

**FINAL**

Office of River Protection  
Consent Decree 08-5085-FVS

Project Summary Report

July 26, 2011

## Office of River Protection

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## Project Summary Report

July 26, 2011

9:00 a.m. – 12:00 p.m.

Page	Topic	Leads
1	Statistics / Status	Woody Russell / Dan McDonald / Jeff Lyon
5	SST Retrieval and Closure - D-00B-01, -02, -03, -04 - TWRWP Status	Chris Kemp / Jeff Lyon
8	WTP - Immobilization Plant Project - D-00A-06, D-00A-17, D-00A-01	Wahed Abdul / Jason Young / Gary Olsen / Dan McDonald
10	WTP Pretreatment (PT) Facility - D-00A-18, -19, -13, -14, -15, 16	Wahed Abdul / Dan McDonald
13	High-Level Waste (HLW) Facility - D-00A-20, -21, 02, 03	Jason Young / Dan McDonald
16	Low-Activity Waste (LAW) Facility - D-00A-07, -08, -09	Gary Olsen / Dan McDonald
19	Analytical Laboratory (LAB) - D-00A-005	
22	Balance of Facilities (BOF) - D-00A-12	

**Fiscal Year 2011 Consent Decree Milestone Status**

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
D-00A-20	Complete Construction of Structural Steel to Elevation 14' in HLW Facility	12/31/10	01/31/10										
D-00C-01B	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	01/31/11	01/25/11										
D-00C-02D	Submit to Ecology and Oregon Monthly Summary Reports	02/28/11	2/25/11										
D-00C-02E	Submit to Ecology and Oregon Monthly Summary Reports	03/31/11	03/24/11										
D-00C-02F	Submit to Ecology and Oregon Monthly Summary Reports	04/30/11	04/29/11										
D-00C-02G	Submit to Ecology and Oregon Monthly Summary Reports	05/31/11	05/25/11										
D-00C-02H	Submit to Ecology and Oregon Monthly Summary Reports	06/30/11	06/30/11										
D-00C-02I	Submit to Ecology and Oregon Monthly Summary Reports	07/31/11		X									

**Fiscal Year 2011 Consent Decree Milestone Status**

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
**D-00C-02J	Submit to Ecology and Oregon Monthly Summary Reports	08/31/11		X									
** Future Monthly Reports will be added as necessary to maintain a two-months ahead activity.													
D-00C-01C	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	07/31/11		X									

**Fiscal Year 2012 Consent Decree Milestone Status**

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
D-00C-02L	Submit to Ecology and Oregon Monthly Summary Reports	10/31/11		X									
**D-00C-02M	Submit to Ecology and Oregon Monthly Summary Reports	11/30/11		X									
** Future Monthly 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		X									
D-00C-01E	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	07/31/12		X									

## 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.

**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 Schedule

**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 Schedule

**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 Schedule

## **SST Retrieval and Closure Program**

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

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

Pursuant to the requirement at 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-108, C-109, C-110, C-104, and C-111.

**D-00B-02, Advise Ecology of the 9 SST's from which Waste Will Be Retrieved by 2022,**

**Due: 9/30/2014, Status: On Schedule.** ORP and Ecology began meeting in December 2010 to discuss the selection of the next nine tanks to be retrieved and why ORP believes those nine tanks should be in A/AX Farms.

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

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

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

### **Significant Past Accomplishments:**

1. Completed C-107 electrical upgrades, powering up the new system.
2. Continued the installation of the control room and MARS arm into the C-107 tank.
3. Continued construction activities for C-108 equipment installation for Hard Heel Removal.
4. Continued installation of the POR107 exhauster for use at C-107 during MARS arm operation.
5. Continued design and procurement for C-109 Hard Heel Removal equipment.
6. Continued design activities for C-112 sluicing system.
7. Completed removal of legacy equipment (saltwell screen) at C-112.
8. Continued new pump and slurry distributor installation activities at AN-106.
9. Continued testing of a MARS sluice educator system.

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

1. Complete the C-101 design, initiate long lead procurements and initiate legacy equipment removals.
2. Complete construction/installation of MARs at C-107.
3. Initiate Operation Acceptance Testing (OAT) of the C-107 system.
4. Complete startup of C-107 MARS retrieval.
5. Start up of retrieval activities for C-108 hard heel.
6. Complete hard heel retrieval of C-108.

7. Replace the AN-106 supernatant pump to support C-108 and C-107 retrievals.
8. Complete C-112 design, initiate long lead procurements and initiate legacy equipment removals.
9. Finish testing of the MARS with the vacuum educator.

**Issues:**

- D-00B-02, Discussions continue on the issue to advise Ecology of the 9 SST's from which waste will be retrieved by 2022.
- C-106 Closure Plan approval and SST radiological Categorical Notice of Construction (NOC) Phase 3 (closure) and a toxics categorical NOC application are pending completion of the Tank Closure and Waste Management Environmental Impact Statement (EIS) and associated Record of Decision (ROD); forecast completion for the final EIS ROD is in the winter of 2011.

## TWRWP Status

Tank	TWRWP	Expected Revisions	Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520	Projected revision early fall	MRS (per 10/7/10 agreement, to be Modified Sluicing)	-	-
C-102	RPP-22393	In Process	Modified Sluicing	MS-ITV	-
C-103	RPP-21895	Retrieval Completed			
C-104	RPP-22393	In Process	Modified Sluicing	MS-ITV	-
C-105	RPP-22520	Projected revision early fall	MRS	-	-
C-106		Retrieval Completed			
C-107	RPP-22393	In Process	MARS-S		
C-108	RPP-22393	In Process	Modified Sluicing	Chemical Dissolution	MS-ITV
C-109	RPP-21895	Following RPP-22393	Modified Sluicing	MS-ITV	-
C-110	RPP-33116	Following RPP-22393	Modified Sluicing	-	-
C-111	RPP-37739	Following RPP-22393	Modified Sluicing	-	-
C-112	RPP-22393	In Process	Modified Sluicing	MS-ITV	-

### Significant Accomplishments:

- ECY and ORP met for a TWRWPs Workshop on Selecting the Second Technology Under the CD on May 6, 2011. Goals included development of a table to identify 1<sup>st</sup> and 2<sup>nd</sup> technologies (including rationale for technology selection) and to develop proposed TWRWP language to be submitted with next revision of the TWRWP. The workshop discussions and actions are captured in meeting minutes which have been submitted as a handout in the ORP June 2011 PMM meeting for inclusion in the Administrative Record.

### Issues:

- ORP wants to reopen discussion on end of retrieval discussions that include cost benefit analysis and how the finish of a retrieval decision occurs.

## **Hanford Waste Treatment and Immobilization Plant (WTP) Project**

**D-00A-06, Complete Methods Validations**, Due: 12/31/2017, Status: On Schedule

**D-00A-17, Hot Start of Waste Treatment Plant**, Due: 12/31/2019, Status: On Schedule

**D-00A-01, Achieve Initial Plant Operations for WTP**, Due: 12/31/2022, Status: On Schedule

There are about 3,400 FTE equivalent contractor [Bechtel National Inc. (BNI)] and subcontractor personnel working on the WTP Project, including 1,200 craft, 500 non-manual, and about 180 subcontractor personnel FTE equivalents working at the WTP construction site (all facilities). Overall project percent complete through June 2011 is 59%, design and engineering is 82% complete, procurement is 62% complete, construction is 56% complete and Start-Up and Commissioning is 13% complete.

The overall WTP Project Schedule Variance (SV) in June was a positive \$6.0M, the Cost Variance (CV) was a positive \$2.7M. The positive cost variance was due to Plant Equipment and Construction control accounts and the schedule variances came primarily from Plant Equipment and Construction control accounts.

Design/Engineering facility percent complete values went down due to a baseline change proposal to align the specific Engineering functions scope with the respective facility that the work scope supported. This BCP resulted in an increase to the facility Engineering budgets, which correspondingly reduced the to-date percent complete values.

Following is the status through the end of June for current project issues:

### **Significant Past Accomplishments:**

- A permitting strategy for the on-site vessels modifications has been developed jointly and agreed upon between DOE and Ecology

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

- Complete erection of 4<sup>th</sup> tier structural steel (77-ft to 98-ft elevation)
- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Complete Fabrication and Delivery of C5V Dampers
- Complete Siding of HLW Annex
- Complete installation of the LAW and LAB Autosampler systems
- Install hot cell monorail airlocks in the LAB
- Complete construction of the BOF switchgear facility, cooling tower and fuel oil pumphouse

### **Issues:**

No significant issues at this time.

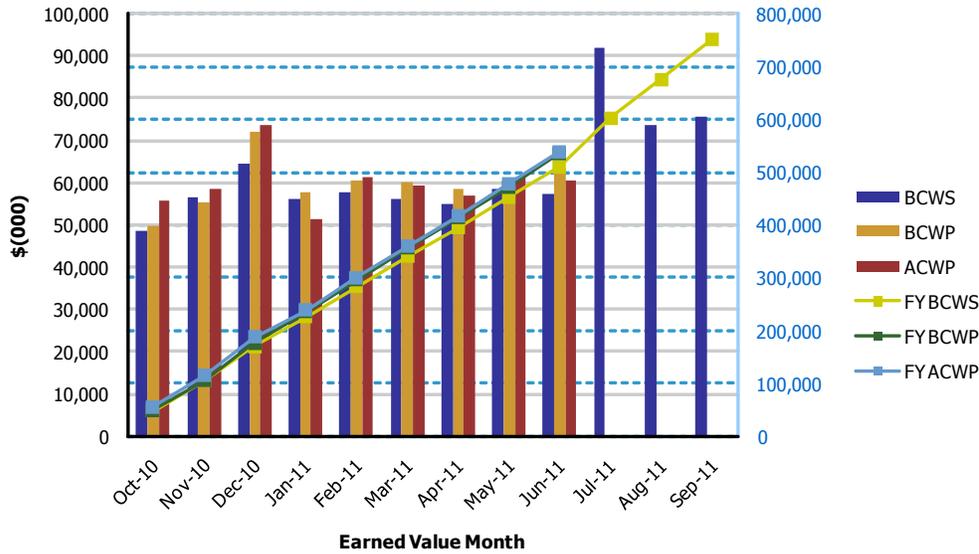
### WTP – Fiscal Year To-Date Performance

Data Set: FY 2011 Earned Value Data

Data as of: June 2011

**River Protection**  
**01-D-416 - Waste Treatment Plant (WTP) Project**

Monthly 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 2010	\$48,550	\$49,962	\$55,880	1.03	0.89	\$48,550	\$49,962	\$55,880	1.03	0.89
Nov 2010	\$56,608	\$55,427	\$58,449	0.98	0.95	\$105,158	\$105,389	\$114,329	1.00	0.92
Dec 2010	\$64,533	\$71,852	\$73,610	1.11	0.98	\$169,691	\$177,241	\$187,939	1.04	0.94
Jan 2011	\$55,988	\$57,756	\$51,327	1.03	1.13	\$225,679	\$234,997	\$239,266	1.04	0.98
Feb 2011	\$57,941	\$60,462	\$61,199	1.04	0.99	\$283,620	\$295,459	\$300,465	1.04	0.98
Mar 2011	\$56,009	\$60,032	\$59,335	1.07	1.01	\$339,629	\$355,491	\$359,800	1.05	0.99
Apr 2011	\$54,890	\$58,438	\$56,937	1.06	1.03	\$394,519	\$413,929	\$416,737	1.05	0.99
May 2011	\$58,530	\$58,722	\$61,263	1.00	0.96	\$453,049	\$472,651	\$478,000	1.04	0.99
Jun 2011	\$57,334	\$63,340	\$60,603	1.10	1.05	\$510,383	\$535,991	\$538,603	1.05	1.00
Jul 2011	\$91,983					\$602,366				
Aug 2011	\$73,717					\$676,083				
Sep 2011	\$75,503					\$751,586				

PTD	\$6,239,410	\$6,271,539	\$6,296,633	1.01	1.00
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## Pretreatment (PT) Facility

**D-00A-19, Complete Elevation 98' Concrete Floor Slab in PT Facility, Due: 12/31/2014, Status: On Schedule**

**D-00A-13, Complete Installation of Pretreatment Feed Separation Vessels, Due: 12/31/2015, Status: On Schedule**

**D-00A-14, PT Facility Construction Substantially Complete, Due: 12/31/2017, Status: On Schedule**

**D-00A-15, Start PT Facility Cold Commissioning, Due: 12/31/2018, Status: On Schedule**

**D-00A-16, PT Facility Hot Commissioning Complete, Due: 12/31/2019, Status: On Schedule**

The 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 June 2011, overall PT Facility percent complete is 48%, engineering is 77% complete, procurement is 45% complete, and construction is 37% complete.

### Significant Past Accomplishments:

In June, overall construction continues to perform well. Rebar and embed installation and fabrication of rebar wall curtains continues to support additional slab and wall placements at the 56-ft to 98-ft elevations. Construction completions for June include placement of six 5<sup>th</sup> lift (77-ft to 98-ft elevation) walls and one 56-ft elevation cell wall for a total of 913 CY. Completed initial installation of stick-build pipe above Feed Receipt Process (FRP) Vessel 2C. Completed erection of the first 126-ft, going from west to east, of north & south Tier 4 (77-ft to 98-ft elevation) exterior corridor structural steel.

On-going work includes fabrication of piping modules, installation of drain piping, service air piping, cable trays and supports, ductwork, wall liner plates and sparge tubing in the hot cell. Began excavation for the PT Control Building basemat in July.

Engineering continues to implement changes from the technical issue resolutions into Piping and Instrumentation Design (P&ID) and piping isometric drawings. Issued calculations for ultrafiltration process (UFP) vessels 1A & 1B, and issued drawings for implementation of the vessel mixing issue resolution and other changes. Civil/Structural/Architectural (C/S/A) design completed the design verification matrix for the 77-ft elevation slabs and issued the report, and completed the release of the 98-ft elevation slab design. Plant Design developed the Isometric Drawings for the PSA, UFP, CXP, and PVP vessels. Safety Analysis completed four scheduled safety evaluations.

Evaluation of PVP/PVV system to meet functional requirements during the off-normal condition are ongoing that requires revision of the aerosol generation model; performance testing of HEME and Scrubber to function during off-normal condition; and aerosol testing to determine entrainment factor for the WTP-specific conditions.

Completed planning, and initiated bid for the fabrication and testing for the Large Scale testing (LSIT) for the validation of vessel mixing

Issued Material Requisitions (MR) to purchase charge vessels for the LAW Melter Feed Process (LFP) system, and HEPA housing assemblies for the pneumatic transfer system (PTS) exhausters. Twelve jet pump pairs were released to ship. Completed development of the test spec for the procurement of scrubber PVP-SCB-O2. Completed the award for on-site vessel modifications for 7 vessels.

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

- Completion of Milestones for re-Committed design of the CXP and FRP vessels
- Install hot cell piping PJV header
- Complete nineteen mechanical systems re-committed design packages
- Complete twelve process re-committed design packages
- Fabricate and deliver ten hot cell equipment frames
- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Complete 5<sup>th</sup> lift wall placements and make initial placements for the Control Building slab, totaling approximately 3,590 CY of concrete.
- Complete erection of 4<sup>th</sup> tier structural steel (77-ft to 98-ft elevation)
- Award contract for High Efficiency Mist Eliminator (HEME)
- Completion of DOE evaluation of BNI request to weld the vessel heads onto the five Non-Newtonian vessels (UFP-VSL-0002A/B, HLP-VSL-00027A/B, and HLP-VSL-00028).

**Issues:**

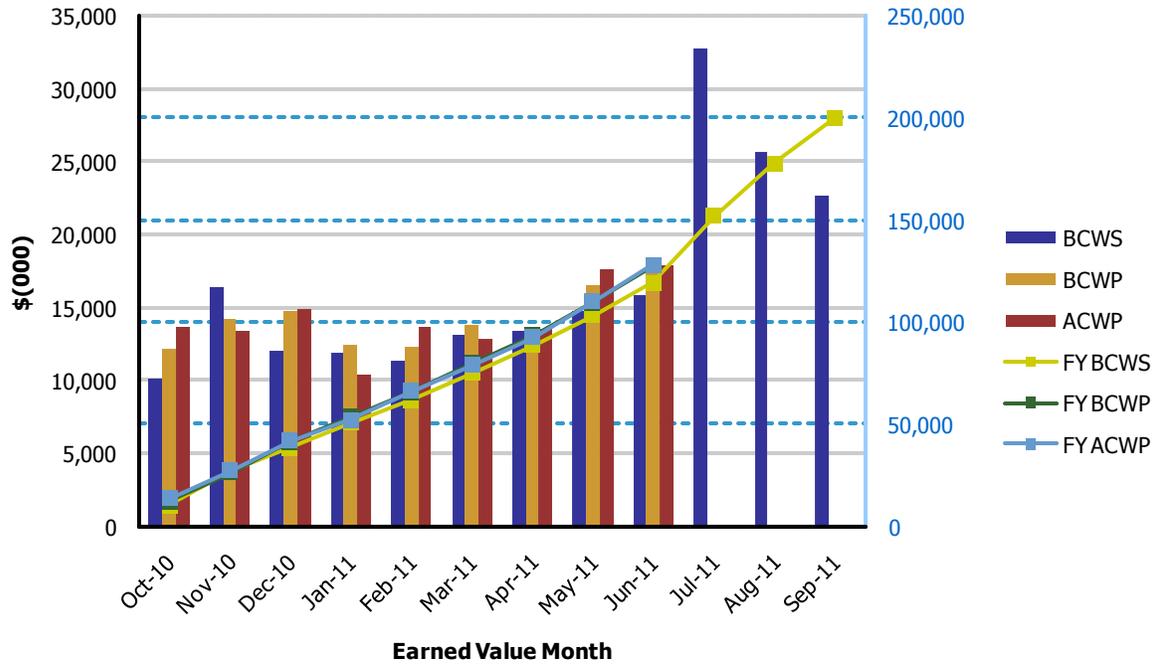
- Vessel Critical Path: Fabrication of vessel HLP-22 continues to be the primary critical path for the PT Facility. The fabrication of the vessel is in progress, but the vendor completion has slipped from October to December 2012. The tank vendor is pursuing opportunities to improve the HLP-22 completion date. Ecology approval of the permit packages is required to proceed with the vessel alteration for vessels FRP -2A/B/C/D and UFP-62A/B/C in December 2011. Ecology is being briefed routinely on the status of vessel design, fabrication and permitting schedule, due to the critical nature of this activity.

Data Set: FY 2011 Earned Value Data

Data as of: June 2011

**River Protection  
01-D-16E - Pretreatment Facility**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$10,196	\$12,179	\$13,730	1.19	0.89	\$10,196	\$12,179	\$13,730	1.19	0.89
Nov 2010	\$16,462	\$14,257	\$13,360	0.87	1.07	\$26,658	\$26,436	\$27,090	0.99	0.98
Dec 2010	\$12,060	\$14,788	\$14,869	1.23	0.99	\$38,718	\$41,224	\$41,959	1.06	0.98
Jan 2011	\$11,902	\$12,449	\$10,403	1.05	1.20	\$50,620	\$53,673	\$52,362	1.06	1.03
Feb 2011	\$11,428	\$12,373	\$13,692	1.08	0.90	\$62,048	\$66,046	\$66,054	1.06	1.00
Mar 2011	\$13,145	\$13,809	\$12,923	1.05	1.07	\$75,193	\$79,855	\$78,977	1.06	1.01
Apr 2011	\$13,444	\$13,497	\$13,533	1.00	1.00	\$88,637	\$93,352	\$92,510	1.05	1.01
May 2011	\$14,789	\$16,506	\$17,668	1.12	0.93	\$103,426	\$109,858	\$110,178	1.06	1.00
Jun 2011	\$15,909	\$17,928	\$17,968	1.13	1.00	\$119,335	\$127,786	\$128,146	1.07	1.00
Jul 2011	\$32,706					\$152,041				
Aug 2011	\$25,646					\$177,687				
Sep 2011	\$22,683					\$200,370				
PTD	\$1,175,527	\$1,192,825	\$1,161,627	1.01	1.03					

## High-Level Waste (HLW) Facility

**D-00A-21, Complete Construction of Structural Steel to 37' in HLW Facility, Due:** 12/31/2012, Status: On Schedule

**D-00A-02, HLW Facility Construction Substantially Complete, Due:** 12/31/2016, Status: On Schedule

**D-00A-03, Start HLW Facility Cold Commissioning, Due:** 6/30/2018, Status: On Schedule

**D-00A-04, HLW Facility Hot Commissioning Complete, Due:** 12/31/2019, Status: On Schedule

The HLW Facility will receive the separated high-level waste from the Pretreatment (PT) facility. The concentrate is 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 are sealed and decontaminated prior to shipment to interim storage. The HLW Facility is 54% complete overall, with engineering design 85% complete, procurement 67% complete, and construction 35% complete.

### Significant Past Accomplishments:

The HLW Filter Cave build-out remains critical path with a majority of the activities being construction and installation. Installation of support steel to the +8ft elevation continues to support the setting of the C5V, HOP, and PJV filter housings. Fabrication of the final C5V filter housing is complete and all of the units have been delivered to the site. The final PJV filter housing is complete awaiting inspection. The vendor is continuing fabrication of the HOP filter housings and is progressing as planned. Additional completed activities include installation of the 42" C5V Riser and the Rectangular duct that each span over 50ft vertically.

Several concrete pours have taken place during the month of June, including the #2 Melter Cave walls which were some of the most difficult in the building due to their complexity. The pour of the #1 Melter Cave walls will follow this month. Roofing has also commenced on the annex, with the parapet walls being formed and the decking being placed working toward the goal of weathering in by the end of the year.

Electrical and piping commodities are progressing throughout the -21ft elevation including cooling water, cable trays and supports, and fire protection piping. Vendors are also continuing with special coatings, HVAC, and liner plate.

Fabrication of the two 40 Ton Thermo Catalytic Oxidizers have begun and despite early material supply issues, fabrication of the C5V remote-operated dampers has been accelerated to maintain the original scheduled delivery of the first units in early August.

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

- Receive Canister Decontamination Vessels and Canister Rinse Vessel
- Complete Fabrication and Delivery of C5V Dampers
- Complete Siding of Annex
- C5V housing and remote-operated damper installations
- Receive major components of Melters #1 and #2

**Issues:**

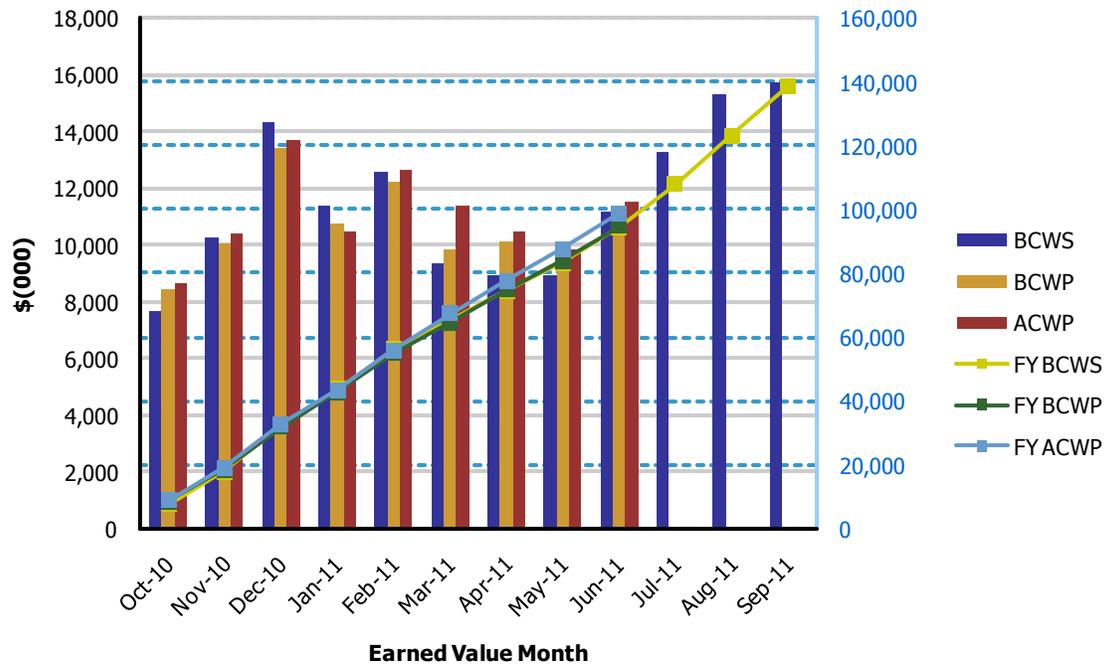
No significant issues at this time.

Data Set: FY 2011 Earned Value Data

Data as of: June 2011

**River Protection  
01-D-16D - High-Level Waste Facility**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$7,653	\$8,413	\$8,615	1.10	0.98	\$7,653	\$8,413	\$8,615	1.10	0.98
Nov 2010	\$10,239	\$10,032	\$10,434	0.98	0.96	\$17,892	\$18,445	\$19,049	1.03	0.97
Dec 2010	\$14,364	\$13,384	\$13,697	0.93	0.98	\$32,256	\$31,829	\$32,746	0.99	0.97
Jan 2011	\$11,360	\$10,767	\$10,461	0.95	1.03	\$43,616	\$42,596	\$43,207	0.98	0.99
Feb 2011	\$12,550	\$12,224	\$12,651	0.97	0.97	\$56,166	\$54,820	\$55,858	0.98	0.98
Mar 2011	\$9,376	\$9,860	\$11,369	1.05	0.87	\$65,542	\$64,680	\$67,227	0.99	0.96
Apr 2011	\$8,930	\$10,154	\$10,445	1.14	0.97	\$74,472	\$74,834	\$77,672	1.00	0.96
May 2011	\$8,919	\$9,075	\$9,806	1.02	0.93	\$83,391	\$83,909	\$87,478	1.01	0.96
Jun 2011	\$11,189	\$10,734	\$11,504	0.96	0.93	\$94,580	\$94,643	\$98,982	1.00	0.96
Jul 2011	\$13,285					\$107,865				
Aug 2011	\$15,296					\$123,161				
Sep 2011	\$15,743					\$138,904				
PTD	\$789,208	\$793,868	\$788,109	1.01	1.01					

## Low-Activity Waste (LAW) Facility

**D-00A-07, LAW Facility Construction Substantially Complete, Due: 12/31/2014, Status: On Schedule**

**D-00A-08, Start LAW Facility Cold Commissioning, Due: 12/31/2018, Status: On Schedule**

**D-00A-09, LAW Facility Hot Commissioning Complete, Due: 12/31/2019, Status: On Schedule**

The LAW Facility will vitrify low-activity waste from the PT Facility. Waste will be mixed with glass formers, vitrified into glass at an average daily rate of 30 metric tons, and placed in stainless-steel canisters that will be disposed on site in the Integrated Disposal Facility. Overall facility percent complete is 65%, engineering is 88% complete, procurement is 84% complete, and construction is 64% complete.

### Significant Past Accomplishments:

LAW secondary offgas treatment system component procurement activities continued. Vendor activities are progressing as scheduled for all offgas system components. Other procurement activities included issuance of a material requisition to purchase cooling jackets for the LAW melter feed process (LFP) system,

Drawings for the LAW container pour handling (LPH) system were issued for modifications to the pour cave equipment to improve container cooling. In addition, the *Enlarged Pour Cave Plan SS [Stainless Steel] Liner Plate and Insulation at Elevation -21'* drawing was issued. Piping isometric drawings for the chilled water (CHW), low-pressure steam (LPS), plant service air (PSA), radioactive liquid waste disposal (RLD), steam condensate water (SCW), and instrument service air (ISA) systems were issued. Instrument data sheets were issued for the foundation fieldbus signal converters for the LAW primary offgas process (LOP) system, control valves for the plant cooling water (PCW) system, and important-to-safety piloted solenoid valves. Committed calculations, *Anchorage Design for LAW Off Gas Caustic Scrubber* and *Gypsum Board Wall Design for LAW and LAB Building*, were issued. Two pressure safety valve calculations were completed for instrument service air (ISA) system confirmation.

BNI completed installation of the jib cranes for the container finishing handling (LFH) system. Construction started installing lighting panels/transformers and buffer storage area shield plates. Thermite welding of rails in the finishing line continued, as well as installation of the fire alarm system, installation of support arms in the process cells, low-voltage electrical (LVE) system equipment, medium-voltage electrical (MVE) equipment, piping for the air-handling unit, fan-coil units and humidifiers for the C2V ventilation system, liner in the pour caves, and container finishing line hoists and hatches. Other normal activities continued, including installation of piping for the Non-Radioactive Liquid Waste Disposal (NLD), Radioactive Liquid Waste Disposal (RLD), glass former reagent (GFR), and plant cooling water (PCW) systems within the LAW, as well as installation of cable tray, pipe and pipe hangers, transformers, electrical grounding, conduit and wiring, instrument enclosures, lighting fixtures, partition walls, and coatings.

Integrated Control Network (ICN) development continued with the review of software for the treated LAW evaporation process (TLP) system, container receipt handling (LRH) system,

container export handling (LEH) system, high pressure steam (HPS) system, melter feed process (LFP) system, melter process (LMP) system, secondary offgas/vessel vent process (LVP) system, radioactive liquid waste disposal (RLD) system, and stack discharge monitoring (SDJ) system. Software related to the following systems was accepted: container export handling (LEH) system, primary offgas process (LOP) system, Stack discharge monitoring (SDJ) system, melter feed process (LFP) system, melter process (LMP) system, and high pressure steam (HPS) system. Discussions were held to determine required safeguards for the LAW container finishing handling system (LFH) dual-rail hoist obstructions and to discuss proposed LAW design modifications to the loss of power controls for the offgas process system exhausters.

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

- Complete vendor fabrication of the Carbon Bed Adsorber (CBA)
- Complete installation of container handling line shield doors
- Complete installation of the autosampling (ASX) system

**Issues:**

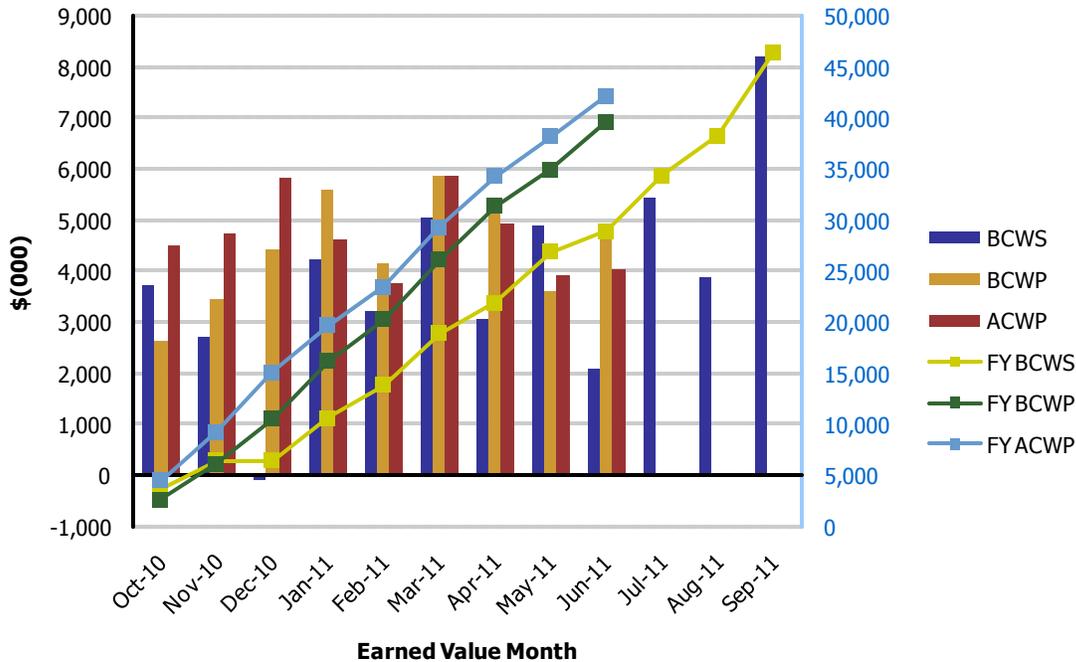
No major issues at this time.

Data Set: FY 2011 Earned Value Data

Data as of: June 2011

**River Protection**  
**01-D-16A - Low-Activity Waste Facility**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$3,743	\$2,654	\$4,511	0.71	0.59	\$3,743	\$2,654	\$4,511	0.71	0.59
Nov 2010	\$2,732	\$3,462	\$4,752	1.27	0.73	\$6,475	\$6,116	\$9,263	0.94	0.66
Dec 2010	(\$84)	\$4,424	\$5,823	-52.67	0.76	\$6,391	\$10,540	\$15,086	1.65	0.70
Jan 2011	\$4,232	\$5,597	\$4,606	1.32	1.22	\$10,623	\$16,137	\$19,692	1.52	0.82
Feb 2011	\$3,222	\$4,153	\$3,778	1.29	1.10	\$13,845	\$20,290	\$23,470	1.47	0.86
Mar 2011	\$5,054	\$5,862	\$5,857	1.16	1.00	\$18,899	\$26,152	\$29,327	1.38	0.89
Apr 2011	\$3,062	\$5,210	\$4,930	1.70	1.06	\$21,961	\$31,362	\$34,257	1.43	0.92
May 2011	\$4,895	\$3,600	\$3,919	0.74	0.92	\$26,856	\$34,962	\$38,176	1.30	0.92
Jun 2011	\$2,089	\$4,713	\$4,057	2.26	1.16	\$28,945	\$39,675	\$42,233	1.37	0.94
Jul 2011	\$5,443					\$34,388				
Aug 2011	\$3,895					\$38,283				
Sep 2011	\$8,214					\$46,497				
PTD	\$617,549	\$620,613	\$665,328	1.00	0.93					

## Analytical Laboratory

**D-00A-05, LAB Construction Substantially Complete, Due: 12/31/2012, Status: On Schedule**

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. Overall facility complete for LAB is 46%, engineering is 78% complete, procurement is 74% complete, and construction is 63% complete.

### **Significant Past Accomplishments:**

On-going construction work includes: installing piping for low pressure steam (LPS) system, high pressure steam (HPS) system, steam condensate water (SCW) system, domestic water (DOW) in the C2V/C3V system pits, bulk piping hangers and structural steel for the fireproof slab in the C5 area, and raceway and electrical equipment in the fan room. In the hot cells installation has been progressing on bulk piping/hangers, electrical equipment, ballast enclosures, scheduled conduit, trolley covers/motor assemblies, trolley trough/cable reel, and the monorail/hoist.

Engineering issued piping isometric drawings for the radioactive liquid waste disposal (RLD) system, high pressure steam (HPS) system, low pressure steam (LPS) system, autosampling (ASX) system, and the plant service air (PSA) system. Configuration data indices were issued for DOW, breathing service air (BSA), plant vacuum air (PVA), miscellaneous gases (MXG), low voltage electrical (LVE), medium voltage electrical (MVE), PSA, uninterruptable power electrical (UPE), chill water (CHW), steam condensate water (SCW), and HPS systems. Architectural drawings were also issued for the floor and reflected-ceiling at elevation 0', building section, wall section, miscellaneous detail, interior elevation, door schedule, and room finishes. The structural design verification matrix was also issued.

Procurement issued material requisitions for pressure/differential pressure transmitters, lighting, power distribution and fused panels, transformers, terminal boxes, and HEPA filter housings. Furthermore, 60 pressure gages and 17 bimetallic thermometers were released to ship.

The operations staff received training on ProjectWise which will be utilized to maintain version control and accurate development records. ASX sample bottles, sample carriers, needle extraction and replacement carriers, and an Isolok sample needle was obtained for demonstration purposes. In response to a WRPS question on utilization of Hanford Analytical Services Quality Assurance Requirements Document (HASQARD) and the Environmental Protection Agency's (EPA) SW-846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", WTP has the same source requirements as the HASQARD, and SW-846 will be used for a guide for methods where appropriate. An evaluation is currently being performed of pneumatically testing versus hydrostatically testing permitted dangerous waste lines, and whether ASX procedure tracking system (PTS) HEPA filters can be "CM" rather than "Q" since the rest of the system is "CM".

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

- Install Drum Packing Fume Hood (Forecast July 2011)
- Install waste drum bogie transfer port (Forecast June 2011)
- Install Autosampler HEPA filter housings (Forecast October 2011)
- Install hot cell monorail airlocks (Forecast August 2011)
- Complete installation of Autosampler System (Milestone date of October 2011)

**Issues:**

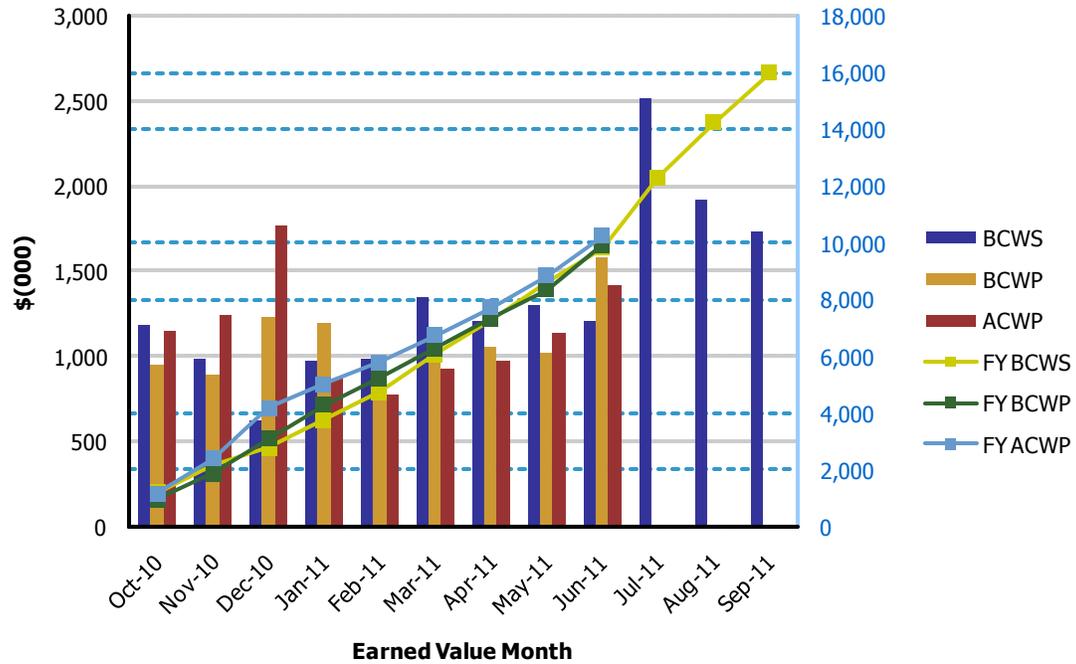
No major issues.

Data Set: FY 2011 Earned Value Data

Data as of: June 2011

**River Protection  
01-D-16B - Analytical Laboratory**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$1,180	\$954	\$1,152	0.81	0.83	\$1,180	\$954	\$1,152	0.81	0.83
Nov 2010	\$984	\$893	\$1,245	0.91	0.72	\$2,164	\$1,847	\$2,397	0.85	0.77
Dec 2010	\$621	\$1,236	\$1,768	1.99	0.70	\$2,785	\$3,083	\$4,165	1.11	0.74
Jan 2011	\$971	\$1,198	\$869	1.23	1.38	\$3,756	\$4,281	\$5,034	1.14	0.85
Feb 2011	\$982	\$949	\$770	0.97	1.23	\$4,738	\$5,230	\$5,804	1.10	0.90
Mar 2011	\$1,350	\$1,039	\$924	0.77	1.12	\$6,088	\$6,269	\$6,728	1.03	0.93
Apr 2011	\$1,210	\$1,059	\$974	0.88	1.09	\$7,298	\$7,328	\$7,702	1.00	0.95
May 2011	\$1,299	\$1,018	\$1,133	0.78	0.90	\$8,597	\$8,346	\$8,835	0.97	0.94
Jun 2011	\$1,213	\$1,579	\$1,413	1.30	1.12	\$9,810	\$9,925	\$10,248	1.01	0.97
Jul 2011	\$2,516					\$12,326				
Aug 2011	\$1,925					\$14,251				
Sep 2011	\$1,735					\$15,986				
PTD	\$163,086	\$162,313	\$174,926	1.00	0.93					

## Balance of Facilities (BOF)

**D-00A-12, Steam Plant Construction Complete, Due: 12/31/2012, Status: On Schedule**

BOF provides services and utilities to support operation of the main production facilities – PT, HLW, LAW, and LAB. Overall facility percent complete for BOF is 47%, engineering is 72% complete, procurement is 46% complete, and construction is 61% complete.

### Significant Past Accomplishments:

On-going construction work includes: installing PSA and scheduled conduit at glass former storage facility (GFSF), booster pumps for CHW, concrete pedestal forms and piping for non-radioactive liquid waste disposal (NLD) and DOW, cable terminations in the main switchgear building, valves in the cooling tower, sump/piping and excavating for electrical conduit at the CO<sub>2</sub> tank pad, and connecting DOW system piping to the water treatment facility.

Engineering issued piping isometric drawings for the DOW, PSA, and SCW systems. Completed graded approach to quality confirmation sheet for emergency turbine generator (ETG), ISM meetings for tailoring of IEEE-387 with respect to ETG use, and received DOE's approval of justification for continued design, procurement, and installation (JCDPI) for ETG implementation for safety class emergency power. For the switchgear building foundation drawings were issued for grade beams and slab reinforcing details, and foundation and slab plans at elevation 0'0" and 9'0". General arrangement drawings for sunshades over ammonia reagent (AMR) system enclosures/filters were issued. Termination schedules were issued for plant cooling water (PCW) at the cooler tower facility and for PSA system.

Procurement released 20 pressure gauges and 28 bi-metallic thermometers to ship.

The operations staff continued work on Commission Test Engineer Level II qualification design and implementation, piping and component insulation design requirements, transition from emergency diesel generator (EDG) to ETG. Discussions were held on permit renewal for NLD discharges to treated effluent disposal facility (TEDF), operator positions and qualifications for LBL watch stations, ETG load energization timing and priorities evaluation for PTF/HLW. A walk down of construction completion and work to go for the cooling tower facility was performed.

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

- Complete construction of cooling tower (Forecast July 2011)
- Complete construction of fuel oil pumphouse (Forecast September 2011)
- Complete construction of BOF switchgear building (Forecast July 2011)
- Install structural steel for anhydrous ammonia facility (Forecast August 2011)

### Issues:

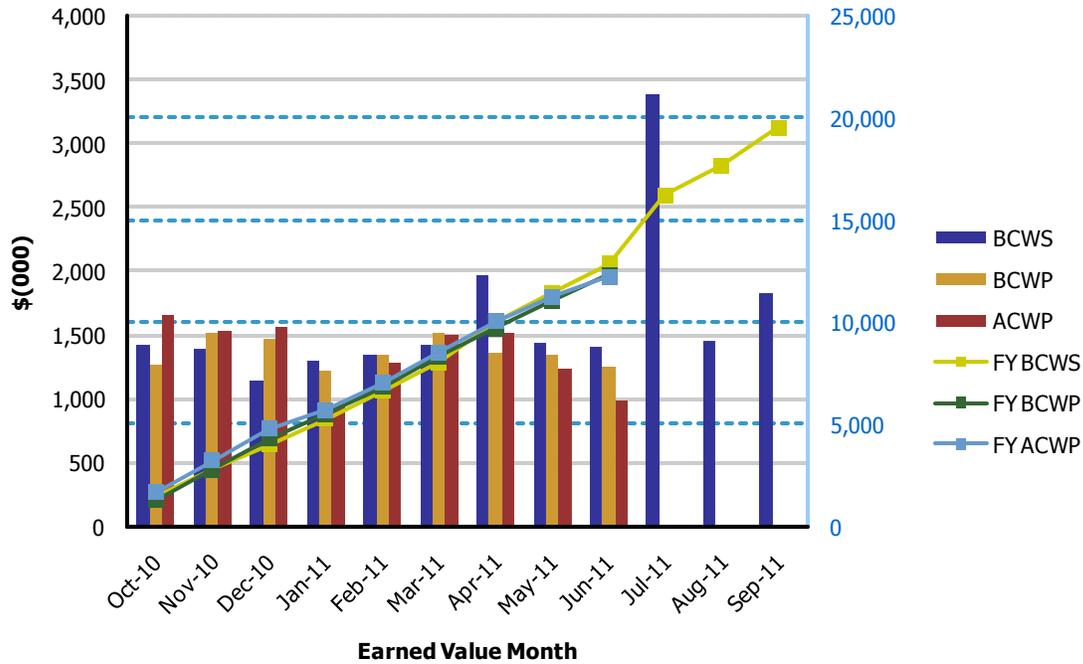
No significant issues at this time.

Data Set: FY 2011 Earned Value Data

Data as of: June 2011

**River Protection  
01-D-16C - Balance of Facilities**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$1,428	\$1,272	\$1,660	0.89	0.77	\$1,428	\$1,272	\$1,660	0.89	0.77
Nov 2010	\$1,398	\$1,520	\$1,539	1.09	0.99	\$2,826	\$2,792	\$3,199	0.99	0.87
Dec 2010	\$1,150	\$1,475	\$1,558	1.28	0.95	\$3,976	\$4,267	\$4,757	1.07	0.90
Jan 2011	\$1,302	\$1,224	\$960	0.94	1.28	\$5,278	\$5,491	\$5,717	1.04	0.96
Feb 2011	\$1,347	\$1,346	\$1,288	1.00	1.05	\$6,625	\$6,837	\$7,005	1.03	0.98
Mar 2011	\$1,429	\$1,518	\$1,505	1.06	1.01	\$8,054	\$8,355	\$8,510	1.04	0.98
Apr 2011	\$1,962	\$1,363	\$1,524	0.69	0.89	\$10,016	\$9,718	\$10,034	0.97	0.97
May 2011	\$1,442	\$1,352	\$1,237	0.94	1.09	\$11,458	\$11,070	\$11,271	0.97	0.98
Jun 2011	\$1,400	\$1,253	\$980	0.90	1.28	\$12,858	\$12,323	\$12,251	0.96	1.01
Jul 2011	\$3,383					\$16,241				
Aug 2011	\$1,462					\$17,703				
Sep 2011	\$1,830					\$19,533				
PTD	\$248,126	\$246,689	\$244,166	0.99	1.01					

Waste Treatment Plant Project - Percent Complete Status															
Through June 2011															
(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
Low-Activity Waste	952.8	620.6	65%	229.8	201.3	88%	234.9	197.1	84%	340.0	215.9	64%	148.1	6.3	4%
Analytical Lab	350.7	162.3	46%	54.8	42.5	78%	56.1	41.7	74%	104.6	66.3	63%	135.2	11.9	9%
Balance of Facilities	529.7	246.7	47%	84.4	60.5	72%	81.2	37.5	46%	227.9	139.6	61%	136.1	9.1	7%
High-Level Waste	1,471.4	793.9	54%	341.8	291.0	85%	454.8	305.1	67%	557.1	193.5	35%	117.8	4.3	4%
Pretreatment	2,493.6	1,192.8	48%	696.8	538.7	77%	715.4	319.5	45%	898.9	328.8	37%	182.6	5.9	3%
Shared Services	4,747.0	3,255.2	69%	1,051.3	886.4	84%	467.7	354.6	76%	1,423.0	1,027.6	72%	455.8	112.8	25%
<b>Total WTP w/o UB</b>	<b>10,545.2</b>	<b>6,271.5</b>	<b>59%</b>	<b>2,458.9</b>	<b>2,020.4</b>	<b>82%</b>	<b>2,010.1</b>	<b>1,255.5</b>	<b>62%</b>	<b>3,551.5</b>	<b>1,971.7</b>	<b>56%</b>	<b>1,175.6</b>	<b>150.3</b>	<b>13%</b>
Undistributed Budget	0.0	n/a	n/a	n/a	n/a	n/a									
<b>Total WTP</b>	<b>10,545.2</b>	<b>6,271.5</b>	<b>59%</b>	<b>2,458.9</b>	<b>2,020.4</b>	<b>82%</b>	<b>2,010.1</b>	<b>1,255.5</b>	<b>62%</b>	<b>3,551.5</b>	<b>1,971.7</b>	<b>56%</b>	<b>1,175.6</b>	<b>150.3</b>	<b>13%</b>

Source: WTP Contract Performance Report - Format 1, Data for June 2011

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.

<sup>1</sup> Note: EVMS data is through June 2011.