

**FINAL**

Office of River Protection  
Consent Decree 08-5085-FVS

Monthly Summary Report

June 2012

Office of River Protection  
 Consent Decree 08-5085-FVS  
 Monthly Summary Report  
 June 2012

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<b>Milestone</b>	<b>Title</b>	<b>Due Date</b>	<b>Completion Date</b>	<b>Status</b>
<b>Fiscal Year 2012</b>				
D-00C-02L	Submit to Ecology and Oregon Monthly Summary Reports	10/31/11	10/25/11	Completed
D-00C-02M	Submit to Ecology and Oregon Monthly Summary Reports	11/30/11	11/21/11	Completed
D-00C-02N	Submit to Ecology and Oregon Monthly Summary Reports	12/31/11	12/27/11	Completed
D-00C-02O	Submit to Ecology and Oregon Monthly Summary Reports	01/31/12	01/25/12	Completed
D-00C-02P	Submit to Ecology and Oregon Monthly Summary Reports	02/29/12	02/22/12	Completed
D-00C-02Q	Submit to Ecology and Oregon Monthly Summary Reports	03/31/12	03/31/12	Completed
D-00C-02R	Submit to Ecology and Oregon Monthly Summary Reports	04/30/12	04/26/12	Completed
D-00C-02S	Submit to Ecology and Oregon Monthly Summary Reports	05/31/12	05/29/12	Completed
D-00C-02T	Submit to Ecology and Oregon Monthly Summary Reports	06/30/12		On-going
**D-00C-02U	Submit to Ecology and Oregon Monthly Summary Reports	07/31/12		On-going
** Future Monthly Summary Reports will be added as necessary to maintain a two-months ahead activity.				
D-00C-01D	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	01/31/12	01/27/12	Completed
D-00C-01E	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	07/31/12		On-going
<b>Fiscal Year 2013</b>				
D-00C-02X	Submit to Ecology & State of Oregon Monthly Summary Report	10/31/2012		On-going
**D-00C-02Y	Submit to Ecology & State of Oregon Monthly Summary Report	11/30/2012		On-going
** Future Monthly Reports will be added as necessary to maintain a two-months ahead activity.				
D-00A-05	LAB Construction Substantially Complete	12/31/2012		On-going
D-00A-12	Steam Plant Construction Complete	12/31/2012		On-going
D-00A-21	Complete Construction of Structural Steel to EL. 37' in HLW Fac.	12/31/2012		On-going
D-00C-01F	Submit to Ecology & State of Oregon Semi-Annual Report	1/31/2013		On-going

Milestone	Title	Due Date	Completion Date	Status
D-00C-01G	Submit to Ecology & State of Oregon Semi-Annual Report	7/31/2013		On-going
D-006-00-A1	Provide State of Oregon Notice of Meetings	9/25/2013		On-going

## Reports

**D-00C-01 series, Submit to Ecology & State of Oregon Semi-Annual Report, Due: Semi-Annually – January 31<sup>st</sup> and July 31<sup>st</sup> of each year. Status: On-going**

**D-00C-02 series, Submit to Ecology & State of Oregon Monthly Summary Report Documenting Progress During Previous Month, Due: End of Each Month, Status: On-going**

**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, Due: 9/25/2013, Status: On-going**

**D-006-00-A, Meet Approximately Every Three Years After Entry of Decree to review requirements of the Consent Decree, Due: 10/25/2013, Status: On-going**

## SST Retrieval Program

**D-00B-01, Complete Retrieval of Tank Wastes from 10 Remaining SSTs in WMA-C, Due: 9/30/2014, Status: On-going**

**D-00B-01A thru J, Submit Tank Retrieval Complete Certification, Due: TBD**

Pursuant to the requirement in Section IV-B-5 of the Consent Decree (CD) DOE must submit to Ecology a written certification that DOE has completed retrieval of a tank in accordance with the requirements of Appendix "C", Part 1, of the CD. Tanks currently in retrieval status are C-104, C-107, C-108, C-109, C-110, C-111, and C-112.

**D-00B-02, Advise Ecology of the 9 SST's from which Waste Will Be Retrieved by 2022, Due: 9/30/2014, Status: Complete.** ORP and Ecology began meeting in December 2010 to discuss the selection of the next nine tanks from which waste will be retrieved and why ORP believes those nine tanks should be in A/AX Farms. The last meeting was held on August 24, 2011. At this meeting, Ecology provided ORP with the guidance that Ecology believes the requirements of Project B-2 of the Consent Decree have been met.

**D-00B-03, Initiate Startup Retrieval in At Least 5 of 9 SSTs in D-00B-02, Due: 12/31/2017, Status: On-going**

**D-00B-04, Complete Retrieval of Tank Wastes from the 9 SSTs in D-00B-02, Due: 9/30/2022, Status: On-going**

**D-00B-04A thru I, Submit Tank Retrieval Complete Certification, Due: TBD**

### Significant Past Accomplishments:

1. Continued design and procurement for C-101 & 102 bulk retrieval systems.
2. Completed field activities for installation of ventilation system on C-101 and C-102.
3. Continued removal of legacy equipment in C-101 and C-102.
4. Completed installation of cameras and platforms for sampling activities associated with C-104 Hard Heel Removal.
5. Completed readiness assessment for C-104 Hard Heel Activities.
6. Continued construction activities for removal of equipment at C-105 to support Large Riser installation.
7. Restarted C-107 retrieval utilizing the MARS system.
8. Initiated planning for removal of failed C-109 Slurry Pump to support Hard Heel Removal.
9. Completed C-112 bulk retrieval operations.

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

1. Complete construction/installation of the modified sluicing system in C-101.
2. Complete installation of the C-102 ventilation system and removal of legacy equipment.
3. Initiate start up of Hard Heel Removal system for C-104.
4. Complete installation of the C-105 ventilation system and removal of equipment.
5. Complete installation of the Large Riser in C-105.

6. Complete C-107 bulk retrieval.
7. Initiate hard heel retrieval of C-109.
8. Complete discussions with Ecology on the retrieval certificate of completion.

**Issues:**

None.

**Tank Waste Retrieval Work Plan (TWRWP) Status**

<b>Tank</b>	<b>TWRWP</b>	<b>Expected Revisions</b>	<b>Retrieval Technology</b>	<b>Second Technology</b>	<b>Third Technology</b>
C-101	RPP-22520	Complete	MRS (per 10/7/10 agreement, to be Modified Sluicing)	Chemical Dissolution	-
C-102	RPP-22393	Complete	Modified Sluicing	Chemical Dissolution	-
C-104	RPP-22393	In Process	Modified Sluicing	Chemical Dissolution	-
C-105	RPP-22520	Early Spring 2012	MARS-V	-	-
C-107	RPP-22393	In Process	MARS-S	MARS-High Pressure	-
C-108	RPP-22393	In Process	Modified Sluicing	Chemical Dissolution	-
C-109	RPP-21895	After evaluation of C-108 hard heel retrieval	Modified Sluicing	MS-ITV, to be revised to chemical dissolution	-
C-110	RPP-33116	After evaluation of C-108 hard heel retrieval	Modified Sluicing	To be revised to chemical dissolution	-
C-111	RPP-37739	After evaluation of C-108 hard heel retrieval	Modified Sluicing	To be revised to include water soaking and chemical dissolution for the hard crust on the surface of the waste	-
C-112	RPP-22393	In Process	Modified Sluicing	Chemical Dissolution	-

**Significant Accomplishments**

None.

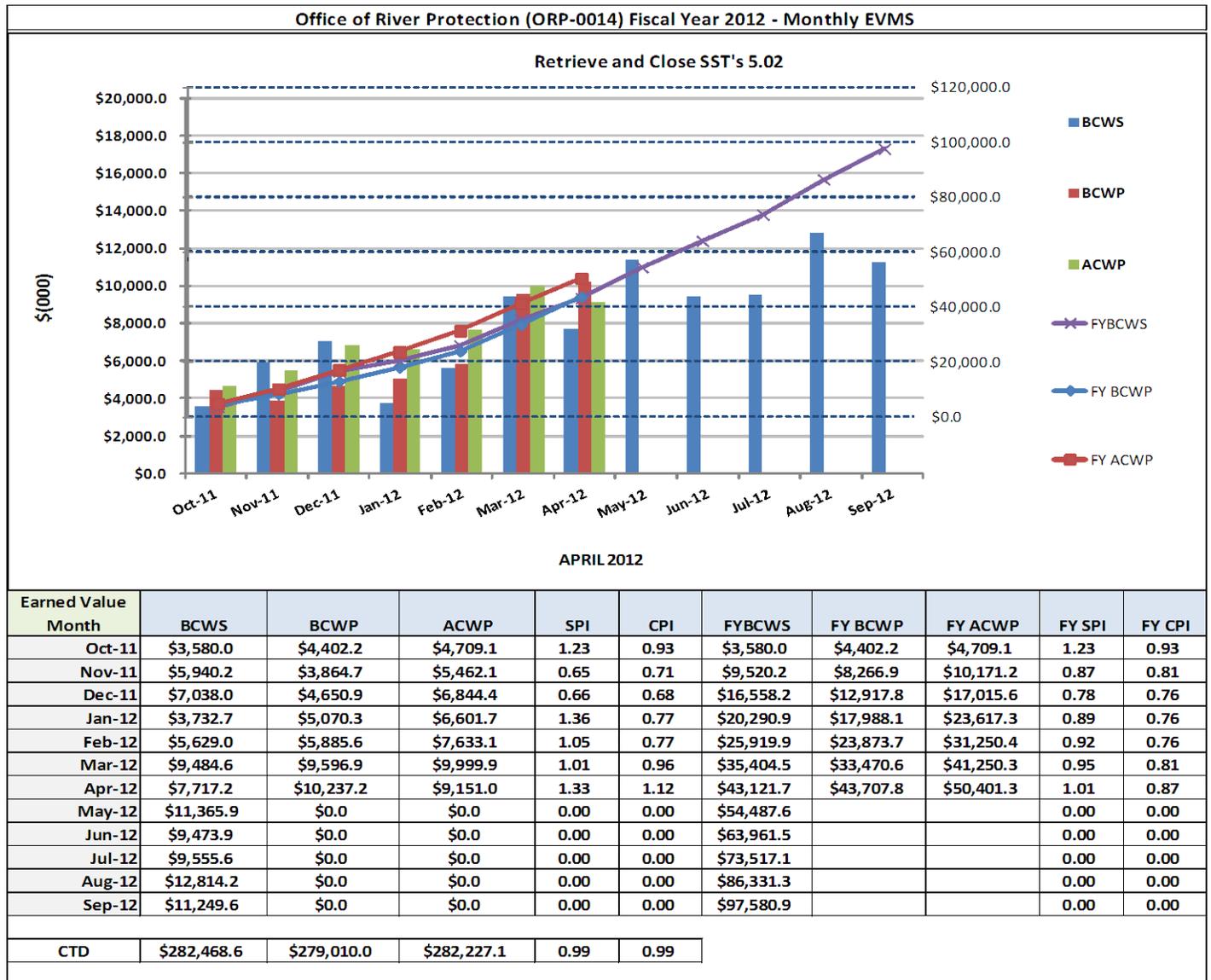
**Significant Planned Activities in the Next 6 Months:**

Work with Ecology on RPP-22520, Rev 7, 241-C-101 and 241-C-105 Tanks Waste Retrieval Work Plan.

**Issues:**

None.

### SST Retrieval Monthly and Fiscal Year EVMS Data



#### Single-Shell Tanks

##### Schedule Variance:

The favorable schedule variance is primarily due to:

- Schedule recovery on C-112 retrieval operations. Bulk retrieval to the limits of technology was completed in May (original Date December 2011), and included use of the new Extended Reach Sluicing System.
- Initiated the Phase 3 acceptance testing of the MARS-V educator system one month early. Component fabrication and installation was completed much sooner than first expected which allowed the testing to start early.
- Accelerated C-105 retrieval system installation resulting from work process improvements realized in the pit removal mockup. The mockup was constructed by a separate construction contractor at an

offsite location. This allowed the dedicated C-105 construction crew to work in parallel with the construction of the mockup on the removal of abandoned C-105 equipment around the central pit and fabrication of ventilation ducting during the construction of the pit mockup. Also, additional soil analysis increased the allowable amount of soil that could be removed at one time and the absence of a saltwell pump in the central riser allowed the equipment to be removed with one excavation instead of having to excavate and backfill each piece of removed equipment.

Cost Variance:

The favorable cost variance is primarily due to:

- C-105 retrieval system installation efficiencies resulted as some planned labor resources, including staff augmentation, engineers, and industrial hygienists were not required during the month. Use of a dedicated, experienced construction crew reduced the amount of and need for internal labor support and field oversight activities. In addition, additional soil analysis was performed resulting in an increase in the allowable volume of soil that may be removed at one time. This resulted in one excavation for equipment removal instead of excavating and backfilling each piece of removed equipment as was originally planned.
- C-101 retrieval system installation activities including the ventilation header test and demister installation were completed in April 2012. Favorable weather conditions allowed these activities to be completed with minimal delays.
- The deployment of on-riser, non-tank-intrusive Raman technology utilizing a combination of PNNL and WRPS labor resources resulted in efficiencies. The technology was selected to provide analytical data to support the C-111 hard heel strategy decision-making process. Fieldwork and preliminary analysis of waste tank contents required less resources and materials than traditional off-riser or other in-tank sampling methods which were originally planned. Additional in-tank confirmatory sampling to validate the Raman results and to provide material for additional analysis and dissolution testing is anticipated in late FY 2012 or early FY 2013 to support final selection of the hard heel retrieval methodology.

**WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP) PROJECT**

<b>Number</b>	<b>Title</b>	<b>Due Date</b>	<b>Status</b>
D-00A-06	Complete Methods Validations	12/31/2017	On-going* (see issues below)
D-00A-17	Hot Start of Waste Treatment Plant	12/31/2019	On-going* (see issues below)
D-00A-01	Achieve Initial Plant Operations for WTP	12/31/2022	On-going* (see issues below)

The WTP Project currently employs about 2,709 Full-Time Equivalent (FTE) contractor (Bechtel National, Inc. [BNI]) and subcontractor personnel, including 589 craft, 508 non-manual, and about 131 subcontractor personnel FTEs working at the WTP construction site (all facilities). As of April 2012, the project was 64 percent complete overall, design and engineering was 85 percent complete, procurement was 70 percent complete, construction was 61 percent complete, and startup and commissioning was 15 percent complete.

The overall WTP Project schedule variance in April was a negative \$12.3 M; the cost variance was a negative \$38.4M. The cost variance was primarily related to Engineering Design, Construction Crafts, and Engineering Equipment; and the schedule variance was primarily related to Plant Equipment, Engineering Design, and Environmental & Nuclear Safety.

Following is the status through the end of April for current project issues.

**Significant Past Accomplishments:**

- Aerosol testing to determine realistic entrainment coefficient for the Process Vessel Vent Exhaust (PVV) system has been completed for Pretreatment (PT)
- Received the last shield door for HLW in April which completed a nine year procurement effort
- Completed 75% of the concrete in HLW with 58ft elevation walls continuing and a majority of the 37ft slabs complete
- Completed the concrete slab above the Container Transfer Room for the Low-Activity Waste (LAW) facility
- Completed the review of software functional requirements for the LAW Secondary Off-Gas/Vessel Vent Process (LVP)
- Installed Chill Water system expansion joints for Balance of Facilities (BOF)
- Completed Hydrostatic testing for the Chill Water and Plant Service Water systems in the Chiller Compressor Plant BOF
- Completed installation of a high-purity gas helium rack in the exterior Hotcell area in the Analytical Lab (LAB)

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

- Perform Large Scale Integrated Testing (LSIT) in 4ft and 8ft vessels for the Verification and Validation (V&V) of the Computational Fluids Dynamics (CFD) program for PT
- Receive Plant Wash and Drains vessel for HLW (RLD-VSL-8)
- Complete 37' structural steel in HLW
- Complete installation of LAW melter power supplies

- Complete installation of the LAW autosampler (ASX system)
- Complete installation of the Analytical Lab (LAB) autosampler System
- Complete construction of the BOF cooling tower
- Complete construction of BOF switchgear building

**Issues:**

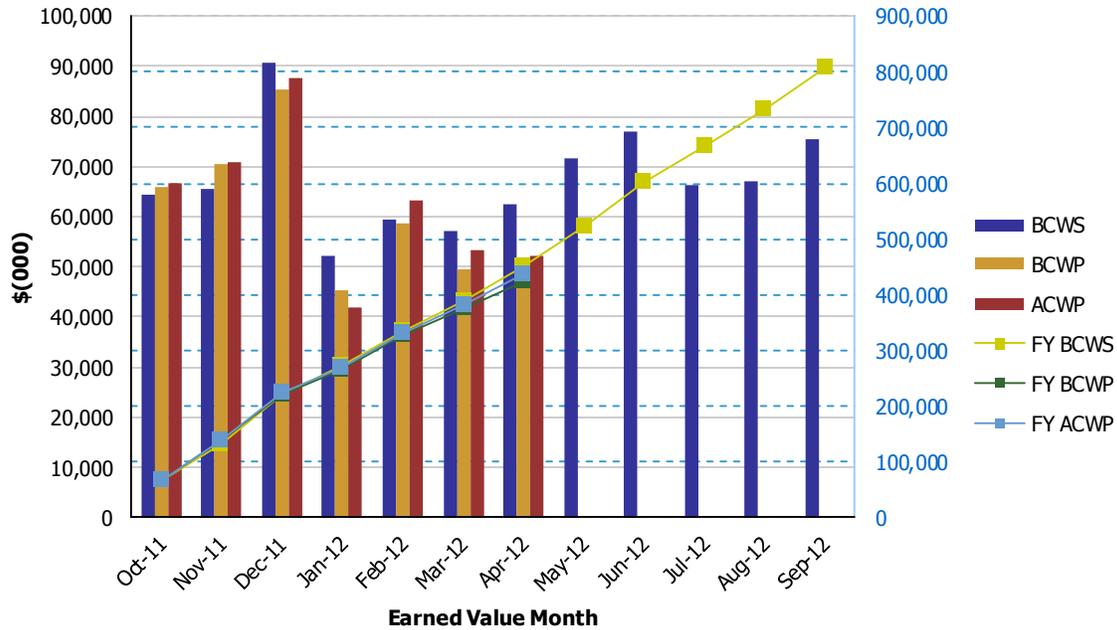
- \*PT and HLW Facilities: Other issues have potential impacts on the PTF and HLW schedule. This includes risks that the project has already realized and the plans for addressing the remaining risks in the PTF and HLW.
- There are no significant technical issues in LAW, LAB or BOF at this time.

Data Set: FY 2012 Earned Value Data

Data as of: April 2012

**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 2011	\$64,411	\$65,869	\$66,670	1.02	0.99	\$64,411	\$65,869	\$66,670	1.02	0.99
Nov 2011	\$65,647	\$70,625	\$70,879	1.08	1.00	\$130,058	\$136,494	\$137,549	1.05	0.99
Dec 2011	\$90,699	\$85,246	\$87,845	0.94	0.97	\$220,757	\$221,740	\$225,394	1.00	0.98
Jan 2012	\$52,248	\$45,149	\$41,816	0.86	1.08	\$273,005	\$266,889	\$267,210	0.98	1.00
Feb 2012	\$59,271	\$58,579	\$63,201	0.99	0.93	\$332,276	\$325,468	\$330,411	0.98	0.99
Mar 2012	\$57,285	\$49,398	\$53,161	0.86	0.93	\$389,561	\$374,866	\$383,572	0.96	0.98
Apr 2012	\$62,378	\$47,517	\$52,149	0.76	0.91	\$451,939	\$422,383	\$435,721	0.93	0.97
May 2012	\$71,656			0.00		\$523,594			0.00	
Jun 2012	\$76,835			0.00		\$600,429			0.00	
Jul 2012	\$66,388			0.00		\$666,817			0.00	
Aug 2012	\$66,879			0.00		\$733,696			0.00	
Sep 2012	\$75,468			0.00		\$809,163			0.00	
PTD	\$6,915,686	\$6,903,338	\$6,941,746	1.00	0.99					

**PRETREATMENT (PT) FACILITY**

<b>Number</b>	<b>Title</b>	<b>Due Date</b>	<b>Status</b>
D-00A-19	Complete Elevation 98' Concrete Floor Slab in PT Facility	12/31/2014	On-going* (see issues below)
D-00A-13	Complete Installation of Pretreatment Feed Separation Vessels	12/31/2015	On-going* (see issues below)
D-00A-14	PT Facility Construction Substantially Complete	12/31/2017	On-going* (see issues below)
D-00A-15	Start PT Facility Cold Commissioning	12/31/2018	On-going* (see issues below)
D-00A-16	PT Facility Hot Commissioning Complete	12/31/2019	On-going* (see issues below)

The Pretreatment (PT) Facility will separate radioactive tank waste into High Level Waste (HLW) and Low-Activity Waste (LAW) fractions and transfer each waste type to the respective vitrification facility for immobilization. Through March 2012, the PT Facility was 53 percent complete overall, with engineering design 78 percent complete, procurement 51 percent complete, construction 42 percent complete, and startup and commissioning was 4 percent complete.

**Significant Past Accomplishments:**

On-going PT construction includes installation of rebar and embedded conduit for the placement of Control Building base mat; structural steel at the 77ft elevation; Heating, Ventilation, and Air Conditioning (HVAC) duct in the hot cell; and roof decking. The first two control building base mat concrete pours have been made.

Aerosol testing to determine realistic entrainment coefficient for the Process Vessel Vent Exhaust (PVV) system has been completed at the Parsons Facility in Pasco. The preliminary results for both the small and medium scale tests are positive. The final report documenting the results will be completed in June 2012.

BNI is actively working to resolve issues regarding vessel material selection and mixing. The steps identified in the erosion/corrosion action plan, issued in April 2012, to address the material selection issue are being implemented. Computational Fluid Dynamics (CFD) Verification and Validation (V&V) simulant tests to evaluate mixing are forecasted to start in June 2012. Planning is ongoing for the path forward for the non-Newtonian vessels that may include additional scaling testing and/or other alternate methods which are still under development.

Prepared and submitted two DNFSB 2010-2 Implementation Plan deliverables. The hydrogen generation rate calculations and development of the route packages in support of resolving the Hydrogen in Piping and Ancillary Vessels (HPAV) issue have started.

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

- Issue the final report documenting the results from the entrainment coefficient testing for the (PVV) system
- Complete placements for the Control Building base mat

- Complete Hazards and Operability Analysis (HAZOP) for the pretreatment Vessel Vent Process (PVP) system
- Issue jumpers phase 2 frame design for hot cell areas 29, 30 and 36
- Complete resolution of the material selection issues with the vessels
- Perform Large Scale Integrated Testing (LSIT) in 4ft and 8ft vessels for the (V&V) of CFD program

**Issues:**

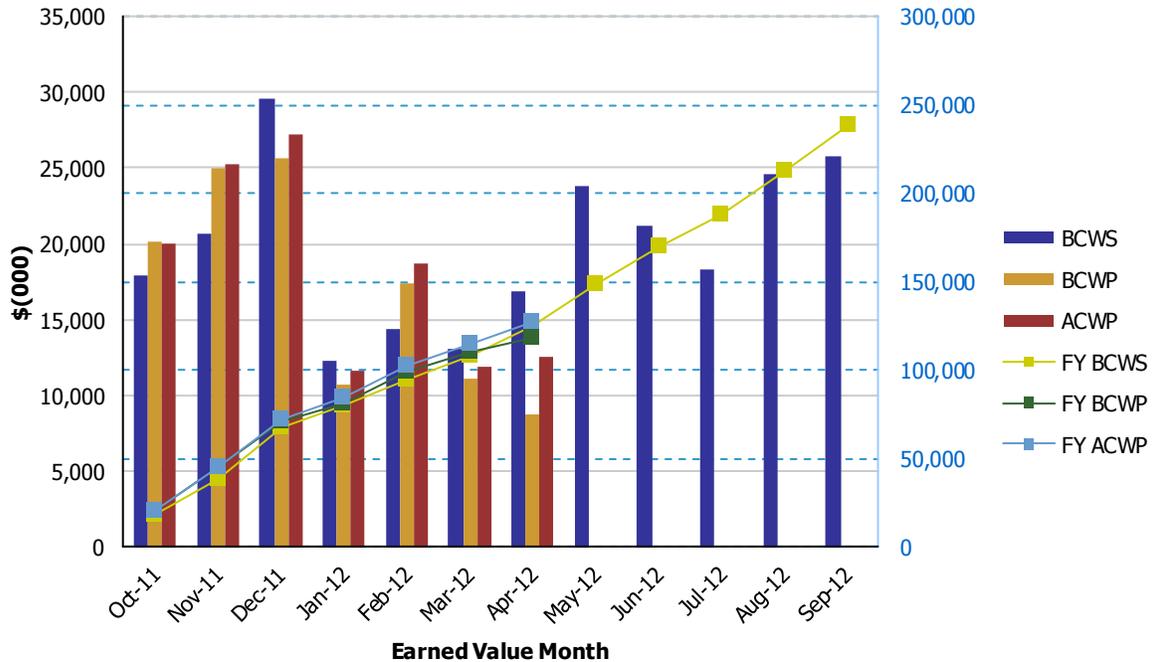
\* Other issues have potential impacts on the PT schedule. This includes risks that the project has already realized and the plans for addressing the remaining risks in the PTF.

Data Set: FY 2012 Earned Value Data

Data as of: April 2012

**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 2011	\$17,935	\$20,110	\$20,000	1.12	1.01	\$17,935	\$20,110	\$20,000	1.12	1.01
Nov 2011	\$20,616	\$24,945	\$25,222	1.21	0.99	\$38,551	\$45,055	\$45,222	1.17	1.00
Dec 2011	\$29,580	\$25,673	\$27,175	0.87	0.94	\$68,131	\$70,728	\$72,397	1.04	0.98
Jan 2012	\$12,292	\$10,751	\$11,583	0.87	0.93	\$80,423	\$81,479	\$83,980	1.01	0.97
Feb 2012	\$14,371	\$17,367	\$18,675	1.21	0.93	\$94,794	\$98,846	\$102,655	1.04	0.96
Mar 2012	\$13,101	\$11,054	\$11,874	0.84	0.93	\$107,895	\$109,900	\$114,529	1.02	0.96
Apr 2012	\$16,877	\$8,730	\$12,488	0.52	0.70	\$124,772	\$118,630	\$127,017	0.95	0.93
May 2012	\$23,771			0.00		\$148,542			0.00	
Jun 2012	\$21,257			0.00		\$169,799			0.00	
Jul 2012	\$18,266			0.00		\$188,065			0.00	
Aug 2012	\$24,560			0.00		\$212,625			0.00	
Sep 2012	\$25,838			0.00		\$238,463			0.00	

PTD	\$1,367,945	\$1,368,128	\$1,347,631	1.00	1.02
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**HIGH-LEVEL WASTE (HLW) FACILITY**

<b>Number</b>	<b>Title</b>	<b>Due Date</b>	<b>Status</b>
D-00A-21	Complete Construction of Structural Steel to 37' in HLW Facility	12/31/2012	On-going
D-00A-02	HLW Facility Construction Substantially Complete	12/31/2016	On-going* (see issues below)
D-00A-03	Start HLW Facility Cold Commissioning	6/30/2018	On-going* (see issues below)
D-00A-04	HLW Facility Hot Commissioning Complete	12/31/2019	On-going* (see issues below)

The High Level Waste (HLW) Facility will receive the separated high-level waste concentrate from the Pretreatment (PT) Facility. This concentrate will be blended with glass formers and 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 prior to shipment to interim storage. The HLW Facility is 59 percent complete overall, with engineering design 86 percent complete, procurement 76 percent complete, construction 41 percent complete, and startup and commissioning is 4 percent complete.

**Significant Past Accomplishments:**

Excellent progress is being made on completion of the Consent Decree Milestone (D-00A-21) "Complete Construction of Structural Steel to 37' in HLW Facility." The current forecasted construction completion date is early October 2012 and the consent decree compliance date is December 31, 2012. All of the materials to complete this milestone have been delivered and are on site. The remaining steel erection consists primarily of 20 beams in the Filter Cave and 4 beams in the Rinse Tunnel. Prior to setting this steel, work at lower elevations is proceeding in order to utilize efficiencies gained by being able to lift materials in through the roof.

The installation of the remote-operated dampers in the filter cave has been completed, and the structural steel which supports the 14ft steel deck is also complete. The steel decking installation has commenced and good progress is being made.

The seismic rails for the decontamination rinse bogie have been set. The Dangerous Waste Permit change notification has been approved so that the rinse bogie can be installed. The rails will be installed following the setting of the decontamination rinse bogie for final alignment.

75% of the concrete has been poured in the facility with 58ft elevation walls continuing and a majority of the 37ft slabs complete.

The melter transport trolley was received by HLW. This trolley will be used to remove and replace the melters.

Fabrication of Plant Wash and Drain Vessel (RLD-VSL-08) in England was completed; and it was delivered to the Mid-Columbia Engineering Facility in April for further inspection prior to being received and accepted by Bechtel. The project completed factory acceptance testing on Thermal Catalytic Oxidizers (TCO) which are being fabricated in Colorado. The TCOs are scheduled for delivery to the site in early July.

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

- Complete 37' structural steel
- Receive Thermal Catalytic Oxidizers
- Receive Plant Wash and Drains Vessel (RLD-VSL-8)
- Receive Acidic Waste Vessel (RLD-VSL-7)
- Receive Primary Off-gas Vessel HEME Vessel
- Stage Rinse Bogie with Rinse Vessel in Canister Rinse Tunnel

**Issues:**

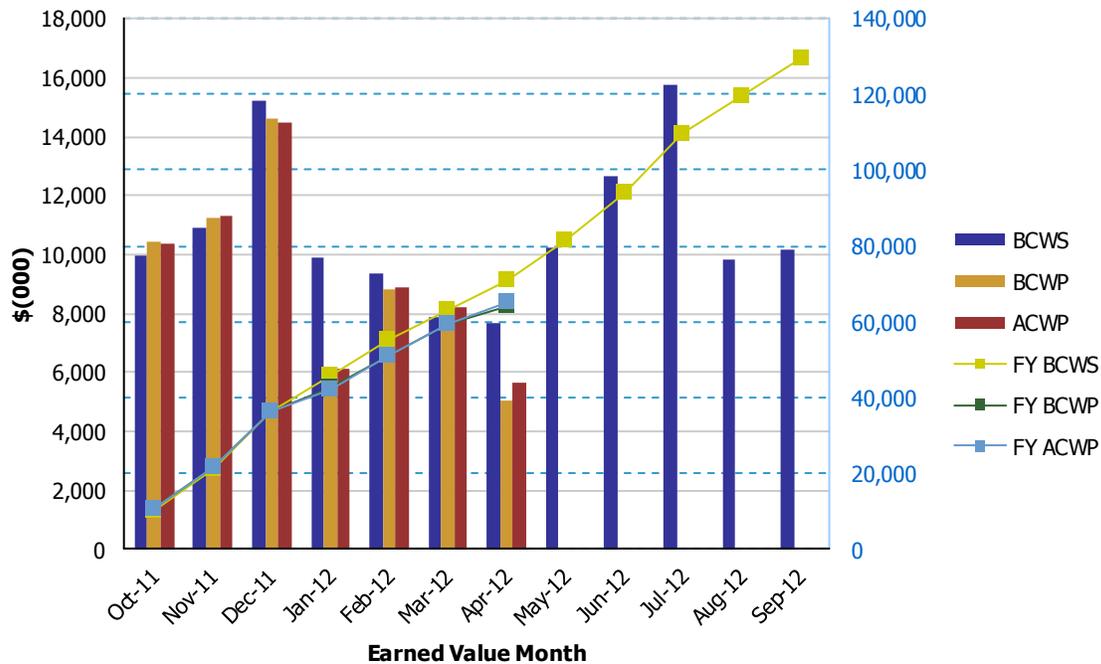
\* Various issues may have potential impacts on the HLW schedule. This includes risks that the project has already realized and the plans for addressing the remaining risks in the HLW.

Data Set: FY 2012 Earned Value Data

Data as of: April 2012

**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 2011	\$9,953	\$10,437	\$10,368	1.05	1.01	\$9,953	\$10,437	\$10,368	1.05	1.01
Nov 2011	\$10,920	\$11,224	\$11,295	1.03	0.99	\$20,873	\$21,661	\$21,663	1.04	1.00
Dec 2011	\$15,209	\$14,578	\$14,472	0.96	1.01	\$36,082	\$36,239	\$36,135	1.00	1.00
Jan 2012	\$9,878	\$6,187	\$6,142	0.63	1.01	\$45,960	\$42,426	\$42,277	0.92	1.00
Feb 2012	\$9,383	\$8,807	\$8,891	0.94	0.99	\$55,343	\$51,233	\$51,168	0.93	1.00
Mar 2012	\$7,900	\$7,901	\$8,221	1.00	0.96	\$63,243	\$59,134	\$59,389	0.94	1.00
Apr 2012	\$7,652	\$5,055	\$5,676	0.66	0.89	\$70,895	\$64,189	\$65,065	0.91	0.99
May 2012	\$10,249			0.00		\$81,143			0.00	
Jun 2012	\$12,635			0.00		\$93,778			0.00	
Jul 2012	\$15,787			0.00		\$109,565			0.00	
Aug 2012	\$9,818			0.00		\$119,384			0.00	
Sep 2012	\$10,133			0.00		\$129,516			0.00	
PTD	\$900,388	\$895,815	\$890,123	0.99	1.01					

**LOW-ACTIVITY WASTE (LAW) FACILITY**

<b>Number</b>	<b>Title</b>	<b>Due Date</b>	<b>Status</b>
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2014	On-going
D-00A-08	Start LAW Facility Cold Commissioning	12/31/2018	On-going
D-00A-09	LAW Facility Hot Commissioning Complete	12/31/2019	On-going

The Low-Activity Waste (LAW) Facility will vitrify LAW from the Pretreatment (PT) Facility. Waste 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 that are anticipated to be disposed on the Hanford Site in the Integrated Disposal Facility. The LAW Facility is 68 percent complete overall, with engineering design 85 percent complete, procurement 88 percent complete, construction 70 percent complete, and startup and commissioning is 4 percent complete.

**Significant Past Accomplishments:**

Electrical systems design continues in support of all equipment, controls, and lighting throughout the facility. For example, control logic diagrams were updated for the LAW Primary Off-Gas Processing (LOP), Low Pressure Steam (LPS), and LAW Secondary Off-Gas/Vessel Vent Process (LVP) systems. Also, control logic diagrams were issued for the Auto Sampling (ASX) and Instrument Service Air (ISA) system.

Equipment qualification data sheets for LVP system preheaters were issued. Piping isometric drawings for the LAW Melter Process (LMP), High Pressure Steam (HPS), LOP, LVP, LAW Concentrate Receipt Process (LCP), ISA and Plant Cooling Water (PCW) systems were issued. Piping support drawings were issued for the LAW LVP systems.

Procurement activities for the LAW facility are currently focused on the LVP system components. Engineering review of vendor calculations and vendor interactions continued as a major emphasis during the ongoing procurement of LVP system components. Engineered hangers were received for the Sodium Hydroxide Reagent (SHR), Radioactive Liquid Waste Disposal (RLD), Ammonia Reagent (AMR), LAW Melter Process (LMP), and LOP systems.

The primary areas of construction focus continued to be LAW facility partition wall installation and equipment installation for the Container Finishing Handling (LFH) system. Installation of the decontamination manipulators, installation of the Wet Electrostatic Precipitator (WESP) internals, finishing line dual-rail hoists, and the trolley/bogie cars for the LFH system continued. The concrete slab above the Container Transfer Room was placed.

Construction activities were initiated to install the electrical equipment and plumbing lay out/roughing in the annex. Other on-going construction activities included installation of Low-Voltage Electrical (LVE) non-segmented bus ducts in chases. Piping was installed in the process cells and cable tray/engineered supports in the north finishing line.

Removal of gas barrier lid (internal lid) from melter #1 and #2 was completed in preparation for future installation of refractory materials. Structural/wall coatings on the east end of the melter gallery mezzanine from elevation +22 to +28 were completed.

Resolved comments for software functional requirements for the following systems:

- LAW Secondary Off-Gas/Vessel Vent Process (LVP)
- Low Pressure Steam (LPS)
- Stack Discharge Monitoring (SDJ)

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

- Complete installation of melter power supplies
- Complete installation of Auto Sampling (ASX) system
- Receive HEPA Pre-heaters for LVP system
- Receive HEPA Housings for LVP system
- Receive Thermal Catalytic Oxidizer (TCO) for LVP system
- Begin Melter #1 Refractory Installation

**Issues:**

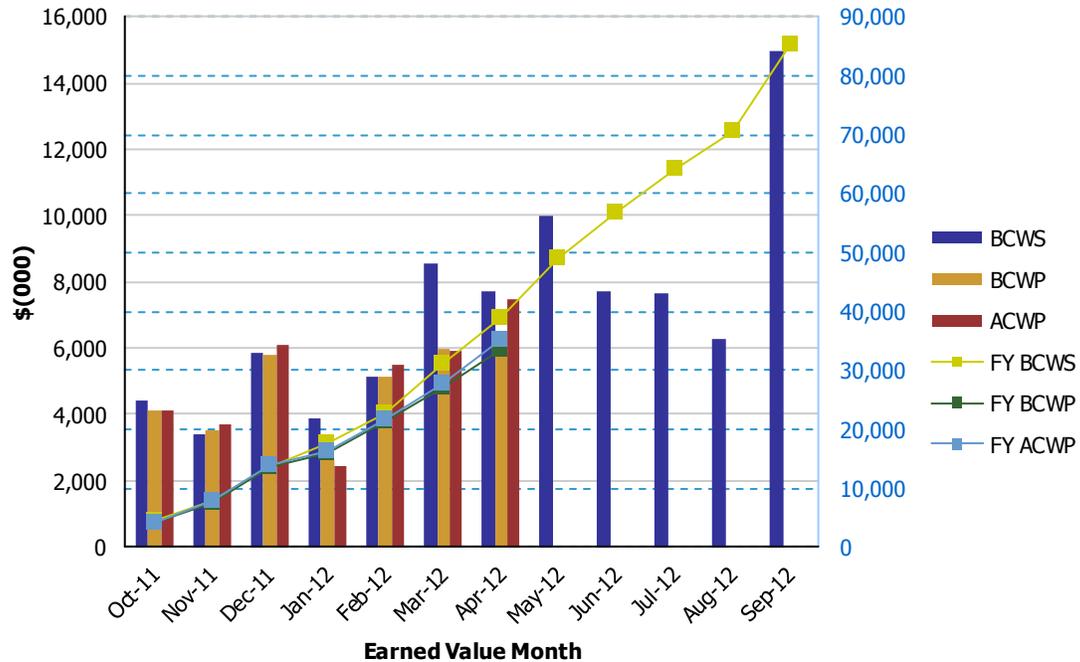
No major issues at this time.

Data Set: FY 2012 Earned Value Data

Data as of: April 2012

**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 2011	\$4,415	\$4,115	\$4,104	0.93	1.00	\$4,415	\$4,115	\$4,104	0.93	1.00
Nov 2011	\$3,404	\$3,510	\$3,704	1.03	0.95	\$7,819	\$7,625	\$7,808	0.98	0.98
Dec 2011	\$5,827	\$5,807	\$6,123	1.00	0.95	\$13,646	\$13,432	\$13,931	0.98	0.96
Jan 2012	\$3,886	\$2,617	\$2,412	0.67	1.08	\$17,532	\$16,049	\$16,343	0.92	0.98
Feb 2012	\$5,140	\$5,117	\$5,472	1.00	0.94	\$22,672	\$21,166	\$21,815	0.93	0.97
Mar 2012	\$8,531	\$5,960	\$5,900	0.70	1.01	\$31,203	\$27,126	\$27,715	0.87	0.98
Apr 2012	\$7,735	\$6,351	\$7,469	0.82	0.85	\$38,938	\$33,477	\$35,184	0.86	0.95
May 2012	\$9,977			0.00		\$48,915			0.00	
Jun 2012	\$7,718			0.00		\$56,633			0.00	
Jul 2012	\$7,638			0.00		\$64,271			0.00	
Aug 2012	\$6,263			0.00		\$70,534			0.00	
Sep 2012	\$14,932			0.00		\$85,466			0.00	
PTD	\$675,522	\$670,739	\$717,721	0.99	0.93					

**BALANCE OF FACILITIES (BOF)**

<b>Number</b>	<b>Title</b>	<b>Due Date</b>	<b>Status</b>
D-00A-12	Steam Plant Construction Complete	12/31/2012	On-going

The Balance of Facilities (BOF) provides services and utilities to support operation of the main production facilities – PT, HLW, LAW, and LAB. The BOF is 49 percent complete overall, with engineering design 73 percent complete, procurement 48 percent complete, construction 64 percent complete, and startup and commissioning is 9 percent complete.

**Significant Past Accomplishments:**

Oversight efforts are focused on identification of individual facility requirements within BOF to support facility completion and turnover to the startup organization. As necessary to support facility completion, the WTP contractor initiates a weekly or bi-weekly meeting approximately 12 months prior to the scheduled turnover date. The meetings focus on schedule reviews and punch list development for the remaining construction activities. Regular meetings are currently being held for the WTP site switchgear buildings (87 and 91), Chiller Compressor Plant (CCP), and a meeting is currently being established for the Non-radioactive non-dangerous Liquid Drains (NLD) facility.

Recent accomplishments for the BOF team are:

- Continued installing conduit at BOF switchgear building 91
- Continued excavation to support structural steel for pipe rack connection from the LAB to the LAW
- Completed backfilling of the Low-Voltage duct bank, north of the Glass Former Storage Facility
- Began installation of pressure safety valves in the Plant Cooling Water and Plant Service Air systems for the CCP

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

- Complete construction of cooling tower
- Complete construction of BOF switchgear building
- Install structural steel for anhydrous ammonia facility
- Turnover WTP Switchgear (Bldg 87) from construction to the startup organization

**Issues:**

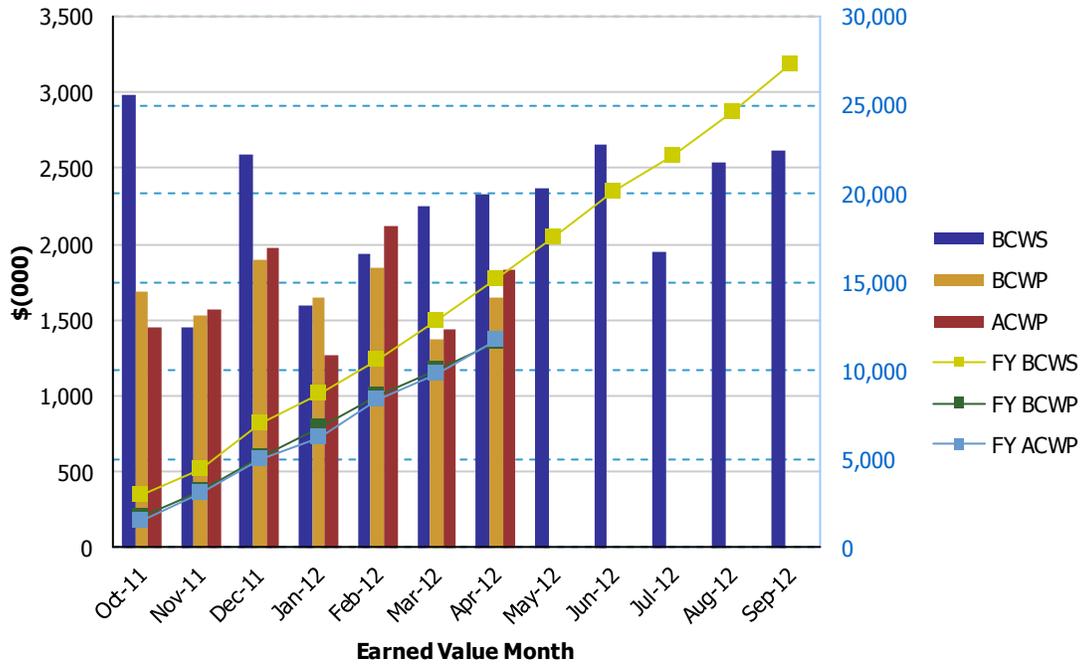
No major issues.

Data Set: FY 2012 Earned Value Data

Data as of: April 2012

**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 2011	\$2,980	\$1,685	\$1,454	0.57	1.16	\$2,980	\$1,685	\$1,454	0.57	1.16
Nov 2011	\$1,455	\$1,524	\$1,564	1.05	0.97	\$4,435	\$3,209	\$3,018	0.72	1.06
Dec 2011	\$2,594	\$1,895	\$1,981	0.73	0.96	\$7,029	\$5,104	\$4,999	0.73	1.02
Jan 2012	\$1,597	\$1,652	\$1,262	1.03	1.31	\$8,626	\$6,756	\$6,261	0.78	1.08
Feb 2012	\$1,939	\$1,841	\$2,123	0.95	0.87	\$10,565	\$8,597	\$8,384	0.81	1.03
Mar 2012	\$2,248	\$1,376	\$1,444	0.61	0.95	\$12,813	\$9,973	\$9,828	0.78	1.01
Apr 2012	\$2,331	\$1,651	\$1,835	0.71	0.90	\$15,144	\$11,624	\$11,663	0.77	1.00
May 2012	\$2,374			0.00		\$17,518			0.00	
Jun 2012	\$2,656			0.00		\$20,174			0.00	
Jul 2012	\$1,950			0.00		\$22,124			0.00	
Aug 2012	\$2,533			0.00		\$24,657			0.00	
Sep 2012	\$2,615			0.00		\$27,272			0.00	
PTD	\$268,987	\$263,735	\$260,719	0.98	1.01					

**ANALYTICAL LABORATORY**

<b>Number</b>	<b>Title</b>	<b>Due Date</b>	<b>Status</b>
D-00A-05	LAB Construction Substantially Complete	12/31/2012	On-going

The Analytical Laboratory (LAB) will support WTP operations by analyzing feed, vitrified waste, and effluent streams. The LAB is 53 percent complete overall, with engineering design 79 percent complete, procurement 76 percent complete, construction 82 percent complete, and startup and commissioning is 10 percent complete.

**Significant Past Accomplishments:**

Efforts of the LAB team continue to focus on the LAB Construction Substantially Complete milestone. Weekly meetings are held to evaluate construction progress and challenges that arise. Major structures of the building are in place including the interior partition walls which segregate the various analytical stations for LAW sample analysis. Within the individual analytical areas, detail/finishing work continues with emphasis on the installation of commodities to support laboratory cabinets and analytical equipment.

Recent accomplishments for the LAB team are listed below:

- Completed the installation of Autosampling System (ASX) High-Efficiency Particulate Air (HEPA) filter housing frames
- Began installation of radiological laboratory door
- Issued updated environmental and radiation monitoring system block diagrams
- Continued installing fittings and components in locker room

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

- Complete mechanical installation of Autosampling System
- Set pumps in C5 pit
- Install Hot Cell import/export motors
- Progress Analytical Laboratory Construction to “Substantially Complete”

**Issues:**

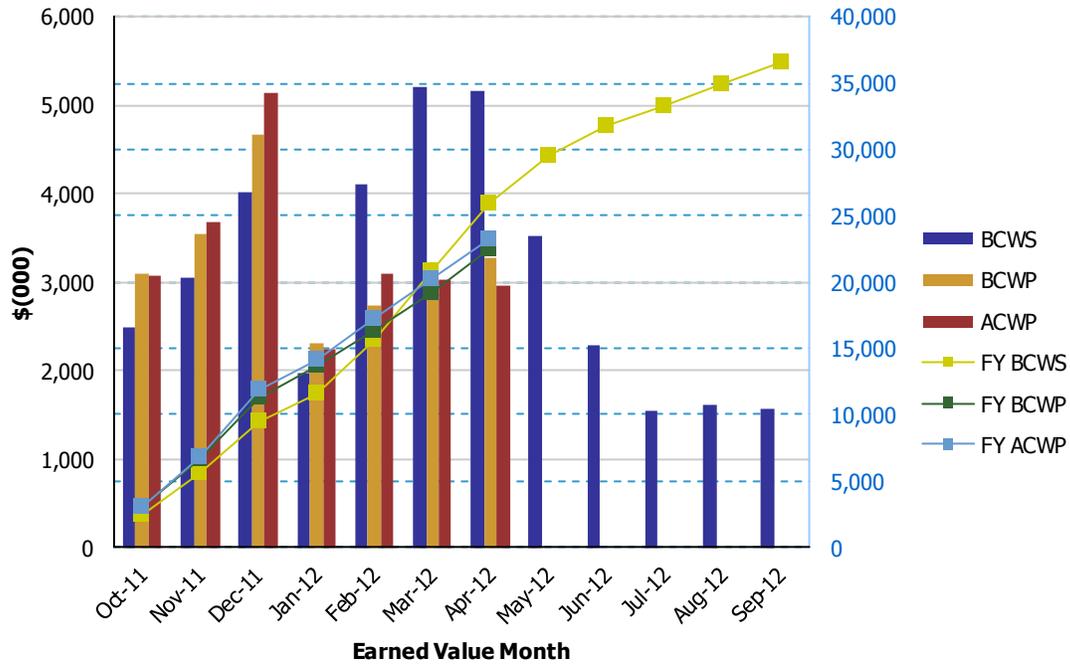
No major issues.

Data Set: FY 2012 Earned Value Data

Data as of: April 2012

**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 2011	\$2,489	\$3,092	\$3,063	1.24	1.01	\$2,489	\$3,092	\$3,063	1.24	1.01
Nov 2011	\$3,040	\$3,551	\$3,680	1.17	0.96	\$5,529	\$6,643	\$6,743	1.20	0.99
Dec 2011	\$4,005	\$4,676	\$5,128	1.17	0.91	\$9,534	\$11,319	\$11,871	1.19	0.95
Jan 2012	\$1,970	\$2,318	\$2,242	1.18	1.03	\$11,504	\$13,637	\$14,113	1.19	0.97
Feb 2012	\$4,113	\$2,725	\$3,091	0.66	0.88	\$15,617	\$16,362	\$17,204	1.05	0.95
Mar 2012	\$5,203	\$2,860	\$3,036	0.55	0.94	\$20,820	\$19,222	\$20,240	0.92	0.95
Apr 2012	\$5,167	\$3,265	\$2,954	0.63	1.11	\$25,987	\$22,487	\$23,194	0.87	0.97
May 2012	\$3,517			0.00		\$29,504			0.00	
Jun 2012	\$2,292			0.00		\$31,796			0.00	
Jul 2012	\$1,540			0.00		\$33,336			0.00	
Aug 2012	\$1,612			0.00		\$34,947			0.00	
Sep 2012	\$1,572			0.00		\$36,519			0.00	
PTD	\$195,789	\$190,956	\$203,963	0.98	0.94					

Waste Treatment Plant Project - Percent Complete Status															
Through April 2012															
(Dollars - Millions)	Overall Facility Percent Complete Unallocated Dollars			Design/Engineering Unallocated Dollars			Procurement Unallocated Dollars			Construction Unallocated Dollars			Startup & Commissioning 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
Facilities															
Low -Activity Waste	984.6	670.7	68%	246.1	209.1	85%	241.1	212.7	88%	347.2	242.3	70%	150.2	6.6	4%
Analytical Lab	360.0	191.0	53%	57.9	45.1	78%	56.2	42.6	76%	109.2	89.1	82%	136.6	13.4	10%
Balance of Facilities	538.2	263.7	49%	88.6	64.7	73%	81.4	39.3	48%	231.5	147.8	64%	136.7	11.9	9%
High-Level Waste	1,516.3	895.8	59%	355.9	305.8	86%	458.2	346.2	76%	582.3	239.1	41%	120.0	4.8	4%
Pretreatment	2,588.5	1,368.1	53%	774.0	607.9	79%	713.5	369.2	52%	914.6	384.0	42%	186.4	7.0	4%
Shared Services	4,718.2	3,514.0	74%	1,005.1	918.9	91%	471.7	397.0	84%	1,432.2	1,110.3	78%	455.9	131.8	29%
<b>Total WTP w/o UB</b>	<b>10,705.9</b>	<b>6,903.3</b>	<b>64%</b>	<b>2,527.6</b>	<b>2,151.5</b>	<b>85%</b>	<b>2,022.2</b>	<b>1,407.0</b>	<b>70%</b>	<b>3,617.0</b>	<b>2,212.5</b>	<b>61%</b>	<b>1,185.7</b>	<b>175.6</b>	<b>15%</b>
Undistributed Budget	0.0	n/a	n/a	n/a	n/a	n/a									
<b>Total WTP</b>	<b>10,705.9</b>	<b>6,903.3</b>	<b>64%</b>	<b>2,527.6</b>	<b>2,151.5</b>	<b>85%</b>	<b>2,022.2</b>	<b>1,407.0</b>	<b>70%</b>	<b>3,617.0</b>	<b>2,212.5</b>	<b>61%</b>	<b>1,185.7</b>	<b>175.6</b>	<b>15%</b>

Source: Preliminary WTP Contract Performance Report - Format 1, Data for April 2012

Note: Starting with the June 2009 report, facility Construction percent complete values decreased significantly, and a couple of Design/Engineering facility percent complete values went down as well. The decrease in values was tied to Phase I of BNI's elimination of WBS 1.08, Plant Wide EPCC; scope from WBS 1.08 was moved to facilities as appropriate or to WBS 1.90, Shared Services. This resulted in an increase in the facility construction budgets, which has correspondingly reduced the to-date percent complete values. In July 2010 the allocation of 1.90 to the facilities was removed to show true facility percent complete. This report does not show the LOE budgets that are not associated with a specific EPCC function, these include, Finance, Project Management, etc, but are included in the total Overall Facility Percent Complete for Shared Services.