



**PBS-SR-0014**  
**Radioactive Liquid Tank Waste**  
**Stabilization and Disposition**



**PROGRAM RISKOMETER**  
**December 2015**

**This Riskometer is developed with input from each risk owner to convey their individual level of concern, in terms of risks being Major, Minor or Acceptable. The level of concern is not necessarily related to risk level, but reflects each risk owner's judgment on how successfully their risk or opportunity is being managed (e.g. is the handling strategy being implemented?, is it showing positive results?), and how imminent the threat from the risk appears (e.g. can it happen at any time?, is handling complete?). Remarks are added by the risk/opportunity owner to present the key points necessary to understand the current status of the risk or opportunity.**

# PBS-SR-0014 Riskometer

(Sort By: Final Risk Level/ID)

ID	Title	Initial Risk Level	Review Date	Final Risk Level	Status			Remarks
					Closed	Acceptable Risk	Minor Concern	
011	Tank Farm Infrastructure/Equipment Failure (Not Including Transfer Lines or 3H Evaporator)	High	12/17/2015	High			●	Continue expanded System Health Reporting. Managing degraded systems through the use of temporary modifications. Implementing improvements in phases based on limited funding. FY16 activities include upgrade of some waste tank ventilation systems, procurement of pump tank transfer pumps, installation of the pipe bridge to support future services upgrades on the East Hill and design for future services upgrades for Tanks 48-51.
012	DWPF Equipment Failure (Excluding Melter)	High	11/19/2015	Moderate			●	To develop an all-encompassing spare parts program would require additional funding. No available on hand spares for MFT, SME or SRAT. Potential re-use of SME vessel yet to be determined. Major concern will be reduced to a Minor concern when spare SRAT, SME, MFT and supporting auxiliary equipment (transfer pumps, agitators) have been obtained. Spare SME coil was received and is now available.
018	Saltstone Processing Facility (SPF) Cannot Achieve Attainment	Moderate	12/16/2015	Low			●	Continuing to update critical spares list. Additional items are being added based on operating experience. Performing investigation, evaluation, recommendation and deployment of improvements to achieve enhanced capacity and reliability (ELAWD).
021	Replacement DWPF Melter Failure	Moderate	12/16/2015	Moderate			●	Development of significant and complex remote repair techniques, is not funded. Melter 4 vessel and frame fabrication has been completed. The refractory installation has been completed and refractory dryout is complete. Melter 4 onsite, final assembly is currently not funded. Major concern becomes Minor concern when 2 spare melters are assembled and ready to be installed in the DWPF melt cell. Melter 4 has a major concern for resolution of non-compliant welds with NNI.
022	Spare Melter Material/Vendor Unavailable	High	11/19/2015	Zero			●	Melter 4 is currently in Building 717-F but final onsite assembly is currently unfunded. Melter 4 weld issues resolution discussion with vendor. DWPF Engineering has recently received information that the Monofrax K-3 vendor may cease further operations at the K-3 facility. This could affect the availability of K-3 refractory brick for Melter 5 and future melters. Procurement of K-3 refractory has been placed with the vendor and is expected in FY16.
027	Program (PBS-SR-0014) Funding Impacted by Competing Priorities (DOE Risk)	High	12/16/2015	High			●	This risk has been determined to be a cross-cutting, DOE-HQ owned risk and is included in the DOE-SR Federal Risk Management Plan. Cost reducing alternative to GWSB has been selected and change in design to the Saltstone Disposal Units is under implementation. Major concern can be reduced to minor concern when near-term funding targets can support near-term execution goals.

Content changed from last update

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030	3H Evaporator Material and Chemical Balance Issues	Moderate	11/6/2015	Moderate					Maintaining evaporator feed qualification program.
033	Heel Removal/Annulus Cleaning Flowsheet Interface Problems	Low	12/1/2015	Zero					Acid neutralization flowsheet will be developed and alternative technologies investigated.
034	DWPF Impacted by Chemistry/Rheology of Sludge Waste Feed	High	12/16/2015	Moderate					As part of ongoing operations frit formulations are currently subjected to continuous optimization and new frit formulations are being investigated and developed. The Alternate reductant flowsheet currently under development has shown benefit in its ability to more readily accommodate handling of sludge waste with differing chemistry/rheology. Additionally, pilot scale processability testing integrating both Sludge and Salt Batching has been evaluated and proposal has been approved and is awaiting funding.
036	Sampling and Analysis of Salt Feed to ARP/MCU Shows SPF WAC Cannot be Met After Processing	Low	11/6/2015	Low					Salt Batch 8 is currently being processed through ARP/MCU with no impacts to the SPF WAC. Salt Batch 9 has been assembled and is currently undergoing qualification. Preliminary results for Salt Batch 9 are favorable.
037	DWPF Impacted by Chemistry / Quantity of Salt Waste Feed	Moderate	12/16/2015	Low					Characterization data and operating lessons learned are being compiled during ARP/MCU operations to optimize sludge batch compatibility with the SWPF waste stream for processing at DWPF. Ability to increase SWPF throughput from 7 to 9 Mgals/yr without increasing the SE output to DWPF has not been validated. CoreSIM modeling is being performed. Dry Frit project is currently unfunded.
040	Salt Dissolution Results in Greater than Planned Precipitation of Gibbsite	Low	11/17/2015	Low					Investigating methods to avoid gibbsite formation. System Plan includes additional canisters resulting from gibbsite formation.
041	Formation of Sodium Aluminosilicate in a Salt Tank	Moderate	12/16/2015	Low					Developing flowsheets and mathematical models for salt removal that avoid criticality. No issues encountered to date. As part of ongoing feed qualification, flowsheets are developed and thermodynamic modeling (e.g. OLI) for salt batching performed with the goal of predicting solids formation potential and specifically allowing NAS to settle without impacting the feed preparation. Continue to monitor filter performance degradation (512-S) and coalescer performance degradation (MCU) to assess mitigation strategy effectiveness. Examine 512-S primary and secondary filters to assess for potential NAS formation.
042	Salt Waste Heel or Tank Annuli Waste Cannot be Processed Through SWPF	Moderate	11/4/2015	Low					Annually the System Plan and associated salt/sludge batch preparation plans are updated based on data obtained, to allow salt processing from tank heel or annulus.

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045	Higher Curie Sludge Impacts DWPF Canister Production	Moderate	11/19/2015	Zero					Sludge batch sampling, blending strategy development and qualification are being performed. The number of filled canisters capable of being stored in the canyon once SWPF comes online will be reduced by 9 due to dose rates and shielding. This will limit operational flexibility and may be a significant impact to operations.
048	Sludge Physical Properties Cause Delays in Meeting Sludge Feed Objectives	Moderate	12/16/2015	Low					Physical characteristics of waste are being determined and used in development of removal technologies that can tolerate variability in waste characteristics. Sludge batch planning continues to optimize the feed specifications as a mitigator. Maturation of sludge batch processing continues to provide valuable information on physical properties. The introduction of Tank 22 solids (which includes carryover from DWPF, including Frit), will be assessed during Sludge Batch 9 preparation. The information obtained from these samples will be utilized to determine the impacts of this type of sludge in future sludge batches.
070	Rogue Constituents in Salt Feed	Moderate	11/6/2015	Low					Evaluating the need for additional sampling and testing and developing tank sequencing / blending strategies. Moved this to a major concern due to oxalates in salt feed.
083	Non-routine Constituents in Sludge Impact Canister Production Rate	High	12/16/2015	Moderate					Incorporating sludge batch processing lessons learned into future sludge batch preparation. DWPF Reliability Review Team recommendations have been made.
084	Lack of Dispositioning of Failed Equipment Impacts DWPF Operations	Low	11/19/2015	Zero					Disposition strategy has been developed and implementation in progress. Remote size reduction tool has been received on site and program for deployment is being developed. An on-site temporary storage facility external to DWPF Canyon to handle failed equipment has been completed and will be utilized as part of disposition strategy. In addition, development of a disposition path to an offsite facility is being evaluated for failed equipment. Used bubbler size reduction campaign is in progress.
090	Tank Farm Tank Availability and Infrastructure Does Not Support Salt Processing Operations	High	12/17/2015	Moderate					Infrastructure upgrades and enhancements to improve attainment are being pursued to a limited extent based on available funding. No MST demonstration is planned, which targets improving filtration rate. The System Plan recognizes the limitations in tank space and shows SWPF production rates that align with the tank space.
091	Close Coupling-SWPF, DWPF, ARP/MCU and SPF Limits Waste Processing Throughput (Non-Chemistry)	High	12/15/2015	Moderate					The SSRTs have been turned over to Operations and the required Readiness Assessment is scheduled for March 2016. FY16 funding has been allocated for modifications to proceed on the DWPF, Transfer Lines and Blend & Feed scopes, as well as TiO2 testing scope.

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094	Available Tank Farm Space Cannot Support System Plan	High	11/17/2015	Moderate			●	Identifying and coordinating the implementation of projects that will achieve space gain. Level of concern will be reduced further upon SWPF becoming fully operational at planned capacity. Investigating opportunities to enhance ARP/MCU operations.	
100	Waste Tank Utilization Conflict	Low	11/17/2015	Low			●	Continuing to integrate project execution with program implementation. Level of concern will be reduced further upon SWPF becoming fully operational at planned capacity. Investigating opportunities to enhance ARP/MCU operations.	
102	2H Evaporator Impacted by DWPF Recycle Enrichment	Low	12/16/2015	Zero		●		2H Evaporator NCSE has been revised with minor or no physical modifications required.	
116	2H Evaporator Material and Chemical Balance Issues	Moderate	11/6/2015	Low		●		Monitoring the ammonia levels in the overheads via the System Health Program.	
117	Oxalates from Acidic Tank Cleaning Cause Sludge Batch Preparation Problems	Moderate	12/16/2015	Low			●	Heel is being minimized. Determining upper limit of oxalates in DWPF feed. The sludge washing endpoint will be evaluated to optimize the disposition of oxalates. New cleaning strategies are reducing the need for continued acidic chemical cleaning for all tanks. The washing endpoint for maximizing oxalate disposition to DWPF must be balanced against the sodium balance at DWPF.	
120	Sludge Batch Preparation Impacted by Slow Settling Rate	Moderate	12/16/2015	Low			●	Beginning sludge batch preparation early and implementing settling time improvements identified through flowsheet, DSA and batch sequencing and LTAD strategy reviews. RMF has been procured as part of the SCIX program but may be used for sludge preparation.	
121	Salt Dissolution Creates Greater Than Expected Volume of Salt Solution	Moderate	11/17/2015	Moderate			●	Tank 37 salt dissolution proved inefficient resulting in a higher than expected volume of salt.	
129	Slower Salt Dissolution Rates Force Schedule Delays	Low	11/17/2015	Low		●		Evaluating the need for additional sampling and developing a more effective salt dissolution method. Favorable results have been obtained from Tanks 10, 41 and 25. Tank 37 dissolution using jets demonstrated improved efficiency.	
145	Limited DWPF Laboratory Capabilities Challenged by New Constituents	Moderate	11/19/2015	Moderate			●	Validation of DWPF laboratory analytical methods will be performed for every sludge batch. Radiological evaluations indicate that lab waste removal activities will result in unacceptable dose rates. DWPF is evaluating a redesign of the waste removal system in the lab to reduce exposure rates in support of lab operations once SWPF comes online. Currently unfunded.	

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149	HLW Tank Leak Requires the Use of Contingency Space	Moderate	12/17/2015	Moderate			●	Chemistry control program minimizes likelihood of conditions facilitating leak development. Maintaining the ability to utilize a closure tank as contingency space greatly reduces the impact of this event.
166	TiO2 Limits Within DWPF WAC Cannot be Sufficiently Raised to Support Salt Processing	High	12/15/2015	Zero			●	SRR continues TiO2 testing to identify the upper limit for Titanium Dioxide in the DWPF Glass. Testing thus far indicates raising the TiO2 limits within the DWPF WAC is feasible. All of the fifty (50) test glass samples are developed. Viscosity and Density testing have completed, while PCT and Liquidus testing will continue into FY16. SRNL resources are being strained due to demand from Alternate Reductant project.
168	SWPF Does Not Achieve System Plan Throughput / Attainment	High	11/3/2015	Moderate			●	Planned incorporation of ARP/MCU data and lessons learned from first year of SWPF operation. Additional salt processing capacity is being pursued, including increased capacity (gained by deployment of new generation solvent) to recover from production interruptions.
174	Tank Cleaning Not Sufficient for Tank Closure (DOE Risk)	Moderate	12/1/2015	Low			●	Investigating new mechanical and chemical cleaning techniques. Tanks 5, 6 and 16 have been cleaned to MEP which meets the requirements of the PA, CA, regulatory approval was received, and grouting has been completed.
175	Canyon Waste Contains Rogue Constituents (DOE Risk)	Moderate	11/6/2015	Low			●	Canyon Waste transfers to HTF must meet the requirements of the Waste Acceptance Criteria for Liquid Waste Transfers to the F/H Tank Farms X-SD-G-00001 and the corresponding Waste Compliance Program for Liquid Waste Transfers from H Canyon to the 241-H Tank Farm X-WCP-H-00008. The WAC and WCP together provide adequate controls to prevent rogue constituents from being transferred to the Tank Farms.
176	Volume of Canyon Waste is Greater Than Planned (DOE Risk)	Low	11/17/2015	Zero			●	Investigating methods to reduce waste volume. Canyon waste stream is well understood and documented in Service Level Agreement #19 which has been revised to align with Tank Farm capabilities and System Plan projections. Volume received has been less than forecast. Funding constraints are forcing reduced capacity to receive Canyon waste. Increased volume is projected from the Canyon for FY14 onwards, with additional increases possible. Dropped to an acceptable risk after revision of SLA.
182	Radioactive Release From Tank Farm	Low	12/17/2015	Low			●	Current operational and safety controls support risk acceptance. AA and TSRs manage this risk to within acceptable limits.
197	DWPF Transfer Line Failure	Low	11/19/2015	Low			●	Current inspection and maintenance practices support risk acceptance.

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204	Interarea Transfer Line Failure	High	12/17/2015	High			●	Programs for structural integrity and testing of transfer lines are in place which identify and repair failures. A mitigation strategy is being pursued that would potentially enable evaluations to be performed that allow transfer lines with failed jackets to be used for transfers without completing repairs if the ability to detect a leak has not been compromised.
205	SWPF Not Available When Planned (DOE Risk)	High	12/16/2015	Moderate			●	The management of the EPC contract is being performed by DOE-SR and handling of risks that may challenge the startup date of SWPF is the responsibility of DOE-SR and the EPC contractor. The DOE Federal Project Director will continue to monitor EPC contractor performance against the baseline schedule. The EPC contractor has developed a risk management plan for the SWPF project and is currently implementing the plan to handle these risks. For the scope associated with startup, cold runs and turn over to hot operations, the work will be done on a cost reimbursable contract arrangement. Additional risk handling strategies are directed at maintaining the program completion milestones by extending operation of ARP/MCU. A new Total Project Cost has been approved including funding to achieve CD-4. Current execution trending to completion milestone in support of System Plan need date.
209	Impacts of NRC Monitoring of 3116 Implementation for Salt Processing (DOE Risk)	Low	12/16/2015	Low			●	The strategy currently being employed is adequate to allow implementation of measures which satisfy the intent of NRC recommendations received to date.
213	NRC Activities for Monitoring of Closure Process Not Well Defined (DOE Risk)	Low	11/5/2015	Low	●			NRC issued their combined Monitoring Plan for FTF and HTF in October 2015. Negligible consequence impact supports risk acceptance.
214	Compliance Assessment Data Conflicts With Assumptions Upon Which 3116 WD is Based	Low	12/16/2015	Low	●			Established assumption review process supports risk acceptance.
219	DWPF Criticality Concerns During SWPF Processing and/or Sludge Batch Processing	Low	12/16/2015	Low	●			Criticality Strategy Report N-ESR-G-00010, Rev 1 determined the DWPF NCSE can be revised with minor or no physical modifications required.
220	Inaccuracies When Sampling for Grout Formulation in Tank 50	Moderate	12/16/2015	Low			●	Developing robust grout mixtures and process knowledge for grout formulation. Formal planning is utilized during the development of Salt Batches to ensure SPF and SDF WAC limits are met prior to the material being processed through ARP/MCU.
221	Salt Baseline Characterization Different Than Forecast	Low	11/17/2015	Low			●	The need for salt characterization is being evaluated and sampling/characterization performed as necessary. Salt processing strategy is adjusted to accommodate characterization results. Aluminum levels in Tank 37 have been encountered which are higher than baseline characterization which create the need for additional batching.

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251	Aluminum Dissolution Impacts Saltstone Processing	Moderate	12/16/2015	Moderate		●			Define likely concentrations of aluminum to be fed to SPF as a result of aluminum dissolution and investigate the impact of these concentrations on grout properties. Identify methods to adjust the dry feed recipe to mitigate these effects.
257	Inter-Area Transfer Line "Salts Out"	Low	12/17/2015	Low		●			One occurrence of IAL salt out has been realized, however, since this occurrence extensive procedural controls are now in place to prevent salt out in the IAL as well as dilution/flushing facilities. There has been no recent history of plugging IAL with salt solution.
264	DWPF is Unable to Process SWPF Strip Effluent at Required Throughput Due to Boil off Capacity Limits	Moderate	11/19/2015	Low		●			Process improvement study has identified improvements and provides recommendations. Full implementation of DWPF enhancement projects is currently not funded (e.g. dry frit, cyclone separator, SEFT to SME).
267	Schedule For Complex Concurrent Activities Not Sustainable	High	11/17/2015	Moderate			●		Program and project planning are being integrated. Formal change control process in place.
286	DOE Requires DWPF AB Update to Latest STD (3009) Based on Number/Significance of Changes (DOE Risk)	Low	12/16/2015	Low		●			As part of the current DSA approach, as operations activities are being implemented that modify DWPF (e.g. SDI, Bubbler installations, alternate reductant, etc.), the DSA is being updated to current practices. Ongoing discussions are being held with DOE on the activities that may impact DWPF and the Hazards analysis and safety analysis are being updated as part of those operations activities.
289	DWPF Infrastructure Failure Forces DWPF Outage	Moderate	11/19/2015	Low			●		Currently, system health evaluations are performed on DWPF systems, repair work identified and executed as part of the ongoing program. Continuing to implement recommendations of system health evaluations. System health path to green items are tracked schedule in facility schedule. Ensure critical infrastructure upgrades are identified, funded and executed. Funding limitations constrain completion.
290	Interface Requirements With EPC Contractor Do Not Support Integration of SWPF (DOE Risk)	Low	12/15/2015	Low			●		These risks are identified and managed within the SWPF Federal Project Risk Management Plan and within SWPF Integration Risk and Opportunity Management. SRR actions include: executing the current interface process to address interface design requirements early in the project: continuing involvement with SWPF design reviews, and performing modeling to evaluate pinch points. SWPF Federal Project actions are documented within V-RMP-J-00001 and managed under the federal Project risk management plan. Additional actions under this PBS-SR-0014 ROMP are limited to ensuring continuing ARP/MCU salt processing capabilities should this risk be realized. DSA integration is scheduled to start within FY16 and complete in FY18.

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291	Skilled Craft Labor is Not Available to Support Liquid Waste Needs	Moderate	11/16/2015	Low		●			As part of ongoing craft support planning, availability will be regularly validated with local unions and shortfalls predicted in sufficient time to work with local unions to seek craft labor from outside the immediate area. Mechanisms are in place and are being maintained to facilitate obtaining additional craft labor when needed.
295	Tank Farm Transfer Line Failure	High	11/6/2015	High			●		Jacket failure identified for segment 102 while repairing line segment 103. A mitigation strategy is being pursued that would potentially enable evaluations to be performed that would allow transfer lines with failed jackets to be used for transfers without completing repairs if the ability to detect a leak has not been compromised. Continue to maintain in accordance with Corrosion Control and Structural Integrity Programs. Recent transfer line pressure test failures have been experienced. (Raised to a minor concern)
297	Infrastructure Modifications Are Not Completed When Required to Support SWPF Startup.	Low	12/15/2015	Zero		●			The SSRTs have been turned over to Operations and the required Readiness Assessment is scheduled for March 2016. FY16 funding has been allocated for modifications to proceed on the DWPF, Transfer Lines and Blend & Feed scopes, as well as, TiO2 testing scope.
299	Tank Leaks to Environment During Tank Cleaning Step	Moderate	11/2/2015	Moderate		●			The susceptibility of Tanks to corrosion/pitting has been evaluated (DSA Revision). Where tank bottoms are evaluated to be susceptible to corrosion/pitting failure, extend non-acid cleaning to achieve MEP. Use mechanical/robotic cleaning techniques in lieu of slurry pumps. Maintain liquid levels as low as practical during cleaning. Implement staged contingency transfer system per project plan; Avoid risk on single wall (Type IV) tanks by not performing acid cleaning in these tanks.
325	DWPF Dry Frit System Experiences Frequent Pluggage	Low	12/16/2015	Low			●		Minimize the D&D of the existing system to allow wet frit slurry delivery system to be re-installed. Perform extensive mockup testing of the dry frit delivery system before installation. Testing to include a range of transient conditions that may be encountered during operation.
332	DWPF Facility Impacts Due to Additional Shielding Needs	Low	11/19/2015	Zero		●			Continue shielding evaluations and develop a strategy which combines administrative controls and shielding and prepare to implement this strategy during an appropriate DWPF outage(s).
343	Size Reduced Zeolite Cannot be Resuspended in Waste Tanks	Low	12/1/2015	Low		●			Where practical, do not transfer zeolite to any tanks with coils that do not already have zeolite present.
344	3H Evaporator Pot Failure	Moderate	11/6/2015	Low		●			Maintaining Corrosion Control Program. 2F Evaporator is not planned for replacement, therefore the consequences of failure are much greater.

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346	Tank Closure Sampling Strategy is Not Effective	Low	12/1/2015	Low				Sampling and analysis has been performed on Tanks 5, 6, 12, 16, 18 and 19, and lessons learned will be used to modify the sampling strategies for the remaining tanks. Sample and Analysis Program Plan has been completed.
358	Solids Build up Within Blend and Feed Tanks	Low	11/17/2015	Low				The likelihood of solids accumulation in the Blend and Feed Tanks is reduced by the use of Hub Tanks for the initial receipt of dissolved salt solution and by enforcement of pump to solids separation requirements.
363	SDF Isopar Limits Restrict ARP/MCU Salt Processing Through Tank 50	Low	12/16/2015	Low				ARP/MCU Isopar limits have been reduced from project baseline limits to near instrument detection limits. Trending and monitoring of process will continue. Increased processing rates at SPF has increased the likelihood of realizing this risk through significant draw down of Tank 50 volume. This risk has been realized and will likely be realized in FY16. This further challenges FY16 production commitments and requires increased coordination and process integration. Lower filtration rates will further increase the likelihood of realizing this risk. A no MST demonstration is planned for FY16 which, if successful, will reduce this risk. A VSA for Tank 50 strip side to reduce the impacts of sampling for isopar will be completed.
364	SDUs are Not Available When Required (Project Execution Delays)	Low	11/9/2015	Low				With System Plan 19, the schedule margin available is sufficient to avoid this risk for SDU 6. It is anticipated that subsequent SDUs will be scheduled with a measure of margin in their project schedule to minimize this risk. Continue to monitor System Plan need dates and factor these into project execution along with lessons learned from SDU 6 (e.g. SDU 6, upon completion will demonstrate the expected duration of an SDU project).
366	More Pu is Required to be Dispositioned in Sludge Batches	High	12/16/2015	Zero				The disposition of additional Pu will be a System Plan change and the PBS baseline will undergo change control to include the additional scope which essentially avoids impact by triggering baseline change control. There is no residual risk or contribution to contingency from this risk.
388	Analytical Resource Limitations Prevent Meeting Baseline Schedule	High	11/2/2015	Zero				Determine adequacy of existing SRNL capabilities and define requirements through approval of Liquid Waste Tank Residual (LWTR) Sampling Assurance Program Plan (SAPP) and LWTR Quality Assurance Program Plan (QAPP) (striving to align requirements with existing capabilities). Look for cost effective alternative to levelize the sample analysis need (e.g. SWPF, MOX). Once the capability has been maximized, adjust the system plan to match the capability. This risk threatens outyear activities as funding limitations will drive System Plan revisions in the near-term.

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390	SDUs Not Available When Required (Operating Permit Delays)	Low	12/17/2015	Low	●			SRR works closely with SCDHEC through DOE and has a formalized process to respond to NRC questions and issues. The proposed design of SDU-6 is a much larger, more cost-effective, disposal unit than prior SDU (2 and 3&5) designs. This larger design will require additional modeling to validate compliance with the Performance Assessment. Deliverables for flowsheet modeling have been incorporated into the SDU-6 schedule to provide the appropriate level of information ahead of the DOE O413.3B Critical Decision process. SCDHEC approved the SDU-6 Construction Permit December 17, 2012
391	Federal Facilities Agreement and Site Treatment Plan Commitment Milestones Missed (DOE Risk)		11/2/2015	Zero			●	Emergent technical and funding issues outside the site's control have placed milestones at risk. Aggregate impacts from reduced annual funding are realized as demonstrated in System Plan Revisions 17, 18 and 19. Risks 205 and 27 continue to be realized. Currently, System Plan Revision 19 is not fully funded. In August 2014, DOE requested an extension.
394	New Waste Stream to Tank Farms (DOE Risk)	Moderate	11/17/2015	Zero	●			The existing program has processes in place to evaluate new waste streams and downstream impacts to waste processing. The Liquid Waste program has a contractual agreement (FSA) and a baseline change may be required if a new waste stream were introduced. A potential new Canyon effluent stream could be introduced from pebble bed reactor fuel.
400	Single Source Supply Chains Fail to Deliver Materials/Equipment When Needed	Moderate	11/2/2015	Low	●			When developing technologies for deployment which use sole source exotic or specialty materials and/or equipment or rely upon sole source/proprietary technology development the potential for sole source supply chain failures should be included. Development of backup technologies, alternate materials should be investigated to provide mitigation for these events. When deploying these technologies/process, establish the ability to obtain spares, replenish materials, develop alternative sources, etc, sufficiently in advance to allow recovery should the sole source chain fail.
401	Exec. order (#13514) Requires Facilities Reduce Greenhouse Gases (DOE Risk)	Low	11/2/2015	Zero	●			Not considered an issue with PBS-SR-0014 as no major new facilities are planned to be deployed after SWPF becomes operational.
402	Beyond Current Design Basis Requirements Imposed (DOE Risk)	Low	11/2/2015	Low	●			This risk has been accepted as there is no effective handling strategy.
403	Tank 48 Processing Takes Longer than Planned	Low	11/17/2015	Low	●			Investigate deploying processing technology early enough to avoid this risk.

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405	Tank 48 Processing Creates a Waste Without an on Site Disposal Path	Low	11/17/2015	Low		●			SRNL-STI-2012-00342, Results of Copper Catalyzed Peroxide Oxidation (CCPO) of Tank 48H Simulants, Rev. 1 has been approved. The report concludes: Results of the experiments indicate that TPB destruction levels exceeding 99.9% are achievable, dependent on the reaction conditions. The conclusion of the simulant testing has provided a set of reaction conditions that can destroy the TPB and phenylborates quickly. While longer times will be required to degrade the residual organics, the reactions appear to perform in a consistent manner. A real waste test or tests are recommended and further investigation into the use of phosphoric or formic acid is warranted.
414	Higher Cs Waste in DWPF Prevents Equipment Contact Repair	High	11/19/2015	Low		●			Design and procure an inventory of cheaper disposable pumps prior to SWPF startup. Investigate and evaluate decontamination methods for use prior to SWPF startup. Evaluate and execute recommendations from the Pump Reliability Team.
415	Saltstone Disposal Facilities (SDF) Cannot Achieve Attainment	Low	11/19/2015	Low		●			The space will be monitored within Tank 50/SSRTs and integrated with SPF runs to maximize the available space, should an upset condition occur. This risk has been accepted for SDU 6. Timely restart of SSRT project must occur to ensure DSS lag storage capacity is available to support SWPF operation. SSRT readiness assessment is planned for spring of 2016.
417	Replacement Melter(s) Damaged During Storage/Assembly	High	11/19/2015	Low			●		Maintain the current strategy of storing two Melters in the same Building so as not to impact DWPF production while investigating and then implementing a storage strategy where both Melters are separated such that no single fire or NPH event can significantly damage both. The development of a separate storage capability is currently unfunded. Add Melter security as a specific item in the interface agreement with the M&O.
418	DOE Requires USQE to be Performed on all Modifications (DOE Risk)	Low	12/16/2015	Low		●			Risk is being realized. Working with DOE and SRNS to minimize potential impacts. Letter presenting estimated cost of implementation was sent to DOE-HQ. DOE has directed implementation. Cost/schedule impact is being assessed prior to issuing contract modification. SRNS is currently developing site-wide strategy and schedule for implementation.
420	Saltstone Grout Pump Cannot Deliver Grout to SDUs	Moderate	12/16/2015	Zero			●		Investigate the grout delivery system to each SDU and ensure the design has sufficient capacity to pump grout to the final disposition point. Include necessary modifications in each SDU project to ensure the field deployment is successful. Develop a System Plan with sufficient contingency space available in previous SDU to avoid "just in time" delivery of disposal facilities. This risk has been realized for SDUs 3 and 5 and an spare larger motor 40hp motor has been installed in the Grout Pump. After validation of the increased capacity being sufficient for grout delivery to SDUs 3 and 5, schedule impact from this risk will have been avoided and the risk will no longer be applicable to SDUs 3 and 5.

● Risk has been closed    ● Not a problem, no issues at this time    ● Minor concern    ● Major concern

ID	Title	Initial Risk Level	Review Date	Final Risk Level	Status			Remarks	Content changed from last update
					Closed	Acceptable Risk	Minor Concern		
421	Glass Waste Storage is not Available After GWSB #2 is Filled (DOE Risk)	Low	11/19/2015	Zero			●		Glass waste storage has been determined to be a line item project. Early approval not anticipated. The Glass Waste Storage project (GWSP) optimization study was initiated at DOE's request. The study evaluated methods and approaches to provide additional storage for DWPF canisters by the need date specified in System Plan 19. DOE has authorized SRR to proceed implementing a canister double stack alternative for 150 cans. As of 11/19/15, thirteen locations have been modified.
422	Organic Carryover in ISDP Waste to DWPF	Low	12/16/2015	Low			●		Continue to monitor and trend the processing of each salt batch. This has demonstrated that this event would be detected early and impact minimized. A VSA for Tank 50 strip side to reduce the impacts of sampling for isopar will be completed.
424	Salt Processing Limited by Actinide Removal Capacity	Low	11/19/2015	Low			●		A filtration improvement team was put together to focus on increasing the throughput at 512-S. Changes to the processing and cleaning strategy have been made as a result of the team's recommendations. The team also recommended changing out the crossflow filter which has been completed. Also, a slightly redesigned filter was procured that will provide a better filtration rate. The filtration improvement team has been replaced by an integrated salt review team. The new team has been chartered to closely monitor the performance of the entire salt flowsheet. The team recommended that: the filter removed from 512-S be investigated/analyzed to determine fouling mechanisms (on hold for funding); that a supply of secondary filters be procured (working); that a no MST demonstration be conducted to assess 512-S filtration improvements (ready for implementation at next crossflow cleaning opportunity).
426	Acidic Chemical Cleaning is Required on Non-Sludge Solids Tanks	Low	11/2/2015	Low	●				Develop a position on the effectiveness of acidic chemical cleaning with respect to mechanical cleaning. Use this position to minimize the number of source tanks for sludge solids tanks that would have to undergo chemical cleaning as opposed to extended mechanical cleaning should issues arise with meeting tank cleanliness requirements.

● Risk has been closed    ● Not a problem, no issues at this time    ● Minor concern    ● Major concern

ID	Title	Initial Risk Level	Review Date	Final Risk Level	Status			Remarks	Content changed from last update
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427	DWPF Recycle Contains High Proportion of Solids	High	11/4/2015	Zero			●	Use of alternate reductant will result in the use of less antifoam and potentially reduce solids carryover in DWPF recycle stream. Use of Dry Frit will greatly reduce the volume of DWPF recycle. Implement a sampling strategy at DWPF to reduce flammability impacts associated with the solids carryover by determining what portion of the solids are sludge and which are non-heat bearing solids (e.g., frit). Gas Release Modification may also be implemented on the salt dissolution tanks to mitigate the flammability concerns during salt dissolution. Tank 41 and Tank 22 are identified as a DWPF recycle receipt tank to provide flexibility to the facility when receiving recycle receipts. Tank 22 solids removal has been completed and samples during the slurring of Tank 22 have been obtained and analysis is complete. Additional evaluations are necessary to determine the portion of solids in Tank 22 that are non-heat bearing solids (i.e., frit) versus sludge, and to update the Waste Characterization System. DWPF sampling of the RCT and solids carryover tracking have been implemented to provide up-to-date solids information in the recycle stream to the tank farms. DWPF Recycle was recently sent directly to Tank 41, during an outage of the availability of Tank 22 for DWPF Recycle receipts. The potential impact of solids and the need to settle solids not being a greatly impactful. (Changed to a Minor Concern)	
430	No Disposal Path Exists for Spent Solvent from ARP/MCU	Low	12/16/2015	Low			●	Reuse of NGS by SWPF has not been agreed upon as a disposal path. Identify alternate disposal paths for NGS, e.g. vendors upfront to allow effective disposal. Develop effective strategy for remediation and/or disposal of waste to avoid any RCRA violations. Capability of recirculation of solvent in MCU has been provided to reduce Ci content of solvent to broaden disposal options. Long range planning should integrate the operational window of ARP/MCU with SWPF to develop a disposal strategy in concert with both facilities. This could include offsite disposal if reuse by SWPF is not a viable option.	
431	No Disposal Path Exists for Spent Solvent from SWPF	Low	12/16/2015	Zero			●	Perform analysis of solvent waste to better characterize waste (SWPF Project). Finalize solvent waste disposition path forward for lifecycle of SWPF.	
435	High Mercury in Sludge Impacts Processing at DWPF	High	12/16/2015	Moderate			●	Investigate re-arranging Sludge Batches to minimize the amount of Mercury in each batch. Investigate reducing waste loading to allow a reduced amount of mercury in each sludge transfer to DWPF. Investigate maximizing mercury strip efficiency in the SRAT (e.g. increasing steam flow to vessel). Investigate maximizing mercury recovery in the SRAT. Possible facility modifications and chemistry changes to improve mercury recovery.	

● Risk has been closed    ● Not a problem, no issues at this time    ● Minor concern    ● Major concern

ID	Title	Initial Risk Level	Review Date	Final Risk Level	Status			Remarks
					Closed	Acceptable Risk	Minor Concern	
436	High Sludge Carryover During Boil Up	High	11/19/2015	Moderate			●	Installed anti-foam metering system for SRAT and SME; optimized Melter offgas flammability model; Installed purge in RCT. These modifications are improving the sludge carryover and the management of solids in the system. Antifoam PISA (5/2015) and JCO (8/2015) have modified antifoam addition method. Monitor effectiveness at DWPF restart.
440	Prior to Closure Contamination Migrates from Vault 4	Low	11/19/2015	Low	●			This risk is accepted as any remediation/preventative measures would be tailored to the contamination path/mechanism encountered. Currently these are being applied to what has been experienced at vault 4 to date. Clean cap and roof recoating completed.
441	Contamination is Released from Used Equipment Containers	Low	12/17/2015	Low	●			This risk is accepted based on the current progress being made at reducing the inventory, planned activities to further reduce the inventory and the current safety controls and operational controls e.g. ALARA, maintenance and operational procedures. When the older boxes have been dispositioned and the inventory greatly reduced, this risk will be closed.
445	Scope to be Added to PBS-0014 Due to Dispersion Characteristics Change is not Defined (DOE Risk)	High	12/16/2015	Moderate			●	Risk is being realized. SRR will perform upfront studies and will work closely with DOE to minimize the impact of this change.
446	Saltstone WAC for I-129 Impacts Salt Processing	High	11/17/2015	Moderate			●	Further investigate and develop a path forward which includes a sampling plan to reduce uncertainty and change parameters within the PA to tolerate a higher level of I-129. this approach will include any necessary R&D and testing by SRNL. This approach should ultimately target enabling the I-129 WAC limit to be raised. Develop a path forward to allow a "totalized" measurement of I-129 to be used as part of the WAC which will accommodate averaging of I-129.
448	Salt Precipitated from DWPF Recycle Requires Criticality Sampling Prior to Dissolution	Moderate	12/16/2015	Zero	●			Identify early, those tanks where this event could occur, develop a backup strategy to take these salt source tanks off line should the event occur and be able to substitute with an alternate salt feed tank to avoid feed break. This would enable the tank of concern to be sampled and NCSE performed in parallel with salt batch preparation so that it is available as a source tank for another salt batch. Perform NCSE early, to identify problem ahead of time.
450	SWPF Accelerated Salt Dissolution Does not Permit NCSE Aerial Density Analyses Techniques	Moderate	12/16/2015	Low	●			Investigate the validity of aerial density techniques during accelerated salt dissolution. If invalid, ready sampling and analytical facilities and integrate these activities into Salt batch planning. Program delays will be avoided.

Content changed from last update

● Risk has been closed    ● Not a problem, no issues at this time    ● Minor concern    ● Major concern

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451	Site Utility Outage (DOE RISK)	Low	11/2/2015	Low					Ameresco has completed installing additional heat tracing and insulation to previously unprotected instrument lines. They are also working with DOE to enhance back up package boiler start capability via a proposed heated shelter. Near term Compensatory measures are in place using tarps and temporary heaters. SRR's facilities completed follow up insulation/heat trace repairs initiated last summer as a result of field walk downs and lessons learned from the last freeze event. Site procedures have been revised to facilitate a more timely communication protocol using the Emergency Operations Center (EOC). These procedures were tested in December 2014 via a site steam loss table top drill with Ameresco, SRNS and SRR participation. Lessons learned from this exercise were issued February 2015 in a Post Drill Review. Follow-up actions are being implemented within the facilities.
452	As Found Field Configurations on Old Style Tanks do not Match Technical Baseline	Low	11/2/2015	Low					Develop revised approach to investigating and documenting as-found conditions early in design process.
454	Gas Retention in Waste Impacts Bulk Waste Removal	Moderate	12/16/2015	Moderate					Incorporate lessons learned (e.g. develop reasonable control set options ahead of BWR), provide contingency within the BWR schedule and/or System Plan to accommodate additional allowance for realizing this risk.
455	TSR Limit Prevents Tank Entering Closure Mode After Cleaning has Been Completed	Low	12/1/2015	Low					Monitor during BWR to identify early if this condition is developing. If trending, investigate opportunities to reduce uncertainty/revise DSA for specific tank to gain relief on TSR for closure or identify if additional cleaning is necessary beyond MEP.
457	SCDHEC do not Allow Temporary Use of Old Style Tanks After BWRE	Moderate	12/17/2015	Moderate					Continue dialogue with SCDHEC to ensure the regulators are aware of the impact of not allowing limited re-use of old-style tanks after BWRE (i.e. material at risk for longer, SWPF not operating at full capacity, program slowed down with additional costs for PBS-SR-0014 and follow on closure PBS-SR-0030).
458	Targeted Sludge Tank Does not Contain Predicted Quantity of Sludge	High	11/17/2015	Moderate					Accelerate infrastructure placement such that an alternate tank is closer to being ready earlier, thereby reducing program delay. Continue processing with a lower sludge loading to prevent impacts to SWPF and/or lower the canister production rate while still avoiding any impact to SWPF.
459	Warehouse Fire Destroys Critical Equipment (Excluding Melters) (DOE Risk)	Low	11/19/2015	Low					This risk has been accepted by DOE.

 Risk has been closed    
  Not a problem, no issues at this time    
  Minor concern    
  Major concern

ID	Title	Initial Risk Level	Review Date	Final Risk Level	Status			Remarks
					Closed	Acceptable Risk	Minor Concern	
460	SDUs are Not Available When Required (Acquisition Delays) (DOE Risk)	Moderate	11/3/2015	Zero			●	Ensure SDU project acquisition strategy identifies the appropriate fiscal period to submit project data and begin acquisition. Provide sufficient allowance for budget perturbations e.g. continuing resolutions. The FY16 continuing resolution will create schedule delays for project completion but it is not expected to affect the programmatic need date.
461	Additional Requirements Imposed on Tank Farm Operation Due to Hanford Vapor Issues	Low	12/17/2015	Low		●		Evaluated the Hanford Tank Vapor Assessment Report recommendations. Determined applicability to SRR, whether the SRR program has deficiencies related to the recommendation. Developed a SRR Tank Vapor Action Plan with specific actions to be implemented.
462	Increased Aluminum due to Aluminum Dissolution Creates Precipitation During Processing	Moderate	11/4/2015	Low			●	Metering in leachate to salt feed; perform grout testing with higher aluminum concentrations (with the aim of increasing SPF WAC limit for aluminum); and add hydroxide during salt batch prep. These handling strategies should be worked in conjunction with handling strategies for Risk 251.
463	Increased Level of Mercury in Saltstone Grout	Moderate	12/16/2015	Moderate			●	Form a task team to investigate the fate of mercury in the HLW System and make recommendations; Reestablish mercury removal capability at DWPF and eliminate DWPF Recycle.
466	Increased Levels of Mercury in HLW System Creates Industrial Hazards	Low	12/17/2015	Low		●		IH protocols are being followed (e.g. monitoring and PPE as necessary). If monitoring identifies increasing levels, additional engineered controls (e.g. increasing stack height), administrative controls and PPE will be implemented.
467	Oxalates Impact Salt Processing	High	11/16/2015	Moderate			●	Minimize oxalate use, i.e. 512-S filter cleaning and tank cleaning. Use an ion exchange process on high oxalate bearing tanks and low sodium salt at end of Program. This would send DSS (containing oxalates) to saltstone.
468	DWPF Sand Filter is Expended Before Design Life is Reached	Low	11/19/2015	Low		●		This risk is accepted as there are no practical measures for mitigation. Periodic monitoring in place.
469	Sampling Requirements at MCU Prevent Maximum Throughput of above 2 Mgals/yr	Low	12/16/2015	Low		●		A VSA for Tank 50 strip side to reduce the impacts of sampling for isopar will be completed.
470	Processing Higher Curie Feed Increases MCU Outage Durations	Low	12/16/2015	Low		●		This risk is accepted however, by assessing de-inventory protocols comensurate with rad monitoring and trending program, the impact of outage durations may be reduced.

Content changed from last update

● Risk has been closed    ● Not a problem, no issues at this time    ● Minor concern    ● Major concern

<i>ID</i>	<i>Title</i>	<i>Initial Risk Level</i>	<i>Review Date</i>	<i>Final Risk Level</i>	<i>Status</i>			<i>Remarks</i>
					<i>Closed</i>	<i>Acceptable Risk</i>	<i>Minor Concern</i>	
471	Tank 50 Cannot be Transferred to Saltstone	Low	12/16/2015	Low				Evaluate sending filter cleaning residuals to DWPF as opposed to Tank 50. Evaluate and establish a transfer path from Tank 50 to the Tank Farm to reduce the duration of the impact. No MST demonstration, targeted for FY16, will allow an evaluation of reducing the frequency of sending filter cleaning streams to Tank 50.
472	DOE Directs Additional Business/Project Requirements on Lower Level Activities (DOE Risk)	High	12/16/2015	High				Ensure DOE is appraised of the impact of these changes; Utilize appropriate baseline change control to incorporate changing requirement; anticipate review requirements and obtain and deploy contractor and DOE resources early. Secretary of Energy issued direction in June 2015 to department elements to implement this change. CLIN has been developed. Current strategy is to implement (if required) in the next contract.

Content changed from last update

 Risk has been closed
  Not a problem, no issues at this time
  Minor concern
  Major concern

# PBS-SR-00014 Opportunities

ID	Title	Initial Level	Review Date	Final Level	Status			Remarks	
					Closed	Little Potential	Some Potential		Excellent Potential
173	Feed back from Technical Successes to DOE Complex. (DOE Opportunity)	Moderate	12/15/2015	Moderate			●		This is a cross cutting opportunity. Develop a complex wide plan to collect and document technical successes and disseminate this information to the DOE complex for the life cycle of the PBS.
208	Improvements in Waste Removal	Moderate	12/1/2015	High			●		Activities are identified which reduce the amount of liquid needed and which improve and speed the process. The result is a reduction in the cost of waste removal. Tank 15 waste removal will be utilizing a "feed and bleed" process which will result in the reduction of water usage. Available recycle will be used when practical to avoid the use of fresh water.
224	Improvements in closure	High	11/2/2015	High				●	Examination of the Tank closure activities to date have shown opportunities to streamline and improve the cleaning and closure process.
226	Influent Reductions	Moderate	11/17/2015	Moderate		●			By reducing the volume of the influents into the Tank Farm, the amount of waste requiring treatment is less and the program duration could be reduced. Based on Current projections of increased Canyon waste volume, this opportunity offers less potential.
227	Waste Characterization Improvements	Moderate	12/16/2015	Moderate			●		Review of the existing sampling program and waste characterization program indicate the potential for cost savings through improvements in sampling and implementation of new waste characterization tools and software. In tank measurement of hydroxide, nitrate and nitrite as well as in situ rheology measurement techniques combined with WCS upgrades can optimize process flow sheets and maximize throughputs for all facilities.
368	Use Higher Capacity Canisters at DWPF	Moderate	12/16/2015	Moderate			●		After completing the handling strategy, this opportunity will have been exploited.
384	Develop Approved Final Disposal Paths for DWPF Failed Equipment	Moderate	12/1/2015	Moderate			●		Early permanent disposal of failed equipment from DWPF could provide a long term life cycle savings. This would be accomplished by not building the FESVs at DWPF for temporary storage and allowing for permanent disposition of failed equipment now. Current plans include final disposition of failed DWPF equipment with the final SRS closure. No action is being performed as this is a low priority due to current funding constraints.
385	Re-Define Final Vitrified Wasteform Requirements	Low	12/1/2015	Low		●			A set of new DWPF Glass wasteform requirements could be developed with a greater fissile waste loading, which optimizes production and balances the maximum throughput of DWPF against the ability to pretreat waste within the HLW System. The actions required are to develop a business case for the glass wasteform by establishing a higher fissile waste loading, Ti limits, Al concentration, etc., and gain acceptance of DOE-HQ and applicable government office. No action is being performed as this is a low priority due to current funding constraints.

## PBS-SR-00014 Opportunities

<i>ID</i>	<i>Title</i>	<i>Initial Level</i>	<i>Review Date</i>	<i>Final Level</i>	<i>Closed</i>	<i>Little Potential</i>	<i>Some Potential</i>	<i>Excellent Potential</i>	<i>Remarks</i>
386	Remove Organic Controls From Design of SDUs	Moderate	11/9/2015	Moderate			●		BCP approved to remove ventilation off SDU 6 and do not anticipate needing SS active ventilation on any other SDU's. There is an outstanding action to complete the calc for NFPA 69 (25 % LFL Limit) to determine if some form of PS active ventilation is required to process at maximum fill rate capacity without approaching 25 % LFL. Upon conclusion of this work on SDU 6, the path forward for ventilation of future SDUs will be known and factored into future SDU design.
389	Reduce Future Closure Requirements	Moderate	11/2/2015	Moderate			●		As tank closures are completed and confidence in the PA results increases, requirements for future tank closures may be reduced. Opportunity partially realized with the Tank 16 Cease Waste Removal approval.
393	Operation of NGS at Higher Sodium Molarity	High	11/3/2015	High				●	Performance of the NGS at increased Na concentration has shown that Cesium extraction strength can increase while not impairing stripping or scrubbing. This will result in a smaller volume of Salt needing to be processed, reducing the volume of DSS, reducing the SDU space required. Investigate further processing at a higher Na molarity and develop a path forward for testing using full-scale equipment and validation before deployment. Testing for processing high Na feed has been completed and report P-RPT-J-00028, Rev 0 has been issued.
406	Process the Contents Of Tank 48 Early	High	11/17/2015	High				●	Tank 48 can be processed, cleaned and closed after ARP processing has been completed. If Tank 48 is recovered early, it can be used to assist in salt processing and provide qualified contingency space. Early closure of Tank 48 could accelerate closure of tank 21.
411	Perform Lay-up of Vault 4	Moderate	11/19/2015	Moderate			●		Implementation of an early lay-up strategy for Vault 4 could allow discontinuing most Surveillance and monitoring activities, mitigate continued spread of contamination, result in reduced worker radiation exposure and reduce labor and non-labor resources required for long term surveillance and monitoring. This would require a cost/benefit analysis, development of a business case and regulatory position. Clean cap and roof coating completed.
423	Higher Molarity Sludge Processing	Low	12/16/2015	Low			●		Implementing the use of Alternate Reductant in the DWPF process may allow processing of a higher Na molarity sludge. For each wash not performed during sludge batch preparation there is a savings of \$250K. (\$5M over 10 sludge batches) Evaporator savings would be \$1 per gallon, a savings of \$2.5M over the 10 sludge batches.
428	Remove/Relieve Design Constraints on SDUs Based Upon Maturing Performance Analysis	Moderate	12/16/2015	Moderate			●		Produced the FY13 Special Analysis incorporating latest PA Maintenance Plan outputs and available technical data (i.e. cementitious barrier workshop toolbox) to remove/relieve design constraints associated with long-term environmental performance (note: structural and "leak-tight" constraints are not addressed in this action). The FY2013 SDF SA was approved by the LFRG and transmitted to NRC per their Monitoring role; the NRC provided RAIs in June 2014. The FY2014 SDF SA has been completed to consider the new SDU 6 design and has been reviewed and approved by the LFRG and DOE-SR. It has been officially implemented. Further, the SDF 2014 SA has been sent to the Nuclear Regulatory Commission for their review and comment.

## PBS-SR-00014 Opportunities

<i>ID</i>	<i>Title</i>	<i>Initial Level</i>	<i>Review Date</i>	<i>Final Level</i>	<i>Closed</i>	<i>Little Potential</i>	<i>Some Potential</i>	<i>Excellent Potential</i>	<i>Remarks</i>
438	Salt Dissolution Creates Less than Expected Volume	Moderate	11/17/2015	Moderate			●		Accept - If this opportunity occurs, benefit will be realized.
453	Perform Interim Salt processing Without an MST Strike	High	11/16/2015	High				●	Ensure regulators understand the benefit from proceeding with this processing strategy. Once concurrence is received, reconfigure interim salt processing to bypass actinide strike and if feasible, feed filtration. Concurrence from DOE to begin processing without MST strike has been received and is planned for FY16.
456	Spread Cement Bags Evenly in Vault 4	Moderate	12/16/2015	Moderate			●		Develop a technical, regulatory and business case to allow the cement bags to remain within Vault 4.
473	Remove Interior Coating Requirement from SDU Design	Moderate	12/15/2015	Moderate			●		Investigate the feasibility of developing a grout recipe and controls to limit sulphate levels to below which a protective coating is no longer required. If feasible, determine the extent of work required to develop and qualify a new grout formulation (testing and PA/SA activities). Prepare a business analysis of cost benefit vs cost of qualifying a new grout formulation (including any additional materials and operating costs over the life of the Program). If benefit is tangible, proceed with development and qualification of a new grout waste from.

● *Opportunity has been closed*    
 ● *Little Potential*    
 ● *Some Potential*    
 ● *Excellent Potential*

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