JAN 13 1998 4
STA# 4

ENGINEERING DATA TRANSMITTAL

Page 1 of 1

1. EDT 617939

2. To: (Receiving Organization)	3. From: (Originating Organization)	4. Related EDT No.:
Distribution	Tank Farm Restoration and Safe Operations Project	168123
5. Proj./Prog./Dept./Div.:	**6. Design Authority/ Design Agent/Cog. Engr.:**	**7. Purchase Order No.:**
Project W-314/TWRS		N/A
8. Originator Remarks: This Design Review Report (DDR) documents the contractor design verification methodology and records associated with Project W-314's "AN Valve Pit Upgrades" design package.		**9. Equip./Component No.:** N/A
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1	HNF-1893	--	0	Design Review Report: "AN Valve Pit Upgrades," Project W-314, Tank Farm Restoration and Safe Operations	Q	2	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 4. Review 2. Release 5. Post-Review 3. Information 6. Dist. (Receipt Acknow. Required)	1. Approved 4. Reviewed no/comment 2. Approved w/comment 5. Reviewed w/comment 3. Disapproved 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: N/A			
		Design Agent: N/A			
1	1	Cog.Eng.: K. A. Boes K A Boes 1/12/98			
1	1	Cog. Mgr.: W. W. Rutherford 1/12/98			
1	1	QA: H. M. Chafin Hank Chafin 1/12/98			
		Safety: N/A			
		Env.: N/A			

18.	19.	20.	21. DOE APPROVAL (if required) Ctrl. No.
K. A. Boes 1/12/98 Signature of EDT Originator Date	Authorized Representative for Receiving Organization Date	W. W. Rutherford 1/12/98 Design Authority/ Cognizant Manager Date	[ ] Approved [ ] Approved w/comments [ ] Disapproved w/comments

BD-7400-172-2 (05/96) GEF097

Design Review Report: AN Valve Pit Upgrades for Project W-314, Tank Farm Restoration and Safe Operations

K. A. Boes
Numatec Hanford Corporation, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

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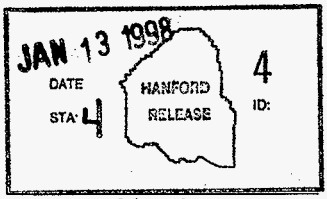
Key Words: Design Review Report, DRR, W-314, Tank Farm Restoration and Safe Operations, Phase 1, AN Valve Pit Upgrades, Design Verification

Abstract: This Design Review Report (DRR) documents the contractor design verification methodology and records associated with project W-314's "AN Valve Pit Upgrades" design package. The DRR includes the documented comments and their respective dispositions for this design. Acceptance of the comment dispositions and closure of the review comments is indicated by the signatures of the participating reviewers.



Release Approval — Date — Release Stamp

Approved for Public Release

Design Review Report

AN Valve Pit Upgrades

Project W-314
Tank Farm Restoration and Safe Operations

Prepared by Numatec Hanford Corporation

December 1997

CONTENTS

ATTACHMENTS

DESIGN REVIEW REPORT

PROJECT W-314, TANK FARM RESTORATION AND SAFE OPERATIONS "AN VALVE PIT UPGRADES"

1.0 SCOPE

1.1 Introduction

Project W-314, "Tank Farm Restoration and Safe Operations," is a Fiscal Year 1997 line item project within the Tank Waste Remediation System (TWRS) Tank Waste Retrieval Program. This project provides capital upgrades for the existing Hanford tank farms' waste transfer, instrumentation, ventilation, and electrical infrastructure systems. To support established TWRS programmatic objectives, the project is organized into two distinct phases. The initial focus of the project (i.e., Phase 1) is on waste transfer system upgrades needed to support the TWRS Privatization waste feed delivery system. Phase 2 of the project will provide upgrades to support resolution of regulatory compliance issues, improve tank infrastructure reliability, and reduce overall plant operating/maintenance costs.

Within Phase 1 of the W-314 project, the waste transfer system upgrades are further broken down into six major packages which align with the project's work breakdown structure. Each of these six sub-elements includes the design, procurement, and construction activities necessary to accomplish the specific tank farm upgrades contained within the package.

The first package to be performed is the "AN Valve Pit Upgrades" package. This activity will provide modifications to the existing valve pits within the 241-AN Tank Farm. The scope of these modifications includes new pit cover blocks, valve manifolds, leak detectors, transfer line connections (for future planned transfer lines), and special protective coating for the 241-AN-A and 241-AN-B valve pits.

1.2 Purpose of Design Review Report

This Design Review Report (DRR) was prepared to document the Contractor's design verification methodology and records in accordance with HNF-PRO-445, Rev. 0, "Design Verification Requirements." The format and content for this report is based upon the applicable guidance contained in WHC-IP-1026, Appendix G.

1.3 Documents Reviewed

Design documents covered by this report include the definitive design drawings, construction specification, and procurement specifications associated with the W-314 AN Valve Pit Upgrades package (see Attachment 1). This design media addresses the total scope of the Project W-314 upgrades

associated with the 241-AN-A and 241-AN-B valve pits. Additional W-314 Phase 1 modifications within the 241-AN Tank Farm but outside the valve pits (i.e., new waste transfer line SN-630 between valve pit 241-AN-B and pump pit 241-AZ-02A) is not included in the AN Valve Pit Upgrades design package. Design verification of the design for this scope, as well as other AN Tank Farm upgrades performed during Phase 2 of the project, will be performed and documented separately.

1.4 Documents Supporting the Review

The primary documents used to support the review of this design package were the Project Development Specifications (PDSs) listed below. The PDSs contain the total suite of approved design requirements for the W-314 Phase 1 activities:

- HNF-SD-W314-PDS-001, Rev. 0, "Project Development Specification for Transfer Piping"
- HNF-SD-W314-PDS-002, Rev. 0, "Project Development Specification for Valve Pit Manifold"
- HNF-SD-W314-PDS-003, Rev. 0, "Project Development Specification for Pit Leak Detection"
- HNF-SD-W314-PDS-005, Rev. 0, "Project Development Specification for Special Protective Coating"

Preparation of the definitive design media (drawings, specifications, etc.) for this package was performed between January and October 1997. During this period, customer reviews of the design deliverables were performed both formally and informally. These reviews included a formal review of the Piping and Instrumentation Diagrams (P&IDs) at the 30-percent design completion stage, and a formal review of all the design drawings and specifications at the design completion stage. Informal reviews of the "in-process" design products were also performed on a bi-weekly basis.

2.0 SUMMARY

Formal reviews of the W-314 AN Valve Pit Upgrades design package were conducted by committee of personnel representing various disciplines and organizations. The Design Review Chairman was designated by the W-314 Project Manager. Other members of the Design Review Team (DRT) were selected based on their particular area of expertise and/or organizational affiliation. Personnel selected to participate as DRT members were not involved in performing the design work. A listing of the DRT personnel is provided in Attachment 2.

2.1 30-Percent Design Review

A formal review of the new AN valve pit P&IDs was conducted at the 30-percent design stage for the AN Valve Pit Upgrades package. Since the P&IDs establish the configuration of the new waste transfer piping (manifolds) to be provided within the pits, finalization of this configuration, and customer buy-in to the P&IDs, was the first key step in completing the overall design.

The W-314 Design Review Team (DRT) convened on April 1, 1997 for the 30-percent design review briefing. During this briefing, the Design Agent (Fluor Daniel Northwest [FDNW]) distributed copies of the 30-percent design package to the DRT personnel. This package consisted of the P&IDs to be formally reviewed by the Team, as well as "in-process" drawings and documents (i.e., at various stages of completion) provided for informal review/comment. The FDNW Design Team presented their overall design approach, discussed significant features associated with the design, and answered questions posed by the DRT members.

On April 15, 1997, the DRT and the Design Team reconvened in the design review meeting to discuss comments associated with the 30-percent design package. As requested during the briefing two weeks earlier, the reviewers brought their review comments/questions to the meeting and presented them to the group as each of the design documents was reviewed. The FDNW Design Team and the DRT discussed and, to the greatest extent possible, dispositioned all the comments associated with the P&IDs during this meeting. Comments which were dispositioned as "accepted," or which were determined to require further evaluation, were recorded by the secretary on a consolidated Review Comments Record (RCR) form representing the formal comments of the DRT. At the conclusion of the P&ID review, the attendees informally reviewed each of the "in-process" design documents and discussed significant comments/questions concerning these products. These comments were not recorded on the RCR, but were instead noted by the FDNW Design Team for resolution prior to the final design review.

Minutes from the 30-percent design review briefing and design review meeting are included in Attachment 3.

Following final resolution of all the comments on the formal RCR and concurrence with these dispositions by the DRT, approval signatures were obtained on the RCR from each of the key reviewers. Approval of the dispositioned RCR comments by the each of reviewing organizations constitutes closure of the review comments and DRT concurrence with the revised P&IDs. A copy of the final RCR for the 30-percent review is provided in Attachment 4.

2.2 Final Design Review

A final design review was performed against FDNW's completed design products, which included all design drawings (e.g., P&IDs, site plans, arrangement assembly drawings, etc.), construction specification, and

procurement specifications. The same DRT and the same basic approach, as discussed above for the 30-percent review of the P&IDs, were utilized to verify the completed design media and to document the formal comments.

The final design packages were distributed to the DRT at a briefing conducted on September 11, 1997. Following a two-week review period, the DRT and FDNW Design Team met again on September 25, 1997, to review and disposition the DRT's comments. Minutes from the review briefing and final design review meeting are included in Attachment 5.

Based on the approved comment dispositions reflected in the RCR for the final review (see Attachment 6), the AN Valve Pit Upgrades design package was finalized by the Design Agent and approved for procurement/construction by the customer.

2.3 Approval of Design Media

There are no outstanding actions resulting from either the 30-percent or final design reviews. Design verification of the AN Valve Pit Upgrades design package is therefore considered to be complete. Engineering Data Transmittal (EDT) #618123 officially issued/released the AN Valve Pit Upgrades design media for construction. A copy of this EDT is included as Attachment 7.

Any design changes implemented for this package will be design verified prior to implementing the change.

3.0 DOCUMENTATION

The following supporting documentation is provided within the attachments to this DRR:

- Attachment 1 - List of AN Valve Pit Upgrades Design Media
- Attachment 2 - List of DRT Members
- Attachment 3 - Meeting Minutes Associated With 30-Percent Design Review
- Attachment 4 - Review Comment Records for 30-Percent Design Review
- Attachment 5 - Meeting Minutes Associated With Final Design Review
- Attachment 6 - Review Comment Records for Final Design Review
- Attachment 7 - EDT #168123 for Release of AN Valve Pit Upgrades Design Media

W-314 AN VALVE PIT UPGRADES
DESIGN DRAWINGS AND SPECIFICATIONS

KAB 4/8/98

H-14-100~~292~~929, Drawing List
H-14-100930, Structural Cover Blocks 241-AN-A Plan & Details
H-14-100931, Structural Cover Blocks 241-AN-B Plan & Details
H-14-100932, Structural Cover Blocks 241-AN-A,B Sections & Details
H-14-100933, Shts. 1-3, Structural Pits 241-AN-A,B Wall Modifications
H-14-100935, Shts. 1-3, Electrical Power and Control Plan 241-AN Tank Farm
H-14-100936, Shts. 1-3, Electrical Installation Details Valve Pit 241-AN-A
H-14-100937, Electrical Panelboard Schedule EDS-DP-106
H-14-100938, Shts. 1-2, Electrical Wire Run List 241-AN-A
H-14-100939, Shts. 1-2, Electrical Cathodic Protection 241-AN-A
H-14-100941, P&ID Valve Pit 241-AN-A
H-14-100942, P&ID Valve Pit 241-AN-B
H-14-100943, P&ID Miscellaneous Details
H-14-100944, Jumper Arrangement Valve Pit 241-AN-A
H-14-100945, Jumper Arrangement Valve Pit 241-AN-A Section
H-14-100946, Jumper Arrangement Valve Pit 241-AN-B
H-14-100947, Jumper Arrangement Valve Pit 241-AN-B Section
H-14-100948, Jumper Assembly 241-AN-A L1-(H)
H-14-100949, Shts. 1-2, Jumper Assembly 241-AN-A L3-L5-(A&B)
H-14-100950, Shts. 1-2, Jumper Assembly 241-AN-A L7-L9-(B&C)
H-14-100951, Jumper Assembly 241-AN-A L11-(D)
H-14-100952, Shts. 1-2, Jumper Assembly 241-AN-A L14-L15-L16-(D&E)
H-14-100953, Shts. 1-2, Jumper Assembly 241-AN-A L19-(E-F-G&H)
H-14-100954, Jumper Assembly 241-AN-A L20-(A)
H-14-100955, Jumper Assembly 241-AN-A L21-(F)
H-14-100956, Jumper Assembly 241-AN-A L11A-Drain
H-14-100957, Jumper Assembly 241-AN-A L20A-Drain
H-14-100958, Jumper Assembly 241-AN-A L21A-Drain
H-14-100959, Shts. 1-2, Jumper Assembly 241-AN-B R1-(D&E)
H-14-100961, Shts. 1-2, Jumper Assembly 241-AN-B R5-R20-(B)
H-14-100962, Shts. 1-2, Jumper Assembly 241-AN-B R7-R9-(B&C)
H-14-100963, Jumper Assembly 241-AN-B R11-(G)
H-14-100964, Shts. 1-2, Jumper Assembly 241-AN-B R14-R15-R16-(F&G)
H-14-100965, Shts. 1-2, Jumper Assembly 241-AN-B R19-(D&F)
H-14-100966, Jumper Assembly 241-AN-B R1A-Drain
H-14-100967, Jumper Assembly 241-AN-B R11A-Drain
H-14-100968, Jumper Assembly 241-AN-B R20A-Drain
H-14-100969, Pit Cover Painting Diagram 241-AN-A
H-14-100970, Pit Cover Painting Diagram 241-AN-B
H-14-100971, Shts. 1-4, Funnel Assembly 2 and 3 Way Valves
H-14-100972, Shts. 1-2, Valve Handle Assembly 2 and 3 Way Valves
H-14-100973, Piping Miscellaneous Details
H-14-100974, Shts. 1-5, Piping Valve Pit 241-AN-A & B Modification Details
H-14-100975, Shts. 1-2, Valve Actuator Arrangement Valve Pit 241-AN-A
H-14-100976, Shts. 1-2, Valve Actuator Details

W-314 AN VALVE PIT UPGRADES
DESIGN DRAWINGS AND SPECIFICATIONS

H-14-100978, Shts. 1-2, Piping Floor Drain Seal Assembly Valve Pits 241-AN-A&B
H-14-100980, Instrument Valve Position Switch Assembly
H-14-100981, Shts. 1-2, Instrument Pit Leak Detection Assembly Tank Farms
H-14-100982, Instrument Transfer Line Encasement Leak Detection Assembly
H-14-100983, Instrument Leak Detection Relay Pnl Assembly & Details
H-14-100984, Instrument Plan AN Farm 241-AN-A&B
H-14-100985, Shts. 1-2, Instrument 241-AN-A Valve Pit Elevation & Details
H-14-100986, Shts. 1-2, Instrument 241-AN-B Valve Pit Elevation & Details
H-14-100987, Shts. 1-3, Instrument Valve Position Switches Loop Diagram
H-14-100988, Instrument Field Terminal Box
H-14-100989, Shts. 1-2, Instrument Valve Pit Leak Detection Loop Diagram
H-14-100990, Shts. 1-2, Instrument Encsd Low Pt Leak Det Loop Diagram
H-14-100991, Shts. 1-9, Instrument List AN Tank Farm
H-14-101341, Instrument Generic Field Terminal Box

W-314-C1, Construction Specification for Tank Farm Restoration & Safe Operations, AN Valve Pit Upgrades

W-314-P1, Procurement Specification for Ball Valves, AN Valve Pit Upgrades

W-314-P2, Procurement Specification for Impact Wrench, AN Valve Pit Upgrades

DESIGN REVIEW TEAM FOR W-314 "AN VALVE PIT UPGRADES"

ORGANIZATION/FUNCTION	REPRESENTATIVE
W-314 Project Management	K. A. (Kirk) Boes (DRT Chairman) D. L. (Dick) McGrew
East Tank Farms Engineering	D. E. (Dave) Bowers (Design Authority) R. S. (Bob) Nicholson (AN Farm Cognizant Engineer)
Tank Farm Operations	R. W. (Jake) Jacobson T. K. (Treta) Ravencraft
Rad Engineering/Tech Support	J. E. (Jim) Pieper
West Tank Farms Engineering	D. R. (Dan) Nunamaker
Maintenance	P. H. (Pete) Thomsen J. R. (Jim) LaPointe
Quality Assurance	H. M. (Hank) Chafin
Operations Compliance	P. C. (Phil) Miller
TWRS Safety	S. U. (Shakir) Zaman
Op's & Project Safety Support	M. S. (Matt) Tiffany
Startup	M. D. (Doug) Gerken T. L. (Terry) Warnick
TWRS Testing	R. J. (Royal) Shupe
Project W-211	C. A. (Curt) Rieck
TWRS Disposal	J. D. (John) Galbraith

MEETING MINUTES

Subject: 30% DESIGN REVIEW BRIEFING - W-314 AN VALVE PIT UPGRADES

TO: Distribution BUILDING

FROM: Kirk Boes CHAIRMAN Kirk Boes K A Boes 4/2/97

Department-Operation-Component	Area	Shift	Date of Meeting	Number Attending
TWRS/Project W-314			4/1/97	24

ATTENDEES:

R. A. Ackerman	G3-12
R. Adhikari	G3-12
D. J. Ashley	S7-40
K. A. Boes	R3-25
D. E. Bowers	S6-01
R. T. Carratt	G3-12
H. M. Chafin	R3-25
J. D. Galbraith	H5-49
M. D. Gerken	R3-25
B. J. Hendel	R3-25
R. W. Jacobson	R1-09
J. T. Koberg	G3-12
J. R. LaPointe	R2-88
D. L. McGrew	R3-25
P. C. Miller	R1-55
J. E. Navarro	S7-54
D. R. Nunamaker	T4-07
M. D. Rickenbach	G3-12
T. B. Salzano	G3-12
R. J. Shupe	R2-50
P. H. Thomsen	R2-88
M. S. Tiffany	R1-49
L. A. Williamson	R1-49
S. U. Zaman	R3-01

DISTRIBUTION:

Attendees	
D. G. Baide	S5-05
T. W. Bohan	S5-04
S. R. Briggs	R3-25
L. de Lamartinie	H5-61
O. R. Dovalle	R3-09
R. A. Dodd	S5-07
P. A. Haine	R3-47
C. E. Leach	R1-49
S. L. Leckband	R3-47
R. L. Nelson	R3-47
R. S. Nicholson	S5-05
D. W. Reberger	S5-13
C. A. Rieck	S2-48
W. E. Ross	S5-07
W. W. Rutherford	R3-25
W. T. Thompson	G3-21
Project Files	G3-11

John Koberg (FDNW Project Manager) welcomed the assembled Design Review Team and opened the meeting by presenting the 30% complete design package for the W-314 AN Valve Pit Upgrades (see Attachment 1). The attendees at this meeting are identified in Attachment 2. The scope of the AN Valve Pit Upgrades is focused on modifications to the 241-AN-A and -B valve pits, and includes new valve pit manifold assemblies and cover blocks, replacement pit leak detectors, special protective coating for the pits, and replacement of selected encasement line leak detectors.

John stated that the Piping and Instrumentation Diagrams (P&IDs) included in the design package are considered to be complete and are submitted for formal design review by the Design Review Team. He said that all other design products contained in the package are considered to be "in-process" documents (i.e., currently at various stages of completion) and are being presented to the Team for informal review/comment. The Design Review Team is scheduled to reconvene in two weeks to present and discuss their comments on the 30% design package.

John said that the reviewers should come to the design review meeting with their comments "red-lined" on the design documents. The FDNW Design Leads and the Design Review Team will resolve/disposition all comments against the P&IDs during this meeting. Comments which are dispositioned as "accepted," or which require further evaluation by the Design Team, will be recorded by the secretary on a consolidated Review Comments Record (RCR) form representing the formal comments of the team. Closure of this RCR will signify the Design Review Team's final approval of the P&IDs. At the conclusion of the P&ID review, the attendees will review each of the in-process documents and discuss any significant comments/questions concerning these products.

Specific items within the 30% design package were presented to the assembled Design Review Team by the FDNW Design Leads, as follows:

- Tom Salzano (Piping Lead Engineer) discussed the completed P&IDs associated with the new AN valve pit manifolds (drawings H-14-100941 thru H-14-100943), and briefly described the other in-process piping drawings. Tom noted that the valve extension handles shown on in-process drawing H-14-100945 do not currently reflect the design change discussed at the 3/25/97 design status meeting (i.e., the planned new design approach includes a gear operator and hand wheel for operating each valve, as illustated on instrumentation drawing H-14-100980). This change will be reflected in the completed piping drawings submitted for final design review.

- Richard Ackerman (Civil/Structural Lead Engineer) reviewed the in-process drawings associated with the new AN-A and AN-B valve pit cover blocks. He noted that the package does not include the drawings which will reflect the pit modifications to accomodate the new nozzle installations.

- Dick Carratt (Instrumentation Lead Engineer) reviewed the in-process drawings associated with the new pit leak detectors, valve position sensors, transfer line encasement leak detector assembly, and instrument list.

- Ron Adhikari (Electrical Lead Engineer) reviewed the in-process electrical drawings associated with the valve pit upgrades, including conduit layouts and details, electrical panelboard schedule, and wire run list.

- Mark Rickenbach (Principal Lead Engineer for W-314) presented the in-process Construction Specification associated with the AN Valve Pit Upgrades. He said that this specification is generally well developed with the exception of the sections addressing Division 1 ("General Requirements") and Division 13 ("Special Construction") work.

Mark also presented an example of a partially completed Requirements Verification Report (for Valve Pit Manifolds) to the Design Review Team. Mark explained that the Requirements Verification Report is not a typical definitive design product but is being prepared by FDNW during the W-314 definitive design phase as a part of the project's graded approach to Systems Engineering implemention as a way of demonstrating the design's compliance with the established baseline requirements (i.e., requirements identified in the applicable Project Development Specifications [PDSs]). The example Requirements Verification Report handed out at the meeting is not intended to be part of the 30% review

package, but was provided to give the Design Review Team an introduction to the Requirements Analysis Document concept and approach being used by the the Design Team. Completed Requirements Verification Report(s) will be available to support the final design review conducted for the AN Valve Pit Upgrades design.

Kirk Boes emphasized to the Design Review Team that their reviews of the P&IDs and in-process design documents should be based on the requirements established in the approved PDSs. The applicable PDSs for this design package are as follows:

- HNF-SD-W314-PDS-002, Rev. 0: Valve Pit Manifolds
- HNF-SD-W314-PDS-003, Rev. 0: Pit Leak Detection
- HNF-SD-W314-PDS-005, Rev. 0: Special Protective Coating

Kirk asked members of the Design Review Team to contact him if additional copies of the PDSs are needed to support their review, or if clarification of the scope of their review is needed. Jake Jacobson added that, if during their review of the 30% design products, anyone believes that additional requirements (not currently included in the PDSs) are applicable to the AN Valve Pit Upgrades design, those requirements should be identified. Dick McGrew stated that any such requirements need to be accompanied by appropriate documentation of the basis for the requirement to support integration of any new project requirements with the Systems Engineering requirements database.

Dave Bowers requested that the Design Team provide a listing to the Design Review Team of any portions of the 30% design package which are being substantially revised (such as the valve extention handles discussed above) to minimize the Team's time spent in reviewing items that are already known to be changing. **ACTION ITEM: Mark Rickenbach agreed to issue via cc:mail a message to all the meeting attendees by 4/2/97 containing the requested information.** NOTE: This message is included as Attachment 3.

John Koberg closed the 30% design review briefing by encouraging the Design Review Team members to feel free to contact any of the FDNW Design Leads (i.e., Rickenbach, Ackerman, Adhikari, Carratt, Salzano) if any further explanation or clarification of the design products/philosophy is needed to support their review.

ACTION ITEM: The W-314 Design Review Team will reconvene at 7:30 am in the TCPC Building/4th floor conference room on Tuesday, 4/15/97, to review/disposition the Team's comments on the AN Valve Pit Upgrades design package.

ATTACHMENT 1: 30% Design Package Contents
ATTACHMENT 2: 30% Design Review Briefing Attendance List
ATTACHMENT 3: Clarificiation of In-Process Design Changes

ATTACHMENT 1 PAGE 1 OF 2

4/1/97

30% AN Valve Pit Design Package Review

The following items are included in the 30% design review for the AN Valve Pit package. The P&IDs are the only items in this package that will recieve a formal review and comments. The remaining items are all in some state of development.

DRAWINGS

Civil

H-14-100929, Drawing List, Vicinity Map
H-14-100930, Structural, Cover Blocks VP-100A, Plan and Details
H-14-100931, Structural, Cover Blocks VP-100B, Plan and Details
H-14-100932, Structural, Cover Blocks, Sections and Details

Piping

* H-14-100941, P&ID, Valve Pit, 241-AN-A
* H-14-100942, P&ID, Valve Pit, 241-AN-B
* H-14-100943, P&ID, Miscellaneous Details
H-14-100944, Jumper Arrangment, Valve Pit 241-AN-A
H-14-100945, Jumper Arrangment, Valve Pit 241-AN-A, Section
H-14-100946, Jumper Arrangment, Valve Pit 241-AN-B
H-14-100947, Jumper Arrangment, Valve Pit 241-AN-B, Section
H-14-100948, Jumper Assembly, VP-100A; L1-(H)
H-14-100949, Jumper Assembly, VP-100A, L3-L5-(B&C) (2 shts)
H-14-100950, Jumper Assembly, Valve Pit VP-100A, 241-AN-A L7-(L9) (2 shts)
H-14-100951, Jumper Assembly, Valve Pit VP-100A, 241-AN-A L11-(D)
H-14-100952, Jumper Assembly, Valve Pit VP-100A, L13-L14-L15 (D&E)
H-14-100953, Jumper Assembly, VP-100A, L19-(E-F-G&H)
H-14-100954, Jumper Assembly, VP-100A, L20-(A)
H-14-100955, Jumper Assembly, VP-100A, L21-(F)
H-14-100956, Jumper Assembly, Valve Pit 241-AN-A, L11A-Drain
H-14-100957, Jumper Assembly, Valve Pit 241-AN-A, L20A-Drain
H-14-100958, Jumper Assembly, Valve Pit 241-AN-A, L21A-Drain
H-14-100959, Jumper Assembly, 241-AN-B, R1-(D-E)
H-14-100960, Jumper Assembly, 241-AN-B, R3 - (A)
H-14-100961, Jumper Assembly, 241-AN-B, R5-R20-(A&B)
H-14-100962, Jumper Assembly, 241-AN-B, R7-R9-(B&C) (2 shts)
H-14-100963, Jumper Assembly, 241-AN-B, R11-(G)
H-14-100964, Jumper Assembly, 241-AN-B, R14-R15-R16 (F&G) (2 shts)
H-14-100965, Jumper Assembly, 241-AN-B, R19-(D&F) (2 shts)
H-14-100966, Jumper Assembly, 241-AN-B, R1A-Drain
H-14-100967, Jumper Assembly, 241-AN-B, R11A-Drain
H-14-100968, Jumper Assembly, 241-AN-B, R20A-Drain
H-14-100973, Piping, Miscellaneous Details

Electrical

H-14-100935, Electrical, 241-AN Tank Farm, Power and Control Plan

* COMPLETED ITEMS SUBJECT TO FORMAL DESIGN REVIEW.

ATTACHMENT 1 PAGE 2 OF 2

H-14-100936, Electrical, Installation Details, Valve Pit 241-AN-A (2 shts)
H-14-100937, Electrical, Panelboard Schedule, EDS-DP-106
H-14-100938, Electrical, Power and Control, Wire Run List

Instrumentation

H-14-100980, Instm, Valve Position, Sensor Assembly
H-14-100981, Instm, Pit Leak Detection Assy, VP-100A & VP-100B (2 shts)
H-14-100982, Instm, Transfer Line Encasement Leak Detection Assembly
H-14-100983, Instm, Leak Detector Cabinet, Assembly & Details
H-14-100984, Instm Plan, VP-100A
H-14-100985, Instm, VP-100A, Elevation & Details
H-14-100991, Instm, Instrument List, AN Tank Farm (6 shts)

MISCELLANEOUS

Construction Specification W314-C1

** Requirements Verification Report, Valve Pit Manifold, Valve Pits 241-AN-A, -B

** EXAMPLE COPY FOR INFORMATION ONLY.

ATTACHMENT 2 PAGE 1 OF 1

ATTENDANCE LIST

YEAR

- Agendas (telephone, meetings)
- Conversations

DAILY RECORD OF EVENTS

4/1/97
DATE

NAME	COMPANY	MSIN	PHONE
JOHN KOBERG	FDNW		373-2576
KIRK BOES	NHC	R3-25	372-3023
TOM SALZANO	FDNW		372-2267
RICHARD ACKERMAN	FDNW		373-4540
DICK CARRATT	FDNW		372-3726
Mark Rickenbach	FDNW		373-2539
RON ASHIKARI	FDNW	G3-12	376-0324
JIM NAVARRO	RL		373-4365
DAVID ASHLEY	FDNW		376-8600
PHIL MILLER	LMHC	R1-51	373-6389
PETE THOMSEN	LMHC	R2-88	373-7777
Royal Skaggs	LMHC		372-2439
Shahin Zaman	LMHC	R3-01	372-2312
LUIS A. WILLIAMSON	DE&S H		376-2398
DOUG GERKEN	NHC	R3-25	372-3239
HANK M. CHAFIN	FDNW	R3-25	376-3387
Matthew Stiffany	DE&S H	R1-49	373-2148
DAVID BOWERS	LMHC	S6-01	373-1841
Dan Niemaker	LMHC	T4-07	373-9115
John D. GALBRAITH	NHC	H9-45	373-7929
BRIAN HEADEL	TRW		946-6724
DICK MCGREW	NHC	R3-25	372-2296
J. R LaPointe	LMHC	RT-88	373 7744
R.W. JACKSON	LMHC	R1-09	376 2957

W-314 30% Design Review Mtg - Kick off

Hand out 30% design review package and briefed attendees on items in package and what for review is about.

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To	From
J. Boes	M. Ackerman
Co.	Co.
Dept.	Phone #
Fax # 372-2703	Fax #

MO 3701

[148] From: Kirk A Boes at ~HANFORD10B 4/2/97 8:14AM (4079 bytes: 41 ln)
To: Mark D Rickenbach at ~HANFORD07C, Jaime E (Jim) Navarro at ~HANFORD05C, David J (Dave) Ashley at ~HANFORD02B, Phillip C (Phil) Miller at ~HANFORD04E, Peter H (Pete) Thomsen at ~WHC117, Royal J Shupe at ~HANFORD04D, Shakir U Zaman at ~HANFORD06C, Luis A Williamson at ~HANFORD06C, Mark D (Doug) Gerken at ~WHC17, Henry M (Hank) Chafin at ~HANFORD05A, Matthew S Tiffany at ~HANFORD05E, David E Bowers at ~HANFORD04B, Daniel R Nunamaker at ~WHC73, John D Galbraith at ~HANFORD09A, Brian J Hendel at ~WHC133, Dick L McGrew, James R LaPointe at ~HANFORD04E, Ralph W (Jake) Jacobson at ~HANFORD04B, David J Peck at ~KEH10, Timothy W Bohan at ~HANFORD04B, Curtis A Rieck, Octavio R DoValle at ~HANFORD10C, Ronald L Nelson at ~HANFORD06A, Robert S (Bob) Nicholson at ~HANFORD05E, Dan W Reberger at ~HANFORD05E, David J Shrimpton at ~KEH10
cc: John T Roberg at ~HANFORD07C, Kirk A Boes, W W (Wally) Rutherford
Subject: W-314 30% review package for AN Valve Pit Upgrades
---------- Message Contents ----------

Based on discussion with Mark Rickenbach, I've added some minor clarifications to his earlier message.

Kirk

The following items on the drawings that were handed out in the 30% review for the AN package are going to be revised and as such, you do not need to look at:

1. The conduits embedded in the cover blocks shown on drawings H-14-100935 & 936 will be changed to be routed to common points (rather than exiting all sides of the cover blocks) to allow for ease of construction.

2. Drawing H-14-100936 show the old valve position sensor assemblies. These will be removed and replaced with the "new" design (integrated valve extension handle/gear operator/position indicator).

3. Drawing H-14-100930, Detail B will be deleted.

4. Drawing H-14-100980, ignore the gear operator & switch (this is a preliminary representation of the "new" design being developed for the integrated valve extenstion handle/gear operator/position indicator).

5. Drawing H-14-100981, ignore probe insulator (Savannah River leak detector design is represented on the drawing, but further research/analysis of this design is still being performed -- need for probe insulator has not been established).

6. Drawing H-14-100982, ignore electrical connection of leak detector. (same reason as for item 5 above)

In general, all Title Blocks will reflect the valve pit numbering as 241-AN-A and not the "new" (now discontinued) numbering scheme (i.e., VP-100A).

Mark

MEETING MINUTES

Subject: 30% DESIGN REVIEW MEETING - W-314 AN VALVE PIT UPGRADES

TO: Distribution **BUILDING**

FROM: Kirk Boes **CHAIRMAN** Kirk Boes

Department-Operation-Component	Area	Shift	Date of Meeting	Number Attending
TWRS/Project W-314			4/15/97	26

ATTENDEES:

R. A. Ackerman	G3-12
R. Adhikari	G3-12
T. Ambalam	E6-46
K. A. Boes	R3-25
D. E. Bowers	S6-01
S. R. Briggs	R3-25
R. T. Carratt	G3-12
H. M. Chafin	R3-25
D. O. Dougherty	G3-12
M. D. Gerken	R3-25
P. A. Haine	R3-47
B. J. Hendel	R3-25
R. W. Jacobson	R1-09
J. T. Koberg	G3-12
J. R. LaPointe	R2-88
D. L. McGrew	R3-25
P. C. Miller	R1-55
D. R. Nunamaker	T4-07
J. J. O'Conner	S5-21
M. D. Rickenbach	G3-12
C. A. Rieck	S2-48
W. W. Rutherford	R3-25
T. B. Salzano	G3-12
P. H. Thomsen	R2-88
L. A. Williamson	R1-49
J. A. Wright	S5-50

DISTRIBUTION:

Attendees	
D. A. Ashley	S7-40
D. G. Baide	S5-05
T. W. Bohan	S5-04
L. de Lamartinie	H5-61
O. R. Dovalle	R3-09
R. A. Dodd	S5-07
C. E. Leach	R1-49
S. L. Leckband	R3-47
J. E. Navarro	S7-54
R. L. Nelson	R3-47
R. S. Nicholson	S5-05
D. W. Reberger	S5-13
W. E. Ross	S5-07
R. J. Shupe	R2-50
W. T. Thompson	G3-21
M. S. Tiffany	R1-49
S. U. Zaman	R3-01
Project Files	G3-11

These minutes document the proceedings from the 30% Design Review Meeting conducted for Project W-314's AN Valve Pit Upgrades. The 30% design package prepared by FDNW was distributed to the Design Review Team during the 4/1/97 Design Review Briefing. The purpose of this meeting was to formally review the completed Piping and Instrumentation Diagrams (P&IDs) associated with the upgraded AN valve pits, and to informally review the other "in-process" design drawings and construction specification associated with this work. Participants in this review meeting are identified in Attachment 1.

The following drawings were formally reviewed by the Design Review Team:

H-14-100941, P&ID Valve Pit 241-AN-A (sht. 1 of 1)
H-14-100942, P&ID Valve Pit 241-AN-B (sht. 1 of 1)
H-14-100943, P&ID Miscellaneous Details (sht. 1 of 1)

Comments were identified by the Design Review Team and discussed by the assembled participants. Comments dispositioned during the meeting as "accepted," or which were determined to require further evaluation by the Design Team, were recorded on a consolidated Review Comments Record (RCR) form. This RCR represents the formal comments of the team (see Attachment 2). Following resolution and/or incorporation of all the formal comments associated with the P&IDs, each of the reviewing organizations will sign-off the RCR to signify closure of the Design Review Team's comments and acceptance of the P&IDs. It is intended that these completed P&IDs will set the basic design configuration for the AN-A and AN-B valve pit upgrades, and provide the basis for completing the remaining design details.

Review comments associated with the in-process documents (see list of reviewed items in Attachment 3) were not recorded on an RCR. Instead, these comments were identified by the design reviewers and then discussed by the assembled group. In most cases, the reviewers' comments were either accepted for incorporation or were determined to be a result of the current incomplete/"unchecked" condition of the design media. The informal comments were recorded as "red-line" markups to the drawings and specification by the FDNW Design Team.

The completed design documentation for the AN Valve Pit Upgrades (with the exception of the P&IDs) will be resubmitted to the Design Review Team for formal review upon completion by the FDNW Design Team. This final review of the AN Valve Pit Upgrades design is currently planned to begin in mid- to late July 1997. Information concerning the final review for this design package will be issued to the W-314 Design Review Team in advance of this date. As required to support the design verification documentation requirements (WHC-CM-6-1, EP-4.1), a Design Review Report containing all formal design review documentation associated with the AN Valve Pit Upgrades will be issued at the conclusion of this definitive design activity.

Reviewers are reminded that additional informal in-process reviews of the W-314 design media are conducted during the bi-weekly Design Status Meetings. For more information concerning these meetings, or any other information discussed in these minutes, please contact Kirk Boes at 372-3023.

ATTACHMENT 1: 30% Design Review Meeting Attendance List
ATTACHMENT 2: P&ID Review Comments
ATTACHMENT 3: In-Process Design Documentation List

ATTACHMENT #1 (PAGE 1 OF 1)

ATTENDANCE SHEET
PROJECT W-314, AN VALVE PIT UPGRADES
30% DESIGN REVIEW MEETING
April 15, 1997

	Name	Company/Organization	MSIN/Phone
1.	KIRK BOES	NHC / PROJECT W-314	R3-25/372-3023
2.	Mark Rickenbach	FDNW / TWRS Projects	53-10/373-2539
3.	JOAN WRIGHT	FDNW / CONST.	376-3899
4.	JOHN KOBERG	FDNW PM	373-2576
5.	RICHARD ACKERMAN	FDNW CIVIL STRUCT	375-4540
6.	HANK M. CHAFIN	FDNW / QA	R3-25/376-3387
7.	DICK CARRATT	FDNW/CSE	372-3726
8.	RON ADHIKARI	FDNW/EL.	376-0324
9.	JAKE JACOBSON	LMHC/OPS (OPERATION)	R1-09 6-2957
10.	PHIL MILLER	LMHC/OPS Compliance	373-6389 R1-51
11.	PETE THOMSEN	LMHC / MAINT. PROG.	373-7777 R2-88
12.	JIM LA POINTE	LMHC / MAINT PROG	373-7744
13.	DANIEL O. DOUGHERTY	FDNW	372-2107
14.	Jim O'Connor	LMHC/ETF Radcon	373-7289
15.	TOM SALZANO	FDNW	372-2267
16.	DICK McGREW	NHC / Project W-314	372-2296
17.	BRIAN HENDEL	TRW	946-672A
18.	STEVE BRIGGS	NHC/Project W-314	3-4610
19.	CHRIS KIECK	NHC / Project W-211	3-2913
20.	WALLY RUTHERFORD	NHC/W-314	R3-25/2-2903
21.	DON NUNAMAKER	LMHC/WTF Eng'g.	T4-07/3-9115
22.	DAVID BOWERS	LMHC/ETF Eng'g.	56-01/373-184/
23.	LUIS A. HILLIARDSON	DE&S/H.	376-2328
24.	PIERRE HAINE	NHC	
25.	TOM AMBALAM	FDNW	376-6049
26.	DOUG GERKEN	NHC/STARTUP	372-3739

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
4/15/97	AN-001
3. Project No.	**4. Page**
W-314	1 of 4

5. Document Number(s)/Title(s)	6. Program/Project/ Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
Project W-314, Phase 1, AN Valve Pit Upgrades, P&IDs (H-14-100941; H-14-100942; H-14-100943)	TWRS/Project W-314	See below	See below	

10. Agreement with indicated comment disposition(s) and closure:

Facility Design (W-314 Engineering Lead)	Date	Facility Design (W-314 Systems Engineering Lead)	Date
East Tank Farm Engineering	Date	East Tank Farm Operations	Date
Maintenance Program Integration	Date	Operations Integration	Date
Operations Compliance	Date	Quality Assurance	Date
TWRS Safety	Date	Operations & Projects Safety Support	Date
TWRS Testing Oversight & Startup	Date	Facility Startup	Date
TWRS Integration & Baseline Management	Date	West Tank Farm Engineering	Date
Project W-211, ITRS	Date	Process Development	Date

A-6400-090.1 (03/92) WEF011

ATTACHMENT # 2
PAGE 1 OF 4

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
4/15/97	AN-001
3. Project No.	4. Page
W-314	2 of 4

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1.	H-14-100941: Provide label to identify new 2" drain line in zone D7 (e.g., "spare"). Same comment for other similar capped stub-outs. (Boes)			
2.	H-14-100941: Line flushing is required per authorization basis following waste transfers. Evaluate need for extending a new flush line from the existing flush pit to new AN-A nozzles "L21" and "L20," or providing a new permanent flush jumper from existing nozzle L17. Also evaluate drainage requirements for the flush line (backflow prevention, etc.) as required. (Bowers)			
3.	H-14-100941: AN-A nozzles "L21" and "L21A" do not correspond to PDS designations. Revise PDS or drawing as required. (Miller)			
4.	H-14-100941: Verify that valves #301 and #302 are numbered consistantly with other AN-A valve pit drawings. (LaPointe)			
5.	H-14-100941: AN-A nozzle "L4" is shown with a dust cover on this drawing, but on H-14-100944 it is shown with a vertical nozzle seal. Correct this inconsistancy. (LaPointe)			
6.	H-14-100941: AN-A manifold ISB connectors "G" and "C" need notes added to indicate that they will be blanked off. (LaPointe)			
7.	H-14-100941: Clarify symbology used for connectors to show the connector designations (e.g., connector "A", etc.). Comment also applies to drawing H-14-100942. (Koberg)			
8.	H-14-100941: In the Symbol Legend, change "ES" to "EY", and change "voltage switch" to "voltage relay." (Carratt)			

ATTACHMENT #2 PAGE 2 of 4

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
4/15/97	AN-001
3. Project No.	**4. Page**
W-314	3 of 4

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
9.	H-14-100941: Verify that proposed vapor seals meet State requirements for isolation of transfer lines. (Bowers) Phil Miller, LMHC, to check on requirements.			
10.	H-14-100941: Evaluate changing all nozzle dust covers to vapor seals. Comment also applies to H-14-100942. (Bowers)			
11.	H-14-100941: Add piping material code to Symbol Legend. Comment also applies to H-14-100942. (Bowers)			
12.	H-14-100941: Reserve space above title block to add future "essential drawing" indication. This comment is applicable to all drawings. (Bowers)			
13.	H-14-100941: Evaluate addition of remote valve indication on new drain valves. May require a revision to the PDC/PDS documentation. Comment also applies to H-14-100942. (Bowers)			
14.	H-14-100941: Change existing encasement drain #WT-V-404 to a new jumpered drain assembly to facilitate maintenance (existing permanent drain is old and maintenance of drain valve requires manned entry to pit). (Bowers)			
15.	H-14-100941: Expand labling for transfer lines SN-268 and SL-168 to indicate their destinations (consistent with other lines shown in the pit). (Bowers)			
16.	H-14-100941: Add jumper identification numbers on P&IDs. Comment also applies to H-14-100942. (Bowers)			

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
4/15/97	AN-001
3. Project No.	**4. Page**
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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
17.	H-14-100942: In valve pit AN-B, eliminate new jumper connection (and associated leak detection) to existing nozzle "R3" based on pending scope changes relative to 2" transfer lines. (Bowers)			
18.	H-14-100942: Add callout for 6" encasement for new piping stubout at AN-B nozzle "R11." (Boes)			
19.	H-14-100941: Need to add valve position labeling to the P&ID corresponding with H-14-100943 (i.e., position A, B, C) on all new 3-way valves. Comment also applies to H-14-100942. (Carratt)			
20.	H-14-100942: AN-B nozzles identified for future 2" flush/diluent (from W-211) and associated encasement drain line do not correspond to those identified in the PDS. Make correction either to the drawing or to the PDS. (Salzano)			
21.	H-14-100943: Change Detail 3 to reflect the "intrinsically safe" modifications currently being made to the existing leak detection system. (Carratt)			
22.	H-14-100943: Evaluate seperation of local leak detection alarm and local trouble alarm for new leak detectors. (Bowers)			

ATTACHMENT # 2 PAGE 4 OF 4

W-314 AN VALVE PIT UPGRADES
IN-PROCESS (30%) DESIGN REVIEW PACKAGE

The following items are included in the 30% design review package for the AN Valve Pit Upgrades. The P&IDs are the only items in this package that are complete and submitted for formal design review. The remaining items are currently all in various stages of development.

DRAWINGS

Civil

H-14-100930, Structural, Cover Blocks VP-100A, Plan and Details
H-14-100931, Structural, Cover Blocks VP-100B, Plan and Details
H-14-100932, Structural, Cover Blocks, Sections and Details

Piping

1 H-14-100941, P&ID, Valve Pit, 241-AN-A
1 H-14-100942, P&ID, Valve Pit, 241-AN-B
1 H-14-100943, P&ID, Miscellaneous Details
H-14-100944, Jumper Arrangment, Valve Pit 241-AN-A
H-14-100945, Jumper Arrangment, Valve Pit 241-AN-A, Section
H-14-100946, Jumper Arrangment, Valve Pit 241-AN-B
H-14-100947, Jumper Arrangment, Valve Pit 241-AN-B, Section
H-14-100948, Jumper Assembly, VP-100A, L1-(H)
H-14-100949, Jumper Assembly, VP-100A, L3-L5-(B&C) (2 shts)
H-14-100950, Jumper Assembly, Valve Pit VP-100A, 241-AN-A L7-(L9) (2 shts)
H-14-100951, Jumper Assembly, Valve Pit VP-100A, 241-AN-A L11-(D)
H-14-100952, Jumper Assembly, Valve Pit VP-100A, L13-L14-L15 (D&E)
H-14-100953, Jumper Assembly, VP-100A, L19-(E-F-G&H)
H-14-100954, Jumper Assembly, VP-100A, L20-(A)
H-14-100955, Jumper Assembly, VP-100A, L21-(F)
H-14-100956, Jumper Assembly, Valve Pit 241-AN-A, L11A-Drain
H-14-100957, Jumper Assembly, Valve Pit 241-AN-A, L20A-Drain
H-14-100958, Jumper Assembly, Valve Pit 241-AN-A, L21A-Drain
H-14-100959, Jumper Assembly, 241-AN-B, R1-(D-E)
H-14-100960, Jumper Assembly, 241-AN-B, R3 - (A)
H-14-100961, Jumper Assembly, 241-AN-B, R5-R20-(A&B)
H-14-100962, Jumper Assembly, 241-AN-B, R7-R9-(B&C) (2 shts)
H-14-100963, Jumper Assembly, 241-AN-B, R11-(G)
H-14-100964, Jumper Assembly, 241-AN-B, R14-R15-R16 (F&G) (2 shts)
H-14-100965, Jumper Assembly, 241-AN-B, R19-(D&F) (2 shts)
H-14-100966, Jumper Assembly, 241-AN-B, R1A-Drain
H-14-100967, Jumper Assembly, 241-AN-B, R11A-Drain
H-14-100968, Jumper Assembly, 241-AN-B, R20A-Drain
H-14-100973, Piping, Miscellaneous Details

Electrical

H-14-100935, Electrical, 241-AN Tank Farm, Power and Control Plan

ATTACHMENT #3

PAGE 2 OF 2

H-14-100936, Electrical, Installation Details, Valve Pit 241-AN-A (2 shts)
H-14-100937, Electrical, Panelboard Schedule, EDS-DP-106
H-14-100938, Electrical, Power and Control, Wire Run List

Instrumentation

H-14-100980, Instm, Valve Position, Sensor Assembly
H-14-100981, Instm, Pit Leak Detection Assy, VP-100A & VP-100B (2 shts)
H-14-100982, Instm, Transfer Line Encasement Leak Detection Assembly
H-14-100983, Instm, Leak Detector Cabinet, Assembly & Details
H-14-100984, Instm Plan, VP-100A
H-14-100985, Instm, VP-100A, Elevation & Details
H-14-100991, Instm, Instrument List, AN Tank Farm (6 shts)

MISCELLANEOUS

Construction Specification W314-C1

[1] Completed items

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
4/15/97	AN-001
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W-314	1 of 5

5. Document Number(s)/Title(s)	6. Program/Project/ Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
Project W-314, Phase 1, AN Valve Pit Upgrades, P&IDs (H-14-100941; H-14-100942; H-14-100943)	TWRS/Project W-314	See below	See below	

10. Agreement with indicated comment disposition(s) and closure:

Facility Design (W-314 Engineering Lead)	4/29/97	Facility Design (W-314 Systems Engineering Lead)	4-29-97
East Tank Farm Engineering	4/30/97	East Tank Farm Operations	4/30/97
Maintenance Program Integration	4/29/97	Operations Integration	4/29/97
Operations Compliance	4/29/97	Quality Assurance	4/30/97
TWRS Safety	4/29/97	Operations & Projects Safety Support	4/30/97
TWRS Testing Oversight & Startup	N/A	Facility Startup	4/29/97
TWRS Integration & Baseline Management	4/30/97	West Tank Farm Engineering	4/29/97
Project W-211, ITRS	4/29/97	Process Development	4/29/97

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
4/15/97	AN-001
3. Project No.	**4. Page**
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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1.	H-14-100941: Provide label to identify new 2" drain line in zone D7 (e.g., "spare"). Same comment for other similar capped stub-outs. (Boes)		Accepted.	
2.	H-14-100941: Line flushing is required per authorization basis following waste transfers. Evaluate need for extending a new flush line from the existing flush pit to new AN-A nozzles "L21" and "L20," or providing a new permanent flush jumper from existing nozzle L17. Also evaluate drainage requirements for the flush line (backflow prevention, etc.) as required. Comment also applies to drawing H-14-100942. (Bowers)		Not accepted. The applicable Project Development Specification (HNF-SD-W314-PDS-002) includes requirements for the manifolds to confine flush water used following a waste transfer (see PDS section 3.2.1.3), but there is no PDS requirement that specifies connection of the new manifolds to a flush water source (except the future W-211 flush connections being provided by this project). Therefore, this proposed change is considered outside the scope of the project's approved technical requirements baseline, and implementation of the change would require a change to the PDS.	
3.	H-14-100941: AN-A nozzles "L21" and "L21A" do not correspond to PDS designations. Revise PDS or drawing as required. (Miller)		Accepted. The descriptions provided in the Project Development Specification (HNF-SD-W314-PDS-002) for nozzles L20/L20A and L21/L21A will be corrected to be consistent with the P&ID.	
4.	H-14-100941: Verify that valves #301 and #302 are numbered consistantly with other AN-A valve pit drawings. (LaPointe)		Accepted. Valves #301 and #302 are correct as shown on the P&ID. The other drawings will be revised to reflect the correct numbering.	
5.	H-14-100941: AN-A nozzle "L4" is shown with a dust cover on this drawing, but on H-14-100944 it is shown with a vertical nozzle seal. Correct this inconsistancy. (LaPointe)		See disposition to comment #10 below.	

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
4/15/97	AN-001
3. Project No.	**4. Page**
W-314	3 of 5

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
6.	H-14-100941: AN-A manifold ISB connectors "G" and "C" need notes added to indicate that they will be blanked off. (LaPointe)		Accepted.	
7.	H-14-100941: Clarify symbology used for connectors to show the connector designations (e.g., connector "A", etc.). Comment also applies to drawing H-14-100942. (Koberg)		Accepted.	
8.	H-14-100941: In the Symbol Legend, change "ES" to "EY", and change "voltage switch" to "voltage relay." (Carratt)		Accepted.	
9.	H-14-100941: Verify that proposed vapor seals meet State requirements for isolation of transfer lines. (Bowers) Phil Miller, LMHC, to check on requirements.		Verified. State requirements are met by either vapor seals or blanks. See attached cc:mail message from Phil Miller.	
10.	H-14-100941: Evaluate changing all nozzle dust covers to vapor seals. Comment also applies to H-14-100942. (Bowers)		Accepted. Vapor seals or process blanks will be used on all unused nozzles in place of dust covers.	
11.	H-14-100941: Add piping material code to Symbol Legend. Comment also applies to H-14-100942. (Bowers)		Accepted.	
12.	H-14-100941: Reserve space above title block to add future "essential drawing" indication. This comment is applicable to all drawings. (Bowers)		Accepted.	
13.	H-14-100941: Evaluate addition of remote valve indication on new drain valves. May require a revision to the PDC/PDS documentation. Comment also applies to H-14-100942. (Bowers)		Not accepted. This proposed change is not within the scope of the project's approved technical requirements baseline, and would require a change to the Project Development Specification.	

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
4/15/97	AN-001
3. Project No.	**4. Page**
W-314	4 of 5

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
14.	H-14-100941: Change existing encasement drain #WT-V-404 to a new jumpered drain assembly to facilitate maintenance (existing permanent drain is old and maintenance of drain valve requires manned entry to pit). (Bowers)		Not accepted. This proposed change is not within the scope of the project's approved technical requirements baseline, and would require a change to the Project Development Specification.	
15.	H-14-100941: Expand labling for transfer lines SN-268 and SL-168 to indicate their destinations (consistent with other lines shown in the pit). (Bowers)		Accepted.	
16.	H-14-100941: Add jumper identification numbers on P&IDs. Comment also applies to H-14-100942. (Bowers)		Accepted.	
17.	H-14-100942: In valve pit AN-B, eliminate new jumper connection (and associated leak detection) to existing nozzle "R3" based on pending scope changes relative to 2" transfer lines. (Bowers)		Not accepted. This proposed change is not within the scope of the project's approved technical requirements baseline, and would require a change to the Project Development Specification.	
18.	H-14-100942: Add callout for 6" encasement for new piping stubout at AN-B nozzle "R11." (Boes)		Accepted.	
19.	H-14-100941: Need to add valve position labeling to the P&ID corresponding with H-14-100943 (i.e., position A, B, C) on all new 3-way valves. Comment also applies to H-14-100942. (Carratt)		Accepted.	
20.	H-14-100942: AN-B nozzles identified for future 2" flush/diluent (from W-211) and associated encasement drain line do not correspond to those identified in the PDS. Make correction either to the drawing or to the PDS. (Salzano)		Accepted. Project Development Specification HNF-SD-W314-PDS-002 will be corrected to reflect nozzles "R20" and "R20A" in place of "R21" and "R21A" for the 2-inch flush and associated drain lines.	
21.	H-14-100943: Change Detail 3 to reflect the "intrinsically safe" modifications currently being made to the existing leak detection system. (Carratt)		Accepted.	

REVIEW COMMENT RECORD (RCR)	1. Date 4/15/97	2. Review No. AN-001
	3. Project No. W-314	4. Page 5 of 5

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
22.	H-14-100943: Evaluate seperation of local leak detection alarm and local trouble alarm for new leak detectors. (Bowers)		Not accepted. The applicable Project Development Specification (HNF-SD-W314-PDS-003) does not specify that separate leak detection and trouble alarms are required. Therefore, this proposed change is considered outside the scope of the project's approved technical requirements baseline, and would require a change to the PDS. [Note: A job walk of the farm has determined that there is not sufficient room in the existing leak detection relay box to incorporate the W-314 modifications, even without separate alarm lights. Therefore the project will install a new leak detection relay box, which could accomodate an additional visual alarm if the PDS is revised to specify this requirement. However, consideration should also be given to whether a local failure ("trouble") alarm, separate from the local leak detection alarm, may give an operator in the field a false sense of security that a problem has developed with the leak detector but no leak has occurred; in fact, it is possible (maybe unlikely) that dual failures could occur, causing both a leak detector failure and a real leak into the pit (without any detection/alarm of the leak).]	

MEETING MINUTES

Subject: FINAL DESIGN REVIEW BRIEFING - W-314 AN VALVE PIT UPGRADES

TO: Distribution **BUILDING**

FROM: Kirk Boes **CHAIRMAN** Kirk Boes

Department-Operation-Component	Area	Shift	Date of Meeting	Number Attending
TWRS/Project W-314			9/11/97	23

ATTENDEES:

R. A. Ackerman	G3-12
R. Adhikari	G3-12
K. A. Boes	R3-25
D. E. Bowers	S5-13
M. E. Dallas	G3-12
A. H. Gerard	S0-09
W. H. Hays	E6-08
R. W. Jacobson	R1-09
J. T. Koberg	G3-12
L. M. Livesey	S5-07
P. C. Miller	R1-51
D. L. McGrew	R3-25
R. S. Nicholson	S5-05
D. R. Nunamaker	T4-07
J. E. Pieper	S5-21
T. K. Ravencraft	S5-04
M. D. Rickenbach	G3-12
D. J. Peck	S2-47
T. B. Salzano	G3-12
R. T. Skamser	S2-48
P. H. Thomsen	R2-88
M. S. Tiffany	R1-49
S. U. Zaman	S5-12

DISTRIBUTION:

Attendees	
D. G. Baide	S5-05
T. W. Bohan	S5-04
S. R. Briggs	R3-25
R. T. Carratt	G3-12
H. M. Chafin	R3-25
R. A. Dodd	S5-07
J. D. Galbraith	H5-49
P. A. Haine	R3-47
C. E. Leach	R1-49
S. L. Leckband	R3-47
J. R. LaPointe	R2-88
R. L. Nelson	R3-47
J. E. Navarro	S7-54
D. W. Reberger	S5-13
C. A. Rieck	S2-48
W. E. Ross	S5-07
W. W. Rutherford	R3-25
W. T. Thompson	G3-21
R. J. Shupe	R2-50
Project Files	G3-11

These minutes document the discussions and actions from the final definitive design review kickoff briefing for the Project W-314 AN Valve Pit Upgrades design package. This package is the first of six planned definitive design packages for Phase 1 of the W-314 project to be completed. The scope of the AN Valve Pit Upgrades is comprised of modifications to the 241-AN-A and -B valve pits in support of TWRS Privatization and tank farm operations, including: new valve pit manifold assemblies and cover blocks; new pit nozzles; new pit leak detectors; special protective coating for the pits; new encasement line leak detectors; and associated instrumentation/electrical work.

Following general introductions, John Koberg (FDNW Project Manager) welcomed the assembled Design Review Team and opened the meeting by presenting the AN Valve Pit Upgrades definitive design package. Mark Rickenbach (FDNW Project Lead Engineer) provided a brief overview of the design package, which includes the detailed drawings (60 total drawings), the C-1 Construction Specification, and the P-1 and P-2 Procurement Specifications.

Mark stated that the design media is compliant with the approved requirements baseline for Project W-314 as defined in the Project Development Specifications (PDSs). Mark also discussed two issues of significance for this review:

(1) The Design Team utilized the TWRS Basis for Interim Operation (BIO) in determining appropriate safety classifications for the W-314 SSCs. For this particular design package, only the pit leak detection system, pit coverblocks, and transfer piping secondary containment are identified as Safety Class. All other SSCs provided by the project are considered to be General Service.

(2) During previous design meetings, there has been discussion of possibly needing a temporary flex jumper in the AN-A and AN-B valve pits to support post-transfer pipeline flushing operations. This jumper is not specified as a part of the W-314 scope and therefore is not included in the design package. In addition to determining the funding source for obtaining these temporary jumpers, technical issues related to acceptability of the existing AN flush pit (e.g., backflow concerns) would need to be addressed if the project is to accept the responsibility for making flush connections to the W-314 manifolds located in the AN valve pits. Resolution of this issue is outside the scope of this design review.

Copies of the draft Design Verification Reports associated with the AN Valve Pit Upgrades were distributed for information to the attendees. Kirk Boes (W-314 Technical Lead) said that these documents were not intended to receive formal review by the entire Design Review Team (although any comments from the team would be welcome), but they would be checked separately.

Mark reminded the Design Review Team that the AN-A and AN-B Piping and Instrumentation Diagrams (P&IDs) included in the drawing package were previously subjected to a formal review during the 30% design review (April 1997), and that all the formal comments from that review have been incorporated in accordance with the approved Review Comments Record (RCR). Therefore, no substantial comments are anticipated for the P&IDs during the Definitive Design Review.

Kirk Boes outlined the planned process for conducting the Definitive Design Review meeting. Following a two-week review period, the Design Review Team will reconvene on September 25, 1997 to present and discuss their comments on the design package. Kirk requested that, similar to the previous formal reviews conducted by the team, the reviewers bring their comments to the Definitive Design Review meeting, where the FDNW Design Leads and the Design Review Team will resolve/disposition all comments. Comments which are dispositioned as "accepted," or which require further evaluation by the Design Team, will be recorded by the secretary on a consolidated RCR form representing the formal comments of the team. Closure of this RCR will signify the Design Review Team's final approval of the AN Valve Pit Upgrades design.

Specific deliverables contained within the design package were presented to the assembled Design Review Team by the FDNW Design Leads, as follows:

<u>Civil/Structural - Richard Ackerman</u>

- Richard initially presented the structural drawings associated with the new AN-A and AN-B valve pit cover blocks (H-14-100930 thru

-32), noting that the coverblocks have been designed to satisfy their required Safety Class function.

- He discussed the structural drawing reflecting the AN-A and AN-B pit wall penetrations required to accomodate the new piping nozzle installations (H-14-100933, sht. 1). Richard said that structural calculations performed by FDNW for the pit modifications assumed that each core drill through the pit wall would cut through existing rebar, and the calculations showed that the pits' structural integrity would not be jeopardized by these actions.

- Richard finished with a discussion of the drawing for the new shielding collar to be constructed around each pit (H-14-100933, sht. 2). He said that the collar was determined necessary in order to attenuate radiation levels outside the pits to ALARA levels, based on FDNW's shielding calculations using the waste stream radionuclide concentrations identified in the valve manifold PDS (HNF-SD-W314-PDS-002). He said that special block-outs have been included in the design to allow future maintenance access to existing installations around the outside of the valve pits. Richard also noted that FDNW had assumed that the new collar should receive special protective coating (SPC) application similar to the pits themselves. Dave Bowers (W-314 Design Authority) stated his agreement with this decision.

Electrical - Ron Adhikari

- Ron described the new conduit routings and associated electrical installations between the AN-A/AN-B valve pits and the 241-AN-271 Instrument Building, as shown on the electrical power and control plan drawings (H-14-100935, shts. 1 and 2).

- Electrical details associated with the AN-A and AN-B pits and their new coverblocks were also reviewed (H-14-100936). Ron noted that spare electrical/control conduit embedments have been included in the coverblock conduit plan to support future conversion of the manifold valves to motorized operation.

- Ron briefly discussed the drawings containing the electrical panelboard schedule (H-14-100937) and electrical wire run lists (H-14-100938).

- He concluded with a discussion of the cathodic protection drawings (H-14-100939, shts. 1 and 2), noting that the new piping nozzles and stub-outs for the pits would be electrically bonded to existing cathodically protected piping (serviced by an existing rectifier).

Piping - Tom Salzano

- Tom started by reiterating that the AN-A and AN-B P&IDs (H-14-100941 thru -43) are considered complete and ready for approval based on the previously completed formal design review of these products.

- He briefly reviewed the AN-A and AN-B jumper arrangement plans and section drawings (H-14-100944 thru -47), noting that the only Safety Class items associated with the piping systems were the encasement portions of the new piping stub-outs provided for each pit (transfer lines and tie-ins to these stub-outs to be provided as a part of another design package).

- Tom mentioned that jumper assembly details associated with the new AN-A and AN-B valve manifold jumpers are contained in drawings H-14-100948 thru -68).

- Painting diagrams for the new AN-A and AN-B coverblocks were presented (H-14-100969 thru -70).

- Tom discussed the new funnel assembly design for the manifold jumpers' 2-way and 3-way valves (H-14-100971), the design for the new valve handle assemblies (H-14-100972), and miscellaneous piping details (H-14-100973). He said that the valve handle design includes a universal joint to assist operators in aligning the handles with the funnel/valve stem located in the pits.

- He reviewed the piping details associated with the new pit wall nozzles and piping stub-outs (H-14-100974).

- The valve actuator arrangement plans (H-14-100975) show the proposed configuration of the new actuators. Tom noted that because of the large number of valves required in the AN pits, the space available for personnel traffic atop these pits will be somewhat limited due to the valve actuator configuration. The details associated with assmbly of the new valve actuator devices are shown in drawing H-14-100976.

- The final element presented for the piping design was the new AN-A and AN-B floor drain seal assembly (H-14-100978), which Tom said is patterned after the existing AP valve pit design.

Instrumentation - Mark Dallas

- Mark described the new valve position switch assembly (H-14-100980) associated with the AN-A and AN-B valve manifolds. He noted that the position switch assembly, which is integral with the new valve actuator mechanism, is designed for ease of removal to facilitate removal of the pit coverblocks.

- The new pit leak detectors (H-14-100981), which are patterned after a similar design utilized at the Savannah River Site tank farms, was explained, as was the new transfer line encasement leak detector assemby (H-14-100982) which uses the same design.

- Mark discussed the new leak detection relay cabinet drawing and associated parts/material listing (H-14-100983). Safety Class components associated with the pit leak detection system are clearly identified. He also reviewed the AN-A and AN-B instrument plans, elevations, and details (H-14-100984 thru -86).

- The loop diagrams associated with the valve position switches, pit leak detectors, and encasement leak detectors (H-14-100987 thru -90) were explained.

- A consolidated instrument list for the AN Valve Pit Upgrades was presented (H-14-100991).

Mark Rickenbach closed the briefing by encouraging the Design Review Team members to feel free to contact him or any of the FDNW Design Leads if any further explanation or clarification of the design products/philosophy is needed to support their review. Telephone

numbers for these persons are included in the attached attandance list (Attachment 2).

****

The W-314 Design Review Team will reconvene at 7:30 am in the TCPC Building/4th floor conference room on Thursday, 9/25/97, to review/disposition the Team's comments on the AN Valve Pit Upgrades final design package.

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ATTACHMENT 1: AN Valve Pit Upgrades Definitive Design Package Contents
ATTACHMENT 2: Definitive Design Review Kickoff Briefing Attendance List

A-3000-480 (10/94) GEF011

ATTACHMENT #1

DRAWING LIST

DRAWING LIST

DRAWING NO.	INDEX NO.	TITLE
H-14-100929		DRAWING LIST – VICINITY MAP

STRUCTURAL

DRAWING NO.	INDEX NO.	TITLE
H-14-100930		STRUCTURAL COVER BLOCKS 241-AN-A PLAN AND DETAILS
H-14-100931		STRUCTURAL COVER BLOCKS 241-AN-B PLAN AND DETAILS
H-14-100932		STRUCTURAL COVER BLOCKS 241-AN-A,B SECTIONS AND DETAILS
H-14-100933 SH 1		STRUCTURAL PITS 241-AN-A,B WALL MODIFICATIONS
H-14-100933 SH 2		STRUCTURAL PITS 241-AN-A,B SHIELDING COLLAR

PIPING & VESSELS

DRAWING NO.	INDEX NO.	TITLE
H-14-100941		P&ID VALVE PIT 241-AN-A
H-14-100942		P&ID VALVE PIT 241-AN-B
H-14-100943		P&ID MISCELLANEOUS DETAILS
H-14-100944		JUMPER ARRANGMENT VALVE PIT 241-AN-A
H-14-100945		JUMPER ARRANGMENT VALVE PIT 241-AN-A SECTION
H-14-100946		JUMPER ARRANGMENT VALVE PIT 241-AN-B
H-14-100947		JUMPER ARRANGMENT VALVE PIT 241-AN-B SECTION
H-14-100948		JUMPER ASSEMBLY 241-AN-A L1-(H)
H-14-100949 2 SH		JUMPER ASSEMBLY 241-AN-A L3-L5-(A&B)
H-14-100950 2 SH		JUMPER ASSEMBLY 241-AN-A L7-L9-(B&C)
H-14-100951		JUMPER ASSEMBLY 241-AN-A 241-AN-A L11-(D)
H-14-100952 2 SH		JUMPER ASSEMBLY 241-AN-A L14-L15-L16-(D&E)
H-14-100953 2 SH		JUMPER ASSEMBLY 241-AN-A L19-(E-F-G&H)
H-14-100954		JUMPER ASSEMBLY 241-AN-A L20-(A)
H-14-100955		JUMPER ASSEMBLY 241-AN-A L21-(F)
H-14-100956		JUMPER ASSEMBLY 241-AN-A L11A-DRAIN
H-14-100957		JUMPER ASSEMBLY 241-AN-A L20A-DRAIN
H-14-100958		JUMPER ASSEMBLY 241-AN-A L21A-DRAIN
H-14-100959 2 SH		JUMPER ASSEMBLY 241-AN-B R1-(D&E)
H-14-100961 2 SH		JUMPER ASSEMBLY 241-AN-B R5-R20-(B)
H-14-100962 2 SH		JUMPER ASSEMBLY 241-AN-B R7-R9-(B&C)
H-14-100963		JUMPER ASSEMBLY 241-AN-B R11-(G)
H-14-100964 2 SH		JUMPER ASSEMBLY 241-AN-B R14-R15-R16 (F&G)
H-14-100965 2 SH		JUMPER ASSEMBLY 241-AN-B R19-(D&F)
H-14-100966		JUMPER ASSEMBLY 241-AN-B R1A-DRAIN
H-14-100967		JUMPER ASSEMBLY 241-AN-B R11A-DRAIN
H-14-100968		JUMPER ASSEMBLY 241-AN-B R20A-DRAIN
H-14-100969		PIT COVER PAINTING DIAGRAM 241-AN-A
H-14-100970		PIT COVER PAINTING DIAGRAM 241-AN-B
H-14-100971 4 SH		FUNNEL ASSEMBLY 2 AND 3 WAY VALVE & DETAILS
H-14-100972 2 SH		VALVE HANDLE ASSEMBLY 2 AND 3 WAY VALVE
H-14-100973		PIPING MISCELLANEOUS DETAILS
H-14-100974 3 SH		PIPING VALVE PIT 241-AN-A & B MODIFICATION DETAILS
H-14-100975 2 SH		VALVE ACTUATOR ARRANGEMENT VALVE PIT 241-AN-A -B
H-14-100976 2 SH		VALVE ACTUATOR DETAILS
H-14-100978		PIPING FLOOR DRAIN SEAL ASSEMBLY VALVE PITS 241-AN-A&B

ELECTRICAL

DRAWING NO.	INDEX NO.	TITLE
H-14-100935 2 SH		ELECTRICAL POWER AND CONTROL PLAN 241-AN TANK FARM
H-14-100936 3 SH		ELECTRICAL INSTALLATION DETAILS VALVE PIT 241-AN-A,B
H-14-100937		ELECTRICAL PANELBOARD SCHEDULE EDS-DP-106
H-14-100938 2 SH		ELECTRICAL WIRE RUN LIST 241-AN-A,B
H-14-100939 2 SH		ELECTRICAL CATHODIC PROTECION 241-AN-A,B

INSTRUMENTATION

DRAWING NO.	INDEX NO.	TITLE
H-14-100980		INSTM VALVE POSITION SWITCH ASSEMBLY
H-14-100981 2 SH		INSTM PIT LEAK DETECTION ASSY TANK FARMS
H-14-100982		INSTM TRANSFER LINE ENCASEMENT LEAK DETECTION ASSEMBLY
H-14-100983		INSTM LEAK DETECTOR RELAY CABINET ASSEMBLY & DETAILS
H-14-100984		INSTM PLAN AN FARM 241-AN-A&B
H-14-100985		INSTM 241-AN-A ELEVATION & DETAILS
H-14-100986		INSTM 241-AN-B ELEVATION & DETAILS
H-14-100987 3 SH		INSTM VALVE POSITION SWITCHES LOOP DIAGRAM
H-14-100988		INSTM AN-FARM FIELD TERMINAL BOX
H-14-100989 2 SH		INSTM VALVE PIT LEAK DETECTION LOOP DIAGRAM
H-14-100990 2 SH		INSTM ENCSD LOW PT LEAK DET LOOP DIAGRAM
H-14-100991 3 SH		INSTM INSTRUMENT LIST AN TANK FARM
H-14-101134		INSTM GENERIC FIELD TERMINAL BOX

CONSTRUCTION SPECIFICATION

W-314-C1	CONSTRUCTION SPECIFICATION

PROCUREMENT SPECIFICATION

W-314-P1	BALL VALVES
W-314-P2	IMPACT WRENCH

ATTACHMENT #2

9/11/97

AN Valve Pit Upgrade Design Review Kickoff

✓	Mark Rickenbach	FDNW	PLE	373-3539
✓	Dick McGrew	NHC	PE	372-2296
✓	Kirk Boes	NHC	Proj. Engineer	372-3023
✓	MARK E. DALLAS	FDNW	INST. ENGINEER	376-2949
✓	RON HAHKARI	FDNW	ELEC. LEAD	376-0324
✓	RICHARD ACKERMAN	FDNW	CIVIL/STR. LD	373-4540
✓	TOM SALZANO	FDNW	PIPING	372-2267
✓	DAVE PECK FOR CURT RIECK	FDNW FORD NHC	—	373-3783
✓	Robert Nicholson	LMHC	Cog. Eng.	373-2986
✓	Phil Miller	LMHC	Env Ops Comp	373-6389
✓	Treta Ravencraft	LMHC	OP's ENG.	373-9275
✓	RT Skamser	LmHC	Ops Rep	373.4768
✓	Lee M. Livesey	LMHC	Radiological Con	3-1975
✓	W.A. Hays	FDNW	STARTUP	6-0047
✓	D.E. Bowers	LMHC	COG/DA	373-1841
✓	D.R. Wiemaker	LmHC	TFOPS	373-9115
✓	H.H. Gerard	LATA	TECH. SUPPORT	373-2600
✓	JT KOBERG	FDNW	PM	373-2576
✓	RW JACOBSEN	LMHC	TF Ops Lead	376-2957
✓	SHAKIR ZAMAN	LMHC	NUCLEAR SAFETY	372-2312
✓	James Pierce	LMHC	Rad Con	376-4175
✓	J.W. Thomson	LMHC	MAINT	373-7777
✓	M S Huffman	DESH	HSE&L	373-2148

MEETING MINUTES

Subject: FINAL DESIGN REVIEW MEETING - W-314 AN VALVE PIT UPGRADES

TO: Distribution **BUILDING**

FROM: Kirk Boes **CHAIRMAN** Kirk Boes

Department-Operation-Component	Area	Shift	Date of Meeting	Number Attending
TWRS/Project W-314			9/25/97	23

ATTENDEES:		DISTRIBUTION:		
R. A. Ackerman	G3-12		Attendees	
R. Adhikari	G3-12	*	D. G. Baide	S5-05
K. A. Boes	R3-25	*	T. W. Bohan	S5-04
D. E. Bowers	S5-13	*	S. R. Briggs	R3-25
H. M. Chafin	R3-25	*	R. A. Dodd	S5-07
R. T. Carratt	G3-12		J. D. Galbraith	H5-49
M. E. Dallas	G3-12	*	A. H. Gerard	S0-09
J. T. Koberg	G3-12	*	W. H. Hays	E6-08
P. C. Miller	R1-51	*	P. A. Haine	R3-47
J. E. Navarro	S7-54		R. W. Jacobson	R1-09
R. S. Nicholson	S5-05	*	C. E. Leach	R1-49
D. R. Nunamaker	T4-07	*	L. M. Livesey	S5-07
J. E. Navarro	S7-54	*	S. L. Leckband	R3-47
J. E. Pieper	S5-21		J. R. LaPointe	R2-88
T. K. Ravencraft	S5-04		D. L. McGrew	R3-25
M. D. Rickenbach	G3-12	*	R. L. Nelson	R3-47
W. W. Rutherford	R3-25		D. W. Reberger	S5-13
T. B. Salzano	G3-12		C. A. Rieck	S2-48
R. T. Skamser	S2-48	*	W. E. Ross	S5-07
M. S. Tiffany	R1-49		R. J. Shupe	R2-50
T. L. Warnick	S5-01	*	W. T. Thompson	G3-21
J. W. Whattam	G3-12		E. M. Veith	R1-56
S. U. Zaman	S5-12		Project Files	G3-11

* Indicates copy w/o attachments

These meeting minutes document the discussions and actions from the final definitive design review for the Project W-314 AN Valve Pit Upgrades design package. Copies of the design package (consisting of 60 detailed drawings, C-1 Construction Specification, and P-1/P-2 Procurement Specifications) and specific instructions for the review were provided to the Design Review Team during the 9/11/97 kickoff briefing.

The assembled team (see Attachment 1 for meeting attendees) reviewed each of the design drawings one by one. Any comments or questions related to a particular drawing were discussed and, in most cases, an initial disposition was assigned to the comment. Comments which were tentatively dispositioned as "accepted," or which were determined to require further evaluation by the Design Team, were recorded on a consolidated Review Comments Record (RCR) form representing the formal comments of the team (see Attachment 2). Likewise, the C-1 Construction Specification and the P-1/P-2 Procurement Specifications were reviewed by the team and comments recorded on the RCR. Closure of this RCR (indicated by approval signatures from each of the participating review

organizations) will signify the Design Review Team's final approval of the comment dispositions and approval of the AN Valve Pit Upgrades design.

The W-314 Project Engineers will followup with review team members as needed to complete the comment resolution process. Comments will be incorporated by the FDNW Design Team as indicated on the official RCR. Upon completion of this activity and verification that all comments have been appropriately incorporated, the AN Valve Pit Upgrades design media will be approved and formally released to support construction. Anyone needing further information concerning this process is requested to contact Kirk Boes at 372-3023.

ATTACHMENT 1: Definitive Design Review Meeting Attendance List
ATTACHMENT 2: Review Comment Record (not incl. dispositions)

ATTACHMENT #1

9/25/97

AN Design Review Meeting

✓	Mark Rickenbach	FDNW	373-2539
✓	Kirk Boes	NHC / PROJECTS	372-3023
✓	Jim Navarro	DOE-RL	373-9365
✓	RICHARD ACKERMAN	FDHW	373-4540
✓	TOM SALZANO	FDNW	372-2267
✓	RON ADHIKARI	FDNW	376-0324
✓	DICK CARRATT	FDNW	372-3726
✓	MARK DALLAS	FDNW	376-2949
	JEFF Whittam	FDNW	376-6401
✓	Phil Miller	LMHC	373-6389
✓	Bob Nicholson	LMHC	373-2986
✓	RT Skamser	LMHC	3-4768
	Terry Warnick	FDNW	6-4424
✓	DAVID Bowers	LMHC	3-1841
✓	Theta Ravencraft	LMHC	3-9275
✓	James Poppe	LMHC	6-4175
✓	Dan Nunamaker	LMHC	373-9115
✓	HANK M. CHAFIN	FDNW	376-3387
✓	JOHN KOBERG	FDNW	373-2576
	Shakir Zaman	LMHC	372-2312
✓	WALLY RUTHERFORD	NHC	372-2903
✓	MATT TIFFANY	DESH	373-2148

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
9/25/97 ~~xx/xx/xx~~	AN-002 ~~xxx~~
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5. Document Number(s)/Title(s)	6. Program/Project/ Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
Project W-314 - Phase 1, "AN Valve Pit Upgrades" Definitive Design Drawings and Specifications (see Attachment for detailed list of design documents reviewed)	TWRS/Project W-314			

17. Comment Submittal Approval:

Organization Manager (Optional) _____ Date _____

10. Agreement with indicated comment disposition(s)

Reviewer/Point of Contact _____ Date _____

Author/Originator _____

11. CLOSED

Reviewer/Point of Contact _____ Date _____

Author/Originator _____

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
1	H-14-100929, sht. 1: Verify that Drawing List is consistent with drawing titles and numbers. (Chafin)			
2	H-14-100929, sht. 1: Delete road and relocate fenceline shown in "blow up" view of AN Tank Farm. (Nicholson)			
3	H-14-100930, sht. 1: In Note 3, add "-C1" to the referenced specification number. (Boes)			
4	H-14-100930, sht. 1: Add an additional viewing port near center of pit. Comment applies also to H-14-100931. (Nicholson)			
5	H-14-100930, sht. : Clarify that 3" probe is for the leak detection probe. Comment applies also to H-14-100931. (Boes)			
6	H-14-100930, sht. 1: Ensure that viewport is positioned (or additional port provided) to allow remote viewing of the drain and leak detector. (Bowers)			

ATTACHMENT #2

REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No.
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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
7	H-14-100931, sht. : Clarify title of Section 3 to indicate it is for the leak detection probe. (Boes) Comment applies also to H-14-100931.			
8	H-14-100932, sht. 1: In Section 10, add painted notation on shield plug to identify drawing number and weight. (Bowers)			
9	H-14-100932, sht. 1: Evaluate need for beveling bottom of floor drain seal access port penetration (Section 9) and all other penetrations. (Bowers)			
10	H-14-100932, sht. 1: Revise call-outs used on this drawing to shielding collar, not shielding block". (Boes)			
11	H-14-100932, sht. 1: Clarify in Section A that mark made on top of existing pit wall for alignment of coverblock should be painted. (Boes)			
12	H-14-100933, sht. 1: Delete Note 7. (Bowers)			
13	H-14-100933, sht. 2: Add specification number in Note 2 (i.e., W-314-C1). (Nicholson)			
14	H-14-100933, sht. 2: Delete unistrut in Section G and move details to electrical drawings. (Skamser)			
15	H-14-100933, sht. 2: In Section J, ensure that pipe cap can be readily removed. May need to provide a different/modified cap, or consider changing to a different blockout design similar to Section K. (Bowers/Warnick)			
16	H-14-100933, sht. 2: Check locations of existing "speed rail" installations around valve pits and accomodate if it interferes with new shielding collar. (Bowers)			
17	H-14-100935, sht. 1: Evaluate enlarging Detail 1 to make this detail easier to read. (Nicholson)			

REVIEW COMMENT RECORD (RCR)	1. Date XX/XX/XX	2. Review No. XXX
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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
18	H-14-100935, sht. 1: Straighten out conduit runs shown in Detail 1. (Nicholson)			
19	H-14-100935, sht. 1: Evaluate what to do with existing LSD-VP-AN-A-1 and LSD-VP-AN-B-1 (shown on H-2-71927 and -25). (Warnick)			
20	H-14-100935, sht. 1: Evaluate and verify that existing leak detector wiring conduits that are not needed are removed. (Warnick)			
21	H-14-100935, sht. 2: Evaluate adding up to 5 additional spare conduits between instrument building an valve pit area. (Nicholson)			
22	H-14-100935, sht. 2: Verify that planned underground conduit runs are designed to sustain applicable traffic loadings. (Bowers)			
23	H-14-100935, sht. 2: Concerning Note 13, it is suggested that future project as-builts reflect locatons where existing buried boards are removed. (Bowers)			
24	H-14-100935, sht. 2: Verify drawing number referenced in Note 8. (Chafin)			
25	H-14-100936, sht. 1: In Section A and Elevation C, new unistrut should not extend below grade into soil. Also verify that new shielding collar representation is consistent with the structural drawings. Comments also apply to other applicable drawings. (Warnick)			
26	H-14-100936, sht. 1: In Elevation B, add note that new grounding system is a static ground only. (Warnick)			
27	H-14-100936, sht. 3: Clarify labeling to include matching cord sets. (Bowers)			

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
28	H-14-100936, sht. 3: Expand Note 7 to include info on how to meet NEMA 4. (Boes)			
29	H-14-100937, sht. 1: Delete Note 3. (Boes)			
30	H-14-100938, sht. 1: Expand Note 8 to clarify that spares are for future W-314 use (i.e., Phase 2). (Rickenbach)			
31	H-14-100939, sht. 1: Make representations for new/existing pipelines consistent with sheet 2. (Boes)			
32	H-14-100941, sht. 1: Correct location shown for nozzle L21A. (Miller)			
33	H-14-100939, sht. 1: Evaluate bonding of all spare nozzles. Comment also applies to sheet 2. (Bowers)			
34	H-14-100939, sht. 2: Evaluate need to bond new SN-630 nozzle at the pit. (Bowers)			
35	H-14-100943, sht. 1: Clafify in Detail 3 and/or general notes the location of the PLCs. (Nicholson)			
36	H-14-1009XX, sht. : Evaluate method to ensure that temporary piping stub-outs cannot be inadvertantly contaminated with waste without detection. (Bowers)			
37	H-14-100944, sht. 1: Jumper installation sequence provided in the drawing (intended for construction) does not address the full range of possible operational jumper changeout possibilities. This comment also applies to H-14-100946. Add recommended jumper changeout procedure. (Bowers)			

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
38	H-14-100944, sht. 1: Clarify note concerning removal of existing support structure to indicate that existing will be removed flush to pit floor. Comment also applies to H-14-100945, -46, and -47. (Skamser)			
39	General comment: Change W-314 jumper connectors from new ISB design to existing Purex connector heads. (Bowers/Boes)			
40	H-14-100948, sht. 1: Concerning Note 3, clarify that actual weight will be painted on the jumper after fabrication, and reflected on as-built drawings. This comment applies to all jumper drawings. (Bowers)			
41	H-14-100948, sht. 1: Evaluate whether additional protection for pit SPC should be provided for jumper support footings. Comment applies to all jumper drawings. (Bowers)			
42	General comment: When as-builting jumper drawings, include actual valve data (make/model etc.) in parts list. Comment aplies to all jumper drawings. (Nicholson)			
43	H-14-100969, sht. 1: Consider enlarging label information shown on coverblock painting plan for better readability. Comment will also affect H-14-100970. (Nicholson)			
44	H-14-100969, sht. 1: All coverblock penetrations need to have unique identification numbers included in the painting scheme. Comment will also affect H-14-100970 and civil/structural coverblock drawings. (Bowers)			
45	H-14-100969, sht. 1: Delete all pipe code callouts from painted coverblock labels. (Bowers)			

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
46	H-14-100971, sht. 1: Add visual indication of valve position to inside and outside of valve funnels to allow remote (camera) examination and determination of valve position. Also add note to drawing to indicate that the keyway lines up with the valve through port. (Nicholson)			
47	H-14-100971, sht. 1: Evaluate reorientating Part No. 12 (valve handle receiver assembly) to make it less vulnerable to becoming obstructed. (Bowers)			
48	General comment: Provide locking capability for all drain valve positions. (Nicholson)			
49	H-14-100972, sht. 1: Add note identifying the approximate weight of valve handle assemblies. If necessary, add features to allow crane installation/removal. (Bowers)			
50	H-14-100972, sht. 1: Clarify weld note near bottom of Assembly 1 drawing and also Note 10. (Warnick)			
51	H-14-100972, sht. 1: Clarify method for field determination of valve handle assembly dimensions. (Pieper)			
52	H-14-100973, sht. 1: Add note addressing NDE requirements for lifting bail bend shown in Assembly 1. (Rickenbach)			
53	H-14-100973, sht. 1: Delete Assembly 4 and Note 2, and add impact wrench socket information to P-spec. (Nicholson)			
54	H-14-100974, sht. 1: Verify that welding of nozzle anchor plates will not overstress wall anchors. (Bowers)			

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
55	H-14-100974, sht. 2: In Section F-F, clarify identification of temporary polyethelene sheeting used for piping stubouts. (Nicholson)			
56	H-14-100974, shts. 1-3: Verify consistency of safety classification information between drawings and C-spec. (Chafin)			
57	H-14-100974, shts. 1 and 2: Clarify requirements/instructions associated with core drill keys. (Warnick)			
58	H-14-100974, shts. 1 and 2: Verify that any damage to new grout due to welding of anchor plates will not be a concern. (Bowers)			
59	H-14-100975, sht. 1: Recommend adding new pit leak detector to the valve actuator arrangement plan. Comment also applies to sheet 2. (Bowers)			
60	H-14-100975, sht. 1: Move viewport penetrations as needed so they'l be unobstructed by the valve actuator assemblies. Comment also applies to sheet 2. (Bowers)			
61	H-14-100976, sht. 1: Add some type of lifting mechanism to support removal of the valve actuator assemblies. (Ravencraft)			
62	H-14-100976, sht 2: Concerning Notes 9 and 10, verify that there is sufficient torque margin to operate the valves. (Bowers)			
63	H-14-100978, sht 2: Add color indication to show when drain plug is lifted (red for open position). (Nicholson)			
64	H-14-100978, sht. 1: Add note to provide instructions on removal of handle and/or Part No. 5. (Bowers)			

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
65	H-14-100978, sht 1: Modify lifting handle to allow the floor drain plug to be operated by two people. (Bowers)			
66	H-14-100981, sht. 1: Pit leak detector probes should be lowered to minimize amount of liquid necessary to trigger an alarm. A maximum quantity of 10 gallons (or less) is desirable. Revise Note 4 accordingly. (Miller)			
67	H-14-100981, sht. 1: Ensure that leak detector assembly is labled. Also include "warning" label with Note 9 information to preclude Operator from trying to remove probes before removing the shield plug. (Bowers)			
68	H-14-100981, sht. 2: Label shield plug with its actual weight, and include this information on the drawing. (Bowers)			
69	H-14-100983, sht. 1: Identify the intrinsically safe components/areas in the leak detector cabinet. (Rickenbach).			
70	H-14-100983, sht. 1: Revise Detail 1 assembly drawing to show Part No. 5 (strobe light) to scale. Also, provide protection for the strobe light against wind-driven missiles. (Bowers)			
71	H-14-100983, sht. 1: Review pit leak detection relay cabinet for safety class wind loads. (Bowers)			
72	H-14-100983, sht. 1: Ensure that adequate personnel protective device (shield) is provided to protect against potential electrical shock hazards. (Bowers)			

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
73	H-14-100985, sht. 1: In Elevation A, delete the note associated with Detail 3 which identifies height of probe from pit floor. Comment also applies to H-14-100986. (Boes)			
74	General comment: Change all "MMI" references to "HMI". (Bowers)			
75	H-14-100987, sht. 1: Delete Note 3. (Chafin)			
76	General comment: Label all intrinsically safe SSCs shown on the loop diagrams. (Bowers)			
77	H-14-100989, sht. 1: Identify specific location of relay K-241-AN-PP. (Bowers)			
78	W-314-C1, Pg. 01010-1: Add demolition of existing coverblocks to section 1.2.1.1.e. (Pieper)			
79	W-314-C1, General comment: Consider use of non-wood materials for shoring due to radiological concerns. (Nunamaker)			
80	W-314-C1, Pg. 02050-2: Delete section 3.3.3. (Pieper)			
81	W-314-C1, Pg. 02220-3: In section 3.1.6.2, add requirement to notify design engineer of density test results. (Bowers)			
82	W-314-C1, Pg. 03300-2: In section 1.3.1, verify whether Level II concrete inspector is reqired. (Koberg)			
83	W-314-C1, Pg. 03300-4: In section 1.6.1, verify that referenced Practice is adequate for safety class SSCs. (Bowers)			
84	W-314-C1, Pg. 05055-2: In section 3.3.1, verify that the referenced Practice is adequate for safety class SSCs. (Bowers)			

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
85	W-314-C1, Pg. 05500-2: In section 1.2.3.1, revise to be consistent with section 1.3.2.1. (Warnick)			
86	W-314-C1, Section 05500: General comment: Ensure proper traceability of materials to the applicable testing records. Comment also applies to other sections of the specification. (Warnick)			
87	W-314-C1, Pg. 09855-8: Revise section 3.2.1 to maximize flexibility in determining the most suitable pit prepatory steps. (Boes)			
88	W-314-C1, Pg. 09855-9: In section 3.2.2.5.b, specify a maximum allowable pressure of 3000 psi to comply with the short-form NOC and existing "routine and approved" activities list. Also, delete the allowed use CO2 blasting discussed in Section 3.2.2.5.c. (Miller)			
89	W-314-C1, Pg. 09855-11: Revise section 3.5 as needed to minimize generation of liquid wastes in potentially contaminated areas. (Ravencraft)			
90	W-314-C1, Pg. 13440-1: Add ASME NQA-1 as a reference in section 1.1.1.1, and provide qualified vendor option to appropriate section. (Chafin)			
91	W-314-C1, Pg. 13440-7: Clarify in section 2.3.2.5.b. what constitutes "sufficient packaging". Comment also applies in other sections (such as 2.3.2.6.b.). (Chafin)			
92	W-314-C1, Pgs. 13440-11: Revise Vendor Data List to include data submittals for all new instrumentation. (Bowers)			
93	W-314-C1, Pg. 15493-3: In section 1.2.2.1.a., change "safety significant" to "general service". Comment also applies to section 1.4.1. (Rickenbach)			

REVIEW COMMENT RECORD (RCR)

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
94	General comment: Change safety classification for new flush piping from general service to safety class. (Bowers)			
95	W-314-C1, Pg. 15493-3: In section add requirements for vendor data submittals. (Warnick)			
96	W-314-C1, Pg. 15493-5: Delete section 2.2.4.2, and consider lessons learned from Project W-320 for protective coating of buried piping. (Bowers)			
97	W-314-C1, Pg. 15493-6: Verify that requirements stated in section 2.2.8.1. are applicable to this work scope. (Pieper)			
98	W-314-C1, Pg. 15493-7: General comment for executon fo piping work (Part 3): Maximize use of in-shop inspections and testing to minimize construction costs. (Bowers)			
99	W-314-C1, Pg. 15493-10: In section 3.2.1.4, change "safety significant" to "general service". Also confirm that this information is applicable in this section. (Chafin)			
100	W-314-C1, Pg. 15493-10: Add requirement in section 3.2.2 for wrapping/sealing of nozzles and piping after flushing to maintain cleanliness. (Koberg)			
101	W-314-C1, Pg. 15493-15: Change "safety significant" to "general service". (Rickenbach)			
102	W-314-C1, Pg. 15493-A-3: In section 2.2, add the word's "normal service" to the B31.3 process piping. (Bowers)			
103	W-314-C1, Pg. 15493-A-3: Verify the acceptability of lubricants listed in section 3.1.1 (Kirk Boes to contact Flammable Gas Equipment Advisory Board for a determination). (Richenbach)			

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
104	W-314-C1, Pg. 15493-A-6: Add requirement to leak test jumpers with valves in all possible operating positions. (Bowers)			
105	W-314-C1, Pg. 15493-A-7: Add requirement to section 3.7.7 to weigh jumpers and add this information to the jumper identification label. (Bowers)			
106	W-314-C1, Pg. 15493-A-7: Delete section 3.7.6.2. (Bowers)			
107	W-314-C1, General comment: Verify existing drawings for isolation vapor seals is current and usable. (Bowers)			
108	W-314-C1, Section 16400: Verify that appropriate load conditons are specified for hand-hole covers. (Bowers)			
109	W-314-C1, Pg. 16400-7: Delete section 3.2.3.7.			
110	W-314-C1, Pg. 16640-5: Delete section 2.2.8 (Adhikari)			
111	W-314-P1, General comment: Consider suitability of using plug valves and/or ball valves for jumpers. (Bowers)			
112	W-314-P1, Pg. 4: Clarify in section 3.4.2.2 that valve bodies shall be non-adjustable. (Bowers)			
113	W-314-P1, Pg. 5: Add requirement(s) for body filler or other means to minimize internal entrainment of liquids in the valves. (Bowers)			
114	W-314-P1, Pg. 7: Add a submittal requirement for the section 3.4.3.1 requirements. (Bowers)			
115	W-314-P1, Pg. 5: Verify in section 3.6.4 that proper torque values are specified consistent with the drawings. (Bowers)			

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
116	W-314-P1, Pg. 5: Design of ball (for ball valves) should ensure full sealing in all valve positions. (Bowers)			
117	W-314-P1, Pg. 6: Expand manufacturer's standard requirements for section 4 (Hank Chafin to assist Tom Salzano). (Chafin)			
118	W-314-P1, Pg. 13: Add arrows to diagrams to indicate direction of hydro. (Bowers)			
119	W-314-P1, Pg. 6: In section 5.2.1, add valve weight in data to be submitted by vendor. (Bowers)			
120	W-314-P2, Pg. 3: Determine need for purge system controller on new impact wrenches. Dave Bowers to make determination and inform the design team. (Warnick)			
121	W-314-P2, Pg. 4: Add requirement for loss of purge alarm if necessary. (Bowers)			
122	W-314-P2, Pg. 5: Specify appropriate amperage for impact wrench. (Bowers)			
123	General comment: Check how anti-rotation is accomplished for this impact wrench, and add applicable requirements to P-spec for sockets. (Rickenbach)			
124	General comment: Drawings and specs have not identified required vendor data. This needs to be identified. (Bowers)			
125	General comment: New coverblocks need to be load tested prior to installation. Also verify actual weight of blocks and ensure this is identified on the blocks. (Bowers)			

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126	General comment: As part of planning for critical lifts, verify new cover blocks can be safely lifted and set on ground without impacting tank dome load restrictions. (Skamser)			
127	General comment: Determine need for adding safety class power to support new safety class pit leak detectors.			
128	General comment: Verify whether site standard exists for conduit numbering. Dave Bowers to contact FDH for answer. (Bowers)			
129	General comment: Clarify safety classification and determine if additional analysis and/or controls are required for new encasement drain jumpers. (Bowers)			

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5. Document Number(s)/Title(s)	6. Program/Project/ Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
Project W-314 - Phase 1, "AN Valve Pit Upgrades" Definitive Design Drawings and Specifications (see Attachment for detailed listing of documents reviewed)	TWRS/Project W-314	See below	See below	

17. Comment Submittal Approval:

10. Agreement with indicated comment disposition(s)

11. CLOSED

Kirk A Bass — 10/24/97
Facility Design (W-314 Engineering Lead) — Date

Dick McGrew — 10-28-97
Facility Design (W-314 Systems Engineering Lead) — Date

David E Bowers — 10/28/97
East Tank Farm Engineering — Date

JK Rudnicki — 11-4-97
East Tank Farm Operations — Date

[signature] — 10/24/97
Maintenance Program Integration — Date

[signature] — 10/28/97
Operations Integration — Date

[signature] — 10/24/97
Operations Compliance — Date

Hank M. Chaffin — 10/30/97
Quality Assurance — Date

[signature] — 11/5/97
TWRS Safety — Date

[signature] — 10/28/97
Operations & Projects Safety Support — Date

We were invited to participate in this activity. Due to conflicting priorities we were not able to attend.
[signature] — 10/27/97
TWRS Testing Oversight & Startup — Date

[signature] — 10/29/97
Facility Cognizant Engineer — Date

KA Bass for J.E. Pieper per telecon — 10/28/97
~~TWRS Integration & Baseline Management~~ — Date
Rad Engineering/Tech. Support

[signature] — 10/27/97
West Tank Farm Engineering — Date

[signature] — 11/5/97
Project W-211, ITRS — Date

J.D. Galbraith invited to participate but due to conflicting priorities was not able to attend review meeting
Process Development — Date

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1	H-14-100929, sht. 1: Verify that Drawing List is consistent with drawing titles and numbers. (Chafin)		Accepted. Verified.	
2	H-14-100929, sht. 1: Delete road and relocate fence line shown in "blow up" view of AN Tank Farm. (Nicholson)		Accepted. Deleted road and relocated fence.	
3	H-14-100930, sht. 1: In Note 3, add "-C1" to the referenced specification number. (Boes)		Accepted. Added "-C1".	
4	H-14-100930, sht. 1: Add an additional viewing port near center of pit. Comment applies also to H-14-100931. (Nicholson)		Not accepted. The design as shown fully satisfies the specified design requirements associated with coverblock penetrations (see Project Development Specification for Valve Pit Manifold, HNF-SD-W314-PDS-002, Section 3.7.3.2.3).	
5	H-14-100930, sht. 1: Clarify that 3" probe is for the leak detection probe. Comment applies also to H-14-100931. (Boes)		Accepted. Added verbage on drawing.	
6	H-14-100930, sht. 1: Ensure that viewport is positioned (or additional port provided) to allow remote viewing of the drain and leak detector. (Bowers)		Not accepted. The design as shown offers sufficient viewing capability for the pit interior areas, including the pit drain/leak detector, and fully satisfies the specified design requirements associated with coverblock penetrations (see PDS for Valve Pit Manifold, HNF-SD-W314-PDS-002, Section 3.7.3.2.3).	
7	H-14-100931, sht. : Clarify title of Section 3 to indicate it is for the leak detection probe. (Boes) Comment applies also to H-14-100931.		Accepted. Changed title.	
8	H-14-100932, sht. 1: In Section 10, add painted notation on shield plug to identify drawing number and weight. (Bowers)		Accepted. (Customer Preference) Modified drawing to show drawing # and weight.	

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9	H-14-100932, sht. 1: Evaluate need for beveling bottom of floor drain seal access port penetration (Section 9) and all other penetrations. (Bowers)		All penetrations with potential for snagging of inserted equipment have been beveled to facilitate equipment removal. The penetrations for floor drain seal access and valve stem sleeves do not need to be beveled to remove those pieces of equipment.	
10	H-14-100932, sht. 1: Revise call-outs used on this drawing to shielding collar, not shielding block". (Boes)		Accepted. Changed wording to "collar".	
11	H-14-100932, sht. 1: Clarify in Section A that mark made on top of existing pit wall for alignment of coverblock should be painted. (Boes)		Accepted. Added a note for clarification.	
12	H-14-100933, sht. 1: Delete Note 7. (Bowers)		Accepted. Deleted note 7.	
13	H-14-100933, sht. 2: Add specification number in Note 2 (i.e., W-314-C1). (Nicholson)		Accepted. Added spec number.	
14	H-14-100933, sht. 2: Delete unistrut in Section G and move details to electrical drawings. (Skamser)		Not accepted. The drawing as shown is adequate to construct this item.	
15	H-14-100933, sht. 2: In Section J, ensure that pipe cap can be readily removed. May need to provide a different/modified cap, or consider changing to a different blockout design similar to Section K. (Bowers/Warnick)		Accepted (Customer Preference). Most blockouts for electrical boxes will encompass the pipes & caps. Changed detail for those not close enough (detail like section K).	
16	H-14-100933, sht. 2: Check locations of existing "speed rail" installations around valve pits and accommodate if it interferes with new shielding collar. (Bowers)		Accepted. Verified locations of existing speed rail installations and added sleeves in collar.	
17	H-14-100935, sht. 1: Evaluate enlarging Detail 1 to make this detail easier to read. (Nicholson)		Accepted (Customer Preference). Detail 1 placed on a new sheet 3.	

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18	H-14-100935, sht. 1: Straighten out conduit runs shown in Detail 1. (Nicholson)		Not accepted. This plan is intended to provide only a schematic representation of the new conduit runs. Actual conduit routing will be determined in the field based on minimum lengths required to avoid obstructions and interferences. As-built drawing(s) will reflect the actual conduit locations. A new note added to clarify this information.	
19	H-14-100935, sht. 1: Evaluate what to do with existing LSD-VP-AN-A-1 and LSD-VP-AN-B-1 (shown on H-2-71927 and -25). (Warnick)		Not accepted. This work is not in project scope, and current configuration of LSD's does not impact operations.	
20	H-14-100935, sht. 1: Evaluate and verify that existing leak detector wiring conduits that are not needed are removed. (Warnick)		Partially Accepted. Note added to place old conduit/wiring in a safe state and abandon in place. The old conduit/wiring will NOT be completely removed.	
21	H-14-100935, sht. 2: Evaluate adding up to 5 additional spare conduits between instrument building an valve pit area. (Nicholson)		Accepted (Customer Preference). Five spare conduits for future Operations are provided in the trench as requested by the customer.	
22	H-14-100935, sht. 2: Verify that planned underground conduit runs are designed to sustain applicable traffic loadings. (Bowers)		Accepted. Verified that the design as shown is consistent with Site Electrical Board standards.	
23	H-14-100935, sht. 2: Concerning Note 13, it is suggested that future project as-builts reflect locations where existing buried boards are removed. (Bowers)		Accepted (Customer Preference). This will be addressed in Title 3 as-building.	
24	H-14-100935, sht. 2: Verify drawing number referenced in Note 8. (Chafin)		Accepted. Revise drawing number.	

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25	H-14-100936, sht. 1: In Section A and Elevation C, new unistrut should not extend below grade into soil. Also verify that new shielding collar representation is consistent with the structural drawings. Comments also apply to other applicable drawings. (Warnick)		Accepted. Drawing revised for consistency with the structural drawings. Unistrut mounting details will remain on the structural drawings.	
26	H-14-100936, sht. 1: In Elevation B, add note that new grounding system is a static ground only. (Warnick)		Accepted. Note added.	
27	H-14-100936, sht. 3: Clarify labeling to include matching cord sets. (Bowers)		Accepted (Customer Preference). Added additional labeling information.	
28	H-14-100936, sht. 3: Expand Note 7 to include info on how to meet NEMA 4. (Boes)		Accepted. Modified the parts/material list and deleted note 7.	
29	H-14-100937, sht. 1: Delete Note 3. (Boes)		Accepted. Deleted note 3.	
30	H-14-100938, sht. 1: Expand Note 8 to clarify that spares are for future W-314 use (i.e., Phase 2). (Rickenbach)		Accepted. Added.	
31	H-14-100939, sht. 1: Make representations for new/existing pipelines consistent with sheet 2. (Boes)		Accepted. Modified to make consistent.	
32	H-14-100941, sht. 1: Correct location shown for nozzle L21A. (Miller)		Accepted. Corrected location.	
33	H-14-100939, sht. 1: Evaluate bonding of all spare nozzles. Comment also applies to sheet 2. (Bowers)		Not accepted. Cathodically protecting existing spare nozzles is not in scope.	
34	H-14-100939, sht. 2: Evaluate need to bond new SN-630 nozzle at the pit. (Bowers)		Accepted. Bonding to cathodically protect the new piping nozzle/stubout provided by W-314 will be added.	
35	H-14-100943, sht. 1: Clarify in Detail 3 and/or general notes the location of the PLCs. (Nicholson)		Accepted (Customer Preference). Clarified to indicate PLC location.	

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36	H-14-1009XX, sht. : Evaluate method to ensure that temporary piping stub-outs cannot be inadvertently contaminated with waste without detection. (Bowers)		The piping stubout will be capped, a leak detector riser and drain line provided but NO leak detection system will be installed (per P. Miller direction).	
37	H-14-100944, sht. 1: Jumper installation sequence provided in the drawing (intended for construction) does not address the full range of possible operational jumper changeout possibilities. This comment also applies to H-14-100946. Add recommended jumper changeout procedure. (Bowers)		Accepted. The "Jumper Installation Sequence" will be revised as "Recommended Construction Sequence".	
38	H-14-100944, sht. 1: Clarify note concerning removal of existing support structure to indicate that existing will be removed flush to pit floor. Comment also applies to H-14-100945, -46, and -47. (Skamser)		Not accepted. No change required to the design because the supports do not have to be made flush to the floor to allow proper installation of the new jumpers.	
39	General comment: Change W-314 jumper connectors from new ISB design to existing Purex connector heads. (Bowers/Boes)		Accepted. PUREX connectpr heads provided. PDS changed required.	
40	H-14-100948, sht. 1: Concerning Note 3, clarify that actual weight will be painted on the jumper after fabrication, and reflected on as-built drawings. This comment applies to all jumper drawings. (Bowers)		Accepted (Customer Preference). This customer request added to construction spec (W-314-C1).	
41	H-14-100948, sht. 1: Evaluate whether additional protection for pit SPC should be provided for jumper support footings. Comment applies to all jumper drawings. (Bowers)		Not accepted. Total coating system as specified is 4 coats with a total thickness is 15 mils. Little if any damage to the coating is expected and, if damage does occur during installation, it can be repaired prior to turnover of the pit upgrade.	

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42	General comment: When as-builting jumper drawings, include actual valve data (make/model etc.) in parts list. Comment applies to all jumper drawings. (Nicholson)		Accepted. Will be covered in Title 3 as-builting.	
43	H-14-100969, sht. 1: Consider enlarging label information shown on coverblock painting plan for better readability. Comment will also affect H-14-100970. (Nicholson)		Not accepted. Although some label information shown on the drawing is small, it is still readable on the half-size print.	
44	H-14-100969, sht. 1: All coverblock penetrations need to have unique identification numbers included in the painting scheme. Comment will also affect H-14-100970 and civil/structural coverblock drawings. (Bowers)		Accepted (Customer Preference). Will tag (not paint) all 4" penetration covers, gas sampling port & leak detection port, everything else will be labeled.	
45	H-14-100969, sht. 1: Delete all pipe code callouts from painted coverblock labels. (Bowers)		Accepted (Customer Preference). Pipe codes deleted.	
46	H-14-100971, sht. 1: Add visual indication of valve position to inside and outside of valve funnels to allow remote (camera) examination and determination of valve position. Also add note to drawing to indicate that the keyway lines up with the valve through port. (Nicholson)		Addition of visual indication of valve position to inside and outside of valve funnels to allow remote examination and determination of valve position is not accepted. The inside of the funnel will be painted yellow per the c-spec, but the funnel does not rotate with the valve ball. Second part of comment related to addition of note is accepted (Customer Preference).	

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47	H-14-100971, sht. 1: Evaluate reorientating Part No. 12 (valve handle receiver assembly) to make it less vulnerable to becoming obstructed. (Bowers)		Accepted (Customer Preference). Other than brief periods when the handles are removed (i.e., during in-pit maintenance) the receiver will not be able to collect foreign meterial or otherwise become obstructed. A design change will be made to incorporate the driver pin (Part No. 21) on the end of the valve extension handle rather than as a part of the receiver assembly. This change will make recovery easier in the event that the pin is accidently sheared off.	
48	General comment: Provide locking capability for all drain valve positions. (Nicholson)		This feature is already provided by the current design. See H-14-100972, note 5.	
49	H-14-100972, sht. 1: Add note identifying the approximate weight of valve handle assemblies. If necessary, add features to allow crane installation/removal. (Bowers)		Accepted (Customer Preference). Weight will be added to jumpers. No special crane installation/removal features required to allow crane removal/installation of valve handles.	
50	H-14-100972, sht. 1: Clarify weld note near bottom of Assembly 1 drawing and also Note 10. (Warnick)		Accepted. Reworded note.	
51	H-14-100972, sht. 1: Clarify method for field determination of valve handle assembly dimensions. (Pieper)		Accepted (Customer Preference). The drawing will be revised to include a specified length for the valve handle shaft, along with notes to direct construction personnel to trim shaft to fit as needed in the field.	
52	H-14-100973, sht. 1: Add note addressing NDE requirements for lifting bail bend shown in Assembly 1. (Bowers)		Accepted (Customer Preference). Added notes for dye penetrant testing of the lifting bail bend radius.	
53	H-14-100973, sht. 1: Delete Assembly 4 and Note 2, and add impact wrench socket information to P-spec. (Nicholson)		Accepted. Deleted and added socket to p-spec.	

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54	H-14-100974, sht. 1: Verify that welding of nozzle anchor plates will not overstress wall anchors. (Bowers)		Accepted. Verified that wall anchors will not be overstressed even if weld shrinkage slightly warps anchor plate.	
55	H-14-100974, sht. 2: In Section F-F, clarify identification of temporary polyethylene sheeting used for piping stubouts. (Nicholson)		Noted. Sheeting has been deleted from design.	
56	H-14-100974, shts. 1-3: Verify consistency of safety classification information between drawings and C-spec. (Chafin)		Accepted. Changed construction spec. to be consistent.	
57	H-14-100974, shts. 1 and 2: Clarify requirements/instructions associated with core drill keys. (Warnick)		Accepted (Customer Preference). New 14" core drill shown with phantom blockout.	
58	H-14-100974, shts. 1 and 2: Verify that any damage to new grout due to welding of anchor plates will not be a concern. (Bowers)		Accepted. Verified that grout is not required for structural purposes.	
59	H-14-100975, sht. 1: Recommend adding new pit leak detector to the valve actuator arrangement plan. Comment also applies to sheet 2. (Bowers)		Accepted. (Customer Preference) Added to both sheets.	
60	H-14-100975, sht. 1: Move viewport penetrations as needed so they'll be unobstructed by the valve actuator assemblies. Comment also applies to sheet 2. (Bowers)		Accepted. Moved to minimize interference with valve actuators.	
61	H-14-100976, sht. 1: Add some type of lifting mechanism to support removal of the valve actuator assemblies. (Ravencraft)		Not accepted. Once the gear operator & limit switch are unbolted from the supporting mounting plate, the assembly can be slung around the mounting plate for removal.	
62	H-14-100976, sht 2: Concerning Notes 9 and 10, verify that there is sufficient torque margin to operate the valves. (Bowers)		Accepted. Verified. Increased minimum torques on actuators to be at least 1.5 times the expected valve torque.	

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63	H-14-100978, sht 2: Add color indication to show when drain plug is lifted (red for open position). (Nicholson)		Accepted (Customer Preference). Added to drawings.	
64	H-14-100978, sht. 1: Add note to provide instructions on removal of handle and/or Part No. 5. (Bowers)		Not accepted. Removal only requires that the assembly be lifted up through the coverblock. T-handle can be slung for easy crane removal of the assembly.	
65	H-14-100978, sht 1: Modify lifting handle to allow the floor drain plug to be operated by two people. (Bowers)		Accepted. Handle design changed to a H configuration.	
66	H-14-100981, sht. 1: Pit leak detector probes should be lowered to minimize amount of liquid necessary to trigger an alarm. A maximum quantity of 10 gallons (or less) is desirable. Revise Note 4 accordingly. (Miller)		Accepted (Customer Preference). The PDS for Pit Leak Detection, HNF-SD-W314-PDS-003, Section 3.2.1.1.3, will be revised to accomodate probe installation at a maximum height of 1" above the drain/low point. This will allow for the requested reduction in probe height.	
67	H-14-100981, sht. 1: Ensure that leak detector assembly is labeled. Also include "warning" label with Note 9 information to preclude Operator from trying to remove probes before removing the shield plug. (Bowers)		Accepted (Customer Preference). Assembly labeled and a warning note added.	
68	H-14-100981, sht. 2: Label shield plug with its actual weight, and include this information on the drawing. (Bowers)		Accepted (Customer Preference). Labeled.	
69	H-14-100983, sht. 1: Identify the intrinsically safe components/areas in the leak detector cabinet. (Rickenbach).		Accepted. Identified on drawing.	
70	H-14-100983, sht. 1: Revise Detail 1 assembly drawing to show Part No. 5 (strobe light) to scale. Also, provide protection for the strobe light against wind-driven missiles. (Bowers)		Accepted. Revised drawing to show strobe light to proper scale. Provided wind/missile hazard protection (shown on civil drawings).	

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71	H-14-100983, sht. 1: Review pit leak detection relay cabinet for safety class wind loads. (Bowers)		Accepted. See disposition to comment #70 above.	
72	H-14-100983, sht. 1: Ensure that adequate personnel protective device (shield) is provided to protect against potential electrical shock hazards. (Bowers)		Accepted. Provided shield.	
73	H-14-100985, sht. 1: In Elevation A, delete the note associated with Detail 3 which identifies height of probe from pit floor. Comment also applies to H-14-100986. (Boes)		Not Accepted. This drawing is specific to the AN pits and the height requirement is specific to these pits. Drawing H-14-100981 is a generic drawing and specific pit height information should probably not be put on it.	
74	General comment: Change all "MMI" references to "HMI". (Bowers)		Accepted. Changed ti HMI.	
75	H-14-100987, sht. 1: Delete Note 3. (Chafin)		Accepted. Deleted note 3.	
76	General comment: Label all intrinsically safe SSCs shown on the loop diagrams. (Bowers)		Accepted (Customer Preference). Identified by line characteristics.	
77	H-14-100989, sht. 1: Identify specific location of relay K-241-AN-PP. (Bowers)		Accepted (Customer Preference). Identified on drawing.	
78	W-314-C1, Pg. 01010-1: Add demolition of existing coverblocks to section 1.2.1.1.e. (Pieper)		Accepted. Added.	
79	W-314-C1, General comment: Consider use of non-wood materials for shoring due to radiological concerns. (Nunamaker)		Noted. Construction to determine. No change required to C-spec.	
80	W-314-C1, Pg. 02050-2: Delete section 3.3.3. (Pieper)		Accepted. Deleted.	
81	W-314-C1, Pg. 02220-3: In section 3.1.6.2, add requirement to notify design engineer of density test results. (Bowers)		Accepted. Added.	

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82	W-314-C1, Pg. 03300-2: In section 1.3.1, verify whether Level II concrete inspector is required. (Koberg)		Accepted. Verified only Level I inspector required and added to spec.	
83	W-314-C1, Pg. 03300-4: In section 1.6.1, verify that referenced Practice is adequate for safety class SSCs. (Bowers)		Accepted. Verified.	
84	W-314-C1, Pg. 05055-2: In section 3.3.1, verify that the referenced Practice is adequate for safety class SSCs. (Bowers)		Accepted. Verified.	
85	W-314-C1, Pg. 05500-2: In section 1.2.3.1, revise to be consistent with section 1.3.2.1. (Warnick)		Accepted. Revised for consistency.	
86	W-314-C1, Section 05500: General comment: Ensure proper traceability of materials to the applicable testing records. Comment also applies to other sections of the specification. (Warnick)		Accepted. Modified as required.	
87	W-314-C1, Pg. 09855-8: Revise section 3.2.1 to maximize flexibility in determining the most suitable pit preparatory steps. (Boes)		Accepted. Made more general to allow flexibility.	
88	W-314-C1, Pg. 09855-9: In section 3.2.2.5.b, specify a maximum allowable pressure of 3000 psi to comply with the short-form NOC and existing "routine and approved" activities list. Also, delete the allowed use CO2 blasting discussed in Section 3.2.2.5.c. (Miller)		Accepted. Specified maximum 3000 psi and deleted CO2 blasting.	
89	W-314-C1, Pg. 09855-11: Revise section 3.5 as needed to minimize generation of liquid wastes in potentially contaminated areas. (Ravencraft)		Accepted. Revised.	
90	W-314-C1, Pg. 13440-1: Add ASME NQA-1 as a reference in section 1.1.1.1, and provide qualified vendor option to appropriate section. (Chafin)		Accepted. Added.	

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
91	W-314-C1, Pg. 13440-7: Clarify in section 2.3.2.5.b. what constitutes "sufficient packaging". Comment also applies in other sections (such as 2.3.2.6.b.). (Chafin)		Noted. will be deleted from CGI section.	
92	W-314-C1, Pgs. 13440-11: Revise Vendor Data List to include data submittals for all new instrumentation. (Bowers)		Accepted. Revised.	
93	W-314-C1, Pg. 15493-3: In section 1.2.2.1.a., change "safety significant" to "general service". Comment also applies to section 1.4.1. (Rickenbach)		Accepted. Changed to GS.	
94	General comment: Change safety classification for new flush piping from general service to safety class. (Bowers)		Not accepted. Need written direction from the Design Authority for this change in safety classification.	
95	W-314-C1, Pg. 15493-3: In section 1.2 add requirements for vendor data submittals. (Warnick)		Accepted. Added limit switches & gear operator to list of vendor submittals.	
96	W-314-C1, Pg. 15493-5: Delete section 2.2.4.2, and consider lessons learned from Project W-320 for protective coating of buried piping. (Bowers)		Accepted. Section was deleted. Project W-320 had problems with a different field applied coating. Project W058 used the same as we are specifying with no problems.	
97	W-314-C1, Pg. 15493-6: Verify that requirements stated in section 2.2.8.1. are applicable to this work scope. (Pieper)		Accepted. Section was deleted.	
98	W-314-C1, Pg. 15493-7: General comment for execution of piping work (Part 3): Maximize use of in-shop inspections and testing to minimize construction costs. (Bowers)		Noted. The spec does not limit in shop inspection and testing as long as the requirements of ASME B31.3 are met.	
99	W-314-C1, Pg. 15493-10: In section 3.2.1.4, change "safety significant" to "general service". Also confirm that this information is applicable in this section. (Chafin)		Accepted. Section was deleted.	

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
100	W-314-C1, Pg. 15493-10: Add requirement in section 3.2.2 for wrapping/sealing of nozzles and piping after flushing to maintain cleanliness. (Koberg)		Noted. This requirement is covered under the general execution section, para. 3.1.1.8.	
101	W-314-C1, Pg. 15493-15: Change "safety significant" to "general service". (Rickenbach)		Accepted. Changed to GS.	
102	W-314-C1, Pg. 15493-A-3: In section 2.2, add the word's "normal service" to the B31.3 process piping. (Bowers)		Not accepted. This change is determined to be not necessary. Specific paragraphs in code dealing with normal service are referenced.	
103	W-314-C1, Pg. 15493-A-3: Verify the acceptability of lubricants listed in section 3.1.1 (Kirk Boes to contact Flammable Gas Equipment Advisory Board for a determination). (Richenbach)		Accepted. Assumed to be acceptable unless notified by K. Boes.	
104	W-314-C1, Pg. 15493-A-6: Add requirement to leak test jumpers with valves in all possible operating positions. (Bowers)		Accepted. Added requirement.	
105	W-314-C1, Pg. 15493-A-7: Add requirement to section 3.7.7 to weigh jumpers and add this information to the jumper identification label. (Bowers)		Accepted (Customer Preference). Added.	
106	W-314-C1, Pg. 15493-A-7: Delete section 3.7.6.2. (Bowers)		Accepted.Deleted section.	
107	W-314-C1, General comment: Verify existing drawings for isolation vapor seals is current and usable. (Bowers)		Accepted. Verified that drawings were ECN'ed for current standard in June 1996.	
108	W-314-C1, Section 16400: Verify that appropriate load conditions are specified for hand-hole covers. (Bowers)		Accepted. Verified. Design conforms to GE-UGPD-01 which requires HH to withstand H-20 wheel loading.	
109	W-314-C1, Pg. 16400-7: Delete section 3.2.3.7.		Accepted. Deleted.	
110	W-314-C1, Pg. 16640-5: Delete section 2.2.8 (Adhikari)		Accepted. Deleted.	

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
111	W-314-P1, General comment: Consider suitability of using plug valves and/or ball valves for jumpers. (Bowers)		Plug valves have more pockets and do not provide the 3-way patterns required, therefore ball valves are more suitable for this application.	
112	W-314-P1, Pg. 4: Clarify in section 3.4.2.2 that valve bodies shall be non-adjustable. (Bowers)		Accepted. Added statement that adjustable seals are not acceptable.	
113	W-314-P1, Pg. 5: Add requirement(s) for body filler or other means to minimize internal entrainment of liquids in the valves. (Bowers)		Accepted. Added requirement to fill body cavities.	
114	W-314-P1, Pg. 7: Add a submittal requirement for the section 3.4.3.1 requirements. (Bowers)		Accepted. Added submittal requirement.	
115	W-314-P1, Pg. 5: Verify in section 3.6.4 that proper torque values are specified consistent with the drawings. (Bowers)		Accepted. Modified callout on drawing.	
116	W-314-P1, Pg. 5: Design of ball (for ball valves) should ensure full sealing in all valve positions. (Bowers)		Testing will be done per ASTM B16.34 and MSS-SP-61. The shell test will be done at 1100 psig with the valve in the partially open position. Visually detectable leakage through the pressure boundary walls is not acceptable. Also, stem seals shall be capable of retaining 720 psig without visible leakage. The valve closure test will be done at 790 psig (or 80 psig if using a gas) and the test pressure is applied successively on each side of the closed valve with no visible leakage acceptable.	
117	W-314-P1, Pg. 6: Expand manufacturer's standard requirements for section 4 (Hank Chafin to assist Tom Salzano). (Chafin)		Not accepted. The valves are a catalog item and no further QA requirements are needed.	
118	W-314-P1, Pg. 13: Add arrows to diagrams to indicate direction of hydro. (Bowers)		Accepted. Added arrows.	

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
119	W-314-P1, Pg. 6: In section 5.2.1, add valve weight in data to be submitted by vendor. (Bowers)		Accepted. Added to submittal requirements.	
120	W-314-P2, Pg. 3: Determine need for purge system controller on new impact wrenches. Dave Bowers to make determination and inform the design team. (Warnick)		Noted. Purge system remains until otherwise directed.	
121	W-314-P2, Pg. 4: Add requirement for loss of purge alarm if necessary. (Bowers)		Accepted. Added requirement to meet NFPA 496 which requires alarm.	
122	W-314-P2, Pg. 5: Specify appropriate amperage for impact wrench. (Bowers)		Accepted. Limited amperage to 20 amps unless approved by Buyer.	
123	General comment: Check how anti-rotation is accomplished for this impact wrench, and add applicable requirements to P-spec for sockets. (Rickenbach)		Noted. Per a conversation with Ron Wright, the anti-rotation is not required.	
124	General comment: Drawings and specs have not identified required vendor data. This needs to be identified. (Bowers)		Accepted. Specified on drawings or in specifications for appropriate materials/components.	
125	General comment: New coverblocks need to be load tested prior to installation. Also verify actual weight of blocks and ensure this is identified on the blocks. (Bowers)		Accepted (Customer Preference). Added note to concrete section of construction spec.	
126	General comment: As part of planning for critical lifts, verify new cover blocks can be safely lifted and set on ground without impacting tank dome load restrictions. (Skamser)		Accepted. This will be done as a part of construction planning.	

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12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/ resolve the discrepancy/problem indicated.)	14. Hold Point	15. Disposition (Provide justification if NOT accepted.)	16. Status
127	General comment: Determine need for adding safety class power to support new safety class pit leak detectors. (Zaman)		Accepted. Per the recently approved TWRS Facility Safety Equipment List (SEL), the electrical power for pit leak detectors is classified as Safety Class. A "construction hold" will be placed on drawing H-14-100937 ("Electrical Panelboard Schedule EDS-DP-106") until the exact method (and timing) of this design change is determined (prior to starting W-314 construction work). The design drawings for the leak detection power supply will be approved/released with the indicated "construction hold" and a follow-up ECN will be prepared/issued to incorporate the changes necessary to satisfy the SEL requirements.	
128	General comment: Verify whether site standard exists for conduit numbering. Dave Bowers to contact FDH for answer. (Bowers)		Drawings remain same until otherwise directed.	
129	General comment: Clarify safety classification and determine if additional analysis and/or controls are required for new encasement drain jumpers. (Bowers)		Not accepted. Drain jumpers are designed as General Service, not Safety Class. Need written direction from the Design Authority for any change in safety classification. Will leave as is unless directed to change safety classification.	

ATTACHMENT TO RCR #AN-002
SHEET 1 OF 2

W-314 AN VALVE PIT UPGRADES
DESIGN DRAWINGS AND SPECIFICATIONS

H-14-100929, Drawing List
H-14-100930, Structural Cover Blocks 241-AN-A Plan & Details
H-14-100931, Structural Cover Blocks 241-AN-B Plan & Details
H-14-100932, Structural Cover Blocks 241-AN-A,B Sections & Details
H-14-100933, Shts. 1-2, Structural Pits 241-AN-A,B Wall Modifications
H-14-100935, Shts. 1-2, Electrical Power and Control Plan 241-AN Tank Farm
H-14-100936, Shts. 1-3, Electrical Installation Details Valve Pit 241-AN-A
H-14-100937, Electrical Panelboard Schedule EDS-DP-106
H-14-100938, Shts. 1-2, Electrical Wire Run List 241-AN-A
H-14-100939, Shts. 1-2, Electrical Cathodic Protection 241-AN-A
H-14-100941, P&ID Valve Pit 241-AN-A
H-14-100942, P&ID Valve Pit 241-AN-B
H-14-100943, P&ID Miscellaneous Details
H-14-100944, Jumper Arrangement Valve Pit 241-AN-A
H-14-100945, Jumper Arrangement Valve Pit 241-AN-A Section
H-14-100946, Jumper Arrangement Valve Pit 241-AN-B
H-14-100947, Jumper Arrangement Valve Pit 241-AN-B Section
H-14-100948, Jumper Assembly 241-AN-A L1-(H)
H-14-100949, Shts. 1-2, Jumper Assembly 241-AN-A L3-L5-(A&B)
H-14-100950, Shts. 1-2, Jumper Assembly 241-AN-A L7-L9-(B&C)
H-14-100951, Jumper Assembly 241-AN-A L11-(D)
H-14-100952, Shts. 1-2, Jumper Assembly 241-AN-A L14-L15-L16-(D&E)
H-14-100953, Shts. 1-2, Jumper Assembly 241-AN-A L19-(E-F-G&H)
H-14-100954, Jumper Assembly 241-AN-A L20-(A)
H-14-100955, Jumper Assembly 241-AN-A L21-(F)
H-14-100956, Jumper Assembly 241-AN-A L11A-Drain
H-14-100957, Jumper Assembly 241-AN-A L20A-Drain
H-14-100958, Jumper Assembly 241-AN-A L21A-Drain
H-14-100959, Shts. 1-2, Jumper Assembly 241-AN-B R1-(D&E)
H-14-100961, Shts. 1-2, Jumper Assembly 241-AN-B R5-R20-(B)
H-14-100962, Shts. 1-2, Jumper Assembly 241-AN-B R7-R9-(B&C)
H-14-100963, Jumper Assembly 241-AN-B R11-(G)
H-14-100964, Shts. 1-2, Jumper Assembly 241-AN-B R14-R15-R16-(F&G)
H-14-100965, Shts. 1-2, Jumper Assembly 241-AN-B R19-(D&F)
H-14-100966, Jumper Assembly 241-AN-B R1A-Drain
H-14-100967, Jumper Assembly 241-AN-B R11A-Drain
H-14-100968, Jumper Assembly 241-AN-B R20A-Drain
H-14-100969, Pit Cover Painting Diagram 241-AN-A
H-14-100970, Pit Cover Painting Diagram 241-AN-B
H-14-100971, Shts. 1-4, Funnel Assembly 2 and 3 Way Valves
H-14-100972, Shts. 1-2, Valve Handle Assembly 2 and 3 Way Valves
H-14-100973, Piping Miscellaneous Details
H-14-100974, Shts. 1-3, Piping Valve Pit 241-AN-A & B Modification Details
H-14-100975, Shts. 1-2, Valve Actuator Arrangement Valve Pit 241-AN-A
H-14-100976, Shts. 1-2, Valve Actuator Details
H-14-100978, Shts. 1-2, Piping Floor Drain Seal Assembly Valve Pits 241-AN-A&B

ATTACHMENT TO RCR #AN-002
SHEET 2 OF 2

H-14-100980, Instm Valve Position Switch Assembly
H-14-100981, Shts. 1-2, Instm Pit Leak Detection Assy Tank Farms
H-14-100982, Instm Transfer Line Encasement Leak Detection Assembly
H-14-100983, Instm Leak Detection Relay Pnl Assembly & Details
H-14-100984, Instm Plan AN Farm 241-AN-A&B
H-14-100985, Shts. 1-2, Instm 241-AN-A Valve Pit Elevation & Details
H-14-100986, Shts. 1-2, Instm 241-AN-B Valve Pit Elevation & Details
H-14-100987, Shts. 1-3, Instm Valve Position Switches Loop Diagram
H-14-100988, Instm Field Terminal Box
H-14-100989, Shts. 1-2, Instm Valve Pit Leak Detection Loop Diagram
H-14-100990, Shts. 1-2, Instm Encsd Low Pt Leak Det Loop Diagram
H-14-100991, Shts. 1-3, Instm Instrument List AN Tank Farm
H-14-101341, Instm Generic Field Terminal Box

W-314-C1, Construction Specification for Tank Farm Restoration & Safe Operations, AN Valve Pit Upgrades

W-314-P1, Procurement Specification for Ball Valves, AN Valve Pit Upgrades

W-314-P2, Procurement Specification for Impact Wrench, AN Valve Pit Upgrades

Sta 4. ②

DEC 31 1997 **ENGINEERING DATA TRANSMITTAL**

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1. EDT 618123

2. To: (Receiving Organization)	3. From: (Originating Organization)	4. Related EDT No.:
DISTRIBUTION	Tank Farm Restoration & Safe Operations	N/A
5. Proj./Prog./Dept./Div.:	**6. Design Authority/ Design Agent/Cog. Engr.:**	**7. Purchase Order No.:**
Project W-314/TWRS	D. E. Bowers	N/A
8. Originator Remarks: This EDT releases for construction the approved design media (i.e., drawings, construction specification, and procurement specifications) associated with Project W-314's "AN Valve Pit Upgrades" package. Design verification for these items is documented in the associated Design Review Report, HNF-1893.		**9. Equip./Component No.:** N/A
		10. System/Bldg./Facility: 241-AN
11. Receiver Remarks: **11A. Design Baseline Document?** [X] Yes [] No		**12. Major Assm. Dwg. No.:** N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: N/A

15. DATA TRANSMITTED

(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	H-14-100929	1	0	Drawing List - Vicinity Map	ESQ	2	1	
2	H-14-100930	1	0	Structural Cover Blocks 241-AN-A Plan & Details	ESQ	2	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 4. Review 2. Release 5. Post-Review 3. Information 6. Dist. (Receipt Acknow. Required)	1. Approved 4. Reviewed no/comment 2. Approved w/comment 5. Reviewed w/comment 3. Disapproved 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
2	1	Design Authority: D.E. Bowers D E Bowers 12-1-97	2	1	Op's Integration: R.W. Jacobson 12/1/97
		Design Agent	2	1	Facility Cog. Engr.: R.S. Nicholson 12/1/97
2	1	Cog.Eng.: K.A. Boes K A Boes 12/01/97	2	1	Proj. Implementation: W.J. Thompson 12/1/97
2	1	Cog. Mgr.: W.W. Rutherford W W Rutherford 12/1/97			
2	1	QA: H.M. Chafin H M Chafin 12/2/97 R3-25			
2	1	Safety: S.U. Zaman S U Zaman 12/4/97			
2	1	Env.: P.C. Miller P C Miller 12/01/97			

18.	19.	20.	21. DOE APPROVAL (if required) Ctrl. No.
K. A. Boes 12/1/97 Signature of EDT Originator Date	N/A Authorized Representative for Receiving Organization Date	W. W. Rutherford 12/1/97 Design Authority/ Cognizant Manager Date	[] Approved [] Approved w/comments [] Disapproved w/comments

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5. Proj./Prog./Dept./Div.:	6. Cog. Eng.	1. EDT	
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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 Transmittal	Originator Disposition	Receiver Disposition
3	H-14-100931	1	0	Structural Cover Blocks 241-AN-B Plan & Details	ESQ	2	1	
4	H-14-100932	1	0	Structural Cover Blocks 241-AN-A,B Sections & Details	ESQ	2	1	
5	H-14-100933	1	0	Structural Pits 241-AN-A,B Wall Modifications	ESQ	2	1	
6	H-14-100933	2	0	Structural Pits 241-AN-A,B Plans & Details	ESQ	2	1	
7	H-14-100933	3	0	Structural Pits 241-AN-A,B Shielding Collar Details	ESQ	2	1	
8	H-14-100935	1	0	Electrical Power and Control Plan 241-AN Tank Farm	ESQ	2	1	
9	H-14-100935	2	0	Electrical Power and Control Plan 241-AN Tank Farm	ESQ	2	1	
10	H-14-100935	3	0	Electrical Power and Control Plan 241-AN Tank Farm	ESQ	2	1	
11	H-14-100936	1	0	Electrical Installation Details Valve Pit 241-AN-A	ESQ	2	1	
12	H-14-100936	2	0	Electrical Installation Details Valve Pit 241-AN-B	ESQ	2	1	
13	H-14-100936	3	0	Electrical Installation Details Valve Pits 241-AN-A,B	ESQ	2	1	
14	H-14-100937	1	0	Electrical Panelboard Schedule EDS-DP-106	ESQ	2	1	
15	H-14-100938	1	0	Electrical Wire Run List 241-AN-A	ESQ	2	1	
16	H-14-100938	2	0	Electrical Wire Run List 241-AN-B	ESQ	2	1	
17	H-14-100939	1	0	Electrical Cathodic Protection 241-AN-A	ESQ	2	1	
18	H-14-100939	2	0	Electrical Cathodic Protection 241-AN-B	ESQ	2	1	

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5. Proj./Prog./Dept./Div.:	6. Cog. Eng.	1. EDT	
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19	H-14-100941	1	0	P&ID Valve Pit 241-AN-A	ESQ	2	1	
20	H-14-100942	1	0	P&ID Valve Pit 241-AN-B	ESQ	2	1	
21	H-14-100943	1	0	P&ID Miscellaneous Details	ESQ	2	1	
22	H-14-100944	1	0	Jumper Arrangement Valve Pit 241-AN-A	ESQ	2	1	
23	H-14-100945	1	0	Jumper Arrangement Valve Pit 241-AN-A Section	ESQ	2	1	
24	H-14-100946	1	0	Jumper Arrangement Valve Pit 241-AN-B	ESQ	2	1	
25	H-14-100947	1	0	Jumper Arrangement Valve Pit 241-AN-B Section	ESQ	2	1	
26	H-14-100948	1	0	Jumper Assembly 241-AN-A L1-(H)	ESQ	2	1	
27	H-14-100949	1	0	Jumper Assembly 241-AN-A L3-L5-(A&B)	ESQ	2	1	
28	H-14-100949	2	0	Jumper Assembly 241-AN-A L3-L5-(A&B)	ESQ	2	1	
29	H-14-100950	1	0	Jumper Assembly 241-AN-A L7-L9-(B&C)	ESQ	2	1	
30	H-14-100950	2	0	Jumper Assembly 241-AN-A L7-L9-(B&C)	ESQ	2	1	
31	H-14-100951	1	0	Jumper Assembly 241-AN-A L11-(D)	ESQ	2	1	
32	H-14-100952	1	0	Jumper Assembly 241-AN-A L14-L15-L16-(D&E)	ESQ	2	1	
33	H-14-100952	2	0	Jumper Assembly 241-AN-A L14-L15-L16-(D&E)	ESQ	2	1	
34	H-14-100953	1	0	Jumper Assembly 241-AN-A L19-(E-F-G&H)	ESQ	2	1	
35	H-14-100953	2	0	Jumper Assembly 241-AN-A L19-(E-F-G&H)	ESQ	2	1	
36	H-14-100954	1	0	Jumper Assembly 241-AN-A L20-(A)	ESQ	2	1	
37	H-14-100955	1	0	Jumper Assembly 241-AN-A L21-(F)	ESQ	2	1	
38	H-14-100956	1	0	Jumper Assembly 241-AN-A L11A-Drain	ESQ	2	1	
39	H-14-100957	1	0	Jumper Assembly 241-AN-A L20A-Drain	ESQ	2	1	

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5. Proj./Prog./Dept./Div.:	6. Cog. Eng.	1. EDT	
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40	H-14-100958	1	0	Jumper Assembly 241-AN-A L21A-Drain	ESQ	2	1	
41	H-14-100959	1	0	Jumper Assembly 241-AN-B R1-(D&E)	ESQ	2	1	
42	H-14-100959	2	0	Jumper Assembly 241-AN-B R1-(D&E)	ESQ	2	1	
43	H-14-100961	1	0	Jumper Assembly 241-AN-B R5-R20-(B)	ESQ	2	1	
44	H-14-100961	2	0	Jumper Assembly 241-AN-B R5-R20-(B)	ESQ	2	1	
45	H-14-100962	1	0	Jumper Assembly 241-AN-B R7-R9-(B&C)	ESQ	2	1	
46	H-14-100962	2	0	Jumper Assembly 241-AN-B R7-R9-(B&C)	ESQ	2	1	
47	H-14-100963	1	0	Jumper Assembly 241-AN-B R11-(G)	ESQ	2	1	
48	H-14-100964	1	0	Jumper Assembly 241-AN-B R14-R15-R16-(F&G)	ESQ	2	1	
49	H-14-100964	2	0	Jumper Assembly 241-AN-B R14-R15-R16-(F&G)	ESQ	2	1	
50	H-14-100965	1	0	Jumper Assembly 241-AN-B R19-(D&F)	ESQ	2	1	
51	H-14-100965	2	0	Jumper Assembly 241-AN-B R19-(D&F)	ESQ	2	1	
52	H-14-100966	1	0	Jumper Assembly 241-AN-B R1A-Drain	ESQ	2	1	
53	H-14-100967	1	0	Jumper Assembly 241-AN-B R11A-Drain	ESQ	2	1	
54	H-14-100968	1	0	Jumper Assembly 241-AN-B R20A-Drain	ESQ	2	1	
55	H-14-100969	1	0	Pit Cover Painting Diagram 241-AN-A	ESQ	2	1	
56	H-14-100970	1	0	Pit Cover Painting Diagram 241-AN-B	ESQ	2	1	
57	H-14-100971	1	0	Funnel Assembly 2 and 3 Way Valves	ESQ	2	1	
58	H-14-100971	2	0	Funnel Assembly Details	ESQ	2	1	
59	H-14-100971	3	0	Funnel Assembly Details	ESQ	2	1	
60	H-14-100971	4	0	Funnel Assembly Details	ESQ	2	1	
61	H-14-100972	1	0	Valve Handle Assembly 2 and 3 Way Valves	ESQ	2	1	

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62	H-14-100972	2	0	Valve Handle Assembly 2 and 3 Way Valve	ESQ	2	1	
63	H-14-100973	1	0	Piping Miscellaneous Details	ESQ	2	1	
64	H-14-100974	1	0	Piping Valve Pit 241-AN-A & B Modification Details	ESQ	2	1	
65	H-14-100974	2	0	Piping Valve Pit 241-AN-A & B Modification Details	ESQ	2	1	
66	H-14-100974	3	0	Piping Valve Pit 241-AN-A & B Modification Details	ESQ	2	1	
67	H-14-100974	4	0	Piping Valve Pit 241-AN-A & B Modification Details	ESQ	2	1	
68	H-14-100974	5	0	Piping Valve Pit 241-AN-A & B Modification Details	ESQ	2	1	
69	H-14-100975	1	0	Valve Actuator Arrangement Valve Pit 241-AN-A	ESQ	2	1	
70	H-14-100975	2	0	Valve Actuator Arrangement Valve Pit 241-AN-B	ESQ	2	1	
71	H-14-100976	1	0	Valve Actuator Details	ESQ	2	1	
72	H-14-100976	2	0	Valve Actuator Details	ESQ	2	1	
73	H-14-100978	1	0	Piping Floor Drain Seal Assembly Valve Pits 241-AN-A&B	ESQ	2	1	
74	H-14-100978	2	0	Piping Floor Drain Seal Assembly Valve Pits 241-AN-A&B	ESQ	2	1	
75	H-14-100980	1	0	Instm Valve Position Switch Assembly	ESQ	2	1	
76	H-14-100981	1	0	Instm Pit Leak Detection Assy Tank Farms	ESQ	2	1	
77	H-14-100981	2	0	Instm Pit Leak Detection Assy Tank Farms	ESQ	2	1	
78	H-14-100982	1	0	Instm Transfer Line Encasement Leak Detection Assembly	ESQ	2	1	

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79	H-14-100983	1	0	Instm Leak Detection Relay Pnl Assembly & Details	ESQ	2	1	
80	H-14-100984	1	0	Instm Plan AN Farm 241-AN-A&B	ESQ	2	1	
81	H-14-100985	1	0	Instm 241-AN-A Valve Pit Elevation & Details	ESQ	2	1	
82	H-14-100985	2	0	Instm 241-AN-A Valve Pit Details	ESQ	2	1	
83	H-14-100986	1	0	Instm 241-AN-B Valve Pit Elevation & Details	ESQ	2	1	
84	H-14-100986	2	0	Instm 241-AN-B Valve Pit Details	ESQ	2	1	
85	H-14-100987	1	0	Instm Valve Position Switches Loop Diagram	ESQ	2	1	
86	H-14-100987	2	0	Instm Valve Position Switches Valve Pit A Loop Diagram	ESQ	2	1	
87	H-14-100987	3	0	Instm Valve Position Switches Valve Pit B Loop Diagram	ESQ	2	1	
88	H-14-100988	1	0	Instm Field Terminal Box	ESQ	2	1	
89	H-14-100989	1	0	Instm Valve Pit Leak Detection Loop Diagram	ESQ	2	1	
90	H-14-100989	2	0	Instm Valve Pit Leak Detection Loop Diagram	ESQ	2	1	
91	H-14-100990	1	0	Instm Encsd Low Pt Leak Det Loop Diagram	ESQ	2	1	
92	H-14-100990	2	0	Instm Encsd Low Pt Leak Det LDE-234 Loop Diagram	ESQ	2	1	
93	H-14-100991	1	0	Instm Instrument List AN Tank Farm	ESQ	2	1	
94	H-14-100991	2	0	Instm Instrument List AN Tank Farm	ESQ	2	1	
95	H-14-100991	3	0	Instm Instrument List AN Tank Farm	ESQ	2	1	
96	H-14-100991	4	0	Instm Instrument List AN Tank Farm	ESQ	2	1	
97	H-14-100991	5	0	Instm Instrument List AN Tank Farm	ESQ	2	1	
98	H-14-100991	6	0	Instm Instrument List AN Tank Farm	ESQ	2	1	

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99	H-14-100991	7	0	Instm Instrument List AN Tank Farm	ESQ	2	1	
100	H-14-100991	8	0	Instm Instrument List AN Tank Farm	ESQ	2	1	
101	H-14-100991	9	0	Instm Instrument List AN Tank Farm	ESQ	2	1	
102	H-14-101341	1	0	Instm Generic Field Terminal Box	ESQ	2	1	
103	W-314-C1	--	0	Construction Specification for Tank Farm Restoration & Safe Operations, AN Valve Pit Upgrades	ESQ	2	1	
104	W-314-P1	--	0	Procurement Specification for Ball Valves, AN Valve Pit Upgrades	ESQ	2	1	
105	W-314-P2	--	0	Procurement Specification for Impact Wrench, AN Valve Pit Upgrades	ESQ	2	1	

DISTRIBUTION SHEET

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Project Title/Work Order		EDT No. 617939
W-314, Tank Farm Restoration and Safe Operations (AN Valve Pit Upgrades)		ECN No.

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