as of: July 2018

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 2017	$52,662	$49,804	$46,894	0.95	1.06	$52,662	$49,804	$46,894	0.95	1.06
Nov 2017	$65,935	$56,513	$51,026	0.86	1.11	$118,597	$106,317	$97,920	0.90	1.09
Dec 2017	$58,797	$50,134	$44,924	0.85	1.12	$177,394	$156,452	$142,844	0.88	1.10
Jan 2018	$43,622	$36,665	$28,076	0.84	1.31	$221,016	$193,117	$170,920	0.87	1.13
Feb 2018	$86,995	$80,565	$69,775	0.93	1.15	$308,011	$273,683	$240,695	0.89	1.14
Mar 2018	$102,749	$78,481	$72,880	0.76	1.08	$410,760	$352,163	$313,575	0.86	1.12
Apr 2018	$65,995	$52,537	$50,050	0.80	1.05	$476,755	$404,701	$363,625	0.85	1.11
May 2018	$50,537	$52,199	$49,027	1.03	1.06	$527,292	$456,900	$412,653	0.87	1.11
Jun 2018	$59,842	$58,499	$58,483	0.98	1.00	$587,134	$515,399	$471,135	0.88	1.09
Jul 2018	$53,752	$50,561	$41,973	0.94	1.20	$640,886	$565,961	$513,108	0.88	1.10
Aug 2018	$82,095									
Sep 2018	$62,686									
PTD	$11,152,480	$11,023,857	$10,896,523	0.99	1.01					

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	SV	CV
Current Period (July 2018)	($3,191)	$8,588
Fiscal Year 2018 to-date	($74,926)	$52,852
Cumulative (through July 2018)	($128,623)	$127,335

CV = cost variance.
SV = schedule variance.

Earned Value Management System Analysis

The Earned Value Management System is intended to provide a status of how the contractor is progressing against its planned work (i.e., schedule), and whether it is costing more or less to complete the work than planned. The project plan is measured by expressing the schedule in terms of dollars spread over the anticipated project duration, and then for each month, determining how much of the planned work was accomplished or "earned," as measured in equivalent dollars. If more work is accomplished than planned, then the project is ahead of schedule and has a favorable SV. Similarly, if less work is accomplished, the project is behind schedule and has an unfavorable SV. Accomplished work is reported in the month it was completed, which may not be when it was planned. For example, work completed in a month earlier than planned would be reported as a favorable SV for the month in which it was completed, but would be reported as an unfavorable SV in the month it was planned. The end result would be the overall cumulative SV netting out to zero over these months. Likewise, work completed late will recover an earlier reported unfavorable SV.

The CV measures the actual cost of work performed against the earned dollar value of that performed work. As an example, assume $10,000 of work was planned to-date, $8,000 was reported as being performed (earned), at an actual cost of $9,000. This work would be reported as being $2,000 behind schedule [a negative or unfavorable SV: $8,000–$10,000 = ($2,000)], and has cost $1,000 more [a negative or unfavorable CV: $8,000–$9,000 = ($1,000)] than was planned for completing that work scope. Likewise, a favorable or positive CV would be reported if it cost less to complete the work than the performed dollar value of the work.

The SV and CV are reported for each monthly period, fiscal year to-date, as well as for the project-to-date value. The monthly variances can fluctuate significantly (for reasons noted earlier), so the fiscal year or cumulative-to-date report provides a better indicator of the overall project completion status, and can give a reasonable projection of how the project will finish, based on the progress-to-date.

For the July 2018 Earned Value Management System reporting period, a net **unfavorable** SV of approximately ($3.2 million) was reported, primarily due to the following:

- LAW Facility Construction craft reported an unfavorable SV due to delays in starting the LAW Preliminary Documented Safety Analysis-related piping, electrical, and design evolution scope. Recovery of this unfavorable SV is planned after release of the engineering design expected by the end of October 2018.
- LAW Facility Construction subcontracts reported an unfavorable SV due to early completion of scheduled work related to the roofing of the truck bay canopy, installation of the carbon dioxide gas system vessel, and installation of insulation.
- DFLAW Construction craft reported an unfavorable SV primarily related to procurement delays with the radioactive liquid effluent retention facility pipe, modular rack steel, and rack pipe.
- DFLAW Plant Material reported a favorable SV due to increased deliveries of stainless steel pipe in the reporting period. Additional BNI support in the vendor shop has contributed to this favorable SV performance.
- LBL Plant Management (i.e., commissioning) continues to show an unfavorable SV due to a planned delay of staff increases. The LBL staffing needs to support commissioning are being evaluated. The future staffing level of commissioning personnel will be based on the outcomes of the evaluation. This control account will continue to show an unfavorable SV until staffing levels in the budgeting tools are realigned with the commissioning execution plan via the baseline change control process in a replan effort expected to complete in October 2018.

For the July 2018 Earned Value Management System reporting period, a net **favorable** CV of approximately $8.6 million was reported, primarily due to the following:

- LBL Facility Services reported a favorable CV primarily driven by delayed procurement of the communications system network, now expected between September 2018 and January 2019.
- LAW Facility Engineering reported an unfavorable CV due to design engineering taking longer than originally estimated to complete work associated with more complex scope (e.g., analytical limit calculations).
- LAW Facility, HLW Facility, and PT Facility all reported an unfavorable CV for Plant Equipment as a result of updating previously reported actual cost of work performed for Washington State sales tax, based on a recently completed evaluation of the actual cost of work performed for equipment sales tax.
- LBL Plant Management (i.e., commissioning) continues to report a favorable CV because current spending priorities are different than the existing plan. Revised commissioning spend plans are currently being developed and will be incorporated in the October 2018 replan effort.

Pretreatment Facility

Federal Project Director: Tom Fletcher

Facility Federal Project Director: Wahed Abdul

Milestone	Title	Due Date	Status
D-00A-18	Complete Structural Steel Erection 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	Under Analysis[1]
D-00A-13	Complete Installation of Pretreatment Feed Separation Vessels FEP-SEP-OOOO1A/1B	12/31/2031	Under Analysis[1]
D-00A-14	PT Facility Construction Substantially Complete	12/31/2031	Under Analysis[1]
D-00A-15	Start PT Facility Cold Commissioning	12/31/2032	Under Analysis[1]
D-00A-16	PT Facility Hot Commissioning Complete	12/31/2033	Under Analysis[1]

1. As described in this report, DOE received the U.S. Army Corps of Engineers' final report on its parametric analysis of certain options and funding scenarios used to evaluate the likelihood of achieving PT- and HLW-related milestones. Based on the results of this analysis, DOE considers the milestones for the HLW and PT facilities as "Under Analysis." DOE also considers milestones A-1 and A-17 as being "Under Analysis" because the definition of Section IV-A-2: "'Hot Start of Waste Treatment Plant' means the initiation of simultaneous operation of the Pretreatment (PT) Facility, High-Level Waste (HLW) Facility and Low-Activity Waste (LAW) Facility (including as needed the operations of the Analytical Laboratory (LAB) and the Balance of Facilities) treating Hanford tank wastes and producing a waste glass product."

DOE = U.S. Department of Energy.
HLW = high-level waste.
PT = pretreatment.
WTP = Waste Treatment and Immobilization Plant.

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

ORP and BNI continue to work on resolving the remaining technical issues identified in the Third Order Regarding Motions to Modify Consent Decrees[4], which includes, "Ensuring Control of the Pulse Jet Mixers" (i.e., T4 in relation to pulse-jet mixer vessel mixing and control);

[4] *State of Washington v. Dept. of Energy*, No: 2:08-CV-5085-RMP (March 11, 2016) (EDF-221).

"Protecting Against Possible Erosion and Corrosion" (i.e., T5 in relation to erosion/corrosion in piping and ancillary vessels); and "Ensuring Ventilation Balancing" (i.e., T8 in relation to facility ventilation/process offgas treatment).[5]

Preliminary engineering work, documented previously in a BNI and ORP study, was completed and demonstrates how the standard high-solids vessel design can be implemented in the PT Facility (i.e., T6 in relation to design redundancy and in-service inspection). The engineering study showed that 16 standard high-solids vessels can be incorporated into the PT Facility, while meeting the PT Facility throughput contract requirements. Ecology was briefed on the design concept in February 2018.

Significant Accomplishments during the Prior Month:

- DOE continued to evaluate the USACE report on its parametric analysis of certain options and funding scenarios used to evaluate the potential achievement of the PT Facility construction substantially complete milestone (13 years from now), and the HLW Facility construction substantially complete milestone (12 years from now). Once the DOE evaluation of the USACE report is complete, a path forward focused on meeting treatment objectives to achieve the mission will be developed.
- DOE provided a copy of the final USACE report and two BNI presentations to Ecology on August 13, 2018.
- ORP continued to work with BNI on completing documentation for the remaining open technical issues described as T4, T5, and T7 (i.e., T7 in relation to seismic ground motion criteria changes around 2005).
- BNI continued to focus on ongoing asset maintenance at the PT Facility to protect equipment and structures and ensure design documents are maintained.

Significant Planned Activities for the Next Month:

- DOE will continue to evaluate the USACE report and BNI presentations. ORP will continue to meet with Ecology about the matters discussed in these documents and will update Ecology as circumstances develop.
- ORP will continue discussions with DOE's Office of Environmental Management about the direction to provide BNI regarding engineering, procurement, and construction activities at the PT Facility.
- BNI will continue to focus on ongoing asset maintenance at the PT Facility to protect equipment and structures and ensure design documents are maintained. Work will continue on technical issue resolution related to the remaining technical issues.

[5] At the outset of U.S. Department of Energy's identification of the technical issues, the issues were grouped into eight issues. During the litigation, some issues were combined with others into five groups of issues. Consequently, the descriptions of the issues listed above may be both different by number and somewhat different by description.

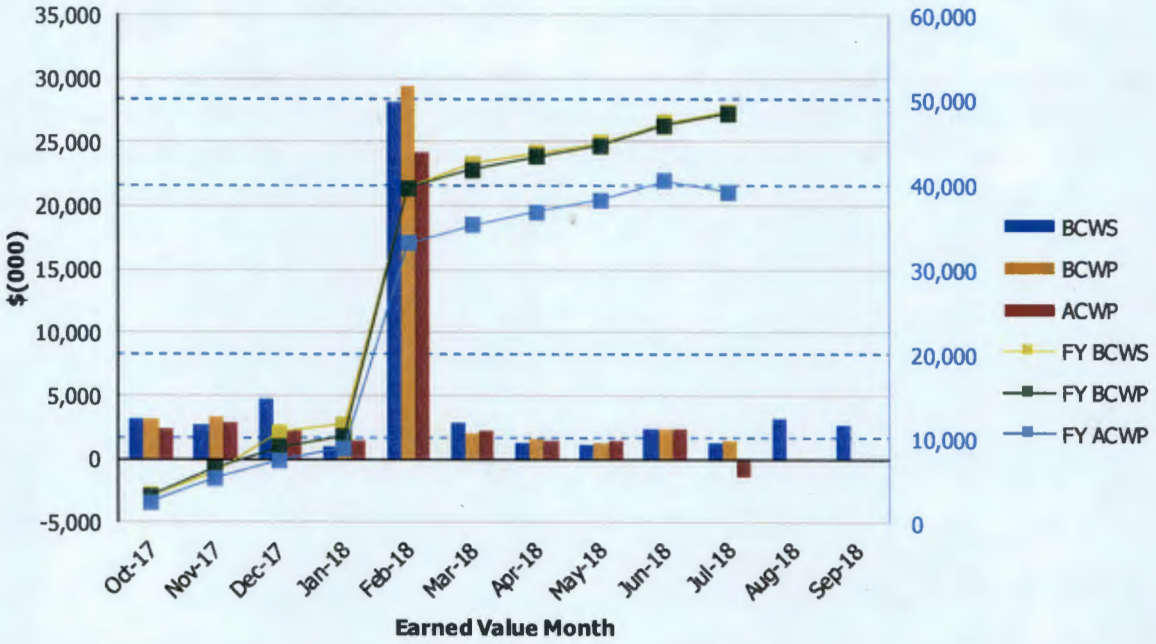
- BNI is expected to issue an update to the localized corrosion test basis document supporting closure of technical issue T5 and closure of the T5 corrective action plan before the end of 2018. Comment resolution on the T5 corrosion test report has taken longer than expected.
- BNI is expected to issue the methodology for the vessel structural integrity verification supporting final resolution of technical issue T7 before the end of 2018. Comment resolution has taken longer than expected.
- ORP anticipates resolution of the remaining technical issues (noted above) with notification to the Defense Nuclear Facilities Safety Board before the end of 2018. The resolution of the technical issues is likely to require significant design changes to the PT Facility.

EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2018 Earned Value Data Data as of: July 2018

River Protection Project
Pretreatment Facility (WBS 1.01)

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 2017	$3,230	$3,129	$2,345	0.97	1.33	$3,230	$3,129	$2,345	0.97	1.33
Nov 2017	$2,757	$3,293	$2,838	1.19	1.16	$5,987	$6,422	$5,184	1.07	1.24
Dec 2017	$4,691	$2,502	$2,204	0.53	1.14	$10,678	$8,924	$7,387	0.84	1.21
Jan 2018	$896	$1,272	$1,371	1.42	0.93	$11,574	$10,196	$8,758	0.88	1.16
Feb 2018	$28,072	$29,440	$24,268	1.05	1.21	$39,647	$39,635	$33,026	1.00	1.20
Mar 2018	$2,819	$2,143	$2,222	0.76	0.96	$42,466	$41,778	$35,248	0.98	1.19
Apr 2018	$1,308	$1,528	$1,494	1.17	1.02	$43,773	$43,306	$36,743	0.99	1.18
May 2018	$1,125	$1,268	$1,382	1.13	0.92	$44,898	$44,574	$38,125	0.99	1.17
Jun 2018	$2,364	$2,366	$2,353	1.00	1.01	$47,262	$46,939	$40,477	0.99	1.16
Jul 2018	$1,331	$1,376	($1,416)	1.03	-0.97	$48,593	$48,315	$39,061	0.99	1.24
Aug 2018	$3,161									
Sep 2018	$2,773									
PTD	$1,989,701	$1,985,900	$1,952,422	1.00	1.02					

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.

High-Level Waste Facility

Federal Project Director: Tom Fletcher

Facility Federal Project Director: Wahed Abdul

Milestone	Title	Due Date	Status
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	Under Analysis[1]
D-00A-03	Start HLW Facility Cold Commissioning	06/30/2032	Under Analysis[1]
D-00A-04	HLW Facility Hot Commissioning Complete	12/31/2033	Under Analysis[1]

[1] As described in this report, DOE received the U.S. Army Corps of Engineers' final report on its parametric analysis of certain options and funding scenarios used to evaluate the likelihood of achieving PT- and HLW-related milestones. Based on the results of this analysis, DOE considers the milestones for the HLW and PT facilities as "Under Analysis." DOE also considers milestones A-1 and A-17 as being "Under Analysis" because the definition of Section IV-A-2: "'Hot Start of Waste Treatment Plant' means the initiation of simultaneous operation of the Pretreatment (PT) Facility, High-Level Waste (HLW) Facility and Low-Activity Waste (LAW) Facility (including as needed the operations of the Analytical Laboratory (LAB) and the Balance of Facilities) treating Hanford tank wastes and producing a waste glass product."

DOE = U.S. Department of Energy.
HLW = high-level waste.
PT = pretreatment.
WTP = Waste Treatment and Immobilization Plant.

The HLW Facility will receive the separated high-level waste concentrate from the PT Facility. This concentrate will 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 will 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 (FY) 2017 through FY 2021 Interim Work Plan, which resulted in work primarily associated with asset maintenance and key ongoing procurement activities. With the receipt of increased funding for FY 2018 (noted below), additional engineering workscope is being performed and is being planned for FY 2019 in anticipation of available engineering resources previously assigned to DFLAW/LBL activities.

Significant Accomplishments during the Prior Month:

- In accordance with the additional funding received for the HLW Facility in the *Consolidated Appropriations Act, 2018*, ORP and BNI continued to update system design descriptions and incorporated design changes resulting from the updated HLW Facility Preliminary Documented Safety Analysis.
- ORP and BNI continued limited engineering and continued detailed work planning for FY 2019 based on carry-over funding from the FY 2018 appropriation. In addition, long-range planning in preparations for a rebaselining effort and the release of critical and long-lead procurements continued. ORP continued discussions with DOE's Office of Environmental Management about the direction to provide BNI regarding this facility.
- DOE continued to evaluate the USACE report on its parametric analysis of certain options and funding scenarios in order to evaluate the potential achievement of the PT Facility construction substantially complete milestone (13 years from now) and the HLW Facility construction substantially complete milestone (12 years from now). Once the DOE evaluation of the USACE report is complete, a path forward focused on meeting treatment objectives to achieve the mission will be developed.
- DOE provided a copy of the final USACE report and two BNI presentations to Ecology on August 13, 2018.
- BNI continued to focus on ongoing asset maintenance at the HLW Facility to protect equipment and structures and ensure design documents are maintained.
- BNI continued fabrication of RLD-7 and RLD-8 vessels to support expected delivery by the end of December 2018. These vessels are to be installed in the wet process cell prior to concrete slab placement. This activity supports roof installation and building enclosure.

Significant Planned Activities in the Next Month:

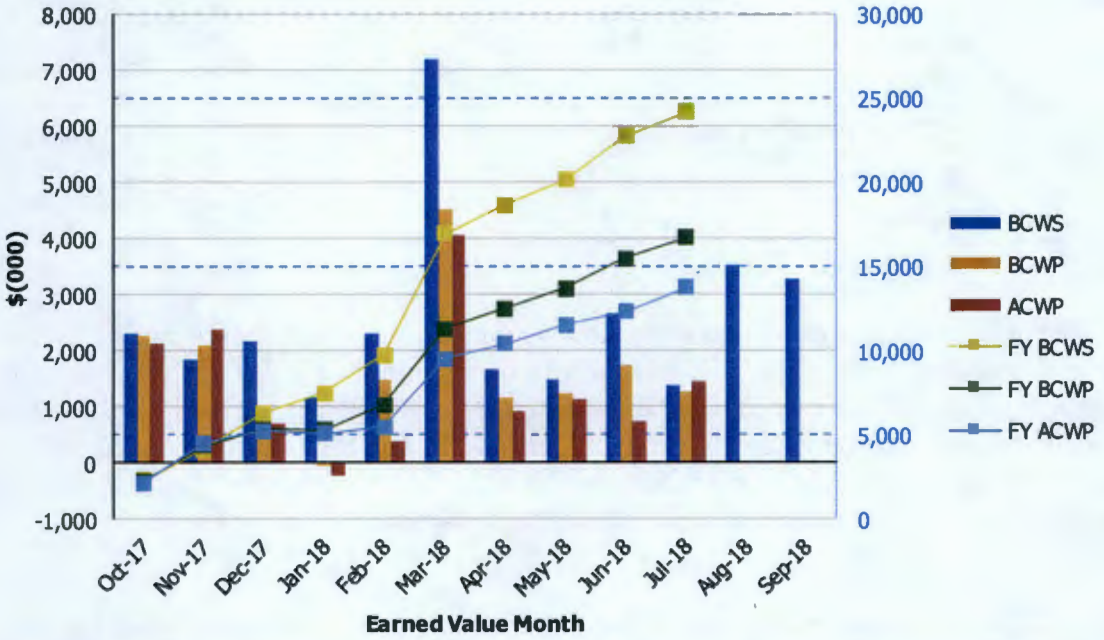
- In accordance with the additional funding received for the HLW Facility in the *Consolidated Appropriations Act, 2018*, ORP and BNI expect to complete the detailed work planning for the HLW Facility in FY 2019 utilizing the carry-over of additional funds received in the FY 2018 appropriation. Engineering resources from DFLAW/LBL modifications will be transitioned to support production engineering efforts for the HLW Facility as they become available.
- DOE will continue to evaluate the USACE report and BNI presentations. ORP will continue to meet with Ecology about the matters discussed in these documents and will update Ecology as circumstances develop.
- BNI will continue to focus on ongoing asset maintenance at the HLW Facility to protect equipment and structures and ensure design documents are maintained.
- BNI will continue to update its long-range planning documents to support a future rebaseline effort as resources become available.

EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2018 Earned Value Data Data as of: July 2018

River Protection Project
High-Level Waste Facility (WBS 1.03)

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 2017	$2,303	$2,268	$2,151	0.98	1.05	$2,303	$2,268	$2,151	0.98	1.05
Nov 2017	$1,848	$2,091	$2,396	1.13	0.87	$4,151	$4,360	$4,547	1.05	0.96
Dec 2017	$2,160	$976	$714	0.45	1.37	$6,311	$5,336	$5,261	0.85	1.01
Jan 2018	$1,164	($32)	($209)	-0.03	0.16	$7,475	$5,304	$5,053	0.71	1.05
Feb 2018	$2,310	$1,477	$396	0.64	3.72	$9,785	$6,780	$5,449	0.69	1.24
Mar 2018	$7,188	$4,514	$4,061	0.63	1.11	$16,974	$11,294	$9,510	0.67	1.19
Apr 2018	$1,684	$1,179	$916	0.70	1.29	$18,658	$12,473	$10,426	0.67	1.20
May 2018	$1,492	$1,240	$1,129	0.83	1.10	$20,150	$13,713	$11,555	0.68	1.19
Jun 2018	$2,659	$1,743	$745	0.66	2.34	$22,809	$15,456	$12,300	0.68	1.26
Jul 2018	$1,381	$1,282	$1,455	0.93	0.88	$24,190	$16,738	$13,755	0.69	1.22
Aug 2018	$3,525									
Sep 2018	$3,273									
PTD	$1,356,861	$1,348,873	$1,322,147	0.99	1.02					

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.

Low-Activity Waste Facility[6]

Federal Project Director: Tom Fletcher

Facility Federal Project Director: Wahed Abdul

Milestone	Title	Due Date	Status
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2020	On Schedule
D-00A-08	Start LAW Facility Cold Commissioning	12/31/2022	On Schedule
D-00A-09	LAW Facility Hot Commissioning Complete	12/31/2023	On Schedule

LAW = low-activity waste.

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 July 2018, the LAW Facility was 72 percent complete overall, engineering design was 91 percent complete, procurement was 84 percent complete, construction was 93 percent complete, and startup and commissioning was 22 percent complete.

Significant Accomplishments during the Prior Month:

- ORP completed validation review of BNI's declaration of interim contract milestone A-5, "Final LBL Physical Plant Complete," and issued a response to BNI on August 13, 2018, verifying satisfactory completion of all required construction and resolution of all identified issues. Completion of interim contract milestone A-5 was determined to be July 13, 2018.
- BNI awarded the procurement for the melter system crush pads.
- BNI's Startup organization accepted turnover of the following LAW Facility systems from the Construction organization:
  - Process control system 2
  - Low-voltage electrical system 3.

[6] Please note that discussions about the related Low-Activity Waste Pretreatment System and Tank-Side Cesium Removal are included in the monthly reports submitted under the *Hanford Federal Facility Agreement and Consent Order* (also known as the Tri-Party Agreement or TPA). Prior discussions are in reports archived in the Administrative Record.

Significant Planned Activities in the Next Month:

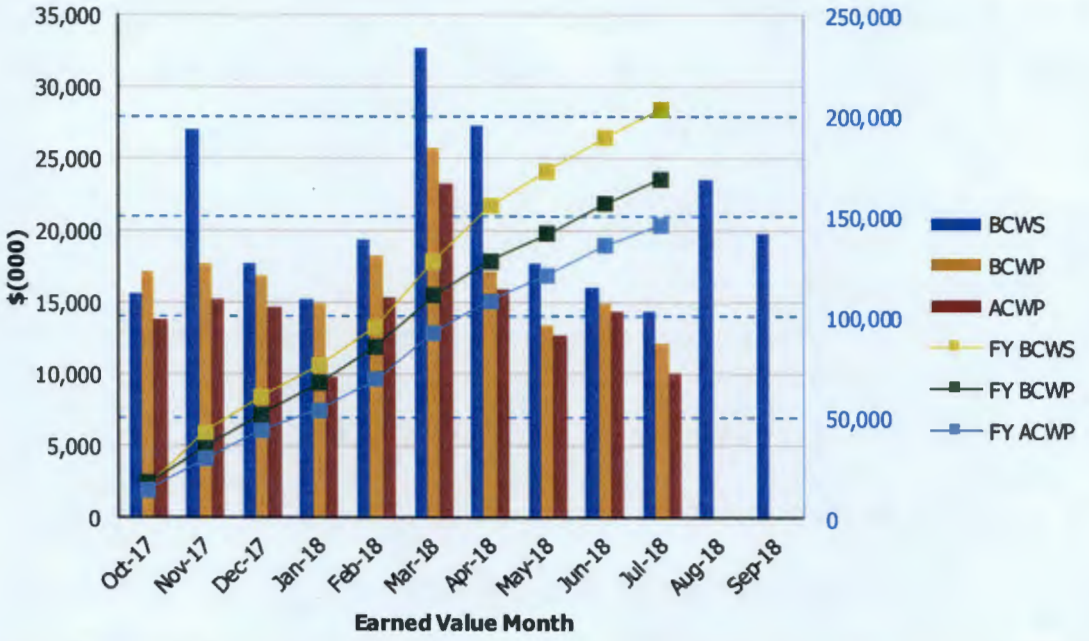
- BNI, in conjunction with ORP, is continuing to develop a modified program for performing commercial grade dedication to better align with the approved LAW Facility Documented Safety Analysis. Currently, the pilot program is being reviewed on sample equipment before full implementation expected in October 2018.
- BNI is expected to complete engineering design for the active gas analyzer procurement.
- BNI's Startup is expected to complete component testing of the following systems:
  - High-pressure steam system 1
  - C1 ventilation (C1V) system 2
  - Domestic (potable) water system 1
  - Process service water system 1
  - Chilled water system 3.
- BNI's Startup is expected to accept the following systems turned over from the Construction organization:
  - Low-activity waste container receipt handling system 1
  - Glass formers reagent system 1
  - Miscellaneous gases system 1
  - C5V system 1
  - Low-activity waste container finishing handling system 2.

EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2018 Earned Value Data Data as of: July 2018

River Protection Project
Low-Activity Waste Facility (WBS 1.02)

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 2017	$15,716	$17,201	$13,802	1.09	1.25	$15,716	$17,201	$13,802	1.09	1.25
Nov 2017	$27,014	$17,698	$15,292	0.66	1.16	$42,730	$34,898	$29,095	0.82	1.20
Dec 2017	$17,686	$16,865	$14,665	0.95	1.15	$60,416	$51,763	$43,760	0.86	1.18
Jan 2018	$15,226	$15,023	$9,821	0.99	1.53	$75,641	$66,786	$53,580	0.88	1.25
Feb 2018	$19,349	$18,243	$15,413	0.94	1.18	$94,990	$85,029	$68,993	0.90	1.23
Mar 2018	$32,761	$25,728	$23,335	0.79	1.10	$127,750	$110,757	$92,328	0.87	1.20
Apr 2018	$27,269	$17,227	$15,923	0.63	1.08	$155,019	$127,984	$108,251	0.83	1.18
May 2018	$17,765	$13,420	$12,803	0.76	1.05	$172,784	$141,405	$121,054	0.82	1.17
Jun 2018	$16,038	$14,943	$14,382	0.93	1.04	$188,822	$156,348	$135,437	0.83	1.15
Jul 2018	$14,445	$12,116	$10,154	0.84	1.19	$203,267	$168,464	$145,591	0.83	1.16
Aug 2018	$23,535									
Sep 2018	$19,760									
PTD	$1,931,491	$1,894,899	$1,876,198	0.98	1.01					

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.

Balance of Facilities

Federal Project Director: Tom Fletcher

Facility Federal Project Director: Jason Young

Milestone	Title	Due Date	Status
D-00A-12	Steam Plant Construction Complete	12/31/2012	Complete

BOF will provide services and utilities to support operation of the main production facilities: PT, HLW, LAW, and LAB. As of July 2018, BOF was 72 percent complete overall, engineering design was 93 percent complete, procurement was 85 percent complete, construction was 82 percent complete, and startup and commissioning was 43 percent complete. Design of the Effluent Management Facility (EMF) was 90 percent complete.

BNI Engineering efforts are focused on completion of the EMF design, supporting EMF procurement activities, and providing field support for BOF startup activities. BNI Construction has completed installation of the stainless steel liner plate in the low-point drain tank area and is focused on completion for the evaporator feed tank area. In parallel, BNI Construction is preparing for a significant number of equipment lifts in the upcoming months for EMF. Startup testing for BOF systems is focused on the cooling tower facility medium-voltage cooling water pumps and major equipment in the chiller compressor and steam plants.

Significant Accomplishments during the Prior Month:

- BNI completed installation of the stainless steel liner plate for the low-point drain vessel area.
- BNI completed placement of rack No. 2 for the EMF secondary reboiler and condenser (C3) area.
- BNI completed placement of the footings for the EMF powerhouse.
- BNI received approval for the EMF equipment group III permit modification.
- BNI relocated the Demag crane in preparation for rack, vessel, and roofing placements.
- BNI assembled a large section of the roof structure off-footprint to facilitate improvement of the installation schedule.
- BNI continued installation of the stainless steel liner plate installation for the evaporator feed vessel area.
- BNI continued installation of the waste transfer line between the LAW Facility and EMF.
- BNI continued protective coatings application throughout the EMF processing building.

Significant Planned Activities in the Next Month:

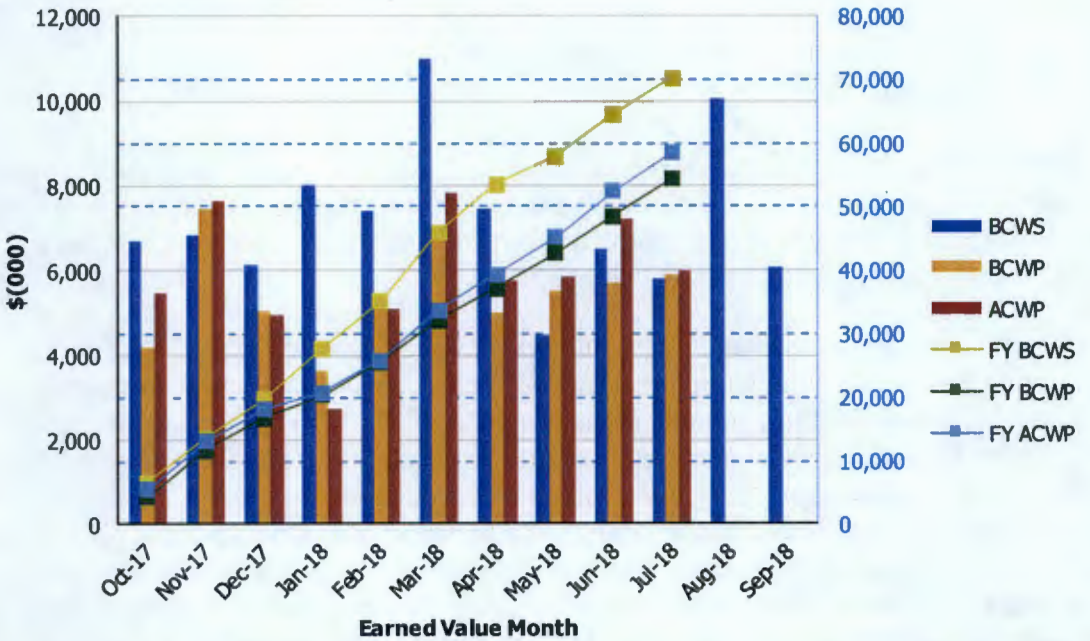
- BNI Construction is expected to place the EMF evaporator and tower assembly.
- BNI Construction is expected to place the EMF secondary reboiler in the C3 area.
- BNI Construction is expected to place the roof assembly over the EMF C3 area.
- BNI Construction is expected to turn over the glass former (GFR-B-01) system for startup testing after it works through the final punchlist items needed for turnover.
- BNI Construction is expected to turn over the ammonia reagent (AMR-B-01) system for startup testing pending completion of the Underwriters Laboratory inspection.

EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2018 Earned Value Data Data as of: July 2018

River Protection Project
Balance of Facilities (WBS 1.05)

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 2017	$6,686	$4,211	$5,450	0.63	0.77	$6,686	$4,211	$5,450	0.63	0.77
Nov 2017	$6,823	$7,436	$7,658	1.09	0.97	$13,509	$11,647	$13,108	0.86	0.89
Dec 2017	$6,146	$5,033	$4,931	0.82	1.02	$19,655	$16,679	$18,039	0.85	0.92
Jan 2018	$7,999	$3,629	$2,707	0.45	1.34	$27,654	$20,308	$20,746	0.73	0.98
Feb 2018	$7,399	$5,164	$5,092	0.70	1.01	$35,052	$25,472	$25,838	0.73	0.99
Mar 2018	$10,993	$6,722	$7,817	0.61	0.86	$46,045	$32,195	$33,655	0.70	0.96
Apr 2018	$7,447	$5,012	$5,759	0.67	0.87	$53,492	$37,207	$39,414	0.70	0.94
May 2018	$4,485	$5,514	$5,826	1.23	0.95	$57,976	$42,721	$45,240	0.74	0.94
Jun 2018	$6,515	$5,700	$7,228	0.87	0.79	$64,492	$48,421	$52,468	0.75	0.92
Jul 2018	$5,800	$5,871	$6,001	1.01	0.98	$70,292	$54,292	$58,469	0.77	0.93
Aug 2018	$10,027									
Sep 2018	$6,068									
PTD	$742,637	$719,801	$733,213	0.97	0.98					

ACWP = actual cost of work performed.
BCWP = budgeted cost of work performed.
BCWS = budgeted cost of work scheduled.
CPI = cost performance index.
EVMS = earned value management system.
FY = fiscal year.
PTD = project to date.
SPI = schedule performance index.

Analytical Laboratory

Federal Project Director: Tom Fletcher

Facility Federal Project Director: Jason Young

Milestone	Title	Due Date	Status
D-00A-05	LAB Construction Substantially Complete	12/31/2012	Complete

LAB = analytical laboratory.

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. As of July 2018, the LAB was 73 percent complete overall, engineering design was 91 percent complete, procurement was 90 percent complete, construction was 96 percent complete, and startup and commissioning was 33 percent complete.

Activities in the LAB are focused on system turnovers to begin startup testing of LAB systems. BNI is focused on completing the turnover of all LAB systems from construction to startup in 2018. To date, BNI has completed the turnover of 27 LAB systems for startup testing. BNI has relocated personnel and equipment into an offsite laboratory facility to perform analytical methods development. This allows methods development to occur in parallel with system startup testing. The installation of analytical equipment at the offsite facility has been completed and procedure development is in progress. The servers used to operate the test engineers' workstation have been transferred to the LAW Facility annex and startup testing support is now provided from the permanent DFLAW control room in the LAW Facility.

Significant Accomplishments during the Prior Month:

- BNI completed energization of the C3V system.
- BNI completed energization of the C2V system.
- BNI completed turnover of the stack discharge monitoring system for startup testing.
- BNI completed turnover of the plant vacuum air system for startup testing.
- BNI completed turnover of the environmental monitoring system for startup testing.
- BNI continued review of the analytical methods procedures.

Significant Planned Activities in the Next Month:

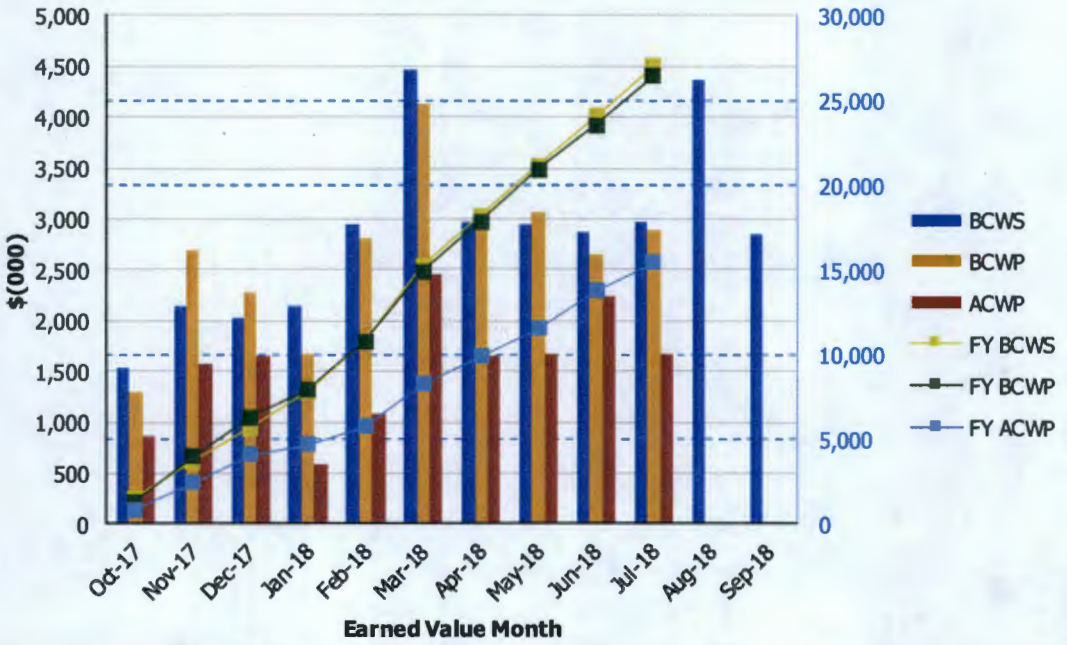
- BNI is expected to continue turnover of LAB systems and startup testing of systems as they become available.

EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2018 Earned Value Data Data as of: July 2018

River Protection Project
Analytical Laboratory (WBS 1.06)

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 2017	$1,538	$1,298	$861	0.84	1.51	$1,538	$1,298	$861	0.84	1.51
Nov 2017	$2,135	$2,694	$1,578	1.26	1.71	$3,673	$3,992	$2,438	1.09	1.64
Dec 2017	$2,029	$2,286	$1,660	1.13	1.38	$5,702	$6,278	$4,098	1.10	1.53
Jan 2018	$2,139	$1,678	$586	0.78	2.86	$7,841	$7,956	$4,684	1.01	1.70
Feb 2018	$2,950	$2,806	$1,082	0.95	2.59	$10,791	$10,762	$5,766	1.00	1.87
Mar 2018	$4,477	$4,134	$2,463	0.92	1.68	$15,268	$14,896	$8,229	0.98	1.81
Apr 2018	$2,966	$2,938	$1,649	0.99	1.78	$18,234	$17,833	$9,878	0.98	1.81
May 2018	$2,950	$3,067	$1,666	1.04	1.84	$21,184	$20,901	$11,544	0.99	1.81
Jun 2018	$2,876	$2,656	$2,242	0.92	1.18	$24,060	$23,557	$13,786	0.98	1.71
Jul 2018	$2,972	$2,888	$1,668	0.97	1.73	$27,033	$26,445	$15,454	0.98	1.71
Aug 2018	$4,366									
Sep 2018	$2,856									
PTD	$388,241	$384,302	$359,572	0.99	1.07					

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.

Waste Treatment Plant Project Percent Complete Status (Table)

Waste Treatment Plant Project - (LBL/Project Services) Percent Complete Status

Through July 2018

(Dollars - Millions)	Overall Facility Percent Complete Unallocated Dollars			Design/Engineering Unallocated Dollars			Procurement Unallocated Dollars			Construction Unallocated Dollars			Startup & Plant Operations Unallocated Dollars			Project Management & Shared Services Unallocated Dollars		
Facilities	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete
Low-Activity Waste	2,310.0	1,652.3	72%	565.8	515.3	91%	375.6	314.5	84%	728.1	678.5	93%	636.5	139.9	22%	4.0	4.0	100%
Balance of Facilities	805.1	575.8	72%	149.3	138.4	93%	72.2	61.0	85%	317.0	261.5	82%	266.2	114.4	43%	0.5	0.5	100%
Analytical Lab	501.1	365.9	73%	102.9	93.4	91%	66.5	59.6	90%	164.9	157.8	96%	166.3	54.6	33%	0.5	0.5	100%
Direct Feed LAW	420.0	207.8	49%	108.1	88.6	82%	67.7	30.7	45%	232.5	81.2	35%	0.0	0.0	0%	11.6	7.3	62%
LBL Facility Services	723.6	343.8	48%	0.0	0.0	0%	69.3	44.5	64%	190.5	86.9	46%	204.6	105.9	52%	259.2	106.5	41%
Total LBL	4,759.9	3,145.6	66%	926.1	835.7	90%	651.3	510.5	78%	1,633.0	1,266.0	78%	1,273.6	414.7	33%	275.8	118.8	43%
Project Services	930.0	583.5	63%	92.3	80.1	87%	65.6	47.2	72%	106.8	84.0	79%	1.7	1.7	100%	663.7	370.5	56%
Total Project Services	930.0	583.5	63%	92.3	80.1	87%	65.6	47.2	72%	106.8	84.0	79%	1.7	1.7	100%	663.7	370.5	56%
Total LBL, DFLAW & Project Services	5,689.9	3,729.2	66%	1,018.4	915.8	90%	716.9	557.7	78%	1,739.8	1,350.0	78%	1,275.3	416.5	33%	939.5	489.2	52%
PT/HLW/SS Percent Complete Status Frozen as of September 2012 (due to project rebaselining efforts)																		
High-Level Waste	1,478.6	922.1	62%	364.4	325.2	89%	433.9	349.4	81%	561.1	243.2	43%	119.2	4.4	4%	n/a	n/a	n/a
Pretreatment	2,517.3	1,410.5	56%	761.7	645.8	85%	679.9	380.4	56%	890.0	378.6	43%	185.8	5.6	3%	n/a	n/a	n/a
Shared Services	4,726.9	3,632.6	77%	1,047.0	977.9	93%	451.7	395.0	87%	1,436.5	1,143.0	80%	453.5	133.2	29%	1,338.1	983.5	73%
Total HLW/PT/SS	8,722.8	5,965.2	68%	2,173.1	1,948.9	90%	1,565.5	1,124.8	72%	2,887.6	1,764.8	61%	758.5	143.2	19%	1,338.1	983.5	73%
Undistributed Budget	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total WTP	14,412.7	9,694.4	67%	3,191.5	2,864.7	90%	2,282.4	1,682.5	74%	4,627.4	3,114.8	67%	2,033.8	559.7	28%	2,277.6	1,472.7	65%

Source: Preliminary WTP Contract Performance Report - Format 1, Data for July 2018

Note: In September 2012, the LBL Replan was incorporated into the project OTB baseline resulting in increases/decreases to the LBL facility budgets, which correspondingly increased/decreased the facility/function to-date percent complete values. In October 2012, the PT/HLW/SS Interim Work Plan was incorporated into the project OTB baseline resulting in decreases to the PT/HLW/SS facility budgets, this was due to a work scope shift from the Distributed budget to UB. Percent Complete Values shown for PT, HLW and SS have been frozen with the September 2012 values due to the Interim Work Plan and budgets being moved into UB. UB value for the project for PT/HLW/SS is $2,014M. The percent complete values for the Total WTP are the current total LBL BCWP added to the frozen HLW/PT/SS BCWP values. In March 2014, Project Controls and Project Management work scope was moved out of Shared Services control accounts into the facilities with new control accounts being set up in the facilities. These will now be seen under Project Management/Shared Services by facility. The Shared Services PMB value has not been changed to reflect this change due to the freeze on HLW/PT and SS and the budgets remaining in UB. October 2014 data reflects the incorporation of Direct Feed LAW and the split of Shared Services into LBL Facility Services and Project Services. March 2016 LBL percent complete data is a total of LAW-BOF-LAB-DFLAW and LBL Facility Services. The Project Services Allocation account (zPSA), as shown on the CPR Format 1, is not added to LBL for percent complete purposes.