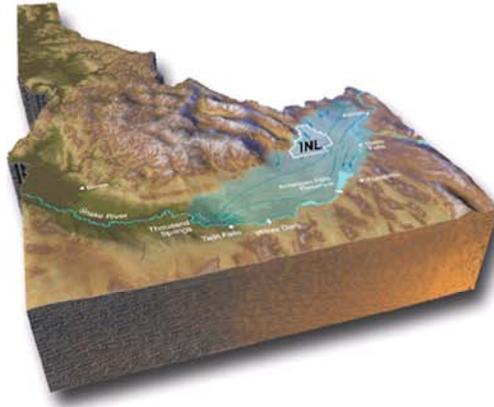


PLN-2084  
Revision 4



# **Project Execution Plan for the INTEC Area Cleanup Project**

JUNE 2008

CH2M♦WG Idaho, LLC is the Idaho Cleanup Project contractor for the US Department of Energy



## **Plan**

# **Project Execution Plan for the INTEC Area Cleanup Project**

**Idaho  
Cleanup  
Project**

CH2M ♦ WG Idaho, LLC is the Idaho Cleanup Project contractor for the U.S. Department of Energy

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084 Revision: 4 Page: 1 of 70
--	--

Project Controls	Plan	For Additional Info: <a href="http://EDMS">http://EDMS</a>	Effective Date: 06/02/08
------------------	------	---	--------------------------

Change Number: 322270

Entire document revised

## CONTENTS

ACRONYMS .....	5
1. PROJECT IDENTIFICATION .....	8
1.1 Purpose .....	8
1.2 Building Description History .....	9
1.2.1 High-risk Facilities .....	10
1.2.2 Key Excess Facilities to be Demolished by 2012 .....	12
1.2.3 Key Facilities under Continuing Operation.....	16
1.3 Project Justification .....	26
1.3.1 Liquid Waste Closure and Integrated Waste Treatment Unit Facilities.....	26
1.3.2 Nuclear Materials Disposition.....	27
1.3.3 D&D/Waste Management/Environmental Remediation.....	27
1.4 Project Funding .....	27
2. PROJECT SCOPE.....	27
2.1 Scope .....	27
2.2 Boundaries.....	30
2.3 Project Documents.....	30
2.3.1 Liquid Waste Facilities Closure Documents .....	31
2.3.2 Liquid Waste Facilities Closure Documents .....	32
2.3.3 Nuclear Materials Deposition Documents .....	32
2.3.4 INTEC Area Operations Documents.....	32
2.3.5 D&D Documents.....	33
3. TECHNICAL APPROACH .....	33
3.1 Technical Strategy .....	34
3.1.1 Sodium Bearing Waste (SBW) .....	34
3.1.2 Organic and Hazardous Waste .....	34
3.1.3 Tank Farm .....	34
3.1.4 High-level Waste (HLW) Calcine.....	34
3.1.5 Nuclear Materials.....	34
3.1.6 Spent Nuclear Fuel (SNF).....	35
3.1.7 Deactivation, Decontamination, and Decommissioning (DD&D).....	35

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier:	PLN-2084
	Revision:	4
	Page:	2 of 70

3.1.8	Continuing Facility Operations .....	35
3.1.9	Environmental Remediation.....	35
3.2	Project Closure .....	37
3.2.1	Liquid Waste Facilities Closure (LWFC) .....	37
3.2.2	Nuclear Materials Disposition (NMD).....	38
3.2.3	Decontamination and Decommissioning (D&D).....	38
3.2.4	CERCLA/VCO Sites.....	39
4.	PERFORMANCE CRITERIA .....	39
4.1	Enforceable and Supporting Milestones.....	39
4.2	Performance Metrics .....	39
5.	PROJECT RISK MANAGEMENT .....	40
5.1	Assumptions .....	40
5.1.1	General .....	40
5.1.2	Environmental Remediation/Voluntary Consent Order .....	40
5.1.3	Decontamination and Decommissioning .....	40
5.1.4	Liquid Waste Facilities Closure .....	40
5.1.5	Nuclear Material Disposition .....	41
5.2	Risks .....	41
6.	METHOD OF ACCOMPLISHMENT.....	41
7.	ENVIRONMENTAL, HEALTH, SAFETY, AND QUALITY .....	42
7.1	Environmental Compliance .....	42
7.2	Applicable Regulatory Requirements Documentation .....	44
7.3	Health and Safety .....	44
7.3.1	Integrated Safety Management (ISM).....	45
7.3.2	Step Back/Stop Work.....	45
7.4	Quality Assurance .....	46
7.4.1	Quality Management .....	46
8.	WASTE MANAGEMENT AND MINIMIZATION .....	46
8.1	Waste Management .....	46
8.2	Waste Minimization .....	47

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 3 of 70

- 9. STAKEHOLDERS ..... 47
- 10. ORGANIZATION AND RESPONSIBILITIES ..... 47
  - 10.1 General Responsibilities ..... 47
    - 10.1.1 Internal Organizations ..... 47
    - 10.1.2 External Organizations ..... 48
  - 10.2 Project Organizational Structure ..... 49
  - 10.3 Responsibilities ..... 49
    - 10.3.1 INTEC Area Project Manager ..... 50
    - 10.3.2 INTEC Operations Manager ..... 50
    - 10.3.3 INTEC Support Group Manager ..... 52
    - 10.3.4 INTEC Fuel Group Manager ..... 54
    - 10.3.5 INTEC Analytical Services Group Manager ..... 55
    - 10.3.6 INTEC Chief Engineer ..... 56
    - 10.3.7 INTEC Maintenance Group Manager ..... 57
    - 10.3.8 Project Planning and Integration (PP&I) Manager ..... 58
    - 10.3.9 Department Managers/Completion Managers/Managers ..... 59
  - 10.4 Interfaces ..... 59
  - 10.5 Facility Interfaces ..... 60
  - 10.6 Subcontractor’s Interfaces ..... 60
  - 10.7 Project Meetings ..... 61
    - 10.7.1 Safety Meetings ..... 61
    - 10.7.2 Shift Turnover ..... 61
    - 10.7.3 Daily Team Meetings ..... 62
    - 10.7.4 Plan of the Day ..... 62
    - 10.7.5 Lock-In ..... 62
    - 10.7.6 Work Week Critique ..... 63
    - 10.7.7 Plan of the Month ..... 63
    - 10.7.8 Monthly INTEC Area Cleanup Project Review ..... 64
  - 10.8 Site Project Control Interface ..... 65
  - 10.9 Project Control ..... 65
    - 10.9.1 Status Measurement ..... 65
    - 10.9.2 Analysis ..... 66
    - 10.9.3 Project Reports ..... 66
  - 10.10 Change Management ..... 67

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 4 of 70

10.11 Value Engineering Activities ..... 67

    10.11.1 Methodology ..... 67

    10.11.2 Responsibilities ..... 68

    10.11.3 Continuing Pursuit of Cost Savings: Section B.8 Activities ..... 68

11. REFERENCES ..... 69

**FIGURES**

10-1. INTEC area cleanup project organization chart ..... 49

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084 Revision: 4 Page: 5 of 70
--	--

## ACRONYMS

ACWP	actual cost of work performed (actuals)
ALARA	as low as reasonably achievable
ARAR	applicable or relevant and appropriate requirement
BCP	baseline change proposal
BEA	Battelle Energy Alliance
BCWP	budgeted cost of work performed (earned value)
BCWS	budgeted cost of work scheduled (budget)
CAB	Citizens Advisory Board
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CWI	CH2M-WG Idaho, LLC
D&D	decontamination and decommissioning
DD&D	deactivation, decontamination, and decommissioning
DEQ	Department of Environmental Quality
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
DSA	documented safety analysis
EE/CA	engineering evaluation/cost analysis
EM	Environmental Management
EPA	Environmental Protection Agency
ER	Environmental Remediation
ESH&Q	Environment, Safety, Health, and Quality
EVMS	earned value measurement system
FFA/CO	Federal Facility Agreement and Consent Order
FSA	Fuel Storage Area

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 6 of 70

FY	fiscal year
HEPA	high-efficiency particulate air
HLW	high-level waste
HRB	Hazards Review Board
IAO	INTEC Area Operations
ICP	Idaho Cleanup Project
IFSF	Irradiated Fuel Storage Facility
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
IWTU	Integrated Waste Treatment Unit
LCB	life-cycle baseline
LLW	low-level waste
LST	list
LWBR	Light Water Breeder Reactor
LWFC	Liquid Waste Facilities Closure
MLLW	mixed low-level waste
NCR	nonconformance report
NEPA	National Environmental Protection Act
NMD	Nuclear Materials Disposition
NTS	Nevada Test Site
NWCF	New Waste Calciner Facility
ORPS	Occurrence Reporting and Processing System
OU	operable unit

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 7 of 70

PEP	project execution plan
POD	plan of the day
PP&I	Program Planning and Integration
QAP	Quality Assurance Program
RCRA	Resource Conservation and Recovery Act
RD/RA	remedial design/remedial action
RFP	request for proposals
ROD	record of decision
RWMC	Radioactive Waste Management Complex
SAR	safety analysis report
SBW	sodium-bearing waste
SNF	spent nuclear fuel
SRS	Savannah River Site
TRU	transuranic
TSR	technical safety requirements
USQ	unreviewed safety question
VCO	Voluntary Consent Order
VE	value engineering
WAG	waste area group
WBS	work breakdown structure
WGS	Waste Generator Services
WIPP	Waste Isolation Pilot Plant
WIR	waste incidental to reprocessing
WM	Waste Management
YTD	year to date

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 8 of 70

## 1. PROJECT IDENTIFICATION

The Idaho Nuclear Technology and Engineering Center (INTEC) Area Cleanup Project is one of four area projects of the Idaho Cleanup Project (ICP). The INTEC Area Cleanup Project consists of all elements of the ICP contract scope of work conducted within or contiguous with the INTEC perimeter property protection fence. Within the scope of the INTEC Area Cleanup Project, four other area projects perform work including: environmental remediation, waste management, sodium-bearing waste (SBW) disposition and decommissioning and demolition of excess facilities. The scope which is directly managed by the INTEC area manager, includes spent fuel management and consolidation, nuclear materials disposition, tank farm closure, calcine retrieval and packaging design, and provides common services to other projects within INTEC, such as steam, roads and grounds, etc. The INTEC Area Cleanup Project also provides integration among other projects working within INTEC. The INTEC Area Cleanup Project also provides continuing operations and maintenance of INTEC facilities that have a continuing mission—for example, analytical laboratories, liquid and solid waste management facilities, and administrative and support buildings.

All of the work performed as part of the INTEC Area Cleanup Project will be completed in strict compliance with the contract (DE-AC07-05ID14516) between CH2M-WG Idaho, LLC, (CWI) and the U.S. Department of Energy (DOE).

The work performed in the INTEC Area Cleanup Project is outlined in the CWI work breakdown structure (WBS). The INTEC Area Cleanup Project portion of the WBS dictionary is maintained in accordance with MCP-1414, “Change Control,” and can be found in the IPS 2000 system. The WBS assigns responsibility to a person for each WBS element. The responsibility depends on the level of the WBS. Managers at the lowest level of the WBS have the responsibility to plan and perform the work in the work package and to report progress. They can authorize changes in the details of the work package that do not affect the life-cycle baseline (LCB) or performance measures. Changes that meet the baseline change proposal (BCP) thresholds must follow the BCP process, as described in the project controls system description document. The WBS dictionary contains the responsibility assignments for the project team members. The project team and individuals with assigned responsibility have reviewed and agreed to the assignments.

The scope of the project work is given in narratives also maintained in the IPS 2000 system. It represents an extraction from the contract with DOE.

The project will be performed in the timeframe spanning May 1, 2005, through September 30, 2012. The schedule for the INTEC Area Cleanup Project is maintained in the ICP LCB and is controlled in accordance with MCP-1414.

### 1.1 Purpose

The purpose of the INTEC Area Cleanup Project is to execute the INTEC scope of the CWI-DOE contract (DE-AC07-05ID14516).

The Nuclear Materials Disposition (NMD) subproject provides movement to consolidate spent nuclear fuel (SNF) owned by Environmental Management (EM) from a wet storage environment to a

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 9 of 70

safer and more stable dry storage environment. This subproject also transfers remaining excess unirradiated nuclear materials to a final disposition.

The Liquid Waste Facilities Closure (LWFC) subproject closes the INTEC tank farm and provides a retrieval design for calcine removal from the bin sets by 2012. Completion of this work scope provides substantial elimination of risk to workers and the environment.

The INTEC Area Operations (IAO) subproject supports all ICP activities with analytical lab, industrial lab, calibration services, custodial services, and directly maintains the INTEC area infrastructure (e.g., electricity, steam, and water treatment) necessary for the other projects to successfully complete their objectives.

The Integrated Waste Treatment Unit (IWTU) provides for treatment and disposition of SBW to the Waste Isolation Pilot Plant (WIPP). Completion of this work scope provides substantial elimination of risk to workers and the environment. Specific information on this subproject can be found in PLN-1963, "Idaho Cleanup Project Sodium-Bearing Waste Treatment Project Execution Plan," and PLN-2040, Idaho Cleanup Project Integrated Waste Treatment Unit Team Execution Plan."

Decontamination and Decommissioning (D&D) activities at INTEC remove excess and high-risk facilities, thereby lowering the risk to workers and the public, while reducing mortgage and minimizing legacy costs.

Environmental Remediation (ER) activities achieve the agreed upon closure configuration with State of Idaho regulators for Voluntary Consent Order (VCO) vessels and systems and all other OUs and waste area groups (WAGs) associated with the INTEC Area Completion Project. This provides a significant reduction in risks and completes the cleanup of area soils and facility closures.

The Waste Management (WM) effort at INTEC provides a final disposition for mixed low-level waste (MLLW) and transuranic (TRU) waste streams.

## **1.2 Building Description History**

The INTEC facilities were used to reprocess DOE-consigned fuels. Over the years, several types of processes were used. They generally involved dissolving the fuels with various acids, separating the fission products from the unfissioned uranium by multiple phases of solvent extraction, and then passing the unfissioned uranium stream through a denitrator, where it was converted into a solid uranium oxide product. This product was then returned to the DOE system for reuse. The waste streams containing the fission products were sent to the tank farm for storage. From the tank farm, the waste streams were passed through a calcination process, where they were converted to a solid, stable form. This solid waste stream was stored as calcine in the calcine storage bin sets. Many of the facilities used for these processes are no longer in use, are highly contaminated with radioactive matter, and are in need of deactivation, decontamination, and demolition.

The key INTEC buildings affected by the INTEC Area Cleanup Project are described below. After each description is a listing of the end state to be achieved by the project. If favorable project performance results in the availability of funds due to project underruns, it may be possible to advance the end state of some of the facilities that are otherwise planned to be left as "demolition ready" but not actually demolished.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 10 of 70

Numerous other smaller facilities will be deactivated and demolished at INTEC but are not discussed below due to their small size.

### 1.2.1 High-risk Facilities

**1.2.1.1 CPP-601.** CPP-601 was the original processing facility at INTEC. Here, SNF was dissolved, and the fissile materials were removed from the fission products by passing the dissolution solutions through three successive phases of solvent extraction in a modified Purex process. CPP-601 was activated in 1953. It was constructed with four levels below grade (bermed), and the process makeup area was above grade (berm). A ramped access to the makeup level was provided on the south side of the facility for delivery of process materials. Access is provided through three overhead doors. The three primary processing levels below grade include the operating corridor, the service corridor, and the access corridor. Contained within these lower levels were 20 cells used for various processing activities. The deep tanks, used for collection of contaminated liquids, are still operable and are located in the lowest level of the facility at -57 ft 6 inches.

The CPP-601 facility has had some decontamination of vessels performed and some initial characterization. Many of the cells will likely have high radiation fields, and decontamination to lower fields may be only partially successful.

End State: Demolition Ready



CPP-601

**1.2.1.2 CPP-603A.** The CPP-603 facility was originally designed and used to store SNF in water-filled basins. The current facility is divided into two parts: CPP-603A (which consists of three storage basins) and CPP-603B (the Irradiated Fuel Storage Facility [IFSF] used for dry storage of SNF). The CPP-603A facility will be deactivated by removal of sludge, dewatering, and grouting of the basins. The basin sludge is radioactively contaminated with hazardous constituents and will be pumped into high-integrity containers, solidified, and disposed of at the RWMC. The IFSF (603B) will be discussed in the Facilities with Continuing Operations section below.

The facility houses the operations and support personnel needed for its daily operation.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 11 of 70

End State: Demolition Ready (603A only)



CPP-603A

**1.2.1.3 CPP-627.** This facility was originally used as a remote analytical laboratory. It is now shut down and was replaced by a new facility, CPP-684. CPP-627 was in the initial stages of D&D when transition from the previous contractor occurred. It contains several analytical features, including the large multi-curie cell and A-line and B-line sample processing lines. CPP-627 is radioactively contaminated and a source of radiation exposure. It is attached to other buildings (CPP-601 and CPP-640) via common walls and must be cut away from these facilities before it can be demolished.

End State: Demolished



CPP-627

**1.2.1.4 CPP-640.** This facility was originally the Headend Process Plant. The last campaign performed in this facility was the recovery of unfissioned uranium from the ROVER fuel. The facility contains cells that include the burner cell used for the ROVER fuel. The facility is radioactively contaminated and is a source of radiation exposure to personnel. It will be further deactivated, decontaminated, and made demolition ready as part of this contract.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 12 of 70

End State: Demolition Ready



CPP-640

**1.2.1.5 CPP-648.** This facility houses the sludge tank control functions associated with CPP-603A. CPP-648 is radioactively contaminated. CPP-648 sits on top of Vessel 106 which is discussed in the VCO section. Since building CPP-648 is used in the material removal of Vessel 106, it will be demolished along with the Vessel 106 tank and vault system. The demolition is planned for FY 2008.

End State: Demolished



CPP-648

**1.2.2 Key Excess Facilities to be Demolished by 2012**

A total of 109 facilities have been declared excess facilities in addition to the five high-risk facilities discussed above. These facilities will be demolished as part of the contract. Several prominent facilities in this group are described below.

**1.2.2.1 CPP-645.** This facility functions as the primary management office for the operations contractor and DOE operations at INTEC.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 13 of 70

End State: Demolished



CPP-645

**1.2.2.2 CPP-651.** This highly secure facility is used to store unirradiated fuel. CPP-651 was emptied in July 2005 and is being held for a possible future mission. If a new mission is not identified, the facility will be deactivated and demolished. The contamination levels within the building are low, and minimal radiation exposure to workers would occur during D&D.

End State: Demolished (**NOTE:** *A new mission may be defined requiring a change to the contract end states.*)



CPP-651

**1.2.2.3 CPP-668.** Built in 1978, this facility currently houses Tenant Support, Utilities, and Independent Spent Fuel Storage Installation operations. The office layout in this facility is unusual in that the spaces are not configured in a typical fashion, resulting in inefficient use of the facility.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 14 of 70

End State: Demolished



CPP-668

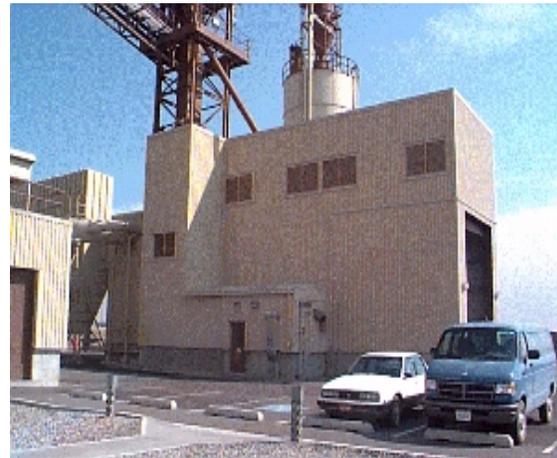
**1.2.2.4 CPP-687/688/other Coal Fired Steam Generation Facility.** The CPP-687 facility was designed to provide high-pressure steam from coal-fired boilers to be used for heating and process steam and to provide an alternate energy source for that purpose. The facility produced steam over an extended period but was ultimately replaced by oil-fired boilers.

The CPP-688 facility provides unloading capabilities for coal and limestone needed for operation of CPP-687.

End State: Demolished



CPP-687



CPP-688

**1.2.2.5 CPP-1619.** This facility is the primary shipping, receiving, and storage area for hazardous chemicals and radioactive waste at INTEC. It will be used to house these functions throughout the contract.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**

Identifier: PLN-2084

Revision: 4

Page: 15 of 70

End State: Demolished



CPP-1619

**1.2.2.6 CPP-1634.** This facility was designed as a research and development laboratory to support high-level waste (HLW) activities. As such, CPP-1634 has a high-bay design that utilizes laboratory gases, service waste, and treated and potable water.

End State: Demolished



CPP-1634

**1.2.2.7 CPP-1651.** This facility provides general administration space for plant training activities. Spaces consist of offices, a break area, a library, and four smaller training rooms, some of which have computer-aided stations.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 16 of 70

End State: Demolished



CPP-1651

**1.2.2.8 CPP-1662.** This facility is used for development, assembly, testing, and maintenance of remote robotic equipment.

End State: Demolished



CPP-1662

**1.2.3 Key Facilities under Continuing Operation**

A number of facilities have a continuing mission and will not be demolished as part of the contract. Several prominent facilities with a continuing mission are described below:

**1.2.3.1 CPP-602/630.** These facilities provide the primary analytical laboratories in support of INTEC and CPP-684 (Remote Analytical Laboratory) activities. CPP-602 currently contains analytical laboratories, support office space for the laboratories, change rooms, and lockers. The basement area houses the dial room for INTEC and some sitewide telephone, communications, data, and security equipment along with some storage areas. Current plans are to use this facility as an analytical laboratory until the TRU lab program can be consolidated to the Remote Analytical Laboratory in CPP-684.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**

Identifier: PLN-2084

Revision: 4

Page: 17 of 70

The CPP-630 facility was built in 1956 as the maintenance facility for INTEC, which was known at that time as the Idaho Chemical Processing Plant. Significant remodeling was undertaken in the early 1980s to convert the building to the current safety/spectrometry facility.

Due to the reduction in staffing and lab analysis numbers, the 602/630 complex will be vacated and deactivated with the exception of the dial room in the basement. The dial room in the basement will be isolated from the remaining portions of the facility with access from CPP-606.

End State: Deactivated



CPP-602



CPP-630

**1.2.3.2 CPP-603B (IFSF).** The IFSF is part of the CPP-603 facility and is used for dry storage of SNF. The IFSF consists mainly of a large shielded vault with storage tubes where the SNF is stored. These tubes are placed in the floor.

The IFSF is the primary dry storage area to be used in the INTEC wet-to-dry SNF transfer program. SNF will be transferred from CPP-666 through FY 2009.

End State: Continuing Operations Capable



CPP-603

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 18 of 70

**1.2.3.3 CPP-604.** This facility was built in 1953 and houses five waste tanks (first-, second-, and third-cycle raffinate and surge feed), liquid evaporation vessels, separation and condensation vessels, blowers, filters, and off-gas equipment to process the waste products prior to further processing. In CPP-604, high-level radioactive liquid waste streams are concentrated by evaporation before they are transferred to the tank farm storage tanks. The cells in CPP-604 are highly contaminated, and radioactivity levels remain high. Many of the cells have not been entered in a long time. This facility will be maintained and operated for the duration of this contract.

End State: Continuing Operations Capable



CPP-604

**1.2.3.4 CPP-605.** This facility was built in 1953 to discharge air exhausted from the fuel processing facilities after the air was sampled. It houses three large blowers and support equipment. This facility will be maintained and operated for the duration of the contract.

End State: Continuing Operations Capable



CPP-605

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**

Identifier: PLN-2084

Revision: 4

Page: 19 of 70

**1.2.3.5 CPP-606.** This facility is the primary source of utility steam and treated water for INTEC. CPP-606 was built in 1953 to provide space heating and process steam capabilities for use throughout INTEC. In addition to providing steam, this facility also provides treated water, demineralized water, softened water, and compressed air and breathing air systems for use within INTEC. Several systems specific to CPP-606 are also contained within the facility. These include the boiler feedwater, cooling tower, process water treatment, and chemical neutralizing systems. The CPP-606 facility will be maintained and operated for the duration of this contract. Several of its systems have degraded in capability over the years. The need for upgrades will be evaluated throughout the contract.

End State: Continuing Operations Capable



CPP-606

**1.2.3.6 CPP-613.** This facility is a 13.8-kV switching substation that provides normal and standby power supply distribution within INTEC. Standby power distribution is provided through the distribution system to subsequent load centers.

End State: Continuing Operations Capable



CPP-613

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**

Identifier: PLN-2084

Revision: 4

Page: 20 of 70

**1.2.3.7 CPP-649.** This facility treats off-gas before it is released to the atmosphere. CPP-649 is part of the CPP-604/605 complex of buildings that is adjacent to the tank farm. This building continues to be used for off-gas treatment and will be used for the duration of the contract.

End State: Continuing Operations Capable



CPP-649

**1.2.3.8 CPP-652.** CPP-652 houses the INTEC cafeteria. Hot meals and dining space are provided in approximately 75% of the building. The balance of the space is used for the Emergency Communication Center for INTEC.

End State: Continuing Operations Ready



CPP-652

**1.2.3.9 CPP-659.** This large facility was designed for the calcining of stored liquid waste for ultimate storage within the calcine storage facilities. CPP-659 began operation in 1990 and processed several million gallons of high-level radioactive waste before its operations were suspended in 2000. Currently, the facility is used for monitoring of the calcine bin sets, evaporation of liquids, and leaching of high-efficiency particulate air (HEPA) filters.

CPP-659 is in use for packaging low-level waste (LLW), MLLW and RH-TRU waste during the course of the contract. The cells of this facility are highly radioactive and are entered infrequently. The facility will be flushed, and its utilities will be isolated prior to completion of the project.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 21 of 70

End State: Deactivated



CPP-659

**1.2.3.10 CPP-663.** Originally built in 1980 as the primary maintenance facility at INTEC, CPP-663 was remodeled in 2003 to allow the consolidation, at INTEC, of maintenance activities for the Idaho National Laboratory (INL) Site. CPP-663 currently houses key maintenance shops and the planning/scheduling personnel who perform sitewide maintenance activities. The warehouse originally installed as part of the first floor has been relocated to CPP-655 to provide the schedulers and planners adequate workspace.

End State: Continuing Operations Capable



CPP-663

**1.2.3.11 CPP-666.** This large facility was originally designed to serve both as a dissolution head end facility and as a receipt and storage pool for incoming SNF. The south portion of the facility contains six large pools used to store SNF rods. The north portion of the facility contains the Fluorinel Dissolution Process, in which SNF was dissolved before it was sent to solvent extraction in CPP-601 for recovery of unfissioned uranium. The dissolution process was shut down when DOE ceased reprocessing operations. A two-story office facility is located on the west side of the facility.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 22 of 70

End State: Continuing Operations Capable with transfer to a non-EM entity at the end of FY 2009 (end of EM work scope)



CPP-666

**1.2.3.12 CPP-684.** This facility houses remote analytical laboratories: a 773-ft<sup>2</sup> cold laboratory, a 1,441-ft<sup>2</sup> warm laboratory, a 123-ft<sup>2</sup> maintenance laboratory, a 508-ft<sup>2</sup> analytical cell, a 240-ft<sup>2</sup> waste-handling cell, two operating galleries totaling 1,051 ft<sup>2</sup>, and a 236-ft<sup>2</sup> airlock. CPP-684 also contains four office areas and support mechanical areas.

End State: Continuing Operations Capable



CPP-684

**1.2.3.13 CPP-691.** This large facility was designed as a fuel-processing facility to replace activities primarily in CPP-601. The project was stopped prior to completion. Some of the major equipment is currently being stored within the facility. The primary pieces of equipment include switchgear, fans, shielding windows, and manipulators.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 23 of 70

End State: Unchanged (No change is scheduled as part of the contract scope.)



CPP-691

**1.2.3.14 CPP-1617.** This facility is used for the storage of contaminated waste before it is disposed of. Currently, about 160 m<sup>3</sup> of MLLW and another 150 m<sup>3</sup> of newly generated MLLW in drums or boxes are stored in this facility.

End State: Continuing Operations Capable



CPP-1617

**1.2.3.15 CPP-1618.** This facility is used for evaporative concentration of radioactive liquid wastes. CPP-1618 is known as the Liquid Effluent Treatment and Disposal Facility and began operations in 1994. It serves, in combination with CPP-604, as the evaporative concentration capability for liquid radioactive waste streams collected from INTEC operations. Due to the limited amount of liquid waste generated after 2008, this facility will be closed as part of the RCRA closure of the Low Level Process Evaporator.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 24 of 70

End State: Deactivated



CPP-1618

**1.2.3.16 CPP-1650.** This facility consists of one auditorium-type and six smaller training rooms used various types of required training at INTEC. CPP-1650 has overhead projection and teleconferencing capabilities.

End State: Continuing Operations Capable



CPP-1650

**1.2.3.17 CPP-1671.** This facility houses INTEC Security Administration offices. The space also includes exercise/physical fitness rooms for security personnel. Locker and change rooms are provided for male and female personnel.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**Identifier: PLN-2084  
Revision: 4  
Page: 25 of 70

End State: Continuing Operations Capable



CPP-1671

**1.2.3.18 CPP-1674.** This is the primary point of entry for CPP-651. The facility also houses the Central Alarm Facility.

End State: Continuing Operations Capable



CPP-1674

**1.2.3.19 CPP-1686.** This is the main security guard gate for INTEC access.

End State: Continuing Operations Capable



CPP-1686

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 26 of 70

### 1.3 Project Justification

The principal project driver for the INTEC Area Cleanup Project is the DOE commitment to reduce the risk to the Snake River Plain Aquifer from the legacy conditions resulting from the operation of nuclear facilities during the Cold War era. A principal agreement affecting INTEC is the Settlement Agreement (DOE 1995) with the State of Idaho. The agreement commits to the cleanup of various facilities on a specified timetable. The DOE has issued a contract to CWI to perform most of that cleanup during a seven-year and five-month period running from May 2005 through September 2012. The contract outlines specifically the cleanup scope to be completed and has provision for further progress if project performance permits.

The CWI ICP contract (DE-AC07-05ID14516) and five compliance agreements and consent orders executed between 1991 and 2000 govern environmental cleanup work at the INL Site. The agreements are as follows:

- Federal Facility Agreement and Consent Order (FFA/CO) (DOE-ID 1991)
- Notice of Non-Compliance Consent Order (and subsequent revisions) (IDHW 1992)
- Settlement Agreement (DOE 1995)
- Site Treatment Plan (DOE-ID 1995)
- VCO (DEQ 2000).

A letter of intent signed by the State of Idaho, the U.S. Environmental Protection Agency (EPA), and DOE in May 2002 documents the agreement of the regulatory agencies to pursue accelerated risk reduction and cleanup at the INL Site and establishes a focused vision for the accelerated cleanup strategy.

#### 1.3.1 Liquid Waste Closure and Integrated Waste Treatment Unit Facilities

DOE, the State of Idaho, various public interest groups, and CWI recognize that the liquid SBW constitutes one of the highest environmental risks posed by the ICP to the Snake River Plain Aquifer. Removal of the liquid waste from the tanks and closure of the tanks and subsystems are the INTEC Area Cleanup Project's highest-priority effort. Safe and environmentally sound closure greatly reduces short- and long-term risk to workers and the environment. Completion of this task will also satisfy several Settlement Agreement (DOE 1995) and Site Treatment Plan (DOE-ID 1995) requirements.

This project utilizes an Integrated Waste Treatment Unit (IWTU) to prepare the SBW for disposal at WIPP and satisfies a Settlement Agreement requirement. By building and operating the IWTU, various waste streams can also be treated onsite in an economical manner.

Safe operation of the ancillary liquid waste and air treatment units is required to meet environmental regulations and permits.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 27 of 70

### 1.3.2 Nuclear Materials Disposition

Movement of EM SNF from wet into dry storage is a high priority in providing additional protection to the environment and is required in order to comply with the Settlement Agreement (DOE 1995). Excess nuclear materials will be dispositioned offsite to other DOE sites as part of an overall consolidation strategy that maximizes safety and increases cost effectiveness across the DOE complex.

### 1.3.3 D&D/Waste Management/Environmental Remediation

Legacy issues at INTEC that require definitive actions such as the demolition or containment of existing facilities and structures are driven by the DOE cleanup strategy, which will satisfy the cleanup requirements of the various applicable regulatory agreements, and by a need to enable possible reuse of the areas for future INL Site missions. A number of regulatory drivers are in place for the work performed by the D&D, Waste Management, and ER groups within INTEC. These drivers include the Settlement Agreement (DOE 1995); the Resource Conservation Recovery Act (RCRA) (42 USC § 6901 et seq.); the Site Treatment Plan (DOE-ID 1995); the FFA/CO (DOE-ID 1991); and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC § 9601 et seq.).

## 1.4 Project Funding

Funding for the INTEC Area Cleanup Project comes from PBS sources described and maintained in MCP-1413 Funds Authorization, Determination and Management.

## 2. PROJECT SCOPE

The scope of the project work is given in narratives maintained in the IPS 2000 system. It represents an extraction from the contract with DOE.

### 2.1 Scope

The scope of the INTEC Area Cleanup Project will be performed per the contract (DE-AC07-05ID14516). Key among INTEC Area Cleanup Project activities are the following activities:

- Project Management Scope:
  - Identifying risk areas.
  - Developing risk mitigation strategies.
  - Monitoring the success of any specific risk mitigation actions taken.
  - Any specific risk mitigation actions that are required to execute the work scope are included in the same WBS element the work scope is planned and a separate activity and charge number will be established to track specific mitigation actions.
- Liquid Waste Facilities Completion:
  - Perform closure of the SBW tanks and vaults by grouting.
  - Demonstrate full-scale retrieval of surrogate calcine.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084 Revision: 4 Page: 28 of 70
--	---

- Develop the design for calcine retrieval and packaging to support a record of decision (ROD) in 2009 and a RCRA permit application.
- Provide safe, regulatory-compliant, routine operations for INTEC liquid waste handling, calcine bin set surveillance, and off-gas ventilation systems.
- Integrated Waste Treatment Unit:
  - Remove, treat, and solidify 900,000 gal of SBW.
  - Place solidified SBW product into transportable containers acceptable for disposal at WIPP.
  - Provide interim shielded storage for the packaged SBW containers, and complete shipments to WIPP by September 30, 2012.
- Nuclear Materials Disposition (NMD): The NMD subproject is responsible for three general activities:
  - Remove legacy, EM-owned, unirradiated nuclear materials and ship them for final disposition by September 30, 2009
  - Move all SNF consigned to DOE-EM from wet storage in the CPP-666 storage pool to appropriate dry storage by September 30, 2009
  - Prepare the spent fuel facilities for transition to another government entity by installing a segregation fence.

Out-of-target scope within the NMD project. The NMD subproject is responsible for five general activities outside the target contract:

- Package and ship the Navy fuel to NRF by September 30, 2012
- Provide surveillance and maintenance of the NRC regulated spent fuel facilities
- Provide technical support for the overall national spent fuel program including the submittal of the Monitored Geologic Repository license
- Receive and store foreign and domestic research reactor fuels from offsite
- Ship aluminum spent nuclear fuel from INTEC to Savannah River Site and receive/store nonaluminum fuel from Savannah River Site starting in 2010.
- Environmental Remediation (ER): The ER Project is responsible for environmental remediation activities and VCO actions within the INTEC boundary. The Environmental Remediation Project is responsible for the following general scope of work inside the INTEC boundary:
  - Tank farm soils interim action
  - OU 3-14 tank farm soil remedial investigation/feasibility study
  - OU 3-13 Group 2 soils under selected buildings at INTEC
  - OU 3-13 Group 3 surface soils requiring CERCLA cleanup at INTEC
  - OU 3-13 Group 4 perched water monitoring at INTEC

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084 Revision: 4 Page: 29 of 70
--	---

- OU 3-13 Group 5 groundwater monitoring at INTEC
- INTEC CPP-603 basin deactivation
- SFE-20 and VES-106 RCRA closure
- Annual groundwater reporting for WAG 3 Group 5
- Aquifer characterization to support the OU 10-08 remedial investigation/feasibility study
- Completing agreed upon actions for all VCO tanks identified in the action plan of the VCO (DEQ 2000), dated June 2000
- Preparation of the INL long-term stewardship strategic and implementation plan
- Ecological monitoring of CERCLA sites
- New sites identification as they are discovered
- Coordination of new well drilling and construction services.

- Waste Generator Services (Waste Management Area Project activities at INTEC): The scope for these activities includes management of all radioactive and nonradioactive waste generated from routine operating activities and cleanup activities associated with the INTEC project. Specific waste types include LLW, MLLW, hazardous (nonradioactive) waste, industrial (nonradioactive, nonhazardous) waste, and other waste (recyclables, CERCLA liquids and excess materials).

Also included is work associated with the operational use of facilities at INTEC to perform backlog work-off and other waste-management operations. Specifically included is the use of CPP-659 to disposition HEPA filters and the management and operation of CPP-1617, which is utilized for interim storage of waste awaiting disposition.

- Specific work scope is contained within the following general groupings:
  - LLW/MLLW disposition
  - RH-TRU waste disposition
  - Hazardous waste disposition
  - Industrial waste disposition
  - Other waste disposition
  - Backlog operations at INTEC.

The scope generally consists of support provided by the Waste Generator Services (WGS) organization for the safe and compliant management and disposition of the various waste types generated from INTEC facilities. Additionally, the scope includes the labor and other direct costs associated with transportation, treatment, and disposal (as applicable) of the various waste forms. WGS works with the generator to ensure the waste is properly characterized and packaged for disposition. The waste generator will perform these initial activities, while WGS will ensure adequate disposition from that point forward. The scope also includes maintaining satellite accumulation areas and temporary accumulation areas for storage of waste awaiting disposition.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 30 of 70

- D&D: A total of 116 facilities were listed as either high-risk or excess facilities in the request for proposals (RFP). At contract assumption, 114 facilities were found to be dispositioned in the categories below:
  - Deactivate, decontaminate, and demolish 109 excess INTEC facilities (the RFP cited 112, but three were demolished when CWI took over contract)
  - Deactivate, decontaminate, and demolish high-risk facilities CPP-627 (added scope) and CPP-648
  - Deactivate, decontaminate, and make demolition ready high-risk facilities CPP-601, CPP-603A, and CPP-640.

The table below summarizes the D&D building count.

INTEC D&D Building Count	
INTEC RFP count	116
INTEC completed scope count	-3
INTEC added scope count	1
INTEC net count	114

Key:

High Risk (4)/Excess Facilities (112).
Scope in the RFP, but was completed at takeover (3 excess).
Scope not completed at takeover as assumed in RFP (CPP-627—high risk).

## 2.2 Boundaries

Most of the work performed under the INTEC Area Cleanup Project will occur within the INTEC fence line. INTEC subprojects interface with several other ICP projects that also work within the INTEC fence line, such as ER and VCO closures, D&D (deactivate, decontaminate, and demolish buildings within the fence line), and Waste Management (disposition TRU and MLLW). A few office buildings, warehouses, and miscellaneous structures fall under the INTEC Area Cleanup Project but are located outside the physical fence line. INTEC Area Operations provides utility services across the entire ICP.

## 2.3 Project Documents

PEP: This project execution plan (PEP) is a principal communication vehicle for use by the project. The primary purpose of the PEP is to provide guidance to the project team on *how* to work together to achieve project results that satisfy the DOE and stakeholders. The PEP will be supplemented by task summary letters, which will provide additional detail for lower-tier projects. This PEP is listed as PLN-2084.

Authorization Agreements: Numerous authorization agreements document the agreement between the Department of Energy Idaho Operations Office (DOE-ID) and the ICP contractor, CWI, on the overall

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 31 of 70

basis for safe operation of the facilities. The authorization agreement contains key terms and conditions under which CWI is authorized to perform work. Any changes to these terms and conditions require DOE-ID approval. In documenting the overall basis for the safe conduct of work, the authorization agreements highlight the scope of the authorization, the safety basis, and the key terms and conditions.

Safety Basis Documents: The safety basis document for each applicable facility is contained in the INTEC plant safety document, technical standards, the basis for interim operations, the INL standardized safety analysis report (SAR), and technical safety requirements (TSRs). These documents are among the applicable “list” (LST) documents. DOE-ID has reviewed and approved CWI’s proposed safety basis for the defined respective scopes of work.

### 2.3.1 Liquid Waste Facilities Closure Documents

For the LWFC-managed facilities/storage areas, existing authorization agreements, safety documents, and regulatory agreements include the following:

- “Authorization Agreement for New Waste Calcining Facility,” IAG-43
- “Safety Analysis Report for the New Waste Calcining Facility,” SAR-103
- “Technical Safety Requirements for the New Waste Calcining Facility,” TSR-103
- “Authorization Agreement for INTEC Calcined Solids Storage Facilities,” IAG-33
- “Safety Analysis Report for the Calcined Solids Storage Facilities,” SAR-105
- “Technical Safety Requirements for the Calcined Solids Storage Facilities,” TSR-105
- “Authorization Agreement for INTEC Tank Farm Facilities,” IAG-39
- “Safety Analysis Report for the Tank Farm Facilities,” SAR-107
- “Technical Safety Requirements for the Tank Farm Facilities,” TSR-107
- “Authorization Agreement for INTEC Process Equipment Waste Evaporator System,” IAG-41
- “Safety Analysis Report for Process Equipment Waste Evaporator System,” SAR-108
- “Technical Safety Requirements for the Process Equipment Waste Evaporator System,” TSR-108
- “Volume 14 – Partial Permit for the HWMA Storage and Treatment for the Liquid Waste Management System at the INTEC on the INL,” PER-111
- “Partial Permit for HWMA Storage for the Calcined Solids Storage Facility at the INTEC on the INL,” PER-114
- “RCRA Volume 18, Part B RCRA Permit for Debris Treatment and HEPA Filter Leach in NWCF”
- Waste Water Land Application Permit LA-000130-02
- *Final Environmental Impact Statement for Idaho High Level Waste and Facilities Disposition, DOE/EIS-0287, September 2002, and pending ROD.*

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 32 of 70

### 2.3.1a Integrated Waste Treatment Unit Closure Documents

- “Idaho Cleanup Project Sodium-Bearing Waste Treatment Project Execution Plan,” PLN-1963
- ”Idaho Cleanup Project Integrated Waste Treatment Unit Team Execution Plan,” PLN-2040

### 2.3.2 Liquid Waste Facilities Closure Documents

- Critical Decision 0, Mission Need Statement for Calcine Retrieval Project
- Section 3116, Waste Determination for INTEC Tank Farm Facility
- Tier 1 Tank Closure document for Tank Farm Facility closure
- Tier 2 Tank Closure documents
- Calcine Disposition Project LCB.

### 2.3.3 Nuclear Materials Deposition Documents

For the NMD-managed facilities/storage areas, existing authorization agreements, safety documents, and regulatory agreements include the following:

- “Authorization Agreement for INTEC Underground Fuel Storage Facilities (CPP-749),” IAG-34
- “Safety Analysis Report for the Underground Fuel Storage Facility,” SAR-112
- “Technical Safety Requirements for the Underground Fuel Storage Facility,” TSR-112
- “Authorization Agreement for the INTEC CPP-666 Fuel Storage Area (FSA),” IAG-36
- “Safety Analysis Report for the CPP-666 Fuel Storage Area (FSA),” SAR-113
- “Technical Safety Requirements for the CPP-666 Fuel Storage Area (FSA),” TSR-113
- “Authorization Agreement for INTEC Irradiated Fuel Storage Facility (CPP-603 IFSF),” IAG-40
- “Safety Analysis Report for the Irradiated Fuel Storage Facility (IFSF),” SAR-114
- “Technical Safety Requirements for the Irradiated Fuel Storage Facility (IFSF),” TSR-114
- “Authorization Agreement for the INTEC Unirradiated Fuel Storage Facility (CPP-651),” IAG-45
- “Safety Analysis for the Unirradiated Fuel Storage Facility (UFSF),” SAR-115
- “Technical Safety Requirements for the Unirradiated Fuel Storage Facility (UFSF),” TSR-115
- “Safety Analysis Report for the Fluorinel Dissolution Process Area,” SAR-126
- “Technical Safety Requirements for the Fluorinel Dissolution Process Area,” TSR-126.

### 2.3.4 INTEC Area Operations Documents

- Analytical Laboratories: A number of plans and other documents are key to the operation of the environmental laboratories. These include the following:
  - “Authorization Agreement for the INTEC Laboratory Facilities,” IAG-42

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 33 of 70

- “Safety Analysis Report for the INTEC Laboratory Facilities (CPP-602 Laboratory and CPP-630 Mass Spectrometry Facility),” SAR-121
- “Technical Safety Requirements for the INTEC Laboratory Facilities (CPP-602 Laboratory and CPP-630 Mass Spectrometry Facility),” TSR-121
- “Safety Analysis Report for the Remote Analytical Laboratory (CPP-684),” SAR-120
- “Technical Safety Requirements for the Remote Analytical Laboratory (CPP-684),” TSR-120
- “Quality Assurance Plan for the Industrial Hygiene Laboratory,” QAP-101
- “Analytical Laboratories Quality Assurance Plan for Environmental Testing,” QAP-103
- “Sample and Analysis Management Statement of Work for Analytical Services,” ER-SOW-394.

### 2.3.5 D&D Documents

A number of project-specific documents and related deliverables will be produced by the INTEC Deactivation, Decontamination, and Decommissioning (DD&D) Project. Engineering evaluation/cost analyses (EE/CAs) will be developed to examine and select method(s) for dispositioning the high-risk. The EE/CAs will be submitted to the DEQ, EPA, Citizens Advisory Board (CAB), and DOE for approval.

A significant number of work control packages will be prepared as part of a comprehensive work control program. These packages will contain drawings, job hazard analyses, hazard controls, work execution steps, characterization data, and other important contents.

Documented safety analyses (DSAs), also known as authorization bases, will be maintained and updated for nuclear facilities as required in federal regulations or DOE orders. The DSAs will be revised to allow preapproved step-out of controls as hazards are reduced and decommissioning activities remove credited safety systems. The DSAs will be revised to downgrade facility hazard categorizations as hazards are removed.

Operation orders, shift orders, work orders, or written work instructions may be used to implement facility-specific requirements (such as surveillances, access control, and other routine requirements). Procedures and model work orders will be used to implement longer-term or higher-risk activities and requirements, as specified in governing protocols.

Statements of work will be prepared for fixed unit rate or fixed-price subcontracting efforts (such as specialty rigging and lifting, concrete cutting/coring, and facility demolition).

## 3. TECHNICAL APPROACH

For each key INTEC subproject, technical approaches and methodologies have been selected that guide the overall subproject and upon which the path to the selected end state is determined. These technical approaches are discussed below.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 34 of 70

## **3.1 Technical Strategy**

### **3.1.1 Sodium Bearing Waste (SBW)**

The technical approach for treatment and solidification of the SBW is the use of a new modular steam reformer facility. The steam reformer unit will destroy the oxides of nitrogen and solidify the SWB into small particles. The particulate will be moved into a shielded hot cell where the material will be placed into RH-72B canisters, bolted lids will be installed, and the canister will be decontaminated. The filled canisters will then be stored onsite in new modular shielded storage units until transportation is provided to WIPP.

After the SBW solidification campaign, the main steam reformer will be available to treat and solidify newly generated liquid waste arising from ICP operations.

### **3.1.2 Organic and Hazardous Waste**

Six electrically heated autoclaves, which can each process two 55-gal drums at a time, are being considered as a option of the IWTU to treat Organic and Hazardous Waste. The gaseous effluent from the autoclaves can be processed through a separate, smaller steam reformer and the treated gas, after some local conditioning, is routed to the last cleanup stage in the large steam reformer. Value engineering studies are being conducted and will assist in ultimately determining the best option for dealing with Organic and Hazardous waste.

### **3.1.3 Tank Farm**

After the tanks are cleaned by water washing to levels required by the performance assessment, the tanks, vaults, and ancillary connected equipment will be grouted closed with a specially formulated grout. The tank farm will then be closed by another subproject that will perform an installation that prevents water from migrating through the tank farm proper.

### **3.1.4 High-level Waste (HLW) Calcine**

The calcine approach is to demonstrate full-scale retrieval using cold surrogate calcine and develop sufficient design information to submit a proposed ROD to DOE in 2009 and a RCRA Part B permit application to the State of Idaho in 2012. A key calcine assumption is that the calcine can be shipped and accepted as loose particles in robust canisters at Yucca Mountain.

### **3.1.5 Nuclear Materials**

The Nevada Test Site (NTS) has been chosen as the primary disposal pathway for the EM-owned legacy nuclear materials. This approach is cost effective, permanent, technically feasible, and fully integrated into both the INTEC and Reactor Technology Complex schedules. Direct disposal avoids unnecessary size reduction, worker exposure, and potential contamination issues. This approach also reduces the amount of new waste produced. To utilize this approach, we must have safeguards termination for the unirradiated light water breeder reactor (LWBR) and other selected nuclear materials. The basis for approval of variance to safeguards termination limits will be developed using previously approved precedents.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 35 of 70

### 3.1.6 Spent Nuclear Fuel (SNF)

Consolidation of EM-owned SNF into dry storage will utilize existing technologies, equipment, and facilities but with a more cost-effective approach than previously planned. Examples include the following:

- Use of carbon steel storage canisters
- Evaluation of the criteria and need for fuel conditioning for intact fuels
- Utilization of CPP-749 to avoid the risk of overfilling CPP-603
- Use of mobile equipment (i.e., cranes) to avoid sole reliance on installed equipment.

### 3.1.7 Deactivation, Decontamination, and Decommissioning (DD&D)

See Section 3.3.7 of the ICP Sitewide Project Management Plan (ICP/EXT-05-01082)

The DD&D activity at INTEC is managed under the ICP-wide D&D Program. At INTEC, a dedicated DD&D manager has been assigned who reports directly to the ICP D&D manager and indirectly to the INTEC Area Project manager. The INTEC D&D manager will status D&D activities through the INTEC Project Integration manager. Applicable INTEC procedures and processes will be followed by the INTEC D&D Program.

### 3.1.8 Continuing Facility Operations

A number of facilities at INTEC continue to operate and fulfill a mission within the DOE complex. These facilities primarily are the spent fuel storage basin in CPP-666, the dry spent fuel storage vaults in CPP-603 and CPP-749, and numerous support facilities. In total, 174 facilities at INTEC are planned for continued use. The strategy is to continue to operate these facilities as in the past to accomplish the contracted mission but to reduce the maintenance level in each facility to the minimum safe level in order to focus the maximum resources on the cleanup activities. Staffing will be aligned with the work scope with a rampdown reflecting completion of various activities.

### 3.1.9 Environmental Remediation

ER will perform many INTEC-related CERCLA- and VCO-driven functions—some that will follow up operational iterations (CPP-603) and some that will follow D&D (site cleanup to meet RCRA after D&D). The strategies for performing the INTEC scope assigned to ER are described below.

#### 3.1.9.1 *CPP-603A, Fuel Storage Basins, and CPP-648, Sludge Tank Control House.*

Following thorough characterization efforts, sludges and sediment in the CPP-603A basins and CPP-648 tank will be removed. In accordance with regulatory agreements, sludge and sediment will be treated for hazardous constituents to meet waste acceptance criteria, as appropriate, and then disposed of. Basins in CPP-603A will be drained of about 1.4 million gal of water. Basins will be grouted in accordance with agreements for disposition. The CPP-648 tank will be emptied and removed along with its vault.

The remaining scope for CPP-603A is to stabilize the remaining portions of the building in a demolition ready state which is agreed upon by DOE and the State of Idaho.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 36 of 70

**3.1.9.2 CPP-601 and 640, Fuel Processing Complex.** All systems in the fuel processing complex—including hot cells, process piping, and tanks—will be thoroughly characterized for radiological and hazardous constituents. Using characterization data, planners and engineers will develop work control packages with safe approaches to hot cell entry and dismantlement. Work control packages will undergo thorough review, including the Hazard Review Board (HRB) per CWI’s approach to integrated safety management. The best available shielding methods and technologies will be used to minimize worker exposure to radiation. Energized systems will be isolated, and any process liquids and sludge will be drained and removed. Shielded equipment, cranes, and remote tooling may be necessary to dismantle and dispose of hot cell equipment. After the equipment is removed, interior hot cell areas will be decontaminated, fixed, and/or grouted for disposition.

**3.1.9.3 CERCLA Remediation.** The strategy for CERCLA activities includes the following:

- Streamlining regulatory and planning processes to quickly begin field work
- Improving work crew efficiencies by:
  - Achieving safe and compliant work practices
  - Clearly communicating objectives
  - Using accurate, clear, and concise planning
  - Using active management oversight and participation in field activities
  - Listening to and evaluating worker ideas and suggestions for improvement
  - Incorporating lessons learned.
- Minimizing legacy and stewardship costs through consolidation and simplification of ongoing activities
- Building credibility with regulators and stakeholders through consistent performance
- Implementing actions as specified in existing RODs or seeking alternative actions through amendments, as appropriate
- Consolidating institutional controls and long-term stewardship activities for efficiencies (new sites that are identified will be evaluated using the new site identification process)
- Balancing waste minimization and cost effectiveness of complete characterization to achieve the best value to the government
- Using the Idaho CERCLA Disposal Facility and the primary alternative for CERCLA waste disposal whenever possible.

**3.1.9.4 Voluntary Consent Order (VCO) Actions.** The strategy for VCO activities includes the following:

- Integration of waste treatment into IWTU where practical
- Developing well trained, experienced, and dedicated teams
- Continuous improvement by applying lessons learned and worker feedback

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 37 of 70

- Implementation of a graded approach for high-risk tanks by balancing productivity and as-low-as-reasonably-achievable (ALARA) principles with proper engineering and equipment selection and detailed work planning.

Where possible, VCO systems will be administratively closed. If that is not possible, the systems will be clean-closed in place. If that is not practical, the systems will be placed in a RCRA-stable condition for closure by removal in a coordinated effort with the facility D&D effort. RCRA closure by removal prior to D&D will only be performed when required to meet enforceable commitment dates or when integration with the D&D effort is impractical.

**3.1.9.5 Waste Management/INTEC Activities.** The disposition of wastes from the INTEC project will be fully integrated with the Waste Management project, which serves as the central “clearinghouse,” and provides the program and infrastructure, for the overall integration, management, and disposition of all waste types (except for HLW and SBW) generated by the INL (includes both ICP and non-ICP entities) as a result of ongoing operations and progressing cleanup activities. Waste types may include some or all of the following:

- TRU and mixed TRU waste
- LLW and MLLW
- Hazardous waste
- Industrial waste
- Other regulated/nonregulated waste that does not fit into one of the previous categories.

Continuous evaluations will be performed to ensure waste is being dispositioned in the safest, most cost-effective manner possible. Although waste-generation rates can vary widely, waste disposition will be “leveled” wherever possible to avoid inefficiencies in disposition and ensure maximum savings associated with large volume discounts.

See the RWMC/Waste Management Project PEP (PLN-2085) for more detail on other strategic aspects of waste disposition.

## 3.2 Project Closure

### 3.2.1 Liquid Waste Facilities Closure (LWFC)

At the end of the 2012 contract performance period, the following closure activities will have been accomplished:

- All tank farm facilities, including tanks, valve boxes, piping, and ancillary equipment, will have progressed through RCRA closure.
- Sufficient calcine retrieval demonstration and design work will have been performed to support a ROD and a permit application.
- All newly generated liquid waste will have been treated and solidified.

A closeout report for the tank farm will be prepared. The report will describe all activities completed and include any significant variations from original decision documents. That report will

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 38 of 70

substantiate the completeness of achieving the ICP goals. A description of the waste quantities, types, and disposal path will be included. The report will also include an index of project records and indicate where records will be archived.

At the end of the contract period, the following liquid waste facility capabilities will remain in order to complete the future DOE closure work:

- The IWTU, including the steam reformer and autoclaves for future liquid and solid waste treatment
- The New Waste Calciner Facility for future remote-handled work
- Miscellaneous monitoring facilities.

### **3.2.1a Integrated Waste Treatment Unit**

At the end of the 2012 contract performance period, the following closure activities will have been accomplished:

- All SBW will have been removed from tanks, treated, solidified, packaged, and sent to WIPP
- All tank farm facilities, including tanks, valve boxes, piping, and ancillary equipment, will have progressed through RCRA closure
- Sufficient calcine retrieval demonstration and design work will have been performed to support a ROD and a permit application
- All newly generated liquid waste will have been treated and solidified.

At the end of the contract period, the following Integrated Waste Treatment Unit capabilities will remain in order to complete the future DOE closure work:

- The IWTU, including the steam reformer and autoclaves (if required) for future liquid and solid waste treatment.

### **3.2.2 Nuclear Materials Disposition (NMD)**

At the end of the 2012 contract performance period, the following closure activities will have been accomplished:

- All EM-owned SNF will have been moved from wet storage to dry storage
- All unirradiated nuclear materials will have been dispositioned, per EM agreement, to an agreed upon location
- A segregation fence will establish a boundary between the SNF facilities and the rest of INTEC.

No overall closeout report will be prepared for this effort. Documentation verifying the end state of the facilities and transferring ownership to an appropriate DOE entity will be in place.

### **3.2.3 Decontamination and Decommissioning (D&D)**

A closeout report will be prepared for each facility undergoing D&D in the INTEC Area Cleanup Project. The report will describe all activities completed and include any significant variations from

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 39 of 70

original decision documents. It will substantiate the completeness of achieving the ICP goals. The report will also contain sampling results, including data that confirm applicable structural release criteria were met. A description of the waste quantities, types, and disposal path will be included. The report will also include an index of project records and indicate where records will be archived.

### 3.2.4 CERCLA/VCO Sites

In July 2003, DOE issued its policy, “Use of Risk-Based End States” (DOE P 455.1). The policy is based on the premise that the effectiveness of cleanup programs can be improved by focusing efforts on cleanup that is aimed at, and achieves, clearly defined risk-based end states. Risk-based end states are representations of site conditions that are based on the planned future use of property and are protective of human health and the environment in a manner consistent with that use.

CERCLA/VCO site end states will be negotiated with the regulatory agencies and clean up decisions will be based on the results on these negotiations.

## 4. PERFORMANCE CRITERIA

Internal and external performance criteria have been identified by the INTEC Area Cleanup Project, as necessary, to successfully accomplish the project and support the overall ICP programmatic requirements. External requirements are discussed first, including commitments to DOE and the regulators, followed by subproject-specific requirements and indicators. These criteria (milestones and performance indicators and measures) are discussed in the following sections.

### 4.1 Enforceable and Supporting Milestones

INTEC milestones are captured on the ICP Milestone Sequence Chart and are maintained in the Life Cycle Baseline schedule.

### 4.2 Performance Metrics

Performance metrics include performance measures (gold metrics) and performance indicators to be used at the INTEC Area Cleanup Project. The gold chart metrics are shown in the *CWI ICP Sitewide Project Management Plan* (ICP/EXT-05-01082), and INTEC metrics shall be established and monitored for key attributes of project performance such as safety, safety, radcon, cost, schedule and others as required by the area manager. These shall be reviewed by the INTEC Area Project manager and the project directors.

Each fiscal year, five or more major milestones will be developed and tracked with DOE-ID for the ICP project.

The following performance indicators have been developed to provide several methods of evaluating project performance across INTEC:

- **Safety and Health Performance:** Total recordable case rate, lost workday case rate, authorization basis violations, radiological violations, nuclear safety, security infractions, Occurrence Reporting and Processing System reportables, Price-Anderson Amendment NTS reports, Hazard Review Board, and noncompliance reports.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 40 of 70

- Cost, Schedule, and Milestone Performance: Schedule performance index, cost performance index, and accomplishment of key milestones per monthly schedule.
- Environmental Performance: Release sites completed, VCO tank systems closed, number of wells closed, percent monitoring reduction from 2004 level, CPP-603 sludge removal activities.

## 5. PROJECT RISK MANAGEMENT

CWI will manage risks using the process for identifying, quantifying, and mitigating risks in accordance with MCP-1409, “Risk Management.” A key component to risk mitigation will be CWI’s revised Integrated Work Control Process, which requires those responsible for planning work to identify, visualize, and anticipate risks associated with an activity’s execution. In the mitigation step, planners will be responsible for developing alternative plans that eliminate, avoid, and/or mitigate risks.

### 5.1 Assumptions

#### 5.1.1 General

- Funding is available throughout the seven-year contract life to support baseline achievement.
- CWI is allowed to match skill needs throughout the project and to align resources as scope is completed.

#### 5.1.2 Environmental Remediation/Voluntary Consent Order

- Perched water and groundwater removal or treatment will not be required.
- No building D&D will require Group 2 soil remediation.
- The selected remedy for tank farm soil does not require soil removal.

#### 5.1.3 Decontamination and Decommissioning

- The end state determination for D&D can be agreed to with regulators and stakeholders.
- Unknowns encountered in D&D of high-risk facilities can be dealt with in a timely and efficient manner.

#### 5.1.4 Liquid Waste Facilities Closure

- Critical government-furnished support and information will be available when scheduled.
- Nuclear Regulatory Commission review and concurrence on waste determination requires no more than nine months.
- No further in situ calcine sampling will be required for the design work or by the regulators.

#### 5.1.4a Integrated Waste Treatment Unit

- Critical government-furnished support and information will be available when scheduled.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084 Revision: 4 Page: 41 of 70
--	---

- Timely waste determination decisions are made by DOE to support the IWTU schedule without delays.
- SBW is dispositioned as TRU waste to WIPP.
- The State of Idaho will provide timely approvals for the IWTU RCRA treatment permit (Volume 14 expansion).

### 5.1.5 Nuclear Material Disposition

- Full cost recovery on out-of-target activities is achieved.
- The condition of the failed/canned fuels is acceptable for handling and packaging.
- Safeguards termination of the unirradiated LWBR is granted.
- NTS acceptance of the unirradiated LWBR for disposal is achieved.
- The accelerated disposition schedule completes nuclear materials shipments before any utilized shipping container certification expiration date.
- The CPP-749 Type 1 caissons will continue to be monitored for possible degradation of fuel. If degradation is detected in the future, the movement of these fuels from Type 1 to Type 2 caissons will be subcontracted utilizing a fixed unit rate subcontract to minimize costs and allow the direct workforce to focus on the continuing wet to dry transfers.
- If the IFSF capacity is filled by 2009 with fuels currently designated out of target, then future foreign research reactor and domestic research reactor fuels can be shipped to the Savannah River Site (SRS). This scope is within the current SRS contract capacity-based requirements. Since Advanced Test Reactor fuel is aluminum clad, SRS can also be used for non-EM Advanced Test Reactor fuels once the IFSF is full.
- Receivers will be identified for disposition of Nuclear Materials Inspection and Storage material supporting completion by September 30, 2009.

## 5.2 Risks

CWI will manage risks in accordance with MCP-1409. PLN-2173, "Idaho Cleanup Project Programmatic Risk Management Plan," describes the overall process, methodology, roles and responsibilities being followed to fulfill the requirements of the contract and to execute work. The risk management plan requires the individual responsible for the work to plan and identify risks attendant to the work and requires that the responsible individual formulate alternative plans that eliminate, avoid or mitigate unacceptable risks. Risks are maintained and updated quarterly in the Risk Register as described in PLN-2173.

## 6. METHOD OF ACCOMPLISHMENT

Work will be performed in two ways: (1) utilizing the workforce currently assigned to the project and (2) utilizing a subcontracted workforce. In the case of ongoing operations, maintenance, and utilities, it is the intent to use the existing operations workforce that is trained and familiar with these functions. Support services will utilize contracted workers whenever feasible and cost effective.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 42 of 70

## 7. ENVIRONMENTAL, HEALTH, SAFETY, AND QUALITY

Protecting the Snake River Plain Aquifer is one of the principal reasons for the ICP. Other environmental objectives, such as protecting offsite and onsite personnel and environments, are also vitally important.

Each subproject will utilize the ISMS to provide a consistent approach to ensure environmental, worker, and public safety. Safety professionals will be dedicated to each subproject and area project activity to provide oversight and assistance in safely performing the work scope.

### 7.1 Environmental Compliance

The INTEC Area Cleanup Project is fully committed to regulatory compliance and environmental cleanup and stewardship. Activities on this project comply with the requirements of the following (noninclusive) list:

- Price-Anderson
- Site Treatment Plan (DOE-ID 1995)
- Federal Facility Compliance Agreement (FFCA)
- Residue Consent Agreement
- Toxic Substances Control Act (15 USC 2601 et seq.)
- Clean Air Act (42 USC § 7401 et seq.)
- Clean Water Act (26 USC § 1251 et seq.)
- RCRA (42 USC § 6901 et seq.)
- National Pollutant Discharge Elimination System (40 CFR 122)
- CERCLA (42 USC § 9601 et seq.)
- McKinney Act
- Price-Anderson Amendments Act (42 USC § 2011 et seq.)
- National Historic Preservation Act (16 USC § 470 et seq.)
- Occupational Safety and Health Act (29 USC § 651 et seq.)
- National Environmental Policy Act (NEPA, 42 USC § 4321 et seq.).

At INTEC, special emphasis will be placed on environmental remediation and VCO activities performed by the ER Project because of the specific regulatory commitments that relate to these scopes of work. Environmental requirements for ER Project flow down into work plans from three sources. The first source of environmental requirements originates in the CWI ICP contract (DE-AC07-05ID14516). For ER activities conducted pursuant to CERCLA (42 USC § 9601 et seq.), the primary environmental requirement is the “National Oil and Hazardous Substances Pollution Contingency Plan” (40 CFR 300), which contains provisions for negotiating with the EPA and Idaho DEQ in order to identify all other applicable or relevant and appropriate requirements (ARARs). For VCO activities, the primary requirements are delineated in RCRA (42 USC § 6901 et seq.). Deactivation, decontamination, and

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 43 of 70

decommissioning activities may be conducted under CERCLA as removal actions or outside of CERCLA. For deactivation, decontamination, and decommissioning activities conducted as CERCLA removal actions, environmental requirements flow down as ARARs identified through preparation of engineering analyses/cost estimates and action memoranda.

Safety and environmental requirements are established through PDD-1004, “Integrated Safety Management System,” and PDD-1012, “Environmental Management System.” The Environmental Management System integrates environmental protection, pollution prevention, and regulatory compliance into work planning and execution throughout all work areas as a function of the five core elements of ISMS and the elements of the ISO-14001, Environmental Management System Standard. Instructions to comply with environmental requirements are contained in MCP-3480, “Environmental Instructions for Facilities, Processes, Materials, and Equipment.” Upon initiation of work planning, all ER projects complete an environmental checklist in accordance with MCP-3480. Completion of the environmental checklist ensures identification of environmental regulations and applicable DOE orders, ensures compliance with resources, and ensures NEPA (42 USC § 4321 et seq.) values are integrated into CERCLA documents.

For ER CERCLA projects, a second source of environmental requirements originates from the FFA/CO (DOE-ID 1991), which implements the requirements of 40 CFR 300 and outlines a process whereby DOE, EPA, and DEQ sign RODs to clean up contaminated sites. The RODs both identify ARARs and contain detailed descriptions of the methods to be employed to conduct remedial actions. In addition, the RODs may identify applicable DOE orders as either ARARs or as to-be-considered requirements. These ARARs, to-be-considered requirements, and other ROD conditions flow down into project-specific remedial design/remedial action (RD/RA) work plans, which are submitted to the EPA and DEQ for approval before implementation. The RD/RA work plans contain additional information regarding requirements to produce operations and maintenance plans, institutional control plans, and provisions to conduct five-year reviews of the selected remedy. Guidance on how to address ARARs, to-be-considered requirements, and ROD conditions within RD/RA documentation may be found in GDE-72, “Remedial Design and Remedial Action.” The FFA/CO (DOE-ID 1991) also reaffirms DOE’s authority to conduct removal actions pursuant to 40 CFR 300.

It should be noted that work conducted pursuant to CERCLA (42 USC § 9601 et seq.), 40 CFR 300, and/or the FFA/CO (DOE-ID 1991) contains several exemptions from requirements that would otherwise apply to work performed outside of CERCLA. Examples include the exemption from obtaining local, state, or federal permits for response actions conducted onsite; the equivalency of the CERCLA public participation process to performing traditional NEPA documentation; and exemptions to some administrative waste storage and treatment requirements of RCRA. The FFA/CO and RODs implement a negotiated approach to identification of environmental requirements for ER projects. Flow down of these requirements into RD/RA documents recognizes and captures the uniqueness of CERCLA work planning relative to other work planning at the INL Site.

For VCO projects, a third source of environmental requirements originates from the VCO (DEQ 2000), which outlines the process and activities to overcome legacy RCRA issues for the INL Site. The VCO action plan, which is included in the VCO, documents each covered RCRA noncompliance, the actions required to overcome the noncompliance, and the agreed-upon milestones to ensure that the noncompliance is addressed in an adequate timeframe. An annual update to the VCO action plan is produced by October 31 of each year. At the time when an individual noncompliance is resolved as agreed to by the DOE and DEQ, the item is moved to Appendix C of the VCO action plan to document the completion.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 44 of 70

## 7.2 Applicable Regulatory Requirements Documentation

The CWI contract with DOE specifies applicable DOE directives (Section J-Attachment B) relevant to the scope of work. In addition, the contract calls out other requirements, including those listed in Section 1.3, Project Justification, of this PEP. All work performed under this PEP will comply with the applicable contract requirements.

For specific ARARs, see the records for RODs at [http://edms/pls/edms/ois.ois\\_09?p\\_cerclatype=ROD](http://edms/pls/edms/ois.ois_09?p_cerclatype=ROD) and the records for explanation of significant differences [http://edms/pls/edms/ois.ois\\_09?p\\_cerclatype=ESD](http://edms/pls/edms/ois.ois_09?p_cerclatype=ESD).

## 7.3 Health and Safety

The INTEC Area Cleanup Projects ensures the safety of the workers and the public. Environment, Safety, Health, and Quality (ESH&Q) is implemented at the project level, while the ICP ESH&Q Program is centrally defined and managed by the ESH&Q vice president. The comprehensive ES&H Program comprises seven functional organizations: Industrial Safety, Industrial Hygiene, Radiological Safety, Training, Environmental Compliance, Nuclear Safety, and the Price-Anderson Amendments Act.

Accountability for specific authorization basis compliance rests with the respective INTEC Area Cleanup Projects subproject managers. The Nuclear Safety Group assists the subprojects in establishing safety margins and independently verifies maintenance of the safety margins.

The ESH&Q director establishes a centralized safety and health training organization to provide cost-effective, quality training to the workers, DOE employees, and subcontractors.

The ES&H Program interfaces with the INL Occupational Medicine Program, which is compliant with the requirements of 29 CFR, 10 CFR, 40 CFR, and DOE directives. The program will continue as stewards for the existing beryllium, lead, asbestos, radiological, and other worker surveillance programs relevant to the site hazards.

The Radiation Protection Program for the ICP is currently in compliance with 10 CFR 835, "Occupational Radiation Protection." Qualified personnel will continue to execute an effective radiation protection program, using the following processes:

- Provide in-field support to the project.
- Maintain and provide calibrated, state-of-the-art radiation monitoring equipment.
- Administer dosimeter programs to maintain compliance with 10 CFR 835.

Fire protection engineering is integrated into the work planning processes.

Integrated Safety Management (ISM) is a central pivotal program for ESH&Q within the ICP as a whole. The following subsection discusses this important program in more detail.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 45 of 70

### 7.3.1 Integrated Safety Management (ISM)

The INTEC Area Cleanup Projects will follow the CWI ISM Program in performance of daily work. The program is specified in PDD-1004, “Integrated Safety Management System.” The CWI ISM Program implements the following eight guiding principles:

1. Line management is responsible for safety
2. Clear roles and responsibilities
3. Competence commensurate with responsibilities
4. Balanced priorities
5. Identification of safety standards and requirements
6. Hazards controls tailored to the work being performed
7. Operations authorized
8. Worker Involvement.

The five core functions of the ISMS are as follows:

1. Define the work scope
2. Identify and analyze the hazards
3. Identify and implement controls
4. Perform the work
5. Provide feedback.

Full integration of safety and environmental protection into daily work planning and execution ensures safety for the public, environment, workers, and subcontractors. Project-specific job sequencing and engineered controls maximize risk reduction, minimize waste generation, reduce radiation exposure, and promote worker efficiency. To ensure thorough understanding and proper implementation, systems effectively involve workers directly into task-level hazards analysis and controls planning. ISMS will analyze performance metrics to quickly identify trends for correction and will apply learning feedback.

### 7.3.2 Step Back/Stop Work

One area of emphasis in implementation of CWI’s ISMS is worker involvement in all aspects of the accomplishing work safely. This includes the right of all employees to evaluate the safety of work being performed and to step back from that work and stop if there is any question regarding safety. Rapid technical response teams of subject matter experts have been established to immediately go to the work area and evaluate potential hazards identified in the step-back/stop-work process and to facilitate timely resolutions to issues identified so that the workers involved can safely proceed with technically accurate, first-hand information in a manner that is consistent with established procedures.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 46 of 70

## 7.4 Quality Assurance

The INTEC Area Cleanup Project applies the ICP infrastructure, quality program, and site interface agreements to ensure compliance with site and project requirements in completion of the CWI mission. The project does not require a project quality assurance program plan to extend the INL Site requirements to the project activities.

The INTEC Area Cleanup Project complies with the quality assurance program established in Manual 13, *Quality Assurance Program*. Quality inspection support is provided by the Quality Assurance organization. The quality engineering lead for the INTEC Area Cleanup Project ensures compliance with company requirements through document reviews, surveillances, and assessments performed by the Quality Engineering staff supporting the INTEC Area Cleanup Project. The Quality Engineering staff also provides ICARE coordination and issue management expertise to project personnel. The support includes initiating, screening, dispositioning, tracking, and closing nonconformance and deficiency reports.

### 7.4.1 Quality Management

The ICP Quality Assurance Program (QAP) Manual defines the management practices and controls imposed for all ICP activities. The QAP includes assignment of responsibility for quality, the governing quality documents, and the different roles—management, performance, and assessment—to obtain and ensure quality performance and product. The application and implementation of these criteria into items and services are consistent with the graded approach. The QAP is based on DOE G-830.120, Rev. 0, “Implementation Guide for use with 10 CFR 830.120 Quality Assurance and DOE O 414.1C, Quality Assurance.” The QAP is consistent with the applicable codes, standards, and other regulatory requirements imposed on the specific projects. A comprehensive set of written policies and procedures is used to guide work performance at all level of activities within ICP.

Specific quality requirements or application of the QAP are defined by a project-specific quality assurance program plan, as appropriate. Quality assurance program plans clarify or take exception to QAP requirements, or invoke additional requirements on selected activities or items. The INTEC Area Cleanup Project quality assurance program plans are PLN-466, “Quality Assurance Plan for ISFSI Management,” and PLN-533, “Quality Assurance Program Plan for High Level Waste and Spent Nuclear Fuel.”

## 8. WASTE MANAGEMENT AND MINIMIZATION

Wastes generated at the INTEC Area Cleanup Project will be efficiently and effectively handled in a manner that avoids the spread of contamination, generation of excessive volumes, cross-contamination of different types of waste, and accumulation of quantities in excess of regulatory limits. Volumes expected to be generated at the INTEC Area Cleanup Project are discussed in the Waste Management/RWMC PEP (PLN-2085). Waste minimization is discussed in Subsection 8.2.

### 8.1 Waste Management

The disposition of wastes from the INTEC project will be fully integrated with the Waste Management/RWMC project, which serves as the central “clearinghouse” and provides the program and infrastructure for the overall integration, management, and disposition of all waste types (except for HLW and SBW) generated by the INL (includes both ICP and non-ICP entities). Waste types may include some or all of the following: (1) TRU and mixed TRU waste, (2) LLW and MLLW, (3) hazardous waste,

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 47 of 70

(4) industrial waste, and (5) other regulated/nonregulated waste that does not fit into one of the previous categories.

## 8.2 Waste Minimization

The INTEC Area Cleanup Project will apply waste minimization practices that will be established for substantive ICP activities. The approach avoids generation of waste, minimizes generation of waste once it has been determined that it must be treated as waste, and uses packaging techniques to minimize storage space required. Administrative controls will be in place to limit/avoid purchasing materials that contain hazardous constituents. Procedures will be established to limit materials that can be taken into contaminated areas, and the project will establish a process to procedurally determine when materials can be left in place. Materials such as steel and lead will be recycled whenever possible.

## 9. STAKEHOLDERS

Stakeholder involvement in this project is the policy of the DOE and the practice of CWI. Stakeholders include regulators, the public, project workers (including subcontractors), and anyone affected by the project. Some activities, such as NEPA and CERCLA compliance, have other specific requirements. Specific activities that involve public comment on decision documents are covered in Section 7 and reflected in the WBS dictionary for those scope elements and the schedule.

The purpose of stakeholder involvement is to provide a forum for collaboration with the project team to develop and endorse the project decisions early in the process. Involvement occurs at the ICP level, area projects level, and subprojects level.

## 10. ORGANIZATION AND RESPONSIBILITIES

This section first discusses the organizations with which the project typically interacts and their general responsibilities, followed by a detailed description of project organization, responsibilities of team members, and detailed interface responsibilities between the project and other INL Site organizations.

### 10.1 General Responsibilities

#### 10.1.1 Internal Organizations

The general responsibilities for the internal organizations are as follows:

Organization	Responsibilities
DOE	Enforcement of government regulations  Communications with external organizations, including those at DOE Headquarters, regarding the cleanup program  Oversight of Cleanup Operations  Communications with ICP on external and DOE inputs, including funding and overall direction  Interfacing with other regulatory agencies, stakeholders, and the public

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084 Revision: 4 Page: 48 of 70
--	---

Organization	Responsibilities
ICP	Communications with DOE-ID and the public regarding cleanup program status  Integrated management of the cleanup program, including program and subcontractor funding and guidance  Approval and forwarding of appropriate documents to DOE-ID
INTEC Area Cleanup Project	Development of communications to be sent to the ICP management team, DOE-ID, and the public regarding INTEC cleanup program status  Management of all activities for the INTEC Area Cleanup Project, including the work of subcontractors and integration of other area project managers working within the INTEC boundary  Preparation of any documents required to be submitted to DOE-ID for stakeholder interactions and submission of these documents to the ICP contracting officer  Development and maintenance of reporting systems by which ICP, DOE, and stakeholders receive information about the project
Lower-tier Projects	Similar responsibilities to INTEC Area Cleanup Project, with additional details provided in a task summary letter
Subcontractors	Communications with the INTEC Area Cleanup Project and its employees regarding the performance and status of the subcontracted work  Demonstrating to ICP that alternate methods of performing subcontracted activities comply with regulatory requirements  Performance of subcontracted activities  Submittal of the required documentation

**10.1.2 External Organizations**

The external organizations with major interests in the INTEC Area Cleanup Project and their responsibilities are presented below.

Organization	Responsibilities
Idaho DEQ	Regulatory oversight and enforcement of RCRA-related activities and other environmental laws delegated to the State of Idaho
Defense Nuclear Facilities Safety Board	Independent oversight of all activities affecting nuclear safety
EPA	Enforcement of environmental laws not delegated to the State of Idaho
Other organizations as necessary (e.g., Idaho Fish and Game, Butte County, Bonneville County, Jefferson County, Citizens Advisory Board, Shoshone-Bannock Tribes)	Participation in activities appropriate to jurisdiction

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 49 of 70

## 10.2 Project Organizational Structure

The INTEC Area Cleanup Project organization, under the direction of an area project manager, consists of three subprojects with each subproject having an integrated team of qualified individuals.

These teams will consist of both permanently assigned and matrixed personnel from a number of the CWI organizations and subcontractors. In addition to the three subprojects, other project teams managed by other area managers (e.g., D&D, ER, Waste Management) will perform work within the INTEC boundaries and will perform that work under the cognizance of the INTEC Operations manager. That organizational relationship is depicted in the chart below. The project organizational structure for lower-tier projects will be consistent with the chart below (Figure 10-1), and the task summary letter for these projects will provide additional detail. The subproject organizations assigned to work INTEC activities are shown for information in Figures 10-1 are subject to change by area project/subproject managers.

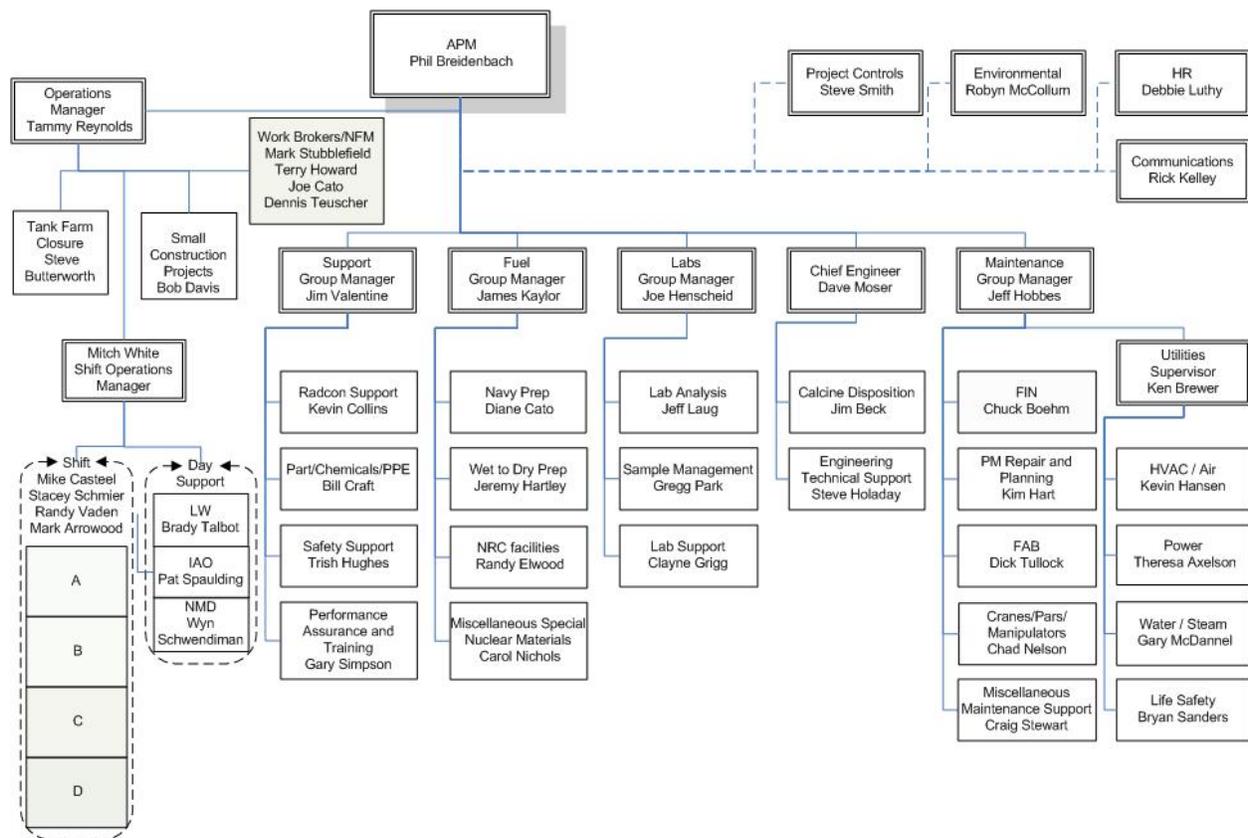


Figure 10-1. INTEC area cleanup project organization chart.

## 10.3 Responsibilities

ICP senior managers are responsible for identifying and implementing standards and requirements that will ensure protection of the worker, the public, and the environment and will adequately address other vulnerabilities (e.g., financial, legal, and security). CWI senior managers, functional support

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 50 of 70

managers, and subject matter experts work closely with BEA management system owners, functional support managers, and subject matter experts who interface with ICP activities to ensure seamless and compliant implementation of standards and requirements in activities. Senior managers are also responsible for ensuring implementation of those standards and requirements at the company level as directed in MCP-2447, “Requirements Management.”

The roles and responsibilities of the INTEC Area Cleanup Project positions are included below. There is a clear line of responsibility from the area project manager to the subproject managers (directors), through to the line execution managers, directly to the workers performing the cleanup scope in the field. The management structure is established to support all the subprojects in INTEC as well as the integration with other project working in INTEC.

### 10.3.1 INTEC Area Project Manager

The INTEC Area Project manager has the following roles and responsibilities:

- Serve as the primary integrator among all subprojects and support organizations for the INTEC Area Cleanup Project
- Establish, communicate, and reinforce overall expectations for safe work performance in all INTEC Area Cleanup Projects activities
- Take overall responsibility for the technical, schedule, and cost baseline performance for all INTEC Area Cleanup Projects activities
- Ensure funding is available to accomplish desired tasks and validates schedules
- Provide the primary senior external interface for the area project.

### 10.3.2 INTEC Operations Manager

- Serve as the senior leader of operating organization take the responsibility for setting expectations for performance, and establishing principles of behavior.
- Ensure adequate resources (personnel, equipment, supplies, facilities, and procedures) are available to provide facility and activity support.
- Ensure radiation exposure of personnel is maintained per the ALARA philosophy.
- Promote an attitude of safety and productivity, providing leadership qualities that ensure work environments created by line management are producing results that support and advance company and customer objectives.
- Provide oversight and direction for safety and surety of operations.
- Maintain compliance with conduct of operations, and understand and ensure implementation of company ISMS, Voluntary Protection Program, Environmental Management System, and ESH&Q requirements and principles.
- Routinely communicate with workers and observe work activities to assess implementation of work execution standards and to identify barriers to their success. Take corrective actions to remove barriers.

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**

Identifier: PLN-2084

Revision: 4

Page: 51 of 70

- Ensure implementation of an area self-assessment program to provide a continuous improvement process to support operational excellence.
- Coordinate issues management by ensuring deficiencies are identified, resolved, and documented, and ensure lessons learned reviews take place as applicable.
- Direct development of facility and activity procedures that can be performed as written and are compliant with applicable company and facility requirements.
- Establish and maintain procedures implementing company and facility requirements (such as authorization bases, DOE rules and regulations, and environmental regulations).
- Ensure all records generated, maintained, and processed within assigned areas of responsibility are handled in accordance with DOE, company, and site area records management procedures.
- Identify required training and qualification for operations personnel.
- Ensure all operations personnel who perform work have the necessary training and qualifications (competence commensurate with responsibilities).
- Ensure clear lines of accountability, responsibility, authority, and communication are established, defined, and maintained, and that these relationships are documented in the form of organization charts and EPDs for key personnel.
- Ensure technical leads assigned to the department understand their expected role in the implementation of company environmental, safety, health, efficiency, and quality standards.
- Authorize and release all work within INTEC. These duties may be delegated to qualified personnel in other organizations, but the overall responsibility for work authorization remains with the Operations manager.
- Directly manage the activities of the shift managers who provide daily, round-the-clock supervision for INTEC operational activities, including liquid waste cleanup, nuclear materials disposition, utilities operation, and inactivation of existing facilities no longer required to support the project or ICP mission. Shift managers specifically perform the following functions:
  - Manage all the shift operations personnel
  - Conduct meetings with project management and the shift crew supervision to coordinate the execution of activities
  - Interface with project, facility, and construction management to maintain awareness of ongoing activities and to resolve any conflicts
  - Release all work in INTEC
  - Act as the emergency action manager during emergency response
  - Categorize and report INTEC abnormal events, and conduct the critiques of such events
  - Make required notification of environmental releases.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 52 of 70

### 10.3.3 INTEC Support Group Manager

The Support Group is responsible for filling a number of resource needs of the other INTEC managers. These resources include radiological control, industrial safety, industrial hygiene, fire protection and performance assurance. Additional roles and responsibilities are as follows:

- Provide overall management of the INTEC radiological program including direct management of the radiological foreman, engineers and technicians
- Provide safety and health oversight for INTEC
- Provide performance assurance for INTEC including ORPS management, ICARE and assessment tracking
- Provide management of the central parts, supplies and respirators for INTEC
- Coordinate work activities for the teams within the group. Be fully aware of the individual team schedules and facilitate resolutions to potential conflicts between teams.
- Ensure teams are compliant with rules and regulations
- Monitor team performance to ensure that teams properly implement program rules and guidance, such as conduct of operations, conduct of maintenance, configuration control, etc. Provide oversight for the teams to ensure that they are following job requirements.
- Set the group vision, goals, and expectations for the teams. Set the tone and ensure teams are working effectively and efficiently.
- Monitor and oversee the group schedule. Own and maintain the budget for the groups activities and hold teams and team leaders accountable to perform the work according to the budget requirements.
- Coordinate group activities with the activities of other groups to ensure that work is conducted efficiently and effectively. Communicate outages and other issues that might affect work performance to the team leads.
- Facilitate the trading of resources when specific skills may be needed on one team and another team may have surplus skills available
- Resolve personnel issues where necessary
- Perform required assessments and obtain assistance as necessary to ensure all assessments are completed
- Conduct group meetings as necessary to coordinate team efforts
- Facilitate mentoring and other training opportunities between teams and team members

**PROJECT EXECUTION PLAN FOR THE INTEC AREA  
CLEANUP PROJECT**

Identifier: PLN-2084

Revision: 4

Page: 53 of 70

- Ensure radiation exposure of personnel is maintained per the ALARA philosophy
- Promote an attitude of safety and productivity, providing leadership qualities that ensure work environments created by line management are producing results that support and advance company and customer objectives
- Provide oversight and direction for safety and surety of operations
- Understand and ensure implementation of company ISMS, Voluntary Protection Program, and ESH&Q requirements and principles
- Routinely communicate with workers and observe work activities to assess implementation of work execution standards and to identify barriers to their success. Take corrective actions to remove barriers.
- Ensure implementation of an area self-assessment program to provide a continuous improvement process to support operational excellence
- Coordinate issues management by ensuring deficiencies are identified, resolved, and documented and that lessons learned reviews take place as applicable
- Direct development of facility and activity procedures that can be performed as written and are compliant with applicable company and facility requirements
- Ensure all records generated, maintained, and processed within assigned areas of responsibility are handled in accordance with DOE, company, and site area records management procedures
- Identify required training and qualification for support personnel
- Ensure all support personnel who perform work have the necessary training and qualifications (competence commensurate with responsibilities)
- Ensure clear lines of accountability, responsibility, authority, and communication are established, defined, and maintained, and that these relationships are documented in the form of organization charts and EPDs for key personnel
- Ensure technical leads and foreman assigned to the department understand their expected role in the implementation of company environmental, safety, health, efficiency, and quality standards
- Assist the INTEC Area Cleanup Project area manager in integrating activities across the project. This includes the following:
  - Coordinate issues management
  - Chair Corrective Action Review Board meetings
  - Assign and track cause analysis
  - Coordinate INTEC lessons-learned program
  - Coordinate Price-Anderson Amendment Act investigations
  - Lead and coordinate the INTEC self-assessment program
  - Integrate requirements rolldown activities, including application of Requirements Tracking Management System, Independent Process Verification and Review, and Activity Based Requirements Management System

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 54 of 70

- Integrate and coordinate the performance assurance activities of the INTEC Excellence Board. Participate in and plan the Project Excellence Board, Defense Nuclear Facility Safety Board, and other surveillances.

#### 10.3.4 INTEC Fuel Group Manager

The INTEC Fuel Group manager has the following roles and responsibilities:

- Manage the readiness for all fuel related activities including the Navy fuel return, wet to dry fuel movement, ULWBR shipments, nuclear material shipments, Foreign and Domestic Research Reactor fuel shipments, DOE technical support and the SRS fuel exchange. Readiness include procedure development, part fabrication, safety basis changes or analysis.
- Support the Operations manager in initiation of fuel movement campaigns
- Provide overall management of the NRC regulated spent fuel facilities
- Provide the primary interface with the Navy on fuel returns
- Manages the coordination of all other area projects that perform work within the INTEC geographic area
- Coordinate work activities for the teams within the group. Be fully aware of the individual team schedules and facilitate resolutions to potential conflicts between teams.
- Ensure teams are compliant with rules and regulations
- Monitor team performance to ensure that teams properly implement program rules and guidance, such as conduct of operations, conduct of maintenance, configuration control, etc. Provide oversight for the teams to ensure that they are following job requirements.
- Set the group vision, goals, and expectations for the teams. Set the tone and ensure teams are working effectively and efficiently.
- Monitor and oversee the group schedule. Own and maintain the budget for the groups activities and hold teams and team leaders accountable to perform the work according to the budget requirements.
- Coordinate group activities with the activities of other groups to ensure that work is conducted efficiently and effectively. Communicate outages and other issues that might affect work performance to the team leads.
- Facilitate the trading of resources when specific skills may be needed on one team and another team may have surplus skills available
- Resolve personnel issues where necessary
- Perform required assessments and obtain assistance as necessary to ensure all assessments are completed
- Conduct group meetings as necessary to coordinate team efforts

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 55 of 70

- Facilitate mentoring and other training opportunities between teams and team members.

### **10.3.5 INTEC Analytical Services Group Manager**

The INTEC Lab Group manager is responsible for the conduct of lab analysis in the INTEC lab facilities including:

- Analyze TRU samples and CWI samples and conduct the CWI sample management program
- Coordinate work activities for the teams within the group. Be fully aware of the individual team schedules and facilitate resolutions to potential conflicts between teams.
- Ensure teams are compliant with rules and regulations
- Monitor team performance to ensure that teams properly implement program rules and guidance, such as conduct of operations, conduct of maintenance, configuration control, etc. Provide oversight for the teams to ensure that they are following job requirements.
- Set the group vision, goals, and expectations for the teams. Set the tone and ensure teams are working effectively and efficiently.
- Monitor and oversee the group schedule. Own and maintain the budget for the groups activities and hold teams and team leaders accountable to perform the work according to the budget requirements.
- Coordinate group activities with the activities of other groups to ensure that work is conducted efficiently and effectively. Communicate outages and other issues that might affect work performance to the team leads.
- Facilitate the trading of resources when specific skills may be needed on one team and another team may have surplus skills available
- Resolve personnel issues where necessary
- Perform required assessments and obtain assistance as necessary to ensure all assessments are completed
- Conduct group meetings as necessary to coordinate team efforts
- Facilitate mentoring and other training opportunities between teams and team member
- Maintain compliance with conduct of operations, and understand and ensure implementation of company ISMS, Voluntary Protection Program, Environmental Management System, and ESH&Q requirements and principles.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084 Revision: 4 Page: 56 of 70
--	---

### 10.3.6 INTEC Chief Engineer

The INTEC chief engineer is vested with authority to establish, implement, maintain, and continually improve the INTEC Engineering Program. A primary mechanism for achieving this responsibility is through the INTEC chief engineer's implementation documents contained in company Manual 10A.

In addition to the interfaces that exist between the design authority and design agent functions, there are numerous interfaces with the other company FSAs that are necessary to ensure engineering is performed in a safe and compliant manner. The full engineering process is initiated as needed to implement engineering solutions for new, replaced, or upgraded SSCs.

The INTEC chief engineer has the following roles and responsibilities:

- Maintain and update technical baseline documentation
- Assist with development and revision of applicable environmental permit documentation
- Identify and justify maintenance requirements
- Monitor operations history, industry operating experience, operational status, and ongoing maintenance and modification activities
- Provide technical input into operating and maintenance documentation (such as technical procedures, work orders, and instrumentation calibrations)
- Identify and provide input into the establishment of inspections, operating and test procedures, and surveillances necessary to assure system condition and functionality
- Identify and resolve interface issues with other systems and activities that may impact SSC design bases
- Control changes to assigned SSCs
- Initiate actions to correct deficient conditions
- Advise facility, operations, and engineering management regarding system condition and performance and needs for repair or modification
- Coordinate work activities for the teams within the group. Be fully aware of the individual team schedules and facilitate resolutions to potential conflicts between teams.
- Ensure teams are compliant with rules and regulations.
- Monitor team performance to ensure that teams properly implement program rules and guidance, such as conduct of operations, conduct of maintenance, configuration control, etc. Provide oversight for the teams to ensure that they are following job requirements.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 57 of 70

- Set the group vision, goals, and expectations for the teams. Set the tone and ensure teams are working effectively and efficiently.
- Monitor and oversee the group schedule. Own and maintain the budget for the groups activities and hold teams and team leaders accountable to perform the work according to the budget requirements.
- Coordinate group activities with the activities of other groups to ensure that work is conducted efficiently and effectively. Communicate outages and other issues that might affect work performance to the team leads.
- Facilitate the trading of resources when specific skills may be needed on one team and another team may have surplus skills available
- Resolve personnel issues where necessary
- Perform required assessments and obtain assistance as necessary to ensure all assessments are completed
- Conduct group meetings as necessary to coordinate team efforts
- Facilitate mentoring and other training opportunities between teams and team members.

### **10.3.7 INTEC Maintenance Group Manager**

The INTEC Maintenance Group manager is responsible for all the maintenance for the INTEC facilities as well as the operations of the INTEC cafeteria. The Maintenance organization is divided into multifunctional teams of craft, technical support and engineering personnel (matrixed to the chief engineer) by working systems.

The INTEC Maintenance Group manager has the following roles and responsibilities:

- Maintain the INTEC infrastructure (e.g., utilities, roads, and grounds)
- Maintain the facilities slated for continuing operations
- Maintain the facilities slated for demolition until they are turned over to D&D
- Ensure adequate resources (personnel, equipment, supplies, facilities, and procedures) are available to provide facility and activity support
- Manage the INTEC maintenance program including calibrations and the CWI rigging authority
- Coordinate work activities for the teams within the group. Be fully aware of the individual team schedules and facilitate resolutions to potential conflicts between teams.
- Ensure teams are compliant with rules and regulations

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 58 of 70

- Monitor team performance to ensure that teams properly implement program rules and guidance, such as conduct of operations, conduct of maintenance, configuration control, etc. Provide oversight for the teams to ensure that they are following job requirements.
- Set the group vision, goals, and expectations for the teams. Set the tone and ensure teams are working effectively and efficiently.
- Monitor and oversee the group schedule. Own and maintain the budget for the groups activities and hold teams and team leaders accountable to perform the work according to the budget requirements.
- Coordinate group activities with the activities of other groups to ensure that work is conducted efficiently and effectively. Communicate outages and other issues that might affect work performance to the team leads.
- Facilitate the trading of resources when specific skills may be needed on one team and another team may have surplus skills available
- Resolve personnel issues where necessary
- Perform required assessments and obtain assistance as necessary to ensure all assessments are completed
- Conduct group meetings as necessary to coordinate team efforts
- Facilitate mentoring and other training opportunities between teams and team members
- Maintain compliance with conduct of maintenance and understand and ensure implementation of company ISMS, Voluntary Protection Program, Environmental Management System, and ESH&Q requirements and principles.

### **10.3.8 Project Planning and Integration (PP&I) Manager**

The PP&I manager has the following roles and responsibilities:

- Develop and maintain project scope, schedule, and cost Baselines; provide DOE budget submissions; execute methods for monitoring and controlling project costs/schedules, and recommend project recovery strategies for the INTEC Area Cleanup Project
- Assist the area project manager and subproject managers in planning their work packages and control account plans
- Provide performance information monthly to the DOE, the area project manager, and the subproject managers
- Manage the INTEC PP&I organization in its performance of project control functions.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 59 of 70

### 10.3.9 Department Managers/Completion Managers/Managers

Department managers/completion managers/managers are key to executing the defined project work scope. Their roles and responsibilities are as follows:

- Report directly to the project directors; the work scope definition comes from the project director
- Manage and control all equipment, structures, activities, processes, and personnel in assigned facilities in a manner that protects the safety of the workers, the public, the environment, and the processes
- Conduct job walk-downs, prejob briefings, and postjob reviews as required by company procedures
- Authorize all work to be performed in the facilities
- Authorize and direct performance of operational and maintenance activities in accordance with approved daily orders and plans of the week
- Authorize pre-approved work activities.
- Coordinate with Maintenance to ensure adequate review and support of infrastructure maintenance and operations. Develop and coordinate operational activity and work schedules to accomplish assigned tasks.
- Establish facility priorities to effectively address programmatic and operational considerations within the defined cost, scope, and schedule
- Schedule all work to be performed in assigned facilities
- Ensure the facilities emergency action plans, the spill prevention and countermeasures plan, and any necessary equipment or supplies are understood and maintained
- Perform periodic field observation of activities to verify compliance with approved procedures and requirements. Provide feedback directly to personnel to establish appropriate work execution standards.
- Participate in INTEC operational safety boards as assigned
- Ensure facility hazards are identified and the facility hazard list is maintained
- Provide oversight for the Price-Anderson Amendment Act screening and reporting activities
- Perform nuclear facility manager/facility manager responsibilities as indicated in PDD-1005.

## 10.4 Interfaces

Interfaces with other projects include the following:

- D&D that affects tank farm facilities, CPP-603 and CPP-651
- Waste Management/WGS that affects work in CPP-659, such as filter leach and future remote-handled TRU waste repackaging
- Waste Management that affects CPP-666 filter leach or other waste management

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084 Revision: 4 Page: 60 of 70
--	---

- BEA—activities that interface with SNF and nuclear materials that are physically located at or may be dispositioned via BEA INL Site areas
- ER—sludge removal and tank deactivation associated with CPP-603A.

Primary interfaces with other CWI Site organizations include the following:

- Planning and Integration
- ES&H
- ER
- D&D
- Quality Assurance
- Safeguards and Security.

Interfaces outside of the INL Site organizations and DOE include the following:

- NMD will interface, through appropriate channels, with stakeholders. Reports will be available, as appropriate, through DOE, and meetings will be held with interested groups on a periodic basis.
- Stakeholders (through appropriate channels (reports will be available, as appropriate, through DOE, and meetings will be held with interested groups on a periodic basis).

## 10.5 Facility Interfaces

The INTEC infrastructure requires that many facilities interface with each other. For example:

- The LWFC Project will receive liquid radioactive waste in the CPP-604 complex of buildings from the analytical laboratories and from CPP-601 deep tanks
- Electrical, steam, and water requirements will be supplied to all subproject facilities from the CPP-606 utilities building and from the substations, all of which are managed by IAO
- The CPP-659 facility will handle processing of HEPA filters and other radioactive wastes (TRU and MLLW) that are generated at other INTEC and ICP facilities
- The LWFC Project will supply the sodium-bearing waste material to the IWTU facility for processing.

## 10.6 Subcontractor's Interfaces

Subcontract interface protocol is a key aspect to safe and effective work performance. A significant amount of life cycle scope is planned to be provided by subcontract support.

The direct oversight of subcontractors work is by subcontract technical representatives assigned by the responsible subproject manager. Ongoing direct, open communication exists between the specific

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 61 of 70

project managers through the subcontract technical representative and the performing subcontractor to provide day-to-day direction and oversight as well as to evaluate work status and performance.

The contract management interface with subcontractors performing work for INTEC is coordinated through the procurement organization. The procurement organization establishes an administrative contractual interface to track the period of performance progress and payment authorization.

The only major construction activity will be the construction of the IWTU. Description of this interface is within the Sodium-Bearing Waste Project Execution Plan (PLN-1963), project controls, reporting, and documentation.

This section of the PEP discusses the routine, ongoing project activities for the INTEC Area Cleanup Project. It includes routinely scheduled meetings, project control activities, and routinely generated reporting. The project control activities include two general topics: (1) internal project methods for establishing earned-value basis and reporting process as well as any internal project analysis and (2) processing this information into the format required for roll-up into the ICP systems.

## 10.7 Project Meetings

A schedule of regular INTEC Area Cleanup Project meetings are held to communicate project status, identify and mitigate obstacles and risks to successful project completion, and maintain open and effective lines of communication between all internal and external elements of the project team

### 10.7.1 Safety Meetings

Safety meetings are held on a monthly basis or more frequently if necessary. The topics covered in the safety meetings will be germane to the work at hand. When special situations arise, management may call a safety meeting to discuss an emergent safety topic.

### 10.7.2 Shift Turnover

An INTEC shift turnover meeting (shift brief) will be held from 7:15–7:45 every morning (Monday–Thursday) in CPP-663, Room 229. The purpose of this meeting is to status the plant to ensure the planned work can be worked in the facility. The Fragnet will be the tool used for this meeting. The INTEC Area Project manager, Operations manager, work broker(s), on-duty shift manager, on-duty shift supervisors, team leads, group managers, a representative of any group(s) that interface with Org. 5000 and have work on the schedule to be performed that day and DOE should attend this meeting. This meeting is to be held prior to all morning team meetings to ensure all of INTEC is on the same page. The on-duty work broker will lead the meeting, using the Fragnet to status the planned work with input from the on-duty shift manager with regard to facility status to support the planned work.

The off-going shift manager will need to update the Fragnet to show items completed during the night shift in preparation for this meeting.

The agenda for the meeting will include:

- Safety issues/reportables/RCRA remedials/tours
- Shift manager status of any plant configuration changes that occurred during the last 24 hours (major equipment failures)

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 62 of 70

- Work broker page by page review of the Fragnet of the work completed and the work to be released that shift
- Reprioritization of tasks if any emergent work needs to be added to the Fragnet.

**NOTE:** *The Fragnet will be printed once a week. The on-duty work broker and shift managers will maintain a working copy of the Fragnet with “penciled in” updates. Personnel who attend the Shift Turnover meeting should bring their copy of the Fragnet each day to update as the work broker reviews each page.*

### 10.7.3 Daily Team Meetings

Daily team meeting/prejob briefs will be held by the individual INTEC teams after the shift brief meeting for work not previously released prior to the shift brief. The purpose of these meetings is to execute the prioritized work as established on the schedule or any emergent work discussed in the shift turnover meeting. Personnel resources allocated to individual teams will attend as assigned. Team leads or those attending the shift brief (for the team lead) must attend this meeting to ensure continuity.

### 10.7.4 Plan of the Day

A plan of the day (POD) will be held twice a week (Monday and Thursday) at 9:00 in CPP-663, Room 229. The purpose of this meeting is to status the longer term scheduled work which supports INTEC operations. The POD includes activities such as outage/work order planning, engineering design activities, SAR updates, etc. (activities that may lead up to field work by maintenance, construction, operations or other field execution groups). Once the activity reaches the field implementation phase, it will move from the POD to the Fragnet. The work brokers will be responsible for working with the Scheduling Group to watch for work that needs to transition from the POD to the Fragnet for execution. The INTEC Operations manager, INTEC work broker(s), scheduler, group managers, a representative from Engineering, Radcon, Work Planning, LO/TO Group, Environmental, QA, Nuclear Safety and any other groups who have work represented on the POD should be present at this meeting. The Operations manager will oversee the conduct of the meeting as the scheduler facilitates status of the schedule. The POD will be printed once/week.

### 10.7.5 Lock-In

A lock-in (T2, etc.) meeting will be held every Wednesday at 1400 in CPP-663, Room 229. The purpose of this meeting is to lock in (T1) and authorize the work scheduled for the following week (Thursday night shift through the next Thursday day shift). This meeting will also review the T-2 schedule after the locked-in schedule has been approved. The work brokers, INTEC Area Project manager, Operations manager, group managers, selected team leads, any other non-Org. 5000 groups requesting work on the Fragnet and the scheduler should attend this meeting. Any new emergent work requests which need to be scheduled will be reviewed for priority and team assignment. The lock-in portion of the meeting will be conducted by the work broker who will be on duty during the execution week of the Fragnet. Discussions on the T-2 schedule will be lead by the work broker who is responsible for each of those weeks. The scheduler will make any changes to the schedule(s) and print the approved locked-in Fragnet on Thursday afternoon.

On each Monday, the Scheduling Group will issue a draft schedule to be locked in at the Wednesday meeting. They will also issue draft schedules for the out week (T2.). The drafts will be at a

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 63 of 70

minimum issued to the work brokers, team leads and any non-Org. 5000 groups that have work on the Fragnet or need to put work on the Fragnet the following week. The draft schedules are to be reviewed and any comments/changes resolved through the work broker assigned to that week on Tuesday, so that comments can be incorporated prior to the lock-in meeting on Wednesday.

In addition, the work broker, group managers, and Operations manager will screen work requests that meet the criteria to be scheduled during to ensure that unnecessary work is not performed.

A list of all work requests that were submitted during the previous week, (Monday–Thursday) will also be reviewed at this meeting. The Scheduling Group will provide a list of these work requests on Monday of that week. As the work request(s) are submitted during the previous week, the team leads have the option to screen the request(s) to determine if it meets the criteria for un-scheduled work. (They should contact the work broker for guidance in this determination, if questionable.) If the request(s) does not need to be scheduled work, the team can proceed with planning and execution of the work as resources within the team are available. The team leads and work brokers will evaluate the remaining list of work requests that need to be scheduled to ensure they support the mission of the contract. The work brokers will assign a work week for the work requests that need to be scheduled on the Fragnet.

#### **10.7.6 Work Week Critique**

A work week critique meeting will be held every Tuesday at 1400 in CPP-663, Room 229. This meeting will review the previous week's Fragnet performance and lessons learned. The meeting will be attended by the work brokers, Operations manager, group managers and the team leads. Prior to the meeting, the work broker who was on duty the previous week will work with the Scheduling Group to ensure a report indicating the performance of work on the previous week's Fragnet. The report should include:

- Maintenance tasks scheduled versus completed
- Operations tasks scheduled versus completed
- Any emergent work that was added
- Any other work that was not completed as scheduled.

Action items will be assigned, as appropriate for work not completed to understand the cause and to determine lessons learned.

#### **10.7.7 Plan of the Month**

A plan of the month will be held every other Wednesday at 1200 in CPP-663, Room 229 to schedule work out past T2. The Scheduling Group will facilitate this meeting, with support from the work brokers. Scheduling for future work and resource needs will also be conducted at this meeting. The INTEC Area Project manager, Operations manager, group managers, work brokers and non-Org. 5000 interfacing projects should be present. This meeting will review performance indicators including backlog management. Activities from this meeting will ultimately roll into the T2 schedule and then the Fragnet when they get to the field execution phase. The work brokers will be responsible for working with the Scheduling Group to transition activities from the plan of the month to the Fragnet when they reach the field execution stage.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 64 of 70

### 10.7.8 Monthly INTEC Area Cleanup Project Review

Monthly project review meetings will be required within the INTEC Area Cleanup Project. Prior to these meetings, the INTEC PP&I manager provides a cost performance report to the subproject managers. The monthly project review meeting presentation by the project will follow the format below:

- Safety Performance: The project reports on its recordable case rate, lost workday case rate, lost workday severity rate, authorization basis violations, radiological violations, criticality safety infractions and occurrences, and any other safety or radiological issues/concerns.
- Performance Measures: The subproject presents the current status of any assigned performance measures.
- Performance Indicators: The project will report on the following project performance indicators:
  - Cost Performance—Period, cumulative to date, and projected year-end and project cost performance, including cost variance, cost performance index, and estimate at completion.
  - Schedule Performance—Period, cumulative to date, and projected year-end and project schedule performance including schedule variance and schedule performance index.
  - Milestone Performance—Period, cumulative to date, and projected year-end and project milestone performance. Performance will be shown as a milestone performance index, which is a comparison of external milestones accomplished to external milestones planned to be completed.
  - Gold Metrics—The product of the project’s scope of work is the accomplishment of “physical work” (e.g., lineal feet of piping/duct removed, cubic feet of glove box packaged, cubic meters of building rubble shipped). Period and YTD performance of this physical work is reported as a family of project-specific, discrete, and measurable gold metrics.
  - Baseline Schedule Performance—Period and cumulative actual performance to the project’s activity level baseline critical path schedule, including total float and other key schedule elements. A current “time now” or performance period line needs to be indicated and the critical path statused to the time now line. If the project is behind schedule or there is a risk of falling behind schedule, the project manager will present detailed plans or recommendations to mitigate this behind or potentially behind schedule condition.
  - 60-day and 120-day Look Ahead—This part of the review is a 60- and 120-day look ahead of the project’s schedule, cost, milestone performance, procurement actions, waste projections, performance measures, staffing plans, and any other project specific items of interest.
  - Issues and Concerns—This part of the review is a listing of any issues or concerns identified by the director. This list need not have detailed substantiation but is intended to convey any concerns felt by the director to the area manager.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 65 of 70

- Project Status Assessment—This part of the review is a subjective status of the subproject as viewed by the director. It should address the director's thoughts on progress toward achieving near-term milestones and objectives.
- Action Items—The purpose of this part of the review is to clearly collect and status action items and commitments affecting work. It should also clearly describe the need, if any, for new actions or commitments.

## 10.8 Site Project Control Interface

The *Project Control System Description* describes the project planning and control system at the ICP level and the methods used by PP&I to evaluate, display, and roll up the data generated by the project and the cost accrual system. They include the details on how ICP manages the project control data—e.g., tracks and reports progress, reports earned value, and posts accruals.

The focus of the information roll-up at the project level is the charge number and the activity. The activity identifies the lowest-level cost input in the cost collection system and establishes the schedule start date and duration in the LCB. Collectively for the project, the activities establish the budgeted cost of work scheduled (BCWS).

The area project manager is required to report monthly on the earned value by activity, resulting in the project budgeted cost of work performed (BCWP). The actual costs are derived from the costs collected on a monthly basis by charge number and applied against the activity to determine the actual cost of work performed (ACWP). Because of these constraints, there may only be one activity per charge number, although there may be more than one charge number per activity, depending on how the project wants to collect cost below the activity level.

## 10.9 Project Control

The management approach of this project provides for easily maintained schedule and cost controls which supplement the ICP systems. The inputs to the process are the work plans for a logical grouping of activities (e.g., planning, decontamination, and dismantlement for a given work area). These work plans have sub-activities and schedules which roll up to the activities identified in the LCB. Additionally, the sub-activity costs are identified and collected in a manner that allows them to be rolled up to the activity.

### 10.9.1 Status Measurement

The status of the project will be measured by the use of an earned value measurement system (EVMS). Each reporting period, the work package managers and control account managers will measure progress and report it in terms of BCWP. BCWP will be earned by completing or progressing on certain activities. Progress will generally be measured using the modified milestone method by weighting milestones and completing those milestones to earn a predetermined value measured in dollars. Other methods used include quantitative method, where each unit of completion carries an assigned BCWP; and level of effort which is used for some accounts where such is the nature of the work. In level of effort accounts, the schedule variance is always zero and the schedule performance index is always 1 (see paragraph that follows).

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 66 of 70

BCWP will be used to calculate both schedule and budget status against the LCB. The principal measures used are as follows:

- Schedule Variance = BCWP - BCWS
- Cost Variance = BCWP - ACWP
- Schedule Performance Index = BCWP/BCWS
- Cost Performance Index = BCWP/ACWP.

For a more detailed explanation of CWI's earned value system please see the Sitewide Project Management Plan, the Project Control System Description and MCP-1416, "Earned Value."

### 10.9.2 Analysis

Monthly analysis of project performance determines the management actions necessary to meet the project scope, schedule, and cost requirements and to look for ways to accelerate the project. Triggers for project analysis include the following:

- Status shows critical path behind schedule
- Status changes the critical path
- Stated schedule noncritical paths show very little, zero, or negative float
- Stated schedule moves milestones (including performance measures) beyond target dates
- Objective performance measures below plan (e.g., liters of liquid processed versus time)
- Project cost variance is negative
- Project estimate at completion exceeds funding level (including management reserve and escalation)
- New scope information arises
- New project interface information arises
- New resource availability information arises.

This analysis leads to planned actions to eliminate variances. If appropriate (due to potential magnitude of impact or lack of clarity on the actual cause), the project team performs a root cause analysis to support response action decisions.

### 10.9.3 Project Reports

**10.9.3.1 ICP-Level Reporting.** No formal reporting has been required from the area projects to the ICP. Monthly presentations by the area managers to the president/chief executive officer of CWI are expected.

**10.9.3.2 Internal Project Reporting.** The table below presents the list of project documents and the approval, transmittal, and customer distribution requirements for the major project documents.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 67 of 70

Project document matrix.

Document	Frequency	Creator	Approval Authority	Distribution
Project Execution Plan	Revised as needed	Project Team (PP&I support)	Area Project Managers VP PP&I	Project Team ICP managers DOE-ID
WBS Dictionary	Revised as needed	Project Team (PP&I support)	VP PP&I	Intranet
Area Project Schedule (Primavera)	Baseline-one time	Project Team (PP&I support)	Subproject Managers, Area Project Manager and VP PP&I	DOE-ID, President, Area Project Managers and VP PP&I
Area Project Cost Estimate	Life cycle-one time, Annual work plan	Project Team (PP&I support)	Subproject Managers, Area Project Manager and VP PP&I	DOE-ID, President, Area Project Managers and VP PP&I
LCB	As Updated (rare)	Project Team	DOE, President, Area Project Managers and VP PP&I	DOE-ID, President, Area Project Managers and VP PP&I
BCPs	As needed	Project Team	Subproject Manager and VP PP&I	DOE, Area Project Manager
Project Deliverable Reports	As scheduled	As assigned	Subproject Manager	As appropriate
Performance Measure Completion Reports	As required	PP&I Manager	Subproject Manager	Directors, Project Team DOE

All formal reports documented for facility disposition and construction projects include the following basic information: official project title as it appears on the authorizing document, project WBS identification number, report date that report information is based on, and the date the report was printed. Schedules will indicate all scheduled activities, forecasted completion of the scheduled activities, a “time now” line, and the critical path activities. As applicable, all project internal, performance measure, regulatory, and DOE-ID milestones that fall within the span of the schedule will also be clearly indicated on the schedule.

## 10.10 Change Management

The INTEC Area Cleanup Project will follow the change control process provided in the *Project Controls System Description* document and MCP-1414. A BCP will be used to process changes proposed for the scope, schedule, or cost baselines. Thorough records of all BCPs and their disposition will be maintained by the INTEC Area Cleanup Project records management system administrators.

## 10.11 Value Engineering Activities

### 10.11.1 Methodology

CWI utilizes value engineering—also known as VE or value management—as an inherent part of its overall management strategy and project execution methodologies. VE was a key part of various exercises conducted throughout the crafting of the CWI response to the Idaho Cleanup Project

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 68 of 70

RFP—consideration of the proposal requirements, investigation and determination of various remediation techniques and potential strategies, characterizing and evaluating overall project risk, the structure and method associated with forming the successful proposal team, and CWI’s ability to execute the project successfully. These concepts have been carried forward and incorporated into the planning activities associated with development of the ICP Life-cycle Baseline by each of the respective area project managers.

CWI’s approach to VE is structured to be compliant with its contractual obligations and requirements related to value management. This translates into the use of some form of VE on all projects. To the extent feasible, improvements in value, cost, schedule, and construction are sought during the project planning phases or early in the project execution phase before technical/design options are locked in.

### **10.11.2 Responsibilities**

The area project managers have overall responsibility for implementing VE principles for their respective projects. It is the area project manager who will decide whether a formal VE study should be performed and who is required to participate in the actual VE studies. In these instances an integrated project team approach is used. Using an integrated project team approach better enables the primary stakeholders to establish objectives for functionality and performance and make informed decisions about tradeoffs among project objectives, resources, materials, or performance for the short and long term. Schedule and cost savings are major factors in executing the project, however, reliability and the customer’s needs for the life of the structure, system, or component receive emphasis as considerations.

It is the responsibility of the area project manager and procurement to consider including a value engineering incentive clause for construction contracts that do not contain cost saving incentives.

### **10.11.3 Continuing Pursuit of Cost Savings: Section B.8 Activities**

Simply stated, VE is an organized application of common sense and technical knowledge directed at finding and eliminating unnecessary costs in a project. Streamlining processes and eliminating non-value-added requirements are critical to accomplishing accelerated cleanup and for getting the best overall project value for the taxpayer. That said, CWI recognizes that the accelerated cleanup is a cooperative undertaking with DOE that requires both parties to seek innovative approaches to achieve the end objective.

ICP has instituted a formal process for accomplishing this through its “B.8 Team” cost savings activities. Based on Section B.8 of the ICP Contract and lead by the CWI Vice President of Strategic Planning the B.8 Team consists of representatives from each of the divisions within the ICP who are charged with seeking out and investigating opportunities to identify and non-value-added requirements and processes that impede progress or contribute to unnecessary cost. The B.8 Team works closely with CWI management and the ICP work force to actively solicit ideas and assist in identifying seemingly “non-value-added” activities or excess, legacy requirements, and to pursue their elimination. Financial incentives are in place to encourage participation in both the identification and resolution phases of the process.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 69 of 70

## 11. REFERENCES

- 10 CFR 835, 2002, “Occupational Radiation Protection,” *Code of Federal Regulations*, Office of the Federal Register, February 2002.
- 40 CFR 122, 2003, “EPA Administered Permit Programs: The National Pollutant Discharge Elimination System,” *Code of Federal Regulations*, Office of the Federal Register, April 2003.
- 40 CFR 300, 2005, “National Oil and Hazardous Substances Pollution Contingency Plan,” *Code of Federal Regulations*, Office of the Federal Register, June 2005.
- 15 USC 2601 et seq., 1976, “Toxic Substances Control Act,” United States Code.
- 16 USC § 470 et seq., 1966, “National Historic Preservation Act,” *United States Code*, October 15, 1966.
- 26 USC § 1251 et seq., 1987, “Clean Water Act,” *United States Code*, U.S. Environmental Protection Agency.
- 29 USC § 651 et seq., 1970, “Occupational Safety and Health Act of 1970,” *United States Code*, December 29, 1970.
- 42 USC § 2011 et seq., 1954, “Atomic Energy Act of 1954,” *United States Code*, August 30, 1954. (The 1988 Amendment, Public Law 100–408, Section 1, is cited as the “Price-Anderson Amendments Act of 1988”).
- 42 USC § 4321 et seq., 1970, “National Environmental Policy Act of 1969,” *United States Code*, January 1, 1970.
- 42 USC § 6901 et seq., 1976, “Resource Conservation and Recovery Act (Solid Waste Disposal Act),” *United States Code*, October 21, 1976.
- 42 USC § 7401 et seq., 1990, *Clean Air Act*, U.S. Environmental Protection Agency, 1990.
- 42 USC § 9601 et seq., 1980, “Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA/Superfund),” *United States Code*, December 11, 1980.
- DEQ, 2000, B. R. Monson, Idaho Division of Environmental Quality, to D. N. Rasch, DOE Idaho Operations Office, Enclosure: “Consent Order,” Idaho Code Section 39-4413, June 14, 2000. (Commonly referred to as the “Voluntary Consent Order”)
- DOE, 1995, *Settlement Agreement*, U.S. Department of Energy, Environmental Management; U.S. Department of the Navy, Naval Nuclear Propulsion Program; and the State of Idaho, October 17, 1995.
- DOE P 455.1, 2003, “Use of Risk-Based End States,” U.S. Department of Energy, July 23, 2003.

<b>PROJECT EXECUTION PLAN FOR THE INTEC AREA CLEANUP PROJECT</b>	Identifier: PLN-2084
	Revision: 4
	Page: 70 of 70

DOE-ID, 1991, *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory*, Administrative Docket No. 1088-06-29-120, U.S. Department of Energy Idaho Operations Office; U.S. Environmental Protection Agency, Region 10; Idaho Department of Health and Welfare, December 4, 1991.

DOE-ID, 1995, *Idaho National Engineering Laboratory Site Treatment Plan*, DOE/ID-10519, U.S. Department of Energy Idaho Operations Office, September 1995.

GDE-72, "Remedial Design and Remedial Action," *Manual 8—Environmental Protection and Compliance*.

ICP, 2006, *CWI ICP Sitewide Project Management Plan*, ICP/EXT-05-01082.

IDWH, 1992, "Notice of Non-Compliance Consent Order," Idaho Code §39-4413, Idaho Department of Health and Welfare, April 3, 1992 (ICP OIS Doc. No. 18028).

MCP-1409, "Risk Management," *Manual 5—Project Management and Controls*.

MCP-1413, "Funds Authorization, Determination, and Management," *Manual 5—Project Management and Controls*.

MCP-2447, "Requirements Management," *Manual 3—ES&H Program Support*.

MCP-3480, "Environmental Instructions for Facilities, Processes, Materials and Equipment," *Manual 8—Environmental Protection and Compliance*.

MCP-1414, "Change Control," *Manual 5—Project Management and Controls*.

PDD-1004, "Integrated Safety Management System," *Manual 3—ES&H Program Support*.

PDD-1005, "ICP Management and Operations Manual," *Manual 9—Operations*.

PDD-1012, "Environmental Management System," *Manual 8—Environmental Protection and Compliance*.

PLN-466, "Quality Assurance Program Plan for ISFSI Management."

PLN-533, "Quality Assurance Program Plan for High Level Waste and Spent Nuclear Fuel."

PLN-2085, "Project Execution Plan for the ICP Radioactive Waste Management Complex Project."

PLN-2173, "Idaho Cleanup Project Programmatic Risk Management Plan."

PRD-5071, "Quality Assurance Program," *Manual 13—Quality Assurance Program*.