

**FINAL**

Office of River Protection  
Consent Decree 08-5085-FVS

Monthly Summary Report

September 2014

**Office of River Protection****Consent Decree 08-5085-FVS  
Monthly Summary Report****September 2014 (Monthly Summary Report/Project Earned Value Management System  
reflects July 2014 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		Ongoing*
D-00B-02	Advise Ecology of the 9 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		Ongoing*
D-00A-19	Complete elevation 98 feet Concrete Floor Slab Placements in PT Facility	12/31/2014		Ongoing*

**\* 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.**

DOE = U.S. Department of Energy.

Ecology = Washington State Department of Ecology.

LAW = Low-Activity Waste (Facility).

PT = Pretreatment (Facility).

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 July 2014 Semiannual Report was issued on July 31, 2014 via U.S. Department of Energy (DOE), Office of River Protection (ORP) Letter 14-ECD-0040.

**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	Ongoing*
D-00B-01A through D-00B-01J	Submit Tank Retrieval Complete Certification	TBD <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, 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.

TBD = to be determined.  
WMA-C = C-Farm Waste Management Area.

### Significant Past Accomplishments:

- Operated C-102 modified sluicing operations with limited sluicer functions retrieving over 65 percent of the volume of waste.
- Continued operation of the Mobile Arm Retrieval System – Vacuum system at C-105, operating vacuum/slurry pump system for over 400 hours.
- Completed C-107 hard heel retrieval with hot water dissolution.
- Continued with evaluation of C-111 sluicer failure modes to support design of new replacement sluicers.

### Significant Planned Activities in the Next 6 Months:

- Complete retrieval of C-102 using modified sluicing.
- Continue retrieval of C-105 using Mobile Arm Retrieval System – Vacuum.
- 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

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 8	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-102	RPP-22393, Rev. 7	In Process	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 6 Months:

None.

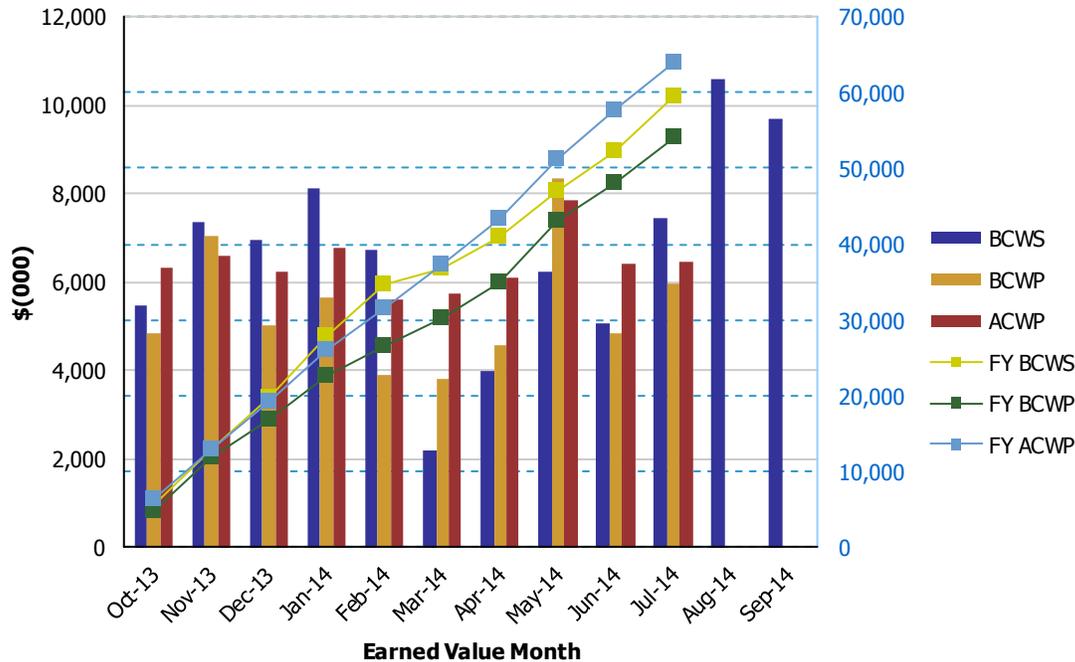
#### Issues:

None.

## Single-Shell Tank Retrieval Monthly and Fiscal Year Earned Value Management System Data

**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 2013	\$5,483	\$4,823	\$6,336	0.88	0.76	\$5,483	\$4,823	\$6,336	0.88	0.76
Nov 2013	\$7,366	\$7,054	\$6,609	0.96	1.07	\$12,849	\$11,876	\$12,945	0.92	0.92
Dec 2013	\$6,970	\$5,002	\$6,231	0.72	0.80	\$19,820	\$16,878	\$19,176	0.85	0.88
Jan 2014	\$8,102	\$5,661	\$6,765	0.70	0.84	\$27,922	\$22,539	\$25,941	0.81	0.87
Feb 2014	\$6,726	\$3,914	\$5,602	0.58	0.70	\$34,647	\$26,453	\$31,543	0.76	0.84
Mar 2014	\$2,201	\$3,805	\$5,729	1.73	0.66	\$36,849	\$30,258	\$37,273	0.82	0.81
Apr 2014	\$4,000	\$4,558	\$6,079	1.14	0.75	\$40,848	\$34,816	\$43,352	0.85	0.80
May 2014	\$6,255	\$8,331	\$7,855	1.33	1.06	\$47,103	\$43,146	\$51,207	0.92	0.84
Jun 2014	\$5,055	\$4,826	\$6,413	0.95	0.75	\$52,158	\$47,972	\$57,621	0.92	0.83
Jul 2014	\$7,437	\$5,954	\$6,461	0.80	0.92	\$59,595	\$53,926	\$64,082	0.90	0.84
Aug 2014	\$10,588									
Sep 2014	\$9,711									
<b>CTD</b>	<b>\$486,434</b>	<b>\$480,766</b>	<b>\$490,921</b>	<b>0.99</b>	<b>0.98</b>					

## 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 2,634 full-time equivalent contractor (Bechtel National, Inc. [BNI]) and subcontractor personnel. This includes 623 craft, 393 nonmanual, and 197 subcontractor full-time equivalent personnel working at the WTP construction site (all facilities).

As of July 2014, the combined Low-Activity Waste (LAW) Facility, Analytical Laboratory (LAB), and Balance of Facilities (BOF) (collectively LBL) were 69 percent complete, design and engineering was 83 percent complete, procurement was 85 percent complete, construction was 81 percent complete, and startup and commissioning was 15 percent complete.

In September 2012, the baseline change proposal that implemented the LBL replan was incorporated into the project over-target 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 Pretreatment (PT) and High-Level Waste (HLW) Facilities 2-Year Interim Work Plan was incorporated into the project over-target baseline and the percent-complete values for PT and HLW Facilities were frozen at the September 2012 rate. The WTP Project continues to progress in accordance with the LBL replan and PT/HLW 2-Year Interim Work Plan.

In July 2014, the cumulative to-date WTP Project schedule variance was a negative \$146.1 million, and the cumulative to-date WTP Project cost variance was a negative \$13.1 million. The major contribution to the cumulative to-date cost and schedule variance is based on the progress of the LBL replan and PT/HLW 2-Year Interim Work Plan.

The following is the project status through the end of July 2014.

### Significant Past Accomplishments:

- Completed fabrication of 8 ft pulse jet mixer (PJM) test fixture with movable PJMs (PT)
- DOE authorized BNI to resume all engineering work necessary to finalize the design of the HLW Facility on August 19, 2014 (HLW)
- Installed 11 tons of structural steel – mostly steel to support slabs 4019 and 4020 over Canister Handling Cave (HLW)
- Completed melter electrode installation (total of 12 each) (LAW)
- Installed over 200 linear feet of process piping and hydro-tested 2,160 linear feet of facility piping (LAW)
- Completed Cathodic protection system test station installation (BOF)

- Completed recertification of radioactive liquid waste disposal (RLD) vessels 163, 164, and 165 (LAB).

**Significant Planned Actions in the Next 6 Months:**

- Complete modification at Full-Scale Vessel Testing Facility to support Phase 2 testing for the PJM controls (PT)
- DOE approval of PT resumption plan to support DOE authorization to proceed with production engineering (PT)
- BNI to submit PT Facility Safety Design Strategy (SDS) Plan for DOE review (PT)
- Complete installation of autosampling system (LAW)
- Complete the LAW Facility design and operability review (LAW)
- Complete construction of the Glass Former Storage Facility (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 the WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and ventilation.

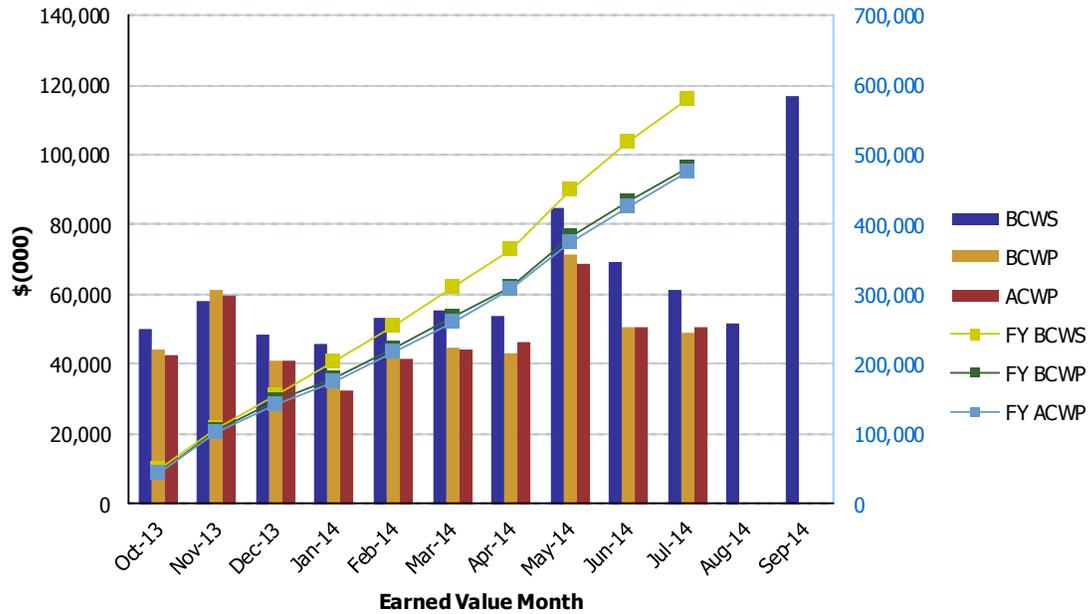
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2014 Earned Value Data

Data as of: July 2014

**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 2013	\$49,959	\$43,981	\$42,448	0.88	1.04	\$49,959	\$43,981	\$42,448	0.88	1.04
Nov 2013	\$58,047	\$61,276	\$59,935	1.06	1.02	\$108,006	\$105,257	\$102,383	0.97	1.03
Dec 2013	\$48,739	\$41,149	\$40,881	0.84	1.01	\$156,745	\$146,406	\$143,264	0.93	1.02
Jan 2014	\$45,633	\$34,448	\$32,185	0.75	1.07	\$202,378	\$180,854	\$175,449	0.89	1.03
Feb 2014	\$53,315	\$42,491	\$41,349	0.80	1.03	\$255,693	\$223,345	\$216,798	0.87	1.03
Mar 2014	\$55,327	\$44,937	\$44,053	0.81	1.02	\$311,020	\$268,282	\$260,851	0.86	1.03
Apr 2014	\$53,695	\$43,232	\$46,086	0.81	0.94	\$364,715	\$311,514	\$306,937	0.85	1.01
May 2014	\$84,691	\$71,474	\$68,633	0.84	1.04	\$449,406	\$382,988	\$375,570	0.85	1.02
Jun 2014	\$69,440	\$50,571	\$50,680	0.73	1.00	\$518,846	\$433,559	\$426,250	0.84	1.02
Jul 2014	\$61,232	\$49,176	\$50,487	0.80	0.97	\$580,078	\$482,735	\$476,737	0.83	1.01
Aug 2014	\$51,488									
Sep 2014	\$116,961									

PTD	\$8,370,291	\$8,224,209	\$8,237,347	0.98	1.00
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## Pretreatment Facility

Number	Title	Due Date	Status
D-00A-19	Complete Elevation 98' Concrete Floor Slab in PT Facility	12/31/2014	Ongoing *
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 PT/HLW 2-Year Interim Work Plan.

Technical review teams continue to evaluate open PT Facility technical issues. Evaluation is ongoing relative to a standardized design for high-solids vessels within the PT Facility. BNI has submitted resolution plans for eight technical issues, which are undergoing DOE review. The eight technical issues are the T1 Hydrogen in Vessels, T2 Criticality, T3 HPAV, T4 Mixing, T5 Erosion Corrosion, T6 PTF Optimization, T7 Vessel Analysis, and T8 Ventilation.

DOE completed a review of the PT resumption plan that supports the authorization to proceed with production engineering, and provided comments to BNI for incorporation. BNI has submitted a fiscal year (FY) 2015–FY 2016 two-year work plan, which is being reviewed by DOE.

### Significant Past Accomplishments:

- Continued testing of the PJM controls at the Full-Scale test facility
- Completed fabrication of 8 ft PJM test fixture with movable PJMs
- Continued jet impingement testing for erosion; Phase 2 test is complete
- Continued conceptual design for a standardized high-solids vessel design
- Continued maintenance activities as result of PT Facility assessment.

### Significant Planned Actions in the Next 6 Months:

- Complete modification at Full-Scale Vessel Testing Facility to support Phase 2 testing for the PJM controls
- Evaluate potential savings relative to storing procured commodities onsite compared to storing at vendor facilities during suspensions of procurements

- DOE approval of PT resumption plan to support DOE authorization to proceed with production engineering
- Finalize technical team strategic plans
- BNI to submit PT Facility SDS Plan for DOE review
- Finalize test plan, simulant composition, and test instrument list for full-scale vessel mixing tests
- Define standardized vessel selection criteria in support of vessel mixing resolution
- Complete critical dimensions for PJM array
- Start informational testing in 8-ft test vessel for down selection of features pertaining to standardized high-solids vessel design.

**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.

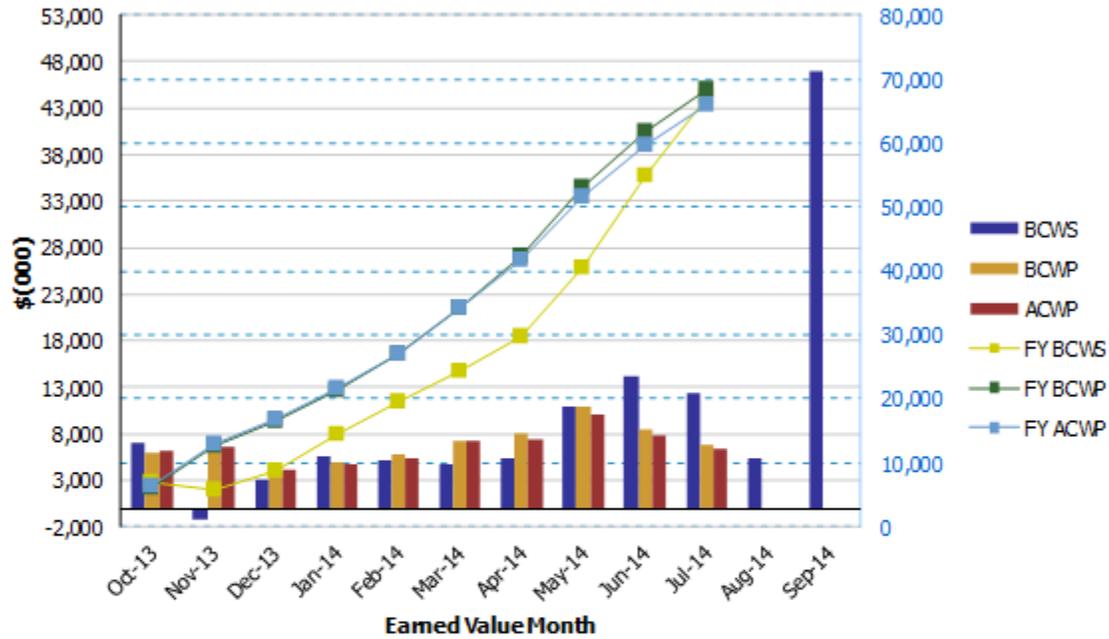
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2014 Earned Value Data

Data as of: July 2014

**River Protection Project  
Pretreatment Facility**

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 2013	\$6,954	\$5,927	\$6,224	0.85	0.95	\$6,954	\$5,927	\$6,224	0.85	0.95
Nov 2013	(\$1,213)	\$6,673	\$6,646	-5.50	1.00	\$5,741	\$12,600	\$12,870	2.19	0.98
Dec 2013	\$3,109	\$3,957	\$4,053	1.27	0.98	\$8,850	\$16,557	\$16,923	1.87	0.98
Jan 2014	\$5,616	\$4,856	\$4,809	0.86	1.01	\$14,466	\$21,413	\$21,732	1.48	0.99
Feb 2014	\$5,155	\$5,673	\$5,261	1.10	1.08	\$19,621	\$27,086	\$26,993	1.38	1.00
Mar 2014	\$4,751	\$7,210	\$7,173	1.52	1.01	\$24,372	\$34,296	\$34,166	1.41	1.00
Apr 2014	\$5,329	\$7,957	\$7,521	1.49	1.06	\$29,701	\$42,253	\$41,687	1.42	1.01
May 2014	\$10,845	\$10,888	\$10,039	1.00	1.08	\$40,546	\$53,141	\$51,726	1.31	1.03
Jun 2014	\$14,207	\$8,532	\$7,915	0.60	1.08	\$54,753	\$61,673	\$59,641	1.13	1.03
Jul 2014	\$12,442	\$6,706	\$6,415	0.54	1.05	\$67,195	\$68,379	\$66,056	1.02	1.04
Aug 2014	\$5,459									
Sep 2014	\$46,949									

PTD	\$1,594,485	\$1,578,388	\$1,573,800	0.99	1.00
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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 shipment 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. BNI and DOE continue to focus on resolving technical issues, performing hazard analyses, and completing safety evaluations for process systems in accordance with the PT/HLW 2-Year Interim Work Plan.

Construction activities include the placement of walls at the 37-foot elevation, installation of structural steel at the 58- and 77-foot elevation, and installation of cable tray supports and ventilation ducts at the 14-foot elevation. For the last 6 months, the HLW activities were focused on supporting authorization to proceed with a resumption of production engineering.

DOE has authorized BNI to resume all engineering work necessary to finalize the design of the HLW Facility on August 19, 2014. DOE has also authorized limited procurement and construction with certain conditions.

Office of River Protection has provided this authorization because BNI has made significant progress in resolving technical issues and establishing work processes to align the HLW Facility design and safety basis. The accomplishments include substantial resolution of the HLW technical issues as documented in BNI design assessments; Office of River Protection approval of BNI corrective action plans for nine technical and quality Priority Level 1 findings; BNI's revision of design and nuclear safety processes, and plans and procedures to implement the HLW SDS; development of the Reliability Validation Process Extent-of-Condition Plan and associated EPC Process Gates desk instruction; development of a systems engineering management plan; completion of a risk assessment to support continued civil construction of the HLW Facility; preparation of risk assessment sheets for confinement ventilation and process off-gas systems; and DOE approval of the HLW SDS.

Currently, DOE is in the process of finalizing the resumption plan and the 2-year work plan for FY 2015 and FY 2016.

**Significant Past Accomplishments:**

- DOE authorized BNI to resume all engineering work necessary to finalize the design of the HLW Facility on August 19, 2014
- One concrete placement was made in mid-July
- Continued initial testing on Porvair high-efficiency particulate air (HEPA) filter at Mississippi State University
- Installed 11 tons of structural steel – mostly steel to support slabs 4019 and 4020 over Canister Handling Cave.

**Significant Planned Actions in the Next 6 Months:**

- Issue request for proposal for vendor design of RLD-8 vessel
- Glove box 29 and 42 assembly/fabrication for auto samplers
- Twelve tons of steel forecasted for delivery in the Fourth Quarter FY 2014
- Perform gap analysis to identify misalignments with the current Preliminary Documented Safety Analysis and to identify safety analyses necessary to incorporate the SDS into the Preliminary Documented Safety Analysis
- Complete draft analysis of single-point failures in support of failure mode analysis
- Perform HEPA filter qualification testing at Mississippi State University
- Continue activities to support the RLD system redesign in support of vessel reprourement.

**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.

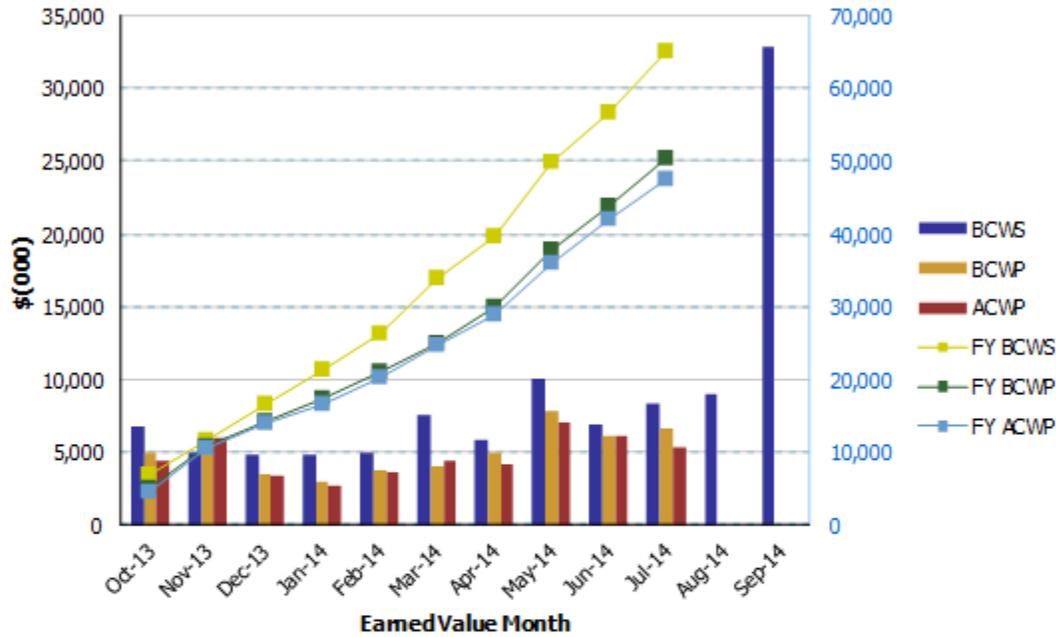
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2014 Earned Value Data

Data as of: July 2014

**River Protection Project  
High-Level Waste Facility**

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 2013	\$6,818	\$4,914	\$4,390	0.72	1.12	\$6,818	\$4,914	\$4,390	0.72	1.12
Nov 2013	\$4,892	\$5,842	\$6,055	1.19	0.96	\$11,710	\$10,756	\$10,445	0.92	1.03
Dec 2013	\$4,811	\$3,559	\$3,420	0.74	1.04	\$16,521	\$14,315	\$13,865	0.87	1.03
Jan 2014	\$4,778	\$2,998	\$2,760	0.63	1.09	\$21,299	\$17,313	\$16,625	0.81	1.04
Feb 2014	\$4,927	\$3,736	\$3,647	0.76	1.02	\$26,226	\$21,049	\$20,272	0.80	1.04
Mar 2014	\$7,612	\$4,010	\$4,391	0.53	0.91	\$33,838	\$25,059	\$24,663	0.74	1.02
Apr 2014	\$5,867	\$4,921	\$4,203	0.84	1.17	\$39,705	\$29,980	\$28,866	0.76	1.04
May 2014	\$10,121	\$7,861	\$7,079	0.78	1.11	\$49,826	\$37,841	\$35,945	0.76	1.05
Jun 2014	\$6,975	\$6,073	\$6,097	0.87	1.00	\$56,801	\$43,914	\$42,042	0.77	1.04
Jul 2014	\$8,292	\$6,589	\$5,379	0.79	1.22	\$65,093	\$50,503	\$47,421	0.78	1.06
Aug 2014	\$9,052									
Sep 2014	\$32,827									

PTD	\$1,051,896	\$1,039,683	\$1,030,291	0.99	1.01
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## Low-Activity Waste Facility

Number	Title	Due Date	Status
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2014	Ongoing*
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 the 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 July 2014, the LAW Facility was 71 percent complete overall, with engineering design 82 percent complete, procurement 89 percent complete, construction 77 percent complete, and startup and commissioning 7 percent complete. On February 24, 2014, DOE requested that BNI develop a contract modification proposal for the following:

- Completing the LBL work scope in the current contract through hot commissioning
- Completing initial planning and design for incorporating a permanent capability to accommodate a direct feed LAW option in the WTP Project.

### Significant Past Accomplishments:

- Placed all AZS bricks on the north, east, and west walls for the lower glass pool refractory
- Completed melter electrode installation (total of 12 each)
- Completed motor alignment on LVP exhausters
- Installed over 1,040 linear feet of conduit and pulled over 15,900 linear feet of cable
- Installed over 200 linear feet of process piping and hydro-tested 2,160 linear feet of facility piping.

### Significant Planned Actions in the Next 6 Months:

- Complete installation of autosampling system
- Award the purchase order for the “active” gas analyzers
- Submit the thermal catalytic oxidizer permit package for independent qualified registered professional engineer review
- Complete the LAW Facility design and operability review
- Continue refractory brick installation in the melters.

### 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.

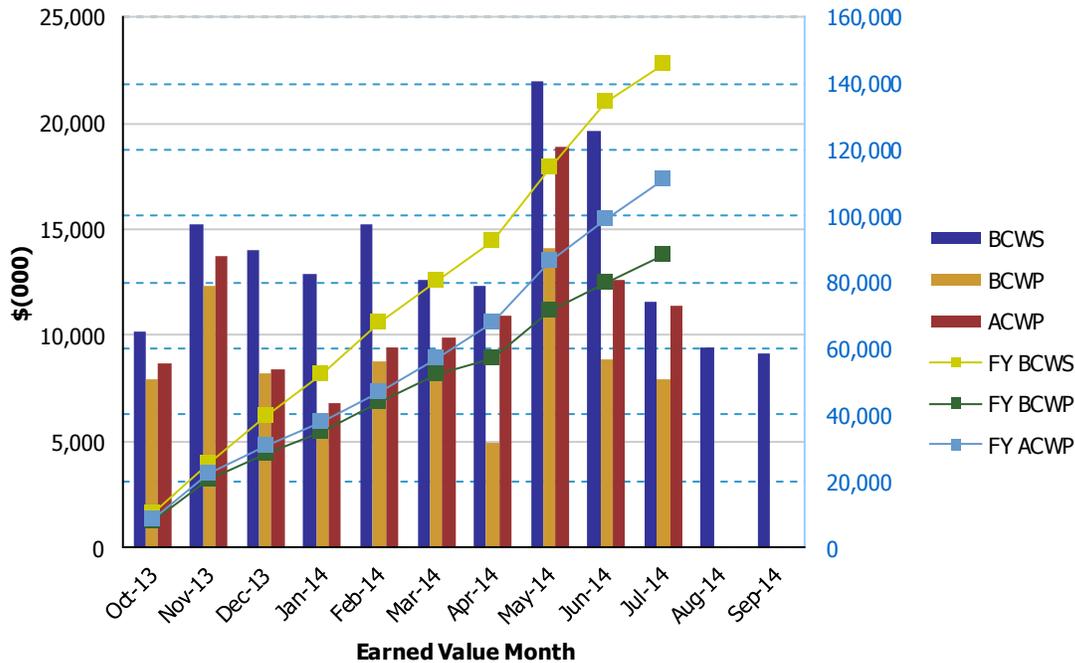
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2014 Earned Value Data

Data as of: July 2014

**River Protection Project  
Low-Activity Waste Facility**

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 2013	\$10,160	\$7,952	\$8,677	0.78	0.92	\$10,160	\$7,952	\$8,677	0.78	0.92
Nov 2013	\$15,237	\$12,339	\$13,732	0.81	0.90	\$25,397	\$20,291	\$22,409	0.80	0.91
Dec 2013	\$14,003	\$8,214	\$8,389	0.59	0.98	\$39,400	\$28,505	\$30,798	0.72	0.93
Jan 2014	\$12,919	\$6,382	\$6,795	0.49	0.94	\$52,319	\$34,887	\$37,593	0.67	0.93
Feb 2014	\$15,254	\$8,750	\$9,433	0.57	0.93	\$67,573	\$43,637	\$47,026	0.65	0.93
Mar 2014	\$12,596	\$8,478	\$9,852	0.67	0.86	\$80,169	\$52,115	\$56,878	0.65	0.92
Apr 2014	\$12,335	\$4,958	\$10,936	0.40	0.45	\$92,504	\$57,073	\$67,814	0.62	0.84
May 2014	\$21,988	\$14,117	\$18,840	0.64	0.75	\$114,492	\$71,190	\$86,654	0.62	0.82
Jun 2014	\$19,658	\$8,885	\$12,594	0.45	0.71	\$134,150	\$80,075	\$99,248	0.60	0.81
Jul 2014	\$11,551	\$7,974	\$11,433	0.69	0.70	\$145,701	\$88,049	\$110,681	0.60	0.80
Aug 2014	\$9,406									
Sep 2014	\$9,120									

PTD	\$950,200	\$877,539	\$953,962	0.92	0.92
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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 July 2014, BOF was 63 percent complete overall, with engineering design 84 percent complete, procurement 72 percent complete, construction 82 percent complete, and startup and commissioning 18 percent complete.

Commercial grade dedication activities in support of the emergency turbine generator procurement are the primary focus for the quality, design engineering, and procurement organizations. Construction efforts are focused on completion of the Glass Former Facility and construction of the Standby Diesel Generator Facility. The standby diesel generator has been placed along with the heat exchanger and fuel tank that support it.

### Significant Past Accomplishments:

- Set standby diesel generator fuel tank and heat exchangers
- Completed 4,750 linear feet of cable pulling and 275 terminations
- Continued recoating activities for fire service water tanks
- Completed Cathodic protection system test station installation.

### Significant Planned Actions in the Next 6 Months:

- Complete construction of the Glass Former Storage Facility
- Complete repair work for fire service water tanks
- Receive the replacement nonradioactive liquid waste disposal panel
- Complete component testing of the low-voltage, medium-voltage, and fire detection systems for switchgear Buildings 87 and 91.

### Issues:

No major issues at this time.

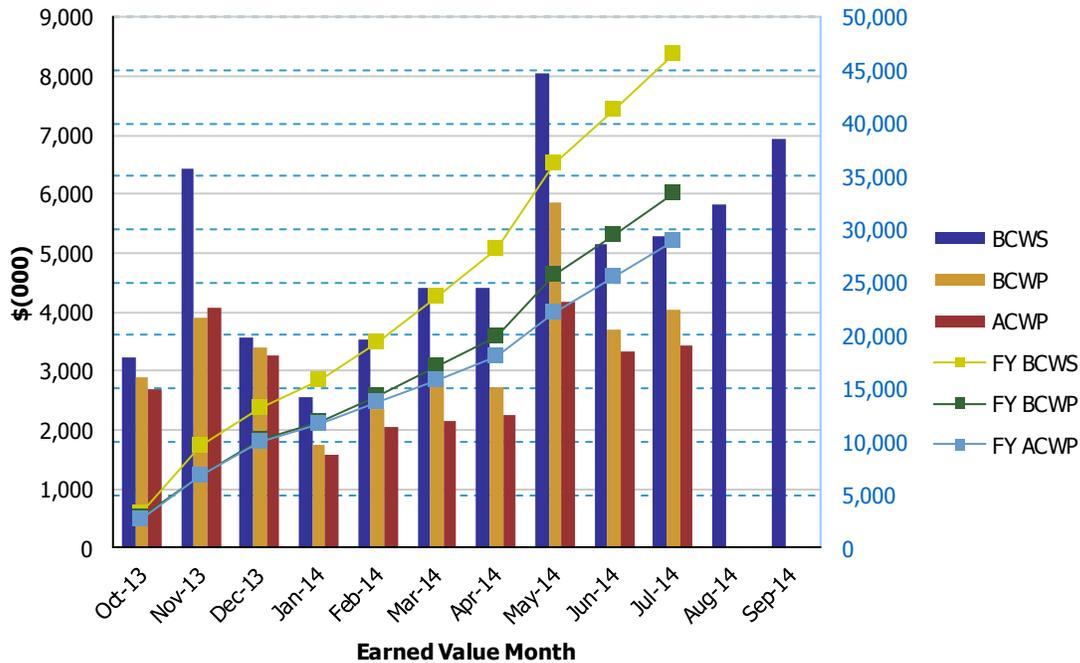
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2014 Earned Value Data

Data as of: July 2014

**River Protection Project  
Balance of Facilities**

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 2013	\$3,218	\$2,901	\$2,679	0.90	1.08	\$3,218	\$2,901	\$2,679	0.90	1.08
Nov 2013	\$6,431	\$3,886	\$4,067	0.60	0.96	\$9,649	\$6,787	\$6,746	0.70	1.01
Dec 2013	\$3,547	\$3,395	\$3,267	0.96	1.04	\$13,196	\$10,182	\$10,013	0.77	1.02
Jan 2014	\$2,538	\$1,737	\$1,562	0.68	1.11	\$15,734	\$11,919	\$11,575	0.76	1.03
Feb 2014	\$3,528	\$2,356	\$2,047	0.67	1.15	\$19,262	\$14,275	\$13,622	0.74	1.05
Mar 2014	\$4,394	\$2,806	\$2,163	0.64	1.30	\$23,656	\$17,081	\$15,785	0.72	1.08
Apr 2014	\$4,399	\$2,724	\$2,238	0.62	1.22	\$28,055	\$19,805	\$18,023	0.71	1.10
May 2014	\$8,035	\$5,861	\$4,179	0.73	1.40	\$36,090	\$25,666	\$22,202	0.71	1.16
Jun 2014	\$5,161	\$3,711	\$3,320	0.72	1.12	\$41,251	\$29,377	\$25,522	0.71	1.15
Jul 2014	\$5,297	\$4,032	\$3,415	0.76	1.18	\$46,548	\$33,409	\$28,937	0.72	1.15
Aug 2014	\$5,827									
Sep 2014	\$6,945									

PTD	\$373,262	\$351,058	\$340,307	0.94	1.03
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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 July 2014, the LAB was 75 percent complete overall, with engineering design 83 percent complete, procurement 86 percent complete, construction 93 percent complete, and startup and commissioning 25 percent complete.

Engineering efforts are focused on closure of nonconformance reports and construction deficiency reports. In addition engineering is supporting completion of construction punchlist items. Construction efforts are focused on installation of remaining electrical commodities and penetration seals to support the completion of LAB construction.

### Significant Past Accomplishments:

- Continued cable pulls and terminations (5,410 linear feet in July)
- Continued installation of instrumentation tubing (1,520 linear feet in July)
- Continued installation of penetration seals and fireproofing (97 percent complete)
- Completed Recertification of RLD vessels 163, 164, and 165.

### Significant Planned Actions in the Next 6 Months:

- Complete electrical commodity installation
- Complete penetration seal installation
- Initiate component level testing of select LAB systems.

### Issues:

No major issues at this time.

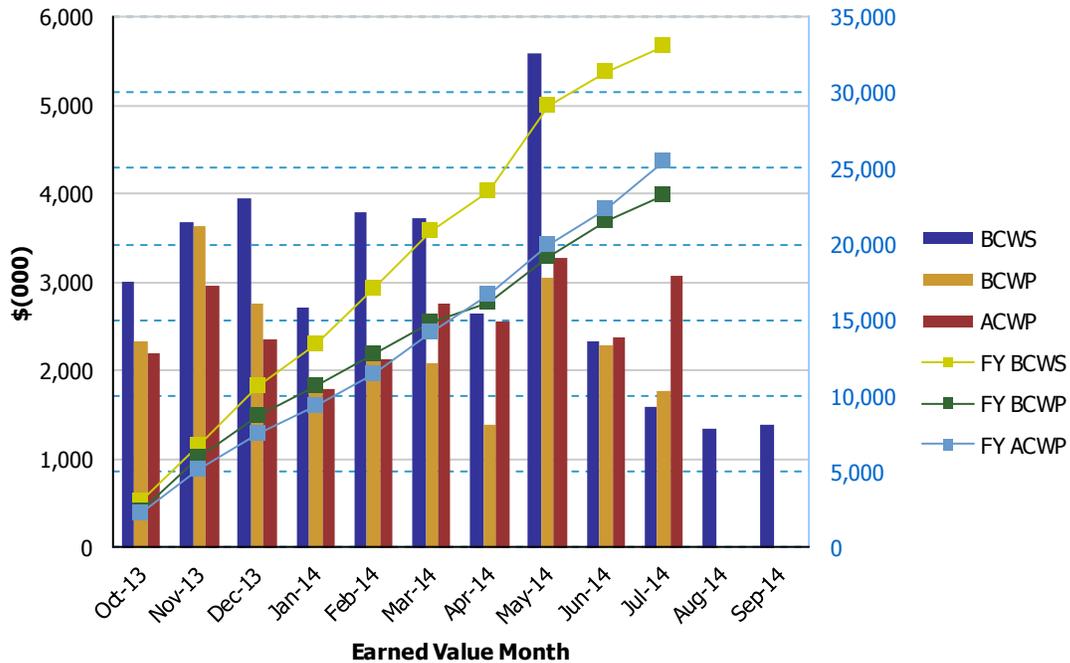
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2014 Earned Value Data

Data as of: July 2014

**River Protection Project  
Analytical Laboratory**

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 2013	\$3,008	\$2,328	\$2,196	0.77	1.06	\$3,008	\$2,328	\$2,196	0.77	1.06
Nov 2013	\$3,689	\$3,629	\$2,959	0.98	1.23	\$6,697	\$5,957	\$5,155	0.89	1.16
Dec 2013	\$3,943	\$2,750	\$2,350	0.70	1.17	\$10,640	\$8,707	\$7,505	0.82	1.16
Jan 2014	\$2,705	\$1,875	\$1,788	0.69	1.05	\$13,345	\$10,582	\$9,293	0.79	1.14
Feb 2014	\$3,783	\$2,130	\$2,126	0.56	1.00	\$17,128	\$12,712	\$11,419	0.74	1.11
Mar 2014	\$3,718	\$2,080	\$2,751	0.56	0.76	\$20,846	\$14,792	\$14,170	0.71	1.04
Apr 2014	\$2,642	\$1,382	\$2,552	0.52	0.54	\$23,488	\$16,174	\$16,722	0.69	0.97
May 2014	\$5,592	\$3,040	\$3,274	0.54	0.93	\$29,080	\$19,214	\$19,996	0.66	0.96
Jun 2014	\$2,330	\$2,291	\$2,375	0.98	0.96	\$31,410	\$21,505	\$22,371	0.68	0.96
Jul 2014	\$1,591	\$1,772	\$3,082	1.11	0.57	\$33,001	\$23,277	\$25,453	0.71	0.91
Aug 2014	\$1,351									
Sep 2014	\$1,381									

PTD	\$270,039	\$256,360	\$277,956	0.95	0.92
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**Waste Treatment Plant Project - (LBL) Percent Complete Status  
Through July 2014**

(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	1,240.4	877.5	71%	329.7	270.6	82%	263.5	233.7	89%	464.1	359.0	77%	181.3	13.1	7%	1.9	1.3	69%
Analytical Lab	339.9	256.4	75%	73.7	61.1	83%	56.0	48.2	86%	138.5	128.5	93%	71.1	18.1	25%	0.6	0.4	69%
Balance of Facilities	561.6	351.1	63%	96.5	81.1	84%	74.7	54.0	72%	225.6	185.0	82%	165.5	30.6	18%	0.6	0.4	69%
<b>Total LBL</b>	<b>2,142.0</b>	<b>1,485.0</b>	<b>69%</b>	<b>499.9</b>	<b>412.8</b>	<b>83%</b>	<b>394.2</b>	<b>335.8</b>	<b>85%</b>	<b>828.1</b>	<b>672.5</b>	<b>81%</b>	<b>418.0</b>	<b>61.8</b>	<b>15%</b>	<b>3.0</b>	<b>2.1</b>	<b>69%</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%	n/a	n/a	n/a
<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>n/a</b>	<b>n/a</b>	<b>n/a</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>10,864.8</b>	<b>7,450.2</b>	<b>69%</b>	<b>2,673.0</b>	<b>2,361.7</b>	<b>88%</b>	<b>1,959.7</b>	<b>1,460.6</b>	<b>75%</b>	<b>3,715.7</b>	<b>2,437.3</b>	<b>66%</b>	<b>1,176.5</b>	<b>205.0</b>	<b>17%</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>

Source - Preliminary WTP Contract Performance Report - Format 1 Data for July 2014

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.