

**FINAL**

Office of River Protection  
Consent Decree 08-5085-FVS

Monthly Summary Report

July 2015

**Office of River Protection**  
**Consent Decree 08-5085-FVS**  
**Monthly Summary Report**

**July 2015 (Monthly Summary Report/Project Earned Value Management System reflects  
May 2015 information)**

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## CD Milestone Statistics/Status

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2014</b>				
D-00B-01	Complete Retrieval of Tank Waste from 10 SSTs in WMA-C	09/30/2014		Past Due
D-00B-02	Advise Ecology of the Nine SSTs Waste will be Retrieved by 2022	09/30/2014	08/24/2011	Completed
<b>Fiscal Year 2015</b>				
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2014		Past Due
D-00A-19	Complete elevation 98 feet Concrete Floor Slab Placements in PT Facility	12/31/2014		Past Due

Ecology = Washington State Department of Ecology.

LAW = low-activity waste.

PT = pretreatment.

SST = single-shell tank.

WMA-C = C Farm waste management area.

### Consent Decree Reports/Reviews

**D-00C-01 series, Submit to State of Washington and State of Oregon Semi-Annual Report,** Due: Semiannually – January 31 and July 31 of each year, Status: Ongoing. The January 2015 Semiannual Report was issued on January 29, 2015, via U.S. Department of Energy (DOE), Office of River Protection (ORP) letter 15-ECD-0006.

**D-00C-02 series, Submit to State of Washington and State of Oregon Monthly Summary Reports,** Due: End of each month, Status: Ongoing.

**D-006-00-A, Meet Approximately Every Three Years after Entry of Decree to review requirements of the Consent Decree,** Held: December 10, 2013, Status: Completed.

**D-006-00-A1, Provide State of Oregon notice of meetings in D-006-00-A, etc. no less than 30 days before they are scheduled,** Sent: November 8, 2013, Status: Completed.

## Single-Shell Tank Retrieval Program

Milestone	Title	Due Date	Status
D-00B-01	Complete Retrieval of Tank Wastes from 10 Remaining SSTs in WMA-C	September 30, 2014	Past Due
D-00B-01A through D-00B-01J	Submit Tank Retrieval Complete Certification	One year following each retrieved tank retrieval completion report <sup>a</sup>	Ongoing
D-00B-02	Advise Ecology of the Nine SSTs from which Waste Will Be Retrieved by 2022	September 30, 2014	Completed
D-00B-03	Initiate Startup of Retrieval in At Least 5 of 9 SSTs in D-00B-02	December 31, 2017	Ongoing*
D-00B-04	Complete Retrieval of Tank Wastes from the nine SSTs in D-00B-02	September 30, 2022	Ongoing*
D-00B-04A through D-00B-04I	Submit Tank Retrieval Complete Certification	TBD	TBD

- a. Pursuant to Section IV-B-5 of the Consent Decree, the U.S. Department of Energy (DOE) must submit to the Washington State Department of Ecology (Ecology) a written certification that DOE has completed retrieval of a tank in accordance with the requirements of Appendix C, Part 1, of the Consent Decree. Completed for Single-Shell Tank (SST) C-104 on March 21, 2013, via DOE Office of River Protection (ORP) letter 13-TF-0018. Completed for SST C-108 on May 1, 2013, via ORP letter 13-TF-0025. Completed for SST C-109 on June 4, 2013, via ORP letter 13-TF-0037. Completed for SST C-110 on January 29, 2014, via ORP letter 14-TF-0007. Completed for SST C-107 on September 30, 2014, via ORP letter 14-TF-0114. Completed for SST C-112 on September 30, 2014, via ORP letter 14-TF-0115.

TBD = to be determined.

WMA-C = C Farm waste management area.

### Significant Past Accomplishments:

- Setting up to take video for volume analysis of waste remaining in C-102.
- Continued operation of C-105 MARS-Vacuum retrieval system using high-pressure water.
- Received shipment of second ERSS sluicer for C-111, preparations for installation of the sluicers has begun.
- Completed installation of new slurry pump in C-111.

### Significant Planned Activities in the Next Six Months:

- Finish a C-105 systems engineering evaluation of the current retrieval method; will potentially need a revised tank waste retrieval work plan.
- Continue retrieval of C-105 using Mobile Arm Retrieval System – Vacuum (MARS-V)
- Begin startup of hard heel retrieval in C-111 using high-pressure water, with caustic/water dissolution available.

**Issues:**

\*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone.

**Tank Waste Retrieval Work Plan Status**

<b>Tank</b>	<b>TWRWP</b>	<b>Expected Revisions</b>	<b>First Retrieval Technology</b>	<b>Second Technology</b>	<b>Third Technology</b>
C-101	RPP-22520, Rev. 8	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-102	RPP-22393, Rev. 7	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-104	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0018	-
C-105	RPP-22520, Rev. 8	Complete	MARS-V	MARS-V-High Pressure Water Spray	-
C-107	RPP-22393, Rev. 7	Complete	MARS-S	MARS-S-High Pressure Water Spray	Water Dissolution
C-108	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0025	-
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0037	-
C-110	RPP-33116, Rev. 3	Complete	Modified Sluicing	Mechanical Waste Conditioning with an In-Tank Vehicle	High Pressure Water
C-111	RPP-37739, Rev. 2	Complete	Modified Sluicing	High pressure water using the ERSS	Chemical Dissolution Process with ERSS
C-112	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process	-

ERSS = Extended Reach Sluicing System.

MARS = Mobile Arm Retrieval System.

S = sluicing.

TWRWP = Tank Waste Retrieval Work Plan.

V = vacuum.

**Significant Accomplishments:**

None.

**Significant Planned Activities in the Next Six Months:**

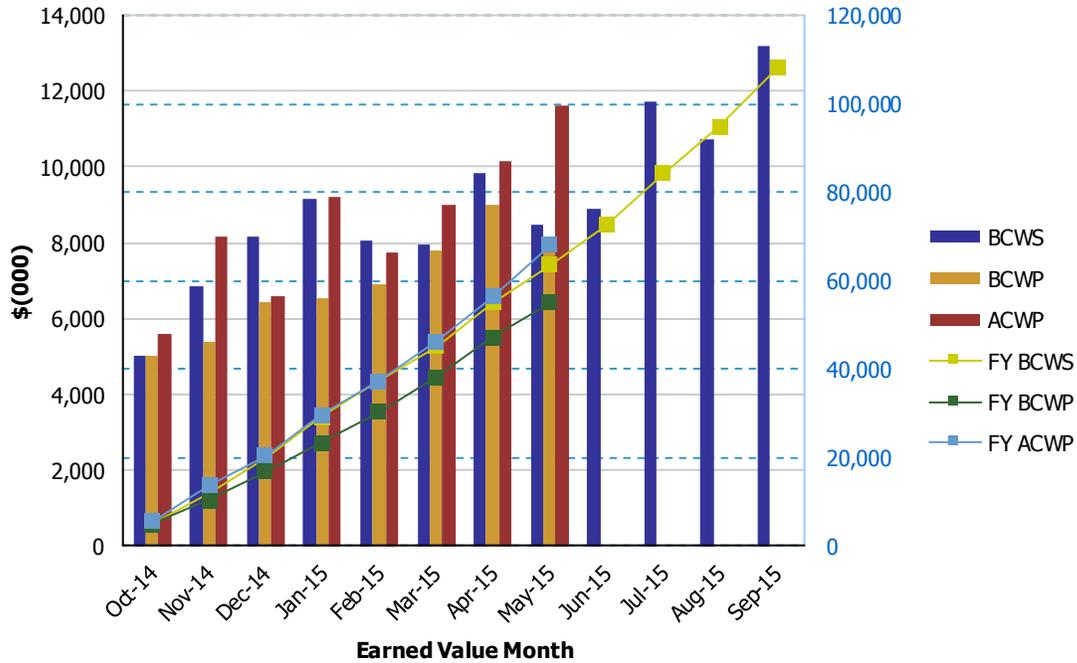
Develop AX Farm tank waste retrieval work plans.

**Issues:**

None.

**Tank Farms ORP-0014  
Retrieve and Close SST's 5.02**

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 2014	\$5,024	\$5,011	\$5,609	1.00	0.89	\$5,024	\$5,011	\$5,609	1.00	0.89
Nov 2014	\$6,852	\$5,392	\$8,174	0.79	0.66	\$11,876	\$10,403	\$13,783	0.88	0.75
Dec 2014	\$8,171	\$6,453	\$6,612	0.79	0.98	\$20,047	\$16,856	\$20,395	0.84	0.83
Jan 2015	\$9,167	\$6,524	\$9,195	0.71	0.71	\$29,215	\$23,380	\$29,589	0.80	0.79
Feb 2015	\$8,075	\$6,924	\$7,719	0.86	0.90	\$37,290	\$30,304	\$37,309	0.81	0.81
Mar 2015	\$7,971	\$7,801	\$9,009	0.98	0.87	\$45,261	\$38,105	\$46,318	0.84	0.82
Apr 2015	\$9,818	\$9,019	\$10,148	0.92	0.89	\$55,079	\$47,124	\$56,466	0.86	0.83
May 2015	\$8,475	\$7,830	\$11,613	0.92	0.67	\$63,554	\$54,954	\$68,079	0.86	0.81
Jun 2015	\$8,899					\$72,453				
Jul 2015	\$11,715					\$84,168				
Aug 2015	\$10,714					\$94,882				
Sep 2015	\$13,179					\$108,061				
CTD	\$560,578	\$542,541	\$565,809	0.97	0.96					

**Retrieve and Close Single-Shell Tanks**

The current month unfavorable cost variance (CV) of (\$3,783k) is due to:

- Limited amount of waste retrieved from C-102 due to a leak within sluicer box #1.
- Limited amount of waste retrieved from C-105 due to multiple work stoppages related to false leak detections and other related alarms.
- A/AX Ventilation System experienced increased costs related to the procurement, design and installation for the POR126/127 exhausters and ventilation system.

The current month unfavorable schedule variance (SV) of (\$643k) is due to:

- Limited amount of waste retrieved from tanks C-102 due to a leak within sluicer box #1 (retrieval operations were originally planned to continue through June 2015).
- Delayed field activities associated with Personnel, Bathroom, and Change Trailers located at A/AX Farms due to revised funding requirements.

## Waste Treatment and Immobilization Plant Project

Number	Title	Due Date	Status
D-00A-06	Complete Methods Validations	12/31/2017	Ongoing*
D-00A-17	Hot Start of Waste Treatment Plant	12/31/2019	Ongoing*
D-00A-01	Achieve Initial Plant Operations for WTP	12/31/2022	Ongoing*

WTP = Waste Treatment and Immobilization Plant.

The Waste Treatment and Immobilization Plant (WTP) Project currently employs approximately 2,793 full-time equivalent contractor (Bechtel National, Inc. [BNI]) and subcontractor personnel. This includes 560 craft, 393 non-manual, and 151 subcontractor full-time equivalent personnel working at the WTP construction site (all facilities).

In October 2012, the percent-complete values for Pretreatment (PT) and High-Level Waste (HLW) facilities were frozen at the September 2012 rate. Construction, procurement, and production engineering activities were placed on hold for PT and significantly slowed down for HLW. In August 2014, DOE approved continuation of production engineering activities for HLW. Subsequently, DOE has approved the fiscal year (FY) 2015 and FY 2016 2-Year Interim Work Plan. In April 2015, a 3-year Interim Work Plan for the PT facility was implemented emphasizing prioritization of technical issue resolution activities. The WTP Project is focused on resolving PT Facility technical issues and finalizing HLW facility design.

The WTP Project continues to focus on completion of the Low-Activity Waste (LAW) Facility, Analytical Laboratory (LAB), and Balance of Facilities (BOF) (collectively LBL). As of May 2015, LBL facilities were 47 percent complete, design and engineering was 77 percent complete, procurement was 70 percent complete, construction was 79 percent complete, and startup and commissioning was 6 percent complete.

In May 2015, the cumulative to-date WTP Project schedule variance was a negative \$11.6 million, and the cumulative to-date WTP Project cost variance was a positive \$45.4 million. The cumulative to-date cost and schedule variance is based on the progress of the LBL Internal Forecast.

The following is the project status through the end of May 2015.

### Significant Past Accomplishments:

- Completed and issued Criticality Safety Evaluation Report (CSER) strategy Development Plan (PT)
- Completed one concrete wall placement (HLW)
- Installed 39 tons of structural steel (HLW)
- Completed load test of temporary Melter assembly crane (LAW)
- Completed flipping of Melter gas barrier lid #1 (LAW)
- Started Direct Expansion (DX) pipe & support installation on Elevation +48 (LAW)

- Completed Primary Offgas (LOP) Wet Electrostatic Precipitator Elevation +03 repairs (LAW)

**Significant Planned Actions in the Next Six Months:**

- Complete modification at Full-Scale Vessel Testing Facility to continue testing for the pulse-jet mixer (PJM) control system (PT)
- Submit the Radioactive Liquid Waste Disposal (RLD) Safety Basis Change Package for DOE review (HLW)
- Complete the LAW Facility design and operability review
- Receive caustic scrubber (LAW)
- Finalize Standard High Solids Vessels Design vessel testing planning, test specification/plan, and define simulate and supplemental mixing engineering study (PT)
- Begin LAB system walk downs in support of direct feed LAW modifications (LAB)
- Turnover all major systems of the NLD facility, WTP Switchgear, and BOF Switchgear buildings for component level testing (BOF)

**Issues:**

\*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone. Technical issues related to WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and ventilation.

## Pretreatment Facility

Number	Title	Due Date	Status
D-00A-19	Complete Elevation 98' Concrete Floor Slab in PT Facility	12/31/2014	Past Due
D-00A-13	Complete Installation of Pretreatment Feed Separation Vessels	12/31/2015	Ongoing*
D-00A-14	PT Facility Construction Substantially Complete	12/31/2017	Ongoing*
D-00A-15	Start PT Facility Cold Commissioning	12/31/2018	Ongoing*
D-00A-16	PT Facility Hot Commissioning Complete	12/31/2019	Ongoing*

PT = pretreatment.

The PT Facility will separate radioactive tank waste into HLW and LAW 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, with engineering design 85 percent complete, procurement 56 percent complete, construction 43 percent complete, and startup and commissioning 3 percent complete. Construction, procurement, and production engineering activities remain on hold, resulting in no change to the percent-complete status since September 2012. BNI and DOE continue to focus on resolving technical issues, performing hazard analyses, and completing safety evaluations for process systems in accordance with the revised PT Facility 3-year work plan.

BNI has submitted resolution plans for eight technical issues: T1, Hydrogen in Vessels; T2, Criticality; T3, Hydrogen in Piping and Ancillary Vessels (HPAV); T4, Mixing; T5, Erosion Corrosion; T6, PT Facility Optimization; T7, Vessel Analysis; and T8, Ventilation. Phase 1 of the Full-Scale Vessel Testing is continuing for the PJM controls utilizing the RLD-8T vessel. Technical review teams continue to evaluate open PT Facility technical issues. An evaluation is ongoing relative to a standardized design for high-solids vessels within the PT Facility.

### Significant Past Accomplishments:

- Completed Standard High Solids Vessels Design test spec. / plan Rev. 0
- Issued PT – Ultrafiltration Process System HLP / PWD criticality hazard assessment report (Heavy Pu)
- Completed and issued Criticality Safety Evaluation Report (CSER) strategy Development Plan
- Completed simulant solids characterization analysis
- Completed PA 2, 3, 4 conceptual piping
- Issued corrosion simulant basis document for localized corrosion
- Issued Supplemental mixing Engineering study

**Significant Planned Actions in the Next Six Months:**

- Commission Phase 2 test specification/plan and platform modifications
- Finalize Standard High Solids Vessels Design vessel testing planning, test specification/plan, and define simulate and supplemental mixing engineering study
- Issue criticality safety evaluation report on informal study for the evaluation of qualitative risk assessment input parameters to be included in the PT Facility safety basis
- Implement PT Facility systems engineering approach
- Complete T4 Technical work plan
- Issue fluid dynamics study
- Start informational testing in 8-ft test vessel for down selection of features pertaining to standardized high-solids vessel design
- Complete preliminary analysis of Standard High Solids Vessels Design
- Issue technical basis to support hold points 1 and 2
- Issue supplemental mixing study
- Draft SHSVD Design Verification (Rev A)

**Issues:**

\*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone. Technical issues related to WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and ventilation.

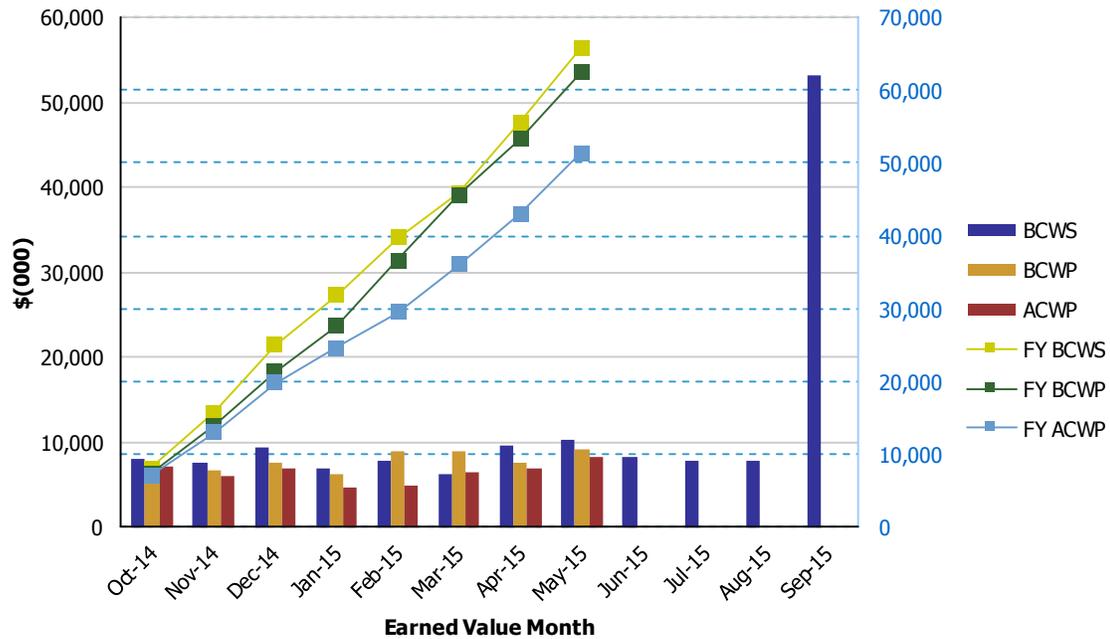
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2015 Earned Value Data

Data as of: May 2015

**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 2014	\$8,100	\$7,285	\$7,050	0.90	1.03	\$8,100	\$7,285	\$7,050	0.90	1.03
Nov 2014	\$7,582	\$6,657	\$5,917	0.88	1.13	\$15,682	\$13,942	\$12,967	0.89	1.08
Dec 2014	\$9,361	\$7,472	\$6,841	0.80	1.09	\$25,043	\$21,414	\$19,808	0.86	1.08
Jan 2015	\$6,819	\$6,293	\$4,765	0.92	1.32	\$31,862	\$27,707	\$24,574	0.87	1.13
Feb 2015	\$7,877	\$9,034	\$4,869	1.15	1.86	\$39,740	\$36,742	\$29,442	0.92	1.25
Mar 2015	\$6,180	\$8,917	\$6,567	1.44	1.36	\$45,920	\$45,659	\$36,009	0.99	1.27
Apr 2015	\$9,661	\$7,631	\$7,008	0.79	1.09	\$55,581	\$53,290	\$43,017	0.96	1.24
May 2015	\$10,243	\$9,161	\$8,322	0.89	1.10	\$65,823	\$62,451	\$51,340	0.95	1.22
Jun 2015	\$8,219									
Jul 2015	\$7,718									
Aug 2015	\$7,854									
Sep 2015	\$53,229									

PTD	\$1,672,495	\$1,669,070	\$1,657,967	1.00	1.01
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## High-Level Waste Facility

Number	Title	Due Date	Status
D-00A-21	Complete Construction of Structural Steel to 37' in HLW Facility	12/31/2012	Complete
D-00A-02	HLW Facility Construction Substantially Complete	12/31/2016	Ongoing*
D-00A-03	Start HLW Facility Cold Commissioning	6/30/2018	Ongoing*
D-00A-04	HLW Facility Hot Commissioning Complete	12/31/2019	Ongoing*

HLW = high-level waste.

The HLW Facility will receive the separated HLW concentrate from the PT Facility. This concentrate will be blended with glass formers, converted into molten glass in one of the two HLW 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, with engineering design 89 percent complete, procurement 81 percent complete, construction 43 percent complete, and startup and commissioning 4 percent complete. Construction, procurement, and production engineering activities have been significantly slowed down, resulting in minimal change to the percent completion status since September 2012.

Currently, all activities are being performed in accordance with the FY15/FY16 2-year work plan. Focus for HLW is to support obtaining full production authorization by DOE. Limited construction is continuing with the concrete placements, installation of support steel, and crane rails in the canister decontamination cave.

To support construction, Engineering continues to execute detailed evaluations to release wall and slab placements and installation of HVAC, fire protection, process piping, and electrical commodities. Engineering also continues to review vendor documentation to support receipt and future installation of auto-sampler system (ASX) units.

System Design Descriptions (SDD) are being developed in accordance with the implementation of the Systems Engineering Management Plan. Other than the construction support, design activities are focused to support Safety Design Strategy (SDS) gap analysis, technical core team recommendations, and studies to resolve Design & Operability review. Studies are being performed to determine the ventilation system capability, waste handling capability, etc. Hazard and accident analyses are initiated to support the Preliminary Documented Safety Analysis (PDSA) update to align design and the safety basis towards the full production authorization.

Test strategy and test plan are being updated for the ventilation and off-gas system HEPA filter test and qualification. Multiple filter media design will be tested to ensure that the qualified filters support the needs for HLW and LBL facilities.

Design is progressing for RLD vessels 7 and 8. PDSA change packages for these vessel designs have been submitted to DOE for approval. Procurement activities for the Emergency Turbine Generator (ETG) are progressing.

**Significant Past Accomplishments:**

- Issued two SDD's this month for a total of 14
- Development of path forward for HEPA filter testing and qualification
- RLD Safety Basis Change Package is submitted to DOE for approval
- Issued Commercial Grade Dedication plan for the ETG procurement
- Initiated implementation of improved Nuclear Safety/Engineering analysis process
- Performing vendor documentation reviews in preparation for the installation of ASX framing
- Initiated operational research (OR) modeling of waste, melter, and melter cave support handling systems
- Completed one concrete wall placement
- Installed 39 tons of structural steel
- Began installation of crane rails and supports in the canister decontamination cave

**Significant Planned Actions in the Next Six Months:**

- DOE approval of the RLD Safety Basis Change Package
- Complete vendor documentation reviews in preparation for the installation of ASX framing
- Evaluate ASX installation plan for impact to the Washington State Department of Ecology permit
- Complete installation of crane rails and supports in the canister decontamination cave
- Issue remaining outstanding SDDs
- Finalize and begin HEPA filter testing at the MSU facility

**Issues:**

\*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone. Technical issues related to the WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and ventilation.

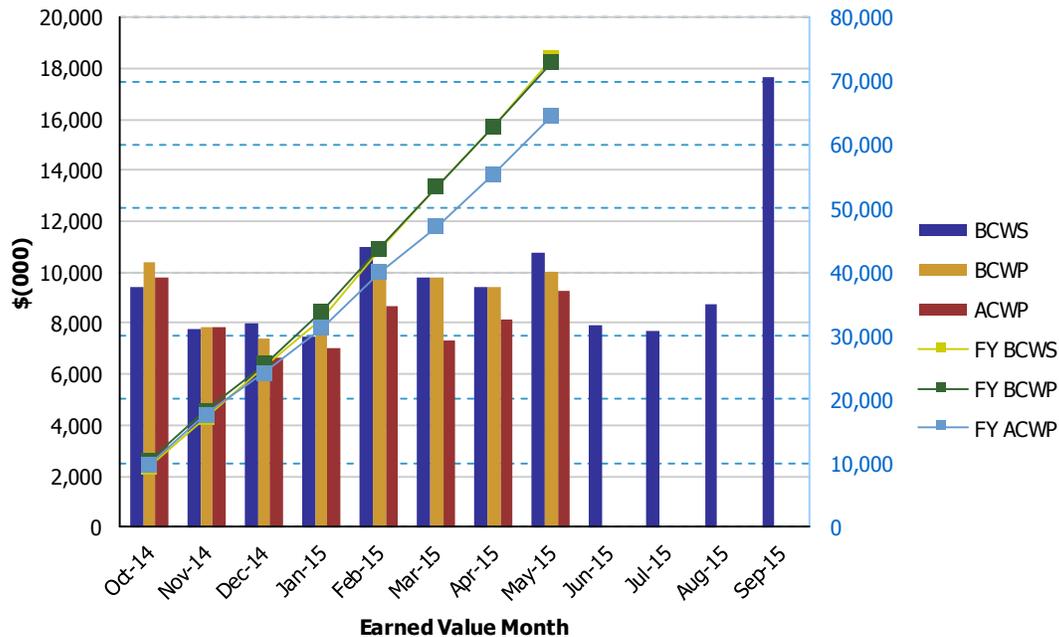
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2015 Earned Value Data

Data as of: May 2015

**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 2014	\$9,449	\$10,367	\$9,783	1.10	1.06	\$9,449	\$10,367	\$9,783	1.10	1.06
Nov 2014	\$7,743	\$7,833	\$7,880	1.01	0.99	\$17,192	\$18,200	\$17,663	1.06	1.03
Dec 2014	\$7,973	\$7,359	\$6,631	0.92	1.11	\$25,165	\$25,559	\$24,294	1.02	1.05
Jan 2015	\$7,490	\$8,342	\$6,994	1.11	1.19	\$32,655	\$33,901	\$31,288	1.04	1.08
Feb 2015	\$10,995	\$9,796	\$8,662	0.89	1.13	\$43,650	\$43,698	\$39,949	1.00	1.09
Mar 2015	\$9,792	\$9,760	\$7,295	1.00	1.34	\$53,442	\$53,458	\$47,244	1.00	1.13
Apr 2015	\$9,391	\$9,411	\$8,115	1.00	1.16	\$62,834	\$62,868	\$55,359	1.00	1.14
May 2015	\$10,774	\$10,029	\$9,242	0.93	1.09	\$73,608	\$72,897	\$64,601	0.99	1.13
Jun 2015	\$7,892									
Jul 2015	\$7,687									
Aug 2015	\$8,732									
Sep 2015	\$17,653									
PTD	\$1,127,720	\$1,127,268	\$1,118,662	1.00	1.01					

## Low-Activity Waste Facility

Number	Title	Due Date	Status
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2014	Past Due
D-00A-08	Start LAW Facility Cold Commissioning	12/31/2018	Ongoing*
D-00A-09	LAW Facility Hot Commissioning Complete	12/31/2019	Ongoing*

LAW = low-activity waste.

The LAW Facility will process LAW that will be mixed with glass formers, vitrified into glass at a design capacity of 30 metric tons per day, and placed in stainless steel containers anticipated to be disposed of on the Hanford Site in the Integrated Disposal Facility. As of May 2015, the LAW Facility was 50 percent complete overall, with engineering design 78 percent complete, procurement 74 percent complete, construction 74 percent complete, and startup and commissioning 3 percent complete.

### Significant Past Accomplishments:

- Installed over 330 linear feet of process piping and hydro-tested 310 linear feet of piping
- Installed over 1,460 linear feet of conduit and pulled approximately 25,570 linear feet of cable
- Completed load test of temporary Melter assembly crane
- Completed flipping of Melter gas barrier lid #1
- Started Direct Expansion (DX) pipe & support installation on Elevation +48
- Completed Primary Offgas (LOP) Wet Electrostatic Precipitator Elevation +03 repairs

### Significant Planned Actions in the Next Six Months:

- Complete subcontractor work scope in the annex
- Complete Nuclear Safety Engineering Hazards Analysis of C5V
- Receive caustic scrubber
- Assemble and install wet electrostatic precipitator internals

### Issues:

\*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone.

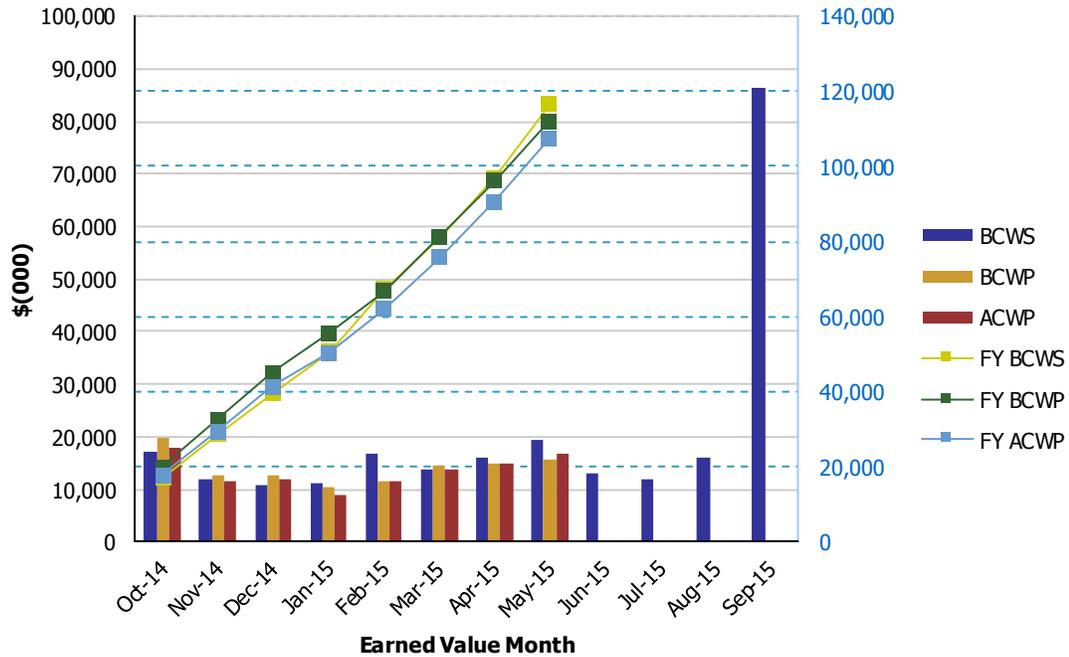
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2015 Earned Value Data

Data as of: May 2015

**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 2014	\$16,994	\$19,896	\$17,781	1.17	1.12	\$16,994	\$19,896	\$17,781	1.17	1.12
Nov 2014	\$11,700	\$12,666	\$11,597	1.08	1.09	\$28,694	\$32,562	\$29,378	1.13	1.11
Dec 2014	\$10,760	\$12,499	\$11,927	1.16	1.05	\$39,454	\$45,061	\$41,305	1.14	1.09
Jan 2015	\$11,248	\$10,387	\$9,033	0.92	1.15	\$50,702	\$55,448	\$50,338	1.09	1.10
Feb 2015	\$16,654	\$11,341	\$11,676	0.68	0.97	\$67,356	\$66,789	\$62,014	0.99	1.08
Mar 2015	\$13,681	\$14,539	\$13,778	1.06	1.06	\$81,037	\$81,329	\$75,792	1.00	1.07
Apr 2015	\$16,031	\$14,925	\$15,002	0.93	0.99	\$97,068	\$96,254	\$90,794	0.99	1.06
May 2015	\$19,533	\$15,802	\$16,674	0.81	0.95	\$116,601	\$112,056	\$107,468	0.96	1.04
Jun 2015	\$12,899									
Jul 2015	\$11,887									
Aug 2015	\$16,174									
Sep 2015	\$86,358									

PTD	\$1,090,795	\$1,089,056	\$1,085,636	1.00	1.00
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### Balance of Facilities

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

The BOF will provide services and utilities to support operation of the main production facilities: PT, HLW, LAW, and LAB. As of May 2015, BOF was 52 percent complete overall, with engineering design 79 percent complete, procurement 71 percent complete, construction 80 percent complete, and startup and commissioning 12 percent complete.

Engineering activities are in progress to develop the preliminary design for BOF systems in support of direct feed LAW. Current efforts are focused on progressing the preliminary design of the Effluent Management Facility (EMF), defining the required BOF system isolations, preparing procurements, and initiating the hazard analysis process. Construction efforts are focused on completion of the remaining punch list items required to support turnover of all major systems within the Non-radioactive Liquid Waste Disposal (NLD) facility, WTP Switchgear, and BOF Switchgear buildings for component level testing.

**Significant Past Accomplishments:**

- Completed heat trace insulation in the NLD Drains (54)
- Installed 1,600 linear feet of pipe insulation primarily in the Steam Plant
- Installed 1,400 linear feet of heat trace cable at Pipe Rack
- Continued coatings applications for Switchgear Buildings #87 & #91

**Significant Planned Actions in the Next Six Months:**

- Complete heat trace insulation in the Cooling Tower Facility
- Complete heat trace insulation in the Water Treatment Building
- Turnover all major systems of the NLD facility, WTP Switchgear, and BOF Switchgear buildings for component level testing

**Issues:**

No major issues at this time.

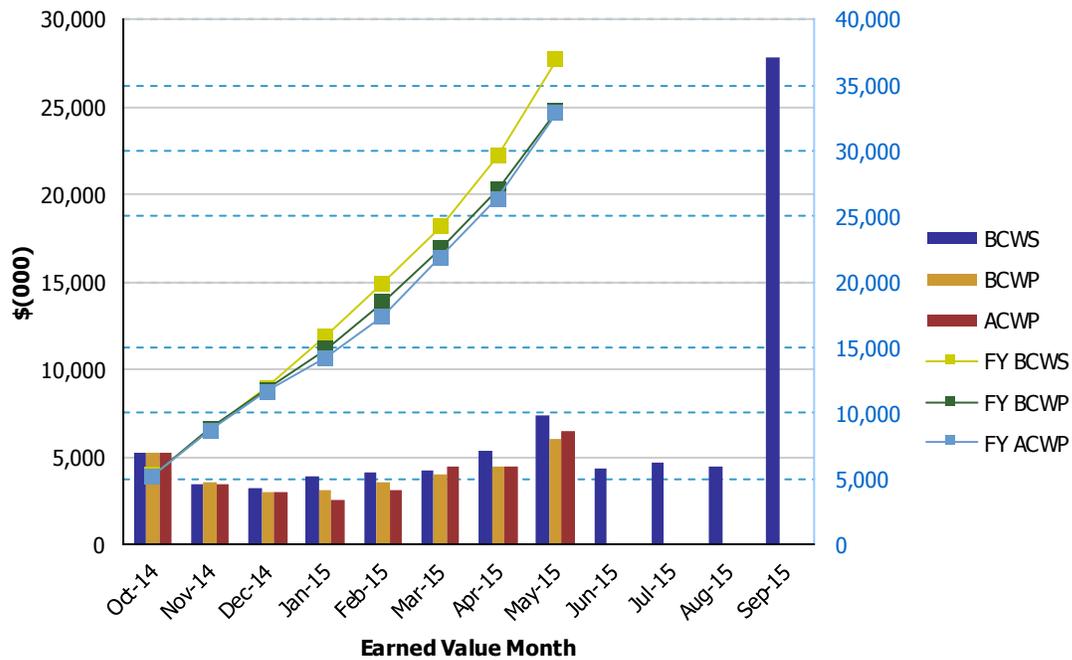
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2015 Earned Value Data

Data as of: May 2015

**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 2014	\$5,300	\$5,238	\$5,223	0.99	1.00	\$5,300	\$5,238	\$5,223	0.99	1.00
Nov 2014	\$3,429	\$3,578	\$3,454	1.04	1.04	\$8,729	\$8,816	\$8,677	1.01	1.02
Dec 2014	\$3,240	\$3,023	\$2,976	0.93	1.02	\$11,969	\$11,839	\$11,653	0.99	1.02
Jan 2015	\$3,885	\$3,098	\$2,584	0.80	1.20	\$15,854	\$14,937	\$14,237	0.94	1.05
Feb 2015	\$4,074	\$3,578	\$3,151	0.88	1.14	\$19,928	\$18,515	\$17,388	0.93	1.06
Mar 2015	\$4,270	\$4,016	\$4,491	0.94	0.89	\$24,198	\$22,531	\$21,879	0.93	1.03
Apr 2015	\$5,384	\$4,497	\$4,491	0.84	1.00	\$29,582	\$27,029	\$26,370	0.91	1.02
May 2015	\$7,347	\$6,027	\$6,470	0.82	0.93	\$36,930	\$33,056	\$32,841	0.90	1.01
Jun 2015	\$4,403									
Jul 2015	\$4,695									
Aug 2015	\$4,429									
Sep 2015	\$27,795									

PTD	\$383,597	\$380,155	\$379,970	0.99	1.00
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## Analytical Laboratory

Number	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 May 2015, the LAB was 58 percent complete overall, with engineering design 83 percent complete, procurement 84 percent complete, construction 95 percent complete, and startup and commissioning 9 percent complete.

During this reporting period engineering efforts are focused on LAB system reviews to evaluate potential modifications or isolations in support of direct feed of LAW. Closure of nonconformance reports and construction deficiency reports continued. Construction efforts within the LAB are minimal. The remaining construction work scope will be completed in parallel with system modifications and construction activities required to support the direct feed of LAW.

### Significant Past Accomplishments:

- Installed 3,040 linear feet of cable (98% complete)
- Continued installation of misc. conduit (99% complete)

### Significant Planned Actions in the Next Six Months:

- Place LAB construction punch list activities on hold
- Initiate component level testing of select LAB systems
- Begin LAB system walk downs in support of direct feed LAW modifications

### Issues:

No major issues at this time.

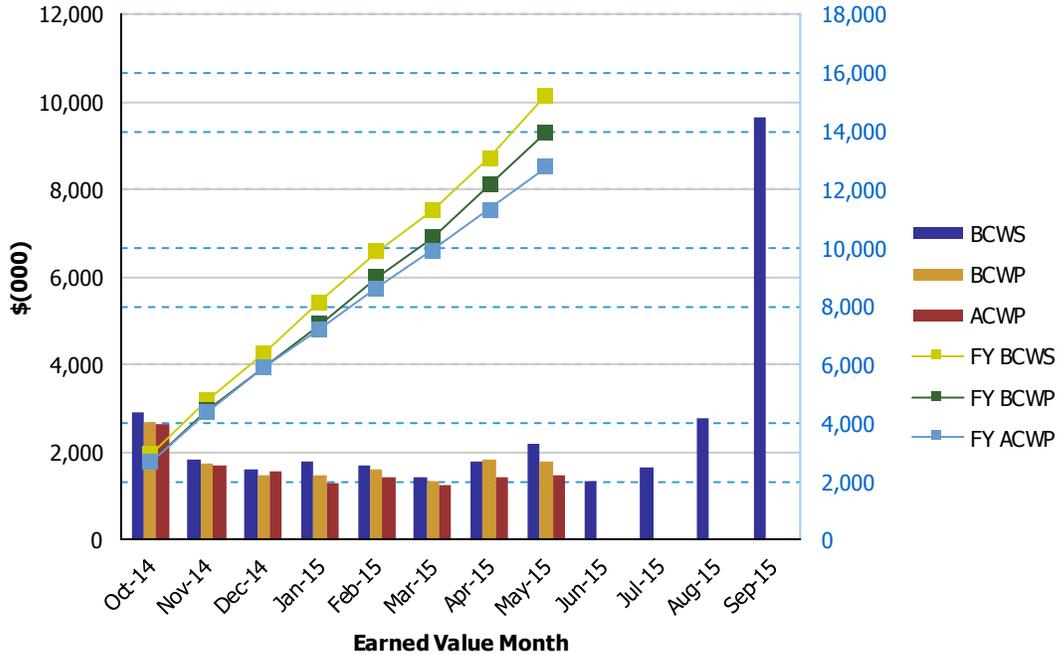
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2015 Earned Value Data

Data as of: May 2015

**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 2014	\$2,920	\$2,670	\$2,645	0.91	1.01	\$2,920	\$2,670	\$2,645	0.91	1.01
Nov 2014	\$1,827	\$1,748	\$1,695	0.96	1.03	\$4,747	\$4,418	\$4,340	0.93	1.02
Dec 2014	\$1,614	\$1,482	\$1,552	0.92	0.95	\$6,361	\$5,900	\$5,892	0.93	1.00
Jan 2015	\$1,788	\$1,490	\$1,304	0.83	1.14	\$8,149	\$7,390	\$7,196	0.91	1.03
Feb 2015	\$1,716	\$1,618	\$1,447	0.94	1.12	\$9,865	\$9,008	\$8,643	0.91	1.04
Mar 2015	\$1,413	\$1,322	\$1,266	0.94	1.04	\$11,278	\$10,330	\$9,909	0.92	1.04
Apr 2015	\$1,781	\$1,833	\$1,407	1.03	1.30	\$13,059	\$12,163	\$11,316	0.93	1.07
May 2015	\$2,186	\$1,773	\$1,459	0.81	1.21	\$15,245	\$13,936	\$12,775	0.91	1.09
Jun 2015	\$1,338									
Jul 2015	\$1,632									
Aug 2015	\$2,756									
Sep 2015	\$9,655									
PTD	\$297,760	\$296,866	\$295,903	1.00	1.00					

**Waste Treatment Plant Project - (LBL/Project Services) Percent Complete Status  
Through May 2015**

(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		
	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
<b>Facilities</b>																		
Low-Activity Waste	2,166.8	1,089.1	50%	452.3	351.4	78%	333.5	248.1	74%	625.9	462.6	74%	677.4	22.9	3%	77.7	4.0	5%
Balance of Facilities	731.9	380.2	52%	126.4	99.6	79%	75.4	53.3	71%	244.0	194.7	80%	262.0	32.0	12%	24.1	0.5	2%
Analytical Lab	512.8	296.9	58%	91.7	75.8	83%	65.6	55.1	84%	155.8	148.2	95%	191.1	17.2	9%	8.6	0.5	5%
Direct Feed LAW	28.4	6.4	23%	21.5	5.3	25%	0.52	0.12	24%	0.1	0.1	50%	0.0	0.0	0%	6.3	0.92	15%
LBL Facility Services	403.0	30.7	8%	0.0	0.0	0%	43.8	6.8	15%	0.0	0.0	0%	237.2	9.6	4%	122.0	14.32	12%
<b>Total LBL</b>	<b>3,842.9</b>	<b>1,803.2</b>	<b>47%</b>	<b>691.9</b>	<b>532.2</b>	<b>77%</b>	<b>518.9</b>	<b>363.4</b>	<b>70%</b>	<b>1,025.8</b>	<b>805.6</b>	<b>79%</b>	<b>1,367.7</b>	<b>81.8</b>	<b>6%</b>	<b>238.7</b>	<b>20.2</b>	<b>8%</b>
Project Services	208.1	147.5	71%	49.6	18.2	37%	37.1	12.9	35%	124.1	45.7	37%	3.0	1.5	52%	(5.6)	69.1	-1229%
<b>Total Project Services</b>	<b>208.1</b>	<b>147.5</b>	<b>71%</b>	<b>49.6</b>	<b>18.2</b>	<b>37%</b>	<b>37.1</b>	<b>12.9</b>	<b>35%</b>	<b>124.1</b>	<b>45.7</b>	<b>37%</b>	<b>3.0</b>	<b>1.5</b>	<b>52%</b>	<b>(5.6)</b>	<b>69.1</b>	<b>-1229%</b>
<b>Total LBL &amp; Project Services</b>	<b>4,051.0</b>	<b>1,950.7</b>	<b>48%</b>	<b>741.4</b>	<b>550.4</b>	<b>74%</b>	<b>556.0</b>	<b>376.3</b>	<b>68%</b>	<b>1,149.9</b>	<b>851.3</b>	<b>74%</b>	<b>1,370.6</b>	<b>83.3</b>	<b>6%</b>	<b>233.1</b>	<b>89.3</b>	<b>38%</b>
<b>PT/HLW/SS Percent Complete Status Frozen as of September 2012 (due to project rebaselining efforts)</b>																		
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%
<b>Total HLW/PT/SS</b>	<b>8,722.8</b>	<b>5,965.2</b>	<b>68%</b>	<b>2,173.1</b>	<b>1,948.9</b>	<b>90%</b>	<b>1,565.5</b>	<b>1,124.8</b>	<b>72%</b>	<b>2,887.6</b>	<b>1,764.8</b>	<b>61%</b>	<b>758.5</b>	<b>143.2</b>	<b>19%</b>	<b>1,338.1</b>	<b>983.5</b>	<b>73%</b>
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
<b>Total WTP</b>	<b>12,773.8</b>	<b>7,915.9</b>	<b>62%</b>	<b>2,914.5</b>	<b>2,499.3</b>	<b>86%</b>	<b>2,121.5</b>	<b>1,501.1</b>	<b>71%</b>	<b>4,037.5</b>	<b>2,616.1</b>	<b>65%</b>	<b>2,129.1</b>	<b>226.5</b>	<b>11%</b>	<b>1,571.2</b>	<b>1,072.8</b>	<b>68%</b>

Source: Preliminary WTP Contract Performance Report - Format 1, Data for May 2015

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.