

Meeting Minutes Transmittal

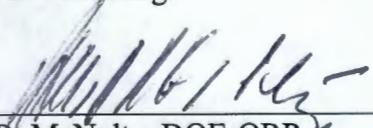
IHLW and ILAW Tri-Party Agreement Definitions of Critical Systems and 80% Design Media

Ecology Offices
1314 West Fourth Avenue
Kennewick, Washington
February 18, 2003
3:00 p.m. - 4:30 p.m.

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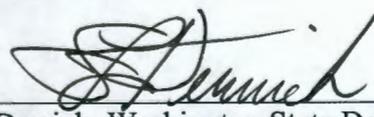
EDMC

The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated Immobilized Waste Part B Permit Application Design Drawing Review Meeting.



R. R. McNulty, DOE-ORP

Date: 4/1/03



S. L. Derrick, Washington State Department of Ecology

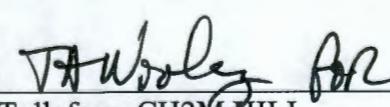
Date: 7/23/03

CHG Concurrence:



G. L. Parsons, CH2M HILL

Date: 4-1-03



K. S. Tollefson, CH2M HILL

Date: 4/1/03

Purpose: IHLW and ILAW Tri-Party Agreement Definitions of Critical Systems and 80% Design Media

- Attachment 1: Agenda & Action Item List
- Attachment 2: Meeting Minutes
- Attachment 3: Attendee List
- Attachment 4: Distribution List

Attachment 1
Agenda and Action Items List
IHLW and ILAW Tri-Party Agreement Definitions of Critical Systems
and 80% Design Media

Ecology Offices
1314 West Fourth Avenue
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3:00 p.m. – 4:30 p.m.

1. IHLW and ILAW Tri-Party Agreement Definitions of Critical Systems and 80% Design Media

ACTION TRACKING LIST

Action	Assignee	Date Established/Due Date	Status
Draft letter to gain Ecology concurrence on IDF permitting assumptions.	Ted Wooley Heather Baune		Drafted and undergoing DOE review.
Draft letter to gain Ecology concurrence on IHLW permitting assumptions.	Ted Wooley Heather Baune		Drafted and undergoing DOE review.
Provide IDF design packages to Bud Derrick	Heather Baune	End date: 5-31-2003	60% Design Package delivered 2-26-2003

Attachment 2
Summary of Discussion and Commitments/Agreements

**IHLW and ILAW Tri-Party Agreement Definitions of Critical Systems
and 80% Design Media**

Ecology Offices
1314 West Fourth Avenue
Kennewick, Washington
February 18, 2003
3:00 p.m. – 4:30 p.m.

ADMINISTRATIVE ISSUES

None

**PROJECT W-464 AND W-520 RECOVERY PLAN DEFINITIONS OF CRITICAL
SYSTEMS AND 80% DESIGN MEDIA**

IDF

Greg Parsons- Explained the purpose of the meeting was to clarify definition of 80% design of critical systems and assumptions. Mr. Parsons also presented the ILAW Tri-Party Agreement Definitions of Critical Systems and 80% Design Media (please see attached handout).

General- Many questions were asked concerning ILAW disposal. The responses are summarized as follows:

- ILAW will be disposed at what is commonly called the Purex Site: approximately 90 acres between 1st and 4th Streets by the old Steam Plant and Ash Pile at 200 East.
- Though there is only a single trench, the trench will be divided hydraulically into two sections with MLLW and LLW. Only the MLLW portion of the trench is planned to be RCRA permitted.
- Currently the IDF and ERDF options are being pursued in parallel. The decision as to the final facility is expected later this year.
- Trenches 31 and 34 are currently used for MLLW. These are relatively small trenches and additional capacity will be needed. IDF is planned to provide the additional capacity.
- LLW is LLBG waste and the IDF is being designed to handle the LLW volumes in support of the RL decision to put all waste in lined trenches. LLW will likely be characterized at the CWC, not at IDF.
- Steam reforming, containerized grout, and other alternate waste forms are being considered for disposal at IDF but all forms must meet the waste acceptance criteria.
- Retrieval of waste is possible with new design.

Bud Derrick- Indicated the ILAW Disposal Facility name change needs to be formalized. The TPA Manager's Meeting was suggested as an avenue for this change.

Greg Parsons- Stressed the disconnect between the two year permitting assumption and TPA Milestone M-90-08. Three options were identified to support M-90-08: non-critical construction can proceed without a final status permit, expedite the permitting process to 21 months to obtain a final status permit, or modify M-90-08 to a later date. A discussion ensued regarding redefinition of the start of construction for the WTP milestones and working out a similar solution for us.

Steve Skurla- Believed Ecology would work with DOE to either finalize the permit in less than two years or redefine the start of construction. Mr. Skurla stated this decision would require internal discussion. The group decided a letter proposing a definition for the start of construction, and critical/non-critical systems would be sent to Ecology to gain agreement. Mr. Skurla requested a draft be sent to Ecology for review.

Phil LaMont- Requested Bud Derrick receive copies of the IDF design review packages.

IHLW

Kris Colosi- Explained the purpose of the meeting was to clarify definition of 80% design of critical systems and assumptions. Ms. Colosi also presented the IHLW Tri-Party Agreement Definitions of Critical Systems and 80% Design Media (please see attached handout).

Steve Skurla- Asked whether not having a RCRA permit for the CSB was being pursued. This question was tabled for a future discussion.

Kris Colosi -Gave an overall description of the CSB using the cut-away drawing from the last page of the presentation. Referring to page 12 of the presentation, Ms. Colosi stated construction of non-critical systems must begin 5-2004 to support a construction completion date of 9-2006. Construction of critical systems must begin 4-2005, three months earlier than the two years allotted for a final status permit. In addition, procurement of critical systems must begin prior to receipt of a final status permit.

Rick McNulty – Stated the permit application will be submitted as a container storage unit and asked if the tube system should still be identified as a critical system since the canister provides primary containment and the tube is secondary containment. Mr. McNulty suggested the canister would be the critical system and no longer the storage tube system. The canister is included in the WTP permit. Mr. Skurla stated this topic would require internal discussion.

Steve Skurla- Agreed the container storage approach was favorable over miscellaneous unit.

Bud Derrick – Asked what alternatives would be proposed to the 30" aisle spacing and weekly inspection requirements. Various inspection alternatives were discussed by the group. Alternatives will be proposed in the permit application.

Bud Derrick – Queried why PE stamping was a problem for submittal of the revision 0 permit applications. Mr. Jarayssi stated that the PE stamp is not included to remove a schedule constraint, design media is otherwise complete.

Steve Skurla – Inquired about canister ventilation. Ms. Colosi explained the natural convection (passive ventilation) system cools the sealed tubes with air passing the outer surface of the tube and HEPA filters would not be used for vault cooling but are used for the operating deck system.

Steve Skurla – Provided a handout for information. Mr. Skurla recommended the permit application provide information for fact sheet justification as to why specific requirements are not enforced (i.e., 30” aisle spacing and weekly inspections).

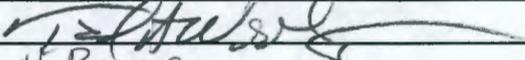
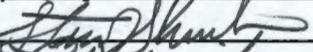
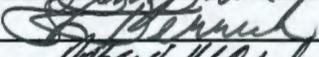
Moses Jarayssi – Reiterated action from the meeting to provide letter proposing a definition for the start of construction, and critical/non-critical systems would be sent to Ecology to gain agreement for both IDF and IHLW. Mr. Jarayssi also suggested regular, informal meetings with Ecology. The suggestion was well received.

NEW TOPICS

None

February 18, 2003

Meeting Attendance Sheet

Name	MSIN	Company	Signature
TED Wooley	R1-51	CHG	
Heather Baune	L6-75	CHG	H Baune
GREG PARSONS	L6-75	CAC	G. Parsons
Kris Colosi	L6-75	CHG	K. Colosi
Phil LaMont	H6-60	DOE/CRP	P.E. LaMont
STEVE SKURLA	B6-05	ECOLOG	
SL "BUD" FERRICK	B6-05	ECOLOG	
KOK McMULTY	H6-60	DOE/CRP	
Moses Javayssi	H6-66	CARM HILL	
Dale Splett	H6-60	DOE	

**Attachment 3
Attendance List
IHLW and ILAW Tri-Party Agreement Definitions of Critical Systems
and 80% Design Media**

**Ecology Offices
1314 West Fourth Avenue
Kennewick, Washington
February 18, 2003
3:00 p.m. – 4:30 p.m.**

Original included in hard copy

Name	Company	Phone Number
Heather Baune	CH2M HILL	372-3393
Kris Colosi	CH2M HILL	372-3395
Bud Derrick	ECOLOGY	736-5703
Moses Jarayssi	CH2M HILL	372-9242
Phil LaMont	DOE-ORP	376-6117
Rick McNulty	DOE-ORP	373-9304
Greg Parsons	CH2M HILL	372-3387
Steve Skurla	ECOLOGY	736-3011
Dale Splett	DOE-ORP	373-7827
Ted Wooley	CH2M HILL	372-1617

Distribution:

H. L. Baune	CH2M HILL	L6-75
D. A. Burbank	CH2M HILL	L6-57
K. A. Colosi	CH2M HILL	L6-75
S. L. Dahl	ECOLOGY	B5-18
S. L. Derrick	ECOLOGY	B5-18
M. N. Jarayssi	CH2M HILL	H6-03
P. E. LaMont	DOE-ORP	H6-60
R. R. McNulty	DOE-ORP	H6-60
G. L. Parsons	CH2M HILL	L6-75
D. H. Splett	DOE-ORP	H6-60
S. J. Skurla	ECOLOGY	B5-18
K. S. Tollefson	CH2M HILL	R1-51
J. E. Van Beek	CH2M HILL	R3-47
T. A. Wooley	CH2M HILL	R1-51

ADMINISTRATIVE RECORD (two copies): A1-14

Debbie Isom (two copies): H6-08

Please send comments on distribution list to Heather. L. Baune (L6-75), 509-372-3393

IHLW and ILAW Tri-Party
Agreement Definitions of Critical
Systems and 80% Design Media

Office of River Protection- Department
of Energy

CH2M Hill Hanford Group, Inc.

ILAW Disposal Facility

Background

- Disposal of ILAW was planned in up to six double lined RCRA compliant trenches. Project W-520 provided the design and construction of the first trench, support buildings and trench loading equipment for the planned ILAW disposal operation.
- Initiatives to reduce the number of disposal facilities and consolidate operations have resulted in the decision to integrate the ILAW operation with other site solid waste disposal. Due to these initiatives, Project W-520 was cancelled.

ILAW Disposal Facility

Background (continued)

- A new concept for ILAW disposal was formulated and includes disposal of ILAW, MLLW, and LLW in a single large trench known as the Integrated Disposal Facility (IDF). The IDF will consist of one double lined RCRA compliant trench divided into two portions, each with a separate leachate collection system. Support facilities and trench loading equipment are not included in the scope of the IDF.
- The Part B Permit Application is will be based on the IDF concept, not the previously planned Project W-520 concept.

*Seeking only a permit for disposal of ILAW and MLLW at this time. LLW is not included within the scope of the permit.

ILAW Disposal Facility Critical Path Schedule

Critical Path Schedule	Date
M-90-09-T-01 Complete detailed design of ILAW Disposal Facility critical systems to 80%. Detailed design of critical systems includes the A) liner B) leachate collection system and C) leak detection system.	05/30/2003
M-20-57 Submit ILAW Disposal Facility certified Part B Permit Application to Ecology	06/30/2003
Start non-critical system construction	01/2005*
Issue Final Status Permit	02/2005
M-90-08 Initiate ILAW Disposal Facility construction. Initiation of construction occurs when DOE or it's contractor (as authorized) issues an approval to start construction and the contractor commences excavation of non-critical systems within the RCRA Disposal Facility.	02/28/2005
Start critical system construction	07/2005
Complete construction	09/2006
Operations	09/2007
M-90-10 Initiate placement of ILAW waste canisters in ILAW Disposal Facility (low activity packages placed within these facilities will be retrievable).	8/31/2008

* Assumes Ecology approval.

ILAW Disposal TPA Requirements:

- Critical Systems are:
 - Liner System
 - Leachate Collection System
 - Leak Detection System
- The certified permit application will include design for 80% completion of critical systems.
- The permitting process will take 2 years to obtain a final status permit.
- A final status permit will be issued in 2005.

ILAW Disposal Facility Key

Assumptions:

- 80% critical system design is assumed to mean the following which is based on 80% design:
 - All drawings and specifications for the critical systems have been completed except for the final review and stamping by a Professional Engineer.
- Final reviews of the design and Professional Engineer stamping will occur prior to submittal of the Revision 1 application.
- To meet ILAW disposal needs, one of the following options must occur:
 - Non-critical system construction can proceed without a final status permit. (Assumes Ecology agreement.)
 - Permitting process can be expedited to 21 months to obtain a final status permit verses a two year process as indicated in Change Notice M-20-01-01. (Contingent upon early production of ILAW as proposed by the Waste Treatment Plant.
- The SWEIS is approved in time to support the permit.
- ILAW TPA milestones are relevant to the new IDF concept though other wastes are included.

ILAW Disposal Facility Non-Critical Systems and Activities

- Contractor Mobilization
- Clearing and Grubbing of Site
- Rough Excavation of Trench
- IDF Site Road Construction

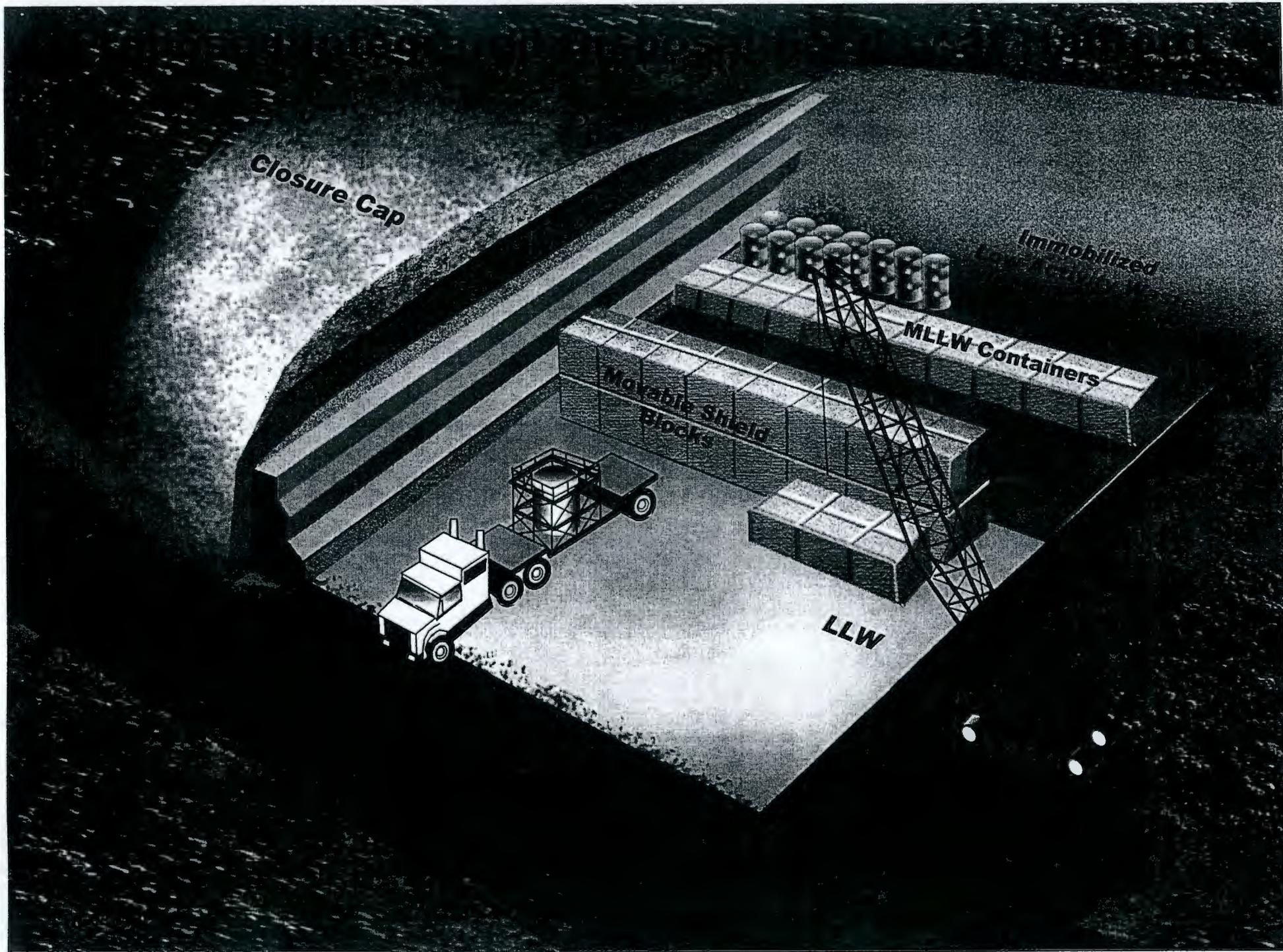
ILAW Disposal Facility Critical Systems

- **Liner System** The double liner system is required by WAC 173-303-665(2)(h) and design requirements are found in WAC 173-303-665(2)(h)(i). The liner system functions to prevent the release of hazardous materials to the environment.
- **Leachate Collection System** The leachate collection and removal system is required by WAC 173-303-665(2)(h) and design requirements are found in WAC 173-303-665(2)(h)(ii). The leachate collection system functions to prevent the release of hazardous materials into the environment.
- **Leak Detection System** The leak detection system is required by WAC 173-303-665(2)(h) and design requirements are found in WAC 173-303-665(2)(h)(iii). The leak detection system functions to prevent the release of hazardous materials into the environment.

ILAW Disposal Facility 80%

Design of Critical Systems

- Drawings: Site Plan; Grading Plan; Secondary Admix Contours; Operations Layer Contours; Cross Sections; Liner System Details; Sump Layout; Sump Cross-Sections; Leachate Collection Piping; Side Slope and Riser Pipes; Leachate Collection Tank and Piping; Sump Pump Details; Leachate Tanker Loadout System
- Specifications: Site Work, including General Excavation and Backfill; Trenching and Backfilling; Soil Bentonite Liner; Geosynthetic Clay Liner; Geotextiles; geocomposite; geomembranes; Granular Drainage Layers; Operations Layer; Geosynthetics; Drainage Facilities; HDPE Pipe; Equipment, including Leachate Pumps; Leachate Storage Tank



Closure Cap

Immobilized
Low-Level Waste

MLLW Containers

Movable Shield
Blocks

LLW

IHLW Interim Storage

Background

- Project W-464 will utilize vaults 2 and 3 of the existing Canister Storage Building (CSB) for IHLW interim storage.
- CSB Vault 1 stores Spent Nuclear Fuel.
- Modifications to the CSB include:
 - Installation of 452 tube systems in vaults 2 and 3.
 - Installation of intake and exhaust stacks for vaults 2 and 3.
 - Modifications to the Multi-Canister Overpack Handling Machine (MHM).
 - Upgrades to the Fast Flux Test Fuel transloading pit for receipt and transfer of IHLW.

IHLW Interim Storage Critical Path Schedule

Critical Path Schedule	Date
M-20-56 Submit Canister Storage Facility Part B Dangerous Waste Permit Application to Ecology	06/30/2003
Begin procurement of critical system components	6/2003
Start non-critical system construction	5/2004*
Issue final status permit	3/2005
Start critical system construction	4/2005
Complete construction	9/2006
Operations	8/2007
M-90-11 Complete Canister Storage Facility Construction	06/30/2009

* Assumes Ecology approval.

IHLW Interim Storage TPA

Requirements:

- Critical System is: Canister Storage Tube System
- The certified permit application will include 80% design completion of critical systems.
- The permitting process will take 2 years to obtain a final status permit.
- A final status permit will be issued in 2005.

IHLW Interim Storage Key

Assumptions:

- 80% critical system design is assumed to mean the following which is based on 80% design:
 - All drawings and specifications for the critical systems have been completed except for the final review and stamping by a Professional Engineer.
- Final reviews of the design and Professional Engineer stamping will occur prior to submittal of the Revision 1 application.
- To meet IHLW disposal needs, one of the following options must occur:
 - Non-critical system construction can proceed without a final status permit. (Assumes Ecology agreement.)
 - Permitting process can be expedited to 21 months to obtain a final status permit verses a two year process as indicated in Change Notice M-20-01-01. (Contingent upon early production of IHLW as proposed by the Waste Treatment Plant.

IHLW Interim Storage

Unit Type

- The IHLW Interim Storage Unit permitting approach has been changed from a miscellaneous unit to container storage based on:
 - The precedent of the Waste Treatment Plant's lag storage unit being permitted as container storage.
 - IHLW is a non-liquid waste.
- The following assumptions will be included in the permit application:
 - Exception to 30 inch aisle spacing requirement.
 - Exception to weekly inspection requirement.
 - Exception to Professional Engineer stamp on the existing CSB structure design media (i.e., drawings, calculations, specifications, etc.).

IHLW Interim Storage

Non-Critical Systems and Activities

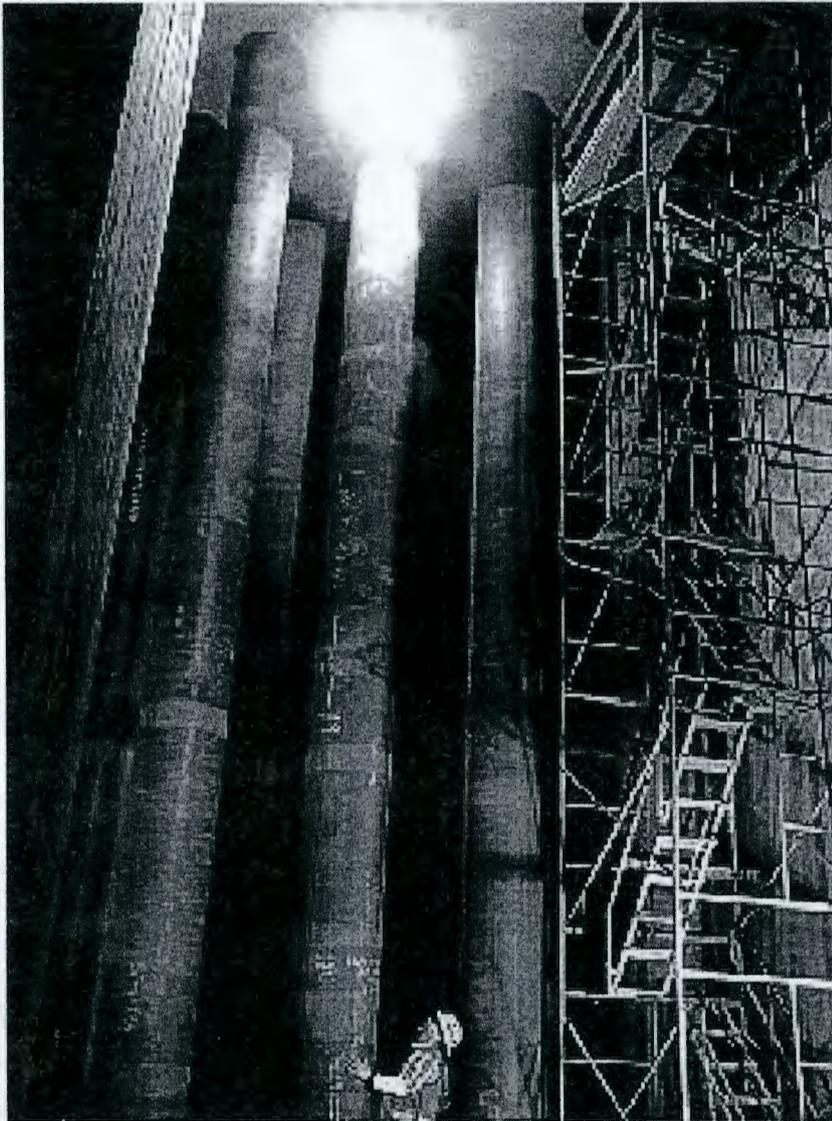
- **MHM:** The Multi-Canister Overpack Handling Machine (MHM) is an existing, large, shielded crane used to move the canister from the receiving pit, across the operating deck, and lower it into the tube. The MHM also removes and replaces the cask lid, and places impact absorbers in the tubes. MHM modifications will include grapple change out, and new control system modes to accommodate the canister operation.
- **FFTF Pit:** The Fast Flux Test Fuel (FFTF) Transloading Pit is used for transfer of the canister from the transportation cask to the MHM. FFTF Pit modifications will include: IHLW cask holding frame, a make-up/shielding ring, and a modest impact absorber.
- **Stacks:** Each vault will be designed to allow heat to be removed by natural convection. Appropriately sized intake and exhaust stacks will be constructed and installed to allow cooling air to be drawn through each of the vaults.
- **Cask/Transporter System** consists of a shielded cask, containing an IHLW canister from the Waste Treatment Plant (WTP), mounted on a trailer specifically designed for the cask. The cask will be fitted with a removable lid, and will be secured to the trailer via a tiedown system. The cask/transporter system will be used to shuttle IHLW canisters from the WTP to the CSB.
- Any other activities not related to the storage tube system.

IHLW Interim Storage Critical Systems

The Canister Storage Tube System consists of:

- Storage Tube
- Lower Impact Absorber*
- Upper Impact Absorber *
- Bellows
- Shield Plug
- Cover

* If required.



Tube Assemblies in the Canister Storage Building

Cask Trailer



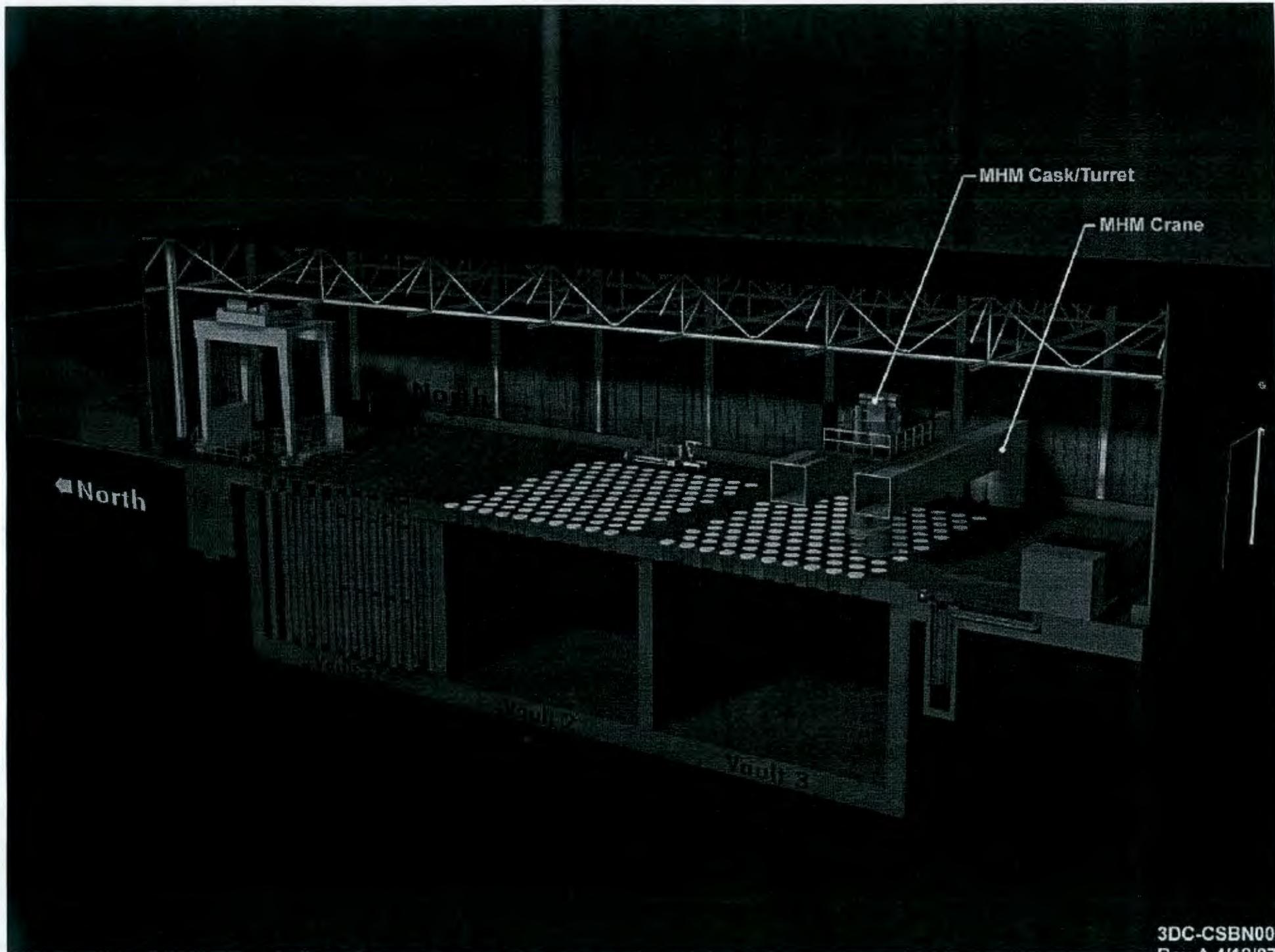
IHLW Interim Storage 80%

Design of Critical Systems

- The 80% design package for the IHLW critical system (i.e. Canister Storage Tube System) will include a performance specification with sketches of the critical system.
- Specifications: Canister Tube System.
- Drawings/Sketches: Tube, Lower Impact Absorber*, Upper Impact Absorber*, Bellows, Shield Plug, and Cover.

Note: Final calculations and fabrication drawings will not be available at the time of submittal of the Revision 0 part B application. Design media will be ready for final design review. Final review of the design and Professional Engineer stamping will occur prior to the submittal of Revision 1.

*If required.



MHM Cask/Turret

MHM Crane

North