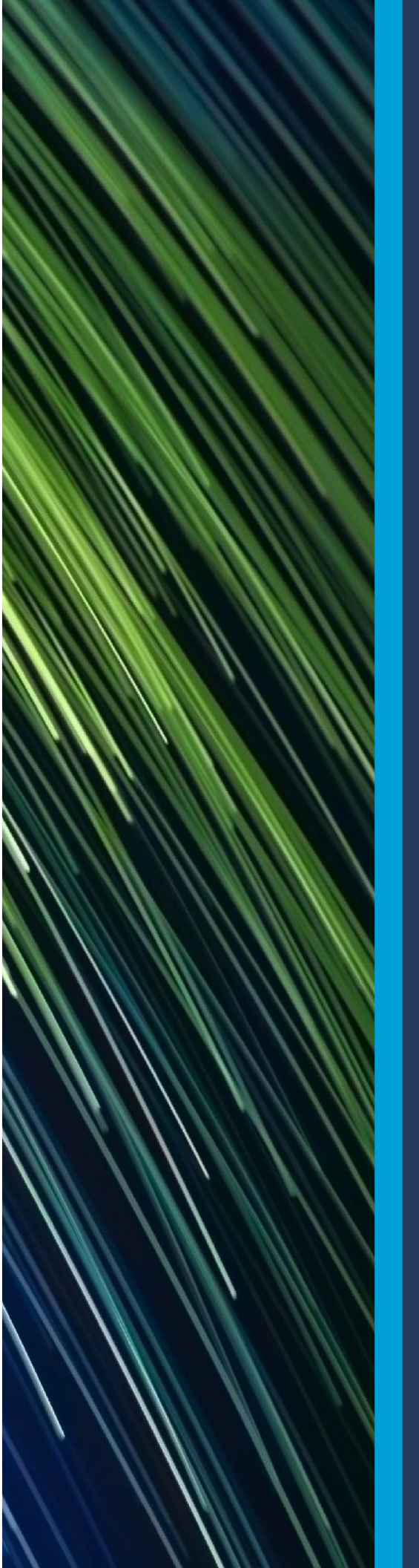
Ten-Year End State Strategic Task Order Plan, Revision 1

Fiscal Year 2023
Idaho Cleanup Project



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Acronyms and Abbreviations

AI	Agreement to Implement
AMWTP	Advanced Mixed Waste Treatment Plant
ARP	Accelerated Retrieval Project
ATR	Advanced Test Reactor
Bldg.	Building
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CH	Contact-Handled
CPAF	Cost Plus Award Fee
CPFF	Cost Plus Fixed Fee
CPIF	Cost Plus Incentive Fee
D&D	Deactivation and Decommissioning
DOE	Department of Energy
DOE-ID	DOE Idaho
EBRII	Experimental Breeder Reactor II
EM	DOE Office of Environmental Management
ES&H	Environmental Safety and Health
FFA/CO	Federal Facility Agreement and Consent Order
FFP	Firm-Fixed Price
FY	Fiscal Year
HLW	High-Level Waste
ICDF	Idaho CERCLA Disposal Facility
ICP	Idaho Cleanup Project
IDIQ	Indefinite Delivery/Indefinite Quantity
IEC	Idaho Environmental Coalition, LLC
IMC	Integration & Mission Continuity
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
IPL	Integrated Priorities List
ISA	Idaho Settlement Agreement
IWTU	Integrated Waste Treatment Unit
LLC	Limited Liability Corporation
MLLW	Mixed Low-Level Waste
NE	DOE Office of Nuclear Energy
NNCO	Notice of Noncompliance Consent Order
NNSS	Nevada National Security Site
NRC	Nuclear Regulatory Commission
NRF	Naval Reactor Facilities
OCVZ	Organic Contamination in Vadose Zone
PEMP	Performance Evaluation Measurement Plan
PEWE	Process Equipment Waste Evaporator
PMB	Project Management Baseline
POP	Period of Performance

Acronyms and Abbreviations (concluded)

PWS	Performance Work Statement
RCRA	Resource Conservation and Recovery Act
RH	Remote-Handled
ROD	Record of Decision
RWDP	Radioactive Waste Disposition Project
RWMC	Radioactive Waste Management Complex
SA	Supplemental Agreement
SBW	Sodium-Bearing Waste
SDA	Subsurface Disposal Area
SNF	Spent Nuclear Fuel
STP	Site Treatment Plan
TBD	To Be Determined
TO	Task Order
TRU	Transuranic
TYP	Ten-Year Strategic Task Order Plan
WIPP	Waste Isolation Pilot Plant

Introduction

This plan focuses on the Department of Energy (DOE) Office of Environmental Management's (DOE-EM) strategic imperatives for site cleanup activities that are being performed on the Idaho Cleanup Project (ICP) across fiscal years (FY) 2022–2031 and potentially through FY 2036. The work includes treating, storing, and dispositioning a variety of radioactive and hazardous wastes; removing and dispositioning targeted buried waste; removing or deactivating unneeded facilities; and preparing spent nuclear fuel (SNF) and high-level waste (HLW) for removal from Idaho. These activities are necessary to implement DOE-EM strategic objectives, meet the milestones contained within the regulatory agreements, and achieve specific End States on the Idaho National Laboratory (INL) Site.

The Idaho Environmental Coalition, LLC, (IEC) and DOE-EM worked collaboratively to establish task orders (TOs) that drive the execution of this Master Indefinite Delivery/Indefinite Quantity contract (Contract). To date the Transition TO (TO1) and Implementation TO (TO2) have been completed. The remaining TOs include three non-end-state, support Task Orders and six End-State Task Orders. The first TO, IMC Phase 1 and Phase 2 is focused on maintaining continuity of operations and providing core programs that support reliable and safe delivery throughout the contract duration. The Non-Defense Project TO (which has been added in this Revised Plan) includes non-end state work scopes that assure safe and compliant management of non-defense spent nuclear fuel (SNF) and facilities. The remaining TOs, including the recently added Excess Facilities Demolition TO, are End State focused and will drive the development of specific TOs and subtasks aimed at facility closures and waste management and disposition and represent specific advances to achieving End States at the ICP. The joint strategy for achieving each End State has been developed to include specific objectives for successful project execution and metrics for measuring and demonstrating progress throughout the life of the Contract

Support Task Orders	
Integration & Mission Continuity (IMC) Phase 1 (TO3 P1)	Focused on maintaining continuity of operations, providing core programs across the ICP, and defining/prioritizing TO development
IMC Phase 2 (TO3 P2)	Focused on programmatic support required over the life of the contract and assuring variable and high-risk work scopes not resolved during IMC Phase 1 are continued until risks have been mitigated to ensure control between IEC and DOE-ID
Non-Defense Project	Manage Fort Saint Vrain and on-site NRC licensed facilities spent nuclear fuels
End State Task Orders	
Excess Facilities Demolition	Drive the development of TOs to achieve specific End States to include facility closures and waste management and disposition as supported by specific IMC Phase 1 and Phase 2 activities
Radioactive Waste Management Complex (RWMC) Closure (TO4)	
Tank Closure	
Spent Nuclear Fuel (SNF) Transfer & Packaging	
Calcine Disposition	
Naval Reactors	

To provide clarity in the tables and figures throughout this Plan, contemplated TOs have been color coded as shown at left. Note that TO numbers have only been assigned to active TOs. The order in which the remaining task orders will be prepared and negotiated will be driven by site priorities.

This Plan is adaptive and focused on achieving DOE End State objectives and identifying strategic imperatives that anticipate challenges and risks; proactively manage, mitigate, and control them; and bring proven solutions during all phases of TO development, implementation, and closeout.

This Plan is a living document that will be managed and updated annually to address changes in DOE priorities or emerging imperatives.

Contract Year One in Review

This Ten-Year Strategic Task Order Plan (TYP) has been revised to reflect the significant progress made on the ICP during FY22. DOE-EM and IEC have worked diligently to ensure alignment of goals and objectives for project implementation. ***Exhibit 1. TO Accomplishments in FY2022*** shows the progress made with TO development, implementation, and completion over the last year. Details regarding the work accomplished in FY 2022 to support end states are provided in ***Exhibit 2. FY2022 Metrics Demonstrating Successful TO Performance.***

Exhibit 1. TO Accomplishments in FY2022

Task Order Development and Implementation	Discussion
Completed the Transition TO (TO1)	Completed cost-plus-no-fee Transition TO with 99.7% of workforce retention. During Transition, completed full transition delivery, and additional scope not included in the original Transition Plan estimate/budget, including the preparation and submittal of Rev 0 of this Ten-Year Plan, preparation and negotiation of the Task Order 2 - Implementation proposal, and implementation of an Advanced Agreement for pre-contract activities. All of these activities were completed under the original estimate and budget for TO1 - Transition.
Completed the Implementation Period TO (TO2)	Implemented, and completed TO2 (cost-plus-fixed-fee) on schedule. TO2 was a 120-day period (1/1/2022 thru 4/30/2022) that provided continued, uninterrupted ICP operations while allowing DOE-EM and IEC to further define strategies and details for project execution. DOE-EM and IEC also completed the Integration & Mission Continuity (IMC) Phase 1 TO (TO3 P1) proposal and finalized negotiations.
Award of IMC Phase 1 TO (TO3 P1)	Fully implemented this cost-plus-award-fee TO focused on maintaining core support programs across the contract while addressing high risk activities that must be mitigated to clearly definitize stand-alone End State TOs. The TO period of performance (POP) is from 5/1/2022 through 9/30/2023.
Submitted proposal for RWMC Closure subtask for the ARP/SDA Demolition and Organic Contamination in Vadose Zone (OCVZ) well abandonment TO (TO4a).	DOE-EM and IEC worked collaboratively through the proposal definitization, preparation, and approval process on this first End State TO. It is a cost-plus-incentive-fee TO that is scheduled to be awarded by 9/30/2022 with a period of performance from 10/1/2022 through 12/31/2024.

Exhibit 2. FY2022 Metrics Demonstrating Successful TO Performance (as of 9/12/22)

Activity	Metrics
RWMC Closure End State	
Subsurface Disposal Area (SDA) exhumation	• Completed final SDA exhumation activities
Accelerated Retrieval Project (ARP) demolition	• Commenced ARP decommissioning and completed decommissioning of ARP IV and 90% of ARP V • Developed ARP Decommissioning and Demolition Plan • Submitted Task Order 4a for D&D of ARPs and OCVZ well abandonment
Waste processing and shipping	• Completed 94 shipments of contact-handled (CH) transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP) • Commenced repackaging and testing of oxidizer legacy waste drums through ARP VII, completing 447 drums of ~2200 drums • Completed certification of 310 m^3 of CH TRU waste in support of Site Treatment Plan (STP) milestones • Completed processing and packaging of 10 lot 11 containers of remote-handled (RH) TRU waste • Developed the Waste Disposition Strategic Plan (PLN-6589) mapping out the final disposition timing and pathway for legacy waste
SDA cap installation	• Completed the constructability review and recommended redesign of the cap to support RWMC closure by December of 2028 • Commenced redesign of SDA cap
Advanced Mixed Waste Treatment Plant (AMWTP) Closure	• Commenced D&D Planning for AMWTP closure
Tank Closure End State	
Integrated Waste Treatment Unit (IWTU) Operations	• Completed confirmatory test run of IWTU – processed 137,124 gallons of simulant • Implemented alternative nitrogen supply process and additional coal reserves to improve reliability • Completed contractor Readiness Assessment and DOE Readiness Assessment for radiological operations • Commenced facility outage “L” to support initial “hot” operations
SNF Transfer & Packaging End State	
Peach Bottom transfers	• Completed 8 of 39 transfers of Peach Bottom Fuels which is ahead of the commitment and on-track for early completion of this activity
Advanced Test Reactor (ATR) fuels transfers	• Completed removal of all ATR fuel from wet storage and placed in dry storage
Experimental Breeder Reactor II (EBRII) fuels transfers	• Completed 13 of 25 shipments of EBRII fuels from wet storage in CPP-666 to dry storage at FCF • Completed 38 shipments of EBRII fuels from wet storage in CPP-666 to dry storage at RSWF (achieving 110 of 120 total by year end) • Accelerated EBRII transfers achieving 93% of scheduled transfers from CPP-666 basin
Calcine Disposition End State	
Bin 1 to Bin 6 Transfer System	• Completed the design of the bin 1 to bin 6 transfer system • Completed the transfer system mockup construction and began testing • Commenced vitrification studies to support final treatment of calcine to make “road ready”
Naval Reactors End State	
S1W Facility Deactivation and Decontamination (D&D)	• Completed Decommissioning of Bldg. 608 and Bldg. 625 • Commenced Decommissioning of Bldg. 601 • Initiated Demolition of Bldg. 608 and Bldg. 625
Core Car	• Commenced design and testing for processing Core Car
A1W and S5G D&D	• Started planning with Naval Reactor Facilities (NRF) for A1W and S5G D&D

A. Background

The ICP work encompasses ongoing and contemplated work scopes, to include:

- Continuing IMC Phase 1 and 2 work scopes to assure programmatic support and ongoing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial actions
- Completing treatment of the liquid sodium-bearing waste (SBW)
- Closing the Idaho Nuclear Technology and Engineering Center (INTEC) tank farm
- Operating and closing the RWMC
- Retrieving targeted buried waste and closure of the SDA
- Dispositioning TRU and mixed wastes
- Completing the SDA cap
- Deactivating and dispositioning the AMWTP
- Stabilizing and repackaging SNF and high-level waste (HLW) to make it "Road Ready"
- Completing wet-to-dry fuel transfers
- Operating and maintaining the balance of plant at INTEC to support ongoing programs (Calcine Disposition Project, Spent Fuel Programs, Tank Closure)
- Supporting Naval Reactors for the disposition of aging facilities
- Managing fuels from Fort Saint Vrain and on-site NRC-licensed facilities
- Completing D&D of excess facilities as funding allows

The ICP contract is an Indefinite Delivery/Indefinite Quantity (IDIQ) End State completion contract with an estimated contract ceiling of approximately $6.4 billion over a 10-year ordering period (FY2022 – FY2031), with the option to award additional End State TOs prior to the last day of the 10 year ordering period for up to an additional five years (ending in FY2036). The anticipated DOE Office of Environmental Management (EM) budget by FY for the 10-year base contract period is estimated to be approximately $400 million (M) per year. Additional funding may be provided for non-EM work, such as Naval Reactors.

B. Regulatory Milestones, Life-Cycle Baseline, and Office of EM Goals and Priorities

B.1 Regulatory Milestones

The ICP regulatory milestones are contained in the 1995 Idaho Settlement Agreement (ISA), 2019 Supplemental Agreement (SA), the 2008 Agreement to Implement (AI), the Site Treatment Plan (STP), the Colorado Settlement Agreement, the Notice of Noncompliance Consent Order (NNCO),

There are many milestones associated with these agreements and directives with targets within the ICP contract ordering period. A complete listing can be found at: DOE Idaho Site Major Agreement Milestones. Below are some examples of applicable milestones:

- Allocate to and make from the State of Idaho 55% of all TRU waste shipments received at WIPP for INL TRU waste (annually)
- Complete TSA-RE closure (4/30/2023)
- Complete transfer of all spent fuel from wet storage (12/31/2023)
- Calcine Treatment Facility commence operations (3/31/2024)

- Sodium Bearing Waste (SBW) Treatment Facility (IWTU) commence operations and fill one canister (9/30/2022)
- SBW Treatment Facility (IWTU) complete 100th canister (12/31/2022)
- SBW Treatment Facility (IWTU) complete 15% treatment (9/30/2024 and annually thereafter)
- Certify 25% ISA (Original Volume) CH TRU contaminated waste (9/30/2024)
- Submit Draft Comprehensive Remedial Action Report for OU 7-13/14 (Phase 3 – SDA cap completion) (12/31/2028)
- Complete SBW treatment (~12/31/2029 based on processing percentage) – Requires removal of ~900,000 gallons of SBW from tanks and treatment of the SBW in IWTU facility.
- Complete SDA Cap (12/31/2028) – Includes the installation of the evapotranspiration soil cap over the SDA and restoration of the area to natural vegetation.
- Remove all spent fuel *(including Navy and TMI spent fuel)* from Idaho (1/1/2035)
- Calcine Waste Road Ready (12/31/2035) – Requires the design and testing of calcine retrieval systems and the retrieval, processing, and packaging of calcine and carbonated waste to make them road ready.
- Treat the entire Radioactive Waste Disposition Project (RWDP) Backlog (9/30/2045) (outside of the ICP contract ordering period).

B.2 Life-Cycle Baseline

The ICP Performance Measurement Baseline (PMB) was submitted and approved by DOE as part of the ICP IMC Phase 1 and Phase 2 TO. Each TO released against the contract will include a stand-alone schedule that is initiated and managed in the PMB in accordance with the ICP End State contract requirements found in Section C.9.2.01 Program Management/Support/Administration.

B.3 Office of EM Goals and Priorities

The DOE EM stated priorities are as follows:

- Activities to maintain a safe, secure, and compliant posture
- Radioactive tank waste stabilization, treatment, and disposal
- Spent (used) nuclear fuel and nuclear materials management and disposition
- TRU and mixed low-level waste (MLLW) disposition
- Soil and groundwater remediation
- Excess facilities deactivation and decommissioning (D&D)

IEC's management approach for the execution of the ICP IDIQ Performance Work Statement (PWS) is in direct alignment with these priorities.

C. Task Order (TO) Discussions

C.1 Overall Strategy for Managing Task Orders

The ICP work scope will be performed using focused TOs to achieve desired End States deploying a TO management process that is forward-looking, adaptive, and flexible, and integrates DOE priorities across the ICP. Task orders will be administered in a manner to maximize efficiency and

integrative management opportunities across all tasks. The contemplated TOs to be executed during the contract period of performance are shown in ***Exhibit 3. Notional End State Task Order Contract Strategy***. The exhibit provides a synopsis of the partnering sessions and aligned strategic imperatives between DOE-EM and IEC.

Each TO will be managed as a project with a beginning and clearly defined end date, concise interim milestones for performance measurement, and agreed-to End States. The contract type used for each TO will be determined based on the degree of variability and risk associated with each TO.

The following contract types will be used for ICP TOs, dependent upon the scope variables associated with each TO at the time of development:

- Cost Plus Award Fee (CPAF)
- Cost Plus Fixed Fee (CPFF)
- Firm Fixed Price (FFP)
- Cost Plus Incentive Fee (CPIF)

Anticipated TOs for the 10-year Contract Period are discussed individually in Section C.2.

C.2 Anticipated Task Orders for the 10-Year Contract Period

The ICP contract is structured to accelerate cleanup, safely achieve significant reduction of environmental risk and financial liability, and align with EM goals for environmental cleanup at the site. Execution of the ICP mission will be completed using the TOs described below.

C.2.a Integration & Mission Continuity (IMC) Task Order Phase 1 (TO3 P1)

The IMC TO (TO3) is implemented in two phases, phase 1 and 2 to support a clear understanding of the work scopes and suitability for capture in future end state TOs. It is not an End State TO. Activities in this TO include interim milestones that support End State TO development and completion.

IMC Task Order Phase 1 (TO3 P1)	
Rationale	Core Programs that provide support for contract duration and evaluation and development of End State TOs
Scope	Core contract support programs and future TO scope definitization
Period of Performance	May 2022 – Sep 2023
Estimated Cost	$180 Million (FY22) $340.6 Million (FY23)
Contract Type	Cost Plus Award Fee (w/PEMP)
Completion Definition	17 Month Period of Performance

Phase 1 of this TO provides operational continuity and programmatic support for a 17-month period during which End State TOs are being defined, developed, and negotiated. This TO is fully implemented.

Exhibit 3. Notional End State Task Order Contract Strategy

Task Order/Activity Scope	Rationale for Scope	Contemplated Contract Type	Incremental Milestones	Completion Definition	Task Order Potential Period of Performance	Rough Estimated Cost
Integration & Mission Continuity (IMC) Phase 1 Task Order (TO3 P1)	**Core Contract Support Programs and Task Order Definitization**	**CPAF (w/PEMP)**	**Evaluate work scopes for potential conversion to independent Task Orders**	**17-Month Period of Performance**	**May 22 - Sep 23**	**$180M (FY22) $340.6M (FY23)**
IMC Phase 2 Task Order (TO3 P2)	**Core Contract Support Programs and Task Order Definitization**	**CPAF (w/PEMP)**	**Evaluate work scopes for potential conversion to independent Task Orders. Includes continuity of operations pending the transfer of scope to individual task orders identified below**	**End of Contract**	**FY24 – FY31 w biennial updates**	**TBD**
Non-Defense Project Task Order	**Manage Fuels in NRC licensed facilities, including Ft. St. Vrain**	**CPFF**	**Will be established during TO development**	**Manage fuels in NRC licensed facilities as directed**	**FY23Q3 – FY31 w biennial updates**	**$5M/yr**
Excess Facilities Demolition End State Task Order	**Accelerated Removal of Excess Facilities to Reduce Liability and Costs**	**FFP**	**Will be established during subtask development as specific facilities are identified for demolition**	**Complete demolition of excess (primarily non-radiological) facilities as directed**	**FY25 – FY31**	**TBD**
RWMC Closure End State Task Order (TO4)	**Combination of activities needed to achieve RWMC Closure**				**FY23 – FY29Q1**	**$825M**
ARP/SDA Demolition and OCVZ Well Abandonment (TO4a)		CPIF	ARP/SDA Demolition complete and completion of OCVZ Well Abandonment	Complete demo & closure ARP/SDA facilities and OCVZ Well Abandonment	FY23 – FY25Q1	
AMWTP Treatment Facility Resource Conservation & Recovery Act (RCRA) Closure & Demolition		CPIF	RCRA Closure and Demolition of AMWTP Treatment Facility	Complete demo & closure AMWTP Treatment Facility	FY25 – FY29Q1	
SDA Cap Installation		CPIF	1st load of dirt to SDA, 25, 50, 75% dirt hauled; cap complete; report submitted	Complete cap installation	FY25 – FY29Q1	
AMWTP Storage Facilities RCRA Closure & Demolition		CPIF	RCRA Closure and Demolition of 9 AMWTP Storage Facilities	Complete demolition and closure of AMWTP Storage Facilities	FY27 – FY29Q1	
Tank Closure End State Task Order	**Activities required to complete Tank Closure**				**FY24 – FY28**	**$545M**
IWTU Operations		CPIF	Maintain hot operations/routine operations/milestones - % tank process and empty tanks and operational outages	Complete tank waste processing	FY24 – FY28	
Tank Closure (4 tanks & supporting structures)		CPIF	Close, clean & grout all 4 tanks and associated systems, place interim cap over tanks (regulatory doc for closure)	Complete tank closure & placement of interim cap	FY26 – FY28	
SNF Transfer & Packaging End State Task Order	**Activities required to prepare & ready HLW & SNF for shipment**				**FY24 – FY35**	**$211M**
Fuel Transfers (Peach Bottom fuel from Gen1 to Gen2 vaults)		CPIF	None	Complete fuel transfer to dry storage	FY24 – FY26	
Packaging Fuel Operations for Staging		CPIF	Initiate repackaging & 50th,100th repack, etc. complete	Complete SNF packaging for staging	FY29 – FY35	
Calcine Disposition End State Task Order	**Activities to support retrieval/processing & disposition of calcine waste**				**FY28 – FY40**	**$1.1B - $2.2B**
Calcine Processing and Operations		CPIF	First canister produced, 50th, 100th, processing complete	Complete canister processing	FY28 – FY36	
Bin Set Closure (RCRA closure & interim Cap)		CPIF	Empty each bin set (7), close/grout bins (7) & interim cap complete	Complete bin set closure, grouting & interim cap placement	FY31 – FY40	
Naval Reactors End State Task Order	**Removal & Disposition of Aging Naval Facilities**				**FY24 – FY34**	**$35M/yr**
S1W Facility D&D		CPIF	Documentation to demonstrate closure & demo complete of NR facilities	Complete demolition of specified NRF facilities	FY24 – FY26	
Core Car		CPIF	TBD	Core Car disposition complete	FY24 – FY27	
A1W Facility D&D		CPIF	New Scope	Complete demolition of specified NRF facilities	FY27 – FY31	
S5G Facility D&D		CPIF	New Scope	Complete demolition of specified NRF facilities	FY30 – FY34	

Key IMC P1 IMC P2 Non-Defense Excess Facilities RWMC Tanks SNF Calcine Navy

In addition, certain support activities have been included in the Phase 1 of the IMC TO (TO3 P1) that are not tied to a specific End State but have overarching impacts during the life of the contract. These include:

- Program Management & Support Functions/Indirects – Business services, core safety programs supporting all projects, CERCLA – Environmental Restoration
- Facility and Infrastructure Upgrades – Specific facility and infrastructure upgrades will be addressed as identified during project execution
- Certify, package, and ship RH TRU waste in shielded container – As waste and the WIPP are available
- Retrieve/Process & Ship RH MLLW – As waste and transportation are available
- Idaho CERCLA Disposal Facility (ICDF) Design/Construction – ICDF must be expanded to receive waste from site-wide CERCLA D&D activities and large components from D&D of Naval Reactors facilities.

The above activities were initiated in Phase 1 of the IMC TO. Any activities that are not completed during Phase 1 will be transferred to Phase 2 of the IMC TO for evaluation every two years and further management to completion.

Additional activities included in Phase 1 have a high degree of variability that must be mitigated to support the development of clearly defined scopes for End State TOs. These include:

- D&D of Idaho DOE-EM Excess Facilities
- Legacy Waste Disposition (CH TRU and MLLW)
- IWTU Startup Operations
- Facility Modifications and SNF Packaging Demonstration (CPP-603)
- Design/Construction of SNF Staging Facility
- Calcine Demonstration Project (Retrieval Development/Mockup)
- Design & Construction of the Calcine Process
- D&D of Naval Reactor facilities

It is expected that end state TO scopes will be refined and definitized during Phase 1 of the IMC TO (TO3 P1) to support the development of future End State TOs. Scopes that require additional definitization beyond Phase 1 will be further managed and monitored for resolution in Phase 2 of the IMC TO (TO3 P2). These activities directly impact the completion of the contemplated End State TOs. These activities are described in ***Exhibit 4. Risks to End States***, which identifies the specific risks to be addressed and mitigated to support development and implementation of the discrete End State TOs.

As scopes are defined, End State TOs will be developed to complete the desired work. As these discrete End State TOs are finalized the scope and associated budget that was carried in the IMC TO will be transferred to the appropriate End State TO. ***Exhibit 5. IMC P1/P2 Scope*** shows the transfer of scope to discrete End State TOs,

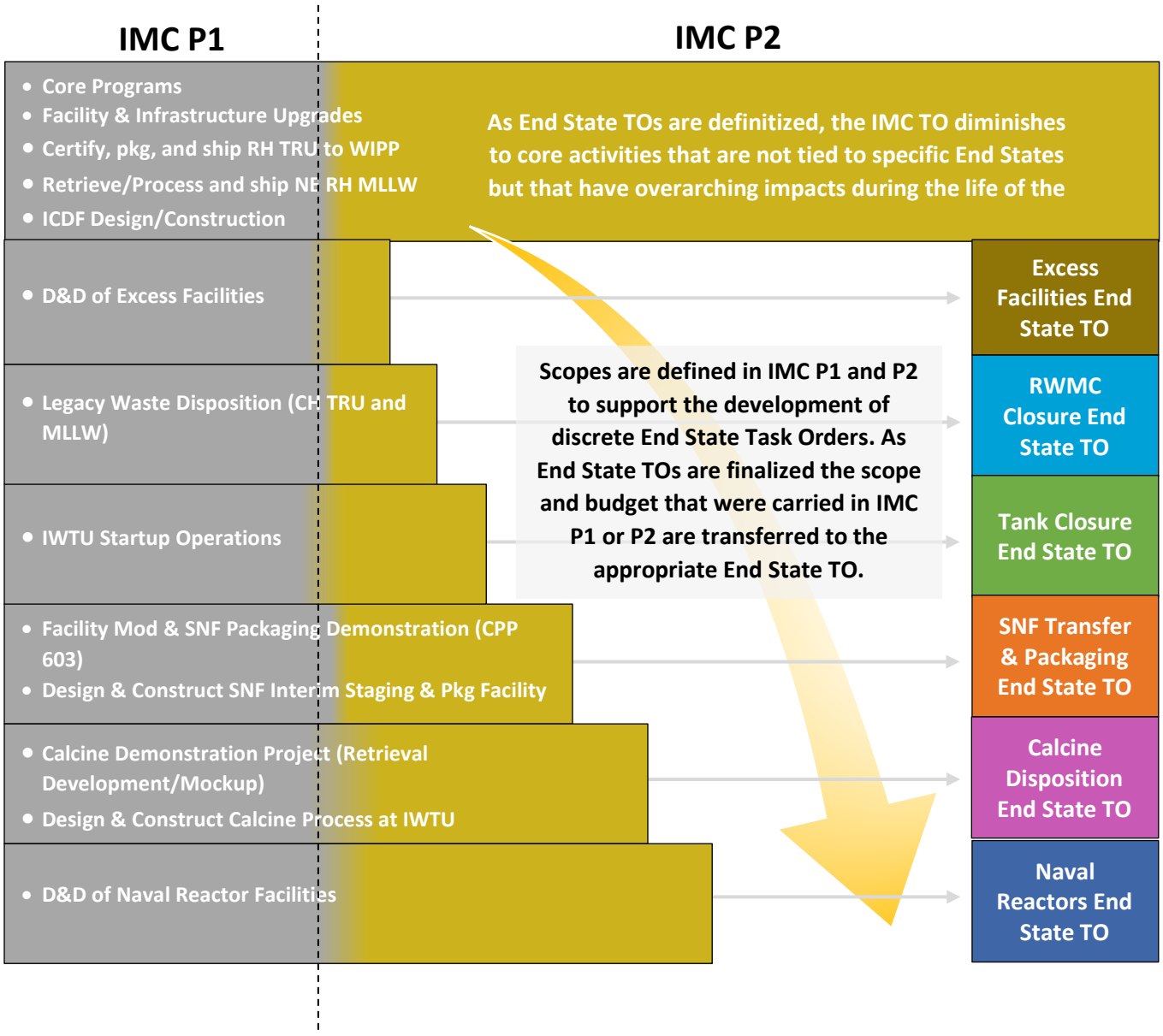
Exhibit 4. Risks to End States

Activities	Risk	Associated End State Task Order
D&D of Excess Facilities	The removal of deactivated, unneeded administrative and support facilities is subject to availability of funding.	**Excess Facilities Demolition**
Legacy Waste Disposition (CH TRU and MLLW)	These wastes are destined for disposal, off-site at the Waste Isolation Pilot Plant, the Nevada National Security Site, or other appropriate off-site disposal facility. Wastes may be packaged and ready for final disposal but be held awaiting approval to ship from the receiving facilities. These wastes reside in the RWMC and must be dispositioned before completing the RWMC Closure End State. Finally, the timing of removal of excess facilities at AMWTP under the D&D of Excess Facilities TO could impact the schedule for RWMC Closure.	**RWMC Closure**
IWTU Startup Operations	IWTU is currently readying for "hot" operations. The IWTU must be fully tested and reliably operational to treat 900,000 gallons of SBW stored in underground storage tanks in the tank farms and is key to completing the Tank Closure End State.	**Tank Closure**
Facility Modification and SNF Packaging Demonstration (CPP-603)	The cost and path forward for this activity are still in development. The Facility Modifications and the Packaging Demonstration Project will be essential to assuring necessary infrastructure and processes are developed, tested, and proven to be effective.	**SNF Transfer and Packaging**
Design and Construct SNF Staging Facility	Potentially subject to the DOE Order 413.3B Capital Acquisition Process.	
Calcine Demonstration Project (Retrieval Development/ Mockup)	The Calcine Demonstration project is in early phase development and demonstration for Bin Set retrievals. Until this demonstration is successfully completed this represents an uncertainty in completing the Calcine Disposition End State. The DOE is currently evaluating the identified path forward for Calcine treatment. This activity is also potentially subject to the DOE Order 413.3B Capital Acquisition Process which represents a risk to schedule.	**Calcine Disposition**
Design and Construct Calcine Process at IWTU		
D&D of Naval Reactor Facilities	Facilities D&D may be subject to DOE Order 413.3B Capital Acquisition Process and evaluations. Sequencing of facilities D&D to support retention of critical resources. Also, ICDF expansion will be required for the disposal of large components. The new ICDF cell is subject to the DOE Order 413.3B Capital Acquisition Process which is a risk to schedule.	**Naval Reactors**

Rationale for TO Selection. This TO is stipulated in the ICP End State contract. The rationale for initial embedment of all tasks in the Phase 1 is to assure that all variables and interrelationships between programs and operational aspects are thoroughly defined, quantified, and understood, and that the associated risks for the key activities to support the End State TOs are quantified, and mitigations defined. During Phase 1 specific End State TOs can be strategically and tactically segregated, defined, and negotiated as specific completion scopes to achieve the desired End States. This TO supports a safe, secure, and compliant posture across the contract in accordance with DOE EM stated priorities. This approach also assures that all contemplated incentives and objectives for the IMC TO are managed under an individual Performance Evaluation Measurement Plan (PEMP), reducing administrative burden and associated cost with management of multiple

PEMPs. Finally, the approach assures that as the interrelationships are clearly defined the subsequent End State TOs are less subject to burdensome contract change management processes.

Exhibit 5. IMC P1/P2 Scope



Scope and Period of Performance. The IMC Phase 1 TO includes all IEC work scope pending DOE authorization to prepare concise proposals for individual End State TOs. Timing for preparation of the End State TOs will be dependent on the DOE's priority for the work scope with TOs developed and sequenced collaboratively to reflect site priorities.

As the End State TOs are developed, negotiated, and implemented, Phase 1 will continue to house the core programs that maintain a comprehensive and effective continuity capability across ICP projects to support achievement of defined End States throughout the seventeen-month Phase 1 period. At the completion of Phase 1 programmatic support, along with any Phase 1 scope that

has not been captured in End State TOs, will be captured in the Phase 2 of the IMC TO as discussed in Section C.3. Phase 1 of the IMC TO (TO3 P1) was implemented 5/1/2022 and will remain in place until 9/30/2023.

Estimated Cost. The estimated cost of Phase 1 of the IMC TO is $180 million in FY22 and $340.6 million in FY23. These costs represent the estimated/project costs for funding (includes Naval Reactors and Non-Defense Project, but not fee).

This estimate was developed using historical data and experience to reasonably represent the effort required to perform the TO3 P1 scope of work. Because this is largely a continuation of ongoing scope, costs were developed using actual historical costs of the previous contract and other projects similar in scope.

Contract Type. The IMC TO is managed as a CPAF TO, with a PEMP, as stipulated in the ICP End State contract. The PEMP, which includes Performance Based Incentives (PBIs), is updated annually to reflect changing conditions. In addition to IEC-owned risks for known and existing conditions with foreseeable impacts, IEC identified proposed DOE-owned risks for potential impacts to the task order execution outside of IEC control (e.g. DOE-ID facility changes, new requirements, funding changes, or regulatory/agency delays).

Completion Definition. The IMC TO is not an End State TO. Phase 1 (TO3 P1) was implemented on 5/1/2022 and will be completed on 9/30/2023 at which time the remaining scope will be transitioned to Phase 2 of the IMC TO (TO3 P2).

C.2.b Integration & Mission Continuity (IMC) Task Order Phase 2 (TO3 P2)

The IMC TO (TO3) is implemented in two phases, phase 1 and 2 to support a clear understanding of the work scopes and suitability for capture in future end state TOs. It is not an End State TO.

Phase 2 of the IMC TO will continue to include enabling, variable work scopes not assigned to specific Task Orders during Phase 1 of the IMC TO. During the Phase 2 period of performance, the IMC TO will be reviewed biennially and revised, negotiated, and extended, if approved, to reflect any changes in DOE priorities or definition and implementation of additional End State TOs.

IMC Task Order Phase 2 (TO3 P2)	
Rationale	Core Programs that support for contract duration and include continued evaluation of work scopes for potential conversion to independent Task Orders
Scope	Core contract support programs and TO definitization
Period of Performance	FY24 – FY31, subject to biennial reviews, negotiations, and updates
Estimated Cost	TBD – Will be addressed prior to transition to Phase 2 of the IMC TO
Contract Type	Cost Plus Award Fee (w/PEMP)
Completion Definition	Biennial update through contract duration

Rationale for TO Selection. Phase 2 of the IMC TO recognizes that there are programmatic support elements that will be required over the life of the contract, and these will be captured first in Phase 1 and continued in Phase 2 until contract end. As discussed in Section C.2.a, all tasks are initially embedded in Phase 1 of the IMC TO. The 17-month period of performance of Phase 1

will be utilized to support the development of well-defined TOs that minimize the risks of changes required during TO execution.

Phase 2 of the IMC TO will include programmatic support activities for the life of the contract, as well as any high-risk activities not resolved in Phase 1 ; specifically, longer-term activities for which uncertainties cannot be adequately quantified during the Phase 1 period of performance. The annual PEMP developed in Phase 1 will be revised for Phase 2 and updated annually through the life of the contract.

Scope and Period of Performance. Phase 2 of the IMC TO will continue to house the core programs that maintain a comprehensive and effective continuity capability across ICP projects to support achievement of defined End States throughout the life of the contract. Phase 2 will begin 10/1/2023 and run through contract duration (through FY31) to support core missions and continuity in the provision of programmatic support. Phase 2 of the IMC TO will be evaluated every two years and modified to reflect changing conditions and priorities and to show the integration of specific activities into the End State TOs.The relationship between each of these IMC TO3 activities and the associated End State TOs is shown in the ***Exhibit 6. ICP Ten Year End State Contract Flowchart.***

Estimated Cost. The IMC Phase 2 proposal, including costs, will be developed prior to transition to Phase 2 utilizing appropriate cost estimating processes consistent with IEC-established estimating and accounting principles / procedures and FAR Part 31, Contract Cost Principles and Procedures.

Contract Type. Phase 2 of the IMC TO will be managed as a Cost-Plus-Award-Fee (CPAF) TO, with a PEMP, as stipulated in the ICP End State contract. The PEMP, which includes Performance Based Incentives (PBIs) and subjective criteria, is updated annually to reflect targeted scopes and changing conditions.

Completion Definition. The IMC TO is not an End State TO. During Phase 2, completion will be demonstrated during biennial updates and at contract completion.

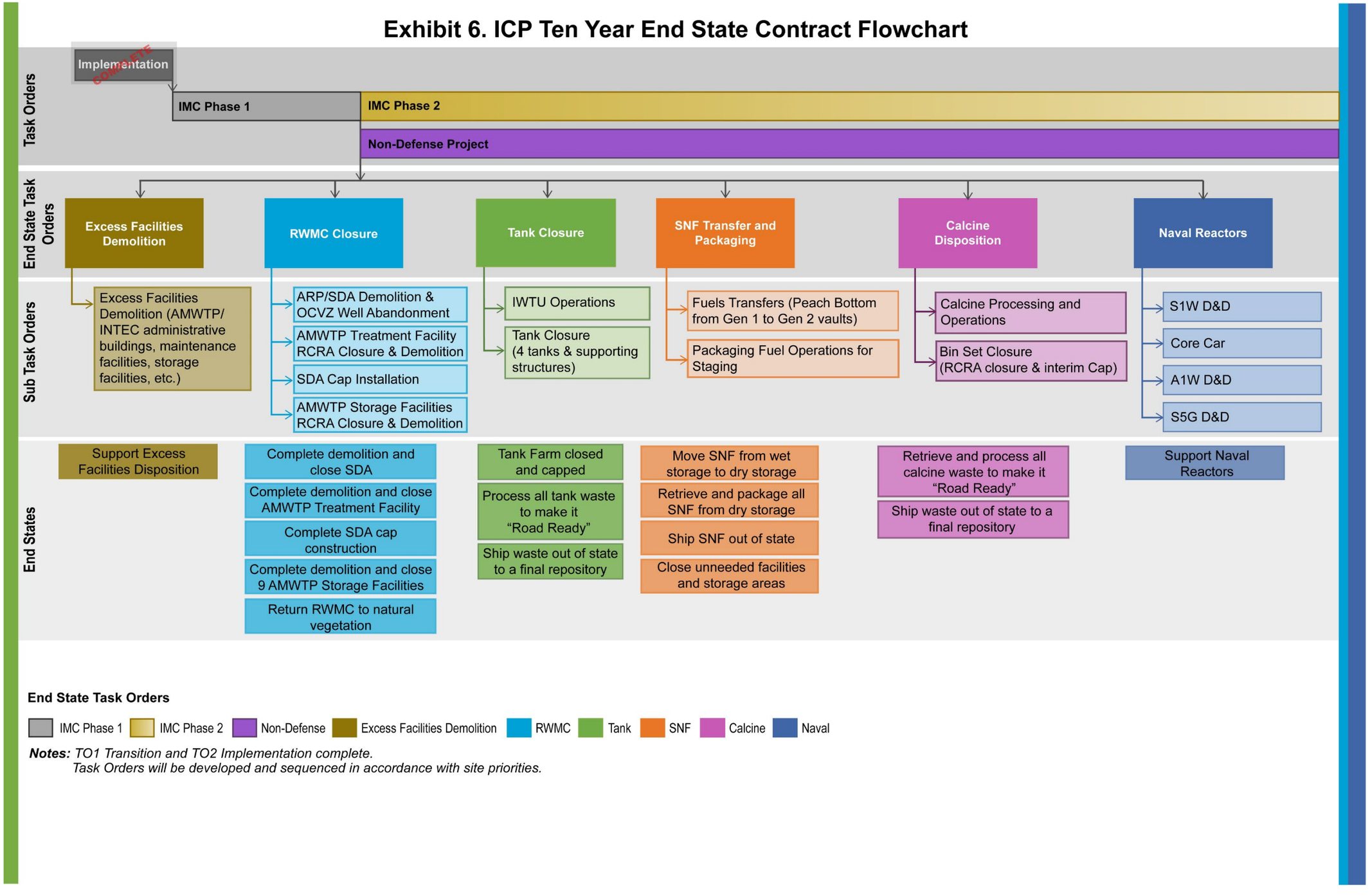
C.2.c Non-Defense Project Task Order

The Non-Defense Project TO is not an End State TO. This TO will serve to capture the scope and costs of managing Ft. St. Vrain fuels and fuels from on-site NRC licensed facilities through the ICP period of performance.

Non-Defense Project Task Order	
Rationale	Manage Fuels in NRC licensed facilities, including Ft. St. Vrain
Scope	Manage fuels in NRC-Licensed facilities as directed
Period of Performance	FY23 Q3– FY31
Estimated Cost	$5M/yr
Contract Type	Cost Plus Fixed Fee
Completion Definition	Manage fuels in NRC licensed facilities as directed

Rationale for TO Selection. This TO recognizes the requirement to monitor and manage fuels from both Ft. St. Vrain in Colorado and from on-site NRC licensed facilities. Fuels at the Ft. St. Vrain facility are scheduled for transfer to the Idaho Site by FY2035 in accordance with the Colorado Settlement Agreement. At the site Ft. St. Vrain fuels and fuels from on-site NRC licensed facilities will be packaged for disposition in a yet-to-be-determined Federal High-Level Waste (HLW) Repository.

Exhibit 6. ICP Ten Year End State Contract Flowchart



Notes: *TO1 Transition and TO2 Implementation complete.*
Task Orders will be developed and sequenced in accordance with site priorities.

Scope and Period of Performance. The period of performance for this TO is anticipated to be the third quarter of FY 2023 through FY 2031.

Estimated Cost. This TO is a separate funding source and is anticipated to cost $5M/year. This cost is based on historical costs for this fuel management and facility maintenance activity.

Contract Type. This TO will be managed as a CPFF contract. A CPFF was selected as the work scope is stable and well understood and represents a low risk to the government and contractor and represents the best value contract type to the government.

Completion Definition. Manage and maintain the Ft. St. Vrain fuels and fuels from on-site NRC-licensed facilities as directed over the life of the contract.

C.2.d Excess Facilities Demolition End State Task Order

Rational for TO Selection. The purpose of this TO is to accomplish the demolition of deactivated/unneeded facilities on an accelerated schedule as funding allows. The facilities are primarily non-radiological administrative and maintenance facilities. The end state desired under this TO is to accomplish the demolition of excess facilities to reduce liability and cost risks associated with continued facility surveillance and maintenance. This TO will be evaluated at least biennially. Excess facilities or groups of facilities identified by DOE will be evaluated as separate subtasks under this TO.

Excess Facilities Demolition End State Task Order	
Subtask a - Excess Facilities Demolition (AMWTP/INTEC admin. Bldgs., maintenance facilities, storage facilities, etc.)	
Rationale	Accelerated removal of Excess Facilities to Reduce Liability and Costs
Scope	Demolish deactivated/unneeded facilities
Period of Performance	FY25 - FY31
Estimated Cost	TBD
Contract Type	Firm-Fixed Price
Completion Definition	Complete demolition of excess facilities as directed

Scope and Period of Performance. The period of performance for this task is anticipated to be from FY25 through FY31.

Estimated Cost. Subtasks under this work scope will be developed as facilities are identified and the TOs are developed.

Contract Type. The contract type for this TO is anticipated to be an FFP contract due to the well-defined scope and fully quantified costs and risks for these demolition activities.

Completion Definition. The desired end state for this TO is the demolition of excess facilities as directed by DOE and as funding allows.

C.2.e RWMC Closure End State Task Order (TO4)

RWMC Closure End State Task Order (TO4)	
Subtask 4a – ARP/SDA Demolition and OCVZ Well Abandonment	
Subtask 4b – AMWTP Treatment Facility RCRA Closure & Demolition	
Subtask 4c – SDA Cap Construction	
Subtask 4d – AMWTP Storage Facilities RCRA Closure & Demolition (9 Facilities)	
Rationale	Combination of activities to achieve RWMC Closure
Scope	Complete waste operations, close and demolish RWMC facilities, abandon OCVZ wells, construct evapotranspiration cap over the SDA, and revegetate RWMC
Period of Performance	Subtask 4a: FY23 – FY25 Q1
	Subtask 4b: FY25 – FY29 Q1
	Subtask 4c: FY25 – FY29 Q1
	Subtask 4d: FY27 – FY29 Q1
Estimated Cost	$825M
Contract Type	Cost Plus Incentive Fee
Completion Definition	RWMC Closed

Rationale for TO Selection. The End State desired is closure of the RWMC. This meets the regulatory milestone to complete the SDA Cap by 12/31/28. The rationale for the four sub-tasks acknowledges the required major aspects of closure, but also allows for optimization and flexibility between the tasks and provides the opportunity to maximize multiple fronts of progress as situations develop or challenges are encountered in any one area: such as legacy wasteMar processing or delays in shipping.

Scope and Period of Performance. The RWMC Closure End State TO scope includes all activities associated with closing the RWMC, including RCRA closure, demolition, and capping of the SDA; Organic Contamination in Vadose Zone (OCVZ) well abandonment; and closure and demolition of RWMC treatment and storage facilities, including AMWTP. Tied to this is completion of necessary waste treatment and processing in the ARPs and AMWTP to the extent necessary to support deactivation and demolition of the facilities while assuring ongoing support to the INL Site.

The entirety of this work will be accomplished under four subtasks:

- Subtask 4a – ARP/SDA Demolition and OCVZ Well Abandonment
- Subtask 4b – AMWTP Treatment Facility RCRA Closure & Demolition
- Subtask 4c – SDA Cap Construction
- Subtask 4d – AMWTP Storage Facilities RCRA Closure & Demolition (9 facilities)

The first subtask, TO4a, is scheduled to be awarded by 9/30/2022.

The expected period of performance for TO4, including all subtasks, is FY23 through the first quarter of FY29. The period of performance for each subtask is:

- Subtask 4a – ARP/SDA Demolition and OCVZ Well Abandonment will run from FY23 through the first quarter of FY25.
- Subtask 4b – AMWTP Treatment Facility RCRA Closure & Demolition will run from FY25 through the first quarter of FY29.
- Subtask 4c – SDA Cap Construction will run from FY25 through the first quarter of FY29.
- Subtask 4d – AMWTP Storage Facility RCRA Closure & Demolition will run from FY27 through the first quarter of FY29.

Estimated Cost. The estimated total cost for TO4 RWMC Closure is $825M, with $92M estimated for completion of subtask 4a - ARP/SDA Demolition and OCVZ Well Abandonment which is scheduled for implementation on 10/1/22. Historical experience was utilized to develop cost estimates to reasonably represent the effort required to perform the task order outlined scope. The main technique used was actual costs of similar projects. The Project Team compared previous ARP D&D estimates to the size and complexity of the remaining ARPs to develop a defensible basis of estimate. Similar scope resources and quantities were then aligned to the task order WBS and activities.

Contract Type. TO4 will be completed as a CPIF TO. The CPIF TO structure for this TO is intended to balance the risk appropriately and motivate efficient and effective contract performance. It is intended for IEC to bear an equitable share of the risk, but also be compensated for optimum contract performance and for assuming risk.

Completion Definition. The RWMC Closure End State TO will be considered complete when the SDA and AMWTP facilities have been demolished and closed, the OCVZ wells have been abandoned, the cap has been installed over the SDA, and the RWMC has been returned to natural vegetation.

C.2.f Tank Closure End State Task Order

Rationale for TO Selection. The End State desired is tank closure. This meets the regulatory milestone to complete sodium-bearing waste (SBW) processing through IWTU by 12/31/2028. The rationale for the two sub-tasks acknowledges that the IWTU, once fully operational, is the instrument required to complete processing of the SBW, and that subsequent tank closures are the actual completion desired. Additionally, the opportunity to optimize the tank closure process remains open with a segregated TO strategy such that accelerated closure plans can be explored and implemented as appropriate.

Tank Closure End State Task Order	
Subtask a – IWTU Operations	
Subtask b – Tank Closure (4 tanks and supporting structures)	
Rationale	Activities required to complete tank closure and tank waste processing
Scope	Empty, close, clean and grout 4 tanks, treat SBW, and place an interim cap over tank farm
Period of Performance	Subtask a: FY24 – FY28
	Subtask b: FY26 – FY28
Estimated Cost	$545M
Contract Type	Cost Plus Incentive Fee
Completion Definition	Tanks are closed and capped with sodium-bearing waste packaged and “Road Ready” for final disposition

Scope and Period of Performance. This TO will encompass the activities associated with closing four tanks located at the Idaho Nuclear Technology and Engineering Center (INTEC) Tank Farm. This activity includes:

- Removal and treatment of 900,000 gallons of SBW contained in the tanks
- RCRA closure and stabilization of the emptied tanks under DOE O 435.1
- Placing an interim cap over the tank farm

This TO will also include maintaining the operational capability of the IWTU to treat the SBW and storage of treated SBW in the IWTU Product Storage Buildings to await final disposition in a Repository.

Note that the IWTU must be fully and reliably operational to treat SBW stored in underground storage tanks in the tank farms and is key to achieving the Tank Closure End State.

The Tank Closure End State TO will include two contemplated subtasks:

- Subtask a – IWTU Operations
- Subtask b – Tank Closure

The expected period of performance for the Tank Closure TO is FY24 through FY28. The period of performance for the subtasks is:

- Subtask a – IWTU full Operations subtask is anticipated to start in FY24 and run through FY28
- Subtask b – Tank Closure is contemplated to begin in FY26 and end in FY28

Estimated Cost. The estimated cost of the Tank Closure End State TO $545M. This includes $85M/yr for five years to operate the IWTU and an estimated $40M/yr over a three-year period for tank closures.

Contract Type. The Tank Closure TO will be completed as a CPIF contract. The CPIF structure for this TO is intended to balance the risk appropriately and motivate efficient and effective contract performance. It is intended for IEC to bear an equitable share of the risk, but also be compensated for optimum contract performance and for assuming cost risk. Cost and performance incentives will be structured to include measurable targets with objective criteria to reward completion of this End State TO.

Completion Definition. This TO will be considered complete when the INTEC Tank Farm is closed and capped and the SBW extracted from the tanks is treated, packaged, and placed in storage, awaiting final disposition.

C.2.g SNF Transfer and Packaging End State Task Order

SNF Transfer and Packaging End State Task Order	
Subtask a – Fuel Transfers (Peach Bottom fuel from Gen1 to Gen2 vaults)	
Subtask b – Packaging Fuel Operations for Staging	
Rationale	Activities required to prepare and ready SNF for shipment
Scope	Complete fuel transfers to dry storage and package and prepare fuel for shipment out of the state of Idaho
Period of Performance	Subtask a: FY24 – FY26
	Subtask b: FY29 – FY35
Estimated Cost	$211M
Contract Type	Cost Plus Incentive Fee
Completion Definition	SNF transferred from wet storage to dry storage, retrieve and package all SNF from dry storge, ship SNF out of state, and close unneeded facilities and storage areas

Rationale for TO Selection. The chief objective for this TO is to reduce risk to ongoing fuel management by completing the transfer of the Peach Bottom fuels from the Generation 1 (Gen1) to Gen2 vaults and to ultimately achieve "Road Ready" status by FY35 for fuels destined for the national HLW repository. While the risk for obtaining fuels repackaging capabilities cannot be ignored, the creation of the two tasks demonstrates commitment to meeting the regulatory milestone to the extent possible through both physical completion (Peach Bottom and wet-to-dry storage), and tactically through planned implementation of the INL site fuels packaging capability, operations, and subsequent staging.

Scope and Period of Performance. This TO scope includes movement of Peach Bottom fuels from Gen1 to Gen2 vaults, preparation and packaging of fuel for shipment in accordance with the Idaho Settlement Agreement, and closure of unneeded facilities and storage areas.

To support accomplishment of this End State the Facility Modifications and SNF Packaging Demonstration Project will be essential to assuring necessary infrastructure and processes are developed, tested, and proven to be effective.

We anticipate that this work will be accomplished under two subtasks:

- Subtask a – Fuel Transfers (Peach Bottom fuel from Gen1 to Gen2 vaults)
- Subtask b – Packaging Fuel Operations for Staging

The period of performance for this TO is FY24 through FY35, including subtasks. Subtask a – Fuel Transfers (Peach Bottom fuel from Gen1 to Gen2 vaults) is anticipated to begin in FY24 and end in FY26 with Subtask b – Packaging Fuel Operations for Staging to begin in FY29 and end in FY35.

A portion of this scope is outside of IEC's contract ordering period. The desired status at the end of the 10-year contract period is:

- Peach Bottom transfers from Gen 1 to Gen 2 vaults complete
- Facility modification and SNF packaging demonstration (CPP-603) complete
- SNF interim staging and packaging capability design complete

Estimated Cost. Estimated costs for this TO are $211M. A final cost estimate will be developed in the SNF Transfer and Packaging End State TO Proposal.

Contract Type. A CPIF TO is contemplated for the SNF Transfer and Packaging End State TO to balance the risk appropriately and motivate efficient and effective contract performance. It is intended for IEC to bear an equitable share of the risk, but also be compensated for optimum contract performance and for assuming cost risk. Cost and performance incentives will be structured to include measurable targets with objective criteria to reward completion of this End State TO.

Completion Definition. This TO will be complete when all SNF has been moved from wet to dry storage, retrieved from dry storage and packaged, and shipped out of state and the unneeded SNF facilities and storage areas have been closed.

C.2.h Calcine Disposition End State Task Order

Rationale for TO Selection. A critical component to achieving the desired End State for Calcine "road ready" by 12/31/35, is assuring the demonstration project contemplated is completed under the IMC TO. However, it is also imperative that several variable issues beyond the demonstration must be resolved collaboratively to assure the End State remains achievable: including final determination and development of treatment processes, and corrective actions determined, further tested, and proven from the bin set retrieval pilot demonstration.

Calcine Disposition End State Task Order	
Subtask a – Calcine Processing and Operations	
Subtask b – Bin Set Closure (RCRA closure & interim cap)	
Rationale	Activities to support retrieval, processing, and disposition of Calcine waste
Scope	Calcine processing and operations and Bin Set Closure
Period of Performance	Subtask a: FY28 – FY36
	Subtask b: FY31 – FY40
Estimated Cost	$1.1 billion (B) - $2.2B
Contract Type	Cost Plus Incentive Fee
Completion Definition	Complete canister processing of calcine waste and complete bin set closure, grouting, and interim cap placement

The two contemplated subtasks and their development and agreement are necessary to assure that all parties understand the need for clear and concise resolution of the variable issues as quickly as possible. This will better assure that the final enabling processes, resources, and capabilities are established to support the End State TO. Further, segregation of the TO allows for continued examination and evaluation of optimized approaches that better allow for acceleration of processing, packaging, and closure as these processes are defined and implemented.

Scope and Period of Performance. Once the bin retrieval system and processing systems are successfully demonstrated and the final alternative selection is complete for waste processing, two subtasks will be developed to achieve the Calcine Disposition End State:

- Subtask a – Calcine Processing and Operations
- Subtask b – Bin Set Closure (RCRA Closure and Interim Cap)

The subtasks for this End State will encompass all work needed to complete emptying of the Calcine bin sets, process the retrieved waste, and package the waste to make calcine "Road Ready."

Upon completion of bin set retrieval the scope will also include necessary actions to complete RCRA and DOE Order 435.1 HLW closure of the bin sets.

While a large portion of this scope is outside of the IEC contract ordering period, the period of performance for these subtasks is anticipated to be FY28 to FY36 for subtask a and FY31 to FY40 for subtask b.

The desired status at the end of the 10-year contract period is:

- Complete Calcine Demonstration Project (Retrieval Development/Mock-up)
- Design and Construct Calcine Process
- Complete the evaluation and testing to determine path for Calcine treatment

Estimated Cost. Estimated costs for this TO are between $1.1B and $2.2B due to the uncertainties surrounding Calcine treatment technologies selection, successful completion of the Calcine Demonstration Project, and modifications required at the IWTU to enable treatment. Once these uncertainties are resolved, costs for the two contemplated TO subtasks will be developed.

Contract Type. A CPIF TO is contemplated for the Calcine Disposition End State TO to balance the risk appropriately and motivate efficient and effective contract performance. It is intended for IEC to bear an equitable share of the risk, but also be compensated for optimum contract performance and for assuming cost risk. Cost and performance incentives will be structured to include measurable targets with objective criteria to reward completion of this End State TO.

Completion Definition. The Calcine Disposition End State TO will be considered complete once the Calcine bin sets are emptied, the calcine is processed, packaged, and made "Road Ready," and the bins are closed, grouted, and capped.

C.2.i Naval Reactors End State Task Order

Rationale for TO Selection. The rationale for segregating the Naval Reactors TO is to assure that the scope of work is clearly defined for each contemplated action that the Navy expects to have accomplished as part of its efforts to reduce risk to the NRF and the INL Site in general. Further, some work contemplated, such as the Core Car subtask, may require extensive use of existing or modified EM facilities sequenced with ICP scopes to complete the desired End State and is not necessarily interrelated to other Naval Reactors facility scopes.

Naval Reactors End State Task Order	
Subtask a – S1W D&D	
Subtask b – Core Car	
Subtask c – A1W D&D	
Subtask d – S5G D&D	
Rationale	Removal and disposition of aging Naval facilities
Scope	Aging facilities and core car disposition
Period of Performance	Subtask a: FY24 – FY26
	Subtask b: FY24 – FY27
	Subtask c: FY27 – FY31
	Subtask d: FY30 – FY34
Estimated Cost	$35M/yr
Contract Type	Cost Plus Incentive Fee
Completion Definition	Completion of S1W, A1W, and S5G demolition and Core Car disposition

Scope and Period of Performance. The scope of this TO is to provide services and expertise to Naval Reactors in the disposition and removal of aging facilities. The contemplated scope at this time includes four scopes of work identified as subtask a – S1W D&D, subtask b – Core Car, subtask c – A1W D&D, and subtask d – S5G D&D. Additional scope may be added at the discretion of the Navy. This is non-EM work and funding for these activities will be provided by an outside source.

The period of performance contemplated for the Naval Reactors End State TO is specific to the currently identified scopes but could expand and will be addressed as additions to the TO, as required. The current periods of performance for these subtasks are:

- Subtask a – S1W D&D FY24 through FY26
- Subtask b – Core Car FY24 through FY27
- Subtask c – A1W D&D FY27 through FY31
- Subtask d – S5G D&D FY30 through FY34

Estimated Cost. Estimated costs for this TO are $35M/year from FY24 through FY34. Various estimating techniques were engaged for the scope of work to provide the highest quality product possible. The main technique used was actual costs of similar D&D projects.

Contract Type. A CPIF TO is contemplated for the Naval Reactors End State TO.

Completion Definition. This TO will be considered complete when the S1W, A1W, and A5G are demolished and dispositioned and the Core Car is dispositioned.

C.3 Incentives

The IEC IMC P1/P2 TO is managed under a PEMP with objective and subjective fee criteria and performance-based incentives (PBIs) as required by DOE policy. Each TO released against the contract will include a stand-alone schedule that is initiated and managed in the PMB in accordance with the ICP End State contract requirements found in Section C.9.2.01 Program Management/Support/Administration. Specific incentives will be established to ensure that targeted scopes are completed and subjective evaluation will be focused in three primary areas as individual TOs are developed.

Schedule: The primary objective of the Schedule Incentive is to encourage the Contractor to achieve schedules (Site Treatment plan reports, IDEQ notifications, DOE notifications, building closures, etc.) that meet or exceed timelines. In combination with the Cost Incentive, this is intended to fully achieve all scope requirements without causing detriment to other areas and avoid mission disruptions or schedule delays. The Contractor will be evaluated on its ability to meet or exceed schedule requirements and the overall timeliness and achievement progress of all facets of its work. The Contractor will be evaluated in all Schedule related areas, including but not limited to the following:

- The timeliness of completion of deliverables all ICP programs including the timeliness of the completion of the contractual milestones.
- The timeliness of submittals to DOE. Including Notifications of Contract Changed Conditions; project documents such as Baseline Change Proposals and Program Change Requests, as

described in the ICP contract to provide sufficient time for review, comment resolution, and revision in advance of document due dates or impacts to work. Submitted documents shall be of sufficient quality to not require significant re-work by DOE.

Cost: The primary objective of the Cost Incentive is to encourage the Contractor to achieve a final actual cost that is less than or equal to the Total Price of the Task Order. In combination with the Schedule Incentive, this is intended to fully achieve all scope requirements without causing detriment to other areas and avoid mission disruptions or schedule delays. The Contractor will be evaluated in all Cost Control related areas, including but not limited to the following:

- Effective planning to control costs within the availability of funding, including alignment with the baseline and ownership of risk.
- Long range planning to control costs in alignment with the baseline and ownership of risk.
- The management of all obligated funds to preclude anti-deficiency and shall include in all subcontracts the appropriate clauses to allow termination with minimal cost impacts to the project.
- The effectiveness in forecasting, managing, and controlling contract cost, including identification and notification to DOE of cost estimates exceeding available funding and implementing timely corrective actions.
- Overall, effective utilization of available appropriated funds.
- Developing and implementing initiatives which result in tangible savings to DOE (cost, schedule, or risk).
- The management of risks such that the costs expended to eliminate, mitigate, or minimize risks results in a substantial reduction in the rate at which risk costs are realized.
- Cost tracking and reporting. This includes the accuracy of Estimate at Completion (EAC), accuracy of cost projections, effectiveness of baseline change management, mitigation of cost overruns through Earned Value measurements.
- The overall and specific program and project status performance against the approved baseline, and the effectiveness of program and project reporting tools and systems.

Program Management: The primary objective of the ICP Program Management Incentive is to encourage the Contractor to continue to advance all ICP projects toward End States. The Contractor's program management support performance will be evaluated in areas including but not limited to the following:

- Effective program and project management.
- Effectiveness in coordinating with and applying lessons learned from other DOE/Commercial site when implementing similar operations.
- Effectiveness of coordination with the Idaho National Laboratory Managing and Operating Contractor (M&O), the Naval Reactors Facility Contractor, and other Site Contractors to support and implement provided services and the reduction of costs to implement these services.
- Performance in interfacing with the community and other stakeholders in the execution of the ICP scope, including but not limited to follow through on stakeholder commitments.

Anticipated incentives for each TO are shown in ***Exhibit 7. Desired End States.***

Exhibit 7. Desired End States

TO Title and Scope	Notional TO Incremental End States/Metrics/Performance Incentives	Desired 10-year End State	Risks to achieving 10-year End State	Activities Required Beyond Contract Period to Achieve Final End State
Integration & Mission Continuity Phase 1 – Maintaining continuity of operations, providing core programs across the ICP, and defining/prioritizing TO development	• 17-month period of performance ending 9/30/2023 • Metrics established in a Biennial PEMP with PBIs (Performance Based Incentives) • Remaining scope is transferred to TO3 P2 10/1/2023	• Transfer of remaining scope to IMC P2 10/1/2023	• WIPP certification and availability • Availability of WIPP containers/overpacks (supply chain) • Subject to the DOE Order 413.3B Capital Acquisition Process which is a risk to schedule	• Not an End State TO
Integration & Mission Continuity Phase 2 – Programmatic support required for life of the contract and assure variable/high-risk work scopes not resolved during IMC Phase 1 are continued until risks have been mitigated	• Update biennially throughout contract POP • Metrics established in a Biennial PEMP with PBIs (Performance Based Incentives) • Resolve high-risk scopes to develop TOs • Complete WIPP certification • Ship remaining CH TRU Waste Inventory to WIPP	• Uninterrupted programmatic support • High-risk scopes resolved and transferred to End State TOs	• WIPP certification and availability • Availability of WIPP containers/overpacks (supply chain) • Subject to the DOE Order 413.3B Capital Acquisition Process which is a risk to schedule	• May be extended if contract is extended or become the responsibility of the new contractor • Not an End State TO
Non-Defense Project – Manage SNF from Ft. St. Vrain and on-site NRC licensed facilities	• Manage Ft. St. Vrain & on-site NRC facilities fuels for future disposal	• Provide NRC licensed fuel facilities support to fuels management as directed • Not an End State TO	• None	• Not an End State TO

Excess Facilities Demolition – Removal of excess facilities as funding allows as directed by DOE to reduce risk and costs	• Identify candidate excess facilities & prioritize according to risk & integration with ongoing operations (AMWTP/INTEC admin. bldgs., maintenance facilities, storage facilities, etc.)	• Demolish priority excess facilities
		  ○ Support RWMC closure
		  ○ Reduce building footprint at INTEC
			• Need to minimize impact to higher priority projects and ongoing operations in other areas
			• Dependent on available funding and resources
				• Complete demolition of identified excess facilities

RWMC Closure – Completion of activities needed to achieve RWMC Closure	• ARP/SDA Demolition & OCVZ Well Abandonment • RCRA Closure/Demolition of AMWTP Treatment Facility • SDA Cap Installation with 1st load of dirt to SDA, 25%, 50%, 75% dirt hauled; cap complete, report submitted • RCRA Closure/Demolition of 9 AMWTP Storage Facilities	• Closure of the RWMC • RWMC returned to natural vegetation	• Dependent upon treatment capabilities to address CH TRU and MLLW • Dependent upon WIPP certification and availability • Availability of WIPP containers/overpacks (supply chain) • SDA Cap subject to the DOE Order 413.3B Capital Acquisition Process which is a risk to schedule	• RWMC Closure will be completed within 10-year contract period
Tank Closure – Completion of activities needed to achieve Tank Closure	• IWTU Operations • Removal & treatment of 900K gallons of SBW contained in tanks • RCRA closure and stabilizing the emptied tanks under DOE O 435.1 • Placing an interim cap over the tank farm	• Tanks emptied of waste and cleaned • Ancillary liquid waste treated (Process Equipment Waste Evaporator [PEWE]) • Tank Farm Closed • Place interim cap over Tank Farm • Determine final treatment Path for SBW treated product	• The IWTU must be fully tested and reliably operational to support interim SBW treatment • No identified final treatment process for SBW	• Tank Closure will be completed within the 10-year contract period • SBW treatment process must be identified • SBW treated, packaged, and “Road Ready” for transport to disposal
SNF Transfer & Packaging – Activities required to prepare and ready SNF for shipment	• Fuel Transfers (Peach Bottom from Gen 1 to Gen 2 vaults) • Packaging Fuel Operations for Staging • Move SNF from wet storage to dry storage • Begin retrieval & packaging demonstration project for SNF from dry storage	• Peach Bottom transfers from Gen 1 to Gen 2 vaults complete • Complete the facility mod and SNF packaging demonstration (CPP-603) • Complete design for SNF Interim Staging and Packaging capability	• Critical activities for the facility modification and SNF packaging demonstration support are still in development • The Design and Construction of the SNF Interim Staging and Packaging Facility is subject to the DOE Order 413.3B Capital Acquisition Process which is a risk to schedule • No out of state repository for SNF disposal	• Develop the SNF Interim Staging and Packaging capability • Complete packaging and preparation of fuel • Ship SNF out of state • Close unneeded facilities and storage areas
Calcine Disposition – Activities to support retrieval, processing, and disposition of Calcine waste	• Begin Calcine processing & operations (transfer Calcine from Bin 1 to Bin 6) • First canister produced, 50th, 100th, processing complete • Empty each bin set (7), close/grout bins (7) & interim cap complete	• Complete Calcine Demonstration Project (Retrieval Development/Mock-up) • Complete the evaluation to determine path for Calcine treatment • Design and construct Calcine treatment process	• Calcine Demonstration Project must be completed successfully to remove uncertainty in completing the Calcine Disposition End State • No identified path for calcine treatment • This activity is subject to the DOE Order 413.3B Capital Acquisition Process which is a risk to schedule	• Retrieve and process all calcine waste to make it “Road Ready” • Ship treated Calcine waste out of state to final disposition • Complete Bin Set Closure (RCRA closure and interim cap)
Naval Reactors – Removal and disposition of aging Naval facilities	• Deactivation of S1W & A1W • Demolition of S1W & A1W • Commence D&D Planning for S5G • Complete design, testing, and processing of Core Car	• Complete demolition of specified NRF facilities • Complete processing of Core Car	• S1W is subject to the DOE Order 413.3B Capital Acquisition Process which is a risk to schedule • A1W & S5G will require evaluation against DOE O 413.3B • No on-site current capacity for disposal of large reactor components - ICDF expansion required • New ICDF cell is subject to the DOE Order 413.3B Capital Acquisition Process which is a risk to schedule	• The S1W and A1W facilities will be dispositioned within the 10-year contract period • The Core Car will be processed within the 10-year contract period

C.4 Workforce

Task Orders are notionally laid out to optimize workforce efficiency, maximize use of the trained and qualified workforce, and minimize down-time between TOs.

The work force is further optimized through:

- **Training:** Workers will have opportunities to learn new skills so they can be leveraged as multi-disciplinary assets (consistent with the collective bargaining agreement, as applicable) and on multiple task orders as the work shifts around the ICP facilities.
- **Recognition for Achievements:** When workers complete tasks safely and compliantly, achieving the desired end states for DOE as required by the task, they will be recognized for their achievements.
- **Transition Support:** As the achievement of end states at the ICP occurs and skill set demands change, IEC will work to provide advanced planning and preparation for initiation of tasks to allow placement of resources on other ICP activities, or to provide opportunity for the workforce in the ongoing missions, or new missions that are part of the future of the Idaho site.
- **Union Collaboration:** IEC will work strategically and collaboratively with the Bargaining Units to ensure that end states are achieved in a safe, effective and timely manner without significant labor impacts.

C.5 Integration

The IMC TO (TO3) is the key mechanism for ensuring a fully integrated approach to End State TO development and implementation over the life of the contract. This allows the planning of TO scopes to achieve end states, while balancing workforce and resource allocations against funding or scope availability. IMC also allows flexibility to move resources between TOs as work is completed or in response to unanticipated situations that require resource reallocation.

C.6 Internal Controls

IEC brings a systematic, standardized approach to managing, implementing, and executing task orders that is of value to the government and contractor alike, driving accountability and engagement by all parties to define and reach agreement on the desired end state objectives.

The TOs will be prepared under separate proposals designed to allow for segregated tracking and charging by TO (Separate WBS structure, separate charge codes to allow tracking of individual work scope under each task independently). In addition, the WBS is set up with links between individual TOs to produce life-cycle tracking.

D. End State

Exhibit 7. Desired End States shows the end states desired for each End State TO as well as the anticipated status of each TO at the end of the contract period.

E. Partnering

The DOE-EM and IEC have established a routine collaborative and iterative process wherein each party has been present and engaged in the identification of the Department's strategic imperatives. The foregoing strategy, including the defined End States, was developed, and agreed to between the parties.

The parties also recognize the need for continuing a defined process for strategic risk management that sets priorities and informs TO development in a way that reduces risk and supports End State achievement in a tactical manner that considers resource availability, funding, regulatory, and budget limitations.

F. Schedule

The contemplated schedule for TO development and deployment is provided in the ***Exhibit 8. Notional Task Order Schedule***.

G. Risk and Liability

DOE-EM employs a risk management plan for the initiation, execution, monitoring and close-out of risks throughout the life cycle of the project. As part of the execution to this plan, the proposed End State task orders will achieve significant risk and liability reductions in each key area of site cleanup and will demonstrate significant progress toward achieving DOE end state goals and objectives.

Risk and financial liabilities are initially reduced in the IMC task order through completion of targeted buried waste exhumations at RWMC as required in the Idaho Settlement Agreement. This Task Order also removes all stored transuranic waste out of the state of Idaho as prescribed in the Site Treatment Plan. Completion of targeted wasted exhumations and transuranic waste removal allows for D&D of structures above the Subsurface Disposal Area (SDA) and allows for installation of the SDA Cap in RWMC Closure task order resulting in final closure of RWMC and AMWTP and an estimated financial liability reduction of $150M/year of historical operating costs. Completion of the cap significantly reduces the risk to the aquifer by limiting below grade contamination migration.

Completion of Tank Closure end state task order will reduce the Idaho environmental liability by approximately $90M/yr of facility related costs and reduce the risk to the aquifer by solidifying an estimated 900,000 gallons of liquid waste currently stored in below ground tanks which will be grouted and closed upon completion of treatment.

Two task orders will also target scope related to spent fuel management. The IMC task order (TO3 P1/P2) will complete the court ordered Idaho Settlement Agreement action to remove all spent nuclear fuel from wet storage and place into dry storage awaiting final disposition while achieving an estimated financial liability reduction of approximately $10M/yr and maintain fuel in a compliant state in dry storage. While the financial liability reduction related to the SNF Transfer & Packaging end state task order is minimal, completion of this scope will reduce risk to SNF located in below ground 1st Generation vaults by transferring into existing 2nd Generation vaults which will minimize the intrusion of water and subsequently limit corrosion of the fuel basket assemblies.

Exhibit 8 Notional Task Order Schedule

Task/Subtask Order Title	Task Order Contemplated Period of Performance (POP)	ROM Estimate/ Negotiated Value	IEC Contract Base 10-Year POP										IEC Contract Potential Extended POP				
			FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036
Integration & Mission Continuity (IMC) Phase 1 (TO3 P1)	May 22 – Sep 23	$180M (FY22) $340.6M (FY23)	IMC Phase 1														
IMC Phase 2 (TO3 P2)	FY23 – FY31	TBD			IMC Phase 2												
Non-Defense Project	FY23Q3 – FY31	$5M/yr		Non-Defense Project													
Excess Facilities Demolition	FY25 – FY31	TBD				Excess Facilities Demolition											
RWMC Closure	FY23 – FY29Q1	$825M		RWMC Closure													
ARP/SDA Demolition & OCVZ Well Abandonment (TO4a)	FY23 – FY25Q1	$64.6M		ARP/SDA Demolition & OCVZ Abandonment													
AMWTP Treatment Facility RCRA Closure & Demo	FY25 – FY29Q1					AMWTP Facility Closure											
SDA Cap Installation	FY25 – FY29Q1					SDA Cap											
AMWTP Storage Facilities RCRA Closure & Demolition	FY27 – FY29Q1							AMWTP Storage Facility Closures									
Tank Closure	FY24 – FY28	$545M			Tank Closure												
IWTU Operations	FY24 – FY28				IWTU Operations												
Tank Closure (4 tanks & supporting structures)	FY26 – FY28						Tank Closures										
SNF Transfer & Packaging	FY24 – FY35	$211M			SNF Transfer & Packaging												
Fuel Transfers (Peach Bottom fuel from Gen1 to Gen2 vaults)	FY24 – FY26				Fuel Transfers												
Packaging Fuel Operations for Staging	FY29 – FY35									Pkg Fuel for Staging							
Calcine Disposition	FY28 – FY40	$1.1B - $2.2B							Calcine Disposition								
Calcine Processing and Operations	FY28 – FY36								Calcine Processing & Ops								
Bin Set Closure (RCRA closure & interim Cap)	FY31 – FY40										Bin Set Closure						
Naval Reactors	FY24 – FY34	$35M/yr			Naval Reactors												
S1W D&D	FY24 – FY26				S1W D&D												
Core Car	FY24 – FY27				Core Car												
A1W D&D	FY27 – FY31							A1W D&D									
S5G D&D	FY30 – FY34										S5G D&D						

Note: *TO1 Transition and TO2 Implementation complete.*

IMC Phase 1 | IMC Phase 2 | Non-Defense | Excess Facilities Demolition | RWMC | Tank | SNF | Calcine | Naval | Task Order Awarded

Two task orders, Packaging Fuel Operations for Staging and Calcine Disposition, will make progress toward repackaging of Spent Nuclear Fuel and treatment and disposition of Calcine waste. Completion of these end state task orders fall outside the 10-year plan; however, it is expected that substantial progress will be made in regard to Record of Decision (ROD) amendments, treatment technologies, SNF repackaging demonstrations, staging, and final SNF path forward in Idaho.

H. Metrics

Metrics for the IMC P1/P2 TO are established in the PEMP with separate metrics identified as TOs are developed. FY22 completed metrics are shown in ***Exhibit 2. FY2022 Metrics Demonstrating Successful TO Performance*** with anticipated metrics for each TO shown in ***Exhibit 7. Desired End States.***