



*River Corridor  
Closure Project*

# Washington Closure Hanford: Cleaning up the River Corridor

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*Deputy Project Manager*

March 2015

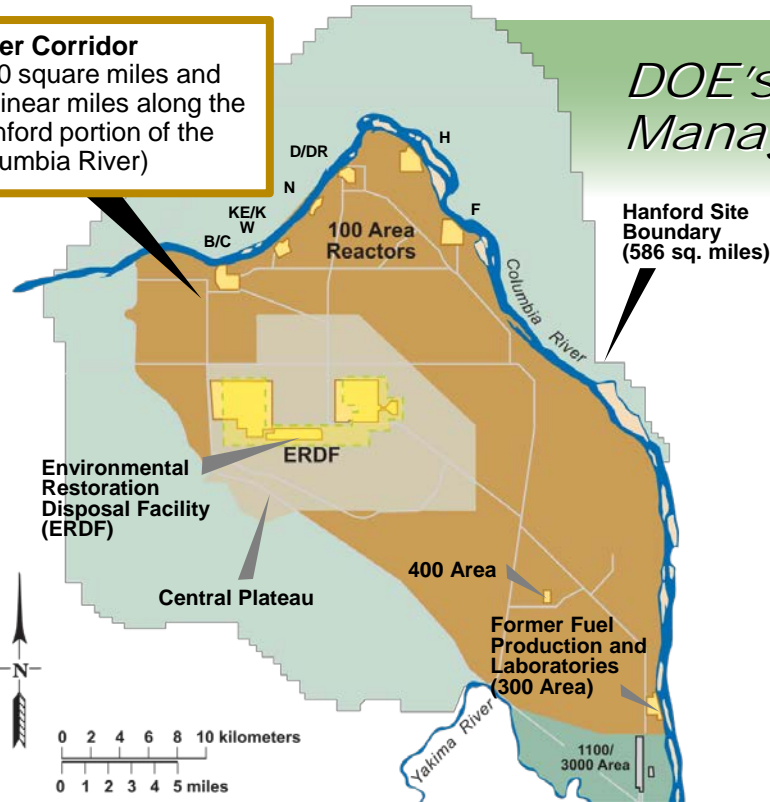


U.S. Department of Energy  
Richland Operations Office

# River Corridor Closure Project

*DOE's Largest Environmental Management Cleanup Closure Project*

**River Corridor**  
(220 square miles and 46 linear miles along the Hanford portion of the Columbia River)



**Client:**



**Scope:**

- 1) Remove hundreds of excess nuclear facilities
- 2) Place deactivated plutonium production reactors in interim safe storage
- 3) Clean up waste sites and burial grounds
- 4) Manage Hanford site waste disposal facility

- \$3B contract
- Cost-plus incentive fee contract
- Making great progress
- Project is 92% complete
  - 322 buildings remediated
  - 528 waste sites cleaned up

**Partners:**



40%



30%



CH2MHILL

30%

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# Success in Project Performance

- Saved \$285M in cleanup costs through efficiencies and reinvested it back into the project
- CPI = 1.13
- Transported and disposed 11 million tons of hazardous waste to Hanford's disposal facility
- More than \$1 billion in small business subcontract awards
- Met 100% of regulatory milestones
- Managing contract changes

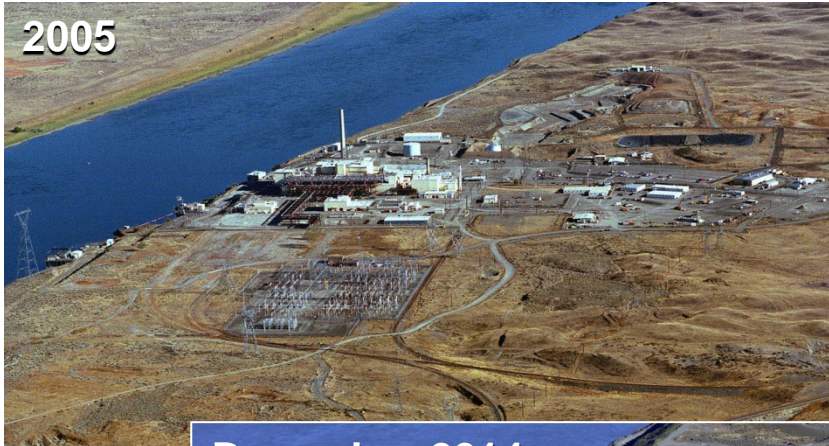


Radiological Liquid Waste System piping in the 300 Area was stabilized, removed, and disposed of at ERDF.

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# Success in Project Performance

## 100-N Reactor Area



### 100-N Cleanup

- 726,000 tons of clean material was used to backfill 98 remediated waste sites
- Revegetated with more than 3,000 pounds of native bunchgrass seed, and approximately 78,000 shrub tubelings planted
- Backfill left the area with more natural appearance, using contouring and boulders

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# Success in Project Performance

## 100-B/C Reactor Area



### 100-C-7 Waste Site Cleanup

- More than 120 acres cleaned up; 2.5 million tons of waste material removed
- Revegetated with native bunchgrasses and roughly 52,000 tubelings of three different native plant species
- Using contouring and boulders, backfilling left the area with a more natural appearance

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# Success in Project Performance

## 300 Area



### 300 Area Cleanup

- Located 1.5 miles north of the city of Richland, close to the Columbia River
- Center of Hanford's radiological research and fuel fabrication during the Manhattan Project and Cold War
- 171 facilities demolished
- 91 waste sites cleaned up



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# Success in Project Performance

## 100-D Reactor Area

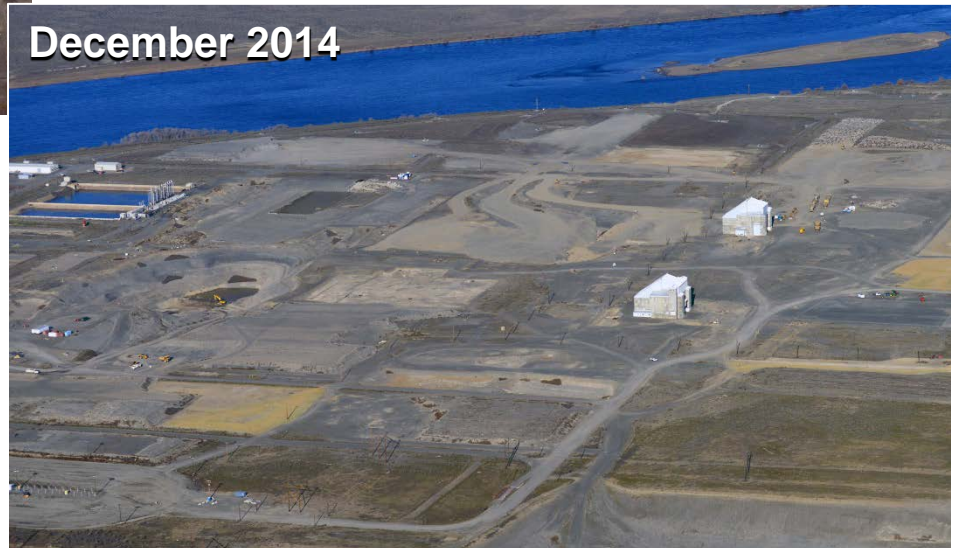
### During Operations



### 100-D Area Cleanup

- Have removed what is believed to be Hanford's primary source of chromium contamination to the Columbia River
- Two major chromium sites completed
- More than 60,000 tons of chromium-contaminated soil was sent to the Environmental Restoration Disposal Facility (ERDF) and treated

### December 2014



### Waste Site Cleanup

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# Contract Work Remaining in FY 2015

- Hazardous 618-10 Burial Ground in progress
- Cleanup and transition 84 square miles
- Complete 300 Area waste sites
- Complete design for the 324 Building waste site
- Complete remediation and backfill of waste sites in B, C, N, D, and H Reactor areas
- Closeout planning under way



The 618-10 Burial Ground is one of the most highly contaminated waste sites on the River Corridor.



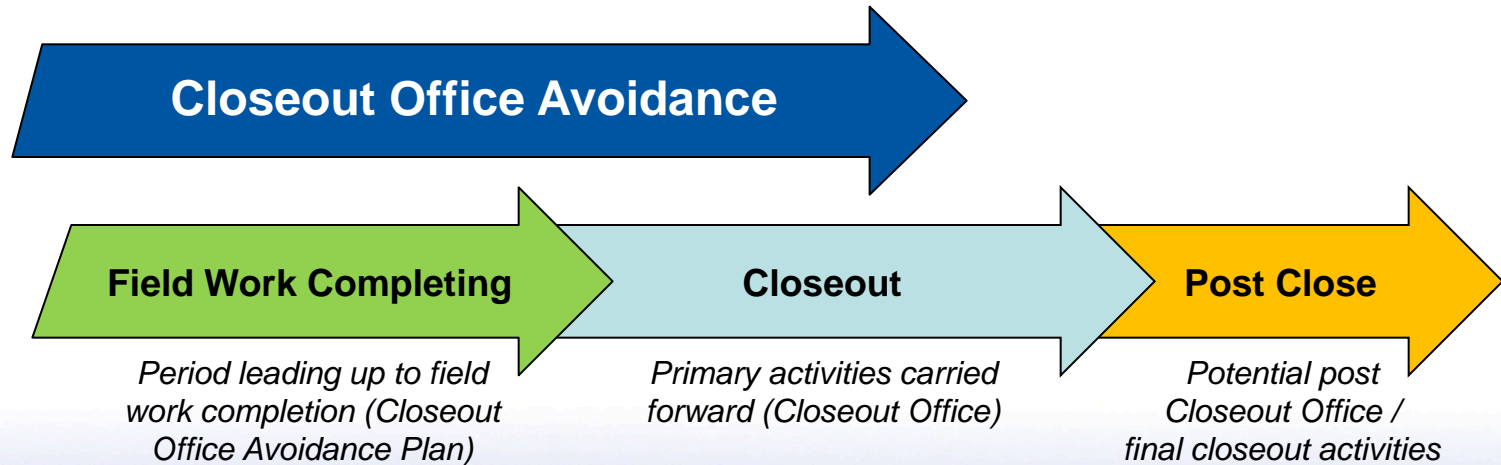
Soil samples found hazardous levels of contamination of more than 12,000 R/hr below a 324 Building hot cell.

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# WCH Closeout Closure Plan

- Finishing is hard
- Plans in place to be “done-done” at contract completion
  - Finalize paperwork in weeks, not years



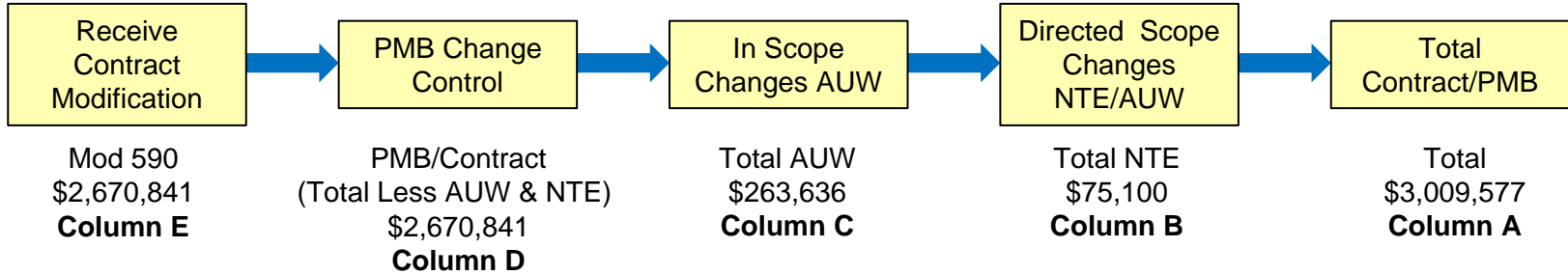
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# WCH EVMS Review History

- 08/05 - EVMS in place since contract award based on legacy system
- 07/07 - DOE-OECM Validation Review
- 11/07 - EVMS acceptance letter
- 02/09 - First formal corporate Surveillance Review (SR)
- 07/10 - DOE-OECM SR, July 2010
  - Seven CARs identified
  - Successfully closed and accepted by DOE-HQ
- 08/12 - Formal Corporate SR August 2012. Included confirmation of corrective actions and comments from previous HQ reviews.
- 12/13 - Stage 3 OAPM SR completed
  - 17 CARs, 1 CIO
  - Prepared CAP using outside SMEs familiar with previous DOE CAP process
  - Reviewed CAP with DOE-RL for their transmittal to OPAM

*Multiple reviews • Corrective actions accepted • Continued implementation verified*

# WCH Contract and Baseline Alignment



Column A		Column B		Column C		Column D		Column E	
CPR WBS	PERIOD END 10/30/15 AT COMPLETION	CPR WBS	PERIOD END 10/30/15 AT COMPLETION	CPR WBS	PERIOD END 10/30/15 AT COMPLETION	CPR WBS	PERIOD END 10/30/15 AT COMPLETION	Table B.1 Mod. 590	
CLIN #1		CLIN #1		CLIN #1		CLIN #1			
1.01 D4	648,703,394	1.01 D4	7,530,298	1.01 D4	0	1.01 D4	640,773,097		
1.02 ISS	75,902,162	1.02 ISS	0	1.02 ISS	949,672	1.02 ISS	75,902,162		
1.03 FR	677,911,216	1.03 FR	16,041,391	1.03 FR	40,976,333	1.03 FR	620,893,493		
	436,853,772				306,692		-309,692		
1.06 MS/OS	0	1.06 MS/OS	0	1.06 MS/OS	0	1.06 MS/OS	3,202,000		
1.09 Contingency	0	1.09 Contingency	0	1.09 Contingency	0	1.09 Contingency	0		
CLIN #4 Totals	253,611,356	CLIN #4 Totals	75,099,734	CLIN #4 Totals	0	CLIN #4 Totals	253,611,356		
Target Total	2,801,505,366	Target Total	75,099,734	Target Total	263,636,233	Target Total	2,462,769,399		2,462,769,276
CLIN #7		CLIN #7		CLIN #7		CLIN #7			
1.08 Fee	152,004,129	1.08 Fee	152,004,129	1.08 Fee	0	1.08 Fee	152,004,129		
1.08 Fee	17,391,474	1.08 Fee	0	1.08 Fee	0	1.08 Fee	17,391,474		
Fee Total	169,395,603	Fee Total	0	Fee Total	0	Fee Total	169,395,603		169,395,604
1.07 Pension	38,675,915	1.07 Pension	0	1.07 Pension	0	1.07 Pension	38,675,915		
Pension Total	38,675,915	Pension Total	0	Pension Total	0	Pension Total	38,675,915		38,675,915
CLIN #1		CLIN #1		CLIN #1		CLIN #1			
1.11 MS/GS-BE	0	1.11 MS/GS-BE	0	1.11 MS/GS-BE	0	1.11 MS/GS-BE	0		
BE Total	0	BE Total	0	BE Total	0	BE Total	0		
Total	3,009,576,884	Total NTE	75,099,734	Total AUW	263,636,233	Total Less AUW and NTE	2,870,840,917		2,870,840,795

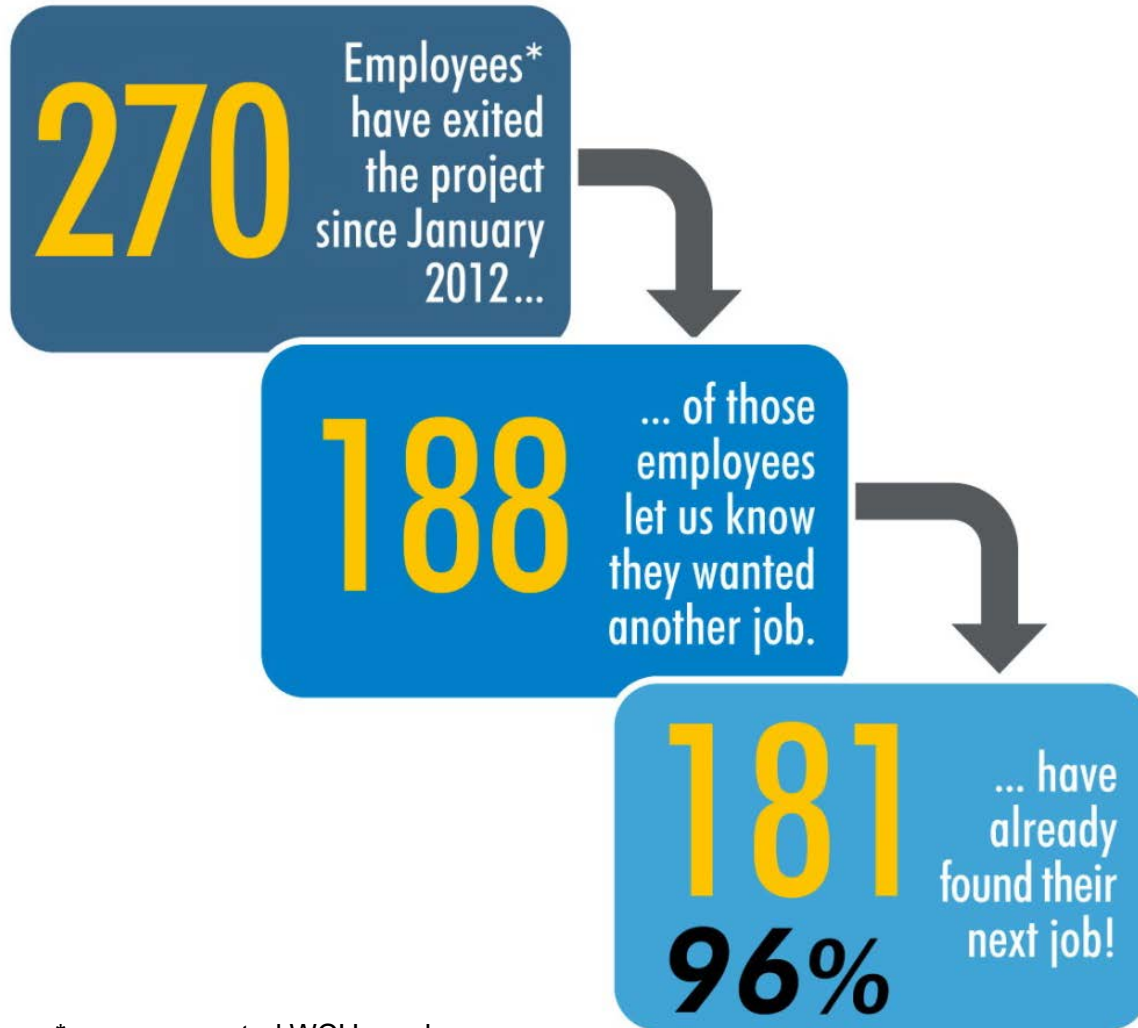
RIVER CORRIDOR PROJECT INTEGRATED PROJECT BASELINE  
CLIN(s) 1 - 2 - 3 - 4  
COST PERFORMANCE REPORT (CPR)

January 2015

DESCRIPTION	CURRENT PERIOD				ACUMULATED TO DATE				AT COMPLETION								
	BUDGETED COST OF WORK SCHED	ACTUAL COST PERCENT	VARIANCE	COPIES	BUDGETED COST OF WORK SCHED	ACTUAL COST PERCENT	VARIANCE	COPIES	BAC	EAC	VAC						
Current Baseline	15,117	17,500	17,820	3,388	150	2,842,804	2,877,225	0.97	92.6%	2,392,548	(85,578)	284,877	1.12	1.05	2,801,505	2,847,989	153,544
Current Baseline (BE)	15,117	17,500	17,820	3,388	150	2,842,804	2,877,225	0.97	92.6%	2,392,548	(85,578)	284,877	1.12	1.05	2,801,505	2,847,989	153,544
Site Closure	0	0	0	0	0	641,232	625,347	0.98	98.4%	566,310	(15,876)	59,037	1.10	1.04	648,703	644,782	3,921
Site Remediation Closure	0	0	0	0	0	75,962	75,962	1.00	100.0%	81,777	0	(5,815)	0.83	0.86	75,962	81,777	(5,815)
Waste Operations	1,736	3,620	3,045	1,884	576	890,408	805,862	0.91	83.2%	705,456	(80,826)	54,128	1.07	0.99	973,130	901,681	71,449
State/Fed Closure	0	20	0	15	147	77,221	74,683	0.97	95.7%	58,172	(12,537)	15,511	1.28	1.13	78,049	65,578	12,470
State Support/General Support	1,580	1,580	2,804	0	(1,214)	391,961	391,961	1.00	100.0%	385,812	0	36,179	1.10	1.05	390,855	453,900	(64,346)
Fee (Target Fee, SPIF & CPIF)	145	145	1,267	0	(1,122)	168,485	168,485	99.6%	99.6%	191,262	0	(22,777)			169,396	282,378	(112,982)
Target Fee - Base Scope	145	145	1,267	0	(1,122)	168,485	168,485	99.4%	99.4%	173,873	0	(22,778)			162,004	284,989	(122,985)
1.08 WCH Performance Fee	145	145	1,267	0	(1,122)	168,485	168,485	99.4%	99.4%	173,873	0	(22,778)			162,004	284,989	(122,985)
Target Fee - ARRA Scope	0	0	0	0	0	17,381	17,381	100.0%	100.0%	17,381	0	0			17,381	17,381	0
1.08 WCH Performance Fee	0	0	0	0	0	17,381	17,381	100.0%	100.0%	17,381	0	0			17,381	17,381	0
Beryllium Program	0	0	29	0	(29)	0	0	0	0	1,516	0	(1,516)			0	3,928	(3,928)
Beryllium Program	0	0	29	0	(29)	0	0	0	0	1,516	0	(1,516)			0	3,928	(3,928)
Beryllium Program	0	0	29	0	(29)	0	0	0	0	1,516	0	(1,516)			0	3,928	(3,928)
1.11 MS/GS-Beryllium Support	0	0	0	0	0	1,516	1,516	100.0%	100.0%	1,516	0	(1,516)			0	3,928	(3,928)
TOTAL	16,263	17,660	19,224	3,368	(1,656)	2,843,969	2,784,386	0.97	92.5%	2,392,267	(85,578)	284,877	1.12	1.05	2,801,505	2,847,989	153,544

**Total  
\$3,009,577**

# Progress Toward Placement



\*non-represented WCH employees

01/30/2015

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