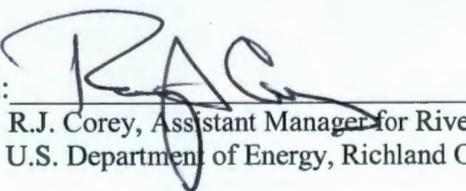


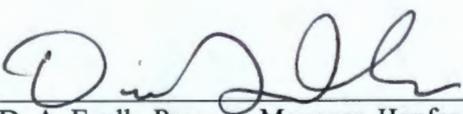


**River Corridor/Central Plateau  
Tri-Party Agreement Quarterly Milestone Review  
Meeting Minutes**

June 16, 2016

Approval:   
R.J. Corey, Assistant Manager for River and Plateau  
U.S. Department of Energy, Richland Operations Office

Date: 7/18/16

Approval:   
D. A. Faulk, Program Manager, Hanford Project Office  
U.S. Environmental Protection Agency, Region 10

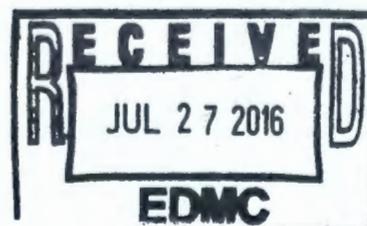
Date: 7/18/16

Approval:   
A. K. Smith, Nuclear Waste Program Manager  
Washington State Department of Ecology

Date: 7/22/16

Approval:   
R. E. Piippo, Tri-Party Agreement Integration  
Mission Support Alliance, LLC

Date: 7-13-16





**River Corridor/Central Plateau Tri-Party Agreement Milestone Review**

**June 16, 2016**

**AGENDA**

Chairperson: Dennis Faulk

<b>Time</b>	<b>Milestones</b>	<b>Subject</b>	<b>DOE Presenter</b>
8:30 a.m.	M-83	Plutonium Finishing Plant (PFP) Closure	Tom Teynor
8:40 a.m.	M-16 and 93	100 K Remediation	Roger Quintero
8:50 a.m.	M-16, 89, 93 and 94	River Corridor Closure	Bryan Foley
9:00 a.m.	M-36	Lifecycle Report	Shannon Ortiz
9:05 a.m.	M-26	Land Disposal Restrictions Report	Mike Collins
9:15 a.m.	M-91	Acquisition of Facilities to treatment, storage, and disposal (TSD), transuranic (TRU), transuranic mixed (TRUM) and low-level mixed waste (LLMW)	Mike Collins
9:25 a.m.	M-16 and 85	Central Plateau Remediation	Al Farabee
9:35 a.m.	M-15, 16, 24, 37 and 85	Soil and Groundwater Remediation	Mike Cline
9:45 a.m.		Richland Operations Office Key Documents List	Mike Cline
10:00		Adjourn	



TPA River Corridor/Central Plateau Quarterly  
Milestone Review Meeting

June 16, 2016

Sign-In Sheet

NAME	SIGNATURE	ORGANIZATION
Keelan Abenth		DOE-RL
Jane Borghese	<i>Jane V Borghese</i>	CHPRC
Sharon Braswell	<i>Sharon Braswell</i>	MSA/North Wind Inc.
Shelley Cimon		Oregon DOE
Michael Cline	<i>Michael Cline</i>	DOE-RL
Michael Collins	<i>Michael Collins</i>	DOE-RL
Ray Corey		DOE-RL
Ben Ellison		DOE-RL
Al Farabee	<i>Al Farabee</i>	DOE-RL
Dennis Faulk	<i>Dennis Faulk</i>	EPA
Bryan Foley	<i>Attended meeting</i>	DOE-RL
Debi Ganwich		DOE-RL
Dib Goswami	<i>Dib Goswami</i>	Ecology
Theresa Howell		CHPRC
Mostafa Kamal		DOE-RL
Kathy Knox	<i>Kathy Knox</i>	KCR
Jeff Lerch	<i>Jeff Lerch</i>	WCH
Nina Menard	<i>Nina M. Menard</i>	Ecology
Ken Moser		MSA-PFM
Carolyn Noonan	<i>Carolyn Noonan</i>	MSA
Shannon Ortiz	<i>Shannon Ortiz</i>	DOE-RL AMB
Rob Piippo	<i>2015 PIIPPO</i>	MSA
John Price		Ecology
Roger Quintero	<i>Roger Quintero</i>	DOE-RL

*Alex Smith*

*Alex Smith*

*Ecology.*



**River Corridor/Central Plateau  
Tri-Party Agreement Quarterly Milestone Review  
Meeting Minutes  
June 16, 2016**

**Plutonium Finishing Plant (PFP) Closure Project - Tri-Party Agreement (TPA) Milestone M-083**

Milestone Summary - U.S. Department of Energy (DOE) Richland Operations Office (RL) noted that the summary report provides the status for the second quarter of January through March 2016. DOE-RL reported that milestone M-083-00A is now being declared as to be missed. DOE-RL has been working closely with Washington State Department of Ecology (Ecology), and Ecology has been integrating U.S. Environmental Protection Agency (EPA) comments and other stakeholder comments to establish a new milestone date. DOE-RL stated that Ecology's comments have been received regarding the milestone, and a meeting is scheduled next week with Ecology to facilitate a better understanding of the comments. DOE-RL indicated that it may result in the attorneys having a discussion since the language that was changed has legal implications. DOE-RL expressed appreciation to Ecology and EPA for the one-year extension to the milestone. Ecology noted that a schedule and a new milestone date was agreed to, and expressed support regarding a discussion with the attorneys in an effort to reach agreement on the language. DOE-RL noted that the content of the milestone has been re-discussed within the removal action work plan (RAWP) and has already been planned, and the issue is associated with the justification section of the change request.

DOE-RL reported that the surveillance and maintenance (S&M) plan associated with target milestone M-083-24-T01 was delivered to Ecology today. DOE-RL stated that it worked closely with Ecology on the S&M plan over the last six to seven months, and the milestone will be considered complete when Ecology's signature is received. DOE-RL noted that EPA provided input to the S&M plan.

Accomplishments 2nd Quarter 2016 - DOE-RL reported that the crew is putting the final fixative on the canyon floor in the Plutonium Reclamation Facility (PRF) canyon, and then fixative will be applied to the walls and strongbacks. DOE-RL noted that the strongbacks are where the pencil tanks were located. The fixative is being applied to minimize the possibility of a release to the environment during open air demolition.

DOE-RL reported that a series of skin contaminations occurred during the first quarter of fiscal year (FY) 2016, resulting in a safety pause, and a major

management change was implemented. DOE-RL stated that the schedule has been maintained over the last six or seven weeks, although there were issues last week.

DOE-RL reported that over 24,500 linear feet of asbestos have been abated in room 262 of the 234-5Z duct level, and roughly 2,800 linear feet remain to be abated. DOE-RL noted that the filter boxes are located downstream from the gloveboxes and are highly contaminated. The filter media is being removed and decontaminated, and fixative is being applied to the interior and exterior of the filter boxes. The filter boxes will be removed whole during demolition to minimize release to the environment.

DOE-RL noted that the Remote Mechanical A and Remote Mechanical C (RMA/RMC) lines were connected to gloveboxes HA-9A and HC-9B, where plutonium was produced and transferred to a metal button or powder. The RMA/RMC lines have been cleaned up and fixative has been applied. The HA-9A glovebox has been size-reduced, and fixative was applied to the entire room to ensure that additional contamination that wasn't cleaned up or vacuumed will adhere to the walls. DOE-RL noted that E-4 was the exhaust system, and the E-4 system was the ventilation downstream off the gloveboxes.

DOE-RL referred to the color photos on page 4 of today's summary handout, and noted that a significant amount of material was pressure washed from the strongbacks and walls onto the canyon floor, and the material was vacuumed and recovered. DOE-RL stated that nondestructive assay (NDA) shots of the walls are being done in PRF to determine the effectiveness of the power washing, and any identified hot spots will be rewashed or chiseled to remove the additional material.

Project Baseline Performance – DOE-RL stated that the contract-to-date performance still reflects that the project is behind schedule and slightly over budget. DOE-RL noted that the fiscal year to date performance, which is from September 2015 through March 2016, was before the project started to show recovery. DOE-RL stated that the high negative schedule variance was due to issues with the vortex cooler units of the level B suits, which delayed work on the HA-9A glovebox by three months. DOE-RL added that there were other issues regarding a breach of the suits, although the good news was that there was no skin contamination. DOE-RL noted that there were improvements with the project performance in May 2016, and a readiness assessment for demolition is still planned for July 18-27, 2016. DOE-RL stated that there will be a series of demonstrations in which a building will be demolished, and invited EPA and Ecology to attend.

Issues/Challenges – Regulatory - DOE-RL noted that several of the issues have been resolved. Ecology has received the S&M plan, and EPA approval was received to leave the asbestos in place, mainly the floor tiles. DOE-RL reported that the asbestos abatement was completed two weeks ago in 242-Z, and the floor tiles are the remaining concern. DOE-RL stated that it is waiting for the results of the effectiveness of the cleanup in the PRF canyon and strongbacks before finalizing the air dispersion modeling report. DOE-RL stated that the significant source term in the modeling came from the gallery gloveboxes in PRF canyon, and now it will be from the strongbacks. DOE-RL noted that the original estimate for the strongbacks was 900 grams, and it's down to an estimated 100 grams, due to the NDA. DOE-RL stated that comments were received regarding the change request associated with milestone M-083-00A, and the goal is to resolve the comments during the meeting scheduled next week with Ecology.

Issues/Challenges - Non-Regulatory – DOE-RL reported that the vortex cooler units in the protective equipment have been recovered, and there was no contamination to the two industrial facilities one near Pittsburgh and one located in Ohio. Ecology inquired about the pinholes in the protective suits. DOE-RL explained that while the HA-9A size-reduction was being done, the workers were rubbing against sharp metal contact points, which caused small pinholes in the protective suits. There was some slight contamination on the interior set of sleeves, but there was no skin contamination. DOE-RL stated that as low as reasonably acceptable (ALARA) reviews are done when these types of situations occur, and the result was to reinforce the suits in certain areas by using a wider belt, knee and arm pads, and reinforcing the interior sleeves. DOE-RL added that the vortex cooler units were rubbing on the back of the suits when the workers were bending, and more of a cushion was added in those areas.

DOE-RL estimated that there are about five or six more entries into 242-Z, and that will complete the last supplied air job in level B suits. The workers will get out of the level B suits and go to protective clothing and use a self-contained breathing apparatus located on the back of the worker.

DOE-RL stated that the A-Line control room was considered a clean buffer area, but some type of contamination penetrated the wall and three workers were contaminated. The control room has been turned into a radiation area.

DOE-RL reported that an independent analysis was done on the J Pan waste, and the waste has fully reacted. DOE-RL has been in contact with the Carlsbad field office and the Waste Isolation Pilot Plant (WIPP) personnel. DOE-RL noted that a mistake was made by over-applying the fixative. One of the corrective actions is a requirement to conduct a chemical compatibility analysis with anything that is brought into the canyon to ensure there will be no reaction with the fixatives.

## Planned Activities through June 2016

236-Z (PRF) - DOE-RL noted the readiness assessment is still scheduled for July 18-27, 2016, and that all of the chemical lines were drained in PRF. The decontamination and fixative application of the gallery gloveboxes is under way. DOE-RL stated that there are seven filter boxes in PRF, and three have been isolated. The miscellaneous treatment column gloveboxes have been removed from the exhaust ventilation system and stabilized, and they will be wrapped as the final step before extraction during demolition. The final step will be to isolate the power and ventilation before going cold and dark, and PRF is expected to be demo ready by the end of August 2016.

242-Z (Americium Facility) – DOE-RL reported that the tank characterization has been completed, and all the tanks have been prepared for demolition. There will be some final cleanup in the exhaust ducting, and the facility will be ready to go cold and dark. DOE-RL stated that 242-Z is scheduled to be demo ready by July 11, 2016. It won't be cold and dark because power from PRF runs through 242-Z.

234-5Z (RMA/RMC and Backside Rooms) and 234-5Z (Duct Level) – DOE-RL stated that all of the activities in these areas are in progress.

291-Z – DOE-RL reported that the work in 291-Z is on hold until the 242-Z Facility has been completed and better progress has been made in PRF. DOE-RL noted that 242-Z and PRF are the first two facilities that are planned for demolition. DOE-RL stated that the 26-inch vacuum line in 291-Z is about 100 feet to be removed. There are five filter boxes that will be removed from 291-Z, and about 1,000 feet of asbestos abatement will be done. There will also be some hot spots to clean up in 291-Z.

PFP Timeline and Sequence – DOE-RL stated that PRF is currently on track to start demolition by late August, early September 2016, and will take approximately 14 weeks. DOE-RL noted that it is the most contaminated facility. Demolition of 242-Z is the second facility to be demolished following PRF, and it is scheduled for December 2016. The main PFP building (234-5Z) will be demolished next, followed by the stack for 291-Z. The stack has been characterized, and is scheduled for explosive demolition in May 2017.

**100-K Sludge Treatment Project, Soil Remediation, Deactivation, Decommission, Decontamination, and Demolition (D4) and Interim Safe Storage (ISS) - M-016-00 and M-093-00 TPA Milestones**

Accomplishments – 2nd Quarter 2016:

Sludge Treatment Project – DOE-RL noted that construction of the K West basin annex was completed in December 2015, and preventive maintenance is being done on the building mechanical systems to ensure they stay in operating condition. DOE-RL stated that the contract will be awarded soon for installation of the engineered container retrieval and transfer system (ECRTS) equipment in the annex and in the basin.

DOE-RL noted that several activities were completed in the K West basin in preparation for sludge removal. The re-lidding of the six engineered containers (EC) was a modification that will make it easier to remove the sludge and improve operational efficiency. DOE-RL stated that the divider plate assembly was installed in EC-230 because it contains a higher concentration of uranium metal, and the plate is an engineered feature to protect safety analysis assumptions.

DOE-RL stated that a contract has been awarded to remove the north loadout pit (NLOP) equipment from T Plant in preparation for sludge storage. EPA asked where the NLOP equipment will be moved and if it is transuranic (TRU) waste. DOE-RL responded that the NLOP equipment is in the process of being dismantled and loaded into waste containers. There was a concern that one item could be TRU waste, but the latest report is that it was not TRU. DOE-RL indicated that the NLOP equipment would go to the Environmental Restoration and Disposal Facility (ERDF) if it is not TRU. EPA noted that the NLOP equipment cannot go to the Central Waste Complex (CWC) because it is Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) waste. ***DOE-RL stated that it will follow up with EPA on the status of the NLOP equipment.***

DOE-RL stated that the first production article sludge transportation and storage container (STSC) assembly was received. The STSCs are certified pressure vessels that are manufactured by ABW Technologies, and they are shipped after they've been inspected. When the STSC has been received on site, it is sent to a local company, HiLine Engineering, where all of the instrumentation and appurtenances are attached to the STSC to complete the assembly.

DOE-RL stated that the preoperational acceptance testing at Maintenance and Storage Facility (MASF) will be cold commissioning testing on the production equipment that will be used to remove the sludge. DOE-RL noted that the sand

filter media testing was completed at MASF. Part of the ECRTS system is a sand filter, and the sand filter media will be removed from the filter vessel during the deactivation phase of the ECRTS.

DOE-RL noted that the sample analysis was completed on the 100-K characterization wells, and a briefing was provided to EPA and Ecology on the results of the sampling during the first quarter of 2016. DOE-RL stated that a final report is being prepared and will be provided to EPA and Ecology.

Milestone Summary – DOE-RL stated that all of the milestones are on schedule. DOE-RL noted that M-016-177, which is due September 30, 2017, is currently tracking completion by April or May 2017. DOE-RL added that M-016-175, to begin sludge removal by September 30, 2018, is tracking to about June or July of 2018 to be completed.

Project Baseline Performance – DOE-RL stated that there were no cost or schedule variances of note to report.

Planned Activities April – September 2016 - DOE-RL stated plans to complete MASF preoperational acceptance testing (MPAT) cold commissioning testing in August 2016, begin disassembling sludge equipment and shipping to 100K Area. DOE-RL noted plans to award contract to install equipment in annex basin.

Sludge Treatment Project - DOE-RL stated that removal of the NLOP equipment from T Plant should be completed by August 2016, and the fabrication and delivery of the T Plant in-cell equipment was completed in May 2016. DOE-RL stated that it plans to procure a total of 24 STSC vessels. One STSC vessel has been received on site, and Nos. 2 through 13 are currently being fabricated and are expected to be delivered by August 2016. DOE-RL noted that all of the remaining auxiliary ventilation system equipment was received in May 2016.

#### **River Corridor Closure Project - Milestones M-16/M-89//M-94**

Quarterly Summary (January – March 2016) – DOE-RL noted that the quarterly summary handout does not capture the current milestone package that was recently signed for the Central Plateau, and updates will be provided during today's presentation. DOE-RL stated that today's report reflects seven remaining milestones to complete, and it is down to six, not including the new milestones that are in the TPA milestone package that was just signed. The milestone package adds three additional milestones, making a total of nine to be completed. DOE-RL noted that M-016-161 was completed in February 2016, that's the 100-D sites, and it included the asbestos waste site 600-385.

Milestone Status:

M-016-149 – DOE-RL reported that this milestone was completed, and one of the key waste sites associated with completing the milestone was the old firing range located at Gable Mountain (600-349).

M-016-164 - DOE-RL reported this is due next year and that's for the 100-N interim response action. To include revegetation activities in November 2016 through February 2017.

M-016-00A - DOE-RL reported that this milestone is due in March 2017 to complete all the response actions for the 100 Area units.

M-016-00B – DOE-RL stated that this milestone is due in September 2018, and it has been revised by removing the 618-11 burial ground, the 300-296 waste site under the 324 building, and the retained facilities in the 300 Area. DOE-RL stated that a couple of milestones were added to M-016-85A, which addresses the 300-296 waste site remediation; and to M-016-85, which completes the footprint of the contamination under the 324 building as well as demolition of the building. DOE-RL noted that the changes will be reflected in the next quarterly milestone update.

M-089-06 – DOE-RL reported that this milestone is on schedule to submit the Resource Conservation and Recovery Act of 1976 (RCRA) permit closure package for the 324 building by June 30, 2016.

M-094-00 – DOE-RL noted that this milestone was revised to exclude the 324 building and requires completion of the facility disposition through a RAWP, but all of the other 300 Area surplus facilities are to be completed according to the RAWP.

Significant Accomplishments - For Last 3 Months:

M-016-00 - Remedial Action/Risk Assessment – DOE-RL reported that the revegetation campaign in the 100-D Area was completed. Also cultural clearance was received for the 600-385 and the Gable Mountain site which completed revegetation at both of those areas.

As of June 16, 2016 63 of the 94 vertical pipe units (VPUs) have been augered in the 618-10 burial ground. The next step in the VPU remediation process is to extract the contaminated soil from the VPUs with an enclosed clamshell tool and place the soil into containers. DOE-RL stated that eight VPUs have been retrieved. DOE-RL noted that the waste site closure document was approved for 600-329, which is a concrete outfall structure in the 100-IU-6 operable unit.

M-094-00 – DOE-RL reported that a key activity was the transition of Washington Closure Hanford, LLC (WCH) contract work to the CH2M HILL Plateau Remediation Company (CHPRC) contract, and the 324 building and associated operations were transferred over in April 2016.

Significant Actions Planned – For Next 3 Months:

M-016-00 – Remedial Action/Risk Assessment – DOE-RL stated that remediation of the 600-385 site was completed, and the 600-349 waste site reclassification was done. DOE-RL reported that remediation at 300-288:2 was completed today. DOE-RL stated that about 1,700 drums have been processed to date in the 618-10 burial ground. DOE-RL noted that there are about 200 to 250 estimated drums that are in the vicinity of the VPU area that cannot be accessed until some of the VPUs are remediated. DOE-RL stated that the remaining work scope is on schedule to be transitioned from WCH to CHPRC by the end of August 2016.

ERDF – DOE-RL reported that operations are going through a significant ramp-down and are moving from double shifts to single shifts starting next week. ERDF had been operating with two ramps and is going down to one ramp, due to the reduced amount of soil remediation in the River Corridor. DOE-RL noted that the completion of 300-288:2 marked the turning point. There will be a staff reduction from about 80 personnel to 40 personnel over the next two weeks, and about 17 of the 40 personnel are drivers. DOE-RL stated that operation of one ramp equates to about 50 to 80 shipments to ERDF per day, which is commensurate with the remaining work for this year.

Performance Summary – DOE-RL stated that the project performance summary reflects contract to date, and the project is behind schedule with a negative \$56.4 million and has positive cost variance. DOE-RL reported 100-N, 618-10 and the 300 Area experienced delays in remediation efforts; and 618-11 no work at that location. DOE-RL stated the cost variance are positive with the cost performance index is 1.1. Significant cost underruns in the 300 Area, 100 B/C, D, F and IU-2/6 remediation and the ERDF costs were less than expected.

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

DOE-RL reported that the 2016 Lifecycle Report was provided in January 2016, and in the last three months the only comments received have been from Ecology. There were no EPA or public comments received. DOE-RL stated the comment resolution just began in May 2016.

DOE-RL stated that there is a change package proposal to change the frequency

of the Lifecycle Report from an annual report to every five years. Ecology submitted a counter-proposal, which DOE-RL is reviewing. DOE-RL noted that during the last quarterly milestone review, Ecology's TPA manager offered to sign a milestone change that would release DOE-RL from preparation of the 2017 Lifecycle Report. DOE-RL indicated that there is a tentative agreement to not submit a 2017 report because there will be no changes from the 2016 report.

DOE-RL stated that Ecology's counter-proposal was for the Lifecycle Report to remain on an annual submittal basis, but DOE-RL could request that the regulatory agencies waive the Lifecycle Report for the next year. DOE-RL will be initiating discussion with the regulatory agencies to consider other options, such as extending the submittal time frame to every three years. DOE-RL is still planning to pursue the regulatory agencies' release from submitting the 2017 Lifecycle Report. EPA noted that new milestones have been negotiated, and if there are significant changes, there needs to be a Lifecycle Report submitted in 2018. DOE-RL noted that ORP's input is linked to the report, and it can take more than one year to coordinate all the information.

#### **M-026-00/M-091-00 TPA Quarterly Milestone Review**

M-026-00 - DOE-RL noted that this milestone is not included in today's summary report. The annual Land Disposal Restrictions (LDR) report was submitted to Ecology in April 2016 ahead of the milestone, and DOE-RL is waiting on comments from Ecology. DOE-RL noted that the Ecology team dispositioning the comments is also working on the Solid Waste Operations Complex (SWOC) permit issues. Ecology stated that a review of the LDR report was done regarding what function it plays at the Hanford Site, and that Ecology and the EPA, the RCRA office and Ecology's attorneys, believe it has an important function. Ecology noted that there is a high level of aggregated waste streams, and the agencies believe it would be useful to break that down a little further since they will not be all the same kind of waste. Ecology acknowledged the holdup on the LDR comments, and stated that the intent is to close out with its internal team and EPA Region 10 before discussing the aggregate waste streams with DOE-RL. Ecology stated they we're trying to finish the reviews in the next couple of months.

M-091-00 – DOE-RL noted that the M-091-00 milestones are associated with the disposition of legacy waste and retrievably stored waste. DOE-RL added that retrievably stored waste is waste that was thought to be TRU waste that was stored underground since 1970, and part of the M-091-00 series is to retrieve that TRU waste.

DOE-RL stated that the milestone change package was approved in January 2016, and today's summary report reflects the milestones in the change package. DOE-RL reported the 2016 milestone was met for making certifiable TRU waste and mixed low-level waste, 280 cubic meters, and Ecology has been formally notified. The M-091-03 Project Management Plan (PMP), the submittal letter is in concurrence and DOE-RL stated the June 30, 2016 submittal date will be met. DOE-RL stated that the secondary document for doing an engineering alternative study under M-091-51 will eventually lead up to the additional capabilities that are needed to deal with remote-handled waste or large packages that cannot be sent to Permafix Northwest. EPA asked if the K Basin sludge will be included in the engineering alternative study. DOE-RL responded that the K Basin sludge will be factored in, but it is independent of what the K Basin group is doing.

EPA pointed to the word "all" in the M-091-51 milestone description. DOE-RL stated that the word "all" is one of the sticking points, and it is all M-091-00 waste, not all Hanford Site remote handled (RH)/transuranic mixed (TRUM) waste. Ecology stated that the goal is to have a discussion with the TPA agencies regarding all the waste that will be generated at Hanford and if the plant facilities will be able to handle the waste. Ecology added that it is not expecting an answer, but the TPA agencies need to start the discussion. DOE-RL noted that in the past few years, the M-091-03 PMP has not factored the CERCLA type of remediation waste that may need to be treated or certified, but the issue is recognized.

M-026-07D – DOE-RL stated that the tritium technology summary report is submitted on an annual basis, and every five years a full report is submitted, which will be in 2019. DOE-RL noted that the summary report is minimal and provides any new technologies, and the full report is not a large report that provides more information on the new technologies. DOE-RL stated that traditionally the tritium technology report was issued through the Effluent Treatment Facility (ETF) at DOE-RL, which has transitioned to DOE Office of River Protection (ORP), and the report may be issued through ORP.

Project Baseline Performance – DOE-RL noted that most of the cost data in the summary report are legacy items from pre-Recovery Act funding, Recovery Act funding, and the past two years. DOE-RL pointed to the cost variance for T Plant, and noted that costs have been kept lower than originally planned, including the effort to bring the plant up and running to support cleanout of cells to support K Basin sludge storage.

Planned Activities April – September 2016 – DOE-RL noted that the milestone change package was approved by Ecology in May 2016, which included the two interim milestones for FY 2017 and FY 2018. DOE-RL stated that the interim milestones call for certifying 280 cubic meters in 2017 and then in 2018.

## **Central Plateau Remediation Project - M-016-00, M-037-00, M-085-00**

### Accomplishments 2nd Quarter 2016 – Minimum Safe/Maintenance Activities -

DOE-RL stated that beryllium verification sampling was done on three small buildings in preparation for decontamination and decommissioning (D&D) on those buildings. DOE-RL noted that surveillance was completed on 6 of the 235 new waste sites did not have a well-defined owner over the last five-plus years. DOE-RL stated that the B-Plant surveillance was done, and it is one of the four remaining canyons onsite. An annual surveillance of each canyon is done during a two-to four-week period, and entries are made to inspect the general condition on the inside. DOE-RL noted that the RAD (radiation absorbed dose) detection equipment that was received is attached to vehicles that drive in and around the waste sites.

Canyon Stabilization Documents – DOE-RL reported closure plans for the B-Plant iso-chem were finalized and transmitted to Ecology. DOE-RL stated that as entry is made in the canyon buildings, degrading conditions have been observed for the last several years, and the intent is to address the degrading conditions with available funding.

Additional Work – DOE-RL stated that the design for the Reduction-Oxidation (S Plant) (REDOX) roof replacement is due by June 30, 2016. The current estimate for the roof is \$3.5 million. DOE-RL noted the canyon building is 800 feet long.

### Planned Activities April – September 2016 Minimum Safe/Maintenance Activities

DOE-RL reported that there was a failure of the Plutonium Uranium Extraction (PUREX) stack sampling system, and installation of an operational system is required by the end of July 2016. Negotiations are under way with the Department of Health (DOH) to determine whether or not another additionally robust system will be installed instead of the system that is currently being installed. DOE-RL stated that the robust system will cost about \$1 million, and there are discussions about whether there will be a continuous air monitor (CAM). DOE-RL noted that the system is currently not running and there is no active ventilation in PUREX, but the system can be turned on if there is an upset condition or additional need to provide ventilation in the facility. DOE-RL explained that the sample line is not trace-heated and it should be trace-heated, and it does not need to be run in other than an upset condition.

207A South Retention Basin – DOE-RL stated that the 207A consisted of three very simple retention basins that were removed, and they will be backfilled as soon as the public comment period is completed.

Canyon Stabilization Documents – Ecology asked if DOE-RL was still planning to remove the 276-BA organic tank this fiscal year. DOE-RL responded that it is planning to remove the tank this fiscal year and that funding is available. Ecology noted that approval is needed, and asked when DOE-RL needs to start. DOE-RL stated that there is not a real need date to remove the tank. Ecology noted that it is looking at the clock in terms of the permit, and stated its preference to do as few temporary authorizations as possible. Ecology added that it understood the need to get the work done.

Other Work – DOE-RL stated that all of the asbestos in the outside of 275EA has been removed, and the asbestos is being removed from the inside of the building. DOE-RL noted that 275EA is a non-radiological building. DOE-RL stated that encapsulating the asbestos-containing material on the REDOX exterior ducts is needed before proceeding with D&D of 2710S, 2711S and 2718S. DOE-RL noted that a stop work order was instated due to a safety concern with the asbestos, and the stop work should be lifted next week and then start with D&D on the three buildings.

**Soil and Groundwater Remediation Project Milestone Review - M-015-00, M-016-00, M-024-00, M-085-00**

Accomplishments – (2nd Quarter 2016) River Corridor - DOE-RL reported that since the chrome levels were measured below the 20 ug/L interim action target cleanup goal at all wells at 100-K West the 100-K West pump and treat (P&T) system has been shut down and a rebound study is being conducted. The purpose of the study is to see if it is a continuing source and if the source comes back. The P&T system will be shut down for a few months and be monitored.

DOE-RL noted that the 300-FF-5 operable unit Stage A Uranium Sequestration System Installation report was issued, which was not the final report on the leach studies, but just how the chemicals were injected and how the test was operated. The final report is expected in August 2016, which will be provided to Ecology and EPA. DOE-RL stated that stage A was a three-quarter acre test site of injecting a phosphate material to bind up the uranium. Stage B will be done next year on the other 2¼ acres to complete the three acres required in the record of decision (ROD).

Accomplishments (2nd Quarter 2016) Central Plateau – DOE-RL stated that comments were resolved on the 200-BP-5 engineering evaluation/cost analysis (EE/CA) at the end of March 2016, the final document went out for public comment, and no comments have been received on the EE/CA. EPA requested a

copy of the EE/CA, noting that its firewall is not allowing access to the Administrative Record (AR). DOE-RL stated that pumping continues under the treatability test to the 200 West Area, treating for uranium nitrates.

DOE-RL reported that three wells have been completed at 200-UP-1, and the second set of three wells is being installed.

DOE-RL stated that leach studies are being performed on the cores that were pulled from the six characterization boreholes at the 200-DV-1 B Complex. DOE-RL stated that the information will be used not only for DV-1, but also for 200-WA-1. DOE-RL noted that the first deep vadose zone test borehole at the U-8 crib is part of WA-1 and not DV-1, but it is still in the deep vadose zone. The information will be used wherever it can be applied, and not be limited to just WA-1.

DOE-RL reported that the third perched water test is under way in 200-DV-1. DOE-RL noted that there was an issue with one of the wells, and after reviewing the data on hand and the data needed going forward, the determination was made to go forward with the two wells and use the third well for monitoring. The perched water is being trucked over to 200 West for treatment. The piping should be in place by the end of this fiscal year, which will allow the perched water to be piped over and avoid the trucking, which is an expensive, labor-intensive operation.

DOE-RL stated that it continues to work closely with Ecology regarding the 200-IS-1 work plan, which is in dispute resolution, and the parties are waiting on a response from Ecology's lawyers. Ecology reported that the lawyers are to provide a response by the end of next week. Ecology noted that DOE-RL conducted an extensive research on the history of 200-IS-1 and prepared an atlas with all the pipelines, diversion boxes and tanks that are in 200-IS-1. Ecology indicated that the atlas is supposed to be released to Ecology by the end of July 2016. DOE-RL and Ecology agreed that progress is being made on the IS-1 work plan.

DOE-RL stated that the update of the 2015 plume maps for 200-ZP-1 to support the annual 200 West P&T Facility report will also provide support to the annual groundwater monitoring report. DOE-RL stated that the groundwater monitoring report is to be transmitted to Ecology for review by the end of next week. Ecology noted that according to its letter, the annual groundwater monitoring report was planned to be delivered June 6, 2016, for regulatory agency review. Ecology stated that a RCRA permit requirement was instituted for DOE-RL to provide the annual groundwater monitoring report.

DOE-RL disagreed, stating that there is no requirement to submit the annual groundwater monitoring report, and it is submitted as good practice and to keep the parties involved. Ecology and EPA disagreed with DOE-RL's statement. DOE-RL stated that the requirement is the RCRA report, which was submitted March 1, 2016, per the federal regulation. DOE-RL noted that Ecology conducted an inspection and issued a violation for not submitting the report March 1, which DOE-RL will comply with in the future as a federal regulation. Ecology and EPA stated that it is not the regulation but a permit requirement, and the date was set at July 31. DOE-RL stated that it is also a federal regulation, and indicated that the permit cannot give relief to the federal regulation. DOE-RL added that it is meeting the federal regulation. Ecology pointed out that DOE-RL will not be meeting the July 31 date. The parties agreed that further discussion was needed to sort out the issue.

Milestone Summary:

M-015-00 Milestones - DOE-RL noted that a response is expected from Ecology's attorneys by the end of next week regarding M-015-112, which is in dispute resolution.

DOE-RL stated that it is waiting on Ecology's comment response to the 200-BP-5/200-PO-1 remedial investigation (RI) report, which has been in Ecology's shop for ten months. DOE-RL noted that the M-015-21A milestone is due June 30, 2018, and is on schedule, but delivery of the feasibility study (FS) report could be at risk if Ecology's comments are not received on the RI report. Ecology asked for clarification regarding the milestone dates. DOE-RL responded that they are the new milestone dates, and asked when Ecology's response to comments on the RI report might be expected. Ecology responded that it is still working on the groundwater modeling issue. DOE-RL noted that the groundwater modeling issue has been elevated. EPA stated that a discussion has not been held. EPA added that it believed agreement had been reached during the meeting that was held six or eight months ago, and was not aware there was still an issue. Ecology stated that the issue was regarding the Environmental Impact Statement (EIS) model, which was supposed to be kept up to date, and then verifying that the model DOE-RL chose would be equivalent to what the EIS model does. Ecology noted that those requirements were met, but there are still issues concerning the EIS model.

DOE-RL stated that Ecology had indicated the issue with the proposed model was that it was not the EIS model. DOE-RL noted that a few Ecology comments were discussed and resolved, and it was not aware of any technical issues. EPA stated that a discussion could be held after this meeting. EPA indicated that subsurface transport over multiple phases (STOMP) was used for the complicated waste sites for 200-ZP-1, and asked if that was still being used. DOE-RL

responded that the same model that was used for 200-ZP-1 and 200-UP-1 is being used. Ecology stated that the comments on the RI for BP-5 and PO-1 won't be submitted until there is a path forward agreed to on the modeling. Ecology stated that comments on the RI for the two groundwater units, Ecology won't be submitting comments on the RI until there is a path forward that is agreed to on the modeling. DOE-RL noted understanding and added that comments were received from the Nez Perce tribe on the BP-5 RI.

DOE-RL noted that the remaining M-015 milestones are on schedule and are two to three years out.

M-016-00 Milestones - DOE-RL stated that M-016-110-T03 is at risk, and efforts are focused on the memorandum of agreement (MOA), which is what puts the milestone at risk. DOE-RL indicated that a discussion is needed with the tribes about the proposed plan, which is different from the previous approach to the MOA.

DOE-RL stated that a draft white paper associated with M-016-110-T04 was provided to Ecology, and a summary table has been added. DOE-RL noted that everything but 100-NR-2 has been included in the white paper since 100-NR-2 has its own target date of M-016-110-T03.

M-024-00 Milestones – DOE-RL reported that discussions of well commitments have been concluded, and there are a few follow-up actions per EPA's comments before sending the table to EPA and Ecology. DOE-RL noted that the remaining M-024 milestones are on schedule.

M-085-70 Milestone – DOE-RL noted that this milestone is over three years out to submit the RI/FS work plan for B Canyon and is on schedule.

Project Baseline Performance – DOE-RL indicated that there were no issues regarding the cost and schedule performance.

Planned Activities – April - September 2016:

DOE-RL stated that drilling has been completed on the 100-F remediation wells, and the 100-NR-2 wells are being drilled.

DOE-RL reported that preparations are being made for the 100-D/H proposed plan public review. A meeting with senior TPA management and the attorneys will be held the week of July 11, 2016, followed by a tribal consultation scheduled the week of July 18, 2016. DOE-RL indicated that the public review will not start before those two meetings take place. EPA responded that may not be the case, and that there is no reason not to proceed with the public review

because the parties will be consulting during the public comment period. EPA added that there will be time to meet during the 30-day public comment period, and there will be a request for an extension, pushing it to 60 days. EPA noted that an early notice of the public comment period went out 45 days ago, and then a 30-day public comment notice will be issued. EPA indicated that there may not be public meetings for 100-D/H since the waste sites are done and the P&T is being expanded. EPA added that a public meeting will be offered, but there has been a suggestion to hold discussion sessions about the 100 Area cleanup in general and ERDF, rather than public comments.

DOE-RL reported that the interim action remedial design/remedial action work plans and sampling analysis plans have been completed for 100-HR-3, 100-KR-4 and 100-NR-2. Ecology stated that the 100-HR-3 documents have been signed, and 100-NR-2 documents are ready to be signed.

DOE-RL noted that the 200-BP-5 treatability test report was sent to Ecology, and Ecology requested an extension for its review.

DOE-RL stated that the DV-1 RI/FS work plan will be submitted to Ecology in August 2016, and the resolved comments were submitted via signed review, comment record (RCRs). DOE-RL stated that the SW-2 work plan comments were signed off and sent to Ecology over a month ago. The SW-2 work plan was sent to Ecology for review on June 9, 2016, for approval, which starts the clock for dispute resolution. Ecology indicated that all of the technical issues in the work plans have been settled, including SW-2, and the remaining issue is to resolve the language for the Central Plateau principles, which are referred to in the work plans. Ecology noted that the work plan for the CERCLA operable units is satisfactory, and the SW-2 work plan is ready to sign when a decision is made on the Central Plateau principles. DOE-RL pointed out that there have been discussions regarding the principles over the past two years, and its position has been provided. DOE-RL suggested that Ecology either approve the position or elevate it to senior management. DOE-RL added that the principles could be discussed when upper management has a meeting about the modeling (see discussion under M-015 milestones).

Ecology stated that it will have internal discussions regarding the Central Plateau principles and coordinate with EPA to ensure agreement. DOE-RL noted that the same issue regarding the Central Plateau principles will likely surface with DOE-ORP.

DOE-RL reported plans to complete the 300-FF-5 post treatment leachability tests report in August 2016.

### **TPA Decision Documents List**

DOE-RL provided an updated list. DOE-RL noted that comment responses were submitted June 13, 2016, for the 200-DV-1 work plan (No. 7 on list).

# *PFP Closure Project*

*TPA Milestone Series: M-083*



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

2<sup>nd</sup> Quarter FY 2016

June 16, 2016

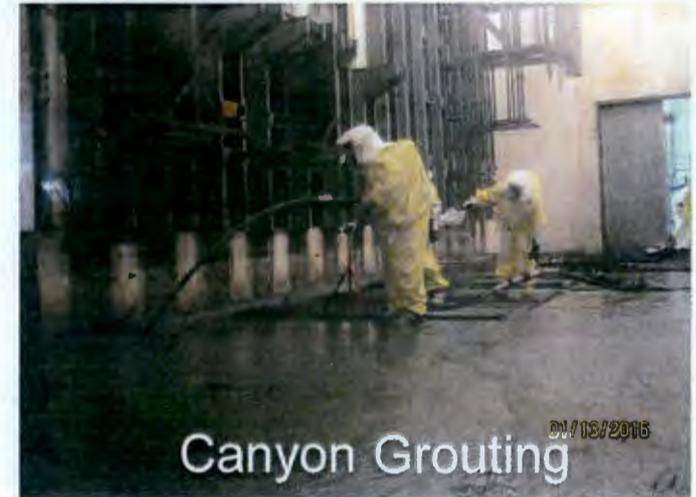


# Milestone Summary

Milestone/ Target Date	Due Date	Status	Description
M-083-00A	9/30/2016	To be Missed	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. Note: Also See "Description/Justification" Contained In Change Form M-83-01-03.
M-083-24-T01	6/30/2016	On Schedule	Submit Revision 0 of the PFP Complex Surveillance and Maintenance (S&M) Plan to Ecology.

## Accomplishments 2<sup>nd</sup> Quarter 2016

- Grouted and applied fixative to PRF canyon floor
- Restarted work after safety pause in December
- Completed asbestos abatement in room 262 of 234-5Z duct level
- Made progress in removal of filter boxes (2S, 3P, 23, 24, 25, 242Z, 7A, 9A)
- Performed cleanup and fixative application in RMA/RMC lines
- Removed portions of the E-4 ventilation ducts
- Installed 'barn' door to facilitate removal of large items from the duct level



# Accomplishments 2<sup>nd</sup> Quarter 2016

- Vacuumed PRF strongbacks and canyon walls and started pressure washing



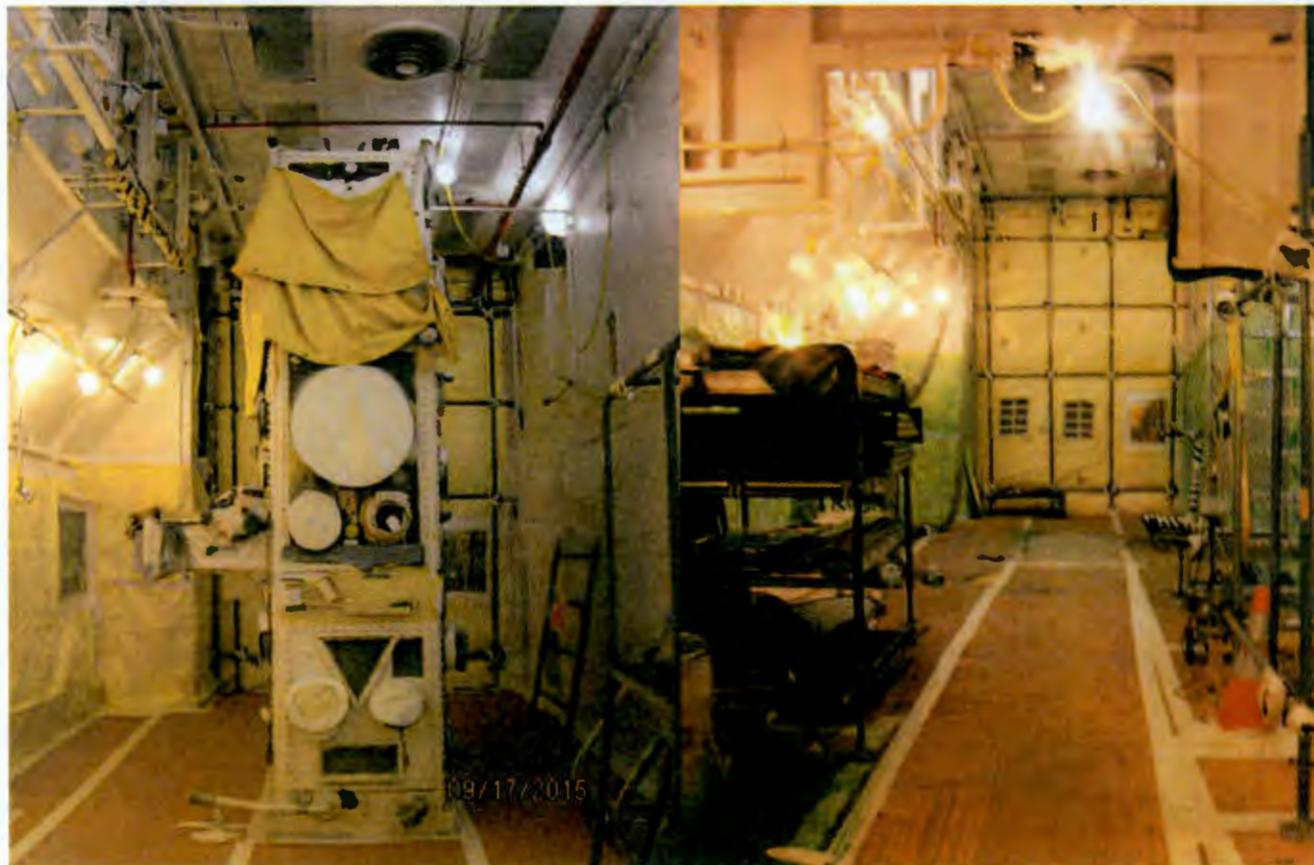
Wall Washing



Vacuumping Strongbacks

## Accomplishments 2<sup>nd</sup> Quarter 2016

- Completed size reduction of glove box HA-9A



# Project Baseline Performance

## Contract to Date (Through March 2016)

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>	\$922,034	\$879,172	\$889,144	(\$42,863)	-4.6%	(\$9,972)	-1.1%	\$971,896	\$1,022,877	(\$50,981)

## Fiscal Year to Date (Through March 2016)

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>	\$58,564	\$42,921	\$46,348	(\$15,643)	-26.7%	(\$3,428)	-8.0%

# Issues/Challenges

## Regulatory (*heads up*)

- *Ecology to receive S&M Plan (in June 2016) and SAP (near future)*
- *Sent request to, and received approval from EPA to leave category 1 and 2 non-friable asbestos in 236-Z, 242-Z, and 242-ZA*
- *Revision to Air Dispersion Modeling Report*
- *Nesting season for migratory birds*
- *Draft Change Request to Major Milestone M-083-00A in review*

## Non-Regulatory

- *Change in radiological release process for respiratory protection equipment*
- *Problems with personal protective equipment (Premaire breathing air systems and suits, respiratory equipment failures)*
  - *Several instances of pinholes in protective suits*
- *Contamination spread into A-Line Control Room*
- *Management of J Pan waste*

# Planned Activities Through September 2016

## 236-Z (PRF)

- Perform a Readiness Assessment for Demolition
- Complete draining of chemical lines
- Complete decontamination, fixative application, and isolation to Gallery glove boxes
- Remove TRU process piping and E4 ducting, and isolate filter boxes
- Prepare column and MT column glove boxes for extraction during demolition
- Remove hazardous materials and complete asbestos removal as needed
- Complete cold and dark isolation activities and make ready for demolition

## 242-Z (Americium Facility)

- Complete tank characterization and prepare tanks for extraction during demolition
- Remove hazardous materials and complete asbestos removal as needed
- Complete cold and dark isolation activities and make ready for demolition

# Planned Activities Through September 2016

## 234-5Z (RMA/RMC and Backside Rooms)

- Stabilize RMA/RMC Control Rooms
- Continue to remove ventilation and process piping and ducts
- Prepare tunnels for demolition activities
- Remove process support equipment
- Prepare for removal of large glove boxes for extraction during demolition
- Continue to remove hazardous materials
- Continue to remove friable asbestos

## 234-5Z (Duct Level)

- Drain remaining chemical lines
- Continue to remove hazardous materials
- Continue to remove friable asbestos
- Continue E3/E4 exhaust systems, filters, and filter box removal activities

## 291-Z

- Remove 26" vacuum line
- Remove 291-Z filter boxes
- Characterize facility and prepare for asbestos removal

# PFP Timeline and Sequence



New dates for major activities (e.g. demolition start/completion) are under review.

## Demolition Sequence

- |   |                                      |   |                                       |
|---|--------------------------------------|---|---------------------------------------|
| 1 | 236-Z Plutonium Reclamation Facility | 3 | 234-5Z Plutonium Finishing Plant      |
| 2 | 242-Z Americium Recovery Facility    | 4 | 291-1 Ventilation Stack and Fan House |

# 100K Sludge Treatment Project, Soil Remediation, D4, & ISS

TPA Milestone Series: M-016 and M-093



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

Second Quarter FY 2016

June 16, 2016



# Accomplishments

2<sup>nd</sup> Quarter 2016

## Sludge Treatment Project

- Complete 105-KW Sludge Transfer Equipment Installation (M-016-177, due 9/30/2017 On Schedule)
- Begin Sludge Removal from 105-KW Fuel Storage Basin (M-016-175, due 9/30/2018 On Schedule)

### Construction

- **Annex**
  - Initiated preventive maintenance on Annex mechanical systems (i.e. compressor/HVAC).
  - Issued RFP for ECRTS equipment installation.
- **In-Basin Construction**
  - Completed re-lidding on all six Engineered Containers (ECs).
  - Completed installation of Divider Plate Assembly in EC-230.
  - Completed transfer of Segregated Settler Material into EC-220.



Annex Building



Completed installation of the Divider Plate Assembly in EC-230.

# Accomplishments

2<sup>nd</sup> Quarter 2016

## Sludge Treatment Project (*continued*)

### Construction (continued)

- T Plant
  - Awarded construction contract for removal of NLOP equipment.
  - Completed delivery of equipment to support NLOP removal.
  - Continued fabrication of in-cell sludge storage equipment, delivery of all equipment expected in May.

### Equipment Procurement/Fabrication

- Received 1<sup>st</sup> production article STSC Assembly with appurtenances.
- Received all equipment required to start cold commissioning at MASF.
- Continued fabrication and receipt of Auxiliary Ventilation system equipment.
- Completed fabrication and testing of the truck scale and panel assembly.

# Accomplishments

2<sup>nd</sup> Quarter 2016

## Sludge Treatment Project *(continued)*

### Equipment Procurement/Fabrication *(continued)*



HiLine Delivery of 1<sup>st</sup> Article STSC at MASF



STSC Head Instrumentation/Appurtenances



Receipt of Auxiliary Ventilation System Low Pressure Air Purge Piping Assembly



1<sup>st</sup> Article STSC Staged for AVS Receipt Inspection



Delivery of Truck Scale Bridge at 100K Area



Nitrogen Supply Panel

# Accomplishments

2<sup>nd</sup> Quarter 2016

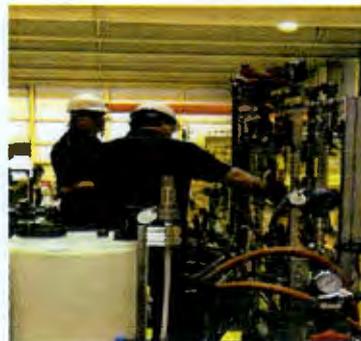
## Sludge Treatment Project (*continued*)

### MASF Preoperational Acceptance Testing (MPAT)

- Completed installation of ECRTS equipment to start MPAT (initiated testing early April 2016).
- Completed MPAT test specification and procedure.
- Completed Sand Filter media removal testing.



Installation of Auxiliary  
Ventilation System  
Low Pressure Air Purge Piping



Air Supply System Check Outs



Pool Refilled and Hardware  
Ready for Walkdown

# Accomplishments

## 2<sup>nd</sup> Quarter 2016

- 100K Characterization Wells (116-KE-3 and UPR-100-K-1)
  - Completed sample analysis
- Area AB Waste Site Remediation
  - Continue excavation of 100K Area AB (Area includes 20 waste sites)
  - Conducted in-process samples of six sites
  - Initiated verification sampling instruction development for four waste sites
- 165-KE Asbestos Abatement
  - Completed preparation for asbestos abatement
  - Began asbestos abatement (cement asbestos board and thermal system insulation)



Water Tunnel Glove Bag Removal



Cement Asbestos Board  
Removal Hallway

# Milestone Summary through 2019

Milestone	Due Date	Description	Status
<b>M-016-00 Complete Remedial Actions For All Non-Tank Farm &amp; Non-Canyon OUs</b>			
M-016-177	9/30/2017	Complete 105-KW sludge transfer equipment installation	On Schedule
M-016-175	9/30/2018	Begin Sludge Removal from 105-KW Fuel Storage Basin	On Schedule
M-016-176	12/31/2019	Complete sludge removal from 105-KW Fuel Storage Basin	On Schedule
M-016-178	12/31/2019	Initiate Deactivation of 105-KW Fuel Storage Basin	On Schedule
<b>M-093-00 Complete Final Disposition of all 100 Area Surplus Production Reactor Buildings</b>			
M-093-28	12/31/2019	Submit Change Package for Proposed Interim Milestones for 105-KE/KW Reactor Interim Safe Storage	On Schedule

# Project Baseline Performance

(Contract to date through March 2016)

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
Base Total	561.3	562.8	564.1	1.4	(1.4)	720.2	717.0	3.2	1.00	1.00

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)	SPI	CPI
Base Total	326.3	328.5	299.3	2.2	29.2	404.2	371.6	32.6	1.01	1.10

# Planned Activities

April – September 2016

## Sludge Treatment Project

### MPAT

- Complete testing, disassemble/ship ECRTS equipment to 100K Area

### In-Basin/Annex Construction

- Award contract and initiate ECRTS equipment installation.
- Complete construction of hose-in-hose assembly (KW Basin NE corner)

### T-Plant Construction

- Complete NLOP equipment removal.
- Complete fabrication and delivery of T-Plant in-cell equipment.

### Equipment Procurement/Fabrication

- Complete fabrication and delivery of STSC Vessels 2-13.
- Complete fabrication and delivery of remaining Auxiliary Ventilation system components.

# Planned Activities

April – September 2016

## 100K AB Waste Site Remediation

- Continue excavation of 100K Area AB (Area includes 20 waste sites)
- Continue Verification Sampling Instruction (VSI) development and initiate Remaining Site Verification Packages (RSVP)
- Conduct In-Process Sampling
- Close out four waste sites, 1607-K2, 100-K-14, 100-K-50, 126-KE-2

## 165-KE Asbestos Abatement

- Continue asbestos abatement removal



Area AB Waste Site Remediation



Area AB Waste Site Remediation

RIVER CORRIDOR CLOSURE PROJECT

*DOE's Largest Environmental Cleanup Closure Project*

# TPA Quarterly Review

For Period: January - March 2016



*Tri-Party Agreement*

## *River Corridor Milestones:*

M-16

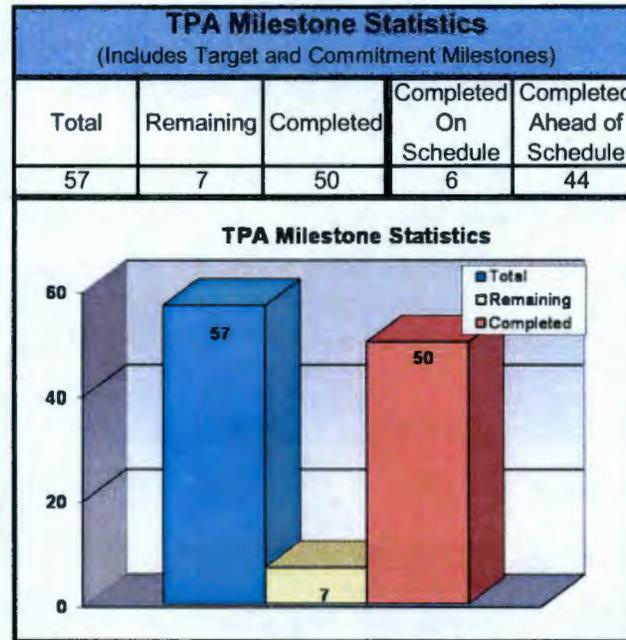
M-89

M-94

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

**June 16, 2016**

*Protecting the Columbia River*



Note: 324 building and associated operations were transitioned to CHPRC on 4/25/16. Three TPA milestones (M-089-06, M-089-00, M-094-00) were included in this transition. These milestones are still reflected in the graph's 'total' number due to this reporting timeframe.

### Quarterly Summary (January – March 2016)

- **Completed TPA Milestones:**
  - M-016-161 – Complete Area Interim Response Actions for 18 100-D Area Sites, 10 100-H Area Sites, Including Revegetation of 100-D and 100-H Waste Sites (due 3/31/16) - completed 2/25/16
  
- **Approved Change Requests:**
  - None for this reporting period.

RIVER CORRIDOR CLOSURE PROJECT

For Period: January - March 2016

TPA MS No.	Compliance Date	Title	Status	Comments
<b>M-016 Milestones - Remedial Action (milestones through 9/30/2018)</b>				
Note: Several M-016 milestones are impacted by change control forms approved in May 2016 as part of the tentative agreement package. These milestone changes will be reflected in future reports.				
M-016-149	03/31/16	Complete 100-IU-2/6 Interim Response Actions for Following Sites: 600-293, 600-294, 600-298, 600-299, 600-300, 600-301, 600-303, 600-305, 600-309, 600-310, 600-313, 600-316, 600-318, 600-319, 600-320, 600-321, 600-328, 600-329, 600-331, 600-332, 600-334, 600-326, 600-349, 600-358, 600-368, 600-369, 600-370, 600-371, 600-372, 600-373, 600-374, 600-375, 600-376, 600-377, 600-378, 600-379	Complete	National Historic Preservation Act (NHPA)Section 106 review was completed in early March, and sampling performed on 3/23/16 resulted in waste site 600-349 final closure. RL and EPA had agreed to extend the period of dispute resolution at the IAMIT level until 5/31/16, however, since DOE has completed the milestone, it has also withdrawn its statement of dispute.
M-016-161	03/31/16	Complete Area Interim Response Actions for 18 100-D Area Sites, 10 100-H Area Sites, and 600-385, including revegetation of 100-D and 100-H Waste Sites.	Complete	Milestone completed on 2/25/16.
M-016-164	03/31/17	Complete 100-N Interim Response Actions by Performing Remediation of Following Waste Sites: 100-N-28, 100-N-35, 100-N-53, 100-N-54, 100-N-55, 100-N-62, 100-N-68, 100-N-81, 100-N-82, 100-N-83, 100-N-84, 100-N-86, 100-N-87, 100-N-88, 100-N-89, 100-N-90, 100-N-91, 100-N-92, 100-N-93, 100-N-94, 100-N-95, 100-N-96, 100-N-97, 100-N-98, 100-N-99, 100-N-100, 100-N-101, 100-N-102, 100-N-103, 120-N-4, 130-N-1, 600-340, 628-2, UPR-100-N-18, UPR-100-N-20, UPR-100-N-24, Including Backfill/Revegetation of M-016-163 Sites. Close 100-N ancillary facilities areas of contamination in accordance with RAWP for 100-N Area ancillary facilities.	On Schedule	Actions remaining to meet this milestone are outside WCH scope. All work except revegetation of 100-N-83 will be completed by WCH (100-N-83 currently working through closeout verification process).
M-016-00A	03/31/17	Complete All Response Actions for the 100 Area Units (except groundwater actions which are covered under M-016-00 and 100-K Area Response Actions Addressed in M-016-00C), by the Specified Due Date as Approved in a Remedial Design/Remedial Action Work Plan.	On Schedule	Actions remaining to meet this milestone are outside WCH scope.
M-016-00B	9/30/18	Complete All Interim 300 Area Remedial Actions Including 618-10 and 618-11 Burial Grounds, but not Including Sites Associated with Retained 300 Area Facilities and Utility Corridors.	On Schedule	Actions remaining to meet this milestone are outside WCH scope.

TPA MS No.	Compliance Date	Title	Status	Comments
<b>M-089 Milestones - 324 Bldg Non-Permitted MW Units Closure (milestones through 9/30/2018)</b>				
M-089-06	06/30/16	Submit to Ecology in Accordance with Procedures in WAC 173-303-830(4)(b), a Request for a Class 2 Modification to Hanford Dangerous Waste Permit, to Include in Permit the "324 Bldg. Radiochemical Engineering Cells, High-Level Vault, Low-Level Vault, and Associated Area Closure Plan" (Closure Plan), DOE/RL-96-73 revised as necessary to address releases to soil and to ensure compliance with requirements of WAC-173-303-610. DOE's revised closure plan will include a schedule for completing closure activities.	On Schedule	324 building and associated operations were transitioned to CHPRC on 4/25/16. WCH is no longer responsible for this milestone.
M-089-00	TBE in accordance with M-89-06	Complete Closure of Mixed Waste Units in 324 Building REC B-Cell, REC D-Cell, and High-Level Vault and Low-Level Vault in Accordance with Closure Plan DOE/RL-96-73, as Amended and Incorporated into the Permit.	Program Planning	324 building and associated operations were transitioned to CHPRC on 4/25/16. WCH is no longer responsible for this milestone.

### M-094 Milestone - 300 Area Surplus Facilities Disposition (milestones through 9/30/2018)

Note: M-094 milestone is impacted by change control forms approved in May 2016 as part of the tentative agreement package. These milestone changes will be reflected in future reports.

M-094-00	09/30/18	Complete Disposition of All 300 Area Surplus Facilities Identified in the Removal Action Work Plan(s) for the 300 Area Facilities Including the 324 Bldg. and its Ancillary Buildings and Structure. Completion of facility disposition is defined as the completion of deactivation, decontamination, decommissioning, and demolition and obtaining EPA and/or Ecology approval of the appropriate project closeout documents. The cleanup of 300-FF-2 waste sites associated with 300 Area surplus facilities and utilities will be performed in accordance with TPA major milestone M-16-00B, M-16-69, and approved RD/RA Work Plans for 300 Area waste sites by the specified due date as approved in Removal or Remedial Action Work Plans.	On Schedule	324 building and associated operations were transitioned to CHPRC on 4/25/16. WCH is no longer responsible for this milestone.
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**Significant Accomplishments – For Last 3 Months:**

**M-016 – Remedial Action / Risk Assessment**

- Completed FY16 revegetation campaign
- Completed remediation of 100-N-83
- Received cultural clearance and completed site preparation activities for remediation of 600-385
- Sampled 600-349 for lead and sent samples to lab for analysis
- Completed augering 38 618-10 vertical pipe units (VPUs) to-date
- Received approval of 1 waste site closure document

**M-089 – 324 Bldg Non-Permitted MW Units Closure and  
M-094 – 300 Area Surplus Facilities Disposition**

- Transitioned 324 building and associated operations from WCH to CHPRC on 4/25/16



Remediated and Revegetated Waste Sites - 100-D Area



618-10 VPU Augering and Trench Excavation

**Significant Accomplishments – For Last 3 Months (cont'd):**

**ERDF**

- For period January-March, disposed ~ 180,400 tons of waste; bringing total to ~ 17.8 million tons disposed in ERDF
- Initiated waste disposal in vertical expansion area
- Started swing shift transportation operations
- Supported CHPRC leachate system modifications to 200 West PTF
- Received shipments of roll-on/roll-off containers, drums, and special-handled waste from other Hanford contractors (OHCs)



First Load of Waste Disposed in Vertical Expansion Area Over Cell 6

**Significant Actions Planned – For Next 3 Months:**

**M-016 – Remedial Action / Risk Assessment**

- Complete remediation of 600-385
- Complete 600-349 waste site reclassification
- Complete miscellaneous restoration at 100-IU Segment 4
- Complete remediation of 300-288:2 West
- Complete 618-10 Burial Ground drum retrieval and characterization
- Begin 618-10 VPU low-level waste retrieval

**ERDF**

- Begin in-cell macroencapsulation
- Receive, offload, and treat long-length macroencapsulation items from Tank Farms as weather permits

**PERFORMANCE SUMMARY**  
**Contract Inception (8/27/05) through March 2016**  
 (\$K)

	IPB		CUMULATIVE			Previous Quarter Comparison			
	BAC	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)	
						Dec	Mar	Dec	Mar
D4	662,663	636,220	659,976	649,095	571,843	-10,060	-10,881	67,694	77,252
Reactor ISS	75,902	81,777	75,902	75,902	81,777	0	0	-5,875	-5,875
Field Remediation	978,301	902,211	955,838	903,966	833,870	-89,536	-51,872	68,690	70,096
Waste Operations	649,851	527,313	618,061	626,638	501,878	17,257	8,577	129,142	124,760
ES/FC	81,206	60,103	79,824	77,554	59,356	-2,062	-2,270	18,047	18,198
Mission/General Support	447,985	412,297	424,978	424,978	388,309	0	0	36,046	36,669
Transition	3,979	3,747	3,979	3,979	3,747	0	0	232	232
Contingency						0	0	0	0
<b>TARGET COST TOTAL</b>	<b>2,899,888</b>	<b>2,623,669</b>	<b>2,818,558</b>	<b>2,762,112</b>	<b>2,440,781</b>	<b>-84,401</b>	<b>-56,446</b>	<b>313,976</b>	<b>321,331</b>

**Schedule Variance (PMB): (\$56,446K)**

- Variance associated with 100-N, 618-10, and 300 Area remediation delays. 618-11 negative schedule variance is due to funding constraints.
- Delay in D4 due to waste site discovered beneath 324 Building. Min-safe activities will continue until in-cell waste site remediation is complete.

**Cost Variance (PMB): \$321,331K**

- Significant underruns experienced in 300 Area building characterization, deactivation, and demolition activities; and in utility charges and surveillance and maintenance activities.
- 100-B/C, 100-D, 100-F, and 100-IU-2/6 remediation underruns due to favorable subcontract rates largely offset by overruns at 300 Area due to delayed release of facilities, and 618-10 due to quantity growth and change to hazard category 3.
- Costs have been less than planned due to Waste Operations efficiencies achieved in waste treatment, transportation, disposal, and construction; and Mission/General Support efficiencies in Project Services, Project Integration, and Office of General Manager.

## ***RCC Issues***

None

## Hanford Lifecycle Scope, Schedule and Cost Report

### TPA Milestone M-036-01 Quarterly Performance Report

June 16, 2016

Shannon Ortiz, DOE-RL Project Manager

#### 1. MILESTONE DESCRIPTION AND DELIVERABLE

- The U.S. Department of Energy (DOE) shall prepare and submit to the U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) a report setting out the lifecycle scope, schedule and cost for completion of the Hanford Site cleanup mission.
- The initial Hanford Lifecycle Scope, Schedule and Cost Report (Lifecycle Report) was submitted to DOE on July 25, 2011, and subsequent reports to 2016 were due January 31 of each year.

#### 2. CONTRACTOR PERFORMANCE

- The contractor responsible for the Lifecycle Report is Mission Support Alliance, Portfolio Management.
- There were no performance issues related to development and preparation of the 2016 Lifecycle Report.

#### 3. SIGNIFICANT ACCOMPLISHMENTS FOR THE LAST THREE MONTHS

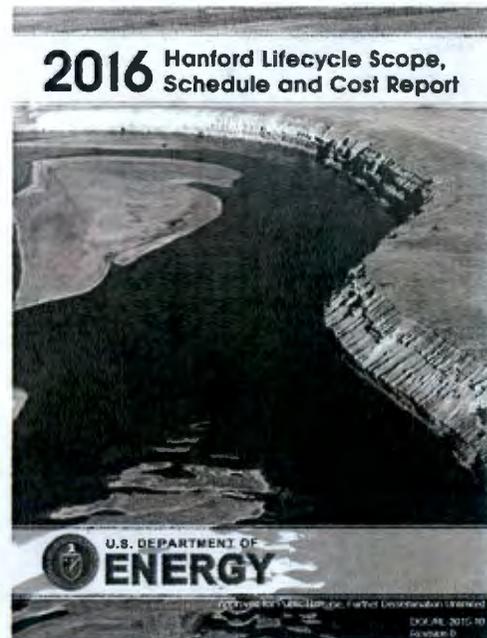
- A Lifecycle Report Project Managers Meeting was held on May 26, 2016. The only feedback received on the 2016 Lifecycle Report was from Ecology on April 15, 2016. Comment resolution began during the May 26, 2016 meeting.
- TPA Change Notice M-36-16-01 would change the M-036-01 due date from annual to every five years, or earlier if there is a significant baseline change. The draft change notice is in review by Ecology's legal counsel.
- Ecology's TPA Manager offered to sign a milestone change that released DOE from preparation of the FY 2017 Lifecycle Report.

#### 4. SIGNIFICANT PLANNED ACTIONS FOR THE NEXT SIX MONTHS

- Complete the review and signature process for TPA Change Notice M-36-16-01.
- The next Lifecycle Report Project Managers Meeting is scheduled for September 1, 2016.
- The next Lifecycle Report Quarterly Milestone Reviews are scheduled for September 15 and December 15, 2016.

#### 5. STATUS AND ISSUES

- Budget/Cost Status - No major issues identified.
- Issues - No major issues identified.
- Non-TPA Regulatory Issues/Potential Impacts to TPA - No major issues identified.



# *Solid Waste Stabilization and Disposition Project RL-0013 Milestone Review*

M-091, M-026



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

2<sup>nd</sup> Quarter FY 2016  
June 16, 2016



# Accomplishments

## 2<sup>nd</sup> Quarter 2016

- M-091-47B Certify or treat 280 cubic meters of TRUM/MLLW waste, and submit a change request to establish a schedule:
  - Completed 280 m<sup>3</sup> on 2/11/16 (Formal notification 16-AMRP-0164 May 4, 2016)
- M-091-03 Submit Annual Revision of TRUM/MLLW Project Management Plan:
  - Draft document prepared.
  - On schedule to submit to Ecology by 6/30/16.
- M-091-51 Submit secondary document Engineering Alternative Study to process all Hanford Site RH TRUM waste :
  - On schedule to submit to Ecology by 9/30/16.



Loading waste box at CWC for shipment

# Milestone Summary through FY 2019

Milestone or Target Date	Due Date	Description	Status
<b>M-091-00</b>	<b>TBD</b>	<b>Complete Treatment to LDR Standards for all RCRA MLLW &amp; TRUM Waste</b>	<b>On Schedule</b>
M-091-03J	6/30/2016	Submit Revision Of TRUM Waste And MLLW PMP To Ecology	On Schedule
M-091-47B	9/30/2016	Certify or treat 280 cubic meters of TRUM/MLLW waste, and submit a change request to establish a schedule	Completed
M-091-51	9/30/2016	Submit as a secondary document and engineering alternatives study for new or modified facilities to process all Hanford Site RH TRUM waste	On Schedule
M-091-03K	6/30/2017	Submit Revision Of TRUM Waste And MLLW PMP To Ecology	On Schedule
M-091-52	9/30/2017	Submit change request with target dates for new/modified capabilities to process TRUM waste	On Schedule
M-091-03L	6/30/2018	Submit Revision Of TRUM Waste And MLLW PMP To Ecology	On Schedule
M-091-53	9/30/2018	Submit milestone change request to replace target dates for capabilities to process TRUM waste	On Schedule
M-091-03M	6/30/2019	Submit Revision Of TRUM Waste And MLLW PMP To Ecology	On Schedule
M-026-07D	3/31/2019	Evaluation of Tritium Treatment Technology to EPA & Ecology	On Schedule

# Project Baseline Performance

Contract To Date Through March 2016  
Dollars in Thousands

Title	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance	Cost Variance
Central Waste Complex	73,015.7	72,832.8	69,370.8	-0.3%	4.8%
Waste Receiving and Processing Facility (WRAP)	42,249.1	42,249.1	40,818.1	0.0%	3.4%
T-Plant	86,349.0	85,597.8	68,238.0	-0.9%	20.3%
Mixed Low Level Waste Treatment	43,182.5	43,182.5	37,206.5	0.0%	13.8%
TRU Waste Retrieval	99,991.6	99,991.6	112,253.3	0.0%	-12.3%
TRU Waste Repackaging	74,079.4	76,836.7	68,070.5	3.7%	11.4%
TRU Waste Disposition	30,934.4	30,934.4	22,345.0	0.0%	27.8%
Project Management	123,420.0	122,323.7	105,117.3	-0.9%	14.1%

# Planned Activities

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## April – September 2016

- Submit Engineering Study/Alternatives Analysis (M-091-51)
- Submit Annual Revision of Project Management Plan (M-091-03)
- Submit Change Request to establish two interim milestones for FY2017 and FY2018 (M-091-47B)

# Central Plateau Remediation Project RL-40

Milestone Review M-016, M-037, M-085



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

2<sup>nd</sup> Quarter FY 2016

June 16, 2016

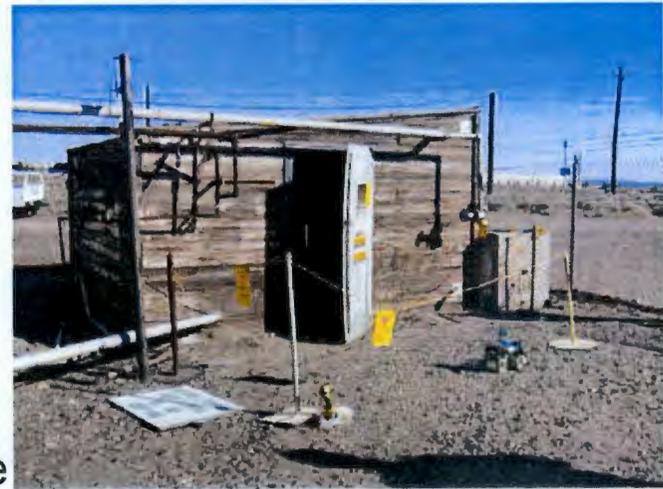


# Accomplishments

2nd Quarter 2016

## Minimum Safe/Maintenance Activities

- Completed replacement of B-Plant Stack exhaust bearing EF-102
- Performed Beryllium Verification Sampling of 2710-S, 2711S, 2718-S, 242 B/BL
- Completed surveillance on six of the 235 new waste sites and brought into compliant state
- Completed B-Plant surveillance
- Completed annual 291-S temperature, bearing, and sand filter differential pressure gauge calibrations
- Received RAD Detection Equipment (Truck & Off-road vehicle)



2711S



RAD Detection Off-Road Vehicle

# Accomplishments

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2<sup>nd</sup> Quarter 2016

## Nuclear Safety

- Completed draft 224-B Documented Safety Analysis (DSA), Rev. 8
- Implemented PUREX DSA, Rev. 8
- Released PUREX, Rev. 9 Criteria Document
- Implemented REDOX DSA, Rev. 5
- Implemented B-Plant DSA, Rev. 6

# Accomplishments

2<sup>nd</sup> Quarter 2016

## Canyon Stabilization Documents

- Finalized closure plans for B-Plant Iso-Chem Tank and 276-BA
- Implemented DSA changes for REDOX to allow for building demolition outside of facility and limited hazard reduction inside (asbestos, immediate hazards) and exterior building D&D of ancillary structures
- Drafted hazard reduction documents for PUREX and B-Plant exterior demolition target structures (203A tank farm, 276-BA)

## Additional Work

- Completed external engineering review of modifications to the REDOX roof design

2711-S Roof Stabilization at REDOX



# 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-016-250	3/31/2016	Develop a three year rolling prioritized schedule consistent with site-wide clean-up priorities to implement waste site removal actions	Complete
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	On Schedule
<b>M-037 TSD Closure Activities</b>			
Milestones due post 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.	On Schedule
M-085-74	6/30/2018	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 B Plant Geographic Area listed in HFFACO Appendix J.	On Schedule
M-085-80A	9/30/2017	Submit to Ecology as a secondary document a data quality objectives report to assess the structural integrity of the PUREX storage tunnels 1 and 2.	On Schedule

# Project Baseline Performance

## Contract to Date Through March 2016

### Contract to Date

BS 040/RL-0040 Nuclear Facility D&D	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>Total</b>	<b>412.2</b>	<b>410.0</b>	<b>378.3</b>	<b>-2.2</b>	<b>31.7</b>	<b>469.1</b>	<b>435.1</b>	<b>34.1</b>	<b>.99</b>	<b>1.08</b>

Numbers are rounded to the nearest \$0.1M

# Planned Activities

April – September 2016

## Minimum Safe/Maintenance Activities

- Continue Beryllium assessments
- Perform repair to PUREX stack sample line
- Perform entries into REDOX for Plutonium Nitrate Bag removal planning
- Perform surveillance of PUREX facility
- Initiate Miscellaneous Facility Surveillances (2321-Z, 242-B/BL)
- Continue Fire Protection assessments
- Change PUREX HEPA filters



PUREX Stack Sample Line



Plutonium Nitrate Bag Removal

# Planned Activities

## April – September 2016 (Continued)

### **Nuclear Safety**

- Complete Unreviewed Safety Question Determination (USQD) Summary for 224-T annual update
- Complete Hazard Characterization of PUREX Ancillary Structures
- Complete Hazard Characterization of 276-BA (B-Plant)
- Implement 224-B DSA (Rev. 9)

### **207A South Retention Basin Closure:**

- Assist Ecology to prepare 45 day public review of Closure Plan
- Initiate backfill operation upon receipt of final permit modification

# Planned Activities

## April – September 2016 (Continued)

### **Canyon Stabilization Documents**

- Receive public comments on Treatment/Storage/Disposal closure for 276-BA organic storage tank
- Draft Removal Action Work Plan (RAWP) for 276-BA organic tank and others in B-Area

### **Other Work:**

- Complete REDOX Roof Replacement design
- Continue planning and remove suspect plutonium nitrate bags at REDOX
- Complete Cold and Dark and demolition planning and perform demolition of high risk facilities at REDOX including 2710S, 2711S, and 2718S
- Complete demolition at 275EA and associated steam line
- Encapsulate asbestos containing material on REDOX exterior ducts

# *Soil and Groundwater Remediation Project Milestone Review*

M-015, M-016, M-024, M-085



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

2<sup>nd</sup> Quarter FY 2016

June 16, 2016



# Accomplishments

## 2<sup>nd</sup> Quarter 2016

### River Corridor

- 100-HR-3:
  - Completed drilling, construction and development of 7 replacement wells that were removed during soil remediation
- 100-KR-4:
  - Measured hexavalent chromium concentrations below the 20 ug/L interim action target cleanup goal at all wells in 100-KW
- 300-FF-5:
  - Issued the Rev 0 300-FF-5 Operable Unit Stage A Uranium Sequestration System Installation Report



# Accomplishments

## 2<sup>nd</sup> Quarter 2016

### Central Plateau

- 200-BP-5:
  - Resolved regulator comments on the 200-BP-5 EE/CA and initiated preparation of final document
- 200-UP-1:
  - Initiated drilling for the southeast chromium plume characterization effort
- 200-DV-1
  - Drilled and sampled 6 characterization boreholes at B Complex
  - Completed installation of the instrument array in the first Deep Vadose Zone treatability test borehole at U-8 Crib
  - Completed the first of 3 perched water tests, January 2016.



*Sonic drilling on Central Plateau*

# Accomplishments

## 2<sup>nd</sup> Quarter 2016

### Central Plateau Continued

- 200-IS-1:
  - Reached agreement with Ecology Technical Staff on 23 of 33 possible TSD Units
  - Finalized 205 (out of 279) waste unit scoping summaries to support the 200-IS-1 RI/FS work plan
- 200-ZP-1
  - Completed update of 2015 plume maps to support the Annual 200 West Pump and Treat Facility Report



*Worker collecting soil samples in 200 East Area*

# Milestone Summary through FY19

Milestone or Target Date	Due Date	Description	Status
<b>M-015-00</b>	<b>6/30/2026</b>	<b>Complete the RI/FS (or RFI/CMS and RI/FS) process for all non-tank farm operable units except for canyon/associated past practice waste site OUs covered in M-085.</b>	<b>On Schedule</b>
M-015-112	2/28/2014	Submit Draft B 200-IS-1 RFI/CMS/RI/FS Work Plan to Ecology with Schedule Dates	Dispute Resolution
M-015-79	12/15/2016	Submit CERCLA Remedial Investigation/Feasibility Study Report & Proposed Plan for 100-BC-1/2/5	On Schedule
M-015-92A	9/30/2017	Submit RCRA FI/CMS & RI/FS Work Plan for 200-EA-1 OU to Ecology	On Schedule
M-015-21A	6/30/2018	Submit 200-BP-5 and 200-PO-1 OU FS Report & PP(s) 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	On Schedule
M-015-98	6/30/2019	Complete remedial investigations of U Plant wastes sites located in 200-WA-1 in accordance with WP	On Schedule
M-015-99	6/30/2019	Complete remedial investigations of PFP wastes sites located in 200-WA-1 in accordance with WP	On Schedule
<b>M-016-00</b>	<b>9/30/2042</b>	<b>Complete remedial actions for all non-tank farm &amp; non-canyon OUs</b>	<b>On Schedule</b>
M-016-110-T03	12/31/2016	Take Actions To Contain Sr-90 GW Plume at 100-NR-2 OU	At Risk
M-016-110-T04	12/31/2016	Implement Remedial Actions in All 100A RODS For GW Ous	On Schedule
M-016-193	9/30/2017	Investigate SE Chromium Plume per 200-UP-1 RD/RAWP	On Schedule

# Milestone Summary through FY19

Milestone or Target Date	Due Date	Description	Status
<b>M-024-000</b>	<b>TBD</b>	<b>Complete Well Installations with RCRA/CERCLA Requirements</b>	<b>In Program Planning</b>
M-024-58I	6/1/2016	Initiate Discussions of Well Commitments	Complete
M-024-67-T01	8/1/2016	Conclude Discussions of Well Commitments	On Schedule
M-024-67	12/31/2016	Complete Construction of All Wells Listed for CY 2016 and Before as Identified in M-24-13-01	Complete
M-024-58J	6/1/2017	Initiate Discussions of Well Commitments	On Schedule
M-024-68-T01	8/1/2017	Conclude Discussions of Well Commitments initiated under M-024-58	On Schedule
M-024-68	12/31/2017	Complete Construction of All Wells Listed for CY 2017 and Before as Identified in M-024-14-01	On Schedule
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, as identified in TPA CP M-24-15-01	On Schedule
<b>M-085-00</b>	<b>TBD</b>	<b>Complete Response Actions for Specified Canyon Fac. &amp; Waste Sites</b>	<b>In Program Planning</b>
M-085-70	9/30/2019	Submit Remedial Investigation/Feasibility Study Work Plan for 200-CB-1 to Ecology	On Schedule

# Project Baseline Performance

## Contract to Date Through March 2016

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>	1,219.4	1,203.5	1,181.2	-15.9	-1.3%	22.3	1.9%	1,561.0	1,522.5	38.4

Numbers are rounded to the nearest \$0.1 million.

# Planned Activities

## April – September 2016

- Complete installation of the 100-F/IU remediation wells
- Complete installation of the 100-NR-2 characterization wells
- Complete 100-D/H Proposed Plan, Public Review, and ROD
- Complete 100-HR-3 Interim Action RD/RA Work Plan, O&M Plan, and SAP
- Complete 100-KR-4 Interim Action RD/RA Work Plan, O&M Plan, and SAP
- Complete 100-NR-2 Interim Action RD/RA Work Plan, O&M Plan, and SAP
- Complete 200-BP-5 treatability test report
- Complete DV-1 RI/FS Work Plan, SW-2 RI/FS Work Plan, WA-1 RI/FS Work Plan
- Complete 300-FF-5 post treatment leachability tests
- Initiate discussions of well commitments to support M-024 milestone series in April and complete discussions by August
- Elevate 200-BP-5 modeling issue

TPA Decision Document List

	Geographical Areas	ROD Area Location	Document	Milestone	Milestone Due Date	Regulatory Review	DOE Lead	Contractor Lead	Regulatory Lead	Agency	Comments/Issues
1	Central Plateau Source Inner Area	200-IS-1 200 Inner Area/Pipelines	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 Dispute Resolution	2/28/2014	TBD	D. Hildebrand	B. Day	N. Menard	Ecology	Dispute Resolution extended to August 1, 2016.  RL and Ecology are continuing the Work Plan preparation workshops as part of the RI/FS WP development.
2	Central Plateau Source Inner Area	200-EA-1 200 East Inner Area	TSD - Closure Plans for 207-A South Retention Basin (DOE/RL-2005-89 R0), 216-A-29 Ditch (DOE/RL-2008-53 R1), 216-A-36B Crib (DOE/RL-2005-90 R0), 216-A-37-1 Crib (DOE/RL-2005-88 R0), and 216-B-63 Trench (DOE/RL-2006-11 R1)	M-037-02: Submit Revised Closure Plan to support TSD closure for five (5) TSD Units Complete	Milestone Completed 6/23/14	6/24/2014 12/9/2014	M. Kamal	B. Day	N. Menard	Ecology	Public review for 207-A Closure Plan scheduled for May 9, 2016 through June 24, 2016. Schedule for remaining closure plans have not been agreed upon.
3	Central Plateau Source Inner Area	200-IS-1	TSD - Closure Plan for the Hexone Storage and Treatment Facility TSD Unit	M-037-01: Submit Revised Closure Plan to support TSD closure of the Hexone Storage and Treatment Facility (276-5-141/142) TSD Unit. Complete	Milestone Completed 7/16/2010		D. Hildebrand	B. Day	N. Menard	Ecology	Comments received. Anticipated to start in 2017 if funding is available.
4	Central Plateau Source Inner Area	200-WA-1 and 200-BC-1 200 West Inner Area	RI/FS Work Plan	M-015-91A: Submit a Remedial Investigation/Feasibility Study Work Plan for the 200-WA-1 operable unit to EPA Complete	Milestone Completed 12/27/2011	10/1/2015 11/16/2015	J. Sands	P. Baynes	C. Cameron	EPA	Draft B WA-1 RI/FS Work Plan was submitted to EPA on September 17, 2015. Received EPA comments in November. Revising draft per comments and to show distinct work areas. RL requested an extension of comment resolution to 8/15/2016.
5	Central Plateau Source Inner Area	200-SW-2 200 West Inner Area & 200 East Inner Area	RFI/CMS & RI/FS Work Plan - Draft B	M-015-113: Submit Draft B RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) & Remedial Investigation/Feasibility Study (RI/FS) work plan for the 200-SW-2 OU to Ecology Complete	Milestone Completed 3/25/2015	4/1/2015 5/26/2015	D. Hildebrand	B. Day	E. Eberlein	Ecology	RL requested, and Ecology has granted, comment resolution and document update extension to the end of May. Signed RCRs were transmitted on May 26th. Work Plan was submitted on June 9th.
6	Central Plateau Source Inner Area	200-PW-1/3/6, CW-5 200 West and 200 East	RD/RAWP	M-016-125: Submit a Remedial Design/Remedial Action Work Plan for 200 CW-5 and 200-PW-1/3/6 to EPA as described in section 12.4 of the associated ROD. Complete	Milestone Completed 9/30/2015	10/1/2015 11/16/2015	B. Long	P. Baynes	E. Lalja	EPA	Document was submitted to EPA on September 30, 2015. EPA comments were received in November. RL requested an extension of comment resolution to 6/1/2016. EPA and DOE approved RD/RAWP and SAP on May 19th.
7	Central Plateau Source Deep Vadose Zone	200-DV-1 Deep Vadose Zone	RI/FS Work Plan	M-015-110A: Submit RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) & Remedial Investigation/Feasibility Study (RI/FS) work plan for the 200-DV-1 OU to Ecology. The work plan shall include technology screening that identifies technologies applicable for characterization, treatment, and monitoring of deep vadose zone contaminants. Complete	Milestone Completed 3/18/2015	4/1/2015 6/24/2015	J. Hanson	M. Byrnes	D. Gaswami	Ecology	RL requested extension to June 13, 2016 (16-AMRP-0151). Incorporating Principles and Parameters into Rev 0 for submittal in June timeframe.
8	Central Plateau Source Outer Area	200-CW-1, 200-CW-3, and 200-OA-1 Outer Area	TSDs - Closure Plan for 216-B-3 Main Pond and 216-S-10 Pond and Ditch	M-037-03: Submit Revised Closure Plans Complete	Milestone Completed 4/18/2013	4/19/2013 7/17/2013	J. Sands	B. Day	N. Menard	Ecology	NOD was issued and response submitted. Major issues have been identified related to non-TSD past-practice contamination and these issues remain unresolved.
9	Central Plateau Groundwater	200-BP-5, 200-PO-1 200 East Area Groundwater	200-BP-5 RI Report	None		8/11/2015 6/9/2016	J.Hanson	C.Wittreich	N. Menard	Ecology	RL Transmitted the Draft A 200-BP-5 RI report to the regulators for review on August 11, 2015. Ecology suspended their review on October 23, 2015. On February 9, Ecology issued a letter indicating they will restart their review, require a minimum of 4 months to complete their review and require additional fate and transport modeling information.
10	Central Plateau Groundwater	200-BP-5, 200-PO-1 200 East Area Groundwater	200-PO-1 RI Report Addendum	None		8/11/2015 6/9/2016	J.Hanson	C.Wittreich	N. Menard	Ecology	RL Transmitted the Draft A 200-PO-1 RI report addendum to the regulators for review on August 11, 2015. Ecology suspended their review on October 23, 2015. On February 9, Ecology issued a letter indicating they will restart their review, require a minimum of 4 months to complete their review and require additional fate and transport modeling information. Ecology and DOE Staff have agreed to elevate the modeling issue.
11	Central Plateau Groundwater	200-BP-5 200 East Area Groundwater	200-BP-5 EE/CA	None		6/11/2015 9/3/2015	J.Hanson	C.Wittreich	N. Menard	Ecology	EE/CA completed public review on 5/20/2016. No comments were received.
12	Central Plateau Groundwater	200-BP-5 200 East Area Groundwater	200-BP-5 Action Memo	None		8/15/2016 9/30/2016	J.Hanson	C.Wittreich	N. Menard	Ecology	In preparation.
13	Central Plateau Groundwater	200-UP-1 200 West Area Groundwater	Technology Evaluation Plan	M-016-192: Submit I-129 Technology Evaluation Plan Draft A to EPA as defined in the 200-UP-1 RD/RA WP Complete	Milestone Completed 12/3/2015	6/18/2016 8/1/2016	K. Amrhein	PNNL	E. Lalja	EPA	RL transmitted Draft A to EPA for review on December 3, 2015. Comments received from EPA on March 7, 2016.
14	River Corridor	100-BC-1, 100-BC-2, 100-BC-5 100-B/C	RI/FS Reports and Proposed Plan	M-015-79: Submit RI/FS Report and PP for 100-BC On Schedule	12/15/2016	12/16/2016 01/30/2017	G. Sinton	R. Evans	L. Buelow	EPA	RI/FS being revised in FY16 to incorporate additional data.
15	River Corridor	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		J. Hanson	M. Drewett	N. Menard	Ecology	ROD issuance scheduled for September 30, 2016. Need tribal briefing prior to public review.

TPA Decision Document List

	Geographical Areas	ROD Area Location	Document	Milestone	Milestone Due Date	Regulatory Review	DOE Lead	Contractor Lead	Regulatory Lead	Agency	Comments/Issues
16	River Corridor	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		J. Hanson	M. Drewett	C. Guzzetti	EPA	The characterization boreholes at 100-KE Reactor waste sites completed in September 2015. Draft Field Investigation report, including PNNL leach testing results, to be submitted in July 2016. RI/FS rewrite scheduled to begin in FY2017.
17	River Corridor	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	G. Sinton	B. Faught	A. Boyd	Ecology	Ecology is not reviewing the PP until RI/FS comment resolution is complete. Disposition meetings with ECY are ongoing. Resolution of Ecology's comments on the Draft A RI/FS has been extended through September 30, 2016.
18	River Corridor	100-NR-1, 100-NR-2 100-N	Interim Action Remedial Design / Remedial Action Work Plans	None		10/22/2015 12/6/2015	G. Sinton	B. Faught	A. Boyd	Ecology	Ecology's comments on the Interim Action RD/RA WP and SAP have been resolved. Preparation of final document is underway.
19	Central Plateau Groundwater	200-BP-5	200-BP-5 Sampling and Analysis Plan	None		TBD TBD	J. Hanson	C. Wittreich	N. Menard	Ecology	Resolution of Ecology comments on SAP dependent on their review of the RI report.
20	Central Plateau Groundwater	200-BP-5	LLBG WMA-1, RCRA Groundwater Monitoring Plan	None		10/7/2015 11/9/2015	D. Hildebrand	B. Faught	S. Luttrell	Ecology	PRC reviewed the RCR with Ecology January 18, 2016. Document will be issued when monitoring plan template is updated (based on all Ecology comments) and the changes made to the plan. This is expected in early August 2016.
21	Central Plateau Groundwater	200-BP-5	LLBG WMA-2, RCRA Groundwater Monitoring Plan	None		TBD TBD	D. Hildebrand	B. Faught	S. Luttrell	Ecology	The plan is complete. Waiting for resolution of "Green Islands".
22	Central Plateau Groundwater	200-PO-1	200-PO-1 Sampling and Analysis Plan	None		TBD TBD	J. Hanson	C. Wittreich	N. Menard	Ecology	Resolution of Ecology comments on SAP dependent on their review of the RI report.
23	Central Plateau Groundwater	200-PO-1	SWL, Groundwater Monitoring Plan	None		1/12/2016 5/2/2016	D. Hildebrand	B. Faught	S. Luttrell	Ecology	Ecology advised that they have no comments on this plan. Document will be issued when monitoring plan template is updated (based on all Ecology comments) and the changes made to the plan. This is expected in early August 2016.
24	Central Plateau Groundwater	200-PO-1	SST WMA-A-AX, RCRA Groundwater Monitoring Plan	None		10/7/2015 ?	D. Hildebrand	B. Faught	J. Lyon	Ecology	Currently in Ecology Review—have received direction to produce final status GWMPs for the SST Tank Farms.
25	Central Plateau Groundwater	200-PO-1	216-A-29, RCRA Groundwater Monitoring Plan	None		12/8/2015 2/8/2016	D. Hildebrand	B. Faught	N. Menard	Ecology	Ecology comments received. Comments applicable to Interim Status will be incorporated.
26	Central Plateau Groundwater	200-PO-1	216-A-36B, RCRA Groundwater Monitoring Plan	None		10/7/2015 2/8/2016	D. Hildebrand	B. Faught	N. Menard	Ecology	
27	Central Plateau Groundwater	200-PO-1	216-A-37-1, RCRA Groundwater Monitoring Plan	None		10/27/2015 2/12/2016	D. Hildebrand	B. Faught	N. Menard	Ecology	
28	Central Plateau Groundwater	200-PO-1	216-B-3, RCRA Groundwater Monitoring Plan	None		1/7/2016 3/8/2016	D. Hildebrand	B. Faught	N. Menard	Ecology	
29	Central Plateau Groundwater	200-PO-1	NRDWL, RCRA Groundwater Monitoring Plan	None		10/7/2015 11/9/2015	D. Hildebrand	B. Faught	S. Luttrell	Ecology	
30	Central Plateau Groundwater	200-ZP-1	LLBG WMA-3, RCRA Final Status Groundwater Monitoring Plan	None		TBD TBD	D. Hildebrand	B. Faught	TBD	Ecology	
31	Central Plateau Groundwater	200-UP-1	216-S-10, RCRA Groundwater Monitoring Plan	None		10/7/2015 2/12/2016	D. Hildebrand	B. Faught	N. Menard	Ecology	
32	River Corridor Groundwater	300-FF-5	300 APT, RCRA Groundwater Monitoring Plan	None		12/8/2015 2/2/2015	D. Hildebrand	B. Faught	S. Schleif	Ecology	
33	River Corridor Groundwater	100-HR-3	183-H, RCRA Groundwater Monitoring Plan	None		10/27/2015 12/7/2015	D. Hildebrand	B. Faught	N. Menard	Ecology	