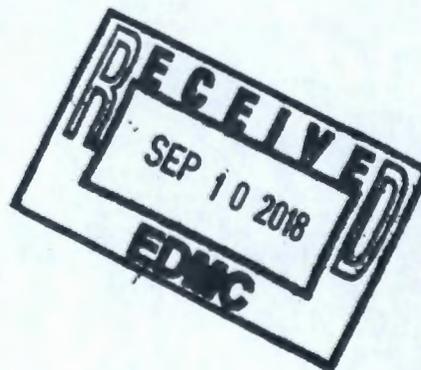


# River Corridor/Central Plateau Quarterly Tri-Party Agreement Milestone Review Meeting Minutes

---

Department of Ecology Building  
Richland, Washington  
July 19, 2018





**River Corridor/Central Plateau  
Tri-Party Agreement Quarterly Milestone Review  
Meeting Minutes  
July 19, 2018**

**SIGNATURES**

Approval: Alex Smith Date: 9/5/18  
**A.K. Smith, Ecology Representative**

Approval: J.R. Franco Date: 8/29/18  
**J.R. Franco, DOE-RL Representative**

Approval: D.R. Einan Date: 4 Sep 18  
**D.R. Einan, EPA Representative**

Minutes Prepared by: S.W. Davis Date: 8/29/18  
**S.W. Davis, Mission Support Alliance**



***Tri-Party Agreement River Corridor/Central Plateau Milestone Review  
July 19, 2018 Agenda***

**Place:** Department of Ecology, 3100 Port of Benton Blvd., Richland  
**Time:** 9:00-10:30 a.m.  
**Chair:** Joe Franco

Time	Milestones	Subject	DOE Presenter
9:00 a.m.	M-083	Plutonium Finishing Plant (PFP) Closure	Tom Teynor
9:10 a.m.	M-035	Data Access	Ben Ellison
9:15 a.m.	M-016, 093	100 K Sludge Removal	Mark French
9:25 a.m.	M-016, 089, 093, 094	River Corridor Closure	Mark French
9:35 a.m.	M-026	Land Disposal Restrictions Report	Al Farabee
9:40 a.m.	M-091, M-092	Acquisition of Facilities to treatment, storage, and disposal (TSD), transuranic (TRU), transuranic mixed (TRUM) and low-level mixed waste (LLMW)	Al Farabee
9:55 a.m.	M-016, 037, 085	Central Plateau Remediation	Al Farabee
10:15 a.m.	M-015, 016, 024, 085	Soil and Groundwater Remediation	Mike Cline
10:25 a.m.	—	Richland Operations Office Key Documents List	Mike Cline
10:30	—	Adjourn	—



**Tri-Party Agreement River Corridor/Central Plateau Milestone Review  
July 19, 2018**

<u>Name</u>	<u>Organization</u>
<u>Sally Davis</u>	<u>MSA-TPA</u>
<u>Craig Cameron</u>	<u>EPA</u>
<u>Tom Reynov</u>	<u>DOE-RL</u>
<u>Joe Franco</u>	<u>DOE RL</u>
<u>Cheryl Whelan</u>	<u>Ecology</u>
<u>CAROLYN NOOAN</u>	<u>MSA</u>
<u>Todd H. Daw</u>	<u>EPA</u>
<u>Ben Simps</u>	<u>EPA</u>
<u>Nina Memand</u>	<u>ECY</u>
<u>DAVE BOALD</u>	<u>YAL ERWIN</u>
<u>Stephanie Schler</u>	<u>Ecology</u>
<u>Dick Goswami</u>	<u>Ecology</u>
<u>Alex Smith</u>	<u>Ecology</u>
<u>Bob Long</u>	<u>DOE-RL</u>
<u>John Neat</u>	<u>DOE-RL</u>
<u>Roger Quintero</u>	<u>DOE-RL</u>



*Tri-Party Agreement River Corridor/Central Plateau Milestone Review  
July 19, 2018*

<u>Name</u>	<u>Organization</u>
<u>Glenn R. Kanzeck</u>	<u>DOE-RL</u>
<u>Stephanie Brasher</u>	<u>MSA TPA</u>
<u>Mike Wilson</u>	<u>MSA ESTH</u>
<u>Sara Austin</u>	<u>CHPRC</u>
<u>Dru Butler</u>	<u>MSA</u>
<u>Dave Einar</u>	<u>EPA</u>
<u>Alex Smith</u>	<u>Ecology.</u>
<u>Ed Soto</u>	<u>Ecology</u>
<u>Michael Cline</u>	<u>DOE/RL</u>
<u>Kaitly Higgins</u>	<u>DOE/RL</u>
<u> </u>	<u> </u>

**River Corridor/Central Plateau  
Tri-Party Agreement quarterly Milestone Review  
Meeting Minutes  
July 19, 2018**

**Plutonium Finishing Plant (PFP) Closure (M-083)**

Milestone

The U.S. Department of Energy, Richland Operations Office (DOE-RL) stated that the slides in today's handout goes through the end of May, but current statuses would be provided. DOE-RL noted that M-083-00 was missed, but that they are working to resume work safely.

Project Baseline Performance

DOE-RL reported \$80 million in authorization of funds for this year. DOE-RL stated that as of the end of June, \$54 million had been spent. DOE-RL and contractors were discussing FY19 funding needed to accommodate the extended schedule for PFP demolition with congressional staff back east. DOE-RL stated they do not have the final appropriation figures, but committed to keeping the regulators informed on what Tri-Party Agreement (TPA) milestones may be impacted.

DOE-RL reported working with the contractor to develop a revised baseline change proposal for the estimate to safely complete PFP to the slab-on-grade and to the requirements of the removal action work plan.

Status: March 2018 through May 2018

DOE-RL reported continuing moving forward with sampling and characterization of the 236-Z Plutonium Reclamation Facility (PRF) slab and McCluskey Room slabs, which were included in the current funding profile.

DOE-RL reported the radiological buffer area had been finalized and was in place. DOE-RL continued that all the highly contaminated PRF debris had been removed, and that 90 percent of the at-risk material had been removed from the site. DOE-RL reported having increased monitoring in the PRF, and that the site was stabilized and preparations ongoing to complete a contractor management assessment. The management assessment was estimated to run August 13-23, 2018, although a specific schedule was not yet established. DOE-RL extended an invite to the regulators to observe parts of the assessment, and committed to invite the regulators to the assessment outbrief scheduled around August 29, 2018.

DOE-RL stated that the contractor would not resume operations until all prestarts are closed. Six corrective actions from previous reviews remained open, primarily associated with establishing the final high-contamination area, airborne radiological area, and contamination areas. Some unforeseen nighttime loadout work may be anticipated. The air dispersion model for 234-5Z was sent back to Pacific Northwest National Laboratory (PNNL) for final adjustments, which have been shared with the Washington State Department of Ecology (Ecology).

Ecology asked if any additional prestarts found during the management assessment would be discussed at the outbrief, and DOE-RL confirmed that they would. DOE-RL explained that the contractor will have roughly two weeks to identify, correct, and validate that corrective actions are properly closed, and that Defense Nuclear Facilities Safety Board (DNFSB) and U.S. Department of Energy, Headquarters (DOE-HQ) staff would be present for the assessment.

DOE-RL described the revised radiological buffer area, and explained that an updated map would be provided.

DOE-RL thanked Ecology for their June 26, 2018 letter, and explained that DOE-RL had provided the final resumption of work plan. The removal action work plan was revised to address the parties' concerns, and DOE-RL requested that Ecology and U.S. Environmental Protection Agency (EPA) agree on a path forward for the communication plan. DOE-RL committed to keeping Ecology and EPA informed of all developments related to the 11 items, but that moving a communication plan through the DOE system would be a non-starter.

Ecology acknowledged DOE-RL's constraints, stated a willingness to close that action item, and committed to closing the action item via email. DOE-RL committed to keeping Ecology and EPA abreast of any updates.

DOE-RL summarized the presentation, and stated that size reduction activities were anticipated to begin after September 5, 2018 and conclude by October 24, 2018. The lower risk 234-5Z demolition would begin around October 29, 2018, to be completed by January 24, 2019. High-risk -5Z demolition work (remote mechanical A and C lines) would begin January 28, 2019 to be completed March 19, 2019, followed by high-risk loadout debris March 21 through May 16, 2019 and sampling and characterization late summer/early fall 2019.

EPA asked how the WA-1 would be impacted by the deferral of the uranium sequestration work, presumably due to potential facility alarms from ammonia gas odors. DOE-RL stated that subsequent studies indicated that uranium would have been driven down, so other options were being considered. EPA asked how that site is different from other potential test sites, and DOE-RL explained that the tank farms also could be impacted. EPA and Ecology indicated a desire for the path forward to be established as soon as possible, and DOE-RL committed to keep the regulators informed.

## **Data Access (M-035)**

### Recent Accomplishments and Planned Work Scope

DOE-RL reported that DOE/RL-93-69, *Tri-Party Agreement Databases, Access Mechanism, and Procedures* was updated with the Visitor Hanford Computer Access Request (VHCAR) citizenship information that has been removed, making the form Official Use Only. The information gathered on the VHCAR form, is gathered in other locations and is not needed when requesting Hanford Local Area Network (HLAN) access. DOE-RL stated that Integrated Document Management System (IDMS) was included in the DOE/RL-93-69, even though regulators could access the system previously.

## Issues and Challenges

DOE-RL stated that granting greater access to IDMS has not been solved, but there is a path forward. DOE-RL reported that it is working to create an area that will act as repository for Operating Record (OR) information. DOE-RL stated they have sent letters to Mission Support Alliance, LLC (MSA) to assess impacts on implementing new business processes. DOE-RL reported CH2M Hill Plateau Remediation Company (CHPRC) received their letter in regards to impacts of changing their business process July 18, 2018 and Washington River Protection Solutions (WRPS) letter will be sent shortly. DOE-RL stated that impacts for retroactively collecting OR is expected to be a big number. DOE-RL estimated that there are over 20 million files in the ORs.

Ecology stated the ORs are already required to be kept per Washington Administrative Code (WAC) 173-303-380, Facility Recordkeeping and would also fall under TPA Action Plan, Section 9, Documentation and Records. Ecology stated that they understand the magnitude of the task, and know it will be a scaled approach.

Ecology noted their frustration on the amount of time it has taken to gain access and appreciates the current work on the ORs.

Ecology stated that milestone M-035-09K is due September 30, 2018. Another meeting will be held in August 2018 to determine progress and discuss a milestone due date extension.

## **100 K Sludge Removal Project (M-016)**

### Sludge Removal Project Accomplishments March 2018 – May 2018

DOE-RL stated that the Engineered Container Retrieval and Transfer System operational readiness verification process was completed in April 2018, the contractor was authorized to start sludge removal operations in May 2018, and the contractor began loading sludge into the first sludge transfer and storage containers (STSC) in June 2018. The first sludge transfer was completed on June 14, 2018, and the first STSC was delivered and placed in safe storage at T Plant on June 25, 2018. DOE-RL explained that these actions completed TPA milestone M-016-175 (3 months) ahead of schedule.

DOE-RL explained that basin debris characterization and sampling continued during the reporting period, supporting follow-on K-West Basin deactivation milestones. In addition, DOE-RL reported that T Plant had received the readiness startup approval in February, but completed operation demonstrations to maintain proficiency during the reporting period.

### Milestone Summary

DOE-RL stated that milestone M-016-175 had been completed, and that milestone M-016-176 (complete sludge removal) is due in December 2019. DOE-RL expects milestone M-016-176 to finish on or ahead of schedule.

### Project Baseline Performance

DOE-RL reported the project is slightly ahead of schedule.

## Planned Activities June – August 2018

DOE-RL explained the project plans to continue sludge removal operations, and expects to complete one load and transfer cycle per month for the following 2-3 months.

Ecology asked how many total STSCs the project plans to complete the project. DOE-RL explained that the number of STSCs depended on how efficiently the STSCs are loaded, but that 20 are expected.

### **River Corridor Closure (M-016, 089, 093, 094)**

#### 618-10 Burial Ground

DOE-RL reported completing the backfill and re-contouring of the 618-10 Burial Ground, and that the closure verification package comment resolution was complete. In addition, DOE reported that the site infrastructure had been completely removed, the site was being transferred to Long-Term Stewardship, and revegetation would begin this fall.

#### 300-296 Soil Removal

DOE-RL explained that the Mockup Transfer Mechanism Remote Excavator Arm through supports and dummy posts were fabricated and installation had begun. In addition, DOE-RL stated that geotechnical soil testing by the external boreholes at the 324 Building was completed. This testing would help make sure the building does not move during B Cell excavation. DOE-RL also stated that the core drill sample compression strength testing report for the structural design modifications plan was completed, and that 324 Building interference removal activities and equipment fabrication continued. Finally, the basis of interim operation safety documentation was approved during the reporting period.

DOE-RL explained that planned actions include construction acceptance testing for the Remote Excavator Arm system, integrated equipment testing, completion of the 60-percent design structural modifications, and ongoing facility modifications.

#### 100 K Soil Remediation

DOE-RL explained that 100K soil remediation backfill was completed in the spring, which completed the backfill campaign for the fiscal year. DOE-RL continued that 116-KE-2 excavation is continuing, but that excavation at 100-K-99 was completed. Planned activities include completing the waste site closure documentation for two 100K waste sites.

#### K West Basin Deactivation and Demolition

DOE-RL stated that preparations were complete for the Garnet Filter Media Removal System integrated testing, and that operator training would be held during the June testing. In addition, DOE-RL stated that HiLine Engineering was working on the overflow recovery tool fabrication and installation procurement, and that Energy Northwest had completed STSC radar level instrumentation calibration and continued calibration of STSC leak detectors.

DOE-RL stated that the Sand Filter Media Removal System testing was completed, and the test report for the conceptual design was being internally reviewed.

DOE-RL continued that the engineering evaluation of in-basin modifications necessary to consolidate high-dose materials in the North Loadout Pit was initiated. In addition, DOE-RL noted the KW Fuel Storage Basin Settled Solids Sampling Scheme would be provided to the Sample Management Office, and modeling would be completed to establish dose rate thresholds.

DOE-RL stated the below-water debris characterization activities were placed on hold. Remaining basin characterization work has been placed on a punch list to integrate with other STSC filling, decanting, connecting, disconnecting, and shipping activities. Finally, DOE-RL stated that Attila software for 3D characterization has been procured, and that training has been scheduled.

#### Ancillary Facility Deactivation and Demolition

DOE-RL reported continuing thermal system insulation asbestos abatement activities in the 165K East Power Control building. The engineering planning for 166KE Fuel Storage Basin deactivation and demolition and the 130-KE-2 waste site remediation was finalized, and planning is ongoing. DOE-RL stated that an order was placed to obtain roof crawler parts that will be used to load test the 166KE roof.

#### K East (KE) and K West (KW) Reactor Interim Safe Storage

DOE-RL reported using topical survey data to quantify the solids amounts placed on the north and west sides of the 105KE Reactor since 2012 – approximately 30,000 cubic meters – and prepare a geotechnical report.

DOE-RL completed a draft updated of the 2012 geotechnical engineering study report for the soils surrounding the KE Reactor during safe storage enclosure construction to ensure a safe design.

In addition, DOE-RL reported having developed a 3-D model of the 105KE safe storage enclosure design to support future modifications and construction efforts. Finally, the DOE-RL federal project director, subject matter expert, and EPA representative conducted a walkdown to visually inspect the quantities of asbestos.

#### Significant Planned Actions (June – August 2018)

##### *100 K Soil Remediation*

DOE-RL shared plans to complete the excavation of crib 116-KE-2, and begin excavation of 100-K-47:1.

### *K West Basin Deactivation*

DOE-RL plans to complete setup of the GFMRS hardware, and complete the test procedure for integrated testing. In addition, DOE-RL plans to complete STSC instrumentation installation and obtain approval of the Sand Filter Media Removal System (SFMRS) test report.

### *K West Basin Characterization*

DOE-RL stated significant planned actions include obtaining packaging and shipping floor core samples to PNNL for isotopic analysis, completing the gamma ray spectrometry surveys of the debris fields in the Center and West Bays, developing a waste disposition plan, and developing a settled solids residual sludge sampling process.

### *Ancillary Facility Deactivation and Demolition*

DOE-RL stated significant planned activities include continuing the asbestos removal from the 165KE Power Control Building, and developing a preliminary plan for demolition of the 166KE Fuel Storage Bunker (FSB) and 130-KE-2 remediation.

### *K East Reactor Interim Safe Storage*

DOE-RL stated that development of a statement of work for the design modification/build of the KE Reactor safe storage enclosure would continue.

### Remaining Closure Operations

DOE-RL reported continual progress preparing for revegetation, and that the Little Egypt restoration activities were completed.

### Milestone Summary

DOE-RL presented the milestone summary table, which Ecology questioned related to the 300-296 M-016-00B milestone. DOE-RL indicated that the subject was discussed at the prior day's unit managers meeting, and that DOE-RL would need to discuss with DOE Headquarters before a determination will be made. DOE-RL acknowledged being behind schedule for M-016-85A. EPA supposed that the associated M-016-85 would also be at risk, and DOE-RL concurred. DOE-RL noted that until DOE Headquarters is consulted, they could not change the milestones' statuses. In addition, DOE-RL notes that they would be working with the contractor to learn the contractor's recovery approach. EPA stated an understanding that M-016-86 is at risk as well. DOE-RL concurred.

### **Land Disposal Restrictions (LDR) Report (M-026)**

DOE-RL explained that although the LDR Report is not a high priority, it is still "on the radar," and commitments are being tracked through the project manager meetings (PMM). DOE-RL

### Other Facilities Accomplishments (March – May 2018)

DOE-RL reported that some work is being completed at the Reduction Oxidation (REDOX) facility, with some resources being shared with PFP.

DOE-RL reported the installation of a new containment tent at B Plant, performed a change-out of nine pre-filters and supported a Department of Health inspection.

### Accomplishments (March – May 2018)

EPA stated that they did not reject DOE/RL-2017-05 REDOX sample analysis plan (SAP), draft D. EPA also stated that they have only emphasized that a SAP be completed as soon as possible so DOE-RL is not relying on the S&M characterization. DOE-RL confirmed they would review the SAP and status. Ecology requested an additional copy of the action memorandum for REDOX for their review.

### Milestone Summary

DOE-RL stated M-16-250C was completed March 29, 2018. Ecology stated that M-16-255 had been disapproved.

DOE-RL reported that they are working on a Tentative Agreement (TA) that will go out to public comment of the affected milestones.

### Planned Activities for Facilities and Waste (June 2018 – September 2018)

DOE-RL reported the demolition of 222-B is completed and is in process of sampling this week. DOE-RL stated, depending on the gravel, preventative maintenance in the 400 area and asbestos container material, additional work may take place.

### **Soil and Groundwater Remediation Project (M-015, 016, 024, 085)**

#### River Corridor Accomplishments (March – May 2018)

DOE-RL reported issuing the soil flushing treatability test plan in April of 2018 for KW (met maximum containment levels (MCLs), shut it down, and completed a rebound study). DOE-RL stated they think they have identified where the continuing source is located and will be doing a treatability test to verify if it can be flushed down. DOE-RL confirmed the design is 90 percent completed and will look like a drain field above the source. The drain field will be backfilled and injected with water to flush it down and captured by extraction pumps.

DOE-RL stated that they gave a white paper to EPA on the technical impracticability waiver for Kr-4 Sr-90 plumes and submitted the draft final Rev. 0 BC-5 proposed plan to EPA for review. DOE-RL plans to go out to public review this summer on the proposed plan.

DOE-RL reported completing design review and initiating construction on the FF-5 Stage B Uranium Sequestration project. Stage B will be completed in four different zones with colored coordinated fire hoses. DOE-RL reported their plan is to start September 5<sup>th</sup> and take roughly

three weeks to start sampling. Ecology requested a field visit. DOE-RL responded they are willing to give a tour.

DOE-RL reported submitting a Remedial Action Report (RAR) to EPA closing out the interim actions for 300 Area Interim ROD, in April. DOE-RL requested a response on the closeout. EPA confirmed a letter had been sent stating the interim action ROD is complete.

DOE-RL reported issuing a Rev. 0 to the 200-BP-5 Removal Action Work Plan in April which supported the action memorandum and the EE/CA for pumping 200-BP-5 groundwater over to 2 West. DOE-RL stated that it is an actual removal action work plan and no longer a treatability test.

DOE-RL stated they have finalized the 200-BP-5 and 200-P0-1 interim action record of decision strategy. DOE-RL reported the Interagency Management Integration Team (IAMIT) Determination was signed in the meeting prior identifies the path forward. DOE-RL stated they are proceeding to get an Interim Record of Decision (IROD) for 200-BP-5, which will expand the BP-5 groundwater pumping to included areas by C Farm, A Farm and potentially Gable Gap.

DOE-RL reported completing 200-DV-1 shallow borehole characterization. DOE-RL reported on laboratory tests on URGS treatability test and their options moving forward. DOE-RL stated there are two leachate tests, one is a 2-week test and the other is a 4-month test. The 2-week tests is comparable to the 4-month and was completed on the U8 crib site. While drilling the boreholes, core samples were taken. The core samples were saved and compared to the 4-month test, and they did not match. The test indicated that the uranium would be more mobile if ammonia were to be injected. DOE-RL stated that proceeding is on hold until further evaluations can be completed. DOE-RL stated an evaluation is planned on what can be done for treatability tests for 200-DV-1 and is due by the end of the fiscal year. DOE-RL confirmed a draft copy of the evaluation will be shared by the end of the fiscal year. EPA stated that U8 is part of WA-1 OU and hopes to continue to have treatability work on the west OUs.

DOE-RL stated they used an optimization plan for pulling water out of the modular tank storage units and treating it at 200 West Pump and Treatment Facility, and have discovered that the amount of purge-water from the rehabilitating wells at 2 West due to biological fouling is greater than the modular storage tanks were designed and are capable of handling. DOE-RL continued that the modular tanks cannot keep up with the demand. DOE-RL stated a plan has been put together to pull water from the modular tanks, then treat it at 2 West. DOE-RL has been working with EPA and if the plan works, to use this as a permanent option.

DOE-RL reported that the cultural review and clearance has been completed for 200-WA-1 characterization.

DOE-RL reported the completion of the EA-1 RI/FS work plan and SAP, and that they are with Ecology for an informal review. Ecology stated they received the submittal July 18, 2018 which is ahead of schedule. DOE-RL responded that the goal is to validate the plan is put together correctly and have it signed off by the end of the fiscal year. DOE-RL also said the DV-1 is the next one coming and is a Remedial Investigation/Feasibility Study (RI/FS) and not a work plan.

### Milestone Summary

DOE-RL reported 200-EA-1 is completed as of July 18, 2018. DOE-RL stated that submitting an Feasibility Study for 100-OL-1 is on schedule and has been moved to March 2019. Ecology stated 200-BP-5 was moved to March 2019.

DOE-RL noted Milestone M-015-93C for initiating characterization of the 200-SW-2 is at risk and the September 30, 2018 will not be made. DOE-RL stated that a change package was not approved in the 14-day period, and DOE-RL invoked dispute. DOE-RL stated that this milestone is included in the draft tentative agreement.

DOE-RL reported that completing remedial investigation of U Plant in 200-WA-1, along with the other four 200-WA-1 milestones are all at risk due to if one is missed it affects them all. DOE-RL stated that M-015-99 PFP access does not allow DOE-RL to get in and has put the milestone at risk. EPA stated the status should say to be missed. DOE-RL responded that a draft change control form has been submitted and the 110-mark has not passed and are trying to work on an agreement.

DOE-RL reported that 200-BP-5 is on schedule and the date has been moved to March of 2019 to complete the interim action RI/FS and proposed plan.

DOE-RL reported milestone M-016-19 as on schedule and it will be completed at the end of the fiscal year. DOE-RL stated that a letter has been sent to EPA documenting the completion criteria that was discussed, along with meeting notes and maps of where the wells are located. DOE-RL noted that main part of the milestone was to submit the chrome characterization and request for data review by the end of the fiscal year.

DOE-RL reported milestone M-024 due on June 1, 2018 has been completed. DOE-RL noted that discussion have been initiated and concluded with and will complete all construction of the wells for calendar year 2018.

DOE-RL reported milestone M-085-70 is at risk and will not make the September 30, 2019 date due to not starting work on October 1, 2018. DOE-RL noted that this milestone is included in the tentative agreement draft.

### Project Baseline Performance

DOE-RL noted that the baseline performance is looking good and the variance at completion of \$50 million is a 3 percent of \$1.5 billion.

### Planned Activities June – August 2018

#### *River Corridor*

DOE-RL stated that 100-D/H Reactor Area Record of Decision (ROD) is ready to be signed by Ecology. Ecology responded that Monday morning would work to sign. DOE-RL stated the will have them ready Monday morning. EPA stated that the ROD can be signed independently and EPA needs to brief their headquarters. DOE-RL confirmed they will get a scanned copy to EPA.

DOE-RL reported Rev. 0 100-BC-5 RI/FS is to be issued with the intent of going to the public this summer. DOE-RL noted that comments are being resolved so DOE-RL can issue Rev. 0 100-BC-5 PP.

DOE-RL stated completion of 300 area uranium sequestration and that they are waiting for the chemical delivery of the uranium. DOE-RL noted planned activities are from June to August 2018.

#### *Central Plateau*

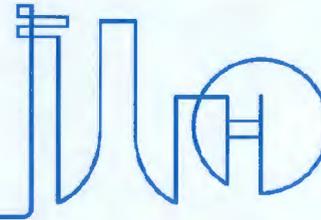
DOE-RL reported completion of installation of 200-UP-1 performance monitoring wells. DOE-RL noted the draft 200-EA-1 RI/FS is complete.

DOE-RL stated that the Layup of 200-DV-1 uranium reactive gas sequestration field site is complete and the ERTs will be left.

#### **Richland Operations Office Key Documents List**

DOE-RL presented the key documents list, and noted that changes from the previous list were indicated in blue. Ecology suggested that the Remedial Investigation decisional draft should be changed to July instead of September 2018, but DOE-RL explained that they anticipated it by July, which is before September.

MSA stated that the M-036 milestone – the Lifecycle Scope, Schedule, and Cost Report – issued an IAMIT milestone review form that would be part of the final minutes package that goes out for review.



# PFP Closure Project – March - May 2018

## TPA Milestone Series: M-083



*Loading super sacks containing previously packaged demolition debris in May 2018.*



**June 21 , 2018**  
U.S. Department of Energy  
U.S. Environmental Protection Agency  
State of Washington, Department of Ecology



# Milestone

Milestone	Due Date	Description	Status
M-083-00	9/30/17	Complete PFP Facility transition & selected disposition activities. Completion of this major milestone includes the following key elements: 1) completion of all activities necessary to achieve end point criteria established through Milestone M-83-20 for placing the PFP facility in a safe and stable S&M mode, 2) completion of all activities described in the approved M-83 series interim milestones and target date; and 3) completion of the balance of PFP selected disposition activities pursuant to the final action memoranda and work plans. Also see "description/justification" contained in change form M-83-01-03.	Missed



# Project Baseline Performance

## Contract to Date (Through May 2018)

RL-0011 Nuclear Material Stabilization and Disposal	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
<b>Total</b>	\$988.6	\$973.0	\$1114.8	(\$15.7)	(1.6%)	(\$141.8)	(14.6%)	\$988.7	\$1197.9	(\$209.3)

## Fiscal Year to Date (Through May 2018)

RL-0011 Nuclear Material Stabilization and Disposal	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
<b>Total</b>	\$ .8	\$9.3	\$48.6	\$8.6	1126.8%	(\$39.2)	(419.5%)



## Status: March 2018 through May 2018

- Radiological Buffer Area boundary and work control zone boundary adjusted
- 127 of 234 containers of previously packaged waste shipped
  - Previously packaged waste comprises 90 percent of the material-at-risk
- Enhanced monitoring deployed
- Plutonium Reclamation Facility rubble remains under at least 18 inches of clean overburden and fixative
- Approximately 40 percent of Main Processing Facility remaining for demolition
- Fixative applied as scheduled

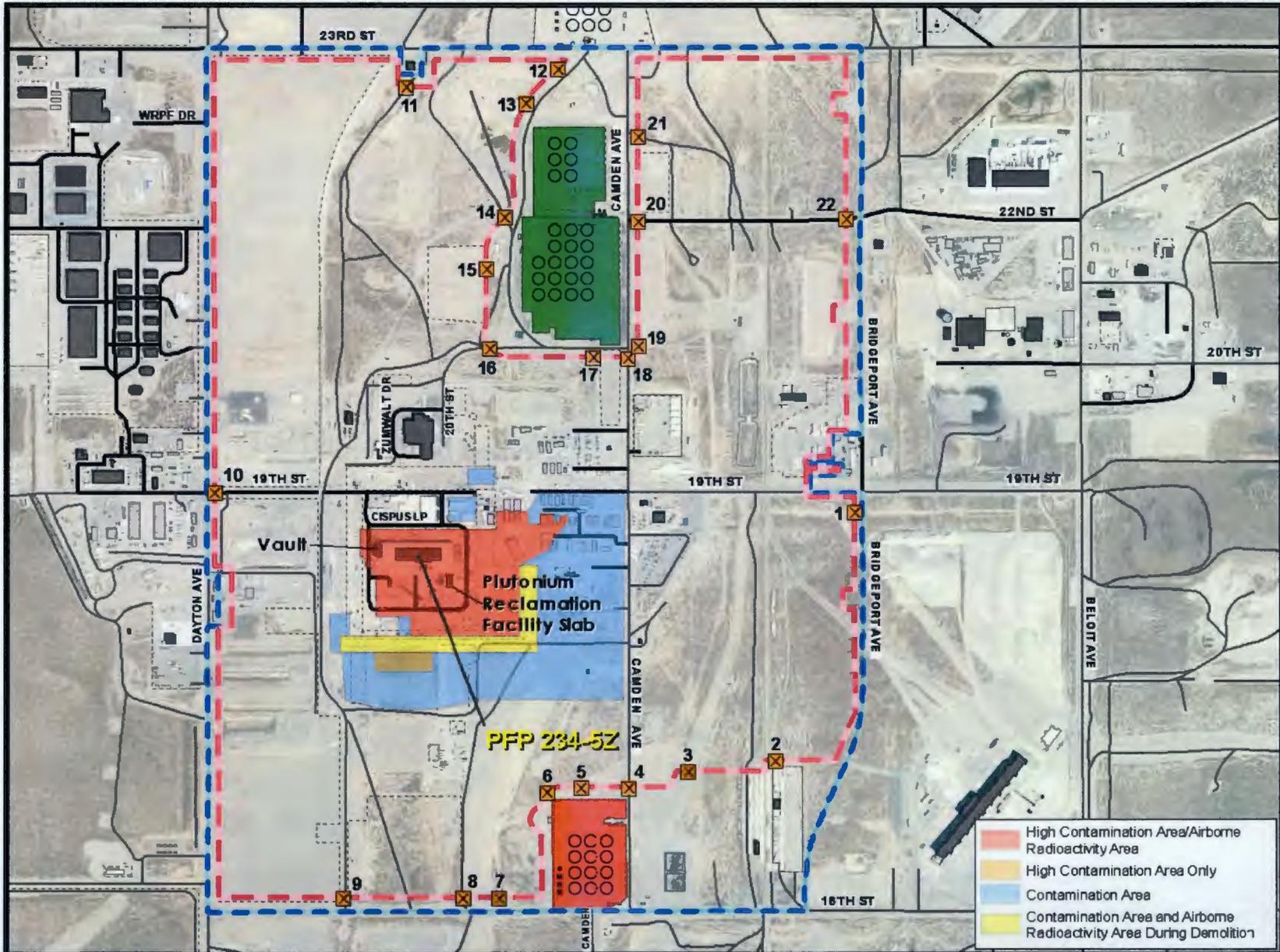


## Status: March 2018 through May 2018

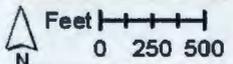
- Root Cause Evaluation complete and corrective actions developed
  - As of May 31, 31 of 37 corrective actions complete
- Option Engineering process evaluation complete
- Work Resumption Plan drafted; incorporating comments from the DOE Expert Panel and regulators
- Demolition will not resume without DOE approval



# CURRENT RADIOLOGICAL BUFFER AREA AND ACCESS CONTROL BOUNDARY (UPDATED 06/05/18)



	High Contamination Area/Airborne Radioactivity Area
	High Contamination Area Only
	Contamination Area
	Contamination Area and Airborne Radioactivity Area During Demolition



Access Control Boundary

RBA Boundary

Gate Locations

WRPS Managed RBA  
 WRPS Managed CA

Building  
 Structure  
 Trailer  
 Fence

Map As of 11:13:27 AM 6/5/2018  
 MSA Central Mapping Services  
 (Reference Map)

180503\_RBA\_AccessControlBoundaries\_11x85\_Rev9

# Regulatory

- Interim Response Transmitted to EPA and Ecology Regarding January 9, 2018 “Creation of Danger” Letter; 3 of 7 Items Remain to be Completed
  - Description of Corrective Actions
  - Briefing Summarizing Corrective Actions
  - Bioassay Results
- Responses in Progress to Wash. Dept. of Health January 30, 2018 Letter of Concern
- Bi-weekly Status Meetings Being Held
- List of Activities Agreed on to Implement DRAFT Updated PFP Stabilization Radiological Boundaries





**M-035-09**

*Conduct Biennial Assessments of Information  
and Data Access Needs*

**RICHLAND  
OPERATIONS OFFICE**

United States Department of Energy

## M-035-09K Milestone



- “Conduct biennial assessments of information and data access needs with EPA and Ecology. DOE will propose implementation schedules (TPA Milestones) for enhancements as a result of the biennial assessments”.
  - Due 3/31/98 (and biennially thereafter).
- M-035-09K due 9/30/2018





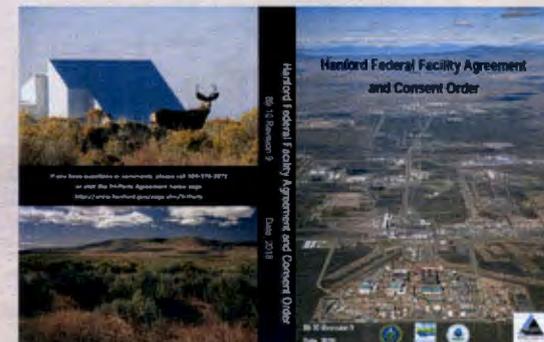
# Recent Accomplishments and Planned Work Scope

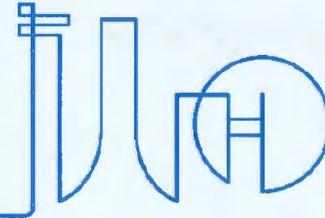
- Updated DOE/RL-93-69 to include:
  - Corrected notification process for expiring email/HLAN accounts
  - Refined Ecology HLAN account renewal process
- Finalized Rev. 6 of DOE/RL-93-69, *Tri-Party Agreement Databases, Access Mechanism, and Procedures*

# Issues and Challenges



- Ecology does not have satisfactory access to operating record files, which are stored in multiple databases including IDMS
- DOE has requested contractors to develop impact assessments associated with developing a mechanism to centralize operating record files
- Ecology will not consider milestone complete until an implementation plan is complete for a centralized operating record repository





---

# 100K Sludge Removal Project

## TPA Milestone Series: M-016

March 2018 – May 2018



*Columbia River White Bluffs*

U.S. Department of Energy  
U.S. Environmental Protection Agency  
State of Washington, Department of Ecology



# Sludge Removal Project Accomplishments March 2018 – May 2018

## ECRTS Readiness/Startup Activities

- Completed SRP Engineered Container Retrieval and Transfer System (ECRTS) Contractor Operational Readiness Review (CORR) on March 7, 2018
- Completed DOE ORR on April 17, 2018
- Issued a CHPRC Request for Authorization to Commence Startup to DOE on May 11, 2018
- DOE HQ approved CHPRC Request for Authorization to Commence Startup and Critical Decision (CD)–4 on May 22, 2018
- Sludge Removal Operations transitioned from startup and testing mode to operations mode on May 23, 2018
- *Transfer of sludge to sludge transport and storage container (STSC) began June 12, 2018 with system transfer efficiency greater than anticipated. Final transfer completed on June 14, 2018.*

## Look ahead:

- Sludge Transportation System Cask will deliver first Sludge Shipment to T Plant on June 25, 2018.



# Accomplishments – DOE ORR Demonstrations March 2018 – May 2018



Operations Personnel Disconnecting STSC Process Connections



Removal of Contamination Drape from STS Cask Following Loading Sequence



# Accomplishments – Preparing for Hot Operations March 2018 – May 2018



STS Trailer Being Removed from Annex Loading Bay During Operations Demonstrations



Preparing to Simulate Sludge Transfer from the 105KW Basin to an STSC in the 105KW Annex



Disconnecting Instrumentation Prior to Installing Cask Lid



Inerting the STS Cask Prior to Leak Test and Shipment



# Accomplishments

## March 2018 – May 2018

### **Basin Operations**

- Continued with basin debris characterization and sampling.

### **T Plant Readiness Activities**

- Approval Letter for receipt of sludge at T Plant was issued by CHPRC on February 08, 2018.
- Completed Operation Demonstrations to maintain proficiency.



# Milestone Summary

Milestone	Due Date	Description	Status
<b>M-016-00 Complete Remedial Actions for all Non-Tank Farm &amp; Non-Canyon OUs</b>			
M-016-175	9/30/2018	Begin Sludge Removal from 105-KW Fuel Storage Basin	Ahead of Schedule
M-016-176	12/31/2019	Complete Sludge Removal from 105-KW Fuel Storage Basin	On Schedule

## Project Baseline Performance (Contract to date through February 2018)

RL-0012 Spent Nuclear Fuel Stabilization and Disposal	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Cost Variance (\$)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)	SPI	CPI
<b>Base Total</b>	<b>728.8</b>	<b>728.4</b>	<b>699.7</b>	<b>(0.4)</b>	<b>28.7</b>	<b>745.4</b>	<b>718.0</b>	<b>27.4</b>	<b>1.00</b>	<b>1.04</b>



# Planned Activities

## June - August 2018

### **ECRTS Operations and SRP Closeout**

- Commenced Sludge Removal Operations.
- Complete Loading and Transfer of 4-5 Sludge Transport and Storage Containers.
- Prepare SRP Closeout Report.





## River Corridor Closure - RL-41

TPA Milestone Series: M-016, M-089, M-093, M-094

March 2018 – May 2018  
June 21, 2018



U.S. Department of Energy  
U.S. Environmental Protection Agency  
State of Washington, Department of Ecology

*Columbia River White Bluffs*



**ch2m.**<sup>SM</sup>

# 618-10 Burial Ground

## Significant Accomplishments (through May 2018)

- Completed backfill and recontouring.
- Completed comment resolution with RL and EPA for the closeout verification package (CVP).
- Completed removal of all trailers and structures from the complex.
- Continued demobilization of site infrastructure and equipment.



## June 2018 Significant Planned Actions

- Issue the approved closeout verification package and waste site reclassification to “Final Closed.”
- Complete Project Demobilization activities.
- Transfer the 618-10 Burial Ground complex to the Long Term Stewardship program.



# 300-296 Soil Removal

## Significant Accomplishments (March 2018 through May 2018)

- Completed fabrication and initiated installation of the Mockup Transfer Mechanism, Remote Excavator Arm (REA) Through Supports and Dummy Posts.
- Completed geotechnical testing of the soils from the 324 Building external bore holes.
- Completed Radiochemical Engineering Complex (REC) Core Drill Sample compression strength testing to support structural modification design.
- Continued 324 Building interference removal activities
- Continued fabrication of 324 Building equipment



Transfer mechanism at the mockup



# 300-296 Soil Removal

## Significant Planned Actions (June 2018 through August 2018)

- DOE approve 2018 update to Basis of Interim Operation (BIO) Safety Document
- Perform Construction Acceptance Testing (CAT) at Mockup for Remote Excavator Arm (REA) System, Cameras and Lights, and Transfer Mechanism

- Perform integrated equipment testing at Mockup
- Remove D Cell debris
- Prepare 60% design for structural modifications
- Progress 324 Building facility modifications (interference removal, cell sealing, and core drilling).



Cell debris removal



Worker relocating B-Cell crane controller  
(interference removal)



# 100K Closure Project

## Significant Accomplishments (through May 2018)

### 100K Soil Remediation

- Completed backfill of waste sites 100-K-103, 100-K-79:9, 1607-K1, and 1607-K5, ending the FY2018 campaign.
- Excavation of radioactive waste crib, 116-KE-2 continued and is 65% complete. Completed demolition and load out of the remaining-duct bank.
- Preparation of waste sites 100-K-107 and 100-K-108 regulatory closure documentation is approximately 95 percent complete.
- Completed additional excavation of waste site 100-K-99 to remove radioactively contaminated soil discovered during in-process sampling.



# 100K Closure Project

## Significant Accomplishments (through May 2018)

### K West Basin Deactivation & Demolition

- Garnet Filter Media Removal System (GFMRS)
- Integrated Testing:
  - Set up of GFMRS production hardware at the Maintenance and Storage Facility (MASF) is complete in preparation for the June integrated testing, test procedures are complete. Operator training will be conducted at that time.
- STSC Fabrication:
  - HiLine Engineering is in the process of procurement for the overflow recovery tool fabrication and installation.
  - Energy North West completed calibration of STSC radar level instrumentation and continued calibration of STSC leak detectors.



# 100K Closure Project



Setup of Production Hardware for Integrated Testing



GFMRS Educator Box



*STSCs Ready for Receipt Inspection*



# 100K Closure Project

## Significant Accomplishments (through May 2018)

### K West Basin Deactivation & Demolition

- Sand Filter Media Removal System (SFMRS)
  - All testing is complete. The test report of the conceptual design is complete and is in the review and approval cycle.



Sand Filter Mockup



# 100K Closure Project

## Significant Accomplishments (through May 2018)

### K West Basin Deactivation & Demolition

- KW Basin Characterization
  - Initiated engineering evaluation of in-basin modifications necessary to consolidate high dose materials in the North Loadout Pit and a vertical processing unit.
  - Provided the KW Fuel Storage Basin Settled Solids Sampling Scheme document to the Sample Management Office.
  - Completed scoping of Transfer Cask Assembly activities for FY19. Dose-to-Curie modeling completed to establish dose rate thresholds upon initial inspection that would trigger a need for sludge removal within the Shielded Transfer Cask.



# 100K Closure Project

## Current Status of Below Water Debris Characterization

### **K West Basin Deactivation & Demolition**

- KW Basin Characterization
  - In-basin characterization has been placed on hold until after the first STSC has been shipped to T Plant.
  - Completed breakdown of remaining basin characterization work into discrete, “punchlist”, activities to be integrated with sludge removal STSC filling/decanting, connect/disconnect, and shipping activities.
    - Integrated schedule indicates that in-basin characterization activities will push well into FY19.
  - Attila Software for 3D characterization of the basin procured.
    - training for Radiological Engineers, Plant Engineers, and Designers has been scheduled



# 100K Closure Project

## Significant Accomplishments (through May 2018) Ancillary Facility Deactivation & Demolition

- Continued Thermal System Insulation (TSI) asbestos abatement in 165K East Power Control Building.
- Finalized the engineering evaluation and continued planning for 166KE Fuel Storage Basin (FSB) D&D and Waste Site 130-KE-2 remediation.
- Order was placed with vendor to obtain parts for roof crawler to be used to load test 166KE roof.



Roof Crawler



# 100K Closure Project

## Significant Accomplishments (through May 2018)

### K East and K West Reactor Interim Safe Storage (ISS)

- Used topographical survey data to quantify the amount of soil placed on the north and west sides of the 105 KE Reactor building since the 2012 geotechnical report was prepared (approximately 30,000 m<sup>3</sup>).
- Draft update complete for the 2012 geotechnical engineering study report for the soils that will surround the K East Reactor during Safe Storage Enclosure (SSE) construction.
- Developed a 3-D model of the 105 KE SSE design to support future design modifications and construction efforts.
- Conducted a walk down with DOE Federal Project Director, DOE subject matter expert, and EPA representative to visually inspect the quantities of asbestos per the whitepaper.



# 100K Closure Project

## Significant Planned Actions (June through August 2018)

### 100K Soil Remediation

- Complete excavation of radioactive waste crib, Waste Site 116-KE-2
- Start excavation of Waste Site 100-K-47:1

### K West Basin Deactivation

- Garnet Filter Media Removal System (GFMRS) and Sand Filter Media Removal System (SFMRS)
  - Complete GFMRS production hardware setup and test procedure for integrated testing
  - Complete STSC instrumentation installation and overflow recovery tool fabrication
  - Obtain approval of the SFMRS test report



# 100K Closure Project

## Significant Planned Actions (June through August 2018)

- **K West Basin Characterization**

- Obtain packaging and ship Center Bay, West Bay and East Bay floor core samples to PNNL for isotopic analysis.
- Complete gamma ray spectrometry surveys of the debris fields in the Center Bay and West Bay.
- Develop waste disposition plan.
- Complete development of a settled solids (residual sludge) sampling process.



# 100K Closure Project

## Significant Planned Actions (June through August 2018)

### Ancillary Facility Deactivation & Demolition

- Continue TSI asbestos removal from the 165K East Power Control Building.
- Develop a preliminary plan for the demolition of the 166K East FSB and Waste Site 130-KE-2 remediation.

### K East Reactor ISS

- Continue planning and begin development of an SOW for the design modification/build of the K East Reactor Safe Storage Enclosure.



# Remaining Closure Operations

## 2018 Significant Accomplishments (through May 2018)

- Continued collecting shrub seeds from various locations around the Hanford Site to support FY2019 re-vegetation efforts (includes 618-10).
- Continued development of two construction work packages for installation of cap over Waste Sites 331LSLT1/331LSLST2.
- Finished preparing a new work package to perform seed collection at the Hanford site to support FY19 revegetation campaign.
- Continued performing ecological/cultural assessment for remediation of Waste Site 600-276 “Little Egypt”.



# Remaining Closure Operations

## **Significant Planned Actions (June through August 2018)**

- Grow shrub tubelings in support of FY19 618-10 revegetation. The shrubs will be received and planted during the FY19 revegetation effort in the 618-10 area.



# Milestone Summary

Milestone	Due Date	Description	Status
<b>M-016</b>			
M-016-00B	9/30/2018	Complete all 300 Area remedial actions including the 618-10 burial ground, but not including the 618-11 burial ground, 300-296, and sites associated with retained 300 Area facilities and the utility corridors. Completion of all remedial actions is defined as the completion of the ROD requirements in accordance with an approved RD/RA work plan for all waste sites except 618-10, 316-4 and 600-63 which will be completed through backfill	On Schedule
M-016-85	9/30/2021	Complete remedial actions for 300-296 and final disposition for 324 building and Ancillary buildings	On Schedule
M-016-85A	9/30/2019	Complete remote excavation of the 300-296 waste site	On Schedule
M-016-86	9/30/2021	Complete remedial actions for 618-11 burial ground in accordance with DOE/RL-2014-13-ADD1	On Schedule
M-016-178	12/31/2019	Initiate Deactivation of 105-KW Fuel Storage Basin	On Schedule
M-016-181	9/30/2023	Complete Deactivation, Demolition & Removal of 105-KW FSB	On Schedule
<b>M-089</b>			
M-089-00	TBD	Closure of Mixed Waste Units in 324 building REC B&D cells and High & Low level vaults	On Schedule
<b>M-093</b>			
M-093-28	12/31/2019	Submit Change Package for Proposed Interim Milestones for 105-KE/KW Interim Safe Storage	On Schedule
<b>M-094</b>			
M-094-00	9/30/2018	Complete disposition of all 300 Area Surplus Facilities excluding the 324 Building	Complete



# Project Baseline Performance

## Contract to Date through May 2018

RL-0041 Nuclear Facility D&D River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Cost Variance (\$)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
<b>Total</b>	<b>589.7</b>	<b>571.0</b>	<b>506.5</b>	<b>18.7</b>	<b>64.5</b>	<b>677.0</b>	<b>601.2</b>	<b>75.8</b>
<b>Numbers are rounded to the nearest \$0.1 million.</b>								

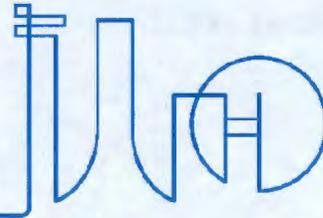




# M-026-01 Land Disposal Restrictions

## TPA Milestone M-026-01 Quarterly Status

- The *CY2014 Hanford Site Mixed Waste Land Disposal Restrictions (LDR) Full Report* TPA primary document review process is ongoing
  - The Parties discussed a path forward for TPA primary document review process completion during the June 28 PMM
  - Ecology is now targeting August 23 to provide complete comment response package to DOE
  - Pending comment resolution completion, the Parties will consider TPA changes
- The *CY2018 Hanford Site Mixed Waste Land Disposal Restrictions (LDR) Summary Report* has been requested by Ecology in the current Summary Report format, due in 2019.



# Solid Waste Stabilization and Disposition Project

RL-0013 TPA Milestone Series: M-091, M-026, and M-092

March – May 2018  
June 21, 2018



U.S. Department of Energy  
U.S. Environmental Protection Agency  
State of Washington, Department of Ecology

*Columbia River White Bluffs*



**ch2m.**<sup>SM</sup>

# Accomplishments

## March – May 2018

- M-091-47D Certify or Treat 280-m<sup>3</sup> of TRUM/MLLW:
  - Completed 280 m<sup>3</sup> of the 280 m<sup>3</sup>.
  - Completed 93.75 m<sup>3</sup> toward next objective (234.9 m<sup>3</sup> total toward next objective).
- M-091-03 Annual Revision of Project Management Plan:
  - This year's submission not required (Change Notice M-91-18-01 has been issued).
- M-091-52 Target Dates:
  - Established on December 28, 2017 by Federal Facility Agreement and Consent Order Change Control Form M-91-17-02.
  - Completed Milestone M-091-52-T01 removal of five (5) mixed waste containers from Outside Storage Area A and/or Outside Storage Area B on April 26, 2018.
- C-026-07L Tritium Treatment Technology:
  - Letter to Ecology and EPA was transmitted on March 28, 2018.



TC162 Photo Container 762DMA20F



TC164 Photo Container 2345Z6-21



# M-092-05 and M-092-00

Determine disposition path and establish interim agreement milestones for Hanford Site Cesium and Strontium capsules.

- **March – May 2018 Accomplishments**

- DOE, WDOE, and EPA have signed an Agreement in Principle to modify the due dates for milestones M-092-00 and M-092-09.
  - Proposed interim milestone, Milestone M-092-21 will address the movement of the Cs/Sr capsules to a new interim dry storage facility. Target milestones are also proposed to achieve final disposition capability.

## June – August 2018 Planned Activities

- M-092 Public Comment Scheduled May 21 – July 6, 2018.



# Milestone Summary

Milestone	Due Date	Description	Status
<b>M-091</b>			
M-091-47D	9/30/2018	Submit change request to establish next two TRU/MLLW annual certification/disposal milestones.	On Schedule
M-091-52	12/29/2017	Submit change request with target dates for new/modified capabilities to process	Complete
M-091-03L	6/30/2018	<del>Submit Revision Of TRUM Waste and MLLW PMP To Ecology</del>	Deleted
M-091-53	9/30/2018	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste	On Schedule
M-091-52-T01A	11/30/2018	Remove 5 MW containers from Outside Storage Area (OSA) A and/or Outside Storage Area B	Complete
M-091-03M	6/30/2019	Submit Revision of TRUM Waste and MLLW PMP to Ecology	On Schedule
<b>M-026</b>			
C-026-07L	3/31/2018	Submit Tritium Treatment Technology Developments to Ecology & EPA Description	Complete
C-026-07D	3/31/2019	Evaluation of Tritium Treatment Technology to EPA & Ecology	On Schedule



# Project Baseline Performance through May 2018

RL-0013 Solid Waste Stab & Disp	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
<b>Total</b>	<b>704,726.8</b>	<b>703,158.7</b>	<b>638,467.1</b>	<b>1,568.2</b>	<b>0.2%</b>	<b>64,691.5</b>	<b>9.2%</b>	<b>737,713.6</b>	<b>666,736.6</b>	<b>70,977.1</b>

Numbers are rounded to the nearest \$0.1 million.

Title	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance	Cost Variance
Central Waste Complex	98,871.3	98,825.9	98,066.4	0.0%	0.8%
Waste Receiving and Processing Facility (WRAP)	51,664.8	51,664.8	49,406.8	0.0%	4.4%
T-Plant	119,137.3	119,123.6	100,004.0	0.0%	16.1%
Mixed Low Level Waste Treatment	43,182.5	43,182.5	37,200.3	0.0%	13.9%
TRU Waste Retrieval	99,991.6	99,991.6	112,253.3	0.0%	-12.3%
TRU Waste Repackaging	99,411.1	99,484.8	90,261.3	0.1%	9.3%
TRU Waste Disposition	32,353.2	32,373.0	23,814.1	0.1%	26.4%
Project Management	160,115.1	158,512.4	127,460.9	-1.0%	19.6%

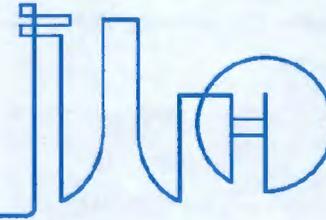


# Planned Activities

## March – May 2018

- M-091-47D TRUM/MLLW Treatment:
  - Met volume processed, August 8, 2017. Issue the TPA milestone completion letter along with the required TPA change proposal to establish the next two annual interim milestone objectives.
- Continue waste processing toward next objective.
- M-091-53
  - Continue negotiations.
  - Continue analysis and draft TPA change request.
- Continue removing mixed waste containers from OSA A and/or OSA B in support of M-091-52-T01.





---

# Central Plateau Remediation Project RL-40

TPA Milestone Series: M-016, M-037, M-085

March – May 2018  
June 21, 2018



U.S. Department of Energy  
U.S. Environmental Protection Agency  
State of Washington, Department of Ecology

*Columbia River White Bluffs*



# PUREX Tunnel # 2 Stabilization

March 2018 through May 2018

- Issued the proposed RCRA permit modifications for Tunnel #2 stabilization to Ecology and held workshop for public comment on March 14, 2018.
- DOE-RL responded to Ecology's comments on the RCRA addendum completeness letter and transmitted certified document on May 29, 2018.
- Completed the PUREX tunnel #2 investigation which included removability of the 30 inch plugs for all risers identified as potential grouting/ventilation points.
- Performed 360-degree camera investigation of 16 identified tunnel #2 risers (fly by) for inventory records.
- Engineering released the conceptual through 90% design for the grouting conveyance system.



PUREX Tunnel #2 removal of 30 inch riser plug



# PUREX Tunnel # 2 Stabilization

March 2018 through May 2018

- Transmitted the Notice of Construction Application for the air permit to WDOH
- Request for Proposals issued for the following work:
  - ❖ Site improvements (road upgrades for safe access during grouting/ clearing of potential batch plant site) – awarded to Watts Construction (5/1/2018)
  - ❖ Batch Plant Power and Trailer (provide temporary trailer and power backbone for operations) - awarded to Ojeda (6/1/2018)
  - ❖ Grouting Conveyance System (fabricate 6 units per engineering design and install on tunnel risers) – awarded to Intermech (6/4/2018)
  - ❖ Grout Stabilization (procure necessary materials needed for grout mixture and place approx. 43,000 cubic yards of grout in tunnel via conveyance system)
    - Proposals due: 06/12/2018
    - Anticipated award: 07/09/2018



Camera Investigation via Tunnel #2 Risers



Site upgrades in readiness for grouting activities

**ch2m**  
RL-40



# Central Plateau Risk Reduction Accomplishments

March 2018 through May 2018

- Performed Ultrasonic Testing of REDOX silo process piping in preparation for the draining risk mitigation campaign.
- Verified cutting locations for required intrusive tank interrogations on REDOX Silo seventh and eighth floors. Cuts scheduled to be completed by November.
- Perform breaker preventative maintenance at U Plant and REDOX (need to confirm REDOX).
- Prepared 222-B for demolition. Demolition to be completed in June.



Ultrasonic Testing of piping in the REDOX Silo



# Other Facilities Accomplishments

March 2018 through May 2018

- Installed new containment tent at B Plant and performed change-out of nine pre-filters in ACT-001.
- Supported a Washington Department of Health Inspection of 8 RARA project managed Waste Information Data System (WIDS) site emission units. No problems or issues were identified.
- Supported a visit from the Washington State Department of Ecology's permit writing team who toured the 216-S-10 Ditch and Pond for information gathering purposes.
- Reviewed and approved two excavation permits affecting WIDS sites (DAN18-0082 and DAN18-0095).
  - WRPS proposed scope in LWPS
  - PUREX Tunnel 2 site preps
- Performed 231-Z Surveillance.



**Containment Tent Set-up for B Plant pre-filter change-out**



# Accomplishments

March 2018 through May 2018

## Canyon Stabilization Documents

- Submitted to Regulators:
  - DOE/RL-2016-15 PUREX Engineering Evaluation/Cost Analysis (EE/CA), Draft B
  - DOE/RL-2016-46 Tier 2 B Plant Removal Action Work Plan (RAWP), Rev 0
  - DOE/RL-2016-14 B Plant EE/CA, Draft B
  - DOE/RL-2017-05 REDOX Sample Analysis Plan (SAP), Draft D (Rejected)
  - DOE/RL-2015-70 276-BA Closure Plan
  - Proposed permit modifications for PUREX Tunnel #2 stabilization.
- Received from CHPRC:
  - DOE/RL-2016-52 REDOX Action Memorandum (AM), Draft A
  - DOE/RL-2017-06 REDOX RAWP, Decisional Draft (re-submitted)
  - DOE/RL-2017-47 Tier 2 200 East Area Miscellaneous Facilities SAP
  - DOE/RL-2016-50 Tier 2 200 East Area Miscellaneous Facilities RAWP
  - DOE/RL-2017-34 224 B Plant RAWP
- In Development Nearing Completion:
  - DOE/RL-2016-47 Tier 2 PUREX RAWP



# Milestone Summary

## Through FY19

Milestone	Due Date	Description	Status
<b>M-016-00 Complete Remedial Actions For All Non-Tank Farm &amp; Non-Canyon OUs</b>			
M-016-255	9/30/2018	DOE shall complete the removal of all waste sites for fiscal year 2018 as identified in TPA change package M-16-16-01	In negotiation
M-016-250C	3/31/2018	DOE shall submit a 3-year rolling prioritized schedule to implement waste site removal actions	Complete 3/29/18
M-016-256	9/30/2019	DOE shall complete the removal of all waste sites for fiscal year 2018 as identified in TPA change package M-16-17-01	On Schedule
<b>M-037 TSD Closure Activities</b>			
		Milestones due past 3 year window	
<b>M-085-00 Complete Response Actions for Specified Canyon Facilities &amp; Waste Sites</b>			
M-085-82	12/31/2017	Submit to Ecology for approval proposal(s) for expedited response action(s) for one or more of the Tier 1 and Tier 2 facilities in the PUREX Geographic Area listed in HFFACO Appendix J.	Complete 12/7/17



# Project Baseline Performance through May 2018

## Contract to Date

<b>BS 040/RL-0040 Nuclear Facility D&amp;D</b>	<b>Budgeted Cost of Work Scheduled</b>	<b>Budgeted Cost of Work Performed</b>	<b>Actual Cost of Work Performed</b>	<b>Schedule Variance (\$)</b>	<b>Cost Variance (\$)</b>	<b>Budget at Completion (BAC)</b>	<b>Estimate at Completion (EAC)</b>	<b>Variance at Completion (VAC)</b>	<b>SPI</b>	<b>CPI</b>
BASE	194.1	190.6	184.8	-3.5	5.8	225.2	220.2	5.0	0.98	1.03
ARRA	285.5	285.5	266.5	0	19.0	285.5	266.5	19.0	1.00	1.07
<b>Total</b>	<b>479.6</b>	<b>476.1</b>	<b>451.3</b>	<b>-3.5</b>	<b>24.8</b>	<b>510.7</b>	<b>486.7</b>	<b>24.0</b>	<b>0.99</b>	<b>1.05</b>

Numbers are rounded to the nearest \$0.1M



# Planned Activities for Facilities and Waste Sites

June 2018 – September 2018

## Minimum Safe/Maintenance Activities

- Complete site improvements for Tunnel #2 stabilization.
- Fabricate and install PUREX Tunnel #2 grout conveyance system
- Award subcontract for Tunnel Stabilization and begin grout placement.
- Demolish 222-B
- Complete the 400 Preventive / Corrective Maintenance Activities for the Central Plateau.
- Complete the Semi-Annual PACM (Presumed Asbestos Containing Material) WIDS sites surveillance.



# Planned Activities

June – September 2018

## Canyon Stabilization Documents

- Ecology approvals:
  - DOE/RL-2016-46 Tier 2 B Plant RAWP
  - DOE/RL-2015-70 276-BA RCRA Closure Plan
  - DOE/RL-2016-15 PUREX EE/CA, Draft A
  - DOE/RL-2016-14 B Plant EE/CA, Draft B
- RL/Ecology Reviews:
  - DOE/RL-2016-52 REDOX AM





# Soil and Groundwater Remediation Project

TPA Milestone Series: M-015, M-016, M-024, M-085

March 2018 – May 2018  
June 21, 2018



U.S. Department of Energy  
U.S. Environmental Protection Agency  
State of Washington, Department of Ecology

*Columbia River White Bluffs*



# Accomplishments – River Corridor March 2018 – May 2018

- Issued the *KW Soil Flushing/Infiltration Treatability Test Plan* in April. Completed review of the 90% design in May.
- Prepared a white paper for EPA to evaluate a Technical Impracticability (TI) waiver approach for the 100-KR-4 Sr-90 plumes in May.
- Submitted the Draft Final Rev 0 100-BC-5 PP to EPA for review on May 22, 2018.
- Held two workshops (March and April) with the Yakama Nation to develop a Memorandum of Agreement for the 100-NR-2 PRB injections.
- Completed design review and initiated construction activities for the 300-FF-5 Stage B Uranium Sequestration project.
- Submitted the 300-FF-5 Operable Unit (OU) Interim Remedial Action report to DOE and EPA for review on April 19, 2018.

300-FF-5 Stage B injection system installation



300-FF-5 Stage B injection well



# Accomplishments – Central Plateau

## March 2018 – May 2018

- Issued the Revision 0, 200-BP-5 Removal Action Work Plan in April.
- Finalized the 200-BP-5 and 200-PO-1 Interim Record of Decision (IROD) strategy with the Tri-parties in May.
- Completed the 200-DV-1 shallow borehole characterization in March.
- Reviewed the laboratory tests results from the 200-DV-1 URGS Treatability Test with Ecology and EPA to discuss path forward on May 16, 2018.

*UP-1 Demobilization*



Extraction well head connected to the 200 West P&T Facility



# Accomplishments – Central Plateau March 2018 – May 2018

- Issued the *Optimization Test Plan for Treating Water from Modular Storage Units at 200 West Pump and Treat Facility* in May.
- Received all ecological and cultural clearances for characterizing the 200-WA-1 and 200-BC-1 waste sites.
- Completed informal review of the 200-EA-1 RI/FS work plan and SAP with Ecology.

Modutank Sediment Removal Mock Up



Modutank Sediment Removal Mock Up



# Milestone Summary

## Through FY19

Milestone or Target Date	Due Date	Description	Status
<b>M-015-00</b>			
M-015-92A	7/31/2018	Submit RCRA FI/CMS & RI/FS Work Plan for 200-EA-1 OU to Ecology	On Schedule
M-015-96	8/31/2018	Submit 100-OL-1 RI report and change request for FS report to Ecology	On Schedule
M-015-93C	9/30/2018	Initiate characterization of the 200-SW-2 OU unlined landfills	At Risk
M-015-98	6/30/2019	Complete remedial investigations of U Plant wastes sites located in 200-WA-1 in accordance with WP	At Risk*
M-015-99	12/31/2019	Complete remedial investigations of PFP wastes sites located in 200-WA-1 in accordance with WP	At Risk**
M-015-21A	3/31/2019	Submit 200-BP-5 and 200-PO-1 OU FS Report & PP(s) to Ecology	On schedule
<b>M-016-00</b>			
M-016-193	9/30/2018	Investigate SE Chromium Plume per 200-UP-1 RD/RAWP	On Schedule**

\* Subsequent follow-on milestones (M-015-84 and M-015-91B) are also at risk.

\*\* EPA agreed on April 26, 2018, that the 22 remedy performance monitoring wells to be installed for 200-UP-1 OU meet the TPA Milestone M-16-193 requirements.



# Milestone Summary

## Through FY19

Milestone or Target Date	Due Date	Description	Status
<b>M-024-000</b>			
M-024-58K	6/1/2018	Initiate Discussions of Well Commitments	On Schedule
M-024-69-T01	8/1/2018	Conclude Discussions of Well Commitments initiated under M-024-58	On Schedule
M-024-69	12/31/2018	DOE shall complete the construction of all wells listed for calendar year 2018 and before	Completed
<b>M-085-00</b>			
M-085-70	9/30/2019	Submit Remedial Investigation/Feasibility Study Work Plan for 200-CB-1 to Ecology	At Risk

# RL-30 Project Baseline Performance

## Contract to Date Through May 2018

RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
<b>Total</b>	1,491.3	1,485.1	1,437.0	(6.1)	(0.4%)	48.2	3.2%	1,595.5	1,544.8	50.7

Numbers are rounded to the nearest \$0.1 million. Period of performance 10/1/2008 through May 2018



# Planned Activities

## June – August 2018

### River Corridor

- Issue the 100-D/H Reactor Area ROD
- Issue the Rev. 0 100-BC-5 RI/FS
- Resolve comments on the Rev. 0 100-BC-5 PP
- Complete field preparation for 300 Area uranium sequestration

### Central Plateau

- Issue Rev. 0 200-BP-5 RI Report/ 200-PO-1 RI Addendum
- Initiate utility construction for the 200-BP-5 Removal Action
- Complete installation of the two 200-UP-1 performance monitoring wells
- Submit the Draft A 200-EA-1 RI/FS WP to Ecology for review
- Complete layup of the 200-DV-1 Uranium Reactive Gas Sequestration field site



TPA Decision Document List

	ROD Area Location	Document	Milestone	Milestone Due Date	Regulatory Review	DOE Lead	Contractor Lead	Regulatory Lead	Agency	Comments/Issues
1	200-IS-1 200 Inner Area/Pipeline	RFI/CMS & RI/FS Work Plan - Draft B	M-015-112: Submit Draft B RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) & Remedial Investigation/Feasibility Study (RI/FS) work plan for 200-IS 1 OU to Ecology	11/30/2020	TBD	D. Hildebrand	M. Hickey	N. Menard	Ecology	
3	200-EA-1 200 East Inner Area	TSD - Closure Plans for 207-A South Retention Basin, 216-A-29 Ditch, 216-A-36B Crib, 216-A-37-1 Crib, 216-B-63 Trench, and the Hexone Storage and Treatment Facility (276-S-143/142)	M-037-10: Complete Closure for 6 Specified TSD Units	9/30/2020	TBD TBD	M. Kamal	M. Hickey	N. Menard	Ecology	207-A South Retention Basin: Closure complete and approved. Remaining effort includes administrative processing of WIDS waste site reclassification form as closed out.  216-A-36B closure plan was prepared following the Ecology Option 2 closure plan format and informally reviewed by Ecology. Comment resolution underway with two outstanding comments.
4	200-CW-1, 200-CW-3, and 200-OA-1 Outer Area	TSDs - Closure Plans for 216-B-3 Main Pond and 216-S-10 Pond and Ditch	M-037-11: Complete Closure Requirements for 216-B-3 & 216-S-10	9/30/2024	TBD TBD	M. Kamal	M. Hickey	N. Menard	Ecology	
5	200-EA-1 200 East Inner Area	RFI/CMS & RI/FS Work Plan	M-015-92A: Submit Draft B RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) & Remedial Investigation/Feasibility Study (RI/FS) work plan for 200-EA-1 OU to Ecology	7/31/2018	7/14/2018 8/14/2018	B. Vannah	M. Hickey	N. Menard	Ecology	Tri-Parties coordinated together and reached agreement on a revised work plan delivery field schedule. Agreement reached to conduct Draft A and Decisional Draft reviews concurrent. Chapter and appendix Informal reviews continue and are nearing completion. Chapter, SAP, and appendix Informal reviews complete. Formal internal review complete and comment resolution on going.
6	200-BP-5, 200-PO-1 200 East Area Groundwater	200-BP-5 RI Report	None		8/11/2015 8/3/2017	J. Hanson	C. Wittreich	N. Menard	Ecology	Comment resolution is being requested to extend through August 30, 2018. Comment resolution process continues with Ecology in parallel with preparation of the FS.
7	200-BP-5, 200-PO-1 200 East Area Groundwater	200-PO-1 RI Report Addendum	None		8/11/2015 8/3/2017	J. Hanson	C. Wittreich	N. Menard	Ecology	Comment resolution is being requested to extend through August 30, 2018. Comment resolution process continues with Ecology in parallel with preparation of the FS.
8	200-BP-5, 200-PO-1 200 East Area Groundwater	200-BP-5/PO-1 FS and PP	M-015-21A: Submit a 200-BP-5 and 200-PO-1 OU Feasibility Study Report and Proposed Plan(s) to Ecology.	3/30/2019		J. Hanson	C. Wittreich	N. Menard	Ecology	TPA charge control form M-15-18-01 extended the due date to March 30, 2019. Tri-Parties developed an Interim ROD strategy that identifies focused FS scope.
9	100-BC-1, 100-BC-2, 100-BC-5 100-B/C	RI/FS Report and Proposed Plan	M-015-79: Submit RI/FS Report and PP for 100-BC	Milestone Completed 12/15/2016	12/16/2016 01/30/2017	E. Glassbrenner	R. Evans	L. Buelow	EPA	Draft Rev. 0 PP transmitted to EPA for review on May 22, 2018. The Draft Rev. 0 RI/FS is near completion and is scheduled to be transmitted to EPA for review latter part of June 2018.
10	100-DR-1, 100-DR-2, 100-HR-1, 100-HR-2, 100-HR-3 100-D/H	RI/FS Reports and Proposed Plan	M-015-70-T01: Submit FS & PP for HR 1/2/3 and DR 1/2 Complete	Target Completed 12/14/2012		S. Balone	E. Feist	N. Menard	Ecology	Proposed Plan Complete. Final ROD signatures pending; anticipated by September 2018.
11	100-KR-1, 100-KR-2, 100-KR-4 100-K	RI/FS Reports and Proposed Plan	M-015-66-T01: Submit RI/FS Report and PP for 100-K Complete	Target Completed 9/21/2011		S. Balone	E. Feist	R. Lobos	EPA	The RI and FS have been separated to allow for a potential TI waiver to be pursued. The RI decisional draft to RI for review is scheduled for July 2018 and the FS decisional draft to RI for review is scheduled for September 2018.
12	100-NR-1, 100-NR-2 100-N	RI/FS Reports and Proposed Plan	M-015-75: Submit FS/PP for NR 1/2 Complete	Milestone Completed 6/24/2013	6/25/2013 10/2/2013	S. Balone	B. Fought	A. Boyd	Ecology	Continue with preparation of the Draft B RI/FS. Comment resolution was requested to extend to March 29, 2019.

(Information current as of 8/17/2017)

Note: Blue text reflects changes from previous quarter. Shading discriminates change in ROD Area Location from adjacent rows.

3  
6

**Hanford Federal Facility Agreement and Consent Order  
IAMIT Milestone Review Form  
(For Milestones without Issues or Significant Activity)**

**M-036-01 Hanford Lifecycle Scope, Schedule and Cost Report**

**Date: July 19, 2018**

**1. Significant Activities Last Three Months**

- Lifecycle Report Project Manager Meetings (PMM) were held on March 1 and June 13, 2018.
- DOE-RL updated their planning case for the 2019 Lifecycle Report, incorporating the amended Consent Decree and extending Long-Term Stewardship to 2095.
- DOE-ORP plans to use the base case from the *River Protection Project System Plan* (ORP-11242, Rev. 8) for the 2019 Lifecycle Report because their planned baseline update has been delayed by other re-planning efforts.

**2. Budget Status (within budget or explain variance)**

- Not documented for this milestone per IAMIT Determination 2017-004 dated March 15, 2018.

**3. Issues**

- No major issues identified.

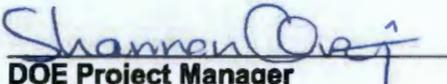
**4. Non-TPA Regulatory Issues with Potential Impact to TPA Milestone**

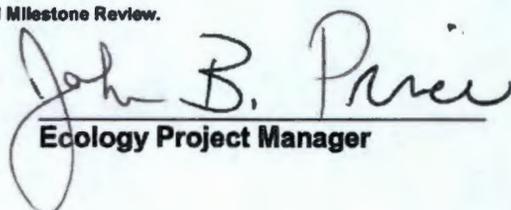
- No major issues identified.

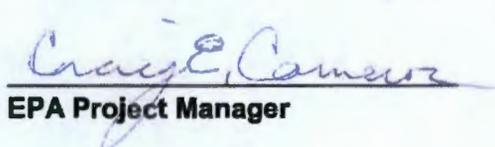
**5. Significant Activities Planned Next Three Months**

- Prepare draft 2019 Lifecycle Report by August 31, 2018 for DOE review and comment by October 31, 2018.

**Note: Approved form to be submitted to IAMIT members 7 days prior to scheduled Milestone Review.**

  
**DOE Project Manager**

  
**Ecology Project Manager**

  
**EPA Project Manager**