

2. AMENDMENT/MODIFICATION NO. P00074	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
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6. ISSUED BY EM-Idaho Department of Energy Office of Environmental Management Idaho Cleanup Project 1955 Fremont Avenue Idaho Falls ID 83415	CODE 893042	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
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8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) IDAHO ENVIRONMENTAL COALITION LLC Attn: Brant Dotson 600 William Northern Blvd Tullahoma TN 373884729	(x)	9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
	x	10A. MODIFICATION OF CONTRACT/ORDER NO. 89303321DEM000061 89304223FEM400000
		10B. DATED (SEE ITEM 13) 09/08/2023

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: FAR 43.103(a) Bilateral authority
	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.)

UEI: LQ5ZLNE3EM27

The purpose of this modification is to update the Risk Registers for Task Order (TO)-3.2, TO-6.1, and TO-7.1 (see below for details).

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: 10/01/2023 to 09/30/2031

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) Eric Trotta, Business Services Deputy/CFO	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Marianne Boline
15B. CONTRACTOR/OFFEROR ERIC TROTTA (Affiliate) <small>Digitally signed by ERIC TROTTA (Affiliate) Date: 2025.03.12 16:35:28 -06'00'</small> (Signature of person authorized to sign)	15C. DATE SIGNED 3/12/2025
16B. UNITED STATES OF AMERICA MARIANNE BOLINE <small>Digitally signed by MARIANNE BOLINE Date: 2025.03.13 06:13:09 -06'00'</small> (Signature of Contracting Officer)	16C. DATE SIGNED

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
89303321DEM000061/89304223FEM400000/P00074

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NAME OF OFFEROR OR CONTRACTOR
IDAHO ENVIRONMENTAL COALITION LLC

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
00302	<p>Change Item 00302 to read as follows (amount shown is the total amount):</p> <p>CLIN 03 SUBTASK 0302 INTEGRATION AND MISSION CONTINUITY (TASK ORDER 3.2) Line item value is: \$716,974,059.00 Incrementally Funded Amount: \$571,575,211.00</p> <p>In accordance with Section B.9, Basis for Changes, TOs issued shall clearly identify the risk ownership for both the Government and the Contractor such that contract changes are reduced to the maximum extent practicable. This modification updates the Risk Registers for TO-3.2, Integration and Mission Continuity (see Attachments TO-3.2 DOE Transfer Risk Register Updates FY25 Q1 -Redline; TO-3.2 DOE Transfer Risk Reg Updates FY25 Q1 - Incorporated; TO-3.2 Risk Reg Updates FY25 Q1 - Redlined; and TO-3.2 Risk Reg Updates FY25 Q1-Incorporated).</p> <p>All other terms and conditions remain unchanged.</p> <p>Change Item 00601 to read as follows (amount shown is the total amount):</p>				716,974,059.00
00601	<p>CLIN 06 SUBTASK 0601 NON-DEFENSE PROJECT (TASK ORDER 6.1) Line item value is: \$13,449,425.00 Incrementally Funded Amount: \$11,541,151.99</p> <p>In accordance with Section B.9, Basis for Changes, TOs issued shall clearly identify the risk ownership for both the Government and the Contractor such that contract changes are reduced to the maximum extent practicable. This modification updates the Risk Registers for TO-6.1, Non-Defense Project (see Attachments TO-6.1 DOE Transfer Risk Register Updates FY25 Q1 - Redline; TO-6.1 DOE Transfer Risk Reg Updates FY25 Q1 - Incorporated).</p> <p>All other terms and conditions remain unchanged.</p> <p>Change Item 00701 to read as follows (amount shown is the total amount):</p> <p>Continued ...</p>				13,449,425.00

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
89303321DEM000061/89304223FEM400000/P00074

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NAME OF OFFEROR OR CONTRACTOR
IDAHO ENVIRONMENTAL COALITION LLC

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
00701	<p>CLIN 07 SUBTASK 0701 IWTU OPERATIONS (TASK ORDER 7.1) Line item value is: \$238,939,203.00 Incrementally Funded Amount: \$172,736,216.82</p> <p>In accordance with Section B.9, Basis for Changes, TOs issued shall clearly identify the risk ownership for both the Government and the Contractor such that contract changes are reduced to the maximum extent practicable. This modification updates the Risk Registers for TO-7.1, Integrated Waste Treatment Unit Operations (see Attachments TO-7.1 DOE Transfer Risk Register Updates FY25 Q1 - Redline; TO-7.1 DOE Transfer Risk Reg Updates FY25 Q1 - Incorporated).</p> <p>All other terms and conditions remain unchanged.</p>				238,939,203.00



TO3 Risk Register: DOE Transfer Risks

Idaho Cleanup Project Programmatic Risk Register

Risk ID	WBS	Responsible Organization	IEC POC	DOE FPD	Risk Title	Risk Description	Trigger Event	Status	Risk Type	Handling Strategy	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Basis of Impacts	Mitigation Actions	Notes	
														Best Case	Most Likely	Worst Case	Best Case2	Most Likely2	Worst Case2				
CA007042	D.3.02.30.08	DOE	Kimbro, Valerie	Kimbro, Valerie	<u>Change</u> : 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 re-prioritize 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.	Open	Opportunity	Transfer	Rare	Minor	1-Low	\$ (150,000)	\$ (100,000)	\$ (80,000)	-150	-150	-60	Acceptance received by DOE per Mod P00041	None		
CA007072	D.3.02.30.08	DOE	Kimbro, Valerie	Kimbro, Valerie	<u>Change</u> : 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 re-prioritize 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.	Open	Threat	Transfer	Rare	Critical	3-Moderate	\$ 80,000	\$ 100,000	\$ 150,000	60	150	150	Acceptance received by DOE per Mod P00041	None		
CC027	D.1.21.30	DOE	Bloom, Scott	Wahnschaffe, Steve	<u>Core Car</u> : Department of Energy Determines the Core Car Project is a Major Modification	Department of Energy determines the Core Car Project meets the criteria of a Major Modification prior to the approval of SAR-113 Revision 2.	DOE directs SAR-113 Revision 2 format be in compliance with DOE Order 3009-2014	Open	Threat	Transfer	Likely	Critical	3-Moderate	\$ 89,184	\$ 114,824	\$ 1,472,794	80	103	160	Best Case: 80 days x 10 hrs/day x 2 FTEs x \$55.74/hr = \$89,184 Most Likely: 103 days x 10 hrs/day x 2 FTEs x \$55.74/hr = \$114,824 Worst Case: 160 days x 10 hrs/day x 9 FTEs x \$102.28/hr = \$1,472,794	Propose transfer to DOE		
DST300	Project Wide	DOE	Perry, Scott	Unknown	<u>DOE Standards Update</u> : IEC is Required to Implement DOE-STD-3009-2014	DOE directs IEC to update safety basis documents to the 2014 version of DOE-STD-3009-2014, "Preparation of Nonreactor Nuclear Facility Documented Safety Analysis". This would require additional funding and reallocating resources to perform the updates and will cause delay to other work scope.	IEC is given formal DOE direction to update Documented Safety Analysis to align with DOE-STD-3009-2014 (safety basis documents are currently written to the 1994 version of DOE-STD-3009).	Open	Threat	Transfer	Likely	Critical	3-Very High	\$ 600,000	\$ 2,000,000	\$ 2,600,000	100	208	308	Impacts for this risk have been reduced to fit in the constraints of the remaining time in Task Order 3 Phase 2. See Notes for long term impacts that are based on an estimated cost and time of performing individual analyses and revising 8 IEC SARs written to DOE-STD-3009, including any necessary subcontract labor. The best case is that writing to the 2014 version of DOE-STD-3009 would be only when required for new facilities or major modifications per DOE-STD-1189. The worst case is based on direction to write to the 2014 version regardless of the requirements in DOE-STD-1189.	Acceptance received by DOE per Mod P00041	The long-term effects of this risk are estimated to cost \$20M+ and require 3,328 days worked into IEC's schedule. These numbers have been reduced to adhere to a Task Order Contract, but the significant impacts should be recognized.	
IND001b	Project Wide	IEC/DOE	Multiple CAMs	Multiple FPDs	<u>Indirect Services</u> : Mandatory Service Cost Increases	BEA provides multiple services to IEC, which support our work at the INL. Some of which IEC cannot seek alternative providers for. There is potential for unforeseen increase in cost for these mandatory services.	Increased Costs of Mandatory Services are applied.	Open	Threat	Share	Almost Certain	Critical	3-Very High	\$ 2,000,000	\$ 4,000,000	\$ 6,000,000	0	0	0	Costs are based on fees associated with BEA FY23 Forecast.	Propose Share to DOE		
IND002	Project Wide	DOE	Langstoss, Beth	Unknown	Indirect Services: General Services Administration (GSA) Vehicle Surcharge Increase	External Requirements are subject to change. Examples of external requirements are: DOE O511.1C, O5HA, EPA, FEMA, and state and local laws. When external requirements are modified, the project may be required to make significant equipment upgrades, supply employees with additional training, update work control, etc., which could result in unforeseen costs and schedule slippage.	Unforeseen cost increase is applied.	Open	Threat	Transfer	Almost Certain	Minor	3-Moderate	\$ -	\$ 58,752	\$ 117,504	0	0	0	Best Case: No cost impacts Most Likely case: 24/month * 204 Vehicles/12 months Worst Case: 324/month * 208 vehicles * 23 months	Propose Transfer to DOE		
INTE210	D.3.03.32.01 D.3.03.32.02	DOE	DOE FPD	Baisch, Kelsey	<u>ICRF</u> : External Requirements Change	External Requirements are subject to change. Examples of external requirements are: DOE O511.1C, O5HA, EPA, FEMA, and state and local laws. When external requirements are modified, the project may be required to make significant equipment upgrades, supply employees with additional training, update work control, etc., which could result in unforeseen costs and schedule slippage.	IEC is notified of changes made to external requirements.	Open	Threat	Transfer	Possible	Major	4-High	\$ 250,000	\$ 500,000	\$ 1,000,000	48	96	192	Cost to update programs, cost to implement the program and cost to train personnel on the changes	Acceptance received by DOE per Mod P00041		
IT001	D.6.02.32	DOE	DOE FPD	Anderson, Jade	<u>Information Technology</u> : Supply Chain Issues for Server Refresh	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 equipment, appliances, hardware, and/or software.	Emerging national and international events impact supply chain.	Open	Threat	Transfer	Possible	Serious	3-Moderate	\$ 500,000	\$ 1,000,000	\$ 1,500,000	8	32	144	Best Case: 8 days (plus extended contractor fees) Most Likely: 32 days (plus extended contractor fees) Worst Case: 144 days (plus extended contractor fees)	Acceptance received by DOE per Mod P00041		
IT308	D.6.02.49	DOE	Anderson, Jade	O'Malley, Russell	<u>Information Technology</u> : Fiber Replacement Capabilities	The fiber that was put in place 20 plus years ago has deteriorated to less than 20% of what was originally there in some of the lines. If the fiber cannot be replaced prior to it breaking, there would be an extensive disruption in internet and communication services.	Work to replace the fiber is not turned on in time to replace the fiber and the fiber breaks.	Emerging	Threat	Transfer	Likely	Critical	3-Very High	\$ 3,000,000	\$ 5,000,000	\$ 7,000,000	3	10	30	We have already experienced interruptions due to unintentional cuts and local area breaks in fiber. In most cases, it has been several days of interruptions to reroute traffic and repair. These cases have been resolved by splicing the existing fiber. In the instance that there are no more viable strands of fiber in the cable, which is an eventuality with aging fiber, new cable must be pulled and connected, extending the outage.	Propose transfer to DOE.		
NICDF016	D.4.06.30	DOE	DOE FPD	Reese, Craig	<u>ICRF</u> : New Call: Supply Chain Delays and Cost Increases	Due to emerging local, regional, and/or international events, any major supply chain issues may limit the ability to procure or accurately estimate the cost and time necessary to acquire necessary materials, services, and personnel.	Examples: + Equipment not available when needed + Bentonite not available when needed + Geosynthetics not available when needed	Open	Threat	Transfer	Almost Certain	Moderate	4-High	\$ 150,000	\$ 300,000	\$ 960,000	5	10	32	Best Case: 5 days X 10 hrs/day X 20 FTEs X \$75/hr Most Likely Case: 10 days X 10 hrs/day X 20 FTEs X \$75/hr Worst Case: 32 days X 10 hrs/day X 20 FTEs X \$75/hr	Acceptance received by DOE per Mod P00041		
NICDF037b	D.4.06.30	DOE	DOE FPD	Reese, Craig	<u>New ICRF Call</u> : BEA Support Services Do Not Meet ICRF Scheduled Need Dates	IEC relies on BEA for support services on Milestones, regulatory commitments, and scope completion. If the work from BEA is delayed, or does not meet the requirements, it can cause a project schedule impact.	BEA power services do not provide power in a timely manner.	Open	Threat	Shared	Unlikely	Minor	2-Low	\$ 60,000	\$ 240,000	\$ 2,640,000	4	16	176	Best Case: 4 days X 10 hrs./day X 20 FTEs X \$75/hr. Most Likely Case: 16 days X 10 hrs./day X 20 FTEs X \$75/hr. Worst Case: 176 days X 10 hrs./day X 20 FTEs X \$75/hr.	Acceptance received by DOE per Mod P00041	As of 9/18/2023 + <u>Note From DOE</u> : This is an IEC risk in that it is obtaining services between contractors (IEC and BEA). This risk must be returned to IEC. + <u>IEC Response</u> : Disagree - after re-evaluating and discussing with DOE, this will be a Shared risk with DOE/IEC. This is in response to the BEA services we can't secure another contractor for. We proposed this under Phase 2 (email confirmation from Aaron Nebeker 5/13/2023, MDCOP0066) and it was accepted by DOE to be "Shared" risk. With that being said IEC will add this risk to their project risk register to carry in addition to the transfer risks. We will also update the mitigation action to show "Shared risk with DOE/IEC". + <u>Note From DOE</u> : AGREE - Per Aaron N., as historical precedence IEC and BEA have shared this risk (or similar risks involving BEA) on other projects.	
S1W002R2	D.5.01.32	DOE	DOE FPD	Burtenshaw, Shawna	<u>NRF Naval Reactors</u> : 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.	Open	Threat	Transfer	Unlikely	Moderate	2-Low	\$ 150,000	\$ 300,000	\$ 960,000	5	10	32	Best Case: 5 days X 10 hrs./day X 2 crews (20 FTEs) X \$75/hr. = \$150,000 Most Likely Case: 10 days X 10 hrs./day X 2 crews (20 FTEs) X \$75/hr. = \$300,000 Worst Case: 32 days X 10 hrs./day X 2 crews (20 FTEs) X \$75/hr. = \$960,000	Acceptance received by DOE per Mod P00041		
SNF033	D.1.04.01.10	DOE	DOE FPD	Cotterell, Jaksen	<u>SNF Staging Facility</u> : DOE CD-1 Review Duration	The duration of the DOE review of CD-1 for the Staging Facility could potentially extend longer than planned, thus pushing subsequent work scope.	IEC and CD-1 Review is delayed.	Open	Threat	Transfer	Likely	Moderate	3-Moderate	\$ 120,000	\$ 180,000	\$ 270,000	16	24	36	Best Case: The schedule is impacted by 1 month (16 working days) and changes need to be made prior to CD-1 approval. Additional costs for 16 days x 10 hrs./day x 10 FTEs x \$75/hr. Worst Case: 4 months review delay. Additional costs for 36 days x 10 hr./day x 10 FTEs x \$75/hr.	Acceptance received by DOE per Mod P00041		
SNF034	D.1.04.01.10	DOE	DOE FPD	Cotterell, Jaksen	<u>SNF Staging Facility</u> : IEC CD-1 Submittal Date	The Management Options for SNF at the INL Site Integrated Project Team AOA is not accepted, causing a new AOA for the ID O&E SF. The new AOA development causes the CD-1 package submittal preparation duration to extend beyond original scheduled.	A new AOA is required. CD-1 submittal date is missed, and the ID SNF-SF loses our DOE HQ reviews.	Realize	Threat	Transfer	Almost Certain	Serious	4-High	\$ 250,000	\$ 500,000	\$ 1,000,000	41	58	75	Best Case: 1 FTE for 4 weeks @ \$100/hr. and 1 FTE for 2 weeks @ \$80/hr. and 50,000 for subcontract design = 30day Most Likely: 1 FTE for 4 weeks @ \$100/hr. and 1 FTE for 2 weeks @ \$80/hr. and 80,000 for subcontract design = 60 days Worst Case: 1 FTE for 4 weeks @ \$100/hr. and 1 FTE for 2 weeks @ \$80/hr. and 100,000 for subcontract design = 90 days Each portion of design will need 10% of the subcontractor cost for IEC to manage.	Acceptance received by DOE per Mod P00041	Consult schedule and forecasts with DOE ICP and HQ in our IPF. Maintain AOA schedule and maintain status updates in the schedule.	

SNF044	D.1.04.01	DOE	DOE FPD020.020	Cottrell, Jaken	<u>SNF Staging Facility</u> , Potential Change to Safety Basis Regulatory Framework	It is determined by DOE that 30 CFR 72 is the governing regulatory framework.	In discussions with DOE and NRC, it is determined that the Staging Facility design must meet NRC requirements.	Open	Threat	Transfer	Rare	Critical	3 Moderate	\$ 500,000	\$ 1,000,000	\$ 2,500,000	128	312	520	Revise TRFR, SOW and require the subcontractor to obtain an NRC licensed facility. Best Case: 8 months with a cost of \$500k Most Likely: 1.5 years with a cost of \$1M Worst Case: 2.5 years with a cost of \$2.5M	Acceptance received by DOE per Mod P00041	
SNF325	D.1.02.36.08	DOE	Woolstenhulme, Tyson	Wahnschaffe, Steve	<u>SNF Road Ready Project</u> : SNF Packaging Criteria	Road Ready Project: IEC develops a Data Package based upon known requirements that is not acceptable	IEC developed Data Package is rejected by CISF/Disposal Facility	Open	Threat	Transfer	Possible	Critical	4 High	\$ 3,000,000	\$ 4,500,000	\$ 6,000,000	192	288	384		Propose transfer to DOE	DOE-ID to work with DOE-HQ and other regulatory agencies to clearly define acceptance criteria for a Road Ready acceptable cask. Additionally, IEC is developing a regulatory strategy to present for our stance on Licensing for packaging, transportation, and storage of SNF.
SNF327	D.1.02.36.07	DOE/IEC	DOE FPD	Woolstenhulme, Tyson	<u>SNF Road Ready Project</u> : Delay of Delivery of DOE Standard Canisters	Any unforeseen delays to the delivery of the DOE Standard Canisters would cause delays to the project work scope.	DOE Standard Canister fabrication not completed according to IEC/BEA schedule.	Open	Threat	Share	Possible	Critical	4 High	\$ 1,200,000	\$ 1,800,000	\$ 5,000,000	96	192	288	DOESC fabrication is included in BEA's scope but being transitioned to IEC per IAG-809. IEC will need DOE concurrence to fully assume Design Authority and fabrication of DOESCs.	Acceptance received by DOE per Mod P00041	Work with BEA to identify possible delays due to supply chain issues. Also mitigating by purchasing long lead items at risk to minimize impacts to schedule.
SNF328	D.1.02.36.11	DOE	DOE FPD	Woolstenhulme, Tyson	<u>SNF Road Ready Project</u> : Lack of Funding Causes Delays in Procurement of High Value Items	Lack of Funding Causes Delays in Procurement of Cask Storage System Items consisting of a Hoist, Star as well as a Multi-Purpose Canister/basket, shield lid, and spacer	Congress/DOE does not provide appropriate funding.	Open	Threat	Transfer	Possible	Critical	4 High	\$ 1,500,000	\$ 3,000,000	\$ 6,000,000	96	192	84	Work with DOE to place RRDP Shipping Cask as a priority for funding to allow procurement of items as scheduled. Shipping Cask has a 2 year lead time which is critical path for the project. The costs listed from delays are based on a \$13M/day cost to operate a SNF crew.	Acceptance received by DOE per Mod P00041	Work with DOE to place RRDP critical components as a priority for funding to allow procurement of items as scheduled.
SNF332	D.1.02.36.07	DOE	DOE FPD	Woolstenhulme, Tyson	<u>SNF Road Ready Project</u> : BEA Leak Testing Plans	BEA Leak testing of Welds on DOE Standard Canisters does not pass causing delays to the project.	Beil Jar leak testing fails.	Open	Threat	Transfer	Possible	Critical	4 High	\$ 1,200,000	\$ 1,800,000	\$ 3,000,000	96	192	288		Acceptance received by DOE per Mod P00041	BEA procurement of different seals to correct deficiencies to allow for successful leak testing, if alternative seals are not successful, BEA to correct design of Beil Jar.
TO3P2001	Project Wide	DOE	DOE FPD	Multiple CAMS	<u>Global</u> : Idaho Power Rates Increase	There is potential of an unforeseen increase in cost for Power supplied by Idaho Power which in turn, would increase the rates that IEC is charged by BEA.	Annual evaluation determines that Idaho Power will be increasing their rates for the year.	Emerging	Threat	Transfer	Almost Certain	Minor	3 Moderate	\$ -	\$ 132,504	\$ 416,440	0	0	0	Best Case: No cost increase to the project Most Likely: 0.1 - 0.044 + 0.56 \$2,366,140.03 * 0.56 = \$1,322,203.84 Worst Case: 0.22 - 0.044 + 0.176 \$2,366,140.03 * 0.176 = \$416,440.66	Acceptance received by DOE per Mod P00041	
TO3P2002	Project Wide	DOE	DOE FPD	Multiple CAMS	<u>Global</u> : Power infrastructure upgrade cost	Idaho Power is performing infrastructure upgrades for the Frontform Substation. BEA has been directed by DOE to allocate costs, of which IEC will be held responsible for a share of this cost. This prevents potential unforeseen increased costs to IEC.	Increased Costs are applied.	Emerging	Threat	Transfer	Almost Certain	Critical	5 Very High	\$ -	\$ 4,350,000	\$ 8,750,000	0	0	0	Best Case: No cost increase to the project Most Likely Case: \$30M * 23% = 4,350,000 Worst Case: \$30M * 23% = 4,350,000	Acceptance received by DOE per Mod P00041	
TO3P2003	Project Wide	DOE	DOE FPD	Multiple CAMS	<u>Global</u> : Vendor Supplied Diesel Rates Increase	There is potential of an unforeseen increase in cost for vendor supplied diesel.	Increased Costs of Services are applied.	Emerging	Threat	Transfer	Almost Certain	Minor	3 Moderate	\$ -	\$ 132,504	\$ 416,440	0	0	0	Best Case: No cost increase to the project Most Likely: 0.1 - 0.044 + 0.56 \$2,366,140.03 * 0.56 = \$1,322,203.84 Worst Case: 0.22 - 0.044 + 0.176 \$2,366,140.03 * 0.176 = \$416,440.66	Acceptance received by DOE per Mod P00041	
TO3P2004	Multiple Projects	DOE	DOE FPD	Perry, Scott	<u>Global</u> : New Requirements From A New Revision of DOE STD-5506 Result in Safety Basis Changes	DOE Nuclear Safety is driving the implementation of a new revision of DOE STD-5506 with IEC. If IEC is required to implement this new revision, there may be significant changes to the current Safety Basis resulting in significant cost increases and schedule delays.	DOE Nuclear Safety mandates new version of DOE-STD-5506 to be implemented.	Open	Threat	Transfer	Possible	Critical	4 High	\$ 3,000,000	\$ 5,000,000	\$ 7,000,000	96	192	288	Cost and schedule impacts are estimated based on the cost and labor to revise the following documents: RPT-05A-02/RPT-TSR-03 for AMWTP SAR-4/TSR-4 for ARP SAR-102/TSR-103 for RH-TRU waste processing operations at INTEC SAR-103 Addendum A for RH-TRU waste storage and handling at INTEC PLN-1851 for on-site transport of TRU waste	Acceptance received by DOE per Mod P00041	
TO3P2005a	Project Wide	DOE	DOE FPD	Multiple CAMS	<u>Global</u> : Line-Item Project Funding	Due to the amount of line-item projects being worked at the Idaho Environmental Coalition (IEC), limitation of base scope inventory may be experienced as a direct result of variability in funding, inability to execute base scope under the end state contract model will result in longer durations required to reach the desired end-states. This will increase the overall costs of the Idaho Cleanup Project (ICP), and could impact staffing levels.	Impacts from line-item project funding causes limitations that impact the execution of the base scope.	Open	Threat	Share	Almost Certain	Critical	5 Very High	\$ 1,000,000,000	\$ 1,350,000,000	\$ 1,700,000,000	900	1350	1800		Acceptance received by DOE per Mod P00041	None
TRU01482	D.2.03.35.04	DOE	DOE FPD	Byram, George	<u>DL-TRU Waste Disposition</u> : Unable to Certify/Ship Waste for Disposal at Waste Isolation Pilot Plant (WIPP)	IEC may not be able to certify and/or ship waste for disposal for several reasons: if WIPP's Waste Data System (WDS) were to fail, if WIPP is unable to transport waste, if CCF flamm gas sampling/data upload is not available, if the WIPP makes changes to their requirements or makes new interpretations of existing requirements, etc.	Waste cannot meet certification requirements for WIPP disposal.	Open	Threat	Transfer	Possible	Serious	3 Moderate	\$ 50,000	\$ 500,000	\$ 1,000,000	16	48	96	Best Case: 16 days X 10 hr. X 5 FTE X \$62.5/hr. Most Likely: 48 days X 10 hr. X 5 FTE X \$62.5/hr. (plus additional Fees) Worst Case: 96 days X 10 hr. X 5 FTE X \$62.5/hr. (plus additional Fees)	Acceptance received by DOE per Mod P00041	
TRU01682	D.2.03.32.04	DOE	DOE FPD	Lofus, Nathan	<u>DL-TRU Waste Disposition</u> : 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.	WIPP requires detailed acceptable knowledge that does not exist and/or permit changes.	Open	Threat	Transfer	Rare	Moderate	1 Low	\$ 300,000	\$ 500,000	\$ 1,750,000	16	32	96	Best Case: 16 days Plus fees Most Likely Case: 32 days plus fees Worst Case: 96 days plus fees	Acceptance received by DOE per Mod P00041	



Risks													Cost Impacts			Schedule Impacts (in days)			Mitigation Actions			Risk Corrective Actions	Notes
Risk ID	WBS	Responsible Organization	EC POC	DOE PFD	Risk Title	Risk Description	Trigger Event	Status	Risk Type	Handling Strategy	Risk Event Likelihood	Risk Impact	Risk Rating	Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case	Mitigation Actions	Risk Corrective Actions	Notes	
CAL282	D.0.2.0.3.1	EC	Kimbo, Val	Balmeser, Grng	<u>Cal282</u> Loss of Specialty Resources	Loss of qualified specialty resources could result in schedule delays.	Notification of intent to leave or retirement.	Realized	Threat	Accept	Low	Major	4-High	\$ 48,000	\$ 80,000	\$ 160,000	48	80	80	Best Case: 48 days x 20 hr x 1.25 FTE x \$100/hr Most Likely Case: 80 days x 20 hr x 1.25 FTE x \$100/hr Worst Case: 80 days x 20 hr x 2.2 FTE x \$100/hr	N/A	N/A	
CAL284	D.0.2.0.3.4	EC	Kimbo, Val	Balmeser, Grng	<u>Cal284</u> Loss of Specialty Resources	Loss of qualified specialty resources could result in schedule delays.	Notification of intent to leave or retire.	Realized	Threat	Accept	Low	Major	4-High	\$ 48,000	\$ 80,000	\$ 160,000	48	80	80	Best Case: Backfill one position (48 days x 20 hr/day x 1 FTE x \$100/hr) Most Likely Case: Backfill one position (80 days x 20 hr/day x 1 FTE x \$100/hr) Worst Case: Backfill two positions (80 days x 20 hr/day x 2 FTE x \$100/hr)	N/A	N/A	
CAL330	D.0.2.0.3.2.5	EC	Kimbo, Val	Balmeser, Grng	<u>Cal330</u> Optimize Using BEA Business Relationships and Resources	It may be possible to optimize the cost and schedule by using the existing BEA relationship and resources under the blanket master contract or other agreement established between BEA and EC. For example, BEA may have in-house specialist that could participate in a review team on documents being produced under T03.2 tasks of work, such as the siting study, treatment study reports, and the technology maturation plan/technology readiness level documents.	Business relationship and resources are available at BEA that are not readily available to EC.	Open	Opportunity	Accept	Low	Minor	3-Low	\$ (432,000)	\$ (216,000)	\$ (72,000)	(48)	(24)	(8)	Project realized approximately 20 days of delay in FY 2022 because resources external to EC were unavailable. However, resources are now available, and this should be considered the worst-case scenario. As such, it was assumed the project would realize 5 days of delay as the best case and 20 days as the worst case. Additionally, schedule delays realized by this activity should be categorized as moderate to low, regardless of the cost and schedule impacts, because the decision in this document can be aligned with DOE's commitment to remove carbon from a permit and close the facility. Best Case: 48 days x 20 hr/day x 1 FTE x \$100/hr = \$96,000 Most Likely Case: 80 days x 20 hr/day x 1 FTE x \$100/hr = \$160,000 Worst Case: 80 days x 20 hr/day x 2.2 FTE x \$100/hr = \$352,000	N/A	N/A	
CAL301	D.3.0.2.30.3	EC	Kimbo, Valeria	Balmeser, Grng	<u>Cal301</u> Delay Finalizing the Draft 3116 Basis Document due to availability of resources (external to EC)	Finalizing the Draft CSF 3116 Basis Document is scheduled in T03.2 but may be delayed because of the availability of resources (external to EC) to perform their roles in the review of the Draft CSF 3116 Basis Document.	Resources external to EC are not available to perform their roles in the review of the Draft CSF 3116 Basis Document.	Open	Threat	Accept	Low	Minor	3-Low	\$ 12,500	\$ 25,000	\$ 50,000	5	10	20	Project realized approximately 20 days of delay in FY 2022 because resources external to EC were unavailable. However, resources are now available, and this should be considered the worst-case scenario. As such, it was assumed the project would realize 5 days of delay as the best case and 20 days as the worst case. Additionally, schedule delays realized by this activity should be categorized as moderate to low, regardless of the cost and schedule impacts, because the decision in this document can be aligned with DOE's commitment to remove carbon from a permit and close the facility. Best Case: 5 days x 20 hr/day x 2.5 FTE x \$100/hr = \$25,000 Most Likely: 10 days x 20 hr/day x 2.5 FTE x \$100/hr = \$50,000 Worst Case: 20 days x 20 hr/day x 2.5 FTE x \$100/hr = \$100,000	N/A	N/A	
CAL302	D.3.02.40	EC	Kimbo, Valeria	Balmeser, Grng	<u>Cal302</u> Limited or No Responses to the RFP for Online Sampling System Testing and Demonstrations	Not enough industry reports responded to the request for proposal for the contractor. Environmental Contract, LLC to award a competitive bid for multiple bidders to a subcontractor that can meet the stated objectives and desired results.	No proposals are received to execute work to the stated objective and desired results.	Open	Threat	Accept	Unlikely	Serious	3-Low	\$ 19,000	\$ 57,000	\$ 114,000	16	48	96	Best Case: Schedule and Cost impacts are based off an estimated 3 month delay to extend bid period. Most Likely Case: Schedule and Cost impacts are based off an estimated 3 month delay to extend bid period. Worst Case: Impacts have been estimated under the assumption that off-the-shelf equipment doesn't meet criteria and needs to be modified. This scenario is estimated to result in a 6-month delay. Best Case: Schedule and Cost impacts have been estimated based on the scenario that the no modifications to the system are required, the vendor simply needs to tighten parameters and reperform testing. Impacts are assumed at a 1 month delay for a vendor. Most Likely Case: Schedule and Cost impacts are estimated based on the vendor having to perform physical modifications to the system and reperforming tests. Impacts are assumed at a 3 month delay for 2 vendors working concurrently. Worst Case: Schedule and Cost impacts are estimated based on vendor having to reperform tests with a different online sampling system. Impacts assume a 4 month delay with 2 vendors working concurrently plus accrual costs for the increased time of the subcontractors.			
CAL303	D.3.02.40	EC	Kimbo, Valeria	Balmeser, Grng	<u>Cal303</u> Inadequate Information from Phase 1 Testing and Demonstrations of the Online Sampling System	Phase 1 work may not generate enough information to adequately evaluate the viability of the online sampling equipment and allow progression to Phase 2.	Inadequate information is generated to adequately evaluate the viability of the online sampling equipment.	Open	Threat	Accept	Possible	Minor	3-Low	\$ 65,000	\$ 130,000	\$ 260,000	16	16	64	Best Case: Schedule and Cost impacts have been estimated based on the scenario that the no modifications to the system are required, the vendor simply needs to tighten parameters and reperform testing. Impacts are assumed at a 1 month delay for a vendor. Most Likely Case: Schedule and Cost impacts are estimated based on the vendor having to perform physical modifications to the system and reperforming tests. Impacts are assumed at a 3 month delay for 2 vendors working concurrently. Worst Case: Schedule and Cost impacts are estimated based on vendor having to reperform tests with a different online sampling system. Impacts assume a 4 month delay with 2 vendors working concurrently plus accrual costs for the increased time of the subcontractors.			Meeting with Brennan Kurtz 10/26/24. Best Case is 1 month of rework, 2 vendor. Most Likely is 3 months of rework, 2 vendors. Worst Case is 6 months of rework, 2 vendors.
CAL304	D.3.02.40	EC	Kimbo, Valeria	Balmeser, Grng	<u>Cal304</u> Limited Use of Proprietary Business Data	Unknown restrictions on proprietary information generated from the Phase 1 work could limit the use or sharing of information outside of the project.	Data cannot be used or shared because of proprietary restrictions.	Open	Threat	Accept	Unlikely	Moderate	3-Low	\$ -	\$ 260,000	\$ 1,000,000	0	32	96	Best Case: Limited information would be released and proprietary information would be vague or general in its description. This scenario creates a challenge of creating a commercial application but does not incur a Cost or schedule impact to this proposal. Most Likely Case: Vendor does not allow EC to share information on the equipment or use. In this scenario, EC would have to pay the vendor to use the equipment. Impacts are based on subcontract cost for 2 vendors, and a 2 month delay. Worst Case: Schedule and Cost impacts are estimated based on EC receiving minimal information and being directed to recreate and self-perform testing. Assuming there is some existing work that can be reused, schedule impacts are estimated at a 6-month delay, plus cost of hiring additional personnel.			
CAL305	D.3.02.40	EC	Kimbo, Valeria	Balmeser, Grng	<u>Cal305</u> Inability to Accept or Use Data Generated from Software Used by the Subcontractor	Inability of the project to accept or use data generated from any of the software used during Phase 2 of the subcontractor because it does not meet information technology requirements and criteria.	Software or data cannot be used by the project because it does not meet information technology requirements and criteria.	Open	Threat	Accept	Unlikely	Major	3-Moderate	\$ 72,000	\$ 250,000	\$ 500,000	12	96	128	Best Case: Impacts are estimated based on a 2 month delay to get software approved through the appropriate company processes. Most Likely Case: Impacts are based on purchasing a software and having it approved through the appropriate company processes. This is estimated at a 6-month delay plus costs for the purchase of the software. Worst Case: Impacts are based on the Most Likely Case impacts plus the greatest having to buy specialty resources to reperform software.			
CC007	D.1.2.1.30.4	EC	Bloom, Scott	Wahrschall, Steve	<u>CC007</u> Operational Readiness Review (ORR) is Determined to be Required	If DOE directs IEC to perform an Operational Readiness Review in addition to a Readiness Assessment, it would cause schedule delays to perform.	DOE directs additional readiness activities prior to releasing operations.	Open	Threat	Mitigate	Unlikely	Major	3-Moderate	\$ 680,000	\$ 1,030,000	\$ 2,060,000	64	96	208	Best Case: 64 days x 20 hr x 11.07 FTEs x \$96/hr Most Likely Case: 96 days x 20 hr x 11.07 FTEs x \$96/hr Worst Case: 208 days x 20 hr x 11.07 FTEs x \$96/hr	Engage DOE SMEs for SAR revision, engineering analysis and design, nuclear and criticality safety analysis, and operational procedure development to ensure DOE is comfortable with the design and process.	N/A	
CC026	D.1.2.1.30	EC	Bloom, Scott	Wahrschall, Steve	<u>CC026</u> Core Remnants (Including Transport Equipment) Do Not Meet the WSC for Disposal at CDF	Physical characteristics of the core remnants or shipping equipment does not meet the Waste Acceptance Criteria (WAC) for CDF.	INTEC WGS Waste Stream Determination is completed.	Open	Threat	Accept	Possible	Minor	3-Low	\$ 10,000	\$ 50,000	\$ 70,000	8	16	16	N/A			
CC300	D.1.2.1.30	EC	Bloom, Scott	Wahrschall, Steve	<u>CC300</u> Engineering/Safety Analysis Determines Core Cannot be Safely Removed from the Reactor Without Extensive Modifications to the Equipment/Process	Design/Analysis determines the core cannot be safely removed from the Reactor and transported to the Hydrogen Station without extensive modifications to the equipment/process.	Completion of design/analysis reveals scenario(s) that result in unacceptable risk or consequence.	Realized	Threat	Mitigate	Possible	Critical	4-High	\$ 5,330,000	\$ 7,000,000	\$ 8,000,000	238	309	412	Add mechanically flexes to the Reactor to ensure the core can be safely moved to the location to remove the core down system and safely processed.	Do-23723 NWS notified EC engineering of a concern that will require an alternative core handling strategy with additional engineered controls. If the core drop analysis determines additional controls are required to safely remove the core from the Reactor and transfer it to the hydrogen system, this risk will be re-evaluated. Cost and schedule impacts will be dependent upon analysis results and the new strategy/controls required to move the core.		
CC301	D.1.2.1.30	EC	Bloom, Scott	Wahrschall, Steve	<u>CC301</u> Hydrogen Levels Inside the Shipping Shield Exceed HAD Limits	High hydrogen gas levels between the shipping shield and the Reactor could indicate water inside the shipping shield. Due to potential RSC lead degradation, a hydrogen sample of the RSC will be required, potentially requiring a purge of the RSC to meet HAD requirements. (RSC sampling will require removal of the shipping shield lid.)	Performance of shipping shield cavity hydrogen sampling after their release is in place at CPP-666.	Open	Threat	Accept	Possible	Serious	3-Moderate	\$ 334,000	\$ 334,500	\$ 693,000	8	12	16	Perform drop analysis to bound shipping shield lid impacts to Reactor/Shipping shield/RSC to the arrival of the reactor.	Perform revision to CDF to incorporate mitigations required by drop analysis.		
CC309	D.1.2.1.30	EC	Bloom, Scott	Wahrschall, Steve	<u>CC309</u> Integrated Testing of the Cutting Station Does Not Meet the Performance or Acceptance Criteria Documented in SPC-3256	Failure of equipment during integrated testing of the Cutting Station at IPM.	Cutting station does not meet the performance requirements documented in SPC-3256.	Open	Threat	Mitigate	Unlikely	Major	3-Moderate	\$ 130,000	\$ 210,000	\$ 379,000	86	94	212	MITIGATION ACTIONS: RSC-018, Procurement of Long Lead Electrical Components submitted to expedite procurement of service motors, enclosures, PLC, HMI, and servo drives to allow early bench testing. Bench testing will decrease risk and early procurement of spares will allow expedited repair if needed. MITIGATION ACTIVITY STATUS: RSC-018 has been submitted and processed to address the procurement of long lead electrical and mechanical components.			
CC304	D.1.2.1.30	EC	Bloom, Scott	Wahrschall, Steve	<u>CC304</u> Failure of Cutting Station Components During Integrated Testing at IPM	Failure of mechanical or electrical equipment during integrated testing of the Cutting Station requires replacement or repair before testing can be completed at IPM.	Component fails or is damaged during integrated testing at IPM.	Open	Threat	Mitigate	Possible	Serious	3-Moderate	\$ 50,000	\$ 150,000	\$ 325,000	12	48	103	MITIGATION ACTIONS: RSC-013, Procurement of Long Lead Precision Mechanical Components submitted to expedite procurement of lead screws, tracks, and ball screw assembly replacements. Early procurement of spares will allow expedited repair if needed at IPM. MITIGATION ACTIVITY STATUS: RSC-013 approved 12/10/24. IPM submitted order of lead screw assemblies 12/11/24.			
ENCLAD01	D.4.0.5.30.09	EC	Whitmore, Erik	Jenkins, Tally	<u>ENCLAD01</u> Evaporation Pond Liner Damage	Existing CERCLA Evaporation liner tears which would require subcontractor support to complete repairs.	Existing liner is damaged.	Open	Threat	Mitigate	Unlikely	Moderate	3-Low	\$ 62,513	\$ 312,658	\$ 468,987	0	0	0	No schedule delays as all other work associated would continue unless repairs are done.	Allocation for repairs for material failure of the pond liner, similar to currently existing situation	N/A	
ICDF001	D.4.0.5.31.03	EC	Orme, Jason	Jenkins, Tally	<u>ICDF001</u> Oils and Maintenance Equipment Failure	If equipment fails, it will need to be repaired or the project will need to procure a replacement. This equipment includes but is not limited to: road graders, excavators, front end loaders, diesel fuel tankers, water trucks, hook trucks, backhoes, wheelbarrows, pumps, liners, Digital Control System Equipment, and Waste processing machinery to perform operations.	Failure of any equipment (i.e. road graders, excavators, front end loaders, diesel fuel tankers, water trucks, hook trucks, backhoes, wheelbarrows, pumps, liners, Digital Control System Equipment, and Waste processing machinery) necessary to perform operations.	Open	Threat	Accept	Low	Serious	4-High	\$ 67,240	\$ 341,000	\$ 511,000	30	60	90	Equipment Costs per OCS sheet / Lease Rates for Equipment: Front End Loader: 20% Equipment Potential Failure: Daily Rates 20% Higher than Monthly Rates / Diesel Consumption Zone Risk of Leased Equipment: Lease to Buy / Work Case will be the OCS sheet lease \$13,000			
ICDF002	D.4.0.5.31.03	EC	Orme, Jason	Jenkins, Tally	<u>ICDF002</u> Oils and Maintenance Treatment, Storage, and Disposal Facility (TSD) Closure	TSD discontinues receiving of waste.	TSD discontinues receiving of waste.	Open	Threat	Mitigate	Low	Minor	3-Low	\$ 79,200	\$ 118,800	\$ 158,400	8	12	16	Best Case: 8 days x 10 hr/day x 6 FTEs x \$110/hr = \$67,200 Most Likely Case: 12 days x 10 hr/day x 6 FTEs x \$110/hr = \$79,200 Worst Case: 16 days x 10 hr/day x 6 FTEs x \$110/hr = \$105,600	Implement the following possible mitigations: - Upon TSD receiving operations, equipment self-corrective and schedule will be recovered by working overtime.	N/A	

T03 Phase 2 Risk Register

Maha Cleanup Project Programmatic Risk Register										Cost Impacts			Schedule Impacts (in days)												
Updated - 1/29/25	Risk ID	WBS	Responsible Organization	IEC POC	DOE POC	Risk Title	Risk Description	Trigger Event	Status	Risk Type	Handling Strategy	Risk Event Likelihood	Risk Impact	Risk Rating	Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case	Mitigation Actions	Risk Corrective Actions	Notes		
	IT005	0.6.0.2.14, 0.6.0.2.16, 0.6.0.3.13	EC	Anderson, Jade	O'Malley, Russell	Information Technology - Information Structural Issues During Operations	Unknown structural issues would require involving our facilities and the schedule is at risk of being pushed to later timelines. The operations is essential structural issues, a possible structural concern will cause delays, possible engineering contractors, structural contractor, electricians, and increased costs.	A sizeable structural concern is discovered.	Open	Threat	Accept	Unlikely	Critical	3-Minor	\$ 320,000	\$ 960,000	\$ 1,920,000	40	120	240	Best Case: 40 days x 10 hr/day x 4 FTEs x \$200/hr = \$320,000 Most Likely: 120 days x 10 hr/day x 4 FTEs x \$200/hr = \$960,000 Worst Case: 240 days x 10 hr/day x 4 FTEs x \$200/hr = \$1,920,000	N/A	Performance preliminary assessment to locate any vulnerabilities and adjust coding as necessary.		
	IT020	0.6.0.2, 1.1.02.04	EC	Anderson, Jade	O'Malley, Russell	Information Technology - Software Upgrades	Scheduling lengthy for software upgrades (ARM risk assessments for Cyber and IT). Degradation of information discovered during risk assessment, or software vulnerabilities discovered under software or hardware built for use at GCP.	Discovery of derogatory information.	Open	Threat	Mitigate	Unlikely	Minor	3-Low	\$ 18,000	\$ 72,000	\$ 288,000	4	16	64	Best Case: 4 days x 10 hr/day x 2 FTEs x \$225/hr = \$18,000 Most Likely: 16 days x 10 hr/day x 2 FTEs x \$225/hr = \$72,000 Worst Case: 64 days x 10 hr/day x 2 FTEs x \$225/hr = \$288,000	N/A	Perform preliminary assessment to locate any vulnerabilities and adjust coding as necessary.		
	IT024	0.6.0.3.01.01	EC	Anderson, Jade	O'Malley, Russell	Information Technology - Operating Hardware	Due to supporting legacy and alpha systems needed for ongoing operations, items needed may be discontinued by the manufacturer. General costs items that are of limited supply.	Cannot source hardware.	Open	Threat	Accept	Possible	Serious	3-Minor	\$ 216,000	\$ 576,000	\$ 1,296,000	24	64	144	Best Case: 24 days x 10 hr/day x 4 FTEs x \$225/hr = \$129,600 Most Likely: 64 days x 10 hr/day x 4 FTEs x \$225/hr = \$576,000 Worst Case: 144 days x 10 hr/day x 4 FTEs x \$225/hr = \$1,296,000	N/A			
	IT031	0.6.0.2.38.01, 0.6.0.2.10, 0.6.0.3.13, 0.6.0.2.14, 0.6.0.2.35.01	EC	Anderson, Jade	O'Malley, Russell	Information Technology - Information Technical Issues	Unknown technical issues or major failures can impact the planned schedule, e.g., ransomware.	Technical issues or major failures occur.	Open	Threat	Accept	Possible	Critical	4-High	\$ 288,000	\$ 864,000	\$ 1,728,000	16	108	216	Best Case: 16days x 10 hr/day x 4 FTEs x \$200/hr = \$128,000 Most Likely: 108 days x 10 hr/day x 4 FTEs x \$200/hr = \$864,000 Worst Case: 216days x 10 hr/day x 4 FTEs x \$200/hr = \$1,728,000	N/A			
	IT307	1.1.02.04	EC	Anderson, Jade	O'Malley, Russell	Information Technology - New VMware Pricing Structure Not Budgeted in FY25	VMWare is changing to a per-CPU core pricing model. Currently, we are paying \$50K for a 3-year license, which expires this year. If we do nothing, the new license will be \$50K yearly. If it is currently looking at changes and could possibly get this cost down to \$35K.	Expiration of the current VMware license.	Emerging	Threat	Mitigate	Almost Certain	Moderate	4-High	\$ 80,000	\$ 140,000	\$ 500,000	0	0	0	VMWare is changing to a per-CPU core pricing model. Currently, we are paying \$50K for a 3-year license, which expires this year. If we do nothing, the new license will be \$50K yearly.	Changing our Virtual Machine infrastructure. Exploring other VM products.			
	IT309	0.2.0.25.30.20	EC	Anderson, Jade	O'Malley, Russell	Information Technology - End of Life Software	The CS at AMMTP runs an end-of-life software called Cybertron that is no longer available. The company that it was purchased from no longer exists and the company that purchased it offers a completely different system now. If the software reaches a point where it can no longer be fixed then IEC will need to purchase a new system.	A software defect is found that halts operations, which the 3rd party support company is unable to resolve.	Emerging	Threat	Mitigate	Rare	Critical	3-Minor	\$ 1,000,000	\$ 2,000,000	\$ 3,000,000	120	360	720	The last estimate for the cost of the software was \$450K plus the installation and customization costs. Replacing then continuing will be time consuming and labor intensive.	IEC pays for a support contract from a 3rd party if the software can be fixed. This contract is a limited support contract that only covers software defects and licensing.			
	IT320	0.2.0.25.30.20	EC	Anderson, Jade	O'Malley, Russell	Information Technology - Waste Tracking System Failure	The Waste Tracking System (WTS) is an Oracle Forms 6i application. Oracle Forms 6i is not supported by Oracle and is no longer compatible with current databases. This means it cannot be patched for cybersecurity purposes. This leaves the forms and database at risk of attack as they are stagnant with no ability to move forward.	The WTS application is attacked through the vulnerabilities associated with the OS software.	Open	Threat	Accept	Critical	3-Minor	\$ 1,500,000	\$ 2,100,000	\$ 3,000,000	96	208	416	Waste Tracking System (WTS) is a legacy application that has been in need of an upgrade for many years. Oracle Forms 6i has been end-of-life since 2008 but has been compatible with the Oracle database as per Oracle 23i, which became end-of-life in 2022. Upgrading the system to a platform that is current and able to be patched for vulnerabilities will cost a large amount of money and take a considerable amount of time.	The WTS application is protected through many network mitigations.				
	IT311	1.1.02.04	EC	Anderson, Jade	O'Malley, Russell	Information Technology - Cyber Vulnerabilities	Cyber vulnerabilities create an attack vector for hackers to penetrate the network. After penetrating the network, hackers can then steal information, lock the network from users, or erase or destroy information.	A hacker is able to penetrate the network.	Open	Threat	Mitigate	Rare	Moderate	3-Low	\$ 1	\$ 500,000	\$ 10,000,000	0	14	180	Cyber vulnerabilities are potential weaknesses in an organization's cyber security defenses that can be exploited by hackers to gain unauthorized access to sensitive information and systems. When these vulnerabilities are not properly addressed, they can lead to a wide range of negative consequences, including data theft, ransomware attacks, and even complete network destruction. Best Case: Attack is thwarted, no impact Most Likely Case: Attacker is able to launch an attack resulting in data theft or ransomware. Worst Case: Attacker is a Cyber terrorist, resulting in destruction of the network.	There are many strategies. The first strategy is to patch the vulnerable network items. The second is to employ a configuration that removes the attack vector. The third is to place the team behind firewalls to protect them. These strategies are employed daily by the IT staff.			
	LE00380	1.1.01.05	EC	Collett, Sean	Unknown	Legal - General Labor and Arbitration	The possibility of diverging resources or obtaining outside counsel to assist with unforeseen arbitrations involving General Employment and Labor Relations matters (i.e., unionism, employee health, and welfare plans).	A grievance is filed requesting for arbitration.	Open	Threat	Accept	Possible	Moderate	2-Low	\$ 25,000	\$ 50,000	75000	15	30	60	Each arbitration is estimated to cost approximately \$25K. The most likely occurrence to happen under the IEC contract is conflict 25K.				
	LE00382	1.1.01.05	EC	Collett, Sean	Unknown	Legal - Miscellaneous Litigation	Exposure for an unanticipated lawsuit which would require resources to be allocated for legal defense and payment of the lawsuit.	New lawsuit is filed against IEC.	Open	Threat	Accept	Possible	Moderate	2-Low	\$ 25,000	\$ 50,000	100000	15	30	60	No Schedule Delay. Costs represent initial responses.				
	LE00392	1.1.01.05	EC	Collett, Sean	Unknown	Legal - General Litigation	Any wrong lawsuit against IEC regarding government contracts, environmental matters, and employment law that would require appropriate resources for litigation.	New lawsuit is filed against IEC.	Open	Threat	Accept	Possible	Moderate	2-Low	\$ 25,000	\$ 50,000	100000	15	30	60	No Schedule Delay. Costs represent initial responses.				
	NKCF020	0.4.06.37.05	EC	Reese, Craig	N/A	New OSHA Call - Debris, Excavation Uncovers Unanticipated Materials	While doing excavation there is a chance of unforeseen circumstances (i.e., not contamination) to occur that can cause a delay in the schedule or a need to assess a new path forward.	Discovering (Examples) un-identified utilities, flat contamination issues.	Open	Threat	Accept	Rare	Minor	3-Low	\$ 30,000	\$ 75,000	\$ 1,200,000	2	5	80	Best Case: 2 days x 10 hr/day x 20 FTEs x \$75/hr Most Likely Case: 5 days x 10 hr/day x 20 FTEs x \$75/hr Worst Case: 80 days x 10 hr/day x 20 FTEs x \$75/hr	N/A			
	NKCF027	0.4.06.39.01	EC	Reese, Craig	Almah, Amin	PM - Safety - Industrial Incident Resulting in Injuries	An industrial incident resulting in serious personal injury they cause an extended shutdown for the resident of operations issues.	An unanticipated incident resulting in injury or near miss.	Open	Threat	Accept	Rare	Minor	3-Low	\$ 30,000	\$ 75,000	\$ 1,440,000	2	5	96	Best Case: 2 days x 10 hr/day x 30 FTEs x \$75/hr Most Likely Case: 5 days x 10 hr/day x 30 FTEs x \$75/hr Worst Case: 96 days x 10 hr/day x 30 FTEs x \$75/hr	N/A			
	NKCF032	0.4.06.37.05	IEC	Reese, Craig	Almah, Amin	PM - Safety - Overtime Required	To maintain project schedule, overtime is required to maintain or re-secure project schedule.	Technical or unanticipated issues cause schedule delays require overtime record or maintain project schedule.	Open	Threat	Accept	Possible	Moderate	2-Low	\$ 144,000	\$ 288,000	\$ 432,000	16	32	48	Best Case: 16 days x 10 hr/day x 20 FTEs x \$75/hr Most Likely Case: 32 days x 10 hr/day x 20 FTEs x \$75/hr Worst Case: 48 days x 10 hr/day x 20 FTEs x \$75/hr	N/A			
	NKCF033	0.4.06.37.05	IEC	Reese, Craig	Almah, Amin	PM - Safety - Weather Delays	Cold/wet weather in the spring and fall prevent construction of the call and re-secure project.	Spring and fall weather prevent construction work at the site.	Open	Threat	Accept	Possible	Minor	2-Low	\$ 75,000	\$ 225,000	\$ 675,000	5	15	45	Best Case: 5 days x 10 hr/day x 30 FTEs x \$75/hr Most Likely Case: 15 days x 10 hr/day x 30 FTEs x \$75/hr Worst Case: 45 days x 10 hr/day x 30 FTEs x \$75/hr	N/A			
	NKCF037a	0.4.06.30	IEC	Reese, Craig	Almah, Amin	PM - Safety - BEA Support Services Do Not Meet IEC Scheduled Need Dates	IEC relies on BEA for support services on telecommunications, regulatory commitments, and costs completion. If the work from BEA is delayed, or does not meet the requirement, it can impact project schedule.	BEA power services do not provide power in a timely manner.	Open	Threat	Shared	Unlikely	Minor	2-Low	\$ 60,000	\$ 240,000	\$ 2,640,000	4	16	176	Best Case: 4 days x 10 hr/day x 20 FTEs x \$75/hr Most Likely Case: 16 days x 10 hr/day x 20 FTEs x \$75/hr Worst Case: 176 days x 10 hr/day x 20 FTEs x \$75/hr	Propose Shared to DOE			
	NKCF038	0.4.06.37	IEC	Reese, Craig	Almah, Amin	New OSHA Call - Subcontractor / Lower Tier Contractor Schedule Does Not Align With IEC Baseline Schedule	Proposed subcontractor schedule could differ from the actual time it takes the subcontractor to perform the site prep and excavation, which will result in schedule delays and unforeseen costs.	Subcontractor schedule is different than proposed baseline schedule.	Realized	Threat	Accept	Possible	Minor	2-Low	\$ 30,000	\$ 60,000	\$ 300,000	2	4	20	Best Case: 2 days x 10 hr/day x 30 FTEs x \$75/hr Most Likely Case: 4 days x 10 hr/day x 30 FTEs x \$75/hr Worst Case: 20 days x 10 hr/day x 30 FTEs x \$75/hr	N/A			
	NKCF039	0.4.06.37	IEC	Reese, Craig	Almah, Amin	New OSHA Call - Subcontractor / Lower Tier Contractor Schedule Does Not Align With IEC Baseline Schedule	Proposed subcontractor schedule could differ from the actual time it takes the subcontractor to perform the site prep and excavation, which will result in schedule delays and unforeseen costs.	Subcontractor schedule is different than proposed baseline schedule.	Realized	Threat	Accept	Possible	Minor	2-Low	\$ 30,000	\$ 60,000	\$ 300,000	2	4	20	Best Case: 2 days x 10 hr/day x 30 FTEs x \$75/hr Most Likely Case: 4 days x 10 hr/day x 30 FTEs x \$75/hr Worst Case: 20 days x 10 hr/day x 30 FTEs x \$75/hr	N/A			
	NKCF040	0.5.1.00.5.0.13, 0.5.0.3.02.30.21	EC	Burtonshaw, Shanna	Larson, Eric	NM - Asset Reliability - Loss of Contamination Control	Loss of contamination control (outside DOE boundaries) during decontamination may result in personnel contamination and/or extended shutdown for remediation.	An unanticipated event driven by discovery of contamination outside of the boundary, possibly portable or reactor.	Open	Threat	Accept	Unlikely	Moderate	2-Low	\$ 100,000	\$ 500,000	\$ 1,000,000	10	24	32	Impacts are estimated based on loss of contamination requiring a stop back and recovery planning, additional surveys and DPE, and execution to recover the area.	N/A			
	NKCF009	0.5.1.02	IEC	Burtonshaw, Shanna	Larson, Eric	NM - Asset Reliability - NRP Waste Gate Access	The West entrance for NRP using gate 4 has limited ingress/egress for the heavy equipment and waste logistics due to high voltage conductors overhead.	The heavy equipment and waste loads ingress/egress from NRP through gate 4 will have a load limit no greater than 12' in height that will require an alternate route or complicated work around scenarios.	Open	Threat	Accept	Unlikely	Minor	2-Low	\$ 21,000	\$ 42,000	\$ 84,000	4	8	16	Best Case: 4 days x 10 hr/day x 7 FTEs x \$75/hr Most Likely Case: 8 days x 10 hr/day x 7 FTEs x \$75/hr Worst Case: 16 days x 10 hr/day x 7 FTEs x \$75/hr	N/A			
	NKCF010	0.5.1.02	IEC	Burtonshaw, Shanna	Larson, Eric	NM - Asset Reliability - A3W Turnover Delays	This work scope is based off an FPM schedule with a phased approach to turnover and transfer auxiliary A3W facilities to IEC starting Jan 1, 2023. If the transfer does not happen as scheduled there is a risk of schedule and associated cost delays and/or budget overruns.	A3W turnover phases are not turned over as scheduled.	Open	Threat	Accept	Rare	Minor	2-Low	\$ 21,000	\$ 42,000	\$ 84,000	4	8	16	Best Case: 4 days x 10 hr/day x 7 FTEs x \$75/hr Most Likely Case: 8 days x 10 hr/day x 7 FTEs x \$75/hr Worst Case: 16 days x 10 hr/day x 7 FTEs x \$75/hr	N/A			
	NKCF011	0.5.0.1.32	IEC	Burtonshaw, Shanna	Larson, Eric	NM - Asset Reliability - Personnel Absition	Key personnel have several individuals becoming harder, requiring contractor support to complete the work. The potential exists for minor additional costs & schedule delays.	Absition realized.	Open	Threat	Accept	Rare	Moderate	2-Low	\$ 17,500	\$ 225,000	\$ 337,500	5	30	30	Best Case: 5 days x 10 hr/day x 18 FTEs x \$75/hr = \$157,500 Most Likely Case: 30 days x 10 hr/day x 18 FTEs x \$75/hr = \$1,350,000 Worst Case: 30 days x 10 hr/day x 18 FTEs x \$75/hr = \$1,350,000	N/A			
	NKCF012	0.5.0.1.32	IEC	Burtonshaw, Shanna	Larson, Eric	NM - Asset Reliability - Industrial Incidents Resulting in Shutdowns	An industrial incident resulting in serious personal injury may cause an extended shutdown to resolve control of operations issue.	An unanticipated accident resulting in injury or near miss.	Open	Threat	Accept	Unlikely	Critical	3-Minor	\$ 750,000	\$ 1,500,000	\$ 3,000,000	100	180	204	Best Case: 100 days x 10 hr/day x 8 people x \$93/hr = \$750,000 Most Likely Case: 180 days x 10 hr/day x 8 people x \$93/hr = \$1,500,000 Worst Case: 204 days x 10 hr/day x 8 people x \$93/hr = \$1,890,000	N/A			
	RYTR00182	0.2.04.30.14	EC	Troesch, Pat	Mitchell, Jason	RY-780 Waste Processing - Achieving PFM/25 Processing Lat 11 Containers Due to Critical Failure of Equipment	Achievement of the PFM/25 milestone of processing 10 Lat 11 containers, due to inability to treat sodium waste with complex geometries, impacts the Waste Settlement Agreement (WSA) and delays to site treatment plan scheduled agreement with DOE to have all the 11W waste out of the State of Idaho.	Critical failure of facility support equipment and lack of funding specific to: 1. Procure manipulators 2. Design, procure, and modify FDA in-cell crane from analog to digital.	Open	Threat	Accept	Unlikely	Moderate	2-Low	\$ 200,000	\$ 300,000	\$ 600,000	16	32	64	Costs are based on fees associated with missed delivery date. Best Case: 16 days down time x 20 FTEs x \$41.50/hr x 10hr = \$132,800 fee Most Likely: 32 days down time x 20 FTEs x \$41.50/hr x 10hr = \$265,600 fee Worst Case: 64 days down time x 20 FTEs x \$41.50/hr x 10hr = \$531,200 fee	Actions include: • The MSM critical spare parts for the Models FX, F, and G is based on current critical spare parts inventory, consumption of critical spares, and lead times to receive replacement parts from the vendor. The system engineer supporting the project tracks and maintains the inventory for the critical MSM and some PM spare parts currently installed in the CPP-603 FOP and CPP559 NRCOP hot cells. A new PM tube assembly was procured and installed in the CPP-666 hot cell. • Monthly and annual PM's are performed on the PM's in both CPP-603 and CPP-666. • Monthly and annual PM's are performed on the in-cell and facility cranes for both CPP-603 and CPP-666. There are spare electrical components (i.e., circuit boards, fuses, and relays) for the in-cell and facility cranes. • Semi-annual, Annual, and 5-year PM's are performed on the elevator in both facilities. • A complete CPP-603 full active assembly has been procured and has been received. However, these steps do not entirely mitigate the equipment failure risk and the risk of DOE renewal since they plan to provide funding for procurement of manipulators and upgrades to the FOP in cell crane from analog to digital. Make DOE aware of the risk of not funding.			
	RYTR00182	0.2.04.30.14	EC	Troesch, Pat	Mitchell, Jason	RY-780 Waste Processing - Achieving PFM/25 Processing Lat 11 Containers Due to Critical Failure of Equipment	Achievement of the PFM/25 milestone of processing 10 Lat 11 containers, due to inability to treat sodium waste with complex geometries, impacts the Waste Settlement Agreement (WSA) and delays to site treatment plan scheduled agreement with DOE to have all the 11W waste out of the State of Idaho.	Complex geometries containing sodium or waste containing significant quantities (100g) of fuel are found in repackaging Lat 11 waste.	Open	Threat	Accept	Unlikely	Minor	2-Low	\$ 16,600	\$ 33,200	\$ 66,400	8	16	32	Schedule impact is based off SCS system being down and in need of repair. Best Case: 8 days down time x 5 FTEs x \$41.50/hr x 10hr = \$16,600 Most Likely Case: 16 days down time x 5 FTEs x \$41.50/hr x 10hr = \$33,200 Worst Case: 32 days down time x 5 FTEs x \$41.50/hr x 10hr = \$66,400	N/A			
	RYTR003	0.2.04.30.14	EC	Troesch, Pat	Mitchell, Jason	RY-780 Waste Processing - Processing Lat 11 Containers	Processing Lat 11 containers are taking longer than planned due to inaccurate generator information. Causing the use of OT to catch up.	Inaccurate generator information.	Open	Threat	Mitigate	Possible	Minor	2-Low	\$ 24,900	\$ 49,800	\$ 97,600	2	4	8	Best Case: 2 days OT x 20 FTEs x \$41.50/hr x 10hr = \$16,600 Most Likely: 4 days OT x 20 FTEs x \$41.50/hr x 10hr = \$33,200 Worst Case: 8 days OT x 20 FTEs x \$41.50/hr x 10hr = \$66,400	N/A	Implement overtime to recover schedule slippage and reduce further schedule interruptions.		
	SNF0070	0.1.02.23.31	IEC	Elsworth, Carla	Wuhrschulte, Steve	Advanced Fuel Reactor (AFR) - ATR - Reactor Fuel Manipulator (RFM) - ATR-402	ATR-402: Transfers are delayed because of a malfunctioning CPP-603 Fuel Manipulator (FM) - ATR-402.	While operating the CPP-603 Fuel Manipulator (FM) - ATR-402, certain fuel manipulator appear to be or are abnormal/malfunctioning. Failure of the manipulators results in schedule delays.	Open	Threat	Accept	Unlikely	Minor	2-Low	\$ 107,016	\$ 214,032	\$ 535,080	7	14	35	Best Case: 7 days x 12 hr x 13 FTEs x \$59/hr = \$72,052 Most Likely Case: 14 days x 12 hr x 13 FTEs x \$59/hr = \$144,104 Worst Case: 35 days x 12 hr x 13 FTEs x \$59/hr = \$350,266	N/A	Maintain the PAK Work with BEA to rechedule ATR repairs.		
	SNF0082	0.1.02.23.31	IEC	Elsworth, Carla	Wuhrschulte, Steve	Advanced Fuel Reactor (AFR) - ATR - Reactor Fuel Manipulator (RFM) - ATR-402	ATR-402: High rail falls in the case cause premature failure of the camera in the Camera Failure Due to High Radiation Fields.	Failed remote camera under or prevent normal fuel handling operations in the CPP-603 FOP case and fuel storage area.	Open	Threat	Mitigate	Unlikely	Minor	2-Low	\$ 42,864	\$ 214,032	\$ 428,064	3	14	28	Best Case: 3 days x 12 hr x 13 FTEs x \$59/hr = \$72,052 Most Likely Case: 14 days x 12 hr x 13 FTEs x \$59/hr = \$144,104 Worst Case: 28 days x 12 hr x 13 FTEs x \$59/hr = \$288,208	N/A	In the majority of instances, alternative cameras can be utilized to allow the continuation of operations. Perform Camera Backup Camera.		
	SNF0092	0.1.02.24.02	IEC	Johnson, Walter	Wuhrschulte, Steve	CFR-200 14 Containment Vials Requirements - Changing CFR-200 Security Requirements	CFR-200 Remediation: Project activities are delayed because of changing CFR-249 Requirements derived from planned security related vulnerability assessments imposed on remote security controls.	Requirements derived from planned security related vulnerability assessments imposed on remote security controls.	Open	Threat	Accept	Possible	Minor	2-Low	\$ 45,864	\$ 214,032	\$ 428,064	3	14	28	Best Case: 3 days x 12 hr x 13 FTEs x \$59/hr = \$72,052 Most Likely Case: 14 days x 12 hr x 13 FTEs x \$59/hr = \$144,104 Worst Case: 28 days x 12 hr x 13 FTEs x \$59/hr = \$288,208	N/A	Work with DOE/BEA to ensure project activities comply with security plan.		

T03 Phase 2 Risk Register

Wabco Cleanse Project Programmatic Risk Register												Cost Impacts			Schedule Impacts (in days)									
Risk ID	WBS	Responsible Organization	EC POC	DOE PFD	Risk Title	Risk Description	Trigger Event	Status	Risk Type	Headline Strategy	Risk Event Likelihood	Risk Impact	Risk Rating	Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case	Mitigation Actions	Risk Corrective Actions	Notes		
SNF0102	0.1.0.2.34.02	IEC	Johnson, Walter	Wahschulte, Steve	<u>CPY-261 3rd Generation Vault Remediation</u> Measure: Stacking Results in Exceeding Radiation Level	CPY-261 Remediation: Interim Storage Area (ISA) shielding is determined to be inadequate, resulting in radiation levels higher than those allowed for extended work in the 1st Generation Vault area.	Radiation Technician surveys of the 1st Generation Vault area indicate higher than allowable radiation levels.	Open	Threat	Accept	Possible	Minor	2-Low	\$ 107,016	\$ 214,032	\$ 531,080	7	14	35	Best Case: 7 days X 12 hr X 13 FTEs X \$98/hr Most Likely: 14 days X 12 hr X 13 FTEs X \$98/hr Worst Case: 35 days X 12 hr X 13 FTEs X \$98/hr	N/A	Work with Radiation protection, engineering, and waste management to mitigate radiation levels.		
SNF0130	0.1.0.2.34.02	IEC	Johnson, Walter	Wahschulte, Steve	<u>CPY-261 3rd Generation Vault Remediation</u> Measure: Corrective Action in Fuel Pack Removal	CPY-261 Remediation: Fuel packages stored in certain Pouch Bottom vaults are found to have excessive corrosion, precluding normal fuel package removal methods.	1) During Pouch Bottom vault inspections, corrosion capable of penetrating the structural integrity of the fuel package lifting hardware is observed. 2) A discharge of fuel is observed when lifting a fuel package to visually inspect its bottom.	Open	Threat	Accept	Possible	Minor	2-Low	\$ 107,016	\$ 214,032	\$ 531,080	7	14	204	Best Case: 7 days X 12 hr X 13 FTEs X \$98/hr Most Likely: 14 days X 12 hr X 13 FTEs X \$98/hr Worst Case: 35 days X 12 hr X 13 FTEs X \$98/hr	N/A	Fuel packages will be visually inspected prior to being lifted for the purpose of identifying corrosion. If an inspected fuel package is determined to be compromised because of corrosion, then, following the fuel package will be delayed until a recovery plan is developed/approved and readied to work. A conceptual design for removal equipment capable of safely lifting a compromised fuel package has been developed and reviewed by DOE.		
SNF0150	0.1.0.2.32.31	IEC	Elsworth, Carla	Wahschulte, Steve	<u>Advanced Fuel Reactor (AFR) DOE Research</u> Measure: Schedule Delay Caused by ATR	ATR Direct: IEC schedule delay caused by ATR.	Equipment vendor and/or operations delays at ATR cause delayed or moved shipment dates to RT/EC.	Open	Threat	Mitigate	Almost Certain	Minor	2-Low	\$ 45,864	\$ 1,700,000	\$ 1,700,000	3	208	208	Best Case: 4 days X 12 hr X 13 FTEs X \$98/hr Most Likely: 14 days X 12 hr X 13 FTEs X \$98/hr Worst Case: 28 days X 12 hr X 13 FTEs X \$98/hr	Alternative work activities will be made available by upper management on the event of an ATR schedule delay.	N/A		
SNF0162	0.1.0.2.32.31	IEC	Elsworth, Carla	Wahschulte, Steve	<u>Advanced Fuel Reactor (AFR) DOE Research</u> Measure: Detonate Clamps Malfunction	ATR Direct: Detonate clamps are partially open or closed and prevent movement of fuel loader canisters.	Detonate clamps found to be damaged or damaged when attempting to open/close a clamp.	Open	Threat	Accept	Possible	Critical	4-High	\$ 1,238,258	\$ 2,308,608	\$ 2,636,422	96	180	204	Best Case: 96 days X 10 hr X 13.36 FTEs X \$98/hr = \$1,238,258 Most Likely: 180 days X 10 hr X 13.36 FTEs X \$98/hr = \$2,308,608 Worst Case: 204 days X 10 hr X 13.36 FTEs X \$98/hr = \$2,636,422		N/A		
SNF0250	0.1.0.4.02.02	IEC	Cottner, Jakeson	Wahschulte, Steve	<u>DOE Strategic Facility</u> Vendor Selection	The BRDP determines which vendor and BRFC system will be used. The selection changes the SNF of Base of Design, and Safety Design (SDS). The design requires updates as well as SDS assessments, strategy, and hazards.	The BRDP selects a different vendor than originally anticipated.	Open	Threat	Mitigate	Possible	Critical	4-High	\$ 650,000	\$ 1,450,000	\$ 2,350,000	120	180	300	Cost Ranges: SDS Research: \$200K, 400K, 700K Design Research: \$100K, 750K, 1M EC management and DOE coordination: \$150K, 300K, 600K	Perform a Q2 assessment to evaluate the subcontractor's quality program. The contractor has to be an NQA-1 qualified for equipment and quality level Q2-3.	N/A	Lead Road Readiness is setting to get the contractor approved at an appropriate quality level Q2-3.	
SNF039	0.1.0.4.03.03	IEC	Cottner, Jakeson	Wahschulte, Steve	<u>DOE Strategic Facility</u> Nuclear Safety Documents	Per 15D-1189-2026 it was determined that the Staging Facility will be a simple modification and be able to fall under existing SAR 122 and SAR 134. This means that a Safety Design Strategy will not be performed for this project. The building may not be a simple mod and that a Safety design strategy will be required.	DOE evaluation determines that the Staging Facility is a major modification.	Realized	Threat	Accept	Possible	Critical	4-High	\$ 500,000	\$ 750,000	\$ 1,000,000	104	156	208	Best Case: 104 days and increase of \$500,000 Most Likely Case: 156 days and increase of \$750,000 Worst Case: 208 days and increase of \$1M	N/A	Discuss the safety design strategy early in the project and frequently, IEC to state position and work with DOE Nuclear Safety group.		
SNF042	0.1.0.4.02.02	IEC	Cottner, Jakeson	Wahschulte, Steve	<u>DOE Strategic Facility</u> Security System and Facility Design Contract	There are two design aspects considered for the DOE SNF of BRFC will perform the security design for the DOE SNF of 2) The SNF of post design will be performed via subcontract. Work performed for the interdependent design needs scheduled duration(s).	Agreements/contracts are not established as planned. The designs do not maintain the schedule duration. BEA does not perform the security design causing for additional time to setup a contract.	Open	Threat	Mitigate	Possible	Moderate	2-Low	\$ 200,000	\$ 500,000	\$ 1,000,000	24	32	56	Best Case: 2 weeks @ 40hr/week x 1 FTE @ \$100/hr = 4 weeks @ 95 hr for sub administration @ \$80/hr Most Likely: 4 weeks @ 40hr/week x 1.5 FTE @ \$100/hr = 4 weeks @ 95 hr for sub administration @ \$80/hr Worst Case: 8 weeks @ 40hr/week x 2 FTE @ \$100/hr = 6 weeks @ 95 hr for sub administration @ \$80/hr	N/A	Integrate the requirement of a contract. Develop a second statement of work and contract a total engineering firm to perform the security design.		
SNF054	0.1.0.2.34.02	IEC	Johnson, Walter	Wahschulte, Steve	<u>DOE Strategic Facility</u> Mobile Crane Maintenance	Exceeding the Mobile Crane manufacturer's recommended operating hours for performing routine maintenance delays Pouch Bottom transfers.	Mobile Crane operator exceeds the machine's monitoring system and concludes the manufacturer's recommended operating hours are exceeded.	Realized	Threat	Mitigate	Possible	Minor	2-Low	\$ 15,500	\$ 46,000	\$ 62,000	1	2	4	Best Case: 1 day equipment/maintenance Most Likely Case: 2 days equipment/materials Worst Case: 4 days equipment/materials	1) Increase periodicity of planned maintenance. 2) Perform additional routine observations to the machine's monitoring system to ensure maintenance can be planned and performed in accordance with the manufacturer's recommendations. 3) The crane will be removed and sent to CFA to shop for preventative maintenance.	N/A		
SNF314	0.1.0.2.36.08	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Supplier Delay - Holtec	Road Ready Project: Delay of Holtec (Fabrication and Design) being on the OSL as a O2 supplier in compliance with QARD Rev 212 and SAR 134. This means that a Safety Design Strategy will not be performed for this project. The building may not be a simple mod and that a Safety design strategy will be required.	Holtec: unable to meet requirements to be placed on the OSL as a O2 supplier in compliance with QARD Rev 20 supplier.	Realized	Threat	Accept	Almost Certain	3-Major	3-High	\$ 750,000	\$ 1,500,000	\$ 2,250,000	31	48	144	Holtec is currently certified as a O2-3 supplier for Engineering Services only on IEC's OSL but not in compliance with QARD Rev 20. O2-4s outside scheduled time for fabrication facility.		N/A		
SNF326	0.1.0.2.36.08	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Delay of Items Provided by Holtec	Road Ready Project: Delay of delivery of Holtec provided items will cause a significant delay to the project.	Holtec: unable to receive material or fabricate items according to IEC schedule.	Open	Threat	Accept	Possible	Major	4-High	\$ 750,000	\$ 1,500,000	\$ 3,000,000	48	96	192	Work with Holtec to identify possible delays due to supply chain issues. Also investigate by purchasing long lead items at risk to minimize impacts to schedule.		N/A		
SNF327	0.1.0.2.36.07	IEC/DOE	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Delay of Delivery of DOESCs	Road Ready Project: Delay of delivery of DOESCs will cause a delay to the project.	DOESC fabrication not completed according to IEC/BEA schedule. Delay of delivery of DOESCs.	Open	Threat	Show	Possible	Critical	4-High	\$ 750,000	\$ 1,500,000	\$ 3,000,000	96	192	288	DOESC fabrication is included in BEA's scope but being transferred to IEC per 440-00. IEC will need DOE concurrence to fully assume Design Authority and Delivery of DOESCs.	Work with BEA to identify possible delays due to supply chain issues. Also investigate by purchasing long lead items at risk to minimize impacts to schedule. O2-4s outside scheduled time for fabrication facility. BEA and IEC will need DOE concurrence to fully assume Design Authority and Delivery of DOESCs. The costs listed from delays are based on a \$150/day cost to operate a SNF crane.		N/A	
SNF330	0.1.0.2.36.07	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Path Equipment Failure	Road Ready Project: 402 Path replacement Project delay or lack of funding could cause delay to BRDP in the event of Path equipment failure.	Path failure will result in limited ability to load DOESCs.	Open	Threat	Show	Possible	Major	4-High	\$ 250,000	\$ 500,000	\$ 750,000	48	96	192	By keeping all PM's current, this will allow for continued use of the Path until funding can be obtained to upgrade or replace. These PM's will also track potential issues. Additionally, infrastructure is scheduled to upgrade the Path in the coming year. An additional spare Path is being refurbished as a backup in the event of a PM failure.		N/A		
SNF331	0.1.0.2.36.07	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Failed Root Weld	Road Ready Project: BEA/USRB weld repair machine cannot successfully repair a failed root weld.	Failed root weld inspection.	Open	Threat	Accept	Unlikely	Serious	3-High	\$ 500,000	\$ 750,000	\$ 1,000,000	8	16	24	For the Road Ready Demonstration, 10 DOESCs will be processed. The Demonstration will be loading 2 DOESCs with 3 spacers in the event of a compromised DOESC. The fuel can be relocated into a spare DOESC and welded. Additionally, the welding will be done in the PCS which will also allow for safely manually grinding of the weld.		N/A		
SNF332	0.1.0.2.36.07	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> BEA Leak Testing Fats	Road Ready Project: BEA Leak testing cannot successfully seal on DOESC causing a delay in the project.	BeE per week fail successful sealing.	Open	Threat	Show	Possible	Major	4-High	\$ 1,200,000	\$ 1,800,000	\$ 3,000,000	48	96	144	BEA procurement of different seals to correct deficiencies to allow for successful leak testing. If alternative seals are not successful, BEA to correct design of fuel can. Additionally, BEA has identified a backup commercially provided system in the event the Leak Tester System is not available.		N/A		
SNF333	0.1.0.2.36.06	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Complication of West Truck Ramp Connection	Continuation of the West Truck Ramp Fill in encounter unknown anomalies which causes a delay in schedule and added costs to project.	During execution of the West Truck Ramp Fill in, unexpected facility/soil conditions are encountered.	Open	Threat	Accept	Likely	Moderate	3-High	\$ 250,000	\$ 500,000	\$ 750,000	16	18	32	Plan to perform a geotechnical investigation. All team members performing or monitoring work will be briefed on the nature of the facility including age and possible unknown conditions. Engineers to provide oversight and help receive issues encountered to minimize schedule impact.		N/A		
SNF335	0.1.0.2.36.06	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Dripped Cask in the Crane Envelope	During operations in the event of a drop of the cask in the crane envelope, significant damage could be sustained to the facility.	During operations, a cask drop occurs.	Open	Threat	Accept	Likely	Serious	4-High	\$ 150,000	\$ 300,000	\$ 450,000	32	64	96	During the design process, MCP-3358 to evaluate the structural integrity of the facility and modifications will be followed. If the analysis shows failure of the west truck ramp will occur, the movement of the Cane will be mitigated by administrative controls in the proper procedure. If a cask drop occurs during operations, MCP-3358 will be followed to determine extent of the damage.		N/A		
SNF336	0.1.0.2.36.06	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Drop Analysis of Cask Determines Potential to Structure Damage	If the analysis of a drop of a cask determines damage will be done to the S5 structure of the facility, modification may be needed to further support facility structure.	During operations, a cask drop occurs.	Open	Threat	Accept	Likely	Serious	4-High	\$ 150,000	\$ 300,000	\$ 450,000	32	64	96	During the design process, MCP-3358 to evaluate the structural integrity of the facility and modifications will be followed. If the analysis shows failure of the west truck ramp will occur, the movement of the Cane will be mitigated by administrative controls in the proper procedure. If a cask drop occurs during operations, MCP-3358 will be followed to determine extent of the damage.		N/A		
SNF337	0.1.0.2.36.06	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Drop Analysis Delay	Road Ready Project: Analysis of a drop of a cask is required to be done prior to SAR revision. If analysis is not performed, then the project may be delayed.	During operations, a cask drop occurs.	Open	Threat	Accept	Likely	Serious	4-High	\$ 250,000	\$ 500,000	\$ 750,000	32	64	96	Drop analysis will determine maximum height cask can be lifted for the crane envelope. Administrative controls will be incorporated into procedures to minimize structural damage to facility in the event of a cask drop.		N/A		
SNF338	0.1.0.2.36.06	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Transfer Route Not Approved	Road Ready Demonstration Transfer route is not approved for Vertical Cask Transporter (VCT) use.	Engineering evaluation of potential transfer routes identifies that no route is acceptable for VCT.	Open	Threat	Mitigate	Likely	Critical	5-Very High	\$ 1,500,000	\$ 3,000,000	\$ 4,500,000	48	96	144	Usage of VCT is preferred due to design of casks. Potential cost improvements will be identified as necessary for usage of VCT.		N/A		
SNF339	0.1.0.2.36.06	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Insufficient Maintenance Funding	Road Ready Project schedule may be delayed in the event that insufficient maintenance funding is available to update facilities, systems, equipment, and infrastructure or recover from significant system failures.	Failure of components, system, equipment, or structures.	Open	Threat	Accept	Likely	3-Moderate Critical	5-Very High	\$ 1,500,000	\$ 3,000,000	\$ 4,500,000	96	192	288	Identified by Engineering as a necessary upgrade to CPY-603 to continue operation/support future projects such as the Packaging Demonstration.		N/A		
SNF342	0.1.0.2.36.03	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: O2-4s Crane Failure Impacts 123 or 403	Key operations will be impacted by 123 or 403 crane failure in CPY-603 fuel handling.	During crane fuel movements the crane fails to respond as designed.	Open	Threat	Accept	Possible	3-Moderate Major	3-High	\$ 600,000	\$ 1,200,000	\$ 1,800,000	48	48	96	Engineering has evaluated the crane electrical system and recommends that the fuses be replaced to increase reliability.		N/A		
SNF347	0.1.0.2.36.08	IEC	Wooldenhulme, Tyson	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Delay in PCS Modifications	Due to facility layout and any delay in work on the West Truck Ramp Fill in could potentially cause a delay in Permanent Containment Structure (PCS) modifications.	Work on the West Truck Ramp Fill in presents work on the PCS modifications due to work in same area being scheduled on same day.	Open	Threat	Accept	Likely	3-Moderate	3-Moderate	\$ 250,000	\$ 500,000	\$ 750,000	16	32	48	Project Management and work with work crews during construction to identify any potential delays during Truck Ramp Fill in and schedule PCS modifications accordingly. Additionally, any work that can be performed on the PCS modifications outside of the affected area will be identified and performed to not impact schedule.		N/A		
SNF352	0.1.0.2.30	IEC	Johnson, Walter	Wahschulte, Steve	<u>DOE Road Ready Demonstration Project</u> Measure: Manpower Crews	Project has to maintain crews in the event BEA does not send the planned ATR receipts.	BEA sends less than the planned ATR receipts.	Open	Threat	Accept	Possible	Serious	3-Moderate	\$ 240,000	\$ 720,000	\$ 960,000	16	48	184	Impacts are estimated based on the \$120,000 per transfer that cost recovery and amount of time crews have to be allocated to different scopes.		N/A		
SNF353	0.1.0.2.33	IEC	Elsworth, Carla	Wahschulte, Steve	<u>DOE Project is More Complex Than Originally Planned</u>	After beginning the Distributed Control System project, scope is realized to be more complex than originally anticipated. This will result in schedule and cost increases to install and activate systems.	Emergent problems and/or more complex systems are discovered that require attention before moving forward.	Emerging	Threat	Accept	Likely	Major	4-High	\$ 100,000	\$ 800,000	\$ 1,500,000	23	79	143	Impacts are estimated based on historical variance and SME judgement for other project projections.		N/A		
SNF354	0.1.0.2.33	IEC	Elsworth, Carla	Wahschulte, Steve	<u>DOE Schedule Delays Due to Higher Priority</u>	Other work takes priority and pushes out install of DCS panels. Results in schedule delays.	Other projects take priority over DCS.	Open	Threat	Accept	Possible	Moderate	3-High	\$ 15,000	\$ 75,000	\$ 300,000	12	33	96	Impacts are estimated based on SME judgement for other project projections.		N/A		
SNF355	0.1.0.2.33	IEC	Elsworth, Carla	Wahschulte, Steve	<u>DOE Loss of SME Experience</u>	Loss experienced staff take longer to complete schedule activities than originally planned. The project will experience schedule delays and cost increases.	Project loses experienced personnel.	Emerging	Threat	Accept	Possible	Major	4-High	\$ 30,000	\$ 150,000	\$ 250,000	16	87	176	Estimates are based on historical variance and SME judgement.		N/A		

T03 Phase 2 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated: 1-29-25

Risk ID	WBS	Responsible Organization	IEC POC	DOE PFD	Risk Title	Risk Description	Trigger Event	Status	Risk Type	Mitigation Strategy	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Mitigation Actions	Risk Corrective Actions	Notes				
														Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case							
TRU036	D.2.03.02.05	EC	Martin, David	Jenkins, Tally	<u>On-TRU Treatment Facility Support</u> , Ammonium Nitrate Chargeout	Difficult/delays caused by not being able to determine the best path forward to be able to treat and package Ammonium Nitrate bearing waste in a safe and compliant manner.	Ammonium Nitrate waste requires reprocessing or testing	Open	Threat	Mitigate	Likely	Serious	4 High	\$	\$6,000	\$	\$192,000	\$	\$384,000	32	64	128	Best Case: 32 days x 10 hr./day x 4 people x \$75/hr. = \$96,000 Most Likely: 64 days x 10 hr./day x 4 people x \$75/hr. = \$192,000 Worst Case: 128 days x 10 hr./day x 4 people x \$75/hr. = \$384,000	Implement the usage of overtime to recover any schedule slippage and prevent total schedule loss.	N/A	
TRU039	D.2.03.02.04	EC	Martin, David	Jenkins, Tally	<u>AMWTF RCDF Maintenance</u> , Replacement Parts Are Out of Compliance or Unavailable	Advanced Mixed Waste Treatment Project (AMWTF) is an aging facility and project in need of constant repairs for continued operations.	Parts and equipment are unavailable or obsolete to keep equipment operating.	Open	Threat	Mitigate	Almost Certain	Serious	5 Very High	\$	\$50,000	\$	\$500,000	\$	\$1,000,000	16	64	128	Impacts are estimated based on replacing/repairing equipment.	Institute planned and regular communication with purchasing department and vendors to ensure that necessary items are stocked ahead of time to meet work scope demands and with additional stock for back log portions.	N/A	
TRU040	D.2.03.01.06	EC	Byram, George	Jenkins, Tally	<u>On-TRU Waste Processing</u> , EPA Cannot Complete Potential Classified Document Reviews	If REA is not available to complete potential classified document reviews, then reviews of required Waste Isolation Pilot Plant (WIPP) documents cannot be completed.	Funding is not available for REA document reviews.	Open	Threat	Accept	Likely	Critical	5 Very High	\$	\$16,000	\$	\$312,000	\$	\$468,000	104	208	312	Best Case: 104 days x 10 hr./day x 2 people x \$75/hr. = \$156,000 Most Likely: 208 days x 10 hr./day x 2 people x \$75/hr. = \$312,000 Worst Case: 312 days x 10 hr./day x 2 people x \$75/hr. = \$468,000	N/A	Attempt to ensure documents can be provided for CDFC review to support waste certification and the annual renotification audit.	
TRU041	D.2.05.00.17	EC	Orme, Jason	Jenkins, Tally	<u>Non-AMWTF Treatment and Disposal</u> , Equipment Failure	In the event that equipment fails, it will need to be repaired or the project will need to procure a replacement.	If any of the following equipment fails: Botical EOG, Trencher/Tractor, Top Soil Deck Over 5th Wheel.	Open	Threat	Mitigate	Likely	Moderate	3 Moderate	\$	\$18,000	\$	\$26,000	\$	\$34,000	16	32	48	Equipment Costs per DCIS sheet / Lease Rates for Equipment Total \$56,700 - 20% Equipment Potential Failure - Daily Rates 20% Failure than Monthly Rates.	Procure or lease backup equipment to resume operations.		
TRU042	D.2.05.00.18	EC	Orme, Jason	Jenkins, Tally	<u>Non-AMWTF Treatment and Disposal</u> , Treatment, Storage, and Disposal Facility (TSDF) Closure	When TSDF is unable to receive waste, transportation of that waste will be delayed. It may then become necessary to work overtime to receive a replacement.	TSDF discontinues receiving of waste.	Open	Threat	Mitigate	Possible	Minor	2 Low	\$	\$7,820	\$	\$18,840	\$	\$18,840	8	12	16	Best Case: 8 days x 10 hr./day x 6 FTEs x \$75/hr. = \$36,000 Most Likely: 12 days x 10 hr./day x 6 FTEs x \$75/hr. = \$54,000 Worst Case: 16 days x 10 hr./day x 6 FTEs x \$75/hr. = \$72,000	Work overtime to recover and prevent further loss of schedule for treatment storage and disposal facility (TSDF).		
TRU043	D.2.05.00.19	EC	Orme, Jason	Jenkins, Tally	<u>Non-AMWTF Treatment and Disposal</u> , Waste Container Treatment, Storage, and Disposal Facility (TSDF) Certification Failure	During the verification process, if a waste container(s) is found to not be in accordance with the TSDF Waste Acceptance Criteria (WAC), the waste will need to be reworked.	A container(s) is identified as damaged, packaged incorrectly, containing unclassified waste, containing prohibited items, etc.	Open	Threat	Mitigate	Rare	Minor	1 Low	\$	\$4,000	\$	\$1,000	\$	\$10,000	4	6	8	Equipment Costs per DCIS sheet / Lease Rates for Equipment Total \$56,700 - 20% Equipment Potential Failure - Daily Rates 20% Failure than Monthly Rates.	Ensure proper training and qualifications.	N/A	
TRU044	D.2.05.00.21	EC	Orme, Jason	Jenkins, Tally	<u>Non-AMWTF Treatment and Disposal</u> , Emergency Equipment Linked Paper	If critical equipment which supports daily operations fails, we will need to procure a replacement.	Critical equipment failure at EPP-1617.	Open	Threat	Mitigate	Likely	Serious	4 High	\$	\$18,000	\$	\$26,000	\$	\$34,000	30	60	90	Equipment Costs per DCIS sheet / Lease Rates for Equipment Total \$56,700 - 20% Equipment Potential Failure - Daily Rates 20% Failure than Monthly Rates.	Procure required backup equipment to resume operations.		
TRU045	D.2.01.00	EC	Orme, Jason	Jenkins, Tally	<u>Waste Characterization Services</u> , Failure to Upgrade Waste Tracking System	The current Waste Tracking System (WTS) is outdated and in need of a significant upgrade. If an upgrade is not performed, the project is at risk of consistent stop work orders to perform repairs.	Dated WTS fails during project operations.	Open	Threat	Accept	Likely	Minor	2 Low	\$	\$,500	\$	\$24,000	\$	\$72,000	1	16	48	Best Case: 5 days x 10 hr./day x 2 people x \$75/hr. = \$7,500 Most Likely: 16 days x 10 hr./day x 2 people x \$75/hr. = \$24,000 Worst Case: 48 days x 10 hr./day x 2 people x \$75/hr. = \$72,000	N/A		
TRU049	D.2.03.00.04	EC	Vargjok, Matthew	Jenkins, Tally	<u>AMWTF LRU/RAW</u> , Generated RCMA Waste	Require Generation and Recovery Act (RCMA) waste that is generated as part of operations must be shipped offsite within 1 year of generation or IEI must provide documentation for waste with no path to disposition. There is risk for funding to not be adequate for this scope due to it taking lower priority. If this risk were to materialize, it would affect shipments to commercial facilities (i.e. Energy Solutions (ES), Waste Control Specialists (WCS), Perma-Fix Florida (PFF)). If we fail to meet the one year to get rid of our New Gen RCMA waste, the DEQ (or EPA if superseded) will likely issue a compliance order, unless we can prove why we need to extend the one year. It is not likely they will extend the one year for routine newly Generated RCMA waste (i.e. there is no special waste content reason, only funding being the issue). If they issue a compliance order, and we don't meet the terms per their timeline, they can charge us \$37,500 per day until resolved. Not only will there be financial risk, but we also risk suspension/losing our RCMA Permit(s) based on the following rule: §30002. Violation of Compliance Order If a violator fails to take corrective action within the time specified in a compliance order, the Administrator may assess a civil penalty of not more than \$37,500 for each day of continued noncompliance with the order. In addition, the EPA Administrator may suspend or revoke any permit issued to the violator (whether issued by the Administrator or the State). If our RCMA permit is suspended or revoked, it takes quite some time to get it back, more than likely 2-3 years. This would greatly impact current operations, as well as O&M activities.	1) Higher priority scope causes this work package to not get funded. 2) EC generated RCMA waste is not shipped in acceptable timeframe.	Open	Threat	Accept	Possible	Minor	1 Low	\$	\$7,000	\$	\$150,000	\$	\$600,000	1	4	16	§30002. Violation of Compliance Order If a violator fails to take corrective action within the time specified in a compliance order, the Administrator may assess a civil penalty of not more than \$37,500 for each day of continued noncompliance with the order. In addition, the EPA Administrator may suspend or revoke any permit issued to the violator (whether issued by the Administrator or the State). If our RCMA permit is suspended or revoked, it takes quite some time to get it back, more than likely 2-3 years. This would greatly impact current operations, as well as O&M activities.	N/A		
TRU051	D.2.03.04	EC	Martin, David	Jenkins, Tally	<u>On-TRU Storage and Movement</u> , Equipment Availability	The robot is not delivered when the project expected to receive it. This causes delays to the schedule.	The robot is not delivered on the day it was expected to.	Open	Threat	Accept	Possible	Minor	2 Low	\$	\$10,000	\$	\$20,000	\$	\$40,000	8	16	32	Numbers developed based on CAM judgment. Subcontractor cost and schedule are in development and will be used to fine tune this.	N/A		
TRU052	D.2.03.04	EC	Martin, David	Jenkins, Tally	<u>On-TRU Storage and Movement</u> , Less Than Anticipated Throughput	Once received, the robot does not perform as fast as anticipated. When throughput is less than anticipated, the project will experience schedule delays.	The project realizes the robot performs slower than originally anticipated.	Open	Threat	Mitigate	Rare	Minor	1 Low	\$	\$,000	\$	\$20,000	\$	\$40,000	4	16	32	Current numbers based on CAM judgment, subcontractor schedule and cost are being developed and will allow fine tune of risk.	Procure a backup robot to operate in parallel to mitigate schedule delays.		
TRU053	D.2.03.04	EC	Martin, David	Jenkins, Tally	<u>On-TRU Storage and Movement</u> , Availability of Crews Above Crew	Crews are not available to move drums in support of Ultrasonic Testing due to higher priority scope, resulting in schedule delays.	Ultrasonic Testing is paused until crew is available to move drums to robot location.	Open	Threat	Accept	Unlikely	Minor	2 Low	\$	\$,000	\$	\$20,000	\$	\$40,000	4	16	32	CAM judgment used to develop initial numbers, subcontractor schedule and cost in development and will allow for fine tuning of risk mitigation.	N/A		



IEC Task Order 6 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated to: 1.30.25

Risk ID	Task Order	WBS	Responsible Organization	Risk Owner	DOE POC	Risk Title	Risk Description	Trigger Event	Status	Risk Type	Handling Strategy	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Basis of Impacts	Mitigation Actions	Notes
															Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case			
NRC003R2	TO6	D.1.03.60 D.1.03.61 D.1.06.60 D.1.06.61	IEC	Long, Jeff	Wahnschaffe, Steve	NRC Licensed SNF Storage Facilities: Aging conditions of facilities	There are aging conditions at both TMI-2 and FSV. Continued weathering and degradation is likely to require additional repairs and maintenance to concrete, paint, and other coatings, associated infrastructure components, etc. If these repairs and/or upgrades do not occur they will prohibit critical project completion and could be identified as noncompliance with NRC requirements.	Continued degradation of facilities with out necessary repairs and/or upgrade	Open	Threat	Accept	Possible	Major	4-High	\$ 100,000	\$ 250,000	\$ 500,000	48	80	96	Based on SME input. Best case is that lack of funding will occur between activities resulting in schedule delays but no rework or additional mobilization/demobilization/stand-by impacts. Most likely case is that in addition to schedule delays, some re-work will be required, mobilization/demobilization of crews will be required, vendor costs will be higher due to inflation and securing specialized resources, and additional procurement of equipment. Worst case is that funding is cut in the middle of the job resulting in complete re-work, additional demobilization/mobilization costs, work site being left in condition to accentuate or accelerate deterioration conditions, etc.	N/A	None
NRC007R2	TO6	D.1.06.60 D.1.06.62	IEC	Long, Jeff	Wahnschaffe, Steve	NRC Licensed SNF Storage Facilities: Loss of Specialty Resources	Loss of qualified and trained resources could result in cost and schedule delays.	Retirement or notification of intent to leave.	Open	Threat	Accept	Likely	Serious	4-High	\$ 100,000	\$ 200,000	\$ 500,000	16	48	64	Based on SME input. Best case is that replacement personnel are immediately available with little downtime or vacancy in the position. Most likely case is that it may take 1-2 months to fill in and train replacement. Worst case is that it may take 6 months or more to recruit new personnel and train.	N/A	None
NRC011	TO6	D.1.06.60 D.1.06.63	IEC	Long, Jeff	Wahnschaffe, Steve	NRC Licensed SNF Storage Facilities: Industrial Incidents Resulting in Shutdowns	An industrial incident resulting in serious personnel injury may cause an extended shutdown to resolve conduct of operations issues.	An unanticipated accident resulting in injury or near miss	Open	Threat	Accept	Rare	Minor	1-Low	\$ 20,000	\$ 50,000	\$ 300,000	5	10	30	Cost is based on ROM estimate to perform corrective actions, but dependant on extent of event. Best case = incident is minor, and investigated quickly with very few corrective actions requiring attention. Worst case = prolonged shut-down with extensive recovery actions, training, etc.	N/A	None
NRC300	TO6	D.1.03.61.05	IEC	Long, Jeffery	Wahnschaffe, Steve	Crane Hydraulic Motor Repair	While performing hydraulic motor repairs on the crane, more issues are identified that will need to be resolved before continuing. The project will experience schedule delays and cost increases to resolve the additional problems.	More issues with the crane are identified.	Realized	Threat	Accept	Rare Almost Certain	Minor	1-Low	\$ 2,000	\$ 10,000	\$ 50,000	1	14	30	Cost and schedule delays based on vendor quotes to replace entire hydraulic motor. This is most likely case. Best case is based on SME input to obtain additional minor parts. Worst case based on SME input assuming additional issues are found with other parts and equipment.		
NRC301	TO6	D.1.03.61.05	IEC	Long, Jeffery	Wahnschaffe, Steve	Incompatible Equipment	New equipment purchased as part of the FY24 IPL, is not compatible and different replacements have to be purchased. The project will incur unforeseen costs from purchasing equipment not anticipated. The project will also experience schedule delays to perform the procurement and receiving items.	During install, equipment is discovered to be incompatible with the existing system.	Open	Threat	Accept	Rare	Moderate	1-Low	\$ 5,000	\$ 50,000	\$ 200,000	14	30	60	Best case assumes that equipment can be returned to the vendor without any penalties and minimum restocking fee. Most likely case assumes that only some equipment will cannot be returned to vendor and delays to schedule and costs for additional trips by vendor to the facility. Worst case is based on needing to re-purchase all new equipment.		



TO7 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated: 1.29.25

Risk ID	WBS	Responsible Organization	IEC POC	DOE FPD	Risk Title	Risk Description	Trigger Event	Status	Risk Type	Handling Strategy	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Basis of Impacts	Mitigation Actions	Risk Corrective Actions
														Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case			
IWTU001R2	D.3.06	IEC	Nahay, Jordan	Neville, Trent	IWTU: 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	Open	Threat	Accept	Unlikely	Moderate	2-Low	\$ 84,000	\$ 180,000	\$ 900,000	14	30	150	Best Case: 14 days X 10 hr/day X 6 FTE X \$100/hr = \$84,000 Most Likely Case: 30 days X 10 hr/day X 6 FTE X \$100/hr = \$180,000 Worst Case: 150 days X 10 hr/day X 6 FTE X \$100/hr = \$900,000	N/A	
IWTU009aR2	D.3.06.70.01	IEC	Nowak, Joel T	Neville, Trent	IWTU: Lack of resources	Completing IWTU scope will be impacted due to a lack of resources.	The project cannot staff up as planned to support scheduled work.	Open	Threat	Mitigate	Unlikely	Moderate	2-Low	\$ 133,920	\$ 267,840	\$ 401,760	12	24	36	Best Case: 12 days x 10 hrs/day x 12 people x \$93/hr = \$133,920 Most Likely: 24 days x 10 hrs/day x 12 people x \$93/hr = \$267,840 Worst Case: 36 days x 10 hrs/day x 12 people x \$93/hr = \$401,760	Investigate several different avenues to fill these gaps with subcontracted labor and hiring additional planners and supervisors. Routine communication with the Building Trades Business Agents on upcoming craft needs.	
IWTU010R2	D.3.06	IEC	Nahay, Jordan	Neville, Trent	IWTU: 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.	Realized	Threat	Mitigate	Almost Certain	Serious	5-Very High	\$ 32,000	\$ 460,000	\$ 1,740,000	16	60	180	Best Case - 16 days X 10 hr/day X 2 FTE X \$100/hr = \$32,000 Most Likely Case - 60 days X 10 hr/day X 6 FTE X \$100/hr = \$360,000, Material Cost = \$100,000 Worst Case - 180 days X 10 hr/day X 8 FTE X \$100/hr = \$1.44M, Material Cost = \$300,000	Ramp up waste feed percentage (vs. simulant) during System Performance Test. Review original test results for accuracy and completeness.	
IWTU016R2	D.3.06.78.01	IEC	Nahay, Jordan	Neville, Trent	IWTU: GAC replacement takes longer than estimated and extends the GAC Outage.	The GAC replacement will extend the current GAC outage schedule due to equipment design, procurement, and installation requirements during the outage.	Delays in GAC replacement delays completion of GAC Outage.	Open	Threat	Mitigate	Possible	Moderate	2-Low	\$ 216,240	\$ 432,480	\$ 864,960	4	8	16	Best Case: 4 days x 12 hrs/day x 17 people x \$265/hr = \$216,240 Most Likely: 8 days x 12 hrs/day x 17 people x \$265/hr = \$432,480 Worst Case: 16 days x 12 hrs/day x 17 people x \$265/hr = \$864,960	Subcontractor to work additional days to complete GAC replacement.	
IWTU023R2	D.3.06.77.01	IEC	Nahay, Jordan	Neville, Trent	IWTU: Vaults are constructed in winter weather.	Schedule delays require constructing vaults in winter weather, thereby increasing vault construction costs. Concrete heating and weather conditions impact the safety of the craft work force.	Delay to start of needed vault construction.	Open	Threat	Accept	Possible	Major	4-High	\$ 400,000	\$ 1,500,000	\$ 1,750,000	8	17	34	Impacts to concrete curing time and compaction testing due to adverse weather conditions, additional engineering analysis needed for acceptance	N/A	
IWTU024R2	D.3.06.77.01	IEC	Nahay, Jordan	Neville, Trent	IWTU: New Vault concrete does not meet shielding density requirements.	New Vault concrete does not meet shielding density requirements.	Gamma inspection identifies vault failure.	Open	Threat	Accept	Unlikely	Serious	2-Low	\$ 500,000	\$ 1,000,000	\$ 1,500,000	17	34	51	Additional shielding or analysis needed for acceptance	N/A	
IWTU030R2	D.3.06.70.01	IEC	Nowak, Joel T	Neville, Trent	IWTU: 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 operation of wet decon system.	Open	Threat	Accept	Possible	Moderate	2-Low	\$ 50,000	\$ 90,000	\$ 270,000	16	30	90	Best Case: 16 days X 10 hr/day X 2 FTE X \$100/hr = \$32,000 Most Likely Case: 30 days X 10 hr/day X 3 FTE X \$100/hr = \$90,000 Worst Case: 90 days X 10 hr/day X 3 FTE X \$100/hr = \$270,000	N/A	Upon completion of project testing significant spares were ordered and have been received. Redundant colloid mills and strainers.
IWTU036R2	D.3.06.73.01	IEC	Nahay, Jordan T	Neville, Trent	IWTU PSB: Change orders Requiring Major Design Changes.	Change orders requiring major design changes are issued during excavation or construction, causing an increase in cost and schedule.	A change order requiring extensive re-design is issued during construction.	Open	Threat	Mitigate	Possible	Moderate	2-Low	\$ 180,000	\$ 270,000	\$ 405,000	20	30	45	Best Case: 20 days x 10 hrs/day x 4 people x \$225/hr = \$180,000 Most Likely: 30 days x 10 hrs/day x 4 people x \$225/hr = \$270,000 Worst Case: 45 days x 10 hrs/day x 4 people x \$225/hr = \$405,000	Discussions with Force Account and Engineering during additional walkdowns and reviews to identify potential issues before they impact schedule.	
IWTU037R2	D.3.06.73.01	IEC	Nahay, Jordan T	Neville, Trent	IWTU PSB: Multiple minor change orders issued during construction.	Multiple minor change orders are issued during construction, causing schedule delays and cost increases.	Multiple minor change orders are issued during construction or excavation.	Open	Threat	Mitigate	Almost Certain	Minor	3-Moderate	\$ 89,280	\$ 178,560	\$ 334,800	8	16	30	Best Case: 8 days x 10 hrs/day x 12 people x \$93/hr = \$89,280 Most Likely: 16 days x 10 hrs/day x 12 people x \$93/hr = \$178,560 Worst Case: 30 days x 10 hrs/day x 12 people x \$93/hr = \$334,800	Discussions with Force Account and Engineering during additional walkdowns and drawing to identify potential issues before they impact schedule.	
IWTU041R2	D.3.06.75.01	IEC	Frye, Meesha	Neville, Trent	IWTU: Vendor weld prepping does not keep pace with production.	Vendor weld prepping of existing canisters cannot keep pace with IWTU production.	Onsite weld prepped canisters fall <120 canisters.	Open	Threat	Mitigate	Rare	Minor	1-Low	\$ 36,000	\$ 60,000	\$ 90,000	2	9	13	Best Case: \$300/canister expedite fee x 120 canisters = \$36,000 Most Likely: \$300/canister expedite fee x 200 canisters = \$60,000 Worst Case: \$300/canister expedite fee x 300 canisters = \$90,000	Evaluate use of Non-weld prep canisters and excel shipping of canisters to subcontractor to build reserve inventory.	
IWTU049	D.3.06.78.01	IEC	Nahay, Jordan	Neville, Trent	IWTU: Unable to release vendor supplied equipment	Added cost due to the required purchase of vendor supplied equipment	Detectable contamination found on vendor supplied equipment.	Open	Threat	Accept	Possible	Moderate	2-Low	\$ 247,200	\$ 350,000	\$ 853,200	1	2	3	Best Case: \$247,200 for equipment Most Likely: \$350,000 for equipment Worst Case: \$853,200 for equipment	N/A	
IWTU050	D.3.06.75.02	IEC	Frye, Meesha	Neville, Trent	IWTU: New canisters do not pass QA receipt inspections and must be reworked/replaced.	New canisters do not pass QA inspections and must be reworked/replaced.	One new canister fails inspection.	Open	Threat	Mitigate	Possible	Minor	2-Low	\$ 4,000	\$ 6,000	\$ 22,900	4	8	12	Best Case: Additional rework on 1 new canister Most Likely: Additional rework on 2 new canisters Worst Case: New canister \$22,900	Order replacement canisters.	
IWTU053	D.3.06.73.01	IEC	Nahay, Jordan	Neville, Trent	IWTU: PSB II construction is delayed.	Delays in PSB II construction results in inadequate storage capacity and operational delays.	PSB I is full and construction of PSB II is incomplete.	Open	Threat	Mitigate	Possible	Moderate	2-Low	\$ 150,000	\$ 300,000	\$ 600,000	10	10	20	Best Case: 10 days X 10 hr/day X 10 FTE X \$150/hr = \$150,000 Most Likely Case: 10 days X 10 hr/day X 20 FTE X \$150/hr = \$300,000 Worst Case: 20 days X 10 hr/day X 20 FTE X \$150/hr = \$600,000	Use additional overtime resources to complete PSB-II as soon as possible.	
IWTU054b	D.3.06	IEC	Nahay, Jordan T	Neville, Trent	IWTU: BEA Support Services do not Meet IWTU Scheduled Need Dates.	IEC relies on BEA for support services on Milestones, regulatory commitments, and scope completion. If the work from BEA is delayed, or does not meet the requirements, it can cause a project schedule impact.	Insufficient quality of work product or timeliness of completion of BEA deliverables impacts project schedule.	Open	Threat	Shared	Unlikely	Moderate	2-Low	\$ 93,000	\$ 390,600	\$ 1,116,000	5	21	60	Best Case: 5 days X 10 hrs/dy X 20 FTEs X \$93/hr Most Likely Case: 21 days X 10 hrs/dy X 20 FTEs X \$93/hr Worst Case: 60 days X 10 hrs/dy X 20 FTEs X \$93/hr	Propose sharing risk with DOE.	
IWTU055	D.3.06.77.01 D.3.06.77.02	IEC	Nahay, Jordan	Neville, Trent	IWTU: No Vaults for waste canister storage.	If subcontractor is unable to produce additional Vault construction by the time they are needed the project will run out of Vaults for waste canister storage. With only 5 vaults remaining for storage the project anticipates running out by approximately April 2024.	Having more canisters to place in Vaults for storage after reamining 5 Vaults are filled.	Open	Threat	Accept	Almost Certain	Critical	5-Very High	\$ 14,571,420	\$ 29,142,840	\$ 43,714,260	60	120	180	Best Case: 60 days X \$242,857/dy Most Likely Case: 120 days X \$242,857/dy Worst Case: 180 days X \$242,857/dy	N/A	
IWTU056	D.3.06.75.02	IEC	Frye, Meesha	Neville, Trent	IWTU: No waste canisters available for storage.	If subcontractor is unable to produce additional waste canister production by the time they are needed the project will run out of waste canisters. Current project pace anticipates running out by approximately April 2025.	Plant continues to operate, and we have less than 32 canisters available on site.	Open	Threat	Accept	Almost Certain	Critical	5-Very High	\$ 7,285,710	\$ 10,928,565	\$ 14,571,420	30	45	60	Best Case: 30 days X \$242,857/dy Most Likely Case: 45 days X \$242,857/dy Worst Case: 60 days X \$242,857/dy	N/A	



TO7 Risk Register

Idaho Cleanup Project Programmatic Risk Register

Updated: 1.29.25

Risk ID	WBS	Responsible Organization	IEC POC	DOE FPD	Risk Title	Risk Description	Trigger Event	Status	Risk Type	Handling Strategy	Risk Event Likelihood	Risk Impact	Risk Rating	Cost Impacts			Schedule Impacts (in days)			Basis of Impacts	Mitigation Actions	Risk Corrective Actions
														Best Case	Most Likely	Worst Case	Best Case	Most Likely	Worst Case			
IWTU301	D.3.06	IEC	Nahay, Jordan	Neville, Trent	IWTU: Pilot Plant Driven Plant Mods	Hazen drives facility modifications that require a facility shutdown which delays completion of SBW processing campaign.	Hazen Run discovers the need for further plant modifications.	Open	Threat	Accept	Possible	Serious	3-Moderate	\$200,880	\$401,760	\$803,520	30	60	120	Best Case: 30 days x 12 hrs/day x 6 people x \$93/hr = \$200,880 Most Likely: 60 days x 12 hrs/day x 6 people x \$93/hr = \$401,760 Worst Case: 120 days x 12hrs/day x 6 people x \$93/hr = \$803,520	N/A	
IWTU302	D.3.06.70.01	IEC	Nahay, Jordan	Neville, Trent	Additional Calcined Coal is Needed	Calcined coal reserves are depleted before SBW tanks are emptied and rinsed.	Inventory is reduced at a faster pace than previously anticipated or IWTU is forecasted to operate for a longer period of time due to various issues.	Open	Threat	Accept	Possible	Critical	4-High	\$1,015,000	\$2,030,000	\$3,045,000	120	180	365	Best Case: 500000 pounds at \$2.03 / lb Most Likely Case: 1000000 pounds at \$2.03 / lb Worst Case: 1500000 pounds at \$2.03 / lb	N/A	
IWTU303	D.3.06.70.01	IEC	Nahay, Jordan	Neville, Trent	Previous Calcined Coal Source is Unavailable	Vendor is unable to utilize original mine used for calcine coal procurements.	The current source of calcined coal is no longer available.	Open	Threat	Accept	Possible	Critical	4-High	\$75,000	\$125,000	\$1,275,000	60	120	365	Rough subcontracted costs for the process of sourcing, testing and validating an adequate source of calcined coal. Worst case contains the costs of a Hazen Pilot Plant Run to verify.	N/A	
IWTU304	D.3.06	IEC	Nahay, Jordan	Neville, Trent	Overtime Required to Complete Performance Milestones	Additional overtime is needed to maintain plant operability in an effort to reach the Site Treatment Plan milestone.	IWTU issues that reduces the plant's output and/or operability require additional personnel to keep plant operating.	Open	Threat	Accept	Likely	Moderate	3-Moderate	\$160,704	\$321,408	\$482,112	12	24	36	Best Case: 12 days x 12 hrs/day x 12 people x \$93/hr = \$160,704 Most Likely: 24 days x 12 hrs/day x 12 people x \$93/hr = \$321,408 Worst Case: 36 days x 12 hrs/day x 12 people x \$93/hr = \$482,112	N/A	
IWTU305	D.3.06	IEC	Nahay, Jordan	Neville, Trent	Additional Waste Canisters	Additional canisters are needed to complete SBW and rinsate treatment.	More than 1,648 canisters are needed.	Open	Threat	Accept	Possible	Critical	4-High	\$5,600,000	\$18,150,000	\$24,800,000	150	500	690	Best Case: 224 canisters x \$25,000/canister = \$5,600,000 Most Likely: 726 canisters x \$25,000/canister = \$18,150,000 Worst Case: 992 canisters x \$25,000/canister = \$24,800,000	N/A	
IWTU306	D.3.06	IEC	Nahay, Jordan	Neville, Trent	Additional Canister Vaults	Additional vaults are needed to complete SBW and rinsate treatment.	More than 103 Vaults are needed.	Open	Threat	Accept	Possible	Critical	4-High	\$8,400,000	\$27,600,000	\$37,200,000	150	480	620	Best Case: 14 Vaults x \$600,000/Vault = \$8,400,000 Most Likely: 46 Vaults x \$600,000/Vault = \$27,600,000 Worst Case: 62 Vaults x \$600,000/Vault = \$37,200,000	N/A	
IWTU307	D.3.06	IEC	Nahay, Jordan	Neville, Trent	Additional Product Storage Building	PSB II is filled to capacity before SBW tanks are emptied and rinsed.	PSB-II is estimated to be filled within 2 years.	Open	Threat	Accept	Possible	Critical	4-High	\$8,000,000	\$20,000,000	\$28,000,000	540	730	900	Best Case: Smaller PSB-III Most Likely: PSB-III identical to PSB-II Worst Case: PSB-III larger than PSB-II	N/A	
IWTU308	D.3.06	IEC	Nahay, Jordan	Neville, Trent	INTEC Issues affect IWTU	INTEC causes idle time for IWTU. Impact to IWTU operations.	Issues at INTEC causes inability to send waste to IWTU.	Open	Threat	Accept	Possible	Critical	4-High	\$6,300,000	\$12,600,000	\$25,200,000	12	24	48	Best Case: 3 weeks * \$2,100,000/week = \$6,300,000 Most Likely: 6 weeks * \$2,100,000/week = \$12,600,000 Worst Case: 12 weeks * \$2,100,000/week = \$25,200,000	N/A	
IWTU309	D.3.06	IEC	Nahay, Jordan	Neville, Trent	Major Equipment Needs Replaced Ahead of Anticipated Service Life	Significant equipment or component failure that requires replacement and was previously estimated to last the life of the facility.	Forced shutdown of IWTU due to component failure that is unable to be repaired and requires replacement.	Open	Threat	Accept	Unlikely	Critical	3-Moderate	\$800,000	\$1,800,000	\$5,000,000	120	240	365	Best Case: Replacement Duration 120 days for 7 FTE's at \$93/hr Most Likely: Replacement Duration of 240 days for 8 FTE's at \$93/hr Worst Case: Replacement Duration of 365 days for 14 FTE's at \$93/ hr.	N/A	