

Taking Closure to the Next Level - 13030

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ABSTRACT

The River Corridor Closure Project (RCCP) is the Hanford Site's first closure project and when it is complete, in 2015, it will have cleaned up 220 mi² of contaminated land adjacent to the Columbia River. Washington Closure Hanford (WCH) was selected by the DOE to manage the removal and cleanup of Hanford's nuclear legacy along the River Corridor. Work began in 2005 and is now more than 85% complete with more than 2 years left in the contract. A Closure Team was commissioned in December 2009 and has since issued a closure strategy and a disciplined three-phase approach to transition land parcels to DOE, Richland Operations Office (DOE-RL) as cleanup is completed. This process supports DOE-RL objectives for progressive footprint reduction based on the division of the River Corridor into geographical land parcels. It also allows for incremental area-by-area transition and turnover to the Long-Term Stewardship program. Several important milestones stand between now and the successful end of the RCCP. They include overall funding impacts, working with DOE-RL on new scope additions, meeting regulatory milestones, and maintaining a strong safety performance.

INTRODUCTION

WCH continues to accelerate the workscope in the Hanford River Corridor Closure Contract awarded by DOE in April 2005. WCH is a limited-liability company owned by URS, Bechtel National, and CH2M HILL. The River Corridor Closure Contract (RCCC) is a 10-year (2005-2015) cost-plus, incentive-fee closure contract, the first at the Hanford Site (Fig. 1). Cost incentives provide for an 80/20 cost savings split. For every dollar saved over the target cost, DOE-RL keeps 80 cents and WCH will earn 20 cents. The fee is contingent on completing all scope safely and efficiently by the end of the contract. A Conditional Payment of Fee clause allows for fee reduction for environmental, safety, and health performance failures.

The River Corridor (RC) is located between the Columbia River and the Hanford Site's Central Plateau. Cleanup of the RC consists of remediating over 500 waste sites and burial grounds, demolish over 300 buildings and structures, place reactors into interim safe storage, and operate and expand, as necessary, the Environmental Restoration Disposal Facility.

The RCCP is the Hanford Site's first closure project and when it is complete, in 2015, it will have cleaned up 220 mi² of contaminated land adjacent to the Columbia River. The project is unique in several ways.

- The RCCP is being carried out in the midst of other Hanford projects that are scheduled to continue for decades. Hanford, like some of the larger DOE sites, will likely be closed in phases because of its complexity. The intention is that the RCCP will provide valuable Lessons Learned for the rest of Hanford and other sites.

- The RCCC is many times larger than all the preceding closure contracts.

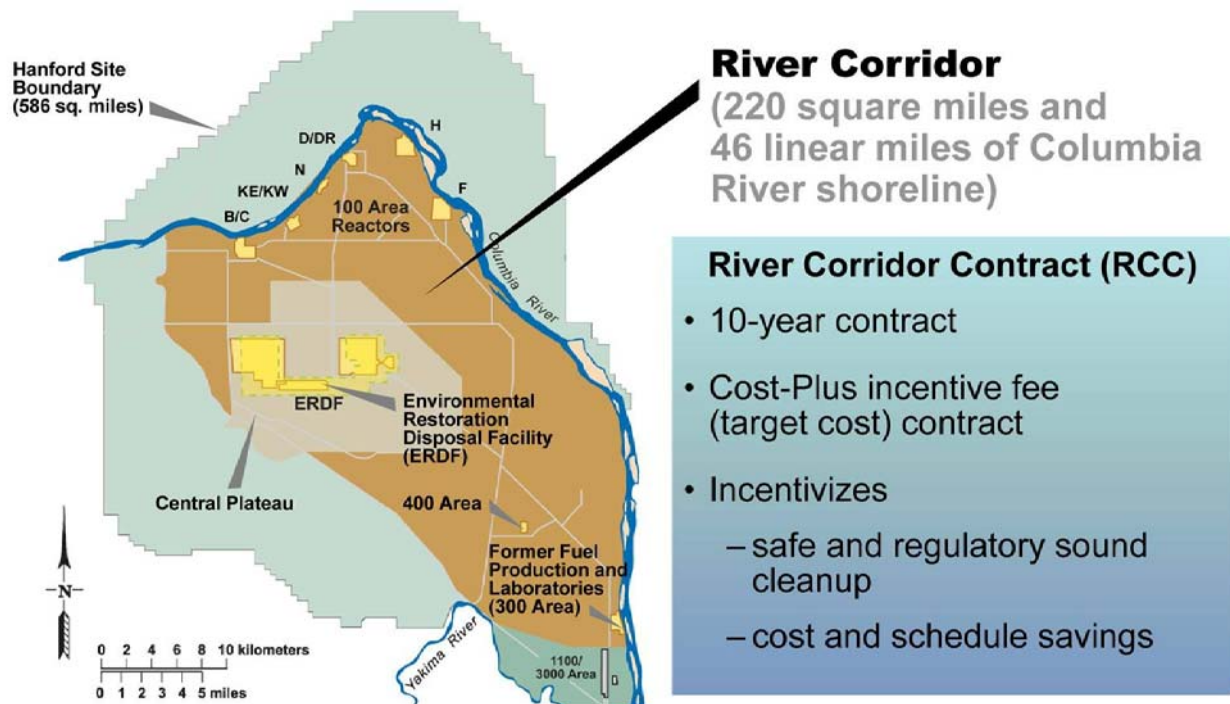


Fig. 1. Map showing 220 mi² of the River Corridor Closure Contract.

- The River Corridor is adjacent to the Columbia River, one of the largest rivers in North America, and includes a 50-mi stretch of river known as the Hanford Reach, which is the last free-flowing stretch in the United States.
- The RCCC's current cleanup is authorized by the Interim Action Records of Decision (IARODs) that, when final, may require further actions.

By the time the RCCP was less than half complete, it had sustained several major changes that added scope in some cases and deleted scope in others. WCH and DOE -RL collaborated to start the momentum for closure by commissioning a WCH Closure Team (Team) in 2009 with the mission of plotting a new path to closure. The Team was formed in December 2009 and by the end of 2010 had issued the closure strategy document *Washington Closure Hanford Closure Roadmap* (the WCH Roadmap) [1]. Implementation of the strategy began in 2011 by communicating to WCH's employees the closure messages of 1) closure is here, 2) changes continue, and 3) our people matter. The Team also worked with DOE-RL to begin transitioning and turnover of completed areas within the RCCP to the Hanford Site Long-Term Stewardship Program.

DISCUSSION

Closure Progress

WCH is on track to be over 90% complete with the scope by the end of calendar year 2013, including workscope that was added later in the project. With a little more than 2 years before the end of its contract, WCH is well underway with continuous planning for and implementing project termination.

From mid-2011 to the present, closure actions are underway or have been completed. A people plan had been endorsed by DOE-RL and was implemented in November 2011. Since January 2012, 87% of employees who have exited the project and wanted to pursue another job have found their next assignment. Transition management training has provided tools needed to help lead employees through the end-of-assignment process.

A new process called Lean was adopted to streamline work practices and was successfully applied company wide. Lean was utilized in the following areas:

- Closure documents processes that required extensive internal preparation then lengthy external review and approval cycles
- Allocation of limited transportation and waste disposal resources to meet aggressive remediation schedules
- Effective start-of-the-day routines in field operations
- Improved excavation and load out processes
- Approaches to strengthen safety culture and support disciplined operations.

A revised Partnering Agreement was drawn up between DOE-RL and WCH that provided a more practical approach to implementation. The Partnering team committed to support each other in completing the goals and objectives critical to achieving mutual success for completing the RCCP. In addition, DOE-RL Closure Teams were established and are working closely with WCH in completing the workscope by geographic area, transitioning each area to long-term stewardship, and minimizing the duration of a Closeout Office post-contract termination.

WCH's Project Services completed a business closure plan that provides detailed closure paths for every department. Organization changes have been made and the Closure directorate subsumed the Engineering; Environmental Protection; and Quality, Safety and Health organizations.

A new Regulatory Strategy was approved and is now being implemented with much more effective results. Field work managers are working together to produce integrated plans for demobilization and remediation on work completion, resulting in completing field cleanup and transitioning of River Corridor to the Long-Term Stewardship Program (Fig. 2).

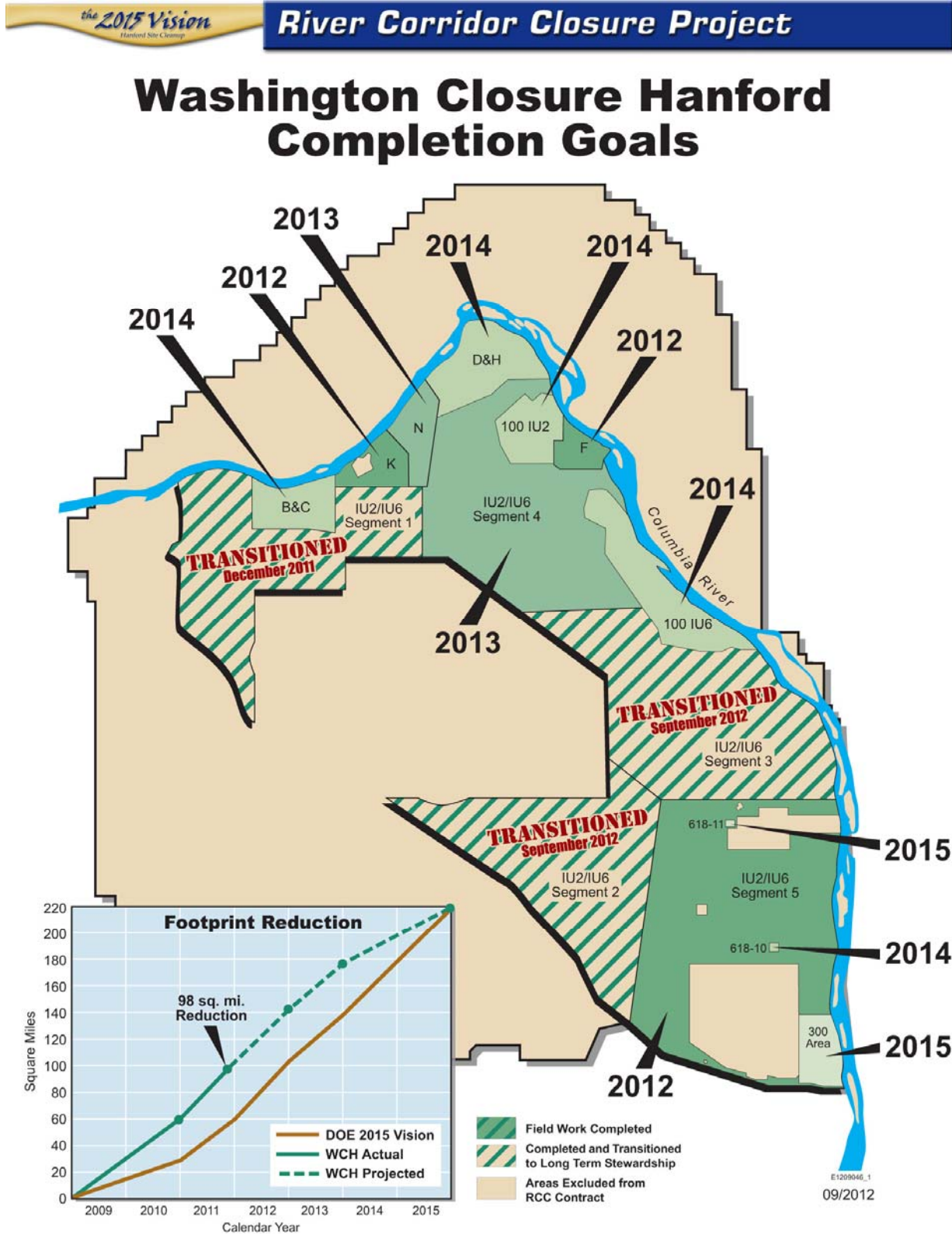


Fig. 2. River Corridor Closure Contract and Completion Goals.

Challenges to Successful Completion

The main closure events to date are shown in the timeline in Fig. 3. This timeline depicts the RCCP has less than 3 years left to run. Several important risk milestones stand between now and a successful end of project. These risks and the actions being taken to mitigate them are described below.

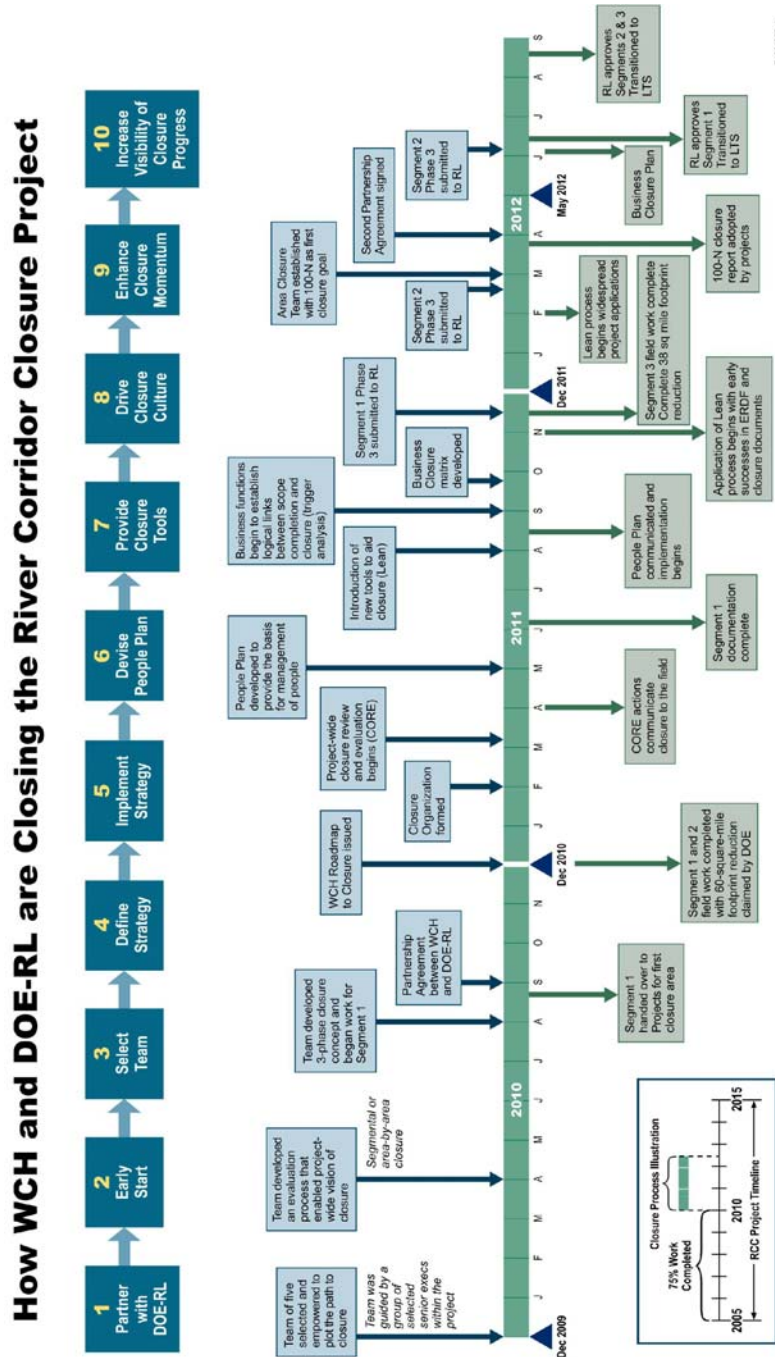


Fig. 3. Timeline for Closing the River Corridor Closure Project.

Strong Safety Culture Amidst Impact of Change

Change is central to the closure of a project and it has long been recognized as a major risk to maintaining a strong safety culture. Therefore, Change Management is vitally important to maintaining a strong safety performance as WCH approaches closure of the RCCC.. WCH has demonstrated sustained, sound performance and holds the trust of the workforce. While these attributes are noteworthy, safety will need to be taken to the next level. The drive for continuous improvement, amidst changes like reorganizations within the company and completing workscope that will result in employees reaching their end of assignments, is necessary to ensure work teams do not become distracted and are able to effectively transition as staff are reduced. Challenges will be to keep safe work performance the overriding priority to protect the workers, the environment, and public.

Unexpected Complexity of Scope and New Scope Additions

The unexpected complexity and additions of new scope to the project continues to be part of “business-as-usual” for WCH. WCH continues to address unknown risks and unexpected complexity of the scope while maintaining a strong safety performance, a positive schedule, and cost variance while getting the new scope approved through a streamlined and successful Request for Equitable Adjustment process.

As the project approaches its end date, unexpected issues like significant increases in chromium contamination at reactor areas D and H and highly contaminated soil beneath the 324 Building (~8,900 R/hr) will result in these remediation projects not being completed by the end of the contract. In addition to the unexpected complexity, there is also new scope such as the discovery of new petroleum waste sites at N Reactor along the Columbia River. Mitigation of this risk must begin with its mutual recognition by WCH and the DOE-RL. Due to risks, such as the ones mentioned, and the effectiveness of getting more workscope completed than originally expected, discussions for completing the remaining workscope past the 10-year contract is being considered. The timing for these considerations is critical as the project progresses down the path to closure.

Tri Party Agreement Milestones

The Tri-Party Agreement (TPA) milestones represent actions necessary to ensure acceptable progress is made toward the Hanford Site compliance with regulatory requirements. Numerous TPA milestones directly associated with the workscope performed by WCH are at risk because many of the unexpected complexities and unknowns encountered during cleanup impact their completion on schedule. Currently, these affected TPA milestones are in the process of being renegotiated. WCH cannot lose sight of the importance of the TPA milestone completion as it strives to safely succeed with completing the performance contract scope (called Scheduled Performance Incentive Fee [SPIF]), complete cleanup of the River Corridor to meet the IARODs and work within the funding constraints that impact completing work. The field projects have the milestones imbedded in their schedules and are part of WCH’s plan-of-the-week discussion. The importance of meeting the milestones is directly tied to contract performance and being successful with work execution. Teaming with the Tri-Parties is the key to achieving timely resolutions to milestones in jeopardy while supporting the intent of the milestones of demonstrating cleanup progress at the Hanford Site.

Funding Constraints

With less than 3 years left in the contract, funding has been reduced and the profile for work completion over these last couple years has been altered accordingly. A recent contract modification from our client, DOE-RL, has directed this change with focus on completion of projects such as the 618-10 and 618-11 Burial Grounds, and the 324 Building in the 300 Area. Matching the remaining work to the reduced funding becomes more of a risk in complex projects such as the 618-11 Burial Ground and the 324 Building where there is a much higher risk of complexity resulting in potential schedule delays.

SPIF Distraction

The project is focused on completing the scope that will earn the SPIF at the end of fiscal year 2013. While important, this focus should not distract WCH from safely completing the remaining (non-SPIF) scope. Current project schedules show a clear distinction between scopes (SPIF and non-SPIF), this should ensure focus is maintained throughout the project. There is also a potential for SPIF scope to distract attention from TPA milestones. The end-point of some field remediation scopes for SPIF are not the same as those required for regulatory completion. Managing and working to the field project schedules is essential to achieving the SPIF workscope while meeting the TPA milestones.

Final ROD Impact

All remediation and closure work currently performed by the RCCP is under the authorization of the IARODs. Final Records of Decision (RODs) are planned to be issued within the next couple years, with the first one scheduled for early 2013; ahead of SPIF and project completion. The impact of these potentially new requirements on the RCCP will depend on decisions made by DOE-RL in terms of the extent to which existing scope may be changed to accommodate new requirements. For example, completion of some SPIF scope may be altered if DOE-RL requests that the clean up be done to the expectation of the new RODs. WCH is working with DOE-RL and the Regulators to develop a strategy of how to reduce the rework and yet maintain the momentum of Hanford's most important closure project.

SUMMARY

WCH is well underway in implementing closure actions and completing workscope. Segments 1, 2, and 3 are three of the largest areas within the RCCC scope, approximately 44.5 % of the River Corridor, and have been transitioned to the Hanford Site's Long-Term Stewardship Program (Fig. 2). By the end of calendar year 2012, field work in the 36-mi² Segment 5 and 2-mi² 100-F Area will be completed with the transition and turnover to Long-Term Stewardship occurring in 2013.

Over the next couple of years, WCH will continue to complete cleanup of the River Corridor following the completion goals. As field workscope is completed, progressive reductions of business processes, physical facilities, and staff will occur. Organizations will be combined and the management structure will flatten commensurate with workload. WCH employees will move

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on to new endeavors proud of their accomplishments and the legacy they are leaving behind as completing the first closure contract at Hanford.

REFERENCES

E. T. FEIST, *Washington Closure Hanford Roadmap*, WCH-356, Rev. 0, Washington Closure Hanford, Richland, Washington (2010).