

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO. P00031	3. EFFECTIVE DATE 05/01/2022	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY U.S. Department of Energy Idaho Operations Office 1955 Fremont Avenue Idaho Falls ID 83415	CODE 892432	7. ADMINISTERED BY (If other than Item 6) U.S. Department of Energy Idaho Operations Office 1955 Fremont Avenue Idaho Falls ID 83415	CODE 00701
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) Idaho Environmental Coalition LLC Attn: Jason Mack 600 William Northern Blvd Tullahoma TN 373884729		(x) 9A. AMENDMENT OF SOLICITATION NO.	
CODE		FACILITY CODE	9B. DATED (SEE ITEM 11)
		X 10A. MODIFICATION OF CONTRACT/ORDER NO. 89303321DEM000061	
		10B. DATED (SEE ITEM 13) 05/27/2021	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended. is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Contract Section B.9 - Basis for Changes
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: Not Available

UEI: LQ5ZLNE3EM27

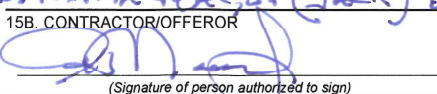
Procurement Instrument Identifier (PIID): 89243222FEMT003

Task Order - 3 Integration and Mission Continuity

The purpose of this modification is to add the risk registers to task order 3 - Integration and Mission Continuity in accordance with contract section B.9 - Basis for Changes. See below for further details.

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) J.H. Mack, Jr. (JACK) Bus Services & PCO	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Aaron Nebeker
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED 18 AUG 22
16B. UNITED STATES OF AMERICA Aaron S. Nebeker Digitally signed by Aaron S. Nebeker Date: 2022.08.18 11:23:46 -06'00' (Signature of Contracting Officer)	16C. DATE SIGNED 08/18/2022

Previous edition unusable

NAME OF OFFEROR OR CONTRACTOR
Idaho Environmental Coalition LLC

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
00003	<p>Payment: OR for Idaho U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 6017 Oak Ridge TN 37831 Period of Performance: 10/01/2021 to 09/30/2031</p> <p>Change Item 00003 to read as follows (amount shown is the total amount):</p> <p>Task Order-3 - Integration and Mission Continuity Line item value is: \$668,617,119.00 Incrementally Funded Amount: \$294,623,739.49</p> <p>PIID: 89243222FEMTO03</p> <p>This modification adds the Risk Register for DOE-EM and IEC to task order 3 - Integration and Mission Continuity. Any DOE-EM risk realized will require a formal Request for Equitable Adjustment (REA) to be submitted and reviewed/approved by DOE-EM. See attachments for risk register documents.</p>				668,617,119.00



TO3 DOE Risk Register

Idaho Cleanup Project Programmatic Risk Register

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case			
CAL007T	E.3.02.30.08	DOE	DOE FPD	Kimbro, Val	Change in Definition Interpretation of High-Level Waste-Threat	The high-level waste definition interpretation may impact the overall project strategy to process and dispose of calcine waste. For example, if direct disposal becomes an option, then portions or all of calcine may be eligible for this disposal alternative. This, consequently, may impact or reprioritize ongoing work (e.g., retrieval demonstration and conceptual designs for calcine processing).	High level waste definition interpretation requires the Department of Energy (DOE) to pursue a different disposition path for the disposal of calcine waste.	Transfer	Threat	Rare	Major	Low (2)	\$ 80,000	\$ 100,000	\$ 150,000	60	150	150	3/20/2022	4/13/2022	TO3CA-8000: CRP - Long-Term Strategy for Calcine Disposition Support FY22 TO3CA-8010: CRP - Long-Term Strategy for Calcine Disposition 1-2 Qtrs Spt FY23 TO3CA-8020: CRP - Long-Term Strategy for Calcine Disposition 3-4 Qtrs Spt FY23
CAL007O	E.3.02.30.08	DOE	DOE FPD	Kimbro, Val	Change in Definition Interpretation of High-Level Waste-Opportunity	The high-level waste definition interpretation may impact the overall project strategy to process and dispose of calcine waste. For example, if direct disposal becomes an option, then portions or all of calcine may be eligible for this disposal alternative. This, consequently, may impact or reprioritize ongoing work (e.g., retrieval demonstration and conceptual designs for calcine processing).	High level waste definition interpretation requires the Department of Energy (DOE) to pursue a different disposition path for the disposal of calcine waste.	Transfer	Opportunity	Rare	Major	Low (2)	\$ (150,000)	\$ (100,000)	\$ (80,000)	-150	-150	-60	3/20/2022	4/13/2022	TO3CA-8000: CRP - Long-Term Strategy for Calcine Disposition Support FY22 TO3CA-8010: CRP - Long-Term Strategy for Calcine Disposition 1-2 Qtrs Spt FY23 TO3CA-8020: CRP - Long-Term Strategy for Calcine Disposition 3-4 Qtrs Spt FY23
CAL008	E.3.02.30.02	DOE	DOE FPD	Kimbro, Val	Delay in the Agreement for Acceptable End-State of CSSF-1	Final agreement on the end-state and residual waste remaining in CSSF-1 could impact ongoing engineering work, specifically residual cleanout equipment.	Future discussions and agreements with Idaho agencies, including Idaho Department of Environmental Quality (IDEQ) and the Environmental Protection Agency (EPA), which will determine the acceptable end state for CSSF-1.	Transfer	Threat	Possible	Serious	Moderate (3)	\$ 100,000	\$ 200,000	\$ 300,000	60	120	180	3/20/2022	4/13/2022	TO3CA-2130: Prepare CSSF-1 EE/CA
ITWU002	E.3.06.34.01	DOE	DOE FPD	Nahay, Jordan T	Legacy Designs Cause Activity Delays	Legacy design issues during construction can lead to increased schedule delays and project costs.	Interruption in the original planned schedule due to unforeseen issues with legacy designs.	Transfer	Threat	Likely	Critical	High (4)	\$ 500,000	\$ 1,000,000	\$ 3,000,000	60	120	180	3/20/2022	4/13/2022	TO3-WTUWDR100: Install Wet Decon Rebuild (Dispersion Mill) TO3-WTUSPT140: Operate IWTU Plant with 100% SBW
IWTU003	E.3.06.34.01	DOE	DOE FPD	Nahay, Jordan T	Legacy Equipment Failure Prevents Transfers of Sodium Bearing Waste (SBW)	Unexpected legacy issues or failure of legacy equipment will occur on systems that cannot be tested prior to actual transfers of SBW from INTEC to IWTU.	Unexpected failure of legacy equipment or components that impact the functionality of the SBW Transfer system.	Transfer	Threat	Possible	Major	High (4)	\$ 500,000	\$ 750,000	\$ 1,000,000	90	180	270	3/20/2022	4/13/2022	TO3-WTUSPT120: Operate IWTU Plant with 10% SBW, 90% Simulant TO3-WTUSPT300A: Interim Processing of WM-189 FY22
IWTU007	E.3.06.34.02	DOE	DOE FPD	Nahay, Jordan T	Resource Conservation and Recovery Act (RCRA) Permit Modification is not Approved	The Idaho Department of Environmental Quality (IDEQ) does not approve the RCRA permit modification which requires additional revisions of PLN-3298 IWTU System Performance Test Plan.	IDEQ determines that the RCRA permit modification is inadequate, requiring revision of PLN-3298 and resubmittal to IDEQ; extending beyond the review period.	Transfer	Threat	Unlikely	Serious	Low (2)	\$ 25,000	\$ 50,000	\$ 100,000	45	60	75	3/20/2022	4/13/2022	TO3-WTUSPT300B: Interim Processing of WM-189 FY23
NICDF001	E.4.06.30.02	DOE	DOE FPD	Sorenson, Travis	Changes to International Building Codes Impact Idaho CERCLA Disposal Facility (ICDF) Design	The original design of the ICDF Cells 1 & 2 (2000 to 2002) implemented the Uniform Building Code (UBC) for designing slope stability during a seismic event. Based on the original design (Cells 1 & 2), the slopes were designed to a 3:1. The current (2022) slope stability seismic analysis must implement the International Building Code (IBC). The seismic analysis may be impacted by the change from the UBC to IBC. Until the preliminary/final design begins, there is a risk that the side slopes may need to be designed to a 4:1 which will require additional design and construction elements.	During the preliminary/final design, design calculations to meet seismic analysis for slope stability may require a 4:1 slope.	Transfer	Threat	Possible	Major	High (4)	\$ 100,000	\$ 500,000	\$ 1,000,000	120	240	365	3/20/2022	4/13/2022	TO3-040601-455: Prepare Final Design (FY23)
TRU001	E.2.03.36.02	DOE	DOE FPD	Zovi, Bruno	Inability to Meet Site Treatment Plan (STP) Milestone for TRU Waste Reclassified to Mixed Low Level Waste (MLLW)	Currently no treatment capabilities exist to treat transuranic waste (TRU) that has been reclassified as mixed low-level waste (MLLW) associated with sludge reprocessing.	Inability to treat and dispose of MLLW organic sludges (10-100nCi/g) as required by STP milestones.	Transfer	Threat	Almost Certain	Critical	Very High (5)	\$ 2,000,000	\$ 8,500,000	\$ 18,500,000	90	180	270	3/20/2022	4/13/2022	TO3-050109-4015: AMWTP LLW/MLLW Shipments Offsite TO3 (FY22) TO3-050109-4025: AMWTP LLW/MLLW Shipments Offsite TO3 (FY23)
TRU014	E.2.03.35.02	DOE	DOE FPD	Byram, George	Unable to Certify/Ship Waste for Disposal at Waste Isolation Pilot Plant (WIPP)	Unable to certify and/or ship waste for disposal.	Waste cannot meet certification requirements for WIPP disposal.	Transfer	Threat	Possible	Serious	Moderate (3)	\$ 50,000	\$ 500,000	\$ 1,000,000	30	60	180	3/20/2022	4/13/2022	TO3-050102-4170: Packaging and Transportation of Waste FY22 TO3-050102-4190: Packaging and Transportation of Waste FY23



TO3 DOE Risk Register

Idaho Cleanup Project Programmatic Risk Register

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case			
TRU016	E.2.03.32.02	DOE	DOE FPD	Loftus, Nathan	Waste Isolation Pilot Plant (WIPP) Interpretations or Requirements Change	Changes to the WIPP requirements or new interpretations of existing requirements could result in a need to reprocess the waste, rework containers, or recertify waste that has already been certified in order to update the waste to the new requirements.	The WIPP requires detailed acceptable knowledge that does not exist and/or permit changes.	Transfer	Threat	Rare	Moderate	Low (1)	\$ 300,000	\$ 500,000	\$ 1,750,000	15	30	90	3/20/2022	4/13/2022	TO3-050102-4170: Packaging and Transportation of Waste FY22
TO3001	Project Wide	DOE	DOE FPD	Blackford, Ty	Supply Chain Delays and Cost Increases.	Due to emerging local, regional, and/or international events the supply chain is impacted limiting the ability to procure or accurately estimate the cost and time necessary to acquire necessary materials, services, and personnel.	Emerging national and international events impact supply chain.	Transfer	Threat	Almost Certain	Serious	Very High (5)	\$ 500,000	\$ 1,000,000	\$ 2,000,000	150	180	270	6/8/2022	6/8/2022	Expected to impact multiple areas within the schedule.
TO3003	Project Wide	DOE	DOE FPD	Blackford, Ty	Legacy Contamination and/or Ordinance is Discovered in an Area Where it Would Not be Expected	Unexpected legacy contamination and/or ordinance is found during construction, excavation, building upgrades, or maintenance in areas where legacy contamination would not be anticipated.	Legacy contamination and/or ordinance is found during construction, excavation, building, upgrades, or maintenance work scope efforts.	Transfer	Threat	Unlikely	Serious	Low (2)	\$ 300,000	\$ 500,000	\$ 800,000	20	60	140	6/8/2022	6/8/2022	Expected to impact multiple areas within the schedule.
TO3004	Project Wide	DOE	DOE FPD	Blackford, Ty	Flaws in Legacy Equipment	The legacy equipment failures result in work execution delays increasing project costs and schedule duration.	Flaws in legacy equipment that occur outside regular preventative maintenance resulting in equipment failure.	Transfer	Threat	Unlikely	Serious	Low (2)	\$ 500,000	\$ 1,000,000	\$ 3,000,000	60	120	180	6/8/2022	6/8/2022	Expected to impact multiple areas within the schedule.



TO3 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated : 8.17.22

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case				
CAL001	E.3.02.06	IEC	Kimbro, Val		Infrastructure: Office space for the project is limited	Infrastructure: Office space for the project is limited to the control room and one container office. Projected staffing levels will require additional office space and upgrades to CPP-691. Limited office space reduces the team's ability to complete work efficiently at the site. Upgrades to CPP-691 and additional office space are a significant cost to the project. Initial estimates for adding additional office space and expanding usable areas at CPP-691 are \$2.3 million. This is currently included in TO3 Integrated Priority List.	Reduced productivity due to limited office space at CPP-691.	Accept	Threat	Rare	Moderate	1-Low	\$ 80,000	\$ 160,000	\$ 240,000	11	19	30	Prioritize work and funding. If funding is unavailable to add additional office space or to upgrade the CPP-691 facility, then work will continue at status quo where personnel adjust the schedule or work location.	3/20/2022	4/13/2022	TO3CA-6180
CAL005	E.3.02.06	IEC	Kimbro, Val		Maintaining a steady set of employees has been a huge help and will be able to realize some efficiencies in the process from having these employees.	Maintaining a steady set of employees has been a huge help and will be able to realize some efficiencies in the process from having these employees. Gaining better trained individuals and higher qualified staff helps spread the responsibility.	Change in current set of employees.	Accept	Threat	Rare	Moderate	1-Low	\$ 40,000	\$ 600,000	\$ 600,000	5	11	11	Continue to actively engage and provide positive leadership, communication, and feedback with the project team.	3/20/2022	4/13/2022	TO3CA-5000
CAL006	E.3.02.06	IEC	Kimbro, Val		Excellent integration between the Calcine Retrieval Project operations and engineering groups, allowing for open and efficient communication.	Excellent integration between the Calcine Retrieval Project operations and engineering groups, allowing for open and efficient communication.	Change in personnel or current execution of conduct of operations.	Accept	Opportunity	Rare	Moderate	1-Low	\$ 40,000	\$ 600,000	\$ 600,000	-11	-11	-5	Continue to actively engage and provide positive leadership, communication, and feedback with the project team.	3/20/2022	4/13/2022	TO3CA-6180
CAL007O	E.3.02.30.08	DOE	DOE FPD	Kimbro, Val	Change in Definition Interpretation of High-Level Waste-Opportunity	The high-level waste definition interpretation may impact the overall project strategy to process and dispose of calcine waste. For example, if direct disposal becomes an option, then portions or all of calcine may be eligible for this disposal alternative. This, consequently, may impact or reprioritize ongoing work (e.g., retrieval demonstration and conceptual designs for calcine processing).	High level waste definition interpretation requires the Department of Energy (DOE) to pursue a different disposition path for the disposal of calcine waste.	Transfer	Opportunity	Rare	Major	2-Low	\$ (150,000)	\$ (100,000)	\$ (80,000)	-150	-150	-60	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3CA-8000: CRP - Long-Term Strategy for Calcine Disposition Support FY22 TO3CA-8010: CRP - Long-Term Strategy for Calcine Disposition 1-2 Qtrs Sppt FY23 TO3CA-8020: CRP - Long-Term Strategy for Calcine Disposition 3-4 Qtrs Sppt FY23
CAL007T	E.3.02.30.08	DOE	DOE FPD	Kimbro, Val	Change in Definition Interpretation of High-Level Waste-Threat	The high-level waste definition interpretation may impact the overall project strategy to process and dispose of calcine waste. For example, if direct disposal becomes an option, then portions or all of calcine may be eligible for this disposal alternative. This, consequently, may impact or reprioritize ongoing work (e.g., retrieval demonstration and conceptual designs for calcine processing).	High level waste definition interpretation requires the Department of Energy (DOE) to pursue a different disposition path for the disposal of calcine waste.	Transfer	Threat	Rare	Major	2-Low	\$ 80,000	\$ 100,000	\$ 150,000	60	150	150	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3CA-8000: CRP - Long-Term Strategy for Calcine Disposition Support FY22 TO3CA-8010: CRP - Long-Term Strategy for Calcine Disposition 1-2 Qtrs Sppt FY23 TO3CA-8020: CRP - Long-Term Strategy for Calcine Disposition 3-4 Qtrs Sppt FY23
CAL008	E.3.02.30.02	DOE	DOE FPD	Kimbro, Val	Delay in the Agreement for Acceptable End-State of CSSF-1	Final agreement on the end-state and residual waste remaining in CSSF-1 could impact ongoing engineering work, specifically residual cleanout equipment.	Future discussions and agreements with Idaho agencies, including Idaho Department of Environmental Quality (IDEQ) and the Environmental Protection Agency (EPA), which will determine the acceptable end state for CSSF-1	Transfer	Threat	Possible	Major	4-High	\$ 100,000	\$ 200,000	\$ 300,000	60	120	180	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3CA-2130: Prepare CSSF-1 EE/CA
CAL010	E.3.02.05	IEC	Kimbro, Val		The planned schedule for the purchase of the drone may be delayed without timely approval by DOE.	The CRP is planning to gather data with a drone flown inside the storage vault to have an accurate understanding of all the obstructions in the CSSF 1 storage vault. Before a drone can be purchased, a risk assessment must be completed and approved by DOE-Idaho. The planned schedule for purchase of the drone may be delayed without timely approval by DOE or data collection will be unavailable if a drone is not acquired. If data is not collected, then access riser placement designs cannot proceed.	Timely review and approval of the risk assessment by DOE to fly the drone in the CSSF 1 storage vault	Accept	Threat	Unlikely	Serious	2-Low	\$ 160,000	\$ 200,000	\$ 320,000	60	60	151	Adjust or reprioritize the schedule to align with DOE approval (if it is not within the planned timeframe).	3/20/2022	4/13/2022	TO3CA-5330
CAL011	E.3.04.31.01	IEC	Zolman, Seabury		While filling the acid totes, an acid spill occurs that requires work to stop for cleanup and investigation.	While filling the acid totes, an acid spill occurs that requires work to stop for cleanup and investigation.	A large volume acid spill while filling totes.	Accept	Threat	Rare	Moderate	1-Low	\$ 80,000	\$ 100,000	\$ 150,000	14	30	151	Perform necessary thorough reviews of the work control document that is controlling the scope of acid drains to ensure proper controls, cautions, warning, and instructions for securing transfers are in place.	3/20/2022	4/13/2022	TO3-RTDFT5
CAL012	E.3.04.31.01	IEC	Zolman, Seabury		After acid totes are filled and delivered, the disposing contractor is unable to process the acid and return the totes to us for re-use, causing schedule delays.	After acid totes are filled and delivered, the disposing contractor is unable to process the acid and return the totes to us for re-use, causing schedule delays.	A disruption or change in schedule or priority at the disposing contractor site.	Accept	Threat	Rare	Moderate	1-Low	\$ 50,000	\$ 100,000	\$ 250,000	14	30	151	Work with the disposing vendor to coordinate shipments with their availability.	3/20/2022	4/13/2022	TO3-RTDSD
CAL014	E.3.04.31.05	IEC	Zolman, Seabury		Parts for tank farm front are readily available.	Equivalent parts for the tank farm front end are readily available and easily found, saving cost and schedule.	Research into parts finds multiple equivalents readily available.	Accept	Opportunity	Rare	Moderate	1-Low	\$ -	\$ 3,000	\$ 5,000	-46	-23	-7	Continue to have the system engineer engage with retired SME's that worked on or designed the system.	3/20/2022	4/13/2022	TO3-TFFE1
INTEC001	E.3.03.07	IEC	Miller, Zeena		Unknown radiation levels in existing waste	There are unknown levels of radiation in existing waste to be removed.	Radiation control identifies high rad fields prior to rigging waste.	Accept	Threat	Possible	Minor	2-Low	\$ 10,000	\$ 25,000	\$ 50,000	7	16	21	Prepare with Lead Blankets and other shielding	3/20/2022	4/13/2022	TO3-VUL.CLN.1
INTEC003	E.3.03.07	IEC	Miller, Zeena		Upsized motor procurement is delayed.	The upsized motor procurement for the manipulator is delayed.	Failure to meet expected delivery of 5/2022	Accept	Threat	Unlikely	Moderate	2-Low	\$ -	\$ -	\$ -	7	30	56	Expedite recovery shipment dates with PaR sub-supplier	3/20/2022	4/13/2022	TO3-VUL.PAR.1



TO3 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated: 8.17.22

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case				
INTEC006	E.3.03.30.02	IEC	Hamilton, Robert		Inability to perform outages when planned.	Inability to perform outages when planned. Schedule delays due to operations commitments can affect performing outages when they were planned. Inability to shutdown buildings to perform inspections and maintenance due to operational commitments.	7DE requires that the building be shut down while they inspect their panels. If operations cannot be shut down there will be schedule delays.	Accept	Threat	Rare	Minor	1-Low	\$ 25,000	\$ 50,000	\$ 100,000	7	16	30	Put plan and schedule together with operations commitment and buy in	3/20/2022	4/13/2022	TO3IN-INTECNFPA-2000 TO3IN-INTECNFPA-2010
INTEC009	E.3.03.30.02	IEC	Hamilton, Robert		Equipment failure and lack of spares cause stoppages.	Equipment failure and or lack of spare parts causes work stoppages, resulting in delays.	A lack of spare parts causes work stoppages.	Accept	Threat	Almost Certain	Minor	3-Moderate	\$ 50,000	\$ 250,000	\$ 500,000	7	16	30	Preventative Maintenance and Testing	3/20/2022	4/13/2022	TO3IN-INTECNFPA-2000 TO3IN-INTECNFPA-2010
INTEC011	E.3.03.30.02	IEC	Hamilton, Robert		Unscheduled power outages with long repair times.	Unscheduled power outages with long repair times Transformers are not off-the-shelf items and can require long procurement times depending on the size of the transformer. All production could halt within the affected facility due to a lack of electrical power.	Electrical equipment (transformer) failure due to prolonged exposure to harsh outdoor weather conditions without testing or maintenance	Accept	Threat	Possible	Moderate	2-Low	\$ 50,000	\$ 100,000	\$ 150,000	16	30	60	Preventative Maintenance and Testing	3/20/2022	4/13/2022	TO3IN-INTECNFPA-2000 TO3IN-INTECNFPA-2010
INTEC013	E.3.03.31	IEC	Jones, Clark		Protected wildlife must be protected or relocated.	There is wildlife which must be protected and or relocated, i.e., nesting migratory birds.	Protected species is discovered on work site and must remain undisturbed for duration of season	Accept	Threat	Possible	Minor	2-Low	\$ 40,000	\$ 133,333	\$ 200,000	5	11	16	Remove nests before eggs laid - Protect and relocate as appropriate	3/20/2022	4/13/2022	TO3INT-RFRP2075 TO3INT-RFRP4060A TO3INT-RFRP4060B
INTEC014	E.3.03.31	IEC	Jones, Clark		Work stoppages, either partial or total	Work stoppages, either partial or total impact work.	IEC Work suspended caused by an action outside the CPP-603 project scope.	Accept	Threat	Possible	Minor	2-Low	\$ 40,000	\$ 133,333	\$ 200,000	5	11	16	Maintained trained work force and work overtime as needed to recover schedule.	3/20/2022	4/13/2022	TO3INT-RFRP2075 TO3INT-RFRP4060A TO3INT-RFRP4060B
INTEC015	E.3.03.31	IEC	Jones, Clark		Secondary roof design, fabrication, and erection is not allowed to be performed.	Secondary roof design, fabrication, and erection are not allowed to be performed within quality level 4 (QL4) controls.	Quality requirements are changed during the project for the secondary roof structure.	Reduce/Mitigate	Threat	Possible	Moderate	2-Low	\$ 100,000	\$ 200,000	\$ 200,000	9	18	18	Ensure design is reviewed and approved before fabrication and no changes impact design without approvals.	3/20/2022	4/13/2022	TO3INT-RFRP4050A TO3INT-RFRP4050B TO3INT-RFRP4050C TO3INT-RFRP4050D TO3INT-RFRP4055
INTEC016	E.3.03.31	IEC	Jones, Clark		There is no capable crane available.	A crane with capacity and reach is not available to support work.	Suitable crane is not available	Accept	Threat	Possible	Minor	2-Low	\$ 33,333	\$ 66,667	\$ 133,333	2	5	11	Review lifts and required crane capacity. Identify required crane and reserve early to avoid delays.	3/20/2022	4/13/2022	TO3INT-RFRP2075 TO3INT-RFRP4060A TO3INT-RFRP4060B
INTEC017	E.3.03.31	IEC	Jones, Clark		Supply chain or vendors fail to deliver materials.	Failure of the supply chain or a vendor to deliver supplies or materials causes operations to be halted.	Materials or Vendor failure to deliver on schedule.	Accept	Threat	Possible	Minor	2-Low	\$ 60,000	\$ 90,000	\$ 180,000	5	9	12	Identify long lead materials early and work with procurement and vendors as needed to track and receive materials.	3/20/2022	4/13/2022	TO3INT-RFP2075 TO3INT-RFRP4060A TO3INT-RFRP4060B TO3RFRP3060 TO3RFRP5040
INTEC018	E.3.03.31	IEC	Jones, Clark		Mixed low-level waste is required to be packaged and transported.	The project waste characterization as mixed low-level waste (MLLW), which is required to be packaged and transported to the Energy Solutions facility in Utah or elsewhere for treatment (stabilization and macro encapsulation) and disposal, will increase the costs significantly and are not included.	Waste identified by WGS as Mixed low-level.	Accept	Threat	Possible	Moderate	2-Low	\$ 150,000	\$ 200,000	\$ 266,667	16	19	25	Have walkdowns and identify any issues early. Ensure craft are trained to not create mixed waste by waste separation during removal operations.	3/20/2022	4/13/2022	TO3INT-RFP2075 TO3RFRP-3060 TO3RFRP-5040
INTEC019	E.3.03.31	IEC	Jones, Clark		No reinforcement of CPP-603 IFSF roof	No reinforcement of the CPP-603 IFSF roof, adjacent parapet walls, or CPP-603 transite roof surfaces/structures is considered as part of the new IFSF secondary roof installation.	CPP-603 IFSF Secondary Design proposed by vendor includes reinforcement requirements onto adjacent CPP-603 roof structure.	Accept	Threat	Possible	Minor	2-Low	\$ 60,000	\$ 160,000	\$ 200,000	5	12	18	Hold Pre-job and discuss design limitations to ensure prospective bidders understand entire scope and limitations.	3/20/2022	4/13/2022	TO3INT-RFRP4050A TO3INT-RFRP4050B TO3INT-RFRP4050C TO3INT-RFRP4050D TO3INT-RFRP4055
INTEC020	E.3.03.31	IEC	Jones, Clark		Security will not allow access to the roof of CPP-603.	Operations or BEA Physical Security will not allow access to the roof areas of CPP-603 while personnel are escorted by "L" cleared individuals.	Restricted access to the roof ladder with requirements to access the ladder through CPP-603.	Accept	Threat	Possible	Minor	2-Low	\$ 13,333	\$ 25,000	\$ 50,000	2	2	4	Met with BEA and IEC security to work out process to access roof ensuring controls are known and "L" cleared escorts are allowed to function as needed to access roof.	3/20/2022	4/13/2022	TO3INT-RFP2075 TO3INT-RFRP4055 TO3INT-RFRP4060A TO3INT-RFRP4060B TO3RFRP-3060 TO3RFRP-5040
INTEC021	E.3.03.31	IEC	Jones, Clark		CPP-603 transite roof repairs exceeding 4 in.	CPP-603 transite roof repairs larger than a 4-inch hole are identified.	Holes larger than 4 inches are encountered.	Accept	Threat	Possible	Minor	2-Low	\$ 80,000	\$ 150,000	\$ 300,000	9	12	25	Identify conditions and advise IEC Engineering, Facility Management and DOE-ID.	3/20/2022	4/13/2022	TO3INT-RFRP5040
INTEC022	E.3.03.31	IEC	Jones, Clark		CPP-603 roof concrete damage during demolition or construction	CPP-603 IFSF roof concrete damage occurs during the HEPA demolition or secondary roof installation work.	Roof surface damaged during the work activities.	Accept	Threat	Possible	Moderate	2-Low	\$ 150,000	\$ 333,333	\$ 533,333	16	30	40	Identify conditions and advise IEC Engineering and Nuclear Safety of the conditions and request repair method. Quality level 2 roof structure - Serious issue will stop work and required corrective action plan and implementation.	3/20/2022	4/13/2022	TO3RFRP-2075 TO3RFRP-4060A TO3RFRP-4060B
INTEC023	E.3.03.31	IEC	Jones, Clark		Weather suspends work	Weather conditions suspend work and impact the accomplishment of the planned work activities.	Weather conditions - rain or high winds cause a suspension of work.	Accept	Threat	Possible	Minor	2-Low	\$ 16,000	\$ 30,000	\$ 60,000	2	2	5	Maintain construction site and materials in safe conditions based on weather conditions.	3/20/2022	4/13/2022	TO3RFRP-2075 TO3RFRP-3060 TO3RFRP-4060A TO3RFRP-4060B TO3RFRP-5040
INTEC024	E.3.03.31	IEC	Jones, Clark		The secondary roof design does not meet specification requirements.	The secondary roof design provided does not meet specification requirements.	Design development and review process shows proposed roof design does not meet specification requirements	Accept	Threat	Possible	Moderate	2-Low	\$ 160,000	\$ 200,000	\$ 360,000	12	18	30	Work to identify methods to overcome issues and accomplish Design Review meeting requirements.	3/20/2022	4/13/2022	TO3INT-RFRP4050A TO3INT-RFRP4050B TO3INT-RFRP4050C TO3INT-RFRP4050D TO3INT-RFRP4055
INTEC025	E.3.03.31	IEC	Jones, Clark		Bidding interest is low.	There is minimal interest in bidding after the performance spec is issued.	CPP-603 IFSF Secondary Roof RFP receives low response	Accept	Threat	Possible	Moderate	2-Low	\$ 250,000	\$ 500,000	\$ 800,000	16	30	46	Work with procurement organization to identify potential bidders.	3/20/2022	4/13/2022	TO3INT-RFRP4050A
INTEC026	E.3.03.31	IEC	Jones, Clark		Unexpected contamination during crane pad preparations	The risk of unexpected or unplanned contamination during crane pad preparation requires additional controls.	Contaminated soil during pad preparation	Accept	Threat	Unlikely	Serious	2-Low	\$ 300,000	\$ 500,000	\$ 800,000	25	37	47	If a clay layer is encountered, removal of material and replacement with crushed gravel would need to be conducted - Notification to DOE-ID of condition and authorization to proceed Disposal on soil in ICDP.	3/20/2022	4/13/2022	TO3INT-RFRP-2000
INTEC027	E.3.03.31	IEC	Jones, Clark		The roof installation bid was higher than expected.	A successful bid on the performance of roof install comes back with much higher costs and duration to perform the work.	Bid costs and schedule higher and longer than anticipated	Accept	Threat	Possible	Moderate	2-Low	\$ 250,000	\$ 500,000	\$ 800,000	16	30	46	Propose negotiations to identify resolution path.	3/20/2022	4/13/2022	TO3INT-RFRP4050A



TO3 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated : 8.17.22

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case				
INTEC028	E.3.03.31	IEC	Jones, Clark		CPP-603 IFSF roof does not support design review	Building documentation developed for CPP-603 IFSF roof does not allow adequate information to support Design Review.	Design review identifies issues which need field verification.	Accept	Threat	Possible	Serious	3-Moderate	\$ 300,000	\$ 800,000	\$ 1,000,000	30	60	89	Work to identify methods to overcome issues and accomplish Design Review meeting requirements.	3/20/2022	4/13/2022	TO3INT-RFRP4055
INTEC029	E.3.03.31	IEC	Jones, Clark		Due to structural issues, we are unable to attach to the existing building.	The risk of not being able to attach to the existing building with a new roof due to existing building structural issues.	Existing structure issues are identified.	Accept	Threat	Possible	Moderate	2-Low	\$ 200,000	\$ 320,000	\$ 400,000	18	25	30	Obtain authorization from DOE-ID and request IEC Engineering analysis as to interface with existing CPP-603 Roof surfaces.	3/20/2022	4/13/2022	TO3INT-RFRP4050A TO3INT-RFRP4050B TO3INT-RFRP4050C TO3INT-RFRP4050D TO3INT-RFRP4055
INTEC034	E.3.03.38.06	IEC	Evans, David		Radiological contamination was found during asphalt and soil removal.	Radiological contamination was found during asphalt and soil removal. If contaminated soils are encountered, stop work is initiated. Revision to planning is conducted and special removal and disposal practices will be required.	Radiological contamination is encountered.	Accept	Threat	Unlikely	Serious	2-Low	\$ 50,000	\$ 150,000	\$ 250,000	19	60	151	RCT's will survey prior to work and during all removal activities	3/20/2022	4/13/2022	TO3IN-PAVEP2-1020
INTEC035	E.3.03.38.06	IEC	Evans, David		Weather impacts removal of pavement.	Weather is a factor in the removal of pavement. If the pavement is removed and the ground is saturated, work must either stop and allow the ground to dry out, and this would affect cost and schedule.	Harsh Weather stopping the project for extended periods of time.	Accept	Threat	Possible	Minor	2-Low	\$ 25,000	\$ 50,000	\$ 100,000	2	4	7	RCT's will survey prior to work and during all removal activities	3/20/2022	4/13/2022	TO3IN-PAVEP2-1040
INTEC036	E.3.03.38.06	IEC	Evans, David		Rental equipment is unreliable.	Reliability of rental equipment: If the asphalt paver or other heavy equipment breaks down, there generally is not a back-up rental available due to the demand for asphalt pavers in the summer months. Waiting for a replacement or for the equipment to get fixed will impact cost and schedule.	Rental equipment breaking down and requiring maintenance or replacement.	Accept	Threat	Unlikely	Minor	2-Low	\$ 25,000	\$ 50,000	\$ 100,000	2	7	14	RCT's will survey prior to work and during all removal activities	3/20/2022	4/13/2022	TO3IN-PAVEP2-1010
INTEC037	E.3.03.38.06	IEC	Evans, David		Unexpected utilities or objects are discovered during digging.	Discovering unexpected utilities or objects during the digging process. Unidentified objects or utilities are found during excavation. Stop work is initiated to review the discovery and determine a path forward. There is an additional impact on cost and schedule for rental and planning.	During the pavement cutting, removal process, or excavation an unknown utility object is discovered.	Accept	Threat	Unlikely	Minor	2-Low	\$ 30,000	\$ 90,000	\$ 200,000	4	14	30	Check weather before hand and have possible weather shelters nearby or on site for emergencies	3/20/2022	4/13/2022	TO3IN-PAVEP2-1010
INTEC038	E.3.03.38.06	IEC	Evans, David		A clay layer is discovered beneath the area to be paved or repaired.	Discovering a clay layer under the area to be paved or repaired will require additional excavation to remove the clay and place it on a compactable base. This will impact the cost and schedule.	Discovering a clay layer during excavation.	Accept	Threat	Possible	Minor	2-Low	\$ 25,000	\$ 50,000	\$ 100,000	7	16	32	Ensure operators assigned to the job are familiar and trained to use the equipment provided.	3/20/2022	4/13/2022	TO3IN-PAVEP2-1060
INTEC041	E.3.03.38.09	IEC	Heyrend, Trad		DCS electronics failure.	If DCS electronics fail, the system would have to be updated to electronics that are readily available. The current system is outdated, and replacement parts are very limited.	Outdated DCS equipment	Accept	Threat	Possible	Minor	2-Low	\$ 29,167	\$ 41,667	\$ 83,333	5	11	16	Work with engineering to prioritize high risk equipment and replace them first.	3/20/2022	4/13/2022	TO3IN-DSC-1000 TO3IN-DSC-1010 TO3IN-DSC-1030 TO3IN-DSC-1050 TO3IN-DSC-1060 TO3IN-DSC-1080
INTEC042	E.3.03.38.09	IEC	Heyrend, Trad		Unexpected or unplanned contamination	The risk of unexpected or unplanned contamination.	Contamination discovered during installation of components.	Accept	Threat	Unlikely	Minor	2-Low	\$ 8,333	\$ 16,667	\$ 33,333	2	5	11	If equipment is in an area with suspected contamination RCT's will survey prior to work and during all removal activities	3/20/2022	4/13/2022	TO3IN-DSC-1020 TO3IN-DSC-1040 TO3IN-DSC-1060
INTEC044	E.3.03.38.07	IEC	Heyrend, Trad		HVAC engineering and installation bids were greater than expected.	A successful bid on the performance of HVAC engineering and installation comes back with much higher costs and duration to perform the work. Due to rising inflation, higher gas prices, a global shortage of electronic chips, etc.	Bid costs and schedules are higher and longer than anticipated.	Accept	Threat	Possible	Moderate	2-Low	\$ 150,000	\$ 300,000	\$ 600,000	14	30	89	Examine work to see if in-house craft can perform more scope at a lower cost.	3/20/2022	4/13/2022	TO3IN-BHAHVAC2-1010
INTEC045	E.3.03.38.07	IEC	Heyrend, Trad		Asbestos was discovered during demolition and installation.	The risk of asbestos being discovered during demo and installation requires additional controls.	Asbestos abatement required	Accept	Threat	Possible	Moderate	2-Low	\$ 50,000	\$ 100,000	\$ 200,000	14	30	60	Issue a work order early on the process to test suspect materials for asbestos.	3/20/2022	4/13/2022	TO3IN-BHAHVAC2-1030
INTEC046	E.3.03.38.07	IEC	Heyrend, Trad		Existing ducting is not in good condition.	The risk of the existing ducting not being in good condition requires new duct work.	Damaged or not compliant ducting.	Accept	Threat	Possible	Moderate	2-Low	\$ 30,000	\$ 80,000	\$ 150,000	14	30	60	Perform walks downs prior to issuing RFP's to verify condition of existing ducting. Put controls in the work order to minimize damage while work is being performed.	3/20/2022	4/13/2022	TO3IN-BHAHVAC2-1060
INTEC048	E.3.03.37	IEC	Evans, David		Radiological contamination was found during asphalt and soil removal.	Radiological contamination was found during asphalt and soil removal. If contaminated soils are encountered, work is immediately stopped. Revision to the plan is being conducted and special removal and disposal practices will be required.	Radiological contamination is encountered.	Accept	Threat	Rare	Serious	2-Low	\$ 50,000	\$ 150,000	\$ 250,000	19	60	151	Minimize excavation depths and segregate waste.	3/20/2022	4/13/2022	TO3IN-WWS-2110
INTEC049	E.3.03.37	IEC	Evans, David		The equipment is not adequate to accomplish the scope.	The equipment is inadequate to accomplish the work scope (the crane is not rated to lift pieces into place). The need for larger equipment and more material is needed for a more complex scope.	Access to some structure requires a larger crane	Accept	Threat	Possible	Moderate	2-Low	\$ 140,000	\$ 150,000	\$ 160,000	7	19	63	Rent a larger crane for the minimum time required to execute the task.	3/20/2022	4/13/2022	TO3IN-WWS-2020
INTEC050	E.3.03.37	IEC	Evans, David		Waste requires disposal at an offsite location.	Waste (hazardous, steel, wood, paint containing lead or chromium) requires disposal at an offsite location.	Material is determined to go to a classified landfill	Accept	Threat	Unlikely	Serious	2-Low	\$ 930,000	\$ 1,000,000	\$ 1,070,000	19	40	60	Segregate waste to minimize amount.	3/20/2022	4/13/2022	TO3IN-WWS-2070
INTEC051	E.3.03.37	IEC	Evans, David		The engineering contractor does not provide adequate or timely support.	An engineering contractor does not provide adequate or timely support (e.g. shop drawing reviews, construction submittals), resulting in delays and additional costs.	Subcontractor fails to review shop drawings and other construction submittals.	Accept	Threat	Unlikely	Serious	2-Low	\$ 480,000	\$ 500,000	\$ 530,000	19	35	70	Use Fluor engineers, and work closely with subcontractor.	3/20/2022	4/13/2022	TO3IN-WWS-2010
INTEC052	E.3.03.37	IEC	Evans, David		Material resources are not available.	Material resources are not readily available.	Material resources are not readily available resulting in increased costs and schedule delays.	Accept	Threat	Unlikely	Serious	2-Low	\$ 100,000	\$ 100,000	\$ 110,000	19	60	89	Plan ahead and order materials as soon as design is completed.	3/20/2022	4/13/2022	TO3IN-WWS-2020
INTEC053	E.3.03.37	IEC	Evans, David		Hazardous material requires level "C", "B", or "A" personnel protective equipment.	Hazardous material requires Levels "C", "B", or "A" personal protective equipment to perform the replacement, upgrading, or rehabilitation of infrastructure.	Work in areas requires the use or wearing of Levels "C", "B" or "A" personal protective equipment (as defined in the PPE Classification System from OSHA and EPA) to perform the replacement, upgrading, of rehabilitation of infrastructure to meet the new OSHA standards.	Accept	Threat	Rare	Serious	2-Low	\$ 930,000	\$ 1,000,000	\$ 1,070,000	30	60	89	Perform work order walkdowns early.	3/20/2022	4/13/2022	TO3IN-WWS-2020



TO3 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated : 8.17.22

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case				
INTEC054	E.3.03.37	IEC	Evans, David		Damage or contamination of leased equipment	Damaging or contaminating leased equipment, resulting in replacement of equipment and disposal costs, will impact cost and schedule.	Damage to equipment or contamination found on equipment that cannot be free released.	Accept	Threat	Unlikely	Moderate	2-Low	\$ 100,000	\$ 300,000	\$ 500,000	14	19	60	Perform surveys of potentially contaminated areas.	3/20/2022	4/13/2022	TO3IN-WWS-2020
INTEC056	E.3.03.38.05	IEC	D. Lords		Charging towers are delivered late.	Late delivery of charging towers.	Charging stations are anticipated to be in high demand potentially delaying delivery.	Accept	Threat	Unlikely	Serious	2-Low	\$ -	\$ 5,000	\$ 5,000	30	60	89	Verify delivery times with vendor prior to finalizing the schedule.	3/20/2022	4/13/2022	TO3-INJOILT1002
INTEC057	E.3.03.30.02	IEC	Rob Hamilton		PMs require outages.	The risk of the PMs, especially those tied to the MCC, may require outages to accomplish them.	Getting access to those panels could be difficult if the outage can't occur during normal working hours resulting in increased costs due to overtime.	Reduce/Mitigate	Threat	Possible	Minor	2-Low	\$ 25,000	\$ 50,000	\$ 100,000	7	16	30	Attempt to schedule work during the normal work week, or plan far enough ahead to shift personnel schedules to not require OT if performed outside the normal work week.	3/20/2022	4/13/2022	TO3IN-INTECNFPA-2000 TO3IN-INTECNFPA-2010
INTEC058	E.3.03.39	IEC	Stacey Lilya		The ALT #1 fire panel is either incomplete or inoperable.	The ECS ALT # 1 fire panel conversion design and component device list provided are incomplete and/or do not function to allow the design to operate correctly.	Subcontractor does not provide functional design package based on installed configuration for each fire panel conversion.	Reduce/Mitigate	Threat	Possible	Serious	3-Moderate	\$ 200,000	\$ 400,000	\$ 600,000	30	46	60	Complete design and review in TO2. Have Subcontractor accomplish field demonstration using INTEC equipment.	3/20/2022	4/13/2022	TO3INTECFA02
INTEC059	E.3.03.39	IEC	Stacey Lilya		ECS wireless system failure.	Existing ECS wireless system failure causes the work to be stopped-and impacts the accomplishment of the fire panel conversion process.	Failure of the INTEC ECS which stops the fire panel conversion work progress and testing.	Accept	Threat	Unlikely	Minor	2-Low	\$ 26,000	\$ 160,000	\$ 240,000	7	14	30	Have an ECS recovery plan in place to repair the system.	3/20/2022	4/13/2022	TO3INTECFA02
INTEC060	E.3.03.39	IEC	Stacey Lilya		BEA reprogramming was not completed in a timely manner.	Required BEA reprogramming at the Central Fire Station for each ECS panel conversion is not completed in a timely manner.	BEA does not reprogram and work to test system is suspended.	Accept	Threat	Unlikely	Minor	2-Low	\$ 10,000	\$ 80,000	\$ 120,000	0	7	14	Have early communications with BEA and have needed necessary documentation in place to allow coordination between IEC and BEA for needed programming.	3/20/2022	4/13/2022	TO3INTECFA03
INTEC061	E.3.03.39	IEC	Stacey Lilya		The supply chain or vendors fail to deliver materials.	Supply chain or vendor failure to deliver suppliers or materials/components suspends work.	Failure to deliver to support planned work.	Reduce/Mitigate	Threat	Possible	Moderate	2-Low	\$ 50,000	\$ 200,000	\$ 480,000	14	30	60	Identify long lead items and order materials earlier - work with procurement and suppliers as needed.	3/20/2022	4/13/2022	TO3INTECFA02
ITWU002	E.3.06.34.01	DOE	DOE FPD	Nahay, Jordan T	Legacy Designs Cause Activity Delays	Legacy design issues during construction can lead to increased schedule delays and project costs.	Interruption in the original planned schedule due to unforeseen issues with legacy designs.	Transfer	Threat	Likely	Major	4-High	\$ 500,000	\$ 1,000,000	\$ 3,000,000	60	120	180	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3-WTUWDR100: Install Wet Decon Rebuild (Dispersion Mill) TO3-WTUUSPT140: Operate IWTU Plant with 100% SBW
IWTU001	E.3.06	IEC	Nahay, Jordan T		The Canister Decon System will not decontaminate the canisters to acceptable levels for transfer.	The Canister Decon System will not effectively or efficiently decontaminate the canister to levels acceptable for transfer between the Can Fill Cells and the canister storage vault and/or contamination spreads during can fill operations and the robotic decon system cannot remove sufficient contamination from the outside of a canister. This will most likely cause a spread of contamination outside of the can fill cells, thereby requiring additional contamination control mitigation.	Contamination levels exceed established limits and/or spreads outside of the can fill cells	Accept	Threat	Possible	Moderate	2-Low	\$ 250,000	\$ 500,000	\$ 750,000	14	30	46	A contamination control mitigation was developed and implemented in Outage J in preparation for this event. Therefore the severity and duration of the risk impact has been reduced from the previous risk register.	3/20/2022	4/13/2022	TO3-WTUOPS160
IWTU002a	E.3.06	IEC	Nahay, Jordan T		The estimated duration of TO3 activities has been exceeded.	TO-3 activity duration estimates are exceeded due to IEC design, construction, or operation.	Unexpected issues (e.g. procurement delays, resource availability due to higher priority project work, engineering, etc.).	Reduce/Mitigate	Threat	Likely	Major	4-High	\$ 500,000	\$ 1,000,000	\$ 3,000,000	60	121	180	Assign dedicated outage manager with dedicated task leaders. Develop and managed to detailed cost and schedules using EVMS. Assign top talent to engineering, outage management and construction. Focus the management attention on the riskiest activities (e.g. the critical path). Projects that are large in scope and complexity will be evaluated for utilizing a modified work schedule of 5 or 6 day work weeks. .	3/20/2022	4/13/2022	TO3-WTUOPS160
IWTU003	E.3.06.34.01	DOE	DOE FPD	Nahay, Jordan T	Legacy Equipment Failure Prevents Transfers of Sodium Bearing Waste (SBW)	Unexpected legacy issues or failure of legacy equipment will occur on systems that cannot be tested prior to actual transfers of SBW from INTEC to IWTU.	Unexpected failure of legacy equipment or components that impact the functionality of the SBW Transfer system.	Transfer	Threat	Possible	Major	4-High	\$ 500,000	\$ 750,000	\$ 1,000,000	90	180	270	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3-WTUUSPT120: Operate IWTU Plant with 10% SBW, 90% Simulant TO3-WTUUSPT30A: Interim Processing of WM-189 FY22
IWTU003a	E.3.06	IEC	Nahay, Jordan T		Equipment failure or issues prevent testing SBW from INTEC to IWTU.	The risk that unexpected issues or failure of equipment will occur on systems that cannot be tested prior to actual transfers of SBW from INTEC to IWTU. IEC's failure to evaluate all available options to verify functionality or perform PMs on the systems.	Unexpected equipment or component failure on the SBW Transfer system	Reduce/Mitigate	Threat	Possible	Major	4-High	\$ 500,000	\$ 750,000	\$ 1,000,000	89	180	270	Maintain PMs and system inspections of those components as well as verify operability (when feasible) prior to the System Performance Test. Perform Engineering System Health reviews and address issues when possible.	3/20/2022	4/13/2022	TO3-WTUOPS160
IWTU004	E.3.06	IEC	Nahay, Jordan T		The DOE Readiness Assessment for Rad Ops results in findings that require corrective actions.	The risk that a DOE Readiness Assessment for Rad Ops results in multiple Pre-Start findings that require corrective actions to be generated will delay the start of the System Performance Test.	Pre-Start findings that delay the authorization to start System Performance Test by more than 30 days.	Accept	Threat	Possible	Moderate	2-Low	\$ 50,000	\$ 75,000	\$ 100,000	14	30	46	Increase rigor of reviews by performing Radiological proficiency runs and CRA prior to starting DOE RA.	3/20/2022	4/13/2022	TO3-WTUOPS160
IWTU005	E.3.06	IEC	Nahay, Jordan T		Replacement PGF filter elements and modifications do not function as anticipated.	The selected replacement PGF filter elements and associated PGF modifications do not function as anticipated, requiring plant modifications and/or alternative filter media.	Filters degrade or do not perform as designed.	Reduce/Mitigate	Threat	Unlikely	Major	3-Moderate	\$ 80,000	\$ 250,000	\$ 2,000,000	89	121	151	Performed extensive testing at Hazen Pilot Plant and perform post confirmatory run inspection.	3/20/2022	4/13/2022	TO3-WTUOPS160
IWTU006	E.3.06	IEC	Nahay, Jordan T		Legacy designs, construction, and operational issues with DMR fluidization and PGR filters are revealed.	The risk that additional legacy (pre-IEC) design, construction and/or operational issues with plant process equipment beyond DMR fluidization and PGR filters are revealed during sustained plant simulant runs (e.g., Auger Grinder, OGF, CRR, PHVF, PRF, OGC, Blowers, HEPA, GAC).	Discovery by inspection or failure.	Reduce/Mitigate	Threat	Unlikely	Major	3-Moderate	\$ 80,000	\$ 250,000	\$ 2,000,000	89	121	151	Perform final simulant Runs and System Performance Test to identify problems and verify solutions perform as planned. Continued monitoring of plant's performance and increased radiological surveys upon the introduction of SBW.	3/20/2022	4/13/2022	TO3-WTUOPS160
IWTU007	E.3.06.34.02	DOE	DOE FPD	Nahay, Jordan T	Resource Conservation and Recovery Act (RCRA) Permit Modification is not Approved	The Idaho Department of Environmental Quality (IDEQ) does not approve the RCRA permit modification which requires additional revisions of PLN-3298 IWTU System Performance Test Plan.	IDEQ determines that the RCRA permit modification is inadequate, requiring revision of PLN-3298 and resubmission to IDEQ, extending beyond the review period.	Transfer	Threat	Unlikely	Serious	2-Low	\$ 25,000	\$ 50,000	\$ 100,000	45	60	75	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3-WTUUSPT30B: Interim Processing of WM-189 FY23
IWTU008a	E.3.06.34	IEC	Nowak, Joel T		Delivery of CO2, N2, O2, and other consumables is interrupted during confirmatory or system performance testing.	The risk that the delivery of CO2, N2, O2, or other consumables is interrupted during confirmatory run or system performance testing results in cost and schedule impacts.	Delays in procurement preparations.	Reduce/Mitigate	Threat	Unlikely	Critical	3-Moderate	\$ 2,900,000	\$ 5,000,000	\$ 7,000,000	16	30	46	Pursuing alternate nitrogen source to reduce reliance on subcontracted vendors as primary supply, however CO2 and O2 will still have this as an on-going risk.	3/20/2022	4/13/2022	TO3-WTUOPS160
IWTU008b	E.3.06.34	IEC	Nowak, Joel T		Delivery of CO2, N2, O2, and other consumables is interrupted.	Delivery of CO2, N2, O2, or other consumables is interrupted during confirmatory run or system performance testing.	Delays in procurement preparations	Accept	Threat	Unlikely	Moderate	2-Low	\$ 100,000	\$ 200,000	\$ 300,000	16	30	46		3/20/2022	4/13/2022	TO3-WTUFACE022 TO3-WTUFACE023



TO3 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated: 8.17.22

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case				
IWTU010	E.3.06	IEC	Nahay, Jordan T		The simulant is not fully representative of actual waste.	Simulant is not fully representative of actual waste. For example, mercury and heavy metals have not been included in the simulant. This may result in system performance problems causing delays.	Introduction of actual waste causes plant performance problems.	Reduce/Mitigate	Threat	Unlikely	Moderate	2-Low	\$ 80,000	\$ 250,000	\$ 750,000	16	30	46	Ramp up waste feed percentage (vs. simulant) during System Performance Test. Review original test results for accuracy and completeness.	3/20/2022	4/13/2022	TO3-WTUOPS160
IWTU012	E.3.06.32.02	IEC	Oliver, David M		Winter weather covering does not adequately protect joints and surfaces.	Winter weather covering does not adequately protect joints and surfaces, causing additional repairs to be required.	Identified during uncovering after winter conditions abate.	Accept	Threat	Possible	Minor	2-Low	\$ 15,000	\$ 30,000	\$ 150,000	7	14	60	Covering during periods of inclement winter weather was the mitigation strategy.	3/20/2022	4/13/2022	TO3-WTUPAIN400
IWTU013	E.3.06.32.02	IEC	Oliver, David M		Repairs to the South Vault Storage pad do not fix air pallet movement.	Repairs to the South Vault Storage pad do not fix air pallet movement issues. This would also prevent the construction of new vaults in this area.	Air pallet deflates during Vault transfer.	Accept	Threat	Unlikely	Minor	2-Low	\$ 7,500	\$ 30,000	\$ 150,000	4	7	30	Repairs to north Vault Storage Pad worked well.	3/20/2022	4/13/2022	TO3-WTUPAIN400
IWTU014	E.3.06.32.03	IEC	Oliver, David M		Vibratory feeder trays do not provide consistent feeds to the DMR and CRR.	New vibratory feeder trays in the additive feed system do not provide consistent feeds to the DMR and CRR and cause an unplanned plant shutdown.	Consistent time outs of vibratory feeders during testing.	Accept	Threat	Unlikely	Minor	2-Low	\$ 75,000	\$ 100,000	\$ 150,000	0	4	7	New design will be tested prior to installation in plant.	3/20/2022	4/13/2022	TO3-WTUOPS160
IWTU015	E.3.06.32.06	IEC	Oliver, David M		Additional cleanout of simulant tanks is required before removal from the Product Storage Building.	Temporary simulant tanks are not emptied to the heel during the confirmatory run, causing additional cleanout before removal from the product storage building. This could delay RadOps.	Simulant tanks are not emptied to the heel during the Confirmatory Run.	Accept	Threat	Unlikely	Minor	2-Low	\$ 15,000	\$ 30,000	\$ 60,000	7	14	30	Ensure all temporary simulant tanks are emptied to the heel during the Confirmatory Run.	3/20/2022	4/13/2022	TO3-WTUSIMT400
IWTU017	E.3.06.32.10	IEC	Oliver, David M		Software applications need to be revised.	Testing of software reveals applications that will not work and need to be revised.	Testing data unsatisfactory	Reduce/Mitigate	Threat	Unlikely	Serious	2-Low	\$ 50,000	\$ 100,000	\$ 250,000	30	60	121	Enlist help of subcontracted outside IT organization to develop alternative application that will work with current software.	3/20/2022	4/13/2022	TO3-WTURDCS410
IWTU030	E.3.06.32.30	IEC	Oliver, David M		The wet decon system rebuild does not function as designed.	The wet decon rebuild has issues that do not allow the wet decon system to fully function as designed.	Unsuccessful operational test prior to PGF Outage completion.	Accept	Threat	Possible	Serious	3-Moderate	\$ 50,000	\$ 100,000	\$ 150,000	30	60	89	Upon completion of project testing significant spares were ordered and have been received. Redundant colloid mills and strainers.	3/20/2022	4/13/2022	TO3-WTUWDR100
IWTU040	E.3.06.34.04	IEC	Nowak, Joel T		Environmental constraints limit the operability of N2 skids(s).	Environmental constraints limit the operability of N2 skids(s).	NOx approach limits.	Reduce/Mitigate	Threat	Possible	Moderate	2-Low	\$ 12,500	\$ 25,000	\$ 75,000	16	30	46	Parallel path by pursuing electrical powered units.	3/20/2022	4/13/2022	TO3-WTUN2SK120 TO3-WTUN2SK150
MULTI009	E.2.04	IEC			Delay to the Idaho Settlement Agreement or site treatment agreement.	Delay to the Idaho Settlement Agreement (ISA) RH TRU certification commitment to DEQ of FY2024, FY2025, and FY2026 and Delay to site treatment plan scheduled agreement with DEQ to have all the STP waste out of the State of Idaho and the project is impacted to meet the FY 22 milestone of processing 6 Lot 11 containers and the FY22/23 milestone of processing 20 Lot 11 containers.	Critical failure of facility support equipment and lack of funding specific to: 1. Procure manipulators 2. Design, procure, and modify FDPFA in-cell crane from analog to digital	Accept	Threat	Possible	Critical	4-High	\$ 1,000,000	\$ 2,000,000	\$ 3,000,000	366	509	730		3/20/2022	4/13/2022	TO3-020430-1047
MULTI010	E.4.02.30	IEC	Chapple, Jason		Weather impacts D&D	Weather impacts on D&D. Managing liquids in the winter months results in shifting crews to different buildings to mitigate weather impacts. Abnormal weather or schedule changes may limit the seasonal appropriate timeframe for weather- or temperature-sensitive D&D activities.	Work execution is impacted by schedule shift or weather.	Accept	Threat	Unlikely	Serious	2-Low	\$ -	\$ 500,000	\$ 750,000	30	60	89	Manage the integration of four exhumation facilities to mitigate weather as much as possible.	3/20/2022	4/13/2022	TO3-3ARPII-3030
MULTI011	E.4.02.30	IEC	Chapple, Jason		Placement of debris from building D&D is contingent on regulatory approval of the CAP design.	Placement of debris from building D&D is contingent on regulatory approval of the CAP design.	Delay experienced in regulatory approval of the CAP design.	Accept	Threat	Unlikely	Moderate	2-Low	\$ -	\$ -	\$ 250,000	16	30	89	Work to ensure that the CAP redesign subcontractor makes progress sufficiently that the D&D plan can be submitted to the Agencies in sufficient time to secure their Approval to no impact the schedule.	3/20/2022	4/13/2022	TO3-1ARPV-5245
MULTI012	E.4.02.30	IEC	Chapple, Jason		Personnel attrition near the end of a 3-year window	Near the end of the next 3-year window, when people sense the project is nearing completion, they tend to leave to move on to a new project, which can cause issues in completing the latter part of the 3-year window.	Attrition realized.	Accept	Threat	Rare	Moderate	1-Low	\$ -	\$ 300,000	\$ 500,000	16	30	89	Monitor staffing to hire if attrition is experienced.	3/20/2022	4/13/2022	TO3-2ARPIV-4180
MULTI015	E.4.06.30	IEC	Sorenson, Travis		The NRF reactor compartments and vessels have not been included in the T&FR.	The NRF reactor compartments and vessels have not been included in the T&FR due to not knowing for sure if they will be going into the ICFD new Cell 3. It is unknown if the weights of those compartments and vessels will affect the design of the cell, number or type of liners, materials used, or depth of the hole. If these items are added after the fact, it could constitute significant design changes affecting cost and schedule.	NRF items are added after design approval.	Accept	Threat	Rare	Major	2-Low	\$ -	\$ 100,000	\$ 500,000	0	121	180	Having Jacobs Engineering design for the NRF Compartments and vessels as if they are going to be placed inside the new cell 3.	3/20/2022	4/13/2022	TO3-040601-455
MULTI016	E.4.06.30	IEC	Sorenson, Travis		Seismic design requirements have changed.	Jacob's Engineers noted that seismic design requirements have changed in the last 20 years. LC-3 is assumed to have the same side slopes as the existing landfill (3:1) but slope stability for seismic may require a 4:1 side slope. Assuming the same top berm dimensional area, the change in side slope will reduce the capacity by 150,000 m3 (ROM) and the bottom area of the landfill will be limited to ~400'x400' area. A re-design may be required.	Determination made to adhere to current seismic requirements.	Accept	Threat	Unlikely	Critical	3-Moderate	\$ 50,000	\$ 500,000	\$ 1,000,000	121	240	366	Increase the overall foot print of the new cell 3 to accommodate the side slopes and maintain the foot print for the base of the landfill.	3/20/2022	4/13/2022	TO3-040601-455



TO3 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated: 8.17.22

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case				
NICDF001	E.4.06.30.02	DOE	DOE FPD	Sorenson, Travis	Changes to International Building Codes Impact Idaho CERCLA Disposal Facility (ICDF) Design	The original design of the ICDF Cells 1 & 2 (2000 to 2002) implemented the Uniform Building Code (UBC) for designing slope stability during a seismic event. Based on the original design (Cells 1 & 2), the slopes were designed to a 3:1. The current (2022) slope stability seismic analysis must implement the International Building Code (IBC). The seismic analysis may be impacted by the change from the UBC to IBC. Until the preliminary/final design begins, there is a risk that the side slopes may need to be designed to a 4:1 which will require additional design and construction elements.	During the preliminary/final design, design calculations to meet seismic analysis for slope stability may require a 4:1 slope.	Transfer	Threat	Possible	Critical	4-High	\$ 100,000	\$ 500,000	\$ 1,000,000	120	240	365	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3-040601-455: Prepare Final Design (FY23)
NRC001	E.1.03.01	IEC	Long, Jeff		NRC regulations or directions are revised or updated.	There is a potential for NRC regulations or directions to be revised or updated such that it might require us to revise programs, procedures, or implement various other measures.	Potential for receipt of NRC direction, request for information, or other confirmatory order	Reduce/Mitigate	Threat	Possible	Serious	3-Moderate	\$ 100,000	\$ 500,000	\$ 1,000,000	30	89	366	Develop estimates for similar activities based on actuals from previous occurrences. If condition arises, submit estimates to Sr. Management and DOE.	3/20/2022	4/13/2022	
NRC002	E.1.03.01	IEC	Long, Jeff		Amendments to the ISFF license	Right now, this project is above the funding line, but it is expected that some direction will be received from the NRC or DOE to amend the ISFF license for an additional 20 years. (In fact, just a week or so ago, we did receive direction from NRC to proceed with license amendment/renewal and that we may also need to file for an exemption from the regulation. (We are still awaiting written direction from DOE.)	Direction from DOE to extend, amend or cancel the license	Reduce/Mitigate	Threat	Possible	Major	4-High	\$ 500,000	\$ 1,000,000	\$ 2,000,000	47	144	200	Upon receipt of DOE direction, develop associated recommendations, cost estimate and schedule estimate of additional requirements for DOE's consideration. Take appropriate actions to procure subcontractors once DOE provides the necessary direction.	3/20/2022	4/13/2022	
NRC003	E.1.03.01	IEC	Long, Jeff		Aging conditions of facilities	There are aging conditions at both facilities. Continued weathering and degradation is likely to require additional repairs and maintenance to concrete, paint, and other coatings.	Weather conditions such as freeze/thaw or other natural cycles	Reduce/Mitigate	Threat	Possible	Major	4-High	\$ 50,000	\$ 500,000	\$ 1,500,000	16	96	144	As aging requirements are identified, engineering to develop recommendations for repairs including cost estimates and schedules. Provide this information to DOE to request additional funding if necessary.	3/20/2022	4/13/2022	
NRC004	E.1.03.01	IEC	Long, Jeff		Surveillance requirements fail to meet established specifications.	On-going surveillance requirements may fail to meet established specifications, requiring specific protective and corrective actions to be taken. As an example, facilities may fail leak testing, hydrogen testing, radiological monitoring, etc.	Equipment failure found during performance of Tech. Spec. surveillances.	Reduce/Mitigate	Threat	Rare	Moderate	1-Low	\$ 10,000	\$ 500,000	\$ 2,000,000	4	16	96	Procedures are already developed and approved for response to potential leaks and tech spec violations. All personnel are trained and equipment is on hand for this eventuality.	3/20/2022	4/13/2022	
NRFC013	E.1.21.04	IEC	Rodriguez, Jose		Core Car: Insufficient number of trained personnel	Core Car: An insufficient number of trained personnel are available to support the project.	Morning Call-ins or redirecting of Core Car trained personnel to other priorities prevents operations from starting.	Reduce/Mitigate	Threat	Possible	Major	4-High	\$ 200,000	\$ 400,000	\$ 500,000	89	180	240	Cross train/hire dedicated staff to support project.	3/20/2022	4/13/2022	TO3-INSNCTMP100
NRFD002	E.5.01.30	IEC	Burtenshaw, Shawna		Unanticipated contamination impacts work performance.	Building Characterization: 1. Unexpected contamination has an impact on work performance and planning. 2. Beryllium training and medical qualifications for workers impact work performance.	1. Contamination was encountered 2. Beryllium was encountered	Accept	Threat	Unlikely	Serious	2-Low	\$ 125,000	\$ 250,000	\$ 373,000	30	60	89	1.Areas are defined as CAs, HRAs, but extent of contamination is not quantified. 2.Conservative basis for ACM abatement and mechanical strip-out and demolition has been taken. 3.Waste quantities are estimated and are valid change request basis.	3/20/2022	4/13/2022	to3-050130-1027
NRFD003	E.5.01.30	IEC	Burtenshaw, Shawna		Asbestos Abatement	Asbestos Abatement: 1.Asbestos abatement has traditionally been the most overrun cost and schedule activity on DOE decommissioning projects. Insufficient information and access were provided to establish a reasonable subcontractor quote. 2. No available water source (provided by NR) 3. There is no on-site ACM disposal area.	1.Asbestos shower trailer not delivered on schedule 2.Water supply for asbestos trailer not available from NR 3.Asbestos Waste does not have on site disposal path	Reduce/Mitigate	Threat	Possible	Serious	3-Moderate	\$ 100,000	\$ 200,000	\$ 300,000	30	60	89	1.Conservative quantity assumptions 2.Basis for change to TSI quantities 3.Obtain external potable water source 4.Ship ACM waste offsite	3/20/2022	4/13/2022	TO3-050130-1037
NRFD004	E.5.01.30	IEC	Burtenshaw, Shawna		There is no Waste Laydown Area.	Waste Laydown Area Not Available 1. MLLW shipping to NNS/WCS is restricted. 2. The BEA landfill is not able to accept ACM waste. 3. Space is available at the NRF S1W site which allows container staging, movement, and shipping.	1.Waste shipping is delayed 2.ACM waste cannot be disposed of at CFA landfill (BEA) 3.Waste staging area is not available	Reduce/Mitigate	Threat	Possible	Serious	3-Moderate	\$ 1,200,000	\$ 2,400,000	\$ 3,600,000	46	89	135	1.Change request – medium potential 2.Utilizing a separate loaded waste container area (200' x 200') allows waste staging and shipping to be separated from demolition and filling containers. 3. Qualify the proposal to state that outdoor staging of compliant shipping containers authorized.	3/20/2022	4/13/2022	TO3-050130-1038
NRFD005	E.5.01.30	IEC	Burtenshaw, Shawna		Seismic Delays	Seismic Delays: Planned activities and methods for demolition affect NR operations due to excessive vibration.	Vibration from work activities become unacceptable to NR	Reduce/Mitigate	Threat	Likely	Minor	2-Low	\$ 91,500	\$ 100,000	\$ 109,750	4	7	11	1.Integrate work activities with NR to minimize potential conflicts and impacts. 2.Schedule critical demo activities during Site non-working hours to minimize impacts Allow additional duration for demolition to mitigate non-working days.	3/20/2022	4/13/2022	TO3-050130-1026 TO3-050130-1027 TO3-050130-1028 TO3-050130-1030



TO3 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated: 8.17.22

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case				
NRFD008	E.5.01.30	IEC	Burtenshaw, Shawna		The spread of contamination during demolition.	Contamination spread during the project, particularly during demolition.	Contamination spread detected outside of a contamination area	Accept	Threat	Rare	Serious	2-Low	\$ 750,000	\$ 1,500,000	\$ 3,000,000	30	60	89	1. Proposed approach to demolition preparations is very conservative. 2. B601 has very low levels of contamination. 3. Final surveys will verify any contamination levels. 4. All interior surfaces of the Bio-Shield will be coated with fixative prior to demolition. 5. Contaminated demo (wet) techniques will be used during wire sawing. 6. Contract is still cost reimbursable, so fee is at risk.	3/20/2022	4/13/2022	TO3-050130-1027
SNF003	E.1.02.31	IEC	Biorn		Mechanical failure of the Volvo tractor	EBR to RSWF: The risk of a mechanical failure of the Volvo tractor prevents shipment to RSWF.	Mechanical failure of Volvo tractor. Risk was partially realized and recovered.	Reduce/Mitigate	Threat	Almost Certain	Minor	3-Moderate	\$ 20,000	\$ 30,000	\$ 350,000	2	2	30	Preventative maintenance inspections. Backup tractor and lease agreement with CFA. Procure second tractor.	3/20/2022	4/13/2022	TO3RSWF-1000
SNF004	E.1.02.34	IEC	Friesz		Weather conditions prevent Peach Bottom transfers.	CPP-749 Peach Bottom Transfers: Abnormal weather conditions prevent the performance of CPP-749 Peach Bottom transfers.	Current weather conditions initiates a need to stop/curtail/delay planned project activities.	Reduce/Mitigate	Threat	Almost Certain	Moderate	4-High	\$ 10,000	\$ 160,000	\$ 600,000	2	30	89	Reschedule transfer. Utilize resources on other projects until weather improves. Recover schedule during good weather months.	3/20/2022	4/13/2022	TO3PBF-1000
SNF005	E.1.02.31	IEC	Biorn		Weather conditions do not allow transfer operations from EBR-II to RSWF.	EBR to RSWF: Unfavorable weather conditions will not allow the performance of transfer operations from EBR-II to RSWF.	Heavy snowfall, extremely cold temperatures, high winds and or above average rainfall.	Reduce/Mitigate	Threat	Almost Certain	Minor	3-Moderate	\$ 20,000	\$ 40,000	\$ 150,000	2	2	7	Reschedule transfer. Utilize resources on other projects until weather improves. Second HFEF-14 cask will allow operations more flexibility to continue with EBR-II operations and maximize shipments until weather improves.	3/20/2022	4/13/2022	TO3RSWF-1000
SNF006	E.1.02.04	IEC	Crapo/Jardine		Weather conditions will not allow for operational activities.	ATR-Direct: Weather conditions will prevent performance during operational activities such as shipping, unloading, drying, and storing 23-001-23-0012. These shipments are scheduled to be received and processed during the winter months by ATR.	Heavy snowfall, extremely cold temperatures, high winds and above average rainfall.	Reduce/Mitigate	Threat	Unlikely	Moderate	2-Low	\$ 50,000	\$ 210,000	\$ 420,000	7	30	60	Reschedule the receipt. Reassign the crew to conduct other work.	3/20/2022	4/13/2022	TO3-SNATR1080
SNF007	E.1.02.04	IEC	Crapo/Jardine		Transfers are delayed due to a malfunctioning CPP-603 PaR manipulator.	ATR-Direct: Transfers are delayed because of a malfunctioning CPP-603 PaR manipulator (MAN-GSF-401).	While operating the CPP-603 PaR manipulator (MAN-GSF-401), certain PaR motions appear to be or actually are abnormal/malfunctioning. Failure of the manipulators results in schedule delays.	Accept	Threat	Likely	Major	4-High	\$ 900,000	\$ 1,500,000	\$ 2,700,000	89	151	270	Maintain the PaR. Work with BEA to reschedule ATR Receipts.	3/20/2022	4/13/2022	TO3-SNATR1080
SNF008	E.1.02.04	IEC	Crapo/Jardine		Camera failures due to high rad fields	ATR-Direct: High rad fields in the cave cause premature failure of the cameras in the CPP-603 fuel handling cave.	Failed remote cameras hinder or prevent normal fuel handling operations in the CPP-603 JFSF cave and fuel storage area.	Reduce/Mitigate	Threat	Likely	Minor	2-Low	\$ 20,000	\$ 40,000	\$ 80,000	2	7	14	In the majority of instances, alternative cameras can be utilized to allow the continuation of operations. Perform camera replacement analysis.	3/20/2022	4/13/2022	TO3-SNATR0040
SNF009	E.1.02.34	IEC	Friesz		Changing CPP-749 security requirements	CPP-749 Remediation: Project activities are delayed because of changing CPP-749 security requirements.	Requirements derived from planned security related vulnerability assessments impose more restrictive security controls.	Accept	Threat	Possible	Moderate	2-Low	\$ -	\$ 260,000	\$ 520,000	0	30	60	Work with DOE/BEA to ensure project activities comply with security plan.	3/20/2022	4/13/2022	TO3PBF-1000
SNF010	E.1.02.34	IEC	Friesz		Shielding is inadequate, resulting in higher than allowed radiation levels.	CPP-749 Remediation: Interim Storage Area (ISA)-4 shielding is determined to be inadequate, resulting in radiation levels higher than those allowed for extended work in the 1st Generation Vault area.	Radcon surveys of the 1st Generation Vault area indicate higher than allowable radiation levels.	Accept	Threat	Possible	Minor	2-Low	\$ -	\$ 100,000	\$ 125,000	0	0	0	Work with Radiation protection, engineering, and waste management to mitigate radiation levels.	3/20/2022	4/13/2022	TO3PBF-1000
SNF011	E.1.02.34	IEC	Friesz		Excessive corrosion in the Peach Bottom vaults	CPP-749 Remediation: Fuel packages stored in certain Peach Bottom vaults are found to have excessive corrosion, precluding normal fuel package retrieval methods.	1.) During Peach Bottom vault inspections, corrosion capable of jeopardizing the structural integrity of the fuel package lifting feature is observed. 2.) A discharge of fuel is observed when lifting a fuel package to visually inspect its bottom.	Accept	Threat	Possible	Moderate	2-Low	\$ -	\$ 260,000	\$ 520,000	0	30	60	Fuel packages will be visually inspected prior to being lifted for the purposes of identifying corrosion issues. If an inspected fuel package is determined to be jeopardized because of corrosion then, retrieving the fuel package will be delayed until a recovery plan is developed/approved and readied to work. A conceptual design for retrieval equipment capable of safely lifting a jeopardized fuel package has been developed and reviewed/approved by DOE.	3/20/2022	4/13/2022	TO3PBF-1000
SNF012	E.1.02.35	IEC	Kimball		Weather conditions will not allow for transfer operations for NuPac 125B casks.	125B: Unfavorable weather conditions will prevent the performance of transfer operations for NuPac 125B casks.	Heavy snowfall, extremely cold temperatures, high winds and above average rainfall.	Reduce/Mitigate	Threat	Rare	Minor	1-Low	\$ 20,000	\$ 30,000	\$ 90,000	2	2	4	Reschedule transfer when weather is favorable. Utilize FTEs to support other projects not affected by the weather. Work with vendor to reschedule transfer or extend contract dates and funding.	3/20/2022	4/13/2022	TO3-SN125B280
SNF013	E.1.02.35	IEC	Kimball		The subcontractor is unable to provide heavy haul services to relocate NuPac 125B casks.	The subcontractor is unable to provide heavy haul services to relocate the NuPac 125B casks on the specified dates.	Subcontractor has other jobs during the readiness time period.	Reduce/Mitigate	Threat	Possible	Moderate	2-Low	\$ -	\$ 100,000	\$ 200,000	0	30	60	Reschedule when contractor is available. Involve contractor in transfer planning to ensure they are part of the schedule. Pursue contract with a different heavy haul contractor.	3/20/2022	4/13/2022	TO3-SN125B270
SNF015	E.1.02.04	IEC	Crapo/Jardine		IEC schedule delay caused by ATR	ATR Direct: IEC schedule delay caused by ATR.	Equipment and/or operations delays at ATR cause delayed or moved shipment dates to INTEC	Reduce/Mitigate	Threat	Possible	Minor	2-Low	\$ 30,000	\$ 110,000	\$ 220,000	4	16	30	Alternative work activities will be made available by upper management in the event of an ATR schedule delay.	3/20/2022	4/13/2022	TO3-SNATR1070
SNF016	E.1.02.32	IEC	Crapo		Destaco clamps are partially open or closed.	ATR-Direct: Destaco clamps are partially open or closed and prevent movement of fuel-loaded canisters.	Destaco clamps found to be damaged or damaged when remotely attempting to open/close a clamp.	Reduce/Mitigate	Threat	Possible	Serious	3-Moderate	\$ 500,000	\$ 1,000,000	\$ 3,000,000	30	60	180	Engineering has designed new equipment to remotely lubricate a De-Sta-Co clamp prior to opening/closing a clamp. Experienced operators who have worked with these clamps in the past are utilized to minimize the probability of failure. Engineering is evaluating other mitigations. Grind off the destaco clamps and transfer fuel into a stainless steel canister.	3/20/2022	4/13/2022	TO3-SNATR0030
TO3001	Project Wide	DOE	DOE FPD	Blackford, Ty	Supply Chain Delays and Cost Increases.	Due to emerging local, regional, and/or international events the supply chain is impacted limiting the ability to procure or accurately estimate the cost and time necessary to acquire necessary materials, services, and personnel.	Emerging national and international events impact supply chain.	Transfer	Threat	Almost Certain	Major	5-Very High	\$ 500,000	\$ 1,000,000	\$ 2,000,000	150	180	270	Propose Transfer to DOE	6/8/2022	6/8/2022	Expected to impact multiple areas within the schedule.



TO3 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated: 8.17.22

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case				
TO3002	Project Wide	DOE	DOE FPD	Blackford, Ty	Work Delay Due to Abnormal Weather Conditions	Severe weather conditions that go above and beyond the historical norms is experienced, resulting in project delays from Site closure. These days would have impacts to the cost and schedule.	Events that are above average or severe weather conditions occur, based on historical precedents that would lead to Site closure.	Accept	Threat	Possible	Serious	3-Moderate	\$ 500,000	\$ 1,000,000	\$ 7,000,000	0.5	1	7	Transfer to DOE	4/13/2022	6/8/2022	Expected to impact multiple areas within the schedule.
TO3003	Project Wide	DOE	DOE FPD	Blackford, Ty	Legacy Contamination and/or Ordinance is Discovered in an Area Where it Would Not be Expected	Unexpected legacy contamination and/or ordinance is found during construction, excavation, building upgrades, or maintenance in areas where legacy contamination would not be anticipated.	Legacy contamination and/or ordinance is found during construction, excavation, building upgrades, or maintenance work scope efforts.	Transfer	Threat	Unlikely	Serious	2-Low	\$ 300,000	\$ 500,000	\$ 800,000	20	60	140	Propose Transfer to DOE	6/8/2022	6/8/2022	Expected to impact multiple areas within the schedule.
TO3004	Project Wide	DOE	DOE FPD	Blackford, Ty	Flaws in Legacy Equipment	The legacy equipment failures result in work execution delays increasing project costs and schedule duration.	Flaws in legacy equipment that occur outside regular preventative maintenance resulting in equipment failure.	Transfer	Threat	Unlikely	Major	3-Moderate	\$ 500,000	\$ 1,000,000	\$ 3,000,000	60	120	180	Propose Transfer to DOE	6/8/2022	6/8/2022	Expected to impact multiple areas within the schedule.
TO3005	Project Wide	IEC	IEC	Blackford, Ty	Stop Work due to External Events	External event at other INL locations or DOE sites cause a stop work.	External event at other INL locations or other DOE sites cause a work stoppage. Events include, but are not limited to; contamination events that shut down other facilities, any crisis that is found at another facility that could potentially exist at Idaho Cleanup Project (ICP) causing a stop work, etc.	Accept	Threat	Unlikely	Serious	2-Low	\$ 300,000	\$ 500,000	\$ 800,000	30	90	180		6/8/2022	6/8/2022	Expected to impact multiple areas within the schedule.
TRU001	E.2.03.36.02	DOE	DOE FPD	Zovi, Bruno	Inability to Meet Site Treatment Plan (STP) Milestone for TRU Waste Reclassified to Mixed Low Level Waste (MLLW)	Currently no treatment capabilities exist to treat transuranic waste (TRU) that has been reclassified as mixed low-level waste (MLLW) associated with sludge reprocessing.	Inability to treat and dispose of MLLW organic sludges (10-100nCi/g) as required by STP milestones.	Transfer	Threat	Almost Certain	Critical	5-Very High	\$ 2,000,000	\$ 8,500,000	\$ 18,500,000	90	180	270	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3-050109-4015: AMWTP LLW/MLLW Shipments Offsite TO3 (FY22) TO3-050109-4025: AMWTP LLW/MLLW Shipments Offsite TO3 (FY23)
TRU002	E.2.03.33	IEC	Chapple, Jason		Commodity risk impacts production.	Commodity risks impact production. Numerous times in the past, production was impacted due to the unavailability of commodities. If experienced in the future, this will limit how many containers can be processed through ARP VII before the building must undergo RCRA closure.	Delayed delivery experience in commodities.	Accept	Threat	Unlikely	Moderate	2-Low	\$ -	\$ 300,000	\$ 500,000	16	30	89	Monitor procurements as early as possible to mitigate potential impacts.	3/20/2022	4/13/2022	TO3-1ARPV-5005
TRU003	E.2.03.30	IEC	Loftus, Nathan		Vendor supplies for PPE	Vendor Supplies for PPE are on order to make cell entries to process this waste.	Unable to receive materials/PPE for NNSS Spheres processing that impact cell entries	Reduce/Mitigate	Threat	Unlikely	Serious	2-Low	\$ 50,000	\$ 100,000	\$ 200,000	16	60	180	Ensure items for processing are on hand as availability allows	3/20/2022	4/13/2022	TO3-050102-4450
TRU004	E.2.03.30	IEC	Loftus, Nathan		Output containers can not be shipped offsite within 1 year.	The risk is that upon receipt and following processing of the two NNSS spheres, necessary actions for shipping, storage, and/or disposal are not completed, and the output containers cannot be shipped off site within one year as required.	Sphere waste cannot be processed/shipped within 1-year of receipt	Reduce/Mitigate	Threat	Possible	Major	4-High	\$ 50,000	\$ 1,000,000	\$ 2,000,000	30	121	366	Monitor shipping requirements as early as possible to mitigate potential impacts.	3/20/2022	4/13/2022	TO3-050102-4560
TRU005	E.2.03.30	IEC	Hubler, Rachelle		Modifications to WMF-618 required to support receipt of the Nevada Sphere in the 8-120B Cask are more extensive than originally planned.	Modifications to WMF-618 required to support receipt of the Nevada Sphere in the 8-120B Cask are more extensive than originally planned, causing schedule delays in shipment of the spheres to Idaho.	DOE must add scope to TO2 or TO3 to support Nevada Spheres project. At this point in time, we can start the engineering evaluation required to determine if the extent of modifications potentially impact schedule.	Reduce/Mitigate	Threat	Rare	Serious	2-Low	\$ 5,000	\$ 17,000	\$ 108,000	30	60	89	unloading spheres outside using temporary platforms and mobile crane to avoid use of WMF618	3/20/2022	4/13/2022	TO3-050102-4360
TRU006	E.2.03.30	IEC	Hubler, Rachelle		Treated Nevada Spheres cannot be shipped to WIPP for disposal within 1 year of receipt.	The treated Nevada Spheres cannot be shipped to WIPP for disposal within the 1-year clock of being received at the AMWTP.	Nevada Spheres are not certified, a CCP responsibility.	Reduce/Mitigate	Threat	Unlikely	Serious	2-Low	\$ -	\$ -	\$ -	30	60	89	The treated and packaged Nevada Sphere waste will be sent to NNSS for storage and eventual final disposal at WIPP. Should this contingency be implemented, DOE-ID and the EM NV Program will coordinate with CBFO to allocate the necessary transportation resources for the shipments of the Nevada Spheres waste to NNSS per DOE ICP MOU with EM NV	3/20/2022	4/13/2022	TO3-050102-4560
TRU007	E.2.03.31	IEC	Byram, George		Failure of characterization equipment will impact CH TRU waste certification.	Failure of characterization equipment will impact CH TRU waste certification. Old technology that cannot be replaced is still present.	Failure of nondestructive assay or real-time-radiography equipment	Accept	Threat	Unlikely	Serious	2-Low	\$ 10,000	\$ 100,000	\$ 200,000	30	89	180	Short Term - Ensure critical spare parts are on hand as availability allows. Long Term - Replace/Upgrade characterization equipment.	3/20/2022	4/13/2022	TO3-050102-4170
TRU012	E.2.03.31	IEC	Byram, George		NDA results, using ISOs and all other available NDA equipment, will not provide a valid assay result for the entire inventory of waste containers at the RWMC.	Risk that NDA results, using ISOs and all other available NDA equipment, will not provide a valid assay result for the entire inventory of waste containers at the RWMC. The lack of sufficient assay characterization data may require repackaging of waste by splitting the waste in a container into two or more containers, combining two or more containers, or a combination of both. After re-assay, one or more of the resulting containers are still indeterminate for assay and have no approved disposition path from RWMC.	Containers fail assay due to high gamma.	Accept	Threat	Rare	Serious	2-Low	\$ 50,000	\$ 100,000	\$ 200,000	30	60	180	Continue real time monitoring of NDA results to determine if changes to the process (longer count times, use of shielding, change distance between waste and equipment, etc.) are necessary and utilize expert technical review of NDA data in an attempt to resolve issues as necessary	3/20/2022	4/13/2022	TO3-050102-4170
TRU014	E.2.03.35.02	DOE	DOE FPD	Byram, George	Unable to Certify/Ship Waste for Disposal at Waste Isolation Pilot Plant (WIPP)	Unable to certify and/or ship waste for disposal.	Waste cannot meet certification requirements for WIPP disposal.	Transfer	Threat	Possible	Serious	3-Moderate	\$ 50,000	\$ 500,000	\$ 1,000,000	30	60	180	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3-050102-4170: Packaging and Transportation of Waste FY22 TO3-050102-4190: Packaging and Transportation of Waste FY23
TRU016	E.2.03.32.02	DOE	DOE FPD	Loftus, Nathan	Waste Isolation Pilot Plant (WIPP) Interpretations or Requirements Change	Changes to the WIPP requirements or new interpretations of existing requirements could result in a need to reprocess the waste, rework containers, or recertify waste that has already been certified in order to update the waste to the new requirements.	The WIPP requires detailed acceptable knowledge that does not exist and/or permit changes.	Transfer	Threat	Rare	Moderate	1-Low	\$ 300,000	\$ 500,000	\$ 1,750,000	15	30	90	Propose Transfer to DOE	3/20/2022	4/13/2022	TO3-050102-4170: Packaging and Transportation of Waste FY22
TRU018	E.2.03.35	IEC	Hubler, Rachelle		The WMF-618 crane is unreliable.		WMF-618 Overhead Crane Failure that cannot be easily repaired because of replacement part availability.	Reduce/Mitigate	Threat	Likely	Serious	4-High	\$ 250,000	\$ 500,000	\$ 1,000,000	30	60	180	Short Term - Ensure critical spare crane parts are on hand as availability allows. Long Term - Replace/Upgrade WMF-618 Overhead Crane during next major WIPP outage.	3/20/2022	4/13/2022	TO3-050102-4170



TO3 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated: 8.17.22

Risk ID	WBS	Responsible Organization	Risk Owner	IEC Risk Back-up	Risk Title	Risk Description	Trigger Event	Handling Strategy	Risk Type	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Date Identified	Last update	Activities
													Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case				
TRU019	E.2.03.31	IEC	Byram, George		The annual Site Treatment Plant milestone is missed.	The annual Site Treatment Plant milestone is missed.	A)The risk that IEC will lose critical personnel and will be unable to fill available positions with experienced staff to complete critical Acceptable Knowledge, Site Project Manager, Certification, Real Time Radiography, Non-Destructive Assay, etc., activities in support of profiling and certification of waste streams B)Delays in external, DOE-ID and the CBFO, approvals of critical documents in support of TRU waste characterization, profiling and certification. C)CBFO requires an action and DOE-ID requires something different. This could potentially generate orphan waste; or could delay waste processing, require reprocessing or delay profiling and certification. D)WIPP may change their requirements or may introduce new interpretations of existing requirements, resulting in delays associated with profiling and certification or may necessitate reprocessing of waste	Reduce/Mitigate	Threat	Possible	Serious	3-Moderate	\$ 50,000	\$ 100,000	\$ 200,000	60	89	180		3/20/2022	4/13/2022	TO3-050102-4170