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ENGINEERING DATA TRANSMITTAL

Page 1 of 1

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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	<i>K. A. Boes</i>	4/13/98							
1	1	Cog. Mgr.: J. L. Homan	<i>J. L. Homan</i>	4-14-98							
1	1	QA: H. M. Chafin	<i>H. M. Chafin</i>	4/14/98							
		Safety: N/A									
		Env.: N/A									

18. <i>K. A. Boes</i> K. A. Boes Signature of EDT Origina	19. <i>4/13/98</i> Date Authorized Representative for Receiving Organization	20. <i>J. L. Homan</i> J. L. Homan Signature of EDT Manager	21. DOE APPROVAL (if required) Ctrl. No. N/A ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments
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Design Review Report: 200 East 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

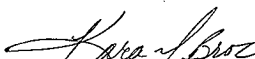
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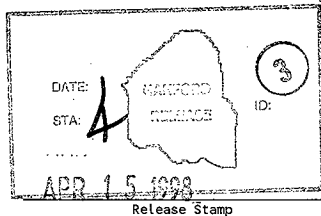
Key Words: Design Review Report, DRR, W-314, Tank Farm Restoration and Safe Operations, Phase 1, 200 East Upgrades, Design Verification

Abstract: This Design Review Report (DRR) documents the contractor design verification methodology and records associated with project W-314's "200 East (200E) 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.

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4/15/98
Date



Approved for Public Release

Design Review Report

200 East Upgrades

Project W-314
Tank Farm Restoration and Safe Operations

Prepared by Numatec Hanford Corporation

April 1998

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- 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: Attendance Lists for 60-Percent Design Review
- Attachment 6: Meeting Minutes Associated with Final Design Review
- Attachment 7: Review Comment Records for Final Design Review
- Attachment 8: EDT for Release of 200 East Valve Pit Upgrades Design Media

DESIGN REVIEW REPORT

PROJECT W-314, TANK FARM RESTORATION AND SAFE OPERATIONS "200 EAST 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 design package ("AN Valve Pit Upgrades") was completed in November 1997, and the associated design verification activities are documented in HNF-1893. The second design package, "200 East (200E) Upgrades," was completed in March 1998. This design package identifies modifications to existing valve pits 241-AX-B and 241-A-B, as well as several new waste transfer pipelines to be constructed within the A Farm Complex of the 200E Area. The scope of the valve pit modifications includes new pit cover blocks, valve manifolds, leak detectors, and special protective coatings similar to those previously approved for the AN Valve Pit Upgrades design package. The new transfer lines included in this package are to be routed (with official line number designations) as follows:

- From valve pit 241-AN-B to pump pit 241-AZ-02A (SN-630)
- From pump pit 241-AZ-02A to valve pit 241-AX-B (SN-632)
- From valve pit 241-AX-B to pump pit 241-AY-02A (SN-633)
- From Valve pit 241-AX-B to valve pit 241-A-B (SN-634)

In the case of lines SN-630, -632, and -633, the piping tie-in interfaces with the existing pump pits are to be made outside the pits. The associated pit wall nozzles and piping stub-outs from the wall are to be performed under separate Phase 1 design/construction packages.

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 and construction specification associated with the W-314 200E Upgrades package. This design media addresses the total scope of the Project W-314 upgrades associated with the 241-AX-B and 241-A-B valve pits, as well as new transfer lines SN-630, SN-632, SN-633, and SN-634. Additional W-314 Phase 1 modifications associated with the new transfer lines (i.e., piping tie-ins to valve pit 241-AN-B and to pump pits 241-AZ-02A and 241-AY-02A) are not included in the 200E Upgrades design package. Verification of the design for this scope 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, along with associated Engineering Change Notices (ECNs). The PDSs, as modified by the ECNs, 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 March 1997 and March 1998. 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, an informal review of the total "in-process" package at the 60-percent completion stage, and a formal review of all the design drawings and specifications at the design completion stage. Informal reviews of selected in-process design products were also performed on a bi-weekly basis.

2.0 SUMMARY

Formal reviews of the W-314 200E Upgrades design package were conducted by a 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 1.

2.1 30-Percent Design Review

A formal review of the new 241-AX-B and 241-A-B valve pit P&IDs was conducted at the 30-percent design stage for the 200E 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 of this package.

The W-314 Design Review Team (DRT) convened on June 3, 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 (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 June 17, 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 2.

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 3.

2.2 60-Percent Design Review

An informal review of the in-process design package was conducted at the 60-percent design stage. The 60-percent design package was distributed to the DRT on September 30, 1997, and the review team reconvened to discuss their comments with the FDNW Design Team on October 14, 1997. Since this review was conducted informally, no RCR documentation was prepared for the 60-percent review. Similar to the in-process design review conducted at the 30-percent stage, the attendees informally reviewed each of the in-process drawings for the 200E Upgrades package and discussed significant comments/questions concerning these products. These comments were noted by the FDNW Design Team for resolution prior to the final design review. Participants in the 60-percent review briefing and the 60-percent review meeting are identified in Attachment 4.

2.3 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 drawings, assembly drawings, etc.) and the construction specification. The same basic approach, as discussed above for the 30-percent review of the P&IDs, was 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 January 29, 1998. Following a two-week review period, the DRT and FDNW Design Team met again on February 12-13, 1998 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 200E Upgrades design package was finalized by the Design Agent and approved for procurement/construction by the customer.

2.4 Approval of Design Media

There are no outstanding actions resulting from either the 30-percent or final design reviews. Design verification of the 200E Upgrades design package is therefore considered to be complete. Engineering Data Transmittal (EDT) #617948 officially issued/released the 200E 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 DRT Members
- Attachment 2 - Meeting Minutes Associated With 30-Percent Design Review
- Attachment 3 - Review Comment Records for 30-Percent Design Review
- Attachment 4 - Attendance Lists for 60-Percent Design Review
- Attachment 5 - Meeting Minutes Associated With Final Design Review
- Attachment 6 - Review Comment Records for Final Design Review
- Attachment 7 - EDT #617948 for Release of 200E Upgrades Design Media

DESIGN REVIEW TEAM FOR W-314 "200E UPGRADES" (PHASE 1)

ORGANIZATION/RESPONSIBILITY	REVIEWER NAME
W-314 Project Management - W-314 Technical Lead - W-314 SE Management - W-314 Startup/Testing	K. A. (Kirk) Boes (NHC) D. L. (Dick) McGrew (NHC) W. H. (Bill) Hays (FDNW)
DST Engineering - W-314 Design Authority - Transfer System Design Authority	D. E. (Dave) Bowers (LMHC) D. W. (Dan) Reberger (LMHC)
TWRS Equipment Engineering - TWRS Design Authority - Leak Detection Design Authority - Electrical Design - Structural Design	S. H. (Shafik) Rifaey (LMHC) C. C. (Chuck) Scaief (LMHC) G. (Ghurdian) Singh (NHC) M. A. (Mark) Scott (SESC)
Tank Waste Operations	R. W. (Jake) Jacobson (LMHC)
Operations & Projects Support	T. K. (Treta) Ravenscraft (LMHC) G. A. (Glenn) Hester (LMHC)
Rad Engineering/Tech Support	J. E. (Jim) Pieper (LMHC)
SST Engineering	D. R. (Dan) Nunamaker (LMHC) M. (Mazen) Al-Wazani (LMHC)
Maintenance Program Integration	J. R. (Jim) LaPointe (LMHC)
Quality Assurance	H. M. (Hank) Chafin (FDNW)
Operations Compliance	P. C. (Phil) Miller (LMHC)
Nuclear Safety	S. U. (Shakir) Zaman (LMHC)
Operations & Project Safety Support	M. S. (Matt) Tiffany (DESH)
TWRS Testing & Systems Readiness	R. L. (Ron) Legg (LMHC)
Process Development	J. D. (John) Galbraith (NHC)

MEETING MINUTES

Subject: 30% DESIGN REVIEW BRIEFING - W-314 200E UPGRADES

TO: Distribution

BUILDING

FROM: Kirk Boes

CHAIRMAN Kirk Boes

Kirk Boes

Department-Operation-
Component

Area

Shift

Date of Meeting

Number

Attending

TWRS/Próject W-314

6/3/97

24

ATTENDEES:

DISTRIBUTION:

R. A. Ackerman G3-12
R. Adhikari G3-12
T. W. Bohan S5-04
K. A. Boes R3-25
D. E. Bowers S6-01
R. T. Carratt G3-12
H. M. Chafin R3-25
M. D. Gerken R3-25
N. T. Hepner B5-18
R. W. Jacobson R1-09
J. R. LaPointe R2-88
J. T. Koberg G3-12
D. L. McGrew R3-25
P. C. Miller R1-55
J. E. Navarro S7-54
J. J. O'Conner S5-21
G. M. Ramin K6-51
M. D. Rickenbach G3-12
W. W. Rutherford R3-25
R. M. Rogers S5-07
T. B. Salzano G3-12
P. H. Thomsen R2-88
L. A. Williamson R1-49
S. U. Zaman R3-01

Attendees
D. J. Ashley S7-40
D. G. Baide S5-05
S. R. Briggs R3-25
L. de Lamartinie H5-61
R. A. Dodd S5-07
J. D. Galbraith H5-49
P. A. Haine R3-47
B. J. Hendel R3-25
C. E. Leach R1-49
S. L. Leckband R3-47
R. L. Nelson R3-47
D. R. Nunamaker T4-07
D. W. Reberger S5-13
W. E. Ross S5-07
R. J. Shupe R2-50
W. T. Thompson G3-21
Project Files G3-11

John Koberg welcomed the assembled Design Review Team (attendees identified in Attachment 1) and opened the meeting by presenting the 30% complete design package for the W-314 200E Upgrades. The scope of the 200E Upgrades package includes modifications to the 241-A-A, 241-A-B, 241-AX-A, and 241-AX-B valve pits. These modifications include 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. Also included in the scope of this design package are three separate waste transfer pipelines needed to support waste transfer operations in the A Farm Complex.

Kirk Boes noted that East Tank Farm Operations had recently identified several recommendations to the project concerning the manifold configurations and schedule. These recommendations are documented in LMHC letter #77100-97-044. Information copies of this letter were distributed to the meeting attendees. Kirk stated that change control documentation is currently being prepared to address the changes

identified in the Operations letter. These pending changes are not reflected in the 30% design review package.

John stated that the 30% review will be conducted in similar fashion to the one that was recently completed using the same Design Review Team for the W-314 AN Valve Pit Upgrades (April 1997). The Piping and Instrumentation Diagrams (P&IDs) included in the design package are considered to be complete and are being submitted for formal design review by the Design Review Team. 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 will reconvene in two weeks to present and discuss their comments on the 30% design package. 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. In general, comments which are dispositioned as "not accepted" will not be recorded on the RCR. Closure of this RCR will signify the Design Review Team's 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.

The products depicted in the 200E Upgrades 30% review package are very similar to the those reviewed previously by the Design Review Team for the W-314 AN Valve Pit Upgrades package. The contents of the 200E Upgrades 30% review package are listed in Attachment 2. Specific items within the 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 A-A, A-B, and AX-B valve pit manifolds (drawings H-14-101079, -101080, -101047, and -101048), and briefly described the other in-process jumper and piping drawings.
- Richard Ackerman (Civil/Structural Lead Engineer) reviewed the in-process drawings associated with the new valve pit cover blocks, valve pit modifications, and pit demolition work.
- Dick Carratt (Instrumentation Lead Engineer) briefly reviewed the in-process drawings associated with the valve pit instrumentation.
- Ron Adhikari (Electrical Lead Engineer) reviewed the in-process electrical drawings associated with the cathodic protection system modifications.

The in-process Construction Specification associated with the 200E Upgrades was not included in the 30% design review package since it is very similar to the one presented to the review team at the previous 30% review conducted for the AN Valve Pit Upgrades design package. Gil Ramin asked whether other design-related products, such as calculations, would be issued for review. John Koberg and Kirk Boes explained that design calculations are not typically issued as part of a design review package. Calculations and other supporting documentation may be provided to specific reviewers qualified to review the results, or to others upon request.

As with the previous 30% review conducted for W-314 in April, this review for the 200E Upgrades P&IDs and in-process design documents shall be based on the requirements established in the approved Project Development Specifications (PDSS). The applicable PDSS for this design package are as follows:

- HNF-SD-W314-PDS-001, Rev. 0: Transfer Piping
- 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

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, 6/17/97, to review/disposition the Team's comments on the 200E Upgrades design package.

ATTACHMENT 1: 30% Design Review Briefing Attendance List
ATTACHMENT 2: 30% Design Package Contents

A-3000-480 (10/94) GEF011

ATTACHMENT #1

HNF-2375, Rev. 0

ATTACHMENT 2

6/3/97 #224

6/3/97

30% Design Renew 200 E/w Package

	<u>Name</u>	<u>Company</u>	<u>Phone</u>	<u>Mail Stop</u>
✓	Mark Rickenbach	FDNW	373-2539	G3-12
✓	Jim Lapointe	LMHC	373-7744	R2-88
✓	Take Jacobson	LMHC	376-2957	R1-09
✓	Jim Navarro	DOE-RL	373-4365	
✓	HANK M. CHAFIN	FDNW	376-3387	R3-25
✓	NORM HEPNER	ECOLOGY	736-3048	
✓	PLI Miller	LMHC	373-6389	R1-51
✓	DOUG GERKEN	NHC	372-3239	R3-38
✓	PETE THOMSEN	LMHC	373-7777	R2-88
✓	Jim O'Connor	LMHC	373-7289	
✓	Bob ROGERS	LMHC	373-2180	
✓	Tim BOHAN	LMHC	373-1479	55-04
✓	NLSA WILLIAMSON	DEFS	376-2398	
✓	RON ADHIKARI	FDNW	376-0324	G3-12
✓	TOM SALZANO	FDNW	372-2267	G3-12
✓	RICHARD ACKERMAN	FDNW	373-4540	G3-12
✓	GIL M. RAMIN	DOE-RL	372-065X	
✓	JOHN T KOBERGE	FDNW	373-2576	G3-12
✓	KIRK A BOES	NHC	372-3023	R3-25
✓	SHAKIR ZAMAN	LMHC	372-2312	R3-01
✓	WALLY RUTHERFORD	NHC	372-2903	R3-25
✓	DICK MCGREW	NHC	372-2296	R3-25
✓	DAVID E. BOWERS	LMHC	373-1841	56-01
✓	Dick Carratt	FDNW	372-3726	G3-12

ATTACHMENT #2

HNF-2375, Rev. 0
ATTACHMENT 2
A2-5

W-314 200E Upgrades - 30% Design Review Package

<u>Drawing No.</u>	<u>Sheet</u>	<u>Title</u>
H-14-101047	1	P&ID Valve Pit 241-AX-B
H-14-101048	1	P&ID Misc. Details
H-14-101079	1	P&ID Valve Pit 241-A-A
H-14-101080	1	P&ID Valve Pit 241-A-B
H-14-101081	1	P&ID Misc. Details
H-14-100999	1	Structural Cover Blocks 241-AX-B
H-14-101000	1	Structural Cover Blocks Sections and Details
H-14-101002	1	Structural Cover Blocks 241-A-B Plan
H-14-101003	1	Structural 241-AC-B & 241-A-B Wall Modifications
H-14-101020	1-3	Cathodic Protection Plan Valve Pit 241-AN-B
H-14-101023	1	Cathodic Protection Details
H-14-101023	1	Cathodic Protection Details
H-14-101028	1	Inst. 241-A & 241-AX Plan
H-14-101029	1	Inst. AX Farm Valve Pit Plan 241-AX-A & 241-AX-B
H-14-101030	1	Inst. 241-AX-B Elevation & Details
H-14-101031	1	Inst. A Farm Valve Pit Plan 241-A-A & 241-A-B
H-14-101032	1	Inst. 241-A-B Elevation & Details
H-14-101051	1	Jumper Arrangement Valve Pit 241-AX-B
H-14-101052	1	Jumper Arrangement Valve Pit 241-AX-B Section
H-14-101061	1-2	Jumper Assembly 241-AX-B R16-R19-R20-(D&E)
H-14-101062	1	Jumper Assembly 241-AX-B
H-14-101063	1	Jumper Assembly 241-AX-B R1-(E)
H-14-101064	1	Jumper Assembly 241-AX-B R11-R12-(A)
H-14-101065	1-2	Jumper Assembly VP-100A R3
H-14-101066	1	Jumper Assembly 241-AX-B R1A-Drain
H-14-101067	1	Jumper Assembly 241-AX-B R3A-Drain
H-14-101071	1-4	Funnel Assembly 2-Way and 3-Way Valves - Details
H-14-101074	1-4	Piping Valve Pit 241-AX-B Modification Details
H-14-101076	1	Pit Demolition Jumper Pit 241-AX-B
H-14-101077	1	Valve Actuator Details
H-14-101082	1	Jumper Arrangement Valve Pit 241-A-A
H-14-010184	1	Jumper Arrangement Valve Pit 241-A-B
H-14-010185	1	Jumper Arrangement Valve Pit 241-A-B Section
H-14-101094	1-2	Jumper Assembly 241-A-B R1-R2-(A)
H-14-101095	1-2	Jumper Assembly 241-A-B R15-R16-R19-(B)
H-14-101096	1-2	Jumper Assembly 241-A-B (A)-(B)-(C)
H-14-101097	1-2	Jumper Assembly 241-A-B R3-R9-(D)
H-14-101103	1	Pit Cover Painting Diagram 241-A-B
H-14-101110	1-3	Piping Plan Valve Pit 241-AN-B

MEETING MINUTES

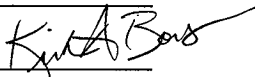
Subject: 30% DESIGN REVIEW MEETING - W-314 200E UPGRADES

TO: Distribution

BUILDING

FROM: Kirk Boes

CHAIRMAN Kirk Boes



Department-Operation-
Component

Area Shift Date of Meeting
6/17/97

Number
Attending
20

TWRS/Project W-314

ATTENDEES:

DISTRIBUTION:

R. A. Ackerman	G3-12	Attendees	
R. Adhikari	G3-12	D. J. Ashley	S7-40
E. L. Ahola	E6-27	D. G. Baide	S5-05
K. A. Boes	R3-25	S. R. Briggs	R3-25
D. E. Bowers	S6-01	T. W. Bohan	S5-04
R. T. Carratt	G3-12	L. de Lamartinié	H5-61
H. M. Chafin	R3-25	R. A. Dodd	S5-07
M. D. Gerken	R3-25	J. D. Galbraith	H5-49
J. R. LaPointe	R2-88	P. A. Haine	R3-47
J. T. Koberg	G3-12	B. J. Hendel	R3-25
D. L. McGrew	R3-25	N. T. Hepner	B5-18
D. R. Nunamaker	T4-07	C. E. Leach	R1-49
R. S. McMurphy	S5-50	S. L. Leckband	R3-25
J. E. Navarro	S7-54	R. W. Jacobson	R1-09
M. D. Rickenbach	G3-12	P. C. Miller	R1-51
R. M. Rogers	S5-07	R. L. Nelson	R3-47
W. W. Rutherford	R3-25	J. J. O'Conner	S5-21
T. B. Salzano	G3-12	D. W. Reberger	S5-13
L. A. Williamson	R1-49	W. E. Ross	S5-07
J. A. Wright	S5-50	R. J. Shupe	R2-50
		P. H. Thomsen	R2-88
		W. T. Thompson	G3-21
		S. U. Zaman	R3-01
		Project Files	G3-11

These minutes document the proceedings from the 30% Design Review Meeting conducted on 6/17/97 for Project W-314's 200E Upgrades definitive design. The 30% design package prepared by FDNW was distributed to the Design Review Team during the 6/3/97 Design Review Briefing. The purpose of this meeting was to formally review the completed Piping and Instrumentation Diagrams (P&IDs) associated with the upgraded 241-A-B and 241-AX-B valve pits, and to informally review the other "in-process" design drawings associated with this work. As discussed during the meeting, the P&IDs associated with the 241-A-A and 241-AX-A valve pit upgrades were not included in the formal review because these upgrades have been identified for deferral into Phase 2 of the project. Participants in the review meeting are identified in Attachment 1.

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

H-14-101047, P&ID Valve Pit 241-AX-B (sht. 1 of 1)
H-14-101048, P&ID Miscellaneous Details (sht. 1 of 1)
H-14-101080, P&ID Valve Pit 241-A-B (sht. 1 of 1)
H-14-101081, 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 AX-B and A-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.

An additional interim review of the in-process design products is planned to be performed at the 60% complete stage for this design package. The 60% design review is scheduled to take place during early September 1997. The completed design documentation for the 200E Upgrades will be submitted for formal review by the Design Review Team upon completion by the FDNW Design Team. This final review of the 200E Upgrades design is currently planned to begin in early February 1998. Updated information concerning the 60% and final reviews for this design package will be issued to the W-314 Design Review Team in advance of the review dates. 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 200E 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

HNF-2375, Rev. 0
ATTACHMENT 2
A2-8

30% Design Review MTG.
Per
200 R/W Package

6/17/97

✓	1	Mark Rickenbach	FDNW	3-2579	G3-12
✓	2	Kirk Boes	NHC/W-314	372-3023	R3-25
✓	3	DAVID Bowers	LMHC/GTFE	373-1841	56-01
✓	4	Dan Ninamaker	LMHC	373-9115	1407
✓	5	AUSIA WILLIAMSON	DEES	376-2893	
✓	6	ELLIOTT L. DUNLOP	FDNW	376-0743	E6-27
✓	7	RON ADHIKARI	FDNW	376-0324	G3-12
✓	8	Bob ROGERS	LMHC	373-2180	
✓	9	DICK CARRATT	FDNW	372-3726	G3-12
✓	10	JOHN WRIGHT	FDNW	376-3899	S5-50
✓	11	RON McMurphy	FDNW	376-6339	S5-50
✓	12	Jim LaPointe	LMHC	373-7744	R2-88
✓	13	TOM SALZANO	FDNW	372-2267	G3-12
✓	14	DAVE GERKEN	NHC	372-3239	S6-38
✓	15	HANK CHAFIN	FDNW	376-3387	R3-25
✓	16	RICHARD ACKERMAN	FDNW	373-4540	G3-12
✓	17	Jim Navarro	BL	373-4365	
✓	18	JOHN KOSERO	FDNW	373-2526	G3-12
✓	19	Dick McGrew	NHC	372-2296	R3-25
✓	20	Wally Rutherford	NHC	372-2903	R3-25

REVIEW COMMENT RECORD (RCR)

1. Date 6/17/97		2. Review No. 200E/W-001	
3. Project No. W-314		4. Page 1 of 4	

5. Document Number(s)/Title(s) Project W-314, Phase 1 - 200E/W Upgrades P&IDs: H-14-101047, H-14-101048, H-14-101080, and H-14-101081	6. Program/Project/ Building Number TWRS/Project W-314	7. Reviewer See below	8. Organization/Group See below	9. Location/Phone
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17. Comment Submittal Approval: 10. Agreement with indicated comment disposition(s) 11. CLOSED

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
East Tank Farms Rad Con	Date	Process Development	Date

ATTACHMENT #2

HNF-2375, Rev. 0
ATTACHMENT 2
A2-9

REVIEW COMMENT RECORD (RCR)

			1. Date 6/17/97	2. Review No. 200E/W-001
			3. Project No. W-314	4. Page 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-14-101047: Delete 2-inch manifold in the 241-AX-B valve pit as per approved ECN #162730. (Bowers)			
2.	H-14-101047: Evaluate the need for both valves (#WT-V-001 and -015) shown in the manifold line connected to nozzle R1. ()			
3.	H-14-101047: Add appropriate safety classification designation and additional notes to the P&ID, as required. This comment applies to all other W-314 P&IDs. (Chafin)			
4.	H-14-101047: Delete 3-inch manifold connection to nozzle R19 as per approved ECN #162730 (manifold connection to "cross-over line" between AX valve pits is not needed). (Bowers)			
5.	H-14-101047: Evaluate methods to minimize/eliminate contamination in capped-off piping stub-outs to facilitate ALARA during future construction tie-ins. This comment also applies to similar activities performed in other pits. (Wright)			
6.	H-14-101047: Replace generic equipment numbers with assigned TWRS equipment designations as applicable. This comment also applies to H-14-101080. (Rickenbach)			
7.	H-14-101047: Consider moving Symbol Legend and item identification legend to the P&ID misc. details drawing. Comment also applies to drawing H-14-101080. (Bowers)			
8.	H-14-101047: Evaluate methods to eliminate permanent manifold connection to line SL-502 which is scheduled for isolation/replacement during Phase 2 of the project. (Bowers)			

REVIEW COMMENT RECORD (RCR)

1. Date 6/17/97			2. Review No. 2008/W-001	
3. Project No. W-314			4. Page 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-14-101047: Revise note associated with 241-AX-B floor drain to identify the drain line destination as Tank AX-102. (Bowers)			
10.	H-14-101047: Revise General Note #2 as needed to address SL-502 isolation and any other piping changes reflected on this drawing. (Bowers)			
11.	H-14-101047: Confirm that existing line SN-400 is actually isolated at AX-501 pit as indicated. (Bowers)			
12.	H-14-101047: Delete "HOLD #2" and insert appropriate equipment number for hydrotest riser associated with line SN-632. (Salzano)			
13.	H-14-101047: Revise modifications shown for instrument air purge line associated with line SL-100 to eliminate cutting and capping of this line -- no changes to be made to existing purge air line. (Salzano)			
14.	H-14-101047: Ensure the nomenclature for the drain line connected to nozzle R1A is consistent with the same line shown on H-14-101051. (Miller)			
15.	H-14-101047: Ensure label associated with the line connected to nozzle R3 is consistent with the same line shown on H-14-101051. (Miller)			
16.	H-14-101048: No comments except as noted above for generic P&ID changes.			
17.	H-14-101080: Evaluate methods to eliminate "permanent" manifold connection to line SN-216 which goes to the 244-A DCRT. (Bowers)			
18.	H-14-101080: Delete 2-inch manifold in the 241-A-B valve pit as per approved ECN #162730. (Bowers)			

REVIEW COMMENT RECORD (RCR)

			1. Date	2. Review No.	4. Page
			6/17/97	200E/W-001	
			3. Project No.		4 of 4
			W-314		
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
19.	H-14-101080: Revise note associated with 241-A-B floor drain to identify the drain line destination as Catch Tank A-350. ()				
20.	H-14-101080: Isolate air purge supply for SN-200/213 line (line taken out of service and isolated by this design) at its source, and remove associated pressure switch tie-in to the master pump shutdown system. ()				
21.	H-14-101080: Revise General Note #2 to address piping changes reflected on this drawing. (Bowers)				
22.	H-14-101080: Revise note associated with SL-113 line to indicate its destination as 242-A Evaporator. ()				
23.	H-14-101080: Revise modifications shown for instrument air purge line associated with line SN-219 to eliminate cutting and capping of this line -- no changes to be made to existing purge air line. (Salzano)				
24.	H-14-101080: Correct typo in last sentence of General Note #1 (should be "identification"). (Boes)				
25.	H-14-101080: Ensure label associated with the line connected to nozzle R1 is consistent with the same line shown on H-14-101084. (Miller)				
26.	H-14-101080: Ensure label associated with the line connected to nozzle R14 is consistent with the same line shown on H-14-101084. (Miller)				
27.	H-14-101081: No comments except as noted above for generic P&ID changes.				

HNF-2375, Rev. 0
ATTACHMENT 2
A2-12

ATTACHMENT #3

HNF-2375, Rev. 0
ATTACHMENT 2
A2-13

W-314 200E Upgrades - 30% Design Review Package

<u>Drawing No.</u>	<u>Sheet</u>	<u>Title</u>
H-14-101047	1	P&ID Valve Pit 241-AX-B
H-14-101048	1	P&ID Misc. Details
H-14-101079	1	P&ID Valve Pit 241-A-A
H-14-101080	1	P&ID Valve Pit 241-A-B
H-14-101081	1	P&ID Misc. Details
H-14-100999	1	Structural Cover Blocks 241-AX-B
H-14-101000	1	Structural Cover Blocks Sections and Details
H-14-101002	1	Structural Cover Blocks 241-A-B Plan
H-14-101003	1	Structural 241-AC-B & 241-A-B Wall Modifications
H-14-101020	1-3	Cathodic Protection Plan Valve Pit 241-AN-B
H-14-101023	1	Cathodic Protection Details
H-14-101023	1	Cathodic Protection Details
H-14-101028	1	Inst. 241-A & 241-AX Plan
H-14-101029	1	Inst. AX Farm Valve Pit Plan 241-AX-A & 241-AX-B
H-14-101030	1	Inst. 241-AX-B Elevation & Details
H-14-101031	1	Inst. A Farm Valve Pit Plan 241-A-A & 241-A-B
H-14-101032	1	Inst. 241-A-B Elevation & Details
H-14-101051	1	Jumper Arrangement Valve Pit 241-AX-B
H-14-101052	1	Jumper Arrangement Valve Pit 241-AX-B Section
H-14-101061	1-2	Jumper Assembly 241-AX-B R16-R19-R20-(D&E)
H-14-101062	1	Jumper Assembly 241-AX-B
H-14-101063	1	Jumper Assembly 241-AX-B R1-(E)
H-14-101064	1	Jumper Assembly 241-AX-B R11-R12-(A)
H-14-101065	1-2	Jumper Assembly VP-100A R3
H-14-101066	1	Jumper Assembly 241-AX-B R1A-Drain
H-14-101067	1	Jumper Assembly 241-AX-B R3A-Drain
H-14-101071	1-4	Funnel Assembly 2-Way and 3-Way Valves - Details
H-14-101074	1-4	Piping Valve Pit 241-AX-B Modification Details
H-14-101076	1	Pit Demolition Jumper Pit 241-AX-B
H-14-101077	1	Valve Actuator Details
H-14-101082	1	Jumper Arrangement Valve Pit 241-A-A
H-14-010184	1	Jumper Arrangement Valve Pit 241-A-B
H-14-010185	1	Jumper Arrangement Valve Pit 241-A-B Section
H-14-101094	1-2	Jumper Assembly 241-A-B R1-R2-(A)
H-14-101095	1-2	Jumper Assembly 241-A-B R15-R16-R19-(B)
H-14-101096	1-2	Jumper Assembly 241-A-B (A)-(B)-(C)
H-14-101097	1-2	Jumper Assembly 241-A-B R3-R9-(D)
H-14-101103	1	Pit Cover Painting Diagram 241-A-B
H-14-101110	1-3	Piping Plan Valve Pit 241-AN-B

REVIEW COMMENT RECORD (RCR)

1. Date 6/17/97				2. Review No. 200E/W-001	
3. Project No. W-314			4. Page 1 of 1		
5. Document Number(s)/Title(s)	6. Program/Project/ Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone	
Project W-314, Phase 1 - 200E/W Upgrades P&IDs: H-14-101047, H-14-101048, H-14- 101080, and H-14-101081	TWRS/Project W-314	See below	See below		
17. Comment Submittal Approval:	10. Agreement with indicated comment disposition(s)	11. CLOSED			
Kirk A. B... Facility Design (W-314 Engineering Lead)	9/8/97 Date	Dick M... Facility Design (W-314 Systems Engineering Lead)	9-9-97 Date		
David E. Bowers East Tank Farm Engineering	9/9/97 Date	JK Bowers East Tank Farm Operations	9-9-97 Date		
D. R. B... Maintenance Program Integration	9/10/97 Date	Operations Integration	9/9/97 Date		
Operations Compliance	9/9/97 Date	Daniel M. Chelton Quality Assurance	9-10-97 Date		
TWRS Safety	9/10/97 Date	Operations & Projects Safety Support	9/9/97 Date		
U/A (DID NOT REVIEW) TWRS Testing Oversight & Startup	9/9/97 Date	Facility Startup	9/9/97 Date		
TWRS Integration & Baseline Management	9/9/97 Date	West Tank Farm Engineering	9/9/97 Date		
East Tank Farm and Con	9/9/97 Date	Process Development	9/9/97 Date		

REVIEW COMMENT RECORD (RCR)

			1. Date	2. Review No.
			6/17/97	200E/W-001
			3. Project No.	4. Page
			W-314	2 of 1
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-14-101047: Delete 2-inch manifold in the 241-AX-B valve pit as per approved ECN #162730. (Bowers)		Accepted - deleted manifold.	
2.	H-14-101047: Evaluate the need for both valves (#WT-V-001 and -015) shown in the manifold line connected to nozzle R1.		Accepted - only one valve is required.	
3.	H-14-101047: Add appropriate safety classification designation and additional notes to the P&ID, as required. This comment applies to all other W-314 P&IDs. (Chafin)		Accepted - will identify drawing as "Safety Class" with a clarifying note as to which components are SC.	
4.	H-14-101047: Delete 3-inch manifold connection to nozzle R19 as per approved ECN #162730 (manifold connection to "cross-over line" between AX valve pits is not needed). (Bowers)		Accepted - deleted manifold.	
5.	H-14-101047: Evaluate methods to minimize/eliminate contamination in capped-off piping stub-outs to facilitate ALARA during future construction tie-ins. This comment also applies to similar activities performed in other pits. (Wright)		This is not an issue for the P&ID to address; however, the ALARA concern is noted and this issue will be addressed during detailed design of the pit modifications.	
6.	H-14-101047: Replace generic equipment numbers with assigned TMRs equipment designations as applicable. This comment also applies to H-14-101080. (Rickenbach)		Accepted.	
7.	H-14-101047: Consider moving Symbol Legend and item identification legend to the P&ID misc. details drawing. Comment also applies to drawing H-14-101080. (Bowers)		Accepted - will move symbol legend as suggested.	
8.	H-14-101047: Evaluate methods to eliminate permanent manifold connection to line SL-502 which is scheduled for isolation/replacement during Phase 2 of the project. (Bowers)		Accepted - a temporary jumper is recommended for this purpose and will be provided, if approved by a change request.	

REVIEW COMMENT RECORD (RCR)

				1. Date 6/17/97	2. Review No. 200E/W-001
				3. Project No. W-314	4. Page 3 of 1
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-14-101047: Revise note associated with 241-AX-B floor drain to identify the drain line destination as Tank AY-102. (Bowers)		Accepted.		
10.	H-14-101047: Revise General Note #2 as needed to address SL-502 isolation and any other piping changes reflected on this drawing. (Bowers)		Accepted - will identify the limiting design pressures.		
11.	H-14-101047: Confirm that existing line SN-400 is actually isolated at AX-501 pit as indicated. (Bowers)		Accepted - this will be investigated.		
12.	H-14-101047: Delete "HOLD #2" and insert appropriate equipment number for hydrotest riser associated with line SN-632. (Salzano)		Accepted.		
13.	H-14-101047: Revise modifications shown for instrument air purge line associated with line SL-100 to eliminate cutting and capping of this line -- no changes to be made to existing purge air line. (Salzano)		Accepted - removed instrument purge air from scope of this activity.		
14.	H-14-101047: Ensure the nomenclature for the drain line connected to nozzle R1A is consistent with the same line shown on H-14-101051. (Miller)		Accepted.		
15.	H-14-101047: Ensure label associated with the line connected to nozzle R3 is consistent with the same line shown on H-14-101051. (Miller)		Accepted.		
16.	H-14-101048: No comments except as noted above for generic P&ID changes.		See dispositions to above comments.		
17.	H-14-101080: Evaluate methods to eliminate "permanent" manifold connection to line SN-216 which goes to the 244-A DCRT. (Bowers)		Accepted - a temporary jumper is recommended for this purpose and will be provided, if approved by a change request.		
18.	H-14-101080: Delete 2-inch manifold in the 241-A-B valve pit as per approved ECN #162730. (Bowers)		Accepted - deleted manifold.		

REVIEW COMMENT RECORD (RCR)

			1. Date	2. Review No.
			6/17/97	200E/W-001
			3. Project No.	4. Page
			W-314	4 of 1
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
19.	H-14-101080: Revise note associated with 241-A-B floor drain to identify the drain line destination as Catch Tank A-350.		Accepted.	
20.	H-14-101080: Isolate air purge supply for SN-2007213 line (line taken out of service and isolated by this design) at its source, and remove associated pressure switch tie-in to the master pump shutdown system.		Not accepted -- this work is out of scope and requires an approved change request to be considered.	
21.	H-14-101080: Revise General Note #2 to address piping changes reflected on this drawing. (Bowers)		Accepted - will identify the limiting design pressures.	
22.	H-14-101080: Revise note associated with SL-113 line to indicate its destination as 242-A Evaporator.		Accepted.	
23.	H-14-101080: Revise modifications shown for instrument air purge line associated with line SN-219 to eliminate cutting and capping of this line -- no changes to be made to existing purge air line. (Salzano)		Accepted.	
24.	H-14-101080: Correct typo in last sentence of General Note #1 (should be "identification"). (Boes)		Accepted.	
25.	H-14-101080: Ensure label associated with the line connected to nozzle R1 is consistent with the same line shown on H-14-101084. (Miller)		Accepted.	
26.	H-14-101080: Ensure label associated with the line connected to nozzle R14 is consistent with the same line shown on H-14-101084. (Miller)		Accepted.	
27.	H-14-101081: No comments except as noted above for generic P&ID changes.		See dispositions to the above comments.	

9/30/97

HNF-2375, Rev. 0
ATTACHMENT 4
A4-1200 R/W Design Package 60% Review Kickoff

Mark Rickenbach	FDNW	377-2539
Bill Hays	FDNW	376-0047
Kirk Boes	NHC/Projects	372-3023
DICK McGREW	NHC/Projects	372-2296
Dan Nunamaker	LMHC/WTF	373-9115
Treta Ravencraft	LMHC/OPERATIONS	373-9275
Phil Miller	LMHC/GUN Ops Comp	373-6389
HANK CHAFIN	FDNW/QA	376-3387
TOM SALZANO	FDNW	372-2267
RICHARD ACKERMAN	FDNW	373-4540
RON ADHIKARI	FDNW	376-0324
DICK CURRATT	FDNW	372-3726
John KOBERG	FDNW	373-2576
DAVID BOWERS	LMHC	373-1841
DAVID MILLER	FDNW	373-3329
Shakir Zaman	LMHC	
Matt Tiffany	DESH	

10/14/97

60% Design Review Meeting - 2006/w Package

Mark Rickenbach	FDNW	373-2539
DAVID POWERS	LMHC	372-1241
Jeff Whattam	FDNW	376-6401
Ron ADHIKARI	FDNW	376-0324
Treta Ravenscraft	LMHC	373-9275
James Pieper	LMHC	376 4175
Dan Nunamaker	LMHC	373-9115
DICK CARRATT	FDNW	372-3726
MARK E. DALLAS	FDNW	376-2949
RICHARD ACKERMAN	FDNW	373-4540
TOM SALEANO	FDNW	372-2267
Jim Navarro	RL	373-4365
Matthew S Tiffany	RESM	373-2148
Jim LaPointe	LMHC	373 7744
Phil Miller	LMHC	373-6389
JOHN KUBERG	FDNW	373-2576
Kirk Boes	NHC	372-3023
HANK M. CHAPIN	FDNW	376-3387

MEETING MINUTES

Subject: FINAL DESIGN REVIEW BRIEFING - W-314 200E UPGRADES

TO: Distribution

BUILDING

FROM: Kirk Boes

CHAIRMAN Kirk Boes

Kirk A. Boes

Department-Operation-
Component
TWRS/Project W-314

Area

Shift

Date of Meeting
1/29/98

Number
Attending
18

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
H. M. Chafin	R3-25
W. J. Eischens	S7-73
W. H. Hays	E6-08
R. W. Jacobson	R1-09
E. W. Leschber	S7-73
P. C. Miller	R1-51
D. L. McGrew	R3-25
J. E. Navarro	S7-54
J. E. Pieper	S5-21
M. D. Rickenbach	G3-12
S. H. Rifaey	R1-56
T. B. Salzano	G3-12
C. C. Scaief	R1-56

DISTRIBUTION:

Attendees	
D. G. Baide	S5-05
T. W. Bohan	S5-04
R. T. Carratt	G3-12
R. A. Dodd	S5-07
J. D. Galbraith	H5-49
P. A. Haine	R3-47
J. L. Homan	T4-07
J. T. Koberg	G3-12
J. R. LaPointe	R2-88
S. L. Leckband	R3-47
R. L. Nelson	R3-47
D. R. Nunamaker	T4-07
D. W. Reberger	S5-13
W. W. Rutherford	R3-25
T. K. Ravencraft	S5-04
W. T. Thompson	G3-21
M. S. Tiffany	R1-49
S. U. Zaman	S5-12
Project Files	G3-11

These minutes document the discussions and actions from the final definitive design review kickoff briefing for Project W-314's "200E Upgrades" design package. This package is the second of six planned definitive design packages for Phase 1 of the W-314 project to be completed.

Following general introductions, Mark Rickenbach (FDNW Principle Lead Engineer) opened the meeting by presenting an overview of the 200E Upgrades. The scope of the 200E Upgrades package consists of modifications to the 200E waste transfer system in support of TWRS Privatization and tank farm operations, including: upgrades to valve pits 241-AX-B and 241-A-B (i.e., 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), and new waste transfer pipelines between the following locations:

- Valve pit 241-AN-B to pump pit 241-AZ-02A
- Pump pit 241-AZ-02A to Valve pit 241-AX-B
- Valve pit 241-AX-B to valve pit 241-A-B
- Valve pit 241-AX-B to pump pit 241-AY-02A

Copies of the completed definitive design package, consisting of drawings (119 sheets) and the W-314-C2 Construction Specification, were distributed to the attendees. Specific deliverables contained within the design package were presented to the assembled Design Review Team by the FDNW design personnel, as follows:

Civil/Structural Drawings - Richard Ackerman

- Richard Ackerman presented the piping plans and profile drawings, structural coverblock and wall modification drawings for the AX-B and A-B pits, and other miscellaneous civil/structural drawings included in the package (H-14-100994 through H-14-101002).
- Dave Bowers (W-314 Design Authority) indicated that an initial comment concerning the piping plans and profile drawings is that these drawings should include identification of line designations for all existing lines crossed by the new W-314 lines. Ackerman said that this information is currently shown on the piping layout drawings and can easily be added to the plans and profiles.

Electrical Drawings - Ron Adhikari

- Ron Adhikari presented the electrical site plans and installation detail drawings, electrical panelboard schedule, wire run list, and cathodic protection drawings (H-14-101008 through H-14-101024).

Instrumentation Drawings - Mark Dallas

- Mark Dallas described instrumentation and control drawings associated with the AX-B and A-B valve pits, including the instrumentation plan and elevation drawings, loop diagrams (for valve pit leak detectors, eccasement leak detectors, and valve position sensors), and instrument lists (H-14-101028 through H-14-101039). He noted that the valve actuator/position switch assembly and leak detection system designs are identical to the those presented in W-314's "AN Valve Pit Upgrades" design.

Piping Drawings - Tom Salzano

- Tom Salzano discussed the piping drawings included in the package, consisting of P&IDs, jumper arrangement and section drawings, jumper assembly drawings, pit cover painting diagrams, piping layouts and details, and hydraulic diagrams (H-14-101047 through H-14-101121).
- Salzano reminded the reviewers that the 241-AX-B and 241-A-B valve pit P&IDs (H-14-101047 and H-14-101080) have been previously reviewed at the 30% and 60% design completion stages, and they are considered ready for approval based on the previously completed formal reviews.
- Dave Bowers asked whether the applicable W-314 drawings reflected the recently installed W-030 and W-320 installations in the AY/AZ Tank Farms. Salzano indicated that he would double-check to ensure that the new installations are identified on the W-314 piping layouts.

C2 Construction Specification - Mark Rickenbach

- Rickenbach briefly discussed the C2 Construction Specification that supports the 200E Upgrades construction activities.

Shafik Rifaey (TWRS Design Authority) indicated that, in addition to the currently identified review team, he will provide the design package to Mark Scott for civil/structural review and to Ghurdian Singh and Mazaen Al-Wazani for electrical review.

Chuck Scaief requested that, prior to the final design review meeting, an agenda be published to allow reviewers with a specific area of interest to plan their attendance at the review meeting.

ACTION ITEM: K. A. Boes to issue agenda to review team for the design review meeting. Due date - 2/10/98

Rickenbach concluded with a discussion of questions/assumptions/issues that FDNW requests customer input on by the final design review meeting in order to finalize the 200E Upgrades design package. These issues are as follows:

1. Based on lack of definitive guidance, it has been assumed that no existing equipment in the AX-B or A-B pits must be retained to support saltwell pumping activities. Confirm this assumption.
2. A number of existing electrical junction boxes associated with in-pit heat tracing systems are located around the outside of the A-B valve pit. The new shielding collar to be provided around the pit includes access covers for these boxes. Is this acceptable or do the temperature gages need to be relocated?
3. Are any spare conduits, in addition to those required to support the future W-314 Phase 2 work, required as a part of this design package?
4. The design for AX-B and A-B is based on shielding calculations performed for the AN-A valve pit. Should new calculations specific to these pits be prepared to support the design?
5. The W-314 modifications include removal of an existing leak detection pressure switch (PS-SN-213) at the A-B valve pit. What additional modification/demolition work is required at the 242-A Building to meet customer requirements (i.e., complete demo, or simply put into a position to ensure continued MPS system operation)?

Kirk Boes (W-314 Technical Lead) closed the briefing by reminding the assembled reviewers that the technical requirements basis for the design is provided in the W-314 Project Development Specifications (PDSSs). If any reviewer needs copies of these documents, Boes will provide. The reviewers were encouraged 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.

ACTION ITEM: The W-314 Design Review Team will reconvene at 7:30 am in
the TCPC Building/4th floor conference room on Thursday, 2/12/98 (and
continuing on 2/13/98, as needed), to review/disposition the Team's
final comments on the 200E Upgrades design package.

ATTACHMENT 1: 200E Upgrades Definitive Design Package Contents
ATTACHMENT 2: Definitive Design Review Kickoff Briefing Attendance List

A-3000-480 (10/94) GEF011

Drawing List

Drawing No.	Index No.	Title
H-14-100993	0000/0101	Drawing List - Vicinity Map

Civil/Structural

Drawing No.	Index No.	Title
H-14-100994	0402	CML 241-AN to 241-AZ Plan & Profile
H-14-10995 Sh 1&2	0402	" " " " "
H-14-10996 Sh 1&2	0402	" " " " "
H-14-100997		CML 241-AY to 241-AX Plan & Profile
H-14-100998		CML Sections & Details - Pipe Lines
H-14-100999	0900/0901	Structural Cover Blocks 241-AX-B Plan
H-14-101000	0900/0901	Structural Cover Blocks 241-A-B Plan
H-14-101002 Sh 1	0900/0901	Structural 241-AX-B & 241-A-B Wall Modifications
H-14-101002 Sh 2	0900/0901	Structural Pits 241-AX-B, & A-B Plans & Details
H-14-101002 Sh 3	0900/0901	Structural Pits 241-AX-B, & A-B Shielding Collar Details
H-14-101002 Sh 4	0900/0901	Structural Pits 241-AX-B, & A-B Missile Shield

PIPING & VESSELS

Drawing No.	Index No.	Title
H-14-101047	7004	P&ID Valve Pit 241-AX-B
H-14-101048	7004	P&ID Miscellaneous Details
H-14-101051	8404	Jumper Arrangement Valve Pit 241-AX-B
H-14-101052	8404	Jumper Arrangement Valve Pit 241-AX-B Section
H-14-101061 Sh 1&2	8405	Jumper Assembly 241-AX-B R1-R20-(O&E)
H-14-101062	8405	Jumper Assembly 241-AX-B R12-(O)
H-14-101063	8405	Jumper Assembly 241-AX-B R16-(E)
H-14-101064	8405	Jumper Assembly 241-AX-B R1A-Drain
H-14-101070	0402	Pit Cover Painting Diagram 241-AX-B
H-14-101073 Sh 1&2	0402	Piping Floor Drain Seal Assembly Valve Pits 241-A-B & AX-B
H-14-101074 Sh 1-4	0402	Piping Valve Pit 241-AX-B Modification Details
H-14-101077	8404	Valve Actuator Arrangement Valve Pit 241-AX-B
H-14-101081	7004	P&ID Valve Pit 241-A-B
H-14-101084	8404	Jumper Arrangement Valve Pit 241-A-B
H-14-101085	8404	Jumper Arrangement Valve Pit 241-A-B Section
H-14-101094 Sh 1&2	8405	Jumper Assembly 241-A-B R1-R2-(A)
H-14-101095 Sh 1&2	8405	Jumper Assembly 241-A-B R15-R19-(B)
H-14-101096 Sh 1&2	8405	Jumper Assembly 241-A-B (A)-(B)-(C)
H-14-101099	8405	Jumper Assembly 241-A-B R16-(C)
H-14-101103	0402	Pit Cover Painting Diagram 241-A-B
H-14-101104	8404	Valve Actuator Arrangement Valve Pit 241-A-B
H-14-101105	0402	Piping Valve Pit 241-A-B Modification Details
H-14-101110 Sh 1-3	0402	Piping Plan 241-AN-B to 241-AZ-02A
H-14-101111	0402	Piping Support Plan 3 rd SN-630-W9
H-14-101112	0402	Piping Details
H-14-101113 Sh 1-6	0402	Piping Plan 241-AZ-02A to 241-AX-B
H-14-101114	0402	Piping Support Plan 3 rd SN-632-W9
H-14-101116 Sh 1-5	0402	Piping Plan 241-AX-B to 241-A-B
H-14-101117 Sh 1-3	0402	Piping Support Plan 3 rd SN-634-W9
H-14-101118 Sh 1-3	0402	Piping Plan 241-AX-B to 241-AY-02A
H-14-101119 Sh 1&2	0402	Piping Support Plan 3 rd SN-635-W9
H-14-101121 Sh 1&2	0402	Piping Hydraulic Diagram AN to A

ELECTRICAL

Drawing No.	Index No.	Title
H-14-101008 Sh 1-3	7901	Electrical Site Plan and Details A/AN/AX/AY/AZ Tank Farms
H-14-101009	7301	Electrical Plan and Details Valve Pit 241-AX-B
H-14-101010 Sh 1&2	7301	Electrical Installation Details Valve Pit 241-AX-B
H-14-101011	7304	Electrical Panelboard Schedule DP-AX-006
H-14-101012	7905	Electrical Wire Run List Valve Pit 241-AX-B
H-14-101016	7301	Electrical Power and Control Plan 241-A Tank Farm
H-14-101017 Sh 1&2	7301	Electrical Installation Details Valve Pit 241-A-B

ELECTRICAL (continued)

Drawing No.	Index No.	Title
H-14-101018	7304	Electrical Panelboard Schedule DP-A-015
H-14-101019	7905	Electrical Wire Run List Valve Pit 241-A-B
H-14-101020 Sh 1-3	7801	Cathodic Protection Plan 241-AN-B to 241-AZ-02A
H-14-101021 Sh 1-6	7801	Cathodic Protection Plan 241-AZ-02A to 241-AX-B
H-14-101022 Sh 1-5	7801	Cathodic Protection Valve Pit 241-AX-B to Valve Pit 241-A-B
H-14-101023 Sh 1-3	7801	Cathodic Protection Valve Pit 241-AX-B to Pump Kit 241-AY-02A
H-14-101024 Sh 1&2	7801	Cathodic Protection Details

INSTRUMENTATION

Drawing No.	Index No.	Title
H-14-101028	5901	INSTM Valve Pit Upgrade Plan
H-14-101029	5901	INSTM Valve Pit Plan 241-AX-B
H-14-101030	5901	INSTM 241-AX-B Valve Pit Elevation
H-14-101031	5903	INSTM Valve Pit Leak Detection Loop Diagram
H-14-101032	5903	INSTM ENC Low Pt Leak Det Loop Diagram
H-14-101033 Sh 1&2	5903	INSTM Valve Position Sensor Loop Diagram
H-14-101034 Sh 1&2	5900	INSTM Instrument List
H-14-101035	5901	INSTM Valve Pit Plan 241-A-B
H-14-101036	5901	INSTM 241-A-B Valve Pit Elevation
H-14-101037	5901	INSTM 241-A-B Valve Pit Leak Detection Loop Diagram
H-14-101038 Sh 1&2	5903	INSTM Valve Position Sensor Loop Diagram
H-14-101039 Sh 1&2	5900	INSTM Instrument List

INSTRUMENTATION

Drawing No.	Index No.	Title
H-14-100946	8404	Jumper Arrangement Valve Pit 241-AN-B
H-14-100971 Sh 1	0403	Funnel Assembly 2- and 3-Way Valves
H-14-100971 Sh 2-4	0403	Funnel Assembly Details
H-14-100972 Sh 1&2	0403	Valve Handle Assembly 2- and 3-Way Valves
H-14-100973	8405	Piping Miscellaneous Details
H-14-100974 Sh 2&3	0402	Piping Valve Pit 241-AN-A & B Modification Details
H-14-100976 Sh 1&2	0402	Valve Actuator Details
H-14-100980	590174	INSTM Valve Position Switch Assembly
H-14-100981 Sh 1&2	590174	INSTM Pit Leak Detection Assy Tank Farms
H-14-100982	590174	INSTM Transfer Line Encasement Leak Detection Assembly
H-14-100983	590174	INSTM Leak Detection Relay PNL Assembly & Details

CONSTRUCTION SPECIFICATION

Drawing No.	Index No.	Title
W-314-C2		Construction Specification

PAGE 1 of 1

ATTACHMENT #2

KICK-OFF MEETING FOR FINAL REVIEW
W-314 "ZOOE/W UPGRADES"

1/29/98

NAME	COMPANY/ORG.	PHONE/MSIN
KIRK BOES	NHC/PROJ. W-314	2-3023 / R3-2
Mark Rickenbach	PRNW / Proj. W314 PLE	3-2532 / G3-12
MARK DALLAS	FDNW / PROT. W-314 INST.	6-2949 / G3-12
TOM SALZANO	" " PINK	2-2267 / "
RICHARD NICKERMAN	" " CIVIL/STR	3-4590 "
RON ADHIKARI	" " ELEC	6-0324 / "
ERVIN LESCHNER	KEH	373-9059
WILLIAM EISCHERS	KEH	372-0740
DAVID BOWERS	LMHC / DSTENGR	373-1841
JAKE JACOBSON	LMHC / TR OPS / INSTR	376-2957
HANK CHAFIN	FDNW / NHC OAE	376-3387 / R3-25
Phil Miller	LMHC ECO	372-1920
DIRK MCGREW	NHC - Project 314	372-2296
Shafik Rifacy	LMHC - TWRS ENG.	373-2128
BILL HAYS	FDNW - STARTUP	376-0047
Chuck Scaf	LMHC - Eq. Eng.	376-0491
Jim Navarro	DOE - RL	373-4365
James Pieper	LMHC / R&C	376-4175

MEETING MINUTES

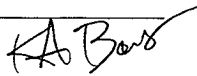
Subject: FINAL DESIGN REVIEW MEETING - W-314 200E UPGRADES

TO: Distribution

BUILDING

FROM: Kirk Boes

CHAIRMAN Kirk Boes



Department-Operation-
Component
TWRS/Project W-314

Area

Shift

Date of Meeting

2/12/98 - 2/13/98

Number
Attending
25

ATTENDEES:

M. Al-Wazani	T4-08
R. A. Ackerman	G3-12
R. Adhikari	G3-12
K. A. Boes	R3-25
D. E. Bowers	S5-13
M. E. Dallas	G3-12
H. M. Chafin	R3-25
W. J. Eischens	S7-73
W. H. Hays	E6-08
G. A. Hester	S5-03
J. T. Koberg	G3-12
J. R. LaPointe	R2-88
R. L. Legg	R1-50
E. W. Leschber	B1-42
J. E. Navarro	S7-54
J. E. Pieper	S5-21
M. D. Rickenbach	G3-12
S. H. Rifaey	R1-56
T. B. Salzano	G3-12
C. C. Scaief	R1-56
M. A. Scott	B4-51
G. Singh	H5-49
M. S. Tiffany	R1-49
T. L. Warnick	E6-11
J. W. Whattam	G3-12

DISTRIBUTION:

Attendees	
D. G. Baide	S5-05
T. W. Bohan	S5-04
R. T. Carratt	G3-12
R. A. Dodd	S5-07
J. D. Galbraith	H5-49
P. A. Haine	R3-47
J. L. Homan	T4-07
R. W. Jacobson	R1-09
S. L. Leckband	R3-47
D. L. McGrew	R3-25
P. C. Miller	T4-08
D. R. Nunamaker	T4-07
D. W. Reberger	S5-13
W. T. Thompson	G3-21
S. U. Zaman	S5-12
Project Files	R1-29

These minutes document the discussions and actions from the final definitive design review meeting for Project W-314's "200E Upgrades" design package. Copies of the design package (consisting of 136 drawings and the C-2 construction specification) and specific instructions for the final review were provided to the W-314 Design Review Team (DRT) at the final design review kick-off briefing conducted on 1/29/98. Participants during the two-day review are identified in the attachment.

The assembled personnel reviewed each of the design drawings one by one. Any comments or questions related to a particular drawing were discussed and, in most cases, a disposition was assigned to the comment during the meeting (e.g., comment accepted, comment not accepted, etc.). Comments that were dispositioned as "accepted" or which were determined to need further evaluation by the Design Team were recorded on a consolidated Review Comment Record (RCR) form. This RCR (designated as RCR #200E-002) represents the formal comments of the W-314 DRT. Likewise, the C-2

construction specification was also reviewed page by page and the team's comments were dispositioned and recorded accordingly. Closure of the RCR (indicated by approval signatures from each of the participating review organizations) will signify the DRT's acceptance of the stated comment dispositions, and provides the basis for final approval of the design package.

Decisions regarding several key questions/issues raised by the FDNW Design Team during the 1/29/98 briefing are identified below:

1. Based on lack of definitive guidance, it has been assumed that no existing equipment in the AX-B or A-B pits must be retained to support saltwell pumping activities. Confirm this assumption.

Decision: All existing jumpers in the valve pits will be removed and disposed of by the project.

2. A number of existing electrical junction boxes associated with in-pit heat tracing systems are located around the outside of the A-B valve pit. The new shielding collar to be provided around the pit includes access covers for these boxes. Is this acceptable or do the temperature gages need to be relocated?

Decision: The project will reattach the loose j-boxes to the outside of the shielded collar during construction. No further modifications to these items is planned.

3. Are any spare conduits, in addition to those required to support the future W-314 Phase 2 work, required as a part of this design package?

Decision: No spare conduits, besides those required for W-314-related activities, will be provided.

4. The design for AX-B and A-B is based on shielding calculations performed for the AN-A valve pit. Should new calculations specific to these pits be prepared to support the design?

Decision: New shielding calculations should be provided to substantiate the need for the collars.

5. The W-314 modifications include removal of an existing leak detection pressure switch (PS-SN-213) at the A-B valve pit. What additional modification/demolition work is required at the 242-A Building to meet customer requirements (i.e., complete demo, or simply put into a position to ensure continued MPS system operation)?

Decision: Isolation of the existing pressure switch for the SN-200/213 encasement leak detector at the 242-A facility should not be included in the 200E Upgrades design package (per Dave Bowers). The work at 242-A needs to be performed via ECN against the existing 242-A Evaporator drawings. The basic work needing to be done involves isolating the instrument air supply to the pressure switch/transfer line encasement and electrically disconnecting or bypassing the switch from the shutdown/alarm relays. Software changes in the Evaporator MCS will also be required. Tom Galioto is the POC for coordinating Evaporator facility changes, and Mac Teats is the POC for software changes.

The W-314 Technical Lead (Kirk Boes) will follow up with each review team member as needed to complete the formal comment resolution and close-out process. Comments will be incorporated into the 200E Upgrades design media by FDNW's Design Team as indicated on the official RCR. Upon completion of this activity and verification that all comments were properly incorporated, the 200E Upgrades design package will be approved and released for construction. Anyone needing further information regarding this process should contact Kirk Boes at 372-3023.

In addition to the W-314 DRT, the U.S. Department of Energy, Richland Operations Office (RL) participated in the review of the 200E Upgrades design package. Comments from the RL independent reviewers (Erv Leschber and Bill Eischens) are included in the official RCR along with the comments of the DRT.

ATTACHMENT: Attendance lists from 2/12 and 2/13 review meetings

'A-3000-480 (10/94) GEF011

2/12-198

ATTACHMENT (PAGE 1 OF 2)

W-314 ZOOE UPGRADES FINAL DESIGN REVIEW

 HNF-2375, Rev. 0
 ATTACHMENT 5
 AS-11

<u>NAME</u>	<u>COMPANY/ORG.</u>	<u>MSIN/PHONE</u>
KIRK BOES	NHC / PROJ. W-314	R3-25 / 372-3023
Mark Ricketbach	FDNW / W314	G3-12 / 372-2579
JOHN KOBERG	FDNW / PM	G3-12 / 372-2576
CHUCK SCAIFF	LMHC / E.G. Eng.	R1-56 / 376-0491
TERRY L JARVICK	FDNW / STARTUP	E6-11 / 376-2365
Treta Ravencraft	LMHC / OE	SS-04 / 373-9275
Ron Legg	LMHC / TRSING	373-4123
Sherr HESTER	LMHC / PIC	373-3236
RICHARD ACHERMAN	FDNW	372-4540
Dick CARRATT	FDNW	372-3726 / 63-12
MARK E. DALLAS	FDNW	376-2949 / 63-12
Jeff Whittam	FDNW	376-6401 / 63-12
GURDHIAN SINGH	NHC	376-3129
RON ADHICARI	FDNW	376-0324
ERV LESCHER	KEH	373-9059
TOM SALZANO	FDNW	372-2267
BILL EISCHENS	KEH	372-0740
HANK CHAFIN	FDNW	R3-25 / 376-3787
DAVID BOWERS	LMSE	SS-13 / 373-1841
Matthew S. Tiffany	DESH	R1-49 / 373-2142
Mazen Aluzani	LMHC	74-07 / 372-3869
Shafik Rifacy	LMHC	R1-56 / 373-2108
JAMES R. LAPOINTE	LMHC	R2-88 / 373-7744
James Propper	LMHC	SS-21 / 376-4175
Mark Scott	BESC	BA-51 / 376-5152

2/13/98

ATTACHMENT (PAGE 2 OF 2)

HNF-2375, Rev. 0
ATTACHMENT 5
A5-12200E UPGRADES FINAL DESIGN REVIEW

<u>NAME</u>	<u>COMPANY/ORG.</u>	<u>MSIN/PHONE</u>
Kirk Boes	NHC / Proj. W-314	R3-25 / 372-3023
DAVID BOWERS	LMHC / OSTENG	85-13 / 373-1841
JOHN KOBERGE	FDNW / PM	63-12 / 373-2578
HANK CHAFIN	FDNW / QAE	R3-25 / 376-3387
BILL ELSCHENS	KEH	372-0740
GURDHIAN SINGH	NHC	376-3129
Jim Navarro	DOE-RL	373-4365
ERV LESCHER	KEH	373-9059
Terry Warwick	FDNW / Startup	376-2365
RICHARD ACKERMAN	FDNW	373-4540
RON ADHIKARI	FDNW	376-0324
Jeff Whittam	FDNW	63-12 / 376-6701
Shafik Rifacy	LMHC	373-2108
Edw. Legg	LMHC	373-4123
STENN HESTER	LMHC	373-3738
R. J. Connett	FDNW	372-3726
MARK E. DALLAS	FDNW	376-2949
TOM SALZANO	"	372-2267
Jim LaPointe	LMHC	R2-88 373-7744
Mark Rickenbach	FDNW	63-12 / 3-2539

REVIEW COMMENT RECORD (RCR)

1. Document Number(s)/Title(s)	2. Review No. 200E-002	3. Review No. W-314	4. Page of 33
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5. Document Number(s)/Title(s)	6. Room/Project/ Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
Project W-314 - Phase 1, "200E Upgrades" Definitive Design Drawings and Specifications 10. Agreement with indicated comment disposition(s)		See below	See below	
<i>Kid-A-Rox</i> Project Development (W-314 Engineering Lead)	3/4/98		<i>David L. M. 98</i>	3-9-98
<i>David E. Bowers</i> DST Engineering (W-314 Design Authority)	3/19/98		<i>David E. Bowers</i>	3-10-98
<i>David E. Bowers</i> Maintenance Program Integration	3/9/98		<i>David E. Bowers</i>	3-9-98
<i>David E. Bowers</i> Operations Competence	3/9/98		<i>David E. Bowers</i>	3-9-98
<i>David E. Bowers</i> THRS Testing & Systems Readiness	3-9-98		<i>David E. Bowers</i>	3-10-98
<i>David E. Bowers</i> THRS Safety	3-9-98		<i>David E. Bowers</i>	3-10-98
<i>David E. Bowers</i> Process Development	3-10-98		<i>David E. Bowers</i>	3-10-98
<i>David E. Bowers</i> Engineering/Technical Support	3/9/98		<i>David E. Bowers</i>	3/9/98
<i>David E. Bowers</i> Project Development (Electrical)	3/9/98		<i>David E. Bowers</i>	3/9/98
<i>David E. Bowers</i> SESC Mechanical/Civil	3/9/98		<i>David E. Bowers</i>	3/9/98
<i>David E. Bowers</i> RL Independent Review	3/10/98		<i>David E. Bowers</i>	3/10/98

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1	H-14-101008, sht. 1: Delete spare (non-W-314) conduits - there is no requirement to provide these items. (Boes)		(cp) Accepted. All spare conduit (Non-W-314) deleted.	
2	H-14-101008, sht. 1: Field routed conduits will need to be as-built on final project drawings. (Bowers)		Noted.	
3	H-14-101008, sht. 1: Specify (in C-spec) sealing material referred to in Note 9. (Singh)		Accepted. Note revised to cap conduits instead of sealing.	
4	H-14-101008, sht. 2 - no comments		N/A	
5	H-14-101008, sht. 3 - no comments (sheet maybe deleted based on comment 1)		N/A	
6	H-14-101009: Reorientate Section A shown in Detail 1 to match the Elevation A drawing. (Singh)		Accepted. Re-orientated section A.	
7	H-14-101009: Correct mislabeling of conduits C3 and C8 (Singh)		Accepted. Switched labeling of C3 and C8.	
8	H-14-101009: Delete conduit shown extending north from TBX101. (Singh)		Accepted. Deleted conduit.	
9	H-14-101009: Clarify tag numbers shown on leak detection relay cabinets (complete tag numbers). (Singh)		(cp) Accepted. Put in whole tag number.	
10	H-14-101010, sht. 1: Correct sizing of penetration shown for gas sampling port.. (Boes)		Accepted. Gas sampling port size reduced to reflect 1-inch penetration.	
11	H-14-101010, sht. 1: Check reference drawing identified for anchoring in Elevations B and C. (Chafin)		Accepted. Changed reference to H-14-101002.	
12	H-14-101010 sht. 2: In detail shown for cordset schedule, clarify that note referencing "90 degrees" is for temperature (Centigrade). (Singh)		Accepted. Added "C" to the note to indicate degrees centigrade.	
13	H-14-101010, sht. 2: Evaluate need for shielded wire. (Singh)		(cp) Accepted. Will use shield for whole run. Cord set changed to include shield.	

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14	H-14-101010, sht. 2: Clarify pin numbering matchups on cordset connections (additional details and/or notes). (Singh)		(cp) Accepted. Revised notes 12 and 13 to clarify pin matchups.	
15	General comment: Need to obtain vendor submittal data for all procured items. (Bowers)		D. Bowers will identify what items require vendor info.	
16	H-14-101011 - no comments		N/A	
17	H-14-101012: Verify conduit routings shown for wire run - see comment #7. (Al-Wazani)		Verified. Wire run list is correct as shown.	
18	H-14-101009 : Add TBX numbers (consistent with wire run list) to enlarged plan for clarification. (Al-Wazani)		(cp) Accepted. Added TBX numbers.	
19	H-14-101012: Evaluate using terminal strips for wire runs 4, 5 and 6. (Singh)		(cp) Not accepted. No splicing involved with signal wire (continuous wire) so there is no need for terminal strips.	
20	H-14-101012: Add note to clarify "WT" prefixes to tag numbers. (Al-Wazani)		(cp) Accepted for LDE only. Others are explained in Note 3.	
21	H-14-101016: In Detail 2, correct mislabeling of conduits (one conduit labeled as both C3 and C41). (Al-Wazani)		Accepted. Additional conduit label added.	
22	H-14-101010, sht. 1: Reorientate Section A line to match elevation A view.		Accepted. Section "A" re-orientated.	
23	H-14-101016: Delete Note 4.B. (Chafin)		Accepted. Note 4.B deleted.	
24	H-14-101016: Identify conduit C41, as appropriate, on Elevation A.		Accepted. Identified conduit C41.	
25	H-14-101017, sht. 1: Correct Section A line shown on Plan view to be consistent with section view.		Accepted. Corrected section A lines.	
26	H-14-101017, sht. 2: Incorporate applicable comments from H-14-101010, sht. 2.		Accepted. See items 10 through 14, and 22.	
27	Not used.		N/A	
28	H-14-101018: No comments		N/A	

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29	H-14-101019; same comments as for H-14-101012.		(cp) Accepted. See items 17, 19, and 20.	
30	H-14-101020, sht. 1: Concerning Note 3, ensure that any anodes are as-built within plus/minus one foot. (Bowers)		(cp) Accepted. Revised Note 3 to add "Record actual installed locations if other than shown".	
31	H-14-101020, sht. 1: Concerning Note 11, verify acceptability of abandoning anodes in place. In addition, final as-builtting shall reflect any existing anodes which are removed. (Bowers)		Checked with LMHC's Operations Compliance organization (Phi Miller) and it is acceptable to abandon them. Noted that final as-built drawings should reflect anodes which are removed.	
32	H-14-101020, sht. 1: Revise jumper shown connecting SN-630 and SN-260 lines to indicate "existing" (to be installed as part of AN Valve Pit Upgrades construction package). (Boes)		(cp) Accepted. Revised connections to display as "existing".	
33	H-14-101020, sht. 1: Clarify method of connection of CP to pipe encasement. (Singh)		(cp) Accepted. Revised drawing to show line representing the negative return cable connecting to encasement symbol.	
34	H-14-101020, sht. 2 - no comment		N/A	
35	H-14-101020, sht. 3: Existing test station T(11-203) is to be relocated. Clarify where existing station is moved from (typical for all relocated test stations). (Bowers)		(cp) Not accepted. Existing test station locations and relocation, as necessary, are shown on civil drawings. This drawing shows connections to the pipe end only.	
36	H-14-101020, sht. 3, editorial - clean up labeling in zone D4. (Chafin)		Accepted. Made labeling more readable.	
37	H-14-101021, sht 1: See comments concerning general notes (30 and 31).		Noted.	
38	H-14-101021, sht. 1: Verify that test station number T(11-206) has not already been used. (Scaterf/Bowman)		Accepted. New number assigned, T(11-208) and shown on the drawing.	
39	H-14-101021, sht. 2: Add labels for 2 lines covered by test station T97-62). (Scaterf/Bowman)		Accepted. Added line numbers (PW-4805 and PW-4507).	
40	H-14-101021, shts. 3, 4, 5, and 6 - no comment		N/A	

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41	H-14-101022, sht. 1: Clean up labeling associated with new test stations. Same comment for sht. 4 and 5. (Boes)		Accepted. Labeling made more readable.	
42	H-14-101022, sht. 1: Apply any applicable comments for previous CP drawings. (Bowers)		Accepted.	
43	H-14-101022, sht. 2: Verify correct labeling of anodes and confirm consistency between plan and table. (Scarief/Bowman)		Verified. Changed anode numbers A(14-50) (3 places) to A(14-56), A(14-57), and A(14-58) and corrected anode location table.	
44	H-14-101022, sht. 3 - no comment		N/A	
45	H-14-101022, sht. 4: Verify sufficient spare space is available for W-314's use in existing conduit for ADB(15-2). Evaluate need for new ADB. (Scarief/Bowman)		Verified that enough space is available. Conduit run is short (less than 3 ft.).	
46	H-14-101022, sht. 5 - no comment		N/A	
47	H-14-101023, sht. 1: See comments concerning general notes for previous CP drawings.		Accepted.	
48	General comment: Verify that recent CP installations associated with other projects have been considered in this design. (Bowers)		(cp) Accepted. Evaluated and design has no adverse effects on CP System in field.	
49	H-14-101023, sht. 1: Add appropriate north coordinates to this drawing for reference (Al-wazani)		(cp) Accepted. Added north coordinate to pit AX-B.	
50	H-14-101023, sht. 2 and 3 - no comment		N/A	
51	H-14-101024, sht. 1 and 2 - no comment		N/A	
52	H-14-101028 - no comment		N/A	
53	H-14-101029: Add triangle symbol (see Note 3) to Legend at top of drawing. (Bowers)		(cp) Not accepted. Definition of this symbol is covered by Note 3.	
54	H-14-101029: Verify correct labeling of HH-01 in Zone F6. (Singh)		Verified, correct as shown.	
55	H-14-101029: Evaluate providing installation details for terminal box (see Note 4). (Leschber)		(cp) Accepted. See installation details on drawing H-14-101009, note 4.	

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56	H-14-101029: In Note 1, add applicable procedure number/revision for IP-0842. General comment wherever applicable. (Bowers)		(cp) Accepted. Section 4.14, Rev. 2a added.	
57	H-14-101030: In Elevation A, move callout for "LDE 220A & B" to align with the actual elements in the pit. (Eischens)		Accepted. "LDE" call out moved to probes.	
58	H-14-101031: Delete the word "temporary" associated with 24-V power supply. This comments applies to other similar drawings. (Rifaey)		(cp) Accepted. Removed word "temporary".	
59	General comment: Check site standards associated with color coding of electrical wiring and assess changes to current design. (Singh)		(cp) Assessed design and determined that wire colors are per FDMW standard GE-Color-01 and are in accordance with section 16400, section 3.2.6.5. For particular wiring in question where the same wiring is going to be used for 220 Vac and then 24 Vdc service, the wiring will be tagged as 220 Vac wiring and when replaced by 24 Vdc, the tags will be removed.	
60	H-14-101031: Clarify note associated with wiring for future connections to relay cabinet terminal strip TBX 220. Consider adding req'd amount of wiring. (Singh)		(cp)Accepted. Note 4 reworded and indicated amount of wire.	
61	H-14-101031: Add indication in Zones B8/C8 to clarify that LDE probes are SC. (Eischens)		Accepted. Added SC designation.	
62	H-14-101031: Drawing needs to include reference to the appropriate wiring diagram for the LDE. This can be done by referencing existing drawing H-14-100981, sht. 2 and/or instrument list. (Eischens)		(cp) Accepted. Note added to reference H-14-100981.	
63	General comment: Evaluate addition of wire/cable numbers to wiring shown on the loop diagrams. Generic comment applicable to loop diagrams. (Eischens)		(cp) Accepted. Provided more wire numbers on loop diagrams for clarification.	

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64	General comment: Evaluate adding wiring diagrams for all electrical installations. (Leschber)		(cp) Accepted. Added wiring diagrams for AX241-WT-TBX-101, -PNL-222, -PNL-220, -W314-07, -W314-03, A241-WT-TBX-101, -PNL-220, -W314-07, -W314-05, -W314-03, -W314-02 as shown on drawings H-14-101040.	
65	H-14-101032: Incorporate any applicable comments from drawing 31. (Bowers)		(cp) Accepted. See items 58, 60, 61, and 62.	
66	H-14-101032: Add reference for method of accomplishing the encasement LDE electrical ground. (Singh)		(cp) Accepted. Added new notes for reference drawing H-14-100982.	
67	General comment: Evaluate adding terminal strip numbers to loop diagrams. (Singh)		(cp) Accepted. Added TB-6 number on H-14-101033 and -101038. Other loops are sufficient as is.	
68	Not used		N/A	
69	H-101033: Change "triangle" symbol to another symbol to avoid confusion with the symbol used to designate SC on other drawings. (Bowers)		(cp) Accepted. Triangle changed to a different symbol.	
70	H-14-101034, sht. 1 and 2: Replace "*" in table with appropriate drawing reference. (Bowers)		(cp) Accepted. Drawing references placed in table.	
71	H-14-101035: No comments other than already discussed for H-14-101029.		Accepted. See items 53 - 56.	
72	H-14-101036: See comments for H-14-101030.		Accepted. See item 57.	
73	H-14-101037: Add references for existing wire runs shown in Zone D2. (Bowers)		(cp) Accepted. Added reference to Spec. B-102-C1.	
74	H-14-101038: See comments for H-14-101033.		(cp) Accepted. See item 69.	
75	H-14-101039: See comments for H-14-101034.		(cp) Accepted. See item 70.	
76	H-14-100993: Correct title shown on drawing list for H-14-100997. (Chafin)		Accepted. Drawing title corrected on drawing list.	

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77	H-14-100994: Delete "SLOPE TBD" note on portion of new line to be completed during AZ design package. (Bowers)		(cp) Accepted. Deleted "Slope TBD".	
78	General comment: (1) On the civil plans/profile drawings, evaluate adding identification of all existing underground lines known to cross the new transfer lines. (2) Clarify in notes that the profiles only address underground piping, ductbanks, etc. (i.e., no electrical runs, etc.). (Bowers)		(cp)(1) Not accepted. Type of lines identified on civil drawings and actual line numbers can be found on piping drawings. (2)Accepted. Put a clarification note on drawing H-14-100998.	
79	General comment: Evaluate altering slope of new pipeline shown on civil piping plans/profiles to minimize need for shoring during construction. (Boes)		(cp) Accepted. Changed some slopes.	
80	H-14-100995, sht. 1: no comment.		N/A	
81	H-14-100995, sht. 2: no comment.		N/A	
82	H-14-100998, sht. 1: Add symbol for steam pipe supports to Legend (used on 996, sht. 1). (Boes)		Accepted. Symbol added.	
83	General comment: Where practical, keep pipe slope to no greater than 10%. (Rifaey)		(cp) Accepted. Changed slope on various sections where possible.	
84	H-14-100996, sht. 1 - no comment.		N/A	
85	H-14-100996, sht. 2 - no comment.		N/A	
86	General comment: Check with Operations Compliance on acceptability with permanently taking out of service existing waste transfer lines. (Bowers)		K. Boes checked with P. Miller and he states it is acceptable to cut, cap, and abandon the transfer lines.	
87	General comment: Recommend developing contingency planning prior to pipeline construction to deal with unforeseen underground interferences/conditions (high rad). (Bowers)		(cp) Noted.	
88	H-14-100997 - no comments.		N/A	
89	H-14-100998: In Note 2, clarify that reference measurements are from centerline of 3-inch pipe. (Bowers)		(cp) Accepted. Clarified in Note 2.	

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90	H-14-100998: In Detail 14, verify need for the callout to Note 10. (Boes)		Accepted. Detail 14 changed to Detail 13 and removed Note 10 reference.	
91	H-14-100998: In Detail 16, clarify dimensional information related to depth of buried conduits. (Bowers)		(cp) Accepted. Changed Detail 16 to Detail 15 and added dimension.	
92	H-14-100998: In the Civil Legend, correct the depiction used for "new pipe line" to match the drawings. (Boes)		Accepted. Changed depiction.	
93	H-14-100998: Verify that Detail 18 applies to H-2-100996. (Chafin)		Accepted. Deleted Detail 18 from this drawing and information moved to H-14-100996. Snt.1.	
94	H-14-100998: Detail 17: change Note 10 to Note 9. (Leschber)		Accepted. Changed to Note 9.	
95	H-14-100999: Change drawing reference in Detail B to H-14-101000. (Chafin)		Accepted. Drawing reference changed to H-14-101000.	
96	H-14-100999: In Note 9, change "inspection port" to "view port" for consistency throughout the drawing package. (Boes)		Accepted. Changed to "view port".	
97	H-14-100999: In Note 4, change soil load from 110 pcf to 125 pcf, based on actual measurements obtained during AP Tank Farm construction. (Rifaey)		(cp) Accepted. Changed to 125 pcf.	
98	H-14-100999: Ensure that actual coverblock weight is incorporated in Note 11 during final project as-builtting. (Bowers)		(cp) Noted.	
99	H-14-100999: Please incorporate additional coverblock penetration near center of AX-B pit to facilitate pit washdown. Comment also applies to H-14-101000 for A-B coverblocks. (Bowers)		(cp) Accepted. Added penetration.	
100	H-14-101000: Verify that gas sampling port plug (7/8" dia. rod) will fit easily into penetration (1 1/2" sch. 80 pipe). (Leschber)		Verified. By using the ASTM tolerances, the rods should fit.	
101	H-14-101000: Correct tag label drawing callout shown for gas sampling port in Zone F1 (should refer to H-14-101000). (Chafin)		Accepted. Corrected to H-14-101000.	

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102	H-14-101000: Evaluate repositioning coverblock bails to ensure safe lifting. (Scott)		(cp) Accepted. See item 103.	
103	H-14-101001: Consider use of commercially available lifting bails in place of specially fabricated bails for the new coverblocks, if cost effective. (Scott)		(cp) Accepted. Changed to a commercially available socket and hook.	
104	H-14-101001: Delete Note 3. (Boes)		Accepted. Note 3 deleted.	
105	H-14-101001: Clarify required pipe grades for carbon steel and stainless steel, as appropriate, for coverblock penetration piping. (Leschber)		(cp) Accepted. Added pipe grades to c-spec. section 05500, para. 2.2.3.	
106	H-14-101001: Revise weld symbol shown in Detail 4 for angle joint. (Scott)		Accepted. Revised weld symbol.	
107	H-14-101002, sht. 1 and 2 - no comments.		N/A	
108	General comment: Any existing loose electrical boxes adjacent to pit wall should be reattached to outside of new shielding collar. (Bowers)		(cp) Accepted.	
109	H-14-101002, sht. 3: In Elevation D, change callout for Detail J to Detail B. (Rickenbach)		Accepted. Changed to "B".	
110	H-14-101002, sht. 3: In Detail B for the pit shielding collar, change materials used for railing post sockets to galvanized to minimize deterioration from rusting (sockets will collect rain water). (Scott)		(cp) Accepted. Changed to "galvanized".	
111	H-14-101002, sht. 4 - no comments.		N/A	
112	Not used.		N/A	
113	C2, section 15493: Provide appropriate requirements for controlling storage and pre-heating of weld rod materials to assure that welds are sound. (Rifaay)		(cp) Welding filler material control is covered in the general procedures of the FDNW Welding Manual (FDNW-M5-8).	

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114	C2, section 15493: If pipe bending less than 5D, provide measurement of pipe wall thickness. (Rifaey)		(cp) Noted. The code requires the minimum thickness for the design pressure be met (0.06" for primary and 0.08" for secondary). There are two bends that are less than 5D (they are approximately 4.5D). Since our starting thickness is much greater than the required thickness for the pressure (approximately 0.2") and since the bends are not extreme, it is the opinion of the design engineer that thickness measurements are not required.	
115	C2, section 15493, M9 table: For 3-inch and smaller piping, specify butt welding. (Rifaey)		(cp) Accepted. Pipe will be butt welded.	
116	C2, section 15493: Specify weld end details on drawings, and consider use of pre-prepped fittings to minimize construction costs. (Rifaey)		(cp) Accepted. Pipe will be purchased with end prepped and fittings are butt welded in accordance with ASME B16.9. Will add requirement for end prep to be plain bevel.	
117	C2, section 15493, para. 3.2.1.3: Specify "normal service". (Rifaey)		(cp) Accepted. "Normal service" added to section 3.2.1.4 (added new 3.2.1.3).	
118	H-14-101047: Delete temporary jumper between Nozzle R16 and Nozzle E (not required due to acceleration of W-314's new transfer line replacing SL-502). Provide a process blank on Nozzle E. (Bowers)		(cp) Accepted. Deleted jumper.	
119	H-14-101048 - no comments.		N/A	
120	H-14-101051: Delete jumper "R16-(E)" in the pit jumper arrangement drawing, as discussed above for the P&ID. (Bowers)		(cp) Accepted. See item 118.	
121	H-14-101051: In Note 6, clarify that the new encasement pipes for 3" SN-633 and 3" SN-632 are also Safety Class, and that all other systems, structures, and components depicted on this drawing are general service. (Leschber)		(cp) Accepted. Added SN-633 & 632 as SC. Left rest of note same.	

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122	H-14-101052: Verify whether "existing support structure" identified on pit floor and to be removed by this project is actually present. Existing video footage should be checked. (Bowers)		Verified existing structures still in place.	
123	General comment: Consider alternatives, (which would facilitate jumper installation) to the current support footings provided on W-314 jumpers. (Pieper)		(cp) Accepted. Reversed the bolt so that adjustments can be made from top. This was done based on input from construction on Project W-320. The only concern was to not have to touch the part of the bolt that came in contact with the pit.	
124	H-14-101061, shts. 1 and 2 - no comments.		N/A	
125	H-14-101062 - no comments.		N/A	
126	H-14-101063: Based on comment above, recommend finalizing this drawing of the "R16-(E)" jumper for future use, if needed, but do not include as a part of the W-314 construction package. (Bowers)		(cp) Not accepted. Drawing removed from package.	
127	H-14-101064: Verify that drain valve can be operated using the T-handle style actuator. (Bowers)		Verified. Received vendor fax on 2/24/98 stating the torque on a 2" MP ball valve with Kynar seats will be 70 ft - lbs. The T-handle should be adequate.	
128	H-14-101070: Although actual coverblock weights will be verified, painted on coverblocks after fabrication, and included in final as-built drawings, please make the approximate coverblock weight shown on this painting diagram consistent with the weight listed on the structural coverblock drawing (or vice-versa). (Boes)		Accepted. Modified to match structural drawings.	
129	General comment: Verify that stop pins on procured valves are solid and "operator-proof." (Bowers)		(cp) Verified. Stop pins are solid pins from 5/16" to 1/2" in diameter.	
130	H-14-101070: Delete routing for jumper "R16-(E)" from the AX-B coverblock painting diagram, based on comment above. (Bowers)		(cp) Accepted. Deleted routing.	

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131	H-14-101073, shts. 1 and 2: Verify sizing compatibility of Part Number 12 (5/8-inch dia. rod) and Part Number 10 (3/4-inch sch. 80 pipe) associated with the new floor drain seal assembly. (Leschber)		Verified. The size tolerance for the bar is a maximum of 0.005" (ASTM A29). The ID of the pipe is 0.742" with a maximum tolerance of +/- 1/16" (ASTM A530).	
132	H-14-101074, sht. 1: In Detail A-A, verify that grout used to fill existing 1 1/2-inch pipe (abandoned and removed from service) completely fills pipe through the pit wall. (Bowers)		Accepted. Deleted misleading grout symbol. The note says to "fill" the pipe.	
133	H-14-101074, shts. 2 and 3 - no comments.		N/A	
134	H-14-101074, sht. 4: Add note or other suitable directions for drilling holes in fins of nozzle assembly to facilitate installation in wall penetration. Recommend discussing with W-320 construction personnel to obtain lessons learned from their experience. (Bowers)		(cp) Accepted. Note added allowing the fins to be drilled through as required to support field installation.	
135	H-14-101077 - no comments.		N/A	
136	H-14-101080: Verify encasement drain detail identified for Nozzle R11 (may be R12?). (Bowers)		Accepted. Relocated the encasement drain line to the line connected to R12.	
137	H-14-101081 - no comments.		N/A	
138	H-14-101084 - no comments.		N/A	
139	H-14-101085 - no comments.		N/A	
140	H-14-101094, shts. 1 and 2 - no comments.		N/A	
141	H-14-101095, shts. 1 and 2 - no comments.		N/A	
142	H-14-101096, shts. 1 and 2 - no comments.		N/A	
143	H-14-101099 - no comments.		N/A	
144	H-14-101103 - no comments.		N/A	
145	H-14-101104 - no comments.		N/A	

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146	H-14-101105: Evaluate method for hydro testing the high point vent cap, if possible. (Bowers)		(cp) Accepted. The integrity of the cap will be verified during the initial hydro test. Re-verification after draining is not possible.	
147	General comment: Evaluate potential CDF adhesion to pipeline and restricting thermal growth. (Bowers)		(cp) Accepted. Wrapping the pipe with polyethylene sheeting will be added to structural drawing. H-14-100998.	
148	H-14-101110, shts. 1, 2, and 3 - no comments.		N/A	
149	H-14-101111 - no comments.		N/A	
150	H-14-101112 - no comments.		N/A	
151	H-14-101113, shts. 1, 2, 3, 4, 5, and 6 - no comments.		N/A	
152	H-14-101114 - no comments.		N/A	
153	H-14-101116, shts. 1, 2, 3, 4, and 5 - no comments.		N/A	
154	H-14-101117, shts. 1, 2, and 3 - no comments.		N/A	
155	H-14-101118, shts. 1 and 2 - no comments.		N/A	
156	H-14-101118, sht. 3: Identify partial plan area. (Boes)		Accepted. Added callout to refer to Detail 1.	
157	H-14-101119, shts. 1 and 2 - no comments.		N/A	
158	H-14-101121, shts. 1 and 2: Recommend adding reference tank elevations to support hydraulic calculations. Also recommend not issuing these drawings until after completion of remaining pump pit tie-ins. (Bowers)		(cp) Accepted. Will add reference information during later design package (AZ).	
159	C2, page v: Add hydraulic calculation for line loss to the listing of calculations. (Leschber)		(cp) Accepted. Calculation number W314-P-101 added.	
160	C2, section 01010-1, section 1.2.1.1: Clarify that the major work to be completed is applicable to pits AX-B and A-B. (Warnick)		Accepted. Clarified scope description.	
161	C2, General comment: Specify the date(s) for codes of record used to support the design. (Leschber)		(cp) Accepted. Add reference to October 1997 on all applicable sections.	

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162	C2, 02237-2, section 1.2.1: Verify that Section 2.10 of the TWRS PPM is a valid reference. (Warnick)		Verified. This is appropriate until a project specific procedure for submittal processing is approved.	
163	C2, General comment: Ensure that procurement documentation requires MSDS's for all procured items. (Bowers)		Noted. Part of FDNW's standard procurement process.	
164	C2, 03300-3, section 1.5.1: Evaluate rewording requirement concerning qualified suppliers meeting NQA-1 program requirements. Clarify that suppliers don't need to have an NQA-1 program. (Leschber)		Not accepted. Wording does not state supplier needs to have a NQA-1 program but a program that meets the applicable requirements of NQA-1.	
165	C2, 03300-4, section 1.5.2.2.a: Clarify that testing agency activities are limited to non-field activities. (Warnick)		Not accepted. Acceptable as worded.	
166	C2, 05055-2, section 3.3.1: How will construction personnel account for rebar encountered during drilling/installation of anchors? (Leschber)		FDNW Practice 134-500.8209, as noted in section 3.3.1, spells out what they will do.	
167	C2, 05500-3, section 1.3.2.2.b: Verify whether ASTM A568 is correct, or should it be A569. (Leschber)		Verified A568 correct.	
168	C2, 05500-4, section 2.2.3: Add applicable requirements for stainless steel pipe. (Leschber)		(cp) Accepted. SST requirement added (ASTM A312, Type 304C).	
169	C2, 05500-5, section 2.3.2: Add a reference in this paragraph to the coating section of this specification. (Leschber)		(cp) Accepted. Reference to coating section included.	
170	C2, General comment: Review welding procedures to determine how they address weld strikes. (Rifaey)		(cp) Accepted. Added a new requirement (para. 3.1.3.7) requiring arc strikes to be examined by liquid penetrant exam.	
171	C2, Section 05500, General comment: Required tolerances do not appear to be identified in the C2 spec or the drawings for metal fabrications. Revise as needed. (Leschber)		(cp) Accepted. Tolerances (+/- 1/8 in.) called out on drawing H-14-100999, General note 11.	
172	C2, 09855-5, section 2.2.3.8: Evaluate clarification that 12-yr design life for coating system is applicable to interior of pit, or consider revising requirement. (Leschber)		(cp) Accepted. Added additional requirement for SPC exposure to solar uv radiation.	

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173	C2, 09855, General comment: Evaluate need to add requirement for spark testing coated surfaces of pit for holidays. (Rifaey)		(cp) Evaluated. With at least 3 coats and total thickness of 15 mils. holidays should not be thru the multiple coats to the substrate. Additionally, spark tests to a concrete surface with embedded steel may not be accurate and high voltage required may damage embedded steel. (cp) Accepted. Added note to mask exposed metal for protection from muriatic acid solutions.	
174	C2, 09855-8, section 3.2.2.4: Consider alternatives to using muriatic acid for cleaning concrete due to possible damage to metallic items. If used, specify precautions to protect metallic items. (Bowers)		Accepted. Corrected drawing numbers.	
175	C2, 09855-10, section 3.3.6: Correct drawing references (should be H-14-101070 and H-14-101103). (Leschber)		(cp) Accepted. Specified QC inspection requirements for SPC. Deleted reference to any specific tests.	
176	C2, 09855-11, section 3.4.2: Specify tests required. (Singh)		Accepted. Changed to "50"	
177	C2, 13440-4, section 2.2.2: Verify specified temperature range limits. Appears to be a typo error. (Etschens)		Accepted. Made all references to NEMA 4X.	
178	C2, 13440-4, section 2.2.5: Change NEMA 4 to NEMA 4X, as appropriate. (Etschens)		(cp) Accepted. Reworded to allow testing by qualified personnel.	
179	C2, 13440-4, section 2.3.2: Consider rewording to allow latitude in qualifying GGI equipment. (Rifaey)		(cp) Accepted. Deleted last part of last sentence at "... or on..."	
180	C2, 13440-4, section 2.3.1: Recommend deleting last sentence of this section dealing with reference to Table 1 in data sheets. (Etschens)		(cp) Accepted. Verified consistency of SC callouts	
181	C2, General comment: Review specification and the drawings to assure consistency in SC equipment/component callouts. (Etschens)		Accepted. Completely revised section with new test procedures in accordance with Design Authority (Bowers/Scalef) direction.	
182	C2, 13440-4, section 2.3.2.1.b: Revise statement to say that input voltage shall be verified as 120V. Also delete "1.2V" and "0.1A." (Etschens)			

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183	C2, 13440-4, section 2.3.2.1.b: In first bullet, ensure associated data sheet calls for 2 form C contacts. (Singh)		Accepted. Completely revised section with test procedures.	
184	C2, 13440-4, section 2.3.2.1.a: Check negative percentage range on 10K resistor. (Singh)		(cp) Accepted. Completed revised section with test procedures.	
185	C2, 13440-5, section 2.3.2.1.b: Verify need for relay to function in an environment of 0-100% relative humidity.		Accepted. Deleted humidity requirement as a critical characteristic. Completely revised section with test procedures.	
186	C2. Evaluate need for adding a temperature alarm in the relay cabinet. (Singh) [If determined to need temperature alarm, notify J.R. LaPointe - TWRS Maintenance]		(cp) Not accepted. Temperature alarm is not needed or desired.	
187	C2, 13440-11: Add missing label ("Dimensional Drawings") to first column in vendor information list. (Bowers)		Accepted. Corrected.	
188	C2, 13440-13: Delete encasement leak detection relay from Table 1 (it does not need to be qualified). (Eischens)		(cp) Not accepted. Changed tables to distinguish SC items.	
189	C2, 13440. General comment: Ensure that vendor information is provided for all procured items. (Bowers)		(cp) Noted.	
190	C2, 13440-12: In item 7 of the data sheet, add "60 Hertz" for consistency with other data sheets (this is also a general comment for all data sheets, as applicable). Also, in item 12, specify 120V ac rating, as applicable. (Singh)		Accepted. Added "60 Hertz". Also added 250V ac rating.	
191	C2, 13440-14: In item 5 of the data sheet, verify correct model number (Singh)		Accepted. Corrected model number.	
192	C2, 13440-14: In item 16 of the data sheet, add model number. (Eischens)		Accepted. Added model number.	
193	C2, 13440. General comment: For all data sheets, check contact type. (Singh)		Accepted. Verified and corrected as required all contact types.	
194	C2, 13440-17: Add table to the data sheet for leak detection probes. (Eischens)		(cp) Accepted. Added table.	

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195	C2. 13440. General comment: Verify field temperature for relay cabinets. (Singh)		(cp) Accepted. Revised temperature to 140 degrees F.	
196	C2. 13440-18: Add appropriate requirements for thermostatic control. (Singh)		Accepted. Added requirement to sheet.	
197	C2. 22 Add appropriate VA rating to this data sheet. (Singh)		(cp) Accepted. Added VA requirement.	
198	General comment: Specify on drawings where to land the leads for a specified voltage. (Singh)		(cp) Accepted. Added to drawings.	
199	C2. 15493-5, 2.2.3.1: Verify use of teflon paste - consistent with AN's CI spec? (Leschber)		Verified teflon paste acceptable, but added requirement for use of pipe joint compound LA-CD-T-O-T in flammable gas areas.	
200	C2. 15493-8, 3.1.3.5: Verify that TIG is used for first pass on pipe welds, as appropriate. (Bowers)		(cp) Accepted. Added requirement to TIG all welds where weld splatter is a concern.	
201	C2. -10: 3.2.2 and 3.2.3: Evaluate whether water quality needs to be specified for flushing and cleaning of piping. (Leschber)		(cp) Evaluated. No changes required. Raw water used for flushing already has a chloride content of less than 10ppm.	
202	C2. 15493-10, section 3.2.3.2: Specify cleanliness standard required for constructed piping. (LaPointe)		(cp) Accepted. Added requirement that no "visible" dirt, scale, or debris is present.	
203	C2. 15493. General comment: Ensure that appropriate requirements are specified to control chloride/fluoride exposure to stainless steel piping. (Bowers)		(cp) Accepted. Added requirement for marking pens in paragraph 3.1.4.3. Tape already covered in paragraph 2.2.4.1. Flush water addressed in item 201 and tooling covered in paragraph 3.1.1.5.	
204	C2. 15493-13, section 3.3.1: Evaluate suitability/benefit of additional inspection requirements (beyond B31.3 code requirements) for SC piping. (Bowers)		(cp) Not accepted. Code requirements provide necessary requirements for safe design and construction of pressure piping.	
205	C2. 15493-16: Add "x" in column for circuit diagrams for position indicators. (Bowers)		(cp) Accepted. Added "x"'s.	
206	C2. 15493-A-4, section 3.1.1: Verify correct spelling of "Amerlock". (Leschber)		Spelling verified to be correct as shown.	

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207	C2, 16400, General comment: Add applicable GGI requirements for electrical based on removal of design "hold" for SC power system. (Bowers)		(cp) Accepted. Incorporated SC power items.	
208	C2, 16400, General comment: Evaluate using NEMA 4X in place of NEMA 4, similar to instrumentation. (Leschber)		(cp) Not accepted. NEMA 4 adequate.	
209	C2, 16400, General comment: Consider specifying torque value for landing nuts. (Singh)		(cp) Accepted. Revised 3.2.7.3 to state "install in accordance with manufacturers instructions"	
210	C2, 16400, General comment: Consider specifying a calibrated crimping tool for SC electrical connections, where applicable. (Eischens)		(cp) Accepted. Calibrated tool specified in 3.2.7.3 (for all items).	
211	C2, 16400, General comment: Evaluate need for internal sealing of conduits. (Singh)		Accepted. Revised 3.2.3.4 to include conduit sealing requirements.	
212	C2, 16400-5, 3.2.1.4 Clarify (Leschber)		Accepted. Revised. Added requirement to get approval of Construction Engineer for potential interferences.	
213	16400-5, 3.2.1.2: Prior to attaching to a SC structure, contact the Construction Engineer. (Singh)		Accepted. Added sentence to the paragraph to include this requirement.	
214	16400-6, 3.2.1.6: Clarify nameplate attachment requirements, consistent with instrumentation section of the spec. (Leschber)		(cp) Accepted. Add reference to IP-0842, section 4.14, Rev. 2a to applicable drawings.	
215	C2, 16400-8, section 3.2.7.3: Specify where splices will be allowed. (Singh)		(cp) Not accepted. Splices (if performed) will be in accordance with NFPA 70.	
216	C2, 16640-8, section 3.2.2.1: Check on acceptability of auger within tank farms. Dave Bowers to consult with B10 authorities. (Bowers)		Accepted. Clarified to use hand digging with shovel or hand operated auger. Removed power auger sentence.	
217	16440-13: In the vendor information list, add "x" in columns for specifications, installation, and maintenance. (Bowers)		(cp) Accepted. Added "x"'s. Also added Test Stations to vendor information table.	

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218	Specification 09855, Section 2.2.3.9 - Have the identified coatings been verified for compliance with Section 2.2.3.6? If not, the performance of these materials should be verified before they are specified as a representative product. (Barilo)		Accepted. Compliance with requirements will be verified with Vendor approval data.	
219	Specification 09855, Section 3.6 - Suggest removing the "epoxies and urethanes" references for concrete coatings. These materials rarely comply with Section 2.2.3.4. (Barilo)		Compliance with requirements will be verified with Vendor approval data.	
220	Specification 13440, Section 1.3.3.3 - Add a sentence to end of this section, "unlisted/untested products will only be considered if the requested product has no listed alternative". DOE 6430.1A requires all components to be unless there is no listed alternative available. (Barilo)		(cp) Not Accepted. Alright as currently written. If not listed, the Design engineer will disposition the product.	
221	P.6 - Step 2.2.13.2 now reads: "Self-v" Should read: "Rubber; Self-vulcanizing.." (Bowman)		(cp) Not accepted. Consistent with 3.2.7.1(e) and 3.2.7.2(e).	
222	P.7 - Step 2.3.6 now reads: "...Provide with 20 feet of No. 8...." W-320-C5 gave more flexibility, could read as follows: "...Provide with 20 feet of No. 14 AMG or larger HMM/PE...." (Bowman)		(cp) Not accepted. Design engineer wants to specify no. 8.	
223	P.7 - Step 3.2.2 now reads: "Install to depth of 8 feet, +/- 6 inches or as shown on drawings" Conflict: Drawing H-14-101024 for horizontal anode allows only 4'0" +/- 1' should read: "Install as shown on drawings" (Bowman)		Accepted. Reworded as recommended.	

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224	P. 8 - Step 3.2.2.1 now reads: "...Power auger may be used for other anodes..." Conflict: Someone told me awhile back that no power augers are allowed in the tank farms for excavating, that all excavation is by hand. (Bowman)		See disposition to comment 216.	
225	P. 8 - Step 3.2.2.5 now reads: "Connect anode lead conductor to terminals in anode distribution box using compression type terminal lug" Conflict: Not all the anode lead conductors from the anodes are connected in the anode distribution box. Some of the anode lead conductors from the anodes are branch-spliced into the anode header cable. Some of the anode lead conductors from the anodes are straight-spliced with the lead cable that is connected to the anode distribution box. Should read: "Splice anode lead cable to the anode header cable per drawings, or splice the anode lead cable to the lead cable per drawings and connect the lead cable to the terminals in the anode distribution box using compression type terminal lug, or connect the anode lead cable to the terminals in the anode distribution box using compression type terminal lug." (Bowman)		Accepted. Partially reworded to satisfy intent.	
226	P. 9 - Step 3.2.7.1 substep d. Suggestion: Move substep "d" to before substep "a". It fits at this location better. (Bowman)		(cp) Accepted. Moved step "d" before "a".	
227	P. 9 - Step 3.2.7.1 substep c. now reads: "...apply specified sealant..." W-320-CS reads: "...apply liquid epoxy coating..." Comment: The sealant given in the Materials section, step 2.2.11., is Clear RTV sealant. Question: Is Clear RTV sealant equivalent or superior to liquid epoxy coating? (Bowman)		Not accepted. Negative system does not require much insulation	

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228	P. 9 - Step 3.2.7.1 substep f. substep 3. Question: Is the plastic sheet material of this substep "Bubblewrap"? (Bowman)		Unknown. The section was clarified to repair to whatever the original material is.	
229	P. 10 - Step 3.2.7.2 substep d. Suggestion: Move substep "d" to before substep "a". It fits at this location better. (Bowman)		(cp) Accepted. Moved step "d" before "a".	
230	P. 10 - Step 3.2.7.2 substep c. now reads: "Apply Clear RTV silicon sealant...." W-320-C5 reads: "...apply liquid epoxy coating...." Question: Is Clear RTV sealant equivalent or superior to liquid epoxy coating? (Bowman)		See disposition to comment 227.	
231	P. 10 - Step 3.2.8 now reads: "Install anode feeder, anode loop, anode lead, and negative return cables as follows." should read: "Install anode header, anode loop, lead, anode lead, and negative return cables as follows." (Bowman)		Accepted. Reworded as recommended.	

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232	P. 10 - Step 3.2.8.3 now reads: "Terminate anode feeder and anode loop cable at junction box or splice points..." Comment: feeder should be header, a rectifier and distribution boxes are on the drawings and also receive these cables, and the header and loop cable terminations are only spliced in junction boxes. should read: "Terminate anode header and anode loop cables at junction boxes, or distribution boxes, or at the rectifier per drawings..." now reads: "...Terminate negative return cable at splice point and on pipe where shown on Drawings." Comment: the only negative return cable of W-314 on drawing H-14-101020 goes from rectifier 12 to pipe SN-630 should read: "...Terminate negative return cable at rectifier and on pipe where shown on Drawings." now reads: "...Use terminal lugs for conductor terminations at anode junction boxes..." Comment: Anode junction boxes, at step 3.2.5 of this construction specification, says "Join conductors with compression connectors or split bolts, and insulate with electrical tape or insulating boot". The newly installed anode junction boxes are empty and have no existing terminal lugs. There are		Accepted. Reworded as stated. Accepted. Reworded as stated. Accepted. Reworded as stated.		

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	existing terminal lugs at the rectifier and at the anode distribution boxes. should read: "...Use terminal lugs for conductor terminations at rectifier and at anode distribution boxes. now reads: "...Use splice kits for taps to existing header, loop, and negative return cables. Comment: Loop cables are not tapped (branched from). W314 Negative return cables are not tapped (branched from). This is shown on all the drawings. Should read: "...Use splice kits for taps to anode header cables and to connect anode lead cables to lead cables and to connect straight runs of negative return cables. (Bowman)		Accepted. Reworded as "...kits for taps or splices to header, loop, and"	
233	P. 7 through P. 10. Step 3.2.2 through step 3.2.9 Comment: There is no sequential logic to the steps in the Installation (step 3.2) of the construction specification: Recommendation: Note: many of the following steps in the recommended sequence have been suggested for modification in this RCR. Perform the steps in the following sequence. step 3.2.1 (General), step 3.2.4 (Anode Distribution Box), step 3.2.5 (Anode Junction Box), step 3.2.8 (conductors), step 3.2.2 (Anodes), step 3.2.3 (Test stations), step 3.2.7 (Pipe test conductors, bonding jumpers, Neg. Return Cables), step 3.2.6 (reference electrodes), and step 3.2.9 (conduits). (Bowman)		(cp) Not accepted. Specification is intended to provide construction requirements and it is not meant to be sequence of work.	

(cp) Denotes Customer Preference.

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2. To: (Receiving Organization) DISTRIBUTION		3. From: (Originating Organization) Tank Farm Restoration & Safe Operations		4. Related EDT No.: N/A	
5. Proj./Prog./Dept./Div.: Project W-314/TWRS		6. Design Authority/ Design Agent/Cog. Engr.: D. E. Bowers		7. Purchase Order No.: N/A	
8. Originator Remarks: This EDT releases for construction the approved design media (i.e., drawings and construction specification) associated with Project W-314's "200 East Upgrades" package. Design verification for these items is documented in the associated Design Review Report, HNF-2375.				9. Equip./Component No.: N/A	
				10. System/Bldg./Facility: 200E Tank Farms	
11. Receiver Remarks: 11A. Design Baseline Document? ☒ 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					(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 Designer	Reason for Transmittal	Originator Disposition	Receiver Disposition
1	H-14-100993	1	0	Drawing List - Vicinity Map	ESQ	2	1	
2	H-14-100994	1	0	Civil Plan & Profile - 241-AN to 241-AZ	ESQ	2	1	

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

17. SIGNATURE/DISTRIBUTION (See Approval Designer 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	<i>D.E. Bowers</i>	3/9/98		2	1	Op's Integration: R.W. Jacobson	<i>R.W. Jacobson</i>	3/9/98	
		Design Agent				2	1	Facility Cog. Engr.: D.W. Reberger	<i>D.W. Reberger</i>	3/9/98	
2	1	Project Eng.: K.A. Boes	<i>K.A. Boes</i>	3/9/98		2	1	Project Implementation: W.T. Thompson	<i>W.T. Thompson</i>	3/9/98	
2	1	Project Mgr.: J.L. Homan	<i>J.L. Homan</i>	3-10-98							
2	1	QA: H.M. Chafin	<i>H.M. Chafin</i>	3/10/98							
2	1	Safety: S.U. Zaman	<i>S.U. Zaman</i>	3/9/98							
2	1	Env.: P.C. Miller	<i>P.C. Miller</i>	3/9/98							

18. <i>K.A. Boes</i> K. A. Boes Signature of EDT Originator Date 3/9/98		19. N/A Authorized Representative Date for Receiving Organization		20. <i>J.L. Homan</i> J. L. Homan Design Authority/Project Manager Date 3-10-98		21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments	
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Project W-314

6. Cog. Eng.

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(A) Item No.	(B) Document/Drawing No.	DATA TRANSMITTED		(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Trans- mittal	(H) Origina- tor Dispo- sition	(I) Receiv- er Dispo- sition
		(C) Sheet No.	(D) Rev. No.					
3	H-14-100995	1	0	Civil Plan & Profile 241-AZ to 241-AX	ESQ	2	1	
4	H-14-100995	2	0	Civil Plan & Profile 241-AZ to 241-AX	ESQ	2	1	
5	H-14-100996	1	0	Civil Plan & Profile 241-AX to 241-A	ESQ	2	1	
6	H-14-100996	2	0	Civil Plan & Profile 241-AX to 241-A	ESQ	2	1	
7	H-14-100997	1	0	Civil Plan & Profile 241-AX to 241-AY	ESQ	2	1	
8	H-14-100998	1	0	Civil General Notes, Legend and Typical Sections	ESQ	2	1	
9	H-14-100999	1	0	Structural Cover Blocks 241-AX-B Plan	ESQ	2	1	
10	H-14-101000	1	0	Structural Cover Blocks 241-A-B Plan	ESQ	2	1	
11	H-14-101001	1	0	Structural Cover Blocks 241-A & AX Sections and Details	ESQ	2	1	
12	H-14-101002	1	0	Structural 241-AX-B & 241-A-B Wall Modifications	ESQ	2	1	
13	H-14-101002	2	0	Structural Pits 241- AX-B, & A-B Shield Collar Plans	ESQ	2	1	
14	H-14-101002	3	0	Structural Pits 241- AX-B, & A-B Shielding Collar Details	ESQ	2	1	
15	H-14-101002	4	0	Structural Pits 241- AX-B & 241-A-B Missile Shield	ESQ	2	1	
16	H-14-101008	1	0	Electrical Site Plan and Details A/AN/AX/AY/AZ Tank Farms	ESQ	2	1	
17	H-14-101008	2	0	Electrical Site Plan and Details A/AN/AX/AY/AZ Tank Farms	ESQ	2	1	
18	H-14-101009	1	0	Electrical Power and Control Plan Valve Pit 241-AX-B	ESQ	2	1	

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19	H-14-101010	1	0	Electrical Installation Details Valve Pit 241-AX-B	ESQ	2	1	
20	H-14-101010	2	0	Electrical Installation Details Valve Pit 241-AX-B	ESQ	2	1	
21	H-14-101011	1	0	Electrical Panelboard Schedule DP-AX-006	ESQ	2	1	
22	H-14-101012	1	0	Electrical Wire Run List Valve Pit 241- AX-B	ESQ	2	1	
23	H-14-101016	1	0	Electrical Power and Control Plan Valve Pit 241-A-B	ESQ	2	1	
24	H-14-101017	1	0	Electrical Installation Details Valve Pit 241-A-B	ESQ	2	1	
25	H-14-101017	2	0	Electrical Installation Details Valve Pit 241-A-B	ESQ	2	1	
26	H-14-101018	1	0	Electrical Panelboard Schedule DP-A-015	ESQ	2	1	
27	H-14-101019	1	0	Electrical Wire Run List Valve Pit 241-A-B	ESQ	2	1	
28	H-14-101020	1	0	Cathodic Protection Plan 241-AN-B to 241- AZ-02A	ESQ	2	1	
29	H-14-101020	2	0	Cathodic Protection Plan 241-AN-B to 241- AZ-02A	ESQ	2	1	
30	H-14-101020	3	0	Cathodic Protection Plan 241-AN-B to 241- AZ-02A	ESQ	2	1	
31	H-14-101021	1	0	Cathodic Protection Plan 241-AZ-02A to 241-AX-B	ESQ	2	1	
32	H-14-101021	2	0	Cathodic Protection Plan 241-AZ-02A to 241-AX-B	ESQ	2	1	
33	H-14-101021	3	0	Cathodic Protection Plan 241-AZ-02A to 241-AX-B	ESQ	2	1	
34	H-14-101021	4	0	Cathodic Protection Plan 241-AZ-02A to 241-AX-B	ESQ	2	1	

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35	H-14-101021	5	0	Cathodic Protection Plan 241-AZ-02A to 241-AX-B	ESQ	2	1	
36	H-14-101021	6	0	Cathodic Protection Plan 241-AZ-02A to 241-AX-B	ESQ	2	1	
37	H-14-101022	1	0	Cathodic Protection Plan 241-AX-B to 241-A-B	ESQ	2	1	
38	H-14-101022	2	0	Cathodic Protection Plan 241-AX-B to 241-A-B	ESQ	2	1	
39	H-14-101022	3	0	Cathodic Protection Plan 241-AX-B to 241-A-B	ESQ	2	1	
40	H-14-101022	4	0	Cathodic Protection Plan 241-AX-B to 241-A-B	ESQ	2	1	
41	H-14-101022	5	0	Cathodic Protection Plan 241-AX-B to 241-A-B	ESQ	2	1	
42	H-14-101023	1	0	Cathodic Protection Plan 241-AX-B to 241-AY-02A	ESQ	2	1	
43	H-14-101023	2	0	Cathodic Protection Plan 241-AX-B to 241-AY-02A	ESQ	2	1	
44	H-14-101023	3	0	Cathodic Protection Plan 241-AX-B to 241-AY-02A	ESQ	2	1	
45	H-14-101024	1	0	Cathodic Protection Details	ESQ	2	1	
46	H-14-101024	2	0	Cathodic Protection Details	ESQ	2	1	
47	H-14-101028	1	0	INSTM Valve Pit Upgrade Plan	ESQ	2	1	
48	H-14-101029	1	0	INSTM Valve Pit Plan 241-AX-B	ESQ	2	1	
49	H-14-101030	1	0	INSTM 241-AX-B Valve Pit Elevation	ESQ	2	1	
50	H-14-101031	1	0	INSTM 241-AX-B Valve Pit Leak Detection Loop Diagram	ESQ	2	1	
51	H-14-101032	1	0	INSTM 241-AX-B Enc Low Pt. Leak Det Loop Diagram	ESQ	2	1	

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5. Proj./Prog./Dept./Div.:		6. Cog. Eng.		1. EDT		Page 5 of 8		
Project W-314		D. E. Bowers		617949				
52	H-14-101033	1	0	INSTM 241-AX-B Valve Position Sensor Loop Diagram	ESQ	2	1	
53	H-14-101033	2	0	INSTM 241-AX-B Valve Position Sensor Loop Diagram	ESQ	2	1	
54	H-14-101034	1	0	INSTM 241-AX-B Instrument List	ESQ	2	1	
55	H-14-101034	2	0	INSTM 241-AX-B Instrument List	ESQ	2	1	
56	H-14-101035	1	0	INSTM Valve Pit Plan 241-A-B	ESQ	2	1	
57	H-14-101036	1	0	INSTM 241-A-B Valve Pit Elevation	ESQ	2	1	
58	H-14-101037	1	0	INSTM 241-A-B Valve Pit Leak Detection Loop Diagram	ESQ	2	1	
59	H-14-101038	1	0	INSTM Valve Position Sensor Loop Diagram	ESQ	2	1	
60	H-14-101038	2	0	INSTM Valve Position Sensor Loop Diagram	ESQ	2	1	
61	H-14-101039	1	0	INSTM Instrument List	ESQ	2	1	
62	H-14-101039	2	0	INSTM Instrument List	ESQ	2	1	
63	H-14-101040	1	0	INSTM A-Farm Field Terminal Box Interconnection Diagram	ESQ	2	1	
64	H-14-101041	1	0	INSTM AX-Farm Field Terminal Box Interconnection Diagram	ESQ	2	1	
65	H-14-101047	1	0	P&ID Valve Pit 241-AX-B	ESQ	2	1	
66	H-14-101048	1	0	P&ID Miscellaneous Details	ESQ	2	1	
67	H-14-101051	1	0	Jumper Arrangement Valve Pit 241-AX-B	ESQ	2	1	
68	H-14-101052	1	0	Jumper Arrangement Valve Pit 241-AX-B Section	ESQ	2	1	
69	H-14-101061	1	0	Jumper Assembly 241-AX-B RI-R20-(D&E)	ESQ	2	1	
70	H-14-101061	2	0	Jumper Assembly 241-AX-B RI-R20-(D&E)	ESQ	2	1	
71	H-14-101062	1	0	Jumper Assembly 241-AX-B RI2-(D)	ESQ	2	1	
72	H-14-101064	1	0	Jumper Assembly 241-AX-B RIA-Drain	ESQ	2	1	

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5. Proj./Prog./Dept./Div.:			6. Cog. Eng.		1. EDT		Page 6 of 7	
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73	H-14-101070	1	0	Pit Cover Painting Diagram 241-AX-B	ESQ	2	1	
74	H-14-101073	1	0	Piping Floor Drain Seal Assembly Valve Pits 241-A-B & AX-B	ESQ	2	1	
75	H-14-101073	2	0	Piping Floor Drain Seal Assembly Valve Pits 241-A-B & AX-B	ESQ	2	1	
76	H-14-101074	1	0	Piping Valve Pit 241- AX-B Modification Details	ESQ	2	1	
77	H-14-101074	2	0	Piping Valve Pit 241- AX-B Modification Details	ESQ	2	1	
78	H-14-101074	3	0	Piping Valve Pit 241- AX-B Modification Details	ESQ	2	1	
79	H-14-101074	4	0	Piping Valve Pit 241- AX-B Modification Details	ESQ	2	1	
80	H-14-101077	1	0	Valve Actuator Arrangement Valve Pit 241-AX-B	ESQ	2	1	
81	H-14-101080	1	0	P&ID Valve Pit 241-A-B	ESQ	2	1	
82	H-14-101081	1	0	P&ID Miscellaneous Details	ESQ	2	1	
83	H-14-101084	1	0	Jumper Arrangement Valve Pit 241-A-B	ESQ	2	1	
84	H-14-101085	1	0	Jumper Arrangement Valve Pit 241-A-B Section	ESQ	2	1	
85	H-14-101094	1	0	Jumper Assembly 241-A-B R1-R2-(A)	ESQ	2	1	
86	H-14-101094	2	0	Jumper Assembly 241-A-B R1-R2-(A)	ESQ	2	1	
87	H-14-101095	1	0	Jumper Assembly 241-A-B R15-R19-(B)	ESQ	2	1	
88	H-14-101095	2	0	Jumper Assembly 241-A-B R15-R19-(B)	ESQ	2	1	
89	H-14-101096	1	0	Jumper Assembly 241- A-B (A)-(B)-(C)	ESQ	2	1	
90	H-14-101096	2	0	Jumper Assembly 241- A-B (A)-(B)-(C)	ESQ	2	1	
91	H-14-101099	1	0	Jumper Assembly 241-A-B R16-(C)	ESQ	2	1	
92	H-14-101103	1	0	Pit Cover Painting Diagram 241-A-B	ESQ	2	1	

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5. Proj./Prog./Dept./Div.:		6. Cog. Eng.		1. EDT		Page 7 of 7		
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93	H-14-101104	1	0	Valve Actuator Arrangement Valve Pit 241-A-B	ESQ	2	1	
94	H-14-101105	1	0	Piping Valve Pit 241- A-B Modification Details	ESQ	2	1	
95	H-14-101110	1	0	Piping Plan 241-AN-B to 241-AZ-02A	ESQ	2	1	
96	H-14-101110	2	0	Piping Plan 241-AN-B to 241-AZ-02A	ESQ	2	1	
97	H-14-101110	3	0	Piping Plan 241-AN-B to 241-AZ-02A	ESQ	2	1	
98	H-14-101111	1	0	Piping Support Plan 3" SN-630-M9	ESQ	2	1	
99	H-14-101112	1	0	Piping Details	ESQ	2	1	
100	H-14-101113	1	0	Piping Plan 241- AZ-02A to 241-AX-B	ESQ	2	1	
101	H-14-101113	2	0	Piping Plan 241- AZ-02A to 241-AX-B	ESQ	2	1	
102	H-14-101113	3	0	Piping Plan 241- AZ-02A to 241-AX-B	ESQ	2	1	
103	H-14-101113	4	0	Piping Plan 241- AZ-02A to 241-AX-B	ESQ	2	1	
104	H-14-101113	5	0	Piping Plan 241- AZ-02A to 241-AX-B	ESQ	2	1	
105	H-14-101113	6	0	Piping Plan 241- AZ-02A to 241-AX-B	ESQ	2	1	
106	H-14-101114	1	0	Piping Support Plan 3" SN-632-M9	ESQ	2	1	
107	H-14-101116	1	0	Piping Plan 241-AX-B to 241-A-B	ESQ	2	1	
108	H-14-101116	2	0	Piping Plan 241-AX-B to 241-A-B	ESQ	2	1	
109	H-14-101116	3	0	Piping Plan 241-AX-B to 241-A-B	ESQ	2	1	
110	H-14-101116	4	0	Piping Plan 241-AX-B to 241-A-B	ESQ	2	1	
111	H-14-101116	5	0	Piping Plan 241-AX-B to 241-A-B	ESQ	2	1	
112	H-14-101117	1	0	Piping Support Plan 3" SN-634-M9	ESQ	2	1	
113	H-14-101117	2	0	Piping Support Plan 3" SN-634-M9	ESQ	2	1	
114	H-14-101117	3	0	Piping Support Plan 3" SN-634-M9	ESQ	2	1	
115	H-14-101118	1	0	Piping Plan 241-AX-B to 241-AY-02A	ESQ	2	1	

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5. Proj./Prog./Dept./Div.: Project W-314			6. Cog. Eng.: D. E. Bowers		1. EDT 617949		Page 8 of 7	
116	H-14-101118	2	0	Piping Plan 241-AX-B to 241-AY-02A	ESQ	2	1	
117	H-14-101118	3	0	Piping Plan 241-AX-B to 241-AY-02A	ESQ	2	1	
118	H-14-101119	1	0	Piping Support Plan 3" SN-633-M9	ESQ	2	1	
119	H-14-101119	2	0	Piping Support Plan 3" SN-633-M9	ESQ	2	1	
120	W-314-C2		0	Construction Specification, Tank Farm Restoration and Safe Operations, 200 East Upgrades	ESQ	2	1	

DISTRIBUTION SHEET

To Distribution	From K. A. Boes	Page 1 of 1 Date April 10, 1998			
Project Title/Work Order W-314, Tank Farm Restoration and Safe Operations, 200 East Upgrades, Design Review Report, HNF-2375		EDT No. 624066			
		ECN No.			
Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
M. G. Al-Wazani	T4-07				X
K. A. Boes	R3-25	X (2)			
T. W. Bohan	S5-04				X
D. E. Bowers	S5-13	X			
H. M. Chafin	R3-25	X			
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Project Files	R1-29	X			