

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

Department of Ecology Building
Richland, Washington
March 21, 2019

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Tri-Party Agreement

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

SIGNATURES

Approval:  Date: 5/8/19.
A.K. Smith, Ecology Representative

Approval:  Date: 5/6/2019
W.F. Hamel, DOE-RL Representative

Approval:  Date: 5/13/19
D.R. Einan, EPA Representative

Minutes Prepared by:  Date: 5/6/2019
S.W. Davis, Mission Support Alliance

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Biennial Assessments of Information and Data Access Needs – M-035-09

The U.S. Department of Energy, Richland Operations Office (DOE-RL) stated the data access milestone is a biennial milestone to evaluate the access to all TPA-relevant databases and information. DOE-RL noted meetings are held on a fairly continual basis with Ecology to discuss issues Ecology has getting access to certain information. DOE-RL described the issues with the data access process as an ebb and flow situation, and in the past year it has been more of a challenge than in the previous years. DOE-RL explained the milestone was not completed in March of 2018, as originally planned, due to these issues, and it has been extended four times since then, to the current date of March 31, 2019.

DOE-RL stated it has been working on getting Ecology access to the operating record areas in the Integrated Document Management System (IDMS), with recent limited success. DOE-RL has directed the contractor CH2M Hill Plateau Remediation Company (CHPRC) to provide access to the operating records in IDMS. However, Washington River Protection Solutions, LLC (WRPS) is waiting until CHPRC has completed the process to ensure all the right information is identified to be accessed and all the mechanisms work correctly. DOE-RL pointed out that from its perspective, there is agreement that Ecology should be provided access to the TPA information it is requesting. Ecology stated a letter was issued to DOE-RL reporting that the milestone is at risk, but Ecology's position is not to extend the milestone anymore.

DOE-RL stated the milestone has been declared in jeopardy and the parties do not have a unanimous interpretation of the cited TPA clauses, and asked about the path forward if the milestone is not extended again. DOE-RL noted that originally the first steps were to populate the folders and then grant Ecology access to the folders, although the contractors had some issues with the process.

DOE-RL asked if access to CHPRC's folders in IDMS that contain operating records would demonstrate enough progress to allow signing the milestone or granting an extension. DOE-RL acknowledged access to CHPRC's folders would not represent all of the TPA data. DOE-RL added that there is not a clear definition of what a comprehensive list of all TPA-relevant data means or what constitutes an operating record.

Ecology agreed that a level set of data needs to be identified. Ecology clarified that the milestone extension process has been ongoing for 3 years, but significant progress has not been made. Ecology noted it currently has next to zero access, in terms of data, when it logs into IDMS. Ecology stated there is still an interpretation issue, and initially when there were

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discussions about the operating record, the operating record was identified as a starting point for getting data secured. Ecology referred to the bullet point on today's handout that states, "Ecology initially tied access to operating record files to completion of milestone M-035," and indicated the statement is fundamentally untrue. Ecology added it has been stating in the project manager meetings that granting access to operating records is a starting point and does not represent completion of the milestone.

Ecology stated it is not interested in extending the milestone, and reiterated that it has been extended 3 years with minimal progress. Ecology added there was an interpretation issue, and Ecology's letter states it is requesting access to all TPA-relevant data and databases, not all data and databases. Ecology stated IDMS is a very large database with many records that do not pertain to TPA work that needs to be performed or is currently being performed, and the Ecology letter is very specific about what data it is referencing. Ecology added it still does not have access to the data referenced in the letter.

Ecology suggested proposing new interim milestones that would establish implementation schedules and facilitate the parties defining and agreeing to what are TPA-relevant data and databases and the logistics for granting access.

DOE-RL disagreed adding milestones would move the parties forward any faster in light of the minimal progress made during the past 3 years. DOE-RL suggested the first step to moving forward would be to reach agreement on the definition of TPA-relevant data and databases. Ecology agreed that would be the starting point. Ecology stated that a significant issue over the past 3 years has been resistance to allowing access by staff that are not involved in the milestone project, and the contractors were not directed until just recently to allow access to the data. Ecology added the TPA guarantees access to that data.

DOE-RL noted part of the challenge is if the TPA-relevant data and databases are not clearly identified, access to the files can be granted but does not guarantee success. DOE-RL stated there will be groups that are not the decision makers that will want to have input on the definition, and coordination will be needed.

Ecology clarified there are a couple of different issues within the TPA. Ecology stated one issue is the milestone that requires the assessment; and there is the submittal of schedules, which are TPA milestones, to resolve any access issues. Ecology stated there is the noncompliance issue with Section 9 of the TPA, which is outlined in the letter as Sections 9.6.2 and 9.6.5, and dictates what level of data the regulators should be able to access.

DOE-RL noted that part of the discussion today is the method of providing data, and asked if

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Ecology is provided data when it requests it via hard copy or email. *Ecology responded that it would need to follow up internally to provide an answer about requests for information via email or requests for hard copies.* DOE-RL stated if there is an issue with those requests not being provided to Ecology, it could be resolved quickly. DOE-RL added it was not clear in Ecology's letter if satisfying requests for hard copies or information via email was separate from the issue of data access. Ecology stated that requests for hard copies usually occur between the individual environmental staff and the counterparts they are working with, and the main issue is attempting to gain access to data within the databases that exist on the Hanford Local Area Network (HLAN).

DOE-RL suggested the option of letting the data access issue go to dispute since the time period is limited for resolution and the parties do not want to extend the milestone. DOE-RL pointed out that reaching a resolution would require input from the lawyers and ORP, and WRPS is waiting on CHPRC to complete its process.

Ecology stated going to dispute may be the best path forward since Ecology and EPA have given four extensions with minimal progress. Ecology added the lack of progress was not due to effort on all sides. EPA agreed potentially the best path forward would be to let it go to dispute and get the definition and scope identified, but milestones are going to be needed to ensure it happens. DOE-RL responded once the definition of data and databases is agreed to, it would agree with Ecology and EPA about setting interim milestones. Ecology stated the TPA reference is all relevant data to work being performed under the TPA or to be performed under the TPA, which is very specific, but it is nonspecific as to who determines what the data set is and whether there is a list.

Ecology acknowledged the challenge with agreeing on a definition, but reiterated that it is completely deficient in accessing the databases it needs as a regulator. DOE-RL noted that databases get consolidated, updated or outdated, and there needs to be a working level definition of an activity and all relevant databases related to that activity. Ecology responded that the milestone is written to identify what the data sets are, to be followed with proposed schedules (milestones) after the assessment has been done. Ecology stated additional milestones are not being established to work with Ecology and EPA on defining what the data set is and what the TPA-relevant databases are.

EPA stated the entire relevant data and databases will not be defined all at once, but they need to be defined on a current basis, and then they are revisited every 2 years to determine if they are still relevant. Ecology noted that the Hanford operating record information was defined as the data set for a starting point, and the milestone was extended for a year to accomplish that, but there was no progress and Ecology still does not have access. DOE-RL pointed out the last

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bullet on today's handout states the parties do not have a unanimous interpretation of the cited TPA clauses, and if the data set was defined as Ecology stated, then something must have changed in the interim. DOE-RL stated that an internal evaluation would be done to decide on the best path forward, which may be letting it run to dispute.

DOE-RL stated it was important to note that the parties are moving in the right direction with the right intent.

Life Cycle Cost Report – M-036

DOE-RL stated the Life Cycle report was submitted to EPA and Ecology on January 31, 2019, meeting the milestone due date. DOE-RL has submitted a draft change proposal to EPA and Ecology to change the frequency of the Life Cycle report from annually, to every 3 years. This would align with the System Plan milestones submitted by ORP.

Plutonium Finishing Plan (PFP) Closure Project - TPA Milestone M-083

DOE-RL stated Milestone M-083-00 has been missed. DOE-RL noted the photo on the cover slide was taken before all the winter weather occurred this year. DOE-RL added that the crew continues to work the project despite the weather and other issues, and the lower risk demolition debris loadout should be completed next week. The lower risk demolition of the vault is planned to start around April 9, 2019.

DOE-RL reported all of the 47 new demolition workers are onsite, their block training and mentoring has been completed, and the workers have demonstrated the ability to do the work. DOE-RL noted the nuclear and chemical operators are still onsite. DOE-RL stated work has been progressing a little more slowly than normal, due to getting the new demolition workers acclimated to working in a high contamination environment and the recent winter weather.

DOE-RL stated management assessment for the higher risk work is still on schedule for April 22, 2019 through May 2, 2019. DOE-RL added Ecology and EPA are being provided the list of activities and the mockups are open for the regulators to view. The corrective actions from the management assessment are scheduled to be completed around June 11, 2019, and the regulators will be briefed on the corrective actions. When DOE-RL has verified all the corrective actions are closed, operations will resume for the higher risk demolition.

DOE-RL stated demolition of the remote mechanical A and C lines in 234-5Z are scheduled to start around July 4, 2019, and go through the end of August 2019. The final highest contamination work for the Plutonium Reclamation Facility (PRF 236-Z) is scheduled to start

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near the end of August 2019 and go until October 24, 2019.

DOE-RL stated the follow-on for the protective cap and the transition to surveillance and maintenance, the sampling underneath the slabs of 242 (McCluskey room), and Plutonium Reclamation Facility are still on schedule. DOE-RL noted Ecology has been provided an updated schedule, which is not risk-informed, but incorporates weather delays, etc.

100K Remediation - TPA Milestone M-016-176 and River Corridor Closure - TPA Milestones M-016, M-089, M-093, M-094

DOE-RL noted the 100K Basins sludge removal project and the River Corridor closure project have been combined into one presentation since they are in one area and under the same manager.

300-296 Soil Removal Significant Accomplishments (December 2018 through February 2019) – DOE-RL reported good progress is being made in 324 to prepare for remediation of the soils underneath B-Cell (see handout).

300-296 Soil Removal Significant Planned Actions – DOE-RL stated the installation of cameras in B-Cell has been completed. DOE-RL noted the B-Cell camera installed when the facility was constructed was removed, and it took several attempts to remove it due to the high contamination level from hot cell operations. DOE-RL stated the camera was finally removed, bagged and placed in a shielded container, and the camera had millions of dpm contamination, which reflects the type of contamination the workers are dealing with in 324. DOE-RL added that extreme radiation absorbed dose (RAD) precautions are being taken, and whenever something abnormal shows up, work is stopped, regrouped, and resumed.

DOE-RL noted the floor-saw test and performance demonstration is the last major piece of equipment to test at the mockup facility. DOE-RL stated an issue was discovered with the hammer that will be used on the end of the remote excavator arm (REA), and efforts are under way to resolve the issue. DOE-RL pointed out it is better to identify these types of issues during mockup instead of when a piece of equipment is deployed in the hot cell.

DOE-RL stated it is speculated the floor plug between D- and C-Cells had never been removed since the facility started operating, and a device is being used to remove the plug. The plug was raised about a half inch and then placed back down to avoid any contamination falling out from around the plug into the other hot cell since work was still being done in C-Cell.

DOE-RL reported there were no issues with the cost performance baseline for RL-41.

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Milestone Summary – DOE-RL stated M-016-85 and M-016-85A are at risk or will be missed, and discussions will be initiated with Ecology and EPA about revising those milestones to reflect the current progress on preparing to remediate the soil waste site. DOE-RL noted M-089-00 for closure of the mixed waste units in the 324 Building are tied to the schedule for getting the waste site remediated, and the milestone date is to be determined (TBD).

K Basins Engineered Container Sludge Removal Significant Accomplishments (through February 2019)

Engineered Container Retrieval and Transfer System (ECRTS) Operations – DOE-RL stated progress continues every month with moving the sludge out of the basin and into T Plant. Sludge transport and storage container (STSC) No. 9 was delivered to T Plant on February 25, 2019, and it was delayed a number of times due to the winter weather. STSC No. 10 was delivered to T Plant yesterday (3/20/19), and it was also delayed due to the weather. The goal now is to get two STSCs filled and sent to T Plant per month. DOE-RL stated there have not been any equipment failures or operational issues, but there are some smaller issues that can cause a delay. DOE-RL cited the situation with an O-ring on the seal plug for the shipping cask that fell off, which caused the time limit to be exceeded from a nuclear safety standpoint. The lid had to be taken off the shipping cask to re-enter the STSC, and that caused a delay of 1 day. DOE-RL added that some of the nuclear safety requirements are being revised to provide relief in those areas.

Milestone Summary – DOE-RL stated M-016-176 is on track to complete sludge removal from K Basins, and it is working with EPA to determine what constitutes completion of sludge removal. DOE-RL noted there are several decisions that go into completing the milestone, which include the end goal of removing equipment that needs to be removed and sending the waste in the basin to Environmental Restoration Disposal Facility (ERDF) after it has been grouted.

Project Baseline Performance – DOE-RL stated there are no issues with the RL-12 project baseline performance.

K Basins Sludge Removal Operations Planned Activities March – May 2019

DOE-RL stated sludge removal to T Plant will continue. DOE-RL noted sludge is being moved from engineered container 230, which contains the settler tube sludge and is the most dense, highest activity sludge, and it is being blended with the lower activity K East sludge that was transferred back to K West in 2007. There are two more transfers planned from engineered container 250, and then the transfers will switch over to engineered container 260.

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100K Closure Project Significant Accomplishments (through February 2019)

100K Soil Remediation – DOE-RL reported that remediation of the 116-KE-2 crib waste site was completed, and the soil sampling was completed last week. DOE-RL noted that the work was delayed by weather because it was covered with snow. Remediation is continuing on the 100-K-47:1 pipeline waste site, which was delayed by the weather, but is expected to be completed in May 2019.

K West Basin Deactivation & Demolition

K West Basin Characterization: DOE-RL stated the gamma camera has been deployed in the basin to determine dose rates and assist with segregating out transuranic (TRU) equipment after the sludge has been removed. DOE-RL noted when the work was started in the basin, some of the residual sludge in the water was stirred up and additional pieces of fuel were found, which are being segregated and collected. DOE-RL added there was increased activity level in the basin, and to avoid an airborne issue, the work was put on hold while the sludge removal and filling the STSCs is being done. DOE-RL stated the increased activity level also creates an issue with loading up the ion exchange modules in the basin water too quickly and having to replace them and the main priority continues with removing the sludge out of the basin.

DOE-RL stated the underwater debris is being catalogued and starting to get segregated. DOE-RL noted a method has been designed to separate the low-level activity and TRU waste using vertical pipe components (VPC), and they are similar to the vertical pipe units (VPU) that were augered in the 618-10 burial ground. DOE-RL has not decided on the viability of the VPCs, and there have been discussions with EPA regarding the VPCs.

DOE-RL reported sampling of the settled solids material has been completed and sent to PNNL for analysis.

Ecology asked if DOE-RL anticipates there will be Transuranic (TRU) waste in the basin and where it will be sent. DOE-RL responded that eventually any TRU waste would be sent to the Waste Isolation Pilot Plant (WIPP), but in the meantime it would be sent to the Central Waste Complex (CWC) and stored in an appropriate storage area, most likely the north outside storage area.

Ancillary Facility Deactivation and Demolition Significant Accomplishments (through February 2019) – DOE-RL stated demolition is under way on the 166KE oil storage bunker and associated waste site, and there are about 30,000 gallons of bunker fuel oil being sampled. DOE-RL noted

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it has been working on comment resolution for the draft revision of the Removal Action Work Plan (RAWP) for the 100K reactor and ancillary facilities. EPA stated it approved the RAWP yesterday (March 20, 2019).

K East and K West Reactor Interim Safe Storage (ISS) Significant Accomplishments (through February 2019) – DOE-RL stated the current focus is on the K East Reactor ISS. The scope of work documents is being finalized, and contracts will be awarded to perform limited asbestos removal from inside the K East reactor. DOE-RL stated the safe storage enclosure (SSE) design is being revised and updated, and the SSE seismic analysis is being reviewed. DOE-RL noted there is funding to continue the work this year, and it is anticipated there will be funding in the next year.

Significant Planned Actions (through May 2019)

K West Basin Characterization – DOE-RL stated efforts will continue with the design or path forward for dispositioning some of the low-activity waste. DOE-RL noted the plan is to complete the design and award the contract to fabricate the VPCs, although agreement by all the parties will be needed before proceeding with the VPCs.

Land Disposal Restrictions (LDR) TPA Milestone M-026-01

DOE-RL stated there were numerous comments on the 2014 calendar year LDR full report, and the comments are close to being finalized. DOE-RL noted the extension to the milestone expires next week, and although the comments are close to being finalized, another extension will probably be requested. DOE-RL added the parties had agreed to forego the FY18 LDR report.

Solid Waste Stabilization and Disposition Project TPA Milestone Series M-091, M-026 and M-092

M-091 Accomplishments (December 2018 – February 2019) – DOE-RL noted M-091-47D, which was due in September 2018, was completed in August 2017. DOE-RL stated part of the milestone is to negotiate new milestones, which is under way, but shipments are continuing to Permafrix Northwest for waste repackaging.

DOE-RL reported M-091-52-T01B was completed in January 2019 and a completion letter has been sent to Ecology. DOE-RL noted the milestone was due at the end of 2019, but was completed ahead of time to remove ten TRU mixed waste containers from outside storage area A or B (OSA-A/B). Progress is being made on the next milestone, M-091-52-T01C, to remove 20

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mixed waste containers from OSA-A/B, and one container has been removed.

DOE-RL stated M-091-52-T02 requires submittal of an Interim Response Action (IRA) to Ecology for retrieval of waste by 2021. Earlier this month the contractor completed and submitted to DOE-RL an Engineering Evaluation and Cost Analysis (EE/CA), which is tied to the IRA.

DOE-RL noted M-091-52-T03 is due in 2022. DOE-RL stated negotiations are under way with Ecology regarding M-091-53 as part of the M-091 series milestone negotiations.

Ecology asked if DOE-RL is still planning to meet with Carlsbad representatives in April 2019. DOE-RL responded originally the representatives were coming to the Hanford Site in April, but a new date needs to be scheduled. DOE-RL stated Carlsbad has provided some indication of the information it is seeking, and that information is different from what DOE-RL originally envisioned. DOE-RL stated Idaho is an assumed source and is first on the shipping docket to WIPP, and there are other sites on the shipping schedule, but they can be moved around on the schedule. DOE-RL stated the information it receives from Carlsbad will drive what is needed to invest in resources to support shipping to WIPP. DOE-RL added it will follow up with Ecology when it has more information about the proposed shipping schedule to WIPP.

M-092-09 and M-092-00 – DOE-RL stated it is reviewing the subcontractor's final design for the cask storage system (CSS) for the cesium/strontium capsules, and the goal is to have the CSS final design completed by the next quarter. The Waste Encapsulation and Storage Facility (WESF) modifications design work and preparations for construction of the capsule storage area (CSA) will continue.

Milestone Summary – DOE-RL noted M-091-47D and M-091-53 are in abeyance while milestone negotiations are under way. M-091-03, to submit the annual project management plan, was deleted for FY 2019 while milestone negotiations are under way.

Project Baseline Performance through February 2019 – DOE-RL stated the project is on schedule and under cost. Ecology inquired about a line item for the Capsule Storage Area (CSA) in WESF on the second table in today's handout. DOE-RL responded it was not included in the table and the information will be provided to Ecology.

Planned Activities (March 2019 – May 2019) – DOE-RL stated waste will continue to be shipped to Permafix Northwest for repackaging and the milestone negotiations will continue.

Central Plateau Remediation Project – TPA Milestones M-016, M-037, M-085

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PUREX Tunnel No. 2 Stabilization Accomplishments (December 2018 - February 2019) – DOE-RL stated there were delays with grouting tunnel No. 2 due to weather, but the grouting has recently been proceeding. DOE-RL noted a modified grout placement strategy was implemented to resolve the peaks and valleys, and new injection points were utilized to allow the modified placement. DOE-RL reported that as of yesterday (3/20/19), tunnel No. 2 was 92.18 percent filled, and the tunnel is expected to be filled by early to mid-April 2019. All of the 28 rail cars have been verified to be covered with grout, which represent the material at risk.

Ecology referred to the first bullet on today's handout regarding the RCRA permit modification and initiated a discussion on M-085-80, which is the remedial investigation/feasibility study (RI/FS) work plan for the PUREX Plant. Ecology stated DOE-RL should start showing the status of M-085-80 as to be missed. Ecology added missing the milestone is problematic because the public was told it would be informed about final closure of the PUREX tunnels through the CERCLA process. Ecology noted the M-085-80 work was not funded this year, which will be an issue as the Central Plateau milestones are revised.

REDOX Risk Reduction Accomplishments (December 2018 – February 2019)

DOE-RL stated it is waiting on the results from samples that were obtained from the west end of the north sample gallery. Removal of waste items from the galleries and crane maintenance platform continues.

Other Accomplishments (December 2018 – February 2019) – DOE-RL noted the annual surveillances were completed for the 400 Area, Fast Flux Test Facility, Sodium Storage Facility, Fuels and Materials Examination Facility, and U Plant. EPA expressed an interest in attending some of the surveillances next year.

Canyon Stabilization Documents – DOE-RL stated a number of documents are under review, either in-house or with the regulator. Ecology and EPA indicated the sampling and analysis plans (SAP) for REDOX, B Plant, and the Tier 2 Miscellaneous Facilities have been reviewed and approved. DOE-RL stated those three SAPs will be issued after technical editing has been completed.

Milestone Summary – DOE-RL stated milestones M-016-255 and 256 have been under dispute and Ecology has been reviewing a draft change notice for the milestones.

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Project Baseline Performance through February 2019 – DOE-RL stated there is a positive cost variance, which can be attributed to the PUREX canyon tunnel number 2 grouting, which is under budget.

Planned Activities (March 2019 – May 2019) – DOE-RL stated annual surveillances will be done at 224T, 105KE, and other miscellaneous facilities. EPA requested notification about the 224T surveillance and the opportunity to go in the building, if possible.

Ecology referred to the canyon stabilization documents, and pointed out that EPA should be listed as the lead for approval of the REDOX RAWP instead of Ecology.

Soil and Groundwater Remediation Project – TPA Milestones M-015, M-016, M-024, M-085

River Corridor Accomplishments (December 2018 – February 2019) - DOE-RL stated the Draft A 100-HR-3 remedial design/remedial action work plan was transmitted to Ecology for review in January 2019, and the review was extended until March 22, 2019. Ecology stated a letter requesting another extension for about a month will be sent to DOE-RL tomorrow.

DOE-RL noted the Draft Rev. 0 100-BC-5 proposed plan is in EPA legal review and inquired about the status of the review. EPA responded the last set of comments was received yesterday from the attorney, and a meeting will be scheduled with DOE-RL to discuss the comments. EPA stated headquarters decided its approval is needed before releasing the proposed plan for public review, and a briefing on the proposed plan has not been scheduled with EPA headquarters. EPA added that by the end of next week, EPA and DOE-RL should be able to reach agreement at the regional level on the proposed plan, and it should not impact getting the RI/FS finalized, which does not require headquarters' approval. DOE-RL noted any significant changes to the proposed plan could impact finalization of the RI/FS, and clarified that EPA is indicating there will not be any significant changes to the proposed plan. EPA responded it will be reviewing the last set of legal comments next week, and then it will be in a position to indicate whether there needs to be changes to the RI/FS or if it can be considered final.

DOE-RL noted the 100-K technical impracticability (TI) waiver was submitted to EPA in February 2019. EPA stated the TI waiver will go through regional review and comment with U.S. Geological Survey (USGS) and the regional TI coordinator, and when Region 10 accepts the TI waiver it will be sent to headquarters for review.

Central Plateau Accomplishments (December 2018 – February 2019) – DOE-RL noted the Draft A 200-DV-1 technology evaluation and treatability study assessment was transmitted to Ecology and EPA, and Ecology sent a letter that their comments will be transmitted April 15, 2019. EPA

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stated USGS will be reviewing the 200-DV-1 assessment, but the inter-agency agreement has been delayed, which will delay USGS's review. EPA noted the delay with the agreement for USGS will not impact its review of the TI waiver that was discussed for 100-K.

DOE-RL stated efforts continue with Ecology and EPA to resolve the remaining issues with the 200-EA-1 work plan. DOE-RL noted the two remaining issues are infiltration rates and the polychlorinated biphenyl (PCB) congeners, and they are scheduled for discussion at the next Inter-Agency Management Integration Team (IAMIT) meeting, tentatively scheduled for April 24, 2019.

DOE-RL stated construction and tie-in of the final extraction well for 200-BP-5 was completed, and the well will go into a testing phase next week. The well is located down from the head of the plume to try to capture the plume before it spreads any further east.

DOE-RL stated the chlorination treatment of the 200-ZP-1 pipelines has been working well to kill off some of the biogrowth in the pipelines that falls into the wells. DOE-RL pointed to page 54 of 58 that shows the before and after photos, which reflect the drastic improvement to the well screen.

Milestone Summary – DOE-RL stated M-015-93C regarding the 200-SW-2 operable unit is in dispute and has been extended to April 30, 2019. The milestone dispute has been elevated to the IAMIT level, and it will be discussed during the April 24, 2019 IAMIT meeting.

DOE-RL stated M-015-98 and 99 are in dispute at the project manager level, and noted the subsequent follow-on milestones M-015-84 and M-015-91B are also in dispute.

DOE-RL stated the M-024 milestones are completed or on schedule.

DOE-RL stated M-085-70 is at risk to submit the B Canyon RI/FS work plan. DOE-RL noted M-085-80 is due next year, but it is also at risk to submit the PUREX Canyon RI/FS work plan. Ecology requested that DOE-RL include M-085-80 on the milestone table, even though it is due next year. Ecology reiterated there is an issue due to statements that were made to the public during the permitting of the PUREX tunnel closure. The public was told it would be able to comment on the final closure process for the PUREX tunnels through the CERCLA process, and now the CERCLA process is being delayed. Ecology indicated management attention is needed to address the issue. DOE-RL clarified the issue is related to timing of the CERCLA process, but the public will still be able to comment. Ecology agreed with DOE-RL's clarification.

DOE-RL stated M-085-80 is being added to the tentative agreement, but formal notification with

**Central Plateau/River Corridor
Tri-Party Agreement Quarterly Milestone Review
Meeting Minutes
March 21, 2019**

the change package has not been sent in the event the tentative agreement will address the issue. DOE-RL noted M-085-80 could be listed on the milestone table.

RL-30 Project Baseline Performance – DOE-RL stated the project baseline performance reflects a positive cost variance.

River Corridor Planned Activities (March 2019 - May 2019) – DOE-RL stated resolution of Ecology's comments on the 100-HR-3 RD/RA work plan are nearing completion.

DOE-RL stated the Draft B of the 100-K RI will be submitted to EPA for review, and it is somewhat dependent on the TI waiver discussions. EPA responded issuing the RI is not contingent on the TI waiver. DOE-RL stated the FS would be more dependent on the TI waiver. EPA stated a TI waiver is not issued until a Record of Decision (ROD) is signed, and the ROD is what memorializes the TI waiver agreement.

Central Plateau Planned Activities (March 2019 – May 2019) – DOE-RL noted the goal is to resolve the remaining issues on 200-EA-1 and get the work plan issued. DOE-RL stated Ecology indicated its comments on the 200-DV-1 treatability test evaluation will be transmitted April 15, 2019. EPA clarified it will also be transmitting comments on the treatability test. EPA stated the regional remedy review team is scheduled to meet on March 27, 2019, and Ecology will be presenting the team the early proposal of the interim action for the 200-BP-5/200-PO-1 groundwater operable units. DOE-RL asked if the proposed interim action will need to go up to the EPA administrator. EPA responded it will go to the EPA administrator, even though it is an interim action.

Richland Operations Office TPA Decision Documents List

DOE-RL noted most of the documents were discussed during today's presentation. DOE-RL stated that the 200-IS-1 RI/FS work plan is on hold until the issues with 200-EA-1 are resolved and the work plan is issued because the same staff are working on the work plans. DOE-RL stated it will likely be requesting an extension from Ecology regarding comment resolution and document submittal for the 100-N RI/FS.



AGENDA
Tri-Party Agreement Central Plateau/River Corridor Milestone Review
March 21, 2019

Place: 2420 Stevens – CR 153
Time: 9:00-10:30 a.m.
Chair: Bill Hamel

Time	Milestones	Subject	DOE Presenter
9:00 a.m.	M-035	Data Access	Ben Ellison
9:05 a.m.	M-036	Life Cycle Cost Report	Shannon Ortiz
9:10 a.m.	M-083	Plutonium Finishing Plant (PFP) Closure	Tom Teynor
9:20 a.m.	M-016, 089, 093, 094	100 K Remediation/River Corridor Closure	Mark French
9:35 a.m.	M-026	Land Disposal Restrictions Report	Mark French
9:40 a.m.	M-091, M-092	Acquisition of Facilities to treatment, storage, and disposal (TSD), transuranic (TRU), transuranic mixed (TRUM) and low-level mixed waste (LLMW)	Mark French
9:55 a.m.	M-016, 037, 085	Central Plateau Remediation	Mark French
10:15 a.m.	M-015, 016, 024, 085	Soil and Groundwater Remediation	Mike Cline
10:25 a.m.	—	Richland Operations Office Key Documents List	Mike Cline
10:30	—	Adjourn	—



M-035-09

Conduct Biennial Assessments of Information and Data Access Needs

RICHLAND
OPERATIONS OFFICE

United States Department of Energy



M-035-09K Milestone

- “Conduct biennial assessments of information and data access needs with EPA and Ecology. DOE will propose implementation schedules (TPA Milestones) for enhancements as a result of the biennial assessments.”
- Originally due March 31, 2018, M-035-09K has been extended through March 31, 2019.
- DOE has given CHPRC direction to grant Ecology access to record sets that contain operating record files, and is working toward doing the same with WRPS and MSA record sets.
- On March 15, 2019, Ecology transmitted letter 19-NWP-050, which stated that DOE is noncompliant with TPA Action Plan sections 9.6.2 and 9.6.5, and suggested developing interim milestones to preclude Ecology proceeding with enforcement actions.
- Ecology initially tied access to operating record files to completion of milestone M-035-09K, but has now extended the scope to include “all” data and databases.
- The parties do not have a unanimous interpretation of the cited TPA clauses.

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

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

Date: March 13, 2019

1. Significant Activities Last Three Months

- The 2019 Lifecycle Report was submitted to the EPA and Ecology on January 31, 2019 meeting TPA Milestone M-036-01I. The report was placed in the Administrative Record and posted to the Hanford website (www.Hanford.gov). A public review period for the document will close on April 15.
- DOE has drafted a proposed Change Request for EPA and Ecology consideration that changes the Lifecycle Report submittal frequency from 1 year to 3 years. The proposed change aligns the Lifecycle Report with the 3 year submittal of tank waste processing System Plan updates defined in TPA Milestone M-062-40. A draft change request was provided to EPA and Ecology during the March 13, 2019 Lifecycle Report Project Managers Meeting.

2. Budget Status (within budget or explain variance)

- No major issues identified.

3. Issues

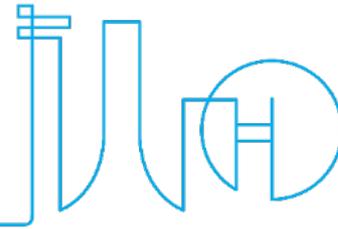
- No major issues identified.

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

- No major issues identified.

5. Significant Activities Planned Next Three Months

- A PMM will be scheduled for mid-May 2019 to review comments and responses on the 2019 Lifecycle Report and to discuss the proposed change request for modifying the Lifecycle Report submittal frequency.



PFP Closure Project – December 2018 - February 2019

TPA Milestone Series: M-083



234-5Z North side remaining rubble beginning of February 2019.



March 21, 2019

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

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Milestone

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



Project Baseline Performance

Contract to Date (Through February 2019)

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)
Total	\$1,024.8	\$1,006.0	\$1,165.2	(\$18.7)	(1.8%)	(\$159.1)	(15.8%)	\$1,055.1	\$1,219.8	(\$164.6)

Fiscal Year to Date (Through February 2019)

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 (%)
Total	\$34.1	\$28.4	\$24.2	(\$5.8)	(16.9%)	\$4.1	14.6%



Status: December 2018 through February 2019

- Low risk rubble (already on ground) removal near completion (delayed due to adverse weather)
- Low risk demolition of 234-5Z will be ready to start when rubble removal completed
- Block training and mentoring of new employees complete
- Preparing for Management assessment for higher risk work
- Plutonium Reclamation Facility rubble remains under at least 18 inches of clean overburden and fixative

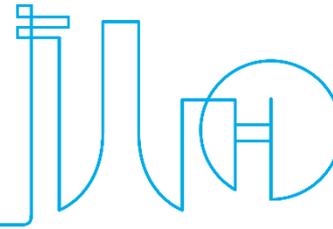


Current Status (Cont).



- Completed contamination stabilization and recovery actions in August 2018
- DOE, EPA and Washington State Department of Ecology (Ecology) stop work orders regarding lower-risk demolition were lifted and contractor resumed 234-5Z lower-risk demolition on September 27, 2018
- Completed approximately 80 percent of 234-5Z Phase 1 lower-risk demolition
- DOE, EPA and Ecology higher-risk demolition stop work orders are still in place
- Contractor-led management assessment to determine readiness to resume higher-risk demolition scheduled for April 22 to May 2, 2019 (new date as of February 19)





K Basins Sludge Removal Project

Milestone M-016-176 and River Corridor Closure

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

December 2018 - February 2019



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



March 21, 2019

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CH2MHILL
Plateau Remediation Company
a Jacobs company

300-296 Soil Removal

Significant Accomplishments (December 2018 through February 2019)

- Completed A-Cell Crane Door Repairs
- Put first Remote Excavator Arm (REA) into service
- Completed Airlock Master Slave Manipulator (MSM) replacement
- Continued debris size reduction and sorting in B-Cell with REA
- Completed A, C-Cell and D-Cell cameras and lights on local display
- Initiated drilling micropile pilot holes
- Completed core drilling for equipment installation
- Micropile design is complete and under review



Replacing MSM in 324 Airlock 12/4/18



Pilot hole mockup (01/15/19)



300-296 Soil Removal (Cont.)

Significant Planned Actions

- Complete installation of cameras in B-Cell
- Continue B-Cell cleanout
- Floor saw test and performance demonstration at the Mockup
- Continue proficiency training at the Mockup
- Perform geo-probe partial removal
- Receive, review and initiate field execution of structural modification design
- Preparations for C-Cell door sealing
- Remove floor plug between D and C cells.



Core drilling for B-Cell camera installation



Core drilling for REA through support installation



Project Baseline Performance

Contract to Date through February 2019

	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)
Total	644.0	635.3	575.3	(8.7)	60	732.2	671.6	60.6
Numbers are rounded to the nearest \$0.1 million.								



Milestone Summary

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



K Basins Engineered Container Sludge Removal Significant Accomplishments (through February 2019)

Engineered Container Retrieval and Transfer System (ECRTS) Operations

- Sludge Transport and Storage Container (STSC) #6 was delivered to T Plant on November 26, 2018.
- STSC #7 was delivered to T Plant on December 17, 2018.
- STSC #8 was delivered to T Plant on January 11, 2019.
- Completed T Plant crane electrical maintenance outage.
- STSC #9 was delivered to T Plant on February 25, 2019.



Milestone Summary

Milestone	Due Date	Description	Status
M-016-00C Complete all response actions for the 100 K Area (9/30/24)			
M-016-175	9/30/2018	Begin Sludge Removal from 105-KW Fuel Storage Basin	Complete
M-016-176	12/31/2019	Complete Sludge Removal from 105-KW Fuel Storage Basin	On Schedule

Project Baseline Performance (Contract to date through February 2019)

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	746.8	746.4	716.6	(0.4)	29.8	762.0	731.2	30.8	1.00	1.04



Planned Activities

March - May

K Basins Sludge Removal Operations

- Continue ECRTS operations, process STSCs nos. 9-14.



100K Closure

Significant Accomplishments (through February 2019)

100K Soil Remediation

Waste Site 116-KE-2

- Completed removal of the wooden crib structure and contaminated soil below the crib. Excavated a walk-in ramp to support Radcon surveys and in-process sampling.

Waste Sites 100-K-13 and 100-K-94

- EPA approved closure of both 100-K-13 and 100-K-94 following the completion of remediation.
- Completed backfill of 100-K-94.

Waste Site 100-K-47:1

- Continued excavation and load out (excavation is approximately 40 percent complete).



Waste Site 116-KE-2



*Waste Site 100-K-47:1
105-K West Reactor in Background*



Significant Accomplishments (through February 2019)

K W Basin Deactivation & Demolition

- K W Basin Characterization

- The gamma camera was deployed by the basin operations characterization team. The camera achieved all desired functionality in the underwater setting - hot spot imaging, laser range measurement, tablet dose rate response, high spectrum quality.
- Surveys were performed on 12 of 25 high dose debris bins requiring analysis.



Basin Operations Characterization Team Performing Surveys



Debris Bin In Position for Survey



Gamma Camera Image of Debris Bin

Significant Accomplishments (through February 2019)

K W Basin Deactivation & Demolition

- K W Basin Characterization

- The basin operations characterization team continued to inspect, stage, and catalog underwater debris.
- 100K Engineering has completed the design of the Vertical Pipe Casings (VPCs). VPCs will be used to segregate high activity below-water debris prior to demolition of the basin.
- Preparations have been made to conduct sampling of settled solids material (re-deposited sludge) on the basin floor.
- PNNL continues to perform plutonium, americium, and cesium analyses of basin floor (concrete and vinyl coating) samples.



Significant Accomplishments (through February 2019) Ancillary Facility Deactivation & Demolition

- Started preparing for demolition of 166KE Oil Storage Bunker (Waste Site 130-KE-2).
 - Performing technical evaluation of contractor proposals to remove residual oil and water from the FSB.
- Resolving DOH comments on draft revision of DOE/RL-2005-26 *RAWP for 100K Reactor and Ancillary Facilities* and supporting Air Monitoring Plan.



Significant Accomplishments (through February 2019)

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

- Focus has been to finalize scope of work documents, prepare and issue request for proposals and bid and award contracts to perform limited asbestos removal inside of the 105-K East Reactor Building and revise and update the 2012 Safe Storage Enclosure (SSE) design.
- Additional focus has been placed on evaluating the original SSE design calculations and seismic and wind modeling to ensure the SSE design meets current design building codes and standards that have been updated since 2012.
 - Geophysical surveys were performed around the 105-K East Reactor Building to validate the soil type present and support removal of unnecessary seismic design/construction requirements.



Remaining Closure Operations

Significant Accomplishments (through February 2019)

- 100K Closure Project, River Risk Management Project, and Project Technical Services combined efforts to complete revegetation of the 618-10 complex.



Hand planting native shrubs



RL walkdown team



Weed removal and light decompaction of surface soil



100K Closure

Significant Planned Actions (through May 2019)

100K Soil Remediation

- Complete remediation and verification sampling of Waste Site 116-KE-2.
- Complete excavation of Waste Site 100-K-47:1.

K West Basin Deactivation & Demolition

- K West Basin Characterization
 - Issue a contract and begin VPC fabrication. Two VPCs will be used to segregate high activity below-water debris.
 - Complete debris unloading bin design to support emptying debris bins into the VPCs.
 - Complete development of the fuel piece specimen conditioning unit.



Significant Planned Actions (through May 2019)

K West Basin Deactivation & Demolition

- K West Basin Characterization
 - Complete design, award a contract, and begin fabrication of the VPCs.
 - Complete K West Basin floor settled solids sampling and transport samples to 222S Laboratory for analysis.
 - Progress disposition of found fuel specimens.
 - Complete development of the fuel piece specimen conditioning unit.
 - Receive RL approval to terminate safeguards for remaining fuel pieces.
 - Begin conditioning the fuel specimens so that a small sample may be transported to PNNL for analysis and the remainder may be configured as an underwater check source for the gamma camera.



Significant Planned Actions (through May 2019)

Ancillary Facility Deactivation & Demolition

- 166KE Fuel Storage Basin (FSB)/Waste Site 130-KE-2
 - Progress preparations for demolition.
 - Issue a subcontract for and begin removal of oil and water from the FSB.
 - .

K East Reactor ISS

- Execute the asbestos removal contract and design modification.
 - Limited asbestos will be removed along the surveillance and maintenance tour path within 105-K East Reactor.
 - The 2012 SSE design will be updated to address necessary changes to support future Surveillance & Maintenance entries into the SSE and Reactor Building.
 - Examples of design changes include creating inspection openings in transite panels, adding a stairwell and railings, modifying lighting, adding electrical receptacles and shifting the entire SSE to avoid the groundwater well installed on the north side of the Reactor Building.
 - Both activities will finish in the third quarter of CY 2019. Completion of the asbestos removal and updating the SSE design are predecessors to performing earthwork around the 105-K East Reactor, constructing the SSE foundation and erecting the SSE structure.





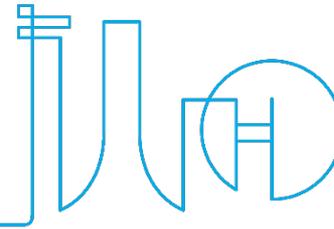
Tri-Party Agreement

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

M-026-01 Land Disposal Restrictions

TPA Milestone M-026-01 Quarterly Status

- The *CY2014 Hanford Site Mixed Waste Land Disposal Restrictions (LDR) Full Report* TPA primary document review process is ongoing.
 - Review Comment Record (RCR) Ecology Comments/Responses were provided on August 23, 2018. The Parties have finalized TPA comment response technical discussions. Revisions to the CY2014 Report will be incorporated and memorialized in the near term.
 - The Parties agreed to place the LDR PMM's on-hold until the end of the TPA primary document review process for the RCR Ecology Comments/Responses.
- The Parties mutually agreed to forego publication of the CY2018 Hanford Site Mixed Waste Land Disposal Restrictions Summary Report while continuing resolution of comments on the CY2014 Report.
 - Deletion of TPA Milestone M-026-01AC for the CY2018 LDR Summary Report occurred on September 27, 2018.



Solid Waste Stabilization and Disposition Project

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

December 2018 – February 2019

March 21, 2019



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

Columbia River White Bluffs



Accomplishments

December 2018 – February 2019

- M-091-47D Certify or Treat 280-m3 of TRUM/MLLW:
 - Met 280 m3 in August 2017. Awaiting negotiations of M-91 series for additional milestones.
 - Waste shipments continue to PFNW, completed 600.2 m3 since August 2017.
- M-091-52-T01B:
 - Completed on January 17, 2019 removal of Ten (10) Mixed Waste Containers from Outside Storage Area A and/or Outside Storage Area B.
- M-091-52-T01C:
 - Continued removal of mixed waste containers from Outside Storage Area A and/or Outside Storage Area B. One (1) of the twenty (20) have now been removed.
- M-091-52-T02:
 - Preparing Engineering Evaluation and Cost Analysis (EE/CA) for submittal to DOE-RL for review.
- M-091-52-T03:
 - Preparing Mission Needs statement (CD-0) for CH processing facilities/capabilities for submittal to DOE-RL for review.
- M-091-53:
 - Continue supporting M-091 TPA negotiations.



Opening of FRP (shipment TC182) prior to inspection of the waste contents at PFNW.



Packaging of processed (size-reduced) waste (shipment TC182) at PFNW into Standard Waste Box (SWB) for shipment to CWC for storage.



M-092-09 and M-092-00

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

- December 2018 – February 2019 Accomplishments
 - Subcontractor submitted for review and approval the final design for cask storage system
- March – May 2019 Planned Activities:
 - Continue WESF modifications design work.
 - Continue Capsule Storage Area construction preparations.
 - Cask Storage System final design completed.



Milestone Summary

Milestone	Due Date	Description	Status
M-091			
M-091-52	12/29/2017	Submit change request with target dates for new/modified capabilities to process	Complete
M-091-47D	9/30/2018	Submit change request to establish next two TRU/MLLW annual certification/disposal milestones.	In Abeyance
M-091-53	9/30/2018	Submit Milestone Change Request to Replace Target Dates for Capabilities to Process TRUM Waste	In Abeyance
M-091-52-T01A	11/30/2018	Remove 5 MW containers from Outside Storage Area (OSA) A and/or Outside Storage Area B	Complete
M-091-03	6/30/2019	Submit Revision of TRUM Waste and MLLW PMP to Ecology	<i>Deleted</i>
M-091-52-T01B	11/30/2019	Remove 10 MW containers from Outside Storage Area (OSA) A and/or Outside Storage Area B	Complete
M-091-052-T01C	11/30/2020	Remove 20 MW containers from Outside Storage Area (OSA) A and/or Outside Storage Area B	On Schedule



Project Baseline Performance through February 2019

RL-0013 Solid Waste Stab & Disp	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
Total	762,896.8	761,134.4	689,744.2	(1,762.4)	-0.2%	71,390.2	9.4%	809,387.2	734,816.1	74,571.1

Numbers are rounded to the nearest \$0.1 million.

Title	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance	Cost Variance
Central Waste Complex	112,180.9	111,800.6	109,734.7	-0.3%	1.8%
Waste Receiving and Processing Facility (WRAP)	55,459.9	55,354.3	53,138.6	-0.2%	4.0%
T-Plant	135,024.2	134,535.6	114,797.1	-0.4%	14.7%
Mixed Low Level Waste Treatment	43,182.5	43,182.5	37,200.3	0.0%	13.9%
TRU Retrieval	100,112.6	100,123.5	112,498.6	0.0%	-12.4%
TRU Repackaging	111,883.0	111,451.6	100,874.0	-0.4%	9.5%
TRU Disposition	33,712.4	33,549.0	24,842.4	-0.5%	26.0%
Project Management	171,341.3	171,137.3	136,658.6	-0.1%	20.1%

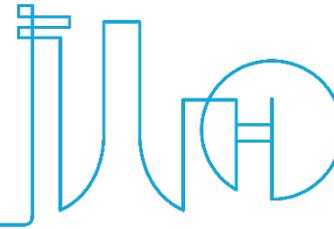


Planned Activities

March – May 2019

- M-091-47D TRUM/MLLW Treatment
 - Met volume processed, August 8, 2017. Complete renegotiation of M-091 series milestones.
 - Continue waste processing toward next objective.
- M-091-52 Target Milestones
 - Continue removing mixed waste containers from OSA A and/or OSA B in support of M-091-52-T01C
 - Continue progress towards M-091-52-T02 to develop Interim Response Action to resume waste retrieval in support of M-091-49A.
 - Continue progress towards M-091-52-T03 to develop a mission needs statement (CD-0) regarding CH processing facilities/capabilities.
- M-091-53
 - Continue negotiations.





Central Plateau Remediation Project

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

Dec 2018 – Feb 2019
March 21, 2019



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

Columbia River White Bluffs



PUREX Tunnel # 2 Stabilization Accomplishments

December 2018 through February 2019

- The RCRA permit with modified addendum for PUREX Tunnel #2 stabilization was issued by Ecology and became effective on January 16, 2019.
- A modified grout placement strategy (the “topping off” plan) was implemented to resolve the peaks and valleys created during grout placement. The tunnel contents near the original injection points obstructed the performance of grout flowability. New injection points were utilized to help level grout placement during the phase.
 - Grout contractor fabricated ten additional insertion devices and installed on tunnel risers for new injection points.
 - Grout placement performed on one riser at a time, utilizing a boom truck vs the conveyance system boom for ease of mobility as switching injection points becomes more frequent.



PUREX Tunnel # 2 Stabilization Accomplishments

December 2018 through February 2019, cont.

- As of February 24, approx. 31,166 cubic yards (3,130 trucks) of grout have been placed in the tunnel (78% filled).



The “Topping Off” Plan includes use of the boom truck, which was the proven strategy of Tunnel #1 stabilization.

REDOX Risk Reduction Accomplishments

December 2018 through February 2019

- Deployed remote controlled robot into west end (over the hump) of the north sample gallery to obtain more current radiological contamination data.
- Continued removal of waste items from sample gallery, storage gallery, pipe gallery, operating gallery, crane way, and crane maintenance platform.
- Completed all Silo tank interrogations.
- Commenced field walk downs for mechanical cold and dark isolations.
- Placed contract for patching of south roof to prevent water intrusion on south side of facility.



Before and after of Storage Gallery combustibles removal campaign



Other Accomplishments

December 2018 through February 2019

- Completed 2019 annual surveillances for 400 area, Fast Flux Test Facility, Sodium Storage Facility, FMEF, and U Plant.
- Installation of the mobile office trailer (MO-6114) complete in the 200 East Area
- Awarded contract for installation of additional mobile trailers at PUREX, REDOX, and B Plant to support upcoming work.
- Completed quarterly CX-70/71/72 temporary storage and disposal (TSD) inspections.
- Completed annual chemical inventory.
- Completed the 200 East Area Tri-Annual Waste Information Data System (WIDS) Sites surveillances slightly ahead of schedule.
- Performed B-Plant Clean, Inspect and Balance exhaust fans.
- Mobilized and completed characterization in 242-B/BL.
- Performed 3 Steam Line Crossover removals in 200 West Area.



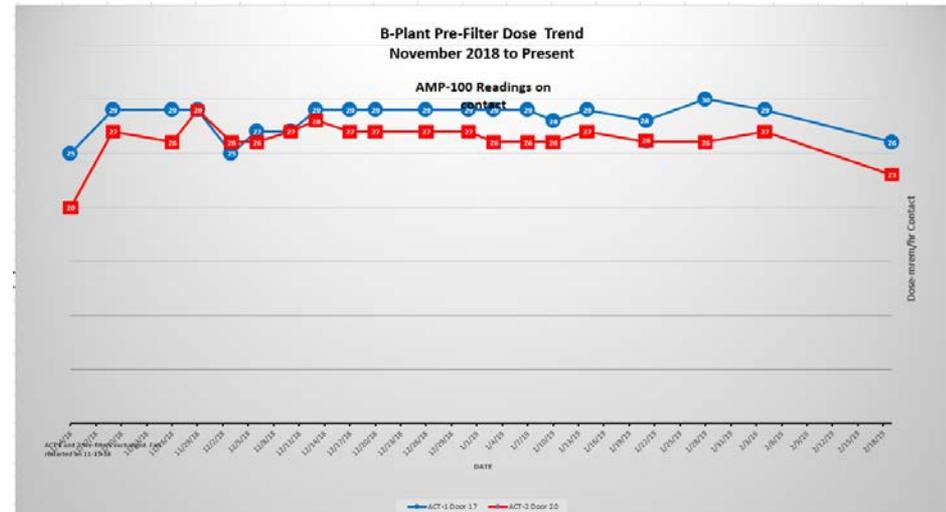
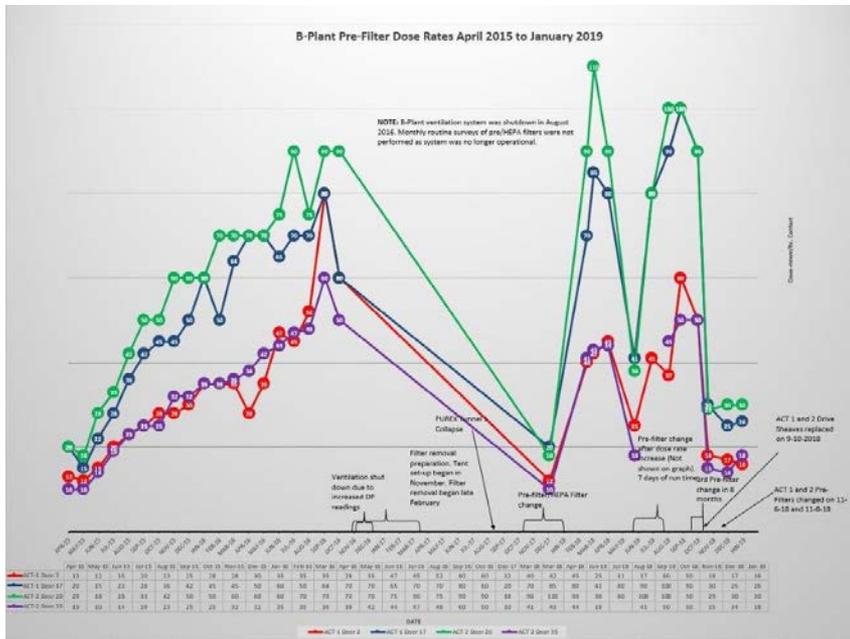
Performing Annual Surveillance at FEMF



Other Accomplishments

December 2018 through February 2019

- Verified B-Plant ventilation system adjustments, including sheave replacement to reduce fan speed, filter housing seal replacement, and in-Canyon damper adjustments successfully reduced the rate of radiological buildup on filtration system without compromising differential pressure gradients from cells to Canyon and Canyon to atmosphere.



Accomplishments

December 2018 through February 2019

Canyon Stabilization Documents

- Submitted to Regulators:
 - DOE/RL-2017-47 Tier 2 Misc. Facilities Sample Analysis Plan (SAP), Draft A
 - DOE/RL-2016-50 Tier 2 Misc. Facilities Removal Action Work Plan (RAWP), Draft B
 - DOE/RL-2017-05 REDOX SAP, Draft C
 - DOE/RL- 2017-45 Tier 2 B Plant SAP, Draft A
- Received from CHPRC:
 - DOE/RL-2016-47 Tier 2 PUREX RAWP, Decisional Draft (DD) for RL Review
 - DOE/RL-2017-34 224B RAWP, DD for RL
- In Development Nearing Completion:
 - DOE/RL-2017-06 REDOX RAWP, Rev. 0
 - DOE/RL-2016-53 PUREX Action Memorandum (AM), DD for RL Review
 - DOE/RL-2017-46 Tier 2 PUREX SAP, DD for RL Review





Milestone Summary

Through FY19

Milestone	Due Date	Description	Status
M-016-00 Complete Remedial Actions For All Non-Tank Farm & Non-Canyon OUs			
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	Dispute resolution
M-016-250D	3/31/2019	DOE shall submit a 3-year rolling prioritized schedule to implement waste site removal actions	On Schedule
M-016-256	9/30/2019	DOE shall complete the removal of all waste sites for fiscal year 2018 as identified in TPA change package M-16-17-01	Dispute resolution
M-037 TSD Closure Activities			
		Milestones due past 3 year window	
M-085-00 Complete Response Actions for Specified Canyon Facilities & Waste Sites			
M-085-82	12/31/2017	Submit to Ecology for approval proposal(s) for expedited response action(s) for one or more of the Tier 1 and Tier 2 facilities in the PUREX Geographic Area listed in HFFACO Appendix J.	Complete 12/7/17
M-085-74	6/30/2018	Submit Expedited Response Action for one or more Tier 1 and Tier 2 facilities in the B Plant geographical area.	Complete 6/30/18



Project Baseline Performance through February 2019

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
BASE	235.5	237.1	230.1	1.5	6.9	291.4	280.8	10.6	1.01	1.03
ARRA	285.5	285.5	266.5	0	19.0	285.5	266.5	19.0	1.00	1.07
Total	521.1	522.6	496.6	1.5	25.9	576.9	547.3	29.6	1.00	1.05

Numbers are rounded to the nearest \$0.1M





Planned Activities for CPRM

March 2019 – May 2019

- Complete grout placement at PUREX Tunnel #2 and demobilization.
- Perform Annual Surveillance at 224T, 105KE, and Misc. Facilities.
- Complete REDOX Silo characterization and Life Safety Code upgrades.
- Complete all REDOX temporary power and lighting in the Silo and North Sample Gallery.
- Initiate REDOX access road and trailer installation.
- Continuation of effective RCRA Rev 9 permit with modified addendums.
- Initiate 200E steam line crossover removals.
- Complete glove bag installs and asbestos abatement in 200W REDOX steam lines (Zones 1 and 2).
- Initiate cold & dark isolations, asbestos removal, and hazmat removal in 242 B&BL.



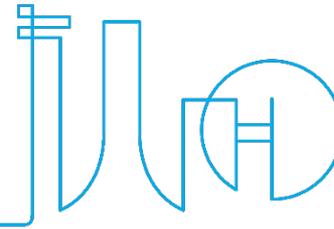
Planned Activities

March 2019 through May 2019

Canyon Stabilization Documents

- Ecology approvals:
 - DOE/RL-2017-06 REDOX RAWP, Rev. 0
 - DOE/RL-2017-47 Tier 2 Misc. Facilities SAP, Draft A
 - DOE/RL-2016-45 Tier 2 B Plant SAP, Draft A
- RL/Ecology Reviews:
 - DOE/RL-2016-15 PUREX Engineering Evaluation/Cost Analysis (EE/CA), Draft B for Ecology Review
 - DOE/RL-2016-47 Tier 2 PUREX RAWP, Decisional Draft (DD) for RL Review
 - DOE/RL-2017-46 Tier 2 PUREX SAP, DD for RL Review
 - DOE/RL-2016-53 PUREX Action Memorandum (AM), DD for RL Review
 - DOE/RL-2017-34 224B RAWP, DD for RL Review





Soil and Groundwater Remediation Project

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



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

December 2018-February 2019



March 21, 2019

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CH2MHILL
Plateau Remediation Company
a Jacobs company

Accomplishments – River Corridor December 2018 – February 2019

- Transmitted the Draft A 100-HR-3 Remedial Design/Remedial Action Work Plan to Ecology for review on January 24, 2019.
- Provided the Draft Rev 0 100-BC-5 Proposed Plan to EPA for legal review on February 19, 2019.
- Provided the 100-K Technical Impracticability Waiver and Evaluation Documents to EPA on February 27, 2019.
- Completed construction of the two monitoring wells that support the KW soil flushing treatability test on December 19, 2018. Initiated construction of the infiltration system on February 20, 2019.



Construction for soil infiltration test in KW



Accomplishments – Central Plateau December 2018 – February 2019

- Transmitted the Draft A, 200-DV-1 Technology Evaluation and Treatability Studies Assessment for the Hanford Central Plateau Deep Vadose Zone report to Ecology and EPA for review on January 28, 2019.
- Transmitted the Draft A, 200-BP-5/200-PO-1 OU Feasibility Study Report to Ecology for review on December 18, 2018.
- Submitted the revised Feed Stream Acceptance Criteria for the 200 West Pump and Treat and Optimization Pilot Test Results Report for treating MSU water to EPA for approval on December 20, 2018.
- Continued to work with Ecology and EPA to resolve the remaining two issues associated on the 200-EA-1 OU Work Plan and SAP. The first issue is related to the infiltration rates to be used when evaluating the characterization data and the second issue is associated with PCB congeners analyses. These two issues are planned to be discussed at the IAMIT meeting.

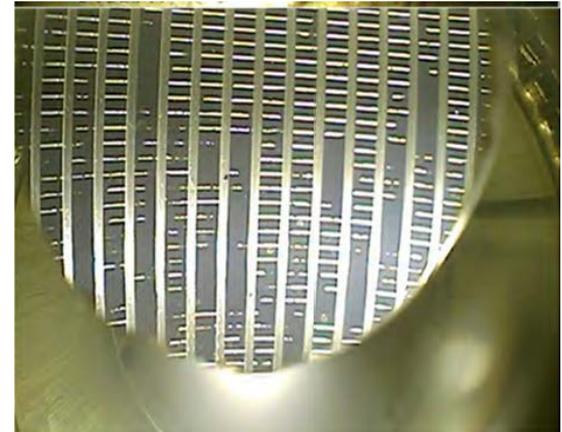


Combined 200-BP-5/200-DV-1 Transfer Station



Accomplishments – Central Plateau December 2018 – February 2019

- Completed construction and the tie-in the final extraction well for the 200-BP-5 Removal Action in January 2018
- Start up of chlorination treatment for the pipelines from the 200-ZP-1 Injection Transfer Building on January 29, 2019.
- Transmitted the certified closure plans for 216-A-36B Crib and 216-A-37-1 Crib to Ecology on February 05, 2019.
- Submitted the closure plan for the 216-A-29 Ditch to Ecology for review on January 29, 2019.



Injection Well Screen Before Rehabilitation (Above) and After (Below)



Milestone Summary

Milestone or Target Date	Due Date	Description	Status
M-015-00			
M-015-93C	9/30/2018	Initiate characterization of the 200-SW-2 OU unlined landfills	In Dispute
M-015-96	2/28/2019	Submit 100-OL-1 RI report and change request for FS report to Ecology	Complete
M-015-21A	3/31/2019	Submit 200-BP-5 and 200-PO-1 OU FS Report & PP(s) to Ecology	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	In Dispute*
M-015-99	12/31/2019	Complete Remedial Investigation of PFP Related Waste Sites Located in 200-WA-1	In Dispute*
M-016-00			
		None	
M-024-00			
M-024-58K	6/1/2018	Initiate Discussions of Well Commitments	Completed
M-024-69-T01	8/1/2018	Conclude Discussions of Well Commitments initiated under M-024-58	Completed
M-024-69	12/31/2018	DOE shall complete the construction of all wells listed for calendar year 2018 and before	Completed
M-024-58L	6/1/2019	Initiate Discussions of Well Commitments	On Schedule
M-024-70-T01	8/1/2019	Conclude Discussions of Well Commitments initiated under M-024-58	On Schedule
M-024-70	12/31/2019	Complete the Construction of All Wells Listed for CY19 and Before	On Schedule
M-085-00			
M-085-70	9/30/2019	Submit Remedial Investigation/Feasibility Study Work Plan for 200-CB-1 to Ecology	At Risk

* Subsequent follow-on milestones (M-015-84 and M-015-91B) are also in dispute.





RL-30 Project Baseline Performance

Contract to Date Through February 2019

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)
Total	1,570.9	1,570.3	1,513.9	-0.6	-0.0%	56.3	3.6%	1,717.2	1,658.7	58.5

Numbers are rounded to the nearest \$0.1 million.

Period of performance 10/1/2008 through February 2019



Planned Activities

March through May 2019

River Corridor

- Issue the Revision 0 100-BC-5 RI/FS.
- Complete EPA review of the 100-BC-5 PP.
- Resolve Ecology's comments on the 100-HR-3 RD/RA Work Plan.
- Submit Draft B 100-K RI to EPA for review.
- Complete the KR-4 Decisional Draft B FS.
- Issue TI Waiver documents for 100-K.
- Initiate Chapter-by-Chapter Review of the Draft B 100-N RI/FS.
- Complete construction of the KW infiltration system.

Central Plateau

- Resolve remaining issues on the 200-EA-1 RI/FS Work Plan.
- Receive Ecology's comments on the Draft A, 200-DV-1 Treatability Test Evaluation Report.
- Resolve comments and issue the 200-BP-5/200-PO-1 FS.
- Submit the 200-BP-5/200-PO-1 PP to Ecology and EPA for review.
- Submit the Draft A, Rev 1 200-ZP-1 RD/RA WP to EPA for review.
- Issue the Rev. 0 Remedial Design Investigation Report for the 200-UP-1 Southeast Chromium Plume.



TPA Decision Document List

	ROD Area Location	Document	Milestone	Milestone Due Date	Regulatory Review	DOE Lead	Contractor Lead	Regulatory Lead	Agency	Comments/Issues
1	200-IS-1 200 Inner Area/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	11/30/2020	TBD	D. Hildebrand	M.Hickey	N. Menard	Ecology	Project initiation will occur after the 200-EA-1 RI/FS work plan is completed since similar resources are used on both documents.
2	200-EA-1 200 East Closure Plans	TSD - Closure Plans for 207-A South Retention Basin, 216-A-29 Ditch, 216-A-36B Crib, 216-A-37-1 Crib, 216-B-63 Trench and Hexone Storage and Treatment Facility (276-S-141/142)	M-037-10: Complete Closure for 6 Specified TSD Units	9/30/2020	11/8/2018 TBD	M. Kamal	M.Hickey	N. Menard	Ecology	Transmitted the certified 216-A-36B crib and 216-A-37-1 crib closure plans to Ecology on February 5, 2019. Hexone Treatment Facility closure plan is undergoing comment resolution with Ecology. Submitted the 216-A-29 ditch closure plan to Ecology for review on January 29, 2019.
3	200-CW-1, 200-CW-3, and 200-OA-1 Outer Area	TSDs - Closure Plans for 216-B-3 Main Pond and 216-S-10 Pond and Ditch	M-037-11: Complete Closure Requirements for 216-B-3 & 216-S-10	9/30/2024	TBD TBD	M. Kamal	M.Hickey	N. Menard	Ecology	.
4	200-EA-1 200 East Inner Area	RFI/CMS & RI/FS Work Plan	M-015-92A: Submit Draft B RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) & Remedial Investigation/Feasibility Study (RI/FS) work plan for 200-EA-1 OU to Ecology	7/31/2018	7/14/2018 8/16/2018	D. Hildebrand	M.Hickey	N.Menard	Ecology	Resolved all EPA comments and working to resolve two remaining Ecology comments. Two issues remain on the 200-EA-1 Work Plan and SAP. The first issue is related to the infiltration rate or rates to be used when evaluating the characterization data. The second issue is a request from Ecology to analyze PCB samples for the congeners associated with a specific Aroclor. <u>These two issues are planned to be discussed at the JAMIT meeting</u>
5	200-UP-1 200 West Area Groundwater	200-UP-1 Southeast Chromium Plume Remedial Design Report	M-16-193: Complete the remedial design investigation of the southeast chromium plume, including the installation of new wells and evaluation of groundwater monitoring data and install monitoring wells needed for remedy performance monitoring as defined in the 200-UP-1 RD/RA WP.	9/30/2018	9/19/2018 12/13/2018	J.Hanson	C.Wittreich	E. Laija	EPA	Received EPA comments on the Draft A 200-UP-1 SE Chromium Plume Remedial Design Investigation Report on December 13, 2018. The comments were resolved in mid-February 2019 and the document will be finalized for transmittal as Revision 0 in March/April 2019.
6	200-BP-5, 200-PO-1 200 East Area Groundwater	200-BP-5/PO-1 FS and PP	M-015-21A: Submit a 200-BP-5 and 200-PO-1 OU Feasibility Study Report and Proposed Plan(s) to Ecology.	3/30/2019	12/18/2018 2/28/2019 3/31/2019 4/30/2019	J.Hanson	C.Cearlock	N. Menard	Ecology	The Draft A FS was transmitted to the regulators on December 18, 2019. The Draft A PP is scheduled to be transmitted to the regulators for review in late-March to complete TPA Milestone M-015-21A.
7	100-BC-1, 100-BC-2, 100-BC-5 100-B/C	RI/FS Report and Proposed Plan	M-015-79: Submit RI/FS Report and PP for 100-BC	Milestone Completed 12/15/2016	12/16/2016 01/30/2017	E. Glossbrenner	R. Evans	L. Buelow	EPA	Received further EPA legal/policy comments on the Draft Rev 0 Proposed Plan (PP) on December 13, 2018. Comments were addressed and the document was forwarded to EPA for review on February 19, 2019. EPA legal/policy comments on the Draft Rev 0 PP are due March 22, 2019. The Draft Rev 0 RI/FS report is near ready for completion, but it is being held in its current state to ensure revisions are not necessary as result of further EPA comments on the Draft Rev 0 PP.
8	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		E. Glossbrenner	E. Feist	L. Buelow	EPA	The RI and FS have been separated to allow for a potential TI wavier to be pursued. The Draft B RI is scheduled to begin EPA review in early April 2019 and the draft B FS is scheduled for EPA review in June 2019.
9	100-DR-1, 100-DR-2, 100-HR-1, 100-HR-2, 100-HR-3 100-D/H	RD/RAWP	None		1/24/2019 3/33/19	J.Sands	R. Evans	N. Menard	Ecology	The Draft A RD/RAWP was provided to Ecology for review on January 24, 2019. Ecology extended to review to March 22, 2019.
10	100-NR-1, 100-NR-2 100-N	RI/FS Reports and Proposed Plan	M-015-75: Submit FS/PP for NR 1/2 Complete	Milestone Completed 6/24/2013	6/25/2013 10/2/2013	S. Balone	B. Faught	A. Boyd	Ecology	Continued preparation of the Draft B RI/FS. RL will request for comment resolution and document submittal (current extension is to March 29, 2019).