

FINAL

Office of River Protection
Consent Decree 08-5085-FVS

Monthly Summary Report

October 2014

Office of River Protection**Consent Decree 08-5085-FVS
Monthly Summary Report****October 2014 (Monthly Summary Report/Project Earned Value Management System
reflects August 2014 information)**

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CD Milestone Statistics/Status

| Milestone | Title | Due Date | Completion Date | Status |
|-------------------------|--|------------|-----------------|-----------|
| Fiscal Year 2014 | | | | |
| 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 |
| Fiscal Year 2015 | | | | |
| 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.

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 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 ^a | 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. 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:

- C-102 removed sluicer #2 from riser 2 and continued with activities to install a new sluicer in C-102.
- Developed a plugged slurry distributor at AN-106 and initiated fabrication activities to build a replacement distributor. Initiated the planning process for replacement of the slurry distributor.
- Continued with evaluation of C-111 sluicer failure modes to support design of new replacement sluicers. Completed removal of both failed sluicers from risers 3 and 6 at C-111.

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.

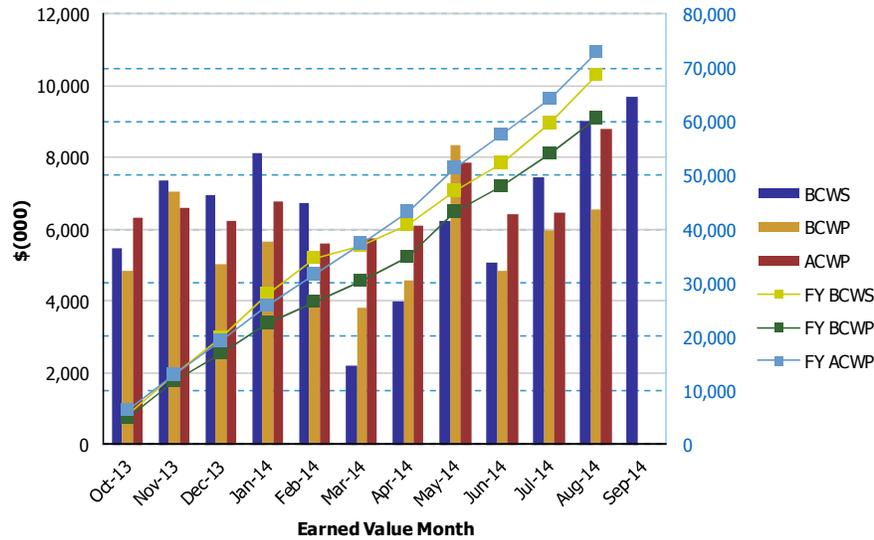
Issues:

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 | \$9,039 | \$6,563 | \$8,792 | 0.73 | 0.75 | \$68,634 | \$60,489 | \$72,874 | 0.88 | 0.83 |
| Sep 2014 | \$9,711 | | | | | | | | | |
| CTD | \$495,473 | \$487,329 | \$499,713 | 0.98 | 0.98 | | | | | |

Retrieve and Close Single-Shell Tanks:

The current month unfavorable schedule variance of **(\$2,476k)** is due to the following:

- Delay in C-105 retrieval due to plugging of the MARS-V end effector and the AN-106 slurry distributor in the receiver tank during operations
- Delays with the direct-push activities at A and AX Farms due to vapor concerns
- Delays in ventilation design for A and AX Farms due to engineering resources being reassigned to address C-105 MARS issues.

The current month unfavorable cost variance of (\$2,229k) is due to:

- C-105 retrieval due to slower than anticipated retrieval rates caused by plugging of the MARS-V end effector and slurry distributor, which has created additional costs.
- C-102 retrieval due to a foreign object discovered at the bottom of the tank that prevented the pump from accessing the remaining waste, the project is replacing the sluicer with a longer one.

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 2,585 full-time equivalent contractor (Bechtel National, Inc. [BNI]) and subcontractor personnel. This includes 615 craft, 402 nonmanual, and 184 subcontractor full-time equivalent personnel working at the WTP construction site (all facilities).

As of August 2014, the combined Low-Activity Waste (LAW) Facility, Analytical Laboratory (LAB), and Balance of Facilities (BOF) (collectively LBL) were 70 percent complete, design and engineering was 83 percent complete, procurement was 85 percent complete, construction was 82 percent complete, and startup and commissioning was 16 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 August 2014, the cumulative to-date WTP Project schedule variance was a negative \$156.5 million, and the cumulative to-date WTP Project cost variance was a negative \$10.7 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 August 2014.

Significant Past Accomplishments:

- DOE completed review of the PT Resumption Plan to support the authorization to proceed with production engineering (PT)
- DOE received the PT SDS Plan for review (PT)
- Installed 8 tons of structural steel – mostly steel to support slabs 4019 and 4020 over the canister handling cave (HLW)
- Completed installation of auto-sampling system (LAW)
- Completed repair work for fire service water tanks (BOF).

Significant Planned Actions in the Next 6 Months:

- Complete modification at Full-Scale Vessel Testing (FSVT) Facility to support Phase 2 testing for the pulse jet mixer (PJM) controls (PT)
- DOE approval of PT Resumption Plan to support DOE authorization to proceed with production engineering (PT)
- Complete the LAW Facility design and operability review (LAW)
- Complete construction of the Analytical Laboratory (LAB)
- Complete construction of the Glass Former Storage Facility (BOF).

Issues:

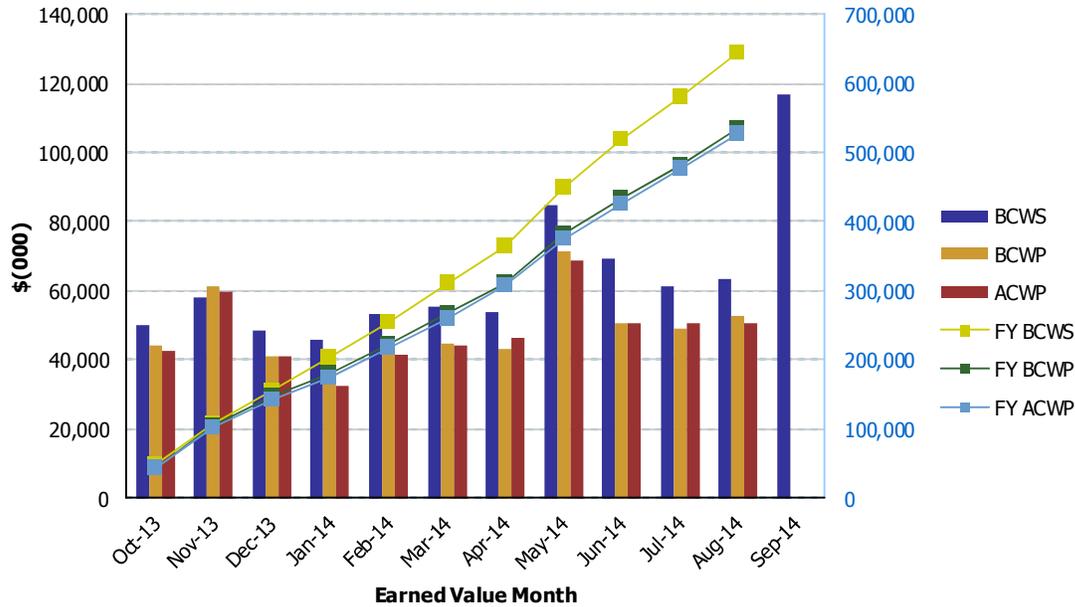
*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone. Technical issues related to WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and ventilation.

Data Set: FY 2014 Earned Value Data

Data as of: August 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 | \$63,198 | \$52,764 | \$50,376 | 0.83 | 1.05 | \$643,276 | \$535,499 | \$527,113 | 0.83 | 1.02 |
| Sep 2014 | \$116,961 | | | | | | | | | |
| PTD | \$8,433,489 | \$8,276,974 | \$8,287,723 | 0.98 | 1.00 | | | | | |

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.

Phase 1 of the FSVT 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. 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.

BNI has submitted a fiscal year (FY) 2015–FY 2016 two-year work plan, which is being reviewed by DOE. BNI has transmitted the PT SDS Plan to DOE for review.

Significant Past Accomplishments:

- DOE completed review of the PT Resumption Plan to support the authorization to proceed with production engineering
- DOE received the PT SDS Plan for review
- Continued testing of the PJM controls at the FSVT Facility
- Continued conceptual design for a standardized high-solids vessel.

Significant Planned Actions in the Next 6 Months:

- Complete modification at FSVT 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

- Finalize technical team strategic plans
- 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 WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and ventilation.

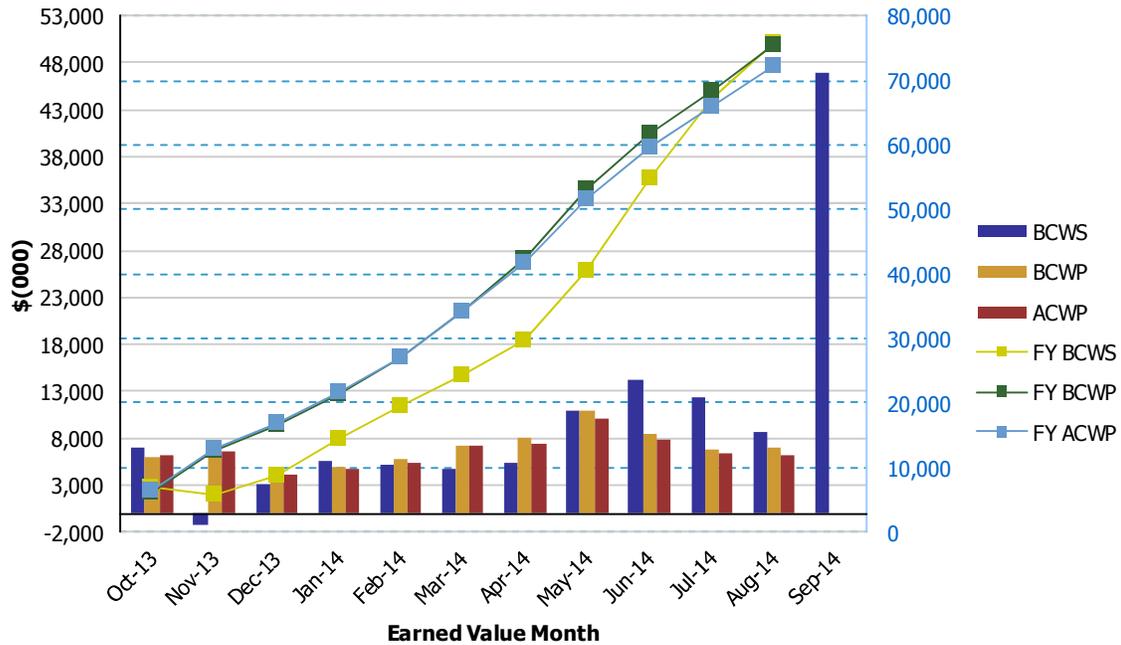
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2014 Earned Value Data

Data as of: August 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 | \$8,704 | \$7,042 | \$6,112 | 0.81 | 1.15 | \$75,899 | \$75,421 | \$72,168 | 0.99 | 1.05 |
| Sep 2014 | \$46,949 | | | | | | | | | |

| | | | | | |
|-----|-------------|-------------|-------------|------|------|
| PTD | \$1,603,189 | \$1,585,430 | \$1,579,912 | 0.99 | 1.00 |
|-----|-------------|-------------|-------------|------|------|

| | |
|------------|----------|
| Mon - SV | Mon - CV |
| (\$1,662) | \$930 |
| | |
| (\$17,759) | \$5,518 |

| | |
|---------|---------|
| FY - SV | FY - CV |
| (\$478) | \$3,253 |

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.

Construction is continuing on concrete placements, and installation of support steel and crane rails in the canister handling cave. Testing of HEPA filters at Mississippi State University (MSU) is continuing to select the filters that would meet the design and operations requirements.

ORP authorized BNI to resume all engineering work necessary to finalize the design of the HLW Facility on August 19, 2014. BNI has submitted FY 2015–FY 2016 two-year work plan incorporating the revised processes.

Since receiving the authorization to proceed, BNI has focused on the implementation of the newly developed 2-year work plan; the gap analysis between the SDS and the PDSA; RLD system redesign and hazards analysis; engineering studies to develop path forwards for resolution of issues regarding HVAC system and Melter and other Solid waste handling system; and development of Facility Design Description (FDD) and System Design Descriptions (SDDs), as required by the newly implemented Systems Engineering Management Plan (SEMP).

Significant Past Accomplishments:

- One concrete placement was made (Slab 4013)
- Continued testing on Porvair HEPA filter at Mississippi State University
- Installed 8 tons of structural steel – mostly steel to support slabs 4019 and 4020 over the canister handling cave
- Continued installation of the crane rails in canister handling cave
- Completed three studies in response to the design and operability review related to HVAC and secondary waste handling operability issues.

Significant Planned Actions in the Next 6 Months:

- Issue request for proposal for vendor design of RLD-8 vessel
- Complete glove box 29 and 42 assembly/fabrication for auto samplers
- 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.

Issues:

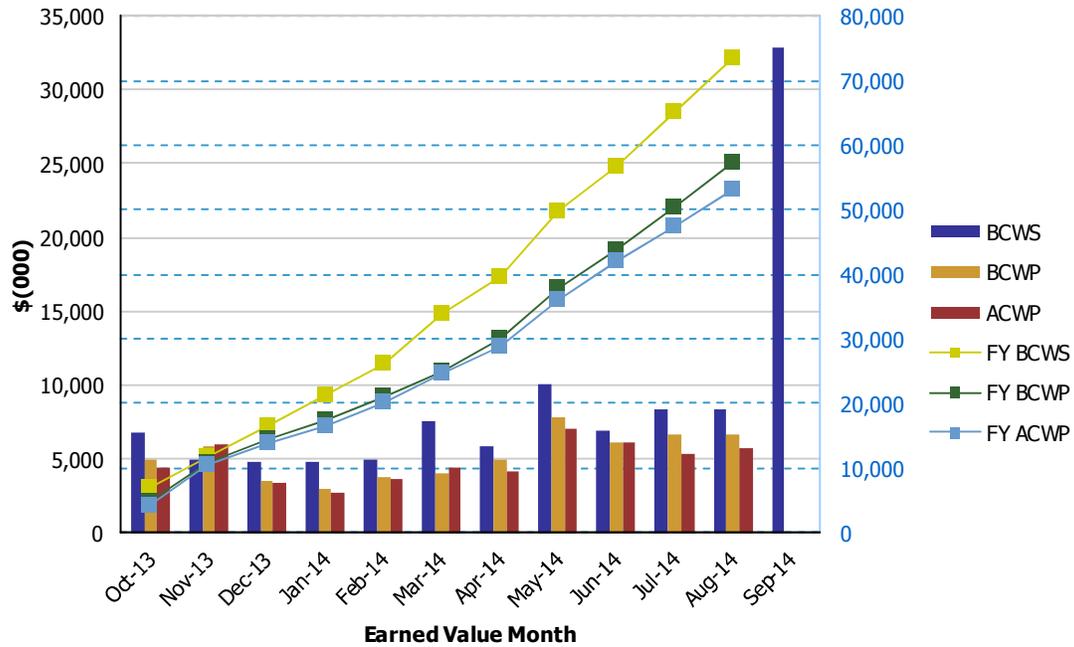
*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone. Technical issues related to the WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and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

Data Set: FY 2014 Earned Value Data

Data as of: August 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 | \$8,413 | \$6,664 | \$5,752 | 0.79 | 1.16 | \$73,506 | \$57,167 | \$53,173 | 0.78 | 1.08 |
| Sep 2014 | \$32,827 | | | | | | | | | |
| PTD | \$1,060,310 | \$1,046,347 | \$1,036,043 | 0.99 | 1.01 | | | | | |

| Mon - SV | Mon - CV |
|------------|----------|
| (\$1,749) | \$912 |
| | |
| (\$13,963) | \$10,304 |

| FY - SV | FY - CV |
|------------|---------|
| (\$16,339) | \$3,994 |

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 Low Activity Waste (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 August 2014, the LAW Facility was 71 percent complete overall, with engineering design 83 percent complete, procurement 89 percent complete, construction 78 percent complete, and startup and commissioning 8 percent complete. As requested, DOE received a Bechtel contract modification proposal on September 30, 2014, 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:

- Installed castable refractory in Melters 1 and 2
- Installed over 1,000 linear feet of scheduled conduit and pulled over 23,900 linear feet of scheduled cable
- Installed over 180 linear feet of process piping and hydro-tested 800 linear feet of facility piping
- Performed an in-process review on the material, fabrication, and welding processes and welder qualifications of the caustic scrubber vendor
- Completed installation of auto-sampling system.

Significant Planned Actions in the Next 6 Months:

- Complete subcontractor work scope in the annex
- Award the purchase order for the *active* gas analyzers
- Complete the LAW Facility design and operability review
- Complete castable refractory 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.

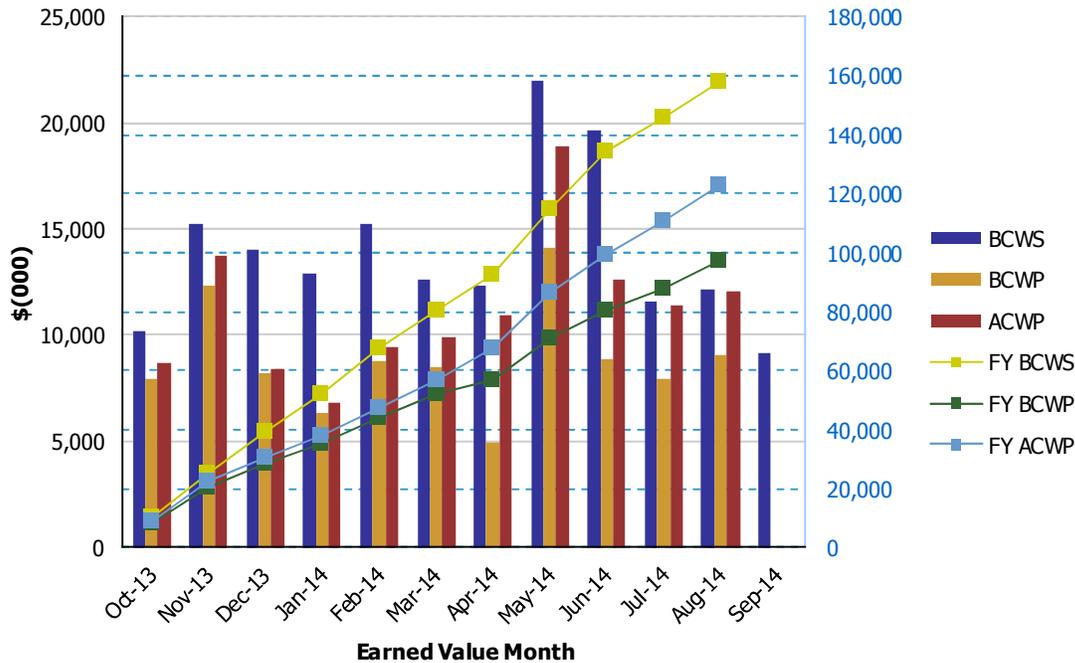
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2014 Earned Value Data

Data as of: August 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 | \$12,107 | \$9,091 | \$12,097 | 0.75 | 0.75 | \$157,808 | \$97,140 | \$122,778 | 0.62 | 0.79 |
| Sep 2014 | \$9,120 | | | | | | | | | |

| | | | | | |
|-----|-----------|-----------|-----------|------|------|
| PTD | \$962,307 | \$886,630 | \$966,059 | 0.92 | 0.92 |
|-----|-----------|-----------|-----------|------|------|

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 August 2014, BOF was 63 percent complete overall, with engineering design 85 percent complete, procurement 73 percent complete, construction 83 percent complete, and startup and commissioning 20 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:

- Completed repair work for fire service water tanks
- Completed over 520 cubic yards of earthwork in various BOF locations
- Completed 1,700 lf of cable and 390 terminations
- Completed coatings on the pipe rack and pump pads (subcontractor FD Thomas)

Significant Planned Actions in the Next 6 Months:

- Complete construction of the Glass Former Storage Facility
- Receive the replacement non-radioactive liquid waste disposal system motor control 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.

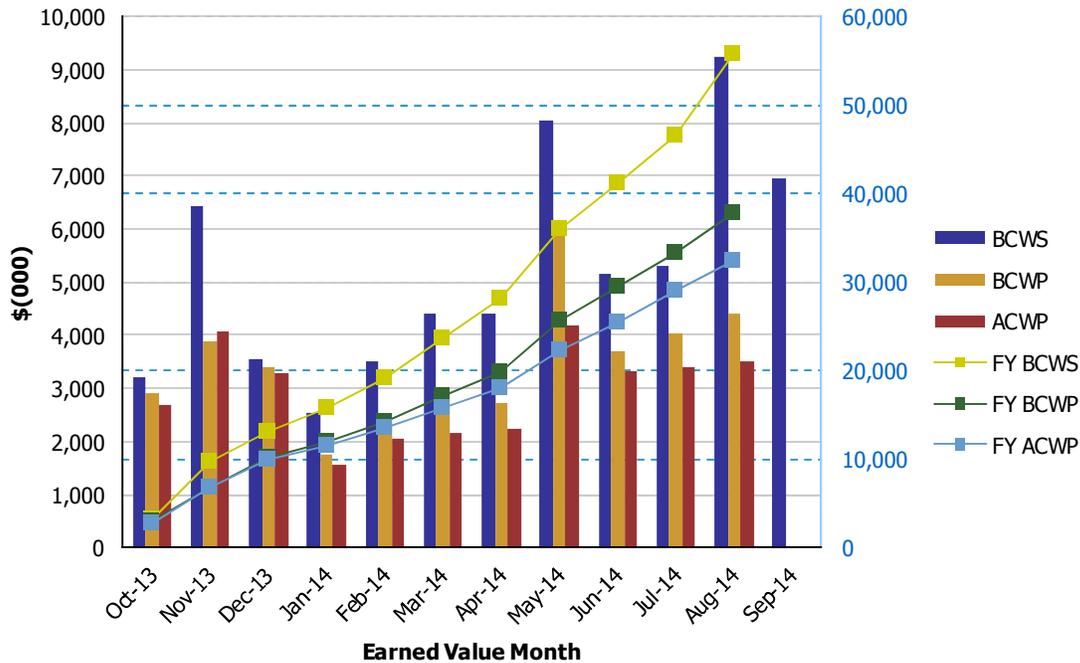
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2014 Earned Value Data

Data as of: August 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 | \$9,233 | \$4,399 | \$3,499 | 0.48 | 1.26 | \$55,781 | \$37,808 | \$32,436 | 0.68 | 1.17 |
| Sep 2014 | \$6,945 | | | | | | | | | |

| | | | | | |
|-----|-----------|-----------|-----------|------|------|
| PTD | \$382,495 | \$355,458 | \$343,806 | 0.93 | 1.03 |
|-----|-----------|-----------|-----------|------|------|

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 August 2014, the LAB was 76 percent complete overall, with engineering design 83 percent complete, procurement 86 percent complete, construction 94 percent complete, and startup and commissioning 26 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 (8,050 linear feet in August – 85% complete)
- Continued installation of conduit (1,500 linear feet in August – 97% complete)
- Continued installation of instrumentation tubing (3,440 linear feet in August)
- Continued installation of penetration seals and fireproofing.

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.

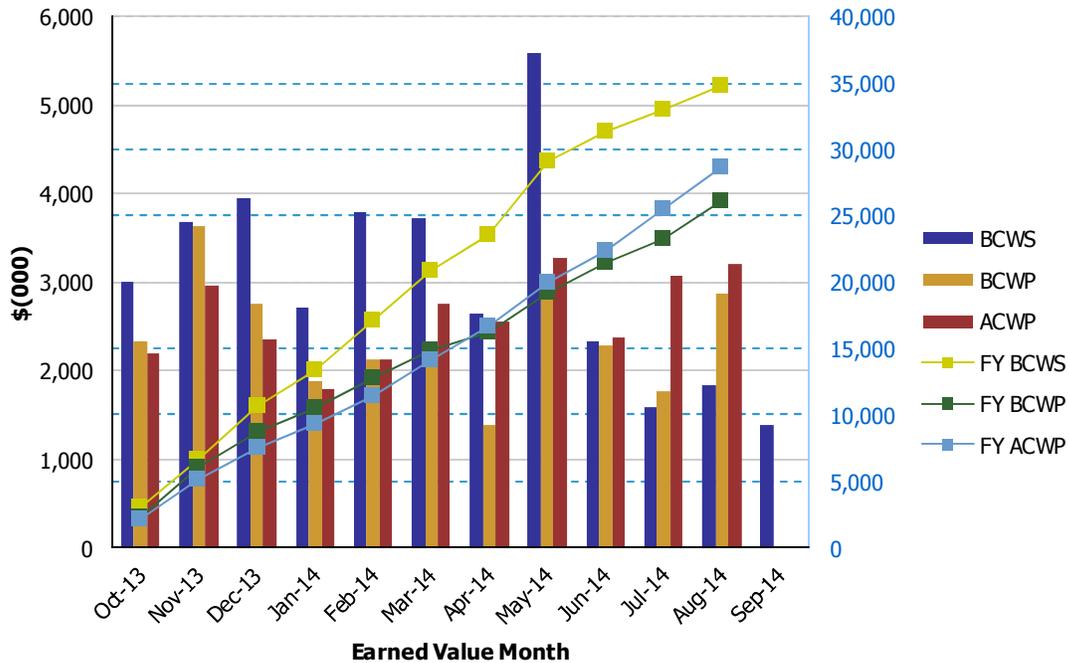
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2014 Earned Value Data

Data as of: August 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 | \$1,847 | \$2,871 | \$3,202 | 1.55 | 0.90 | \$34,848 | \$26,148 | \$28,655 | 0.75 | 0.91 |
| Sep 2014 | \$1,381 | | | | | | | | | |

| | | | | | |
|-----|-----------|-----------|-----------|------|------|
| PTD | \$271,886 | \$259,231 | \$281,158 | 0.95 | 0.92 |
|-----|-----------|-----------|-----------|------|------|

**Waste Treatment Plant Project - (LBL) Percent Complete Status
Through August 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 |
| Facilities | | | | | | | | | | | | | | | | | | |
| Low-Activity Waste | 1,240.4 | 886.6 | 71% | 329.7 | 273.5 | 83% | 263.5 | 233.9 | 89% | 464.1 | 363.9 | 78% | 181.3 | 13.8 | 8% | 1.9 | 1.6 | 85% |
| Analytical Lab | 339.9 | 259.2 | 76% | 73.7 | 61.4 | 83% | 56.0 | 48.4 | 86% | 138.5 | 130.3 | 94% | 71.1 | 18.6 | 26% | 0.6 | 0.5 | 85% |
| Balance of Facilities | 562.9 | 355.5 | 63% | 96.5 | 81.6 | 85% | 74.7 | 54.3 | 73% | 225.6 | 186.2 | 83% | 165.5 | 32.8 | 20% | 0.6 | 0.5 | 85% |
| Total LBL | 2,143.3 | 1,501.3 | 70% | 499.9 | 416.5 | 83% | 394.2 | 336.6 | 85% | 828.1 | 680.4 | 82% | 418.0 | 65.2 | 16% | 3.0 | 2.6 | 85% |
| 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% | n/a | n/a | n/a |
| 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% | n/a | n/a | n/a |
| 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 | 10,866.1 | 7,466.5 | 69% | 2,673.0 | 2,365.4 | 88% | 1,959.7 | 1,461.4 | 75% | 3,715.7 | 2,445.2 | 66% | 1,176.5 | 208.4 | 18% | n/a | n/a | n/a |

Source: Preliminary WTP Contract Performance Report - Format 1, Data for August 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.