

ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN 639101

Proj.
ECN

2. ECN Category (mark one) Supplemental <input type="checkbox"/> Direct Revision <input checked="" type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Standby <input type="checkbox"/> Supersedeure <input type="checkbox"/> Cancel/Void <input type="checkbox"/>	3. Originator's Name, Organization, MSIN, and Telephone No. JR Bunch, SESC, L6-38, 376-2817	4. USQ Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Date December 5, 1996	
	6. Project Title/No./Work Order No. Flammable Gas Waste Tank Safety	7. Bldg./Sys./Fac. No. A11 Tank Farms	8. Approval Designator N/A	
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) EDT-610887/WHC-SD-WM-ABU-002 Rev. 0	10. Related ECN No(s). N/A	11. Related PD No. N/A	

12a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 12b) <input checked="" type="checkbox"/> No (NA Blks. 12b, 12c, 12d)	12b. Work Package No. N/A	12c. Modification Work Complete N/A Design Authority/Cog. Engineer Signature & Date	12d. Restored to Original Condition (Temp. or Standby ECN only) N/A Design Authority/Cog. Engineer Signature & Date
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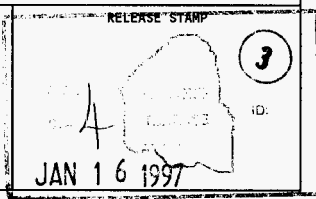
13a. Description of Change Adding the Standard Hydrogen Monitoring Systems, VTP-PNL-105K and VTP-PNL-205K to the Acceptance for Beneficial Use document, WHC-SD-WM-ABU-002. (TBD-WM-038)	13b. Design Baseline Document? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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14a. Justification (mark one) Criteria Change <input checked="" type="checkbox"/> As-Found <input type="checkbox"/>	Design Improvement <input type="checkbox"/> Facilitate Const <input type="checkbox"/>	Environmental <input type="checkbox"/> Const. Error/Omission <input type="checkbox"/>	Facility Deactivation <input type="checkbox"/> Design Error/Omission <input type="checkbox"/>
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14b. Justification Details
 Formal turnover of the Standard D Hydrogen Monitoring Systems, VTP-PNL-105K and VTP-PNL-205K to Operations, Maintenance, and Plant Engineering.

15. Distribution (include name, MSIN, and no. of copies)

RW Reed	S5-07 RL Legg	S5-06
MF Erhart	R1-51 CE Hanson	S7-12
GN Hanson	S5-05 JR Bunch	L6-38
WE Ross	S5-07 Project Files	S7-12
JE Geary	S5-07 TC Schneider	L6-37



ENGINEERING CHANGE NOTICE

16. Design Verification Required

Yes
 No

17. Cost Impact

ENGINEERING

Additional Savings \$ \$NA

CONSTRUCTION

Additional Savings \$ \$NA

18. Schedule Impact (days)

Improvement Delay NA

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	<input type="checkbox"/>	Seismic/Stress Analysis	<input type="checkbox"/>	Tank Calibration Manual	<input type="checkbox"/>
Functional Design Criteria	<input type="checkbox"/>	Stress/Design Report	<input type="checkbox"/>	Health Physics Procedure	<input type="checkbox"/>
Operating Specification	<input type="checkbox"/>	Interface Control Drawing	<input type="checkbox"/>	Spares Multiple Unit Listing	<input type="checkbox"/>
Criticality Specification	<input type="checkbox"/>	Calibration Procedure	<input type="checkbox"/>	Test Procedures/Specification	<input type="checkbox"/>
Conceptual Design Report	<input type="checkbox"/>	Installation Procedure	<input type="checkbox"/>	Component Index	<input type="checkbox"/>
Equipment Spec.	<input type="checkbox"/>	Maintenance Procedure	<input type="checkbox"/>	ASME Coded Item	<input type="checkbox"/>
Const. Spec.	<input type="checkbox"/>	Engineering Procedure	<input type="checkbox"/>	Human Factor Consideration	<input type="checkbox"/>
Procurement Spec.	<input type="checkbox"/>	Operating Instruction	<input type="checkbox"/>	Computer Software	<input type="checkbox"/>
Vendor Information	<input type="checkbox"/>	Operating Procedure	<input type="checkbox"/>	Electric Circuit Schedule	<input type="checkbox"/>
OM Manual	<input type="checkbox"/>	Operational Safety Requirement	<input type="checkbox"/>	ICRS Procedure	<input type="checkbox"/>
FSAR/SAR	<input type="checkbox"/>	IEFD Drawing	<input type="checkbox"/>	Process Control Manual/Plan	<input type="checkbox"/>
Safety Equipment List	<input type="checkbox"/>	Cell Arrangement Drawing	<input type="checkbox"/>	Process Flow Chart	<input type="checkbox"/>
Radiation Work Permit	<input type="checkbox"/>	Essential Material Specification	<input type="checkbox"/>	Purchase Requisition	<input type="checkbox"/>
Environmental Impact Statement	<input type="checkbox"/>	Fac. Proc. Samp. Schedule	<input type="checkbox"/>	Tickler File	<input type="checkbox"/>
Environmental Report	<input type="checkbox"/>	Inspection Plan	<input type="checkbox"/>	ABU	<input checked="" type="checkbox"/>
Environmental Permit	<input type="checkbox"/>	Inventory Adjustment Request	<input type="checkbox"/>		<input type="checkbox"/>

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
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21. Approvals

	Signature	Date	Signature	Date
Design Authority	RW Reed <i>[Signature]</i>	10 Dec 96	Design Agent	TC Schneider <i>[Signature]</i> 12-18-96
Cog. Eng.	MF Erhart <i>[Signature]</i>	12-11-96	PE	N/A
Cog. Mgr.	GN Hanson <i>[Signature]</i>	12/10/96	QA	N/A
QA	N/A	_____	Safety	N/A
Safety	N/A	_____	Design	N/A
Environ.	N/A	_____	Environ.	N/A
Other	N/A	_____	Other	N/A
ETF Op.	WE Ross <i>[Signature]</i>	1/16/97		_____
Evap Op.	JE Geary <i>[Signature]</i>	12/24/96		_____
ETF Maint.	RL Legg <i>[Signature]</i>	1-9-97		_____

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL



ACCEPTANCE FOR BENEFICIAL USE DOCUMENT

JR Bunch

SGN Eurisys Services Corporation (SESC), Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-87RL10930

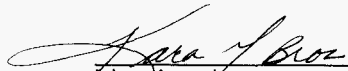
EDT/ECN: 639101 UC: 2030
Org Code: 08E00 Charge Code: N2046
B&R Code: EW3120072 Total Pages: 17 14 km @ 1/16/97

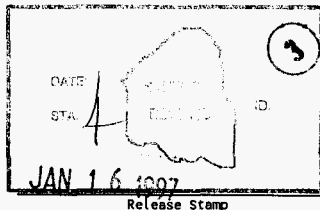
Key Words: Standard Hydrogen Monitoring Systems, SHMS, Stack Ammonia Monitor, ABU, Acceptance for Beneficial Use.

Abstract: Adding the Standard Hydrogen Monitoring Systems, VTP-PNL-105K and VTP-PNL-205K to the Acceptance for Beneficial Use document, WHC-SD-WM-ABU-002.

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Release Approval _____ Date 1/16/97



Approved for Public Release

RECORD OF REVISION

(2) Title
STANDARD HYDROGEN MONITORING SYSTEMS ACCEPTANCE FOR BENEFICIAL USE

CHANGE CONTROL RECORD

(3) Revision	(4) Description of Change - Replace, Add, and Delete Pages	Authorized for Release		
		(5) Cog. Engr.	(6) Cog. Mgr.	Date
0	(7) EDT 610887			
1 RS	Adding the Standard D Hydrogen Monitoring Systems, VTP-PNL-105K and VTP-PNL-205K, to the WHC-SD-WM-ABU-002 document. ECN # 639101	JR Bunch <i>JRBunch</i> 12/9/96	CE Hanson <i>CHanson</i>	1/13/97

TABLE OF CONTENTS

INDEX OF ABU DOCUMENTATION - STANDARD HYDROGEN MONITORING SYSTEMS . 2

ABU INDEX - STANDARD HYDROGEN MONITORING SYSTEMS 3

DOCUMENTATION REQUIRED for ACCEPTANCE FOR BENEFICIAL USE 7

TANK FARM DRAWINGS RELATED TO STANDARD HYDROGEN MONITORING SYSTEM
CONSTRUCTION 9

STANDARD HYDROGEN MONITORING SYSTEM INSTALLATION WORK PACKAGES . . 13

INDEX OF ABU DOCUMENTATION - STANDARD HYDROGEN MONITORING SYSTEMS

This index is intended to serve two purposes:

- 1) it is a "roadmap" to be used by Waste Tank Operations personnel of all the required turnover documentation for the Standard Hydrogen Monitoring Systems,
- 2) it is also intended to demonstrate formal completion of all requirements of the approved ABU checklist for this project.

The following table lists each item required by the approved Standard Hydrogen Monitoring System ABU checklist and identifies the corresponding document control number. An explanation of any exceptions or open items is included in the table. Copies of the original ABU checklists are attached as a convenient reference.

TANK	CABINET
A-101	VTP-PNL-805A
AN-103	VTP-PNL-105C
AN-104	VTP-PNL-105D (temporary gas chromatograph not included)
AN-105	VTP-PNL-105E
241-AN STACK	VTP-PNL-105K (temporary ammonia monitor not included)
AW-101	VTP-PNL-205A
241-AW STACK	VTP-PNL-205K (temporary ammonia monitor not included)
AX-101	VTP-PNL-905A
AX-103	VTP-PNL-905C
S-102	VTP-PNL-3305B
S-111	VTP-PNL-3305K
S-112	VTP-PNL-3305L
SX-101	VTP-PNL-3405A
SX-102	VTP-PNL-3405B
SX-103	VTP-PNL-3405C
SX-104	VTP-PNL-3405D
SX-105	VTP-PNL-3405E
SX-106	VTP-PNL-3405F
SX-109	VTP-PNL-3405I
SY-101	NAN-101-J
SY-101	NAN-101-K
SY-101	NAN-101-L
SY-103	NAN-103-J
T-110	VTP-PNL-3705J
U-103	VTP-PNL-3805C
U-105	VTP-PNL-3805E
U-107	VTP-PNL-3805G
U-108	VTP-PNL-3805H
U-109	VTP-PNL-3805I

ABU INDEX - STANDARD HYDROGEN MONITORING SYSTEMS

Checklist Item	Document Number and Title	Comments
ABU Checklist	EDT file #609616 EDT file #614197	Copy attached
Safety Assessment	USQ-TF-94-0213: Installation, Operation, and Repair of Standard Hydrogen Monitoring Systems on the Double-Shell Flammable Gas Watchlist Tanks USQ-TF-94-0274: Installation, Operation, and Repair of Standard Hydrogen Monitoring Systems on the Single-Shell Flammable Gas Watchlist Tanks USQ-TF-94-0283: Incorporation of Gas Chromatography into the Standard Hydrogen Monitoring Systems WHC-SD-WM-SARR-002: Safety Basis for Activities in Double-Shell Flammable Gas Watchlist Tanks WHC-SD-WM-SARR-004: Safety Basis for Activities in Single-Shell Flammable gas Watchlist Tanks	
Safety Equipment List	WHC-SD-WM-SEL-026: Double Shell Tanks Interim Safety Equipment List WHC-SD-WM-SEL-027: Single Shell Tanks Interim Safety Equipment List	SEL's 026 and 027 are presently in review for approval. (TBD-WM-036)
Engineering Task Plan	WHC-SD-WM-WP-251: 200 Area Watchlist Waste Tank Standard Hydrogen Monitoring System Installation Engineering Work Plan	
Functional Design Criteria	WHC-SD-WM-CR-043: Design Requirements and Criteria for a Hydrogen Monitoring System for Tanks 103-SY and 104-AN WHC-SD-WM-CR-053: 200 Area Hydrogen Watchlist Waste Tank Standard Hydrogen Monitoring System Installation Design Criteria	
System Design Description	WHC-SD-WM-SDD-001: Standard Hydrogen Monitoring System, System Design Description WHC-SD-WM-SDD-055: Standard-B Hydrogen Monitoring System, System Design Description WHC-SD-WM-SDD-058: Standard-C Hydrogen monitoring System, System Design Description WHC-SD-WM-SDD-059: Standard-D Hydrogen Monitoring System, System Design Description	

ABU INDEX - STANDARD HYDROGEN MONITORING SYSTEMS		
Acceptance Test Procedures	<p>WHC-SD-WM-ATP-026: Standard Hydrogen Monitoring System Acceptance Test Procedure</p> <p>WHC-SD-WM-ATP-078: Standard-B Hydrogen Monitoring System Acceptance test Procedure</p> <p>WHC-SD-WM-ATP-090: Standard-B Auto Grab Sampler Hydrogen Monitoring System Acceptance Test Procedure</p> <p>WHC-SD-WM-ATP-096: Standard-C Hydrogen Monitoring System Acceptance Test Procedure</p> <p>WHC-SD-WM-ATP-143: Standard-D Hydrogen Monitoring System Acceptance Test Procedure</p>	
Acceptance Test Reports	<p>WHC-SD-WM-ATR-026: Standard Hydrogen Monitoring System Acceptance Test Report</p> <p>WHC-SD-WM-ATR-078: Standard-B Hydrogen Monitoring System Acceptance Test Report</p> <p>WHC-SD-WM-ATR-090: Standard-B Auto Grab Sampler Hydrogen Monitoring System Acceptance Test Report</p> <p>WHC-SD-WM-ATR-096: Standard-C Hydrogen Monitoring System Acceptance Test Report</p> <p>WHC-SD-WM-ATR-143: Standard Hydrogen Monitoring System Acceptance Test Report</p>	
Operating Procedure	<p>Tank Farm Plant Operating Procedure TO-040-040: Operate the Standard B or C Hydrogen Monitoring Systems</p> <p>Tank Farm Plant Operating Procedure TO-040-041: Operate the Standard D Hydrogen Monitoring Systems</p>	
Surveillance Procedure	<p>Tank Farm Plant Operating Procedure TO-040-040: Operate the Standard B or C Hydrogen Monitoring Systems</p> <p>Tank Farm Plant Operating Procedure TO-040-041: Operate the Standard D Hydrogen Monitoring Systems</p>	
Calibration Procedure	<p>6-TF-408: Whittaker Model 1140038-10 Hydrogen Cell with Newport Infinity electronics, Calibrations</p> <p>6-TF-440: Whittaker Model 1140038-10 Hydrogen Cell with Newport Infinity Electronics, Calibration for Cabinet D.</p> <p>6-TF-509: Pressure and Vacuum Gauges</p> <p>PSCP-4-141: Yokagawa (YEW) Micro R100 Series Recorder</p> <p>PSCP-6-298: Rosemount Model 3051C Differential and Gage Pressure Transmitter Using Model 268 Smart Family Interface</p>	
Preventative Maintenance Procedures	JCS PM/S Component Recall System	<p>ALL SHMS equipment requiring preventive maintenance and referenced maintenance procedures, have been placed into the JCS PM/S Component Recall System</p>

ABU INDEX - STANDARD HYDROGEN MONITORING SYSTEMS		
PM/S Data Sheets	JCS PM/S Component Recall System	The Operation and Maintenance Manuals list equipment in the SHMS that require calibration, including their range and accuracy. All SHMS equipment requiring calibration has been placed into the JCS PM/S Component Recall System.
Operating and Maintenance Manual	WHC-WM-OMM-005: Standard Hydrogen Monitoring System Operation and Maintenance Manual WHC-WM-OMM-015: Standard-B Hydrogen Monitoring System Operation and Maintenance Manual WHC-WM-OMM-018: Standard-C Hydrogen Monitoring System Operation and Maintenance Manual WHC-WM-OMM-020: Standard D Hydrogen Monitoring System Operation and Maintenance Manual	
Equipment Specifications	WHC-SD-WM-EII-003: Standard Hydrogen Monitoring System Equipment Installation Instructions	
Procurement Specifications	WHC-SD-WM-EII-003: Standard Hydrogen Monitoring System Equipment Installation Instructions	
Construction Specifications	WHC-SD-WM-EII-003: Standard Hydrogen Monitoring System Equipment Installation Instructions	
Installation Drawings	See drawing H-2-87275: Standard Hydrogen Monitoring System Drawing Index Tree, WHC-SD-WM-EII-003: Standard Hydrogen Monitoring System Equipment Installation Instructions, W-369 Project ECN's W-369-1 through W-369-44, 46, 48, 49, 50, 51, 53, 54, and 66, and the attached Tank Farm Drawings Related To Standard Hydrogen Monitoring System Construction list for complete listing of installation drawings.	
As-built Drawings	See drawing H-2-87275: Standard Hydrogen Monitoring System Drawing Index Tree, WHC-SD-WM-EII-003: Standard Hydrogen Monitoring System Equipment Installation Instructions, and the attached Tank Farm Drawings Related To Standard Hydrogen Monitoring System Construction list for listing of as-built drawings.	
IEFD Drawings	See the attached Tank Farm Drawings Related To Standard Hydrogen Monitoring System Construction list.	
Drawing Tree	H-2-87275: Standard Hydrogen Monitoring System Drawing Index Tree	
Incorporate outstanding project generated ECNs	Completed	
Software Configuration Management Plan	WHC-SD-WM-CSCM-013: Standard Hydrogen Monitoring System Software Configuration Management Plan	

ABU INDEX - STANDARD HYDROGEN MONITORING SYSTEMS

Software Design Description	WHC-SD-WM-CSDD-004: Standard Hydrogen Monitoring System Computer Software Design Description	
Training Plan	Course No. 351405: Tank Farms Standard Hydrogen Monitoring Systems Course No. 356006: Standard Hydrogen Monitoring Systems Maintenance	A training plan was not written and is not needed now, since the training courses are in place.
Training to Operating Crews	Course no. 351405: Tank Farms Standard Hydrogen Monitoring Systems	
Training to Maintenance Crews	Course no. 356006: Standard Hydrogen Monitoring Systems Maintenance	
Training Mock-up	Presently located in the 306E building	
Inspection Plan	WHC-SD-W369-QAPP-001: W-369 Project Specific Quality Assurance Plan, Table 10-2	
QAPP	WHC-SD-W369-QAPP-001: W-369 Project Specific Quality Assurance Plan WHC-SD-WM-QAPP-018: Tank Waste Projects Quality Assurance Program Plan	
Vendor Information Files	VI22129: Vendor File Information for Gas Monitoring Systems VI22192: Vendor File Information for the Standard Hydrogen Monitoring Systems	
Spare Parts List	Whittaker Cell #1090020-2 Newport Monitor #INFU-0-0-1-0-DC1 Omega Controller #CN9121A Omega Indicator #CN9111A Matheson Filter #6134-T8FF Generant Filter #2S500 Senior Flextronics/Metal Bellows Sample Pump Assembly #29678M1	
Spare Parts in Stock	Spare parts are located in the 2101M warehouse.	
SHMS Projects Punchlists (Open Items)	Project W-369	No open W-369 Project punchlist items.
Installation Work Plan	See the attached Standard Hydrogen Monitoring System Installation Work Package list.	The Standard Hydrogen Monitoring Systems were installed per the JCS Work Package System.

Program/Project Title: Tank Farms Standard Hydrogen Monitoring Systems ETN: 94-0002

DOCUMENTATION REQUIRED for ACCEPTANCE FOR BENEFICIAL USE

DESCRIPTION	RESPONSIBILITY	DESCRIPTION	RESPONSIBILITY
ENGINEERING		ENGINEERING cont'd	
• Engineering Task Plan (ETP)	[X] RE Bauer	• Incorporate outstanding project generated ECNs	[]
• Activity Schedule	[]	• Software Configuration Management Plan	[X] RE Bauer
• Final Safety Analysis Report (FSAR)	[]	• System Requirements Specs.	[] RE Bauer
• Interim Safety Basis - update	[]	• Software Design Description	[X] RE Bauer
• Safety Assessment (SA)	[X] KO Fein	• Validation & Verification Records	[]
• Safety Equipment List (SEL)	[X] KO Fein	TRAINING	
• Operational Safety Requirements (OSR) - or update existing	[]	• Training Plan	[X] RW Reed
• Operational Safety Document(s) (OSD) - or update existing	[]	• Training Manuals	[]
• Functional Design Criteria (FDC)	[X] RE Bauer	• Training to Operating Crews	[X] RW Reed
• Conceptual Design Report (CDR)	[]	• Training to Maintenance Crews	[X] RW Reed
• Supplemental Design Requirements Document (SDRD)	[]	• Training Mock-Up	[X] RE Bauer
• System Design Description (SDD)	[X] RE Bauer	OPERATIONS/ MAINTENANCE	
• Test Plan/Specifications	[]	• Operating and Maintenance Manuals	[X] RE Bauer
• Acceptance Test Procedures (ATPs) and Final Test Report	[X] RE Bauer	• Operating Procedures	[X] RE Bauer
• Operational Test Procedures (OTPs) and Final Test Report	[]	• Surveillance Procedures	[X] RE Bauer
• Environmental Impact Statement	[]	• Calibration Procedures	[X] DG Hert
• Environmental Report	[]	• Preventative Maintenance Procedures	[X] DG Hert
• Environmental Permit	[]	• Repair/Maintenance Procedures	[]
• Hazardous Waste Disposal Plan/Procedures	[]	• Functional Check Procedures	[]
• Solid Waste Disposal Plan/Procedures	[]	• CBRS (PM/S) Data Sheets	[X] RW Reed
• Stress/Seismic Analysis	[]	QUALITY ASSURANCE	
• Stress/Design Report	[]	• Inspection Plan	[X] JB Witt
• Design Specifications/Report	[]	• QAPP	[X] AY Dingle
• Equipment Specifications	[X] RE Bauer	• QAP J.P	[]
• Procurement Specifications	[X] RE Bauer	PROCUREMENT ACTIVITIES	
• Construction Specifications	[X] RE Bauer	• Vendor Information Files	[X] RE Bauer
• Essential Material Specifications	[]	• Comprehensive Equip. List	[]
• Final Design Drawing(s)	[]	• Spare Parts List	[X] RE Bauer
• Installation Drawing(s)	[X] JB Witt	• Spare Parts in Stock	[X] DG Hert
• Installation Work Plan	[X] RW Reed		
• As-built Drawing(s)	[X] JB Witt	• _____	[]
• Interface Control Drawing(s)	[]	• _____	[]
• IEFD Drawing(s)	[X] JB Witt	• _____	[]
• Systems Drawing(s)	[]		
• Drawing Tree	[X] RE Bauer		

Program/Project Title: Standard D Hydrogen Monitoring Systems

DOCUMENTATION REQUIRED for ACCEPTANCE FOR BENEFICIAL USE

DESCRIPTION	RESPONSIBILITY	DESCRIPTION	RESPONSIBILITY
ENGINEERING		ADP	
[X] Engineering Task Plan (ETP)	RE Bauer	[X] Software Configuration Mgmt Plan	RE Bauer
[] Activity Schedule		[] System requirements Specification	
[] Final Safety Analysis Rpt (FSAR)		[X] Software Design Description	RE Bauer
[] Interim Safety Basis - update		[] Software Validation/Verification	
[X] Safety Assessment (SA)	DS Leach	[] _____	
[X] Safety Equipment List (SEL)	LE Johnson	TRAINING	
[] Operational Safety Requirements (OSR) - or update existing		[] Training Plan	
[] Operational Safety Document(s) (OSD) - or update existing		[] Training Manuals	TL Jennings
[] Design Criteria		[X] Training to Operating Crews	MP Baka
[X] System Design Description (SDD)	RE Bauer	[X] Training to Maintenance Crews	RE Bauer
[] Test Plan/Specifications		[X] Training Mock-Up	
[X] Acceptance Test Procedures (ATPs) and Final Test Report	RE Bauer	[] _____	
[] Operational Test Procedures(OTPs) and Final Test Report		OPERATIONS/MAINTENANCE	
[] Environmental Impact Statement		[X] Operating and Maintenance Manuals	RE Bauer
[] Environmental Report		[X] Operating Procedures	RW Reed
[] Environmental Permit		[X] Surveillance Procedures	RW Reed
[] Hazardous Waste Disposal Plan/Procedures		[X] Calibration Procedures	RW Reed
[] Solid Waste Disposal Plan/Procedure		[] Preventative Maintenance Proc.	
[] Stress/Seismic Analysis	RE Bauer	[] Repair/Maintenance Procedures	
[] Stress/Design Report	RE Bauer	[] Functional Check Procedures	
[] Design Specifications/Report	RE Bauer	[X] PM/S Data Sheets	RW Reed
[X] Equipment Specifications		[] _____	
[X] Procurement Specifications		[] _____	
[X] Construction Specification		[] _____	
[] Essential Material Specifications	JR Kelly	QUALITY ASSURANCE	
[] Final Design Drawings	RW Reed	[X] Inspection Plan	JR Kelly
[X] Installation Drawings	JR Kelly	[X] QAPP	JA Peltier
[X] Installation Work Plan		[] QAP _{J,P}	
[X] As-built Drawings		[] _____	
[] Interface Control Drawings		PROCUREMENT	
[] IEDF Drawings	RE Bauer	[X] Vendor Information Files	RE Bauer
[] Systems Drawings	JR Kelly	[] Comprehensive Equip. List	
[X] Drawing Tree		[X] Spare Parts List	RW Reed
[X] Incorporate Outstanding Project Generated ECNs		[X] Spare Parts in Stock	JR Kelly
[] _____		[] _____	
[] _____		[] _____	
[] _____			
[] _____			

**TANK FARM DRAWINGS RELATED TO STANDARD HYDROGEN
MONITORING SYSTEM CONSTRUCTION**

E or S	DRWG/SHEET NO.	TITLE
E	H-2-35047/001	S AND SX TANK FARM ONE LINE DIAG
E	H-2-35047/002	S AND SX TANK FARM PNL SCHEDULES AND MCC ARRANGEMENTS
	H-2-35835/001	VENTILATION PLAN & DETAILS TANKS 105SX, 107SX, 108SX, 109SX, 110SX, 111 & 114SX
	H-2-37316/001	CIVIL PLT PLAN
	H-2-37324/001	ELECTRICAL POWER & INST PLANS & ON E-LINE DIAGRAM
	H-2-37343/001	PIPING PLAN 241-U TANK FARM TKS 102, 103, 105 & 106
	H-2-37344/001	PIPING PLAN 241-U TANK FARM TKS 107, 108, 109, 110 & 111
	H-2-37525/001	102-S TANK ARRANGEMENT AS-BUILT
	H-2-37534/001	111-S TANK ARRANGEMENT AS-BUILT
	H-2-37535/001	112-S TANK ARRANGEMENT AS-BUILT
	H-2-37561/001	SALT WELL POWER & CONTROL 241S & 241-SX-TANK FARM
	H-2-39937/001	ELECTRICAL EMERGENCY PUMP HOUSE POWER & LIGHTING PLAN
	H-2-44725/001	241AX-801A & B ELEC & INST HOUSES MCC-AX3 & MCC-AX2
	H-2-46157/001	ELECTRICAL ONE LINE DIAG & PANEL SCHEDULES
	H-2-46160/001	ELECTRICAL MISCELLANEOUS DETAILS
	H-2-46162/001	ELECTRICAL WIRE RUN LIST
	H-2-46163/001	ELECTRICAL WIRE RUN LIST
	H-2-46188/001	PIPING PLAN 241-S TANK FARM TKS 101, 102, 103, 105 & 106
	H-2-46189/001	PIPING PLAN 241S TANK FARM TKS 107, 108, 109, 110, 111 & 112
	H-2-46240/001	PIPING PLAN 241-SX TANK FARM TANKS 101 THROUGH 106
	H-2-46293/001	CIVIL PLOT PLAN & FINISH GRADING 241-S & SX TANK FARM AREAS
	H-2-61984/001	CIVIL PLOT PLAN 241-A TANK FARM
	H-2-63840/001	PIPING PLAN 241-AX TANK FARM TK-101
	H-2-63842/001	PIPING PLAN 241-AX TANK FARM TK-103
	H-2-68237/001	101-AX TANK ARRANGEMENT AS-BUILT
	H-2-68239/001	103-AX TANK ARRANGEMENT AS-BUILT
E	H-2-69156/001	ELECTRICAL POWER & INSTRUMENT PLANS
S	H-2-69163/001	ELECTRICAL DATA ACO SYSTEM PLOT PLAN. HEAT TRACE DETAILS. PANEL SCHED & ONE-LINE DIAGRAM
	H-2-69184/001	PIPING PLAN 241-A TANK FARM
	H-2-69241/001	PIPING PLAN 241-AX TANK FARM
	H-2-70302/001	CIVIL PLOT PLAN 241-AW TANK FARM
	H-2-70323/001	ELECTRICAL POWER AND CONTROL PLANS AND DETAILS
E	H-2-70324/005	ELECTRICAL PLANS AND DETAILS
	H-2-70333/001	ELECTRICAL POWER & CONTROL WIRE RUN LIST & CONDUIT
	H-2-70333/002	ELECTRICAL POWER & CONTROL WIRE RUN LIST & CONDUIT

	H-2-70333/003	ELECTRICAL POWER & CONTROL WIRE RUN LIST & CONDUIT
	H-2-70333/004	ELECTRICAL INSTRUMENT WIRE RUN LIST AND CONDUIT SCHEDULE
	H-2-70333/005	ELECTRICAL INSTRUMENT WIRE RUN LIST AND CONDUIT SCHEDULE
	H-2-70333/008	ELECTRICAL CONDUIT WIRE RUN SCHEDULE
	H-2-70337/001	HVAC/PIPING VENT PIPING PLAN 1 241-AW TANK FARM
	H-2-70341/001	HVAC/PIPING STANDARD TANK FARM DETAILS
	H-2-71901/001	CIVIL SITE PLAN 241-AN TANK FARM
S	H-2-71925/001	ELECTRICAL POWER AND CONTROL PLANS & DETAILS
S	H-2-71925/002	ELECTRICAL POWER & CONTROL PLAN & DETAILS
S	H-2-71925/003	ELECTRICAL POWER AND CONTROL PLANS AND DETAILS
S	H-2-71925/004	ELECTRICAL POWER & CONTROL PLANS & DETAILS
S	H-2-71925/005	ELECTRICAL POWER & CONTROL PLANS & DETAILS
	H-2-71934/001	ELECTRICAL POWER & CONTROL WIRE RUN LIST
	H-2-71934/002	ELECTRICAL POWER & CONTROL WIRE RUN LIST
	H-2-71934/003	ELECTRICAL POWER & CONTROL WIRE RUN LIST
	H-2-71934/005	ELECTRICAL INSTRUMENT WIRE RUN LIST & CONDUIT SCHEDULE
	H-2-71935/002	HVAC FLOW & CONTROL DIAGRAM
S	H-2-71936/001	HVAC EQUIPMENT PLAN ELEVATIONS & DETAILS
S	H-2-71936/002	HVAC EQUIPMENT PLAN ELEVATIONS & DETAILS
S	H-2-71992/001	PIPING PLAN TANK 102
S	H-2-71994/001	PIPING PLAN TANK 104
S	H-2-71995/002	PIPING PLAN TANK 105
	H-2-72031/001	PIPING MISC DETAILS
	H-2-73064/001	PIPING WASTE TANK ISOLATION 241-T-110
	H-2-73151/001	PIPING WASTE TANK ISOLATION 241-U-103
	H-2-73153/001	PIPING WASTE TANK ISOLATION 241-U-105
	H-2-73155/001	PIPING WASTE TANK ISOLATION 241-U-107
	H-2-73156/001	PIPING WASTE TANK ISOLATION 241-U-108
	H-2-73157/001	PIPING WASTE TANK ISOLATION 241-U-109
	H-2-73182/001	PIPING WASTE TANK ISOLATION TK 241-S-102
	H-2-73190/001	PIPING WASTE TANK ISOLATION TK 241-S-111
	H-2-73191/001	PIPING WASTE TANK ISOLATION 241-S-112
	H-2-73218/001	PIPING WASTE TANK ISOLATION 241-SX-101
	H-2-73219/001	PIPING WASTE TANK ISOLATION 241-SX-102
	H-2-73220/001	PIPING WASTE TANK ISOLATION 241-SX-103

	H-2-73221/001	PIPING WASTE TANK ISOLATION 241-SX-104
	H-2-73222/001	PIPING WASTE TANK ISOLATION 241-SX-105
	H-2-73223/001	PIPING WASTE TANK ISOLATION 241-SX-106
	H-2-73376/001	PIPING WASTE TANK ISOLATION 241-AX-101
	H-2-73380/001	PIPING WASTE TANK ISOLATION 241-AX-103
	H-2-73388/001	PIPING WASTE TANK ISOLATION 241-A-101
	H-2-73682/001	ELECTRICAL JET PUMP CONTROL ON E-LINE AND ELEMENTARY DIAGRAM
E	H-2-73682/002	ELECTRICAL JET PUMP CONTROL ON E-LINE AND ELEMENTARY DIAGRAM
	H-2-73692/001	ELECTRICAL/INSTRUMENTATION WIRE RUN LIST
	H-2-73692/002	ELECTRICAL/INSTRUMENTATION WIRE RUN LIST
	H-2-73956/001	ELECTRICAL/INSTRUMENTATION WIRE RUN LIST
	H-2-73958/001	ELECTRICAL DISTRIBUTION PLAN 241-T TANK FARM
	H-2-73978/001	PIPING & INSTRUMENTATION PLAN 241-T TANK FARM
	H-2-77723/001	PIPING/ELEC PLAN 241-AW TANK FARM
	H-2-85301/004	PANELBOARD SCHEDULE
E	H-2-85303/001	PANELBOARD SCHEDULE INDEX
E	H-2-85303/004	PANELBOARD SCHEDULE
E	H-2-90905/001	DWG LIST/HVAC FLOW CONTROL DIAGRAM & NOTES
S	H-2-90906/001	HVAC-K1 SYSTEM EQUIPMENT PLAN & ELEVATIONS
	H-2-90930/001	ELECTRICAL PLANS & DETAILS
	H-2-91111/001	ELECTRICAL WIRE RUN LIST AND CONDUIT SCHEDULE
	H-2-91111/002	ELECTRICAL WIRE RUN LIST AND CONDUIT
	H-2-91122/001	ELEC/INSTM WIRE RUN LIST 241-T TANK FARM
	H-2-93664/001	ELECTRICAL HEAT TRACE & INSTR BLDG PLANS
	H-2-93668/001	ELECTRICAL WIRE RUN LIST
E	H-2-99389/002	ONE LINE DIAGRAMS
	H-2-815299/002	T-TANK FARM CONDUIT PLAN
	H-2-815438/006	TMACS T-TANK FARM WIRE RUN LIST
	H-2-820778/001	TMACS S-TANK FARM INSTM. PLAN
	H-2-820778/002	TMACS S-TANK FARM CONDUIT PLAN
	H-2-820778/005	TMACS S-TANK FARM WIRE RUN LIST
	H-2-820784/001	TMACS SX-TANK FARM INSTM. PLAN
	H-2-820784/002	TMACS SX-TANK FARM CONDUIT PLAN
	H-2-820804/001	TMACS U-TANK FARM INSTM. PLAN
	H-2-820804/002	TMACS U-TANK FARM CONDUIT PLAN
	H-2-820804/005	TMACS U-TANK FARM WIRE RUN LIST
	H-2-920804/006	TMACS U-TANK FARM WIRE RUN LIST
	H-2-140310/002	TMACS AN-TANK FARM INSTM PLAN VIEW

E = Essential
S = Support

	H-2-140310/007	TMACS AN-TANK FARM WIRE RUN LIST
	H-2-820792/002	TMACS AW-TANK FARM INSTM PLAN
E	H-14-20101/002	VENTILATION TANK PRIMARY SYSTEM VTP O&M SYSTEM P&ID
E	H-14-20102/002	VENTILATION TANK PRIMARY SYSTEM VTP O&M SYSTEM P&ID
E	H-14-30001/002	ELECTRICAL ONE LINE DIAGRAM EDS-MCC-102
E	H-14-30001/008	PANELBOARD SCHEDULE
E	H-14-30001/011	PANELBOARD SCHEDULE
E	H-14-30002/002	ELECTRICAL EDS ONE LINE DIAGRAM
E	H-14-30002/007	PANELBOARD SCHEDULE

STANDARD HYDROGEN MONITORING SYSTEM INSTALLATION WORK PACKAGES

WORK PACKAGE NUMBER	TITLE
2E-94-00750/W	%241-A INSPECT FOR OBSTRUCTIONS AT 101-A
2E-94-00751/W	%241-AX INSPECT FOR OBSTRUCTIONS AT 101-AX
2E-94-00752/W	%241-AX INSPECT FOR OBSTRUCTIONS AT 103-AX
2E-94-00579/W	%241-AW INSTALL 101-AW SHMS
2E-94-00580/W	%241-AN INSTALL 103-AN SHMS
2E-94-00581/W	%241-AN INSTALL 104-AN SHMS
2E-94-00582/W	%241-AN INSTALL 105-AN SHMS
2E-94-01008/M	%241-A INSTALL 101-A SHMS
2E-94-01009/M	%241-AX INSTALL 101-AX SHMS
2E-94-01010/M	%241-AX INSTALL 103-AX SHMS
2W-94-00908/K	241-SX INSTALL 101-SX VAPOR PROBE
2W-94-00909/K	241-SX INSTALL 102-SX VAPOR PROBE
2W-94-00910/K	241-SX INSTALL 103-SX VAPOR PROBE
2W-94-00911/K	241-SX INSTALL 104-SX VAPOR PROBE
2W-94-00912/K	241-SX INSTALL 105-SX VAPOR PROBE
2W-94-00913/K	241-SX INSTALL 106-SX VAPOR PROBE
2W-94-00914/K	241-SX INSTALL SHMS IN SX FARM
2W-94-00915/K	241-SX RISER INSPECTION FOR S AND SX SHMS
2W-94-00920/K	241-SX INSTALL 109-SX SHMS TO VENT HEADER
2W-94-00945/K	241-S INSTALL 102-S VAPOR PROBE
2W-94-00946/K	241-S INSTALL SHMS IN S FARM
2W-94-00947/K	241-S INSTALL 111-S VAPOR PROBE
2W-94-00949/K	241-S INSTALL 112-S VAPOR PROBE
2W-94-00988/K	241-T INSTALL 110-T VAPOR PROBE
2W-94-00989/K	241-T INSTALL SHMS IN T FARM
2W-94-00990/K	241-U INSTALL 103-U VAPOR PROBE
2W-94-00991/K	241-U INSTALL SHMS IN U FARM
2W-94-00992/K	241-U INSTALL 105-U VAPOR PROBE
2W-94-00993/K	241-U RISER INSPECTION FOR U AND T FARMS
2W-94-00994/K	241-U INSTALL 107-U VAPOR PROBE
2W-94-00996/K	241-U INSTALL 108-U VAPOR PROBE
2W-94-00998/K	241-U INSTALL 109-U VAPOR PROBE
2E-95-00519/K	INSTALL SHMS/AMMONIA MONITOR "AN" EXHAUSTERS
2E-95-00604/K	INSTALL SHMS/AMMONIA MONITOR AW-FARM EXHAUSTERS
2E-95-00997/K	PERFORM EXCAVATIONS, INSTALL CONDUIT FOR SHMS
2E-95-01106/K	PERFORM EXCAVATIONS, INSTALL CONDUIT FOR SHMS
UNKNOWN, WORK PACKAGES HAVE BEEN	ARCHIVED
	INSTALL 101 AND 103 SY SHMS