SEP 27 1996

20

ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT

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2. To: (Receiving Organization) 300 Area Liquid Effluent Facilities	3. From: (Originating Organization) 300 Area Liquid Effluent Facilities	4. Related EDT No.: NA
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8. Originator Remarks: For Release		9. Equip./Component No.: NA
		10. System/Bldg./Facility: 310/340
11. Receiver Remarks: 11A. Design Baseline Document? ☐ Yes ☒ No		12. Major Assm. Dwg. No.: NA
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15. DATA TRANSMITTED					(F)	(G)	(H)	(I)
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	Approval Designator	Reason for Trans- mittal	Originator Dispo- sition	Receiver Dispo- sition
1	WHC-SD-LEF-WP-001		0	340 and 310 Drawing Field Verification	Q	1	1	1

16. KEY					
Approval Designator (F)		Reason for Transmittal (G)		Disposition (H) & (I)	
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)		1. Approval 2. Release 3. Information	4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment	4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)											
(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(G) Reason	(H) Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN
		Design Authority				1	1	Jim Langdon	See Document page 2	L6-04	
		Design Agent				1	1	Kevin Hagerty	See Document page 2	L6-04	
1	1	Cog. Eng. L. Berneski See Document page 2 L6-40									
1	1	Cog. Mgr. D. Halgren See Document page 2 L6-04									
1	1	QA Donn Schell See Document page 2 L6-05									
		Safety									
		Env.				3		Central Files		A3-88	

18. Jim Langdon Signature of EDT Originator	9-26-96 Date	19. Dale Halgren Authorized Representative for Receiving Organization	9/27/96 Date	20. Dale Halgren Design Authority/ Cognizant Manager	9/27/96 Date	21. DOE APPROVAL (if required) Ctrl. No. NA ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments
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340 and 310 Drawing Field Verification

Jim Langdon

Westinghouse Hanford Co., Richland, WA 99352

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340 and 310 Drawing Field Verification

September, 1996

340 and 310 Drawing Field Verification

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Approvals

Sept. 26, 1996
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9/26/96
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9/27/96
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9/27/96
Dale Halgren, 300 Area Engineer Manager

9/27/96
Donn Schell, 300 Area LEF Quality Assurance

1.0 Purpose

The purpose of the drawing field verification work plan is to provide reliable drawings for the 310 Treated Effluent Disposal Facility (TEDF) and 340 Waste Handling Facility (340 Facility).

2.0 Scope

The initial scope of this work plan is to provide field verified and updated versions of all the 340 Facility essential drawings. This plan can also be used for field verification of any other drawings that the facility management directs to be so updated. Any drawings revised by this work plan will be issued in an AutoCAD format.

3.0 Responsibilities

3.1 300 Area Liquid Effluent Facilities (LEF) Engineering

The 300 Area LEF Engineering group is responsible for:

1. Walking down the systems, marking up the drawings per the walk down, and submitting the changes to Design Services Support (Design Services).
2. Reviewing all drawing changes made by design services.
3. Assessing all discrepancies found between the field and the drawing for impact on the system safety and function.
4. Providing the Cognizant Engineer and Design Authority functions.

3.2 300 Area LEF

The 300 Area LEF are responsible for:

1. Providing the required manpower and budget to complete this work plan on schedule.
2. Providing management assistance, oversight, and control for this work plan.
3. Providing reviews and approvals for all work plan documents requiring release.
4. Scheduling support manpower for the field verification activities. This includes operators, crafts, and Health Physics Technician support.

3.3 Design Services and Support

Design Services will be responsible for:

1. Converting all manual drawings covered by this work plan to an AutoCAD format.
2. Incorporating all markups and changes on the drawings.
3. Preparing the direct revision Engineering Change Notices (ECNs) required for release of the final drawing.

3.4 Liquid Effluents Services Quality Assurance (QA)

The Liquid Effluents Services QA will be responsible for:

1. Providing reviews and approvals per applicable approval designator.
2. Performing a random field verification of the released as-built drawings and review of documentation for compliance with this work plan and other required procedures.

3.5 340 Facility Operations

The 340 Facility Operations is responsible for:

1. Providing operations support for the field verification activities as required.
2. Arranging access and/or escorting the field verification personnel during field visits. This includes opening any buildings, rooms, and cabinets required for the completion of this work plan.

4.0 Requirements

4.1 Which drawings

The requirements of this work plan are applicable to the drawings for the 340 Facility designated as "Essential". Other drawings may be added to this work plan at management's direction.

4.2 Limits of field verification

Due to the system complexity, location, and ALARA concerns the risk of performing a 100% verification may not be safe or economical. To the fullest extent possible under the direction of the Cognizant Engineer, the field verification walk down is to verify information that is critical to the operation and maintenance of systems and components.

This work plan will use only visual means to verify the information on the drawings. It is not the intent to require that wire bundles in cabinets be opened, wires in conduits be traced, circuits be actuated, valves operated or equipment be run to verify the drawing. Underground pipes, conduits, and direct buried cables will not be verified. Inaccessible areas due to high radiation or other ALARA concerns can be omitted per the Cognizant Engineers direction. Printed circuit boards and internal wiring and piping inside vendor supplied parts will also not be verified. In these cases, the direct revision ECN will be marked to show which areas of the drawing were not verified. If, in the future, information on these areas comes available, any corrections needed will be added to the drawings.

Point to point wiring will be verified only by comparing wire numbers on each end. Circuit tracing devices or other means can be used for a more rigorous verification of a circuit if the Cognizant Engineer determines that this would be required.

4.3 Dimensions

Dimensions will not be field verified unless the equipment location is critical information. The Cognizant Engineer will determine which dimensions are critical. Any dimension that is not verified will be enclosed in parentheses to indicate that it is a reference dimension.

4.4 Part Descriptions

This work plan will verify the part number of any item if that part number is shown on the drawing and it can be readily found on the part. It is not the intent of this work plan to verify material callouts (i.e.: 304 SS, 60 duro gasket, THHN insulation), bolt, nut, or screw sizes or the rating of a component (i.e.: 150 lb). Pipe, tubing and conduit sizes are to be verified where the Cognizant Engineer determines that this is critical information.

4.5 Documentation

This work plan will document the results of the field verifications by issuing a direct revision ECN and an updated revision of the drawing. The ECN will show the areas of the drawing where engineering information was changed with before and after views, and will document any areas of the drawing that were not verified. Drafting changes made to maintain drawing clarity (see Section 5.3 below) will not be recorded as walk down changes on the ECN.

The original working copy or copies of the drawing along with any notes, photographs, or other information gathered during the walk down will be kept on file in the facility engineering office for at least one year after the release date of the revised drawing.

4.6 Quality Control

After the as-built drawings are released, a quality assurance reverification will be done to at least 10% of the 340 essential drawings. This reverification will be a second complete walkdown of the drawing to assure that the process described in this work plan is function correctly.

5.0 Procedure

This procedure describes the minimum requirements for the field verification of the drawings.

5.1 Preparation

The Cognizant Engineer determines which drawing is to be field verified.

If the drawing is not already in a usable CAD format, the drawing will be converted to AutoCAD. Any outstanding work completed ECNs, Change Engineering Orders (CEOs), and Field Change Notices (FCNs) will then be incorporated. The Cognizant Engineer will review any outstanding non-work completed ECNs, CEOs, and FCNs and cancel those that are no longer needed. One copy of the drawing for field use will then be made.

5.2 Field Verification

The field verification team consisting of at least one engineer and the required operations and craft support walks down the drawing. As an area of the drawing is verified, it is marked with a yellow highlighter. When discrepancies are found, any changes to the drawing are marked in red. Any areas that are not available for verification per Sections 4.2 and 4.4 above will be marked with a green or blue highlighter. Notes or clarifications can be made in any other color.

If during the walk down, the working copy of the drawing becomes too cluttered, it will be sent to Design Services for comment incorporation. A new copy of the updated drawing is then made for additional field comments. When multiple copies of the same drawing are required to complete the verification, they will be kept together.

For work in a radiation zone, it is permissible to use a separate copy of parts or of the whole drawing while in the radiation zone. The recorded information will then be transferred to the working copy of the drawing for further work.

5.3 Drawing Revision

When the walk down is complete or when the working copy of the drawing becomes too cluttered, Design Services will incorporate all the red changes shown on the working copy of the drawing. New drawing sheets

may be added and views can be moved on a sheet or between sheets as required to maintain clarity. Other changes may also be made to bring the drawing up to current drafting practices.

5.4 Drawing Release

After the drawing has been revised, Design Services or any one else requested by the Cognizant Engineer will prepare the direct revision ECN. This ECN will show before and after views of all areas of the drawing that had engineering information changed. In addition, it will contain a reproduction of the drawing showing all areas of the drawing that could not be verified.

The Cognizant Engineer will then obtain the required reviews and approvals for release per the approval designator.

5.5 Quality Assurance

Liquid Effluent Services QA will reverify at least 10% of the released 340 Facility essential drawings walked down per this work plan. These drawings will be selected by the QA personnel by any method they choose. The Cognizant Engineer or Facility Management may also request additional drawings for this reverified. If any drawings other than the 340 Facility essential drawings are walked down per this work plan, then management will direct the percentage of those drawings that will be reverified.

The QA engineer will walk down the drawing and will reverify the as-built field conditions. The reverification will be documented on a marked up drawing as per section 4.5 above.

6.0 Schedule

This work plan will begin on October 1, 1996 and will have completed all of the 340 Facility Essential drawings by September 30, 1997. Completion dates for any additional drawings will be per management agreement when those drawings were added to this work plan.

Attachment 1: 340 Essential drawings

340 SYSTEM

DRAWING NUMBERS	SHEET	TITLE	SYSTEM
H-3-34188	1	HVAC AIR PLUMBING DIAGRAMS, IMPROVED WASTE HANDLING FACILITY	340 BUILDING HVAC
H-3-34404	1	HVAC, AIR FLOW AND CONTROL DIAGRAMS	VAULT & 340 B HVAC
H-3-34414	1	EFD, RADIOACTIVE LIQUID WASTE NEUTRALIZATION & TRANSFER	RADIOACTIVE LIQUID WASTE SYSTEM (RLWS) FLOW DIAGRAMS
H-3-34414	2	EFD, RADIOACTIVE LIQUID WASTE NEUTRALIZATION & TRANSFER	RLWS FLOW DIAGRAM
H-3-34414	3	EFD, RADIOACTIVE LIQUID WASTE NEUTRALIZATION & TRANSFER	RLWS FLOW DIAGRAM
H-3-34419	1	PIPING, MISC. SECTIONS & DETAILS 300 AREA RLWS STORAGE & LOADOUT FACILITIES	PUMP SEAL WATER
H-3-49292	1	RLWS DIAGRAM VALVE BOXES & YARD PIPING	VALVE BOXES
H-3-53169	1	INSTRUMENT AIR SUPPLY SYSTEM	INSTRUMENT AIR
H-3-300979	1	IEFD 307 BASIN MAINTENANCE UPGRADES	307 BASINS
H-3-304737	1	PIPING/ELECTRICAL P & ID VAULT EXHAUST STACK SYSTEM	VAULT EXHAUST/VACUUM

340 ELECTRICAL

DRAWING NUMBER	SHEET	TITLE
H-3-34186	1	ELECTRICAL PLANS, ELEVATIONS, & DIAGRAMS PANEL BOARD SCHEDULE
H-3-34187	1	ELECTRICAL - FIRE ALARM PLAN, DIAGRAM & ELEVATIONS
H-3-34187	2	ELECTRICAL - FIRE ALARM PLAN, DIAGRAM & ELEVATIONS
H-3-34237	1	ELECTRICAL SITE PLAN AND ELEMENTARY DIAGRAMS
H-3-34398	1	HVAC - ELEMENTARY ELECTRICAL DIAGRAMS
H-3-49304	2	ISOLATED WATER SUPPLY ELECTRICAL & INSTRUMENTATION
H-3-53285	1	POWER DISTRIBUTION PANEL BOARDS
H-3-53285	2	POWER DISTRIBUTION PANEL BOARDS
H-3-53285	3	POWER DISTRIBUTION PANEL BOARDS
H-3-53496	1	ELECTRICAL ELEMENTARY DIAGRAMS
H-3-53496	2	ELECTRICAL ELEMENTARY DIAGRAMS
H-3-53496	3	ELECTRICAL ELEMENTARY DIAGRAMS
H-3-58061	1	ELECTRICAL - PLANS, DETAILS, DIAGRAMS