

# Environmental Restoration Contract

## Monthly Performance Report

May 2004



Accelerating Cleanup ...



**Department of Energy**  
Richland Operations Office



**Bechtel Hanford, Inc.**  
Environmental Restoration Contractor



**CH2MHILL Hanford Inc.**



**EBERLINE SERVICES**  
HANFORD, INC.

# ENVIRONMENTAL RESTORATION EXECUTIVE SUMMARY

May 2004 Monthly Report

## SAFETY:

As of May 31, the ERC worked approximately 544,000 hours since the last lost workday incident which occurred on October 28, 2003. The ERC has experienced 89% injury free workdays during FY04. No significant issues or findings were identified with regard to the 12 applicable CPOF criteria during the May reporting period.  
Current calendar month: 3 first aids; 1 lost restricted; 2 recordable only

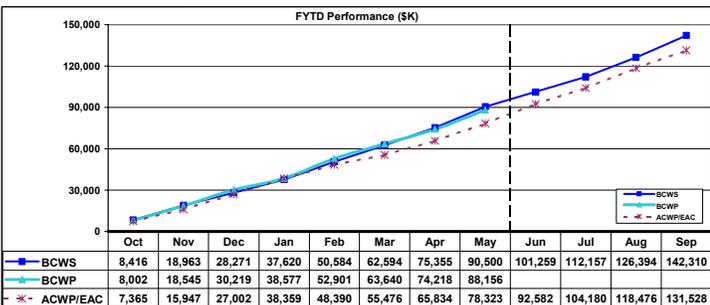
## HIGHLIGHTS:

- Awarded H Reactor SSE design/ construction contract.
- Continued asbestos removal at 190-DR facility.
- Updated B Reactor 2003 Draft B EE/CA for internal review.
- Shipped ~35,000 gallons of potentially contaminated rain water to ETF that was removed from 1300-N Emergency Dump Basin.
- Continued remediation at 118-B-1 Burial Ground and 116-K-2 Mile Long Trench.
- **Issued 100 Area Remaining Sites and 300-FF-2 OU ESDs.**
- Issued 300 Area East Side remediation RFP.
- Successfully completed 183-H Basin bench scale testing of alternate treatment formula for precipitated crystals (4,700 drums). Awaiting EPA approval.
- Completed initial liner placement in ERDF Cell 6.
- Submitted draft General Work Plan for 100/300 Area River Corridor Baseline Risk Assessment to RL for review.
- **Received regulator approval of Columbia River Component Basis & Assumptions.**
- Held FY05/06 DWP priority workshop with RL and regulators.

## UPCOMING KEY ACTIVITIES:

- Initiate preparation of 300 Area (Zone A) EE/CA in June.
- **Issue 100 and 300 Area RDR/RAWP/SAP documents.**
- Complete 116-N-1 Crib readiness assessment; begin remediation.
- Award 300 Area East Side remediation contract.
- Complete design/procurement for receiving low-level fraction of waste from FH's TRU Retrieval Project.
- Receive shipments of treated uranium chips-in-oil waste for disposal in ERDF (M-16-031).
- Begin 60-day review of 100/300 Area General Work Plan on 6/19/04.
- DOE-HQ will conduct on-site review in June of ERC VPP to validate application for VPP Star Status.

## PERFORMANCE:



- **SV: (\$2,344K); (2.6%).** ERDF expansion behind schedule due to inclement weather and recurring pugmill equipment failures. Pugmill has been changed out; schedule expected to be recovered by fiscal year-end.

- **CV: \$9,833K; 11.2%.** 300 Area backfill/regrade subcontract award less than plan; favorable settlement for previous site subcontract litigation; prior-year rebill accounting adjustments; reduction of estimated performance fee.

## EAC TRENDS:

Current Month: \$1,269K  
FYTD: (\$10,782K)

- Labor reductions at N Area, 300 Area, Group 4, 100 Area S&M; 300 Area backfill/regrade efficiencies; favorable settlement for previous site subcontract litigation; DR ancillary facilities D&D efficiencies; prior-year rebill accounting adjustments.

## TPA MILESTONES:

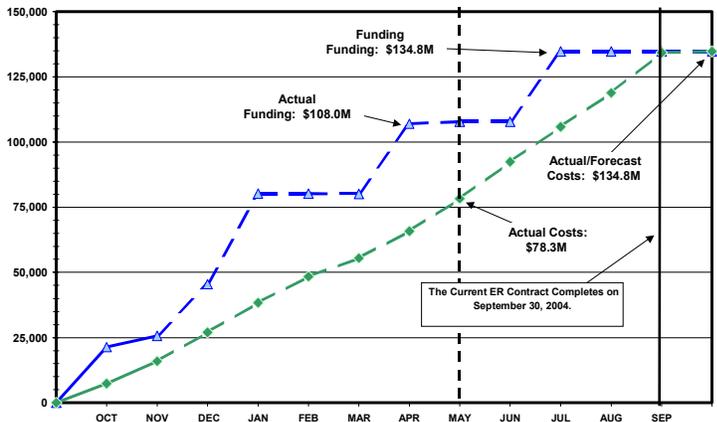
FY04 planned and completed TPA milestones:

- **M-16-03H, Complete 300 Area regrade (due 6/30/04); completed 2/19/04.**
- **M-16-26E, Complete 100 B/C pipeline excavation (due 9/30/04); completed 11/5/03.**
- **M-93-11, Complete F Reactor ISS (due 9/30/04); completed 1/15/04.**

Outyear TPA milestones forecast/completed in FY04:

- **M-16-26F, Complete 100 B/C pipeline backfill (due 2/28/05); completed 5/7/04.**
- **M-16-03I, Complete 618-4 drum treatment (due TBD); forecast 7/31/04.**
- **M-93-17, Complete D Reactor ISS (due 12/31/04); forecast 9/30/04.**

## FUNDING:



## PERFORMANCE INCENTIVES:

- SPI = 1.05 FYTD through May.
- Remove a Gold Chart radiological facility by 3/1/04. **Demolished above-grade portion of 1304-N Tank. Completed 4/2/04.** Tank base will remain in place due to 1300-N Basin demolition.
- Complete 10 Gold Chart release sites by 3/1/04. **Completed 2/23/04.**
- Complete 300-FF-1/618-5 Burial Ground regrade by 3/1/04. **Completed 2/19/04.**

## ISSUES:

- Non-ERC Hanford waste to ERDF acceptance criteria.
- Pipecutting in H Reactor gas wing impacted by unanticipated mercury vapor levels in piping and potential combustibles, which is delaying explosive work. Work-around plan is being prepared.
- Critical shortages in rigging, fitters, and RCTs have delayed FDP work.

# ENVIRONMENTAL RESTORATION FACILITIES DECOMMISSIONING PROJECT

May 2004 Monthly Report

### SAFETY:

- FYTD: 10 first aids; 3 recordable-only; 3 lost restricted; 0 lost workday; 0 skin contaminations
- Current Month: 1 first aid (superficial laceration); 2 recordable (laceration/back pain); 1 lost restricted (laceration)

### HIGHLIGHTS:

#### H Reactor:

- Awarded SSE design/construction contract on May 20. Pre-design kickoff meeting was held June 8.
- Commenced hole drilling in preparation of gas wing explosive demolition scheduled for June 18-19. Explosive fracturing of below-grade concrete will occur in August after upper-level debris is loaded out.

#### B Reactor:

- Updated 2003 Draft B EE/CA; cost estimates will also be revised to reflect current dollar values. Planned for internal review by 6/16/04.

#### 1300-N Basin (EDB):

- Shipped ~35,000 gallons of potentially contaminated rain water removed from EDB to ETF.
- Completed soil excavation from south and west sides of EDB down 6' to basin concrete footing.
- Completed asbestos abatement of 30" raw water pipe mastic.
- Completed vertical cuts on plastic liner; began liner removal.
- Allowed to downgrade from "alpha controls" and "increased concentration" ERDF containers to "general population" containers due to favorable soil sample results.

#### 190-DR Facility:

- Completed asbestos removal on north/south ends of "A" Bay and removed containments. Waste loaded into ERDF containers.

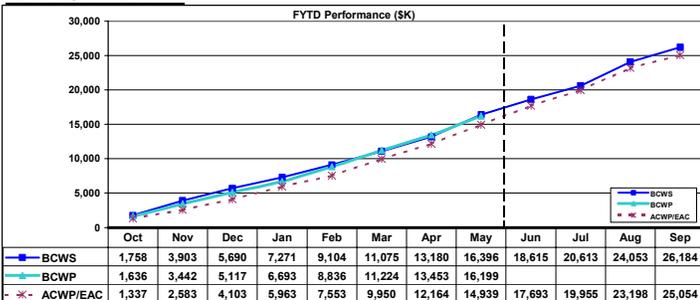
#### Other:

- Completed RL review of 107-N recirculation cooling building ASA. No significant comments; clarifications will be reflected in SER.

### UPCOMING KEY ACTIVITIES:

- Initiate preparation of FY05-06 DWPs - June.
- Initiate preparation of 300 Area (Zone A) EE/CA - June.
- Issue draft EE/CAs for K Area ancillary facilities and 105-N/109-N buildings to RL/regulators for review - June.
- Complete explosive demolition of H Reactor gas wing - June/August.

### PERFORMANCE:



- SV:** (\$197K); (1.2%). D Reactor SSE ahead of schedule; offset by late start for H Reactor gas wing demolition (resources utilized for FSB demolition which was impacted by inclement weather).
- CV:** \$1,260K; 7.8%. Fewer resources required for 100 Area S&M. Less project support/oversight required for DR ancillary facilities D&D, F Reactor, and less miscellaneous sampling required; offset by H Reactor demolition utilizing more resources than planned.

### EAC TRENDS:

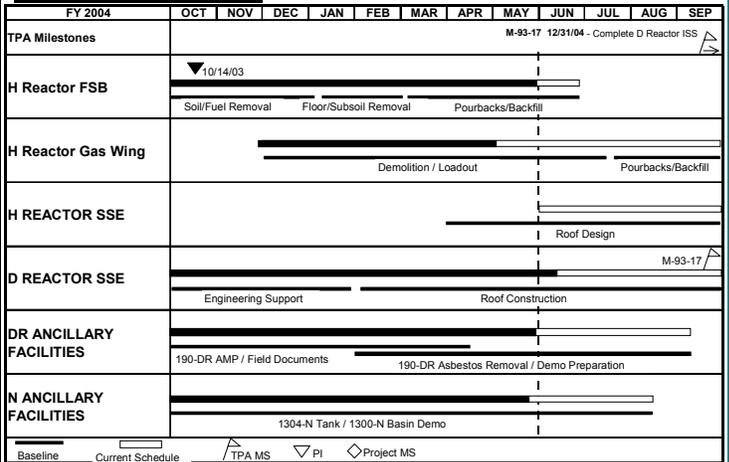
Current Month: \$1,666K  
FYTD: (\$1,130K)

- 100 Area S&M utilizing fewer resources than expected.
- 117-DR demolition/loadout efficiencies.
- 190-DR asbestos removal less than anticipated.
- H Reactor increase in explosive demolition cost.

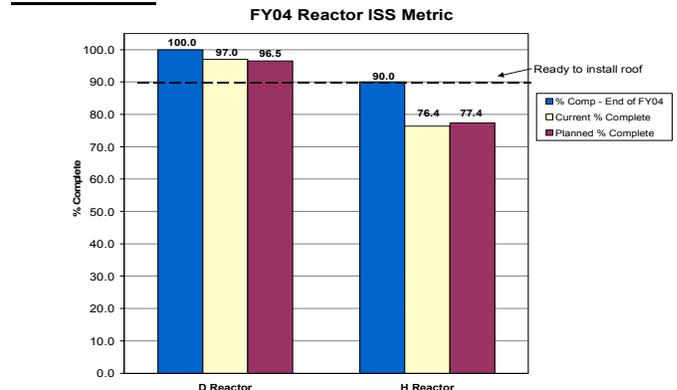
### TPA MILESTONES:

- M-93-11, Complete F Reactor ISS (due 9/30/04); *completed 1/15/04, more than 8 months ahead of schedule. (Physical ISS work completed in August; regulators approved S&M Plan on 1/15/04.)*
- M-93-17, Complete D Reactor ISS (due 12/31/04); *forecast 9/30/04.*

### SUMMARY SCHEDULE:



### ISS METRIC:



### PERFORMANCE INCENTIVES:

Remove a Gold Chart radiological facility by 3/1/04. *Demolished above-grade portion of 1304-N Tank. Completed 4/2/04. Tank base will remain in place due to 1300-N Basin demolition.*

### ISSUES:

- Pipecutting in H Reactor gas wing impacted by unanticipated mercury vapor levels in piping and potential combustibles, which is delaying explosive work. Work-around plan is being prepared.
- Manufacture/delivery of siding is now critical path for completing D Reactor SSE this FY. Both BHI/FE&C are monitoring this issue.
- Critical shortages in rigging, fitters, and RCTs have delayed work in FDP.

# ENVIRONMENTAL RESTORATION REMEDIAL ACTION PROJECT

May 2004 Monthly Report

### SAFETY:

FYTD: 3 first aids; 0 recordable; 0 lost workday cases  
Current Month: None

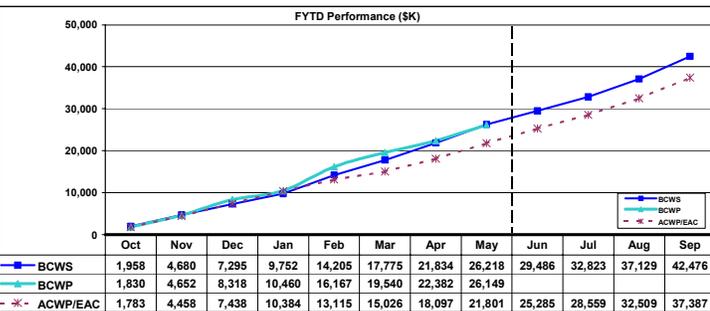
### HIGHLIGHTS:

- Issued 5 Rev. 0 CVPs; issued 4 Draft A RSVPs or CVPs.
- **Issued 100 Area Remaining Sites and 300-FF-2 OU ESDs.**
- **Completed geophysics for five 100-IU-2 and 100-IU-6 waste sites.**
- Continued remediation, sorting, and loadout activities at 118-B-1.
- Completed regrade for 100 B/C Pit 24 in support of B/C pipeline subcontract demobilization.
- Revised work process to incorporate Level B PPE for excavator operator during intrusive work at B/C burial ground trench excavation.
- Prepared sampling strategy for 116-C-3 Chemical Waste Tanks.
- Completed sampling and received analytical data from 100 D Area chromium investigation.
- Continued remediation for 116-K-2 Mile Long Trench and process pipelines.
- Continued crib remediation mobilization and submittal activities at 100 N Area.
- Issued 300 Area East Side remediation RFP and held pre-bid meeting. Bids are due 6/11/04.
- Completed preparation of 618-7 Burial Ground field investigation options.
- Presented and provided verification and validation documentation for Origen 2 runs to RL ABD for 618-2 Burial Ground.

### UPCOMING KEY ACTIVITIES:

- **Issue 100 and 300 Area RDR/RAWP/SAP documents.**
- Complete sample data review for 14 Remaining Sites requiring remediation against existing PHC/IHC.
- Prep and pave B Avenue at 100 B/C.
- Initiate fence replacement around B Reactor.
- Initiate intrusive work at 118-C-1 Burial Ground.
- Complete RL briefing for 116-C-3 Chemical Tank sampling approach.
- Complete geophysics for 100 D Area Remaining Sites.
- Prepare BCP to complete 118-K-1 final design, remove overburden, and construct ERDF haul road at 118-K-1 BG.
- Complete mobilization and readiness assessment; initiate remediation for 116-N-1 Crib.
- Award 300 Area East Side remediation contract.
- Resurface and stripe Route 4 South in support of 300 Area remediation.

### PERFORMANCE:



- **SV:** (\$69K); (0.3%). 300 Area backfill/regrade completed significantly ahead of schedule. K Area pipeline and B/C BG remediation ahead of schedule; partially offset by schedule delays in demobilization of the B/C pipeline subcontractor and by delays in the 618-7 field investigation and the 600-111 geophysical /sampling activities.
- **CV:** \$4,348K; 16.6%. 300 Area backfill/regrade subcontract award less than plan; N Area final contract closeout less than planned; favorable settlement for previous site subcontract litigation.

### EAC TRENDS:

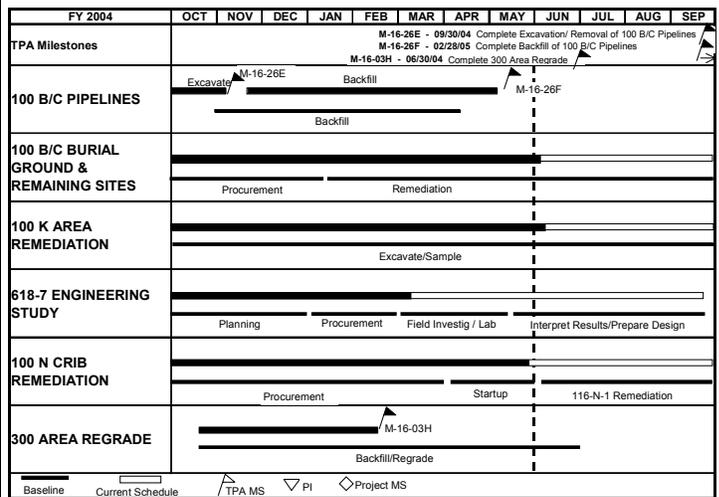
Current Month: (\$48K)  
FYTD: (\$5,089K)

- Labor reductions at N Area, 300 Area, and Group 4; 300 Area backfill/regrade subcontract efficiencies; favorable settlement for previous site subcontract litigation; waste minimization efforts at B/C site 600-232.

### TPA MILESTONES:

- **M-16-03H, Complete 300-FF-1, 618-4, and 618-5 Burial Ground regrade (due 6/30/04); completed 2/19/04, more than 4 months ahead of schedule.**
- **M-16-26E, Complete excavation/removal of 100 B/C pipelines (due 9/30/04); completed 11/5/03, nearly 11 months ahead of schedule.**
- **M-16-26F, Complete backfill of 100 B/C pipelines (due 2/28/05); completed 5/7/04; more than 9 months ahead of schedule.**

### SUMMARY SCHEDULE:



### PERFORMANCE INCENTIVES:

- Complete 10 Gold Chart release sites by 3/1/04. **Completed on 2/23/04.**
- Complete 300-FF-1/618-5 Burial Ground regrade by 3/1/04. **Completed on 2/19/04.**

### ISSUES:

None for this reporting period.

# ENVIRONMENTAL RESTORATION WASTE OPERATIONS PROJECT

May 2004 Monthly Report

### SAFETY:

FYTD: 8 first aids; 1 lost restricted; 0 lost workday cases  
Current Month: 2 first aids (foreign body in eye/strain)

### HIGHLIGHTS:

- Received 45,117 tons of waste at ERDF during May; 307,429 tons during FY04; 4,825,194 tons of contaminated material have been disposed in ERDF since operations began in July 1996.
- Suspended ERDF operations on seven separate days in May due to high winds.
- Successfully completed bench-scale testing of an alternate treatment formula for 183-H waste. Seeking EPA approval to incorporate this less costly approach to 4,700 drums of precipitated crystals.
- Preparing to receive waste from 116-N-1 Crib remediation.
- Completed Value Engineering study for treatment/disposal options of low-level fraction of waste from FH's TRU Retrieval Project. Design and procurement initiated for macro-encapsulation in fabricated grout vaults within ERDF.
- Held kickoff meeting with FH to initiate ERDF waste disposal of 300 Area uranium fuel.
- Completed a gap analysis of new DOT regulations (HM-230) against ERC Procedure BHI-EE-12, *ERC Transportation Manual*. Procedure revisions underway to support use of IP-2 containers.
- Continued admix production in May with 59,352 tons; a total of 112,510 tons produced to date (79% complete). During May, 56,844 tons were placed in Cells 5/6, totaling 104,084 tons to date (73% complete).
- Began initial liner placement in Cell 6 on May 20; installation accepted on May 27.
- Producing gravel at Pit 30. Gravel is being conveyed and stockpiled near Cells 5/6.
- Approved BCP 24062 by RMT for relocation of ERDF stockpile; pending final RL approval.

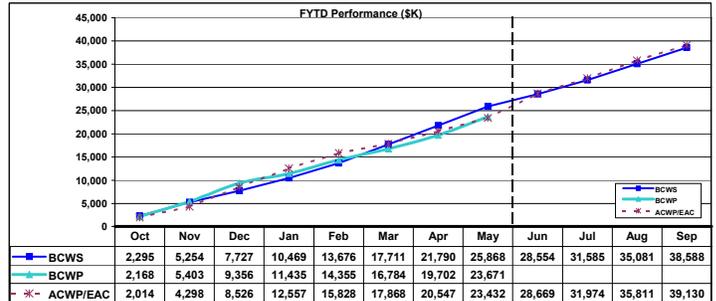
### UPCOMING KEY ACTIVITIES:

- Obtain DOT equivalency and procure IP-2 roll-on/roll-off waste containers for shipping higher activity waste from 100-N Crib and for compliance with newly promulgated regulations that become effective in October.
- Obtain EPA approval of alternate treatment plan for 183-H precipitated crystals; commence treatment using new formula.
- Receive shipments of treated uranium chips-in-oil waste for disposal into ERDF (M-16-031).
- Complete design/procurement for receiving low-level fraction of waste from FH's TRU Retrieval Project. Initiate waste receipts in late August.
- Complete Cells 5/6 admix placement in June.
- Continue liner installation and gravel placement in Cells 5/6.

### TPA MILESTONES:

M-16-031, Complete treatment of drummed waste from 618-4 Burial Ground (due TBD); *forecast 7/31/04*.

### PERFORMANCE:



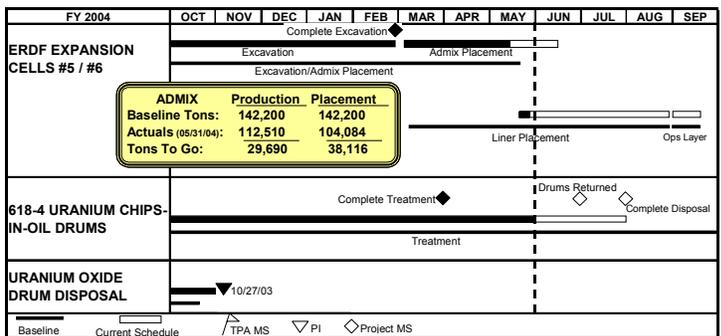
- SV:** (\$2,197K); (8.5%). ERDF expansion behind schedule due to inclement weather and recurring pugmill equipment failures. Subcontractor changed out pugmill to increase admix production; schedule expected to be recovered by fiscal year-end.
- CV:** \$239K; 1.0%. Increase in uranium chips-in-oil treatment costs; offset by current month under-accrual for admix placement.

### EAC TRENDS:

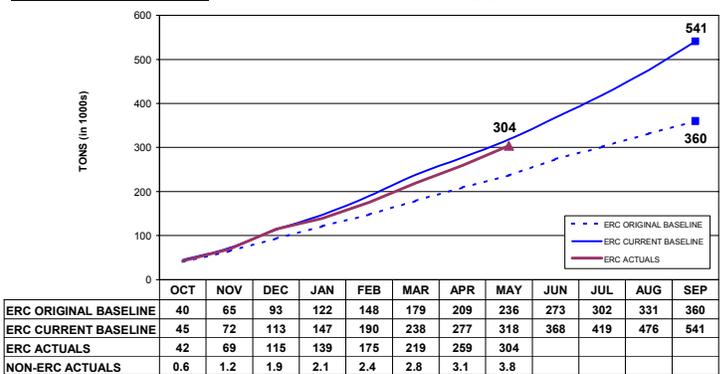
Current Month: (\$365K)  
FYTD: \$542K

- Increased cost for treatment/disposal of uranium chips-in-oil.

### SUMMARY SCHEDULE:



### ERDF TONNAGE:



### ISSUES:

- Non-ERC Hanford Waste to ERDF. Evaluate the acceptance criteria of Hanford Site waste disposal.

# ENVIRONMENTAL RESTORATION RISK ASSESSMENT AND SITE CLOSURE PROJECT

May 2004 Monthly Report

## SAFETY:

No first aid, recordable, or lost workday cases experienced FYTD.

## HIGHLIGHTS:

### *100/300 Area:*

- Prepared and submitted draft General Work Plan for the River Corridor Baseline Risk Assessment (RCBRA) to RL on May 24 for review; comments due June 1.
- Commenced preparing Sample Analysis Plan.
- Presented update to Trustees on May 12. Topics discussed included Work Plan, Web site, shoreline radiation surveys, and compilation of historical data.

### *100 B/C Pilot:*

- Reviewed sampling documentation with EPA, USGS, and Ecology.
- Provided Project overview and update to USGS per EPA request.
- Presented overview of data evaluation process and data information to Trustees on May 12. Topics of discussion included overview of initial data evaluation; upland, near shore, and riparian sampling and results; and Round 2 sampling.

### *Columbia River Component:*

- Completed draft Basis & Assumptions (B&A) public comment period on May 19.
- Met with Nez Perce (5/18), and Umatilla (5/20) to discuss B&A, as well as risk assessment methods.
- Met with RL/regulators on May 26 to review B&A comments. Regulators reviewed and approved B&A.

### *Closure Activities:*

- Completed lead sheath cable SAP and Waste Control Plan; ready to initiate sampling.
- Extracted 42,193 soil records from database and provided to risk assessment team for use in screening assessment for DQO.
- Received 16 CVP/RSVPs for completion.

### *Other:*

- Met with PNNL staff on May 19 to discuss coordination of risk assessment methods.

## UPCOMING KEY ACTIVITIES:

### *100/300 Area:*

- Incorporate comments received on Work Plan.
- Begin 60-day review on June 19 for draft Work Plan.
- Kick off DQO in June.

### *100 B/C Pilot:*

- Update Round 2 sampling activities for FY04.
- Convert risk narrative for analysis for Tribal scenario development.

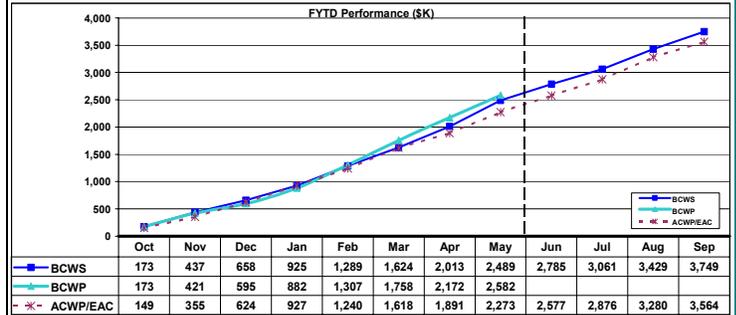
### *Columbia River Component:*

- Meet with RL on June 4 to obtain approval signature for B&A.

### *Closure Activities:*

- Begin sampling lead sheath cable.
- Begin implementing orphan sites task.
- Begin creating 100/300 Area soil sample maps.
- Complete remaining site template for RSVP documents.

## PERFORMANCE:



- **SV:** \$93K; 3.7%. B/C Risk Assessment Report Computational Method completed, and risk calcs started, ahead of schedule. Columbia River Component objectives/issues definition and draft B&A completed ahead of schedule.
- **CV:** \$309K; 12.0%. Columbia River Component Objectives/Issues Definition and draft B&A document required fewer resources to complete than planned due to lessons learned from 100/300 Area. Orphan Site implementation has not, to date, required the projected resource requirements.

## EAC TRENDS:

Current Month: (\$64K)

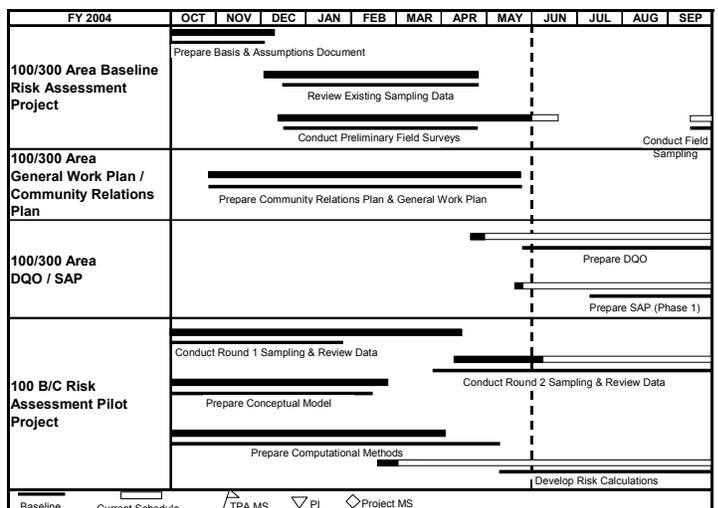
FYTD: (\$185K)

- EAC revision required to perform remaining workscope.

## TPA MILESTONES:

No FY04 milestones.

## SUMMARY SCHEDULE:



## ISSUES:

None for this reporting period.

# ENVIRONMENTAL RESTORATION PROGRAM MANAGEMENT AND SUPPORT PROJECT

May 2004 Monthly Report

## SAFETY:

FYTD: 3 first aid; 0 recordable-only; 1 lost workday case  
Current month: None

## HIGHLIGHTS:

### *General:*

- Held FY05/06 DWP priority workshop with RL and regulators. Results will be incorporated into the DWP development.

### *Safety and Health:*

- Training:
  - Revised Radiological Control Technician (RCT) training to improve the efficiency of temporary Senior RCT qualification in support of low-hazard activities. This process now takes as little as two days.
  - Completed a training needs analysis in cooperation with the Waste Management and Operations staff. This removed the requirement for a four-hour class for RCTs. This efficiency saves as much as 500 hours every two years.
- Technology Development:
  - Personal Air Monitoring - RadCon is procuring a test system to evaluate the ability to measure airborne plutonium using lapel Continuous Air Monitor systems in real time, while eliminating interference from radon.
  - Sample Counting - RadCon is procuring two different test systems to evaluate the capability of measuring plutonium activity on sample media in the presence of radon. This capability will improve the speed and accuracy of field bench-top measurements, allowing work to proceed faster following a high alpha measurement.
- Closed the National Tracking System report from the 2003 DOE Survey Assessment.

### *Technical Services:*

- Completed and transmitted Institutional Controls Assessment Report to RL.
- Completed technology evaluations for waste container sensors (Waste Operations Project), and beryllium contamination monitoring (Remedial Action Project).
- Received EM-23 funding for evaluating technology options to support decommissioning at the 107-N facility.
- Completed data collection for the annual ERC Nuclear Safety Assessment.
- Established process for obtaining and documenting sample location information to meet ERC project needs.

## UPCOMING KEY ACTIVITIES:

### *Safety and Health:*

- During the week of June 21-25, a DOE-HQ's team will conduct an on-site review of the ERC Voluntary Protection Program (VPP) to validate our application for VPP Star Status.

### *Technical Services:*

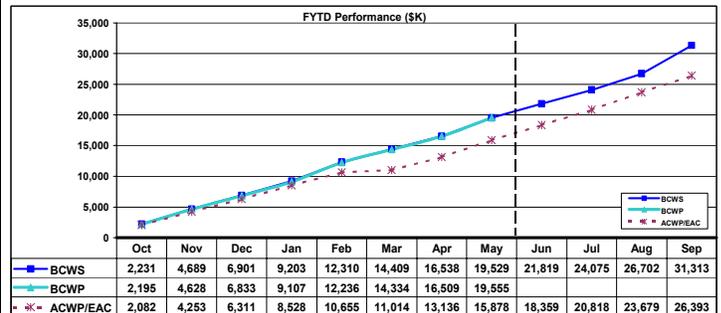
- Site-wide Air Operating Permit Annual Compliance Certification Report due to regulators in July.
- Annual ERC Criticality Safety Assessment Report due to RL in August.
- Site-wide Institutional Controls Assessment Report due to regulators in September.

## ASSESSMENTS:

FY 2004 ERC Assessment Data												
Assessments	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Aug
Scheduled	14	15	16	19	22	26	29	24	29	20	20	
Scheduled / Performed	11	12	13	16	15	19	21	22				
Past Due Completed	0	0	0	0	4	1	3	2				
Unscheduled / Performed	5	4	4	10	5	2	5	7				
Total Performed	16	16	17	26	24	22	29	31				

No significant findings during this reporting period.

## PERFORMANCE:



- **SV:** \$26K; 0.1%. N/A
- **CV:** \$3,677K; 18.8%
- **Technical Services:**
  - Underrun in Regulatory Support, Design Engineering, Technology Applications, and Sample and Data Management due to more direct project support.
- **QA&S:**
  - Lost full-time manager and 3 staff, which have not been replaced. Temporary personnel are being used to reduce impacts. Assessment scope has been reduced requiring fewer hours to perform each assessment.
- **Other:**
  - Prior-year rebill accounting adjustments were realized in March. Reduction of estimated performance fee.

## EAC TRENDS:

Current Month: \$81K

FYTD: (\$4,919K)

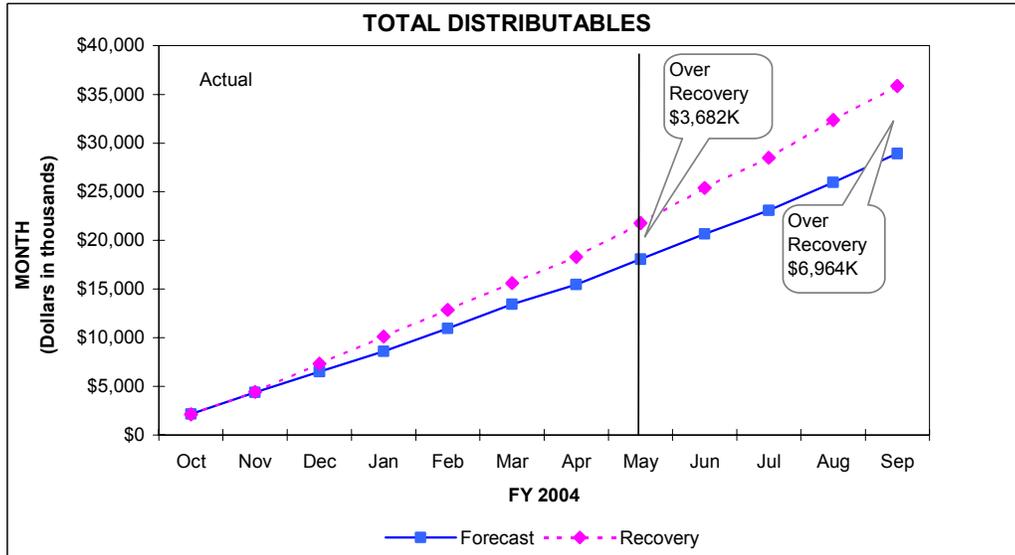
- Prior-year rebill adjustments and FY04 fee forecast reduction.
- Staffing reductions; staff charging more direct project support.

## ISSUES:

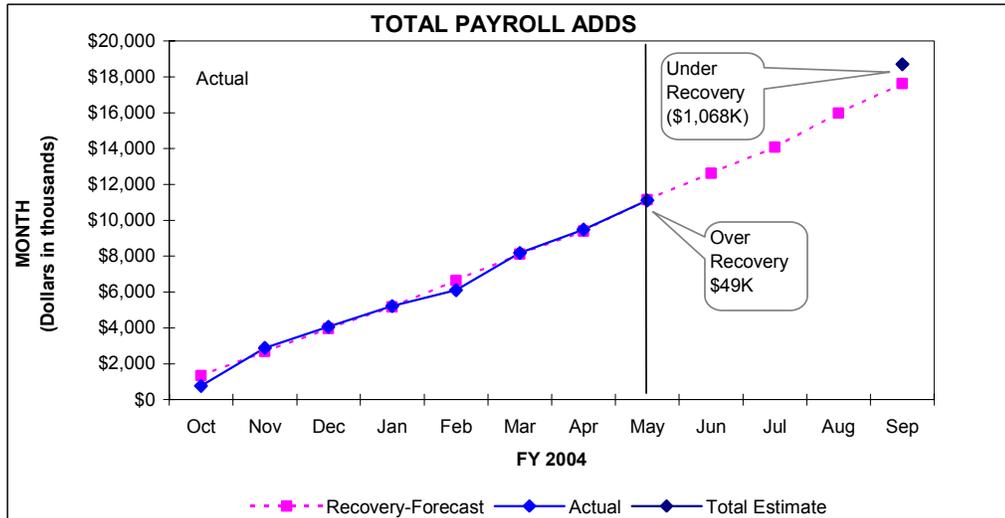
None for this reporting period.

# ENVIRONMENTAL RESTORATION RECOVERY OF DISTRIBUTABLE COST

May 2004 Monthly Report



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
	Act	Fcst	Fcst	Fcst	Fcst	Fcst							
Budget	2,289	2,801	2,242	2,533	2,906	2,680	2,625	3,143	2,590	2,503	3,142	2,968	32,421
Forecast	2,132	2,235	2,143	2,078	2,356	2,495	2,027	2,608	2,598	2,383	2,922	2,930	28,907
Recovery	2,113	2,310	2,908	2,765	2,750	2,751	2,710	3,449	3,635	3,080	3,903	3,498	35,871
Over/Under Recovery													
Monthly	-20	75	765	688	394	256	683	841	1,037	697	982	567	6,964
Cum	-20	55	820	1,508	1,902	2,158	2,841	3,682	4,718	5,416	6,397	6,964	



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Recovery-Budget	1,410	1,790	1,437	1,448	1,878	1,637	1,616	2,035	1,603	1,580	2,072	1,863	20,370
Recovery-Forecast	1,347	1,329	1,298	1,204	1,476	1,467	1,264	1,767	1,484	1,448	1,889	1,659	17,632
Actual	761	2,117	1,187	1,148	892	2,079	1,295	1,624					18,700
Over/Under Recovery													
Monthly	586	-788	111	56	584	-612	-32	143					
Cum	586	-202	-90	-34	550	-62	-94	49					-1,068