

Meeting Minutes Transmittal

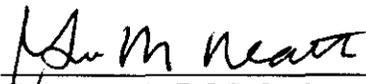
Immobilized Waste Part B Permit Application Kickoff Meeting
 2440 Stevens/ Room 2200
 Richland, Washington

August 23, 2001
 3:30 p.m. – 4:30 p.m.

RECEIVED
 OCT 03 2001

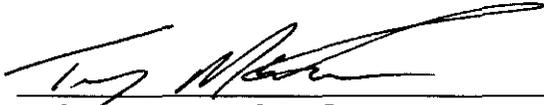
EDMC

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



 G. M. Neath, DOE-ORP

Date: 09/12/2001



 T. C. McKarns, DOE-RL

Date: 9/13/2001



 G. P. Davis, Washington State Department of Ecology

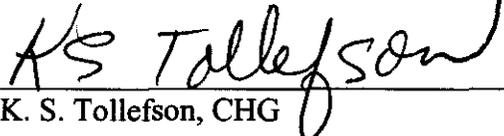
Date: 9-12-01

CHG Concurrence:



 G. L. Parsons, CHG

Date: 9-12-01



 K. S. Tollefson, CHG

Date: 9/12/01

Purpose: Immobilized Waste Part B Permit Application Kickoff Meeting

Attachment 1: Agenda & Action Item List

Attachment 2: Meeting Minutes

Attachment 3: Attendee List

Attachment 4: Distribution List

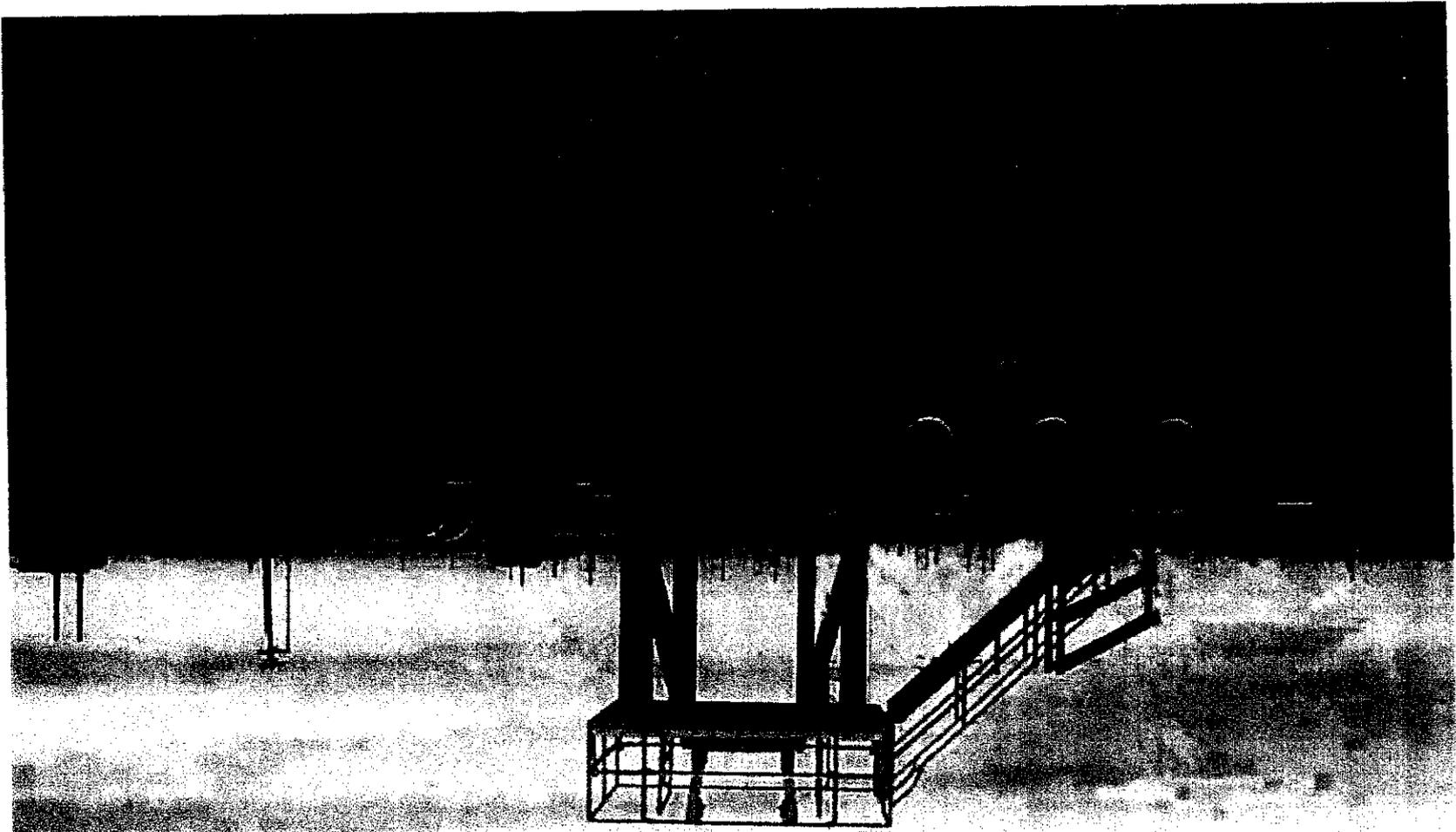
Attachment 1

**Immobilized Waste Part B Permit Application Kickoff Meeting
2440 Stevens/ Room 2200
Richland, Washington**

**August 23, 2001
3:30 p.m. – 4:30 p.m.**

1. Introductions
2. IHLW Project Scope and Status Presentation – Greg Parsons
3. ILAW Project Scope and Status Presentation – Greg Parsons
4. Establish Meeting Time for Follow On Meeting

Next Meeting is September 10, Place TBD, 2:30 – 3:30 p.m.



CASK TRAILER

Purpose

- The purpose of the meeting is to initiate discussion between Ecology and DOE-ORP/DOE-RL Immobilized Waste Team preparing Part B Permits for Project W-464 Immobilized High-Level Waste (IHLW) and Project W-520 Immobilized Low-Activity Waste (ILAW)
- Agenda
 - Introductions
 - Project Scope
 - Project Status
 - Establish Agenda and Confirm Time For Follow On Meeting

W-464 Project Scope

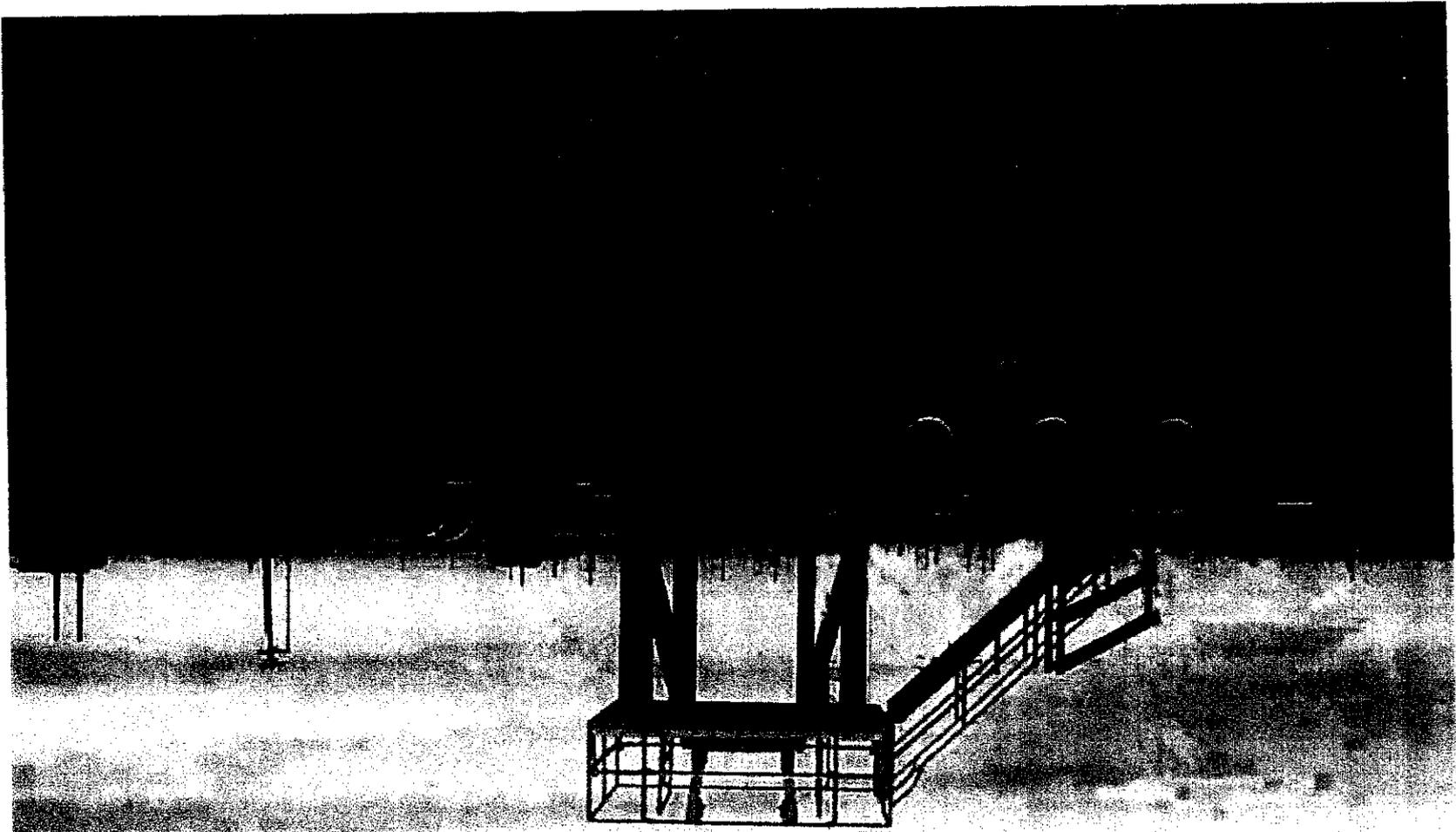
- Project W-464 will utilize vaults 2 and 3 of the Spent Nuclear Fuels (SNF) Canister Storage Building (CSB) located in the 200 East Area for the interim storage of the IHLW.
- Building upgrades include:
 - Installation of 440 tubes, bellows and plugs
 - Installation of intake and exhaust stacks for vaults 2 and 3
 - Design/construct building annex to receive and unload IHLW canisters

W-464 Project Scope (cont.)

- Design and procurement of transporter vehicle(s) and shielded transport cask(s) to transport the IHLW from the Waste Treatment Facility to the Canister Storage Building
- Design and procurement of Shielded Canister Transporter (SCT) to emplace IHLW into the storage tubes in the canister storage building
- Safety, permitting and operational readiness



Tube Assemblies
in the
Canister Storage
Building



CASK TRAILER

W-464 Regulatory Drivers

M-90-12	Submit Part A Permit to WDOE (Complete)	6/99
M-20-56	Submit Part B Permit to WDOE	6/02
M-90-11	Construction Complete	2/07

W-464 Schedule

Initiate Preliminary Design	6/01
Submit Part B Permit to WDOE	6/02
Complete Preliminary Design	9/02
Complete Detailed Design	8/04
Initiate Construction Activities (Bid and Award)	8/04
Finalize Part B Permit Application	TBD
Expected First IHLW Canister Delivery	2009

Project W-464 Immobilized High Level Waste (IHLW) Fact Sheet

Canister

Cylindrical, stainless steel, 4.5 m (14.8 ft) long, 0.610 m (2 ft) diameter, 0.953 cm (0.38 inch) wall thickness, 708 kg (1560 lb) shell weight
Maximum Surface Dose Rate gamma: 10^3 Sv/h (10^8 mrem/h) neutron: 0.1 Sv/h (10^4 mrem/h)
Maximum Removable Surface Contamination alpha: 3670 Bq/m² (9.29×10^{-9} Ci/ft²) beta-gamma: 36700 Bq/m² (9.29×10^{-8} Ci/ft²)

IHLW Glass

Volume 1.150 m³ (40.6 ft³), 2660 kg/m³ density, 2973 kg (6548 lb) weight, 95% fill minimum
Nominal Decay Heat = 300 W (0.284 BTU/s) Maximum Decay Heat = 1500 W (1.42 BTU/s) Maximum Centerline Temperature = 400°C (752 °F)

Canister Storage Building (CSB)

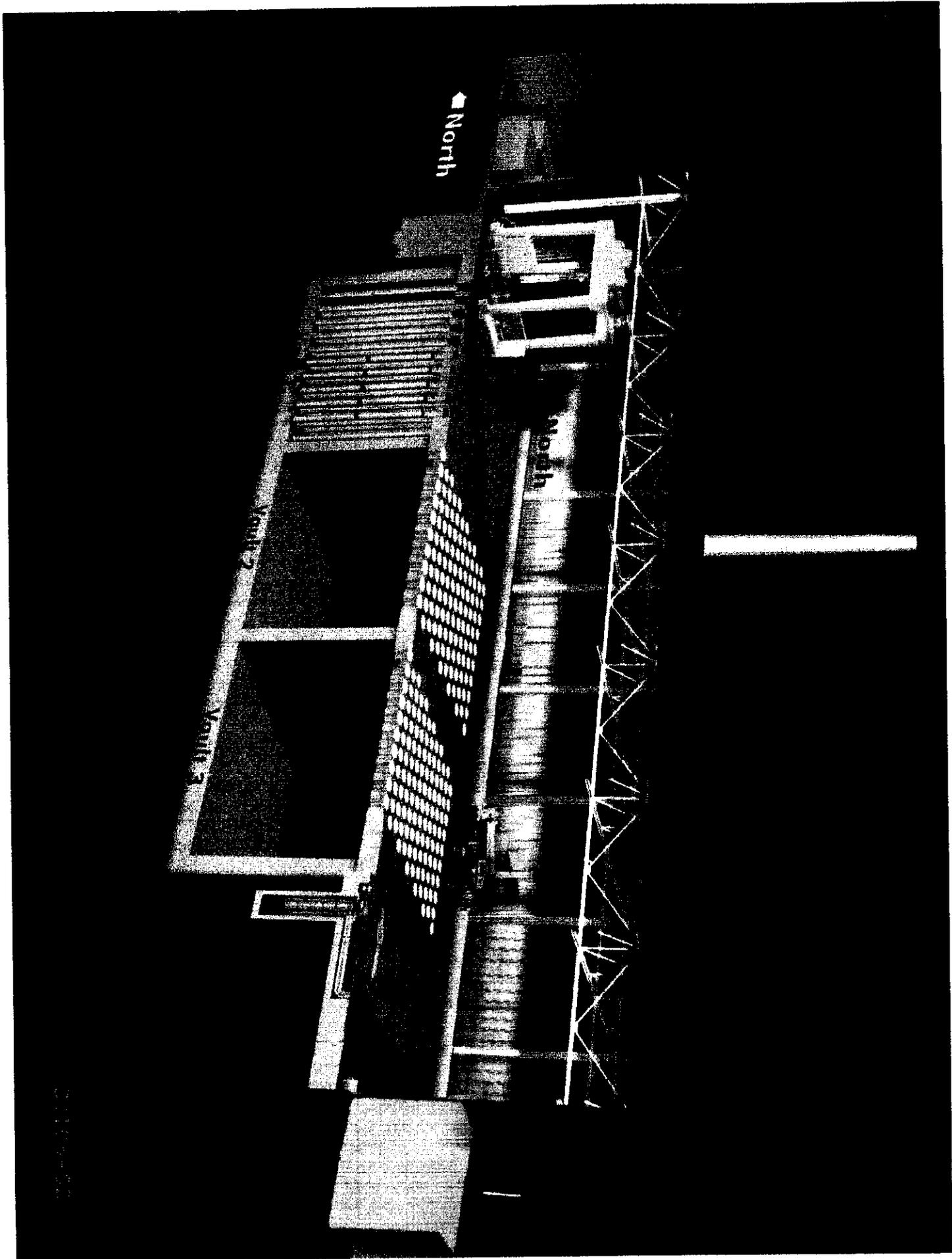
Operating Area 41.86 m (137.3 ft) wide by 68.81 m (225.8 ft) by 12.5 m (41 ft) belowgrade
Three vaults: vault 1 used by SNF, vaults 2 and 3 used by W-464
Storage tube matrix of 22 rows by 10 columns = 220 carbon steel tubes/vault 6 columns of overpack storage tubes
Storage tube 12.8 m (42.1 ft) vertical space with 0.68 m (2.2 ft) inner diameter
Each storage tube holds two IHLW packages, a lower and center impact absorber, and shielded plug for a total of 880 IHLW packages
Cooled by natural convection. Each vault has individual intake and exhaust stacks. Plenums are concrete and stacks are steel.
60 Ton Gantry crane for cask unloading, steel superstructure, and transfer pit operations
10 Ton Bridge crane for remote removal of cask lid
SCT – Shielded Canister Transporter for placement of IHLW canister in storage tube
CSB facility system capable of canister receipt/retrieval at peak rate of one canister per day

CSB Annex

Approximately 3000 ft² connecting to south wall of Operations Area of the CSB
South wall will have double swinging exterior doors 6.01 m (20 ft) wide by 7.3 m (24 ft) high providing access for entry -transport trailer delivering cask
Main level provides a cask receiving area and a HLW cask transfer pit

Cask and Trailer

Cask constructed of 27.9 cm (11 inch) thick stainless steel, approximately 1.52 m (5 ft) diameter by 6.2 m (20.3) high
Maximum weight of loaded cask ~ 40.8 MT (45 tons)
Tractor/lowboy trailer 16 m (52.5 ft) overall length, 6.66 m (21.9 ft) height, and 80 MT (88 tons) maximum weight
Maximum Dose Rates of package inside cask:
100000 rem/hr at canister surface 200 mrem/hr at cask surface
10 mrem/hr at 2m (6.6 ft) from cask 2 mrem/hr to tractor driver



North

North

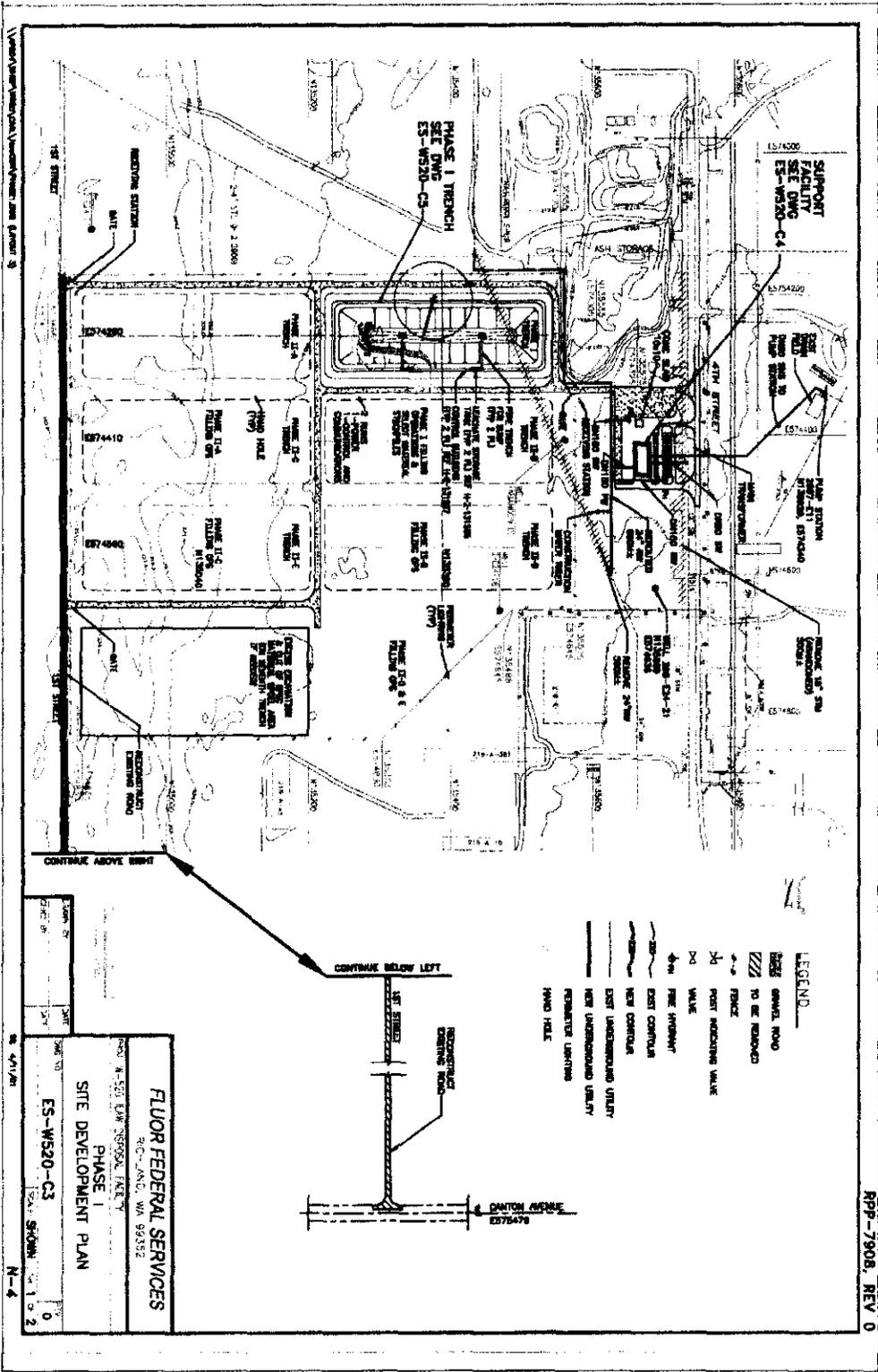
North

North



W-520 Project Scope

- Project W-520 will provide a disposal facility for accommodating Phase I Immobilized Low Activity Waste (ILAW) packages (approximately 13,500) and the infrastructure for supporting all of Phase II ILAW production
- Disposal facility will be in the 200 East Area and include a disposal trench, support facility, transportation equipment, connections to site utilities, equipment for placing packages in trench and equipment for backfilling trench.



APP-7908, REV 0

W-520 Project Scope (cont.)

- Site work includes clearing and grubbing 19 hectares (47 acres) of land, construction of single trench, construction of service roads, perimeter fencing, access control stations, and lighting to support Phase II disposal projects.
- Support facility will be permanent, modular type pre-engineered structure approximately 773m² (8,300 ft²)
 - Office areas
 - Control room
 - Change room
 - Conference/training room
 - Lunchroom

W-520 Project Scope (cont.)

- Design and procurement of transporter vehicles (3) and transport casks with trailers (5) to move ILAW packages from Waste Treatment Facility to the Disposal Facility
- Design and construction of double lined RCRA compliant disposal trench with leachate collection system with equipment to transfer leachate to existing Effluent Treatment Facility
- Design and procurement of crane and associated equipment to off load ILAW packages and to place in disposal trench

W-520 Project Scope (cont.)

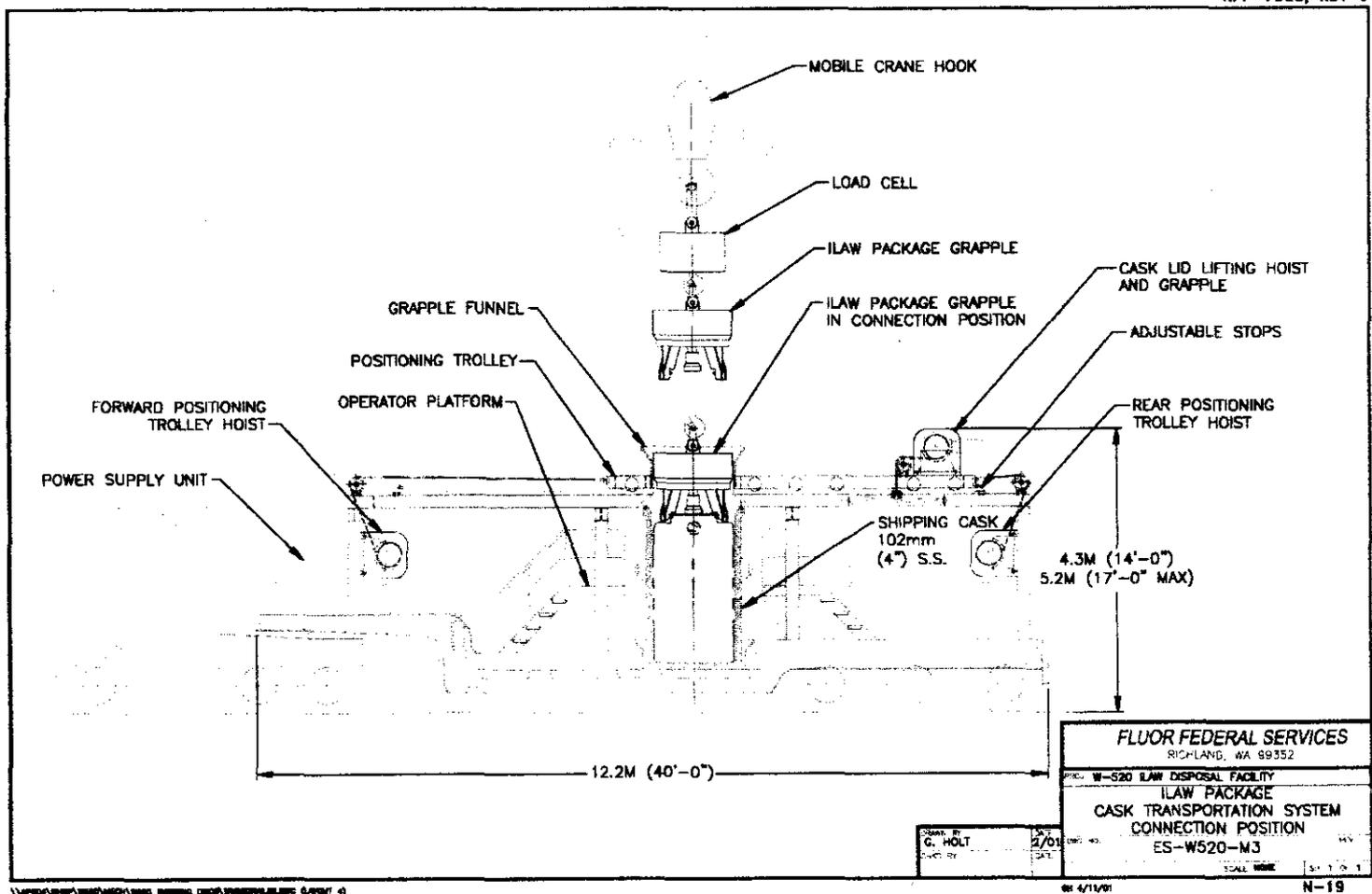
- Design and procurement of equipment to fill voids between ILAW packages and for backfilling and compacting between layers of ILAW packages
- Instrumentation and controls for recording individual ILAW package placement and inventory control
 - Closed circuit television to enhance remote crane operation
 - Waste package identification
 - Global positioning system for recording package location
 - Computerized inventory control system

W-520 Project Scope (cont.)

- Design of closure cover for disposal trenches
- Safety, permitting and operational readiness

W-520 Cask Trailer

RPP-7908, REV 0



W-520 Regulatory Drivers

M-20-57	Submit Part B Permit to WDOE	8/02
M-90-09-T01	Complete Detailed Design	3/04
M-90-08	Initiate Construction	7/04
M-90-10	Initiate Placement of ILAW In Disposal Facility	1/07

W-520 Schedule

Submit Part B Permit to WDOE M-20-56	8/02
Complete Conceptual Design	5/01
Initiate Preliminary Design	10/02
Expected First ILAW Canister Delivery	2008

Project W-520 Immobilized Low Activity Waste (ILAW) Fact Sheet

Canister

Cylindrical, stainless steel, 2.3 m (7.5 ft) long, 1.22 m (4.0 ft) diameter, 2.55 m³ (90.02 ft³) external package volume
Maximum Removable Surface Contamination: alpha: 367 Bq/m² (9.29 10⁻¹⁰ Ci/ft²) beta-gamma: 3670 Bq/m² (9.29x10⁻⁹ Ci/ft²)

ILAW Glass

Volume 2.51 m³ (88.60 ft³), 2660 kg/m³ density, 6 MT weight, 90% fill minimum
Maximum External Temperature = 50°C (122 °F)

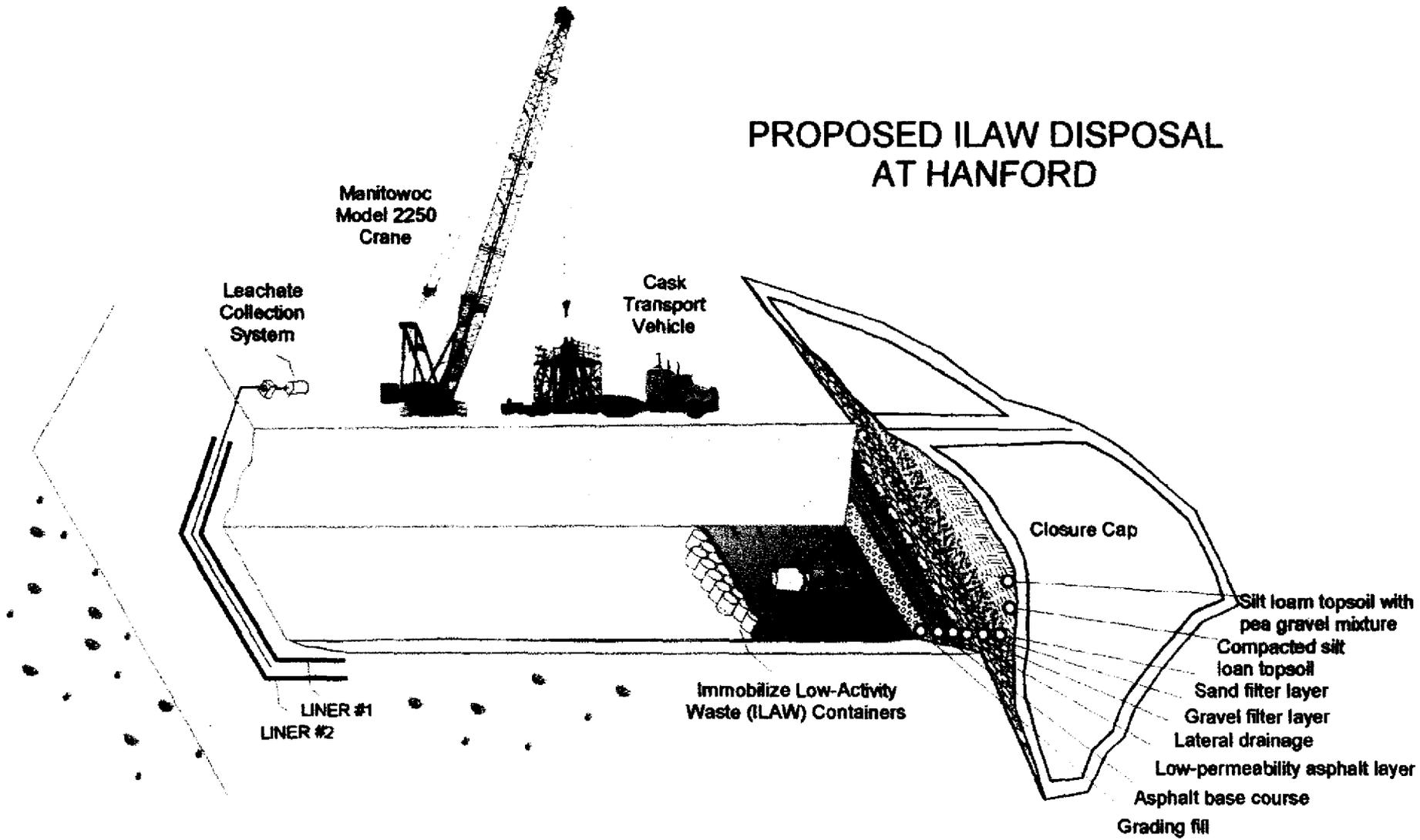
ILAW Disposal Trench

Phase 1: 13500 packages Phase 2: 67500 packages Total: 81000 packages
Phase 1: builds one trench: 280 m (918 ft) long, 80 m (262 ft) wide, 10 m (32.8 ft) deep Phase 2: builds 5 additional trenches
Side slopes and bottom of trench are lined with double liner system of geomembranes to contain and collect leachate generated during filling and post closure operations
Two flexible membrane liners: primary and secondary to provide moisture barriers
Primary leachate detection, collection, and removal system (LDCRS) to collect liquids entering the trench is located above primary liner system
Secondary LDCRS is located between primary and secondary liners to collect liquids that penetrate the primary liner
Collected liquids will be pumped from sumps to collection tanks for sampling and transported to the Effluent Treatment Facility (ETF) for processing and disposal
2 m (6.56 ft) berm around perimeter of trench serves as liner anchor, prevents storm water from running into trench, and provides shielding for above trench operations
Three layers of ILAW packages separated vertically by 1 m (3.28 ft) of soil to provide shielding during package placement
Each layer contains multiple cells or package arrays spanning the length of the trench
7 m (23 ft) wide ramp at 8% slope will be constructed on the side slope of the trench for earth filling operations on the first two layers of packages
Modified Resource Conservation Recovery Act Subtitle C Barrier design concept (employing a fine soil capillary break) cover will be constructed as a separate project
Normal operations: receipt of 5 packages per day Maximum operation: receipt of 7 packages per day
Crane operating radius of 30 m (98 ft) to 103 m (338 ft) with the ability to reach and place 11930 kg (26246 lb) load at a distance of 103 m (338 ft)
Manitowoc Model 2250 Crane is mobile and will move around the trench perimeter under its own power
Hook block equipped with CCTV cameras, lights, and GPS receiver, and a character recognition device to read package serial numbers
Support facility: 773 m² (8317 ft²) building includes office areas, control room, conference/training room, change/locker rooms, restrooms, lunch room, fire riser room, and storage

Cask and Trailer

Cask constructed of 4 inch thick stainless steel, internal dimensions approximately 1.27 m (4.16 ft) diameter by 2.4 m (7.87 ft) high
3 tractors and 5 trailer/transporter systems
Approximate weight of empty cask: 11655 kg (25641 lb) Maximum weight of loaded cask: 21655 kg (47641 lb)
Lowboy trailer 12.2 m (40.0 ft) overall length, 5.2 m (17 ft) height, and 9100 kg (20000 lb) maximum transporter axle weight
Maximum Dose Rates of package inside cask:
1000 mrem/hr at canister surface 200 mrem/hr at cask surface
10 mrem/hr at 2m from cask (horizontal plane) 2 mrem/hr to tractor driver

PROPOSED ILAW DISPOSAL AT HANFORD



**Attachment 3
Attendance List**

Meeting Title: Immobilized Waste Part B Permit Application Kickoff Meeting

Date: August 23, 2001

Original included in hard copy

Name	Company	Phone Number
Carol Babel	DOE-ORP	373-9281
Heather Baune	CHG	372-3393
Greta Davis	Ecology	736-3025
Tony McKarns	DOE-RL	376-8981
Gae Neath	DOE-ORP	376-7828
Greg Parsons	CHG	372-3387
Kathy Tollefson	CHG	373-9120
Ted Wooley	CHG	372-1617

Distribution:

C. A. Babel	ORP	H6-60
H. L. Baune	CHG	L6-75
J. Caggiano	ECY	B5-18
G. P. Davis	ECY	B5-18
J. R. Holder	CHG	R2-50
P. E. LaMont	ORP	H6-60
T. C. McKarns	RL	A5-15
G. M. Neath	ORP	H6-60
G. L. Parsons	CHG	L6-75
R. W. Root	CHG	R2-58
D. H. Splett	DOE	A4-79
K. S. Tollefson	CHG	R1-51
T. A. Wooley	CHG	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