



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

WASHINGTON CLOSURE HANFORD: CLEANUP PROGRESS ALONG HANFORD'S RIVER CORRIDOR

Scott Sax

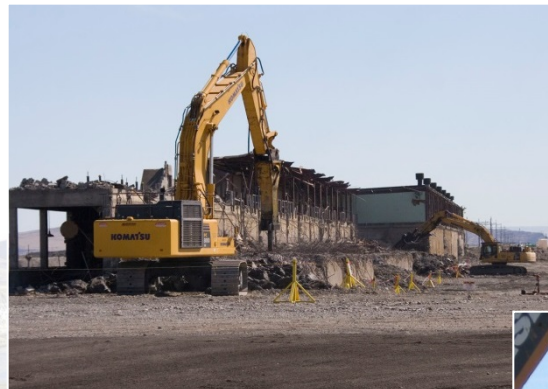
President and Project Manager
Washington Closure Hanford

September 2015



Our Work Scope

Hanford's River Corridor is home to Cold War legacy wastes from nuclear reactors and support facilities dating back to the early 1940s.



*Deactivate,
decontaminate,
decommission and
demolish 331 facilities*

*Clean up and close
583 burial grounds,
waste sites*

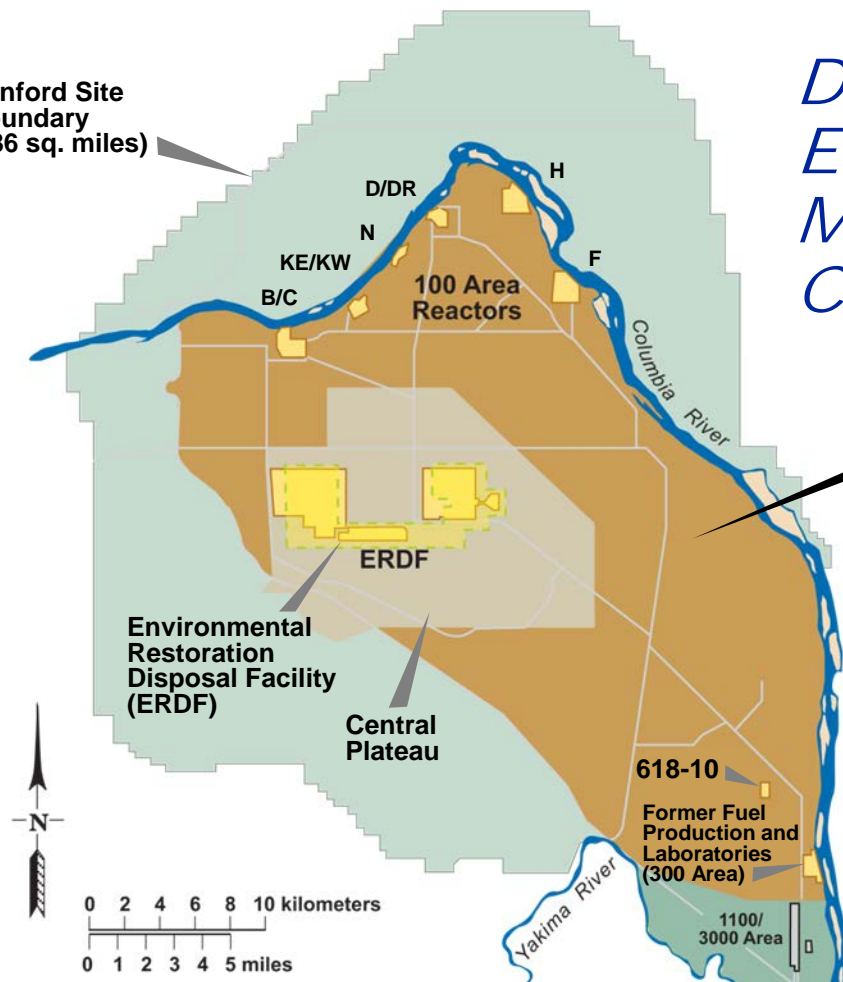


*Treat, transport, and
dispose 11.8 million
tons of waste debris
to disposal facility*

River Corridor Closure Project (RCCP) Overview

DOE's Largest Environmental Management Cleanup Closure Project

Hanford Site
Boundary
(586 sq. miles)



River Corridor

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

- \$2.7B contract
- Cost-plus incentive fee contract
- Making great progress
- Project is 93% complete

Partners:

AECOM

40%



30%

ch2m

30%

Recognized for Safe, Cost-Effective Progress

Tri-City Herald March 29, 2015

- Contract extended through 9/30/2016
- Received Project of the Year award from local chapter of the Project Management Institute; one of three finalists for national award



\$1.00

Wednesday, May 27, 2015

tricityherald.com

WASHINGTON CLOSURE HANFORD

Cleanup contract extended for 1 year

Additional time will bring total budget to almost \$2.9 billion

The Department of Energy is extending Washington Closure Hanford's contract by one year through September 2016, DOE announced Tuesday.

The extension gives some job certainty to the employees of the contractor.

At least some of the 700 employ-

ees will have jobs for another year.

The final year of the extended contract would focus mostly on two challenging projects, cleanup of the trenches at the 618-10 Burial Ground and placing the 324 Building in maintenance status for future demolition, said Scott Sax, president of Washington Closure, in a message to employees Tuesday.

Washington Closure is working under a 10-year contract that was expected to end four months from now with the environmental cleanup of the 220 square miles of Hanford

along the Columbia River completed.

But budget shortfalls, including sequestration's mandatory budget cuts, and some contamination that was found to be more extensive or more hazardous than expected, have kept the work from being done by September 2015. DOE also has added \$400 million worth of work to the contract since it was awarded.

The work covered under the contract through this fiscal year comes to just over \$2.7 billion, and the additional year will bring the contract

budget to a total of almost \$2.9 billion.

"They've done exemplary work," said Doug Shoop, DOE deputy site manager for the Richland Operations Office. "We would not have contemplated extending the contract if they had not done work in such a safe and efficient manner."

Work to date by Washington Closure has been \$295 million under budget.

However, DOE does not anticipate extending the contract past September 2016, Shoop said. That appears

to be the best time to end the contract, he said.

Washington Closure will continue to excavate trenches in the 618-10 Burial Ground north of Richland under the extension. The burial ground also has vertically buried pipes that radioactive and hazardous chemical waste was dropped down.

Washington Closure had driven over-casings into the ground around those pipes. Work to remove the pipes would only start in the final

See **CONTRACT** | Page A2

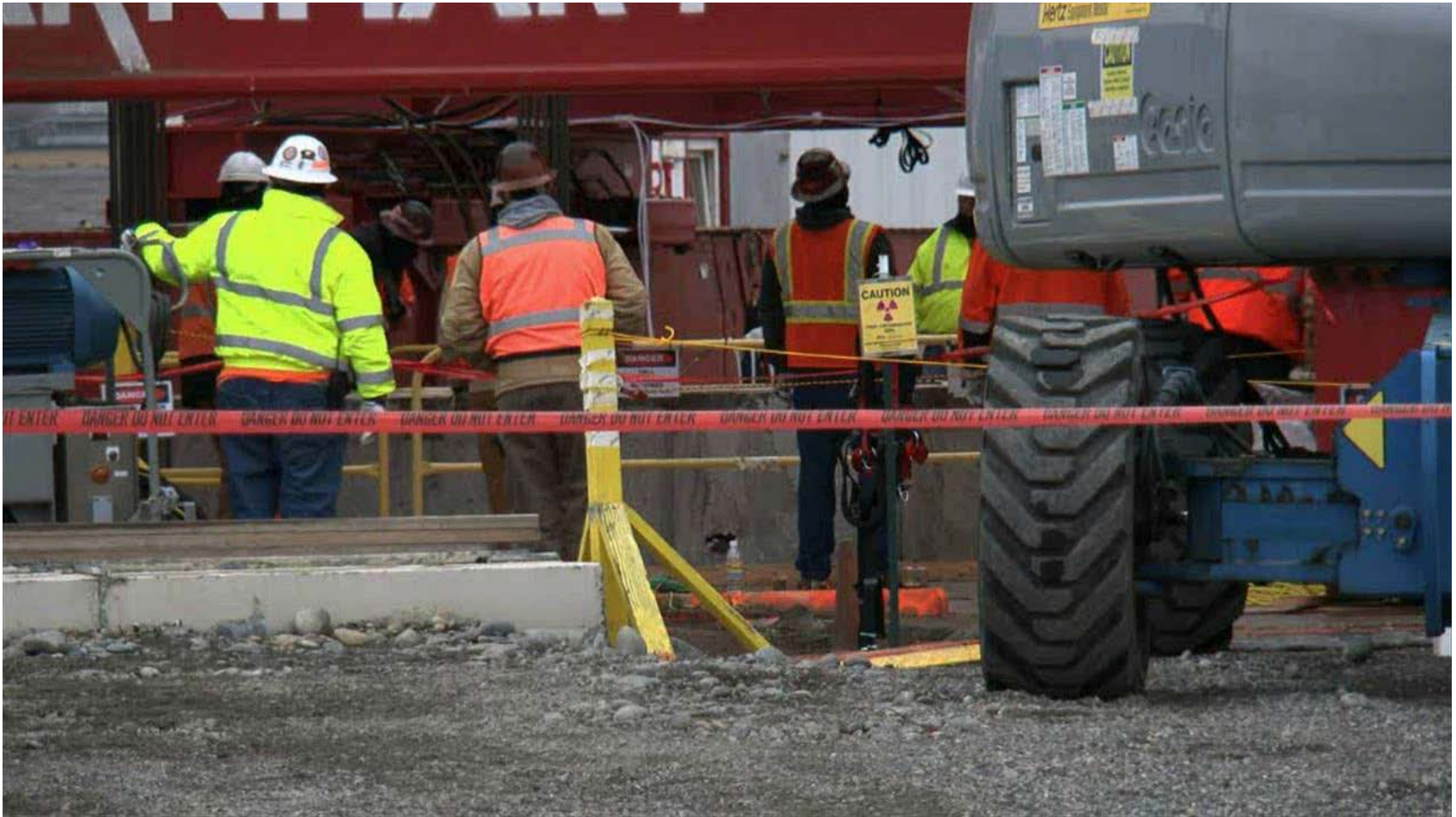


Risks and hazards facing our workers

- High-risk working conditions
- Radiological, chemical, and contamination hazards include chromium, asbestos, beryllium, mercury, and tritium
- Industrial and construction hazards
- Discovery of unexpected waste sites
- High-dose fuel elements and other reactor parts
- Unexploded ordnance
- Pyrophoric uranium oxide (UOX) drums



Risks and hazards facing our workers





Success in Project Performance

300 Area – 1982



Success in Project Performance

300 Area – 2015





Success in Project Performance

100-F Reactor Area – During Operations



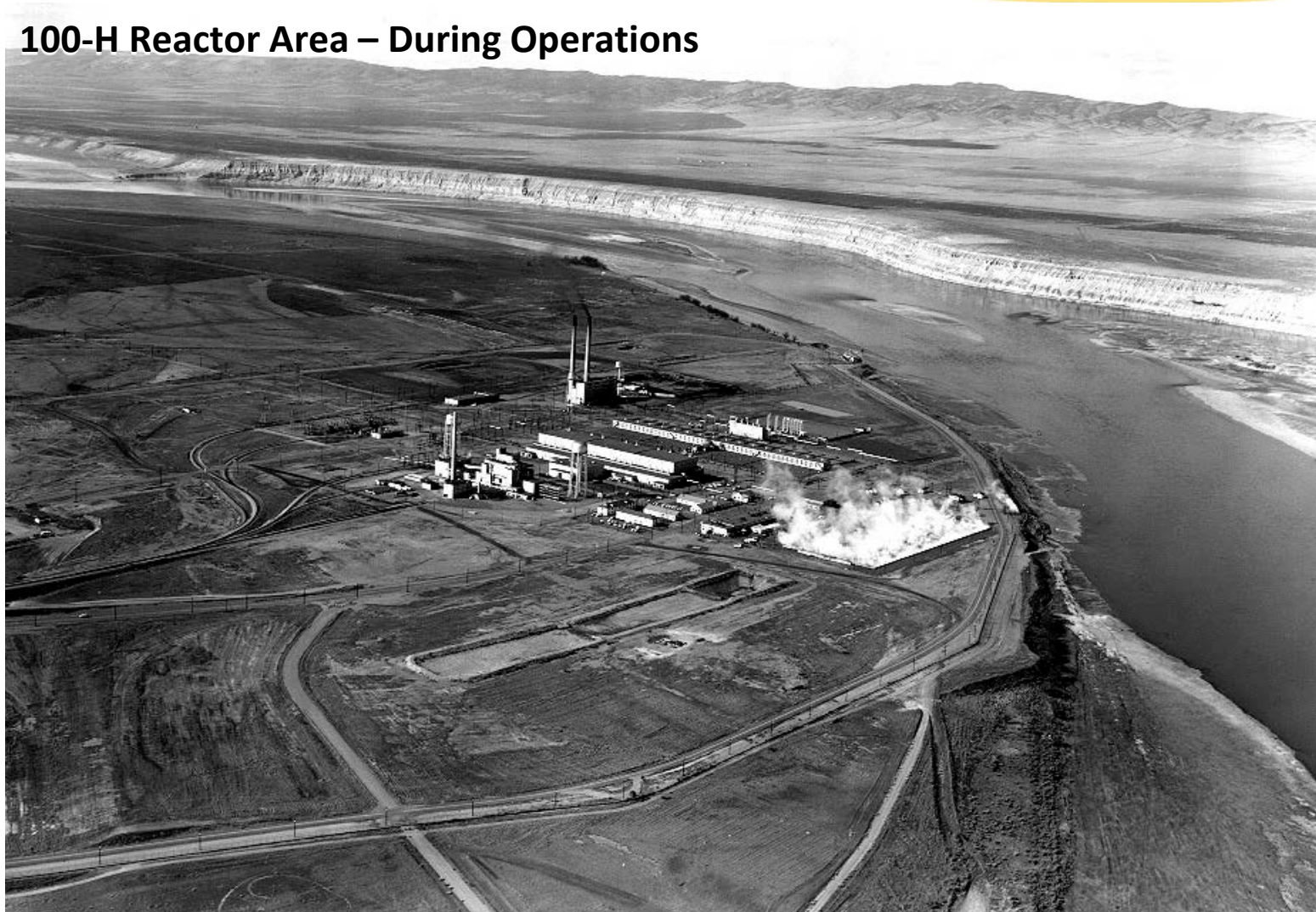
Success in Project Performance

100-F Reactor Area – 2012, Cleanup Complete



Success in Project Performance

100-H Reactor Area – During Operations



Success in Project Performance

100-H Reactor Area – 2015



Success in Project Performance

100-D Reactor Area – During Operations



Success in Project Performance

100-D Waste Site Excavation



Success in Project Performance

100-D Reactor Area – 2015



Success in Project Performance

100-N Reactor Area – During Operations



Success in Project Performance

100-N Reactor Area – During Excavation



Success in Project Performance

100-N Reactor Area – 2015



Success in Project Performance

100-B/C Reactor Area –
During Operations



March 2014



2012





The Environmental Restoration Disposal Facility (ERDF) is the “Hub” of the Site’s Waste Disposal

- Over 11M tons disposed since 2005
 - 17M tons disposed since 1996
- Over 16 million miles driven by Waste Operations drivers since 2005
- \$100M ARRA expansion project completed without injury



More than 2 million tons of chromium-contaminated soil has been disposed at ERDF.



ERDF's disposal cells cover an area equivalent to 52 football fields.



Most of the debris at ERDF has been remediated away from the Columbia River.

ERDF Super Cell Excavation – ARRA Funded





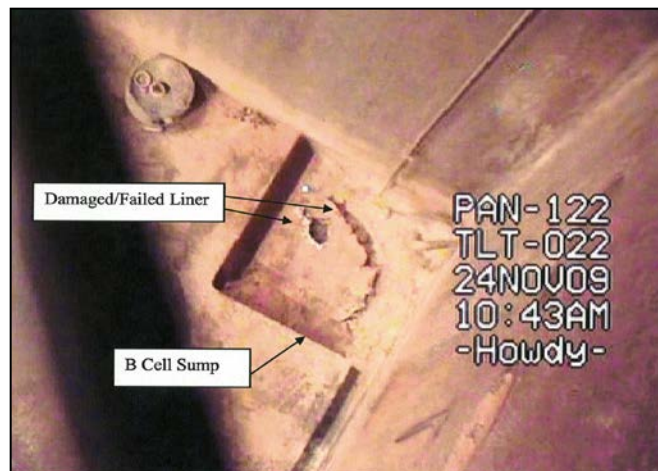
324 Building and 300-296 Waste Site

Overview of 324 Chemical Engineering Laboratory

- Contaminated soil beneath B-cell discovered just prior to demolition in 2010
 - Soil highly radioactive (up to more than 12,000 R/hr)
 - Soil contamination confined below hot cell footprint
 - Not currently impacting groundwater – monitoring wells in place



Workers collected contaminated soil samples from beneath 324 Building B-cell for analysis.



Grout removed from the B-cell trench and sump uncovered a breach in the liner in 2009



618-10 Burial Ground



Above: 618-10 Burial Ground, September 2015.

Right: Workers remove a decontamination cell that was once used a former Hanford research facility.



618-10 Burial Ground



Above: Waste is excavated, processed as appropriate, and shipped to a disposal facility.

Right: Steel over-casings have been installed at 80 vertical pipe units at the 618-10 Burial Ground.



Risks and Hazards at the 618-10 Burial Ground



Revegetation and Wetlands Restoration

- Since 2012, more than 1,100 acres along the Columbia River have been restored, including 30 acres of wetland restoration
- More than 575,000 shrubs and 28,000 pounds of seed have been planted
- More than 2,200 tons of native grass straw has been spread over revegetated



A significant portion of the 100-D Reactor Area has been revegetated.



Above: Wetlands restoration at a "borrow pit" near B/C Reactor Areas.



Left: Mulched grass straw covers revegetated areas near N Reactor.

2016 Work Scope and Closeout

- Finish strong
- Maintain safety performance and disciplined operations – avoid summit fever
- People Plan – Stay the course with people placement and retention processes – 96% placement rate since 2012
- Finish with pride – Closeout in months vs. years

