AUTOMATION MODERNIZATION PROGRAM

LOS ANGELES CARSON REFINERY

LAR1C AMP BPCS CONFIGURATION PROJECT

MODPACK #1 SPECIFICATION

Revisions and Approvals					
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Revision History

Rev	Description	Section
A	Issued for Review	All

Assumptions

No.	Description	Section
-	-	-

Holds

No	Description	Section
1	**Tags not found in backup; description needs to be confirmed from LAR.**	Appendix D

1. General

1.1 Introduction

The Los Angeles Refinery Carson (LARC) facility is completing an Automation Modernization Program (AMP) to replace obsolete automation equipment and to migrate the existing functionality and operability to the Honeywell Experion Process Knowledge System (EPKS) platform.

The LAR1C software configuration is based on the application software backed up at the initiation phase of the project. The site application software has undergone various changes since the software was backed up. These changes have been analyzed and captured as part of this document.

1.2 Purpose of this Document

The purpose of this document is to define:

- The gap between the software backup baseline taken in March 2022 used to develop the migrated software and the software backup taken post-MAY 2023.
- The impact on the migrated software.
- The configuration details for the impacted migrated software to close the gap.
- The test requirements and capture the test records.
- The HMI display layouts updated to align with the LAR ASM HMI style guide.

2. Acronyms and Definitions

2.1 Acronyms

Table 2.1 defines the acronyms used within this document.

Table 2.1. Acronyms

Acronym	Description
AM	Application Module
AMP	Automation Modernization Program
BOM	Bill of Material
BPCS	Basic Process Control System
CDA	Control Data Access
CFAT	Configuration Factory Acceptance Test
CPD	Crude Processing Department
DMC	Dynamic Matrix Control
EPKS	Experion® Process Knowledge System
HG	Hiway Gateway
HMI	Human Machine Interface
HPM	High Performance Manager
I/O	Input/Output
LAR	Los Angeles Refinery
LARC	Los Angeles Refinery Carson
LCN	Local Control Network
MOC	Management of Change
MPC	Marathon Petroleum Corporation
NA	Not Applicable
SCADA	Supervisory Control and Data Acquisition
SIS	Safety Instrumented System
TPS	Total Plant Solution
UCN	Universal Control Network

2.2 Project Definitions

Table 2.2 describes terms used in this document.

Table 2.2. Project Definitions

Definition	Description
3rd-Party Interface	Systems that connect to the BPCS via serial data links or software applications that send and receive data to the BPCS, residing above level 2 in the BPCS architecture.
Automation Contractor	MPC-appointed Automation Contractor or their authorized representative(s).
Complex Loop	A loop whose functionality has deviated from the standard configuration template or where control calculations are performed. Else, the loop is considered a “standard” loop.
Demo	Refers to scope to be “demobilized,” i.e., removed from service; all hardware, software, and documentation updated accordingly.
LAR Team	LAR Site and Project Team or their authorized representative(s).
Standard Loop	A loop whose functionality is fully provided by the standard configuration template with no custom configuration. Else, the loop is considered a “complex” loop.

3. References

3.1 MPC and LAR Standards

Table 3.1 records the specifications that shall be referenced in developing this Modpack specification. Any deviations from the specifications are recorded in an addendum to the specification and will be referenced in the table below.

Table 3.1. Codes and Standards

Document Number	Rev	Document Title
AMP Central Global Specifications		
AMP-GBL-PM-SPC-0001	A3	T/A Integration and Cutover Specification
AMP-GBL-PM-SPC-0002	A1	Automation Specification
AMP-GBL-PM-SPC-0004	5	HMI Specification
AMP-GBL-PM-SPC-0009	A3	Third-Party Integration Specification
AMP-GBL-PM-SPC-0012	A0	Experion C300 Configuration Specification
AMP-GBL-PM-SPC-0022	2	Automation System Testing Specification
AMP LAR-HMI-FDS-v100	B	Human-Machine Interface (HMI) Functional Design Specification

3.2 Project Reference Drawings, Documents, and Software Backups

Table 3.2 records the project documentation referenced in developing this Modpack specification.

Table 3.2. Project Reference Drawings/Documents/Software Backup

Reference Number	Rev	Reference Title
Software Backups		
LCN1_EBs MAR-2022	-	AMP LAR1C EB Database (Received from LAR AMP in MAR 2022)
LCN4_EBs MAR-2022	-	AMP LAR1C EB Database (Received from LAR AMP in MAR 2022)
LCN1_EBs MAY-2023	-	AMP LAR1C EB Database (Received from LAR AMP in MAY 2023)

Reference Number	Rev	Reference Title
LCN4_EBs MAY-2023	-	AMP LAR1C EB Database (Received from LAR AMP in MAY 2023)
REF1 and REF2 PKS Displays	-	HMI graphics backup (Received from LAR AMP in AUG 2022)
LCN1 Graphics_PC_DIR_DS		GUS Graphics Backup (Received from LAR AMP in OCT 2021)
LCN4 Graphics_PC_DIR_DS	-	GUS Graphics Backup (Received from LAR AMP in OCT 2021)
1REF_Modpack	-	HMI graphics backup (Received from LAR AMP in MAY 2023)
2Ref_BU	-	GUS Graphics Backup (Received from LAR AMP in MAY 2023)
HCU_BU	-	GUS Graphics Backup (Received from LAR AMP in MAY 2023)
EP Documentation		
BOD MPLA20002-LAR1-PM-RPT-0002	6	Paton LAR1 Definition BOD 2022-2024 TAR Equipment
747002-LAR1C-AUT-IOA-0100	2	LAR1 AMP BPCS Configuration Project I/O List - Carson
LAR AMP BPCS Documentation		
747002-LAR1C-AUT-FDS-0100	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – Carson General
747002-LAR1C-AUT-FDS-0101	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – 2 Reformer
747002-LAR1C-AUT-FDS-0102	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – #2 Ref Recycle Gas Comp RW 0007.087.06
747002-LAR1C-AUT-FDS-0103	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – #2 Reformer Heater RW 0032.214.02

Reference Number	Rev	Reference Title
747002-LAR1C-AUT-FDS-0104	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – 2A Desulfurizer Heater RW 0033.214.09
747002-LAR1C-AUT-FDS-0105	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – 2B Desulfurizer Heater RW 0034.214.09
747002-LAR1C-AUT-FDS-0106	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – #2 DeSulf Feed/Recycle 0009.087.03
747002-LAR1C-AUT-FDS-0107	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – #2 DeSulf Feed/Recycle RW 0010.087.03
747002-LAR1C-AUT-FDS-0108	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – LED
747002-LAR1C-AUT-FDS-0109	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – NA_DIB
747002-LAR1C-AUT-FDS-0110	0	LAR1C AMP BPCS Configuration Project Equipment Functional Design Specification – SRD
747002-LAR1C-AUT-LST-0100	0	LAR1C AMP BPCS Configuration Project Serial I/O List - 2 Reformer
747002-LAR1C-AUT-LST-0101	A	LAR1C AMP BPCS Configuration Project Serial I/O List - #2 Ref Recycle Gas Comp RW07
LARC HWY 7 Cross reference	-	Pas Integrity Report Cross Reference Report (07-JUN-2023)
747002-LAR1-AUT-MOM-0003	-	LAR1 AMP BPCS ASM Alignment (19-APR-2023)

4. Gap Analysis Methodology

The EB files were compared between the software backup baseline taken in March 2022 used to develop the migrated software and the software backup taken in May 2023 used to identify the changes for HG, AM, and HPM nodes. Comparison was achieved using Excel-based file compare functions. This method involves manual processes and tools.

The PAS Integrity Cross Reference Report is analyzed to identify the impact of new tags across all nodes.

The HCU console native display and REF console EPKS and native display files were compared between the software backup baseline used to develop the migrated software and the software backup taken in May 2023 to identify the changes. Comparison was achieved by a) extracting the tags from the display and verifying this against the baseline software extract and b) visually verifying each display for any static layout changes.

The outcome of the above processes shall be reviewed with LAR prior to implementation to ensure clear alignment with LAR site management of change (MOC) records.

5. Process Control System

The impact on the process control system is summarized in Table 5.1 below; for details of impacted tags, refer to Appendices A and C.

Table 5.1. Impacted Nodes

Node Type	Details	Summary of Change	Additional Remark
C300 Controller	LEDDIB_C300_25 SRD_C300_27 REF2_C300_23 REF2_C300_27 (B-1139)	-Add 2 hardwired signals -Delete 3 hardwired signals -Modify 90 hardwired signals -Add 3 soft signals -Modify 28 soft signals	Existing series C modules shall be used.
Experion Console	REFORMER HCU	-Modify 33 Process displays -Modify 17 Process displays	The displays shall be ASM Compliant.

Refer to Appendices A to I for details of modifications.

6. Obsolete Control Functionality

6.1 Obsolete Tags

The tag listed in Table 6.1 were demolished as identified in the gap analysis (refer to Appendix I). The status of the tag is recorded in the BPCS hardwired I/O list.

Table 6.1. Obsolete HG Tags

#	Tag	Service	Hardware Detail	Summary of Impact	LAR Review Status
1	22XA909	NACCR UPS #7 ON BYPASS	Hiway 07	I/O list needs to be updated, CM will be deleted and associated channel will be spare from the C300 controller REF2-C300-23	
2	22XA910	NACCR UPS #7 ON BATTERY	Hiway 07	I/O list needs to be updated, CM will be deleted and associated channel will be spare from the C300 controller REF2-C300-23	
3	22XA911	NACCR UPS #7 FAULT	Hiway 07	I/O list needs to be updated, CM will be deleted and associated channel will be spare from the C300 controller REF2-C300-23	

Appendix A. BPCS Tag List for Modification

There are 90 tags identified in the Modpack gap analysis report (refer to Appendix I) for modification, as listed in Table A.1.

Table A.1. Standard Tag List for Modification

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
22AI961	PVLL MIDREF HTR O2-SRA	Hiway 07	#2 Reformer Heater RW 0032.214.02	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup EUDESC Parameter value found updated from % O2 E to % O2 M in the new backup SLOTNUM Parameter value found updated from 16 to 17 in the new backup PVLOTP Parameter value found updated from 79.915 to 1.9999 in the new backup PVHITP Parameter value found updated from 279.72 to 6.9999 in the new backup PVEUHI Parameter value found updated from 399.99 to 10.010 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22AI964	2REF RECY COMP MOISTURE	Hiway 07	#2 Ref Recycle Gas Comp RW 0007.087.06	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup PVEUHI Parameter value found updated from 50.049 to 199.89 in the new backup PVLOTP Parameter value found updated from 4.9997 to 4.9972 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22FC105	TOTAL DESULFURIZER FEED	Hiway 07	2 Reformer	PVLOTP Parameter value found updated from 625.00 to 292.01 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22FC125	REFORMER INCREASING GAS	Hiway 07	#2 DeSulf Feed/Recycle 0009/0010.087.03	PVHIPR Parameter value found updated from LOW to NOACTION in the new backup PVHITP Parameter value found	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
				updated from 349.99 to 450.00 in the new backup		
22FC137	STEAM TO STAB REBOILER	Hiway 07	2 Reformer	K Parameter value found updated from 2.0000 to 1.0000 in the new backup T1 Parameter value found updated from 2.0005 to 0.4001 in the new backup OPHITP Parameter value found updated from 100.00 to 80.000 in the new backup TD Parameter value found updated from 0.1999 to 0.1000 in the new backup PVEUHI Parameter value found updated from 39.999 to 60.000 in the new backup PVHITP Parameter value found updated from 38.999 to 39.000 in the new backup PVLOTP Parameter value found updated from 9.9998 to 10.000 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22FI129	REF RECYCLE GAS	Hiway 07	#2 Ref Recycle Gas Comp RW 0007.087.06	PVLOPR Parameter value found updated from HIGH to LOW in the new backup PVLOTP Parameter value found updated from 3.9000 to 3.4997 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22FI133	2REF RECY CMPR SUCTION	Hiway 07	#2 Ref Recycle Gas Comp RW 0007.087.06	PVHITP Parameter value found updated from 9.9999 to 10.001 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller ---	
22II900	2DES RECYCLE COMPR MOTOR	Hiway 07	#2 DeSulf Feed/Recycle RW 0010.087.03	PVHITP Parameter value found updated from 279.72 to 256 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22LA322	REF RECY SEAL OIL HI LO	Hiway 07	#2 Ref Recycle Gas Comp RW 0007.087.06	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller ---	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
22PA408	SWITCH ROOM LO PRESS	Hiway 07	2 Reformer	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22PA442	NORTH 969 PMP SUCT	Hiway 07	2 Reformer	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22PC428	REF FLASH DRUM PSI	Hiway 07	2 Reformer	PVHIPR Parameter value found updated from JOURNAL to HIGH in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22PI439	2DES HTR 2A CONV DRAFT	Hiway 07	2A Desulfurizer Heater RW 0033.214.09	UNREASPR Parameter value found updated from HIGH to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22PI440	2DES HTR 2B CONV DRAFT	Hiway 07	2B Desulfurizer Heater RW 0034.214.09	PVHITP Parameter value found updated from -0.05 to 0 in the new backup UNREASPR Parameter value found updated from HIGH to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22PI472	NO2 REF EAST STK DRAFT	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHITP Parameter value found updated from -0.05 to 0 in the new backup UNREASPR Parameter value found updated from NOACTION to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22PI473	NO2 REF WEST STK DRAFT	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHITP Parameter value found updated from -0.05 to 0 in the new backup UNREASPR Parameter value found updated from NOACTION to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22PI480	REF HTR BELOW CONV DRFT	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHITP Parameter value found updated from -0.05 to 0 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22PR431	DES HTR 2B FUEL GAS PRES	Hiway 07	2B Desulfurizer Heater RW 0034.214.09	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
22PR452	#2REF HTR CELL 1 FG PRES	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller ---	
22PR453	#2REF HTR CELL 2 FG PRES	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller ---	
22PR454	#2REF HTR CELL3A FG PRES	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller ---	
22PR457	#2REF HTR CELL3B FG PRES	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller ---	
22PR458	#2REF DESULF HTR2A FG P	Hiway 07	2A Desulfurizer Heater RW 0033.214.09	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup PVHITP Parameter value found updated from 34.000 to 35.000 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller ---	
22TI692	2A DES HTR C#3 TUBE4 SKN	Hiway 07	2A Desulfurizer Heater RW 0033.214.09	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI695	2B DES HTR C#1 TUBE4 SKN	Hiway 07	2B Desulfurizer Heater RW 0034.214.09	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI696	2B DES HTR C#2 TUBE4 SKN	Hiway 07	2B Desulfurizer Heater RW 0034.214.09	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI697	2B DES HTR C#3 TUBE3 SKN	Hiway 07	2B Desulfurizer Heater RW 0034.214.09	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI698	2B DES HTR C#4 TUBE4 SKN	Hiway 07	2B Desulfurizer Heater RW 0034.214.09	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI699	2B DES HTR C#5 TUBE4 SKN	Hiway 07	2B Desulfurizer Heater RW 0034.214.09	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
22TI710	DESULF FEED TO HEATER	Hiway 07	2A Desulfurizer Heater RW 0033.214.09	PVLOPR Parameter value found updated from HIGH to NOACTION in the new backup PVLOTP Parameter value found updated from 500.02 to 0.0000 in the new backup UNREASPR Parameter value found updated from HIGH to NOACTION in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI721	DESULF REACTOR OUTLET	Hiway 07	2 Reformer	PVLOPR Parameter value found updated from LOW to NOACTIONin the new backup PVLOTP Parameter value found updated from 675.01 to 0.0000 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI790	REFORMATE TO STORAGE	Hiway 07	2 Reformer	PVHIPR Parameter value found updated from NOACTION to HIGH in the new backup PVHITP Parameter value found updated from 1199.0 to 164.99 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI795	DESULF REACTOR TOP NW	Hiway 07	2 Reformer	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI796	DESULF REACTOR MID NW	Hiway 07	2 Reformer	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI797	DESULF REACTOR BTMS NW	Hiway 07	2 Reformer	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI799	DESULF REACTOR MID NE	Hiway 07	2 Reformer	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI823	3A REACTOR MID NE	Hiway 07	#2 Reformer Heater RW 0032.214.02	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
22TI871	#1 HTR NORTH #5 COIL SKN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI872	#1 HTR NORTH #6 COIL SKN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI877	#1 HTR SOUTH #5 COIL SKN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI878	#1 HTR SOUTH #6 COIL SKN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI901	2 HEATER #14 COIL SKIN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI902	2 HEATER #15 COIL SKIN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI913	3A HEATER #5 COIL SKIN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI914	3A HEATER #6 COIL SKIN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI922	2REF 3B HTR #5 COIL SKIN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TI923	2REF 3B HTR #6 COIL SKIN	Hiway 07	#2 Reformer Heater RW 0032.214.02	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22XA941	NACCR UPS #2 LOW BATTERY	Hiway 07	2 Reformer	INPTDIR Parameter value found updated from DIRECT to REVERSE in the new backup STATE2 Parameter value found updated from BYPASS to LOW BATT in the new backup PTDESC Parameter value found	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
				updated from NACCR UPS #2 ON BYPASS to NACCR UPS #2 LOW BATTERY in the new backup OFFNRMPR Parameter value found updated from HIGH to LOW in the new backup		
22XA943	NACCR UPS #2 ON BYPASS	Hiway 07	2 Reformer	INPTDIR Parameter value found updated from DIRECT to REVERSE in the new backup STATE2 Parameter value found updated from FAULT to BYPASS in the new backup PTDESC Parameter value found updated from NACCR UPS #2 FAULT to NACCR UPS #2 ON BYPASS in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22XA955	#2 RACK RM H2S AIR WRNG	Hiway 07	2 Reformer	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22XA971C	2REF BENTLY COMM HARDWR	Hiway 07	#2 Ref Recycle Gas Comp RW 0007.087.06	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22XA982	NACCR UPS #4 LOW BATTERY	Hiway 07	2 Reformer	INPTDIR Parameter value found updated from DIRECT to REVERSE in the new backup STATE2 Parameter value found updated from BYPASS to LOW BATT in the new backup PTDESC Parameter value found updated from NACCR UPS #2 ON BYPASS to NACCR UPS #2 LOW BATTERY in the new backup OFFNRMPR Parameter value found updated from HIGH to LOW in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22XA984	NACCR UPS #4 ON BYPASS	Hiway 07	2 Reformer	INPTDIR Parameter value found updated from DIRECT to REVERSE in the new backup STATE2 Parameter value found updated from FAULT to BYPASS in	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
				the new backup PTDESC Parameter value found updated from NACCR UPS #2 FAULT to NACCR UPS #2 ON BYPASS in the new backup		
27FI191	LED FEED PMP DISCHARGE	Hiway 07	General	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller LEDDIB_C300_25	
27FI192	DEPROP REFLUX PUMP	Hiway 07	General	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller LEDDIB_C300_25	
27LC321	SRD FEED SURGE DRM LEVEL	Hiway 07	SRD	PVHITP Parameter value found updated from 59.999 to 55 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller SRD_C300_27	
27LI312	LED FLASH DRUM	Hiway 07	LED	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller LEDDIB_C300_25	
27LI317	SRD FEED SURGE DRUM-SRA	Hiway 07	SRD	PVHITP Parameter value found updated from 70.001 to 65 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller SRD_C300_27	
27PA405	N FEED COMPR LUBE OIL	Hiway 07	LED	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller LEDDIB_C300_25	
27PC438	LED CONTACTOR PRESSURE	Hiway 07	LED	K Parameter value found updated from 10.000 to 15.000 in the new backup T1 Parameter value found updated from 0.5001 to 2.0005 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller LEDDIB_C300_25	
27TI702	SRD BTMS CLR OUTLET	Hiway 07	SRD	PVHITP Parameter value found updated from 89.996 to 99.996 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller SRD_C300_27	
27XA900	NORTH LED COMP MOTOR OFF	Hiway 07	LED	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller LEDDIB_C300_25	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
28FC108	25# STEAM TO LPG REBOILR	Hiway 07	---	PVHITP Parameter value found updated from 2 to 1.98 in the new backup	None	
29LC301	#3 REF FLASH DRUM LEVEL	Hiway 07	---	PVHITP Parameter value found updated from -6.862 to 0 in the new backup	None	
29LC353	RECY COMP EXHAUST COND	Hiway 07	---	ITLOLM Parameter value found updated from 0.0972 to BLANK in the new backup OPLOLM Parameter value found updated from 0.0000 to 34.469 in the new backup	None	
29LI306	SOUTH LIQUID N2 TANK	Hiway 07	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup	None	
29LI307	NORTH LIQUID N2 TANK	Hiway 07	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup	None	
29LI313	FFHDS CONDENSATE TK935	Hiway 07	---	PVLOTP Parameter value found updated from 110 to 109 in the new backup PVHITP Parameter value found updated from 0.0009 to 0.0197 in the new backup	None	
29LI319	RAFFINATE H20 WASH LEVEL	Hiway 07	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup PVCHAR Parameter value found updated from LINEAR to RADIAMAT in the new backup PVEUHI Parameter value found updated from 99.975 to 1050.5 in the new backup PVEULO Parameter value found updated from 0.0000 to 593.32 in the new backup PVFORMAT Parameter value found updated from D1 to BLANK in the new backup	None	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
				PVHITP Parameter value found updated from 100.00 to 1050.5 in the new backup PVLOTP Parameter value found updated from 0.0000 to 593.32 in the new backup PVTEMP Parameter value found updated from BLANK to DEGREESC in the new backup		
29LI324	EXTRACT RECEIVER LEVEL	Hiway 07	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup	None	
29LI326	STRIP BOTTOMS LEVEL	Hiway 07	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup PVEUHI Parameter value found updated from 99.975 to 999.75 in the new backup PVFORMAT Parameter value found updated from D1 to D0 in the new backup PVHITP Parameter value found updated from 100.00 to 100.01 in the new backup	None	
29PC423	STRIP FLASH DRUM PSIG	Hiway 07	---	K Parameter value found updated from 5.0000 to BLANK in the new backup T1 Parameter value found updated from 2.0005 to BLANK in the new backup PVEUHI Parameter value found updated from 59.997 to 74.94 in the new backup PVHITP Parameter value found updated from 60.000 to 74.95 in the new backup	None	
29PC438	SOLVENT REGENERATION	Hiway 07	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup T1 Parameter value found updated	None	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
				from 0.0100 to 0.0390 in the new backup TD Parameter value found updated from 0.0000 to 0.0128 in the new backup PVSIGNAL Parameter value found updated from PV to RV in the new backup PVSLTSRC Parameter value found updated from 29PC438 to 29LI319 in the new backup SPSIGNAL Parameter value found updated from LSP to OUTPUT in the new backup SPSLTSRC Parameter value found updated from 29PC438 to BLANK in the new backup		
29PI447	RECY COMP EXHAUST COND	Hiway 07	---	PVHITP Parameter value found updated from 30 to 29.9 in the new backup	None	
29TI736	3REF SULFTRAP TOP NW	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI737	3REF SULFTRAP MID NW	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI738	3REF SULFTRAP BTM NW	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI739	3REF SULFTRAP TOP NE	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI740	3REF SULFTRAP MID NE	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI741	3REF SULFTRAP BTM NE	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
29TI742	3REF SULFTRAP TOP SE	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI743	3REF SULFTRAP MID SE	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI744	3REF SULFTRAP BTM SE	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI745	3REF SULFTRAP TOP SW	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI746	3REF SULFTRAP MID SW	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
29TI747	3REF SULFTRAP BTM SW	Hiway 07	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup	None	
89AI932	CT13 ORP ANALYZR/CONTRLR	Hiway 07	2 Reformer	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
89FC105	CT14 RO WATER	Hiway 07	2 Reformer	RATIO Parameter value found updated from 0.2212 to 0.8838 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
89FI100	14 WATER WELL	Hiway 07	2 Reformer	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
89LC304	CT14 BASIN LEVEL	Hiway 07	2 Reformer	PVCHAR Parameter value found updated from JTHERM to LINEAR in the new backup PVEUHI Parameter value found updated from 78.959 to 100.10 in the new backup PVEULO Parameter value found updated from 1.432 to 0.0000 in the new backup PVFORMAT Parameter value found updated from BLANK to D0 in the	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	

Tag Name	Description	Node Name	Equipment Name	Change Details	Summary of Impact	LAR Review Status
				new backup PVHITP Parameter value found updated from 63.303 to 80.001 in the new backup PVLOTP Parameter value found updated from 14.867 to 19.999 in the new backup PVTEMP Parameter value found updated from DEGREESC to BLANK in the new backup		

Appendix B. I/O List for Modification

There are 2 tags identified in the Modpack gap analysis report (refer to Appendix I) as hardwired I/O to be included in the LAR1C I/O List, as listed in Table B.1.

Table B.1. I/O List for Modification

Tag Name	Description	Node Name	Box No	Summary of Impact	LAR Review Status
22UA967	NACCR UPS #4 COM TROUBLE	Hiway 07	Box 07	I/O list needs to be updated and Assignment details needs to be populated	
22UA965	NACCR UPS #2 COM TROUBLE	Hiway 07	Box 07	I/O list needs to be updated and Assignment details needs to be populated	

Appendix C. Serial Link Tag List for Modification

There are no changes identified in the Modpack gap analysis report (refer to Appendix I) for modification in the Serial Link Tag List.

Appendix D. Graphics Tag List

This section provides the details for the modified and new points added on the displays. Table D.1 contains all the BPCS tags impacting the HMI graphics. The graphic markups showing all the changes (including static changes) are included in Appendix D.1.

Table D.1 Details of BPCS Tags Impacting the HMI Displays

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
19XM3703	DESULF FEED HTR BURNER TAG COUNT	Reformer_1902.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
19XM3706	STAB REB HTR BURNER TAG COUNT	Reformer_1906.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21FK3110	#1 REF TOTAL CALCULATED FEED RATE	Reformer_2101.htm, Reformer_2103.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21TK4705	1DES HTR INLET DEWPT	Reformer_2102.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21XM3716	1REF DESULF BURNER TAG COUNT	Reformer_2102.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21FY144C	1REF DSUL S02EMIS-LB/H	Reformer_2102.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21XX944	**HOLD 1**	Reformer_2102.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
21AI944B	1 REF/DES CEMS CAB PURGE	Reformer_2 102.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21FI144A	1REF DSULF STK O2	Reformer_2 102.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21PI444	1REF DSUL HTR FUEL FLOW	Reformer_2 102.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
L421XA944	1REF DSUL HTR FUEL PRESS	Reformer_2 102.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
L421XA944E	**HOLD 1**	Reformer_2 102.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
L421XA944F	**HOLD 1**	Reformer_2 102.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21PA3405	**HOLD 1**	Reformer_2 103.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21PK3405	FOULING BUILD UP TRIGGER	Reformer_2 103.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21FK3125	DP (STRPTWR - AMINE OVHD)	Reformer_2 115.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
27XM3711	H2 FWD FLOW TO REACT	Reformer_2 120.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21FY142B	2REF R3 BURNER TAG COUNT	Reformer_2 120.htm, Reformer_2 124.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3AI990C	1REF NOX STK EMIS-LB/H	Reformer_2 120.htm, Reformer_2 124.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21FY142C	**HOLD 1**	Reformer_2 120.htm, Reformer_2 124.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21XX943	HCU FRAC STACK SO2	Reformer_2 120.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21PK445	**HOLD 1**	Reformer_2 120.htm, Reformer_2 124.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
L421XA943	**HOLD 1**	Reformer_2 120.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
L421XA943E	**HOLD 1**	Reformer_2 120.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
L421XA943F	**HOLD 1**	Reformer_2 120.htm	Tag added on graphics	Graphics shall be updated and replaced in	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
				the abstract of the primary server	
21XM3712	1REF R2 BURNER TAG COUNT	Reformer_2 122.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21XX942	**HOLD 1**	Reformer_2 124.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
L421XA942	**HOLD 1**	Reformer_2 124.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
L421XA942E	**HOLD 1**	Reformer_2 124.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
L421XA942F	**HOLD 1**	Reformer_2 124.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21PI442	1REF HTR FUEL PRESSURE	Reformer_2 124.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21XM3713	1REF R3 BURNER TAG COUNT	Reformer_2 124.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
21XM3714	1REF R4 BURNER TAG COUNT	Reformer_2 126.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
23FK3284	WEST BANK EXCH FD BYPASS	Reformer_2302.htm, Reformer_2333.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23FK3147	TOT TRTGAS 2 REACT HTR W	Reformer_2302.htm, Reformer_2333.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23FC284	E REACTOR COOLDOWN FLOW	Reformer_2302.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23AC916	W HTR O2 CNTRL O2 OVRD	Reformer_2302.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23AC949	E HTR O2 CNTRL O2 OVRD	Reformer_2302.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23PC566A	FUEL GAS TO W HEATER O2	Reformer_2302.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23PC565A	FUEL GAS TO E HEATER O2	Reformer_2302.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23TI800	EFF EXCH TO HOT FL DR	Reformer_2302.htm, Reformer_2333.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23TI760	EFF EXCH HTR TREAT GAS	Reformer_2302.htm, Reformer_2333.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
23LY349	FLARE NHV EVENT	Reformer_2308.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23QK035	FFHDS FLARE FIRING RATE	Reformer_2308.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23HS227	HDSFLR STM CNTL PROG BYP	Reformer_2308.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23FI162	HDS STRPR OH LIQ > REFLX	Reformer_2321.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23FK162	HDS STRPR OVHD LIQ CALC	Reformer_2321.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23ZA915	REACTOR INLET BYPASS VALVE	Reformer_2330.htm, Reformer_2331.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23ZA964	W TRN REACTOR INLET VLV	Reformer_2330.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23ZA965	W TRN REACTOR INLET VLV	Reformer_2330.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23ZA935	W TRN REACTOR OUTLET VLV	Reformer_2330.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
23ZA936	W TRN REACTOR OUTLET VLV	Reformer_2330.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23ZA938	REACTOR OUTLET BYPASS VALVE	Reformer_2330.htm, Reformer_2331.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23ZA943	E TRN REACTOR INLET VLV	Reformer_2331.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23ZA944	E TRN REACTOR INLET VLV	Reformer_2331.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23ZA939	E TRN REACTOR OUTLET VLV	Reformer_2331.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23ZA940	E TRN REACTOR OUTLET VLV	Reformer_2331.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23XM3709	FFHDS WEST HTR BURNER TAG COUNT	Reformer_2332.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23XM3710	FFHDS EAST HTR BURNER TAG COUNT	Reformer_2332.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
23FY118	H2 THROUGH EAST BK EXCH	Reformer_2333.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
23XM3701	AIR PROD H2 RTE CHG LOG	Reformer_2 502.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22TK4710	**HOLD 1**	Reformer_2 202.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22XM3707	2REF 2A DESULF BURNER TAG COUNT	Reformer_2 202.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22XM3708	2REF 2B DESULF BURNER TAG COUNT	Reformer_2 207.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22XM3711	2REF R3 BURNER TAG COUNT	Reformer_2 208.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22XM3709	2REF R1 BURNER TAG COUNT	Reformer_2 213.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22XM3710	2REF R2 BURNER TAG COUNT	Reformer_2 215.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22XM3712	2REF R4 BURNER TAG COUNT	Reformer_2 217.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22UA965	NACCR UPS #2 COM TROUBLE	Reformer_2 235.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
22UA967	NACCR UPS #4 COM TROUBLE	Reformer_2 235.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22XA909	NACCR UPS #7 ON BYPASS	Reformer_2 235.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22XA910	NACCR UPS #7 ON BATTERY	Reformer_2 235.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
22XA911	NACCR UPS #7 ON FAULT	Reformer_2 235.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
27TC3729	DIB TRAY 50 TEMP (AM)	Reformer_2 721A.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
74PC404	NO LED MIX BUTANE	Reformer_2 721A.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XM1401	R1 HEATER BURNER COUNT	0302.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XM1402	R4 HEATER BURNER COUNT	0308.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3PC481	R4 HEATER FUEL GAS	0308H5.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
3AC866	R4 HTR O2 CNTRL OVRD-SRA	0308H5.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3FI113	FRACT TOWER REFLUX	0309.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3FC113	FRAC TOWER REFLUX	0309.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3FC212	HUX TO STORAGE	0309.htm, 0328.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XM3739	FRAC REBLR BURNER COUNT	0310.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3F910PI	FLR SOX 24HR FROM PI	0314.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XM1403	R2 HEATER BURNER COUNT	0316.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3PA522	FIREWTR @ HUX/DUX AIRCLR	0328.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3LC340	HUX STRIPPER REBOILER	0328.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
6FK3125	JET STAB BTMS TOT FLOW	0606.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
6XM3704	STAB REBLR BURNER COUNT	0606.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
5XM3778	REF S BTM DECK BURNER CT	0504.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
5XM3779	REF N BTM DECK BURNER CT	0504.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
5XM3780	REF S TOP DECK BURNER CT	0504.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
5XM3781	REF N TOP DECK BURNER CT	0504.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3AK990C4	HC FRAC REBLR STACK SO2	0515.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
5AI931	1HYD E STK SO2	0515.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
5XA931	1 HYD E STK SO2 FAULT	0515.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
6HS407	JET TRTR MPT ALRM ENABLE	0602.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
6PK3407	R1 INLET SHADOW - 6PI407	0602.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
6XM3701	DESULF HTR BURNER COUNT	0602.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XL091	FR BTMS E PMP RUN STATUS	0304.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XA090A	FR BTMS W PMP COM TRBL	0304.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XA091A	FR BTMS E PMP COM TRBL	0304.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XA090B	FR BOTTOM PUMPS BOTH RUN	0304.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XL090	FR BTMS W PMP RUN STATUS	0304.htm	Tag removed from graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3TI856	TEMP OUT OF DUX STM GEN	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
3LI345	DUX STM GEN LVL	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3LC344	DUX STM GEN LVL CTRL	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3FI143	150# STM FRM DUX STM GEN	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3FI144	HP BFW TO DUX STM GEN	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3PI501	DUX STM GEN PRESSURE	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XA904A	FRAC BTMS AIR CLR FAN 5	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XA904B	FRAC BTMS AIR CLR FAN 5	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3PC547	BFW PRESS IN TO 3LV344	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3XA844A	FRAC BTMS AIR CLR FAN 6	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Tag Name	Description	Impacted Display	Modification Status	Summary of Impact	LAR Review Status
3XA844B	FRAC BTMS AIR CLR FAN 6	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3LO344	DUX STM GEN LVL CTRL	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3LI344	DUX STM GEN LVL CTRL	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	
3PO547	BFW PRESS IN TO 3LV344	0304.htm	Tag added on graphics	Graphics shall be updated and replaced in the abstract of the primary server	

Backup Summary

The table below shows number of graphics received in each backup and provides the summary of change between the two backups.

Console	Baseline Backup AUG-2022/ OCT-2021	Modpack backup MAY-2023	New Graphics in Modpack	Updated Graphics in Modpack backup	Total graphics to be Migrated
1 & 2 Reformer	290	295	-	32	268
2 Reformer	159	171	-	1	18
HCU	388	502	-	17	275

Legends:

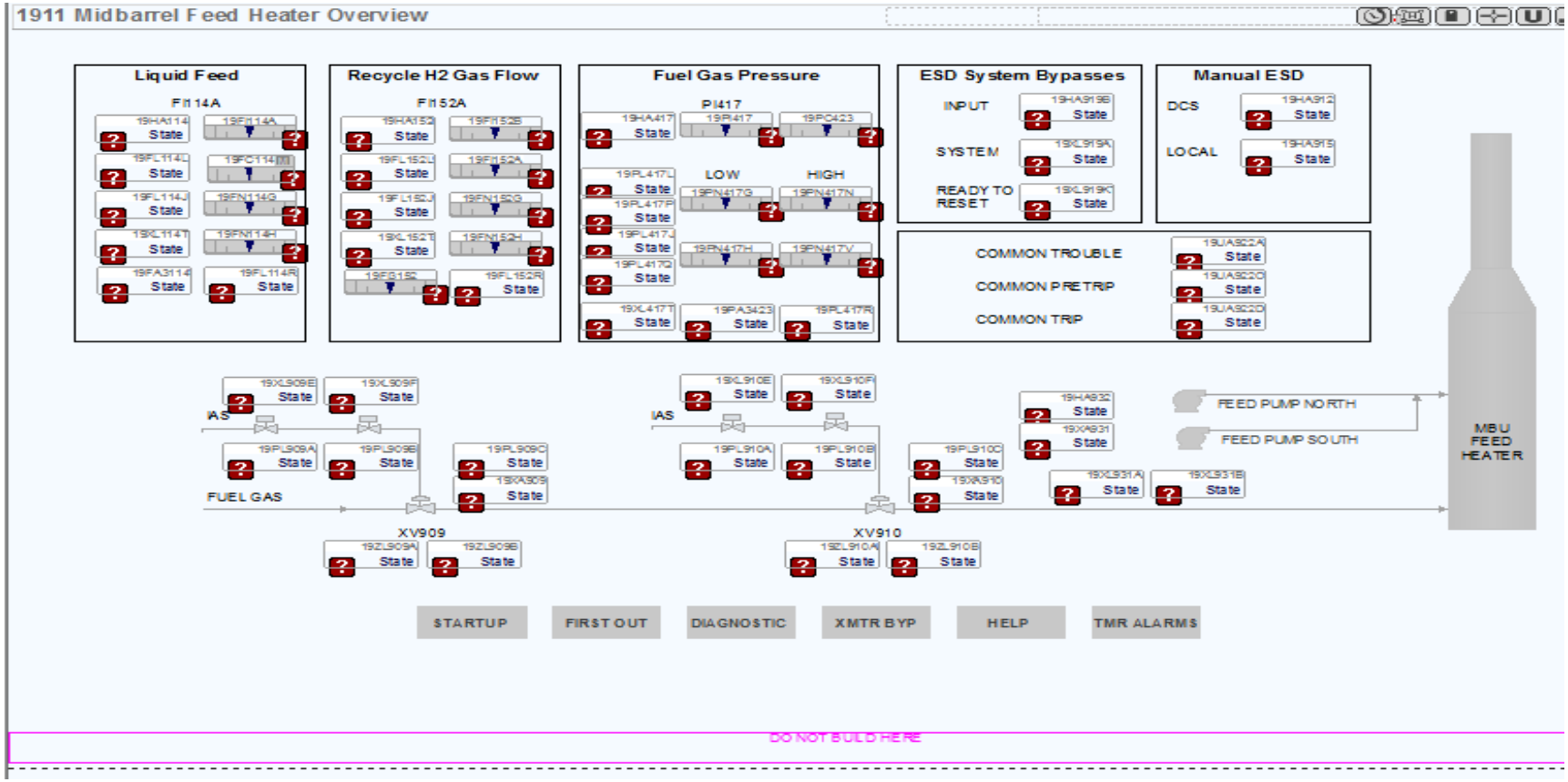
Screen 1. Baseline Backup Graphic from AUG 2022/OCT 2021.

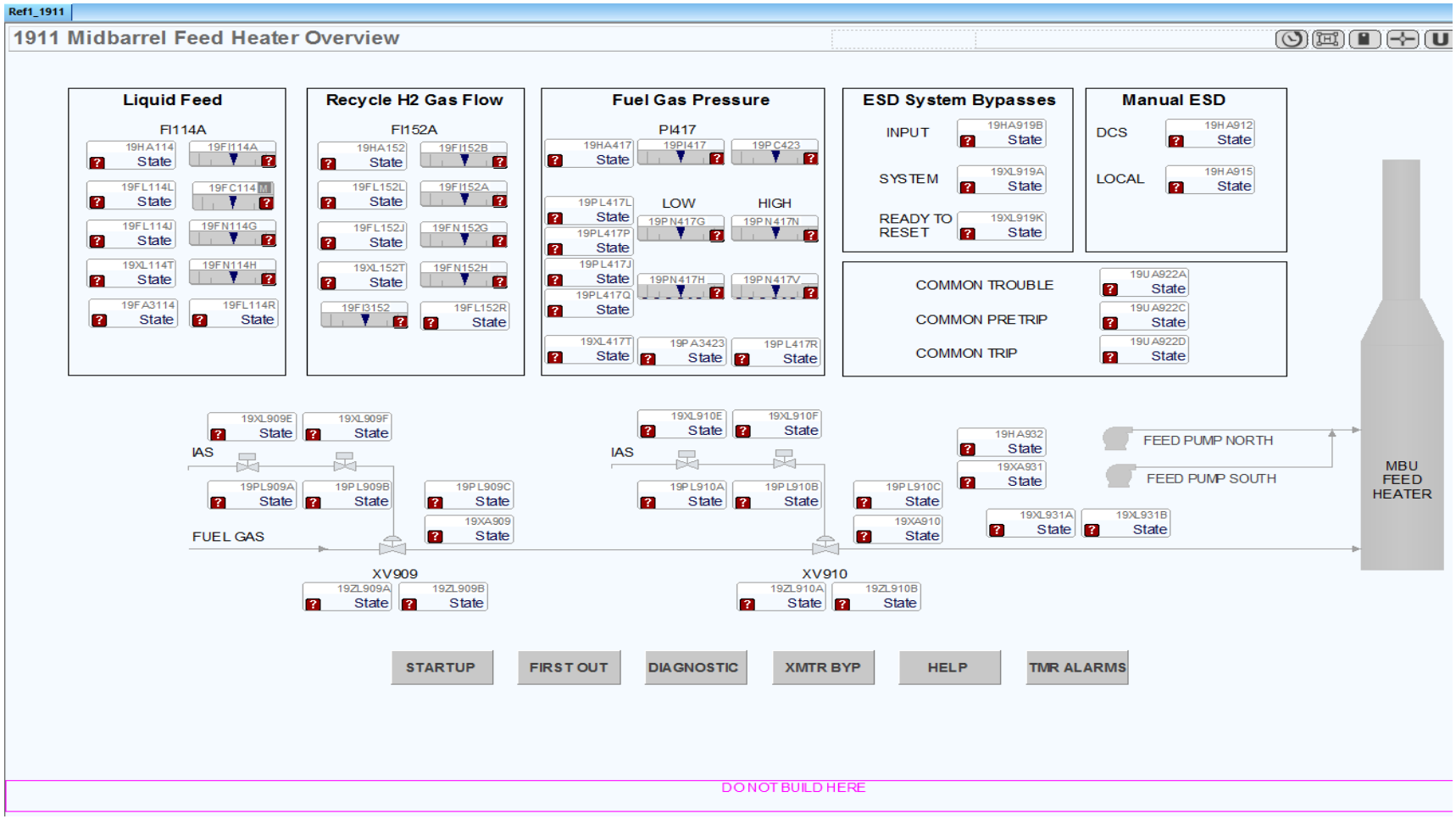
Screen 2. Corresponding Modpack Backup Graphics from MAY -2023.

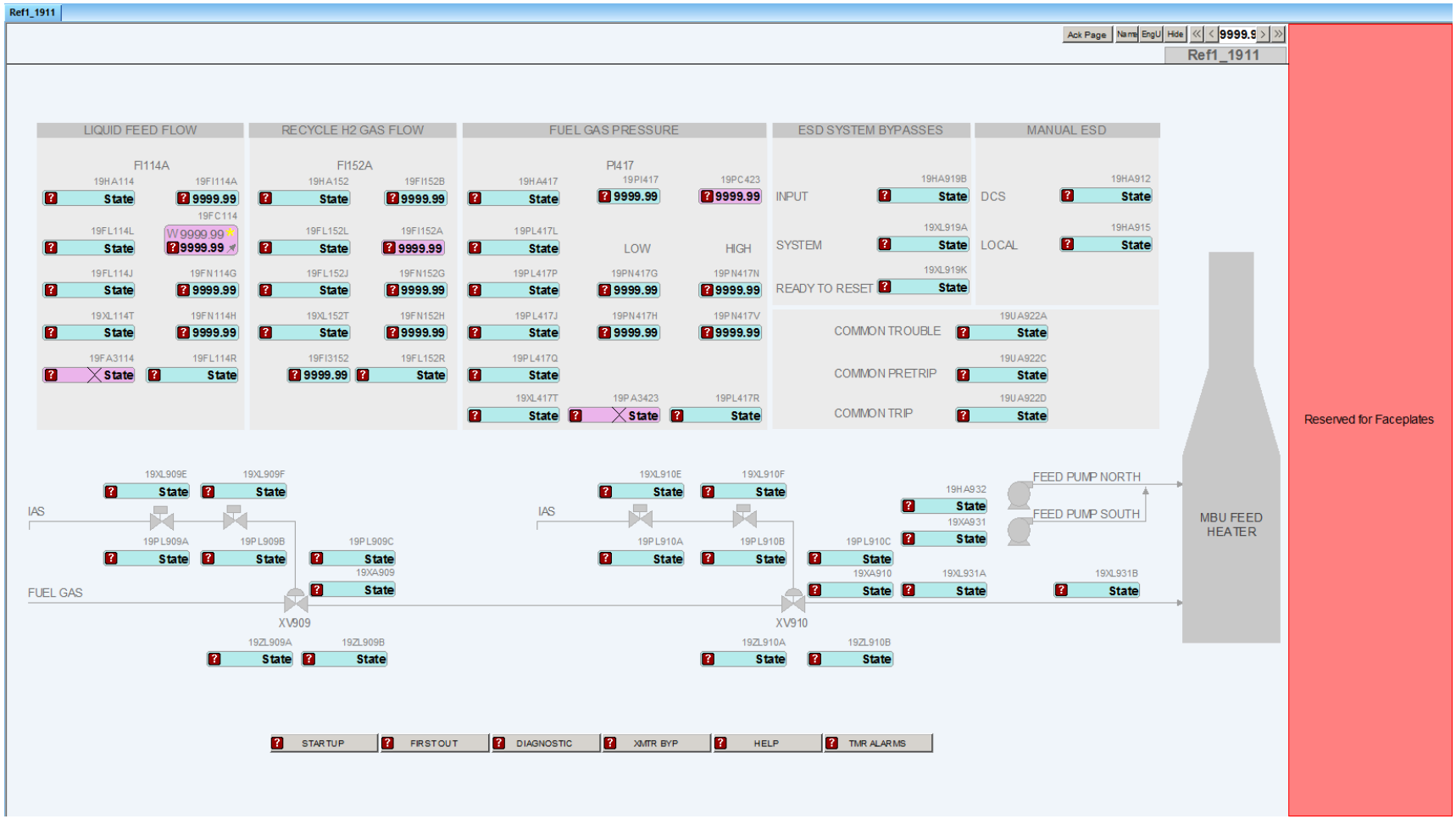
Screen 3. Corresponding ASM EPKS R520.

1. Reformer 1

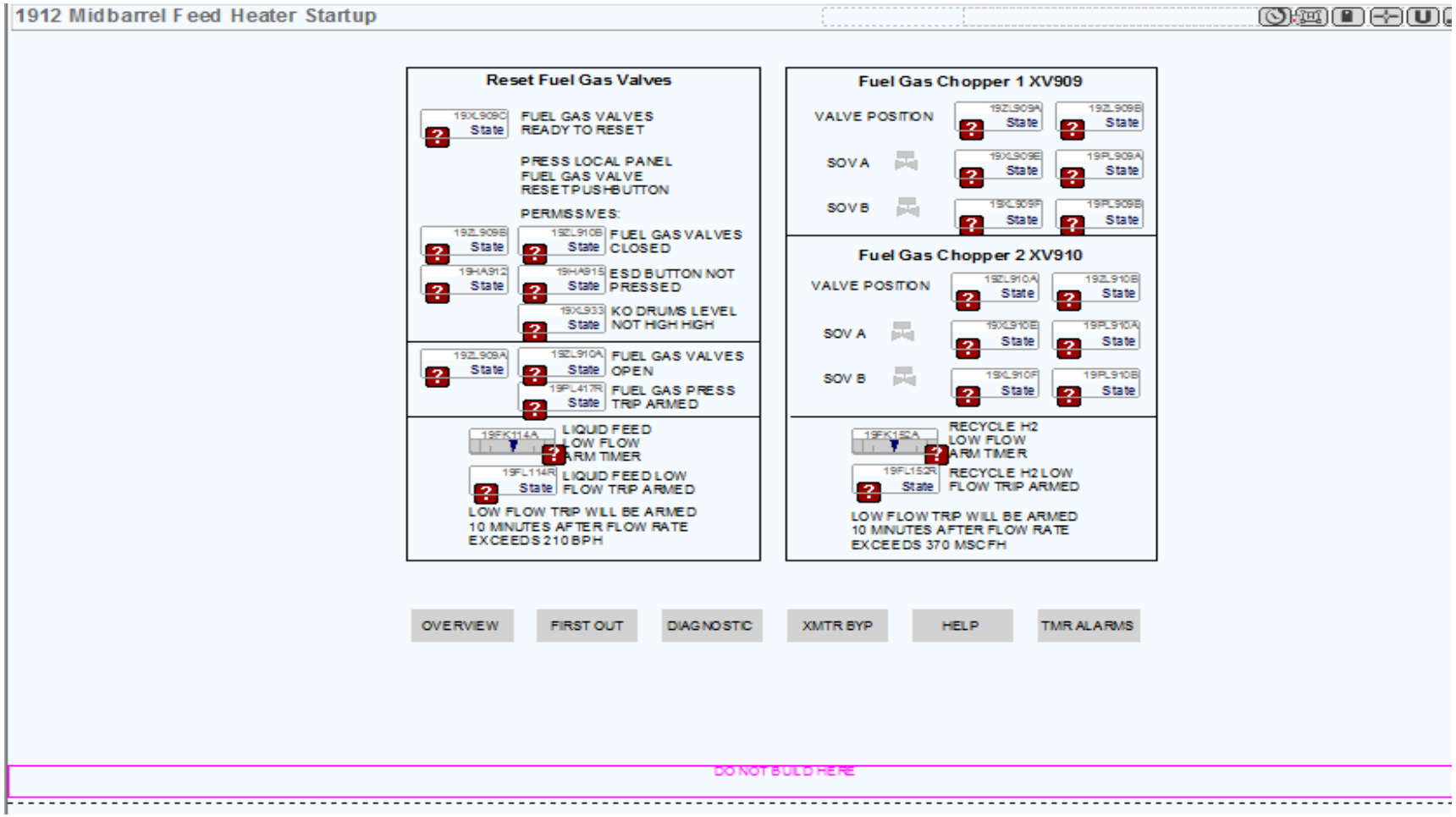
1.1 1911 MIDBARREL FEED HEATER OVERVIEW (Ref1_1911.htm)

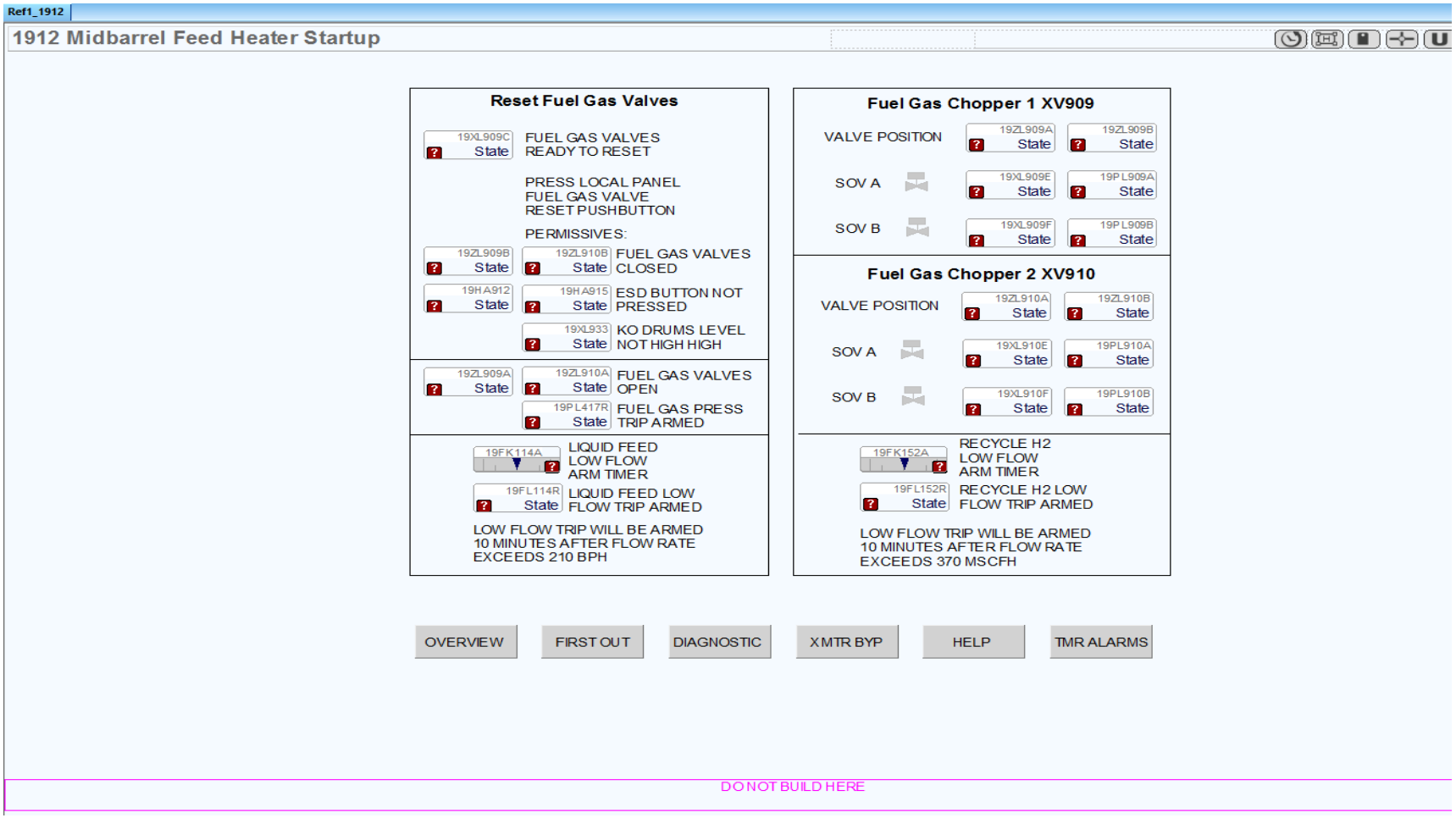


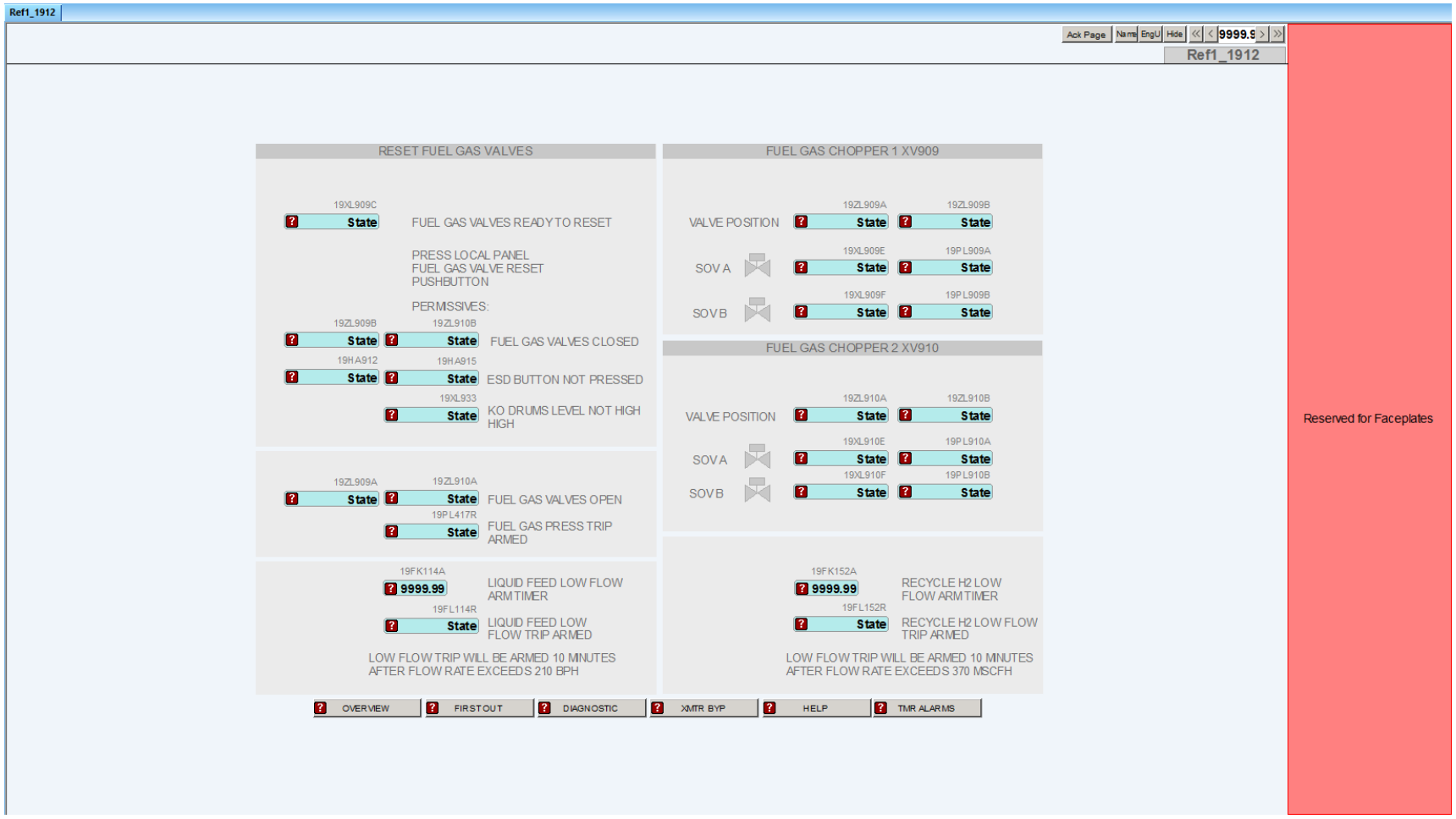

Ref1_1911
1911 Midbarrel Feed Heater Overview
Liquid Feed
FI114A
19HA114 State
19FI114A
19FL114L State
19FC114 M
19FL114J State
19FN114G
19XL114T State
19FN114H
19FA3114 State
19FL114R State
Recycle H2 Gas Flow
FI152A
19HA152 State
19FI152B
19FL152L State
19FI152A
19FL152J State
19FN152G
19XL152T State
19FN152H
19FI3152
19FL152R State
Fuel Gas Pressure
PI417
19HA417 State
19PI417
19PC423
19PL417L State
LOW
HIGH
19PL417P State
19PN417G
19PN417N
19PL417J State
19PL417Q State
19PN417H
19PN417V
19XL417T State
19PA3423 State
19PL417R State
ESD System Bypasses
INPUT
19HA919B State
SYSTEM
19XL919A State
READY TO RESET
19XL919K State
Manual ESD
DCS
19HA912 State
LOCAL
19HA915 State
COMMON TROUBLE
19UA922A State
COMMON PRETRIP
19UA922C State
COMMON TRIP
19UA922D State
19XL909E State
19XL909F State
IAS
19PL909A State
19PL909B State
19PL909C State
19XA909 State
FUEL GAS
XV909
19ZL909A State
19ZL909B State
19XL910E State
19XL910F State
IAS
19PL910A State
19PL910B State
19PL910C State
19XA910 State
XV910
19ZL910A State
19ZL910B State
19HA932 State
19XA931 State
19XL931A State
19XL931B State
FEED PUMP NORTH
FEED PUMP SOUTH
MBU FEED HEATER
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1911
Ack Page
Name
EngU
Hide
Ref1_1911
LIQUID FEED FLOW
FI114A
RECYCLE H2 GAS FLOW
FI152A
FUEL GAS PRESSURE
PI417
LOW
HIGH
ESD SYSTEM BYPASSES
INPUT
SYSTEM
READY TO RESET
MANUAL ESD
DCS
LOCAL
COMMON TROUBLE
COMMON PRETRIP
COMMON TRIP
Reserved for Faceplates
IAS
FUEL GAS
XV909
XV910
FEED PUMP NORTH
FEED PUMP SOUTH
MBU FEED HEATER
STARTUP
FIRSTOUT
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS

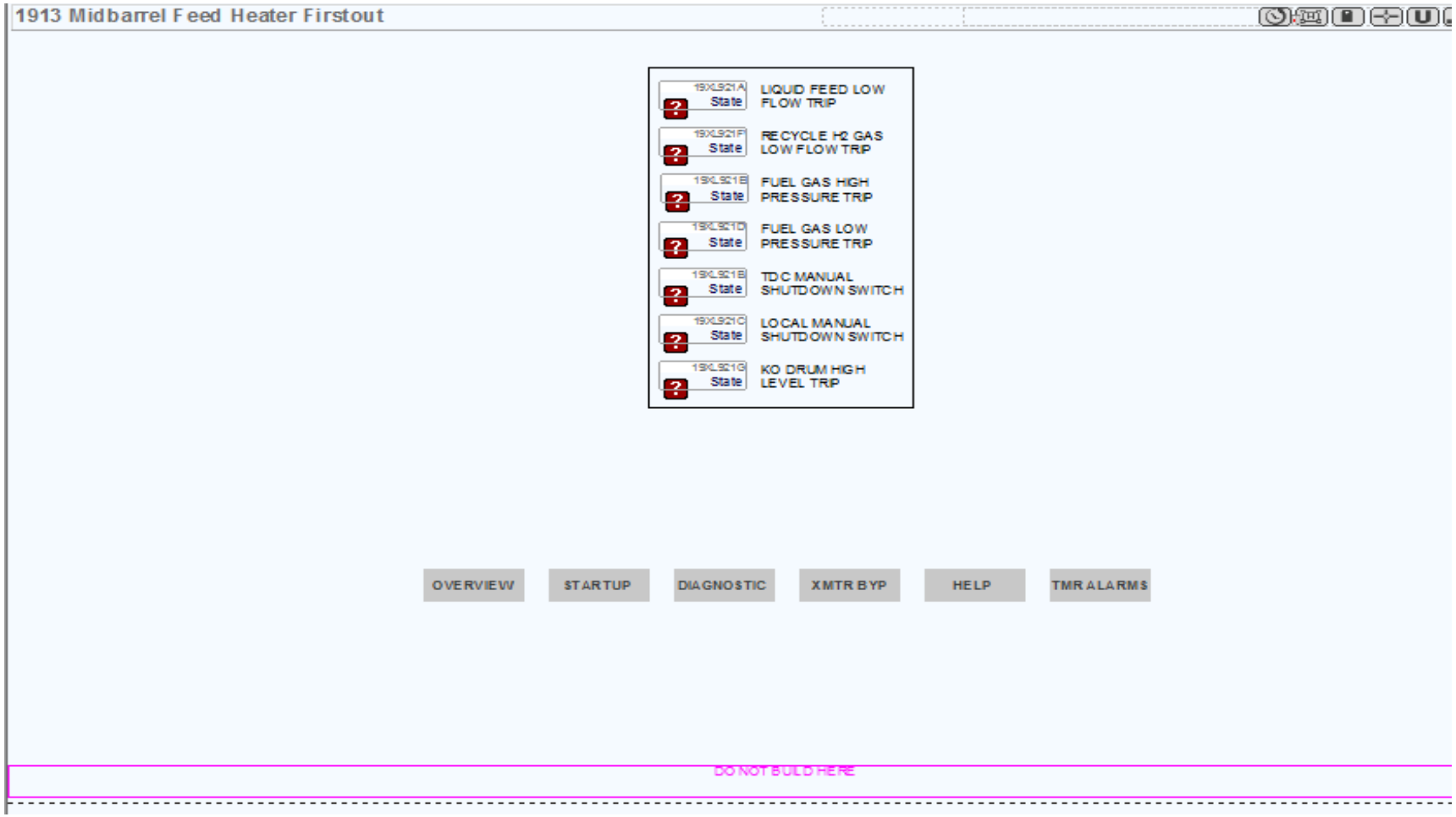
1.2 1912 MIDBARREL FEED HEATER STARTUO (Ref1_1912.htm)

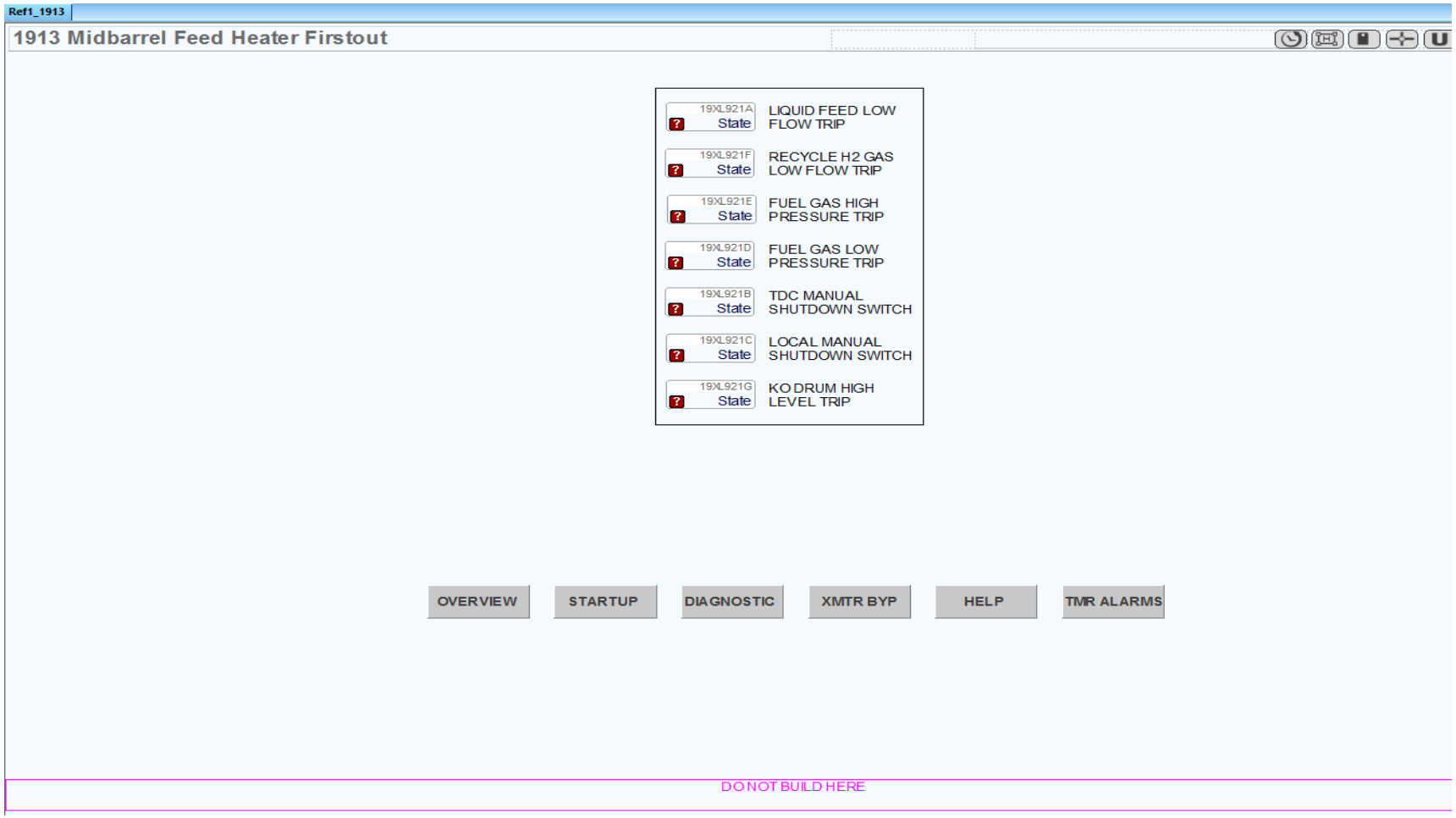


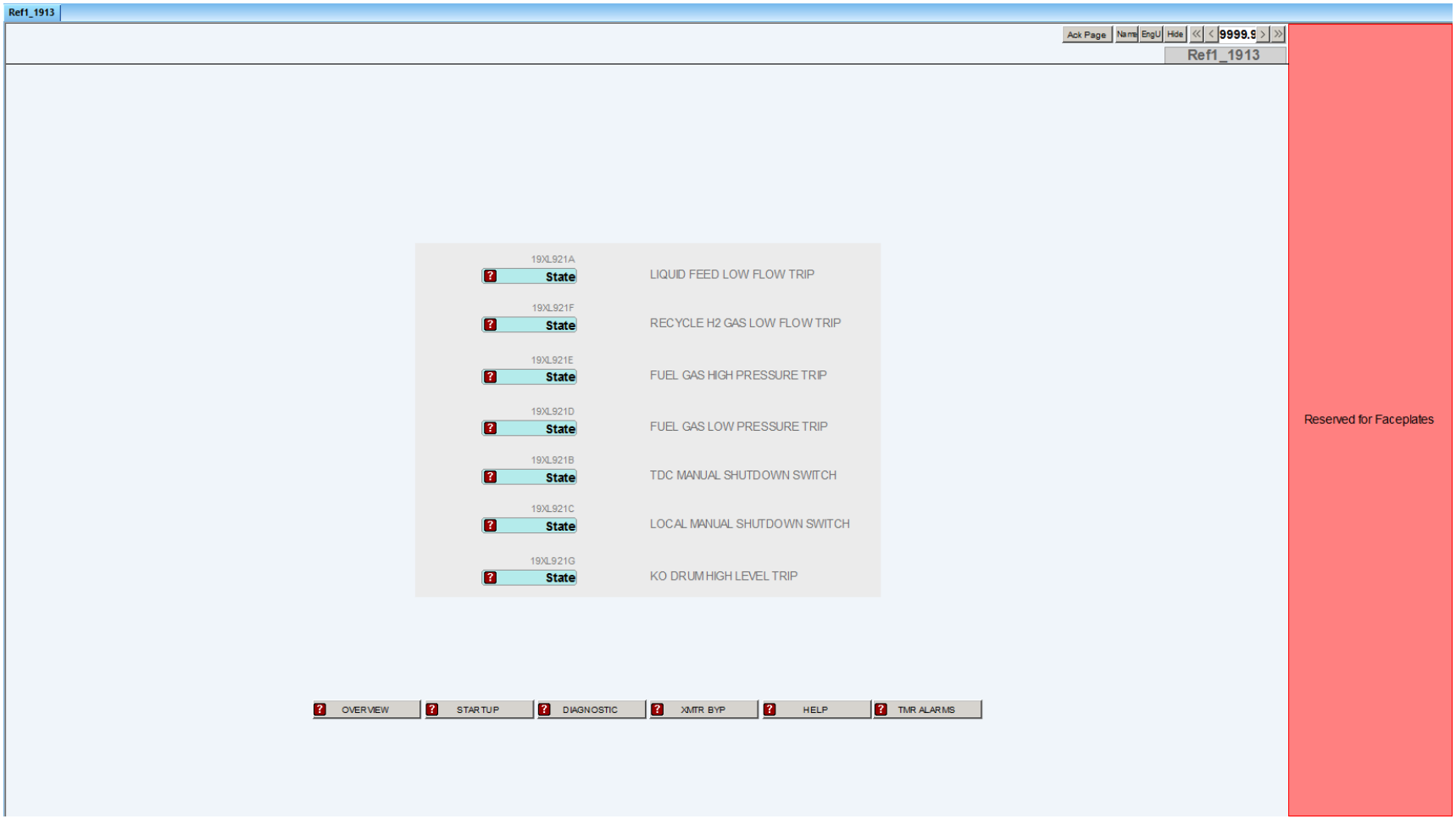

Ref1_1912
1912 Midbarrel Feed Heater Startup
Reset Fuel Gas Valves
19XL909C State
FUEL GAS VALVES READY TO RESET
PRESS LOCAL PANEL FUEL GAS VALVE RESET PUSHBUTTON
PERMISSIVES:
19ZL909B State
19ZL910B State
FUEL GAS VALVES CLOSED
19HA912 State
19HA915 State
ESD BUTTON NOT PRESSED
19XL933 State
KO DRUMS LEVEL NOT HIGH HIGH
19ZL909A State
19ZL910A State
FUEL GAS VALVES OPEN
19PL417R State
FUEL GAS PRESS TRIP ARMED
19FK114A
LIQUID FEED LOW FLOW ARM TIMER
19FL114R State
LIQUID FEED LOW FLOW TRIP ARMED
LOW FLOW TRIP WILL BE ARMED 10 MINUTES AFTER FLOW RATE EXCEEDS 210 BPH
Fuel Gas Chopper 1 XV909
VALVE POSITION
19ZL909A State
19ZL909B State
SOV A
19XL909E State
19PL909A State
SOV B
19XL909F State
19PL909B State
Fuel Gas Chopper 2 XV910
VALVE POSITION
19ZL910A State
19ZL910B State
SOV A
19XL910E State
19PL910A State
SOV B
19XL910F State
19PL910B State
19FK152A
RECYCLE H2 LOW FLOW ARM TIMER
19FL152R State
RECYCLE H2 LOW FLOW TRIP ARMED
LOW FLOW TRIP WILL BE ARMED 10 MINUTES AFTER FLOW RATE EXCEEDS 370 MSCFH
OVERVIEW
FIRST OUT
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1912
Ack Page
Name
EngU
Hide
9999.9
Ref1_1912
RESET FUEL GAS VALVES
19XL909C
State
FUEL GAS VALVES READY TO RESET
PRESS LOCAL PANEL
FUEL GAS VALVE RESET
PUSHBUTTON
PERMISSIVES:
19ZL909B
State
19ZL910B
State
FUEL GAS VALVES CLOSED
19HA912
State
19HA915
State
ESD BUTTON NOT PRESSED
19XL933
State
KO DRUMS LEVEL NOT HIGH HIGH
19ZL909A
State
19ZL910A
State
FUEL GAS VALVES OPEN
19PL417R
State
FUEL GAS PRESS TRIP ARMED
19FK114A
9999.99
LIQUID FEED LOW FLOW ARM TIMER
19FL114R
State
LIQUID FEED LOW FLOW TRIP ARMED
LOW FLOW TRIP WILL BE ARMED 10 MINUTES AFTER FLOW RATE EXCEEDS 210 BPH
FUEL GAS CHOPPER 1 XV909
VALVE POSITION
19ZL909A
State
19ZL909B
State
SOV A
19XL909E
State
19PL909A
State
SOV B
19XL909F
State
19PL909B
State
FUEL GAS CHOPPER 2 XV910
VALVE POSITION
19ZL910A
State
19ZL910B
State
SOV A
19XL910E
State
19PL910A
State
SOV B
19XL910F
State
19PL910B
State
19FK152A
9999.99
RECYCLE H2 LOW FLOW ARM TIMER
19FL152R
State
RECYCLE H2 LOW FLOW TRIP ARMED
LOW FLOW TRIP WILL BE ARMED 10 MINUTES AFTER FLOW RATE EXCEEDS 370 MSCFH
OVERVIEW
FIRST OUT
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
Reserved for Faceplates

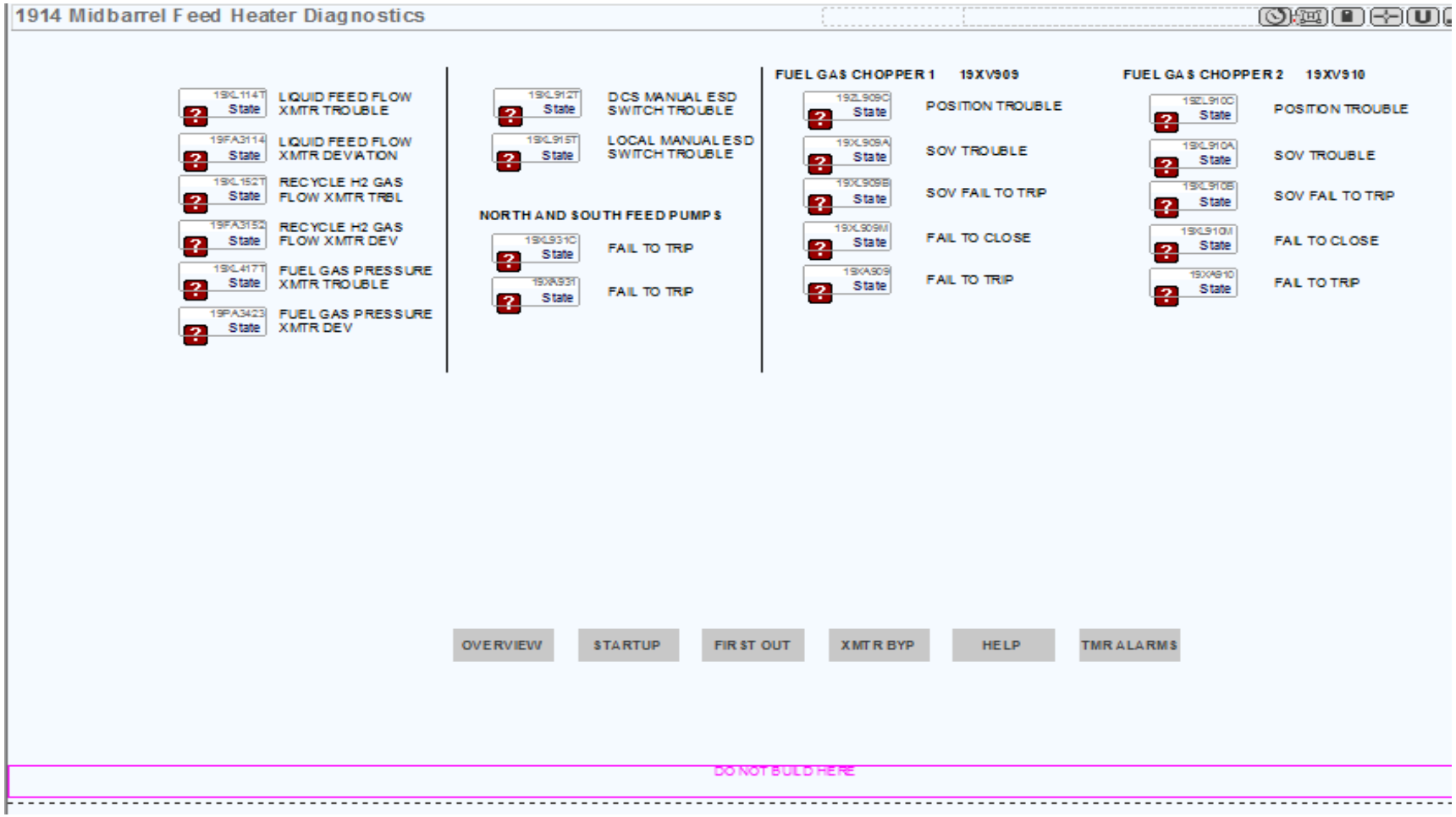
1.3 1913 MIDBARREL FEED HEATER FIRSTOUT (Ref1_1913.htm)

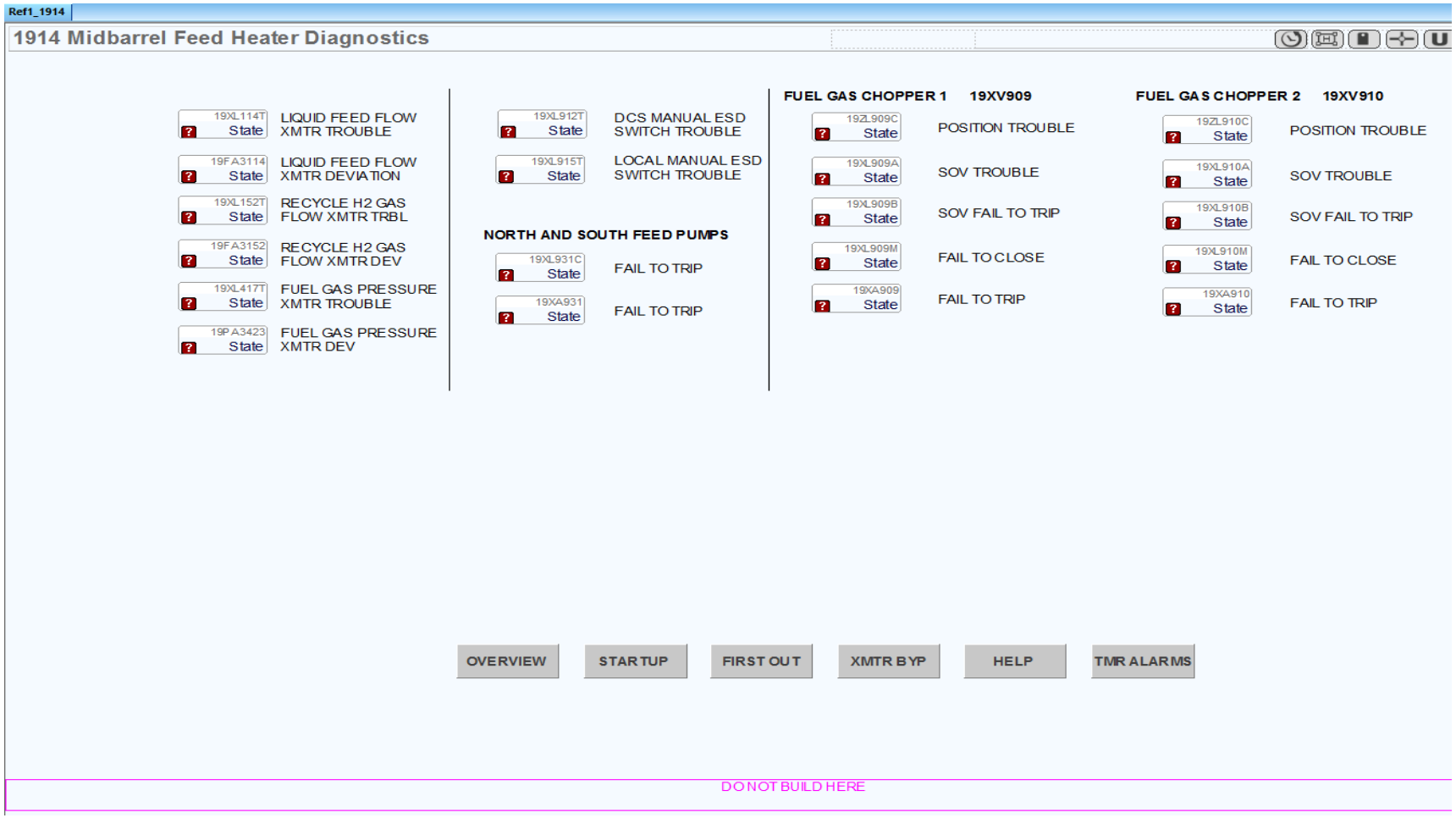


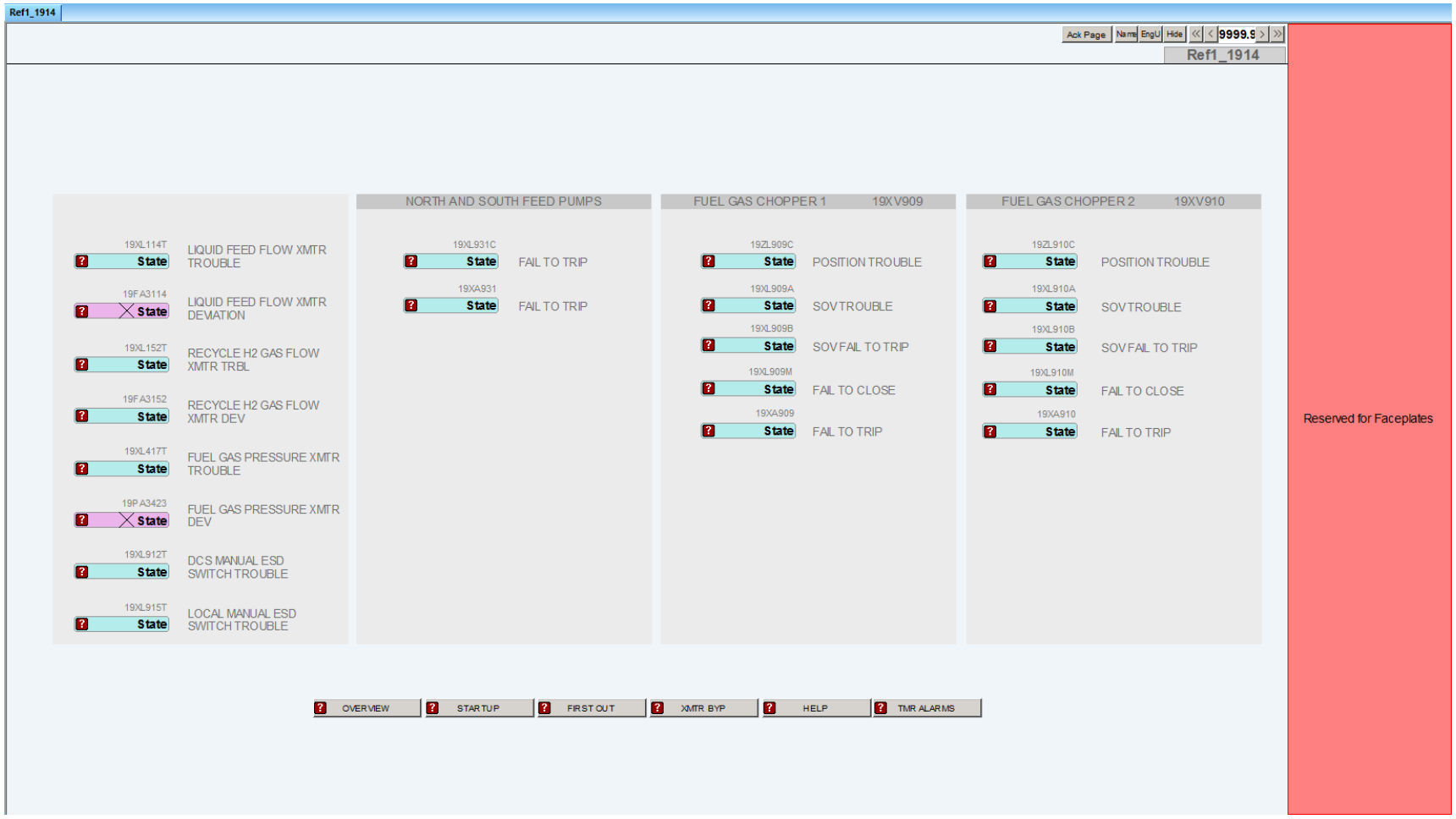

Ref1_1913
1913 Midbarrel Feed Heater Firstout
19XL921A State
LIQUID FEED LOW FLOW TRIP
19XL921F State
RECYCLE H2 GAS LOW FLOW TRIP
19XL921E State
FUEL GAS HIGH PRESSURE TRIP
19XL921D State
FUEL GAS LOW PRESSURE TRIP
19XL921B State
TDC MANUAL SHUTDOWN SWITCH
19XL921C State
LOCAL MANUAL SHUTDOWN SWITCH
19XL921G State
KO DRUM HIGH LEVEL TRIP
OVERVIEW
STARTUP
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1913
Ack Page
Name
EngU
Hide
9999.9
Ref1_1913
19XL921A
State
LIQUID FEED LOW FLOW TRIP
19XL921F
State
RECYCLE H2 GAS LOW FLOW TRIP
19XL921E
State
FUEL GAS HIGH PRESSURE TRIP
19XL921D
State
FUEL GAS LOW PRESSURE TRIP
19XL921B
State
TDC MANUAL SHUTDOWN SWITCH
19XL921C
State
LOCAL MANUAL SHUTDOWN SWITCH
19XL921G
State
KO DRUM HIGH LEVEL TRIP
OVERVIEW
STARTUP
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
Reserved for Faceplates

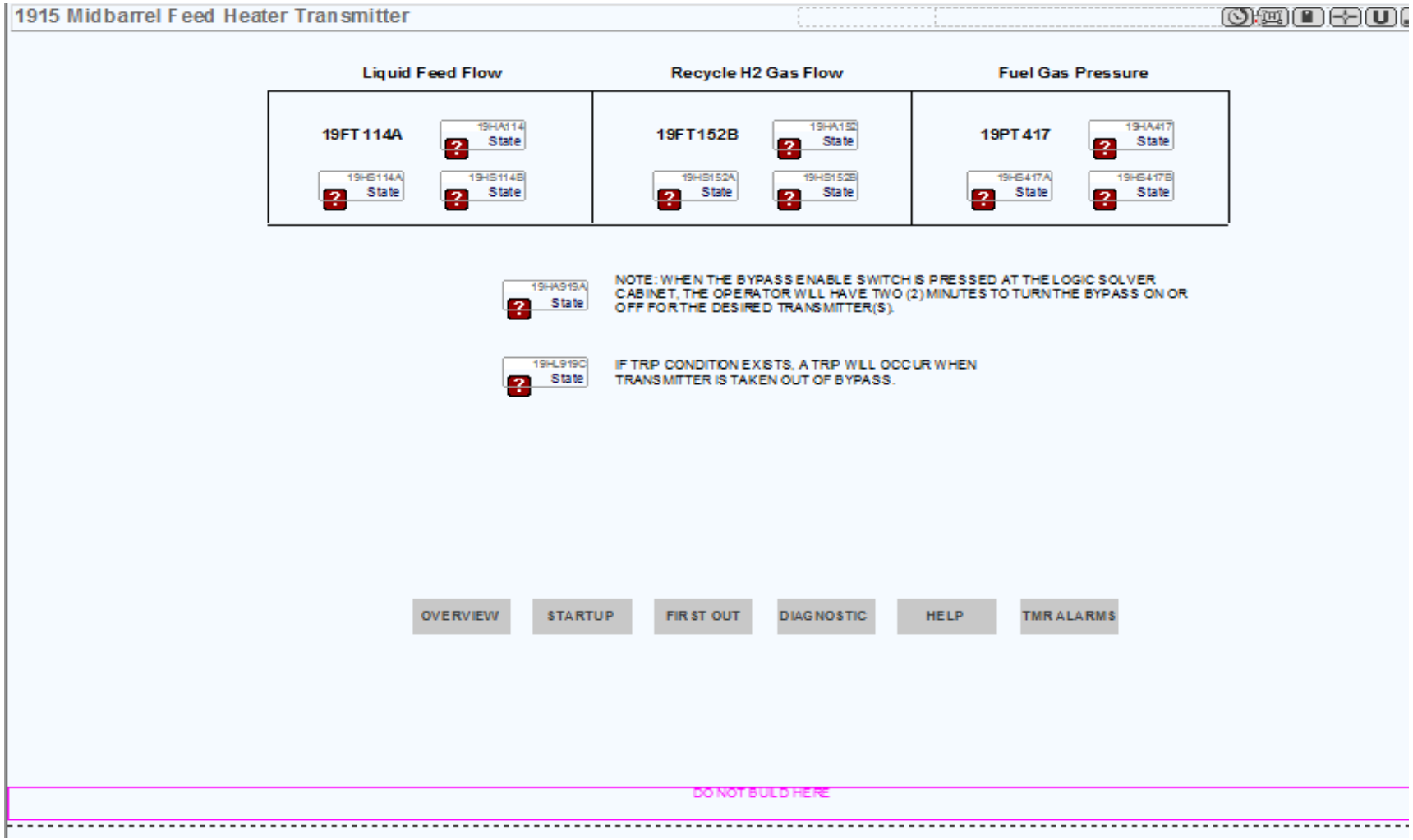
1.4 1914 MIDBARREL FEED HEATER DIAGNOSTICS (Ref1_1914.htm)

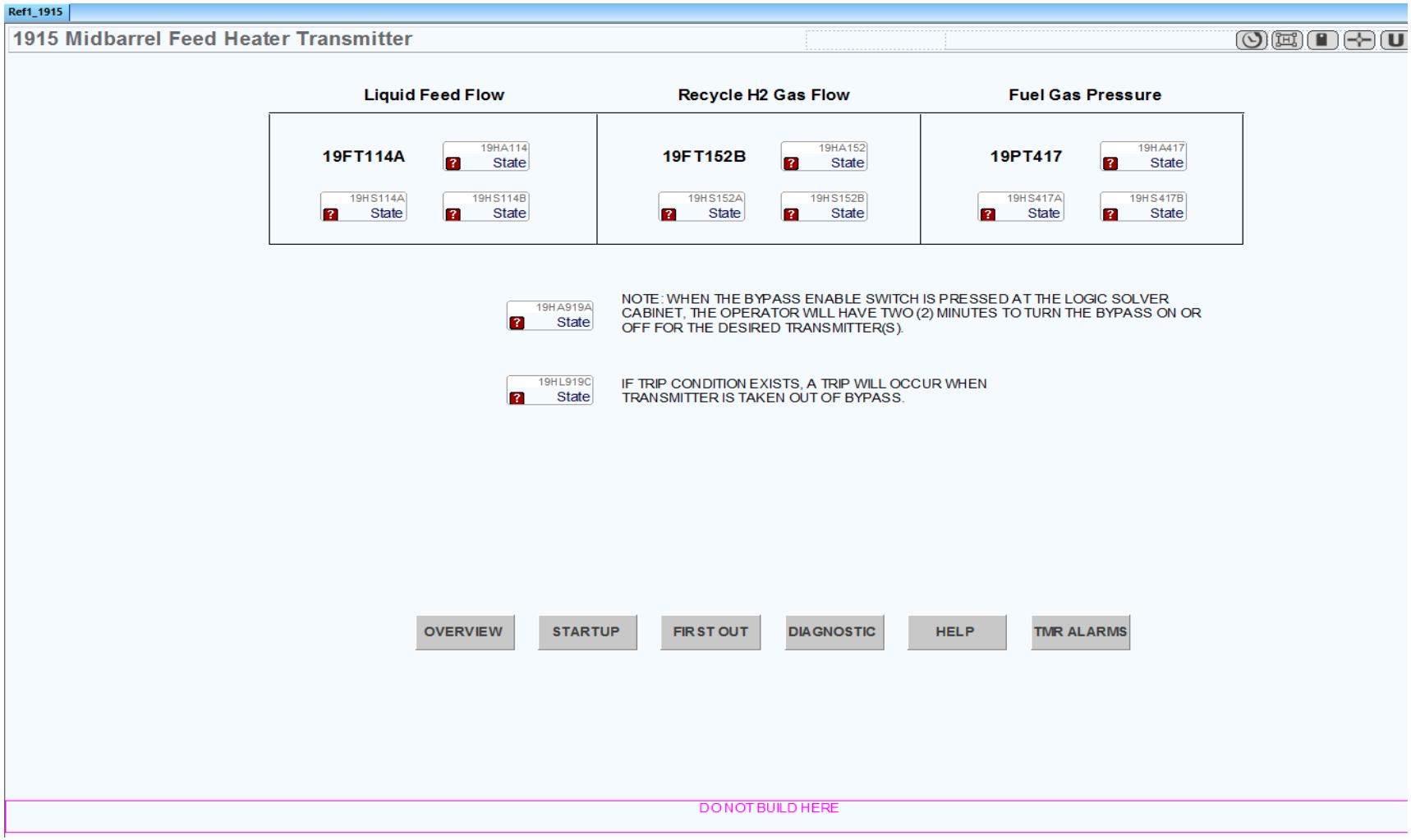


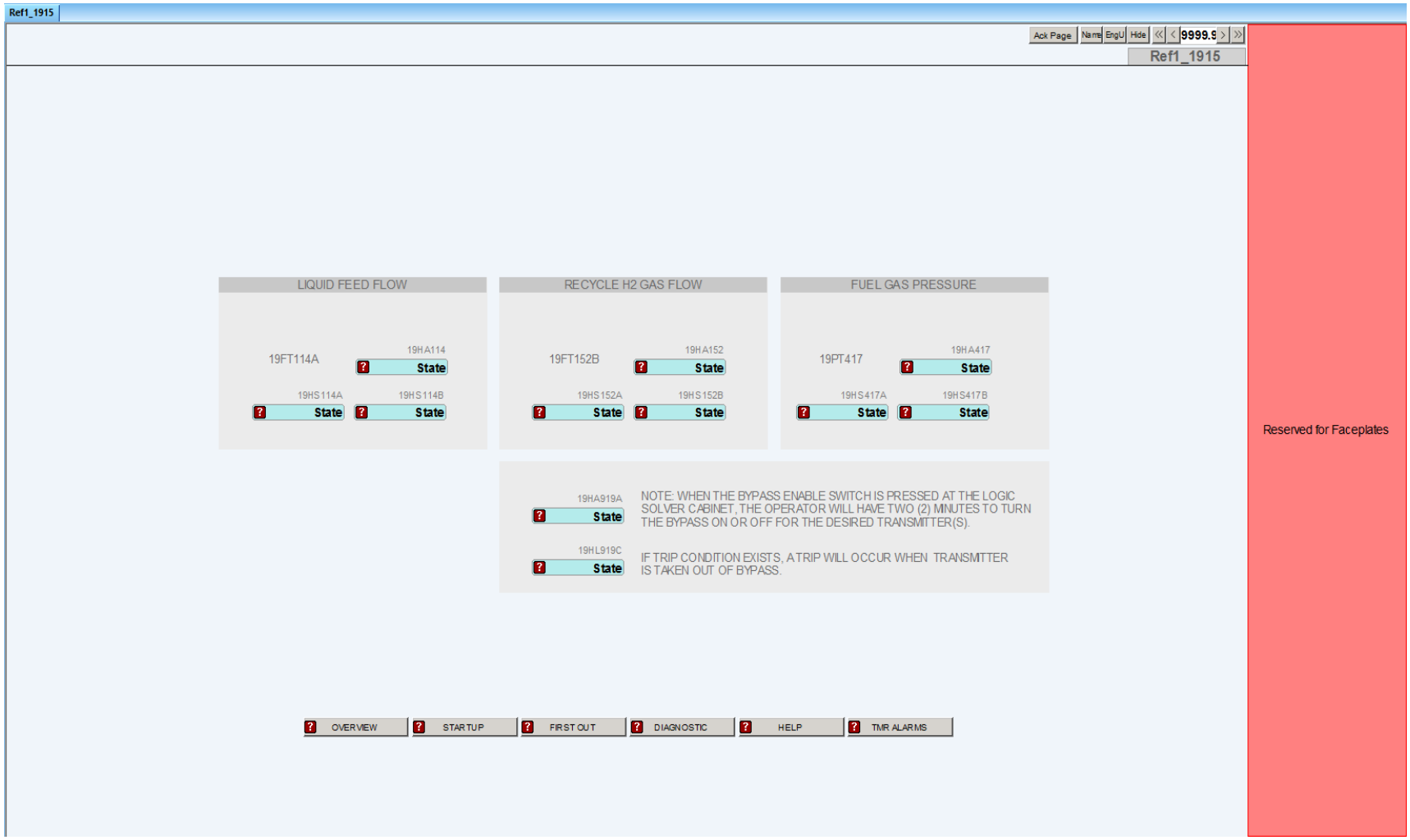

Ref1_1914
1914 Midbarrel Feed Heater Diagnostics
19XL114T State
LIQUID FEED FLOW XMTR TROUBLE
19FA3114 State
LIQUID FEED FLOW XMTR DEVIATION
19XL152T State
RECYCLE H2 GAS FLOW XMTR TRBL
19FA3152 State
RECYCLE H2 GAS FLOW XMTR DEV
19XL417T State
FUEL GAS PRESSURE XMTR TROUBLE
19PA3423 State
FUEL GAS PRESSURE XMTR DEV
19XL912T State
DCS MANUAL ESD SWITCH TROUBLE
19XL915T State
LOCAL MANUAL ESD SWITCH TROUBLE
NORTH AND SOUTH FEED PUMPS
19XL931C State
FAIL TO TRIP
19XA931 State
FAIL TO TRIP
FUEL GAS CHOPPER 1 19XV909
19ZL909C State
POSITION TROUBLE
19XL909A State
SOV TROUBLE
19XL909B State
SOV FAIL TO TRIP
19XL909M State
FAIL TO CLOSE
19XA909 State
FAIL TO TRIP
FUEL GAS CHOPPER 2 19XV910
19ZL910C State
POSITION TROUBLE
19XL910A State
SOV TROUBLE
19XL910B State
SOV FAIL TO TRIP
19XL910M State
FAIL TO CLOSE
19XA910 State
FAIL TO TRIP
OVERVIEW
STARTUP
FIRST OUT
XMTR BYP
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1914
Ack Page
Name
EngU
Hide
9999.9
Ref1_1914
NORTH AND SOUTH FEED PUMPS
FUEL GAS CHOPPER 1 19XV909
FUEL GAS CHOPPER 2 19XV910
19XL114T
State
LIQUID FEED FLOW XMTR TROUBLE
19FA3114
State
LIQUID FEED FLOW XMTR DEVIATION
19XL152T
State
RECYCLE H2 GAS FLOW XMTR TRBL
19FA3152
State
RECYCLE H2 GAS FLOW XMTR DEV
19XL417T
State
FUEL GAS PRESSURE XMTR TROUBLE
19PA3423
State
FUEL GAS PRESSURE XMTR DEV
19XL912T
State
DCS MANUAL ESD SWITCH TROUBLE
19XL915T
State
LOCAL MANUAL ESD SWITCH TROUBLE
19XL931C
State
FAIL TO TRIP
19XA931
State
FAIL TO TRIP
19ZL909C
State
POSITION TROUBLE
19XL909A
State
SOV TROUBLE
19XL909B
State
SOV FAIL TO TRIP
19XL909M
State
FAIL TO CLOSE
19XA909
State
FAIL TO TRIP
19ZL910C
State
POSITION TROUBLE
19XL910A
State
SOV TROUBLE
19XL910B
State
SOV FAIL TO TRIP
19XL910M
State
FAIL TO CLOSE
19XA910
State
FAIL TO TRIP
OVERVIEW
STARTUP
FIRST OUT
XMTR BYP
HELP
TMR ALARMS
Reserved for Faceplates

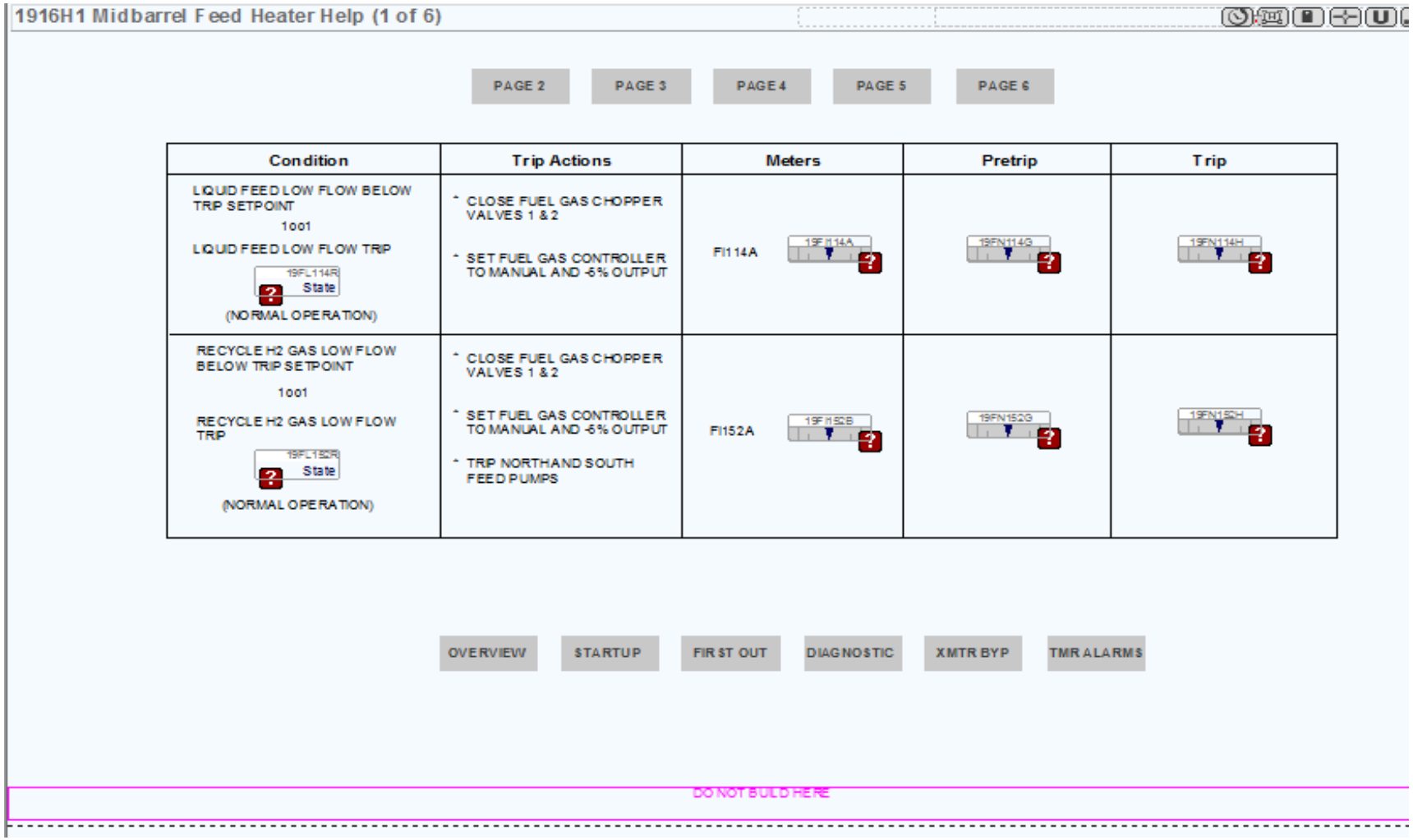
1.5 1915 MIDBARREL FEED HEATER TRANSMITTER (Ref1_1915.htm)

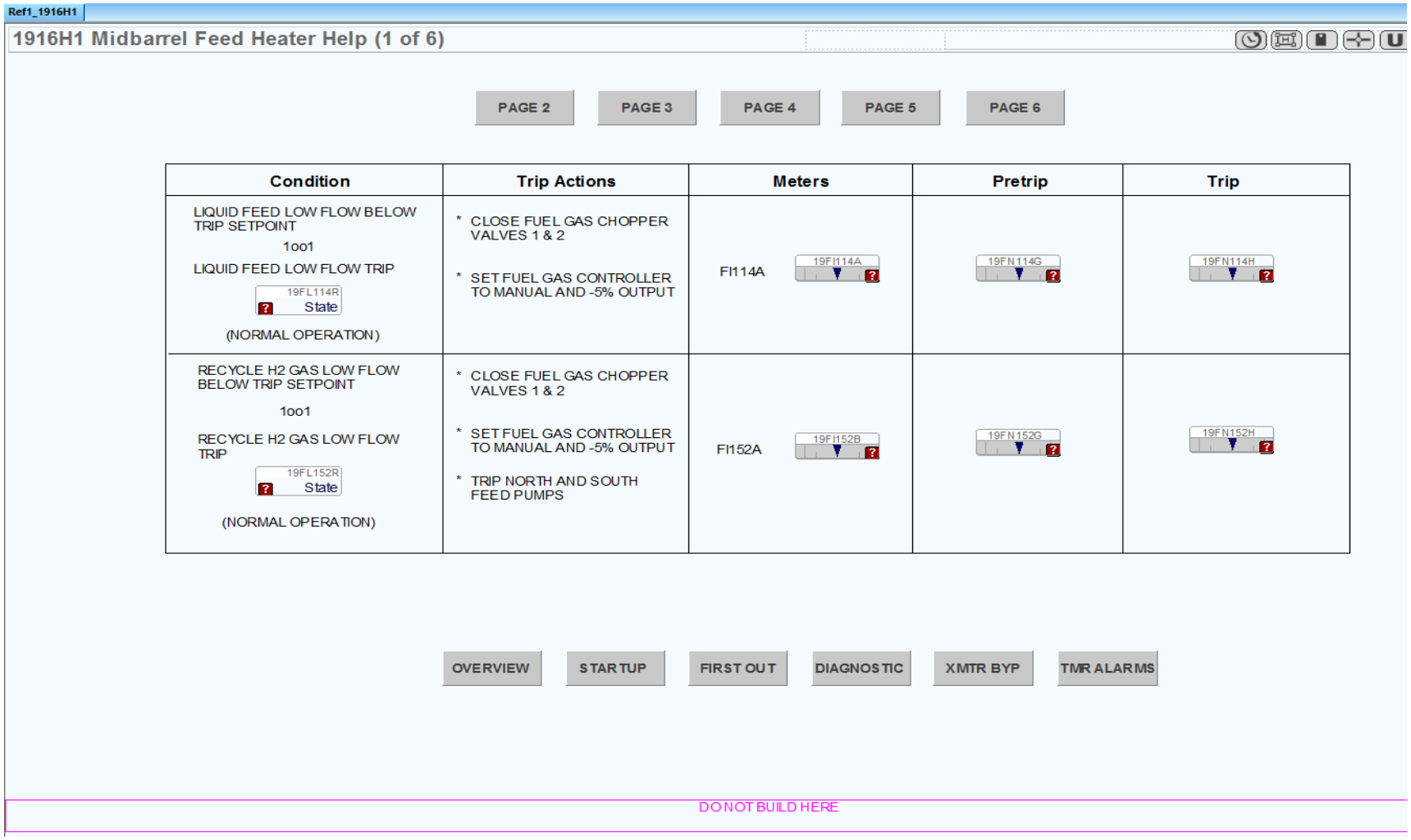


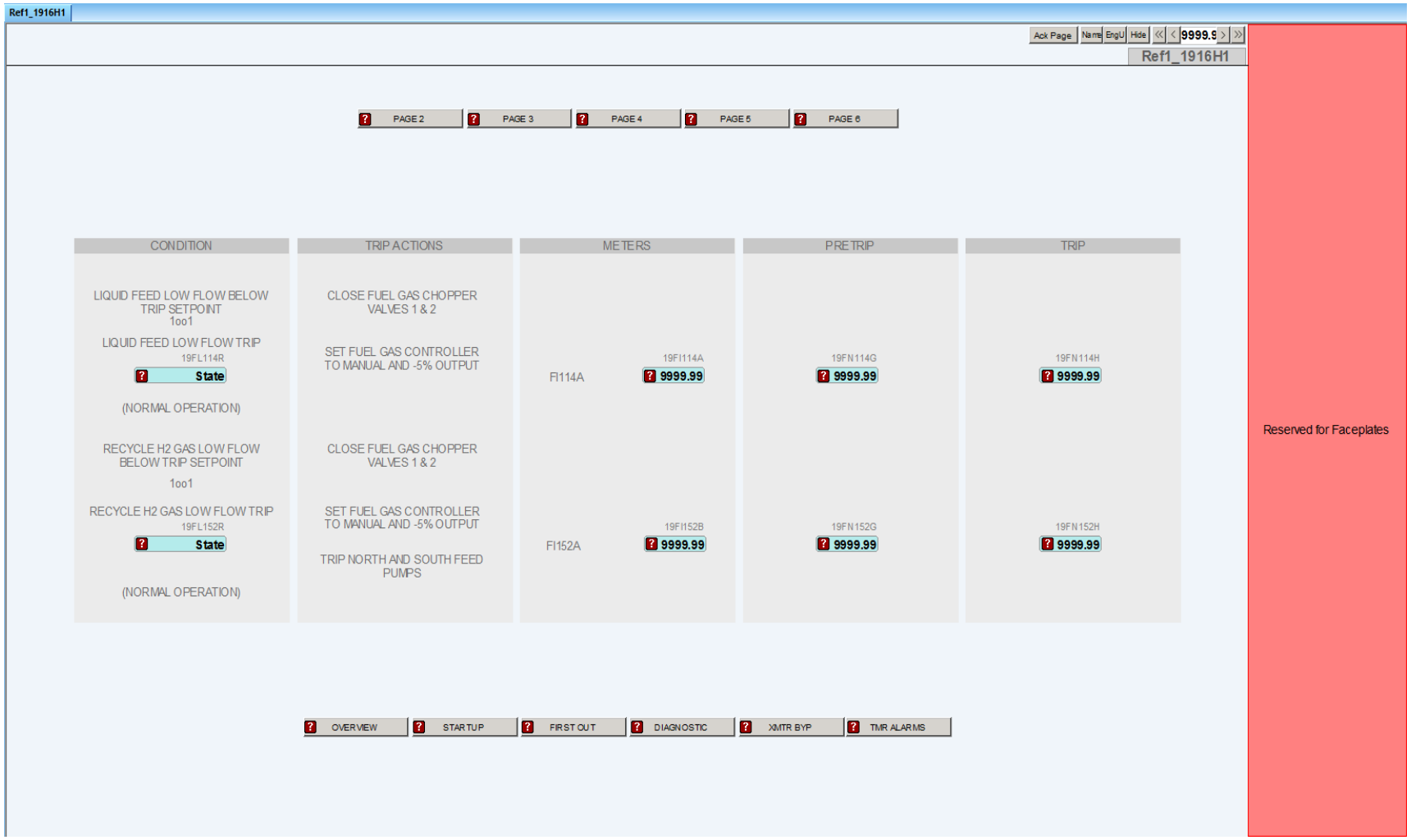

Ref1_1915
1915 Midbarrel Feed Heater Transmitter
Liquid Feed Flow
Recycle H2 Gas Flow
Fuel Gas Pressure
19FT114A
19HA114 State
19HS114A State
19HS114B State
19FT152B
19HA152 State
19HS152A State
19HS152B State
19PT417
19HA417 State
19HS417A State
19HS417B State
19HA919A State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
19HL919C State
IF TRIP CONDITION EXISTS, A TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1915
Ack Page
Name
EngU
Hide
9999.9
Ref1_1915
LIQUID FEED FLOW
19FT114A
19HA114
State
19HS114A
State
19HS114B
State
RECYCLE H2 GAS FLOW
19FT152B
19HA152
State
19HS152A
State
19HS152B
State
FUEL GAS PRESSURE
19PT417
19HA417
State
19HS417A
State
19HS417B
State
19HA919A
State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
19HL919C
State
IF TRIP CONDITION EXISTS, A TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
HELP
TMR ALARMS
Reserved for Faceplates

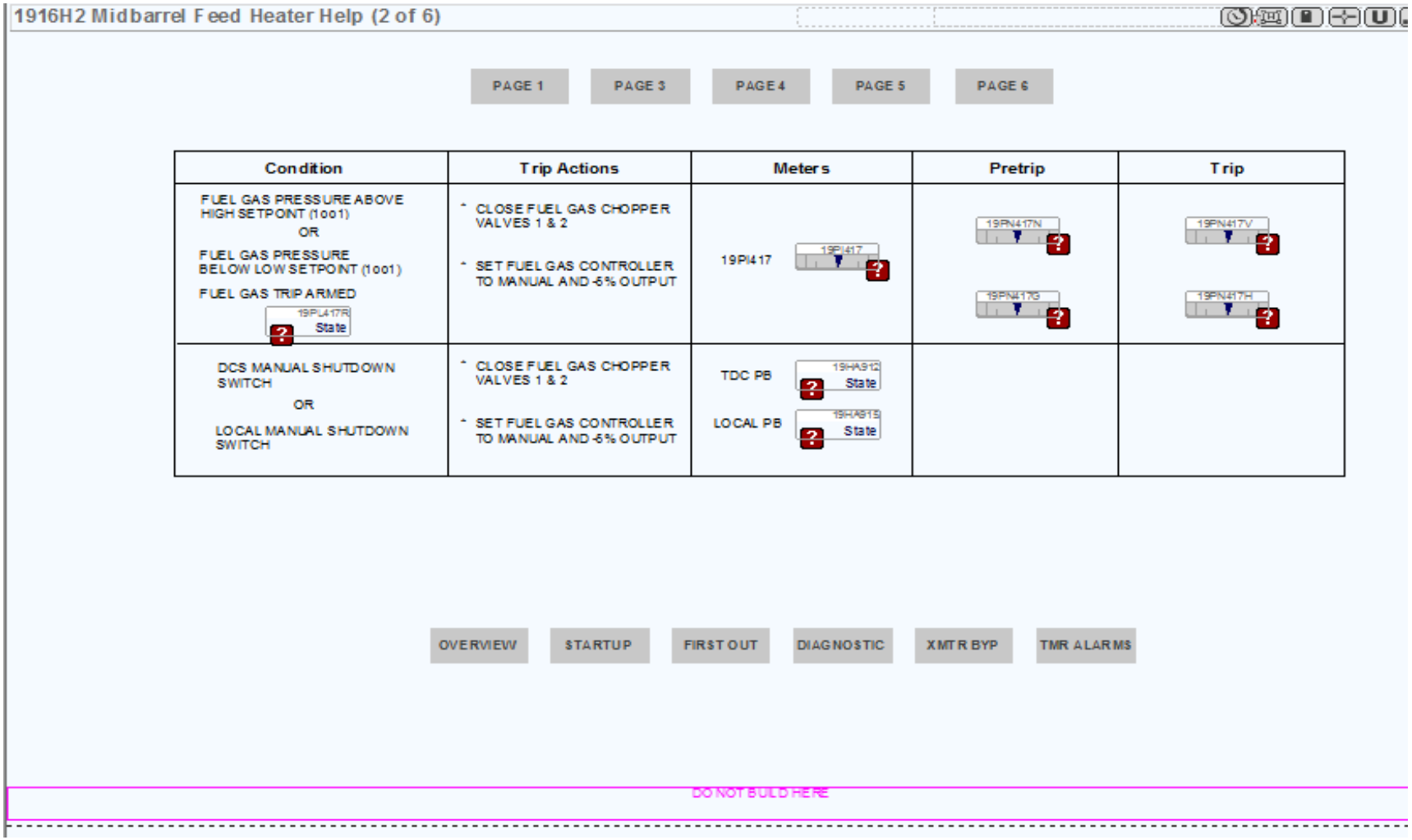
1.6 1916H1 MIDBARREL FEED HEATER HELP (1 TO 6) (Ref1_1916H1.htm)

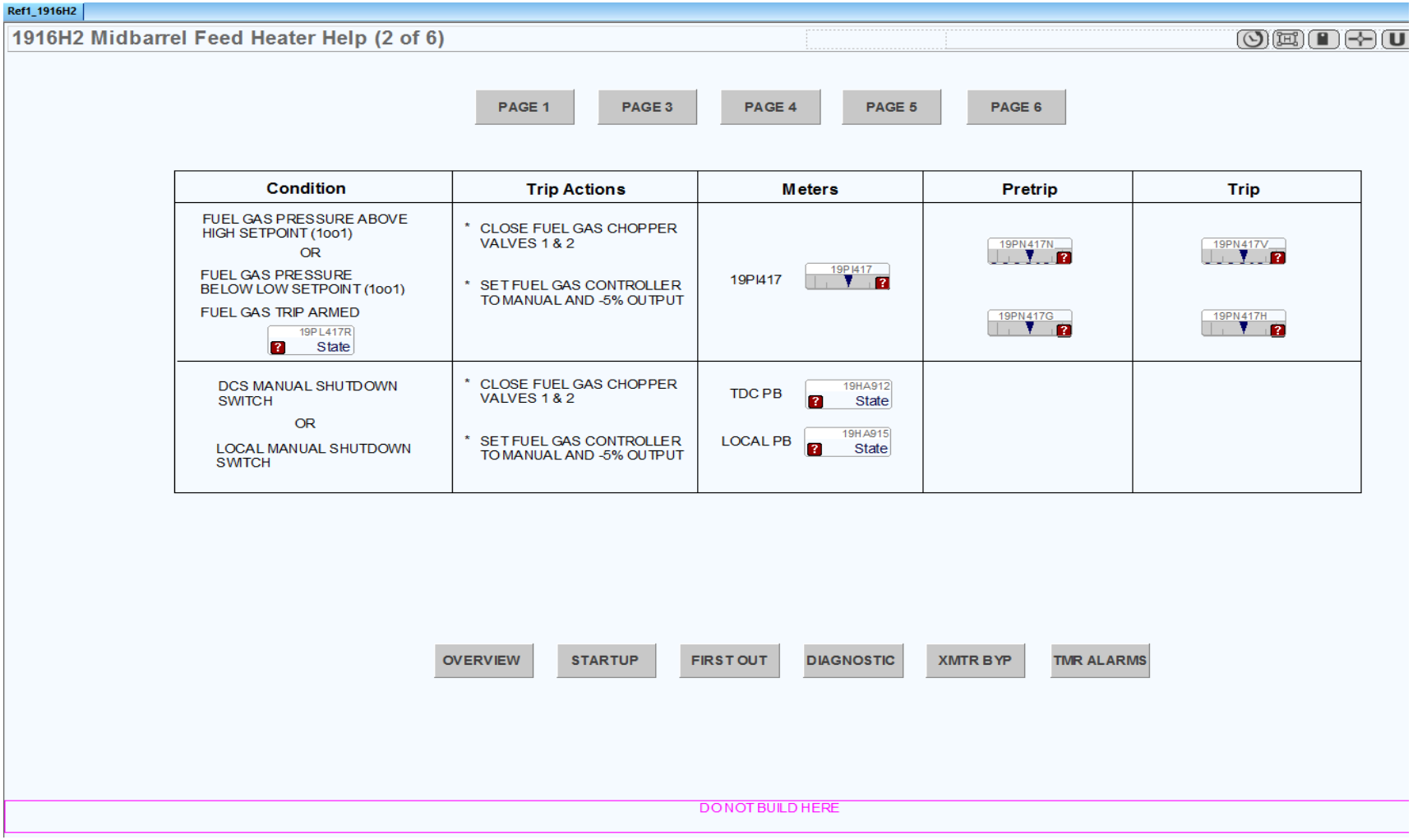



Ref1_1916H1
1916H1 Midbarrel Feed Heater Help (1 of 6)
PAGE 2
PAGE 3
PAGE 4
PAGE 5
PAGE 6
Condition
Trip Actions
Meters
Pretrip
Trip
LIQUID FEED LOW FLOW BELOW TRIP SETPOINT
1oo1
LIQUID FEED LOW FLOW TRIP
19FL114R
State
(NORMAL OPERATION)
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
FI114A
19FI114A
19FN114G
19FN114H
RECYCLE H2 GAS LOW FLOW BELOW TRIP SETPOINT
1oo1
RECYCLE H2 GAS LOW FLOW TRIP
19FL152R
State
(NORMAL OPERATION)
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
* TRIP NORTH AND SOUTH FEED PUMPS
FI152A
19FI152B
19FN152G
19FN152H
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1916H1
Ack Page
Name
EngU
Hide
9999.9
Ref1_1916H1
PAGE 2
PAGE 3
PAGE 4
PAGE 5
PAGE 6
CONDITION
TRIP ACTIONS
METERS
PRETRIP
TRIP
LIQUID FEED LOW FLOW BELOW TRIP SETPOINT
1oo1
LIQUID FEED LOW FLOW TRIP
19FL114R
State
(NORMAL OPERATION)
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
FI114A
19FI114A
9999.99
19FN114G
9999.99
19FN114H
9999.99
RECYCLE H2 GAS LOW FLOW BELOW TRIP SETPOINT
1oo1
RECYCLE H2 GAS LOW FLOW TRIP
19FL152R
State
(NORMAL OPERATION)
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
TRIP NORTH AND SOUTH FEED PUMPS
FI152A
19FI152B
9999.99
19FN152G
9999.99
19FN152H
9999.99
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
Reserved for Faceplates

1.7 1916H2 MIDBARREL FEED HEATER HELP (2 TO 6) (Ref1_1916H2.htm)




Ref1_1916H2
1916H2 Midbarrel Feed Heater Help (2 of 6)
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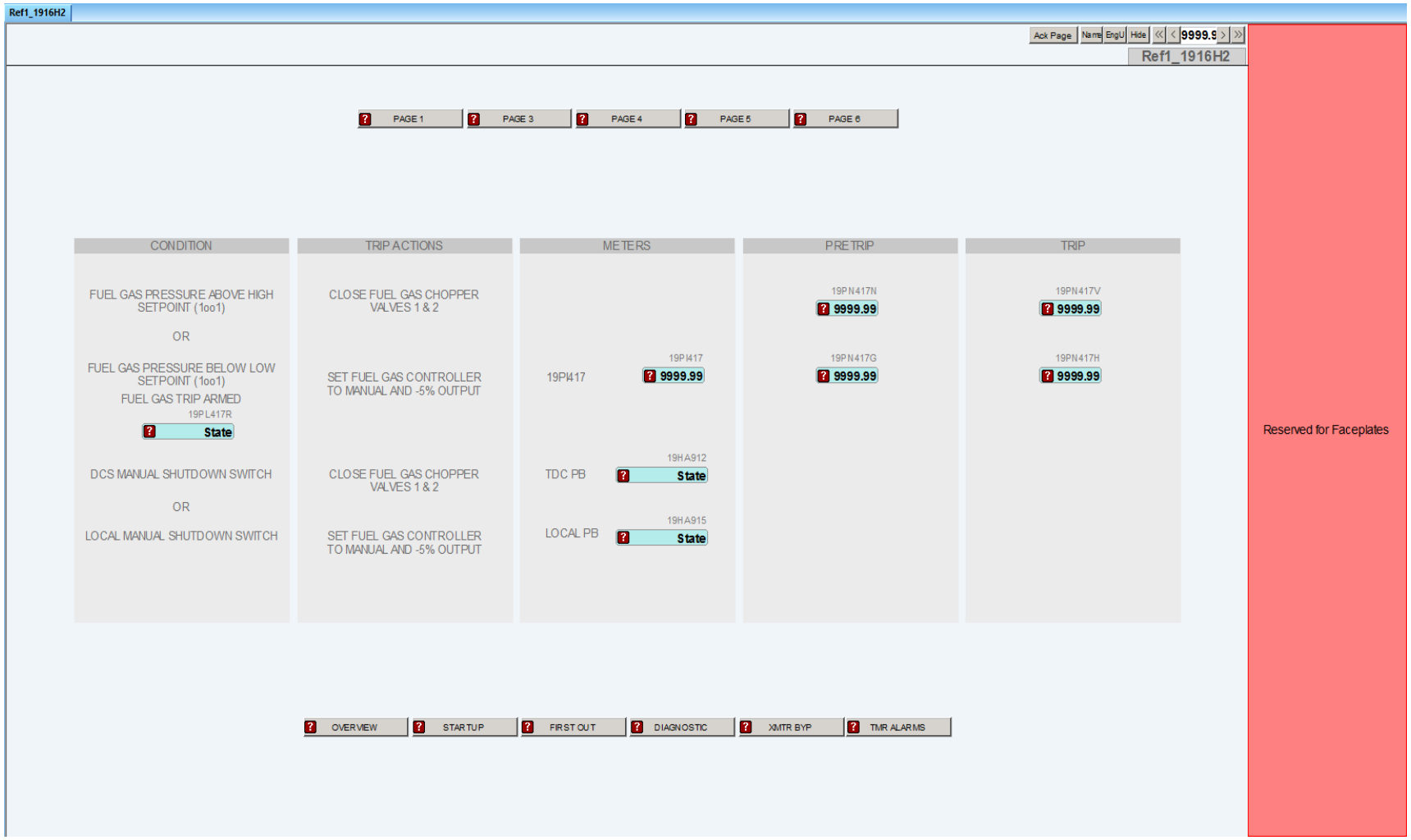
Condition
Trip Actions
Meters
Pretrip
Trip
FUEL GAS PRESSURE ABOVE HIGH SETPOINT (1oo1)
OR
FUEL GAS PRESSURE BELOW LOW SETPOINT (1oo1)
FUEL GAS TRIP ARMED
19PL417R State
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19PI417
19PI417
19PN417N
19PN417G
19PN417V
19PN417H
DCS MANUAL SHUTDOWN SWITCH
OR
LOCAL MANUAL SHUTDOWN SWITCH
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
TDC PB
19HA912 State
LOCAL PB
19HA915 State
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE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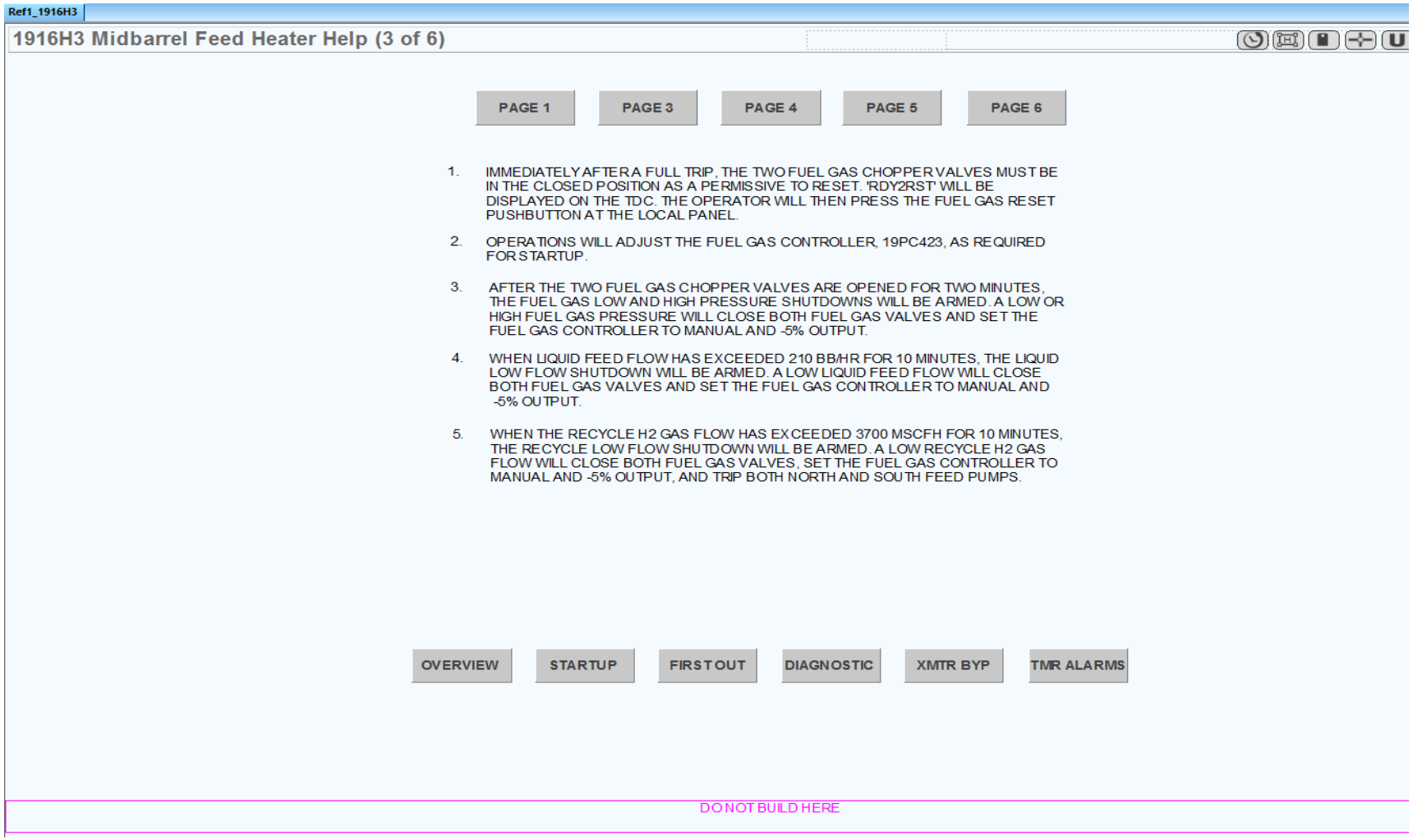
CONDITION
TRIP ACTIONS
METERS
PRETRIP
TRIP
FUEL GAS PRESSURE ABOVE HIGH SETPOINT (1oo1)
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
19PN417N
9999.99
19PN417V
9999.99
OR
FUEL GAS PRESSURE BELOW LOW SETPOINT (1oo1)
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19PI417
9999.99
19PN417G
9999.99
19PN417H
9999.99
FUEL GAS TRIP ARMED
19PL417R
State
DCS MANUAL SHUTDOWN SWITCH
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
TDC PB
19HA912
State
OR
LOCAL MANUAL SHUTDOWN SWITCH
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
LOCAL PB
19HA915
State
Reserved for Faceplates
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS

1.8 1916H3 MIDBARREL FEED HEATER HELP (3 TO 6) (Ref1_1916H3.htm)


Ref1_1916H3
1916H3 Midbarrel Feed Heater Help (3 of 6)
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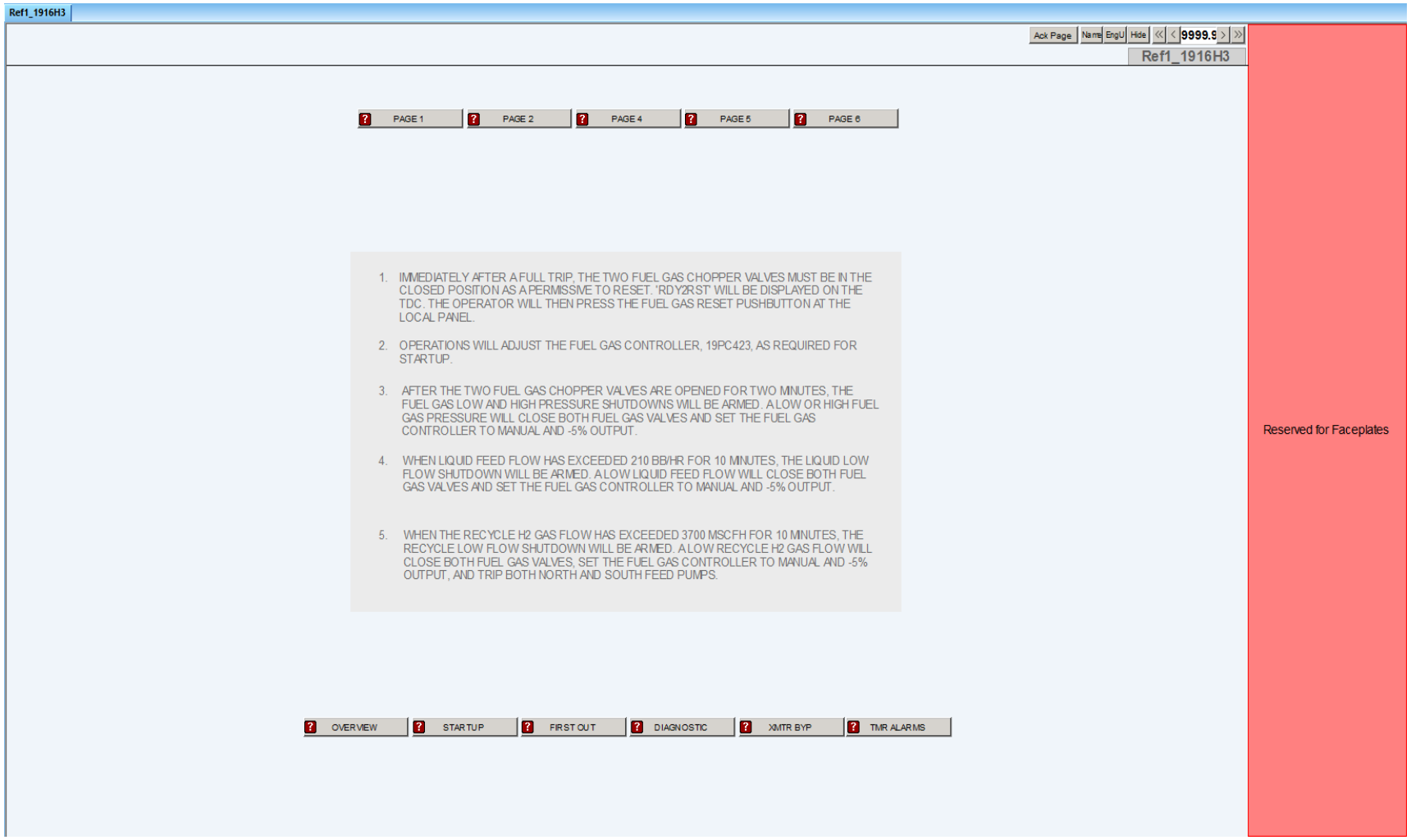
1. IMMEDIATELY AFTER A FULL TRIP, THE TWO FUEL GAS CHOPPER VALVES MUST BE IN THE CLOSED POSITION AS A PERMISSIVE TO RESET. 'RDY2RST' WILL BE DISPLAYED ON THE TDC. THE OPERATOR WILL THEN PRESS THE FUEL GAS RESET PUSHBUTTON AT THE LOCAL PANEL.
2. OPERATIONS WILL ADJUST THE FUEL GAS CONTROLLER, 19PC423, AS REQUIRED FOR STARTUP.
3. AFTER THE TWO FUEL GAS CHOPPER VALVES ARE OPENED FOR TWO MINUTES, THE FUEL GAS LOW AND HIGH PRESSURE SHUTDOWNS WILL BE ARMED. A LOW OR HIGH FUEL GAS PRESSURE WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT.
4. WHEN LIQUID FEED FLOW HAS EXCEEDED 210 BB/HR FOR 10 MINUTES, THE LIQUID LOW FLOW SHUTDOWN WILL BE ARMED. A LOW LIQUID FEED FLOW WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT.
5. WHEN THE RECYCLE H2 GAS FLOW HAS EXCEEDED 3700 MSCFH FOR 10 MINUTES, THE RECYCLE LOW FLOW SHUTDOWN WILL BE ARMED. A LOW RECYCLE H2 GAS FLOW WILL CLOSE BOTH FUEL GAS VALVES, SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT, AND TRIP BOTH NORTH AND SOUTH FEED PUMPS.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE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Ref1_1916H3
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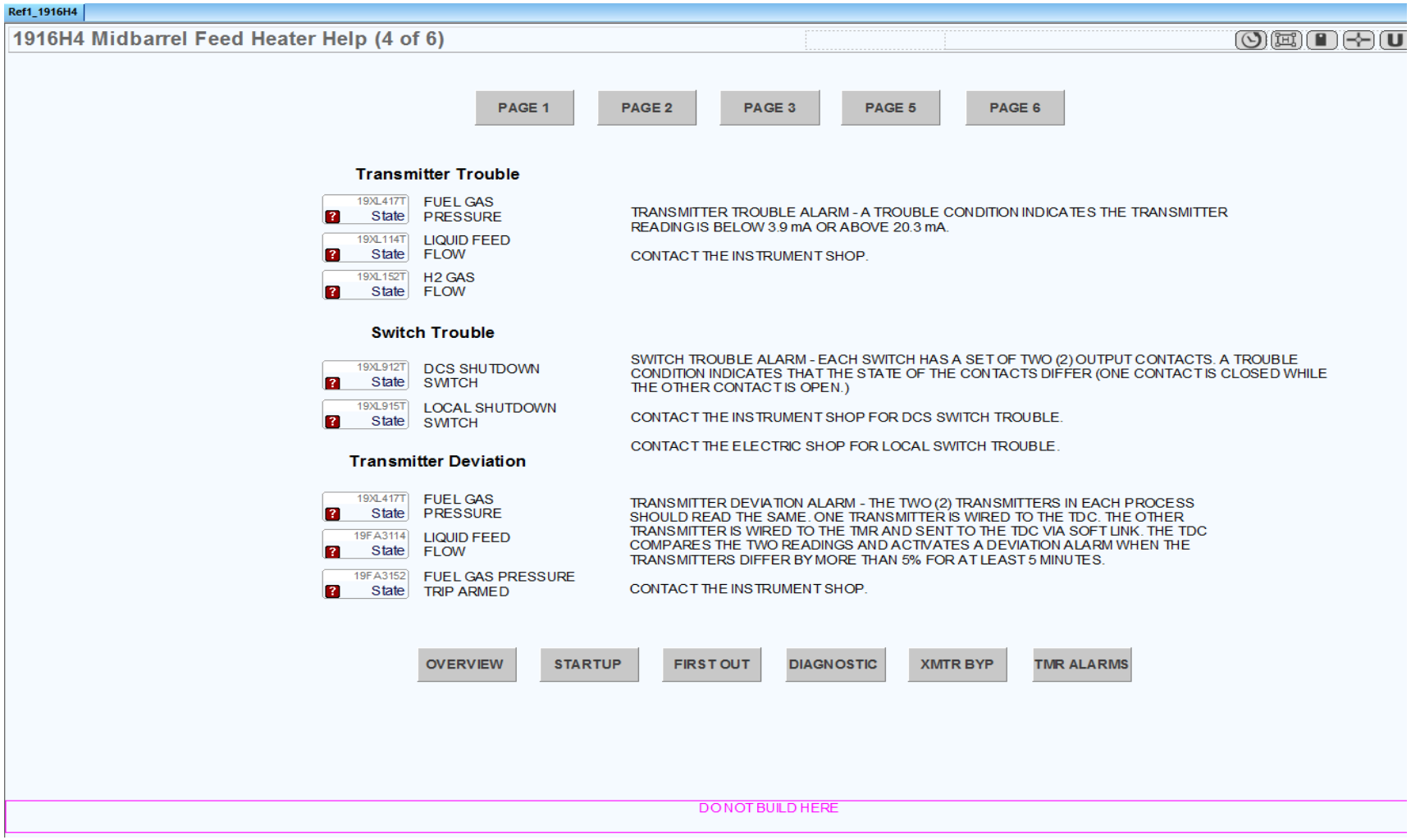
1. IMMEDIATELY AFTER A FULL TRIP, THE TWO FUEL GAS CHOPPER VALVES MUST BE IN THE CLOSED POSITION AS A PERMISSIVE TO RESET. 'RDY2RST' WILL BE DISPLAYED ON THE TDC. THE OPERATOR WILL THEN PRESS THE FUEL GAS RESET PUSHBUTTON AT THE LOCAL PANEL.
2. OPERATIONS WILL ADJUST THE FUEL GAS CONTROLLER, 19PC423, AS REQUIRED FOR STARTUP.
3. AFTER THE TWO FUEL GAS CHOPPER VALVES ARE OPENED FOR TWO MINUTES, THE FUEL GAS LOW AND HIGH PRESSURE SHUTDOWNS WILL BE ARMED. A LOW OR HIGH FUEL GAS PRESSURE WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT.
4. WHEN LIQUID FEED FLOW HAS EXCEEDED 210 BB/HR FOR 10 MINUTES, THE LIQUID LOW FLOW SHUTDOWN WILL BE ARMED. A LOW LIQUID FEED FLOW WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT.
5. WHEN THE RECYCLE H2 GAS FLOW HAS EXCEEDED 3700 MSCFH FOR 10 MINUTES, THE RECYCLE LOW FLOW SHUTDOWN WILL BE ARMED. A LOW RECYCLE H2 GAS FLOW WILL CLOSE BOTH FUEL GAS VALVES, SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT, AND TRIP BOTH NORTH AND SOUTH FEED PUMPS.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
Reserved for Faceplates

1.9 1916H4 MIDBARREL FEED HEATER HELP (4 TO 6) (Ref1_1916H4.htm)


Ref1_1916H4
1916H4 Midbarrel Feed Heater Help (4 of 6)
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Transmitter Trouble
19XL417T State
FUEL GAS PRESSURE
19XL114T State
LIQUID FEED FLOW
19XL152T State
H2 GAS FLOW
TRANSMITTER TROUBLE ALARM - A TROUBLE CONDITION INDICATES THE TRANSMITTER READING IS BELOW 3.9 mA OR ABOVE 20.3 mA.
CONTACT THE INSTRUMENT SHOP.
Switch Trouble
19XL912T State
DCS SHUTDOWN SWITCH
19XL915T State
LOCAL SHUTDOWN SWITCH
SWITCH TROUBLE ALARM - EACH SWITCH HAS A SET OF TWO (2) OUTPUT CONTACTS. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE CONTACTS DIFFER (ONE CONTACT IS CLOSED WHILE THE OTHER CONTACT IS OPEN.)
CONTACT THE INSTRUMENT SHOP FOR DCS SWITCH TROUBLE.
CONTACT THE ELECTRIC SHOP FOR LOCAL SWITCH TROUBLE.
Transmitter Deviation
19XL417T State
FUEL GAS PRESSURE
19FA3114 State
LIQUID FEED FLOW
19FA3152 State
FUEL GAS PRESSURE TRIP ARMED
TRANSMITTER DEVIATION ALARM - THE TWO (2) TRANSMITTERS IN EACH PROCESS SHOULD READ THE SAME. ONE TRANSMITTER IS WIRED TO THE TDC. THE OTHER TRANSMITTER IS WIRED TO THE TMR AND SENT TO THE TDC VIA SOFT LINK. THE TDC COMPARES THE TWO READINGS AND ACTIVATES A DEVIATION ALARM WHEN THE TRANSMITTERS DIFFER BY MORE THAN 5% FOR AT LEAST 5 MINUTES.
CONTACT THE INSTRUMENT SHOP.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE

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TRANSMITTER TROUBLE
19XL417T
State
FUEL GAS PRESSURE
TRANSMITTER TROUBLE ALARM - A TROUBLE CONDITION INDICATES THE TRANSMITTER READING IS BELOW 3.9 mA OR ABOVE 20.3 mA
19XL114T
State
LIQUID FEED FLOW
CONTACT THE INSTRUMENT SHOP.
19XL152T
State
H2 GAS FLOW
SWITCH TROUBLE
19XL912T
State
DCS SHUTDOWN SWITCH
SWITCH TROUBLE ALARM - EACH SWITCH HAS A SET OF TWO (2) OUTPUT CONTACTS. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE CONTACTS DIFFER (ONE CONTACT IS CLOSED WHILE THE OTHER CONTACT IS OPEN.)
19XL915T
State
LOCAL SHUTDOWN
CONTACT THE INSTRUMENT SHOP FOR DCS SWITCH TROUBLE.
TRANSMITTER DEVIATION
19XL417T
State
FUEL GAS PRESSURE
TRANSMITTER DEVIATION ALARM - THE TWO (2) TRANSMITTERS IN EACH PROCESS SHOULD READ THE SAME. ONE TRANSMITTER IS WIRED TO THE TDC. THE OTHER TRANSMITTER IS WIRED TO THE TMR AND SENT TO THE TDC VIA SOFT LINK. THE TDC COMPARES THE TWO READINGS AND ACTIVATES A DEVIATION ALARM WHEN THE TRANSMITTERS DIFFER BY MORE THAN 5% FOR AT LEAST 5 MINUTES.
19FA3114
State
LIQUID FEED FLOW
19FA3152
State
FUEL GAS PRESSURE TRIP ARMED
CONTACT THE INSTRUMENT SHOP.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
Reserved for Faceplates

1.10 1916H5 MIDBARREL FEED HEATER HELP (5 TO 6) (Ref1_1916H5.htm)

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1916H5 Midbarrel Feed Heater Help (5 of 6)
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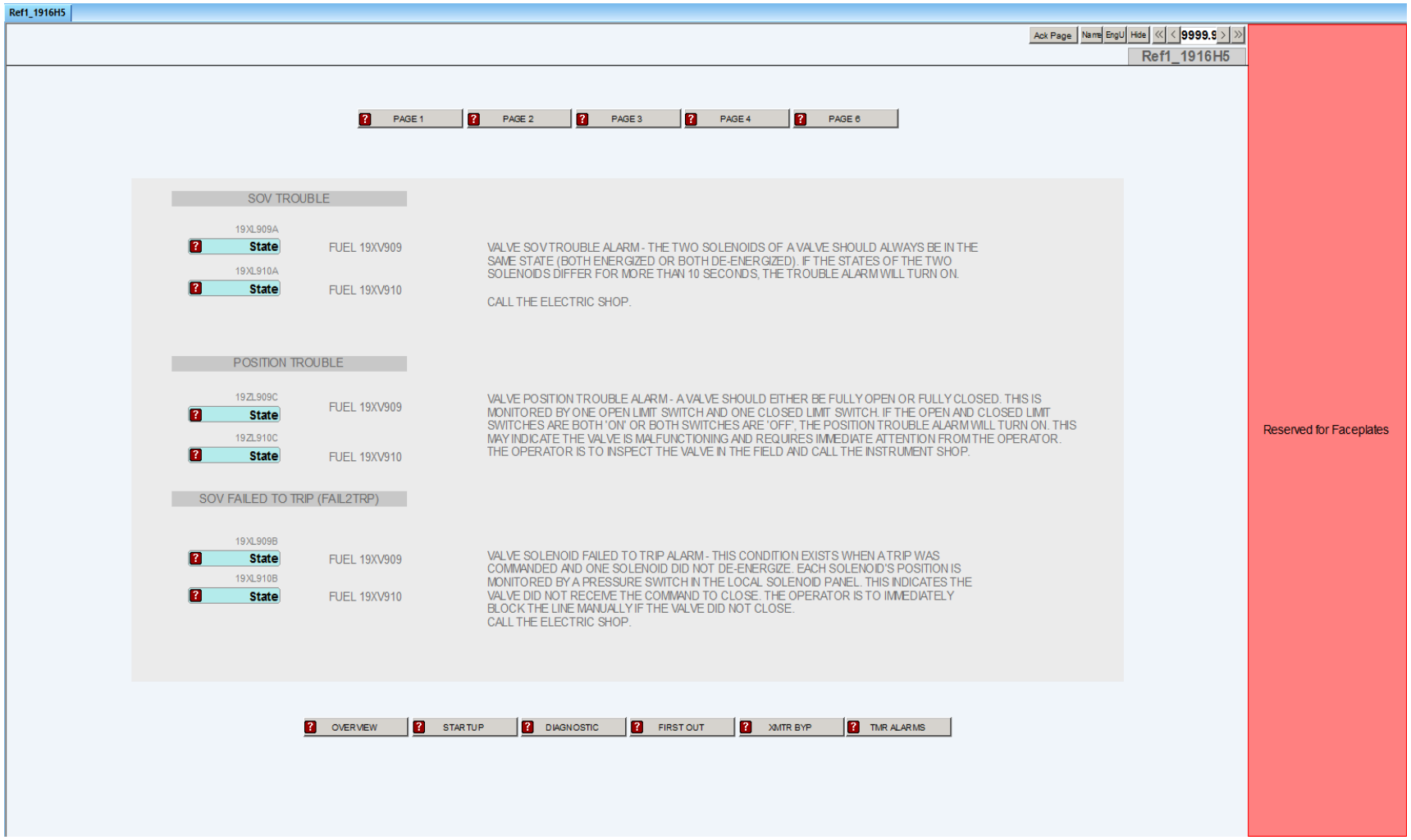
SOV Trouble
19XL909A State FUEL 19XV909
19XL910A State FUEL 19XV910
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
Position Trouble
19ZL909C State FUEL 19XV909
19ZL910C State FUEL 19XV910
VALVE POSITION TROUBLE ALARM - A VALVE SHOULD EITHER BE FULLY OPEN OR FULLY CLOSED. THIS IS MONITORED BY ONE OPEN LIMIT SWITCH AND ONE CLOSED LIMIT SWITCH. IF THE OPEN AND CLOSED LIMIT SWITCHES ARE BOTH 'ON' OR BOTH SWITCHES ARE 'OFF', THE POSITION TROUBLE ALARM WILL TURN ON. THIS MAY INDICATE THE VALVE IS MALFUNCTIONING AND REQUIRES IMMEDIATE ATTENTION FROM THE OPERATOR. THE OPERATOR IS TO INSPECT THE VALVE IN THE FIELD AND CALL THE INSTRUMENT SHOP.
SOV Failed To Trip (FAIL2TRP)
19XL909B State FUEL 19XV909
19XL910B State FUEL 19XV910
VALVE SOLENOID FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A TRIP WAS COMMANDED AND ONE SOLENOID DID NOT DE-ENERGIZE. EACH SOLENOID'S POSITION IS MONITORED BY A PRESSURE SWITCH IN THE LOCAL SOLENOID PANEL. THIS INDICATES THE VALVE DID NOT RECEIVE THE COMMAND TO CLOSE. THE OPERATOR IS TO IMMEDIATELY BLOCK THE LINE MANUALLY IF THE VALVE DID NOT CLOSE.
CALL THE ELECTRIC SHOP.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE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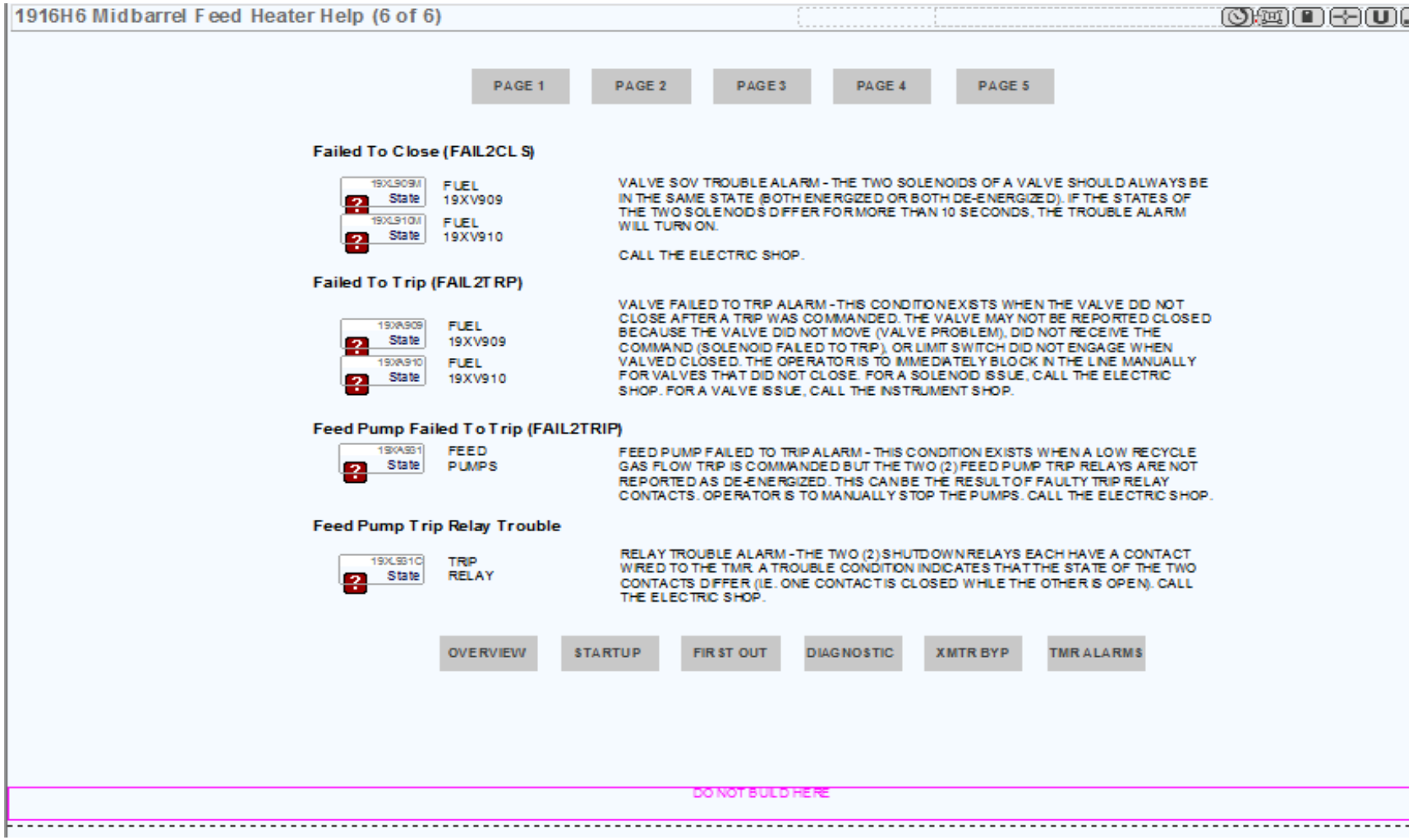
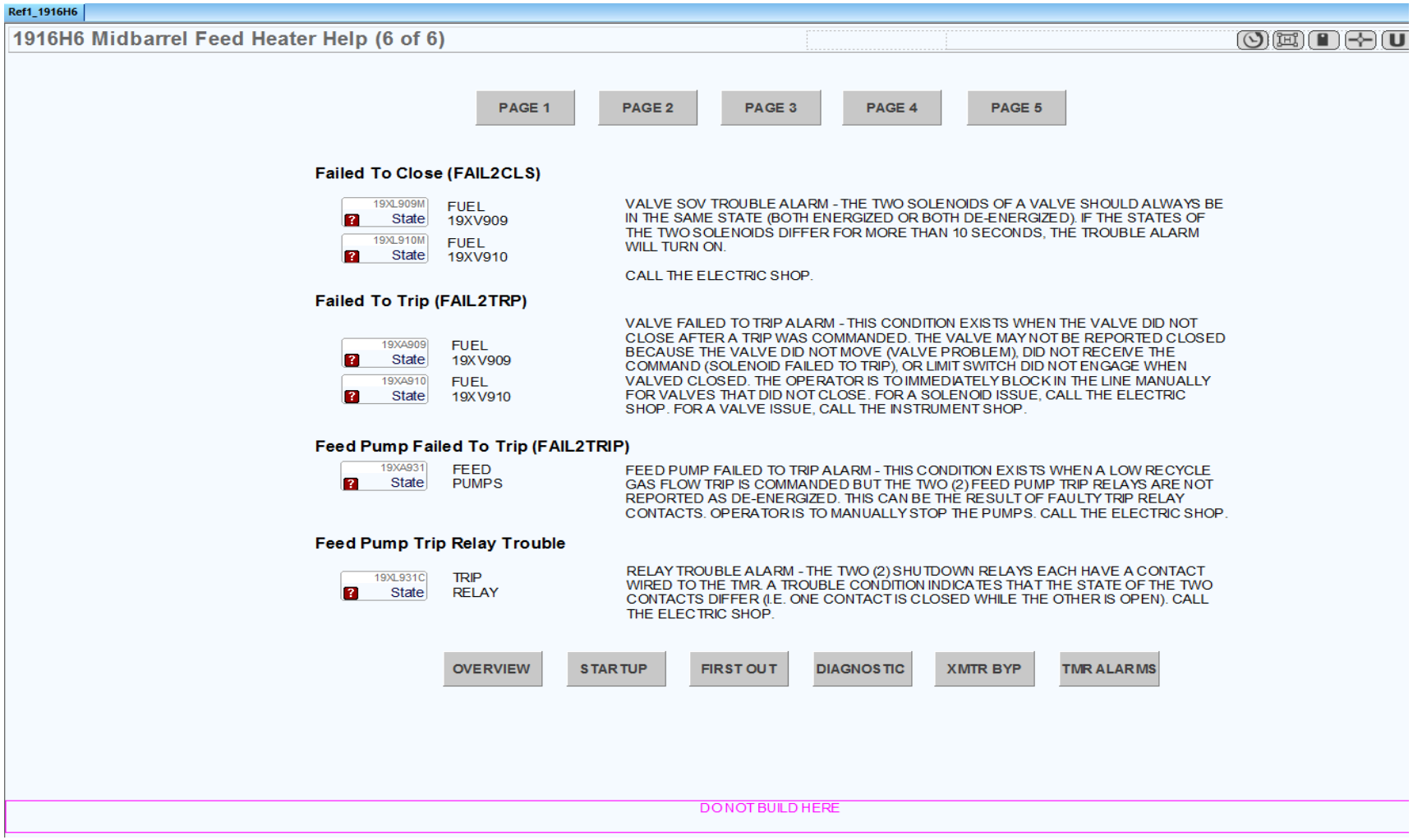
SOV TROUBLE
19XL909A
State
FUEL 19XV909
19XL910A
State
FUEL 19XV910
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
POSITION TROUBLE
19ZL909C
State
FUEL 19XV909
19ZL910C
State
FUEL 19XV910
VALVE POSITION TROUBLE ALARM - A VALVE SHOULD EITHER BE FULLY OPEN OR FULLY CLOSED. THIS IS MONITORED BY ONE OPEN LIMIT SWITCH AND ONE CLOSED LIMIT SWITCH. IF THE OPEN AND CLOSED LIMIT SWITCHES ARE BOTH 'ON' OR BOTH SWITCHES ARE 'OFF', THE POSITION TROUBLE ALARM WILL TURN ON. THIS MAY INDICATE THE VALVE IS MALFUNCTIONING AND REQUIRES IMMEDIATE ATTENTION FROM THE OPERATOR. THE OPERATOR IS TO INSPECT THE VALVE IN THE FIELD AND CALL THE INSTRUMENT SHOP.
SOV FAILED TO TRIP (FAIL2TRP)
19XL909B
State
FUEL 19XV909
19XL910B
State
FUEL 19XV910
VALVE SOLENOID FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A TRIP WAS COMMANDED AND ONE SOLENOID DID NOT DE-ENERGIZE. EACH SOLENOID'S POSITION IS MONITORED BY A PRESSURE SWITCH IN THE LOCAL SOLENOID PANEL. THIS INDICATES THE VALVE DID NOT RECEIVE THE COMMAND TO CLOSE. THE OPERATOR IS TO IMMEDIATELY BLOCK THE LINE MANUALLY IF THE VALVE DID NOT CLOSE.
CALL THE ELECTRIC SHOP.
OVERVIEW
STARTUP
DIAGNOSTIC
FIRST OUT
XMTR BYP
TMR ALARMS
Reserved for Faceplates

1.11 1916H6 MIDBARREL FEED HEATER HELP (6 TO 6) (Ref1_1916H6.htm)




Ref1_1916H6
1916H6 Midbarrel Feed Heater Help (6 of 6)
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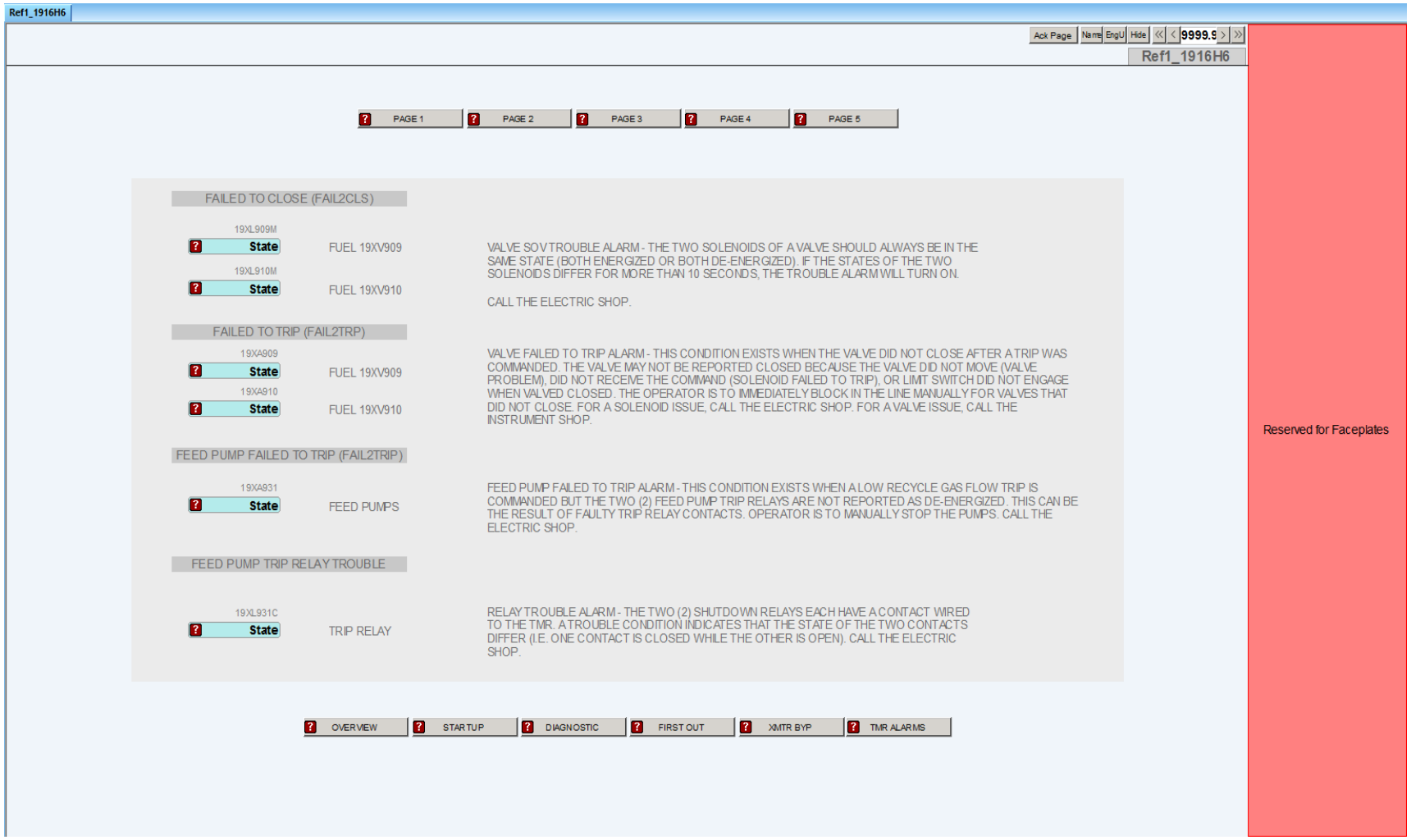
Failed To Close (FAIL2CLS)
19XL909M State
FUEL 19XV909
19XL910M State
FUEL 19XV910
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
Failed To Trip (FAIL2TRP)
19XA909 State
FUEL 19XV909
19XA910 State
FUEL 19XV910
VALVE FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN THE VALVE DID NOT CLOSE AFTER A TRIP WAS COMMANDED. THE VALVE MAY NOT BE REPORTED CLOSED BECAUSE THE VALVE DID NOT MOVE (VALVE PROBLEM), DID NOT RECEIVE THE COMMAND (SOLENOID FAILED TO TRIP), OR LIMIT SWITCH DID NOT ENGAGE WHEN VALVED CLOSED. THE OPERATOR IS TO IMMEDIATELY BLOCK IN THE LINE MANUALLY FOR VALVES THAT DID NOT CLOSE. FOR A SOLENOID ISSUE, CALL THE ELECTRIC SHOP. FOR A VALVE ISSUE, CALL THE INSTRUMENT SHOP.
Feed Pump Failed To Trip (FAIL2TRIP)
19XA931 State
FEED PUMPS
FEED PUMP FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A LOW RECYCLE GAS FLOW TRIP IS COMMANDED BUT THE TWO (2) FEED PUMP TRIP RELAYS ARE NOT REPORTED AS DE-ENERGIZED. THIS CAN BE THE RESULT OF FAULTY TRIP RELAY CONTACTS. OPERATOR IS TO MANUALLY STOP THE PUMPS. CALL THE ELECTRIC SHOP.
Feed Pump Trip Relay Trouble
19XL931C State
TRIP RELAY
RELAY TROUBLE ALARM - THE TWO (2) SHUTDOWN RELAYS EACH HAVE A CONTACT WIRED TO THE TMR. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE TWO CONTACTS DIFFER (I.E. ONE CONTACT IS CLOSED WHILE THE OTHER IS OPEN). CALL THE ELECTRIC SHOP.
OVERVIEW
START UP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE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Ref1_1916H6
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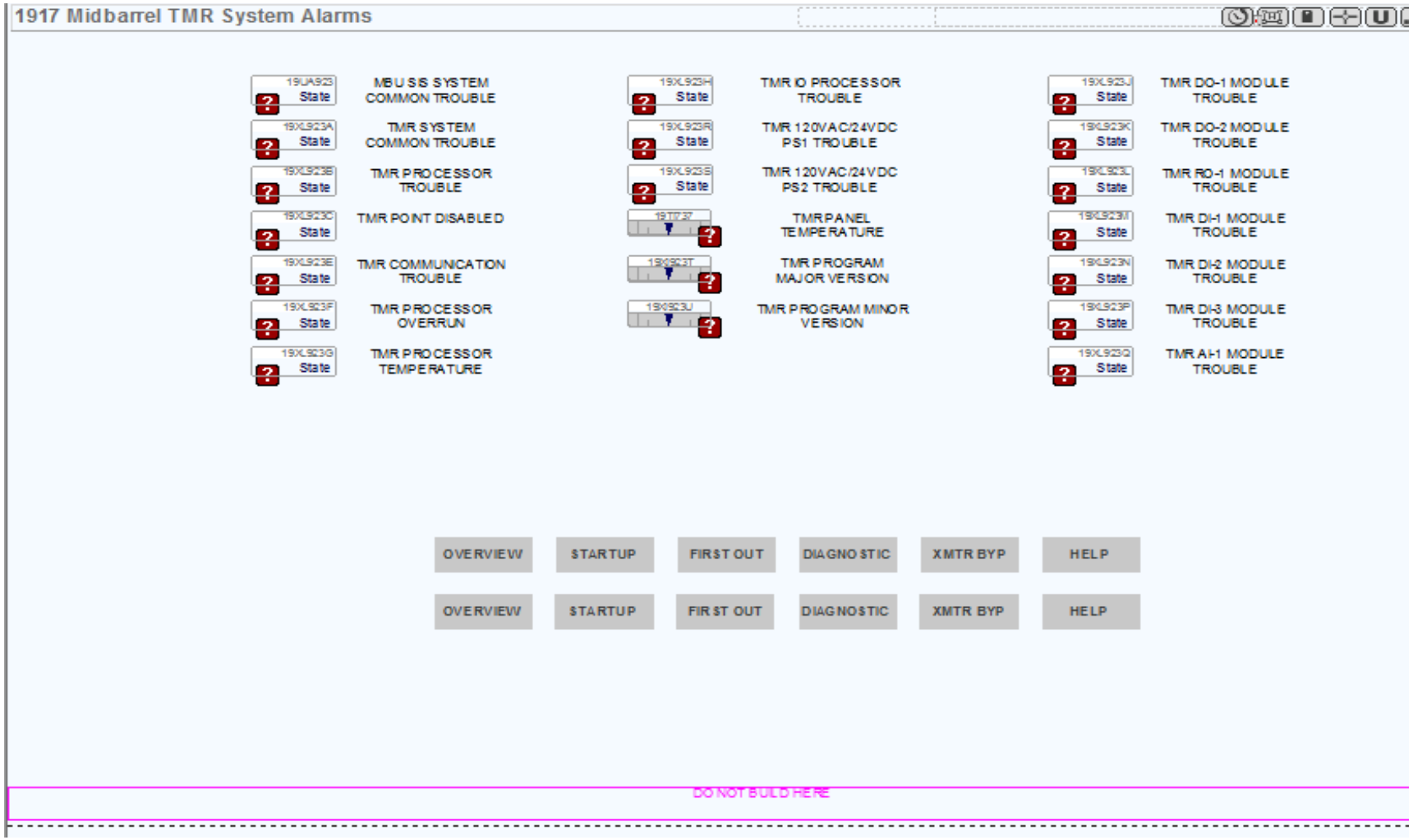
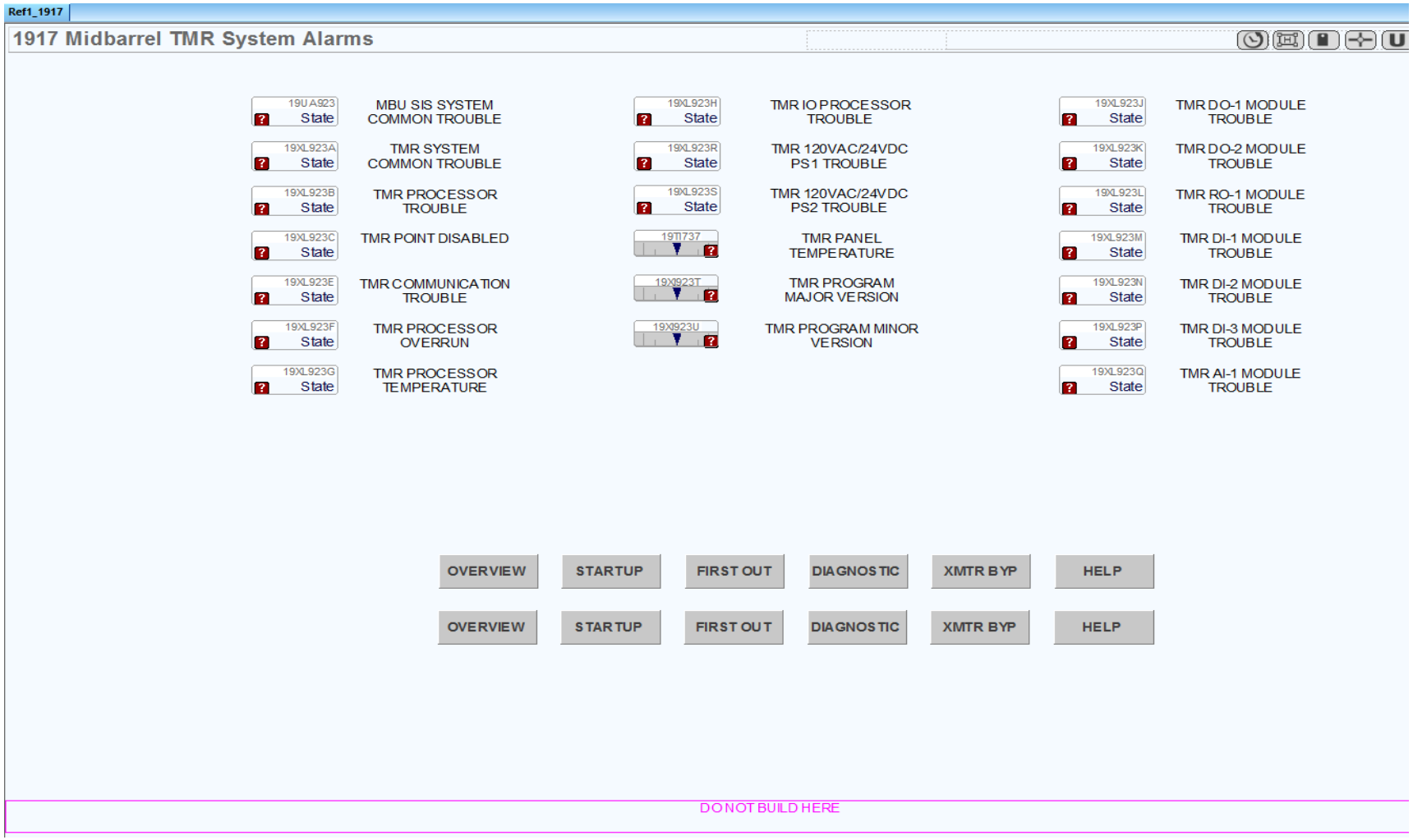
FAILED TO CLOSE (FAIL2CLS)
19XL909M
State
FUEL 19XV909
19XL910M
State
FUEL 19XV910
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
FAILED TO TRIP (FAIL2TRP)
19XA909
State
FUEL 19XV909
19XA910
State
FUEL 19XV910
VALVE FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN THE VALVE DID NOT CLOSE AFTER A TRIP WAS COMMANDED. THE VALVE MAY NOT BE REPORTED CLOSED BECAUSE THE VALVE DID NOT MOVE (VALVE PROBLEM), DID NOT RECEIVE THE COMMAND (SOLENOID FAILED TO TRIP), OR LIMIT SWITCH DID NOT ENGAGE WHEN VALVED CLOSED. THE OPERATOR IS TO IMMEDIATELY BLOCK IN THE LINE MANUALLY FOR VALVES THAT DID NOT CLOSE. FOR A SOLENOID ISSUE, CALL THE ELECTRIC SHOP. FOR A VALVE ISSUE, CALL THE INSTRUMENT SHOP.
FEED PUMP FAILED TO TRIP (FAIL2TRIP)
19XA931
State
FEED PUMPS
FEED PUMP FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A LOW RECYCLE GAS FLOW TRIP IS COMMANDED BUT THE TWO (2) FEED PUMP TRIP RELAYS ARE NOT REPORTED AS DE-ENERGIZED. THIS CAN BE THE RESULT OF FAULTY TRIP RELAY CONTACTS. OPERATOR IS TO MANUALLY STOP THE PUMPS. CALL THE ELECTRIC SHOP.
FEED PUMP TRIP RELAY TROUBLE
19XL931C
State
TRIP RELAY
RELAY TROUBLE ALARM - THE TWO (2) SHUTDOWN RELAYS EACH HAVE A CONTACT WIRED TO THE TMR. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE TWO CONTACTS DIFFER (I.E. ONE CONTACT IS CLOSED WHILE THE OTHER IS OPEN). CALL THE ELECTRIC SHOP.
OVERVIEW
STARTUP
DIAGNOSTIC
FIRST OUT
XMTR BYP
TMR ALARMS
Reserved for Faceplates

1.12 1917 MIDBARREL TWR SYSTEM ALARM (Ref1_1917.htm)

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1917 Midbarrel TMR System Alarms
19UA923 State
MBU SIS SYSTEM COMMON TROUBLE
19XL923A State
TMR SYSTEM COMMON TROUBLE
19XL923B State
TMR PROCESSOR TROUBLE
19XL923C State
TMR POINT DISABLED
19XL923E State
TMR COMMUNICATION TROUBLE
19XL923F State
TMR PROCESSOR OVERRUN
19XL923G State
TMR PROCESSOR TEMPERATURE
19XL923H State
TMR IO PROCESSOR TROUBLE
19XL923R State
TMR 120VAC/24VDC PS1 TROUBLE
19XL923S State
TMR 120VAC/24VDC PS2 TROUBLE
19TI737
TMR PANEL TEMPERATURE
19XI923T
TMR PROGRAM MAJOR VERSION
19XI923U
TMR PROGRAM MINOR VERSION
19XL923J State
TMR DO-1 MODULE TROUBLE
19XL923K State
TMR DO-2 MODULE TROUBLE
19XL923L State
TMR RO-1 MODULE TROUBLE
19XL923M State
TMR DI-1 MODULE TROUBLE
19XL923N State
TMR DI-2 MODULE TROUBLE
19XL923P State
TMR DI-3 MODULE TROUBLE
19XL923Q State
TMR AI-1 MODULE TROUBLE
OVERVIEW
STARTUP
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HELP
OVERVIEW
STARTUP
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DIAGNOSTIC
XMTR BYP
HELP
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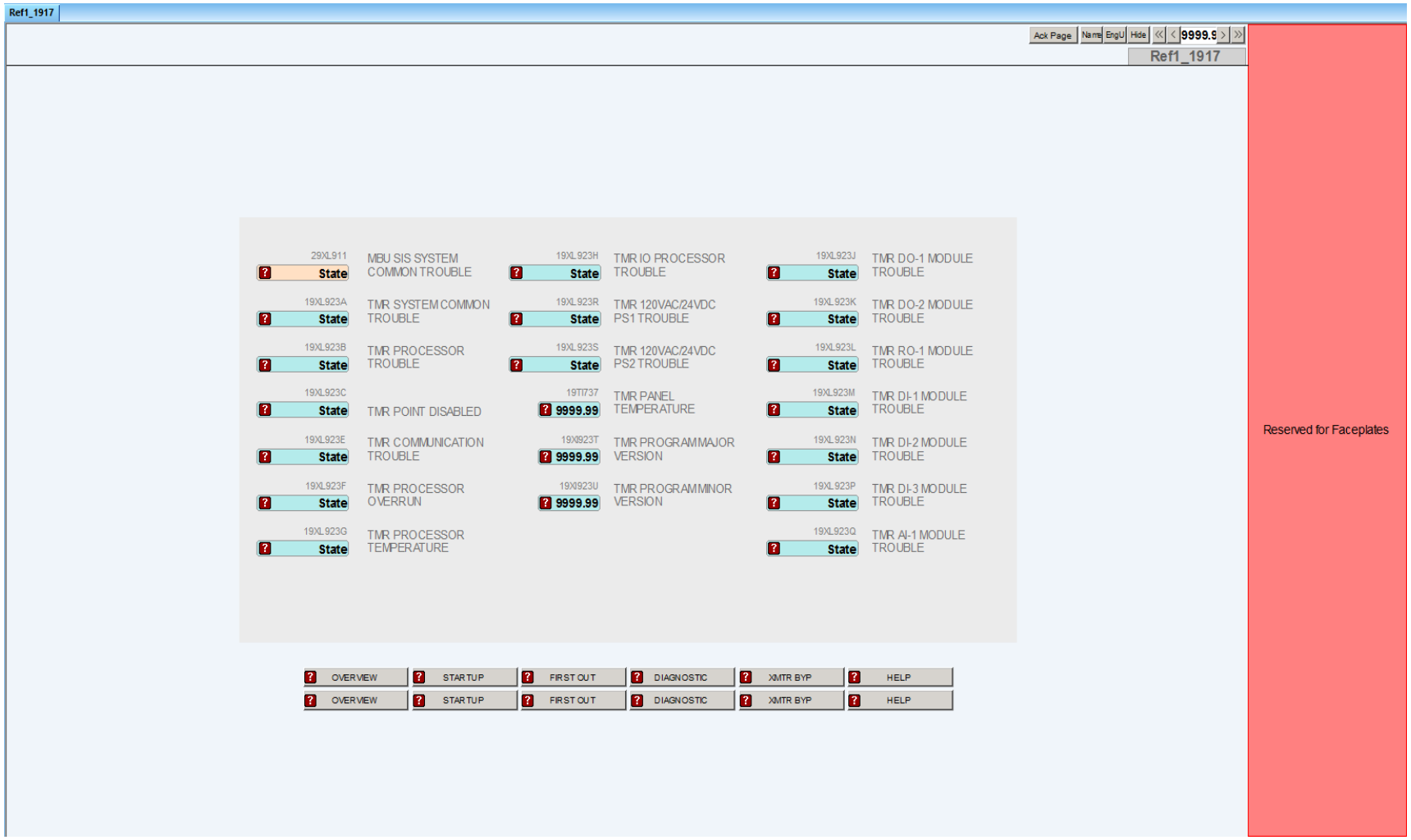
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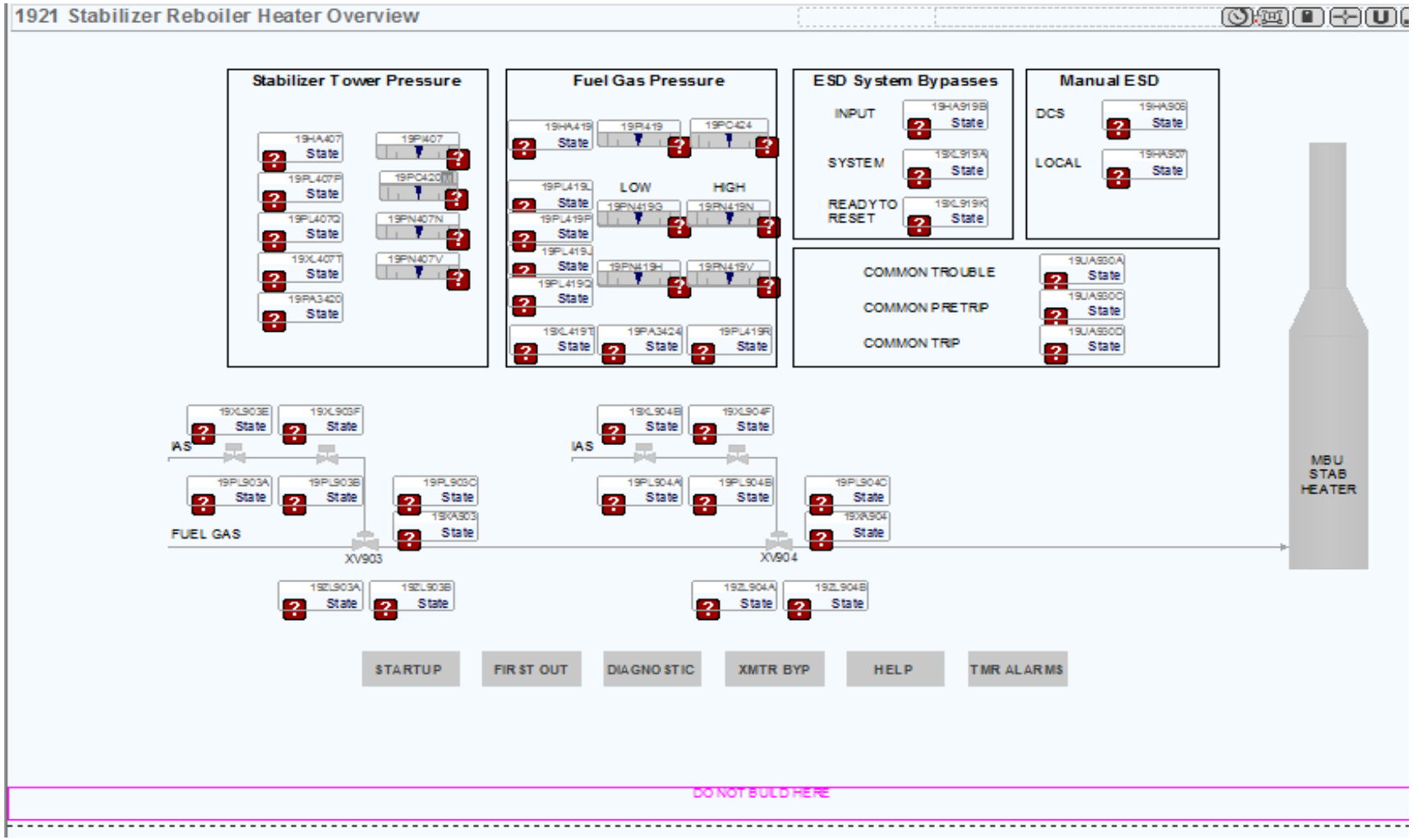
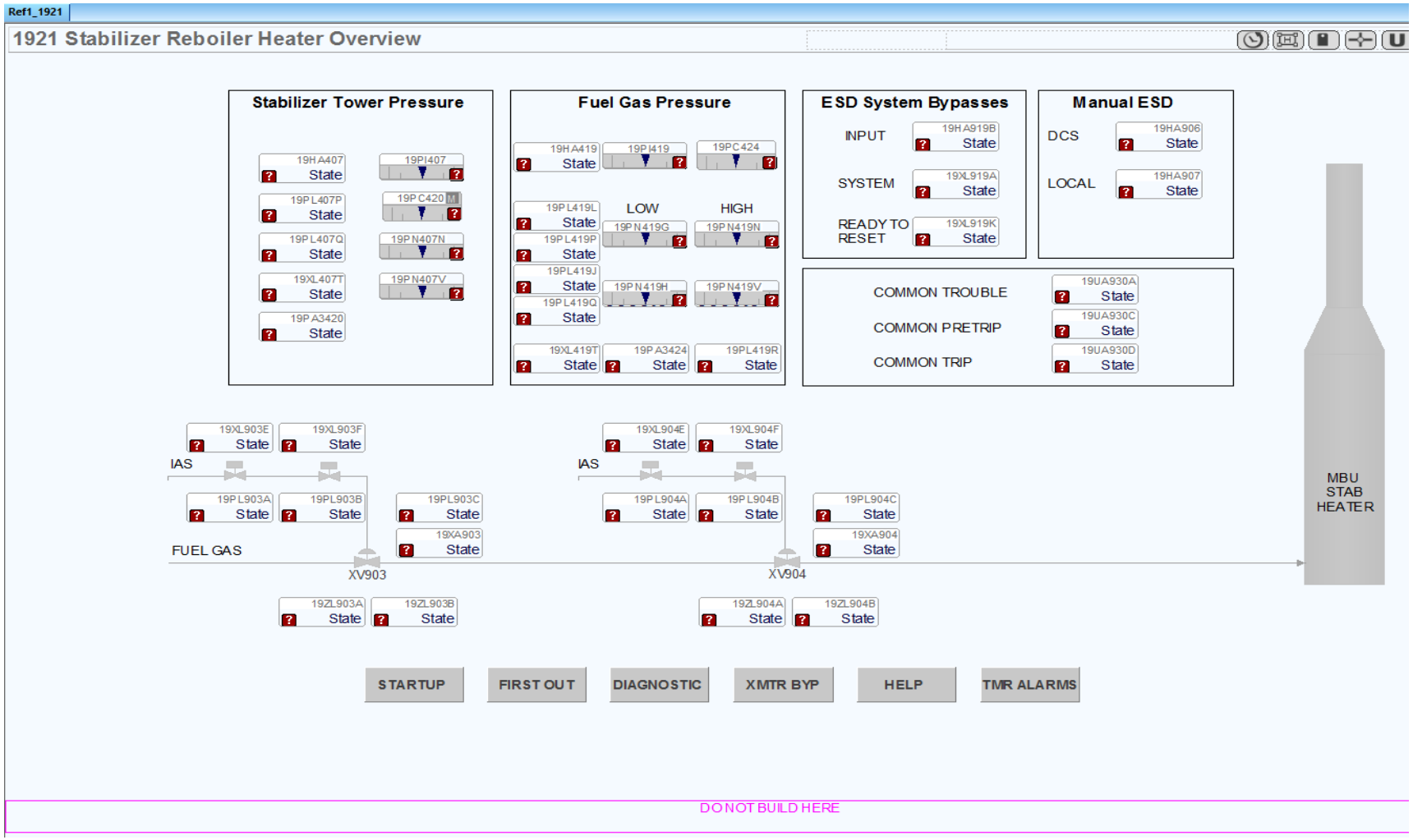
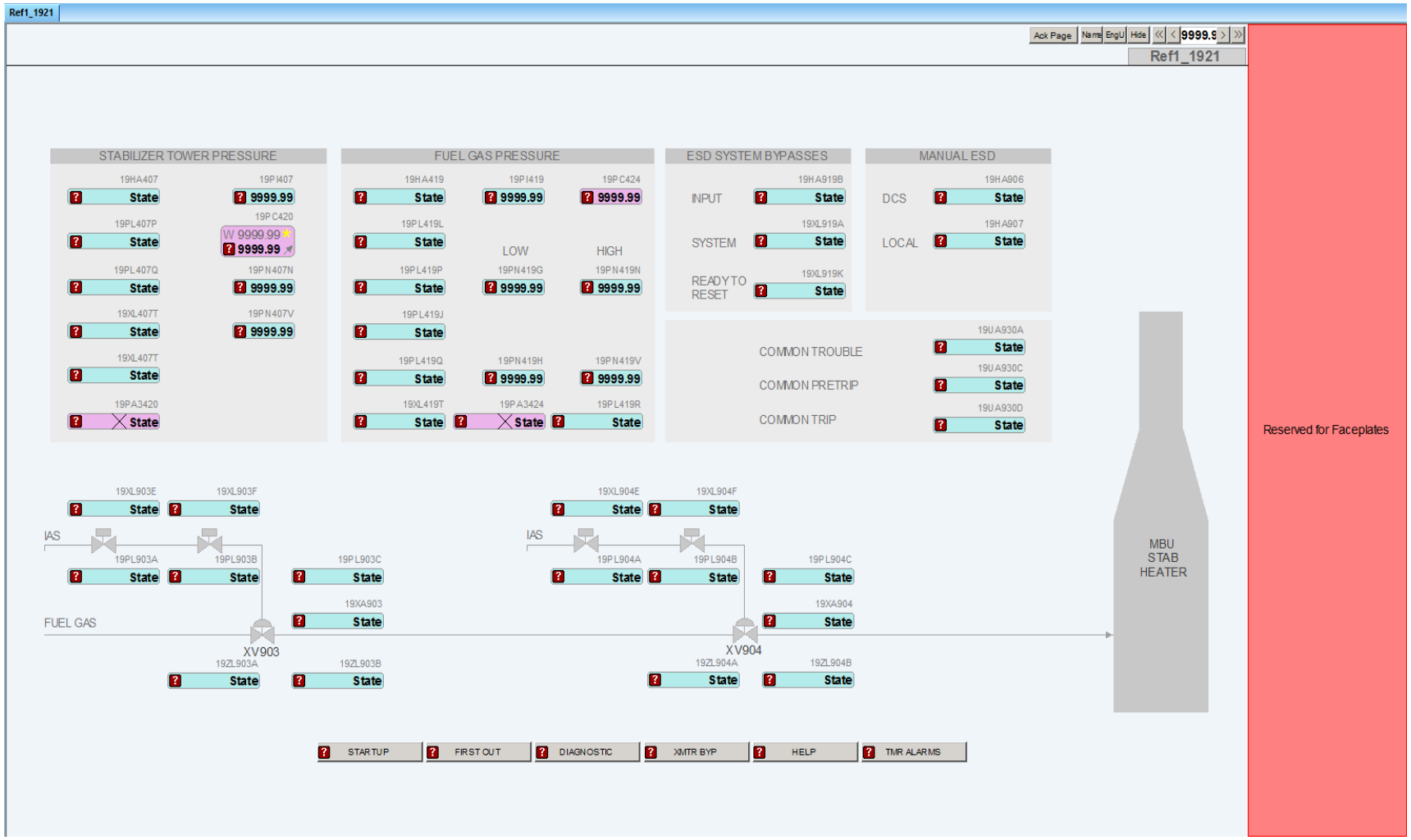
29XL911
State
MBU SIS SYSTEM COMMON TROUBLE
19XL923A
State
TMR SYSTEM COMMON TROUBLE
19XL923B
State
TMR PROCESSOR TROUBLE
19XL923C
State
TMR POINT DISABLED
19XL923E
State
TMR COMMUNICATION TROUBLE
19XL923F
State
TMR PROCESSOR OVERRUN
19XL923G
State
TMR PROCESSOR TEMPERATURE
19XL923H
State
TMR IO PROCESSOR TROUBLE
19XL923R
State
TMR 120VAC/24VDC PS1 TROUBLE
19XL923S
State
TMR 120VAC/24VDC PS2 TROUBLE
19TI737
9999.99
TMR PANEL TEMPERATURE
19XI923T
9999.99
TMR PROGRAM MAJOR VERSION
19XI923U
9999.99
TMR PROGRAM MINOR VERSION
19XL923J
State
TMR DO-1 MODULE TROUBLE
19XL923K
State
TMR DO-2 MODULE TROUBLE
19XL923L
State
TMR RO-1 MODULE TROUBLE
19XL923M
State
TMR DI-1 MODULE TROUBLE
19XL923N
State
TMR DI-2 MODULE TROUBLE
19XL923P
State
TMR DI-3 MODULE TROUBLE
19XL923Q
State
TMR AI-1 MODULE TROUBLE
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
HELP
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
HELP
Reserved for Faceplates

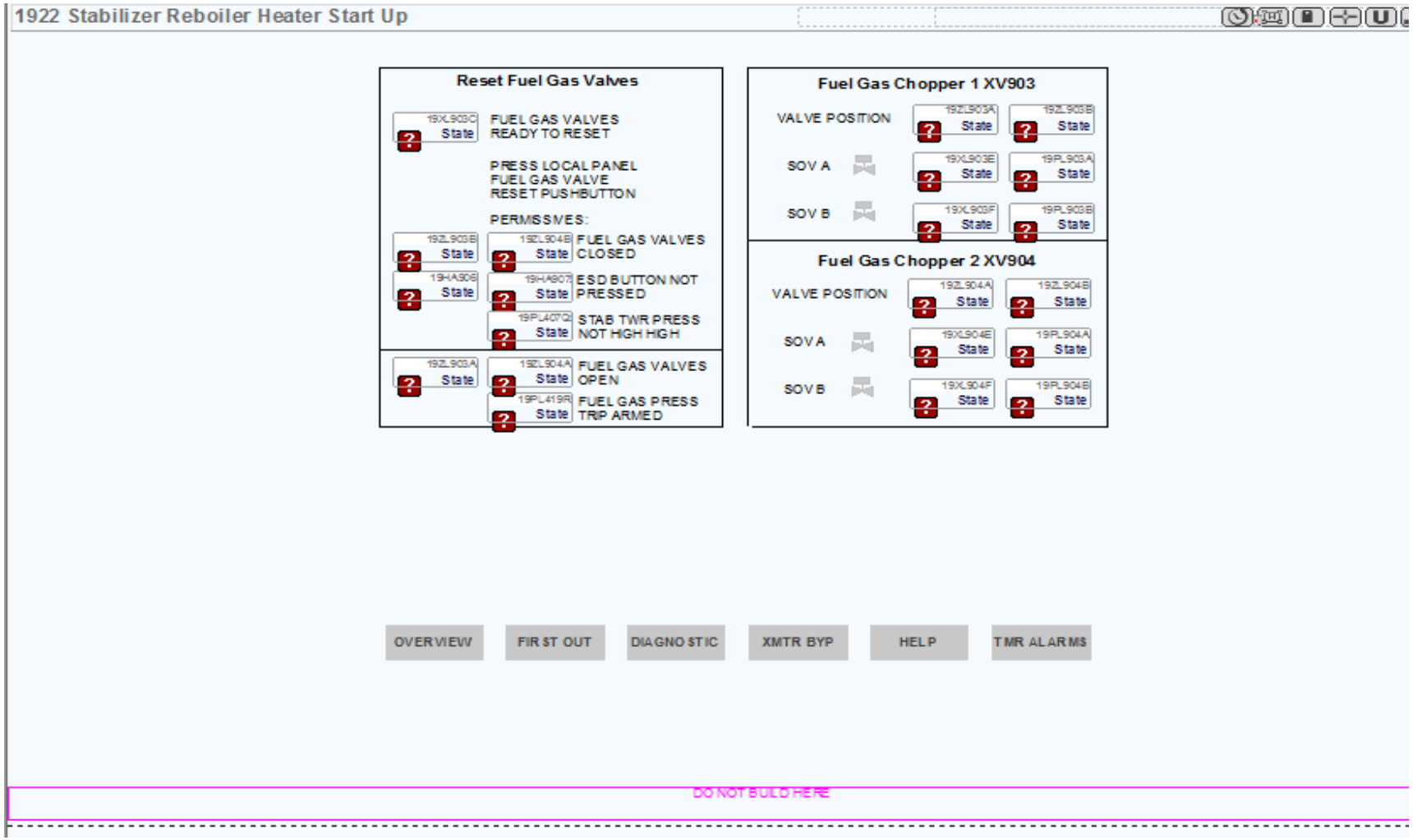
1.13 1921 STABILIZER REBOILER HEATER OVERVIEW (Ref1_1921.htm)

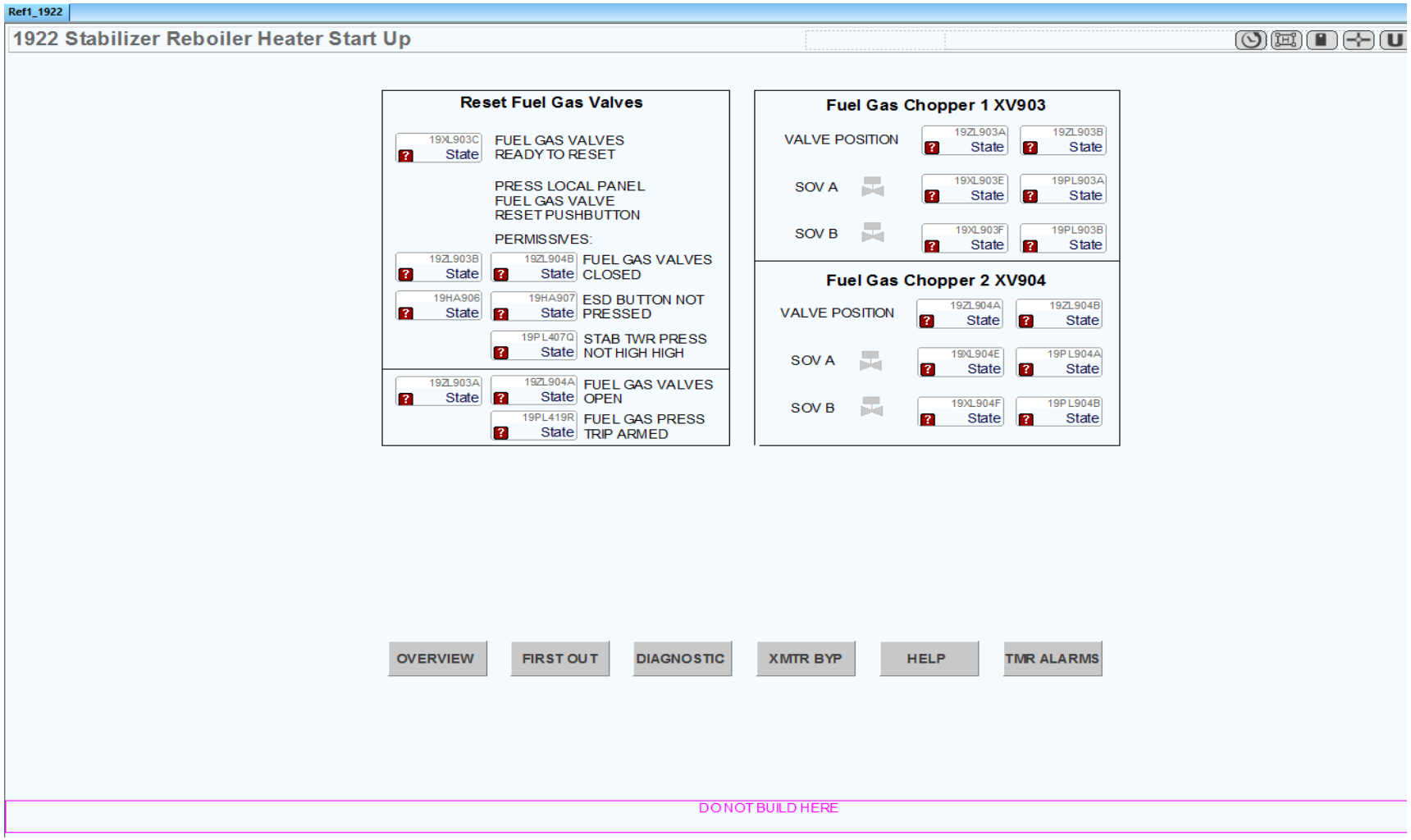


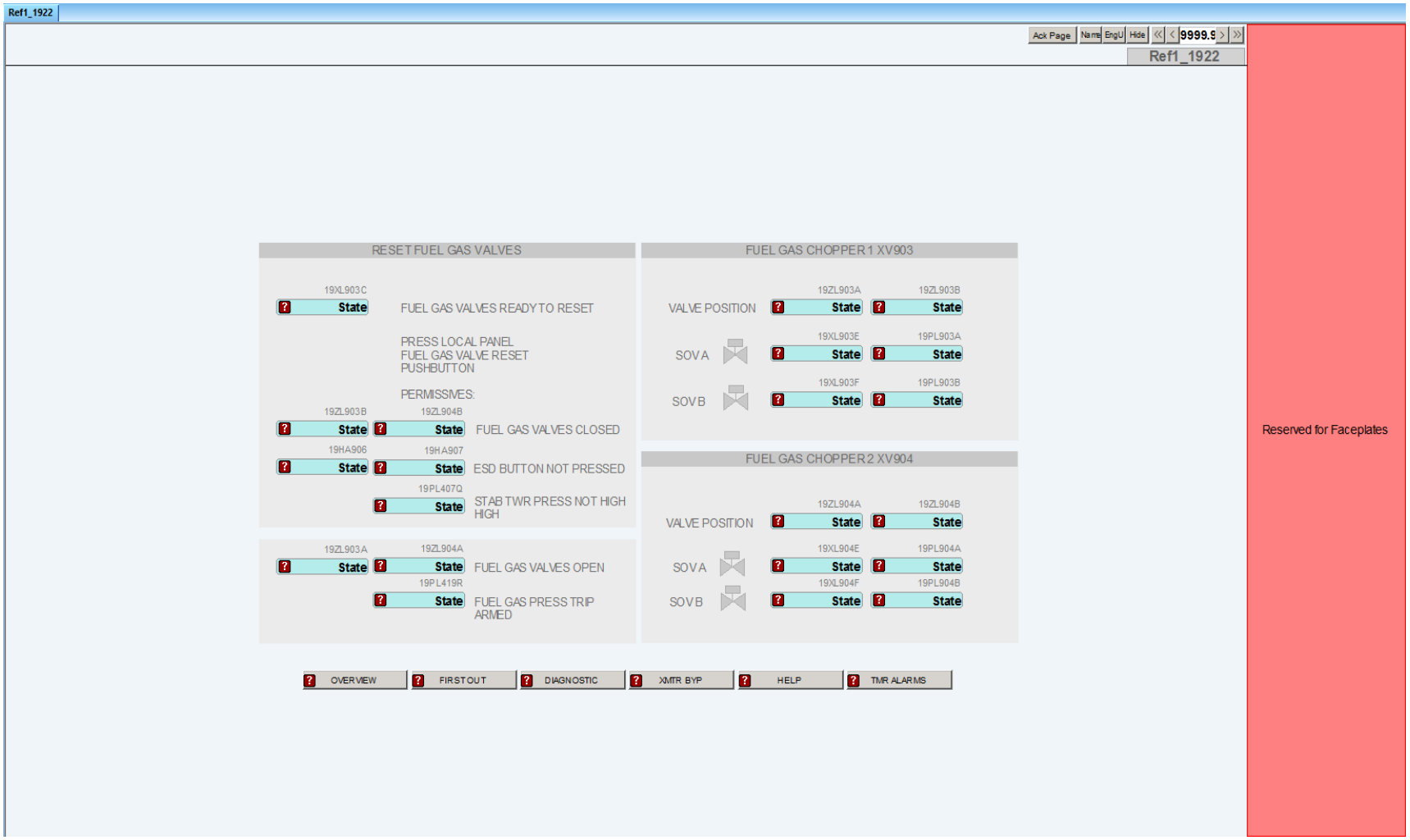

Ref1_1921
1921 Stabilizer Reboiler Heater Overview
Stabilizer Tower Pressure
19HA407 State
19PI407
19PL407P State
19PC420 M
19PL407Q State
19PN407N
19XL407T State
19PN407V
19PA3420 State
Fuel Gas Pressure
19HA419 State
19PI419
19PC424
LOW
HIGH
19PL419L State
19PN419G
19PN419N
19PL419P State
19PL419J State
19PN419H
19PN419V
19PL419Q State
19XL419T State
19PA3424 State
19PL419R State
ESD System Bypasses
INPUT 19HA919B State
SYSTEM 19XL919A State
READY TO RESET 19XL919K State
Manual ESD
DCS 19HA906 State
LOCAL 19HA907 State
COMMON TROUBLE 19UA930A State
COMMON PRETRIP 19UA930C State
COMMON TRIP 19UA930D State
19XL903E State
19XL903F State
IAS
19PL903A State
19PL903B State
19PL903C State
19XA903 State
FUEL GAS
XV903
19ZL903A State
19ZL903B State
19XL904E State
19XL904F State
IAS
19PL904A State
19PL904B State
19PL904C State
19XA904 State
XV904
19ZL904A State
19ZL904B State
MBU STAB HEATER
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1921
Ack Page
Name
EngU
Hide
9999.9
Ref1_1921
STABILIZER TOWER PRESSURE
19HA407
State
19PI407
9999.99
19PL407P
State
19PC420
W 9999.99
9999.99
19PL407Q
State
19PN407N
9999.99
19XL407T
State
19PN407V
9999.99
19XL407T
State
19PA3420
State
FUEL GAS PRESSURE
19HA419
State
19PI419
9999.99
19PC424
9999.99
19PL419L
State
LOW
HIGH
19PL419P
State
19PN419G
9999.99
19PN419N
9999.99
19PL419J
State
19PL419Q
State
19PN419H
9999.99
19PN419V
9999.99
19XL419T
State
19PA3424
State
19PL419R
State
ESD SYSTEM BYPASSES
INPUT
19HA919B
State
SYSTEM
19XL919A
State
READY TO RESET
19XL919K
State
MANUAL ESD
DCS
19HA906
State
LOCAL
19HA907
State
COMMON TROUBLE
19UA930A
State
COMMON PRETRIP
19UA930C
State
COMMON TRIP
19UA930D
State
19XL903E
State
19XL903F
State
IAS
19PL903A
State
19PL903B
State
19PL903C
State
19XA903
State
FUEL GAS
XV903
19ZL903A
State
19ZL903B
State
19XL904E
State
19XL904F
State
IAS
19PL904A
State
19PL904B
State
19PL904C
State
19XA904
State
XV904
19ZL904A
State
19ZL904B
State
MBU
STAB
HEATER
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
Reserved for Faceplates

1.14 1922 STABILIZER REBOILER HEATER START UP (Ref1_1922.htm)




Ref1_1922
1922 Stabilizer Reboiler Heater Start Up
Reset Fuel Gas Valves
19XL903C State
FUEL GAS VALVES READY TO RESET
PRESS LOCAL PANEL FUEL GAS VALVE RESET PUSHBUTTON
PERMISSIVES:
19ZL903B State
19ZL904B State
FUEL GAS VALVES CLOSED
19HA906 State
19HA907 State
ESD BUTTON NOT PRESSED
19PL407Q State
STAB TWR PRESS NOT HIGH HIGH
19ZL903A State
19ZL904A State
FUEL GAS VALVES OPEN
19PL419R State
FUEL GAS PRESS TRIP ARMED
Fuel Gas Chopper 1 XV903
VALVE POSITION
19ZL903A State
19ZL903B State
SOV A
19XL903E State
19PL903A State
SOV B
19XL903F State
19PL903B State
Fuel Gas Chopper 2 XV904
VALVE POSITION
19ZL904A State
19ZL904B State
SOV A
19XL904E State
19PL904A State
SOV B
19XL904F State
19PL904B State
OVERVIEW
FIRST OUT
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1922
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Name
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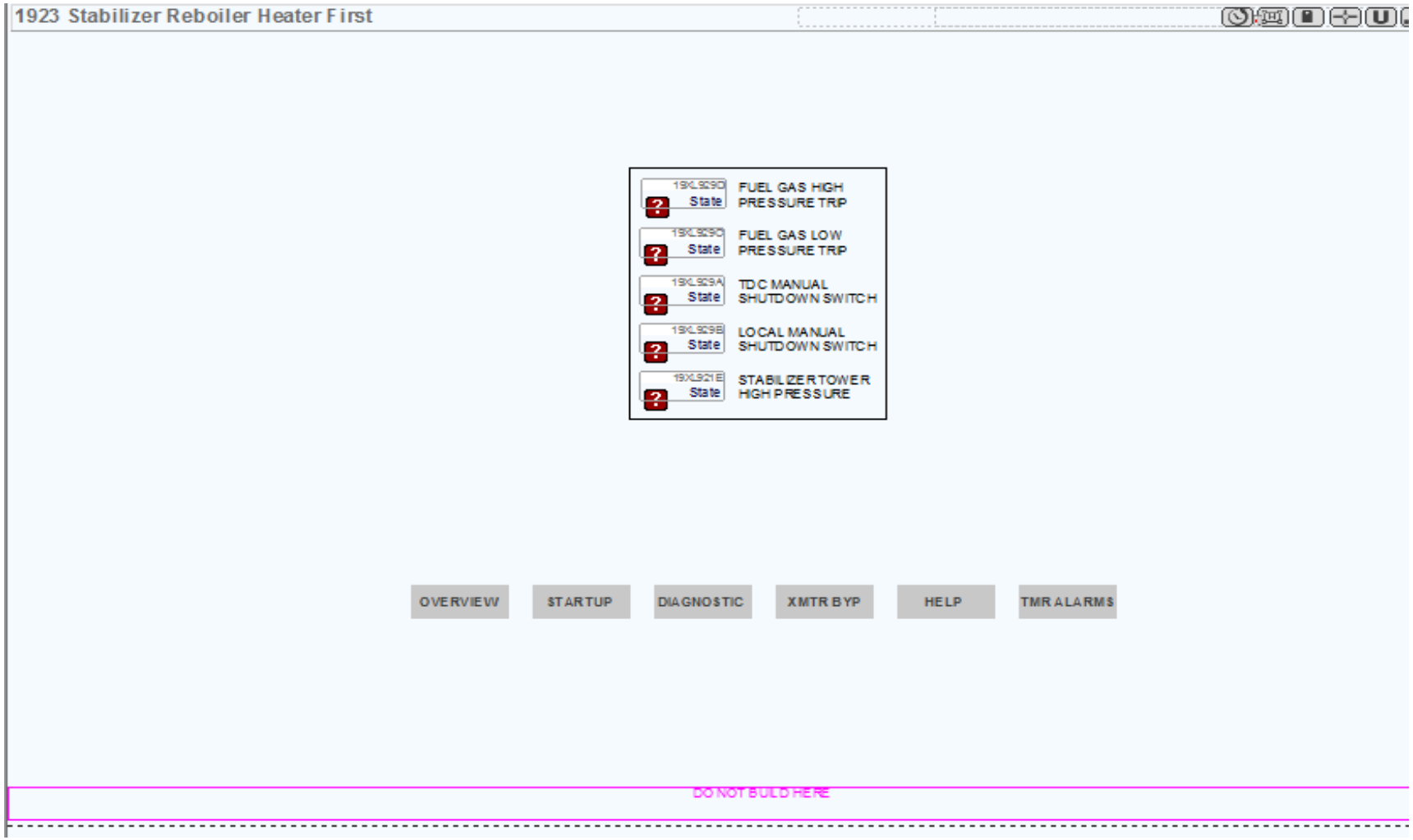
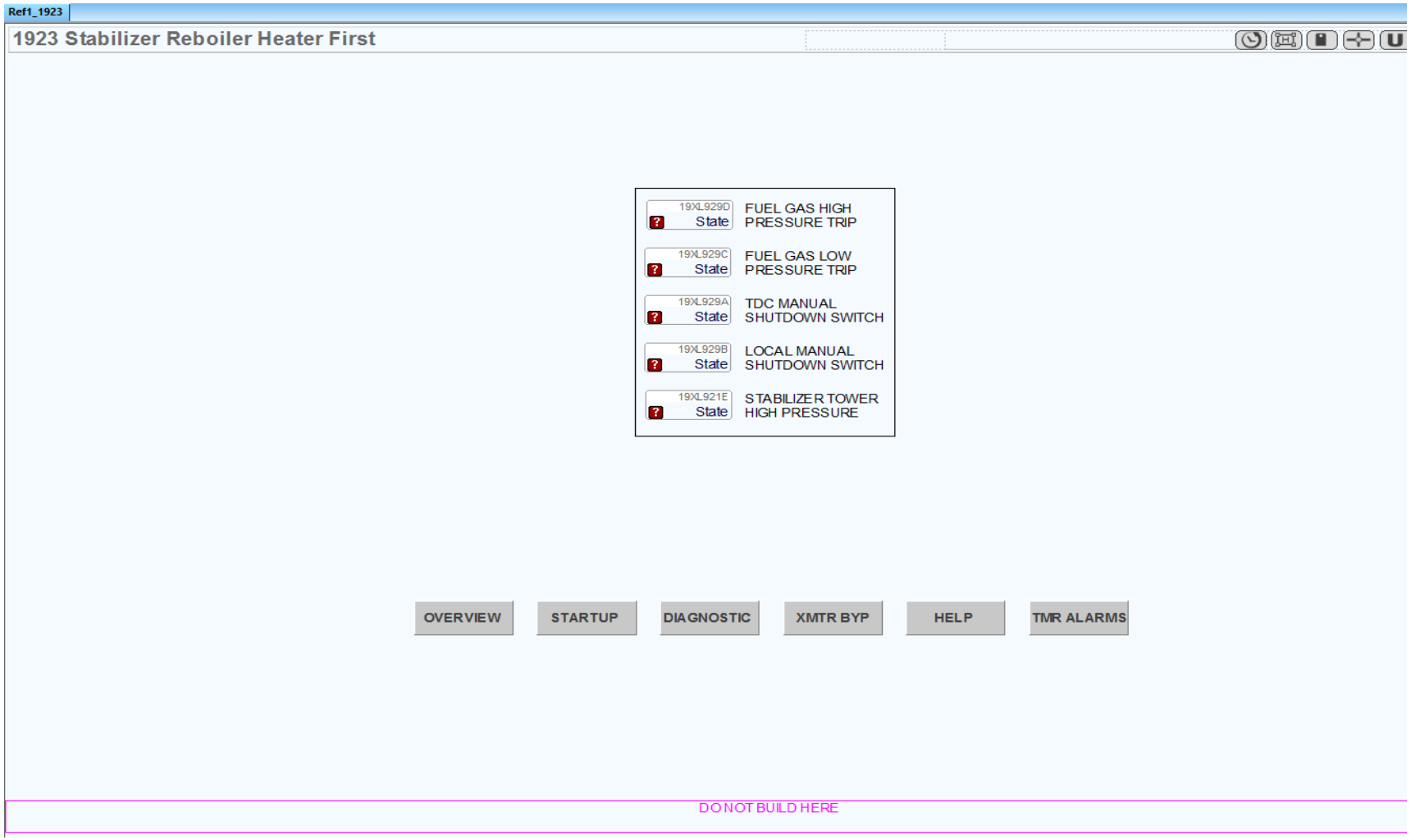
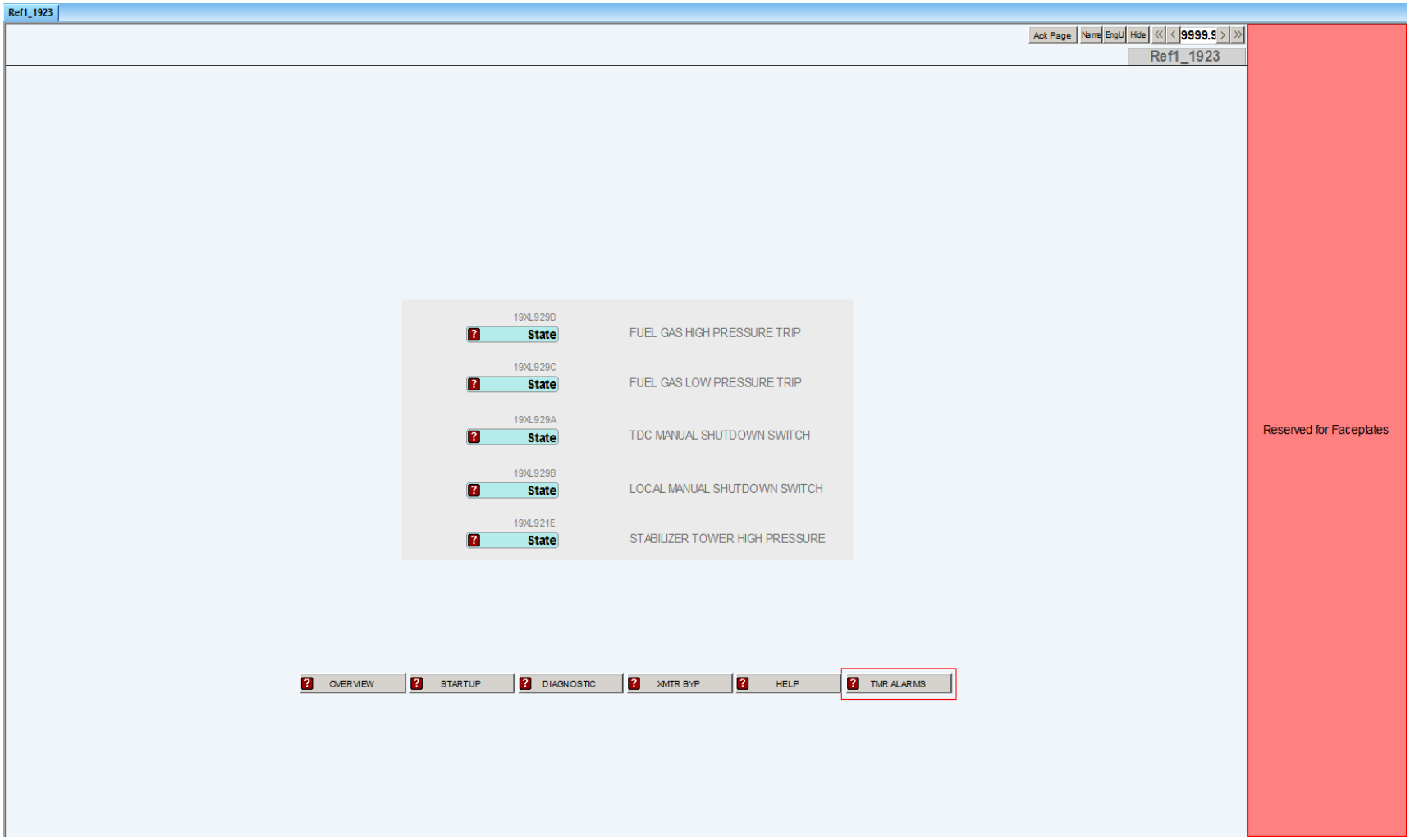
Ref1_1922
RESET FUEL GAS VALVES
19XL903C
State
FUEL GAS VALVES READY TO RESET
PRESS LOCAL PANEL
FUEL GAS VALVE RESET
PUSHBUTTON
PERMISSIVES:
19ZL903B
State
19ZL904B
State
FUEL GAS VALVES CLOSED
19HA906
State
19HA907
State
ESD BUTTON NOT PRESSED
19PL407Q
State
STAB TWR PRESS NOT HIGH HIGH
19ZL903A
State
19ZL904A
State
FUEL GAS VALVES OPEN
19PL419R
State
FUEL GAS PRESS TRIP ARMED
FUEL GAS CHOPPER 1 XV903
VALVE POSITION
19ZL903A
State
19ZL903B
State
SOV A
19XL903E
State
19PL903A
State
SOV B
19XL903F
State
19PL903B
State
FUEL GAS CHOPPER 2 XV904
VALVE POSITION
19ZL904A
State
19ZL904B
State
SOV A
19XL904E
State
19PL904A
State
SOV B
19XL904F
State
19PL904B
State
OVERVIEW
FIRST OUT
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
Reserved for Faceplates

1.15 1923 STABILIZER REBOILER HEATER FIRST (Ref1_1923.htm)




Ref1_1923
1923 Stabilizer Reboiler Heater First
19XL929D State
FUEL GAS HIGH PRESSURE TRIP
19XL929C State
FUEL GAS LOW PRESSURE TRIP
19XL929A State
TDC MANUAL SHUTDOWN SWITCH
19XL929B State
LOCAL MANUAL SHUTDOWN SWITCH
19XL921E State
STABILIZER TOWER HIGH PRESSURE
OVERVIEW
STARTUP
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1923
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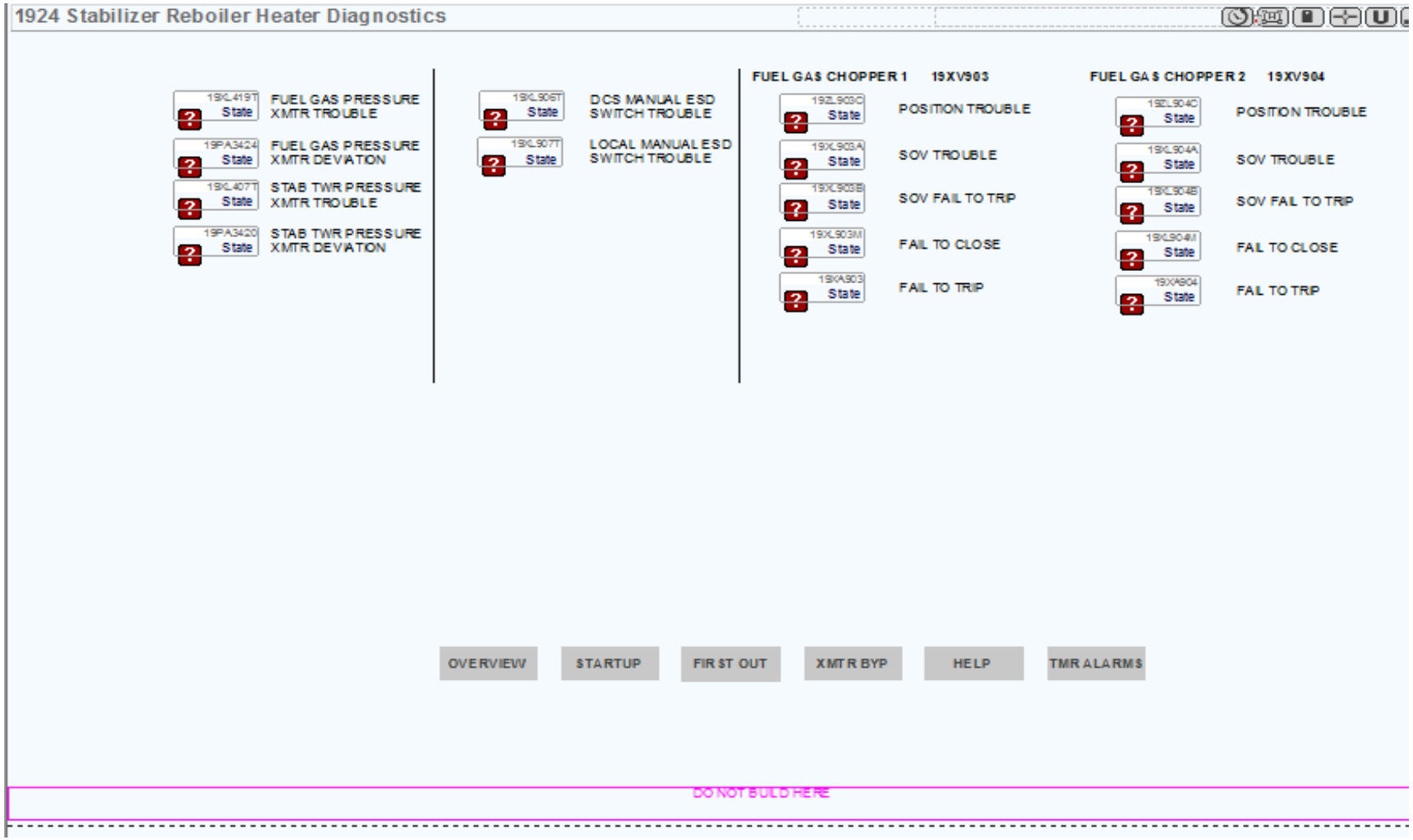
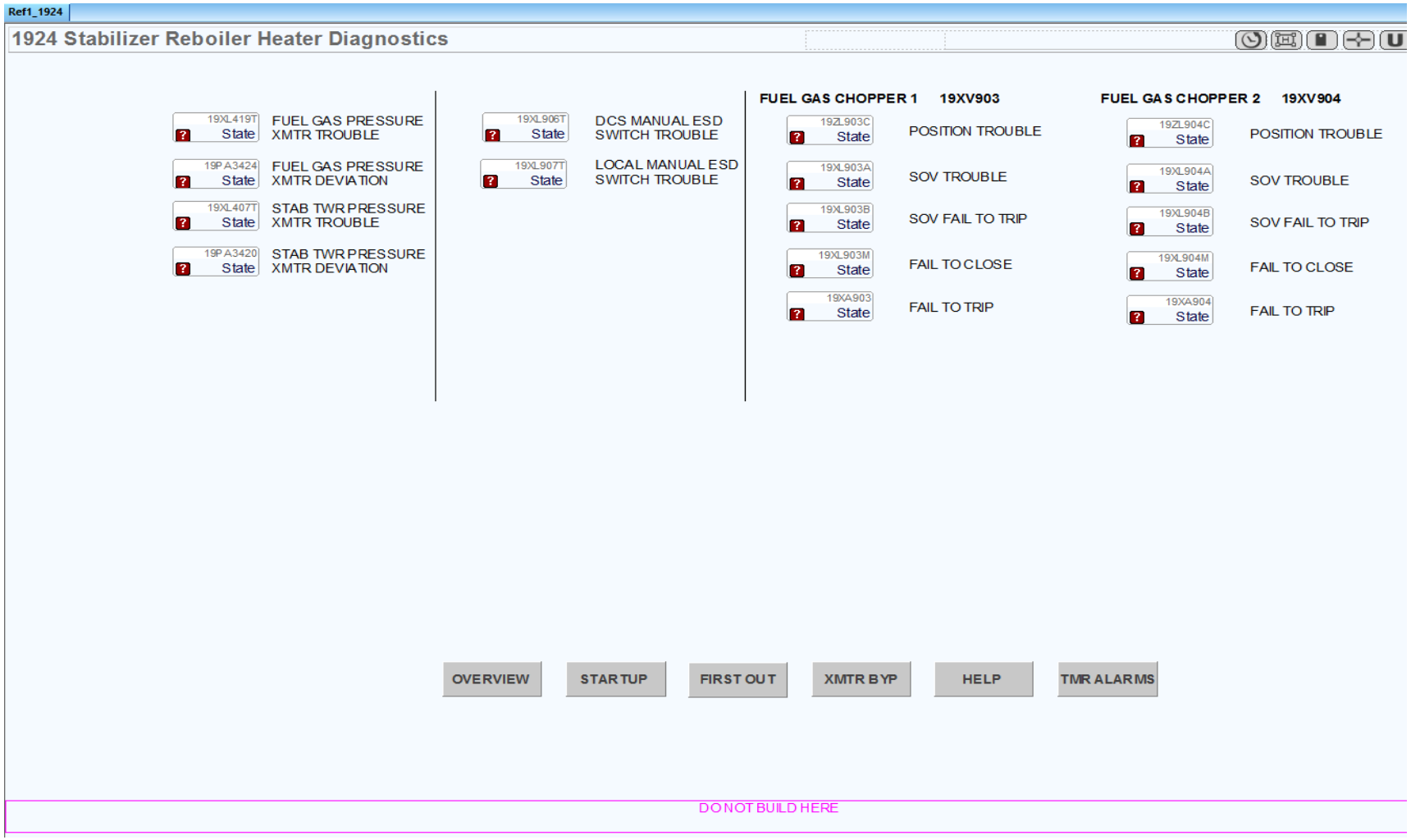
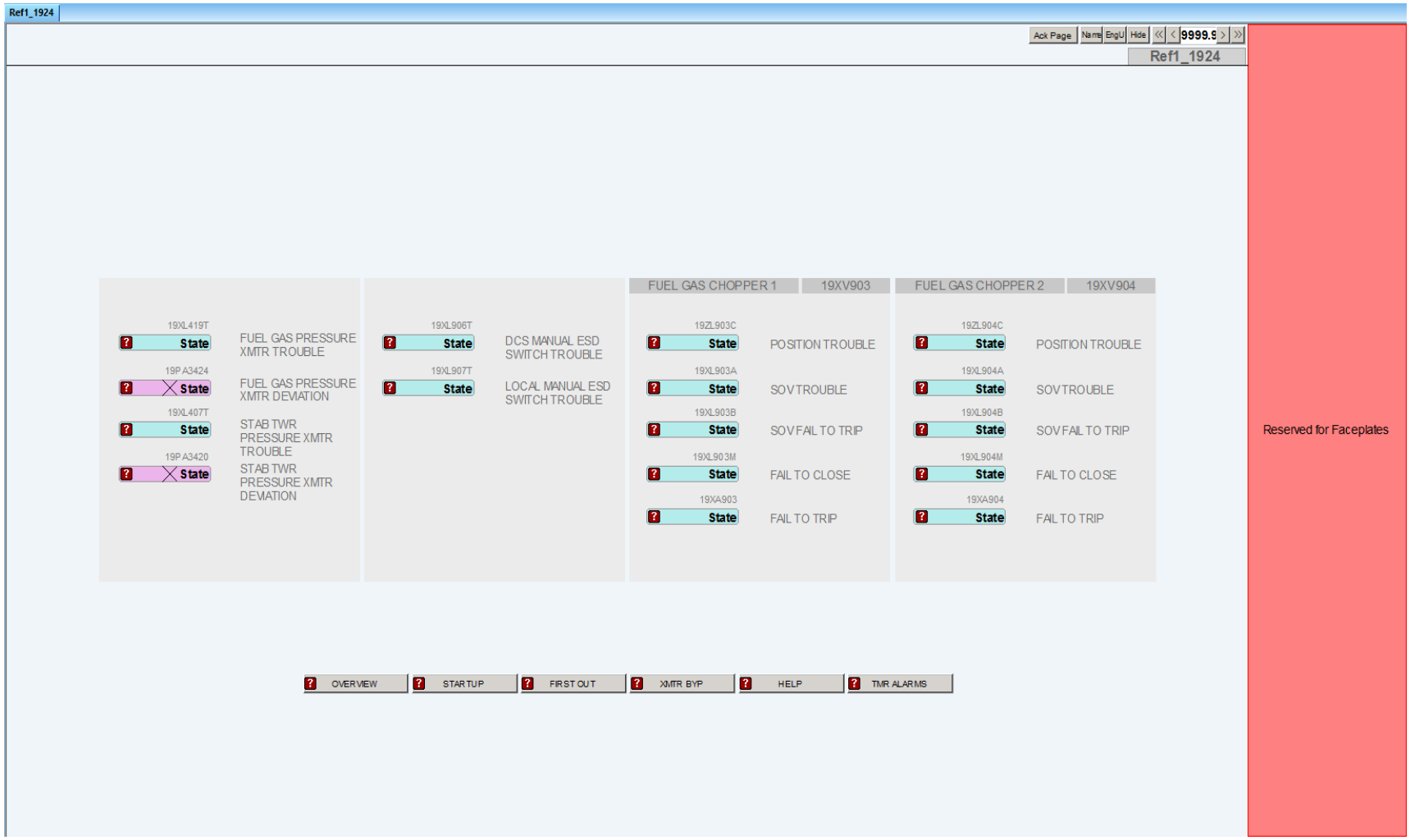
Ref1_1923
19XL929D
State
FUEL GAS HIGH PRESSURE TRIP
19XL929C
State
FUEL GAS LOW PRESSURE TRIP
19XL929A
State
TDC MANUAL SHUTDOWN SWITCH
19XL929B
State
LOCAL MANUAL SHUTDOWN SWITCH
19XL921E
State
STABILIZER TOWER HIGH PRESSURE
OVERVIEW
STARTUP
DIAGNOSTIC
XMTR BYP
HELP
TMR ALARMS
Reserved for Faceplates

1.16 1924 STABILIZER REBOILER DIAGNOSTICS (Ref1_1924.htm)




Ref1_1924
1924 Stabilizer Reboiler Heater Diagnostics
19XL419T State
FUEL GAS PRESSURE XMTR TROUBLE
19PA3424 State
FUEL GAS PRESSURE XMTR DEVIATION
19XL407T State
STAB TWR PRESSURE XMTR TROUBLE
19PA3420 State
STAB TWR PRESSURE XMTR DEVIATION
19XL906T State
DCS MANUAL ESD SWITCH TROUBLE
19XL907T State
LOCAL MANUAL ESD SWITCH TROUBLE
FUEL GAS CHOPPER 1 19XV903
19ZL903C State
POSITION TROUBLE
19XL903A State
SOV TROUBLE
19XL903B State
SOV FAIL TO TRIP
19XL903M State
FAIL TO CLOSE
19XA903 State
FAIL TO TRIP
FUEL GAS CHOPPER 2 19XV904
19ZL904C State
POSITION TROUBLE
19XL904A State
SOV TROUBLE
19XL904B State
SOV FAIL TO TRIP
19XL904M State
FAIL TO CLOSE
19XA904 State
FAIL TO TRIP
OVERVIEW
STARTUP
FIRST OUT
XMTR BYP
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1924
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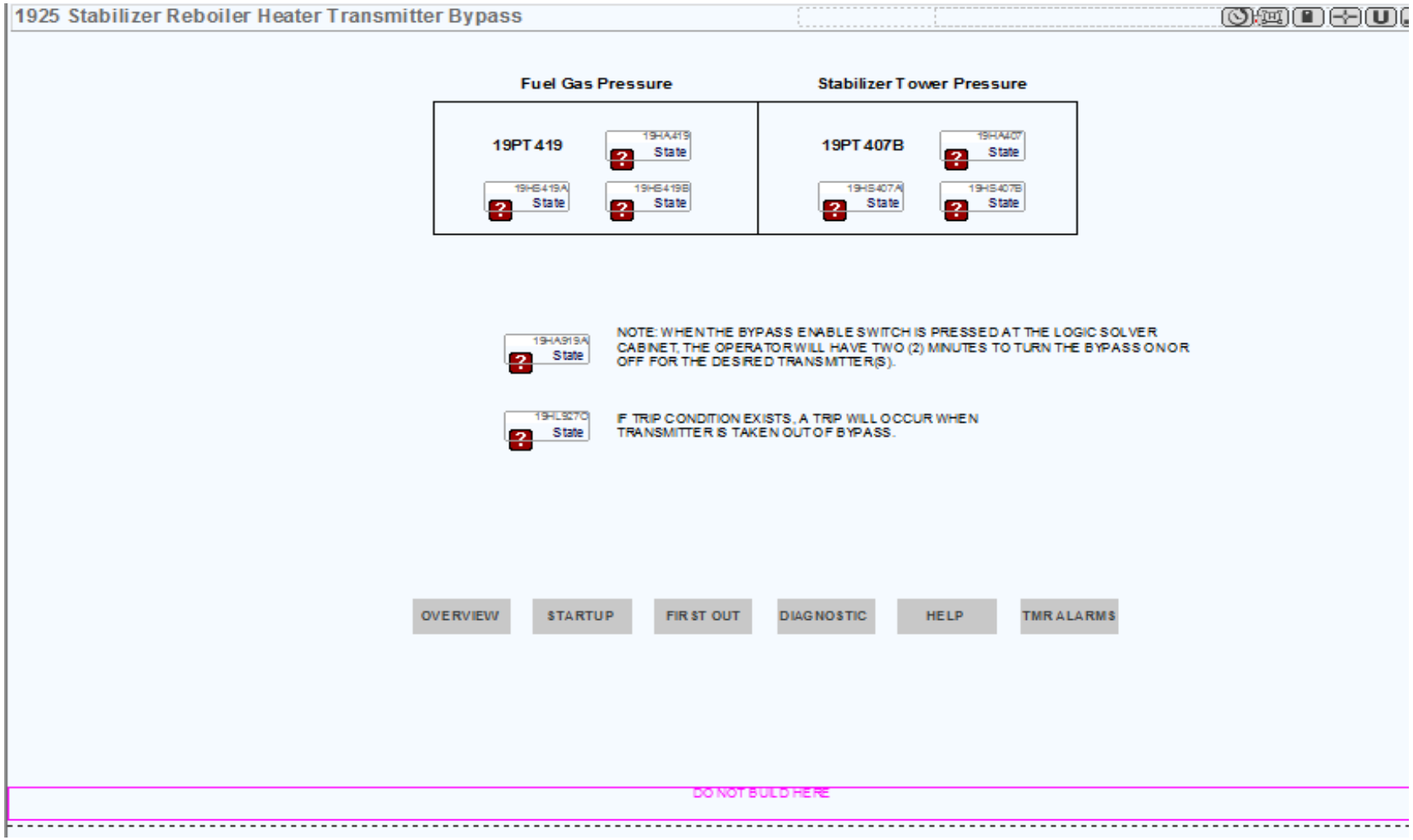
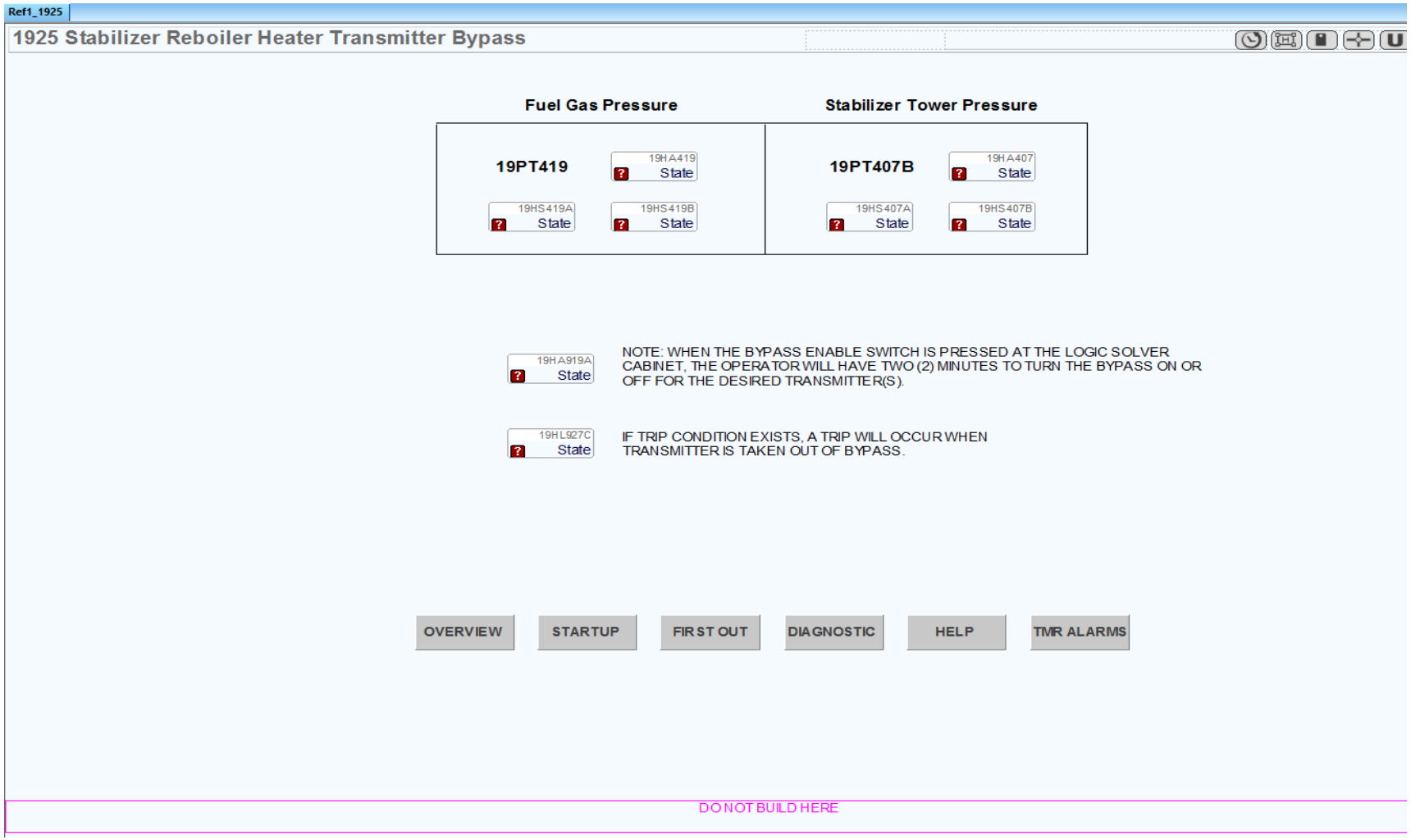
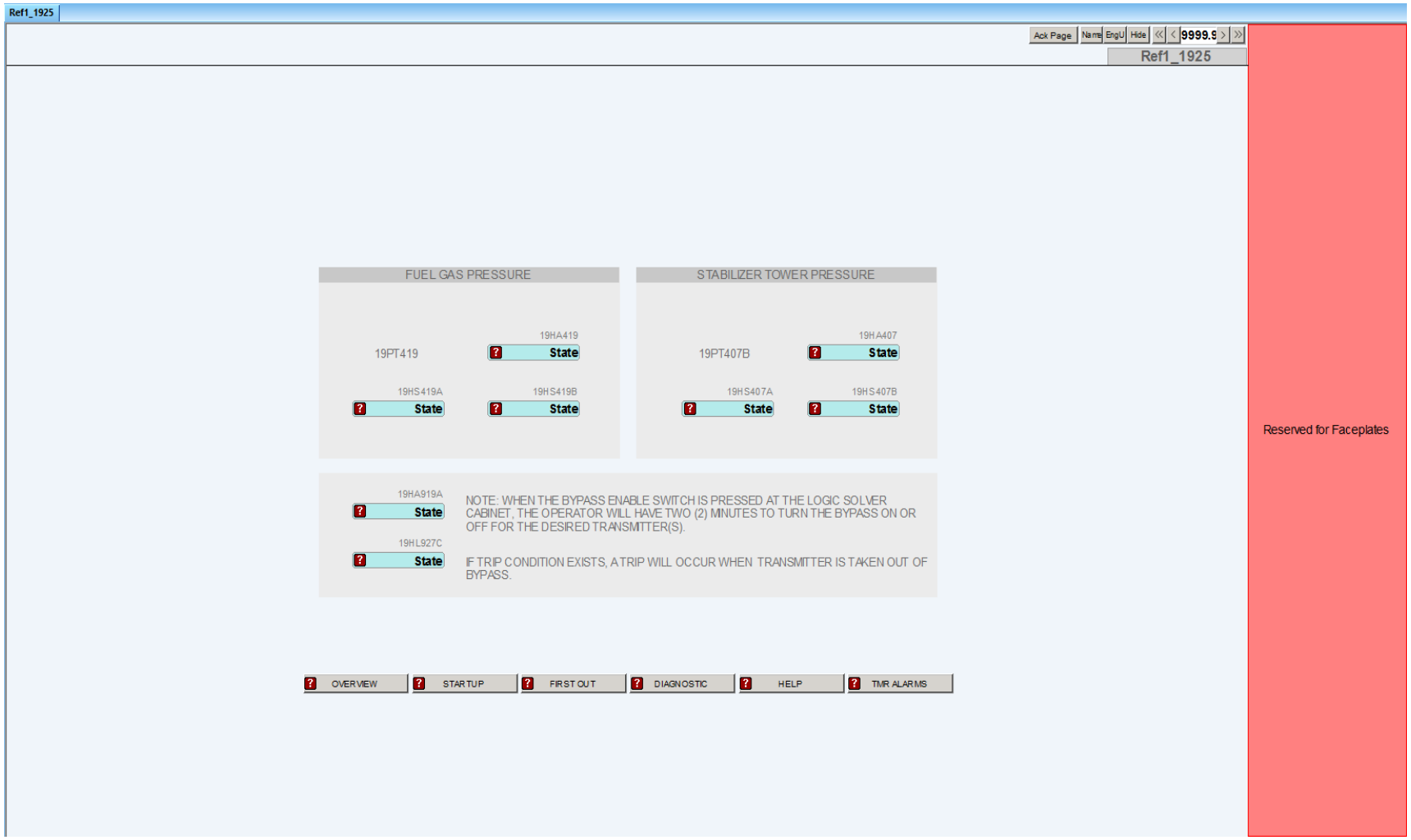
9999.9
Ref1_1924
19XL419T
State
FUEL GAS PRESSURE XMTR TROUBLE
19P A3424
State
FUEL GAS PRESSURE XMTR DEVIATION
19XL407T
State
STAB TWR PRESSURE XMTR TROUBLE
19P A3420
State
STAB TWR PRESSURE XMTR DEVIATION
19XL906T
State
DCS MANUAL ESD SWITCH TROUBLE
19XL907T
State
LOCAL MANUAL ESD SWITCH TROUBLE
FUEL GAS CHOPPER 1
19XV903
19ZL903C
State
POSITION TROUBLE
19XL903A
State
SOV TROUBLE
19XL903B
State
SOV FAIL TO TRIP
19XL903M
State
FAIL TO CLOSE
19XA903
State
FAIL TO TRIP
FUEL GAS CHOPPER 2
19XV904
19ZL904C
State
POSITION TROUBLE
19XL904A
State
SOV TROUBLE
19XL904B
State
SOV FAIL TO TRIP
19XL904M
State
FAIL TO CLOSE
19XA904
State
FAIL TO TRIP
OVERVIEW
STARTUP
FIRST OUT
XMTR BYP
HELP
TMR ALARMS
Reserved for Faceplates

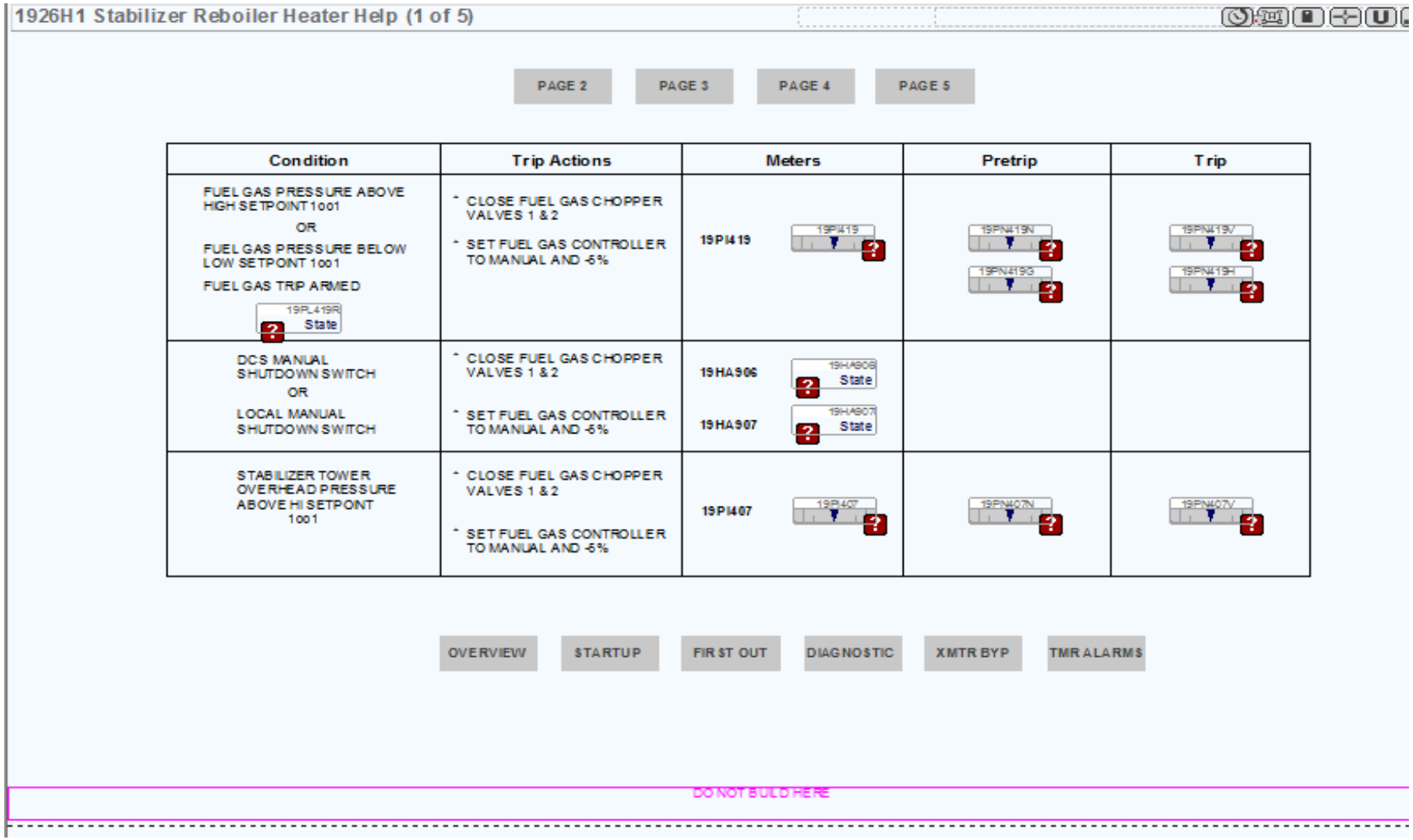
1.17 1925 STABILIZER REBOILER TRANSMITTER BYPASS (Ref1_1925.htm)

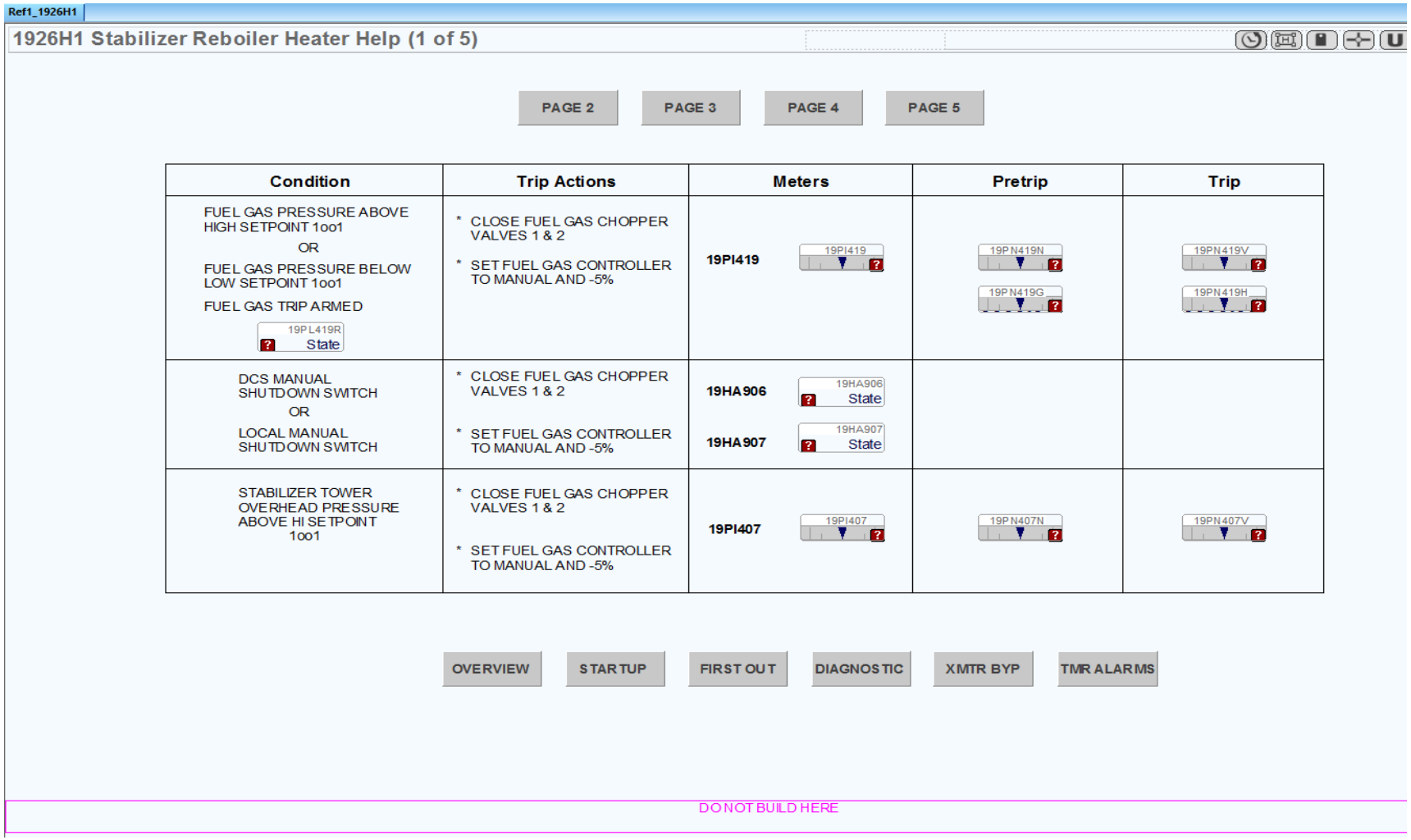


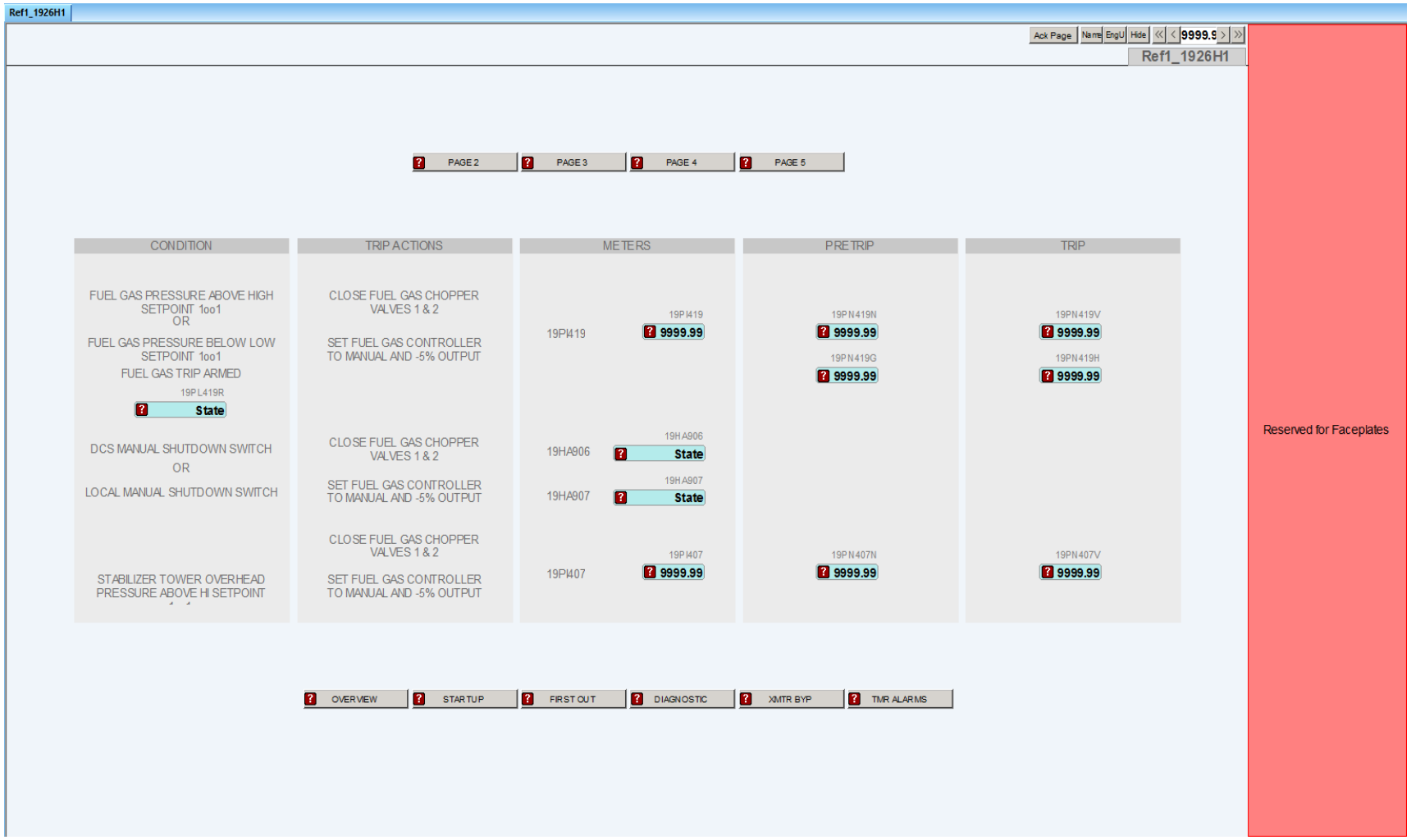

Ref1_1925
1925 Stabilizer Reboiler Heater Transmitter Bypass
Fuel Gas Pressure
Stabilizer Tower Pressure
19PT419
19HA419 State
19HS419A State
19HS419B State
19PT407B
19HA407 State
19HS407A State
19HS407B State
19HA919A State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
19HL927C State
IF TRIP CONDITION EXISTS, A TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
HELP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1925
Ack Page
Name
EngU
Hide
9999.9
Ref1_1925
FUEL GAS PRESSURE
19PT419
19HA419
State
19HS419A
State
19HS419B
State
STABILIZER TOWER PRESSURE
19PT407B
19HA407
State
19HS407A
State
19HS407B
State
19HA919A
State
19HL927C
State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
IF TRIP CONDITION EXISTS, A TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
HELP
TMR ALARMS
Reserved for Faceplates

1.18 1926H1 STABILIZER REBOILER HEATER HELP (1 OF 5) (Ref1_1926H1.htm)




Ref1_1926H1
1926H1 Stabilizer Reboiler Heater Help (1 of 5)
PAGE 2
PAGE 3
PAGE 4
PAGE 5
Condition
Trip Actions
Meters
Pretrip
Trip
FUEL GAS PRESSURE ABOVE HIGH SETPOINT 1oo1
OR
FUEL GAS PRESSURE BELOW LOW SETPOINT 1oo1
FUEL GAS TRIP ARMED
19PL419R State
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5%
19PI419
19PI419
19PN419N
19PN419G
19PN419V
19PN419H
DCS MANUAL SHUTDOWN SWITCH
OR
LOCAL MANUAL SHUTDOWN SWITCH
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5%
19HA906
19HA906 State
19HA907
19HA907 State
STABILIZER TOWER OVERHEAD PRESSURE ABOVE HI SETPOINT 1oo1
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5%
19PI407
19PI407
19PN407N
19PN407V
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1926H1
Ack Page
Name
EngU
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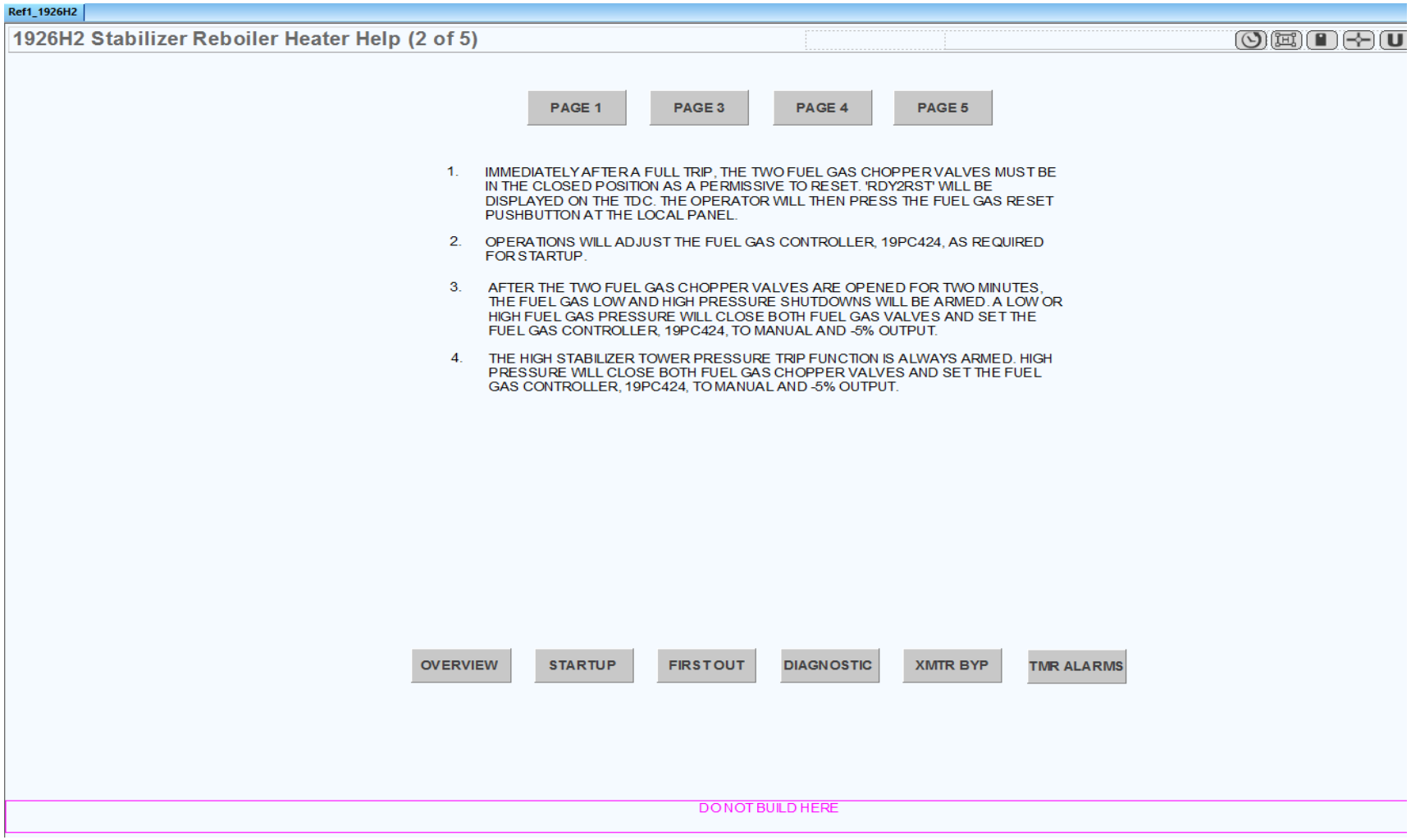
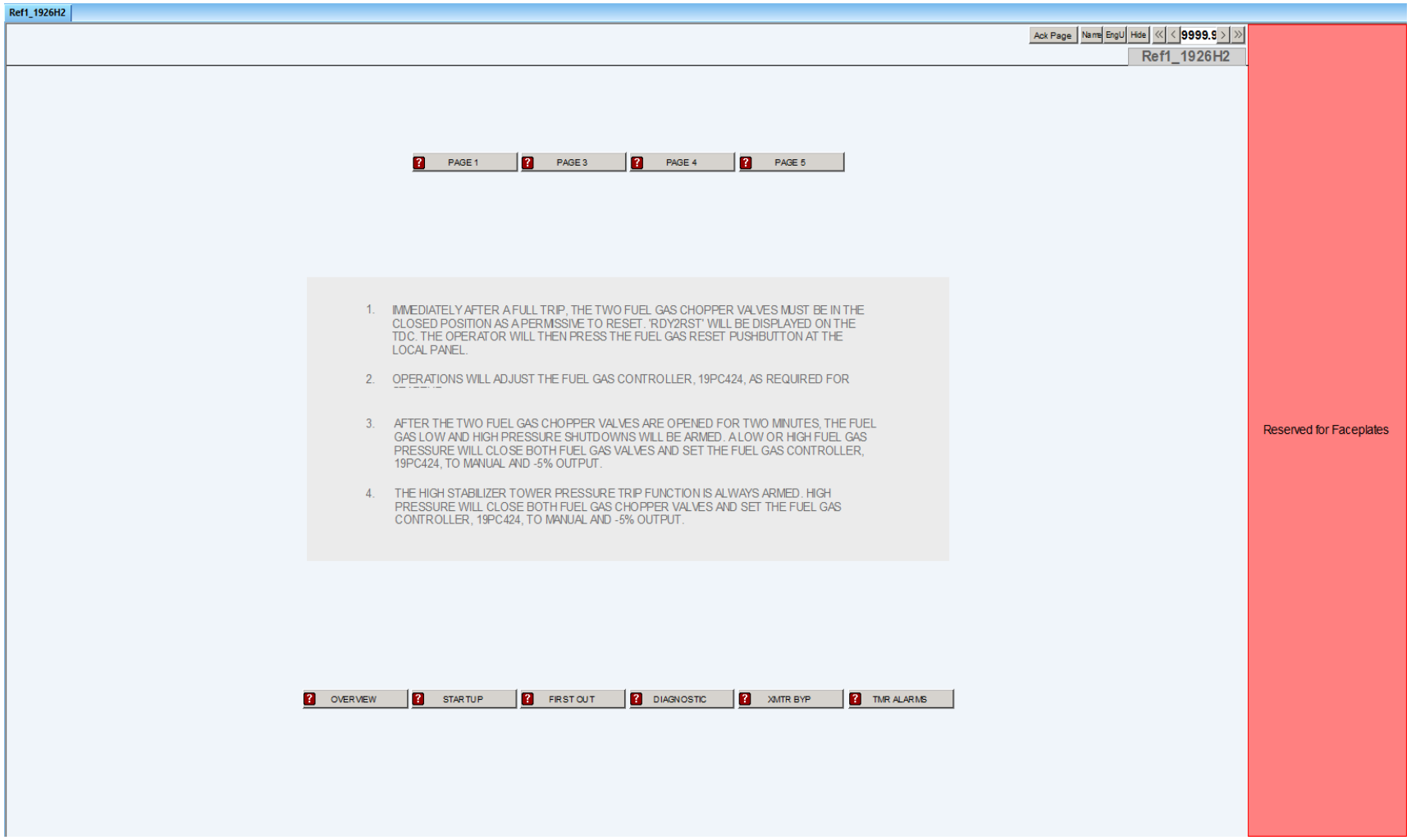
9999.9
Ref1_1926H1
PAGE 2
PAGE 3
PAGE 4
PAGE 5
CONDITION
TRIP ACTIONS
METERS
PRETRIP
TRIP
FUEL GAS PRESSURE ABOVE HIGH SETPOINT 1oo1
OR
FUEL GAS PRESSURE BELOW LOW SETPOINT 1oo1
FUEL GAS TRIP ARMED
19PL419R
State
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19PI419
19PI419
9999.99
19PN419N
9999.99
19PN419G
9999.99
19PN419V
9999.99
19PN419H
9999.99
DCS MANUAL SHUTDOWN SWITCH
OR
LOCAL MANUAL SHUTDOWN SWITCH
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19HA906
19HA906
State
19HA907
19HA907
State
STABILIZER TOWER OVERHEAD PRESSURE ABOVE HI SETPOINT
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19PI407
19PI407
9999.99
19PN407N
9999.99
19PN407V
9999.99
Reserved for Faceplates
OVERVIEW
START UP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS

1.19 1926H2 STABILIZER REBOILER HEATER HELP (2 OF 5) (Ref1_1926H2.htm)


Ref1_1926H2
1926H2 Stabilizer Reboiler Heater Help (2 of 5)
PAGE 1
PAGE 3
PAGE 4
PAGE 5
1. IMMEDIATELY AFTER A FULL TRIP, THE TWO FUEL GAS CHOPPER VALVES MUST BE IN THE CLOSED POSITION AS A PERMISSIVE TO RESET. 'RDY2RST' WILL BE DISPLAYED ON THE TDC. THE OPERATOR WILL THEN PRESS THE FUEL GAS RESET PUSHBUTTON AT THE LOCAL PANEL.
2. OPERATIONS WILL ADJUST THE FUEL GAS CONTROLLER, 19PC424, AS REQUIRED FOR STARTUP.
3. AFTER THE TWO FUEL GAS CHOPPER VALVES ARE OPENED FOR TWO MINUTES, THE FUEL GAS LOW AND HIGH PRESSURE SHUTDOWNS WILL BE ARMED. A LOW OR HIGH FUEL GAS PRESSURE WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER, 19PC424, TO MANUAL AND -5% OUTPUT.
4. THE HIGH STABILIZER TOWER PRESSURE TRIP FUNCTION IS ALWAYS ARMED. HIGH PRESSURE WILL CLOSE BOTH FUEL GAS CHOPPER VALVES AND SET THE FUEL GAS CONTROLLER, 19PC424, TO MANUAL AND -5% OUTPUT.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE


Ref1_1926H2
Ack Page
Name
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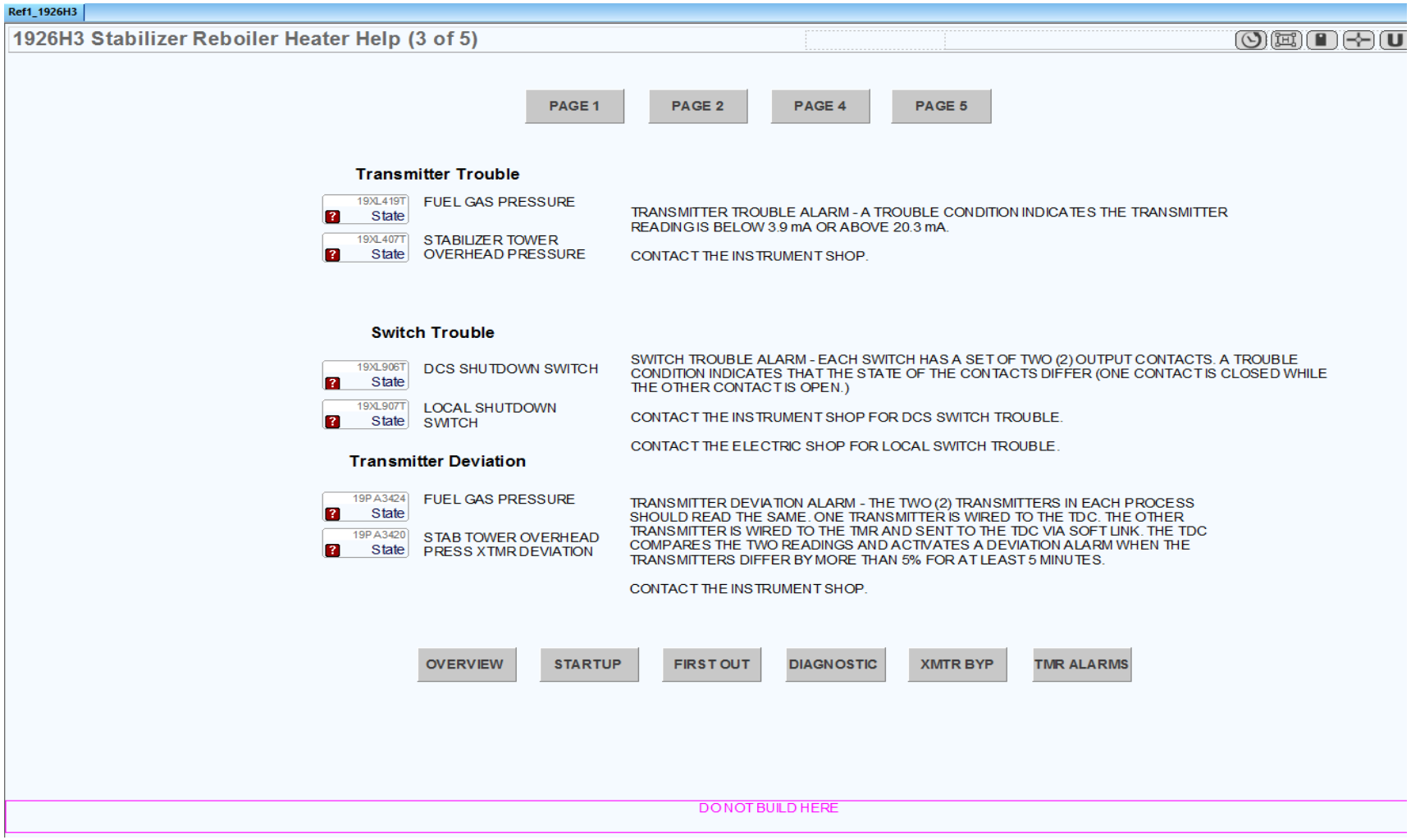
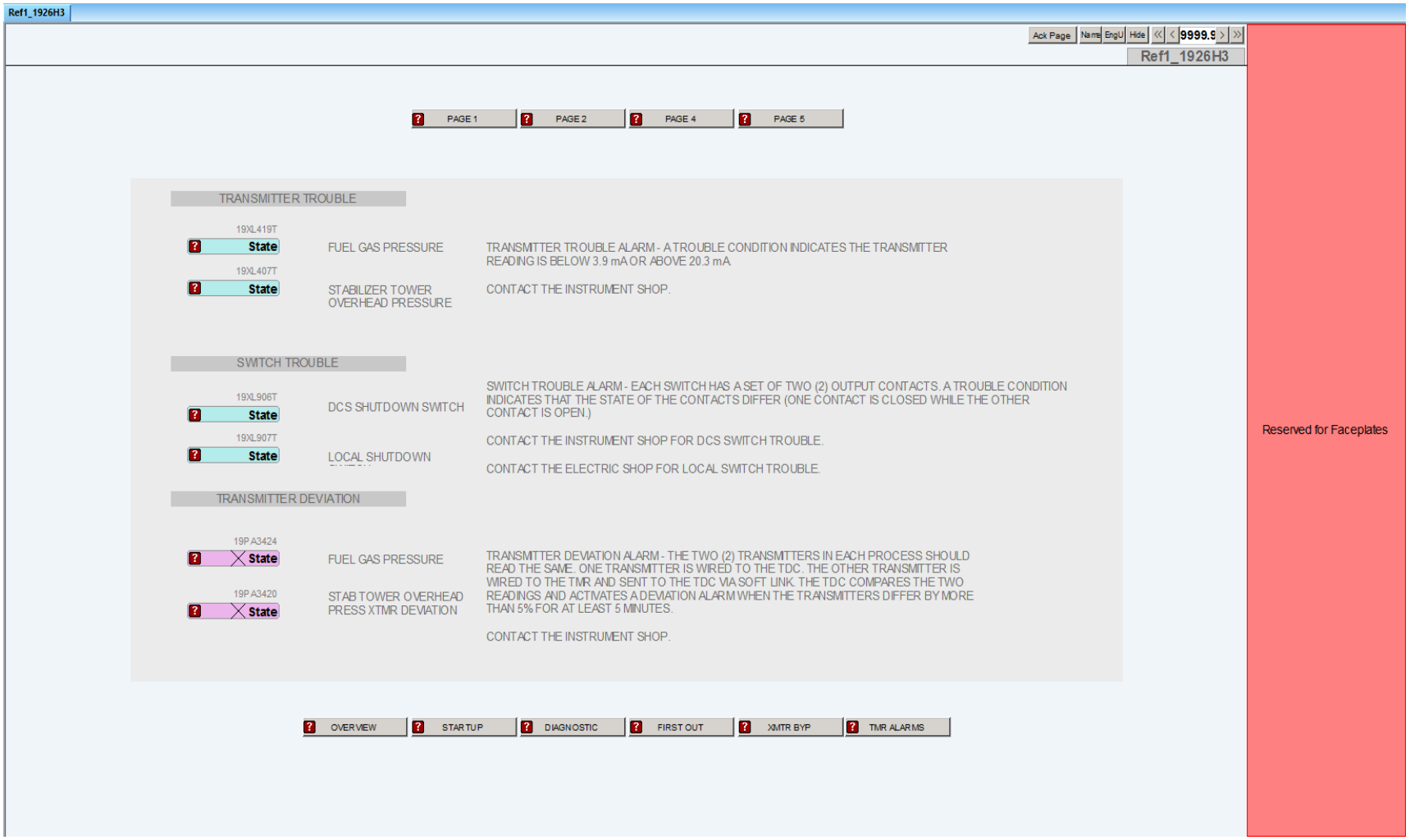
9999.9
Ref1_1926H2
PAGE 1
PAGE 3
PAGE 4
PAGE 5
1. IMMEDIATELY AFTER A FULL TRIP, THE TWO FUEL GAS CHOPPER VALVES MUST BE IN THE CLOSED POSITION AS A PERMISSIVE TO RESET. 'RDY2RST' WILL BE DISPLAYED ON THE TDC. THE OPERATOR WILL THEN PRESS THE FUEL GAS RESET PUSHBUTTON AT THE LOCAL PANEL.
2. OPERATIONS WILL ADJUST THE FUEL GAS CONTROLLER, 19PC424, AS REQUIRED FOR
3. AFTER THE TWO FUEL GAS CHOPPER VALVES ARE OPENED FOR TWO MINUTES, THE FUEL GAS LOW AND HIGH PRESSURE SHUTDOWNS WILL BE ARMED. A LOW OR HIGH FUEL GAS PRESSURE WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER, 19PC424, TO MANUAL AND -5% OUTPUT.
4. THE HIGH STABILIZER TOWER PRESSURE TRIP FUNCTION IS ALWAYS ARMED. HIGH PRESSURE WILL CLOSE BOTH FUEL GAS CHOPPER VALVES AND SET THE FUEL GAS CONTROLLER, 19PC424, TO MANUAL AND -5% OUTPUT.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
Reserved for Faceplates

1.20 1926H3 STABILIZER REBOILER HEATER HELP (3 OF 5) (Ref1_1926H3.htm)


Ref1_1926H3
1926H3 Stabilizer Reboiler Heater Help (3 of 5)
PAGE 1
PAGE 2
PAGE 4
PAGE 5
Transmitter Trouble
19XL419T State
FUEL GAS PRESSURE
19XL407T State
STABILIZER TOWER OVERHEAD PRESSURE
TRANSMITTER TROUBLE ALARM - A TROUBLE CONDITION INDICATES THE TRANSMITTER READING IS BELOW 3.9 mA OR ABOVE 20.3 mA.
CONTACT THE INSTRUMENT SHOP.
Switch Trouble
19XL906T State
DCS SHUTDOWN SWITCH
19XL907T State
LOCAL SHUTDOWN SWITCH
SWITCH TROUBLE ALARM - EACH SWITCH HAS A SET OF TWO (2) OUTPUT CONTACTS. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE CONTACTS DIFFER (ONE CONTACT IS CLOSED WHILE THE OTHER CONTACT IS OPEN.)
CONTACT THE INSTRUMENT SHOP FOR DCS SWITCH TROUBLE.
CONTACT THE ELECTRIC SHOP FOR LOCAL SWITCH TROUBLE.
Transmitter Deviation
19P A3424 State
FUEL GAS PRESSURE
19P A3420 State
STAB TOWER OVERHEAD PRESS XTMR DEVIATION
TRANSMITTER DEVIATION ALARM - THE TWO (2) TRANSMITTERS IN EACH PROCESS SHOULD READ THE SAME. ONE TRANSMITTER IS WIRED TO THE TDC. THE OTHER TRANSMITTER IS WIRED TO THE TMR AND SENT TO THE TDC VIA SOFT LINK. THE TDC COMPARES THE TWO READINGS AND ACTIVATES A DEVIATION ALARM WHEN THE TRANSMITTERS DIFFER BY MORE THAN 5% FOR AT LEAST 5 MINUTES.
CONTACT THE INSTRUMENT SHOP.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE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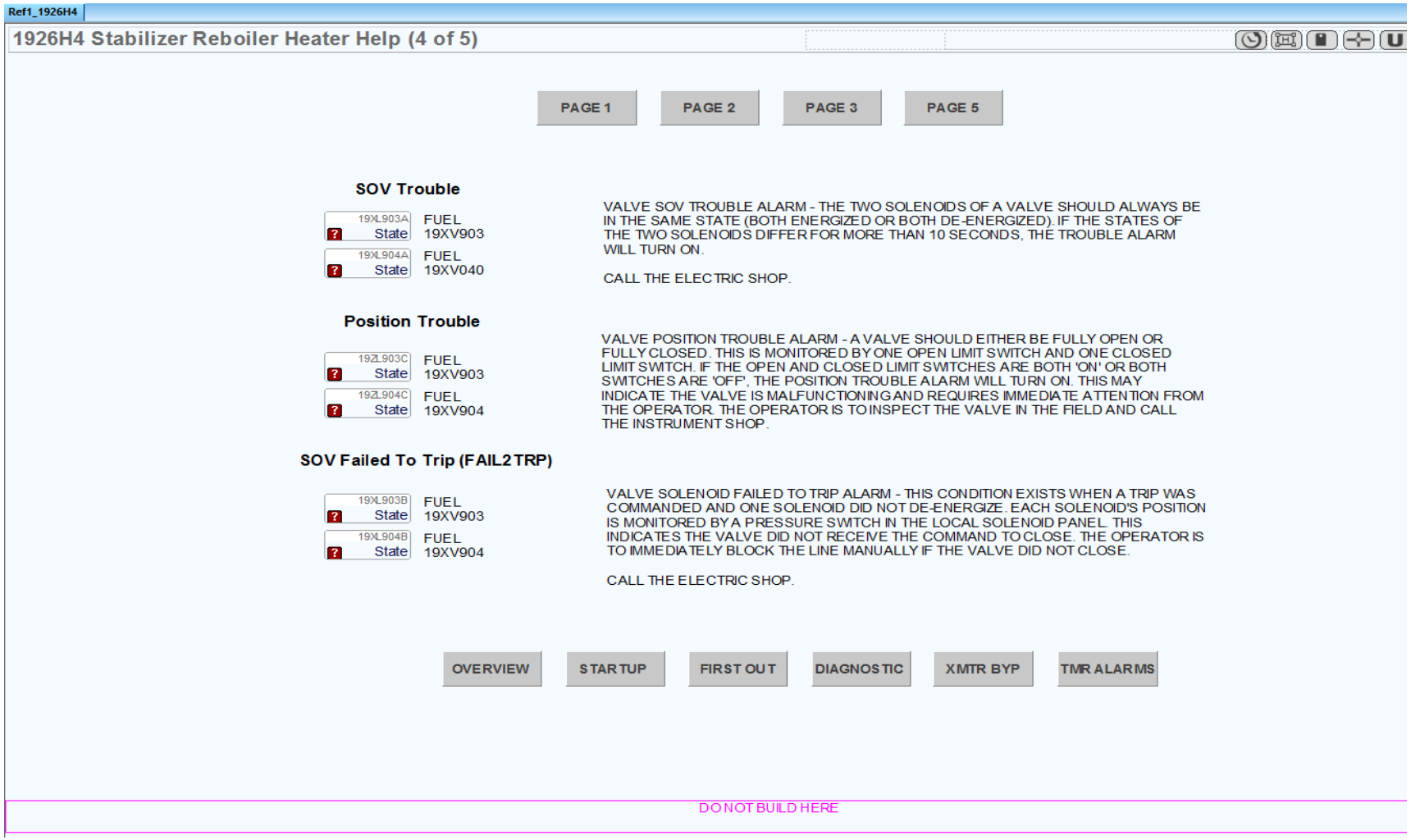
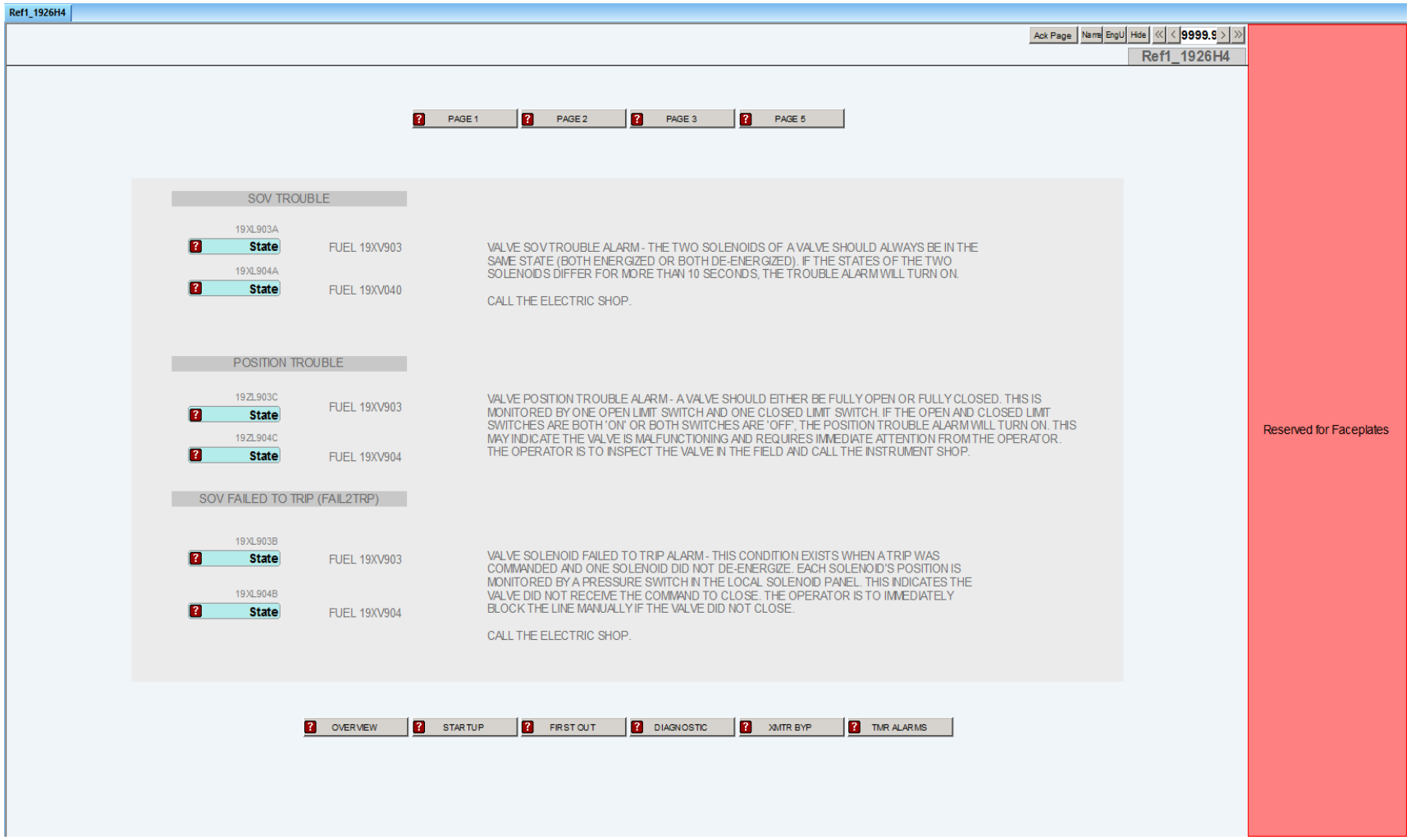
Ref1_1926H3
PAGE 1
PAGE 2
PAGE 4
PAGE 5
TRANSMITTER TROUBLE
19XL419T
State
FUEL GAS PRESSURE
TRANSMITTER TROUBLE ALARM - A TROUBLE CONDITION INDICATES THE TRANSMITTER READING IS BELOW 3.9 mA OR ABOVE 20.3 mA.
19XL407T
State
STABILIZER TOWER OVERHEAD PRESSURE
CONTACT THE INSTRUMENT SHOP.
SWITCH TROUBLE
19XL906T
State
DCS SHUTDOWN SWITCH
SWITCH TROUBLE ALARM - EACH SWITCH HAS A SET OF TWO (2) OUTPUT CONTACTS. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE CONTACTS DIFFER (ONE CONTACT IS CLOSED WHILE THE OTHER CONTACT IS OPEN.)
CONTACT THE INSTRUMENT SHOP FOR DCS SWITCH TROUBLE.
19XL907T
State
LOCAL SHUTDOWN
CONTACT THE ELECTRIC SHOP FOR LOCAL SWITCH TROUBLE.
TRANSMITTER DEVIATION
19PA3424
State
FUEL GAS PRESSURE
TRANSMITTER DEVIATION ALARM - THE TWO (2) TRANSMITTERS IN EACH PROCESS SHOULD READ THE SAME. ONE TRANSMITTER IS WIRED TO THE TDC. THE OTHER TRANSMITTER IS WIRED TO THE TMR AND SENT TO THE TDC VIA SOFT LINK. THE TDC COMPARES THE TWO READINGS AND ACTIVATES A DEVIATION ALARM WHEN THE TRANSMITTERS DIFFER BY MORE THAN 5% FOR AT LEAST 5 MINUTES.
19PA3420
State
STAB TOWER OVERHEAD PRESS XTMR DEVIATION
CONTACT THE INSTRUMENT SHOP.
OVERVIEW
STARTUP
DIAGNOSTIC
FIRST OUT
XMTR BYP
TMR ALARMS
Reserved for Faceplates

1.21 1926H4 STABILIZER REBOILER HEATER HELP (4 OF 5) (Ref1_1926H4.htm)


Ref1_1926H4
1926H4 Stabilizer Reboiler Heater Help (4 of 5)
PAGE 1
PAGE 2
PAGE 3
PAGE 5
SOV Trouble
19XL903A State FUEL 19XV903
19XL904A State FUEL 19XV040
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
Position Trouble
19ZL903C State FUEL 19XV903
19ZL904C State FUEL 19XV904
VALVE POSITION TROUBLE ALARM - A VALVE SHOULD EITHER BE FULLY OPEN OR FULLY CLOSED. THIS IS MONITORED BY ONE OPEN LIMIT SWITCH AND ONE CLOSED LIMIT SWITCH. IF THE OPEN AND CLOSED LIMIT SWITCHES ARE BOTH 'ON' OR BOTH SWITCHES ARE 'OFF', THE POSITION TROUBLE ALARM WILL TURN ON. THIS MAY INDICATE THE VALVE IS MALFUNCTIONING AND REQUIRES IMMEDIATE ATTENTION FROM THE OPERATOR. THE OPERATOR IS TO INSPECT THE VALVE IN THE FIELD AND CALL THE INSTRUMENT SHOP.
SOV Failed To Trip (FAIL2TRP)
19XL903B State FUEL 19XV903
19XL904B State FUEL 19XV904
VALVE SOLENOID FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A TRIP WAS COMMANDED AND ONE SOLENOID DID NOT DE-ENERGIZE. EACH SOLENOID'S POSITION IS MONITORED BY A PRESSURE SWITCH IN THE LOCAL SOLENOID PANEL. THIS INDICATES THE VALVE DID NOT RECEIVE THE COMMAND TO CLOSE. THE OPERATOR IS TO IMMEDIATELY BLOCK THE LINE MANUALLY IF THE VALVE DID NOT CLOSE.
CALL THE ELECTRIC SHOP.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE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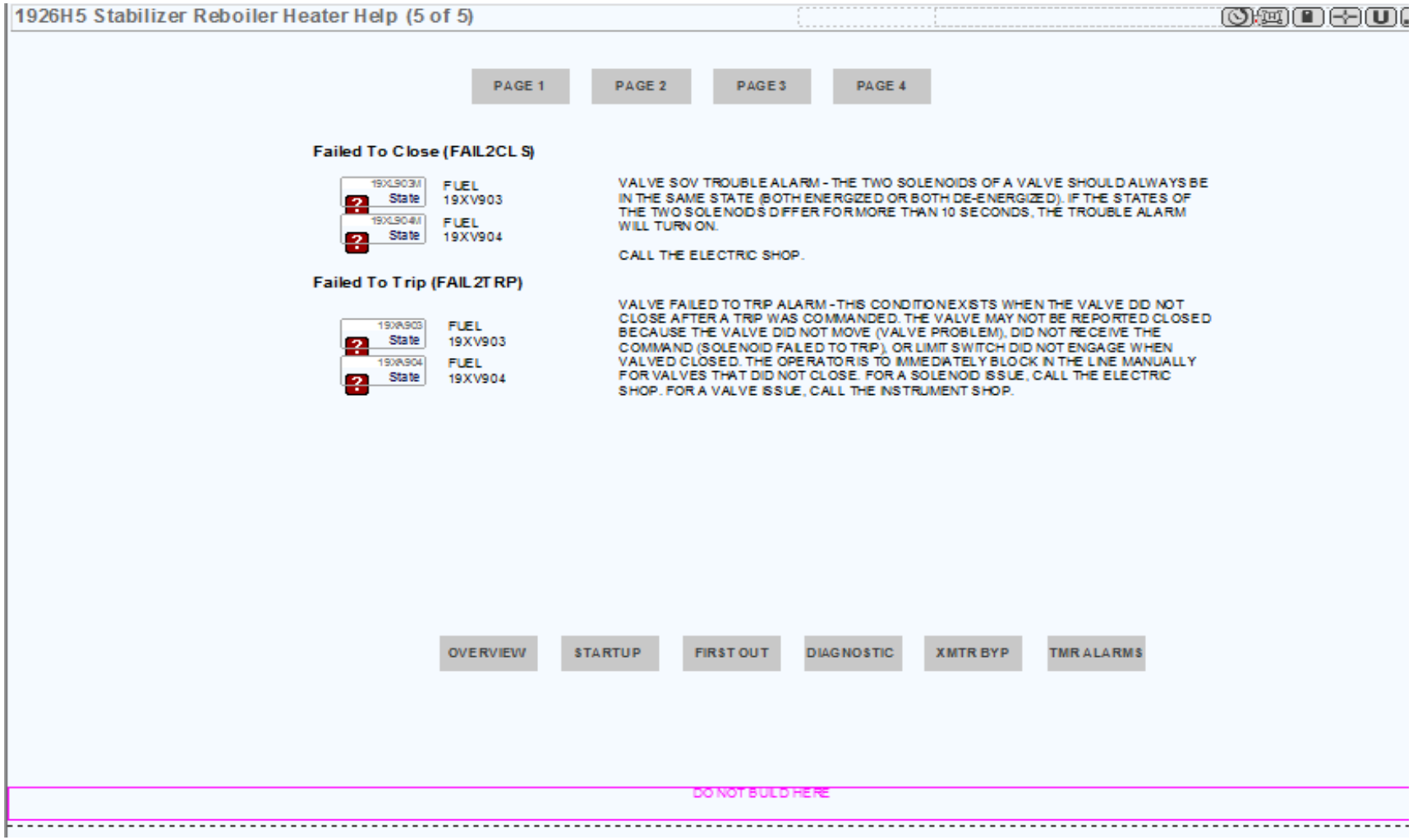
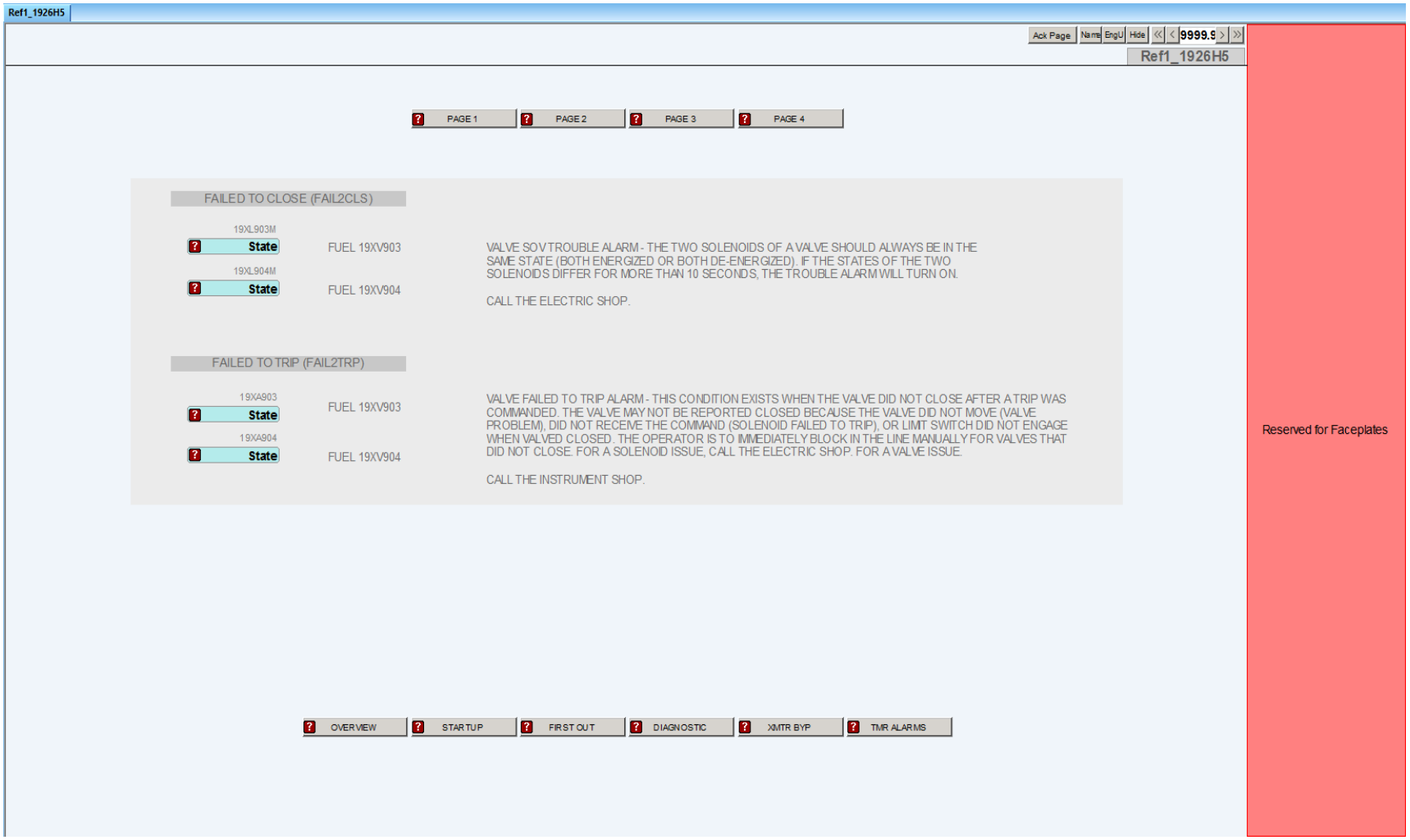
Ref1_1926H4
PAGE 1
PAGE 2
PAGE 3
PAGE 5
SOV TROUBLE
19XL903A
State
FUEL 19XV903
19XL904A
State
FUEL 19XV040
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
POSITION TROUBLE
19ZL903C
State
FUEL 19XV903
19ZL904C
State
FUEL 19XV904
VALVE POSITION TROUBLE ALARM - A VALVE SHOULD EITHER BE FULLY OPEN OR FULLY CLOSED. THIS IS MONITORED BY ONE OPEN LIMIT SWITCH AND ONE CLOSED LIMIT SWITCH. IF THE OPEN AND CLOSED LIMIT SWITCHES ARE BOTH 'ON' OR BOTH SWITCHES ARE 'OFF', THE POSITION TROUBLE ALARM WILL TURN ON. THIS MAY INDICATE THE VALVE IS MALFUNCTIONING AND REQUIRES IMMEDIATE ATTENTION FROM THE OPERATOR. THE OPERATOR IS TO INSPECT THE VALVE IN THE FIELD AND CALL THE INSTRUMENT SHOP.
SOV FAILED TO TRIP (FAIL2TRP)
19XL903B
State
FUEL 19XV903
19XL904B
State
FUEL 19XV904
VALVE SOLENOID FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A TRIP WAS COMMANDED AND ONE SOLENOID DID NOT DE-ENERGIZE. EACH SOLENOID'S POSITION IS MONITORED BY A PRESSURE SWITCH IN THE LOCAL SOLENOID PANEL. THIS INDICATES THE VALVE DID NOT RECEIVE THE COMMAND TO CLOSE. THE OPERATOR IS TO IMMEDIATELY BLOCK THE LINE MANUALLY IF THE VALVE DID NOT CLOSE.
CALL THE ELECTRIC SHOP.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
Reserved for Faceplates

1.22 1926H5 STABILIZER REBOILER HEATER HELP (5 OF 5) (Ref1_1926H5.htm)



Ref1_1926H5
1926H5 Stabilizer Reboiler Heater Help (5 of 5)
PAGE 1
PAGE 2
PAGE 3
PAGE 4
Failed To Close (FAIL2CLS)
19XL903M
State
FUEL
19XV903
19XL904M
State
FUEL
19XV904
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
Failed To Trip (FAIL2TRP)
19XA903
State
FUEL
19XV903
19XA904
State
FUEL
19XV904
VALVE FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN THE VALVE DID NOT CLOSE AFTER A TRIP WAS COMMANDED. THE VALVE MAY NOT BE REPORTED CLOSED BECAUSE THE VALVE DID NOT MOVE (VALVE PROBLEM), DID NOT RECEIVE THE COMMAND (SOLENOID FAILED TO TRIP), OR LIMIT SWITCH DID NOT ENGAGE WHEN VALVED CLOSED. THE OPERATOR IS TO IMMEDIATELY BLOCK IN THE LINE MANUALLY FOR VALVES THAT DID NOT CLOSE. FOR A SOLENOID ISSUE, CALL THE ELECTRIC SHOP. FOR A VALVE ISSUE, CALL THE INSTRUMENT SHOP.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
DO NOT BUILD HERE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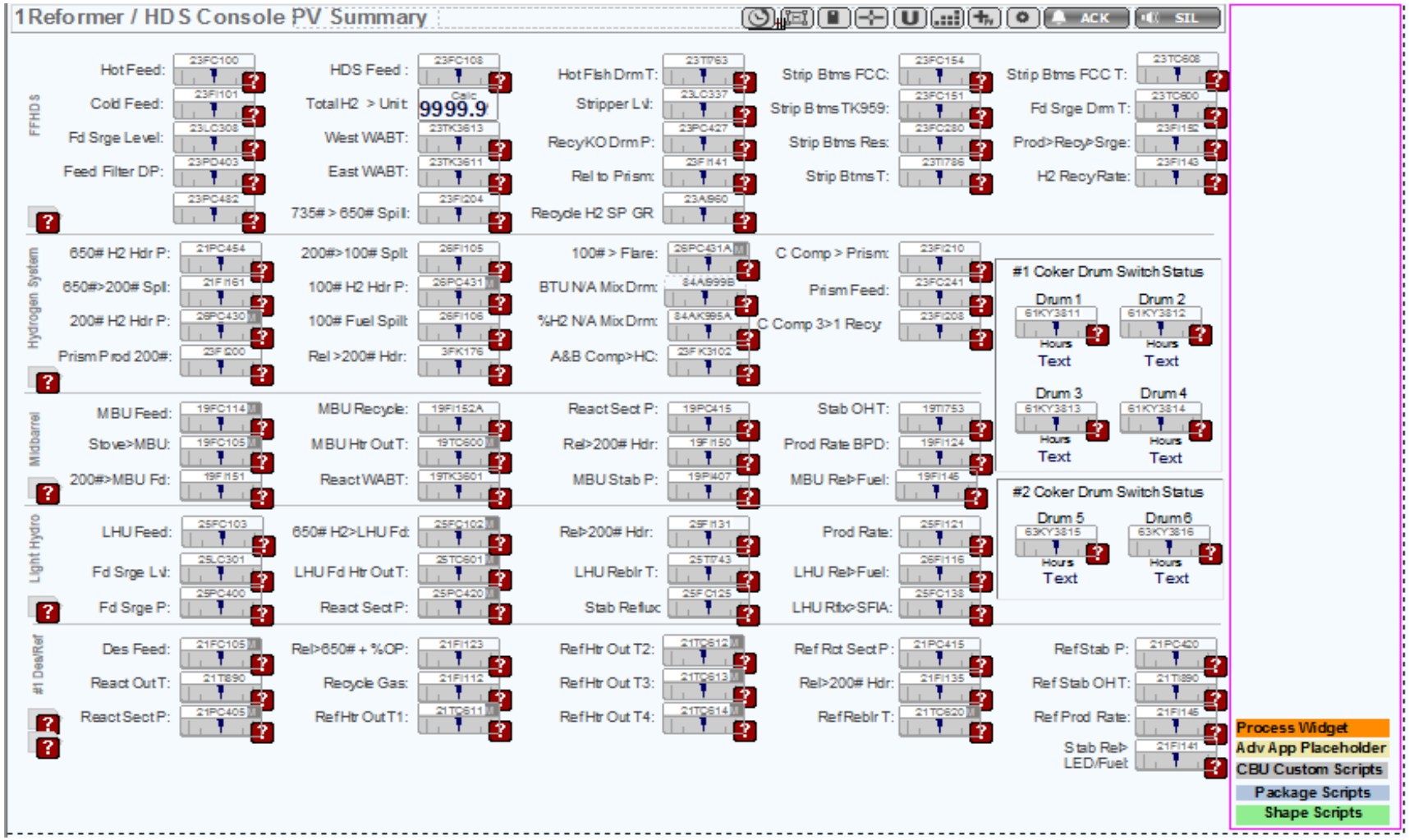
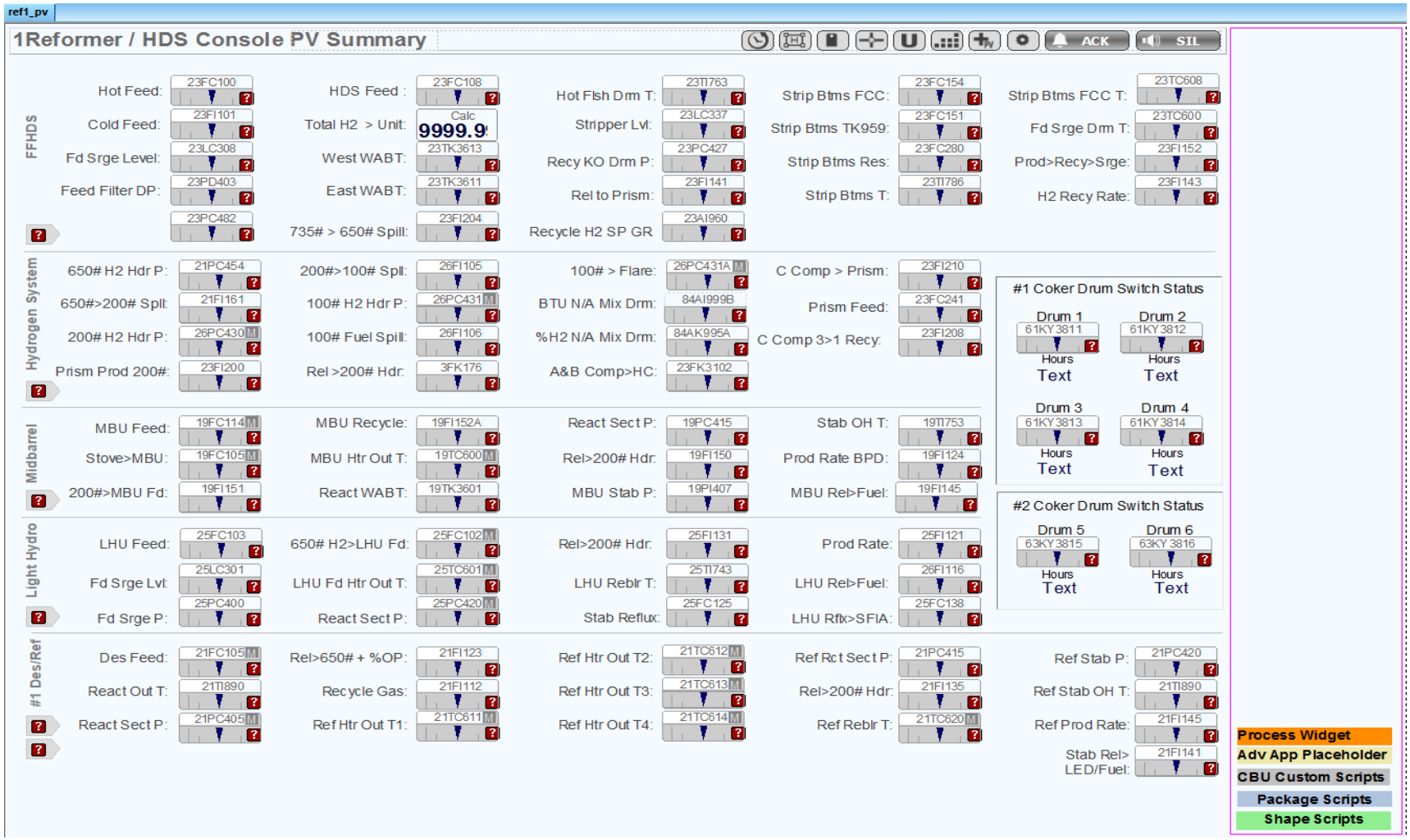
PAGE 1
PAGE 2
PAGE 3
PAGE 4
FAILED TO CLOSE (FAIL2CLS)
19XL903M
State
FUEL 19XV903
19XL904M
State
FUEL 19XV904
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
FAILED TO TRIP (FAIL2TRP)
19XA903
State
FUEL 19XV903
19XA904
State
FUEL 19XV904
VALVE FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN THE VALVE DID NOT CLOSE AFTER A TRIP WAS COMMANDED. THE VALVE MAY NOT BE REPORTED CLOSED BECAUSE THE VALVE DID NOT MOVE (VALVE PROBLEM), DID NOT RECEIVE THE COMMAND (SOLENOID FAILED TO TRIP), OR LIMIT SWITCH DID NOT ENGAGE WHEN VALVED CLOSED. THE OPERATOR IS TO IMMEDIATELY BLOCK IN THE LINE MANUALLY FOR VALVES THAT DID NOT CLOSE. FOR A SOLENOID ISSUE, CALL THE ELECTRIC SHOP. FOR A VALVE ISSUE.
CALL THE INSTRUMENT SHOP.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTIC
XMTR BYP
TMR ALARMS
Reserved for Faceplates

1.23 1 REFORMER / HDS CONSOLE PV SUMMARY (ref1_pv.htm)




ref1_pv
1Reformer / HDS Console PV Summary
ACK
SIL
FFHDS
Hot Feed: 23FC100
Cold Feed: 23FI101
Fd Srge Level: 23LC308
Feed Filter DP: 23PD403
23PC482
HDS Feed : 23FC108
Total H2 > Unit: Calc 9999.9
West WABT: 23TK3613
East WABT: 23TK3611
735# > 650# Spill: 23FI204
Hot Fish Drm T: 23TI763
Stripper Lvl: 23LC337
Recy KO Drm P: 23PC427
Rel to Prism: 23FI141
Recycle H2 SP GR 23AI960
Strip Btms FCC: 23FC154
Strip Btms TK959: 23FC151
Strip Btms Res: 23FC280
Strip Btms T: 23TI786
Strip Btms FCC T: 23TC608
Fd Srge Drm T: 23TC600
Prod>Recy>Srge: 23FI152
H2 Recy Rate: 23FI143
Hydrogen System
650# H2 Hdr P: 21PC454
650#>200# Spll: 21FI161
200# H2 Hdr P: 26PC430
Prism Prod 200#: 23FI200
200#>100# Spll: 26FI105
100# H2 Hdr P: 26PC431
100# Fuel Spill: 26FI106
Rel >200# Hdr: 3FK176
100# > Flare: 26PC431A
BTU N/A Mix Drm: 84AI999B
%H2 N/A Mix Drm: 84AK995A
A&B Comp>HC: 23FK3102
C Comp > Prism: 23FI210
Prism Feed: 23FC241
C Comp 3>1 Recy: 23FI208
#1 Coker Drum Switch Status
Drum 1 61KY3811 Hours Text
Drum 2 61KY3812 Hours Text
Drum 3 61KY3813 Hours Text
Drum 4 61KY3814 Hours Text
Midbarrel
MBU Feed: 19FC114
Stove>MBU: 19FC105
200#>MBU Fd: 19FI151
MBU Recycle: 19FI152A
MBU Htr Out T: 19TC600
React WABT: 19TK3601
React Sect P: 19PC415
Rel>200# Hdr: 19FI150
MBU Stab P: 19PI407
Stab OH T: 19TI753
Prod Rate BPD: 19FI124
MBU Rel>Fuel: 19FI145
#2 Coker Drum Switch Status
Drum 5 63KY3815 Hours Text
Drum 6 63KY3816 Hours Text
Light Hydro
LHU Feed: 25FC103
Fd Srge Lvl: 25LC301
Fd Srge P: 25PC400
650# H2>LHU Fd: 25FC102
LHU Fd Htr Out T: 25TC601
React Sect P: 25PC420
Rel>200# Hdr: 25FI131
LHU Reblr T: 25TI743
Stab Reflux: 25FC125
Prod Rate: 25FI121
LHU Rel>Fuel: 26FI116
LHU Rflx>SFIA: 25FC138
#1 Des/Ref
Des Feed: 21FC105
React Out T: 21TI890
React Sect P: 21PC405
Rel>650# + %OP: 21FI123
Recycle Gas: 21FI112
Ref Htr Out T1: 21TC611
Ref Htr Out T2: 21TC612
Ref Htr Out T3: 21TC613
Ref Htr Out T4: 21TC614
Ref Rct Sect P: 21PC415
Rel>200# Hdr: 21FI135
Ref Reblr T: 21TC620
Ref Stab P: 21PC420
Ref Stab OH T: 21TI890
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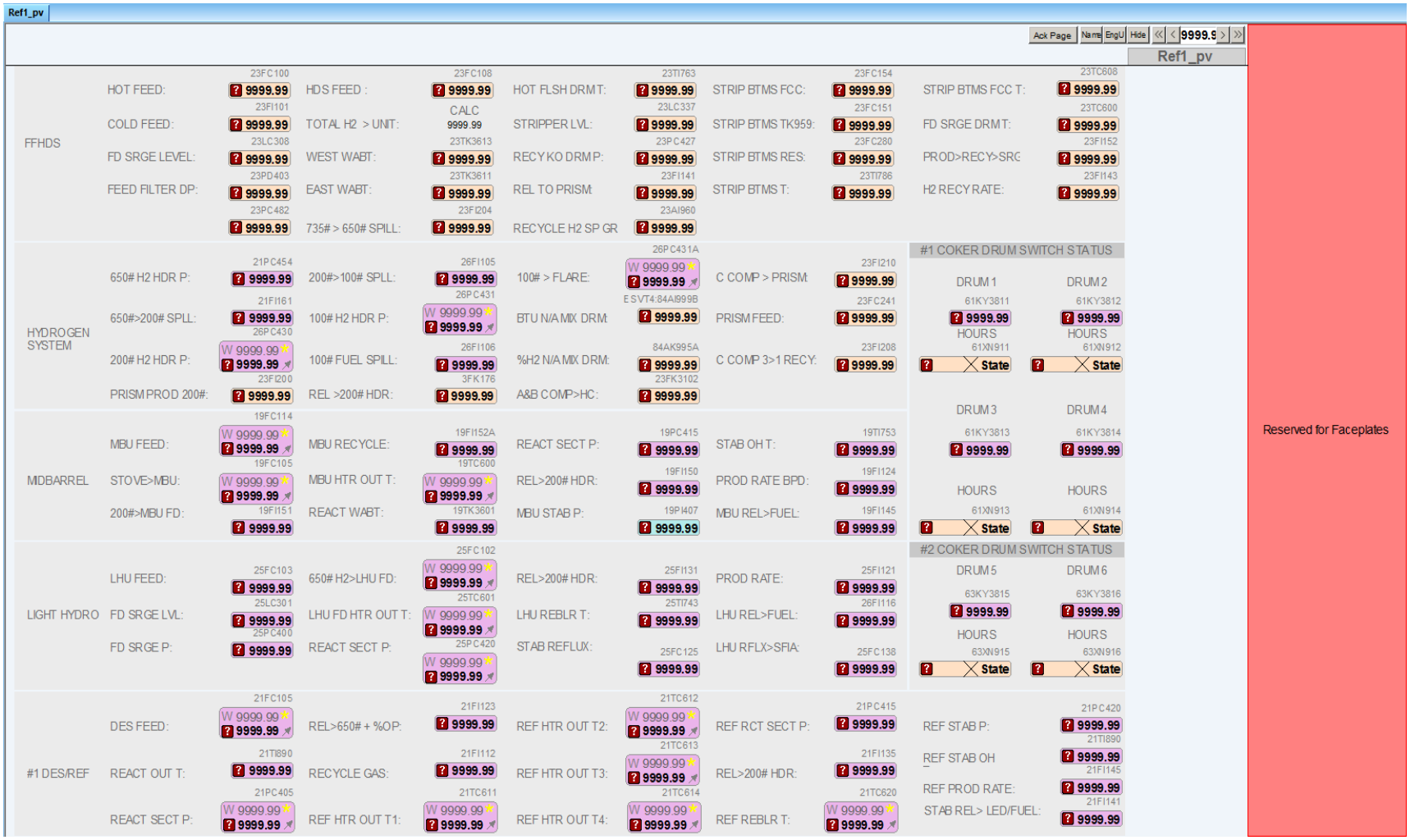
Stab Rel> LED/Fuel: 21FI141
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts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Ref1_pv
FFHDS
HOT FEED: 23FC100 9999.99
COLD FEED: 23FI101 9999.99
FD SRGE LEVEL: 23LC308 9999.99
FEED FILTER DP: 23PD403 9999.99
HDS FEED : 23FC108 9999.99
TOTAL H2 > UNIT: CALC 9999.99
WEST WABT: 23TK3613 9999.99
EAST WABT: 23TK3611 9999.99
735# > 650# SPILL: 23FI204 9999.99
HOT FLSH DRM T: 23TI763 9999.99
STRIPPER LVL: 23LC337 9999.99
RECY KO DRM P: 23PC427 9999.99
REL TO PRISM: 23FI141 9999.99
RECYCLE H2 SP GR 23AI960 9999.99
STRIP BTMS FCC: 23FC154 9999.99
STRIP BTMS TK959: 23FC151 9999.99
STRIP BTMS RES: 23FC280 9999.99
STRIP BTMS T: 23TI786 9999.99
STRIP BTMS FCC T: 23TC608 9999.99
FD SRGE DRM T: 23TC600 9999.99
PROD>RECY>SRC 23FI152 9999.99
H2 RECY RATE: 23FI143 9999.99
HYDROGEN SYSTEM
650# H2 HDR P: 21PC454 9999.99
650#>200# SPLL: 21FI161 9999.99
200# H2 HDR P: 26PC430 W 9999.99 9999.99
PRISM PROD 200#: 23FI200 9999.99
200#>100# SPLL: 26FI105 9999.99
100# H2 HDR P: 26PC431 W 9999.99 9999.99
100# FUEL SPILL: 26FI106 9999.99
REL >200# HDR: 3FK176 9999.99
100# > FLARE: 26PC431A W 9999.99 9999.99
BTU N/A MIX DRM: ESVT4:84AI999B 9999.99
%H2 N/A MIX DRM: 84AK995A 9999.99
A&B COMP>HC: 23FK3102 9999.99
C COMP > PRISM: 23FI210 9999.99
PRISM FEED: 23FC241 9999.99
C COMP 3>1 RECY: 23FI208 9999.99
#1 COKER DRUM SWITCH STATUS
DRUM 1
DRUM 2
61KY3811 9999.99
61KY3812 9999.99
HOURS
61XN911 State
61XN912 State
DRUM 3
DRUM 4
61KY3813 9999.99
61KY3814 9999.99
HOURS
61XN913 State
61XN914 State
MIDBARREL
MBU FEED: 19FC114 W 9999.99 9999.99
STOVE>MBU: 19FC105 W 9999.99 9999.99
200#>MBU FD: 19FI151 9999.99
MBU RECYCLE: 19FI152A 9999.99
MBU HTR OUT T: 19TC600 W 9999.99 9999.99
REACT WABT: 19TK3601 9999.99
REACT SECT P: 19PC415 9999.99
REL>200# HDR: 19FI150 9999.99
MBU STAB P: 19PI407 9999.99
STAB OH T: 19TI753 9999.99
PROD RATE BPD: 19FI124 9999.99
MBU REL>FUEL: 19FI145 9999.99
#2 COKER DRUM SWITCH STATUS
DRUM 5
DRUM 6
63KY3815 9999.99
63KY3816 9999.99
HOURS
63XN915 State
63XN916 State
LIGHT HYDRO
LHU FEED: 25FC103 9999.99
FD SRGE LVL: 25LC301 9999.99
FD SRGE P: 25PC400 9999.99
650# H2>LHU FD: 25FC102 W 9999.99 9999.99
LHU FD HTR OUT T: 25TC601 W 9999.99 9999.99
REACT SECT P: 25PC420 W 9999.99 9999.99
REL>200# HDR: 25FI131 9999.99
LHU REBLR T: 25TI743 9999.99
STAB REFLUX: 25FC125 9999.99
PROD RATE: 25FI121 9999.99
LHU REL>FUEL: 26FI116 9999.99
LHU RFLX>SFIA: 25FC138 9999.99
#1 DES/REF
DES FEED: 21FC105 W 9999.99 9999.99
REACT OUT T: 21TI890 9999.99
REACT SECT P: 21PC405 W 9999.99 9999.99
REL>650# + %OP: 21FI123 9999.99
RECYCLE GAS: 21FI112 9999.99
REF HTR OUT T1: 21TC611 W 9999.99 9999.99
REF HTR OUT T2: 21TC612 W 9999.99 9999.99
REF HTR OUT T3: 21TC613 W 9999.99 9999.99
REF HTR OUT T4: 21TC614 W 9999.99 9999.99
REF RCT SECT P: 21PC415 9999.99
REL>200# HDR: 21FI135 9999.99
REF REBLR T: 21TC620 W 9999.99 9999.99
REF STAB P: 21PC420 9999.99
REF STAB OH 21TI890 9999.99
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STAB REL> LED/FUEL: 21FI141 9999.99
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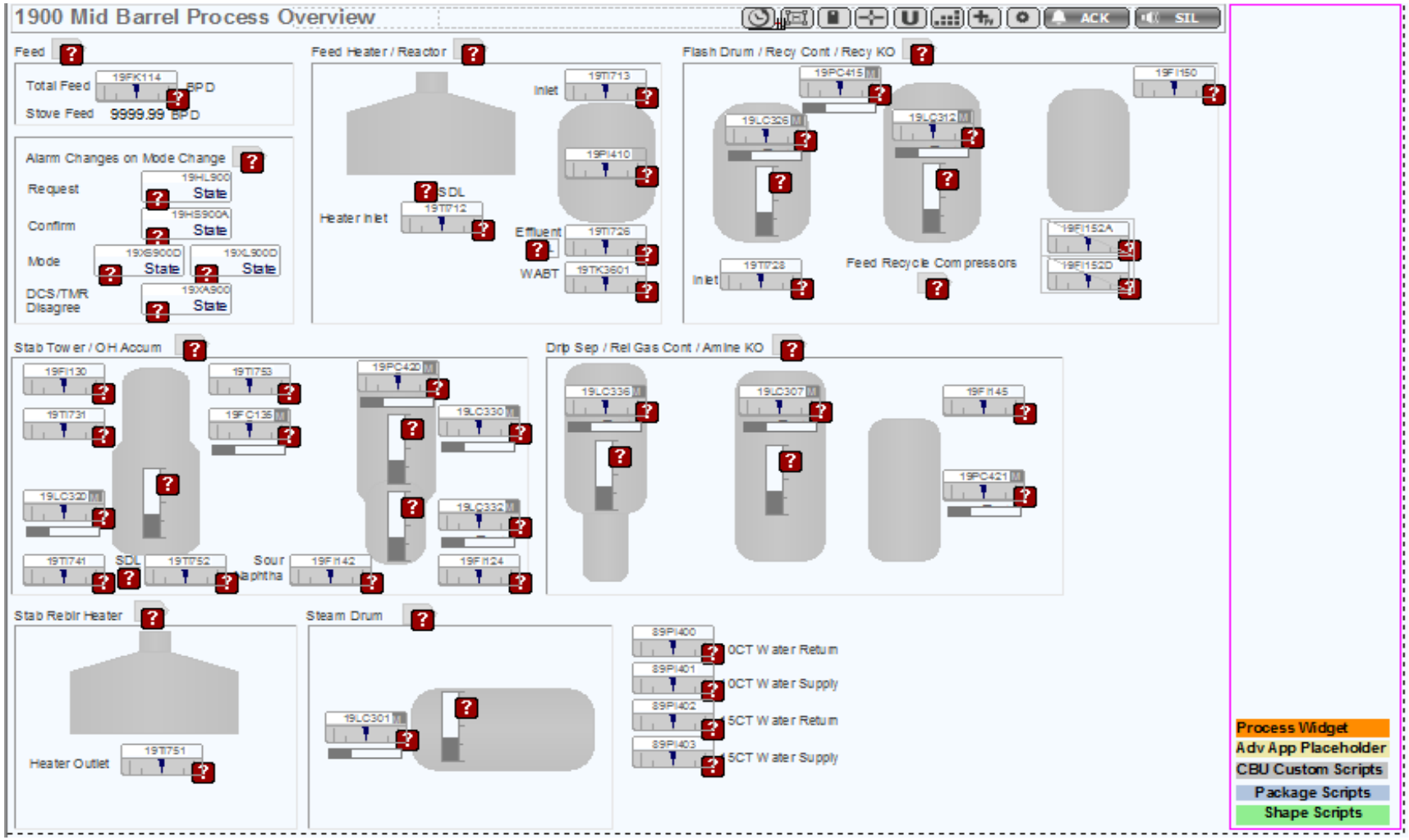
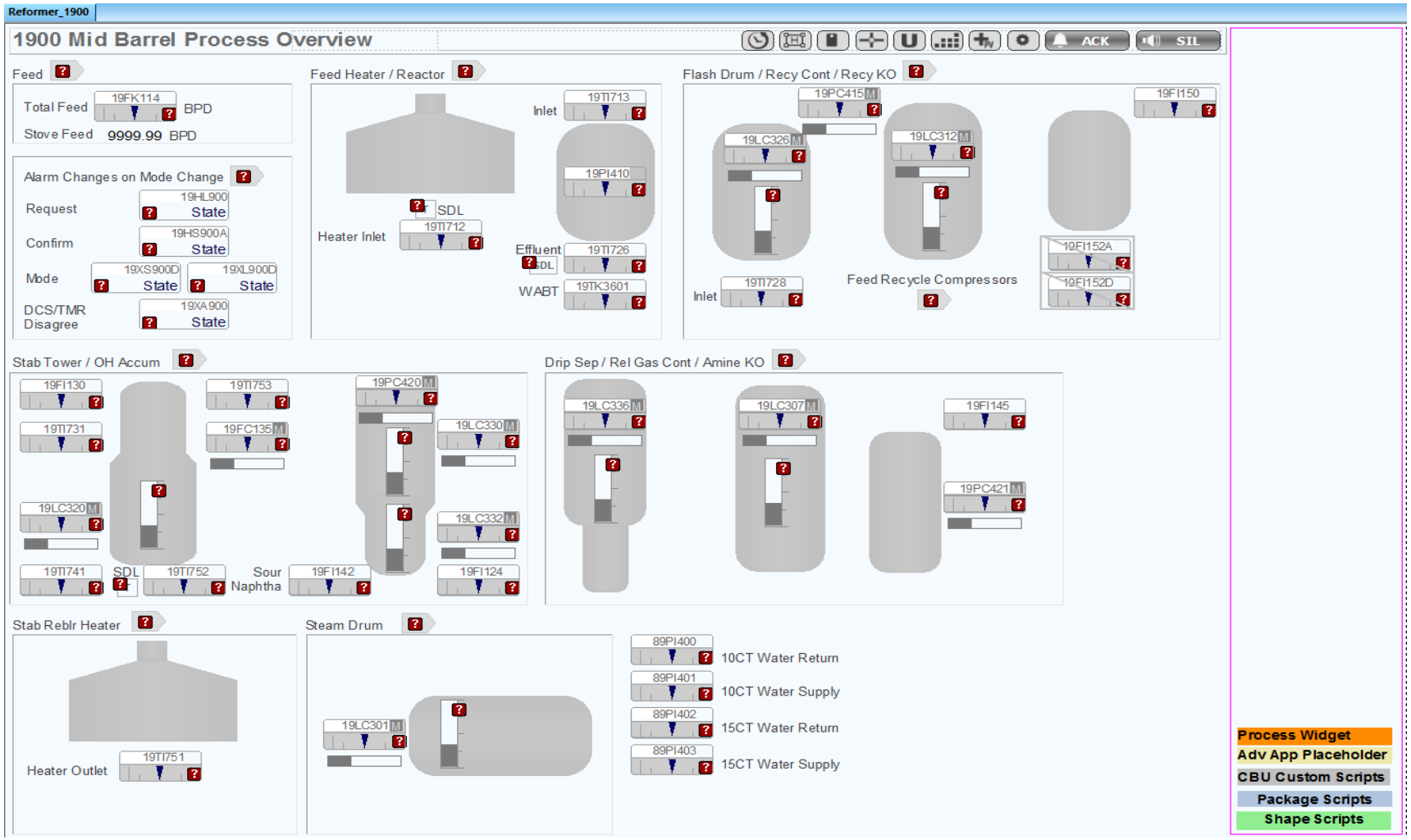
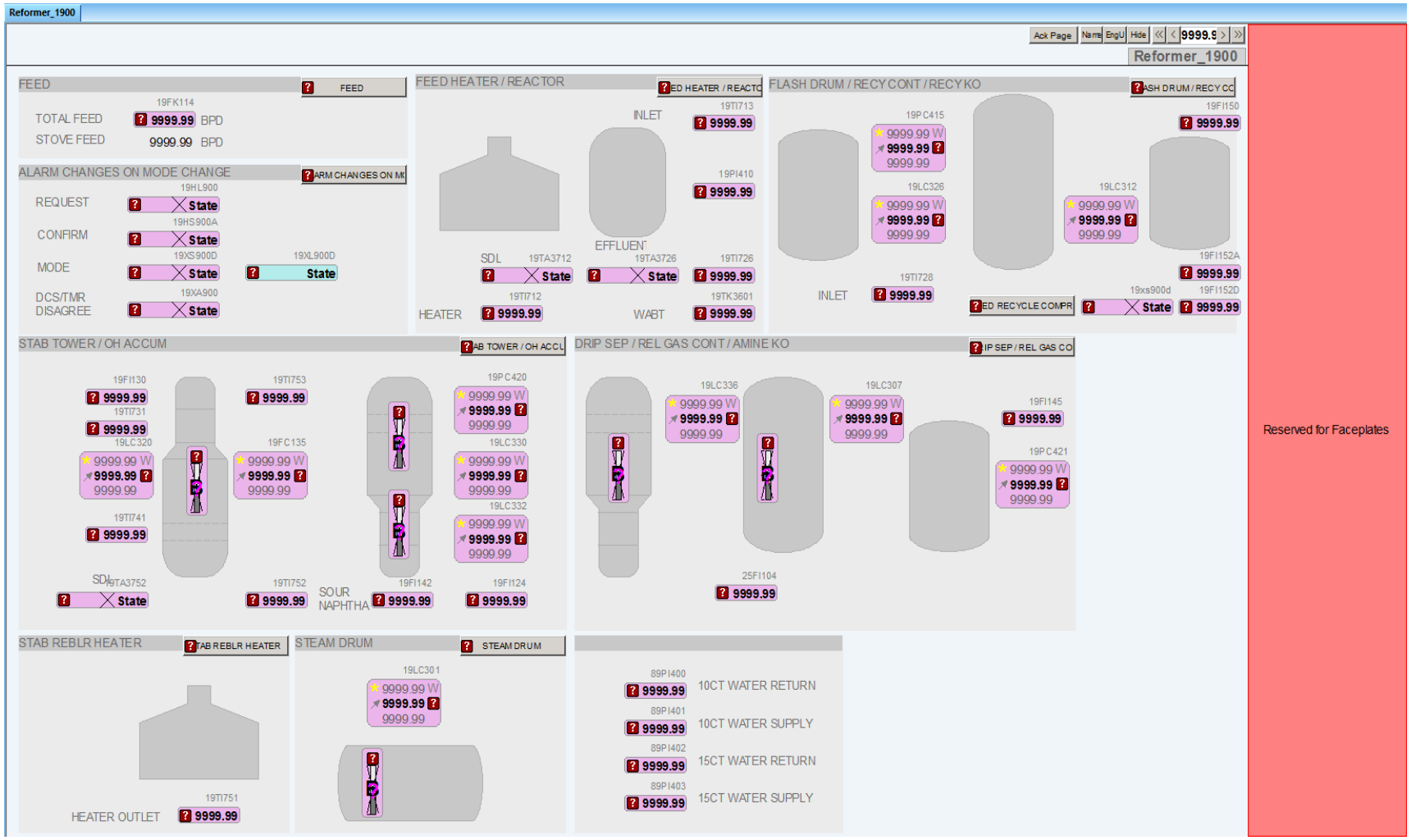
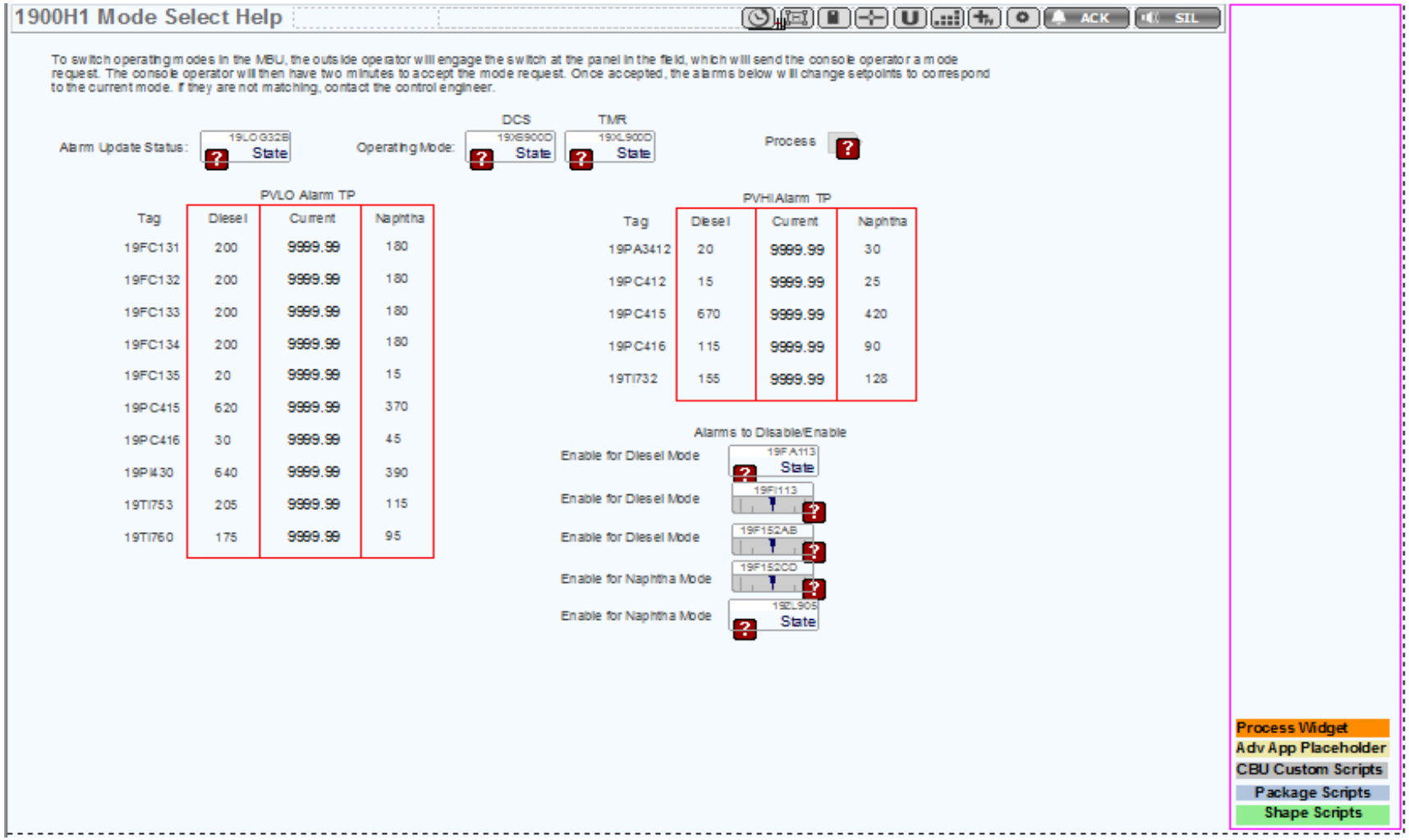
1.24 1900 MID BARREL PROCESS (Reformer_1900.htm)

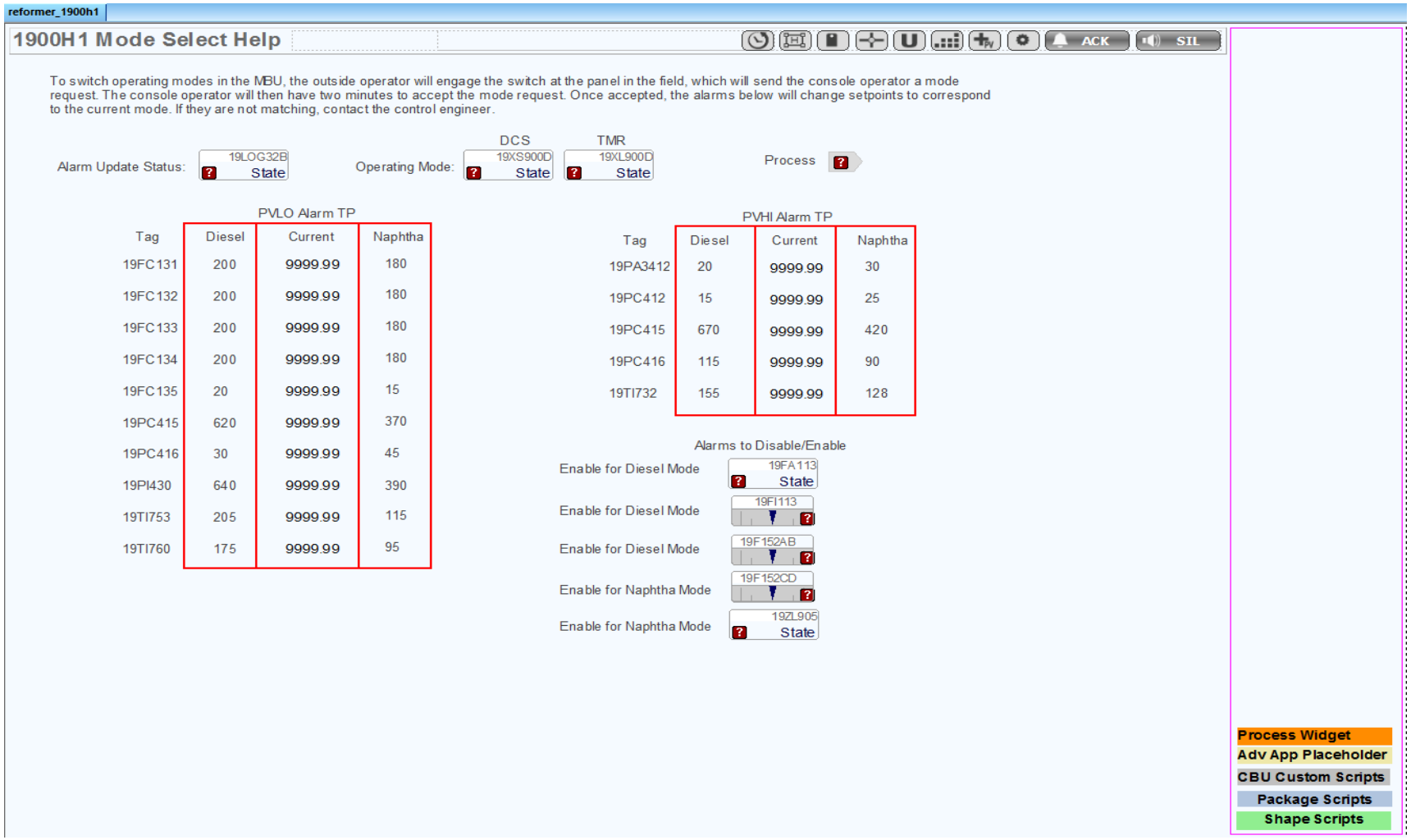


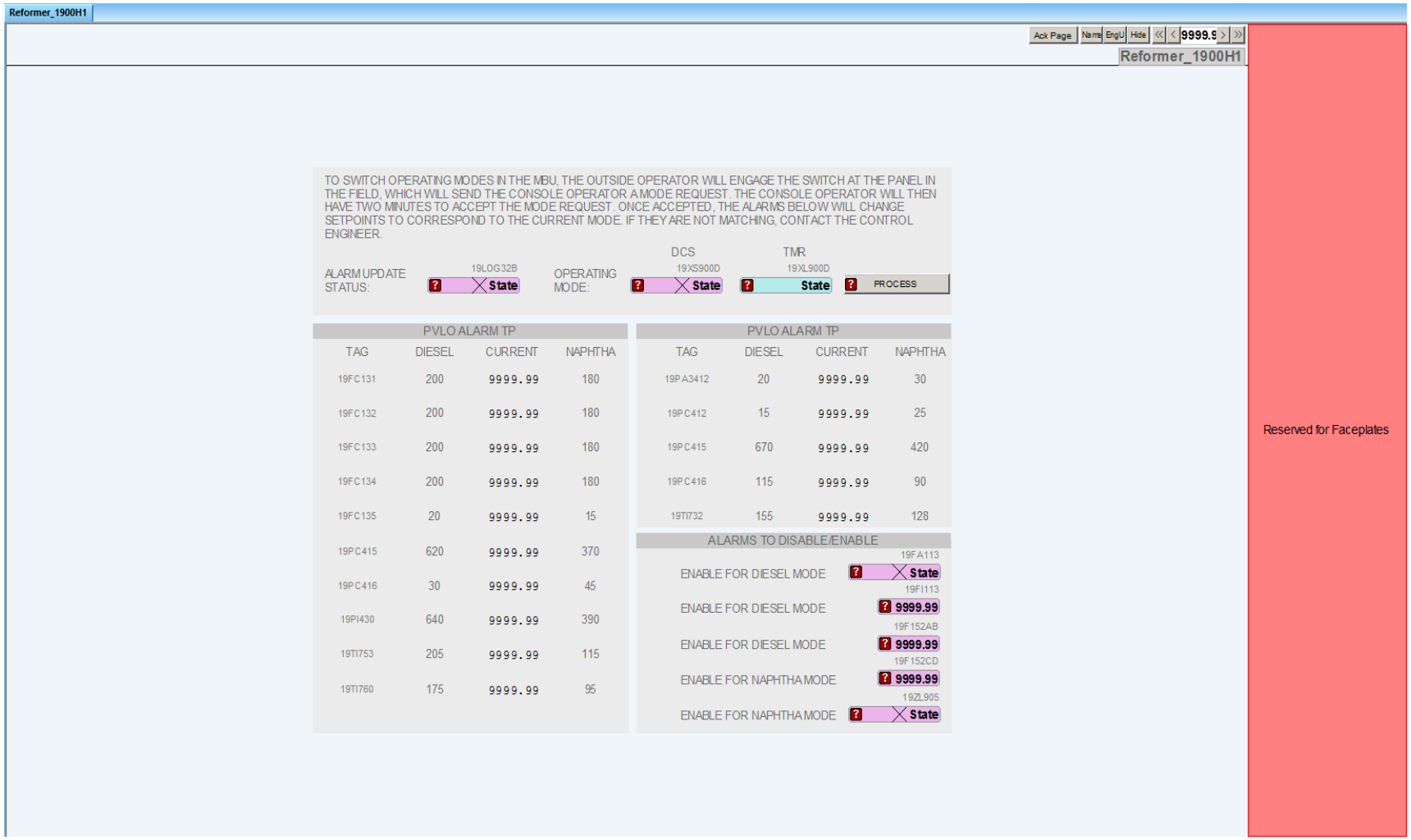

Reformer_1900
1900 Mid Barrel Process Overview
ACK
SIL
Feed
Total Feed
19FK114
BPD
Stove Feed
9999.99 BPD
Alarm Changes on Mode Change
Request
19HL900
State
Confirm
19HS900A
State
Mode
19XS900D
State
19XL900D
State
DCS/TMR Disagree
19XA900
State
Feed Heater / Reactor
Inlet
19TI713
19PI410
SDL
Heater Inlet
19TI712
Effluent
SDL
19TI726
WABT
19TK3601
Flash Drum / Recy Cont / Recy KO
19PC415
19LC326
19LC312
19FI150
19TI728
Inlet
Feed Recycle Compressors
19FI152A
19FI152D
Stab Tower / OH Accum
19FI130
19TI731
19LC320
19TI741
SDL
19TI752
Sour Naphtha
19FI142
19TI753
19FC135
19PC420
19LC330
19LC332
19FI124
Drip Sep / Rel Gas Cont / Amine KO
19LC336
19LC307
19FI145
19PC421
Stab Reblr Heater
Heater Outlet
19TI751
Steam Drum
19LC301
89PI400
10CT Water Return
89PI401
10CT Water Supply
89PI402
15CT Water Return
89PI403
15CT Water Supply
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1900
Ack Page
Name
EngU
Hide
Reformer_1900
FEED
TOTAL FEED
19FK114
9999.99
BPD
STOVE FEED
9999.99
BPD
ALARM CHANGES ON MODE CHANGE
REQUEST
19HL900
State
CONFIRM
19HS900A
State
MODE
19XS900D
State
19XL900D
State
DCS/TMR DISAGREE
19XA900
State
FEED HEATER / REACTOR
INLET
19TI713
9999.99
19PI410
9999.99
EFFLUENT
SDL
19TA3712
State
19TA3726
State
19TI726
9999.99
HEATER
19TI712
9999.99
WABT
19TK3601
9999.99
FLASH DRUM / RECY CONT / RECY KO
19PC415
9999.99 W
9999.99
9999.99
19LC326
19LC312
19FI150
9999.99
19FI152A
9999.99
INLET
19TI728
9999.99
19xs900d
State
19FI152D
9999.99
STAB TOWER / OH ACCUM
19FI130
9999.99
19TI731
9999.99
19LC320
19TI741
9999.99
19TI753
9999.99
19FC135
19PC420
19LC330
19LC332
SDL
19TA3752
State
19TI752
9999.99
SOUR NAPHTHA
19FI142
9999.99
19FI124
9999.99
DRIP SEP / REL GAS CONT / AMINE KO
19LC336
19LC307
19FI145
9999.99
19PC421
25FI104
9999.99
STAB REBLR HEATER
HEATER OUTLET
19TI751
9999.99
STEAM DRUM
19LC301
89PI400
9999.99
10CT WATER RETURN
89PI401
9999.99
10CT WATER SUPPLY
89PI402
9999.99
15CT WATER RETURN
89PI403
9999.99
15CT WATER SUPPLY
Reserved for Faceplates

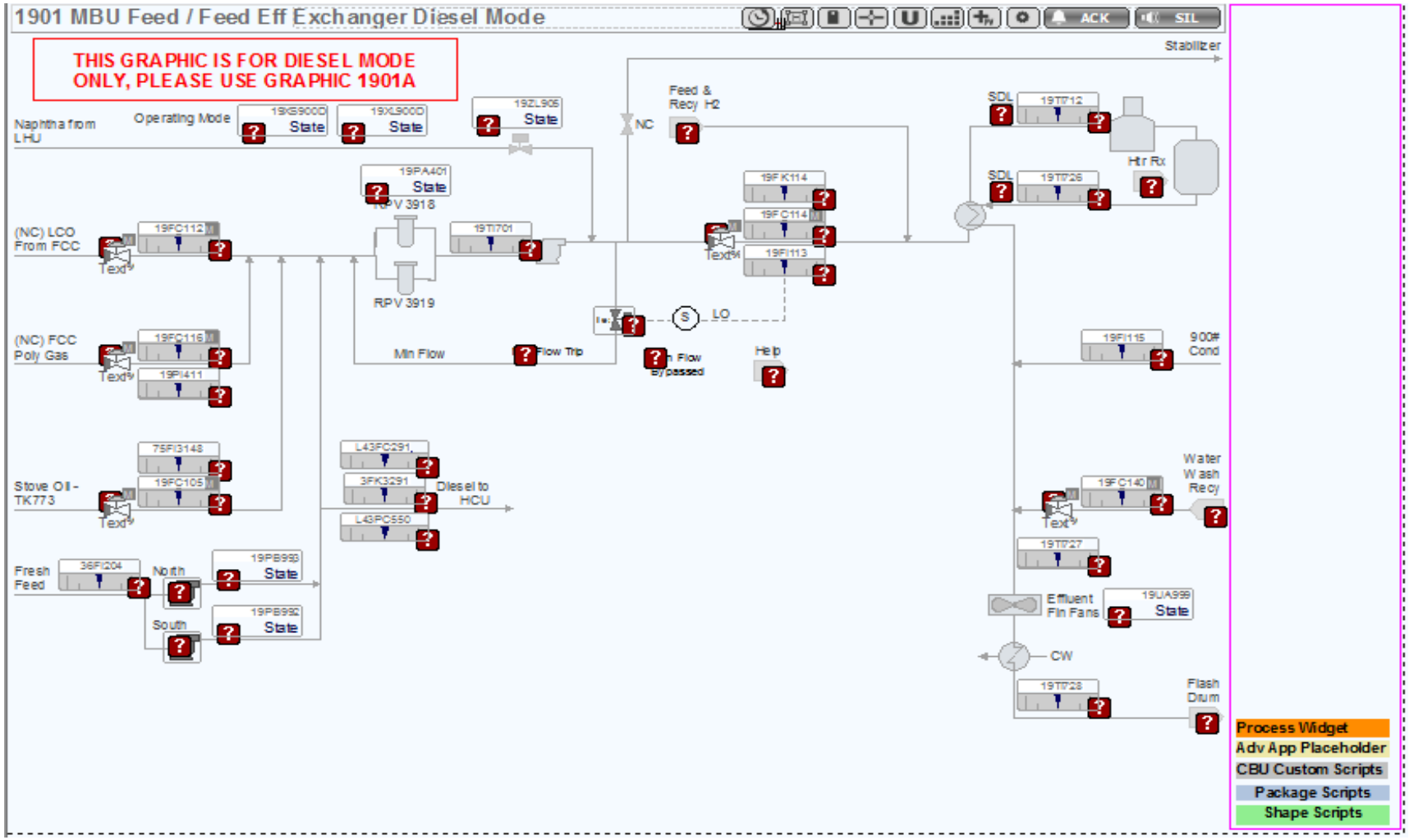
1.25 1900H1 MODE SELECT HELP (reformer_1900h1.htm)

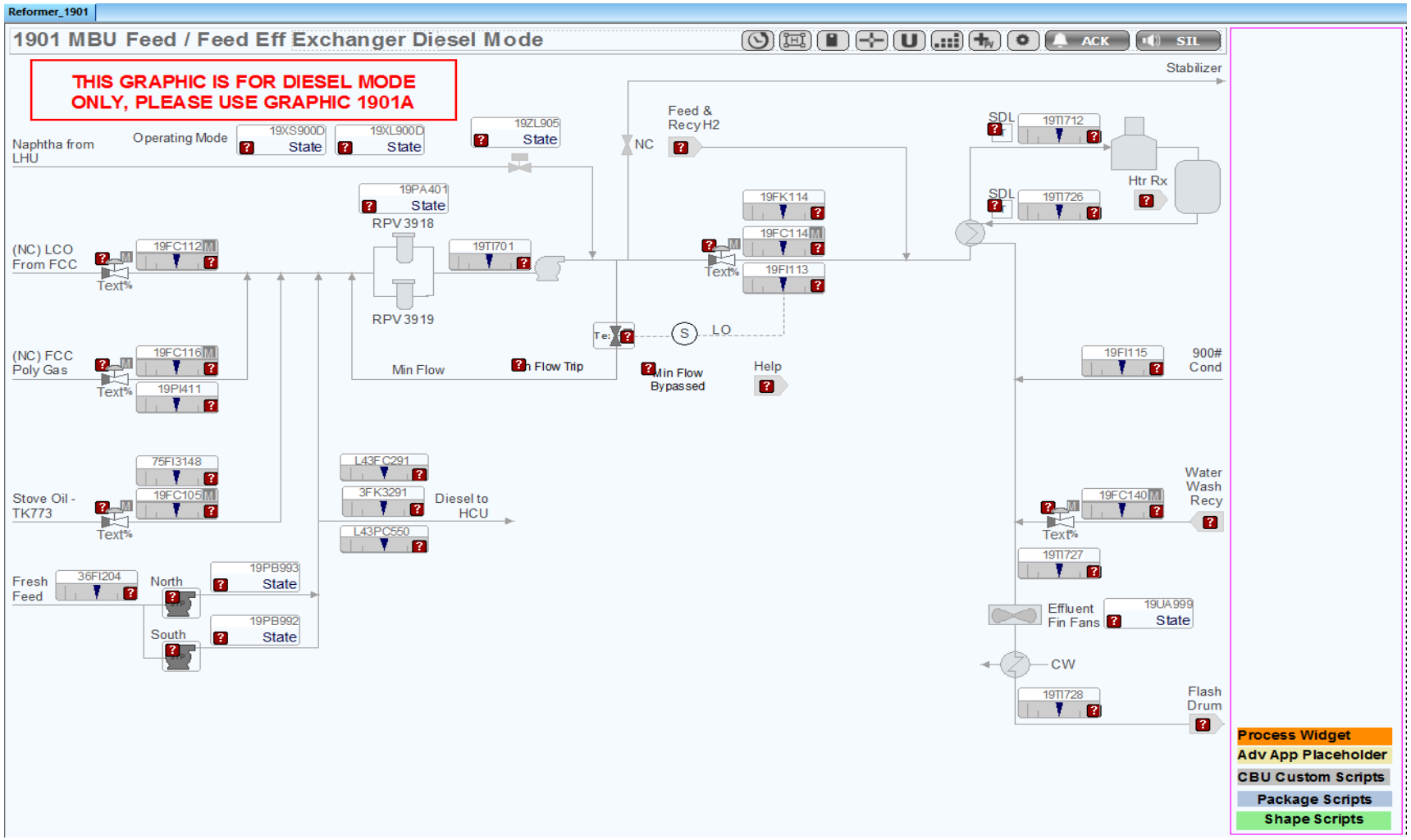


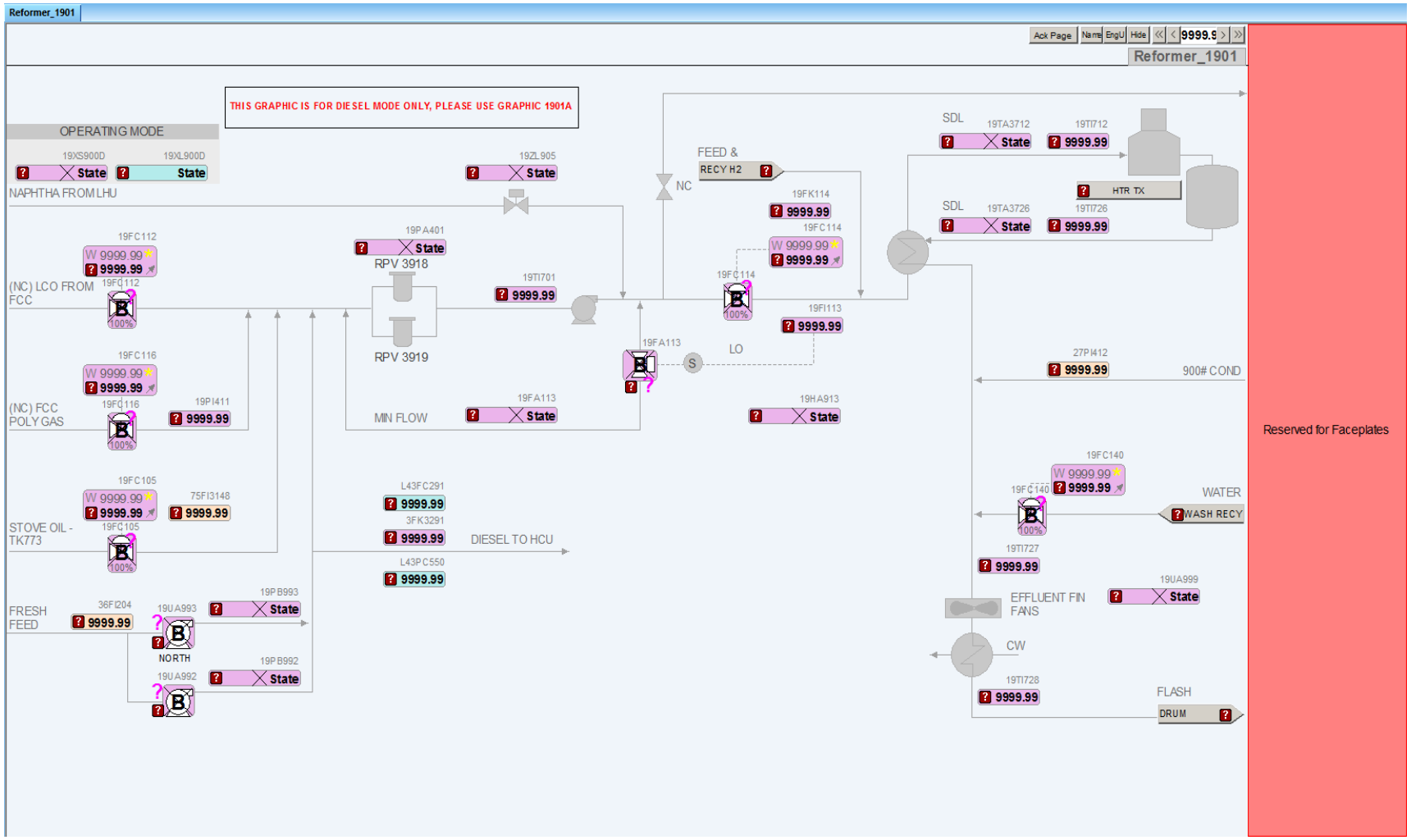

reformer_1900h1
1900H1 Mode Select Help
ACK
SIL
To switch operating modes in the MBU, the outside operator will engage the switch at the panel in the field, which will send the console operator a mode request. The console operator will then have two minutes to accept the mode request. Once accepted, the alarms below will change setpoints to correspond to the current mode. If they are not matching, contact the control engineer.
Alarm Update Status:
19LOG32B
State
Operating Mode:
DCS
19XS900D
State
TMR
19XL900D
State
Process
PVLO Alarm TP
Tag
Diesel
Current
Naphtha
19FC131 200 9999.99 180
19FC132 200 9999.99 180
19FC133 200 9999.99 180
19FC134 200 9999.99 180
19FC135 20 9999.99 15
19PC415 620 9999.99 370
19PC416 30 9999.99 45
19PI430 640 9999.99 390
19TI753 205 9999.99 115
19TI760 175 9999.99 95
PVHI Alarm TP
Tag
Diesel
Current
Naphtha
19PA3412 20 9999.99 30
19PC412 15 9999.99 25
19PC415 670 9999.99 420
19PC416 115 9999.99 90
19TI732 155 9999.99 128
Alarms to Disable/Enable
Enable for Diesel Mode
19FA113
State
Enable for Diesel Mode
19FI113
Enable for Diesel Mode
19F152AB
Enable for Naphtha Mode
19F152CD
Enable for Naphtha Mode
19ZL905
State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1900H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_1900H1
TO SWITCH OPERATING MODES IN THE MBU, THE OUTSIDE OPERATOR WILL ENGAGE THE SWITCH AT THE PANEL IN THE FIELD, WHICH WILL SEND THE CONSOLE OPERATOR A MODE REQUEST. THE CONSOLE OPERATOR WILL THEN HAVE TWO MINUTES TO ACCEPT THE MODE REQUEST. ONCE ACCEPTED, THE ALARMS BELOW WILL CHANGE SETPOINTS TO CORRESPOND TO THE CURRENT MODE. IF THEY ARE NOT MATCHING, CONTACT THE CONTROL ENGINEER.
ALARM UPDATE STATUS:
19LOG32B
State
OPERATING MODE:
DCS
19XS900D
State
TMR
19XL900D
State
PROCESS
PVLO ALARM TP
TAG DIESEL CURRENT NAPHTHA
19FC131 200 9999.99 180
19FC132 200 9999.99 180
19FC133 200 9999.99 180
19FC134 200 9999.99 180
19FC135 20 9999.99 15
19PC415 620 9999.99 370
19PC416 30 9999.99 45
19PI430 640 9999.99 390
19TI753 205 9999.99 115
19TI760 175 9999.99 95
PVLO ALARM TP
TAG DIESEL CURRENT NAPHTHA
19PA3412 20 9999.99 30
19PC412 15 9999.99 25
19PC415 670 9999.99 420
19PC416 115 9999.99 90
19TI732 155 9999.99 128
ALARMS TO DISABLE/ENABLE
19FA113
ENABLE FOR DIESEL MODE
State
19FI113
ENABLE FOR DIESEL MODE
9999.99
19F152AB
ENABLE FOR DIESEL MODE
9999.99
19F152CD
ENABLE FOR NAPHTHA MODE
9999.99
19ZL905
ENABLE FOR NAPHTHA MODE
State
Reserved for Faceplates

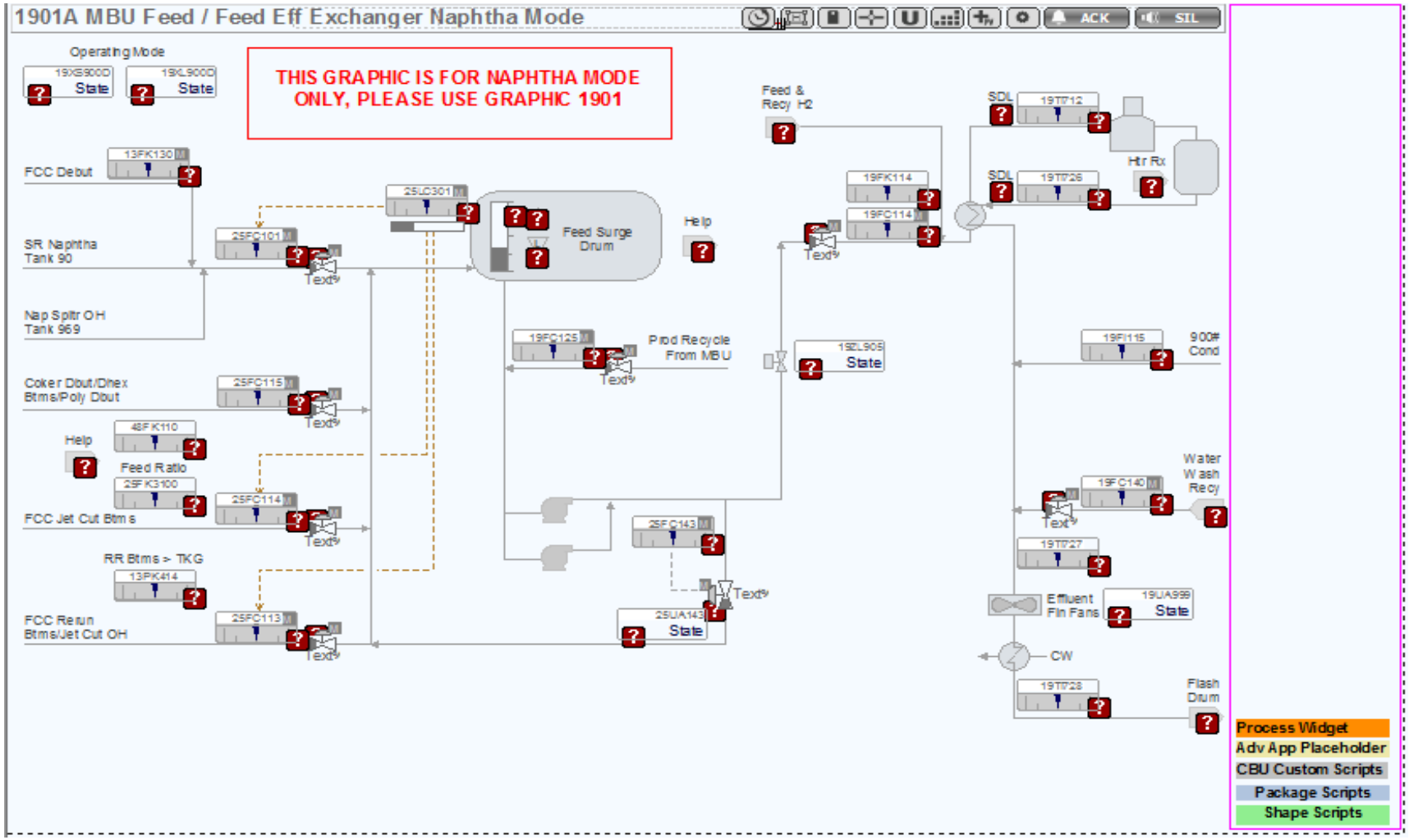
1.26 1901 MBU FEED / FEED EFT EXCHANGER DIESEL MODE (reformer_1901.htm)

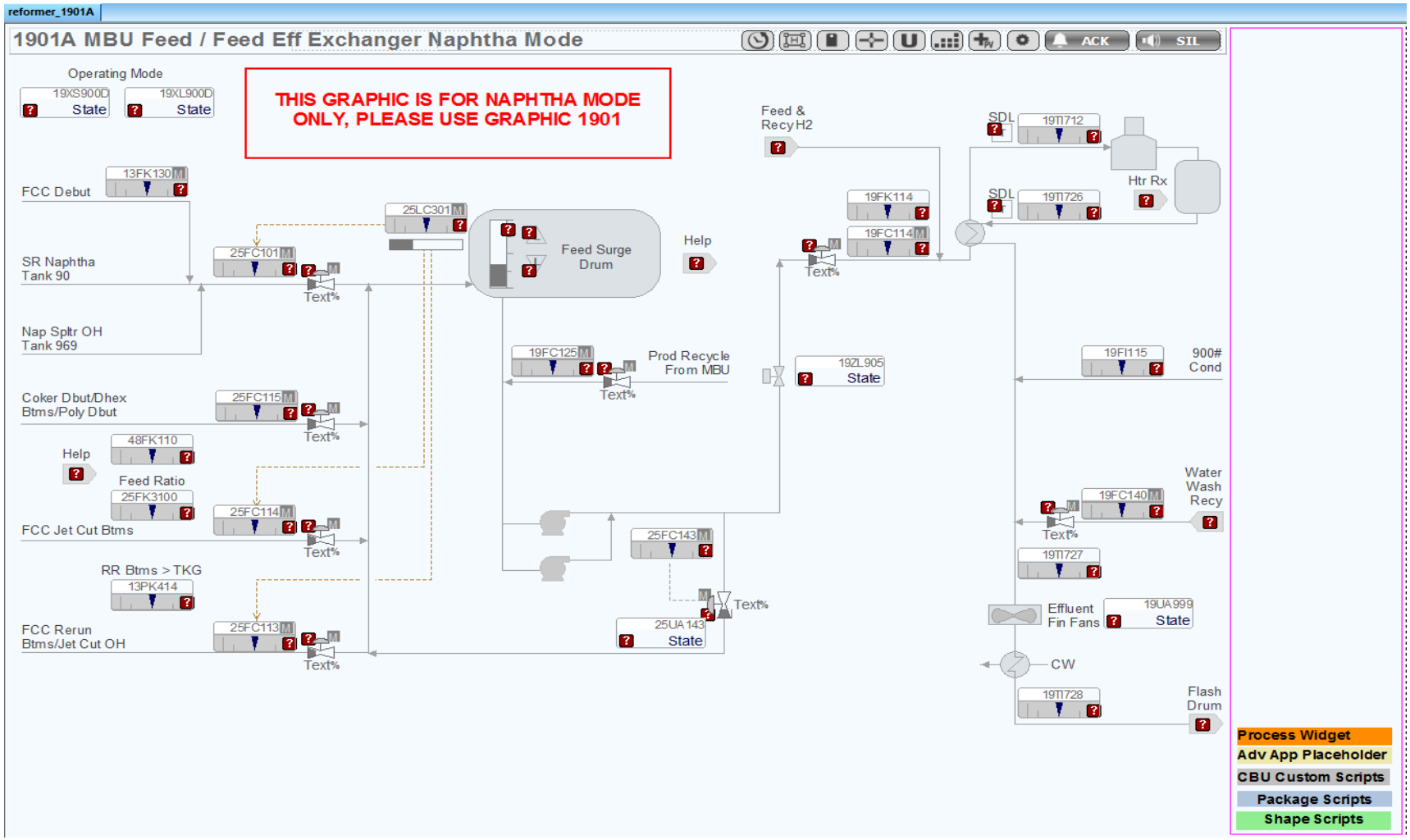


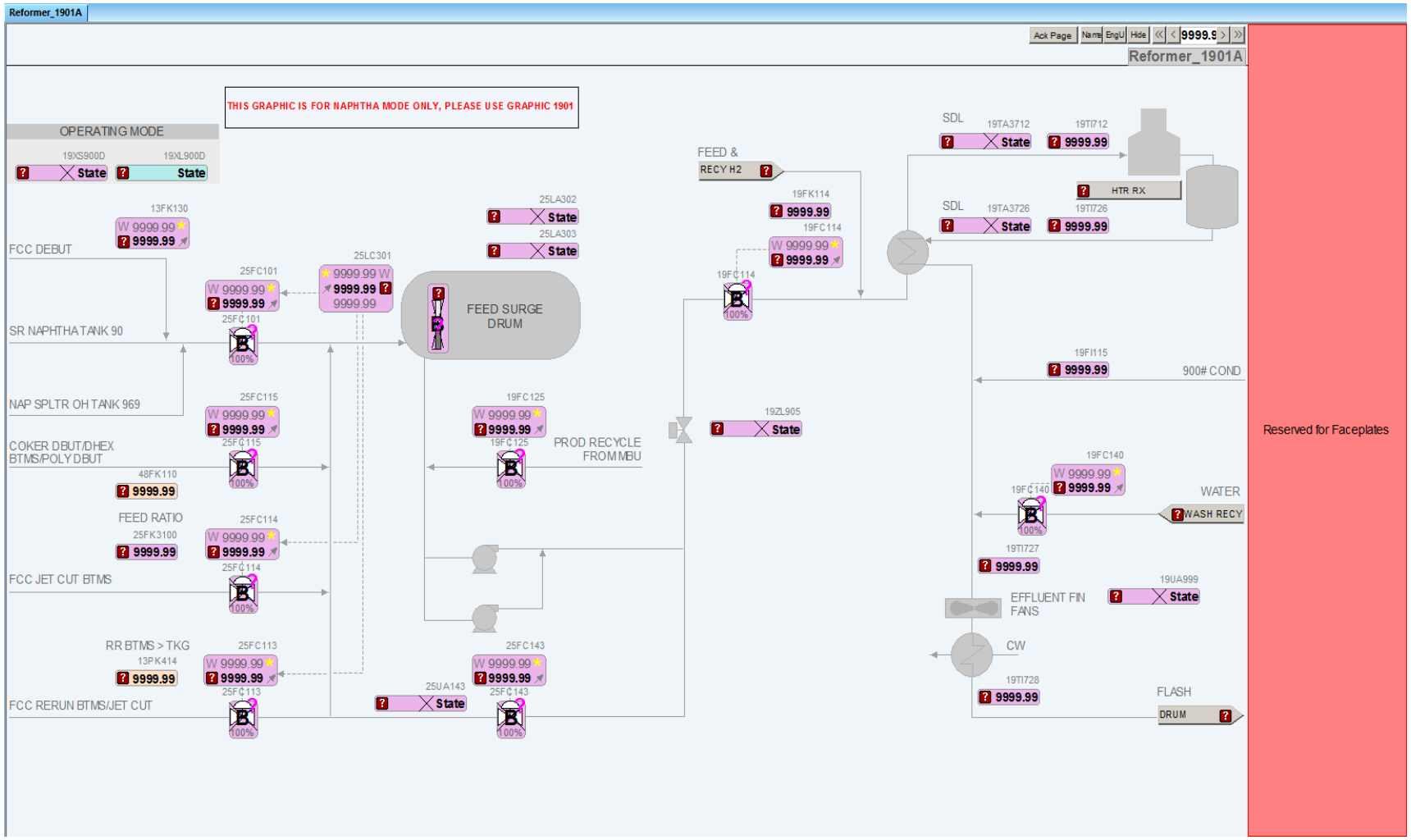

Reformer_1901
1901 MBU Feed / Feed Eff Exchanger Diesel Mode
ACK
SIL
THIS GRAPHIC IS FOR DIESEL MODE ONLY, PLEASE USE GRAPHIC 1901A
Stabilizer
Naphtha from LHU
Operating Mode
19XS900D State
19XL900D State
19ZL905 State
Feed & Recy H2
NC
SDL
19TI712
Htr Rx
SDL
19TI726
19PA401 State
RPV 3918
19FK114
19FC114 M
19FI113
(NC) LCO From FCC
19FC112 M
Text%
19TI701
RPV 3919
Text%
LO
19FI115
900# Cond
(NC) FCC Poly Gas
19FC116 M
Text%
19PI411
Min Flow
Flow Trip
Min Flow Bypassed
Help
75FI3148
L43FC291
Stove Oil - TK773
19FC105 M
Text%
3FK3291
Diesel to HCU
L43PC550
Water Wash Recy
19FC140 M
Text%
19TI727
Fresh Feed
36FI204
North
19PB993 State
South
19PB992 State
Effluent Fin Fans
19UA999 State
CW
19TI728
Flash Drum
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1901
Ack Page
Name
EngU
Hide
Reformer_1901
THIS GRAPHIC IS FOR DIESEL MODE ONLY, PLEASE USE GRAPHIC 1901A
OPERATING MODE
19XS900D
State
19XL900D
State
NAPHTHA FROM LHU
19ZL905
State
19PA401
State
RPV 3918
RPV 3919
19TI701
9999.99
19FC112
W 9999.99
9999.99
(NC) LCO FROM FCC
19FC116
W 9999.99
9999.99
(NC) FCC POLY GAS
19PI411
9999.99
19FC105
W 9999.99
9999.99
75FI3148
9999.99
STOVE OIL - TK773
MIN FLOW
19FA113
State
L43FC291
9999.99
3FK3291
9999.99
DIESEL TO HCU
L43PC550
9999.99
FRESH FEED
36FI204
9999.99
19UA993
NORTH
19UA992
19PB993
State
19PB992
State
NC
FEED & RECY H2
19FK114
9999.99
19FC114
W 9999.99
9999.99
19FI113
9999.99
19FA113
S
LO
19HA913
State
SDL
19TA3712
State
19TI712
9999.99
HTR TX
SDL
19TA3726
State
19TI726
9999.99
27PI412
9999.99
900# COND
19FC140
W 9999.99
9999.99
WATER
WASH RECY
19TI727
9999.99
19UA999
State
EFFLUENT FIN FANS
CW
19TI728
9999.99
FLASH
DRUM
Reserved for Faceplates

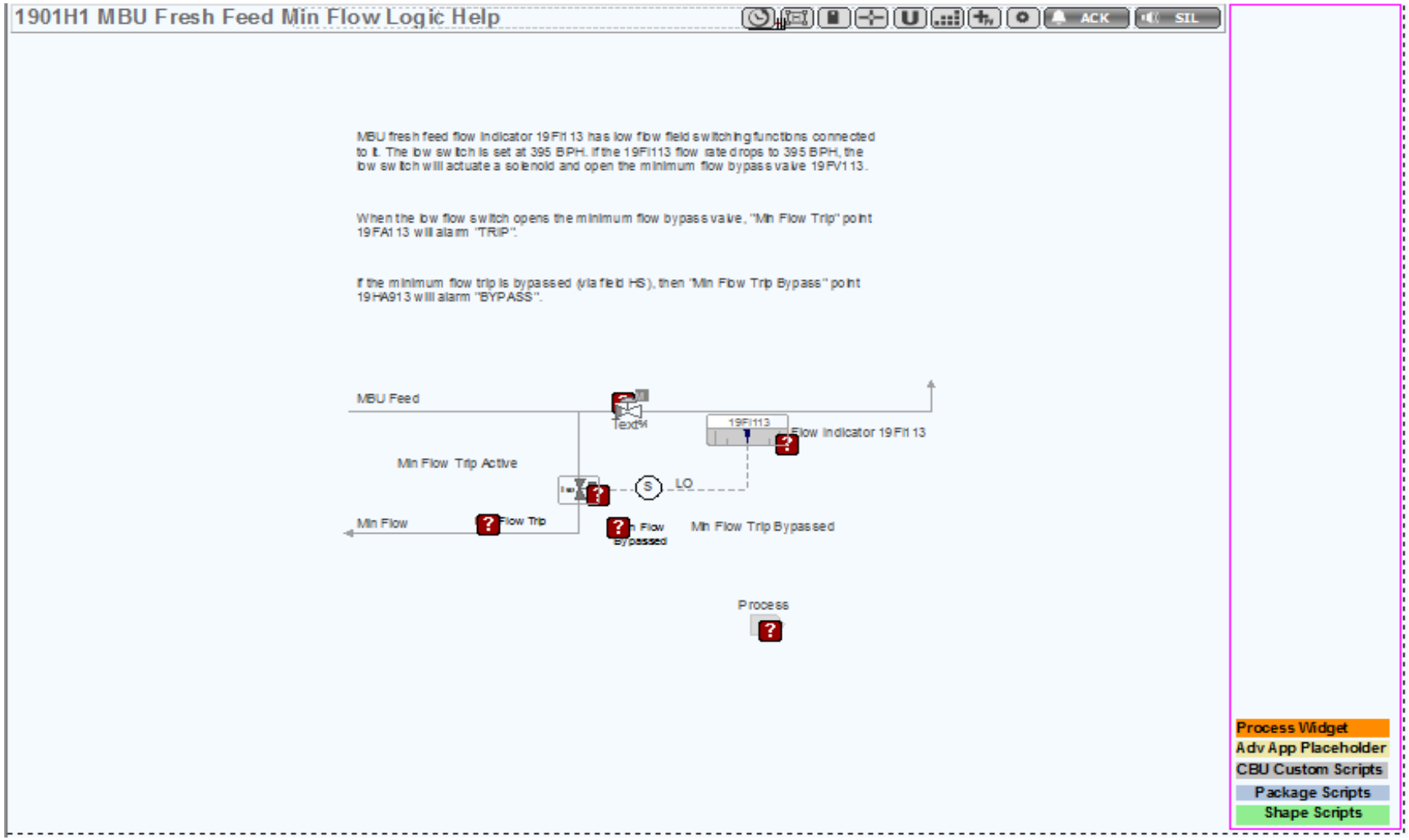
1.27 1901A MBU FEED / FEED EFT EXCHANGER NAPHTHA MODE (reformer_1901A.htm)

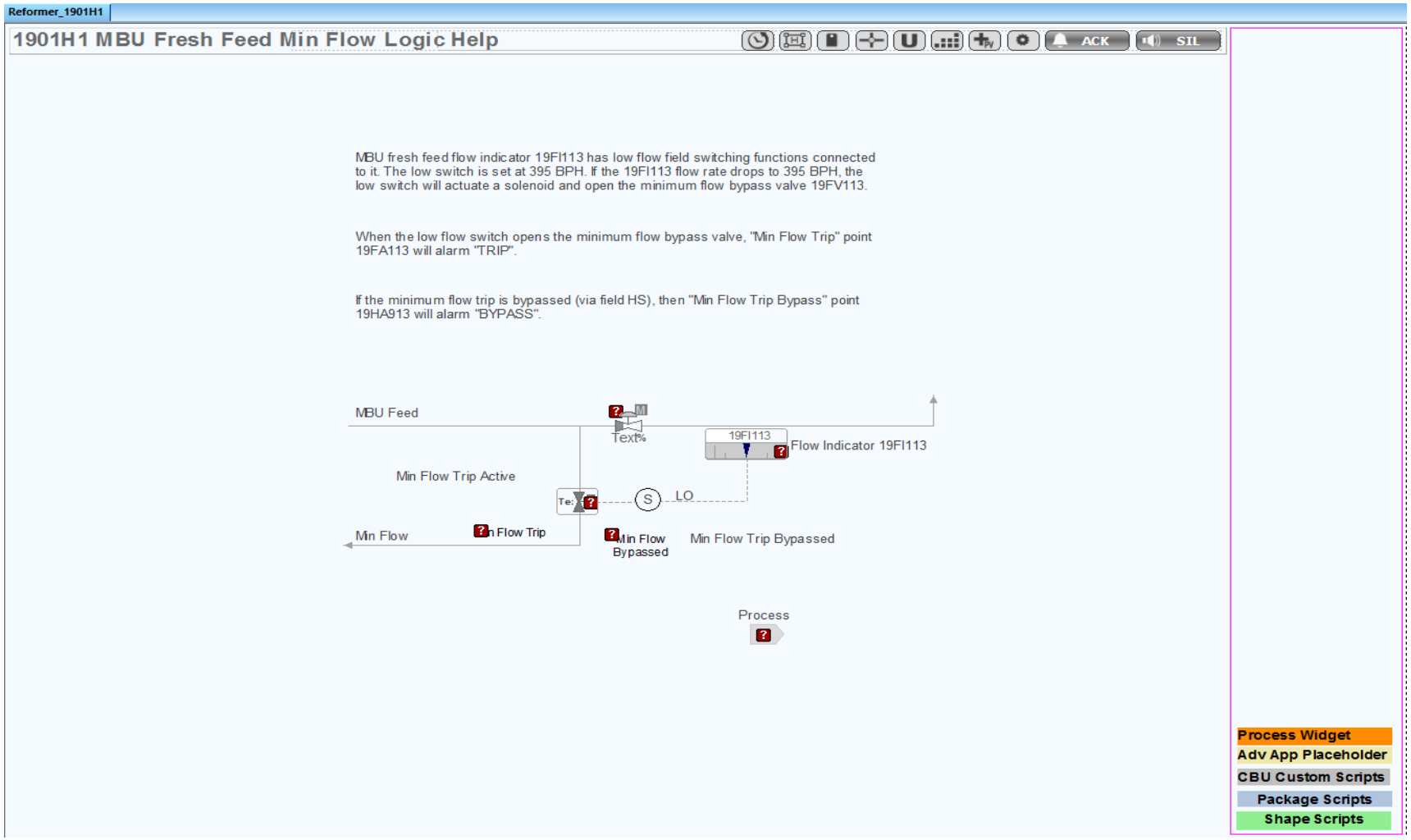


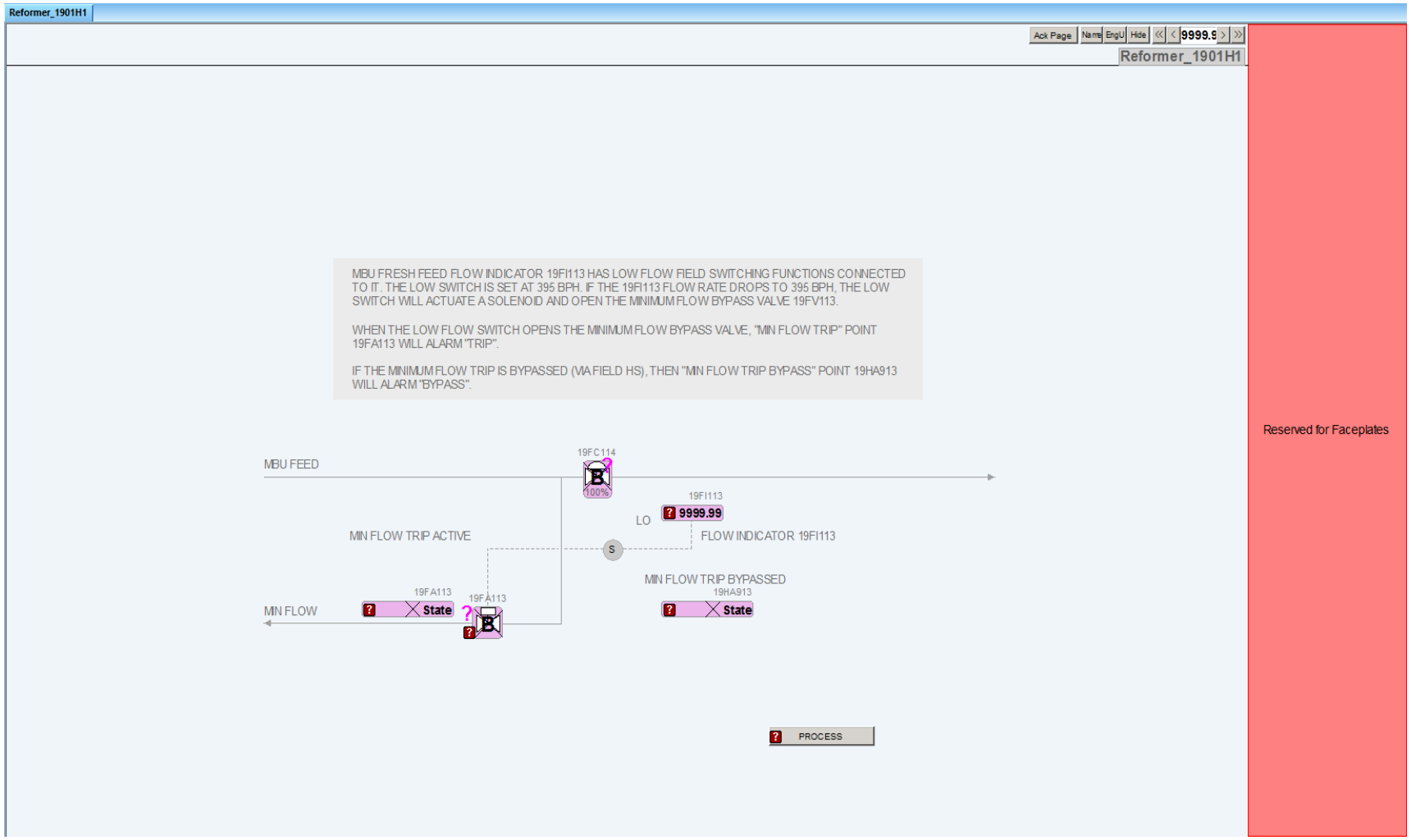

reformer_1901A
1901A MBU Feed / Feed Eff Exchanger Naphtha Mode
ACK
SIL
Operating Mode
19XS900D State
19XL900D State
THIS GRAPHIC IS FOR NAPHTHA MODE ONLY, PLEASE USE GRAPHIC 1901
Feed & Recy H2
SDL
19TI712
Htr Rx
SDL
19TI726
19FK114
19FC114
Text%
13FK130
FCC Debut
25LC301
Feed Surge Drum
Help
SR Naphtha Tank 90
25FC101
Text%
Nap Spltr OH Tank 969
19FC125
Prod Recycle From MBU
Text%
19ZL905 State
19FI115
900# Cond
Coker Dbut/Dhex Btms/Poly Dbut
25FC115
Text%
Help
48FK110
Feed Ratio
25FK3100
FCC Jet Cut Btms
25FC114
Text%
Water Wash Recy
19FC140
Text%
19TI727
25FC143
Text%
RR Btms > TKG
13PK414
25UA143 State
Effluent Fin Fans
19UA999 State
FCC Rerun Btms/Jet Cut OH
25FC113
Text%
CW
19TI728
Flash Drum
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1901A
Ack Page
Name
EngU
Hide
Reformer_1901A
THIS GRAPHIC IS FOR NAPHTHA MODE ONLY, PLEASE USE GRAPHIC 1901
OPERATING MODE
19XS900D
State
19XL900D
State
13FK130
W 9999.99
9999.99
FCC DEBUT
25FC101
25LC301
25LA302
State
25LA303
State
FEED SURGE DRUM
SR NAPHTHA TANK 90
NAP SPLTR OH TANK 969
COKER DBUT/DHEX BTMS/POLY DBUT
48FK110
9999.99
FEED RATIO
25FK3100
9999.99
FCC JET CUT BTMS
RR BTMS > TKG
13PK414
9999.99
FCC RERUN BTMS/JET CUT
25FC113
25FC114
25FC115
25UA143
State
25FC143
19FC125
PROD RECYCLE FROM MBU
FEED &
RECY H2
19FK114
9999.99
19FC114
19ZL905
State
SDL
19TA3712
State
19TI712
9999.99
HTR RX
SDL
19TA3726
State
19TI726
9999.99
19FI115
9999.99
900# COND
19FC140
WATER
WASH RECY
19TI727
9999.99
19UA999
State
EFFLUENT FIN FANS
CW
19TI728
9999.99
FLASH
DRUM
Reserved for Faceplates

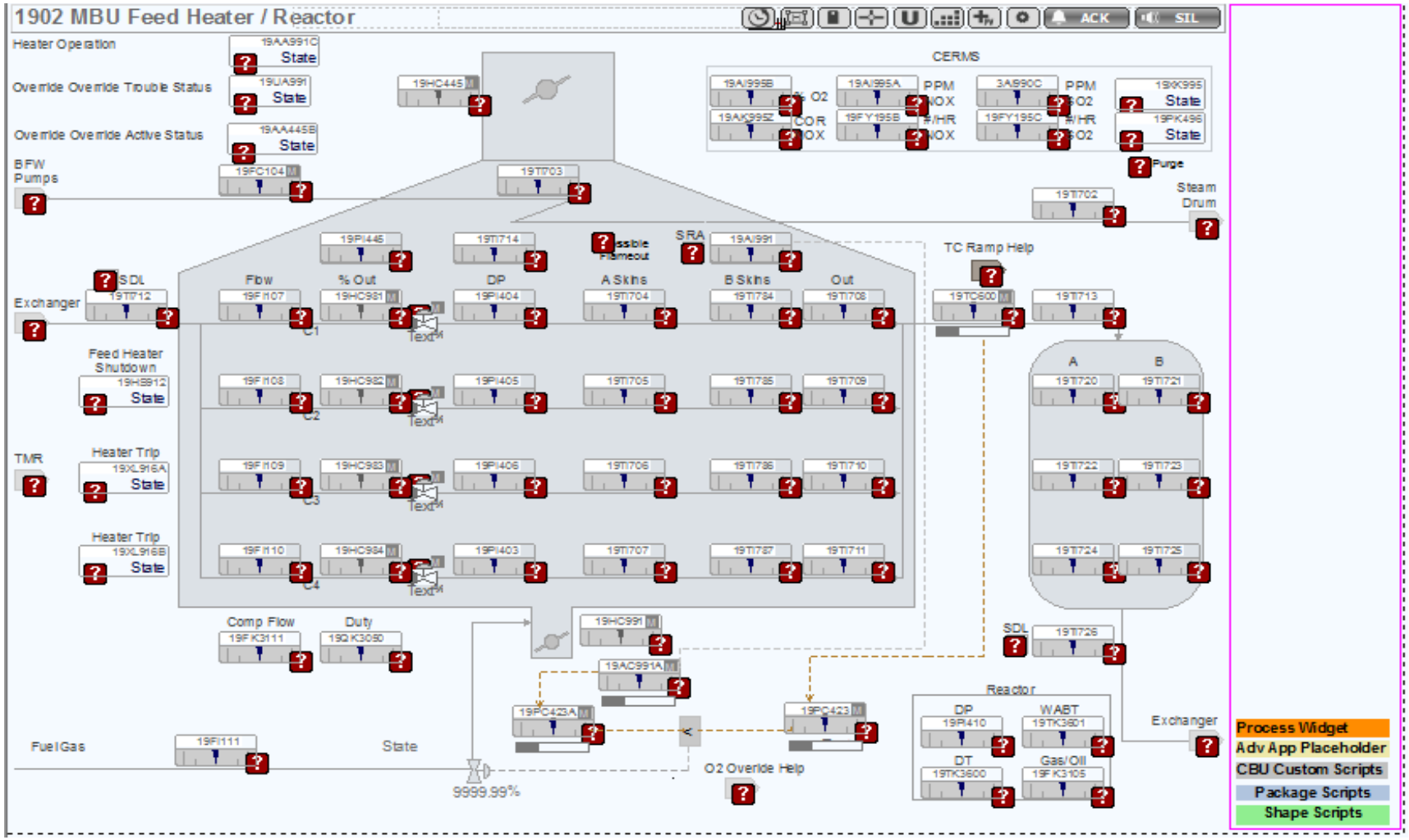
1.28 1901H1 MBU FRESH FEED MIN FLOW LOGIC HELP (Reformer_1901H1.htm)

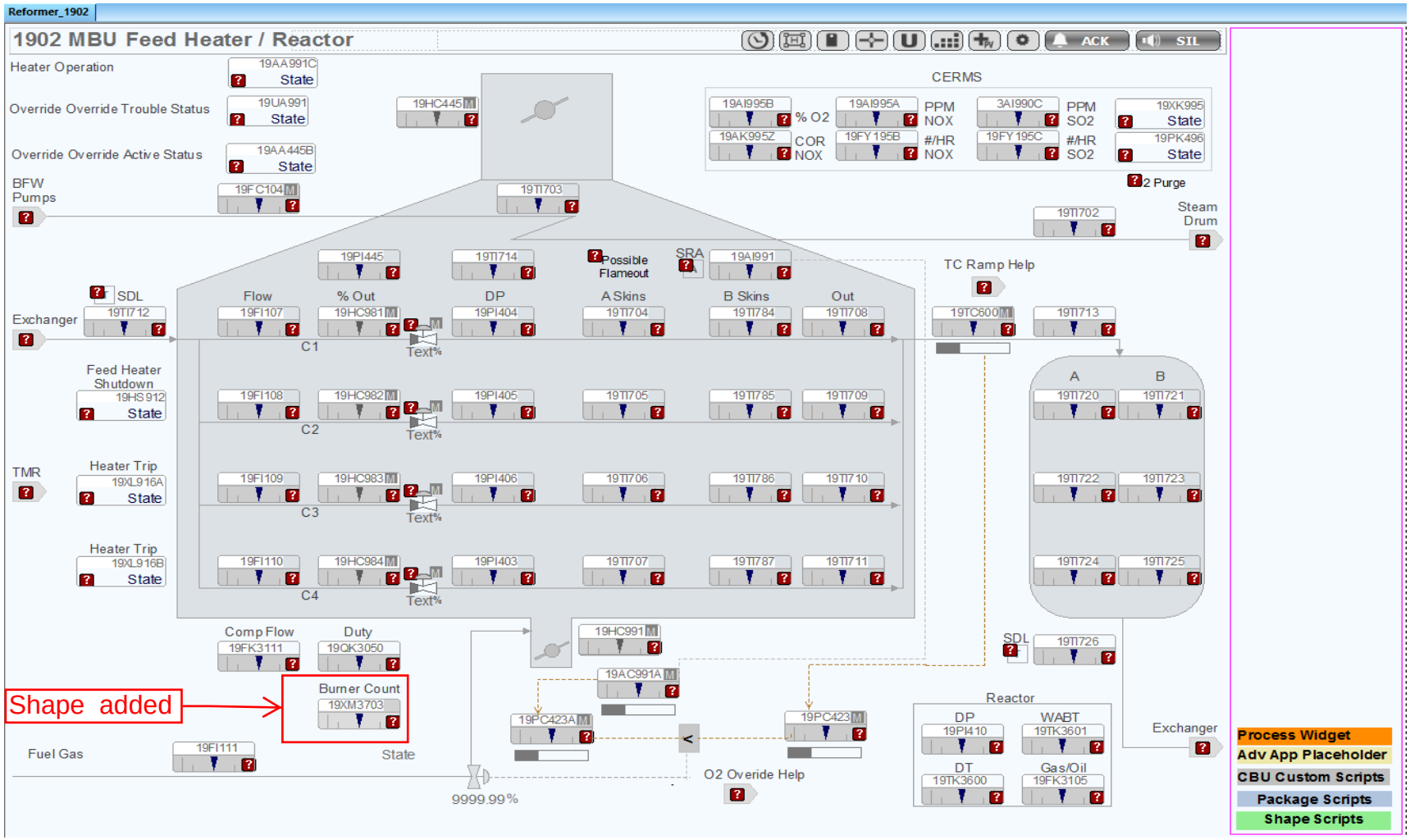


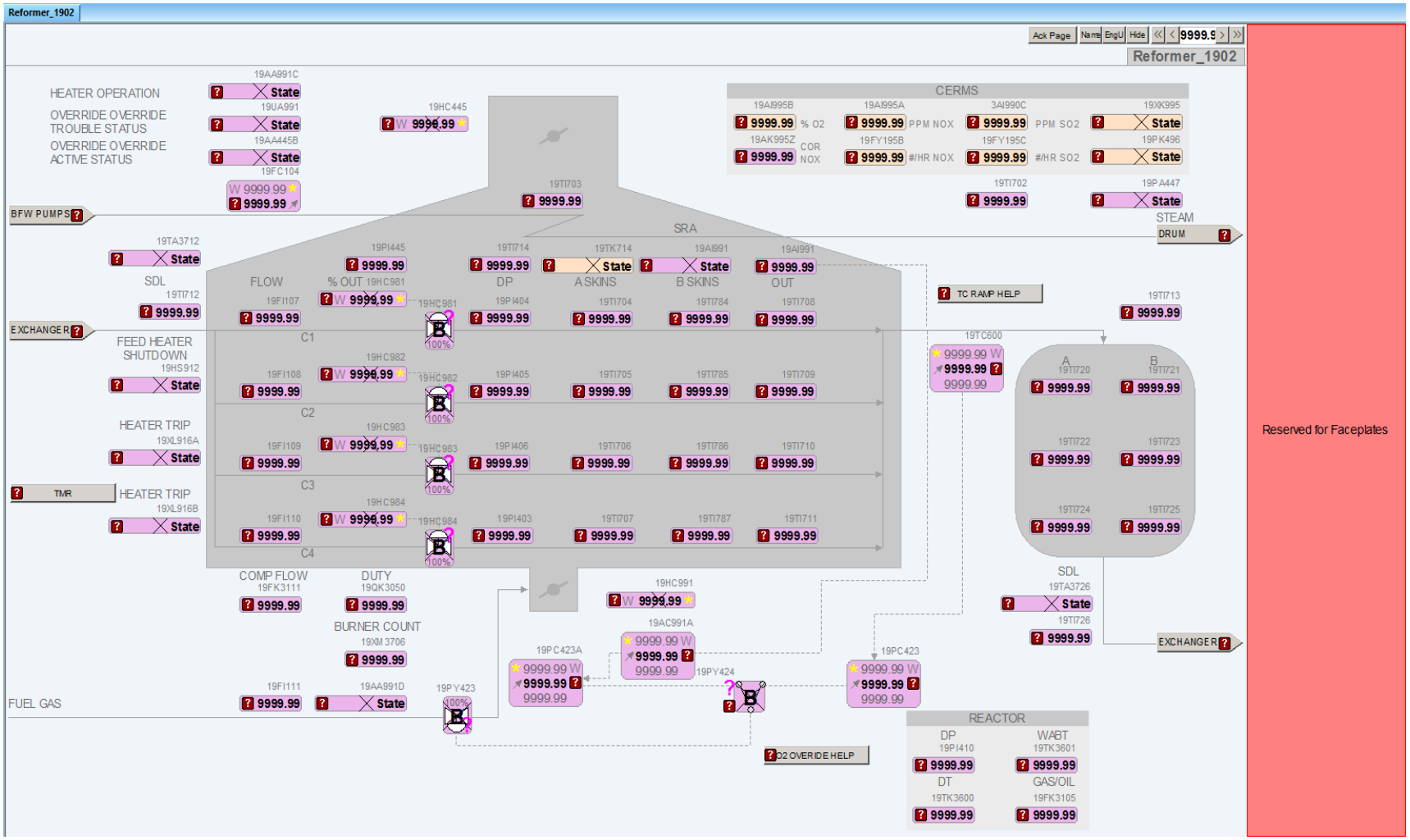

Reformer_1901H1
1901H1 MBU Fresh Feed Min Flow Logic Help
ACK
SIL
MBU fresh feed flow indicator 19FI113 has low flow field switching functions connected to it. The low switch is set at 395 BPH. If the 19FI113 flow rate drops to 395 BPH, the low switch will actuate a solenoid and open the minimum flow bypass valve 19FV113.
When the low flow switch opens the minimum flow bypass valve, "Min Flow Trip" point 19FA113 will alarm "TRIP".
If the minimum flow trip is bypassed (via field HS), then "Min Flow Trip Bypass" point 19HA913 will alarm "BYPASS".
MBU Feed
Text%
19FI113
Flow Indicator 19FI113
Min Flow Trip Active
S
LO
Min Flow
Min Flow Trip
Min Flow Bypassed
Min Flow Trip Bypassed
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1901H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_1901H1
MBU FRESH FEED FLOW INDICATOR 19FI113 HAS LOW FLOW FIELD SWITCHING FUNCTIONS CONNECTED TO IT. THE LOW SWITCH IS SET AT 395 BPH. IF THE 19FI113 FLOW RATE DROPS TO 395 BPH, THE LOW SWITCH WILL ACTUATE A SOLENOID AND OPEN THE MINIMUM FLOW BYPASS VALVE 19FV113.
WHEN THE LOW FLOW SWITCH OPENS THE MINIMUM FLOW BYPASS VALVE, "MIN FLOW TRIP" POINT 19FA113 WILL ALARM "TRIP".
IF THE MINIMUM FLOW TRIP IS BYPASSED (VIA FIELD HS), THEN "MIN FLOW TRIP BYPASS" POINT 19HA913 WILL ALARM "BYPASS".
MBU FEED
19FC114
100%
19FI113
9999.99
LO
FLOW INDICATOR 19FI113
MIN FLOW TRIP ACTIVE
S
MIN FLOW TRIP BYPASSED
19HA913
State
MIN FLOW
19FA113
State
19FA113
PROCESS
Reserved for Faceplates

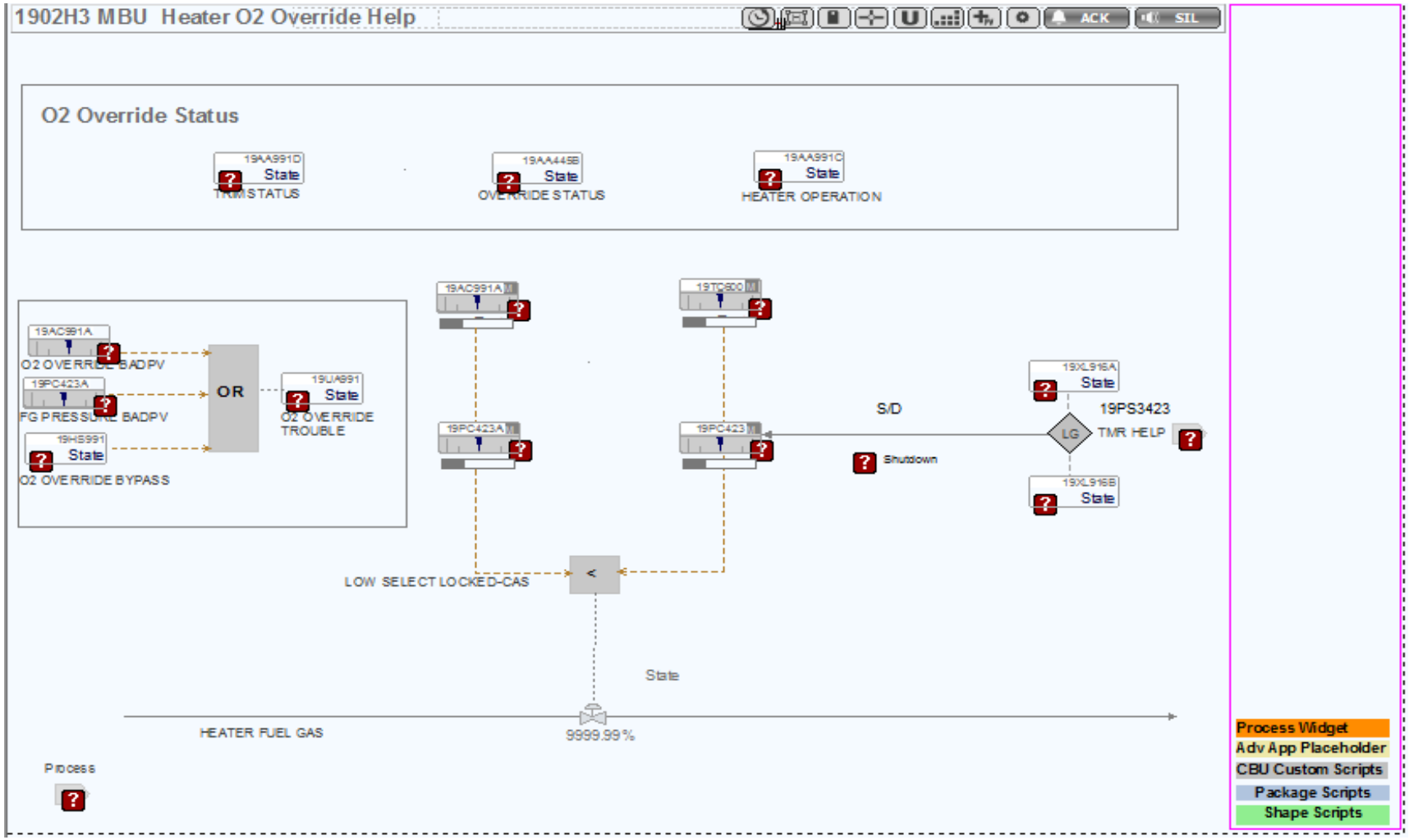
1.29 1902 MBU FEED HEATER / REACTOR (Reformer_1902.htm)

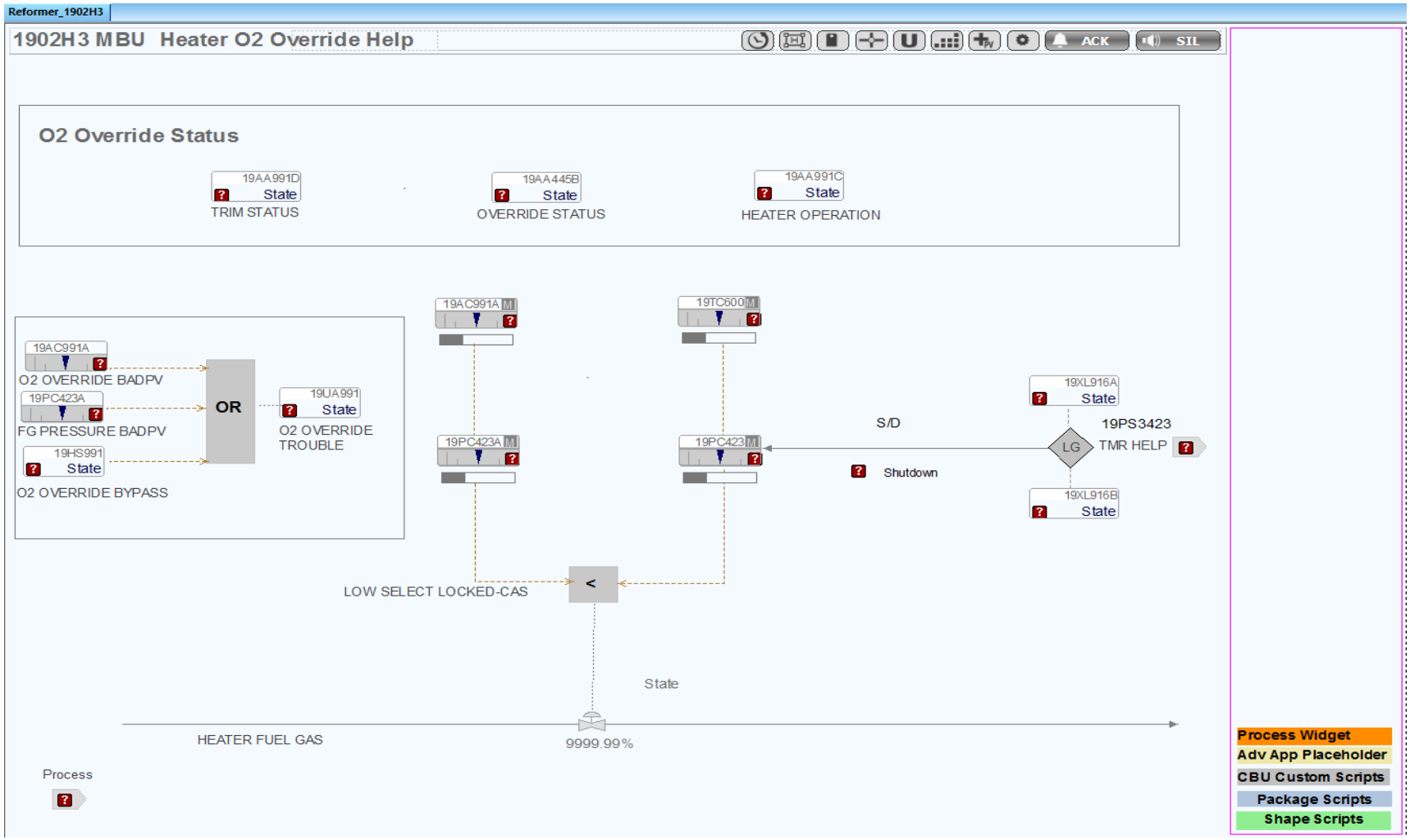


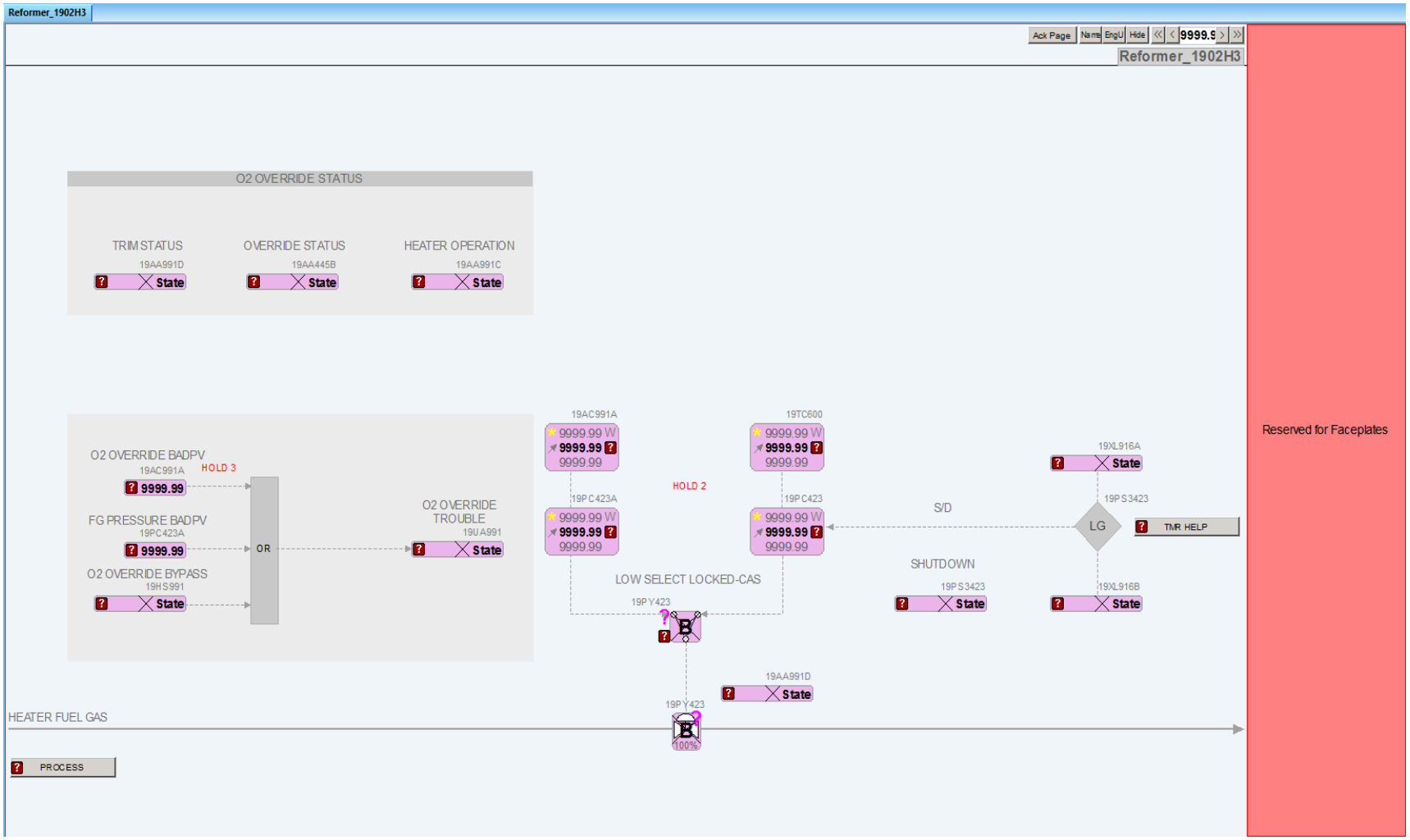

Reformer_1902
1902 MBU Feed Heater / Reactor
ACK
SIL
Heater Operation
19AA991C State
Override Override Trouble Status
19UA991 State
Override Override Active Status
19AA445B State
BFW Pumps
19FC104M
19HC445M
19TI703
CERMS
19AI995B % O2
19AI995A PPM NOX
3AI990C PPM SO2
19XK995 State
19AK995Z COR NOX
19FY195B #/HR NOX
19FY195C #/HR SO2
19PK496 State
2 Purge
19TI702
Steam Drum
19PI445
19TI714
Possible Flameout
SRA
19AI991
TC Ramp Help
SDL
Exchanger
19TI712
Flow
% Out
DP
A Skins
B Skins
Out
19FI107
19HC981M
19PI404
19TI704
19TI784
19TI708
19TC600M
19TI713
C1
Text%
Feed Heater Shutdown
19HS912 State
19FI108
19HC982M
19PI405
19TI705
19TI785
19TI709
C2
A
B
19TI720
19TI721
19TI722
19TI723
19TI724
19TI725
TMR
Heater Trip
19XL916A State
19FI109
19HC983M
19PI406
19TI706
19TI786
19TI710
C3
Heater Trip
19XL916B State
19FI110
19HC984M
19PI403
19TI707
19TI787
19TI711
C4
SDL
19TI726
Comp Flow
19FK3111
Duty
19QK3050
19HC991M
Shape added
Burner Count
19XM3703
19AC991AM
19PC423AM
19PC423M
Reactor
DP
19PI410
WABT
19TK3601
DT
19TK3600
Gas/Oil
19FK3105
Exchanger
Fuel Gas
19FI111
State
9999.99%
O2 Overide Help
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1902
Ack Page
Name
EngU
Hide
Reformer_1902
HEATER OPERATION
OVERRIDE OVERRIDE TROUBLE STATUS
OVERRIDE OVERRIDE ACTIVE STATUS
19AA991C
19UA991
19AA445B
19FC104
19HC445
CERMS
19AI995B
19AI995A
3AI990C
19XK995
19AK995Z
19FY195B
19FY195C
19PK496
19TI703
19TI702
19PA447
BFW PUMPS
STEAM DRUM
SRA
19TA3712
SDL
19TI712
EXCHANGER
FEED HEATER SHUTDOWN
19HS912
HEATER TRIP
19XL916A
TMR
HEATER TRIP
19XL916B
FLOW
% OUT
19HC981
19HC982
19HC983
19HC984
DP
A SKINS
B SKINS
OUT
19PI445
19TI714
19TK714
19AI991
19AI991
19FI107
19PI404
19TI704
19TI784
19TI708
C1
19FI108
19PI405
19TI705
19TI785
19TI709
C2
19FI109
19PI406
19TI706
19TI786
19TI710
C3
19FI110
19PI403
19TI707
19TI787
19TI711
C4
TC RAMP HELP
19TC600
19TI713
A
B
19TI720
19TI721
19TI722
19TI723
19TI724
19TI725
SDL
19TA3726
19TI726
EXCHANGER
COMP FLOW
19FK3111
DUTY
19QK3050
BURNER COUNT
19XM3706
19HC991
19AC991A
19PC423A
19PC423
19PY424
19PY423
FUEL GAS
19FI111
19AA991D
D2 OVERIDE HELP
REACTOR
DP
19PI410
WABT
19TK3601
DT
19TK3600
GAS/OIL
19FK3105
Reserved for Faceplates

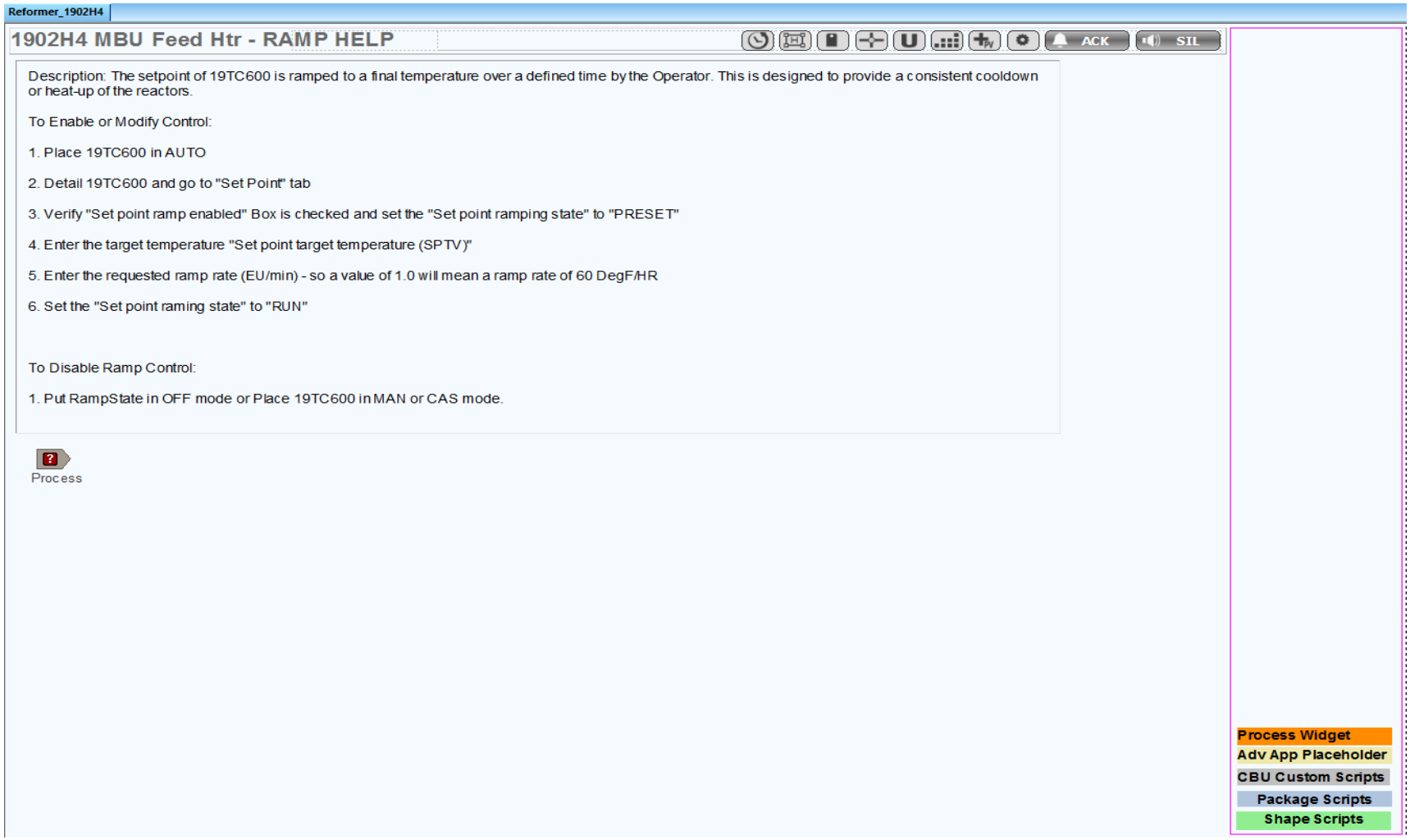
1.30 1902H3 MBU HEATER O2 OVERRIDE HELP (Reformer_1902H3.htm)

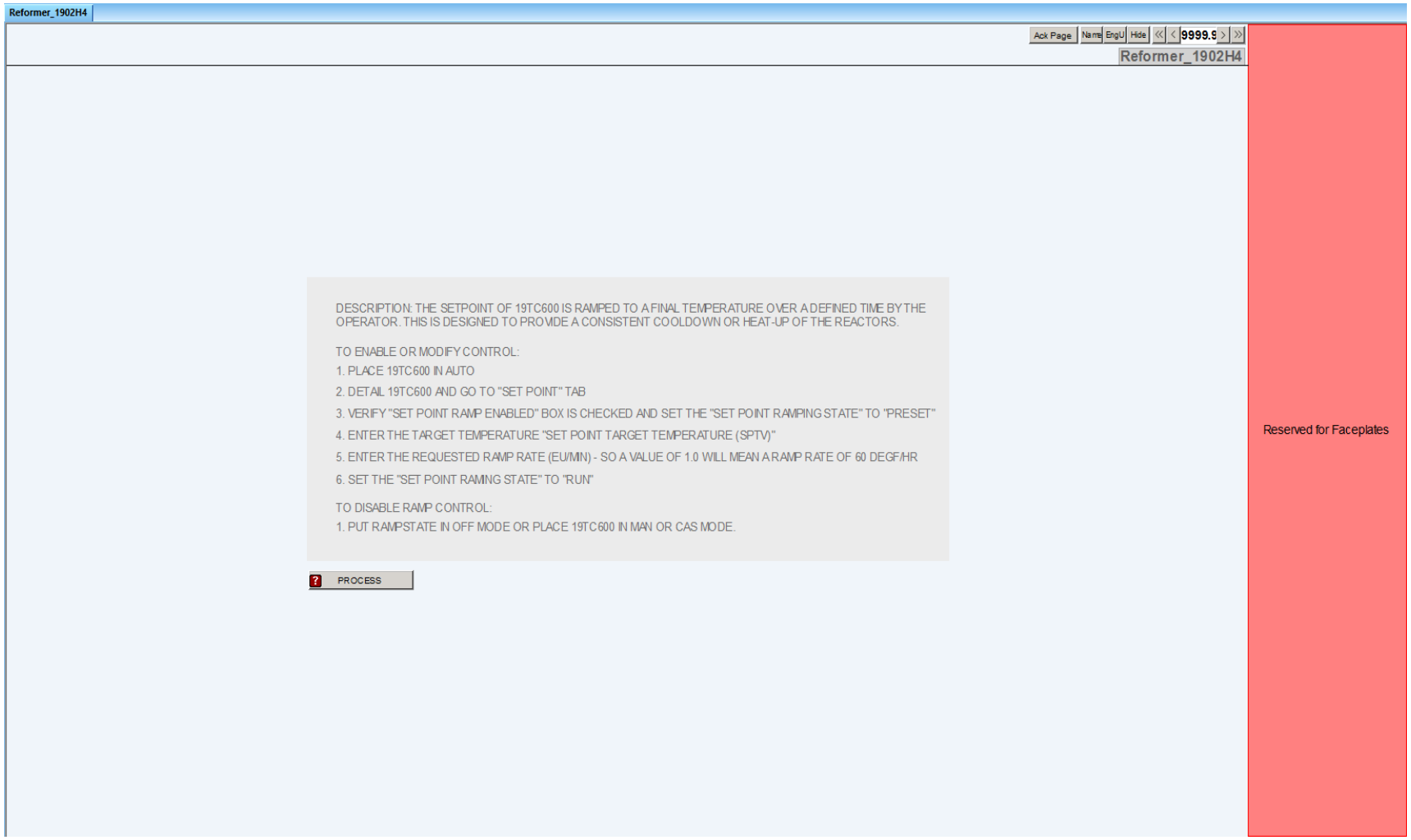



Reformer_1902H3
1902H3 MBU Heater O2 Override Help
ACK
SIL
O2 Override Status
19AA991D
State
TRIM STATUS
19AA445B
State
OVERRIDE STATUS
19AA991C
State
HEATER OPERATION
19AC991A
O2 OVERRIDE BADPV
19PC423A
FG PRESSURE BADPV
19HS991
State
O2 OVERRIDE BYPASS
OR
19UA991
State
O2 OVERRIDE TROUBLE
19AC991A
19TC600
19PC423A
19PC423
S/D
Shutdown
19XL916A
State
19PS3423
LG
TMR HELP
19XL916B
State
LOW SELECT LOCKED-CAS
<
State
HEATER FUEL GAS
9999.99%
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

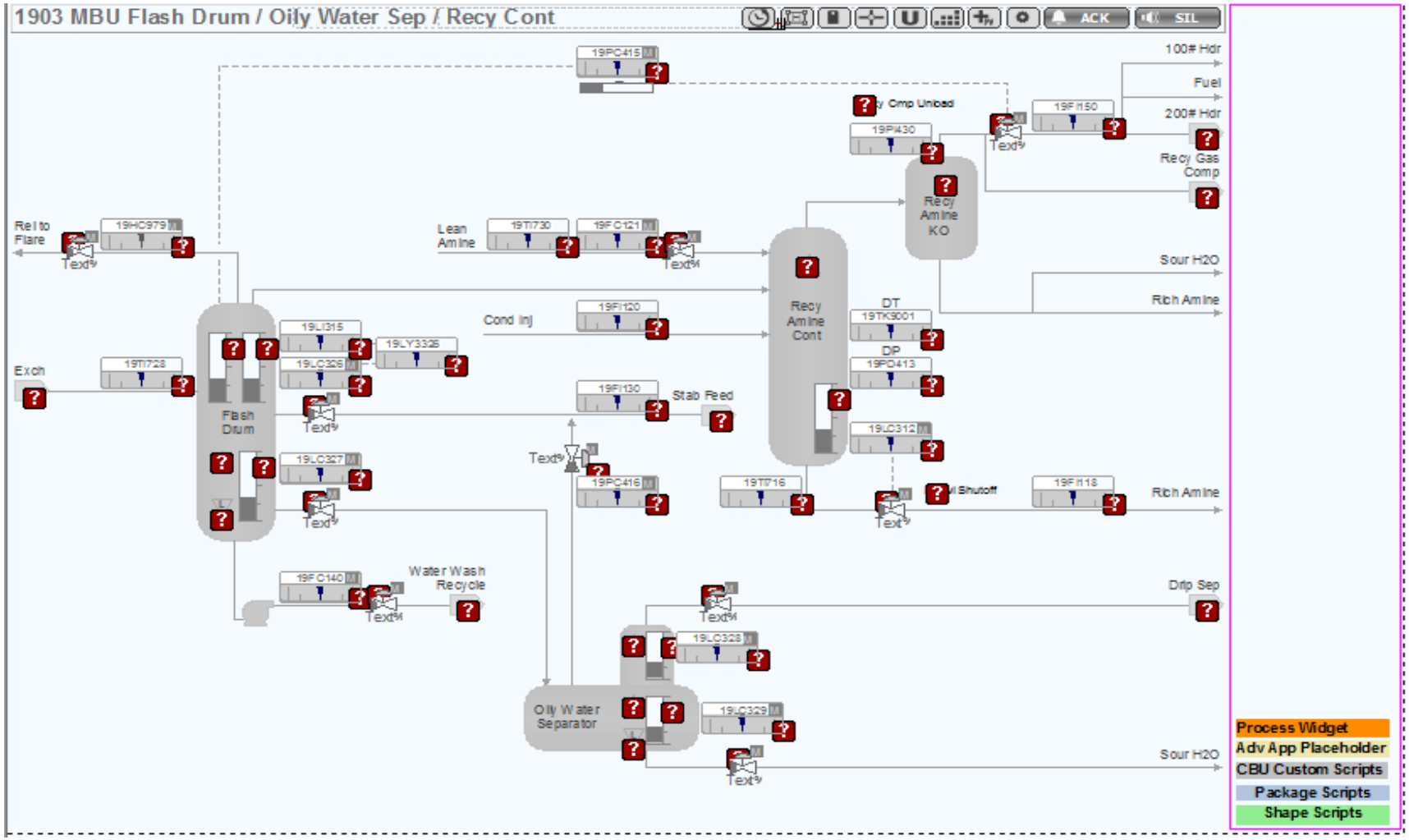

Reformer_1902H3
Ack Page
Name
EngU
Hide
Reformer_1902H3
O2 OVERRIDE STATUS
TRIM STATUS
19AA991D
State
OVERRIDE STATUS
19AA445B
State
HEATER OPERATION
19AA991C
State
O2 OVERRIDE BADPV
19AC991A
HOLD 3
9999.99
FG PRESSURE BADPV
19PC423A
9999.99
O2 OVERRIDE BYPASS
19HS991
State
OR
O2 OVERRIDE TROUBLE
19UA991
State
19AC991A
9999.99 W
9999.99
9999.99
19PC423A
19TC600
19PC423
HOLD 2
S/D
LG
19PS3423
19XL916A
State
TMR HELP
SHUTDOWN
19PS3423
State
19XL916B
State
LOW SELECT LOCKED-CAS
19PY423
19AA991D
State
19PY423
100%
HEATER FUEL GAS
PROCESS
Reserved for Faceplates

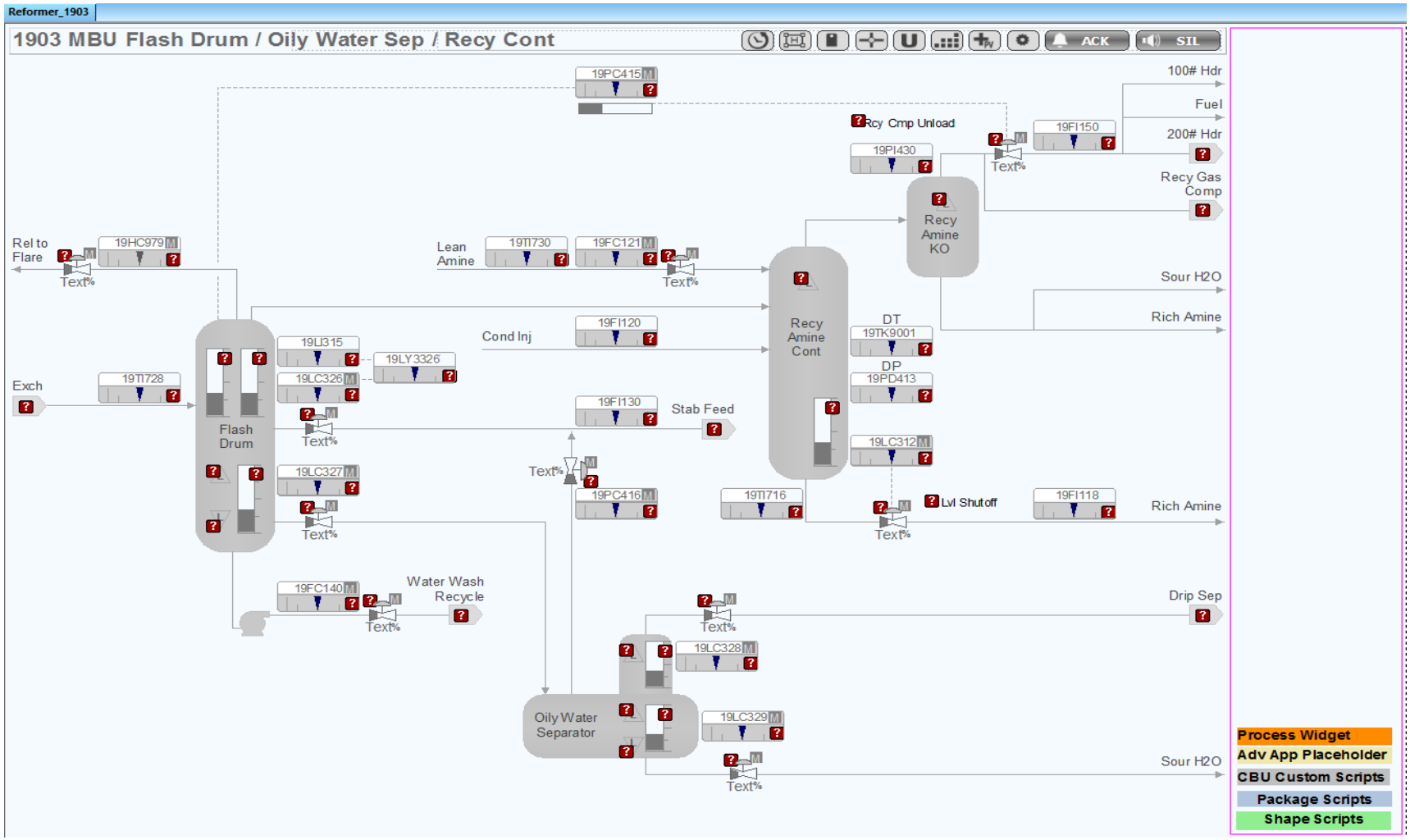
1.31 1902H4 MBU FEED HTR. RAMP HELP (Reformer_1902H4.htm)

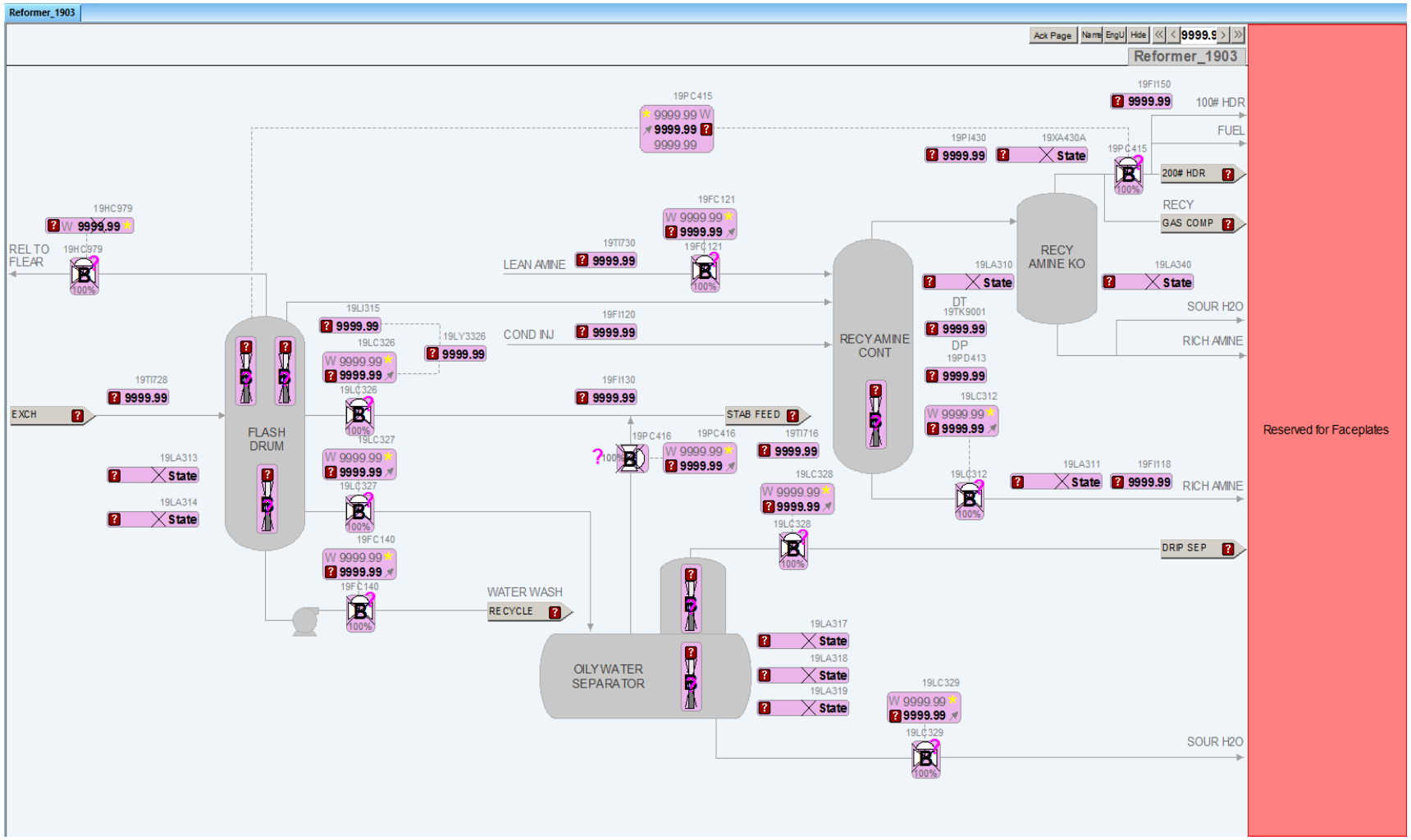

Reformer_1902H4
1902H4 MBU Feed Htr - RAMP HELP
ACK
SIL
Description: The setpoint of 19TC600 is ramped to a final temperature over a defined time by the Operator. This is designed to provide a consistent cooldown or heat-up of the reactors.
To Enable or Modify Control:
1. Place 19TC600 in AUTO
2. Detail 19TC600 and go to "Set Point" tab
3. Verify "Set point ramp enabled" Box is checked and set the "Set point ramping state" to "PRESET"
4. Enter the target temperature "Set point target temperature (SPTV)"
5. Enter the requested ramp rate (EU/min) - so a value of 1.0 will mean a ramp rate of 60 DegF/HR
6. Set the "Set point raming state" to "RUN"
To Disable Ramp Control:
1. Put RampState in OFF mode or Place 19TC600 in MAN or CAS mode.
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1902H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_1902H4
DESCRIPTION: THE SETPOINT OF 19TC600 IS RAMPED TO A FINAL TEMPERATURE OVER A DEFINED TIME BY THE OPERATOR. THIS IS DESIGNED TO PROVIDE A CONSISTENT COOLDOWN OR HEAT-UP OF THE REACTORS.
TO ENABLE OR MODIFY CONTROL:
1. PLACE 19TC600 IN AUTO
2. DETAIL 19TC600 AND GO TO "SET POINT" TAB
3. VERIFY "SET POINT RAMP ENABLED" BOX IS CHECKED AND SET THE "SET POINT RAMPING STATE" TO "PRESET"
4. ENTER THE TARGET TEMPERATURE "SET POINT TARGET TEMPERATURE (SPTV)"
5. ENTER THE REQUESTED RAMP RATE (EU/MIN) - SO A VALUE OF 1.0 WILL MEAN A RAMP RATE OF 60 DEGF/HR
6. SET THE "SET POINT RAMING STATE" TO "RUN"
TO DISABLE RAMP CONTROL:
1. PUT RAMPSTATE IN OFF MODE OR PLACE 19TC600 IN MAN OR CAS MODE.
PROCESS
Reserved for Faceplates

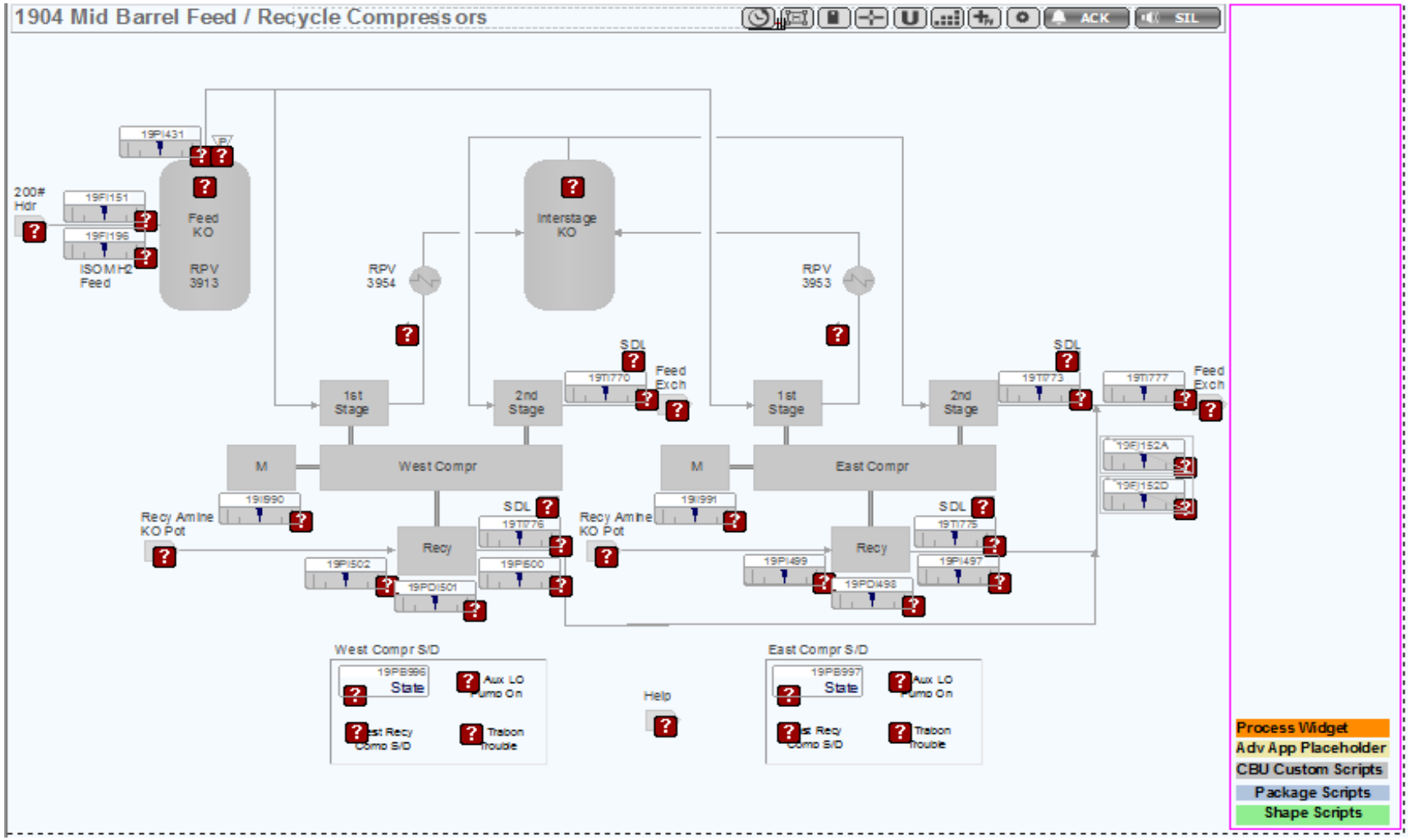
1.32 1903 MBU FLASH DRUM / OILY WATER SEP / RECY CONT (Reformer_1903.htm)

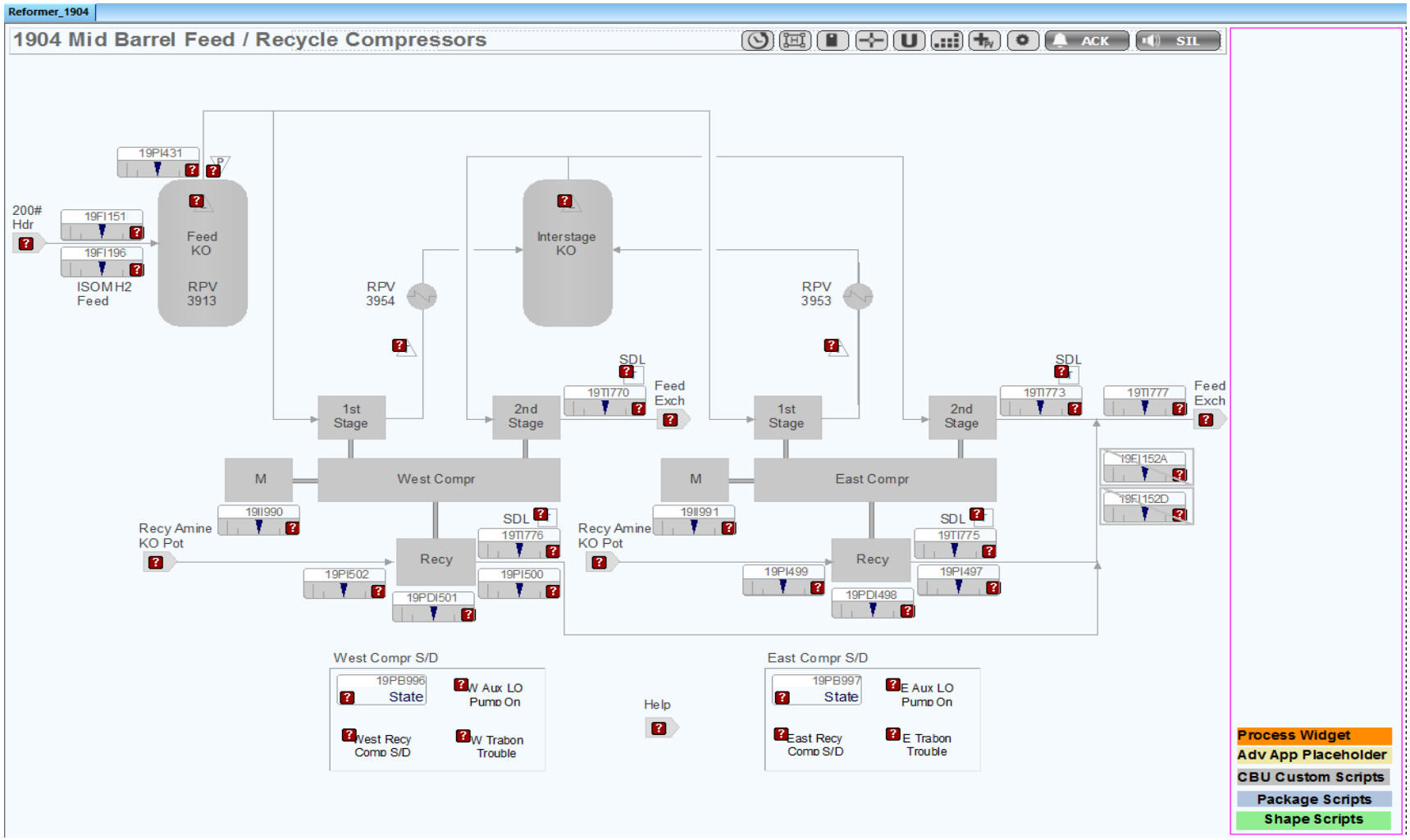


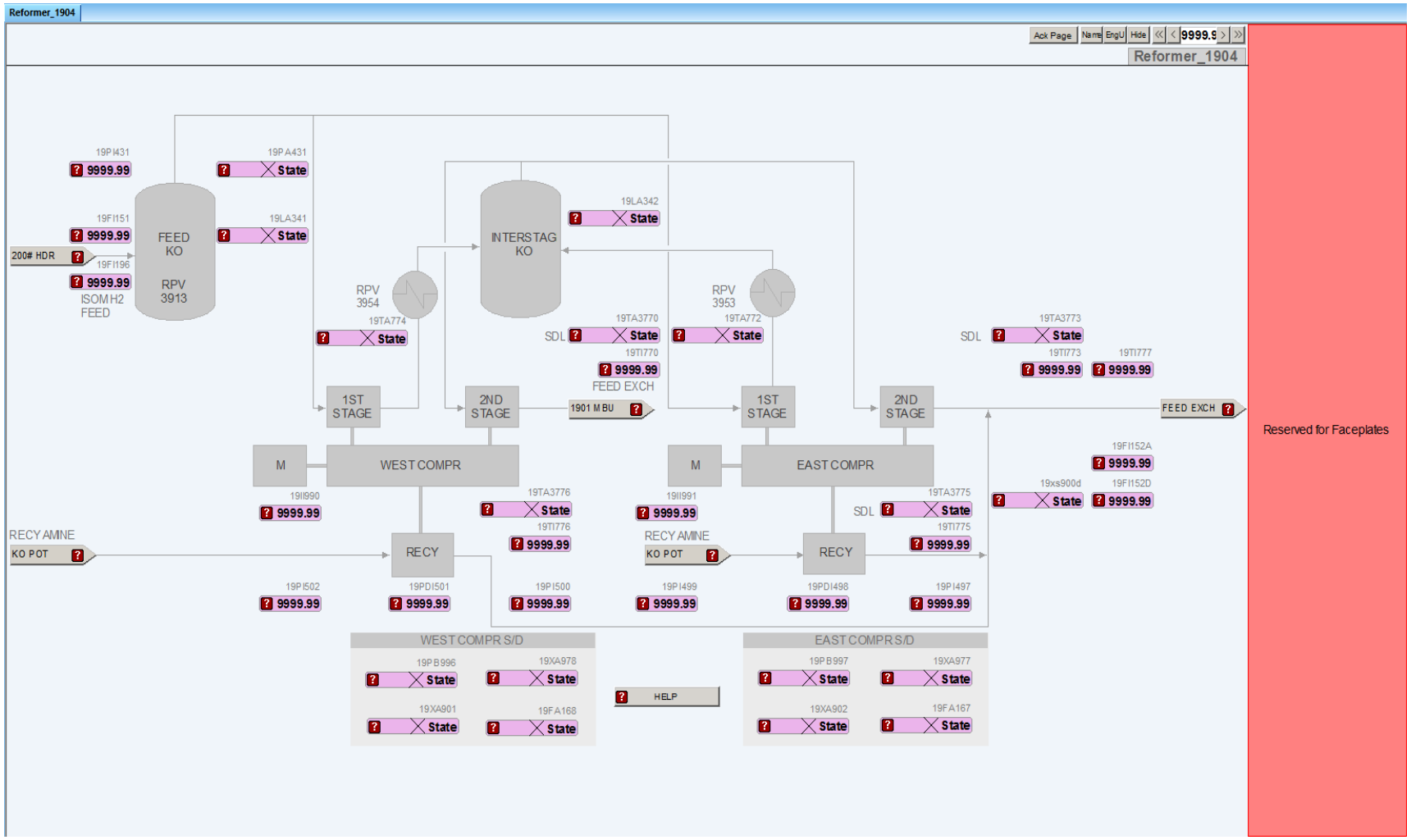

Reformer_1903
1903 MBU Flash Drum / Oily Water Sep / Recy Cont
ACK
SIL
19PC415
100# Hdr
Fuel
200# Hdr
Recy Gas Comp
Rcy Cmp Unload
19PI430
19FI150
Text%
Recy Amine KO
Rel to Flare
19HC979
Lean Amine
19TI730
19FC121
Sour H2O
Rich Amine
Recy Amine Cont
DT
19TK9001
DP
19PD413
Cond Inj
19FI120
19LI315
19LY3326
19LC326
Exch
19TI728
Flash Drum
19FI130
Stab Feed
19LC312
19LC327
19PC416
19TI716
Lvl Shutoff
19FI118
Rich Amine
19FC140
Water Wash Recycle
Drip Sep
19LC328
Oily Water Separator
19LC329
Sour H2O
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1903
Ack Page
Name
EngU
Hide
Reformer_1903
19PC415
19FI150
100# HDR
FUEL
19PI430
19XA430A
200# HDR
RECY
GAS COMP
19HC979
REL TO FLEAR
19FC121
LEAN AMINE
19TI730
RECY AMINE KO
19LA310
19LA340
SOUR H2O
19LI315
19LY3326
COND INJ
19FI120
DT
19TK9001
DP
19PD413
RICH AMINE
19TI728
EXCH
19FI130
STAB FEED
19LC326
19LC327
19PC416
19TI716
19LC312
FLASH DRUM
19LA313
19LA314
19LC328
19LA311
19FI118
RICH AMINE
19FC140
DRIP SEP
WATER WASH
RECYCLE
OILY WATER SEPARATOR
19LA317
19LA318
19LA319
19LC329
SOUR H2O
RECY AMINE CONT
Reserved for Faceplates

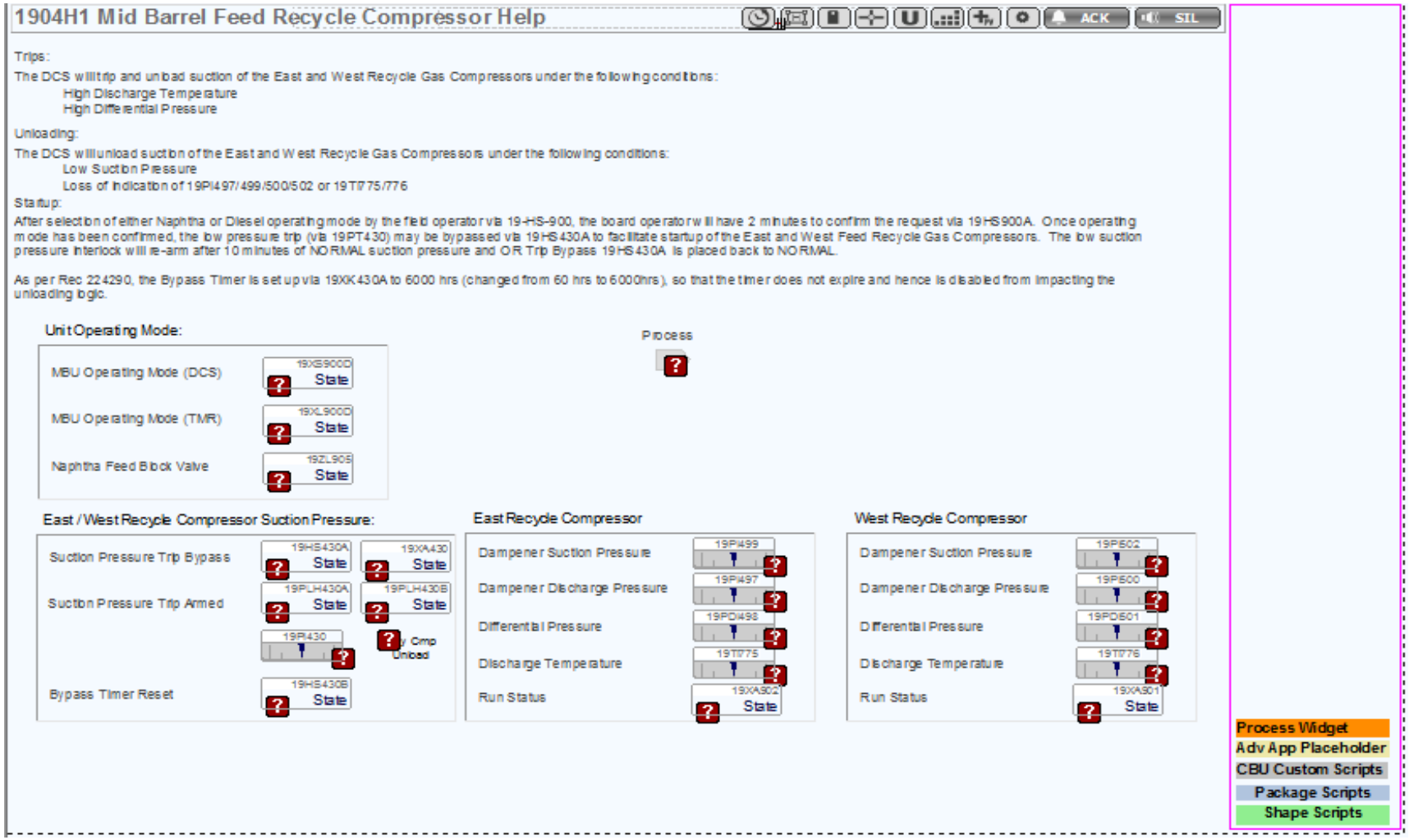
1.33 1904 MID BARREL FEED / RECYCLE COMPRESSORSS (Reformer_1904.htm)

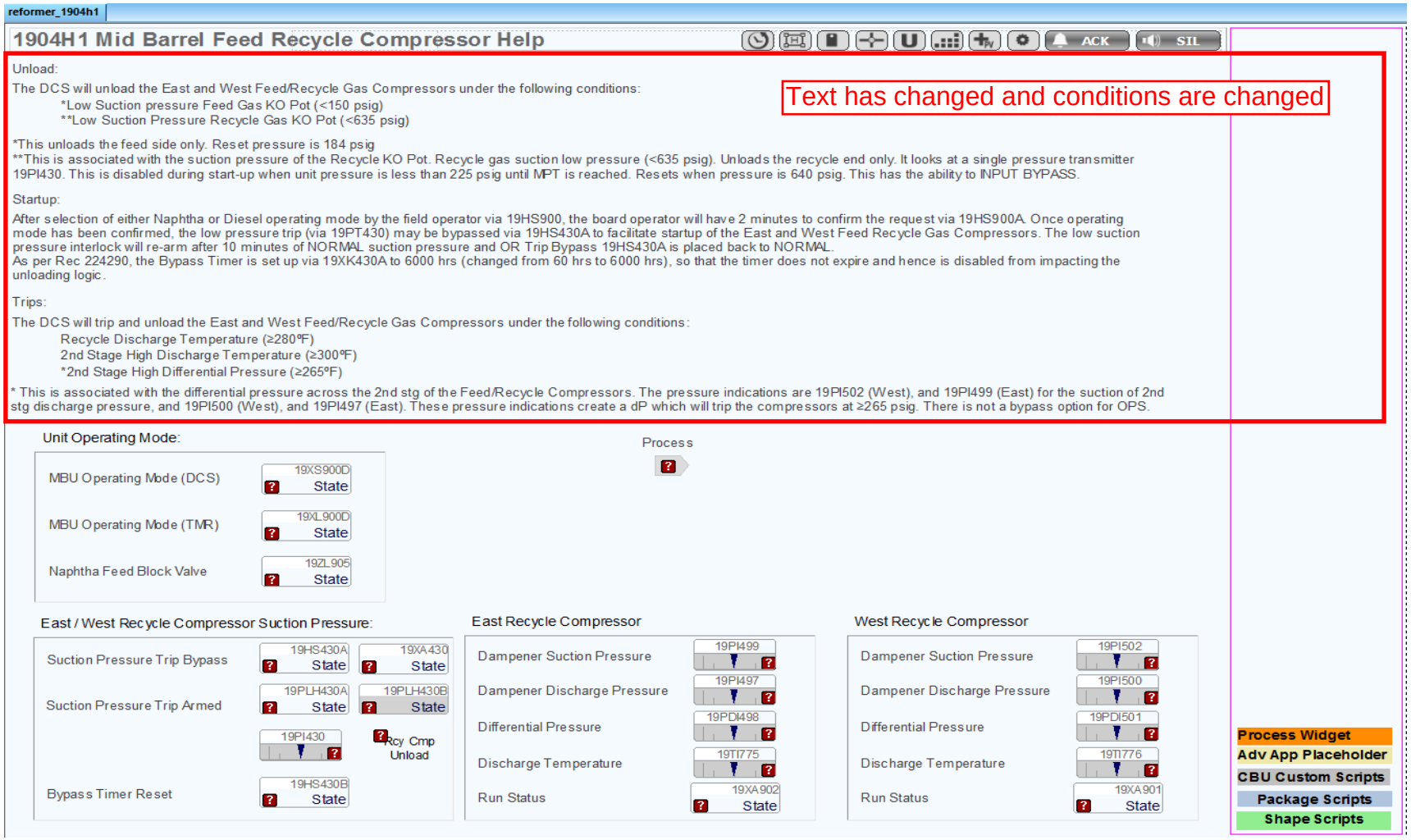


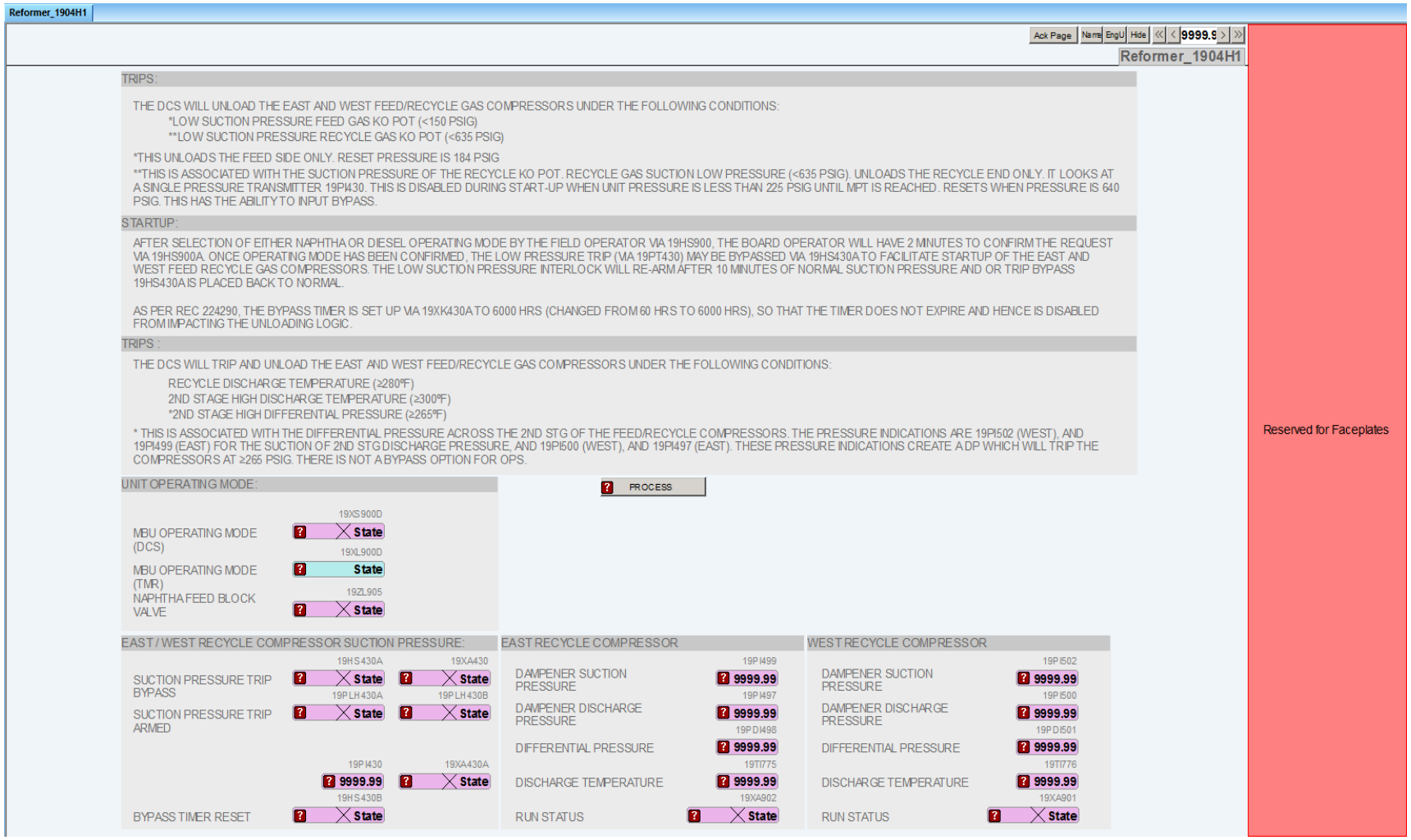

Reformer_1904
1904 Mid Barrel Feed / Recycle Compressors
ACK
SIL
19PI431
200#
Hdr
19FI151
19FI196
ISOM H2
Feed
Feed
KO
RPV
3913
RPV
3954
Interstage
KO
RPV
3953
SDL
19TI770
Feed
Exch
1st
Stage
2nd
Stage
1st
Stage
2nd
Stage
SDL
19TI773
19TI777
Feed
Exch
19FI152A
19FI152D
M
West Compr
M
East Compr
Recy Amine
KO Pot
19II990
SDL
19TI776
Recy
19PI502
19PDI501
19PI500
Recy Amine
KO Pot
19II991
SDL
19TI775
Recy
19PI499
19PDI498
19PI497
West Compr S/D
19PB996
State
W Aux LO
Pump On
West Recy
Comp S/D
W Trabon
Trouble
Help
East Compr S/D
19PB997
State
E Aux LO
Pump On
East Recy
Comp S/D
E Trabon
Trouble
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1904
Ack Page
Name
EngU
Hide
Reformer_1904
19PI431
9999.99
19PA431
State
19FI151
9999.99
FEED KO
19LA341
State
200# HDR
19FI196
9999.99
ISOM H2 FEED
RPV 3913
INTERSTAG KO
19LA342
State
RPV 3954
19TA774
State
RPV 3953
19TA772
State
SDL
19TA3770
State
19TI770
9999.99
FEED EXCH
SDL
19TA3773
State
19TI773
9999.99
19TI777
9999.99
1ST STAGE
2ND STAGE
1901 MBU
1ST STAGE
2ND STAGE
FEED EXCH
Reserved for Faceplates
19FI152A
9999.99
19xs900d
State
19FI152D
9999.99
M
WEST COMPR
M
EAST COMPR
19II990
9999.99
19TA3776
State
19II991
9999.99
SDL
19TA3775
State
19TI776
9999.99
19TI775
9999.99
RECY AMINE
KO POT
RECY
RECY AMINE
KO POT
RECY
19PI502
9999.99
19PDI501
9999.99
19PI500
9999.99
19PI499
9999.99
19PDI498
9999.99
19PI497
9999.99
WEST COMPR S/D
19PB996
State
19XA978
State
19XA901
State
19FA168
State
HELP
EAST COMPR S/D
19PB997
State
19XA977
State
19XA902
State
19FA167
State

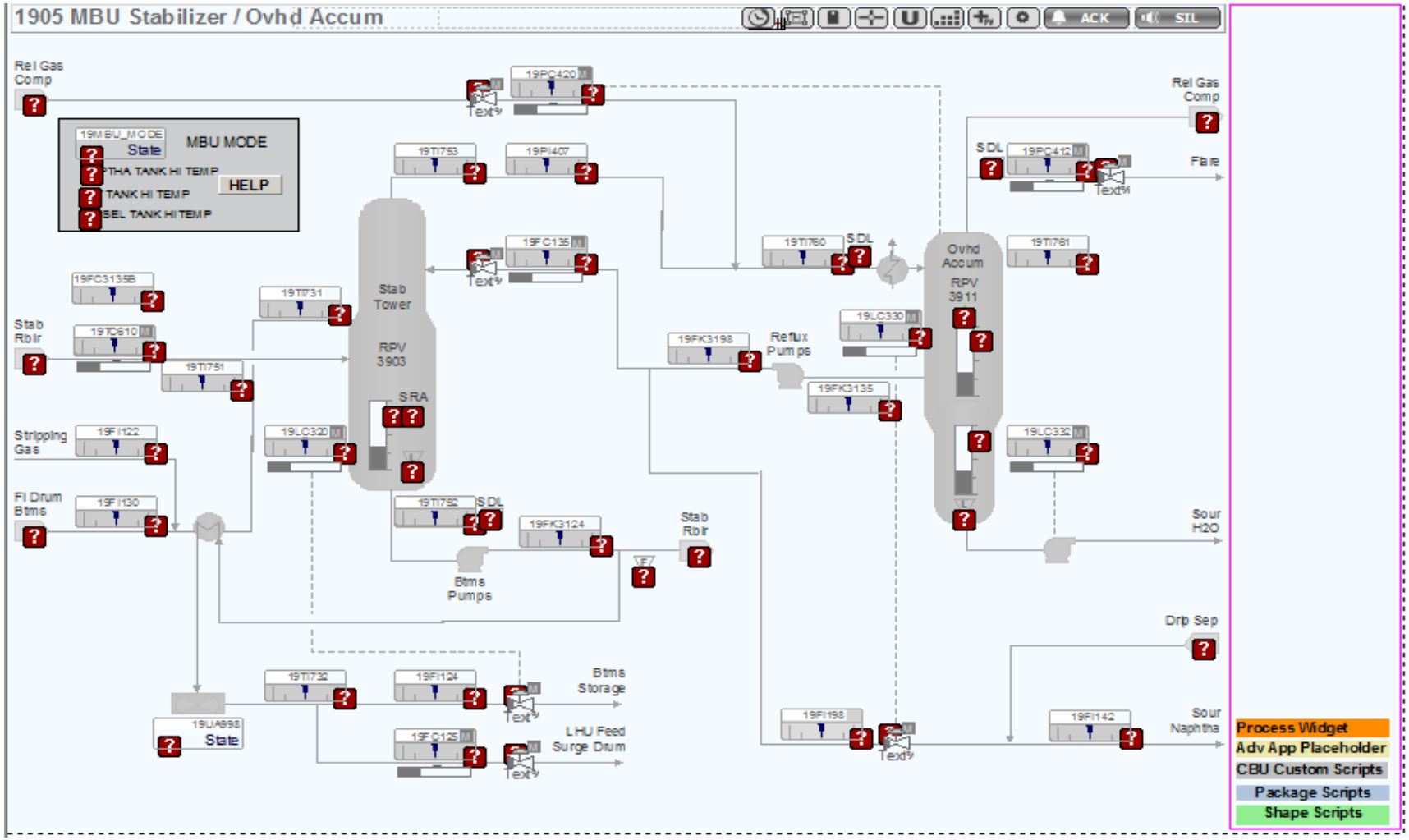
1.34 1904H1 MID BARREL FEED RECYCLE COMPRESSORSS HELP (reformer_1904h1.htm)

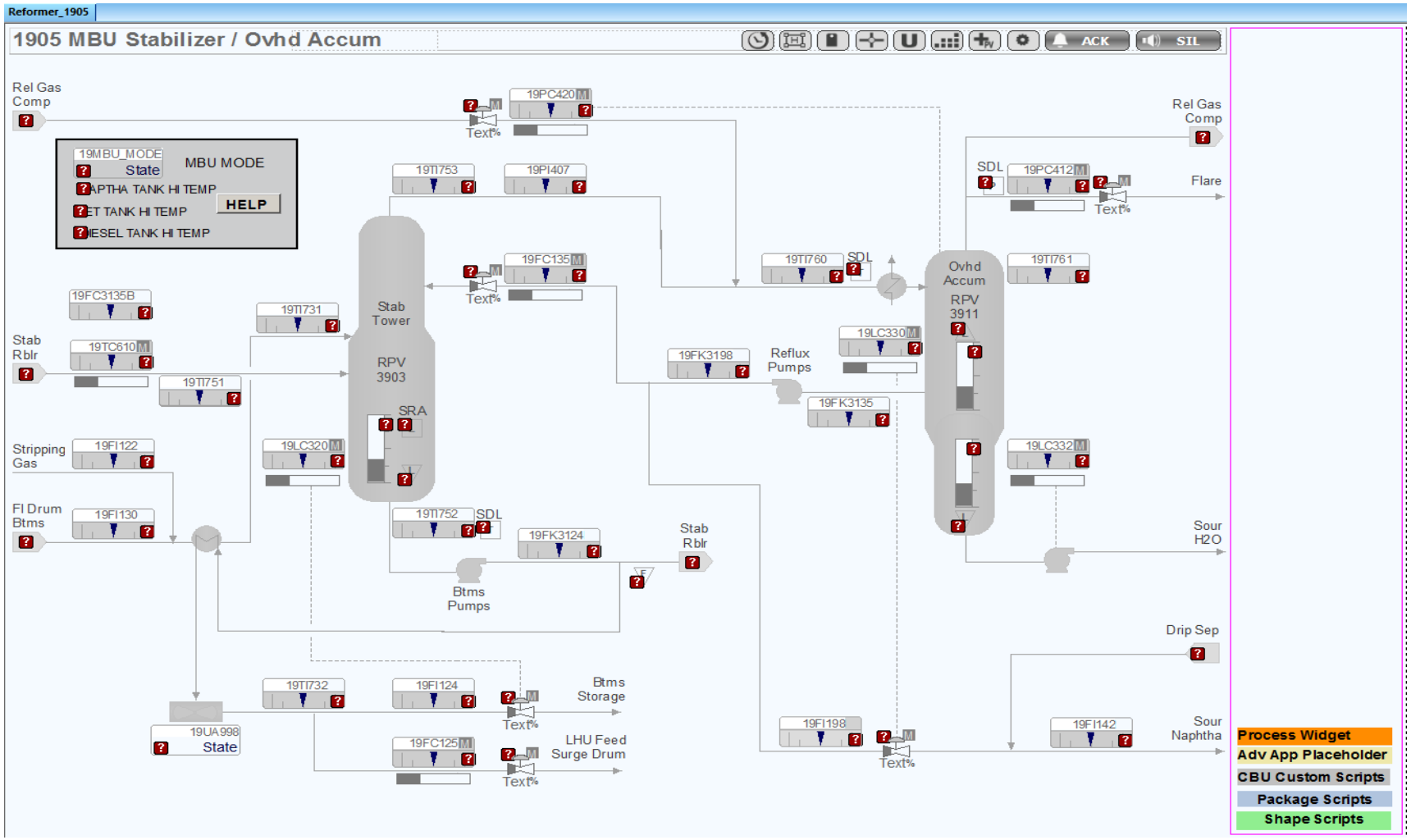


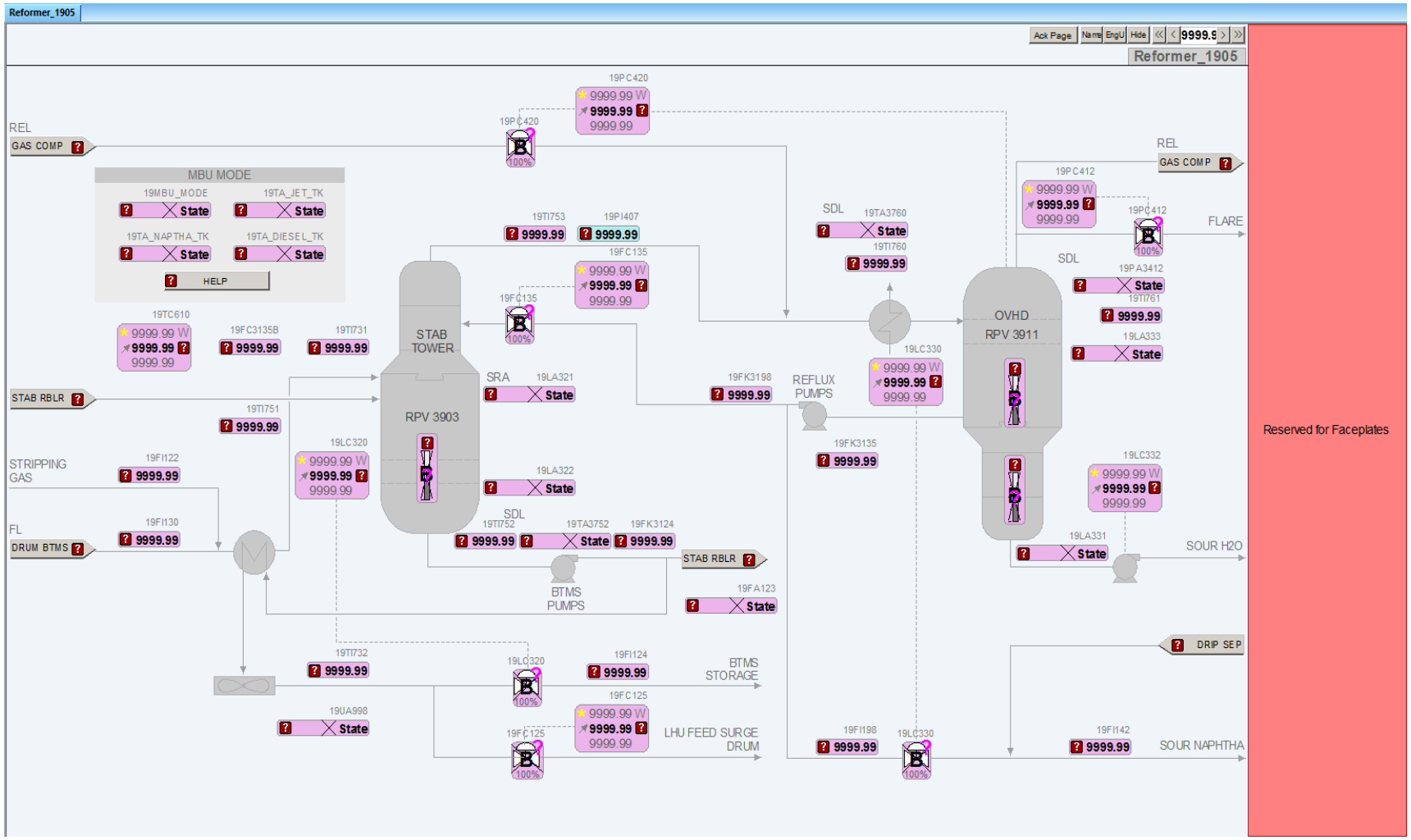

reformer_1904h1
1904H1 Mid Barrel Feed Recycle Compressor Help
ACK
SIL
Unload:
The DCS will unload the East and West Feed/Recycle Gas Compressors under the following conditions:
*Low Suction pressure Feed Gas KO Pot (<150 psig)
**Low Suction Pressure Recycle Gas KO Pot (<635 psig)
Text has changed and conditions are changed
*This unloads the feed side only. Reset pressure is 184 psig
**This is associated with the suction pressure of the Recycle KO Pot. Recycle gas suction low pressure (<635 psig). Unloads the recycle end only. It looks at a single pressure transmitter 19PI430. This is disabled during start-up when unit pressure is less than 225 psig until MPT is reached. Resets when pressure is 640 psig. This has the ability to INPUT BYPASS.
Startup:
After selection of either Naphtha or Diesel operating mode by the field operator via 19HS900, the board operator will have 2 minutes to confirm the request via 19HS900A. Once operating mode has been confirmed, the low pressure trip (via 19PT430) may be bypassed via 19HS430A to facilitate startup of the East and West Feed Recycle Gas Compressors. The low suction pressure interlock will re-arm after 10 minutes of NORMAL suction pressure and OR Trip Bypass 19HS430A is placed back to NORMAL.
As per Rec 224290, the Bypass Timer is set up via 19XK430A to 6000 hrs (changed from 60 hrs to 6000 hrs), so that the timer does not expire and hence is disabled from impacting the unloading logic.
Trips:
The DCS will trip and unload the East and West Feed/Recycle Gas Compressors under the following conditions:
Recycle Discharge Temperature (≥280°F)
2nd Stage High Discharge Temperature (≥300°F)
*2nd Stage High Differential Pressure (≥265°F)
* This is associated with the differential pressure across the 2nd stg of the Feed/Recycle Compressors. The pressure indications are 19PI502 (West), and 19PI499 (East) for the suction of 2nd stg discharge pressure, and 19PI500 (West), and 19PI497 (East). These pressure indications create a dP which will trip the compressors at ≥265 psig. There is not a bypass option for OPS.
Unit Operating Mode:
MBU Operating Mode (DCS)
19XS900D
State
MBU Operating Mode (TMR)
19XL900D
State
Naphtha Feed Block Valve
19ZL905
State
Process
East / West Recycle Compressor Suction Pressure:
Suction Pressure Trip Bypass
19HS430A
State
19XA430
State
Suction Pressure Trip Armed
19PLH430A
State
19PLH430B
State
19PI430
Rcy Cmp Unload
Bypass Timer Reset
19HS430B
State
East Recycle Compressor
Dampener Suction Pressure
19PI499
Dampener Discharge Pressure
19PI497
Differential Pressure
19PDI498
Discharge Temperature
19TI775
Run Status
19XA902
State
West Recycle Compressor
Dampener Suction Pressure
19PI502
Dampener Discharge Pressure
19PI500
Differential Pressure
19PDI501
Discharge Temperature
19TI776
Run Status
19XA901
State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1904H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_1904H1
TRIPS:
THE DCS WILL UNLOAD THE EAST AND WEST FEED/RECYCLE GAS COMPRESSORS UNDER THE FOLLOWING CONDITIONS:
*LOW SUCTION PRESSURE FEED GAS KO POT (<150 PSIG)
**LOW SUCTION PRESSURE RECYCLE GAS KO POT (<635 PSIG)
*THIS UNLOADS THE FEED SIDE ONLY. RESET PRESSURE IS 184 PSIG
**THIS IS ASSOCIATED WITH THE SUCTION PRESSURE OF THE RECYCLE KO POT. RECYCLE GAS SUCTION LOW PRESSURE (<635 PSIG), UNLOADS THE RECYCLE END ONLY. IT LOOKS AT A SINGLE PRESSURE TRANSMITTER 19PI430. THIS IS DISABLED DURING START-UP WHEN UNIT PRESSURE IS LESS THAN 225 PSIG UNTIL MPT IS REACHED. RESETS WHEN PRESSURE IS 640 PSIG. THIS HAS THE ABILITY TO INPUT BYPASS.
STARTUP:
AFTER SELECTION OF EITHER NAPHTHA OR DIESEL OPERATING MODE BY THE FIELD OPERATOR VIA 19HS900, THE BOARD OPERATOR WILL HAVE 2 MINUTES TO CONFIRM THE REQUEST VIA 19HS900A. ONCE OPERATING MODE HAS BEEN CONFIRMED, THE LOW PRESSURE TRIP (VIA 19PT430) MAY BE BYPASSED VIA 19HS430A TO FACILITATE STARTUP OF THE EAST AND WEST FEED RECYCLE GAS COMPRESSORS. THE LOW SUCTION PRESSURE INTERLOCK WILL RE-ARM AFTER 10 MINUTES OF NORMAL SUCTION PRESSURE AND OR TRIP BYPASS 19HS430A IS PLACED BACK TO NORMAL.
AS PER REC 224290, THE BYPASS TIMER IS SET UP VIA 19XK430A TO 6000 HRS (CHANGED FROM 60 HRS TO 6000 HRS), SO THAT THE TIMER DOES NOT EXPIRE AND HENCE IS DISABLED FROM IMPACTING THE UNLOADING LOGIC.
TRIPS :
THE DCS WILL TRIP AND UNLOAD THE EAST AND WEST FEED/RECYCLE GAS COMPRESSORS UNDER THE FOLLOWING CONDITIONS:
RECYCLE DISCHARGE TEMPERATURE (≥280ºF)
2ND STAGE HIGH DISCHARGE TEMPERATURE (≥300ºF)
*2ND STAGE HIGH DIFFERENTIAL PRESSURE (≥265ºF)
* THIS IS ASSOCIATED WITH THE DIFFERENTIAL PRESSURE ACROSS THE 2ND STG OF THE FEED/RECYCLE COMPRESSORS. THE PRESSURE INDICATIONS ARE 19PI502 (WEST), AND 19PI499 (EAST) FOR THE SUCTION OF 2ND STG DISCHARGE PRESSURE, AND 19PI500 (WEST), AND 19PI497 (EAST). THESE PRESSURE INDICATIONS CREATE A DP WHICH WILL TRIP THE COMPRESSORS AT ≥265 PSIG. THERE IS NOT A BYPASS OPTION FOR OPS.
UNIT OPERATING MODE:
PROCESS
19XS900D
MBU OPERATING MODE (DCS)
State
19XL900D
MBU OPERATING MODE (TMR)
State
19ZL905
NAPHTHA FEED BLOCK VALVE
State
EAST / WEST RECYCLE COMPRESSOR SUCTION PRESSURE:
19HS430A
19XA430
SUCTION PRESSURE TRIP BYPASS
State
State
19PLH430A
19PLH430B
SUCTION PRESSURE TRIP ARMED
State
State
19PI430
19XA430A
9999.99
State
19HS430B
BYPASS TIMER RESET
State
EAST RECYCLE COMPRESSOR
19PI499
DAMPENER SUCTION PRESSURE
9999.99
19PI497
DAMPENER DISCHARGE PRESSURE
9999.99
19PDI498
DIFFERENTIAL PRESSURE
9999.99
19TI775
DISCHARGE TEMPERATURE
9999.99
19XA902
RUN STATUS
State
WEST RECYCLE COMPRESSOR
19PI502
DAMPENER SUCTION PRESSURE
9999.99
19PI500
DAMPENER DISCHARGE PRESSURE
9999.99
19PDI501
DIFFERENTIAL PRESSURE
9999.99
19TI776
DISCHARGE TEMPERATURE
9999.99
19XA901
RUN STATUS
State
Reserved for Faceplates

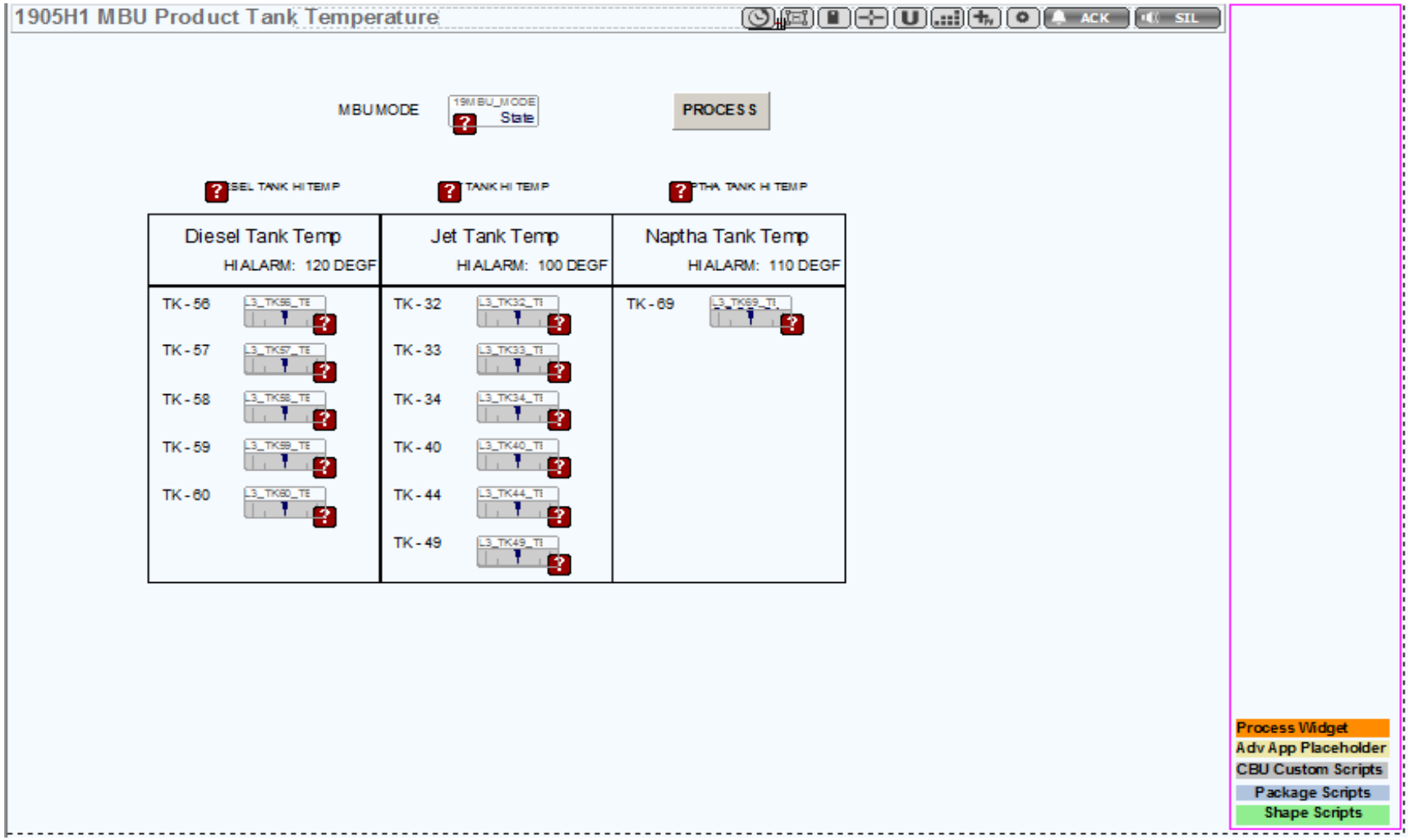
1.35 1905 MBU STABILIZER / OVHD ACCUM (Reformer_1905.htm)

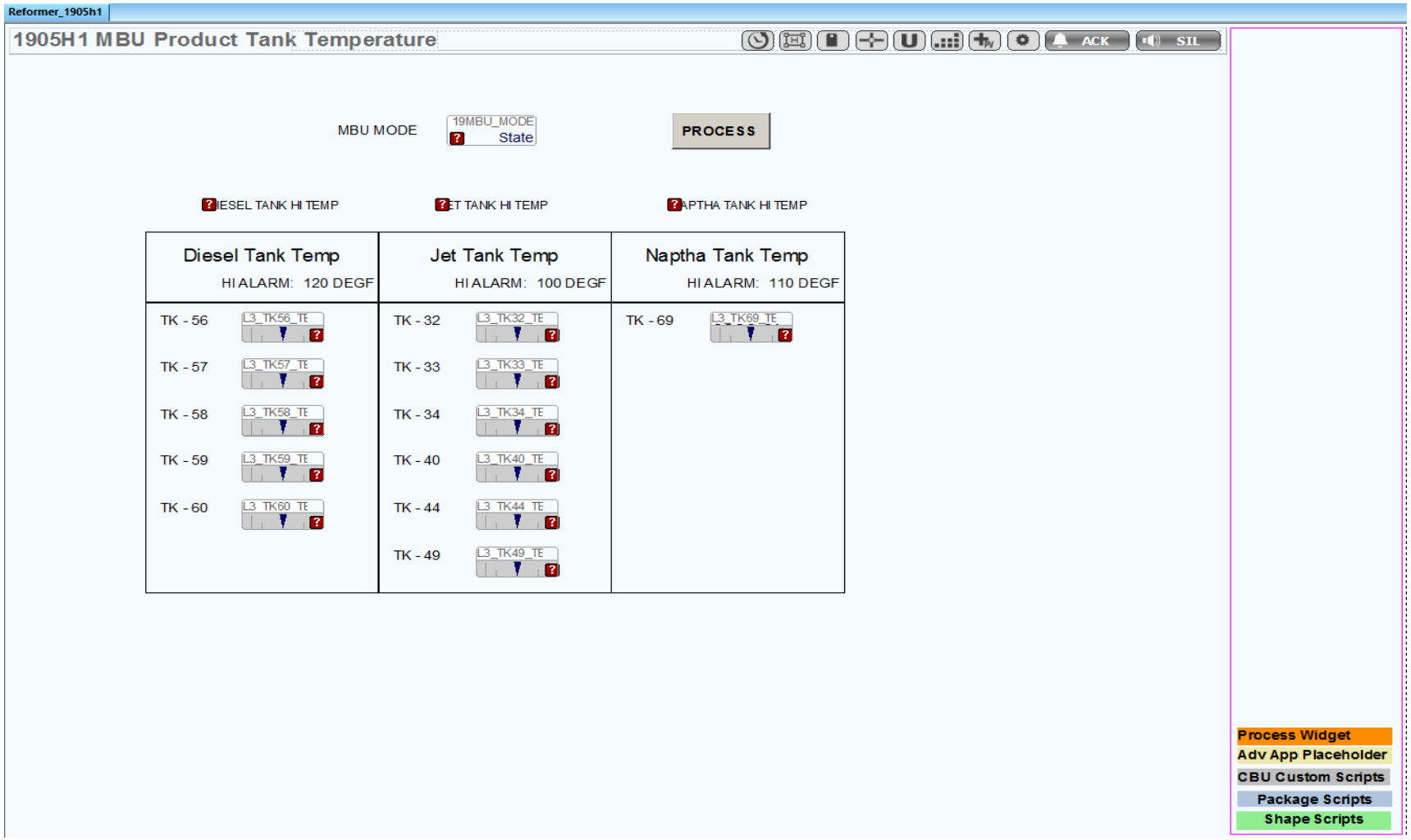


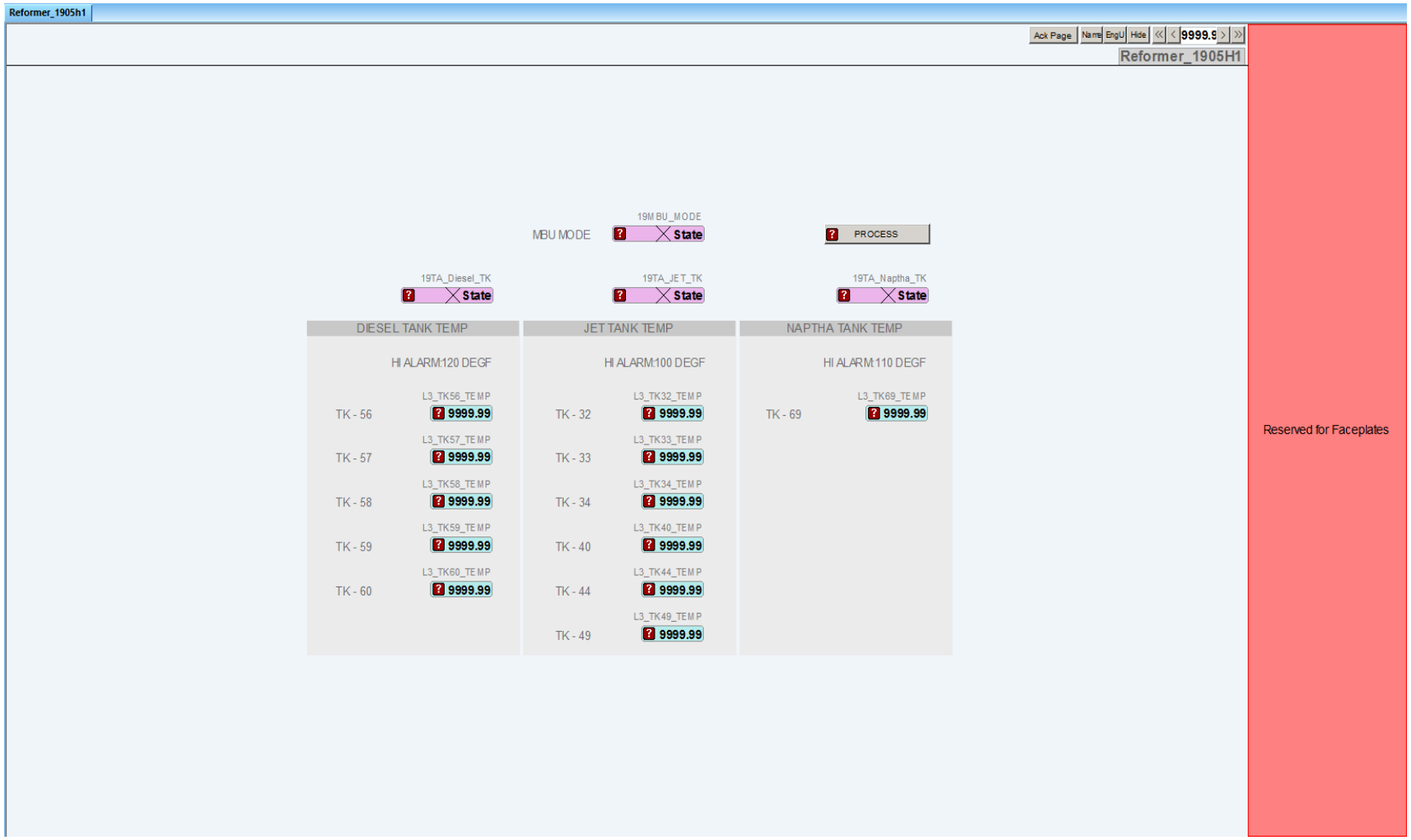

Reformer_1905
1905 MBU Stabilizer / Ovhd Accum
ACK
SIL
Rel Gas Comp
19PC420
Text%
19MBU_MODE
State
MBU MODE
APTHA TANK HI TEMP
ET TANK HI TEMP
IESEL TANK HI TEMP
HELP
19TI753
19PI407
19FC135
Text%
19FC3135B
19TI731
Stab Rblr
19TC610
19TI751
Stripping Gas
19FI122
Fl Drum Btms
19FI130
Stab Tower
RPV 3903
SRA
19LC320
19TI752
SDL
19FK3124
Btms Pumps
Stab Rblr
19TI760
SDL
19FK3198
Reflux Pumps
19FK3135
19LC330
Ovhd Accum
RPV 3911
19TI761
19LC332
Rel Gas Comp
SDL
19PC412
Flare
Text%
Sour H2O
Drip Sep
19TI732
19FI124
Btms Storage
Text%
19UA998
State
19FC125
LHU Feed Surge Drum
Text%
19FI198
Text%
19FI142
Sour Naphtha
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1905
Ack Page
Name
EngU
Hide
Reformer_1905
REL
GAS COMP
MBU MODE
19MBU_MODE
19TA_JET_TK
19TA_NAPTHA_TK
19TA_DIESEL_TK
State
HELP
19PC420
9999.99 W
9999.99
9999.99
19TI753
19PI407
19FC135
19TC610
19FC3135B
19TI731
STAB TOWER
RPV 3903
SRA
19LA321
19LA322
STAB RBLR
19TI751
19LC320
STRIPPING GAS
19FI122
FL
DRUM BTMS
19FI130
SDL
19TI752
19TA3752
19FK3124
BTMS PUMPS
19FA123
19TI732
19FI124
BTMS STORAGE
19UA998
19FC125
LHU FEED SURGE DRUM
19FK3198
REFLUX PUMPS
19FK3135
19LC330
SDL
19TA3760
19TI760
OVHD RPV 3911
19PC412
REL
GAS COMP
FLARE
SDL
19PA3412
19TI761
19LA333
19LC332
19LA331
SOUR H2O
DRIP SEP
19FI198
19FI142
SOUR NAPHTHA
Reserved for Faceplates

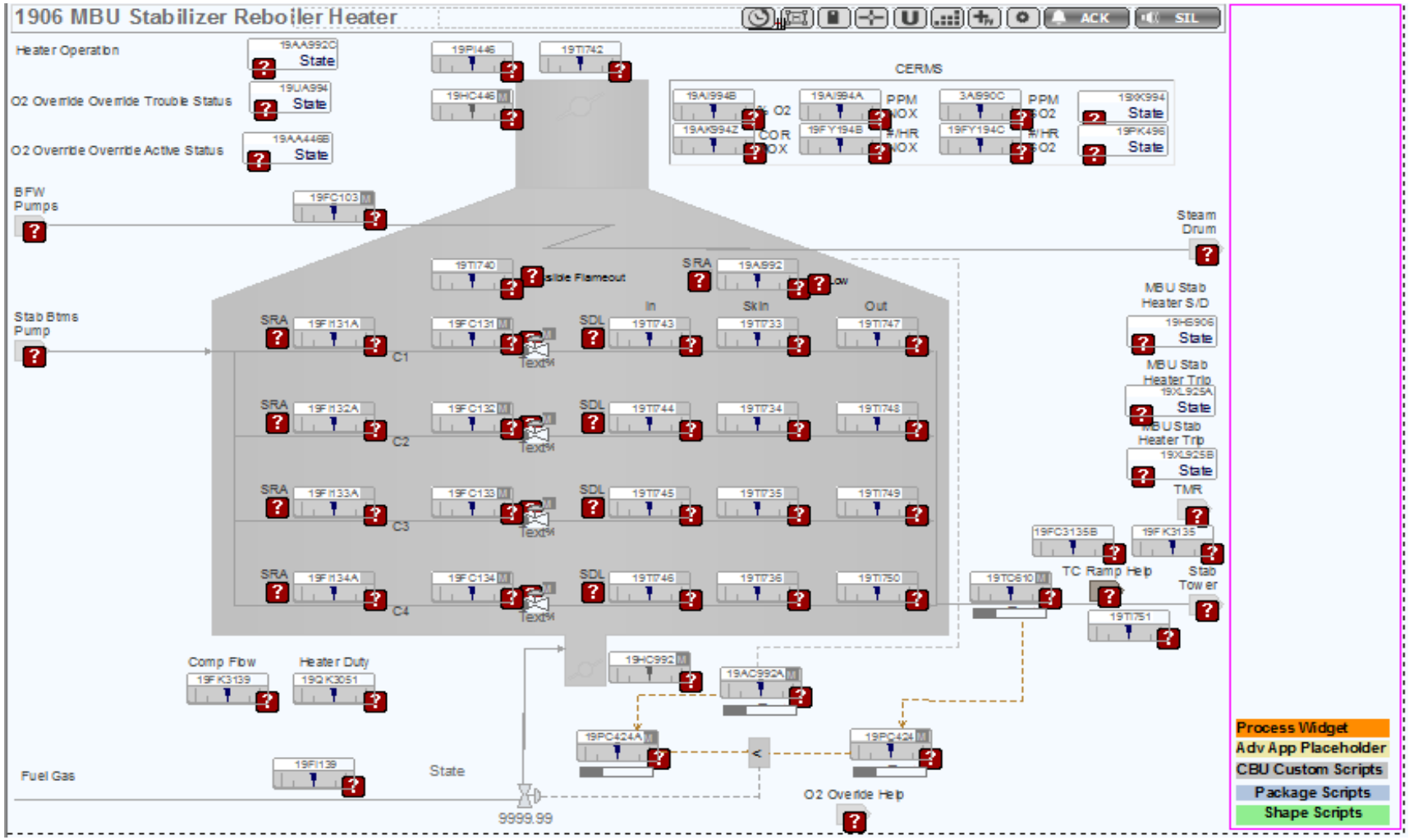
1.36 1905H1 MBU PRODUCTION TANK TEMPERATURE (Reformer_1905h1.htm)

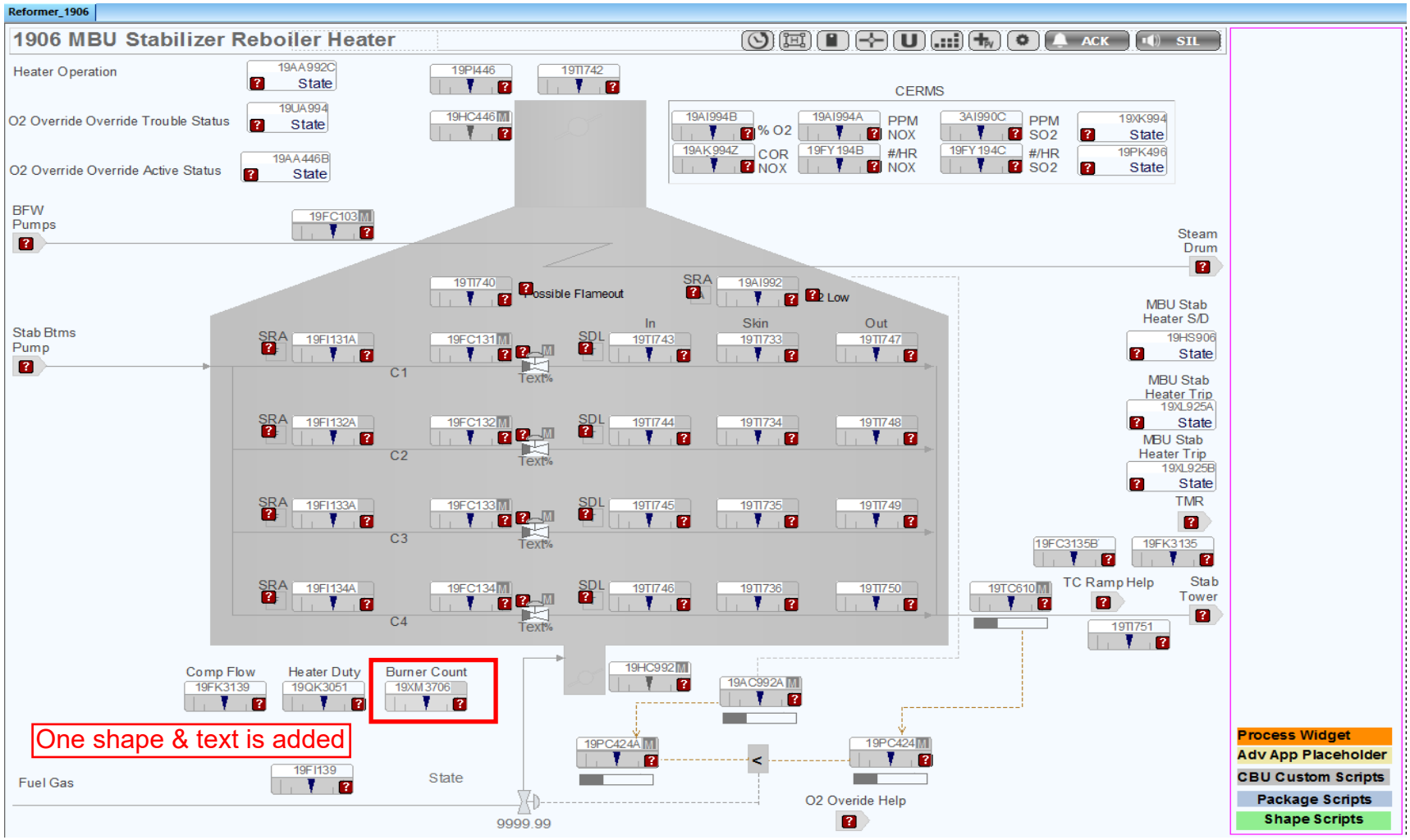


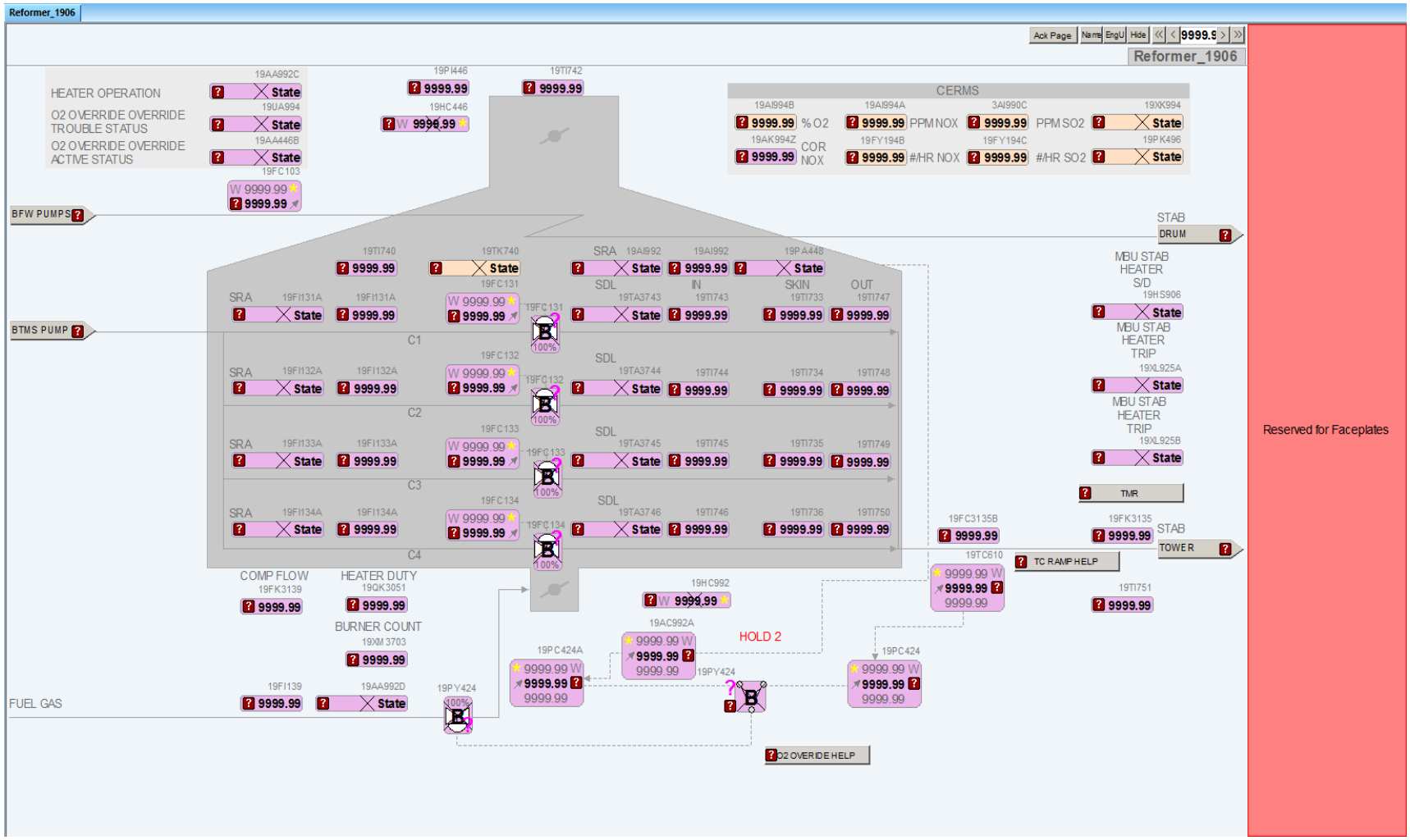

Reformer_1905h1
1905H1 MBU Product Tank Temperature
ACK
SIL
MBU MODE
19MBU_MODE
State
PROCESS
IESEL TANK HI TEMP
ET TANK HI TEMP
APTHA TANK HI TEMP
Diesel Tank Temp
HI ALARM: 120 DEGF
Jet Tank Temp
HI ALARM: 100 DEGF
Naptha Tank Temp
HI ALARM: 110 DEGF
TK - 56
L3_TK56_TE
TK - 57
L3_TK57_TE
TK - 58
L3_TK58_TE
TK - 59
L3_TK59_TE
TK - 60
L3_TK60_TE
TK - 32
L3_TK32_TE
TK - 33
L3_TK33_TE
TK - 34
L3_TK34_TE
TK - 40
L3_TK40_TE
TK - 44
L3_TK44_TE
TK - 49
L3_TK49_TE
TK - 69
L3_TK69_TE
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1905h1
Ack Page
Name
EngU
Hide
9999.9
Reformer_1905H1
MBU MODE
19MBU_MODE
State
PROCESS
19TA_Diesel_TK
State
19TA_JET_TK
State
19TA_Naptha_TK
State
DIESEL TANK TEMP
HI ALARM:120 DEGF
L3_TK56_TEMP
TK - 56
9999.99
L3_TK57_TEMP
TK - 57
9999.99
L3_TK58_TEMP
TK - 58
9999.99
L3_TK59_TEMP
TK - 59
9999.99
L3_TK60_TEMP
TK - 60
9999.99
JET TANK TEMP
HI ALARM:100 DEGF
L3_TK32_TEMP
TK - 32
9999.99
L3_TK33_TEMP
TK - 33
9999.99
L3_TK34_TEMP
TK - 34
9999.99
L3_TK40_TEMP
TK - 40
9999.99
L3_TK44_TEMP
TK - 44
9999.99
L3_TK49_TEMP
TK - 49
9999.99
NAPTHA TANK TEMP
HI ALARM:110 DEGF
L3_TK69_TEMP
TK - 69
9999.99
Reserved for Faceplates

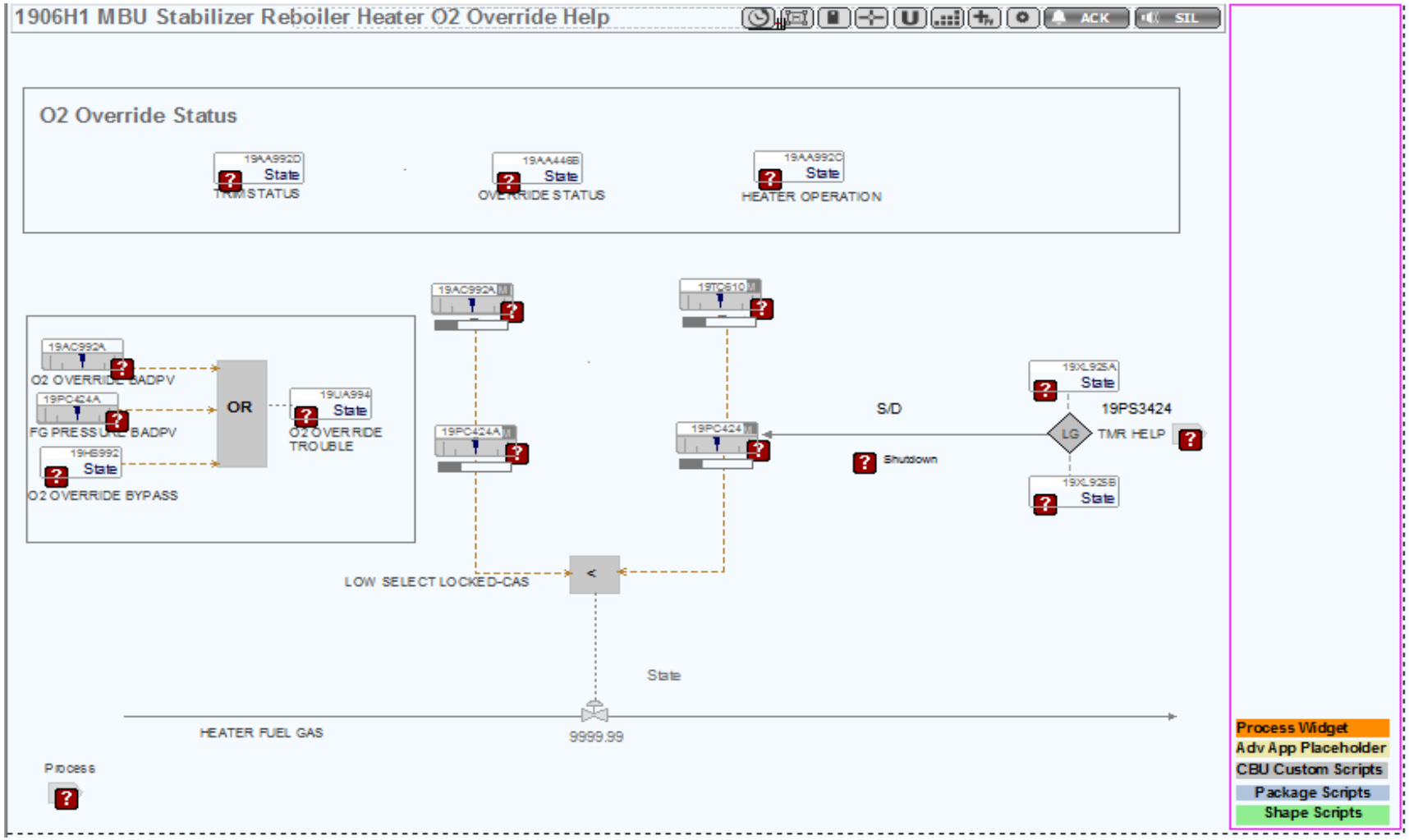
1.37 1906 MBU STABILIZER REBOILER HEATER (Reformer_1906.htm)

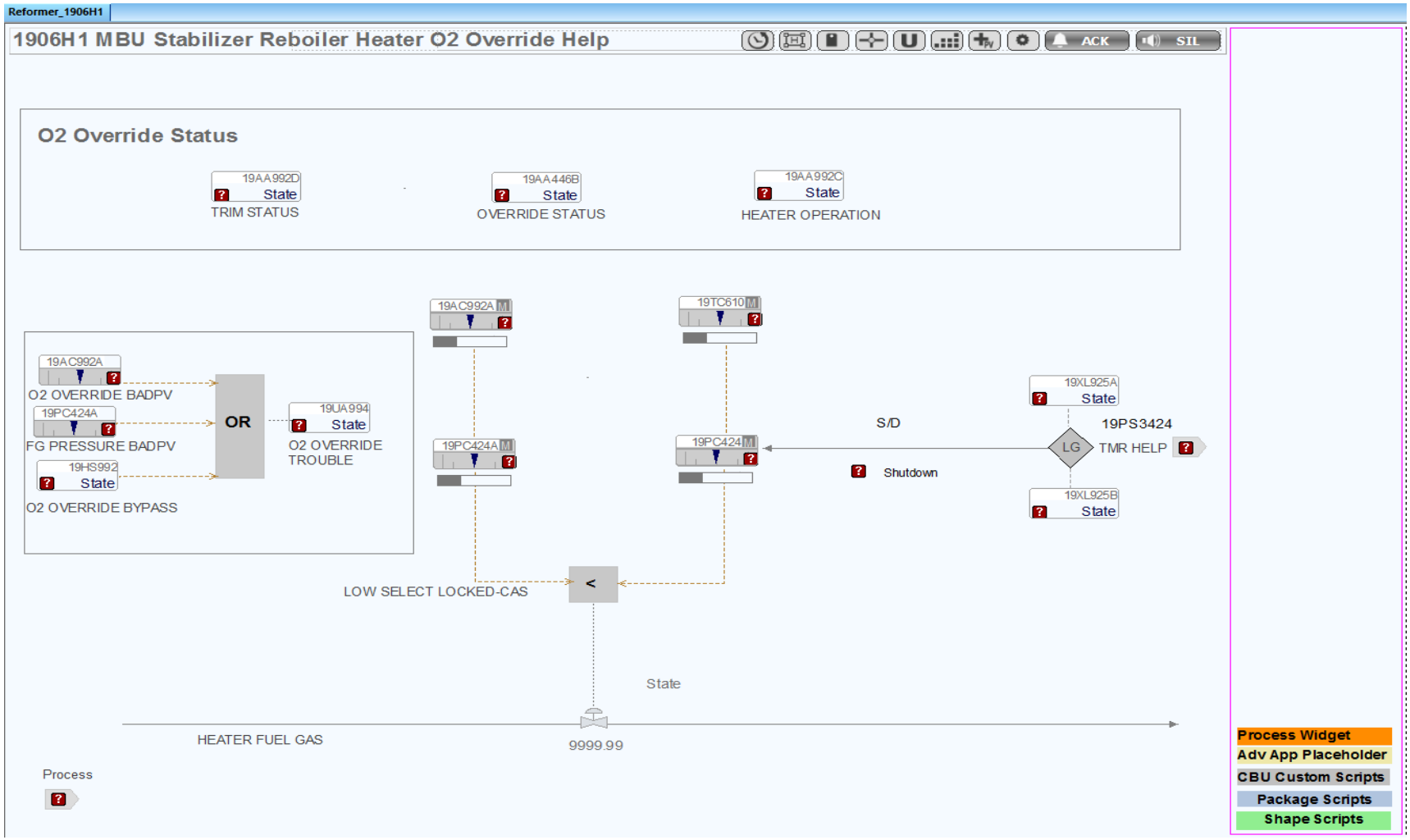


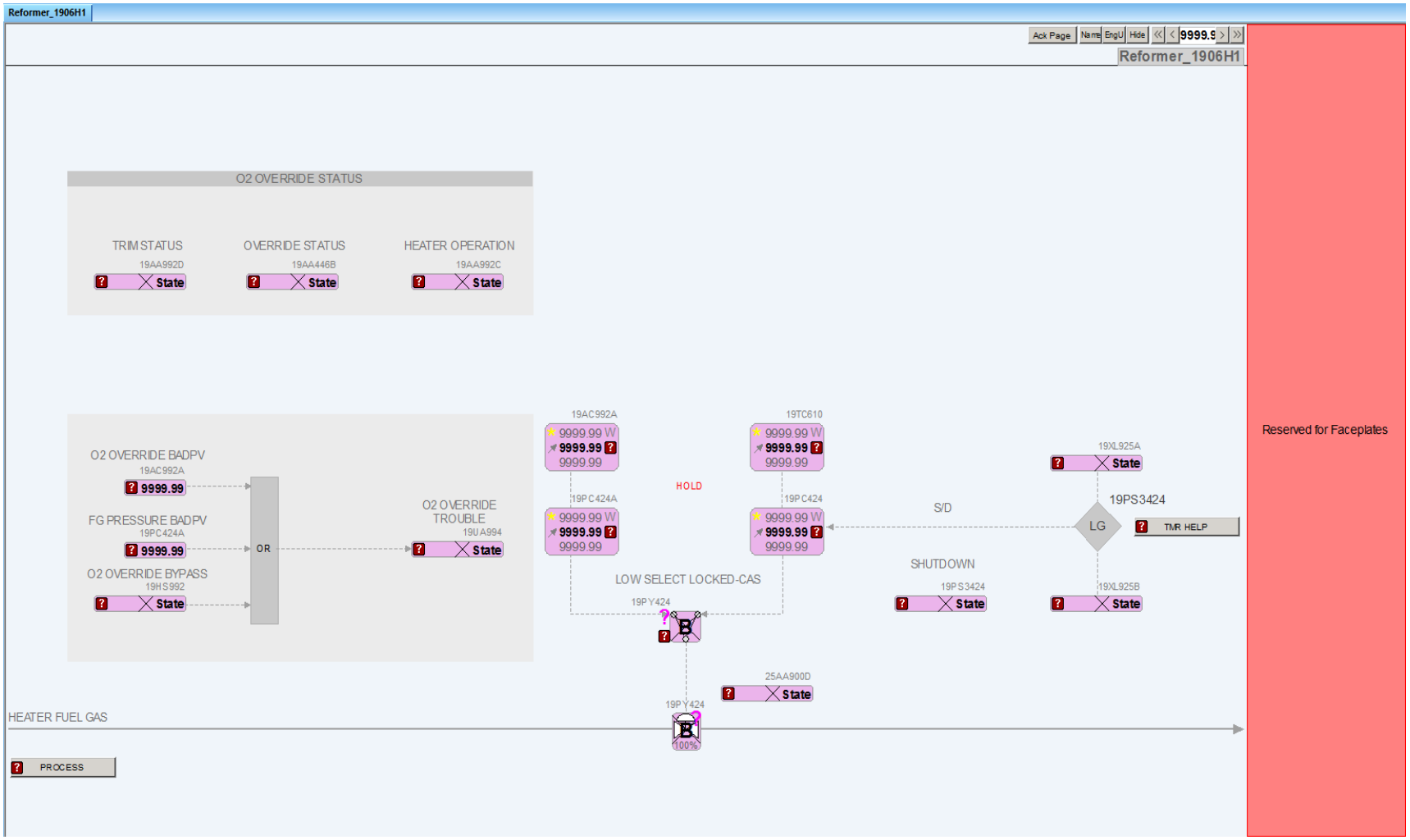

Reformer_1906
1906 MBU Stabilizer Reboiler Heater
ACK
SIL
Heater Operation
19AA992C
State
O2 Override Override Trouble Status
19UA994
State
O2 Override Override Active Status
19AA446B
State
19PI446
19TI742
19HC446M
CERMS
19AI994B
% O2
19AI994A
PPM
NOX
3AI990C
PPM
SO2
19XK994
State
19AK994Z
COR
NOX
19FY194B
#/HR
NOX
19FY194C
#/HR
SO2
19PK496
State
BFW
Pumps
19FC103M
Steam
Drum
19TI740
Possible Flameout
SRA
19AI992
Low
Stab Btms
Pump
In
Skin
Out
SRA
19FI131A
19FC131M
Text%
SDL
19TI743
19TI733
19TI747
C1
SRA
19FI132A
19FC132M
Text%
SDL
19TI744
19TI734
19TI748
C2
SRA
19FI133A
19FC133M
Text%
SDL
19TI745
19TI735
19TI749
C3
SRA
19FI134A
19FC134M
Text%
SDL
19TI746
19TI736
19TI750
C4
MBU Stab
Heater S/D
19HS906
State
MBU Stab
Heater Trip
19XL925A
State
MBU Stab
Heater Trip
19XL925B
State
TMR
19FC3135B
19FK3135
19TC610M
TC Ramp Help
Stab
Tower
19TI751
Comp Flow
19FK3139
Heater Duty
19QK3051
Burner Count
19XM3706
One shape & text is added
19HC992M
19AC992AM
19PC424AM
<
19PC424M
O2 Overide Help
Fuel Gas
19FI139
State
9999.99
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1906
Ack Page
Name
EngU
Hide
Reformer_1906
HEATER OPERATION
O2 OVERRIDE OVERRIDE TROUBLE STATUS
O2 OVERRIDE OVERRIDE ACTIVE STATUS
CERMS
% O2
PPM NOX
PPM SO2
COR NOX
#/HR NOX
#/HR SO2
BFW PUMPS
BTMS PUMP
FUEL GAS
STAB DRUM
MBU STAB HEATER S/D
MBU STAB HEATER TRIP
TMR
STAB TOWER
TC RAMP HELP
SRA
SDL
IN
SKIN
OUT
C1
C2
C3
C4
COMP FLOW
HEATER DUTY
BURNER COUNT
HOLD 2
O2 OVERIDE HELP
Reserved for Faceplates

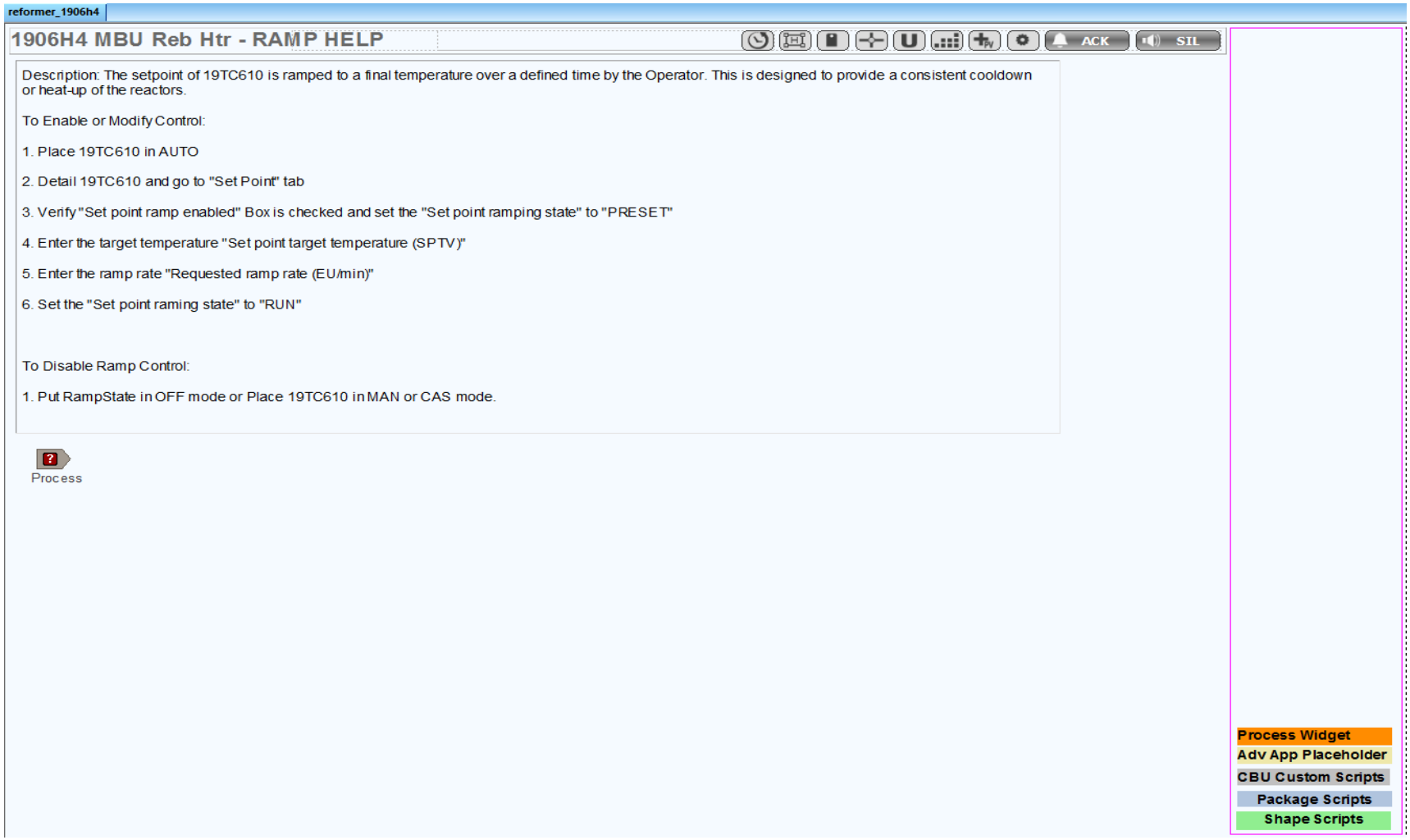
1.38 1906H1 MBU STABILIZER REBOILER HEATER O2 OVERRIDER HELP (Reformer_1906H1.htm)

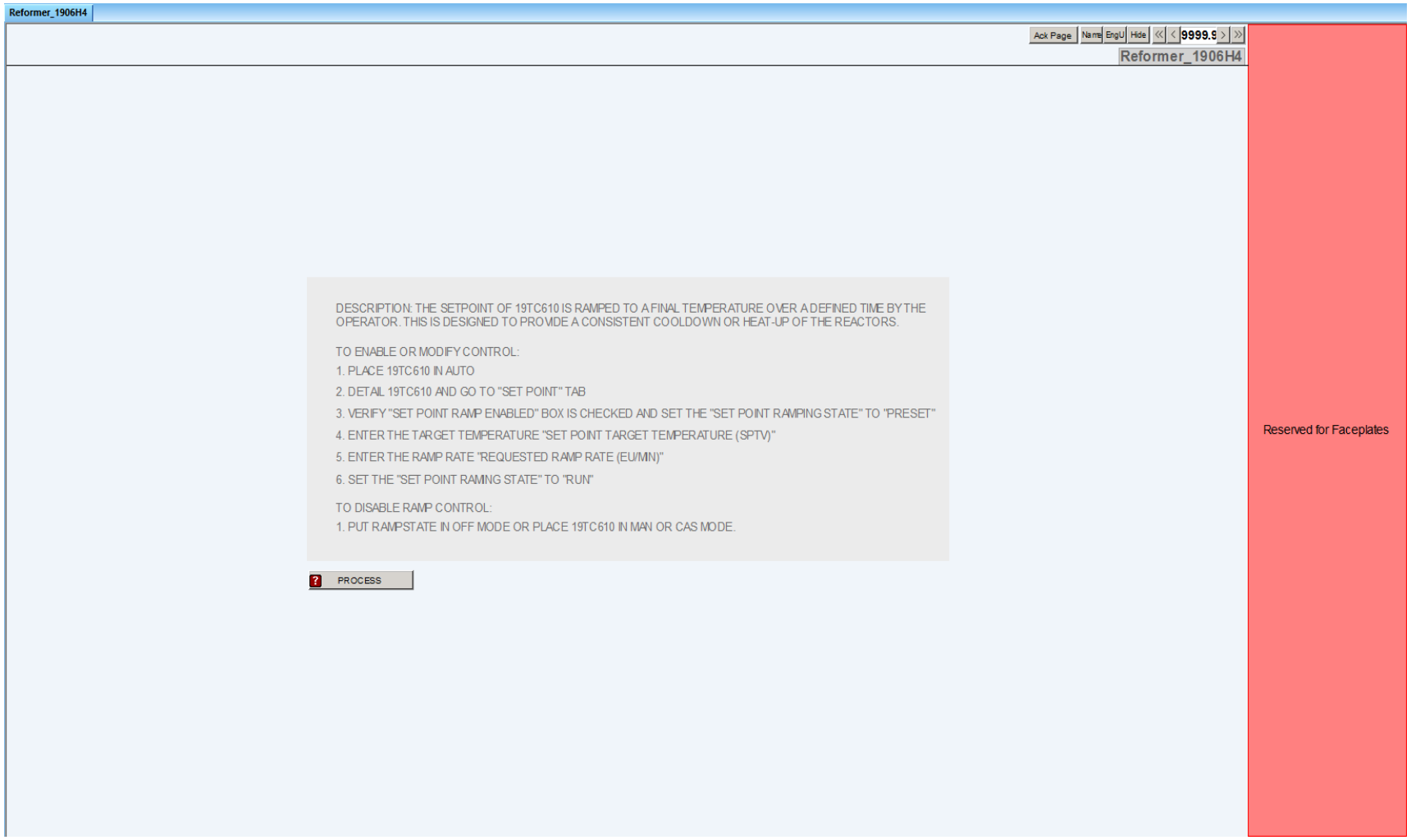



Reformer_1906H1
1906H1 MBU Stabilizer Reboiler Heater O2 Override Help
ACK
SIL
O2 Override Status
19AA992D
State
TRIM STATUS
19AA446B
State
OVERRIDE STATUS
19AA992C
State
HEATER OPERATION
19AC992A
O2 OVERRIDE BADPV
19PC424A
FG PRESSURE BADPV
19HS992
State
O2 OVERRIDE BYPASS
OR
19UA994
State
O2 OVERRIDE TROUBLE
19AC992A
19PC424A
19TC610
19PC424A
S/D
Shutdown
19XL925A
State
19PS3424
LG
TMR HELP
19XL925B
State
LOW SELECT LOCKED-CAS
<
State
HEATER FUEL GAS
9999.99
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

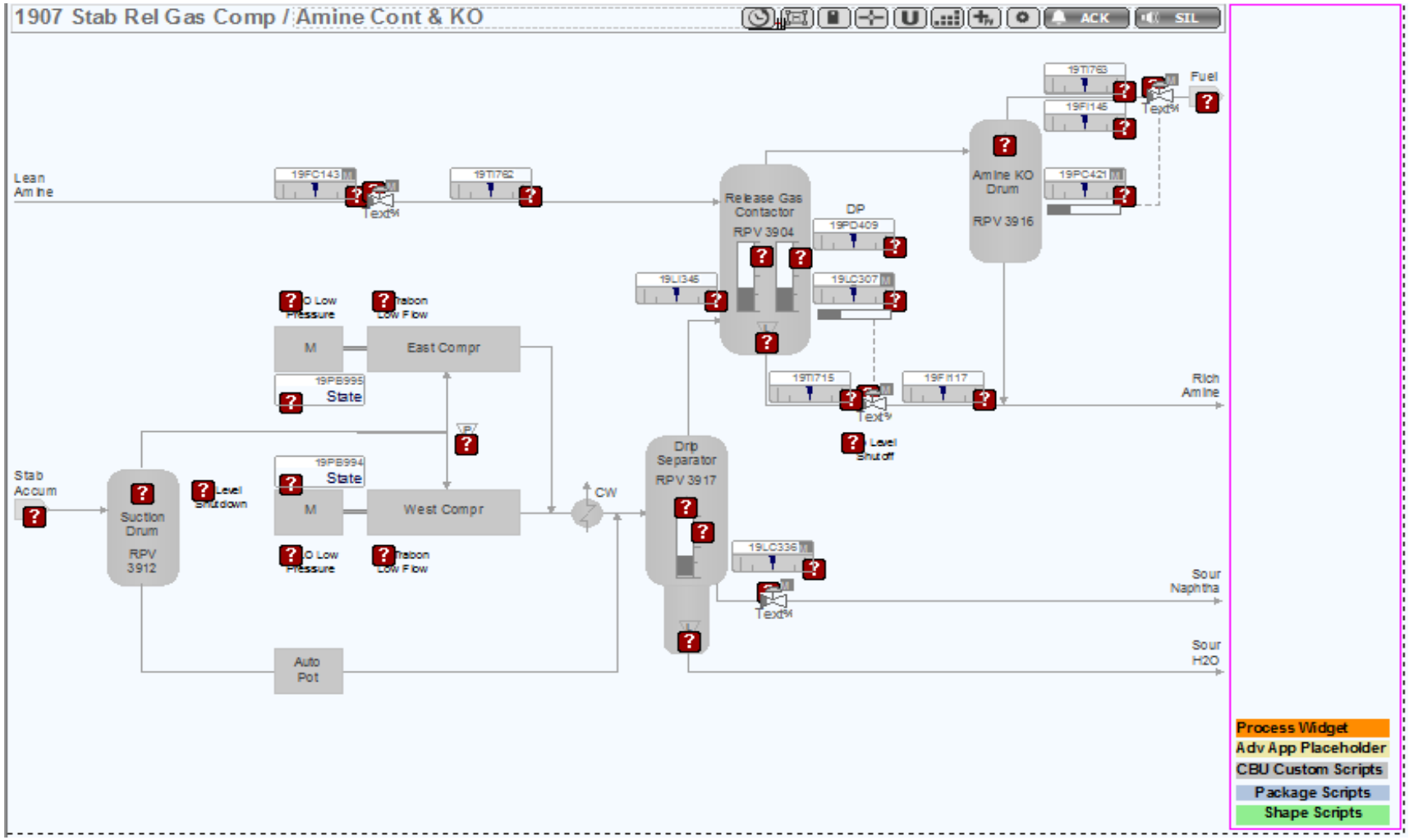

Reformer_1906H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_1906H1
O2 OVERRIDE STATUS
TRIM STATUS
19AA992D
State
OVERRIDE STATUS
19AA446B
State
HEATER OPERATION
19AA992C
State
O2 OVERRIDE BADPV
19AC992A
9999.99
FG PRESSURE BADPV
19PC424A
9999.99
O2 OVERRIDE BYPASS
19HS992
State
OR
O2 OVERRIDE TROUBLE
19UA994
State
19AC992A
9999.99 W
9999.99
9999.99
19PC424A
19TC610
19PC424
HOLD
S/D
LOW SELECT LOCKED-CAS
19PY424
19XL925A
State
19PS3424
LG
TMR HELP
SHUTDOWN
19PS3424
State
19XL925B
State
25AA900D
State
19PY424
100%
HEATER FUEL GAS
PROCESS
Reserved for Faceplates

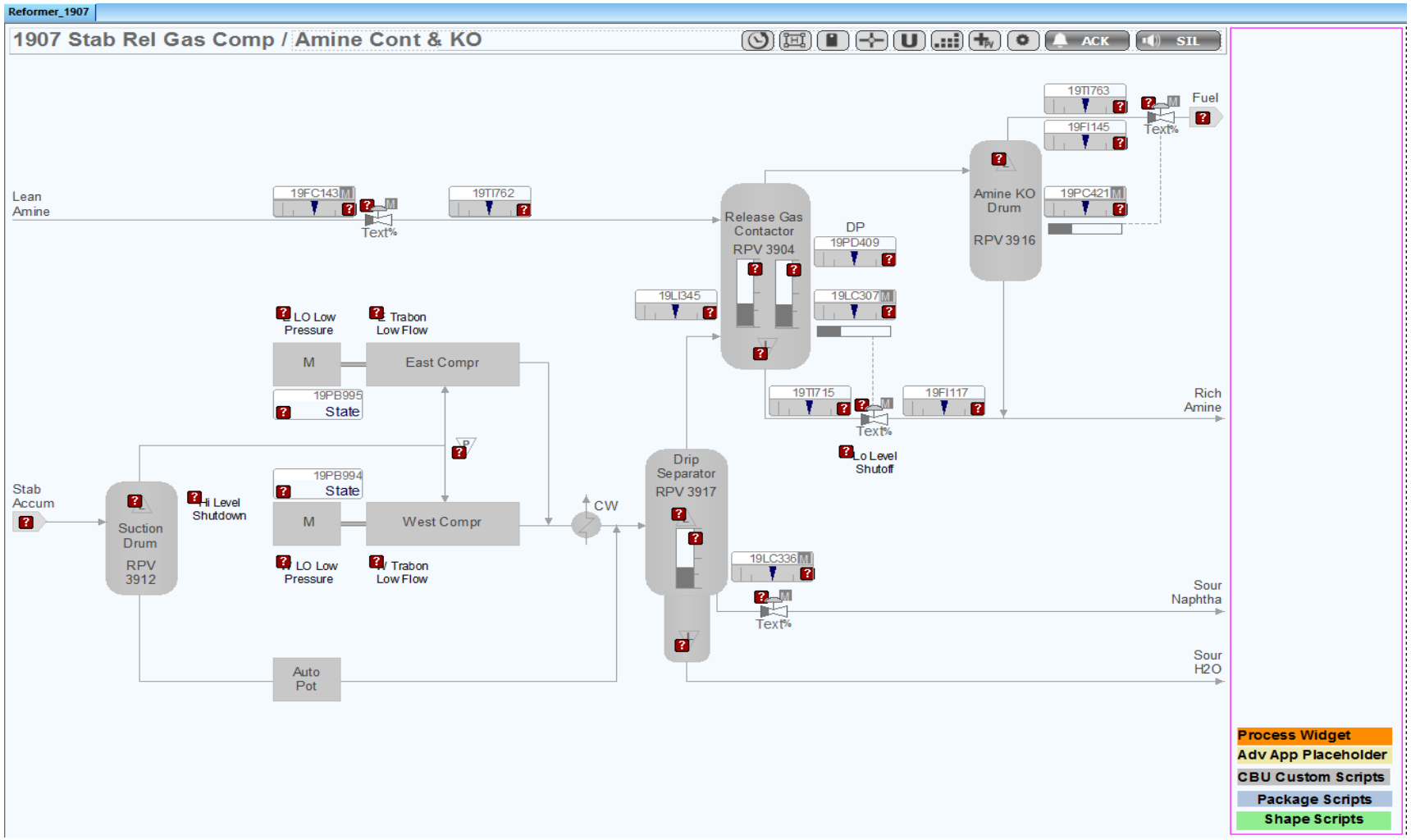
1.39 1906H4 MBU RE HTR – RAMP HELP (reformer_1906h4.htm)

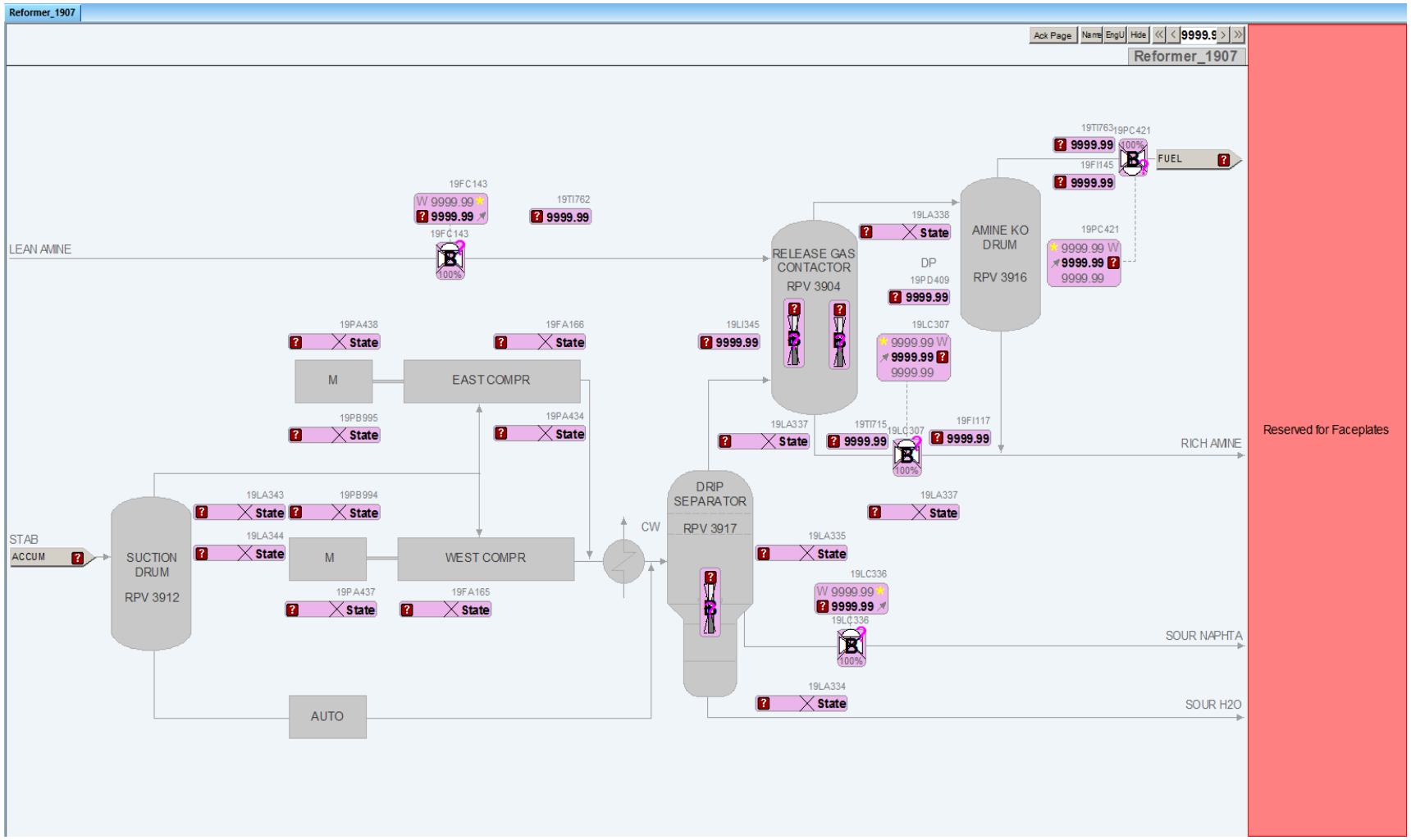

reformer_1906h4
1906H4 MBU Reb Htr - RAMP HELP
ACK
SIL
Description: The setpoint of 19TC610 is ramped to a final temperature over a defined time by the Operator. This is designed to provide a consistent cooldown or heat-up of the reactors.
To Enable or Modify Control:
1. Place 19TC610 in AUTO
2. Detail 19TC610 and go to "Set Point" tab
3. Verify "Set point ramp enabled" Box is checked and set the "Set point ramping state" to "PRESET"
4. Enter the target temperature "Set point target temperature (SPTV)"
5. Enter the ramp rate "Requested ramp rate (EU/min)"
6. Set the "Set point raming state" to "RUN"
To Disable Ramp Control:
1. Put RampState in OFF mode or Place 19TC610 in MAN or CAS mode.
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1906H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_1906H4
DESCRIPTION: THE SETPOINT OF 19TC610 IS RAMPED TO A FINAL TEMPERATURE OVER A DEFINED TIME BY THE OPERATOR. THIS IS DESIGNED TO PROVIDE A CONSISTENT COOLDOWN OR HEAT-UP OF THE REACTORS.
TO ENABLE OR MODIFY CONTROL:
1. PLACE 19TC610 IN AUTO
2. DETAIL 19TC610 AND GO TO "SET POINT" TAB
3. VERIFY "SET POINT RAMP ENABLED" BOX IS CHECKED AND SET THE "SET POINT RAMPING STATE" TO "PRESET"
4. ENTER THE TARGET TEMPERATURE "SET POINT TARGET TEMPERATURE (SPTV)"
5. ENTER THE RAMP RATE "REQUESTED RAMP RATE (EU/MIN)"
6. SET THE "SET POINT RAMING STATE" TO "RUN"
TO DISABLE RAMP CONTROL:
1. PUT RAMPSTATE IN OFF MODE OR PLACE 19TC610 IN MAN OR CAS MODE.
PROCESS
Reserved for Faceplates

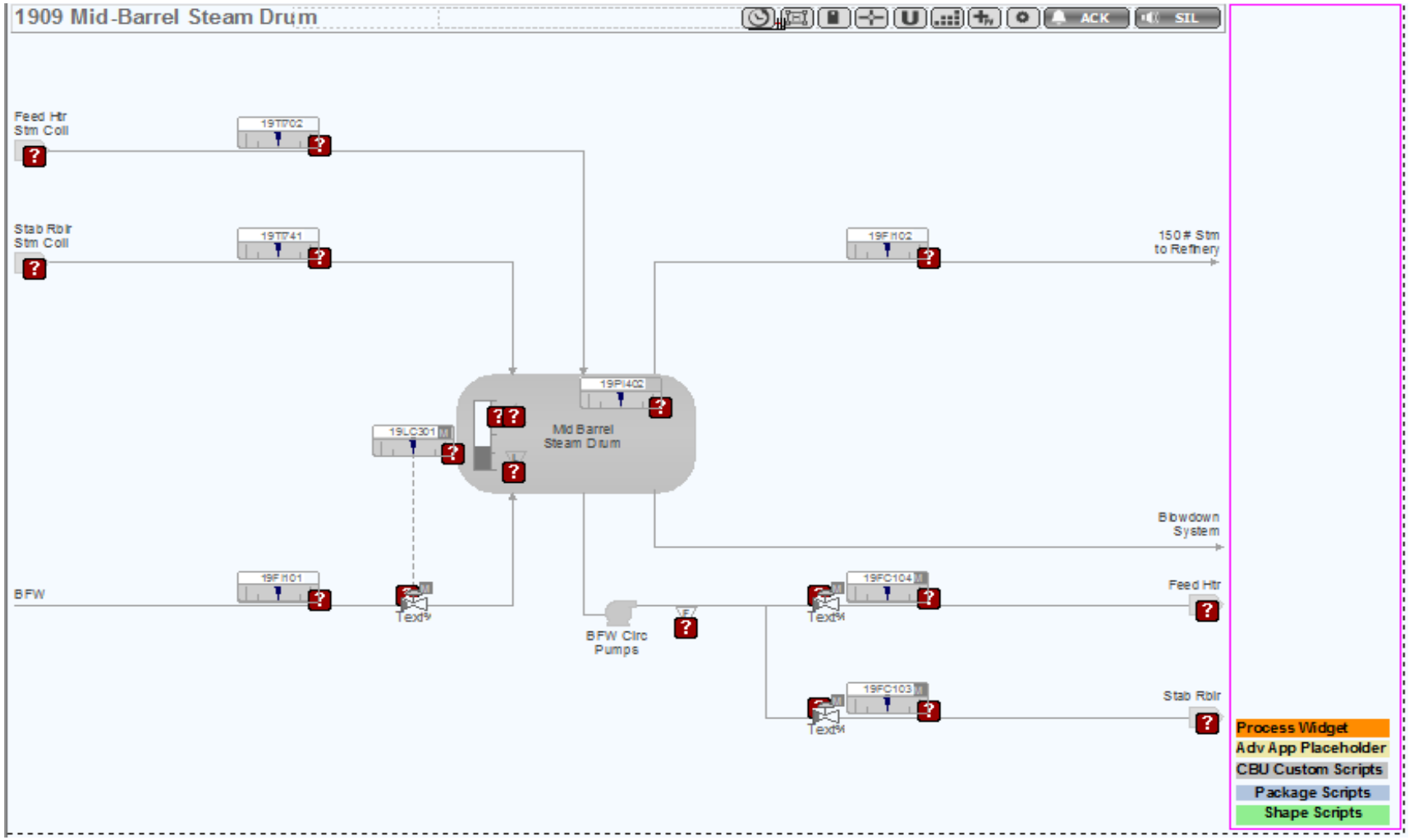
1.40 1907 STAB REL GAS COMP / AMINE CONT & KO (Reformer_1907.htm)

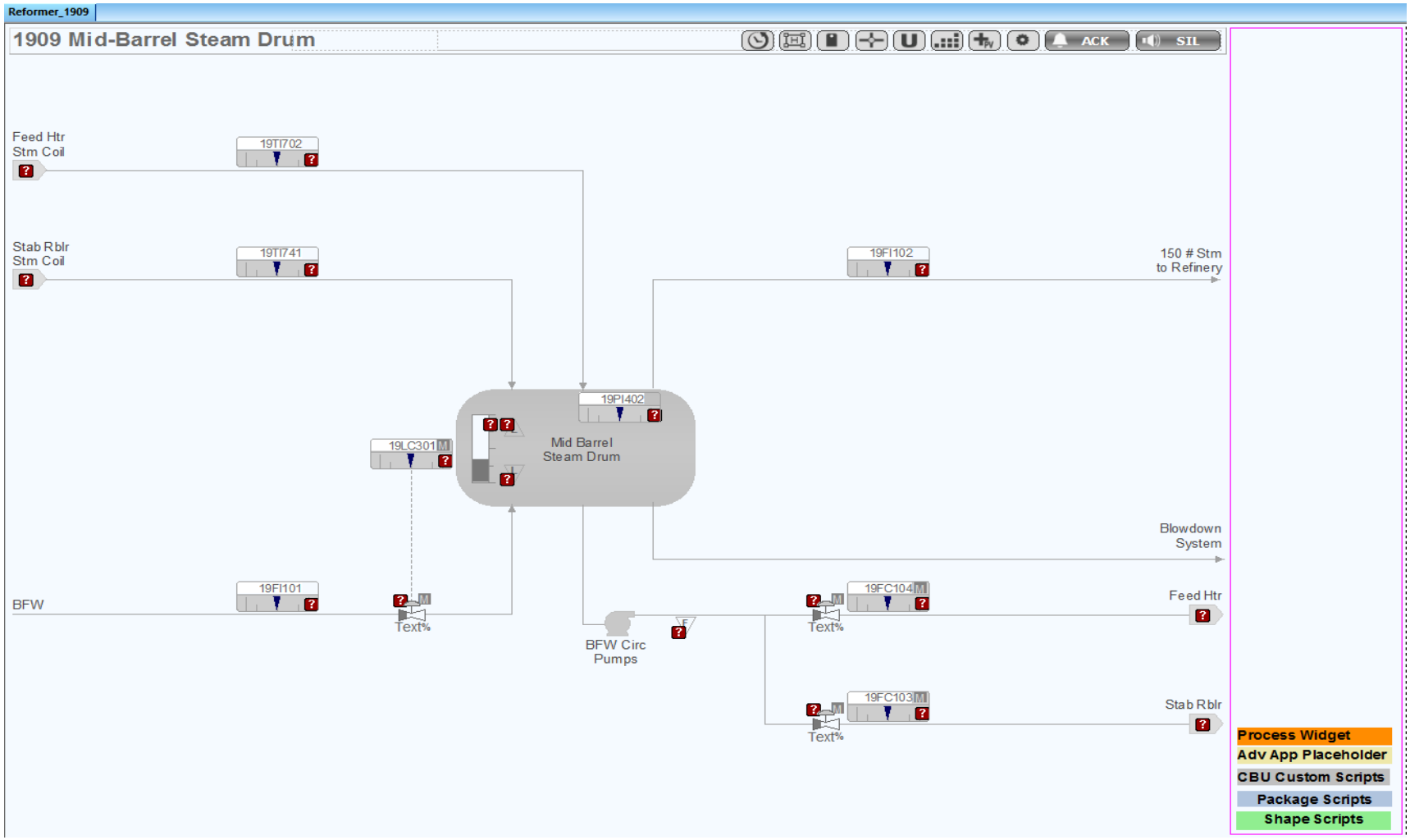


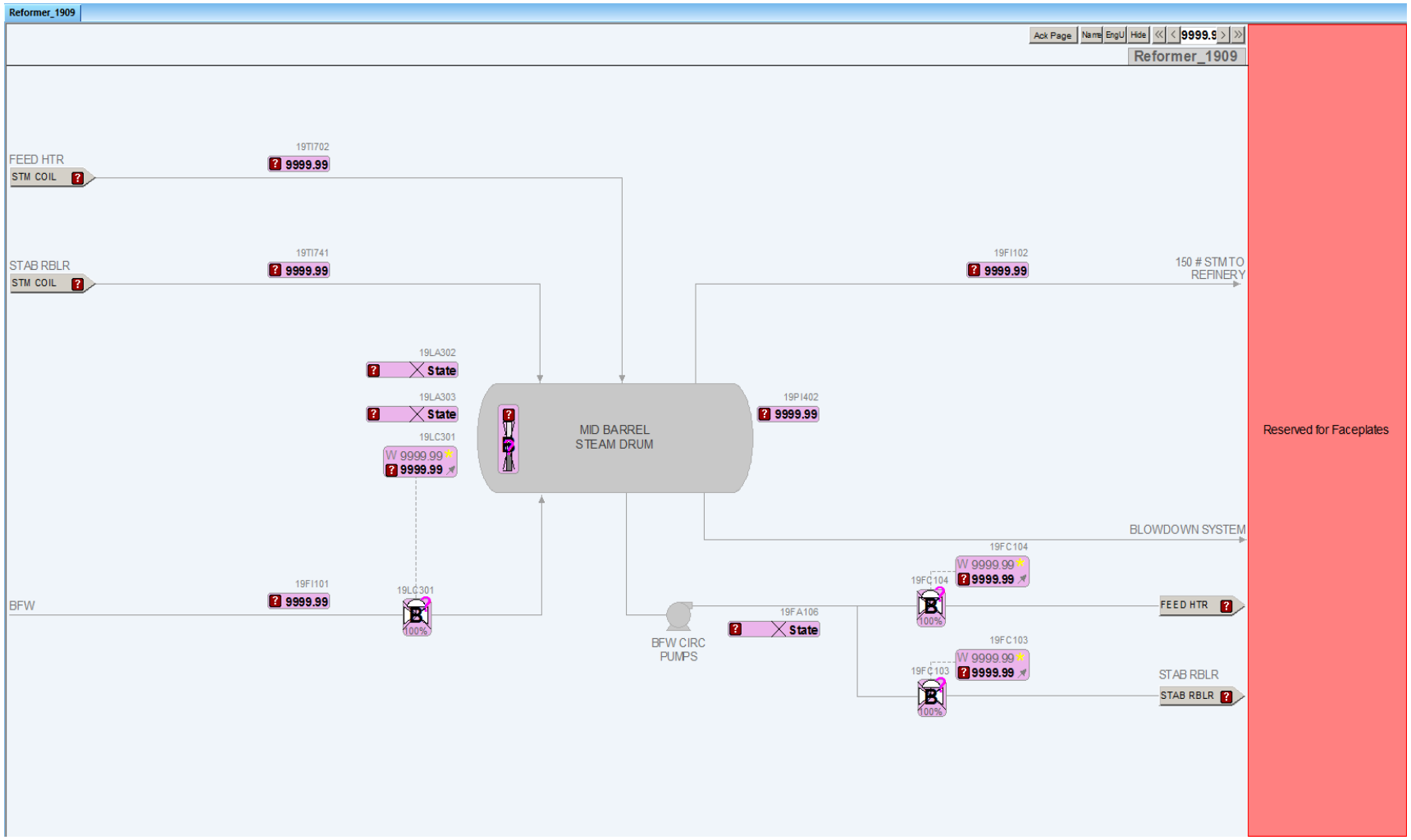

Reformer_1907
1907 Stab Rel Gas Comp / Amine Cont & KO
ACK
SIL
Lean Amine
19FC143
Text%
19TI762
Release Gas Contactor RPV 3904
DP
19PD409
19LI345
19LC307
Amine KO Drum RPV 3916
19TI763
19FI145
19PC421
Fuel
Text%
LO Low Pressure
Trabon Low Flow
M
East Compr
19PB995
State
19TI715
19FI117
Rich Amine
Text%
Lo Level Shutoff
Stab Accum
Suction Drum RPV 3912
Hi Level Shutdown
19PB994
State
M
West Compr
LO Low Pressure
Trabon Low Flow
CW
Drip Separator RPV 3917
19LC336
Text%
Sour Naphtha
Sour H2O
Auto Pot
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1907
Ack Page
Name
EngU
Hide
Reformer_1907
LEAN AMINE
19FC143
19FC143
100%
19TI762
RELEASE GAS CONTACTOR
RPV 3904
19LA338
AMINE KO DRUM
RPV 3916
DP
19PD409
19PC421
19TI763
19PC421
100%
FUEL
19FI145
19LI345
19LC307
19PA438
19FA166
M
EAST COMPR
19PB995
19PA434
19LA337
19TI715
19LC307
100%
19FI117
RICH AMINE
STAB
ACCUM
SUCTION DRUM
RPV 3912
19LA343
19PB994
19LA344
M
WEST COMPR
19PA437
19FA165
CW
DRIP SEPARATOR
RPV 3917
19LA335
19LC336
19LC336
100%
SOUR NAPHTA
19LA334
SOUR H2O
AUTO
Reserved for Faceplates

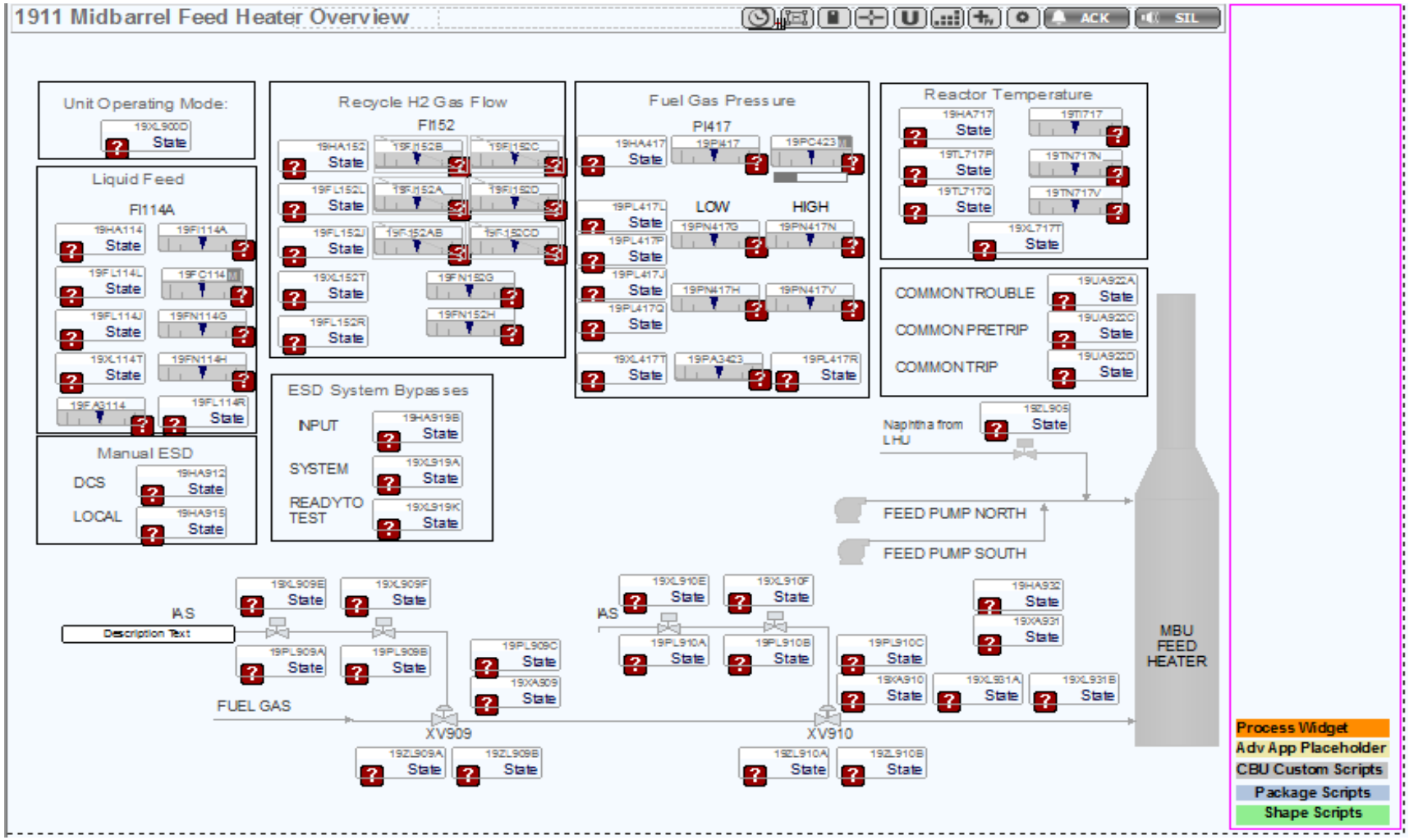
1.41 1909 MID-BARREL STEAM DRUM (Reformer_1909.htm)

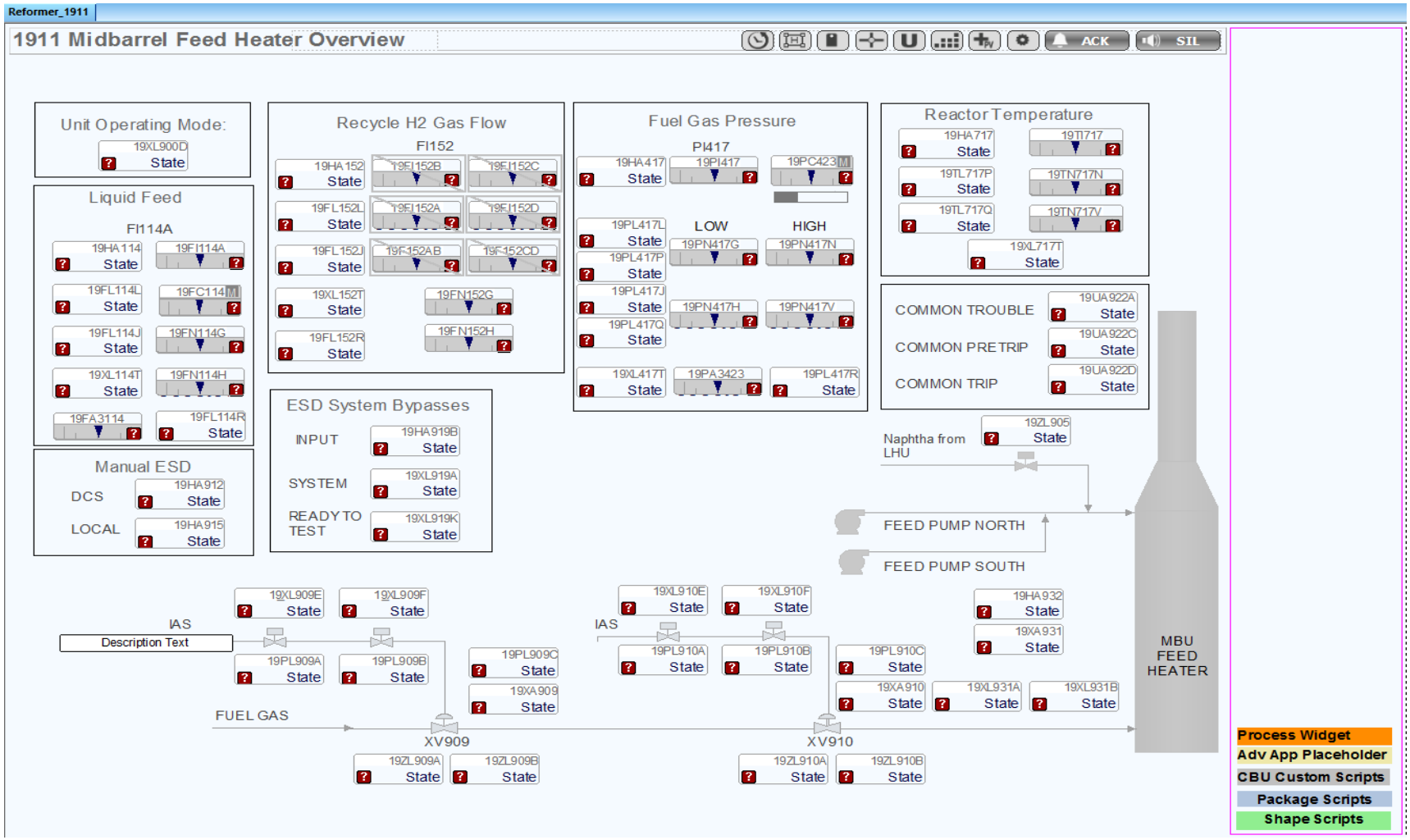


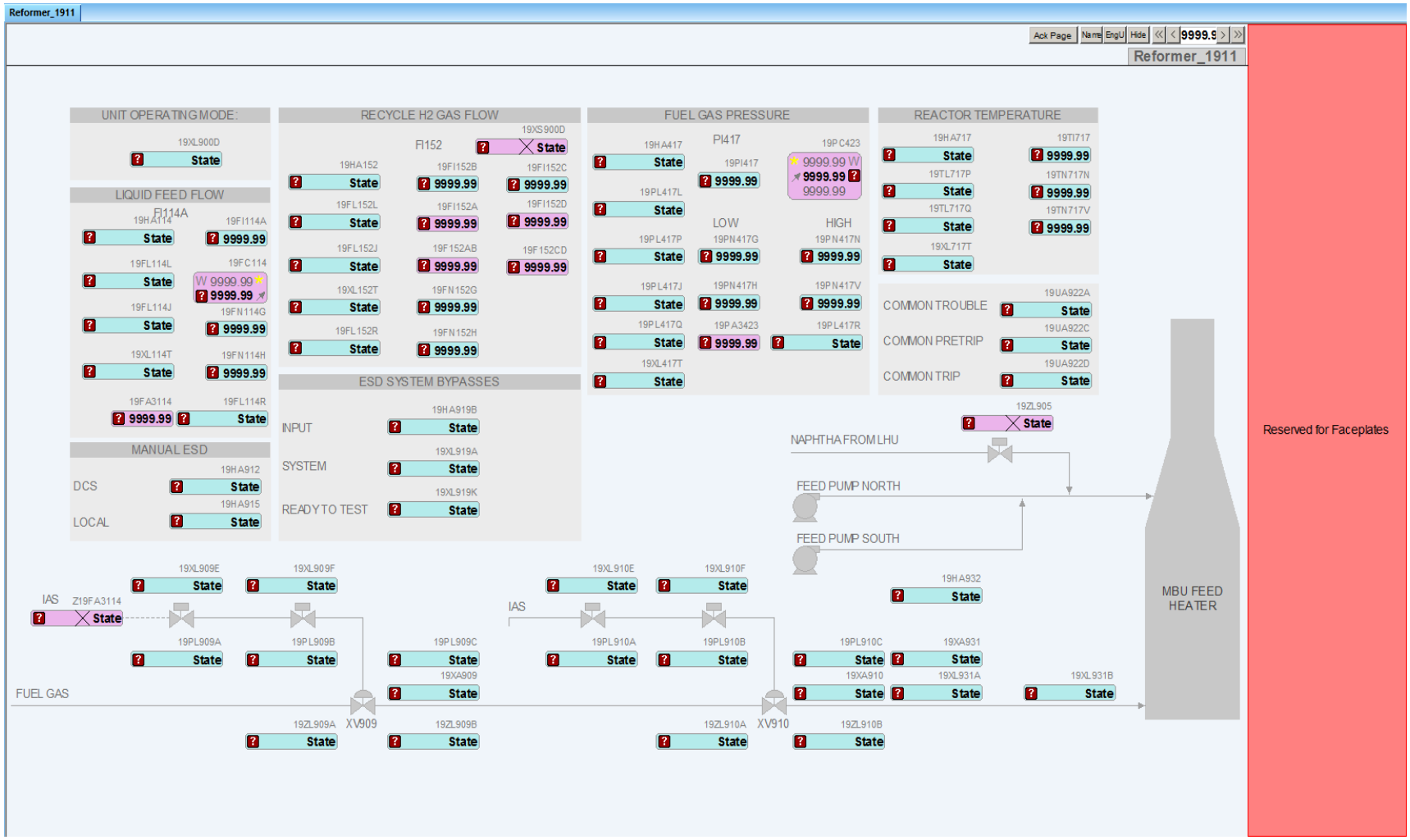

Reformer_1909
1909 Mid-Barrel Steam Drum
ACK
SIL
Feed Htr
Stm Coil
19TI702
Stab Rblr
Stm Coil
19TI741
19FI102
150 # Stm
to Refinery
19PI402
19LC301
Mid Barrel
Steam Drum
Blowdown
System
BFW
19FI101
Text%
BFW Circ
Pumps
19FC104
Text%
Feed Htr
19FC103
Text%
Stab Rblr
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1909
Ack Page
Name
EngU
Hde
9999.9
Reformer_1909
FEED HTR
STM COIL
19TI702
9999.99
STAB RBLR
STM COIL
19TI741
9999.99
19FI102
9999.99
150 # STM TO REFINERY
19LA302
State
19LA303
State
19LC301
W 9999.99
9999.99
MID BARREL STEAM DRUM
19PI402
9999.99
Reserved for Faceplates
BLOWDOWN SYSTEM
19FC104
W 9999.99
9999.99
19FC104
100%
FEED HTR
BFW
19FI101
9999.99
19LC301
100%
BFW CIRC PUMPS
19FA106
State
19FC103
W 9999.99
9999.99
19FC103
100%
STAB RBLR
STAB RBLR

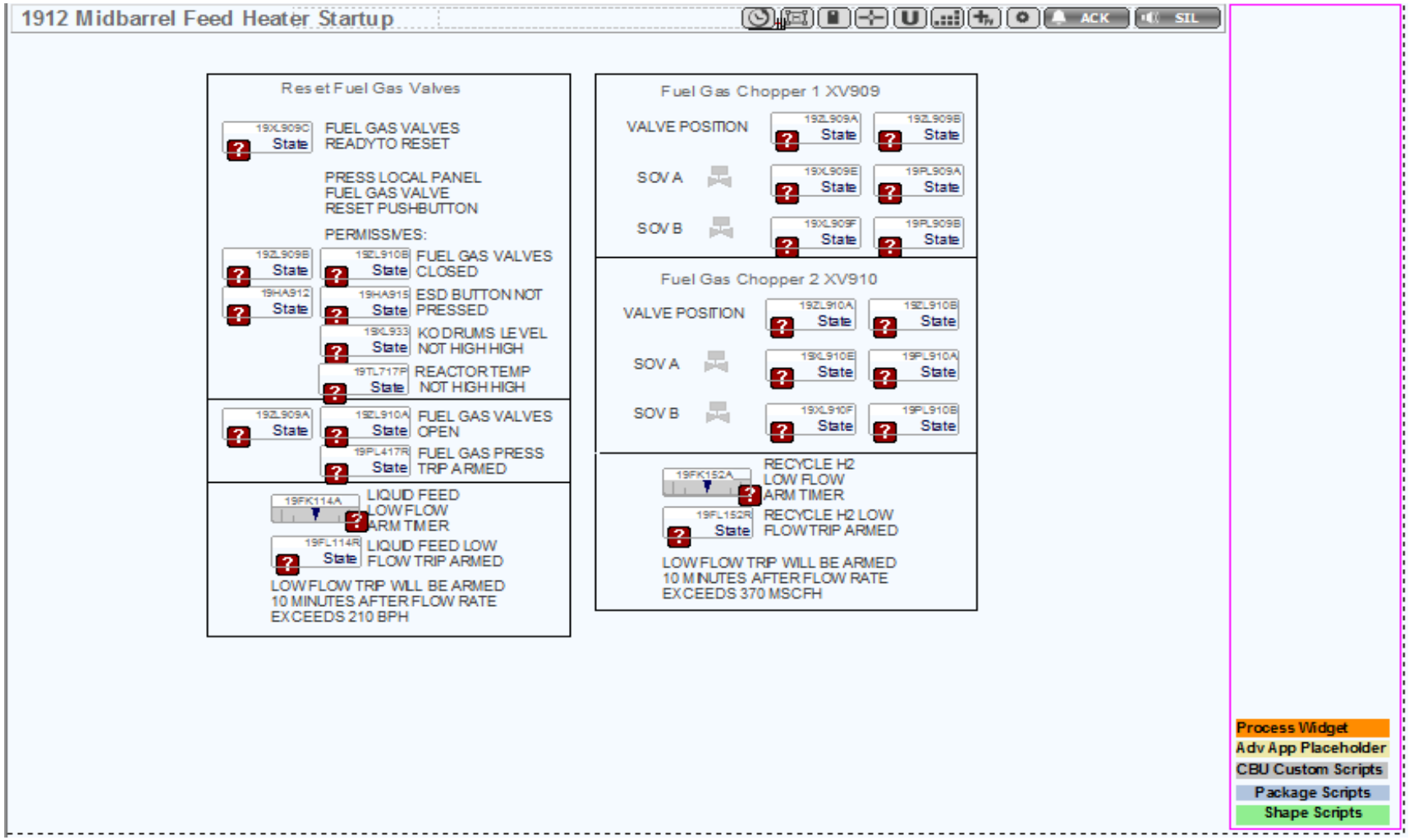
1.42 1911 MIDBARREL FEED HEATER OVERVIEW (Reformer_1911.htm)

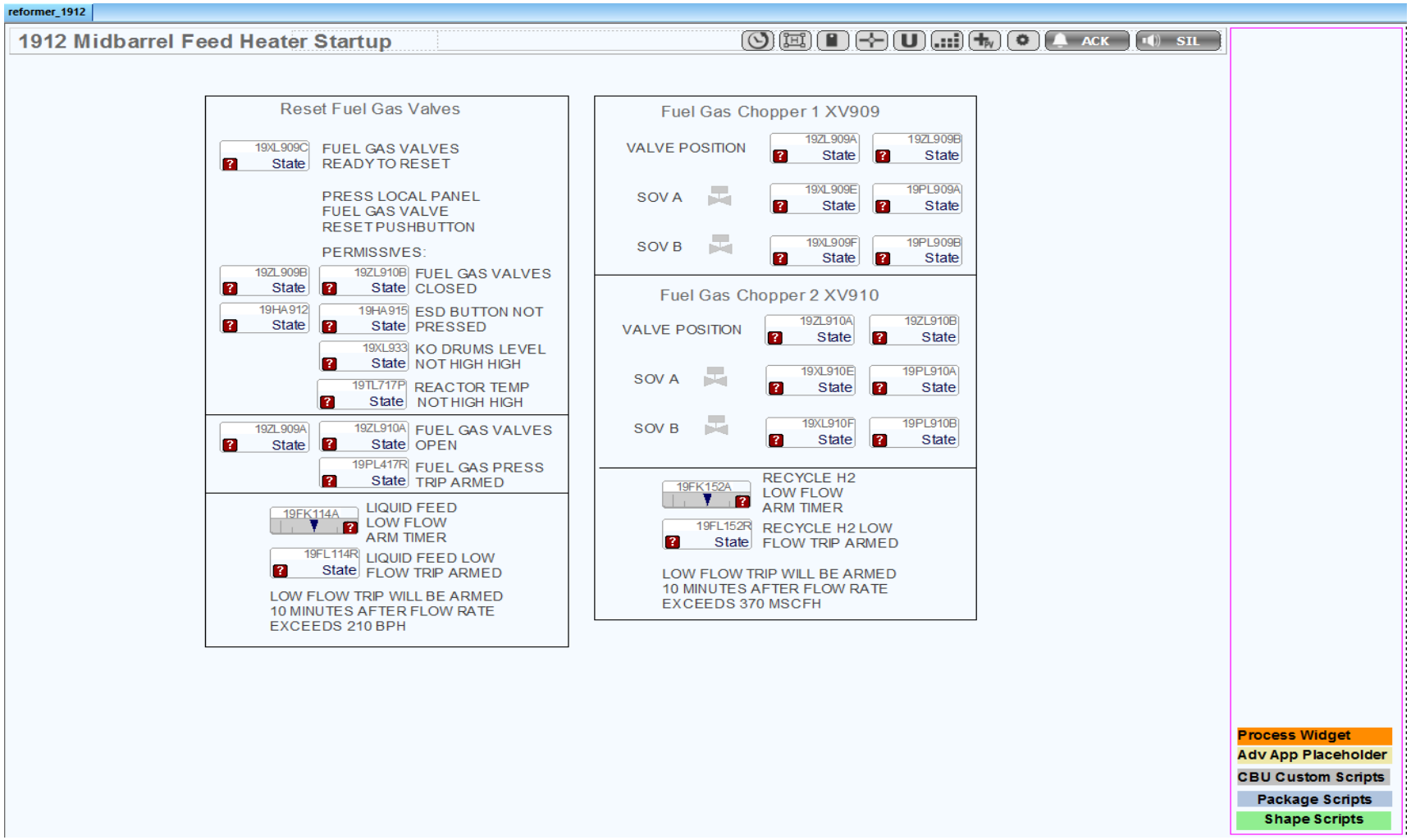


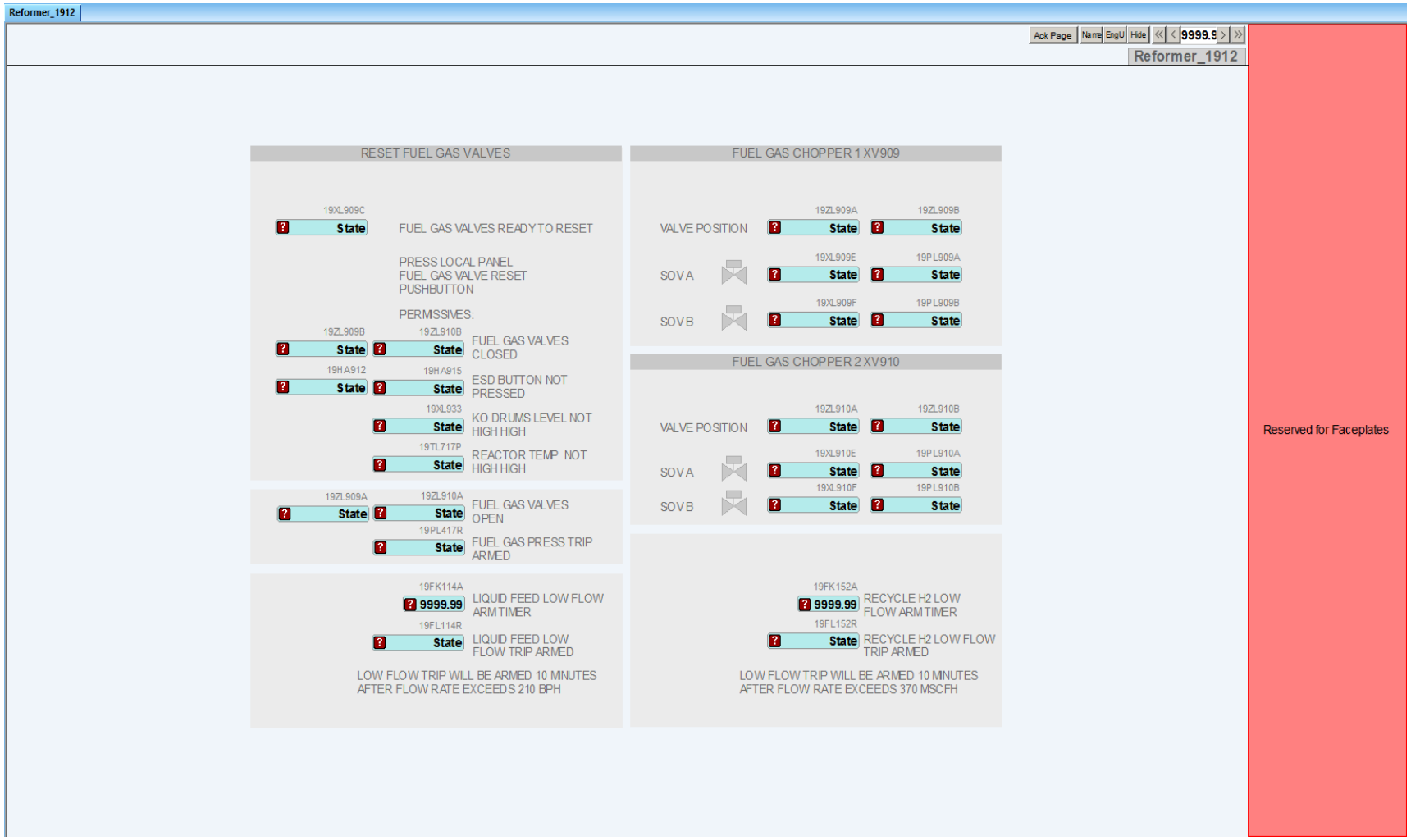

Reformer_1911
1911 Midbarrel Feed Heater Overview
ACK
SIL
Unit Operating Mode:
19XL900D State
Liquid Feed
FI114A
19HA114 State
19FI114A
19FL114L State
19FC114M
19FL114J State
19FN114G
19XL114T State
19FN114H
19FA3114
19FL114R State
Manual ESD
DCS
19HA912 State
LOCAL
19HA915 State
Recycle H2 Gas Flow
FI152
19HA152 State
19FI152B
19FI152C
19FL152L State
19FI152A
19FI152D
19FL152J State
19F152AB
19F152CD
19XL152T State
19FN152G
19FL152R State
19FN152H
ESD System Bypasses
INPUT
19HA919B State
SYSTEM
19XL919A State
READY TO TEST
19XL919K State
Fuel Gas Pressure
PI417
19HA417 State
19PI417
19PC423M
LOW
HIGH
19PL417L State
19PN417G
19PN417N
19PL417P State
19PL417J State
19PN417H
19PN417V
19PL417Q State
19XL417T State
19PA3423
19PL417R State
Reactor Temperature
19HA717 State
19TI717
19TL717P State
19TN717N
19TL717Q State
19TN717V
19XL717T State
COMMON TROUBLE
19UA922A State
COMMON PRETRIP
19UA922C State
COMMON TRIP
19UA922D State
Naphtha from LHU
19ZL905 State
FEED PUMP NORTH
FEED PUMP SOUTH
MBU FEED HEATER
IAS
Description Text
19XL909E State
19XL909F State
19PL909A State
19PL909B State
19PL909C State
19XA909 State
FUEL GAS
XV909
19ZL909A State
19ZL909B State
IAS
19XL910E State
19XL910F State
19PL910A State
19PL910B State
19PL910C State
19XA910 State
XV910
19ZL910A State
19ZL910B State
19HA932 State
19XA931 State
19XL931A State
19XL931B State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1911
Ack Page
Name
EngU
Hide
Reformer_1911
UNIT OPERATING MODE:
19XL900D
State
LIQUID FEED FLOW
FI114A
19HA114
19FI114A
19FL114L
19FC114
19FL114J
19FN114G
19XL114T
19FN114H
19FA3114
19FL114R
MANUAL ESD
19HA912
DCS
19HA915
LOCAL
RECYCLE H2 GAS FLOW
FI152
19XS900D
19HA152
19FI152B
19FI152C
19FL152L
19FI152A
19FI152D
19FL152J
19FF152AB
19FF152CD
19XL152T
19FN152G
19FL152R
19FN152H
ESD SYSTEM BYPASSES
19HA919B
INPUT
19XL919A
SYSTEM
19XL919K
READY TO TEST
FUEL GAS PRESSURE
19HA417
PI417
19PC423
19PI417
19PL417L
LOW
HIGH
19PL417P
19PN417G
19PN417N
19PL417J
19PN417H
19PN417V
19PL417Q
19PA3423
19PL417R
19XL417T
REACTOR TEMPERATURE
19HA717
19TI717
19TL717P
19TN717N
19TL717Q
19TN717V
19XL717T
COMMON TROUBLE
19UA922A
COMMON PRETRIP
19UA922C
COMMON TRIP
19UA922D
19ZL905
NAPHTHA FROM LHU
FEED PUMP NORTH
FEED PUMP SOUTH
19HA932
MBU FEED HEATER
IAS
Z19FA3114
19XL909E
19XL909F
19PL909A
19PL909B
19PL909C
19XA909
19ZL909A
XV909
19ZL909B
FUEL GAS
IAS
19XL910E
19XL910F
19PL910A
19PL910B
19PL910C
19XA931
19XA910
19XL931A
19XL931B
19ZL910A
XV910
19ZL910B
Reserved for Faceplates

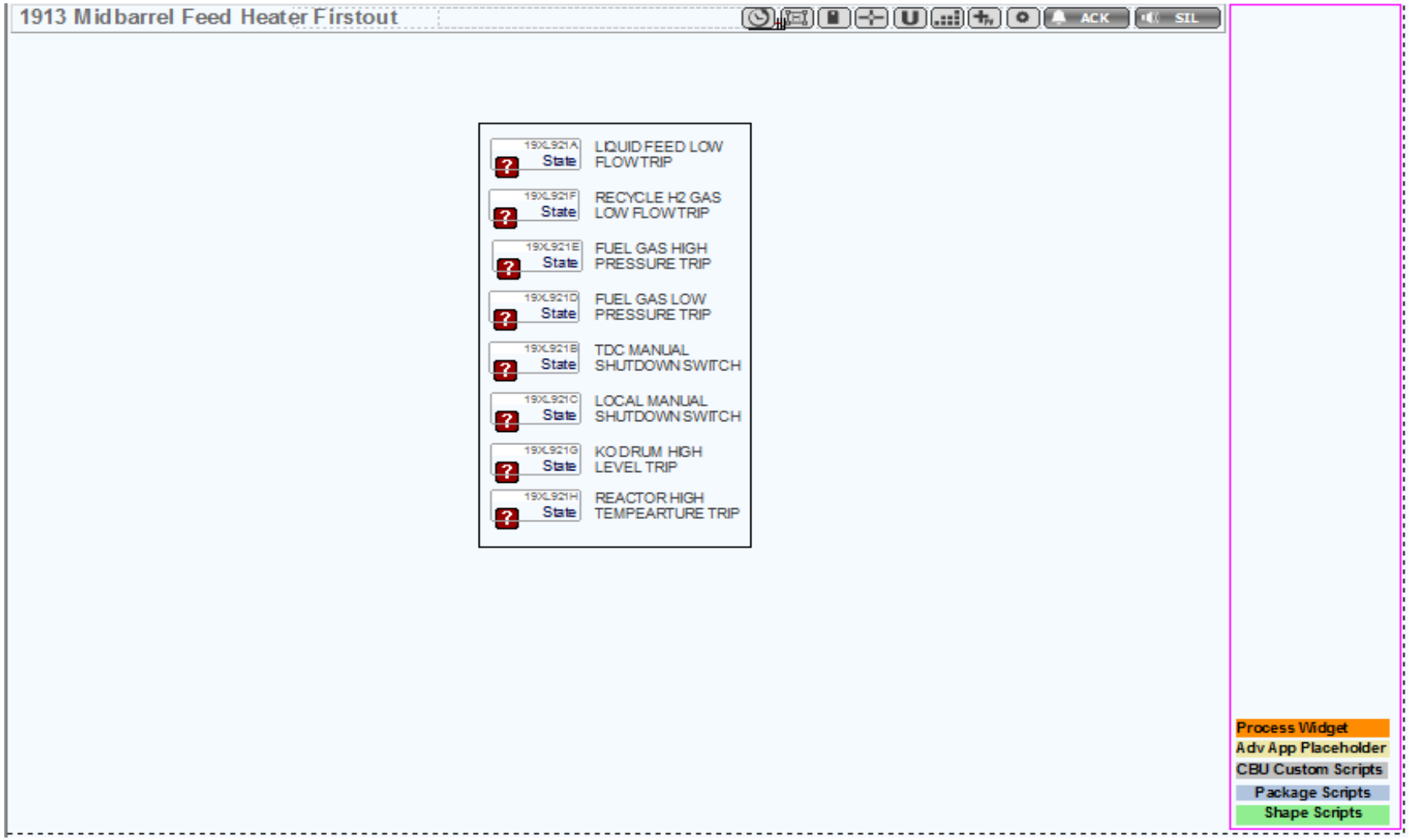
1.43 1912 MIDBARREL FEED HEATER STARTUP (reformer_1912.htm)

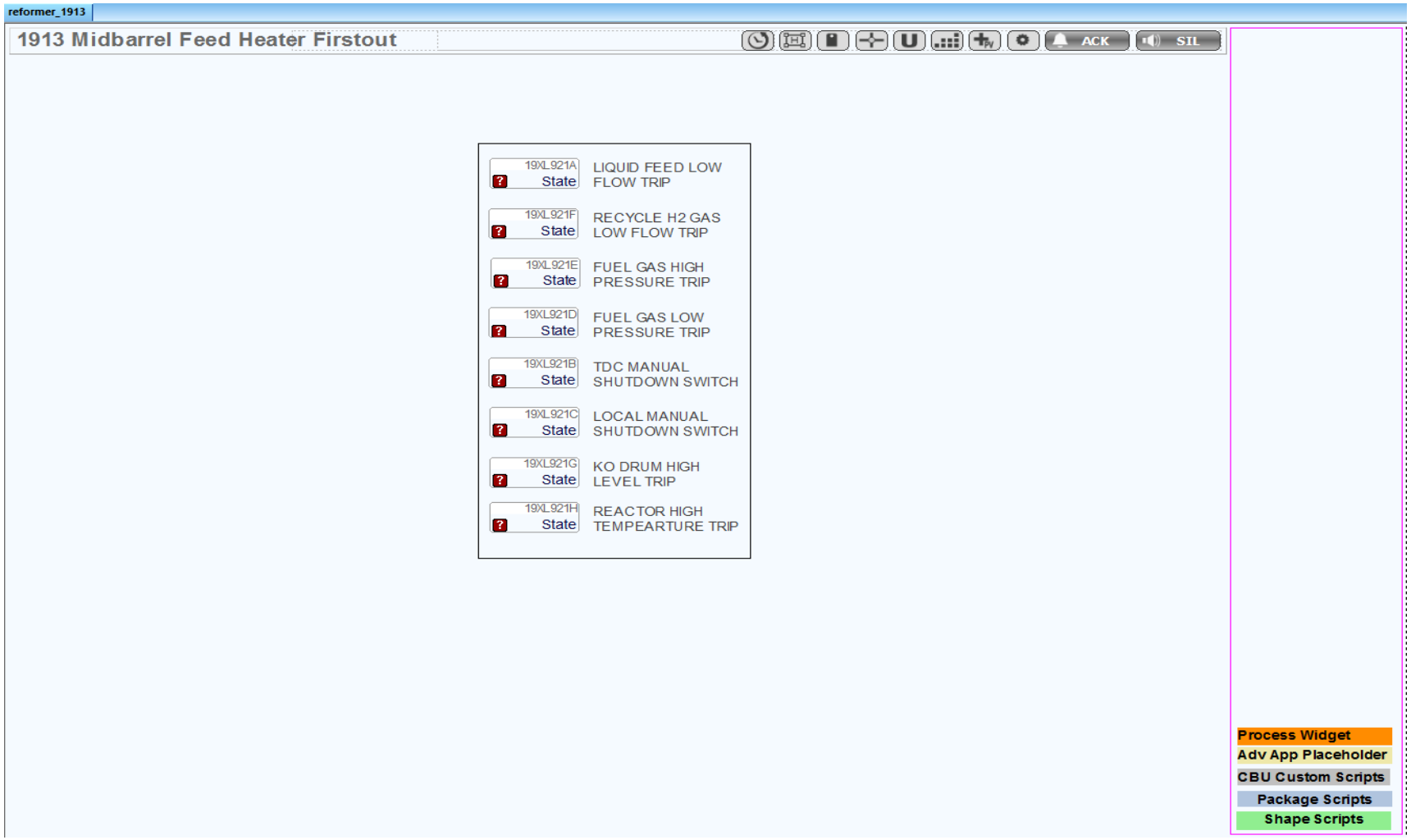


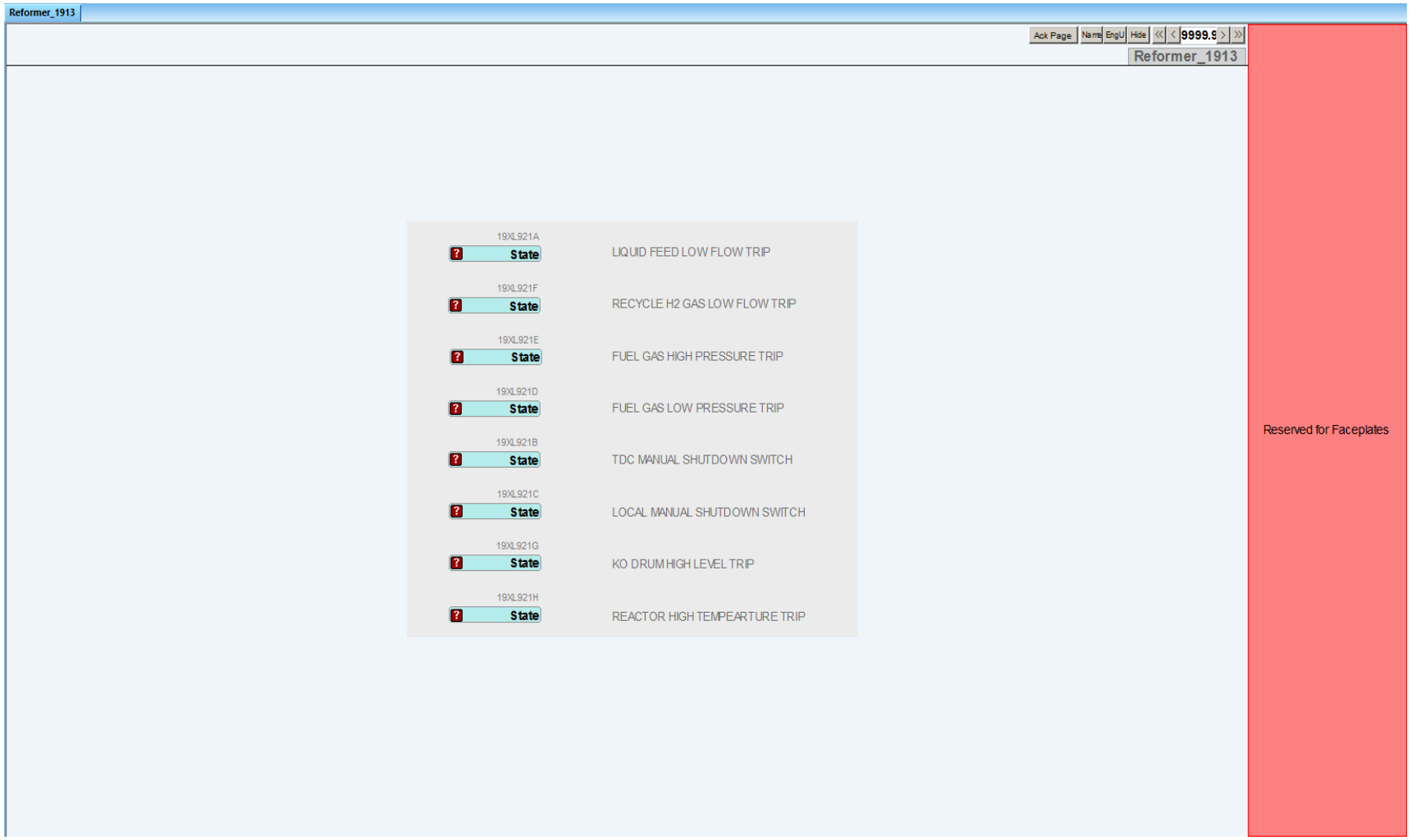

reformer_1912
1912 Midbarrel Feed Heater Startup
ACK
SIL
Reset Fuel Gas Valves
19XL909C State
FUEL GAS VALVES READY TO RESET
PRESS LOCAL PANEL FUEL GAS VALVE RESET PUSHBUTTON
PERMISSIVES:
19ZL909B State
19ZL910B State
FUEL GAS VALVES CLOSED
19HA912 State
19HA915 State
ESD BUTTON NOT PRESSED
19XL933 State
KO DRUMS LEVEL NOT HIGH HIGH
19TL717P State
REACTOR TEMP NOT HIGH HIGH
19ZL909A State
19ZL910A State
FUEL GAS VALVES OPEN
19PL417R State
FUEL GAS PRESS TRIP ARMED
19FK114A
LIQUID FEED LOW FLOW ARM TIMER
19FL114R State
LIQUID FEED LOW FLOW TRIP ARMED
LOW FLOW TRIP WILL BE ARMED 10 MINUTES AFTER FLOW RATE EXCEEDS 210 BPH
Fuel Gas Chopper 1 XV909
VALVE POSITION
19ZL909A State
19ZL909B State
SOV A
19XL909E State
19PL909A State
SOV B
19XL909F State
19PL909B State
Fuel Gas Chopper 2 XV910
VALVE POSITION
19ZL910A State
19ZL910B State
SOV A
19XL910E State
19PL910A State
SOV B
19XL910F State
19PL910B State
19FK152A
RECYCLE H2 LOW FLOW ARM TIMER
19FL152R State
RECYCLE H2 LOW FLOW TRIP ARMED
LOW FLOW TRIP WILL BE ARMED 10 MINUTES AFTER FLOW RATE EXCEEDS 370 MSCFH
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1912
Ack Page
Name
EngU
Hide
9999.9
Reformer_1912
RESET FUEL GAS VALVES
19XL909C
State
FUEL GAS VALVES READY TO RESET
PRESS LOCAL PANEL FUEL GAS VALVE RESET PUSHBUTTON
PERMISSIVES:
19ZL909B
State
19ZL910B
State
FUEL GAS VALVES CLOSED
19HA912
State
19HA915
State
ESD BUTTON NOT PRESSED
19XL933
State
KO DRUMS LEVEL NOT HIGH HIGH
19TL717P
State
REACTOR TEMP NOT HIGH HIGH
19ZL909A
State
19ZL910A
State
FUEL GAS VALVES OPEN
19PL417R
State
FUEL GAS PRESS TRIP ARMED
19FK114A
9999.99
LIQUID FEED LOW FLOW ARM TIMER
19FL114R
State
LIQUID FEED LOW FLOW TRIP ARMED
LOW FLOW TRIP WILL BE ARMED 10 MINUTES AFTER FLOW RATE EXCEEDS 210 BPH
FUEL GAS CHOPPER 1 XV909
VALVE POSITION
19ZL909A
State
19ZL909B
State
SOV A
19XL909E
State
19PL909A
State
SOV B
19XL909F
State
19PL909B
State
FUEL GAS CHOPPER 2 XV910
VALVE POSITION
19ZL910A
State
19ZL910B
State
SOV A
19XL910E
State
19PL910A
State
SOV B
19XL910F
State
19PL910B
State
19FK152A
9999.99
RECYCLE H2 LOW FLOW ARM TIMER
19FL152R
State
RECYCLE H2 LOW FLOW TRIP ARMED
LOW FLOW TRIP WILL BE ARMED 10 MINUTES AFTER FLOW RATE EXCEEDS 370 MSCFH
Reserved for Faceplates

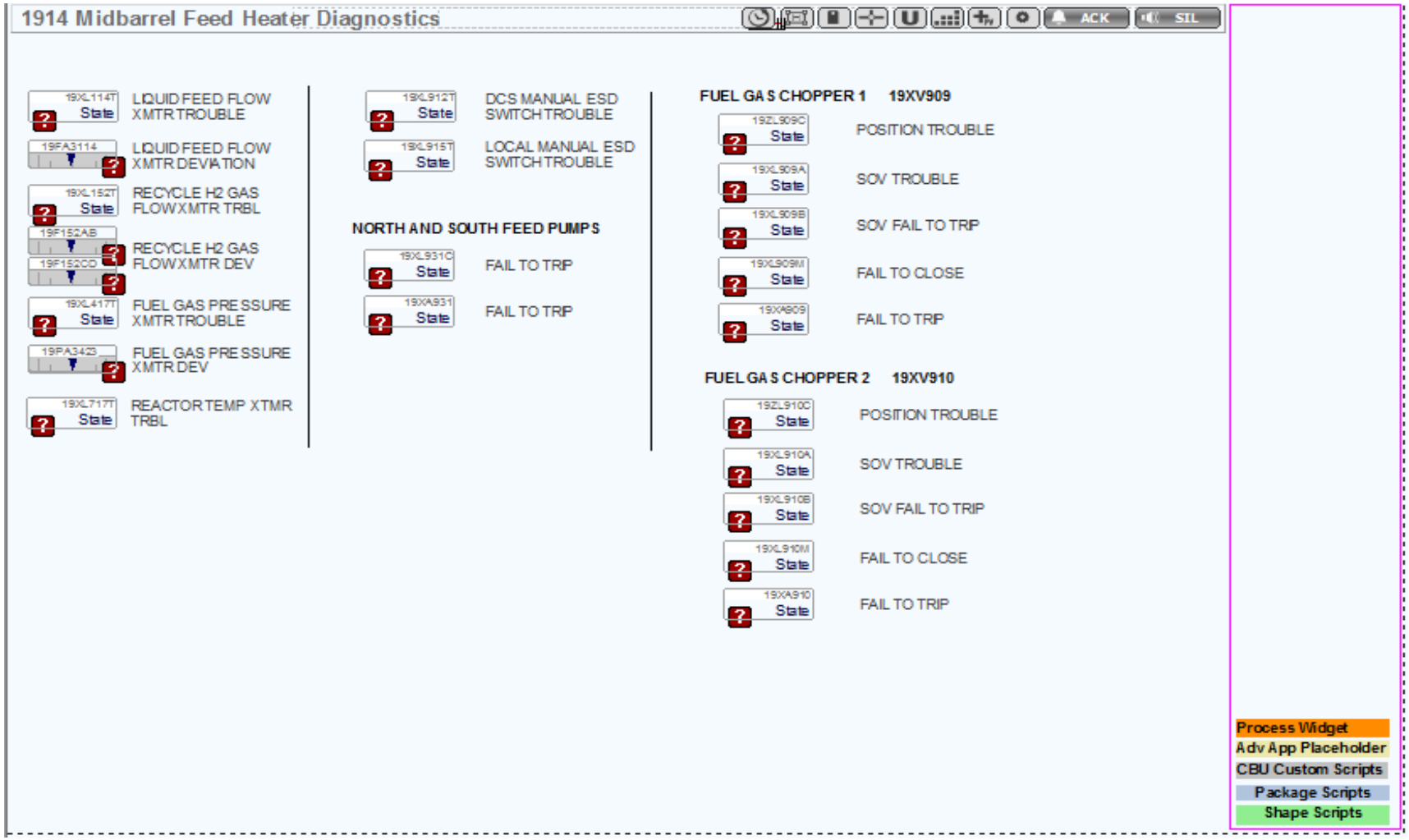
1.44 1913 MIDBARREL FEED HEATER FIRSTOUT (reformer_1913.htm)

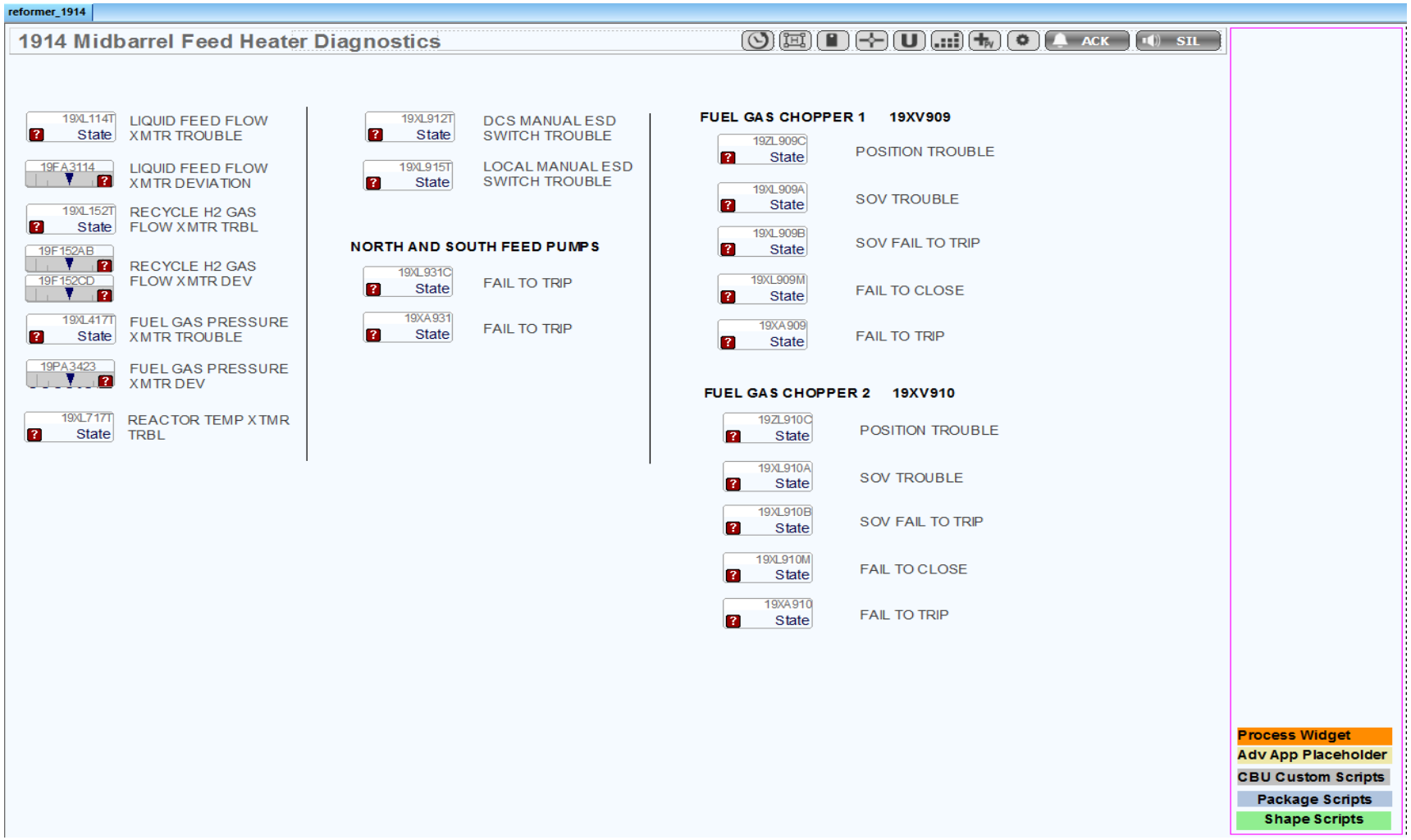


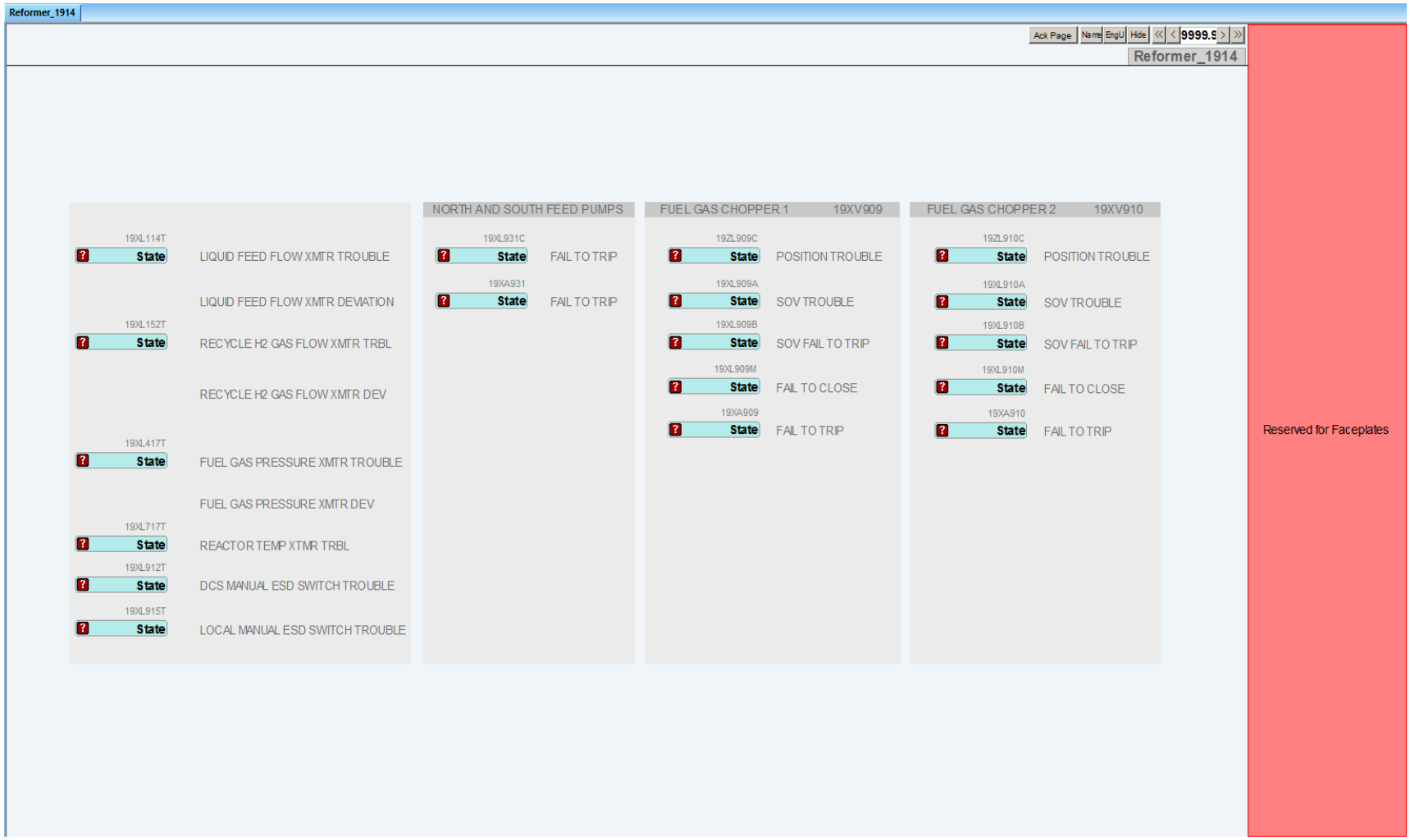

reformer_1913
1913 Midbarrel Feed Heater Firstout
ACK
SIL
19XL921A State
LIQUID FEED LOW FLOW TRIP
19XL921F State
RECYCLE H2 GAS LOW FLOW TRIP
19XL921E State
FUEL GAS HIGH PRESSURE TRIP
19XL921D State
FUEL GAS LOW PRESSURE TRIP
19XL921B State
TDC MANUAL SHUTDOWN SWITCH
19XL921C State
LOCAL MANUAL SHUTDOWN SWITCH
19XL921G State
KO DRUM HIGH LEVEL TRIP
19XL921H State
REACTOR HIGH TEMPEARTURE TRIP
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1913
Ack Page
Name
EngU
Hide
9999.9
Reformer_1913
19XL921A
State
LIQUID FEED LOW FLOW TRIP
19XL921F
State
RECYCLE H2 GAS LOW FLOW TRIP
19XL921E
State
FUEL GAS HIGH PRESSURE TRIP
19XL921D
State
FUEL GAS LOW PRESSURE TRIP
19XL921B
State
TDC MANUAL SHUTDOWN SWITCH
19XL921C
State
LOCAL MANUAL SHUTDOWN SWITCH
19XL921G
State
KO DRUM HIGH LEVEL TRIP
19XL921H
State
REACTOR HIGH TEMPEARTURE TRIP
Reserved for Faceplates

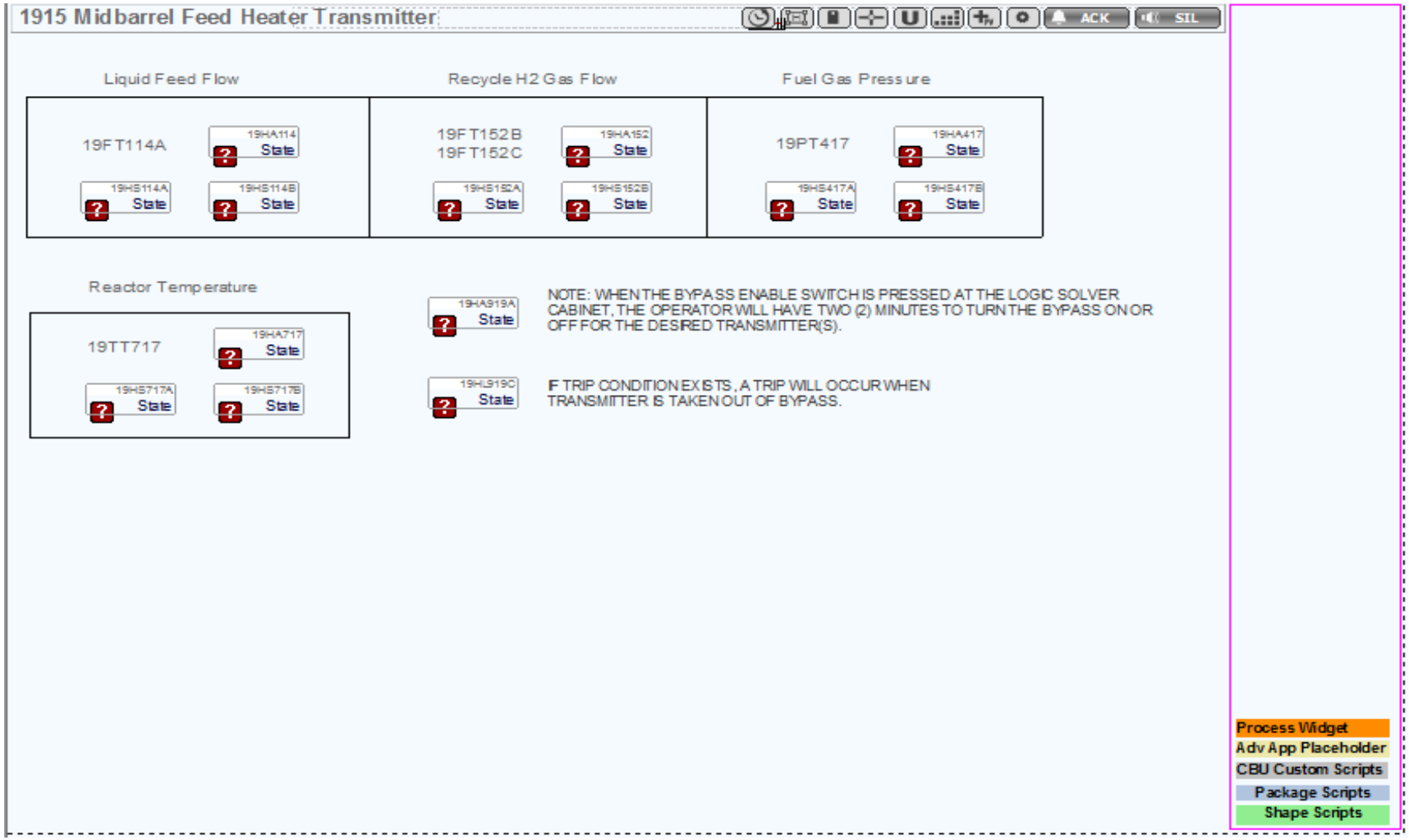
1.45 1914 MIDBARREL FEED HEATER DIAGNOSTICS (reformer_1914.htm)

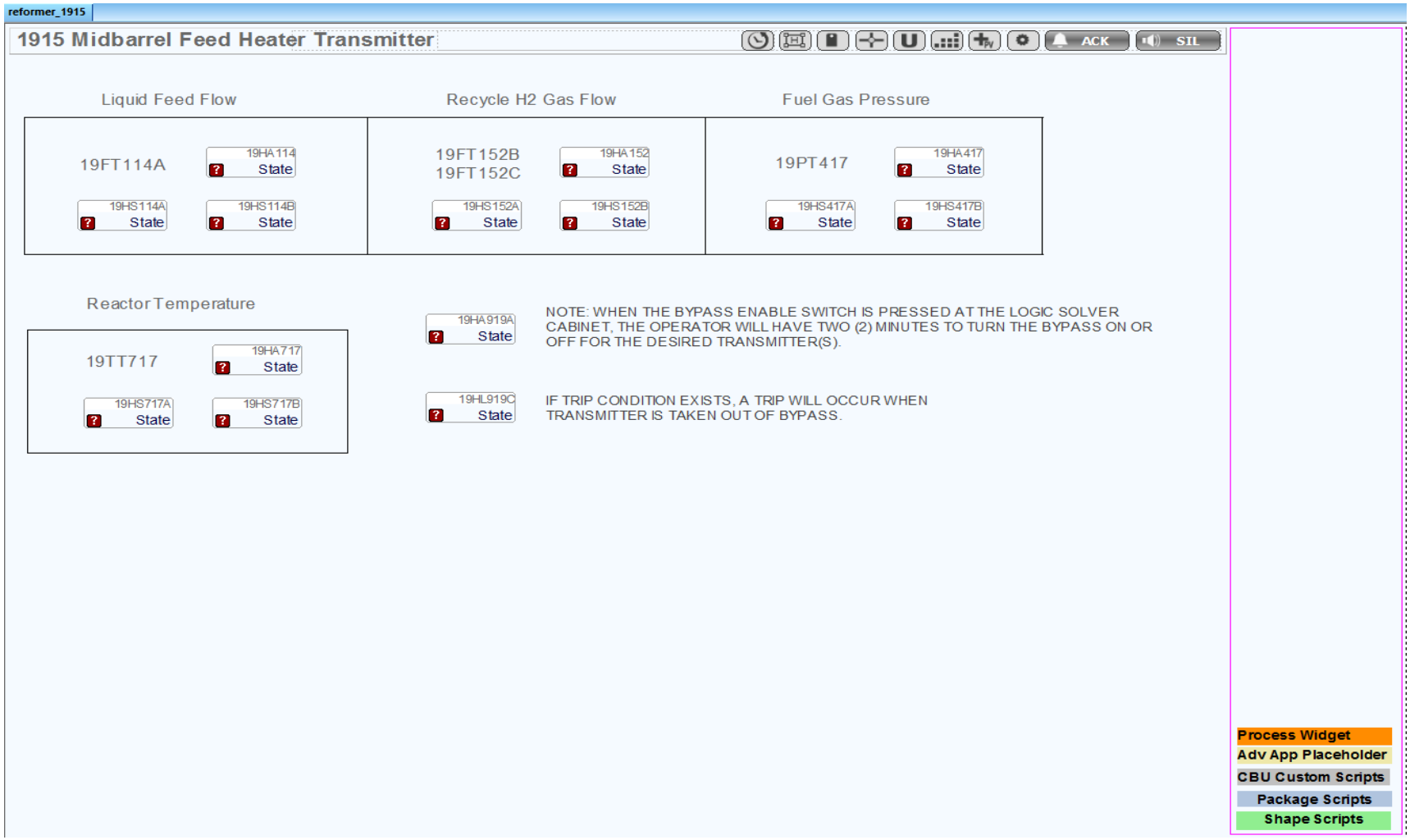


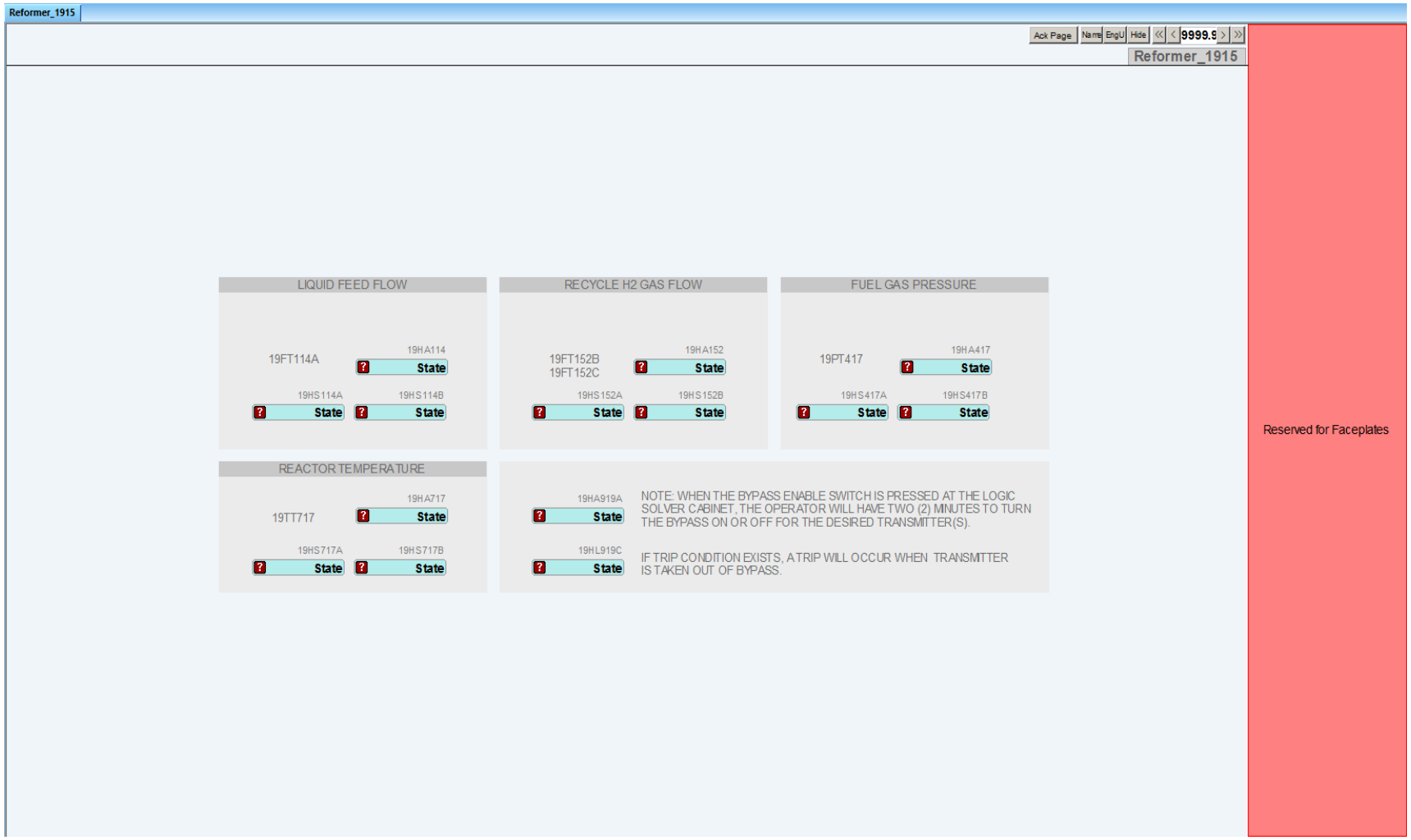

reformer_1914
1914 Midbarrel Feed Heater Diagnostics
ACK
SIL
19XL114T State
LIQUID FEED FLOW XMTR TROUBLE
19FA3114
LIQUID FEED FLOW XMTR DEVIATION
19XL152T State
RECYCLE H2 GAS FLOW XMTR TRBL
19F152AB
19F152CD
RECYCLE H2 GAS FLOW XMTR DEV
19XL417T State
FUEL GAS PRESSURE XMTR TROUBLE
19PA3423
FUEL GAS PRESSURE XMTR DEV
19XL717T State
REACTOR TEMP XTMR TRBL
19XL912T State
DCS MANUAL ESD SWITCH TROUBLE
19XL915T State
LOCAL MANUAL ESD SWITCH TROUBLE
NORTH AND SOUTH FEED PUMPS
19XL931C State
FAIL TO TRIP
19XA931 State
FAIL TO TRIP
FUEL GAS CHOPPER 1 19XV909
19ZL909C State
POSITION TROUBLE
19XL909A State
SOV TROUBLE
19XL909B State
SOV FAIL TO TRIP
19XL909M State
FAIL TO CLOSE
19XA909 State
FAIL TO TRIP
FUEL GAS CHOPPER 2 19XV910
19ZL910C State
POSITION TROUBLE
19XL910A State
SOV TROUBLE
19XL910B State
SOV FAIL TO TRIP
19XL910M State
FAIL TO CLOSE
19XA910 State
FAIL TO TRIP
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1914
Ack Page
Name
EngU
Hide
9999.9
Reformer_1914
19XL114T
State
LIQUID FEED FLOW XMTR TROUBLE
LIQUID FEED FLOW XMTR DEVIATION
19XL152T
State
RECYCLE H2 GAS FLOW XMTR TRBL
RECYCLE H2 GAS FLOW XMTR DEV
19XL417T
State
FUEL GAS PRESSURE XMTR TROUBLE
FUEL GAS PRESSURE XMTR DEV
19XL717T
State
REACTOR TEMP XTMR TRBL
19XL912T
State
DCS MANUAL ESD SWITCH TROUBLE
19XL915T
State
LOCAL MANUAL ESD SWITCH TROUBLE
NORTH AND SOUTH FEED PUMPS
19XL931C
State
FAIL TO TRIP
19XA931
State
FAIL TO TRIP
FUEL GAS CHOPPER 1
19XV909
19ZL909C
State
POSITION TROUBLE
19XL909A
State
SOV TROUBLE
19XL909B
State
SOV FAIL TO TRIP
19XL909M
State
FAIL TO CLOSE
19XA909
State
FAIL TO TRIP
FUEL GAS CHOPPER 2
19XV910
19ZL910C
State
POSITION TROUBLE
19XL910A
State
SOV TROUBLE
19XL910B
State
SOV FAIL TO TRIP
19XL910M
State
FAIL TO CLOSE
19XA910
State
FAIL TO TRIP
Reserved for Faceplates

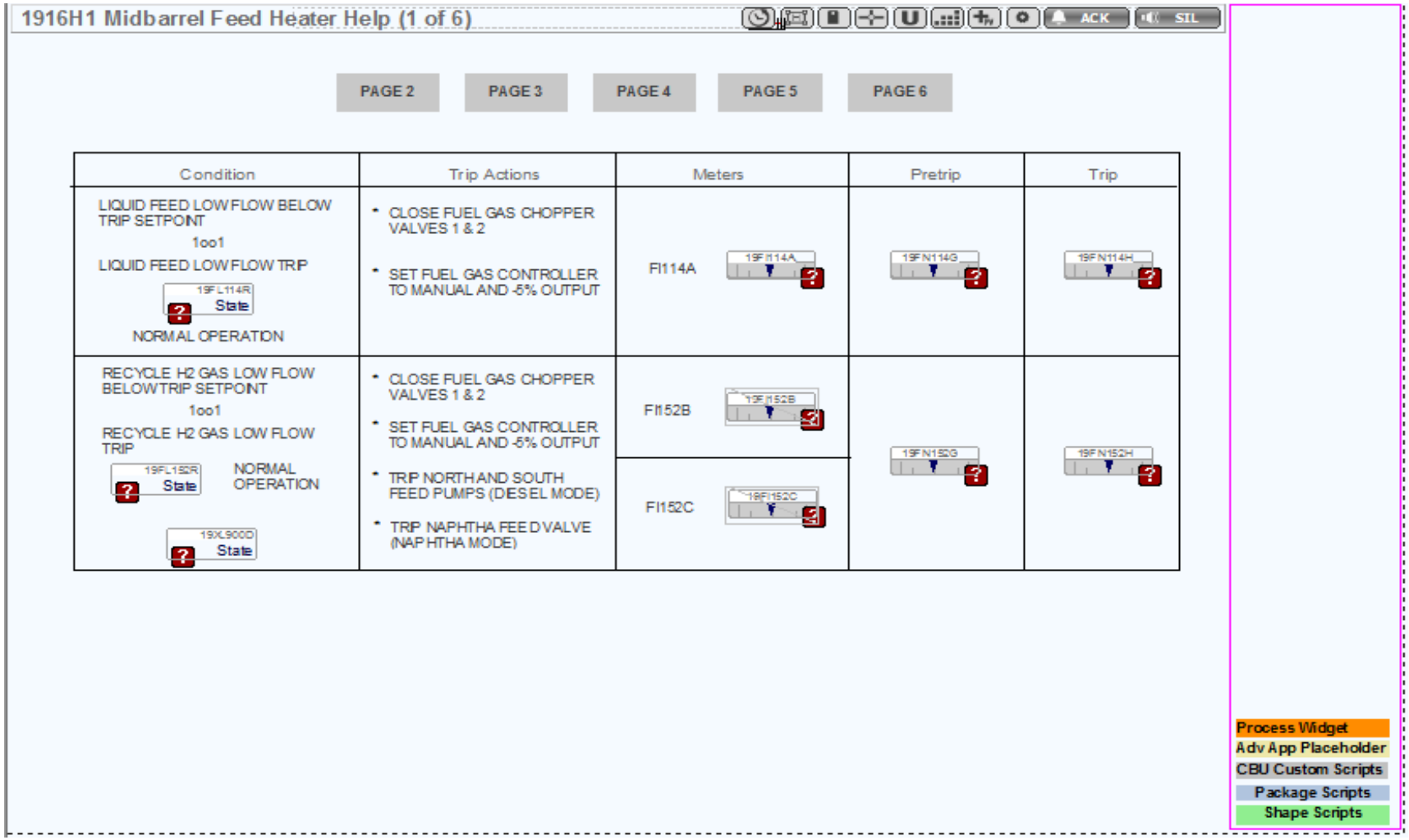
1.46 1915 MIDBARREL FEED HEATER TRANSMITTER (reformer_1915.htm)

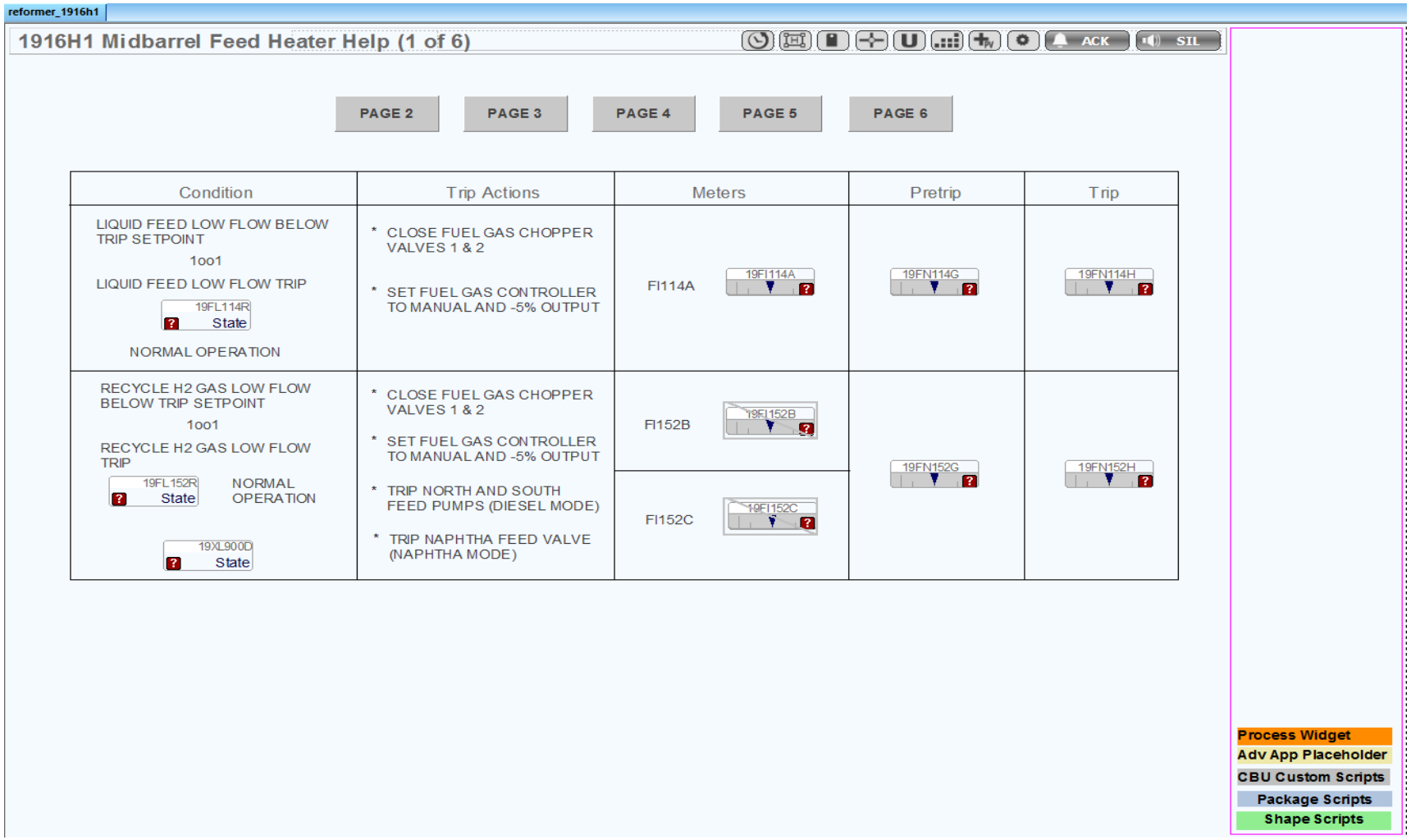


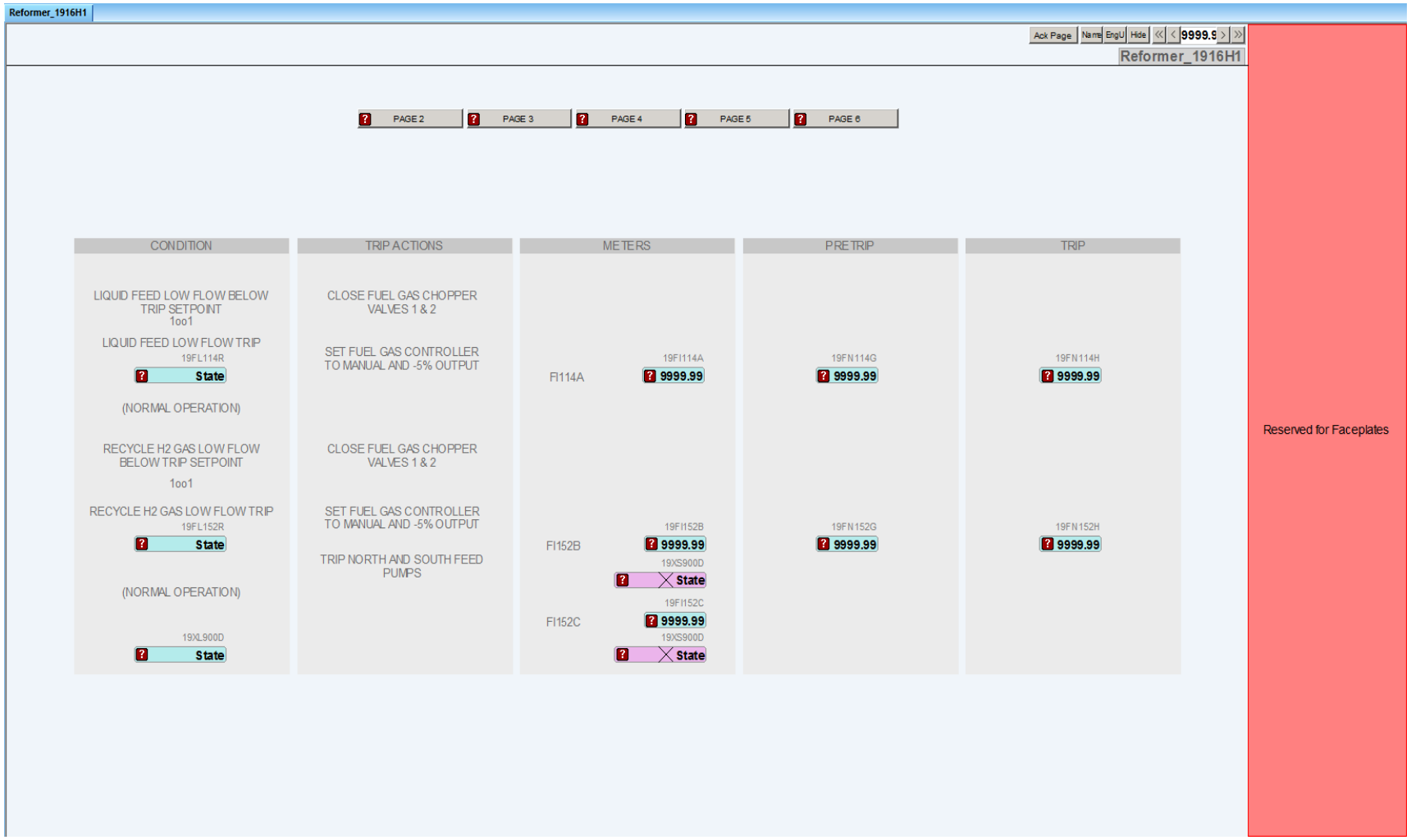

reformer_1915
1915 Midbarrel Feed Heater Transmitter
ACK
SIL
Liquid Feed Flow
19FT114A
19HA114 State
19HS114A State
19HS114B State
Recycle H2 Gas Flow
19FT152B
19FT152C
19HA152 State
19HS152A State
19HS152B State
Fuel Gas Pressure
19PT417
19HA417 State
19HS417A State
19HS417B State
Reactor Temperature
19TT717
19HA717 State
19HS717A State
19HS717B State
19HA919A State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
19HL919C State
IF TRIP CONDITION EXISTS, A TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1915
Ack Page
Name
Engu
Hide
9999.9
Reformer_1915
LIQUID FEED FLOW
19FT114A
19HA114
State
19HS114A
State
19HS114B
State
RECYCLE H2 GAS FLOW
19FT152B
19FT152C
19HA152
State
19HS152A
State
19HS152B
State
FUEL GAS PRESSURE
19PT417
19HA417
State
19HS417A
State
19HS417B
State
REACTOR TEMPERATURE
19TT717
19HA717
State
19HS717A
State
19HS717B
State
19HA919A
State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
19HL919C
State
IF TRIP CONDITION EXISTS, A TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
Reserved for Faceplates

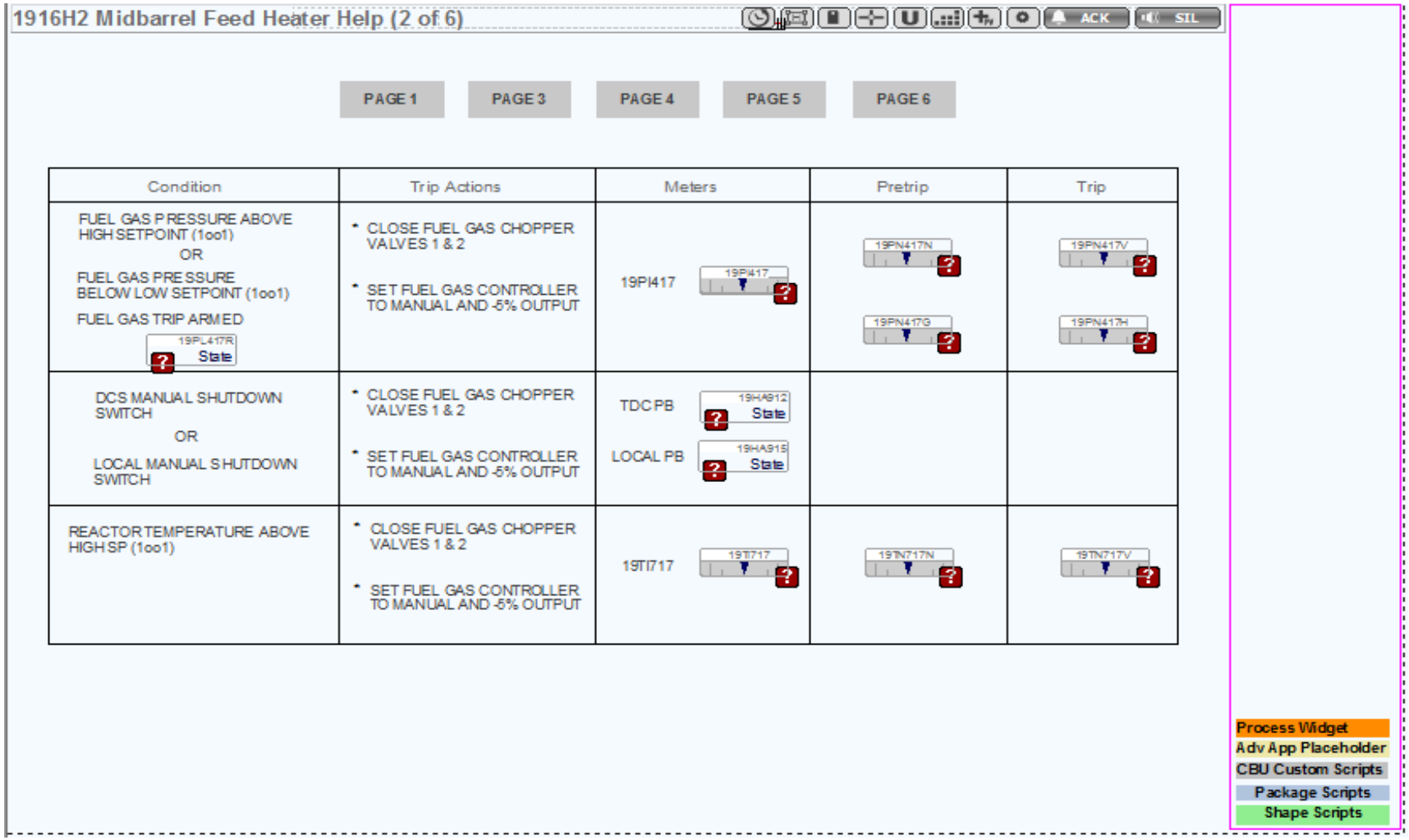
1.47 1916H1 MIDBARREL FEED HEATER HELP (1 OF 6) (reformer_1916h1.htm)

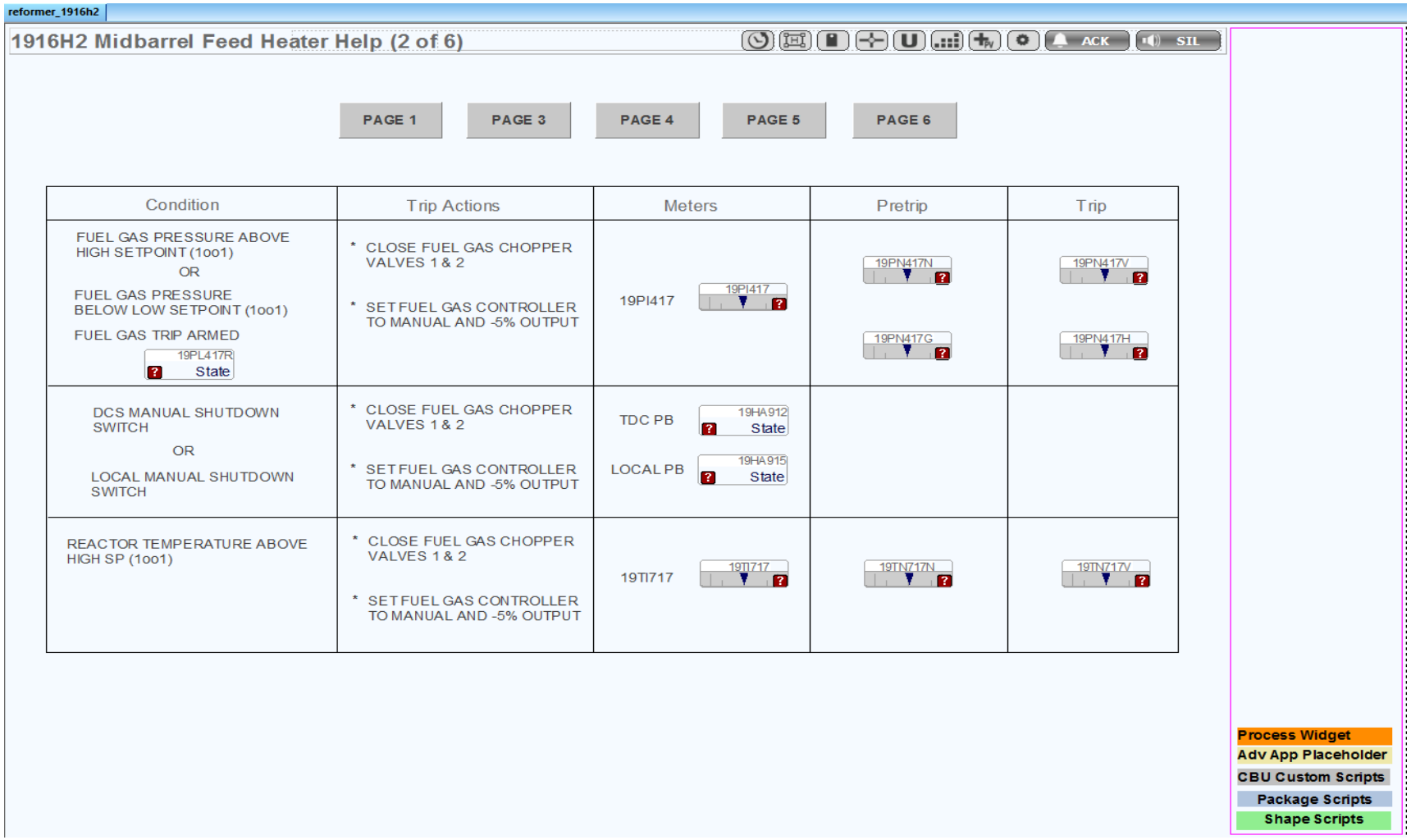


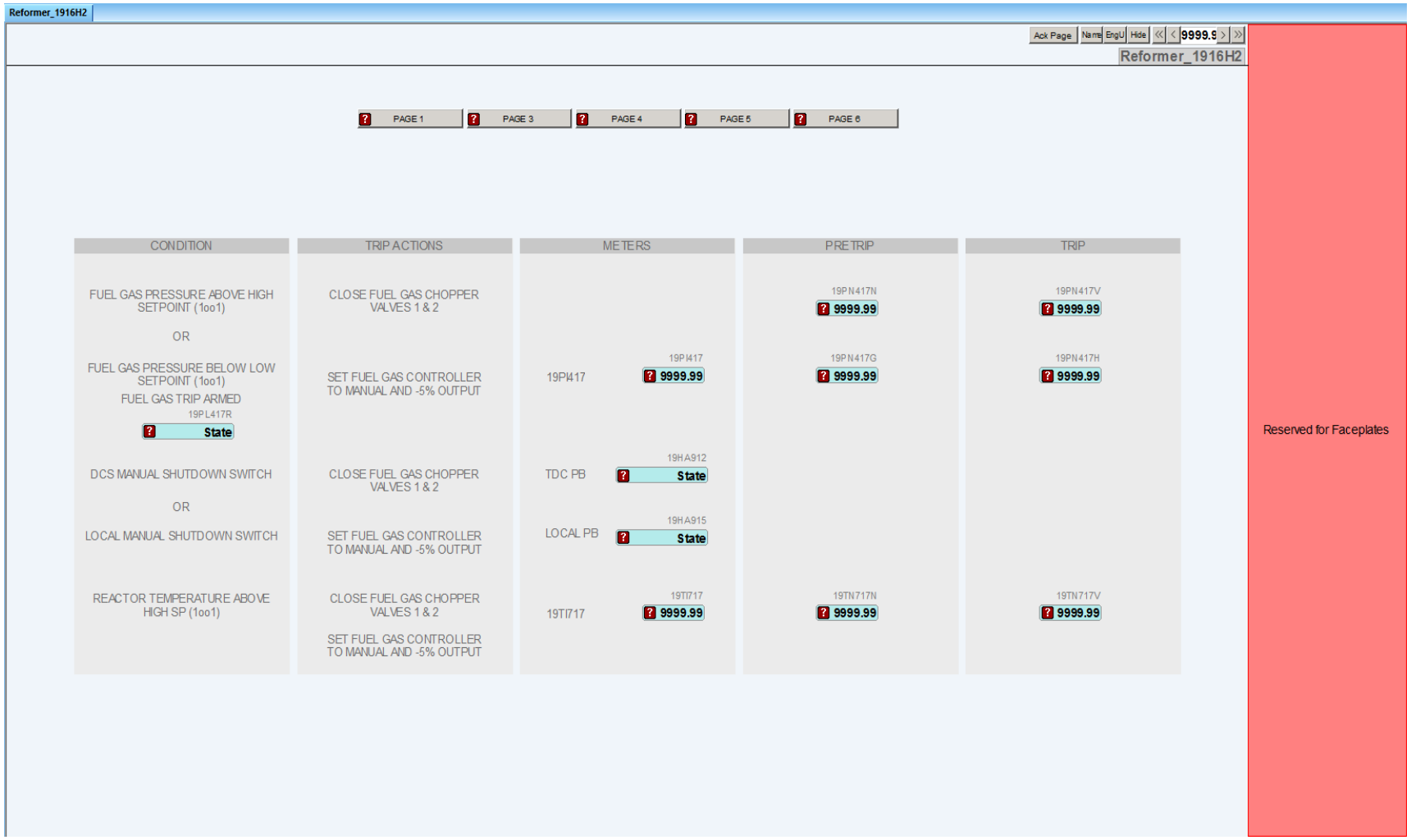

reformer_1916h1
1916H1 Midbarrel Feed Heater Help (1 of 6)
ACK
SIL
PAGE 2
PAGE 3
PAGE 4
PAGE 5
PAGE 6
Condition
Trip Actions
Meters
Pretrip
Trip
LIQUID FEED LOW FLOW BELOW TRIP SETPOINT
1oo1
LIQUID FEED LOW FLOW TRIP
19FL114R State
NORMAL OPERATION
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
FI114A
19FI114A
19FN114G
19FN114H
RECYCLE H2 GAS LOW FLOW BELOW TRIP SETPOINT
1oo1
RECYCLE H2 GAS LOW FLOW TRIP
19FL152R State
NORMAL OPERATION
19XL900D State
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
* TRIP NORTH AND SOUTH FEED PUMPS (DIESEL MODE)
* TRIP NAPHTHA FEED VALVE (NAPHTHA MODE)
FI152B
19FI152B
FI152C
19FI152C
19FN152G
19FN152H
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1916H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_1916H1
PAGE 2
PAGE 3
PAGE 4
PAGE 5
PAGE 6
CONDITION
TRIP ACTIONS
METERS
PRETRIP
TRIP
LIQUID FEED LOW FLOW BELOW TRIP SETPOINT
1oo1
LIQUID FEED LOW FLOW TRIP
19FL114R
State
(NORMAL OPERATION)
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
FI114A
19FI114A
9999.99
19FN114G
9999.99
19FN114H
9999.99
RECYCLE H2 GAS LOW FLOW BELOW TRIP SETPOINT
1oo1
RECYCLE H2 GAS LOW FLOW TRIP
19FL152R
State
(NORMAL OPERATION)
19XL900D
State
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
TRIP NORTH AND SOUTH FEED PUMPS
FI152B
19FI152B
9999.99
19XS900D
State
FI152C
19FI152C
9999.99
19XS900D
State
19FN152G
9999.99
19FN152H
9999.99
Reserved for Faceplates

1.48 1916H2 MIDBARREL FEED HEATER HELP (2 OF 6) (reformer_1916h2.htm)

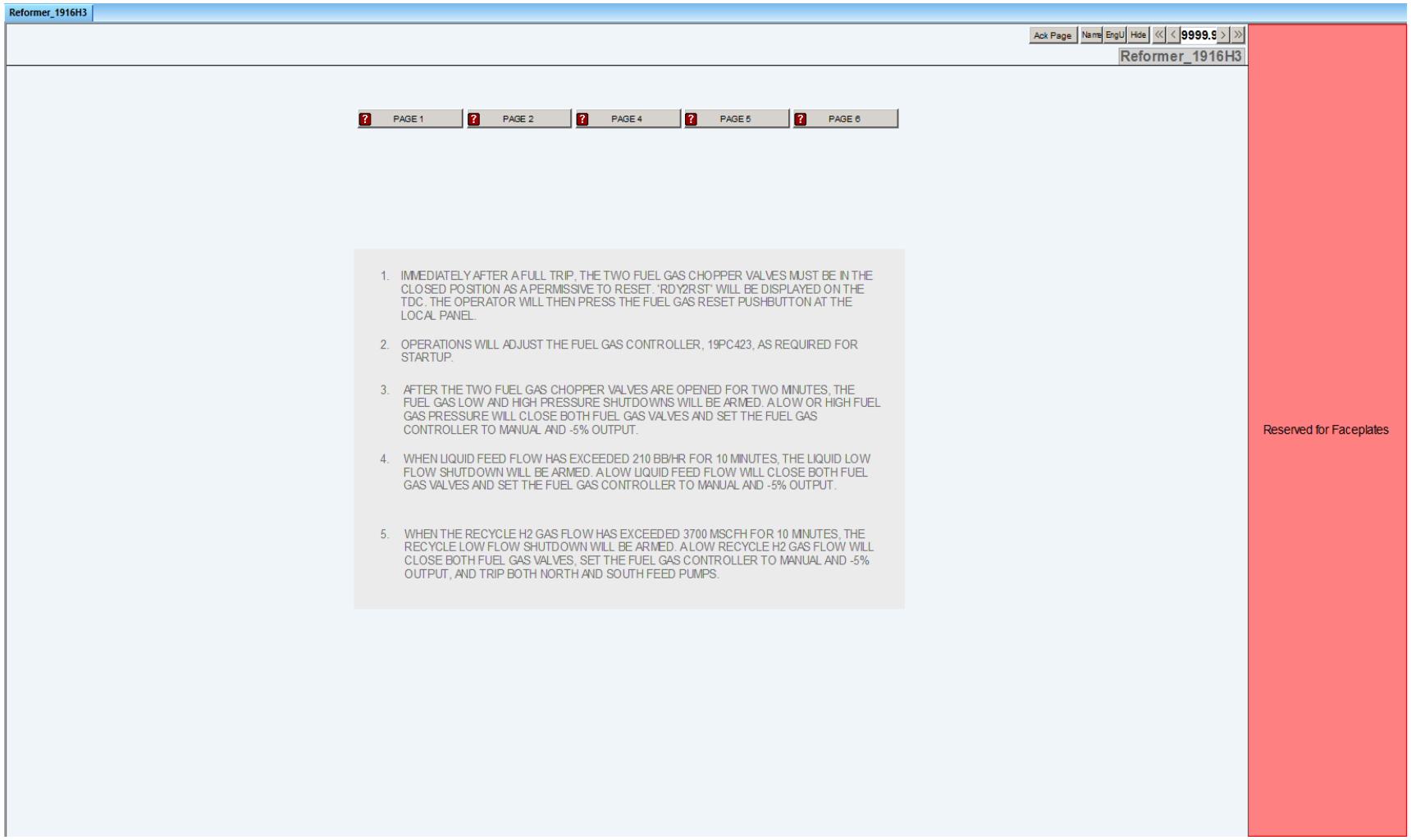



reformer_1916h2
1916H2 Midbarrel Feed Heater Help (2 of 6)
ACK
SIL
PAGE 1
PAGE 3
PAGE 4
PAGE 5
PAGE 6
Condition
Trip Actions
Meters
Pretrip
Trip
FUEL GAS PRESSURE ABOVE HIGH SETPOINT (1oo1)
OR
FUEL GAS PRESSURE BELOW LOW SETPOINT (1oo1)
FUEL GAS TRIP ARMED
19PL417R
State
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19PI417
19PI417
19PN417N
19PN417G
19PN417V
19PN417H
DCS MANUAL SHUTDOWN SWITCH
OR
LOCAL MANUAL SHUTDOWN SWITCH
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
TDC PB
19HA912
State
LOCAL PB
19HA915
State
REACTOR TEMPERATURE ABOVE HIGH SP (1oo1)
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19TI717
19TI717
19TN717N
19TN717V
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1916H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_1916H2
PAGE 1
PAGE 3
PAGE 4
PAGE 5
PAGE 6
CONDITION
TRIP ACTIONS
METERS
PRETRIP
TRIP
FUEL GAS PRESSURE ABOVE HIGH SETPOINT (1oo1)
OR
FUEL GAS PRESSURE BELOW LOW SETPOINT (1oo1)
FUEL GAS TRIP ARMED
19PL417R
State
DCS MANUAL SHUTDOWN SWITCH
OR
LOCAL MANUAL SHUTDOWN SWITCH
REACTOR TEMPERATURE ABOVE HIGH SP (1oo1)
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19PI417
9999.99
TDC PB
19HA912
State
LOCAL PB
19HA915
State
19TI717
9999.99
19PN417N
9999.99
19PN417G
9999.99
19TN717N
9999.99
19PN417V
9999.99
19PN417H
9999.99
19TN717V
9999.99
Reserved for Faceplates

1.49 1916H3 MIDBARREL FEED HEATER HELP (3 OF 6) (Reformer_1916h3.htm)

reformer_1916h3
1916H3 Midbarrel Feed Heater Help (3 of 6)
ACK
SIL
PAGE 1
PAGE 2
PAGE 4
PAGE 5
PAGE 6
1. IMMEDIATELY AFTER A FULL TRIP, THE TWO FUEL GAS CHOPPER VALVES MUST BE IN THE CLOSED POSITION AS A PERMISSIVE TO RESET. 'RDY2RST' WILL BE DISPLAYED ON THE TDC. THE OPERATOR WILL THEN PRESS THE FUEL GAS RESET PUSHBUTTON AT THE LOCAL PANEL.
2. OPERATIONS WILL ADJUST THE FUEL GAS CONTROLLER, 19PC423, AS REQUIRED FOR STARTUP.
3. AFTER THE TWO FUEL GAS CHOPPER VALVES ARE OPENED FOR TWO MINUTES, THE FUEL GAS LOW AND HIGH PRESSURE SHUTDOWNS WILL BE ARMED. A LOW OR HIGH FUEL GAS PRESSURE WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT.
4. WHEN LIQUID FEED FLOW HAS EXCEEDED 210 BB/HR FOR 10 MINUTES, THE LIQUID LOW FLOW SHUTDOWN WILL BE ARMED. A LOW LIQUID FEED FLOW WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT.
5. WHEN THE RECYCLE H2 GAS FLOW HAS EXCEEDED 3700 MSCFH FOR 10 MINUTES, THE RECYCLE LOW FLOW SHUTDOWN WILL BE ARMED. A LOW RECYCLE H2 GAS FLOW WILL CLOSE BOTH FUEL GAS VALVES, SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT, AND TRIP BOTH NORTH AND SOUTH FEED PUMPS.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

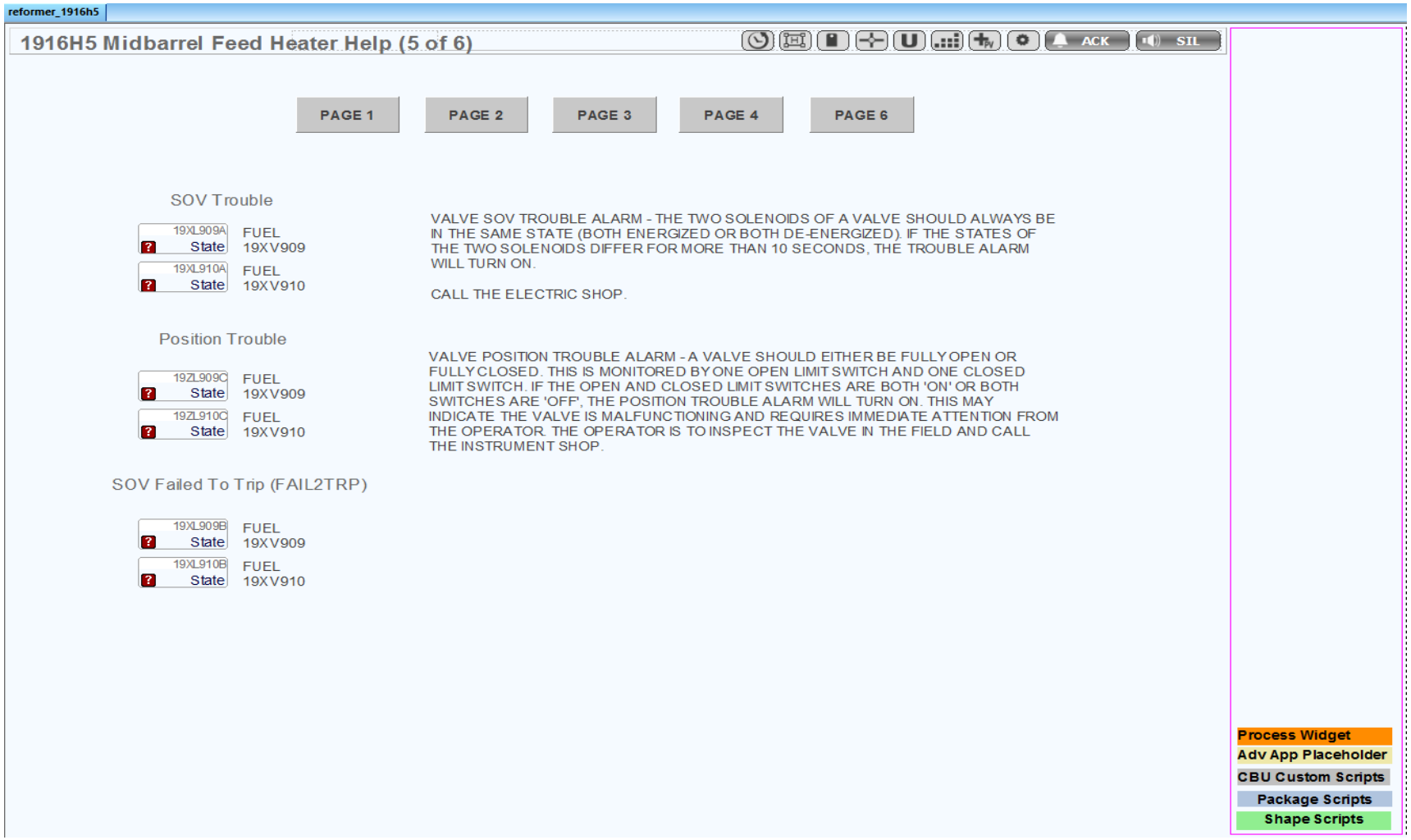

Reformer_1916H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_1916H3
PAGE 1
PAGE 2
PAGE 4
PAGE 5
PAGE 6
1. IMMEDIATELY AFTER A FULL TRIP, THE TWO FUEL GAS CHOPPER VALVES MUST BE IN THE CLOSED POSITION AS A PERMISSIVE TO RESET. 'RDY2RST' WILL BE DISPLAYED ON THE TDC. THE OPERATOR WILL THEN PRESS THE FUEL GAS RESET PUSHBUTTON AT THE LOCAL PANEL.
2. OPERATIONS WILL ADJUST THE FUEL GAS CONTROLLER, 19PC423, AS REQUIRED FOR STARTUP.
3. AFTER THE TWO FUEL GAS CHOPPER VALVES ARE OPENED FOR TWO MINUTES, THE FUEL GAS LOW AND HIGH PRESSURE SHUTDOWNS WILL BE ARMED. A LOW OR HIGH FUEL GAS PRESSURE WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT.
4. WHEN LIQUID FEED FLOW HAS EXCEEDED 210 BB/HR FOR 10 MINUTES, THE LIQUID LOW FLOW SHUTDOWN WILL BE ARMED. A LOW LIQUID FEED FLOW WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT.
5. WHEN THE RECYCLE H2 GAS FLOW HAS EXCEEDED 3700 MSCFH FOR 10 MINUTES, THE RECYCLE LOW FLOW SHUTDOWN WILL BE ARMED. A LOW RECYCLE H2 GAS FLOW WILL CLOSE BOTH FUEL GAS VALVES, SET THE FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT, AND TRIP BOTH NORTH AND SOUTH FEED PUMPS.
Reserved for Faceplates

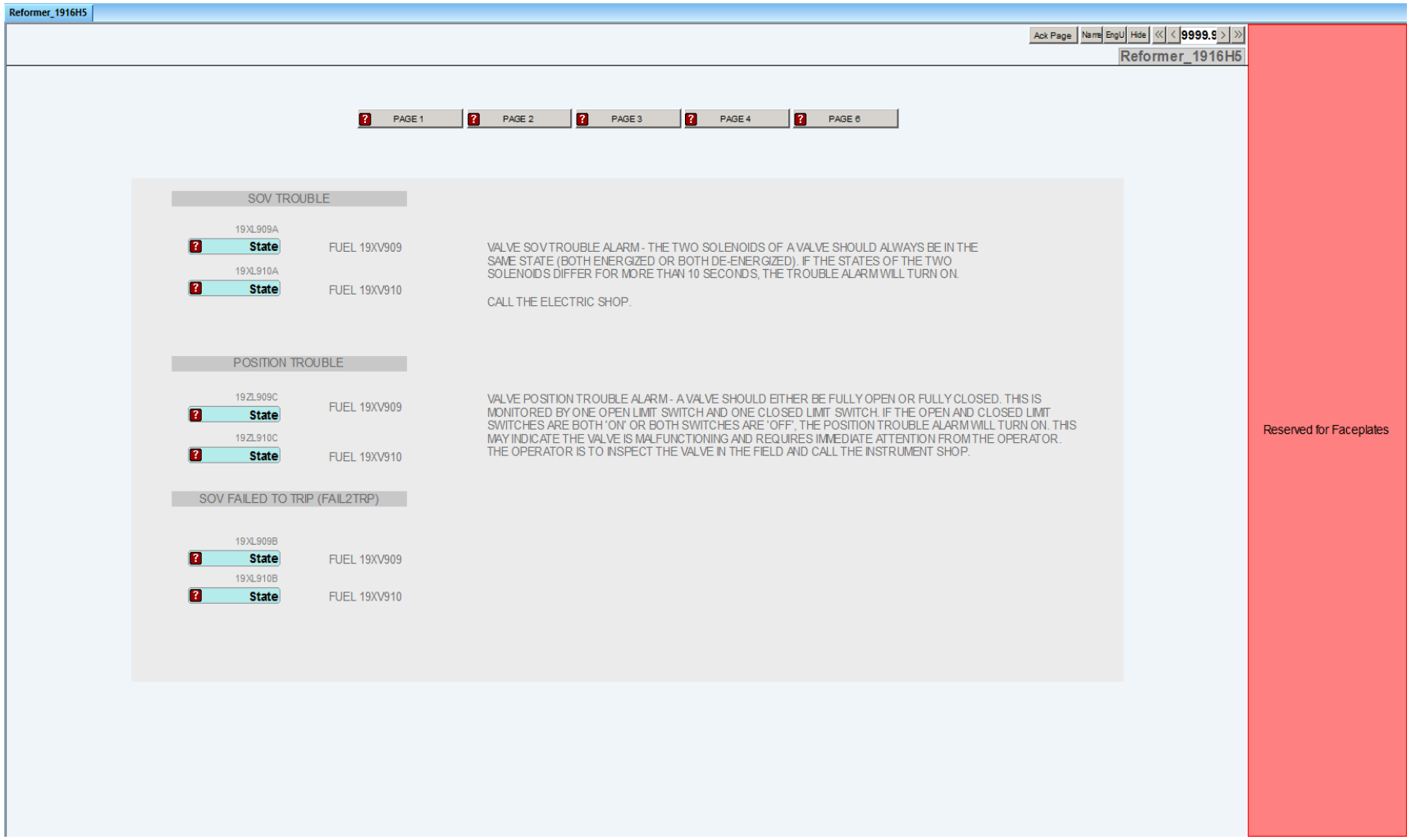
1.50 1916H4 MIDBARREL FEED HEATER HELP (4 OF 6) (Reformer_1916h4.htm)

reformer_1916h4
1916H4 Midbarrel Feed Heater Help (4 of 6)
ACK
SIL
PAGE 1
PAGE 2
PAGE 3
PAGE 5
PAGE 6
Transmitter Trouble
19XL417T State
FUEL GAS PRESSURE
19XL114T State
LIQUID FEED FLOW
19XL152T State
H2 GAS FLOW
19XL717T State
REACTOR TEMP
TRANSMITTER TROUBLE ALARM - A TROUBLE CONDITION INDICATES THE TRANSMITTER READING IS BELOW 3.9 mA OR ABOVE 20.3 mA.
CONTACT THE INSTRUMENT SHOP.
Switch Trouble
19XL912T State
DCS SHUTDOWN SWITCH
19XL915T State
LOCAL SHUTDOWN SWITCH
SWITCH TROUBLE ALARM - EACH SWITCH HAS A SET OF TWO (2) OUTPUT CONTACTS. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE CONTACTS DIFFER (ONE CONTACT IS CLOSED WHILE THE OTHER CONTACT IS OPEN.)
CONTACT THE INSTRUMENT SHOP FOR DCS SWITCH TROUBLE.
CONTACT THE ELECTRIC SHOP FOR LOCAL SWITCH TROUBLE.
Transmitter Deviation
19PA3423
FUEL GAS PRESSURE
19FA3114
LIQUID FEED FLOW
19F152AB
19F152CD
FUEL GAS PRESSURE TRIP ARMED
TRANSMITTER DEVIATION ALARM - THE TWO (2) TRANSMITTERS IN EACH PROCESS SHOULD READ THE SAME. ONE TRANSMITTER IS WIRED TO THE TDC. THE OTHER TRANSMITTER IS WIRED TO THE TMR AND SENT TO THE TDC VIA SOFT LINK. THE TDC COMPARES THE TWO READINGS AND ACTIVATES A DEVIATION ALARM WHEN THE TRANSMITTERS DIFFER BY MORE THAN 5% FOR AT LEAST 5 MINUTES.
CONTACT THE INSTRUMENT SHOP.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

Reformer_1916H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_1916H4
PAGE 1
PAGE 2
PAGE 3
PAGE 5
PAGE 6
TRANSMITTER TROUBLE
19XL417T
State
FUEL GAS PRESSURE
19XL114T
State
LIQUID FEED FLOW
19XL152T
State
H2 GAS FLOW
19XL717T
State
REACTOR TEMP
SWITCH TROUBLE
19XL912T
State
DCS SHUTDOWN SWITCH
19XL915T
State
LOCAL SHUTDOWN SWITCH
TRANSMITTER DEVIATION
19PA3423
9999.99
FUEL GAS PRESSURE
19FA3114
9999.99
LIQUID FEED FLOW
19F152AB
9999.99
19F152CD
9999.99
FUEL GAS PRESSURE TRIP ARMED
TRANSMITTER TROUBLE ALARM - A TROUBLE CONDITION INDICATES THE TRANSMITTER READING IS BELOW 3.9 mA OR ABOVE 20.3 mA
CONTACT THE INSTRUMENT SHOP.
SWITCH TROUBLE ALARM - EACH SWITCH HAS A SET OF TWO (2) OUTPUT CONTACTS. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE CONTACTS DIFFER (ONE CONTACT IS CLOSED WHILE THE OTHER CONTACT IS OPEN.)
CONTACT THE INSTRUMENT SHOP FOR DCS SWITCH TROUBLE.
CONTACT THE ELECTRIC SHOP FOR LOCAL SWITCH TROUBLE.
TRANSMITTER DEVIATION ALARM - THE TWO (2) TRANSMITTERS IN EACH PROCESS SHOULD READ THE SAME. ONE TRANSMITTER IS WIRED TO THE TDC. THE OTHER TRANSMITTER IS WIRED TO THE TMR AND SENT TO THE TDC VIA SOFT LINK. THE TDC COMPARES THE TWO READINGS AND ACTIVATES A DEVIATION ALARM WHEN THE TRANSMITTERS DIFFER BY MORE THAN 5% FOR AT LEAST 5 MINUTES.
CONTACT THE INSTRUMENT SHOP.
Reserved for Faceplates

1.51 1916H5 MIDBARREL FEED HEATER HELP (5 OF 6) (Reformer_1916h5.htm)


reformer_1916h5
1916H5 Midbarrel Feed Heater Help (5 of 6)
ACK
SIL
PAGE 1
PAGE 2
PAGE 3
PAGE 4
PAGE 6
SOV Trouble
19XL909A State
FUEL 19XV909
19XL910A State
FUEL 19XV910
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
Position Trouble
19ZL909C State
FUEL 19XV909
19ZL910C State
FUEL 19XV910
VALVE POSITION TROUBLE ALARM - A VALVE SHOULD EITHER BE FULLY OPEN OR FULLY CLOSED. THIS IS MONITORED BY ONE OPEN LIMIT SWITCH AND ONE CLOSED LIMIT SWITCH. IF THE OPEN AND CLOSED LIMIT SWITCHES ARE BOTH 'ON' OR BOTH SWITCHES ARE 'OFF', THE POSITION TROUBLE ALARM WILL TURN ON. THIS MAY INDICATE THE VALVE IS MALFUNCTIONING AND REQUIRES IMMEDIATE ATTENTION FROM THE OPERATOR. THE OPERATOR IS TO INSPECT THE VALVE IN THE FIELD AND CALL THE INSTRUMENT SHOP.
SOV Failed To Trip (FAIL2TRP)
19XL909B State
FUEL 19XV909
19XL910B State
FUEL 19XV910
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1916H5
Ack Page
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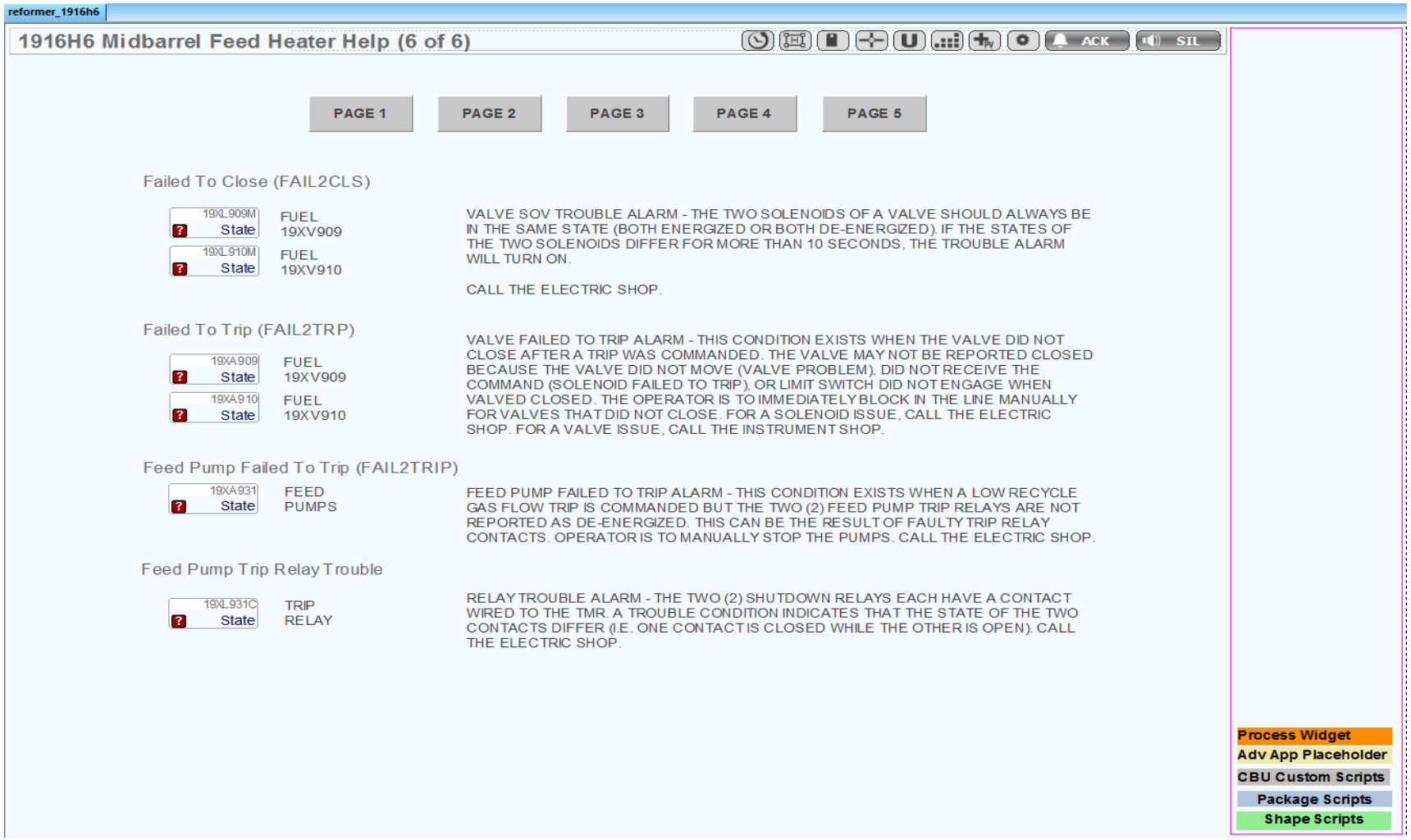
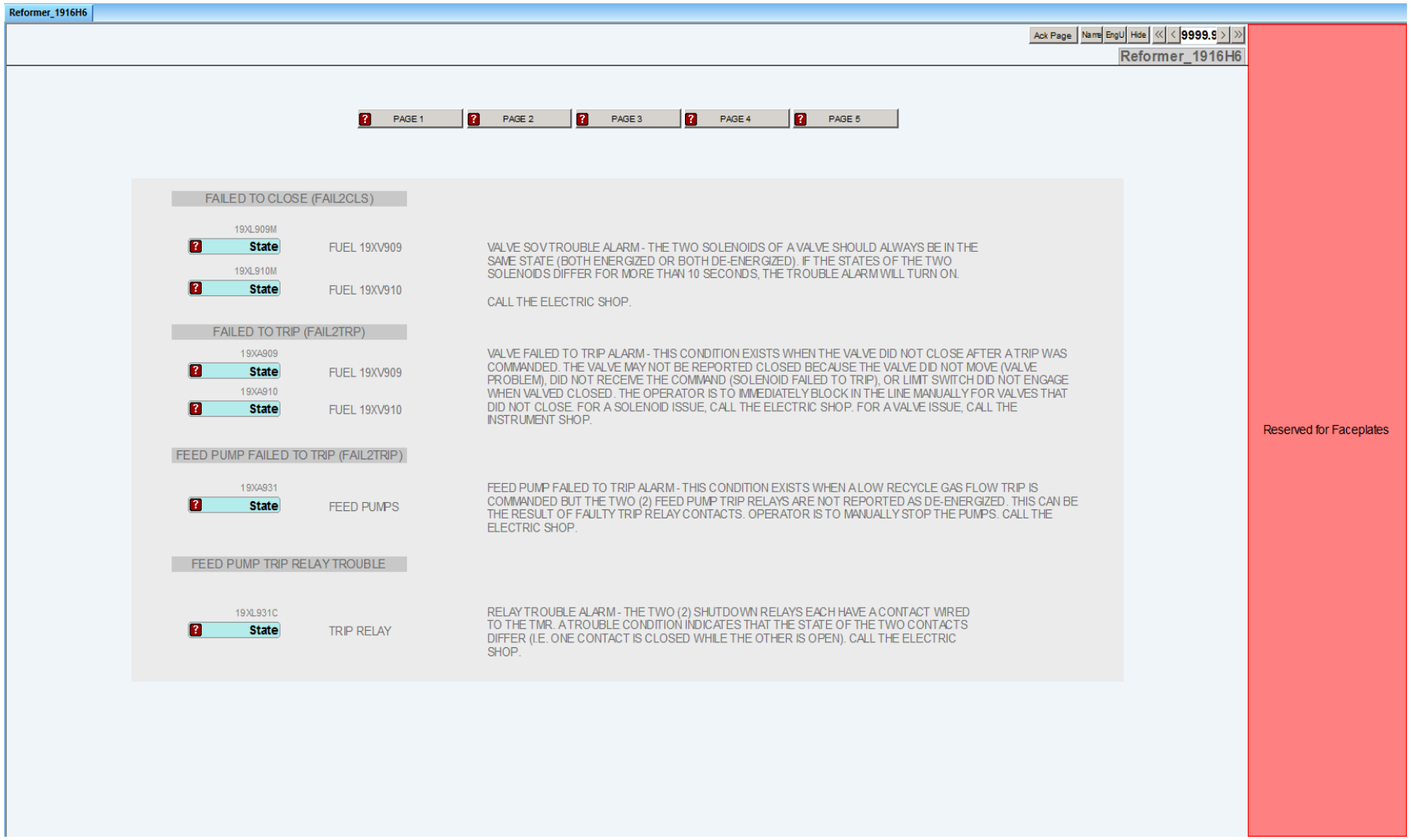
Reformer_1916H5
PAGE 1
PAGE 2
PAGE 3
PAGE 4
PAGE 6
SOV TROUBLE
19XL909A
State
FUEL 19XV909
19XL910A
State
FUEL 19XV910
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
POSITION TROUBLE
19ZL909C
State
FUEL 19XV909
19ZL910C
State
FUEL 19XV910
VALVE POSITION TROUBLE ALARM - A VALVE SHOULD EITHER BE FULLY OPEN OR FULLY CLOSED. THIS IS MONITORED BY ONE OPEN LIMIT SWITCH AND ONE CLOSED LIMIT SWITCH. IF THE OPEN AND CLOSED LIMIT SWITCHES ARE BOTH 'ON' OR BOTH SWITCHES ARE 'OFF', THE POSITION TROUBLE ALARM WILL TURN ON. THIS MAY INDICATE THE VALVE IS MALFUNCTIONING AND REQUIRES IMMEDIATE ATTENTION FROM THE OPERATOR. THE OPERATOR IS TO INSPECT THE VALVE IN THE FIELD AND CALL THE INSTRUMENT SHOP.
SOV FAILED TO TRIP (FAIL2TRP)
19XL909B
State
FUEL 19XV909
19XL910B
State
FUEL 19XV910
Reserved for Faceplates

1.52 1916H6 MIDBARREL FEED HEATER HELP (6 OF 6) (Reformer_1916H6.htm)


reformer_1916h6
1916H6 Midbarrel Feed Heater Help (6 of 6)
ACK
SIL
PAGE 1
PAGE 2
PAGE 3
PAGE 4
PAGE 5
Failed To Close (FAIL2CLS)
19XL909M State
FUEL 19XV909
19XL910M State
FUEL 19XV910
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
Failed To Trip (FAIL2TRP)
19XA909 State
FUEL 19XV909
19XA910 State
FUEL 19XV910
VALVE FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN THE VALVE DID NOT CLOSE AFTER A TRIP WAS COMMANDED. THE VALVE MAY NOT BE REPORTED CLOSED BECAUSE THE VALVE DID NOT MOVE (VALVE PROBLEM), DID NOT RECEIVE THE COMMAND (SOLENOID FAILED TO TRIP), OR LIMIT SWITCH DID NOT ENGAGE WHEN VALVED CLOSED. THE OPERATOR IS TO IMMEDIATELY BLOCK IN THE LINE MANUALLY FOR VALVES THAT DID NOT CLOSE. FOR A SOLENOID ISSUE, CALL THE ELECTRIC SHOP. FOR A VALVE ISSUE, CALL THE INSTRUMENT SHOP.
Feed Pump Failed To Trip (FAIL2TRIP)
19XA931 State
FEED PUMPS
FEED PUMP FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A LOW RECYCLE GAS FLOW TRIP IS COMMANDED BUT THE TWO (2) FEED PUMP TRIP RELAYS ARE NOT REPORTED AS DE-ENERGIZED. THIS CAN BE THE RESULT OF FAULTY TRIP RELAY CONTACTS. OPERATOR IS TO MANUALLY STOP THE PUMPS. CALL THE ELECTRIC SHOP.
Feed Pump Trip Relay Trouble
19XL931C State
TRIP RELAY
RELAY TROUBLE ALARM - THE TWO (2) SHUTDOWN RELAYS EACH HAVE A CONTACT WIRED TO THE TMR. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE TWO CONTACTS DIFFER (I.E. ONE CONTACT IS CLOSED WHILE THE OTHER IS OPEN). CALL THE ELECTRIC SHOP.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1916H6
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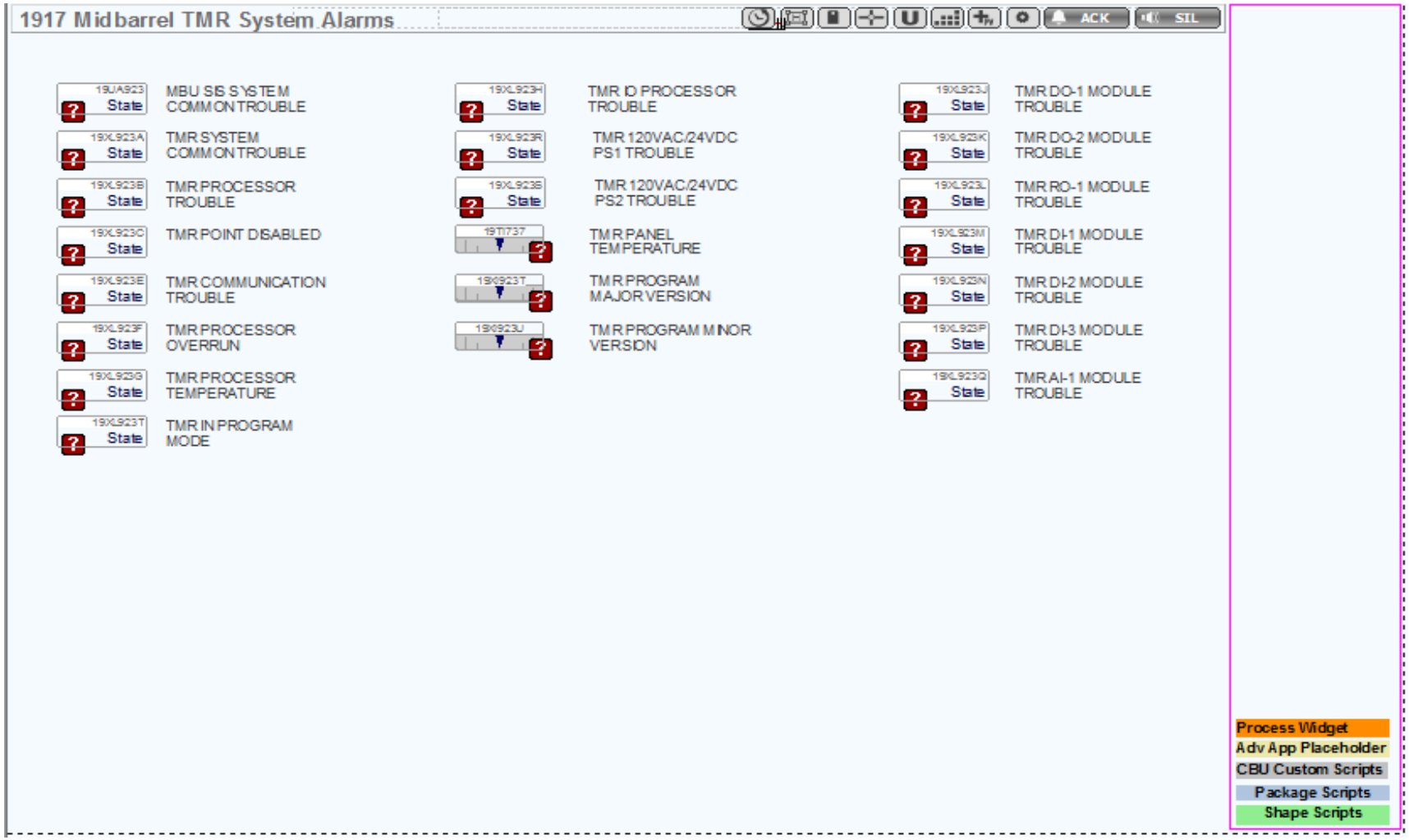
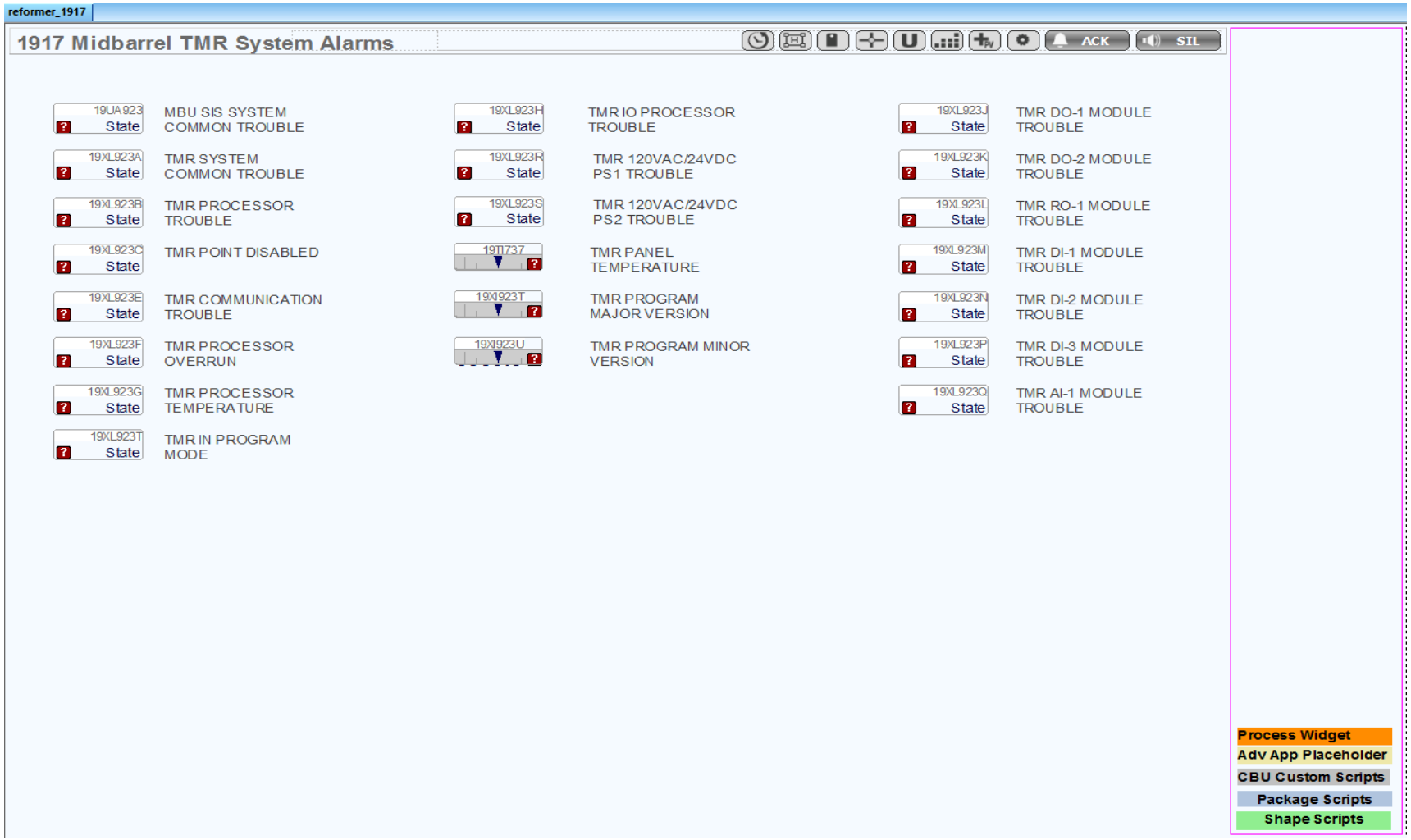
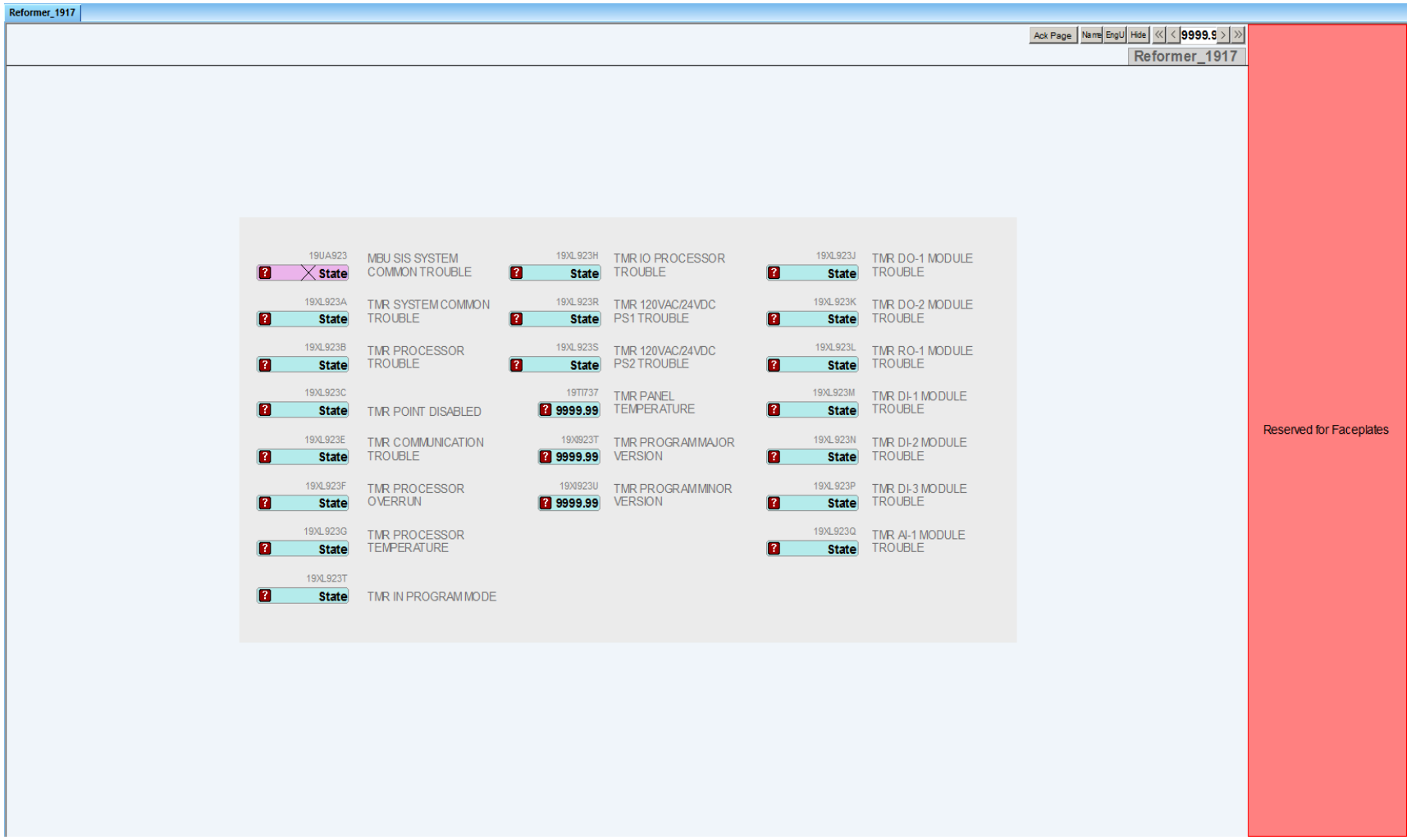
9999.9
Reformer_1916H6
PAGE 1
PAGE 2
PAGE 3
PAGE 4
PAGE 5
FAILED TO CLOSE (FAIL2CLS)
19XL909M
State
FUEL 19XV909
19XL910M
State
FUEL 19XV910
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
FAILED TO TRIP (FAIL2TRP)
19XA909
State
FUEL 19XV909
19XA910
State
FUEL 19XV910
VALVE FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN THE VALVE DID NOT CLOSE AFTER A TRIP WAS COMMANDED. THE VALVE MAY NOT BE REPORTED CLOSED BECAUSE THE VALVE DID NOT MOVE (VALVE PROBLEM), DID NOT RECEIVE THE COMMAND (SOLENOID FAILED TO TRIP), OR LIMIT SWITCH DID NOT ENGAGE WHEN VALVED CLOSED. THE OPERATOR IS TO IMMEDIATELY BLOCK IN THE LINE MANUALLY FOR VALVES THAT DID NOT CLOSE. FOR A SOLENOID ISSUE, CALL THE ELECTRIC SHOP. FOR A VALVE ISSUE, CALL THE INSTRUMENT SHOP.
FEED PUMP FAILED TO TRIP (FAIL2TRIP)
19XA931
State
FEED PUMPS
FEED PUMP FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A LOW RECYCLE GAS FLOW TRIP IS COMMANDED BUT THE TWO (2) FEED PUMP TRIP RELAYS ARE NOT REPORTED AS DE-ENERGIZED. THIS CAN BE THE RESULT OF FAULTY TRIP RELAY CONTACTS. OPERATOR IS TO MANUALLY STOP THE PUMPS. CALL THE ELECTRIC SHOP.
FEED PUMP TRIP RELAY TROUBLE
19XL931C
State
TRIP RELAY
RELAY TROUBLE ALARM - THE TWO (2) SHUTDOWN RELAYS EACH HAVE A CONTACT WIRED TO THE TMR. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE TWO CONTACTS DIFFER (I.E. ONE CONTACT IS CLOSED WHILE THE OTHER IS OPEN). CALL THE ELECTRIC SHOP.
Reserved for Faceplates

1.53 1917 MIDBARREL TMR SYATEM ALARM (Reformer_1917.htm)




reformer_1917
1917 Midbarrel TMR System Alarms
ACK
SIL
19UA923 State
MBU SIS SYSTEM COMMON TROUBLE
19XL923A State
TMR SYSTEM COMMON TROUBLE
19XL923B State
TMR PROCESSOR TROUBLE
19XL923C State
TMR POINT DISABLED
19XL923E State
TMR COMMUNICATION TROUBLE
19XL923F State
TMR PROCESSOR OVERRUN
19XL923G State
TMR PROCESSOR TEMPERATURE
19XL923T State
TMR IN PROGRAM MODE
19XL923H State
TMR IO PROCESSOR TROUBLE
19XL923R State
TMR 120VAC/24VDC PS1 TROUBLE
19XL923S State
TMR 120VAC/24VDC PS2 TROUBLE
19TI737
TMR PANEL TEMPERATURE
19XI923T
TMR PROGRAM MAJOR VERSION
19XI923U
TMR PROGRAM MINOR VERSION
19XL923J State
TMR DO-1 MODULE TROUBLE
19XL923K State
TMR DO-2 MODULE TROUBLE
19XL923L State
TMR RO-1 MODULE TROUBLE
19XL923M State
TMR DI-1 MODULE TROUBLE
19XL923N State
TMR DI-2 MODULE TROUBLE
19XL923P State
TMR DI-3 MODULE TROUBLE
19XL923Q State
TMR AI-1 MODULE TROUBLE
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1917
Ack Page
Name
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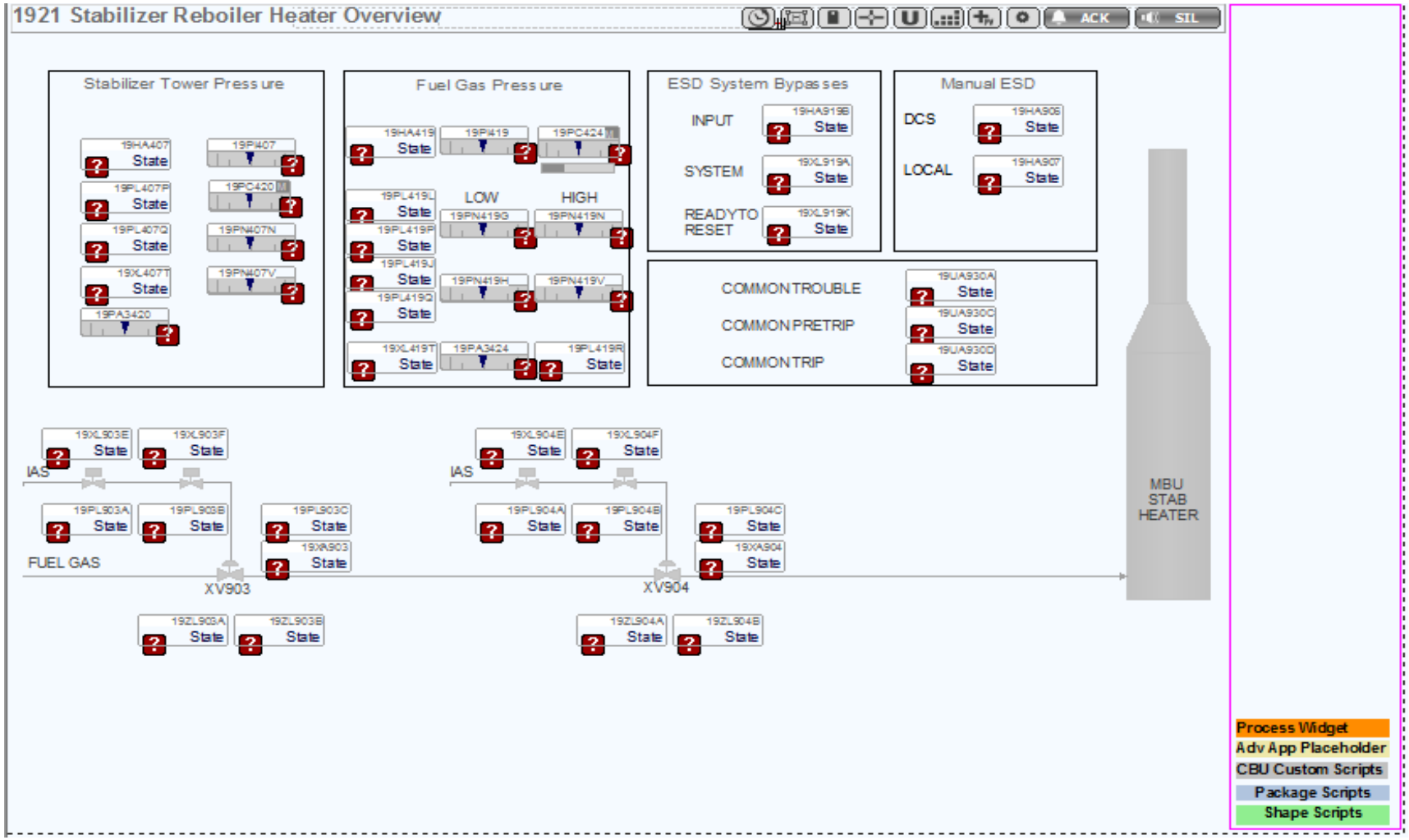
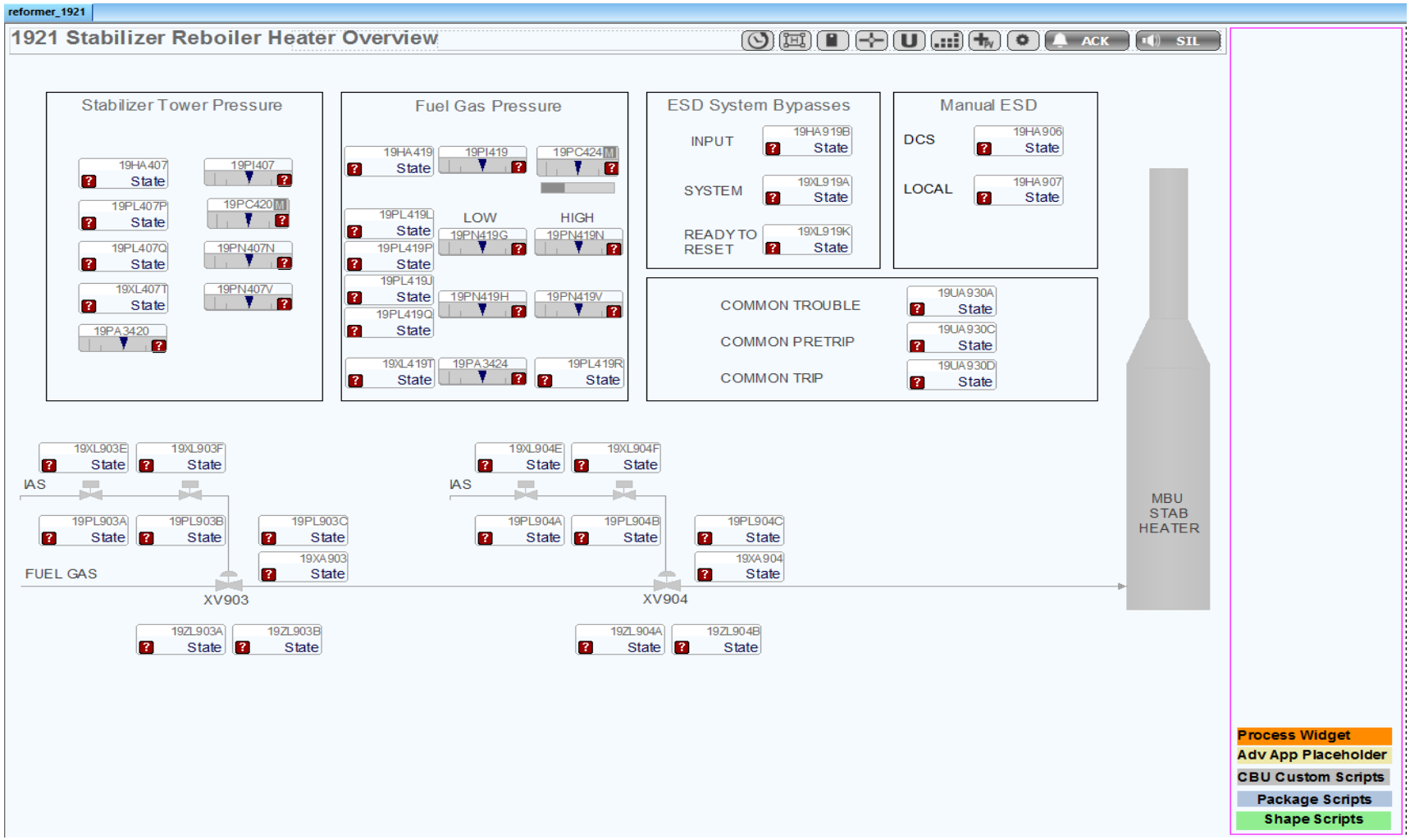
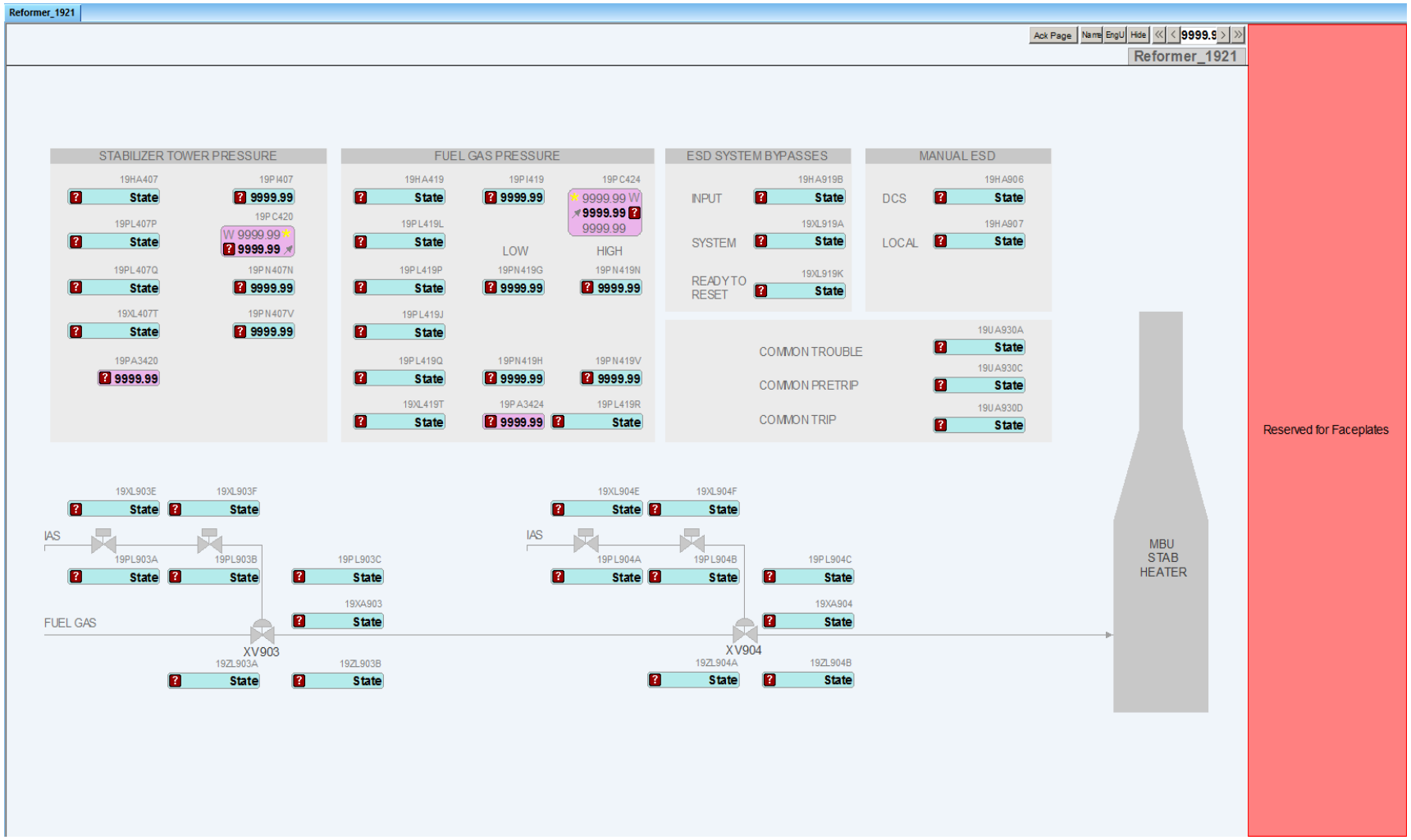
9999.9
Reformer_1917
19UA923
State
MBU SIS SYSTEM COMMON TROUBLE
19XL923A
State
TMR SYSTEM COMMON TROUBLE
19XL923B
State
TMR PROCESSOR TROUBLE
19XL923C
State
TMR POINT DISABLED
19XL923E
State
TMR COMMUNICATION TROUBLE
19XL923F
State
TMR PROCESSOR OVERRUN
19XL923G
State
TMR PROCESSOR TEMPERATURE
19XL923T
State
TMR IN PROGRAM MODE
19XL923H
State
TMR IO PROCESSOR TROUBLE
19XL923R
State
TMR 120VAC/24VDC PS1 TROUBLE
19XL923S
State
TMR 120VAC/24VDC PS2 TROUBLE
19TI737
9999.99
TMR PANEL TEMPERATURE
19XI923T
9999.99
TMR PROGRAM MAJOR VERSION
19XI923U
9999.99
TMR PROGRAM MINOR VERSION
19XL923J
State
TMR DO-1 MODULE TROUBLE
19XL923K
State
TMR DO-2 MODULE TROUBLE
19XL923L
State
TMR RO-1 MODULE TROUBLE
19XL923M
State
TMR DI-1 MODULE TROUBLE
19XL923N
State
TMR DI-2 MODULE TROUBLE
19XL923P
State
TMR DI-3 MODULE TROUBLE
19XL923Q
State
TMR AI-1 MODULE TROUBLE
Reserved for Faceplates

1.54 1921 STABILIZER REBOILER HEATER OVERVIEW (Reformer_1921.htm)




reformer_1921
1921 Stabilizer Reboiler Heater Overview
ACK
SIL
Stabilizer Tower Pressure
19HA407 State
19PI407
19PL407P State
19PC420
19PL407Q State
19PN407N
19XL407T State
19PN407V
19PA3420
Fuel Gas Pressure
19HA419 State
19PI419
19PC424
19PL419L State
LOW
HIGH
19PN419G
19PN419N
19PL419P State
19PL419J State
19PN419H
19PN419V
19PL419Q State
19XL419T State
19PA3424
19PL419R State
ESD System Bypasses
INPUT
19HA919B State
SYSTEM
19XL919A State
READY TO RESET
19XL919K State
Manual ESD
DCS
19HA906 State
LOCAL
19HA907 State
COMMON TROUBLE
19UA930A State
COMMON PRETRIP
19UA930C State
COMMON TRIP
19UA930D State
19XL903E State
19XL903F State
IAS
19PL903A State
19PL903B State
19PL903C State
19XA903 State
FUEL GAS
XV903
19ZL903A State
19ZL903B State
19XL904E State
19XL904F State
IAS
19PL904A State
19PL904B State
19PL904C State
19XA904 State
XV904
19ZL904A State
19ZL904B State
MBU STAB HEATER
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1921
Ack Page
Name
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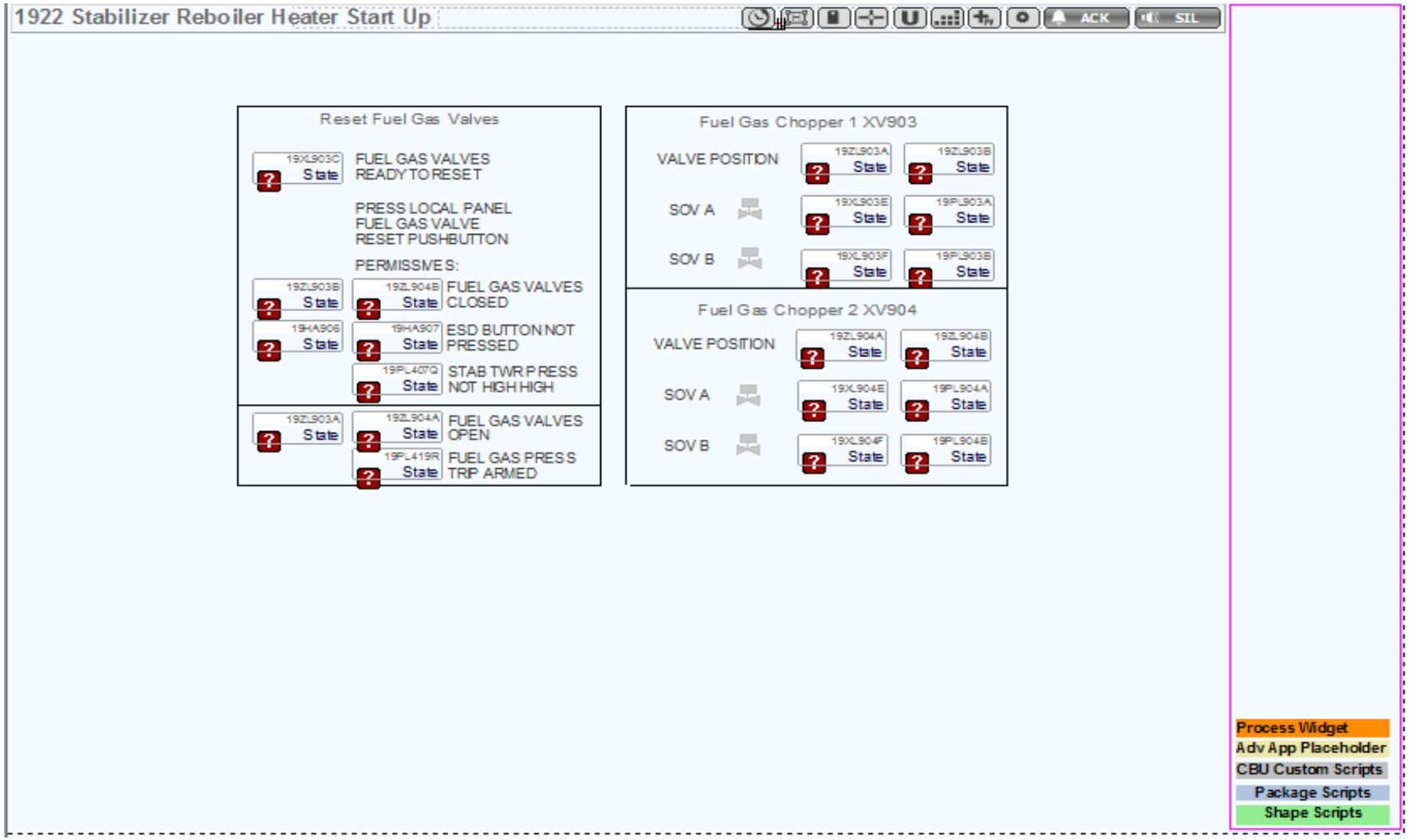
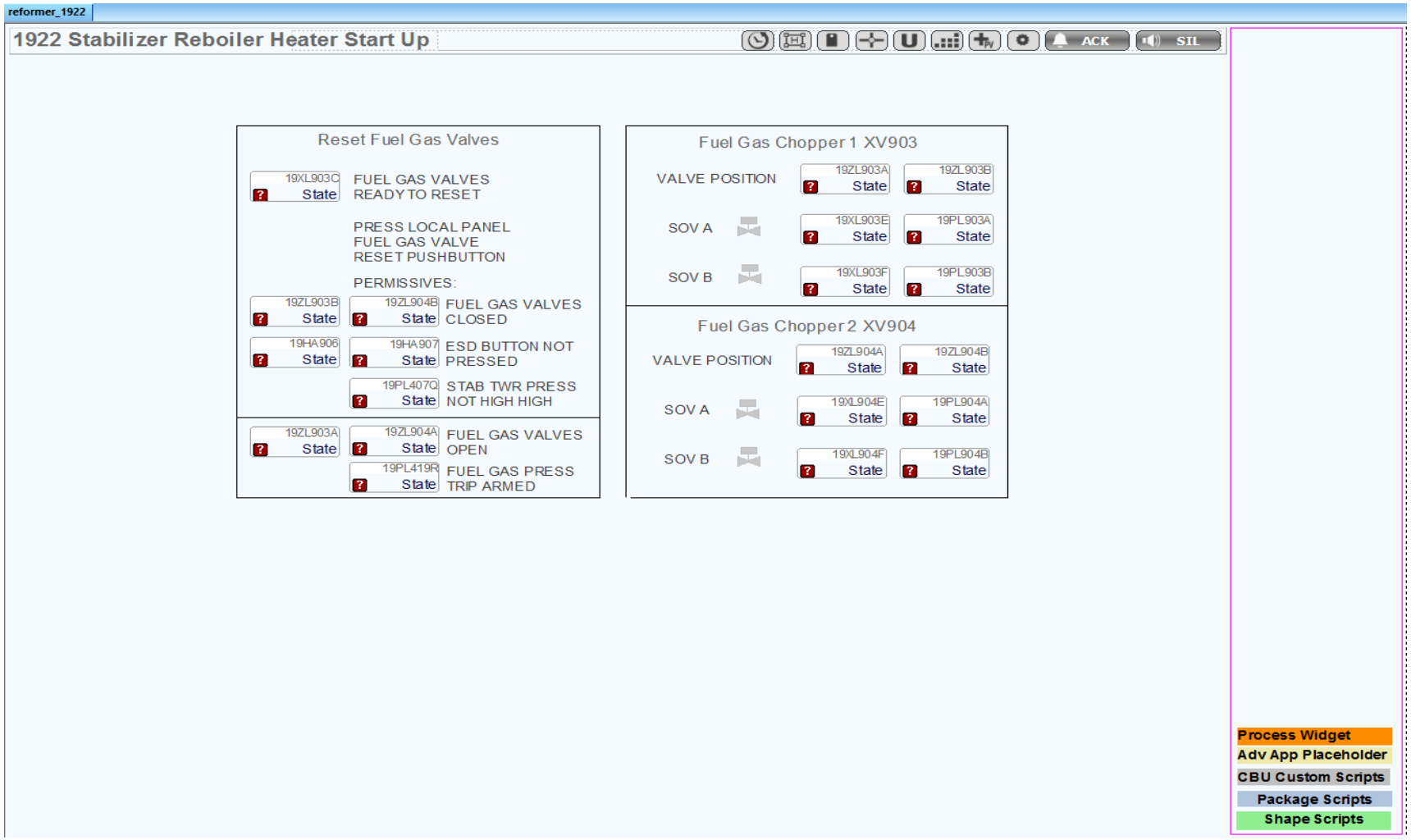
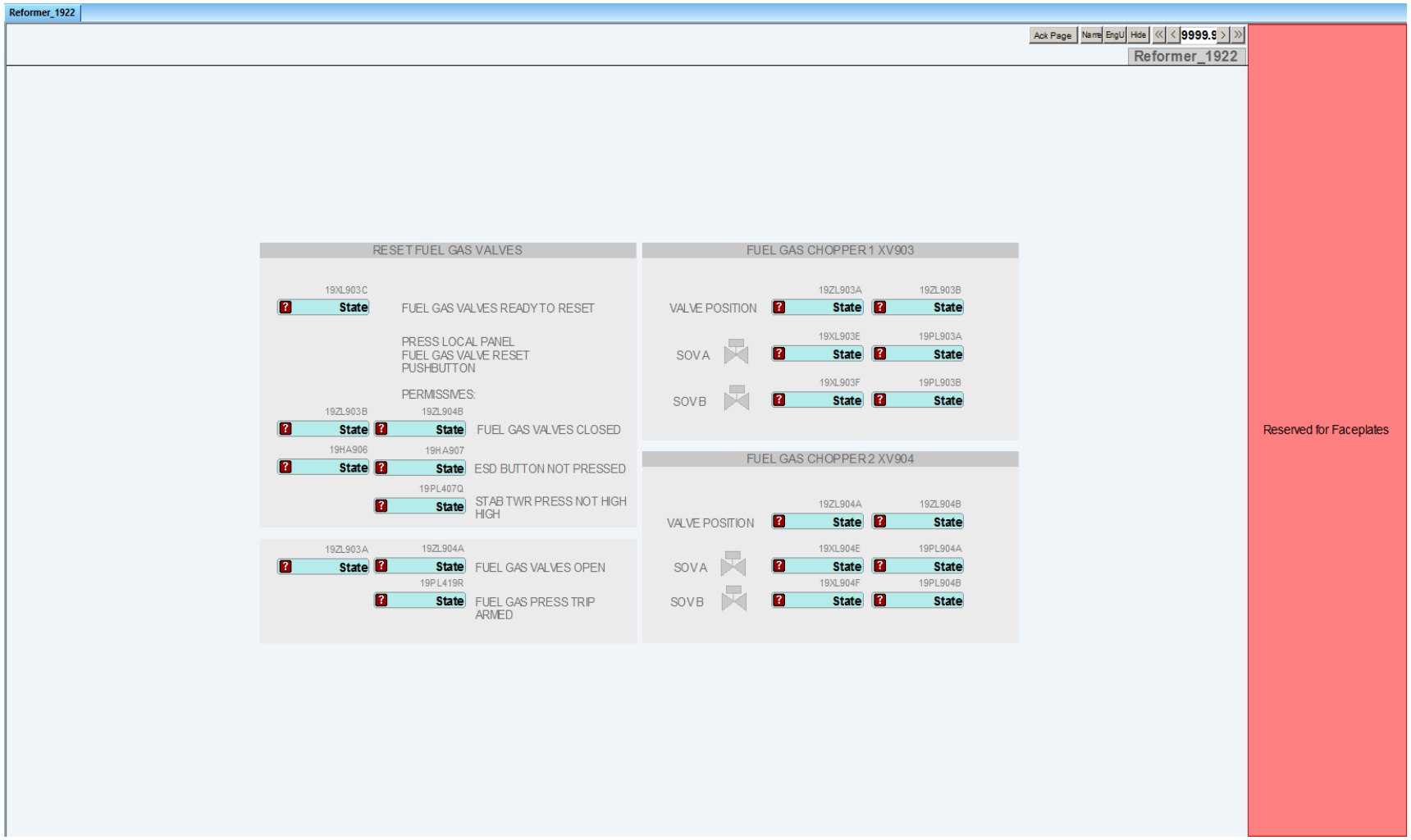
Reformer_1921
STABILIZER TOWER PRESSURE
19HA407
State
19PI407
9999.99
19PL407P
State
19PC420
W 9999.99
9999.99
19PL407Q
State
19PN407N
9999.99
19XL407T
State
19PN407V
9999.99
19PA3420
9999.99
FUEL GAS PRESSURE
19HA419
State
19PI419
9999.99
19PC424
9999.99 W
9999.99
9999.99
19PL419L
State
LOW
HIGH
19PL419P
State
19PN419G
9999.99
19PN419N
9999.99
19PL419J
State
19PL419Q
State
19PN419H
9999.99
19PN419V
9999.99
19XL419T
State
19PA3424
9999.99
19PL419R
State
ESD SYSTEM BYPASSES
INPUT
19HA919B
State
SYSTEM
19XL919A
State
READY TO RESET
19XL919K
State
MANUAL ESD
DCS
19HA906
State
LOCAL
19HA907
State
COMMON TROUBLE
19UA930A
State
COMMON PRETRIP
19UA930C
State
COMMON TRIP
19UA930D
State
19XL903E
State
19XL903F
State
IAS
19PL903A
State
19PL903B
State
19PL903C
State
19XA903
State
FUEL GAS
XV903
19ZL903A
State
19ZL903B
State
19XL904E
State
19XL904F
State
IAS
19PL904A
State
19PL904B
State
19PL904C
State
19XA904
State
XV904
19ZL904A
State
19ZL904B
State
MBU
STAB
HEATER
Reserved for Faceplates

1.55 1922 STABILIZER REBOILER HEATER START UP (Reformer_1922.htm)




reformer_1922
1922 Stabilizer Reboiler Heater Start Up
ACK
SIL
Reset Fuel Gas Valves
19XL903C State
FUEL GAS VALVES READY TO RESET
PRESS LOCAL PANEL FUEL GAS VALVE RESET PUSHBUTTON
PERMISSIVES:
19ZL903B State
19ZL904B State
FUEL GAS VALVES CLOSED
19HA906 State
19HA907 State
ESD BUTTON NOT PRESSED
19PL407Q State
STAB TWR PRESS NOT HIGH HIGH
19ZL903A State
19ZL904A State
FUEL GAS VALVES OPEN
19PL419R State
FUEL GAS PRESS TRIP ARMED
Fuel Gas Chopper 1 XV903
VALVE POSITION
19ZL903A State
19ZL903B State
SOV A
19XL903E State
19PL903A State
SOV B
19XL903F State
19PL903B State
Fuel Gas Chopper 2 XV904
VALVE POSITION
19ZL904A State
19ZL904B State
SOV A
19XL904E State
19PL904A State
SOV B
19XL904F State
19PL904B State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1922
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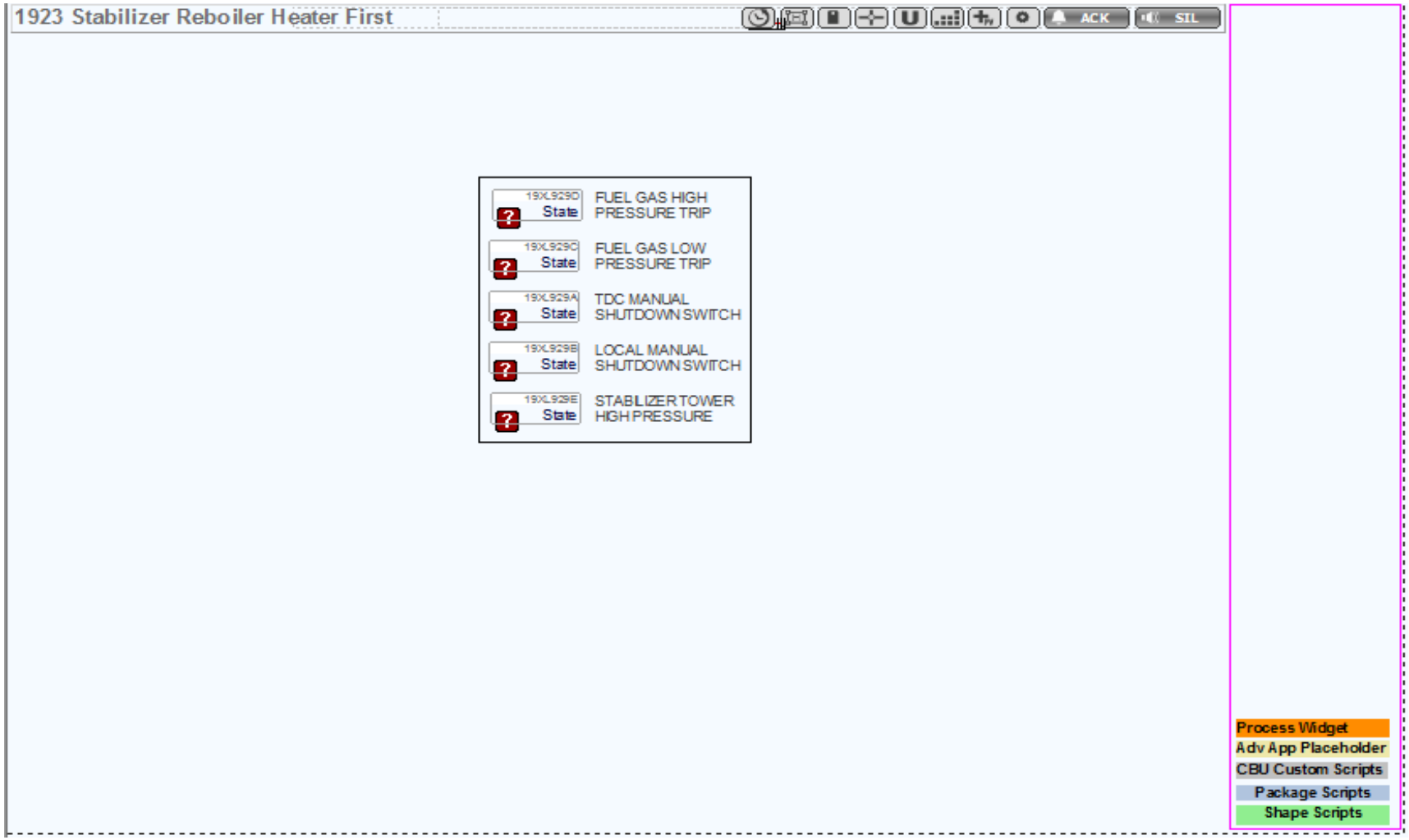
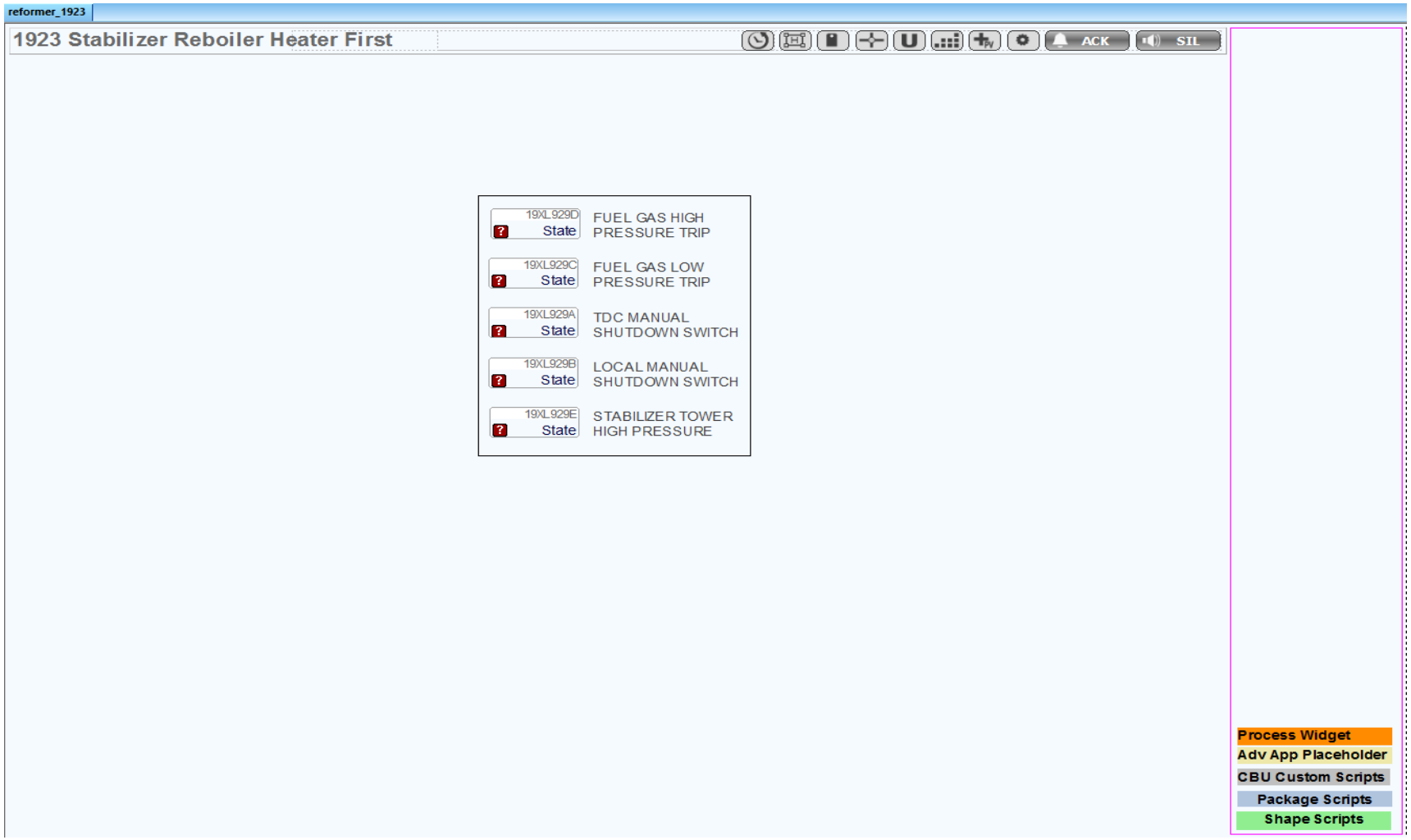
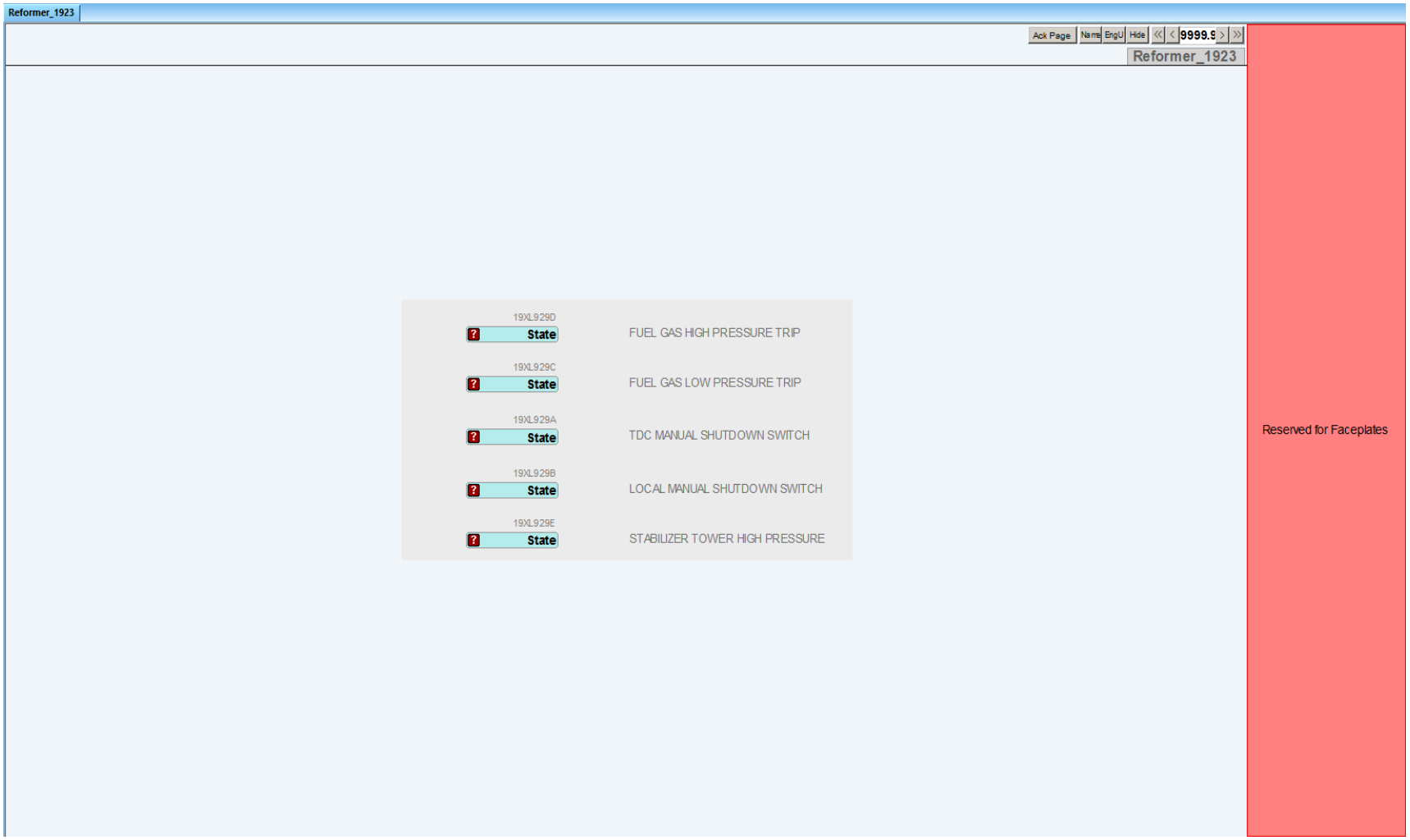
9999.9
Reformer_1922
RESET FUEL GAS VALVES
19XL903C
State
FUEL GAS VALVES READY TO RESET
PRESS LOCAL PANEL
FUEL GAS VALVE RESET
PUSHBUTTON
PERMISSIVES:
19ZL903B
State
19ZL904B
State
FUEL GAS VALVES CLOSED
19HA906
State
19HA907
State
ESD BUTTON NOT PRESSED
19PL407Q
State
STAB TWR PRESS NOT HIGH HIGH
19ZL903A
State
19ZL904A
State
FUEL GAS VALVES OPEN
19PL419R
State
FUEL GAS PRESS TRIP ARMED
FUEL GAS CHOPPER 1 XV903
VALVE POSITION
19ZL903A
State
19ZL903B
State
SOV A
19XL903E
State
19PL903A
State
SOV B
19XL903F
State
19PL903B
State
FUEL GAS CHOPPER 2 XV904
VALVE POSITION
19ZL904A
State
19ZL904B
State
SOV A
19XL904E
State
19PL904A
State
SOV B
19XL904F
State
19PL904B
State
Reserved for Faceplates

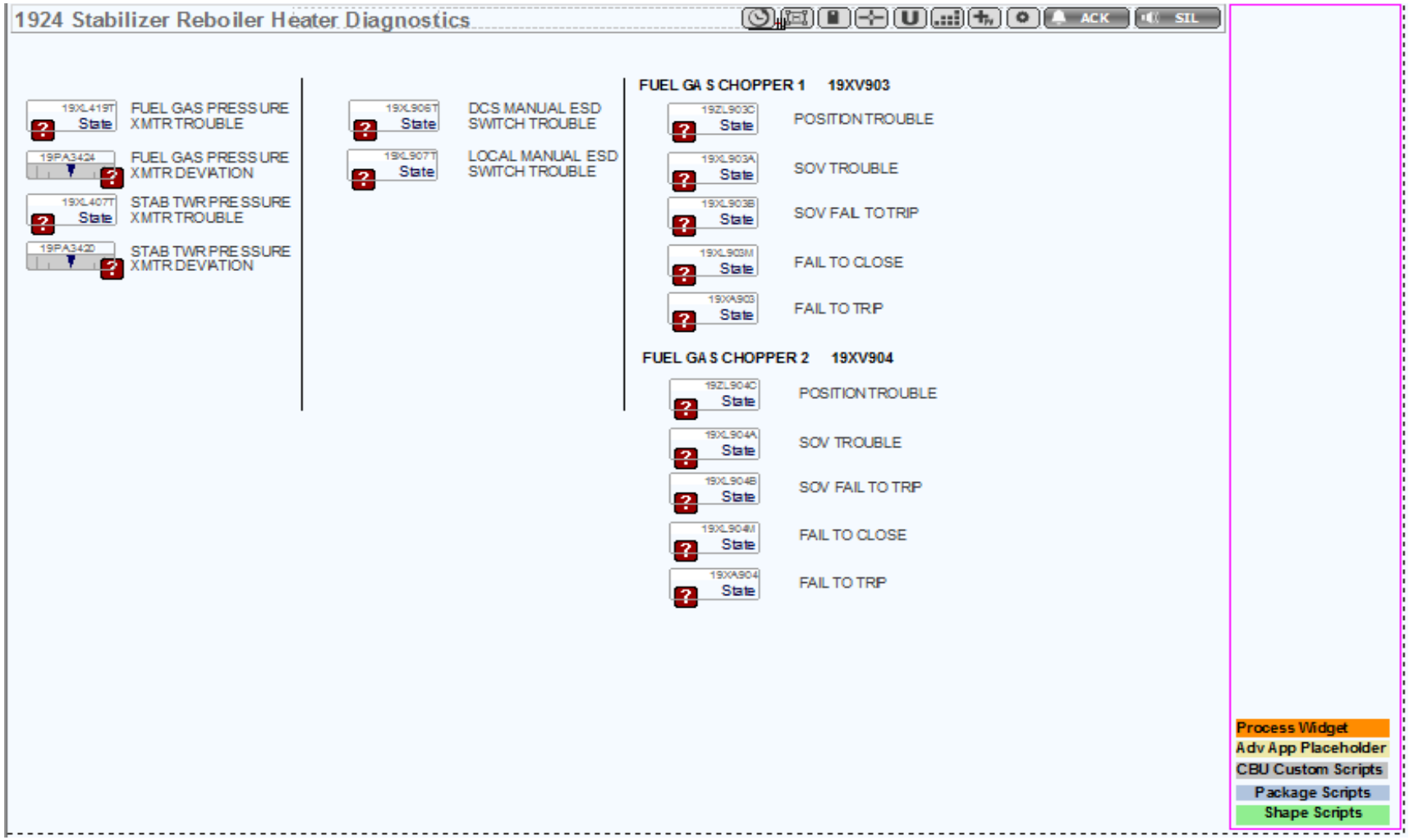
1.56 1923 STABILIZER REBOILER HEATER FIRST (reformer_1923.htm)

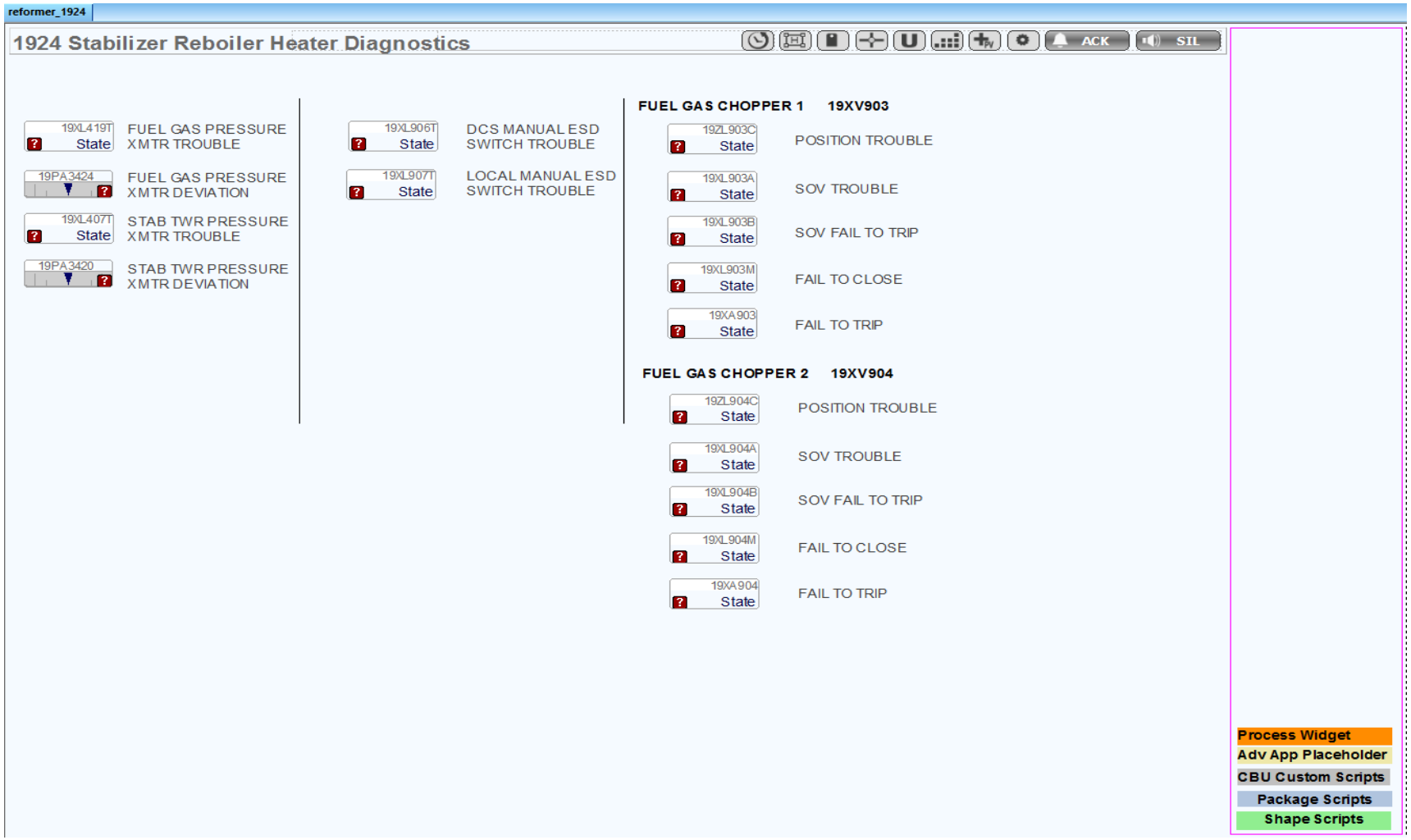


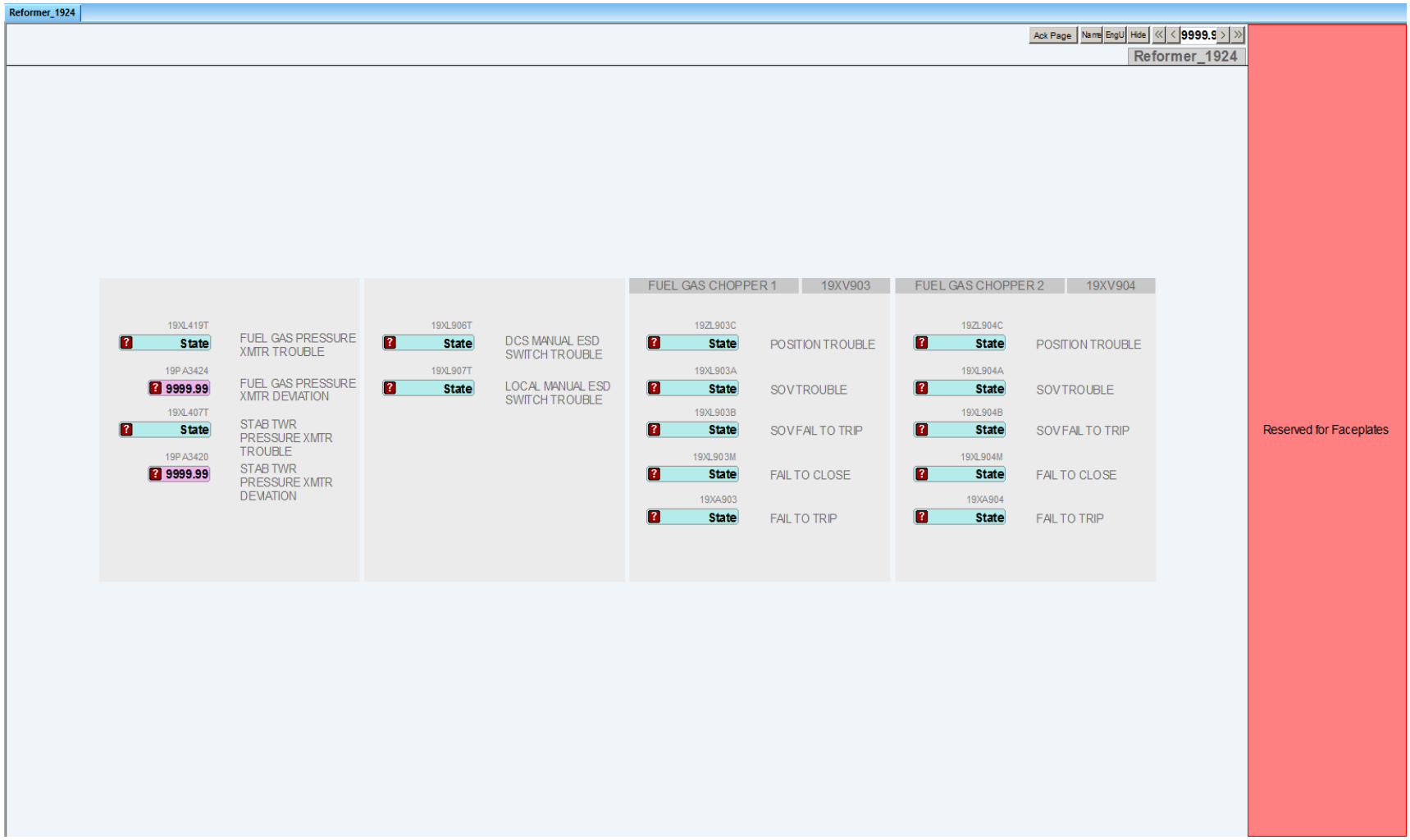

reformer_1923
1923 Stabilizer Reboiler Heater First
ACK
SIL
19XL929D State
FUEL GAS HIGH PRESSURE TRIP
19XL929C State
FUEL GAS LOW PRESSURE TRIP
19XL929A State
TDC MANUAL SHUTDOWN SWITCH
19XL929B State
LOCAL MANUAL SHUTDOWN SWITCH
19XL929E State
STABILIZER TOWER HIGH PRESSURE
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1923
Ack Page
Name
EngU
Hide
9999.9
Reformer_1923
19XL929D
State
FUEL GAS HIGH PRESSURE TRIP
19XL929C
State
FUEL GAS LOW PRESSURE TRIP
19XL929A
State
TDC MANUAL SHUTDOWN SWITCH
19XL929B
State
LOCAL MANUAL SHUTDOWN SWITCH
19XL929E
State
STABILIZER TOWER HIGH PRESSURE
Reserved for Faceplates

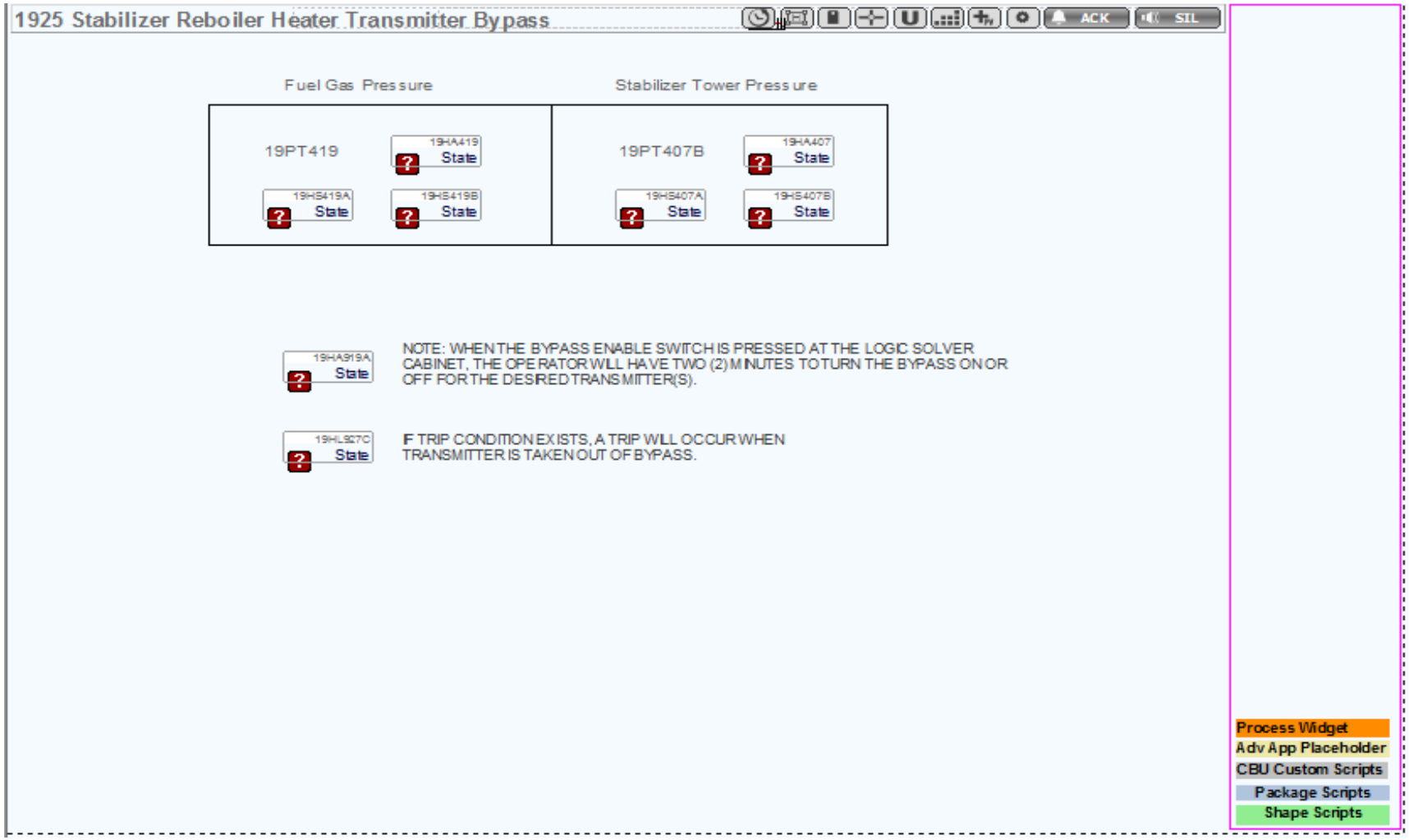
1.57 1924 STABILIZER REBOILER HEATER DIAGNOSTICS (reformer_1924.htm)

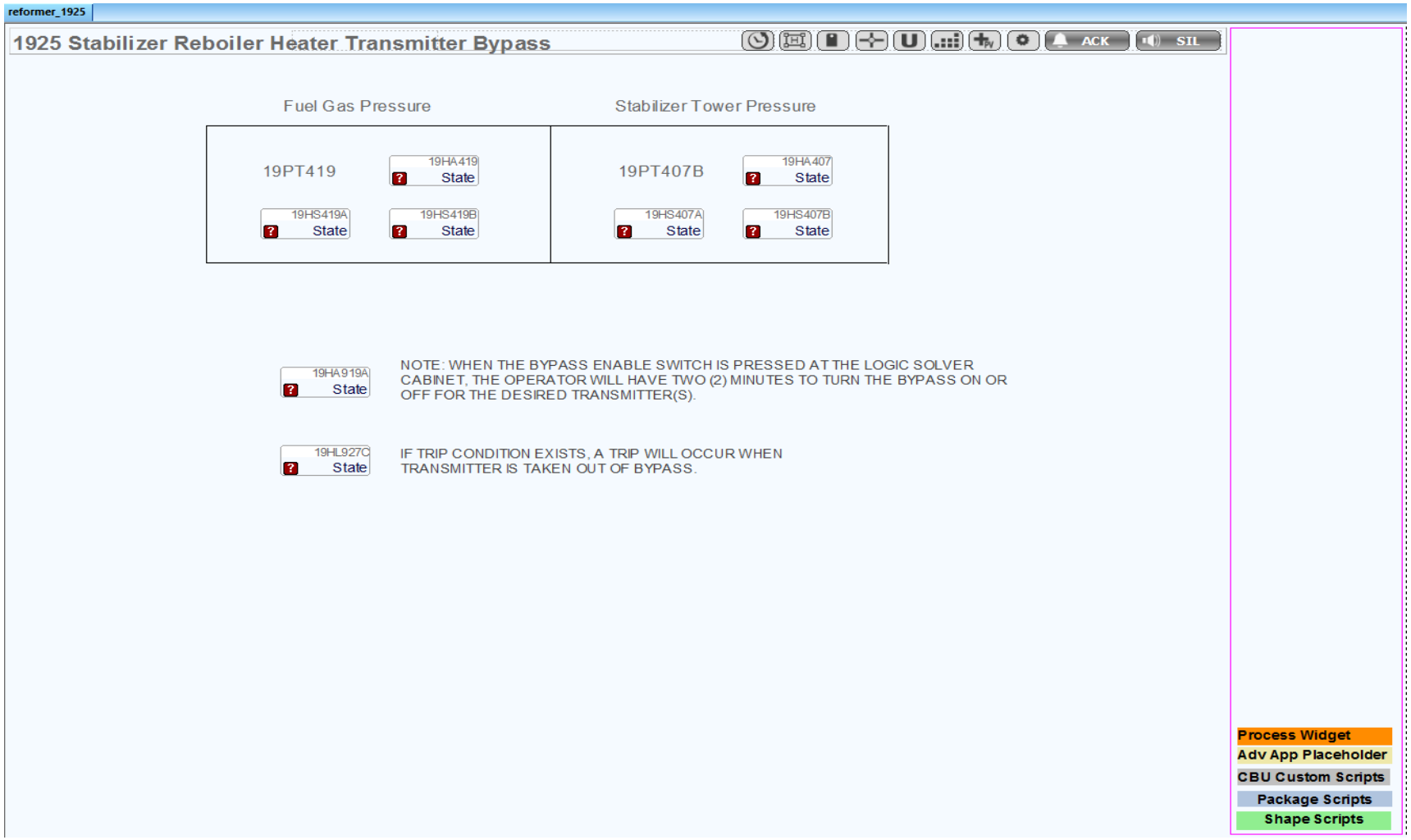



reformer_1924
1924 Stabilizer Reboiler Heater Diagnostics
ACK
SIL
19XL419T State
FUEL GAS PRESSURE XMTR TROUBLE
19PA3424
FUEL GAS PRESSURE XMTR DEVIATION
19XL407T State
STAB TWR PRESSURE XMTR TROUBLE
19PA3420
STAB TWR PRESSURE XMTR DEVIATION
19XL906T State
DCS MANUAL ESD SWITCH TROUBLE
19XL907T State
LOCAL MANUAL ESD SWITCH TROUBLE
FUEL GAS CHOPPER 1 19XV903
19ZL903C State
POSITION TROUBLE
19XL903A State
SOV TROUBLE
19XL903B State
SOV FAIL TO TRIP
19XL903M State
FAIL TO CLOSE
19XA903 State
FAIL TO TRIP
FUEL GAS CHOPPER 2 19XV904
19ZL904C State
POSITION TROUBLE
19XL904A State
SOV TROUBLE
19XL904B State
SOV FAIL TO TRIP
19XL904M State
FAIL TO CLOSE
19XA904 State
FAIL TO TRIP
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1924
Ack Page
Name
EngU
Hide
9999.9
Reformer_1924
19XL419T
State
FUEL GAS PRESSURE XMTR TROUBLE
19P A3424
9999.99
FUEL GAS PRESSURE XMTR DEVIATION
19XL407T
State
STAB TWR PRESSURE XMTR TROUBLE
19P A3420
9999.99
STAB TWR PRESSURE XMTR DEVIATION
19XL906T
State
DCS MANUAL ESD SWITCH TROUBLE
19XL907T
State
LOCAL MANUAL ESD SWITCH TROUBLE
FUEL GAS CHOPPER 1
19XV903
19ZL903C
State
POSITION TROUBLE
19XL903A
State
SOV TROUBLE
19XL903B
State
SOV FAIL TO TRIP
19XL903M
State
FAIL TO CLOSE
19XA903
State
FAIL TO TRIP
FUEL GAS CHOPPER 2
19XV904
19ZL904C
State
POSITION TROUBLE
19XL904A
State
SOV TROUBLE
19XL904B
State
SOV FAIL TO TRIP
19XL904M
State
FAIL TO CLOSE
19XA904
State
FAIL TO TRIP
Reserved for Faceplates

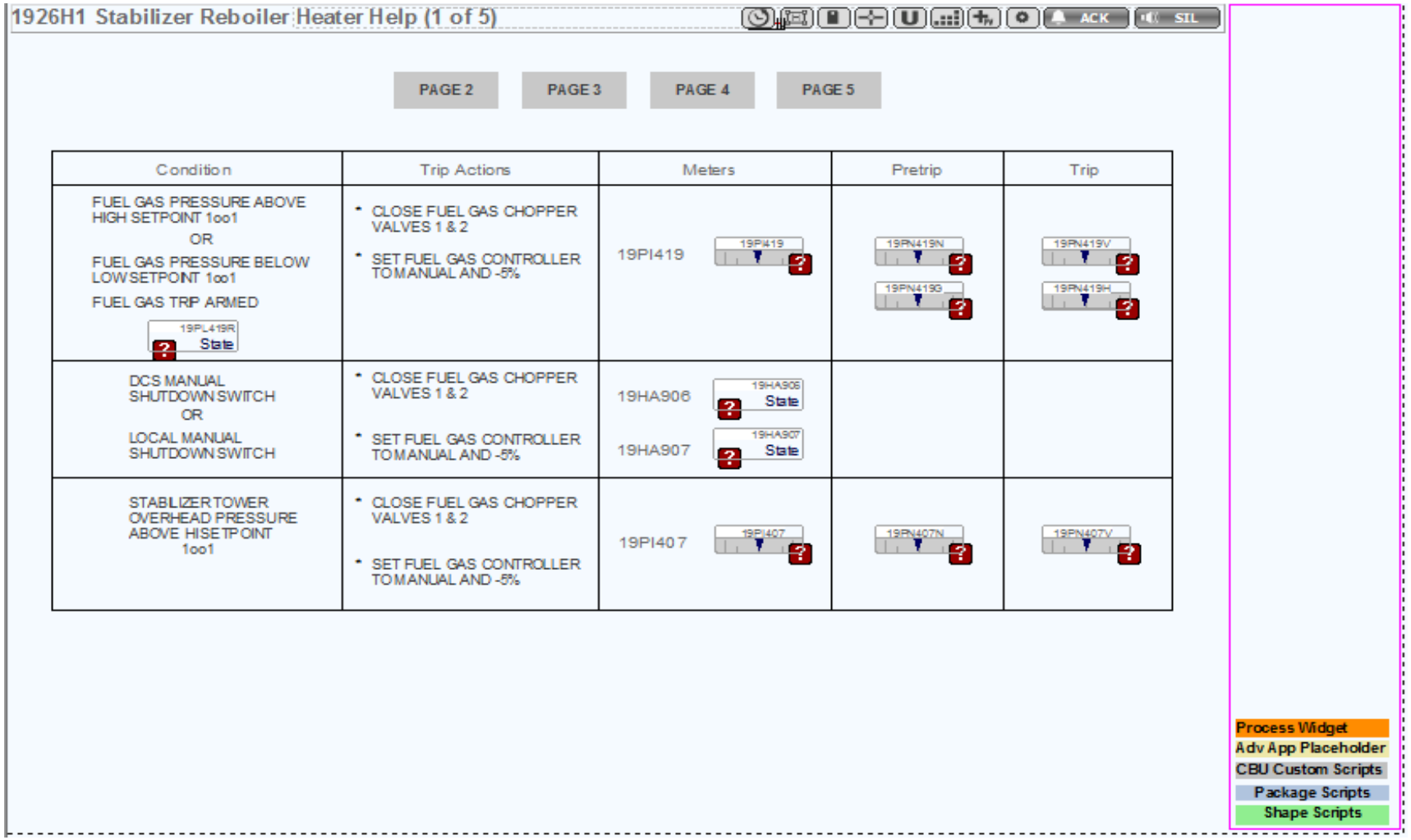
1.58 1925 STABILIZER REBOILER HEATER TRANSMITTER BYPASS (reformer_1925.htm)

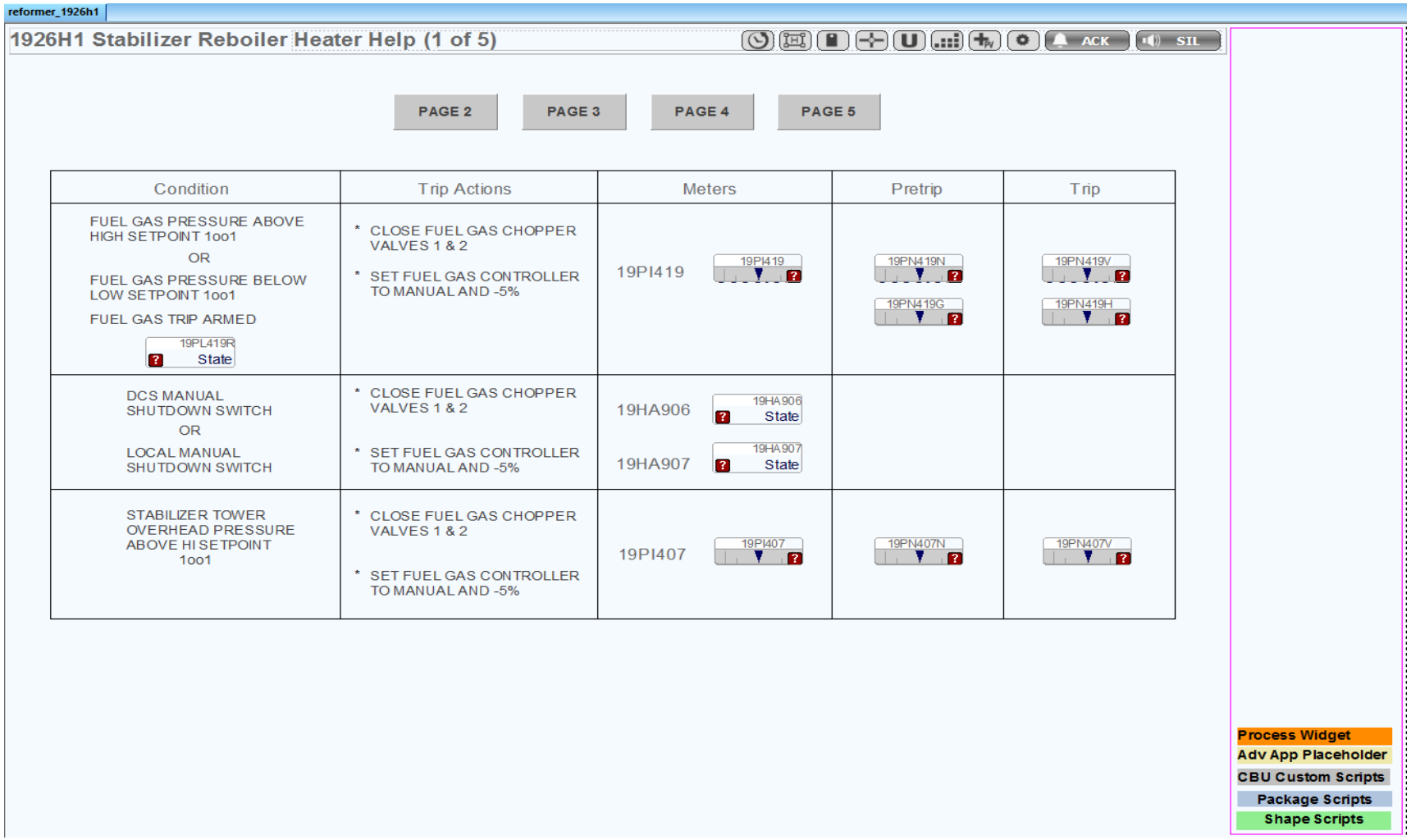


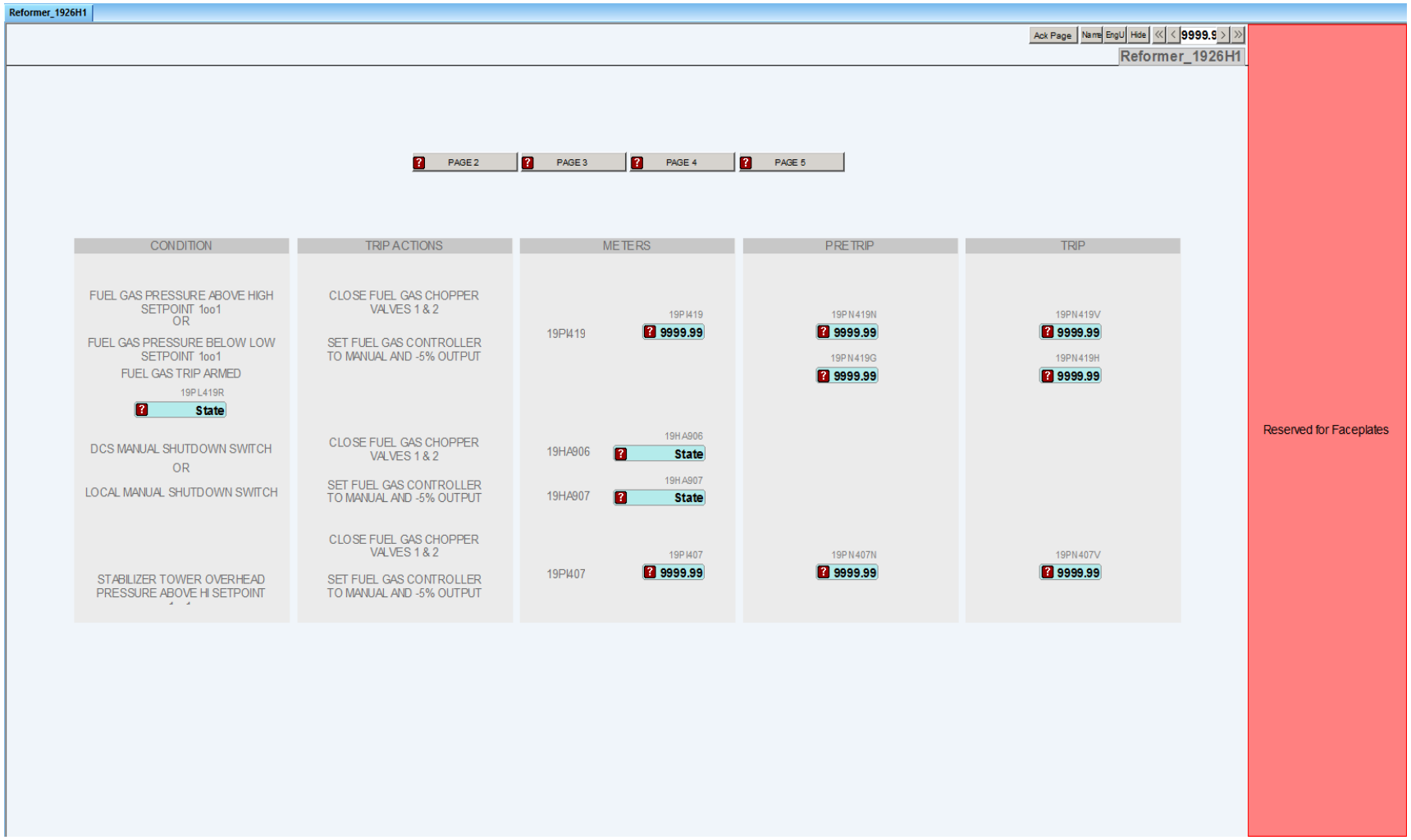

reformer_1925
1925 Stabilizer Reboiler Heater Transmitter Bypass
ACK
SIL
Fuel Gas Pressure
Stabilizer Tower Pressure
19PT419
19HA419
State
19HS419A
State
19HS419B
State
19PT407B
19HA407
State
19HS407A
State
19HS407B
State
19HA919A
State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
19HL927C
State
IF TRIP CONDITION EXISTS, A TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

Reformer_1925
Ack Page
Name
EngU
Hide
9999.9
Reformer_1925
FUEL GAS PRESSURE
19PT419
19HA419
State
19HS419A
State
19HS419B
State
STABILIZER TOWER PRESSURE
19PT407B
19HA407
State
19HS407A
State
19HS407B
State
19HA919A
State
19HL927C
State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
IF TRIP CONDITION EXISTS, A TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
Reserved for Faceplates

1.59 1926H1 STABILIZER REBOILER HEATER HELP (1 OF 5) (reformer_1926h1.htm)

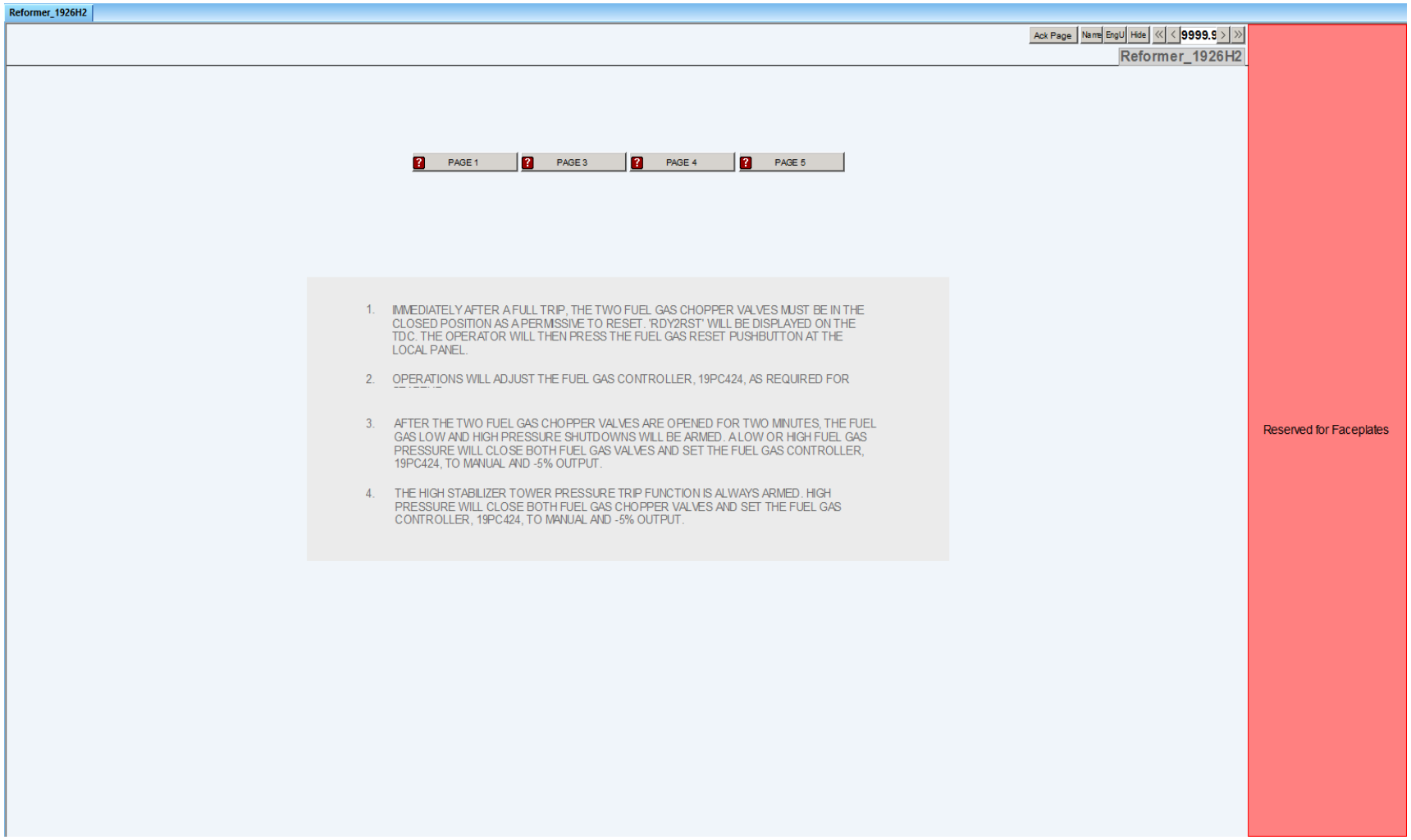



reformer_1926h1
1926H1 Stabilizer Reboiler Heater Help (1 of 5)
ACK
SIL
PAGE 2
PAGE 3
PAGE 4
PAGE 5
Condition
Trip Actions
Meters
Pretrip
Trip
FUEL GAS PRESSURE ABOVE HIGH SETPOINT 1oo1
OR
FUEL GAS PRESSURE BELOW LOW SETPOINT 1oo1
FUEL GAS TRIP ARMED
19PL419R State
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5%
19PI419
19PI419
19PN419N
19PN419G
19PN419V
19PN419H
DCS MANUAL SHUTDOWN SWITCH
OR
LOCAL MANUAL SHUTDOWN SWITCH
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5%
19HA906
19HA906 State
19HA907
19HA907 State
STABILIZER TOWER OVERHEAD PRESSURE ABOVE HI SETPOINT 1oo1
* CLOSE FUEL GAS CHOPPER VALVES 1 & 2
* SET FUEL GAS CONTROLLER TO MANUAL AND -5%
19PI407
19PI407
19PN407N
19PN407V
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

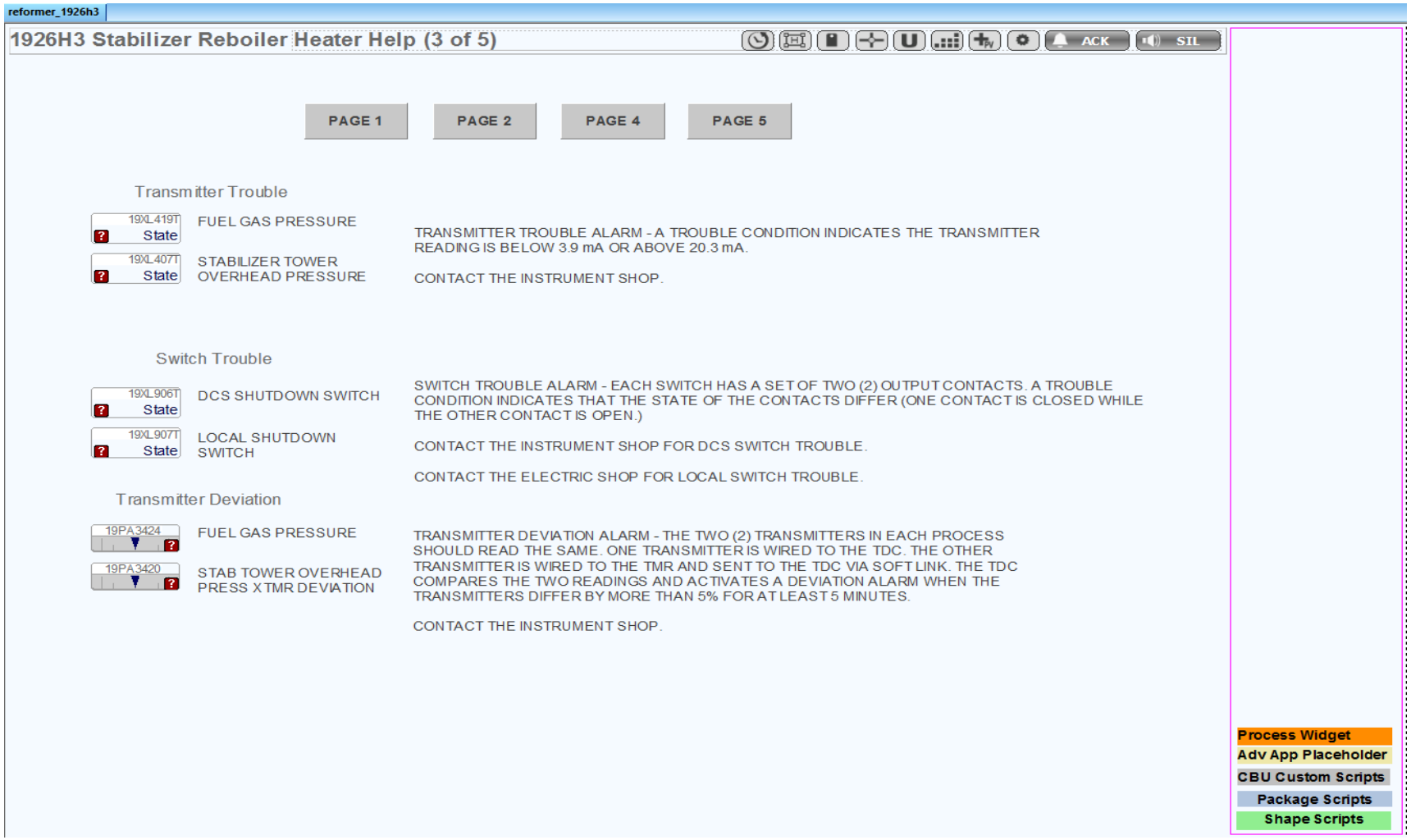

Reformer_1926H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_1926H1
PAGE 2
PAGE 3
PAGE 4
PAGE 5
CONDITION
TRIP ACTIONS
METERS
PRETRIP
TRIP
FUEL GAS PRESSURE ABOVE HIGH SETPOINT 1oo1
OR
FUEL GAS PRESSURE BELOW LOW SETPOINT 1oo1
FUEL GAS TRIP ARMED
19PL419R
State
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19PI419
19PI419
9999.99
19PN419N
9999.99
19PN419V
9999.99
19PN419G
9999.99
19PN419H
9999.99
DCS MANUAL SHUTDOWN SWITCH
OR
LOCAL MANUAL SHUTDOWN SWITCH
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19HA906
19HA906
State
19HA907
19HA907
State
STABILIZER TOWER OVERHEAD PRESSURE ABOVE HI SETPOINT
CLOSE FUEL GAS CHOPPER VALVES 1 & 2
SET FUEL GAS CONTROLLER TO MANUAL AND -5% OUTPUT
19PI407
19PI407
9999.99
19PN407N
9999.99
19PN407V
9999.99
Reserved for Faceplates

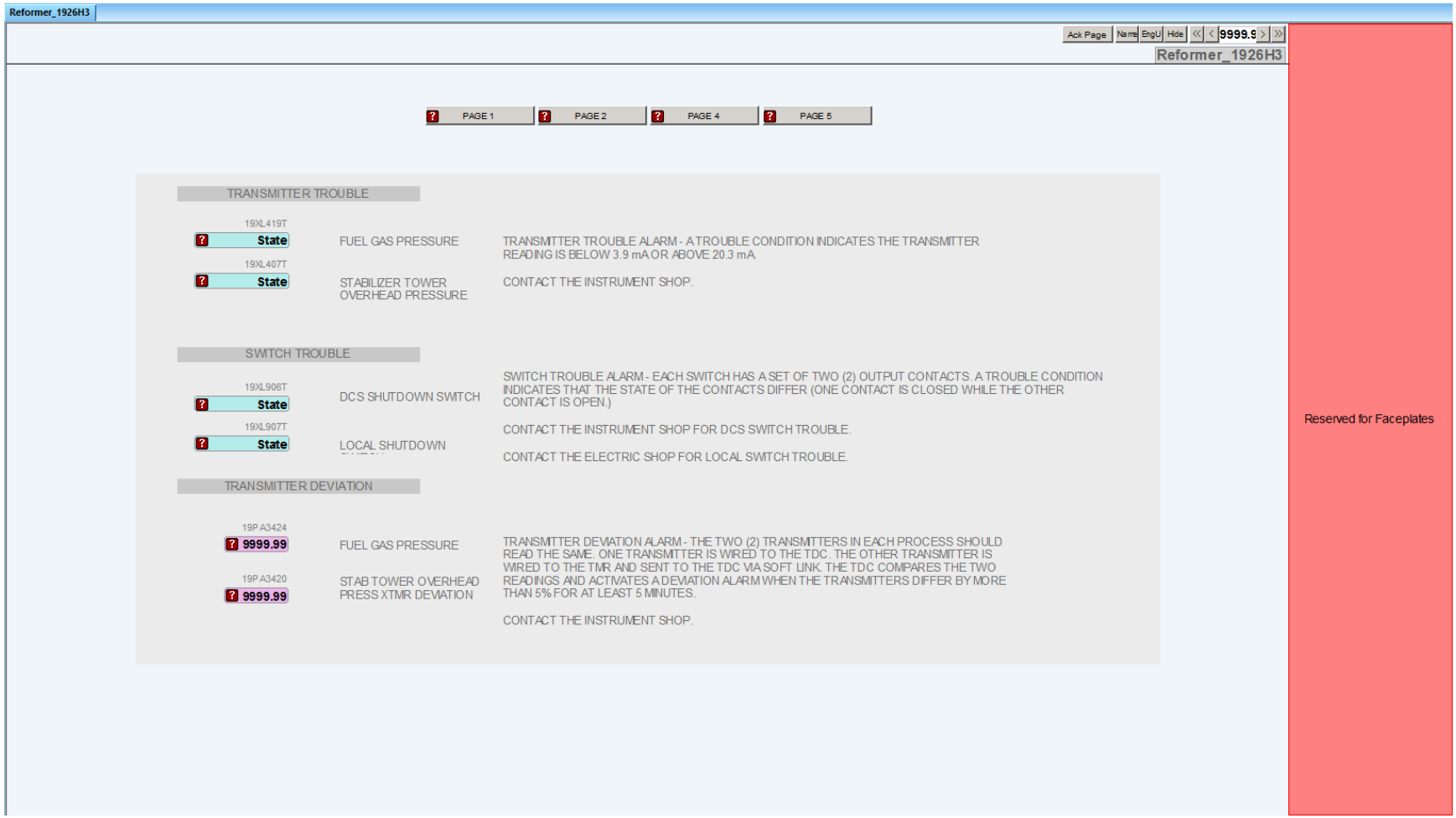
1.60 1926H2 STABILIZER REBOILER HEATER HELP (2 OF 5) (reformer_1926h2.htm)

reformer_1926h2
1926H2 Stabilizer Reboiler Heater Help (2 of 5)
ACK
SIL
PAGE 1
PAGE 3
PAGE 4
PAGE 5
1. IMMEDIATELY AFTER A FULL TRIP, THE TWO FUEL GAS CHOPPER VALVES MUST BE IN THE CLOSED POSITION AS A PERMISSIVE TO RESET. 'RDY2RST' WILL BE DISPLAYED ON THE TDC. THE OPERATOR WILL THEN PRESS THE FUEL GAS RESET PUSHBUTTON AT THE LOCAL PANEL.
2. OPERATIONS WILL ADJUST THE FUEL GAS CONTROLLER, 19PC424, AS REQUIRED FOR STARTUP.
3. AFTER THE TWO FUEL GAS CHOPPER VALVES ARE OPENED FOR TWO MINUTES, THE FUEL GAS LOW AND HIGH PRESSURE SHUTDOWNS WILL BE ARMED. A LOW OR HIGH FUEL GAS PRESSURE WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER, 19PC424, TO MANUAL AND -5% OUTPUT.
4. THE HIGH STABILIZER TOWER PRESSURE TRIP FUNCTION IS ALWAYS ARMED. HIGH PRESSURE WILL CLOSE BOTH FUEL GAS CHOPPER VALVES AND SET THE FUEL GAS CONTROLLER, 19PC424, TO MANUAL AND -5% OUTPUT.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

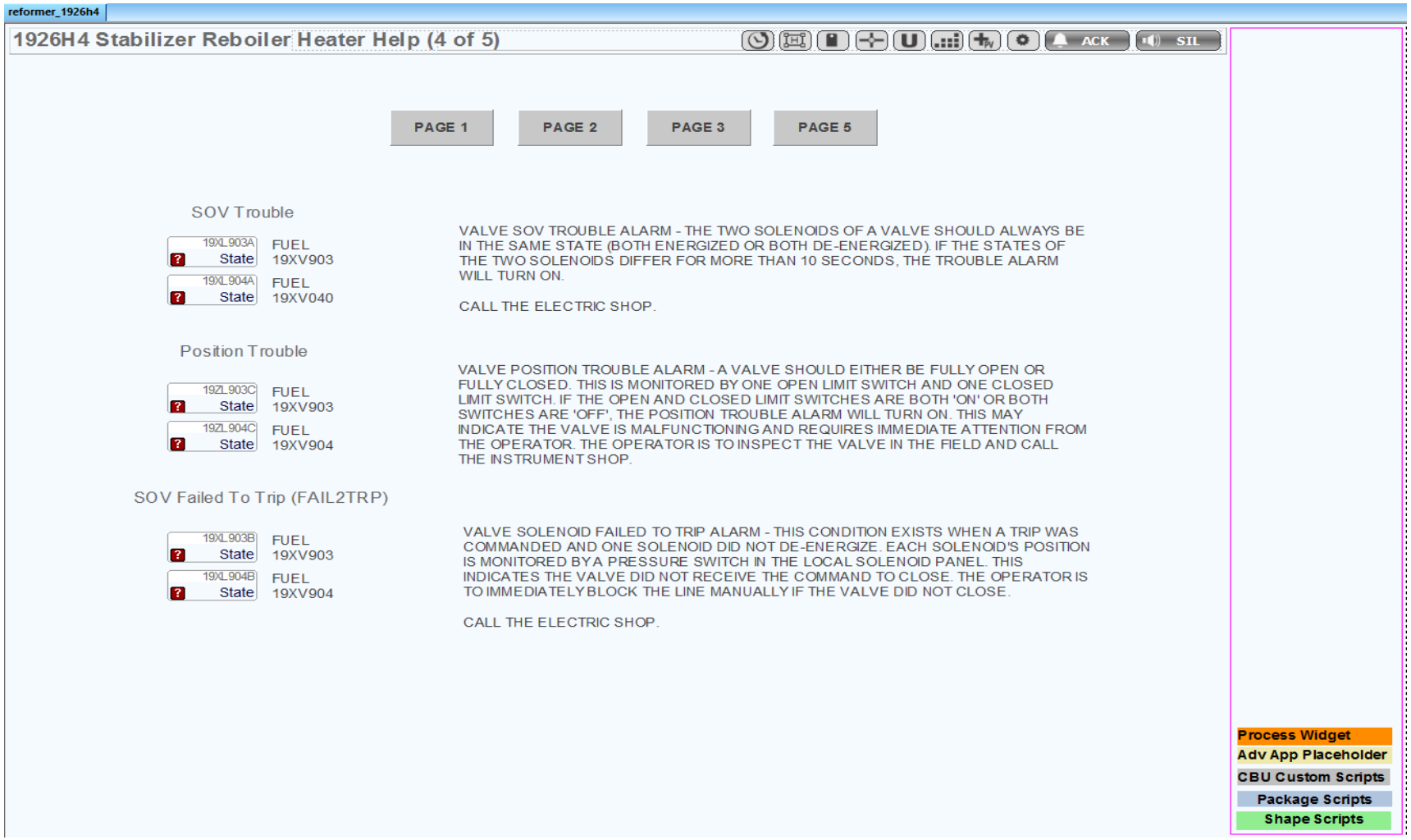

Reformer_1926H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_1926H2
PAGE 1
PAGE 3
PAGE 4
PAGE 5
1. IMMEDIATELY AFTER A FULL TRIP, THE TWO FUEL GAS CHOPPER VALVES MUST BE IN THE CLOSED POSITION AS A PERMISSIVE TO RESET. 'RDY2RST' WILL BE DISPLAYED ON THE TDC. THE OPERATOR WILL THEN PRESS THE FUEL GAS RESET PUSHBUTTON AT THE LOCAL PANEL.
2. OPERATIONS WILL ADJUST THE FUEL GAS CONTROLLER, 19PC424, AS REQUIRED FOR
3. AFTER THE TWO FUEL GAS CHOPPER VALVES ARE OPENED FOR TWO MINUTES, THE FUEL GAS LOW AND HIGH PRESSURE SHUTDOWNS WILL BE ARMED. A LOW OR HIGH FUEL GAS PRESSURE WILL CLOSE BOTH FUEL GAS VALVES AND SET THE FUEL GAS CONTROLLER, 19PC424, TO MANUAL AND -5% OUTPUT.
4. THE HIGH STABILIZER TOWER PRESSURE TRIP FUNCTION IS ALWAYS ARMED. HIGH PRESSURE WILL CLOSE BOTH FUEL GAS CHOPPER VALVES AND SET THE FUEL GAS CONTROLLER, 19PC424, TO MANUAL AND -5% OUTPUT.
Reserved for Faceplates

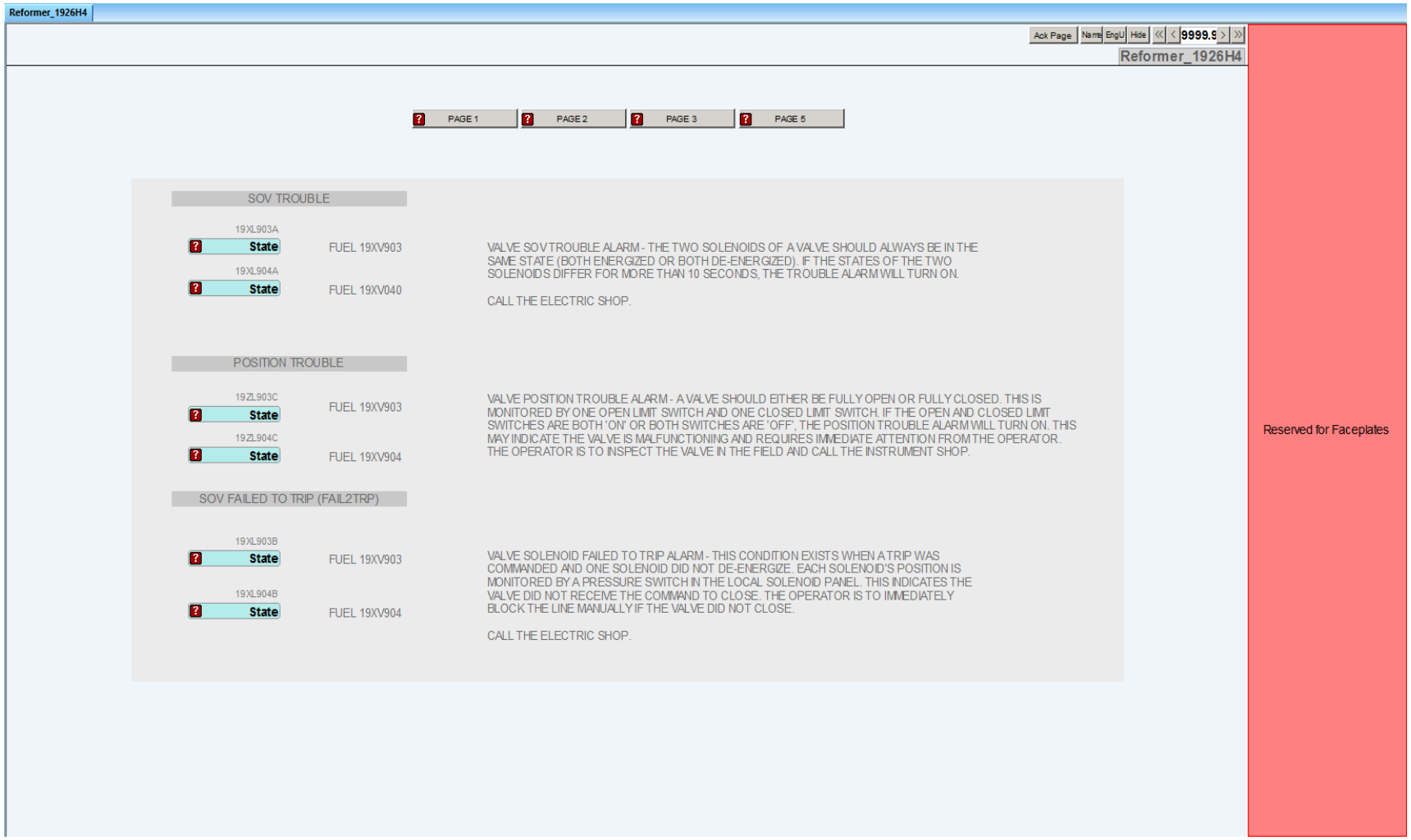
1.61 1926H3 STABILIZER REBOILER HEATER HELP (3 OF 5) (Reformer_1926h3.htm)


reformer_1926h3
1926H3 Stabilizer Reboiler Heater Help (3 of 5)
ACK
SIL
PAGE 1
PAGE 2
PAGE 4
PAGE 5
Transmitter Trouble
19XL419T State
FUEL GAS PRESSURE
19XL407T State
STABILIZER TOWER OVERHEAD PRESSURE
TRANSMITTER TROUBLE ALARM - A TROUBLE CONDITION INDICATES THE TRANSMITTER READING IS BELOW 3.9 mA OR ABOVE 20.3 mA.
CONTACT THE INSTRUMENT SHOP.
Switch Trouble
19XL906T State
DCS SHUTDOWN SWITCH
19XL907T State
LOCAL SHUTDOWN SWITCH
SWITCH TROUBLE ALARM - EACH SWITCH HAS A SET OF TWO (2) OUTPUT CONTACTS. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE CONTACTS DIFFER (ONE CONTACT IS CLOSED WHILE THE OTHER CONTACT IS OPEN.)
CONTACT THE INSTRUMENT SHOP FOR DCS SWITCH TROUBLE.
CONTACT THE ELECTRIC SHOP FOR LOCAL SWITCH TROUBLE.
Transmitter Deviation
19PA3424
FUEL GAS PRESSURE
19PA3420
STAB TOWER OVERHEAD PRESS XTMR DEVIATION
TRANSMITTER DEVIATION ALARM - THE TWO (2) TRANSMITTERS IN EACH PROCESS SHOULD READ THE SAME. ONE TRANSMITTER IS WIRED TO THE TDC. THE OTHER TRANSMITTER IS WIRED TO THE TMR AND SENT TO THE TDC VIA SOFT LINK. THE TDC COMPARES THE TWO READINGS AND ACTIVATES A DEVIATION ALARM WHEN THE TRANSMITTERS DIFFER BY MORE THAN 5% FOR AT LEAST 5 MINUTES.
CONTACT THE INSTRUMENT SHOP.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1926H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_1926H3
PAGE 1
PAGE 2
PAGE 4
PAGE 5
TRANSMITTER TROUBLE
19XL419T
State
FUEL GAS PRESSURE
TRANSMITTER TROUBLE ALARM - A TROUBLE CONDITION INDICATES THE TRANSMITTER READING IS BELOW 3.9 mA OR ABOVE 20.3 mA
19XL407T
State
STABILIZER TOWER OVERHEAD PRESSURE
CONTACT THE INSTRUMENT SHOP.
SWITCH TROUBLE
19XL906T
State
DCS SHUTDOWN SWITCH
SWITCH TROUBLE ALARM - EACH SWITCH HAS A SET OF TWO (2) OUTPUT CONTACTS. A TROUBLE CONDITION INDICATES THAT THE STATE OF THE CONTACTS DIFFER (ONE CONTACT IS CLOSED WHILE THE OTHER CONTACT IS OPEN.)
CONTACT THE INSTRUMENT SHOP FOR DCS SWITCH TROUBLE.
19XL907T
State
LOCAL SHUTDOWN
CONTACT THE ELECTRIC SHOP FOR LOCAL SWITCH TROUBLE.
TRANSMITTER DEVIATION
19PA3424
9999.99
FUEL GAS PRESSURE
TRANSMITTER DEVIATION ALARM - THE TWO (2) TRANSMITTERS IN EACH PROCESS SHOULD READ THE SAME. ONE TRANSMITTER IS WIRED TO THE TDC. THE OTHER TRANSMITTER IS WIRED TO THE TMR AND SENT TO THE TDC VIA SOFT LINK. THE TDC COMPARES THE TWO READINGS AND ACTIVATES A DEVIATION ALARM WHEN THE TRANSMITTERS DIFFER BY MORE THAN 5% FOR AT LEAST 5 MINUTES.
19PA3420
9999.99
STAB TOWER OVERHEAD PRESS XTMR DEVIATION
CONTACT THE INSTRUMENT SHOP.
Reserved for Faceplates

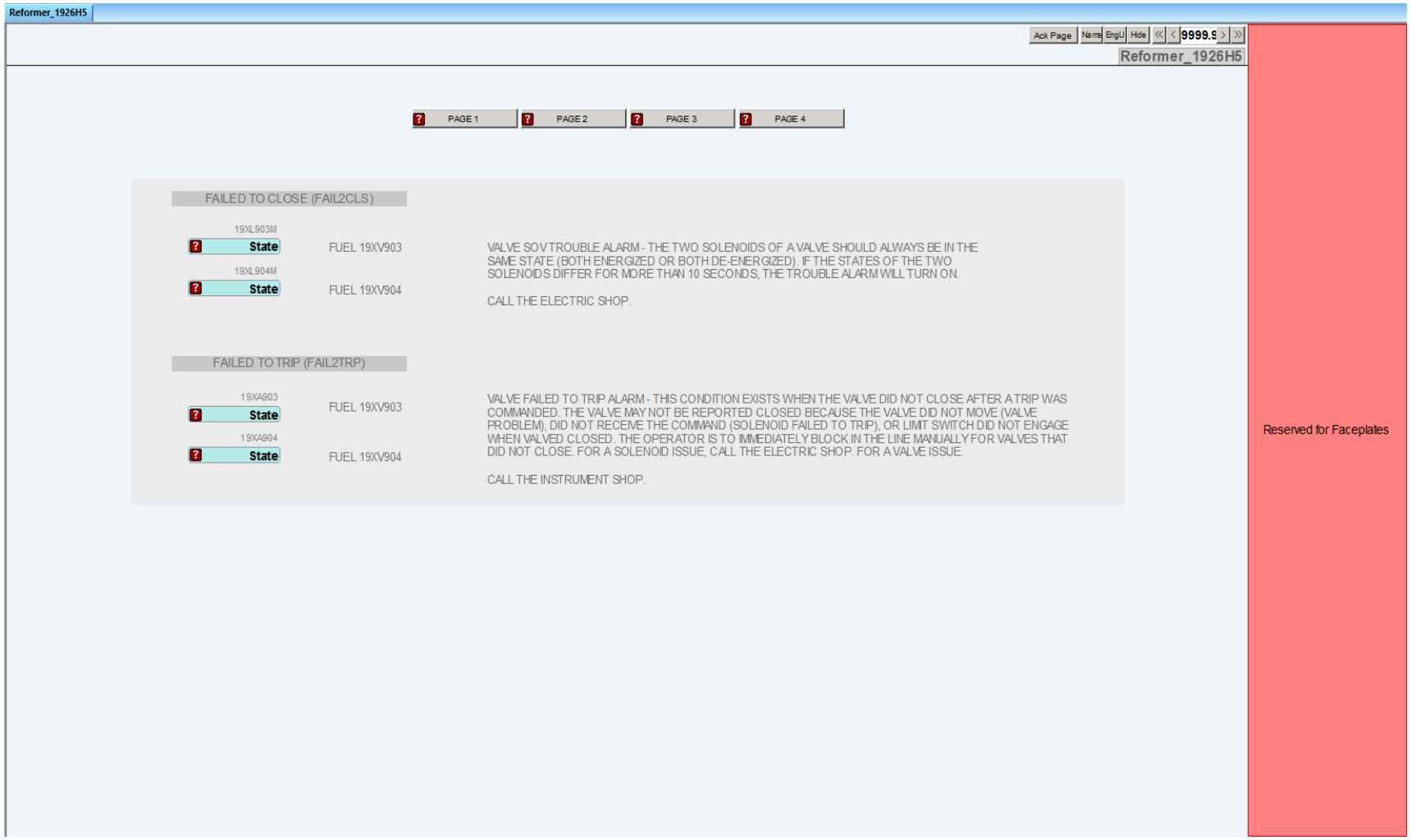
1.62 1926H4 STABILIZER REBOILER HEATER HELP (4 OF 5) (reformer_1926h4.htm)


reformer_1926h4
1926H4 Stabilizer Reboiler Heater Help (4 of 5)
ACK
SIL
PAGE 1
PAGE 2
PAGE 3
PAGE 5
SOV Trouble
19XL903A State
FUEL 19XV903
19XL904A State
FUEL 19XV040
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
Position Trouble
19ZL903C State
FUEL 19XV903
19ZL904C State
FUEL 19XV904
VALVE POSITION TROUBLE ALARM - A VALVE SHOULD EITHER BE FULLY OPEN OR FULLY CLOSED. THIS IS MONITORED BY ONE OPEN LIMIT SWITCH AND ONE CLOSED LIMIT SWITCH. IF THE OPEN AND CLOSED LIMIT SWITCHES ARE BOTH 'ON' OR BOTH SWITCHES ARE 'OFF', THE POSITION TROUBLE ALARM WILL TURN ON. THIS MAY INDICATE THE VALVE IS MALFUNCTIONING AND REQUIRES IMMEDIATE ATTENTION FROM THE OPERATOR. THE OPERATOR IS TO INSPECT THE VALVE IN THE FIELD AND CALL THE INSTRUMENT SHOP.
SOV Failed To Trip (FAIL2TRP)
19XL903B State
FUEL 19XV903
19XL904B State
FUEL 19XV904
VALVE SOLENOID FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A TRIP WAS COMMANDED AND ONE SOLENOID DID NOT DE-ENERGIZE. EACH SOLENOID'S POSITION IS MONITORED BY A PRESSURE SWITCH IN THE LOCAL SOLENOID PANEL. THIS INDICATES THE VALVE DID NOT RECEIVE THE COMMAND TO CLOSE. THE OPERATOR IS TO IMMEDIATELY BLOCK THE LINE MANUALLY IF THE VALVE DID NOT CLOSE.
CALL THE ELECTRIC SHOP.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

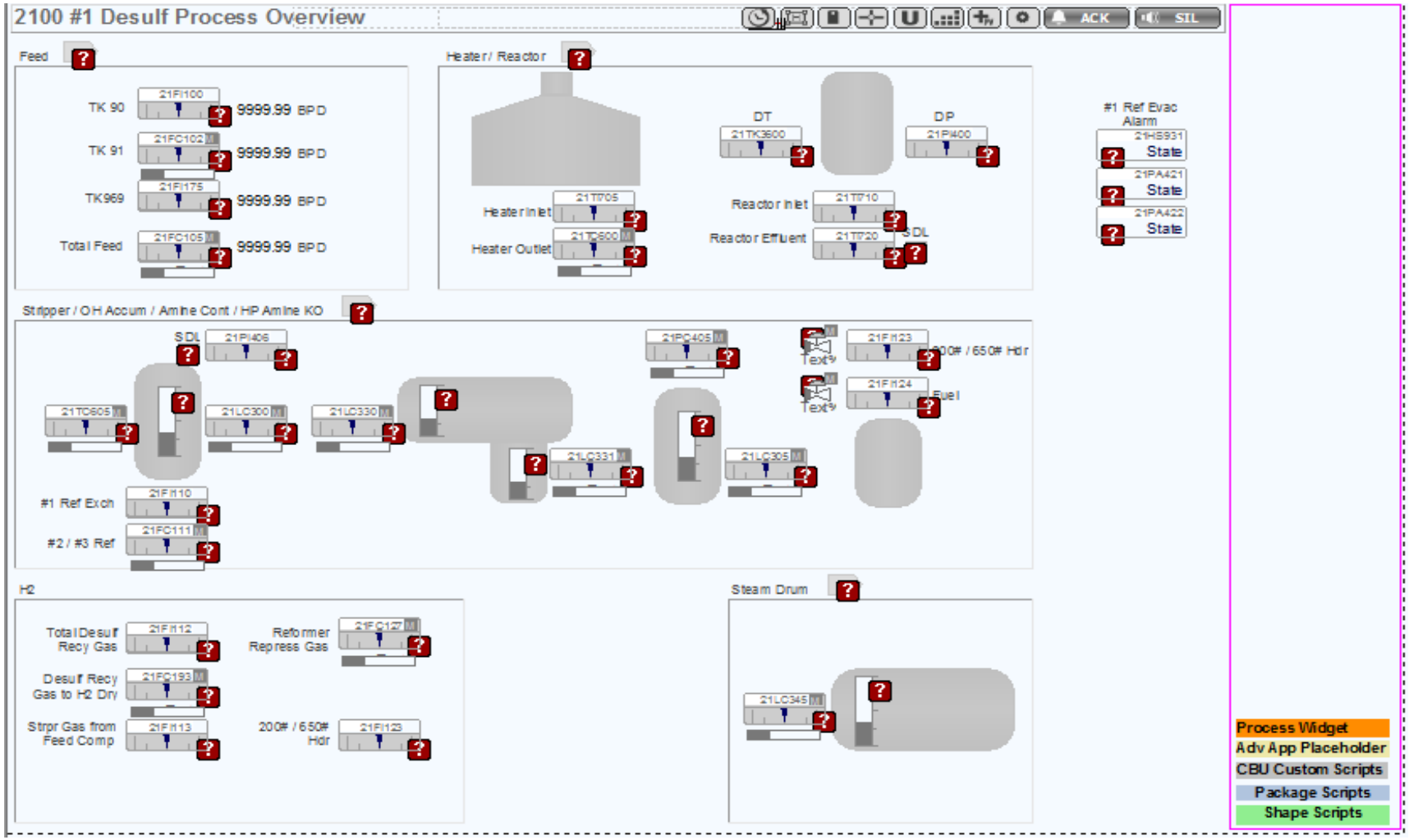

Reformer_1926H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_1926H4
PAGE 1
PAGE 2
PAGE 3
PAGE 5
SOV TROUBLE
19XL903A
State
FUEL 19XV903
19XL904A
State
FUEL 19XV040
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
POSITION TROUBLE
19ZL903C
State
FUEL 19XV903
19ZL904C
State
FUEL 19XV904
VALVE POSITION TROUBLE ALARM - A VALVE SHOULD EITHER BE FULLY OPEN OR FULLY CLOSED. THIS IS MONITORED BY ONE OPEN LIMIT SWITCH AND ONE CLOSED LIMIT SWITCH. IF THE OPEN AND CLOSED LIMIT SWITCHES ARE BOTH 'ON' OR BOTH SWITCHES ARE 'OFF', THE POSITION TROUBLE ALARM WILL TURN ON. THIS MAY INDICATE THE VALVE IS MALFUNCTIONING AND REQUIRES IMMEDIATE ATTENTION FROM THE OPERATOR. THE OPERATOR IS TO INSPECT THE VALVE IN THE FIELD AND CALL THE INSTRUMENT SHOP.
SOV FAILED TO TRIP (FAIL2TRP)
19XL903B
State
FUEL 19XV903
19XL904B
State
FUEL 19XV904
VALVE SOLENOID FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN A TRIP WAS COMMANDED AND ONE SOLENOID DID NOT DE-ENERGIZE. EACH SOLENOID'S POSITION IS MONITORED BY A PRESSURE SWITCH IN THE LOCAL SOLENOID PANEL. THIS INDICATES THE VALVE DID NOT RECEIVE THE COMMAND TO CLOSE. THE OPERATOR IS TO IMMEDIATELY BLOCK THE LINE MANUALLY IF THE VALVE DID NOT CLOSE.
CALL THE ELECTRIC SHOP.
Reserved for Faceplates

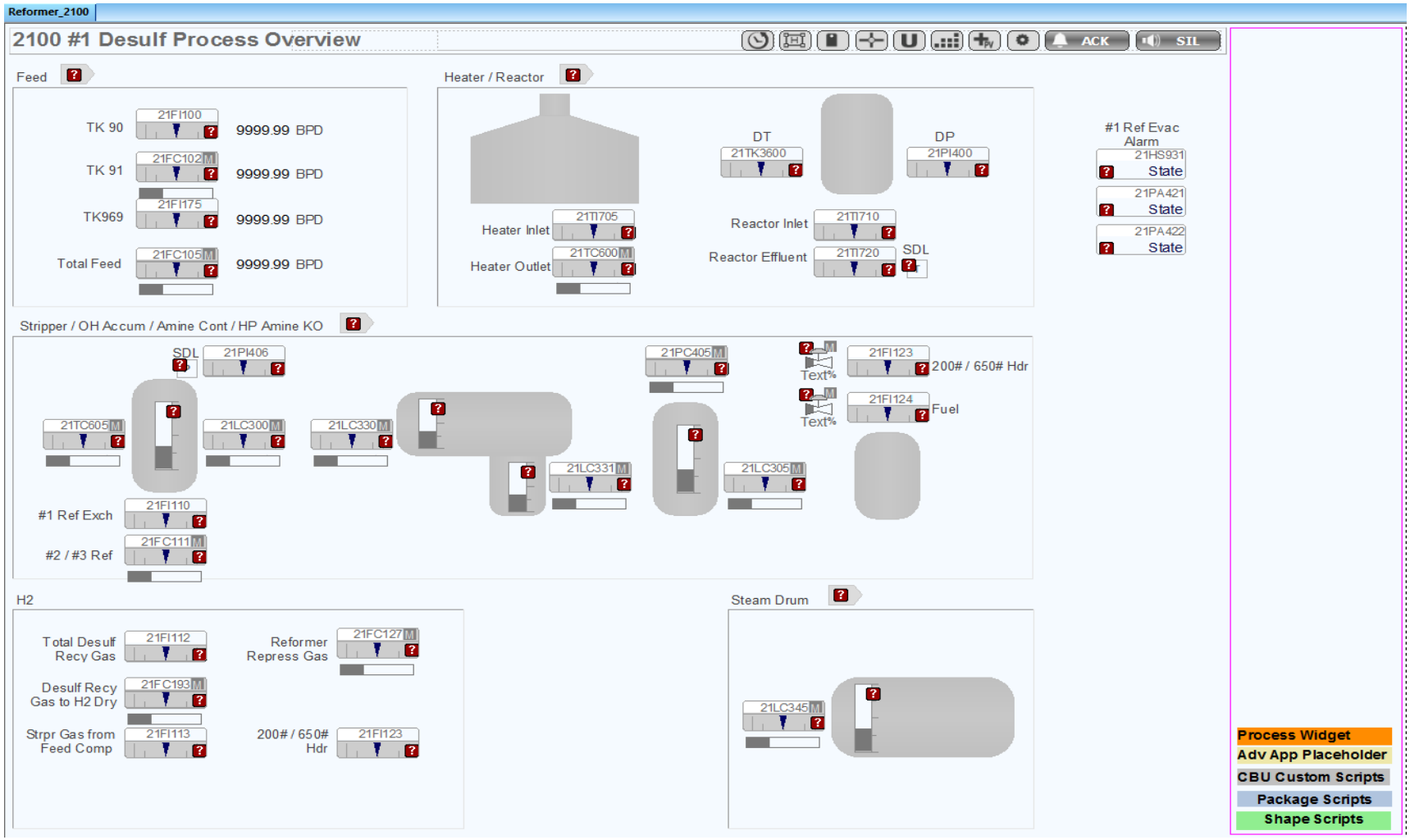
1.63 1926H5 STABILIZER REBOILER HEATER HELP (5 OF 5) (reformer_1926h5.htm)

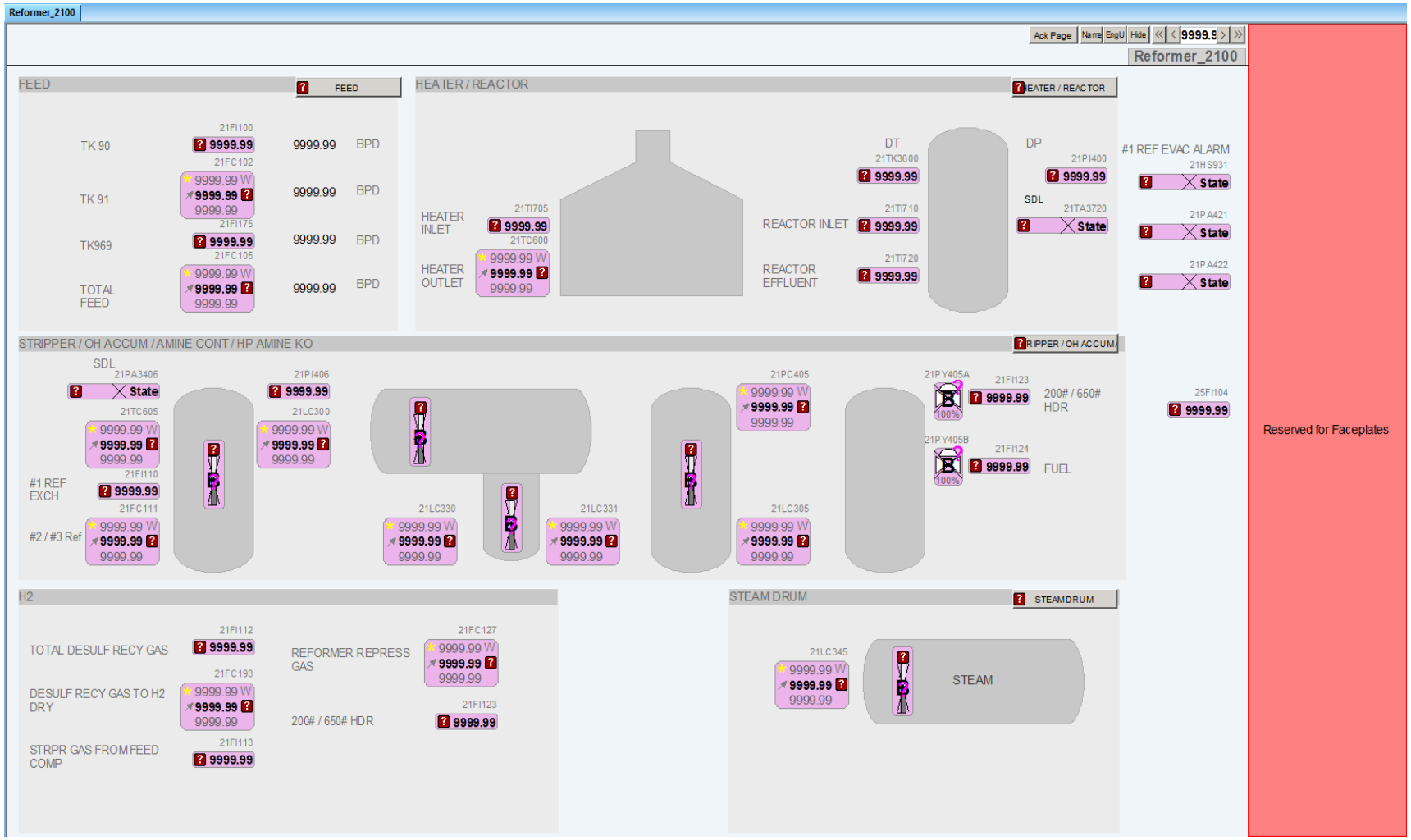
reformer_1926h5
1926H5 Stabilizer Reboiler Heater Help (5 of 5)
ACK
SIL
PAGE 1
PAGE 2
PAGE 3
PAGE 4
Failed To Close (FAIL2CLS)
19XL903M State
FUEL 19XV903
19XL904M State
FUEL 19XV904
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
Failed To Trip (FAIL2TRP)
19XA903 State
FUEL 19XV903
19XA904 State
FUEL 19XV904
VALVE FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN THE VALVE DID NOT CLOSE AFTER A TRIP WAS COMMANDED. THE VALVE MAY NOT BE REPORTED CLOSED BECAUSE THE VALVE DID NOT MOVE (VALVE PROBLEM), DID NOT RECEIVE THE COMMAND (SOLENOID FAILED TO TRIP), OR LIMIT SWITCH DID NOT ENGAGE WHEN VALVED CLOSED. THE OPERATOR IS TO IMMEDIATELY BLOCK IN THE LINE MANUALLY FOR VALVES THAT DID NOT CLOSE. FOR A SOLENOID ISSUE, CALL THE ELECTRIC SHOP. FOR A VALVE ISSUE, CALL THE INSTRUMENT SHOP.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_1926H5
Ack Page
Name
EngU
Hide
9999.9
Reformer_1926H5
PAGE 1
PAGE 2
PAGE 3
PAGE 4
FAILED TO CLOSE (FAIL2CLS)
19XL903M
State
FUEL 19XV903
19XL904M
State
FUEL 19XV904
VALVE SOV TROUBLE ALARM - THE TWO SOLENOIDS OF A VALVE SHOULD ALWAYS BE IN THE SAME STATE (BOTH ENERGIZED OR BOTH DE-ENERGIZED). IF THE STATES OF THE TWO SOLENOIDS DIFFER FOR MORE THAN 10 SECONDS, THE TROUBLE ALARM WILL TURN ON.
CALL THE ELECTRIC SHOP.
FAILED TO TRIP (FAIL2TRP)
19XA903
State
FUEL 19XV903
19XA904
State
FUEL 19XV904
VALVE FAILED TO TRIP ALARM - THIS CONDITION EXISTS WHEN THE VALVE DID NOT CLOSE AFTER A TRIP WAS COMMANDED. THE VALVE MAY NOT BE REPORTED CLOSED BECAUSE THE VALVE DID NOT MOVE (VALVE PROBLEM), DID NOT RECEIVE THE COMMAND (SOLENOID FAILED TO TRIP), OR LIMIT SWITCH DID NOT ENGAGE WHEN VALVED CLOSED. THE OPERATOR IS TO IMMEDIATELY BLOCK IN THE LINE MANUALLY FOR VALVES THAT DID NOT CLOSE. FOR A SOLENOID ISSUE, CALL THE ELECTRIC SHOP. FOR A VALVE ISSUE.
CALL THE INSTRUMENT SHOP.
Reserved for Faceplates

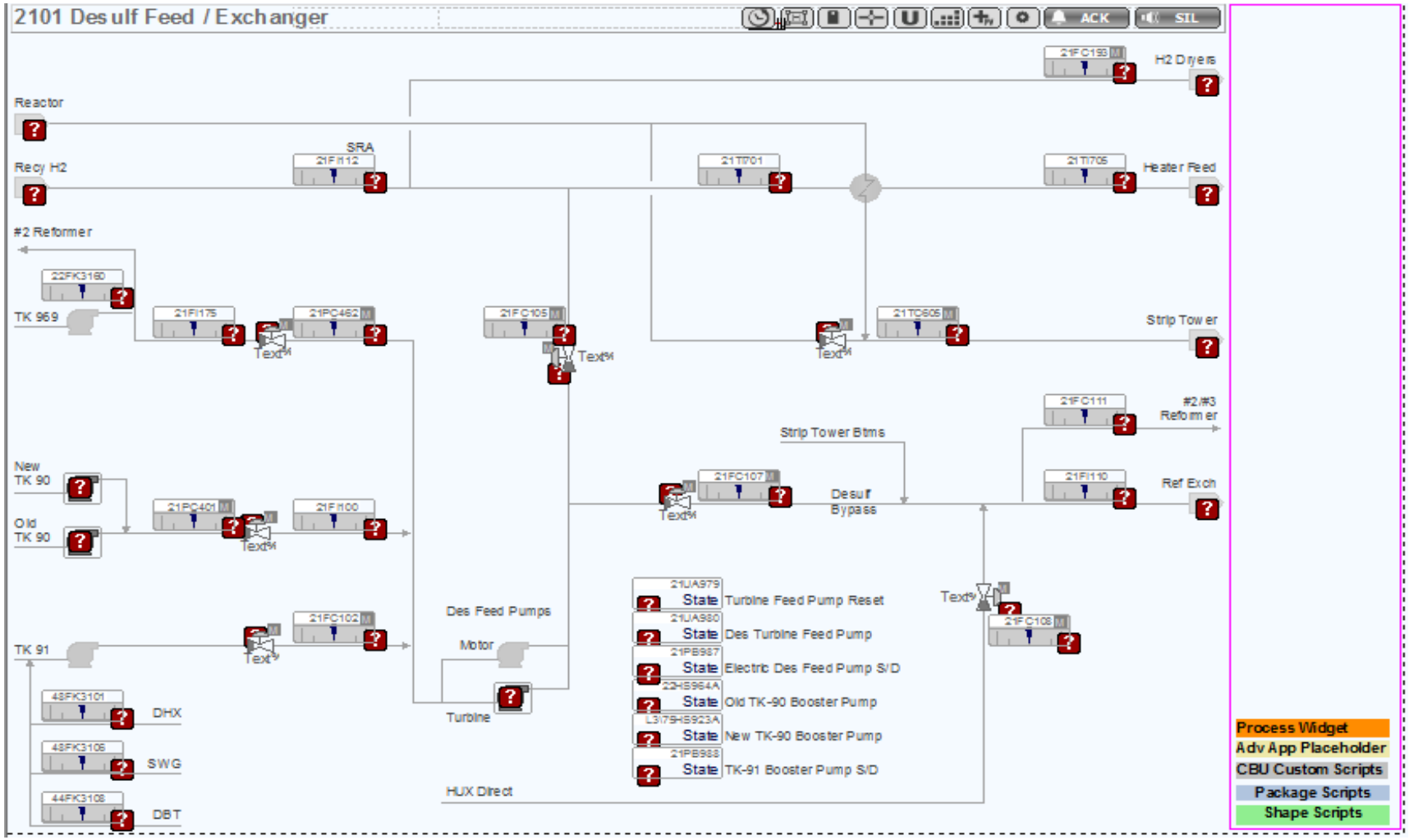
1.64 2100 #1 DESULF PROCESS OVERVIEW (Reformer_2100.htm)

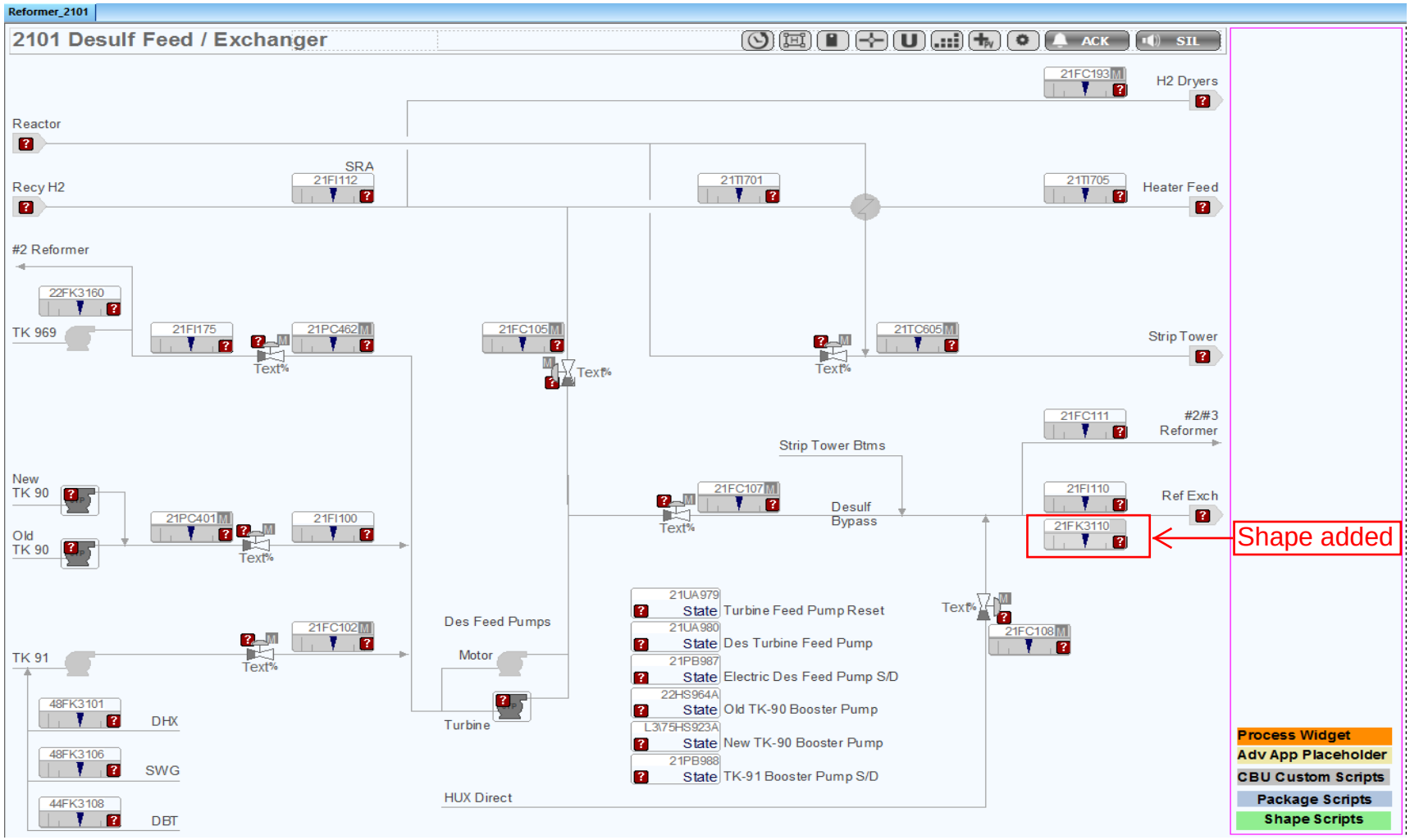


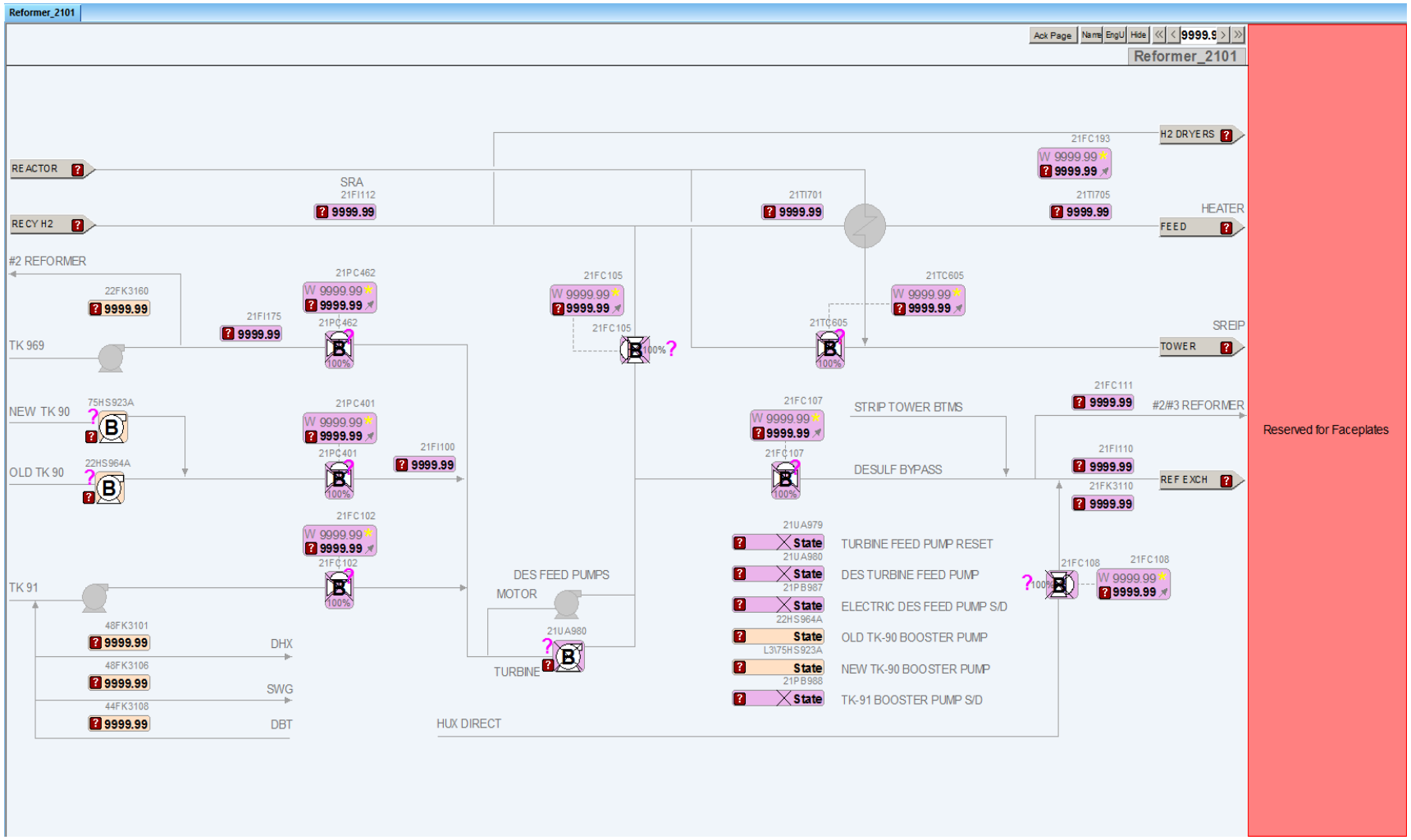

Reformer_2100
2100 #1 Desulf Process Overview
ACK
SIL
Feed
TK 90
21FI100
9999.99 BPD
TK 91
21FC102
9999.99 BPD
TK969
21FI175
9999.99 BPD
Total Feed
21FC105
9999.99 BPD
Heater / Reactor
Heater Inlet
21TI705
Heater Outlet
21TC600
DT
21TK3600
DP
21PI400
Reactor Inlet
21TI710
Reactor Effluent
21TI720
SDL
#1 Ref Evac Alarm
21HS931
State
21PA421
State
21PA422
State
Stripper / OH Accum / Amine Cont / HP Amine KO
SDL
21PI406
21TC605
21LC300
21LC330
21LC331
21PC405
21LC305
Text%
Text%
21FI123
200# / 650# Hdr
21FI124
Fuel
#1 Ref Exch
21FI110
#2 / #3 Ref
21FC111
H2
Total Desulf Recy Gas
21FI112
Reformer Repress Gas
21FC127
Desulf Recy Gas to H2 Dry
21FC193
Strpr Gas from Feed Comp
21FI113
200# / 650# Hdr
21FI123
Steam Drum
21LC345
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2100
Ack Page
Name
EngU
Hide
Reformer_2100
FEED
FEED
TK 90
21FI100
9999.99
9999.99
BPD
TK 91
21FC102
9999.99 W
9999.99
9999.99
9999.99
BPD
TK969
21FI175
9999.99
9999.99
BPD
TOTAL FEED
21FC105
9999.99 W
9999.99
9999.99
9999.99
BPD
HEATER / REACTOR
HEATER / REACTOR
HEATER INLET
21TI705
9999.99
HEATER OUTLET
21TC600
9999.99 W
9999.99
9999.99
DT
21TK3600
9999.99
REACTOR INLET
21TI710
9999.99
REACTOR EFFLUENT
21TI720
9999.99
DP
21PI400
9999.99
SDL
21TA3720
State
#1 REF EVAC ALARM
21HS931
State
21PA421
State
21PA422
State
STRIPPER / OH ACCUM / AMINE CONT / HP AMINE KO
RIPPER / OH ACCUM
SDL
21PA3406
State
21TC605
9999.99 W
9999.99
9999.99
#1 REF EXCH
21FI110
9999.99
#2 / #3 Ref
21FC111
9999.99 W
9999.99
9999.99
21PI406
9999.99
21LC300
9999.99 W
9999.99
9999.99
21LC330
9999.99 W
9999.99
9999.99
21LC331
9999.99 W
9999.99
9999.99
21PC405
9999.99 W
9999.99
9999.99
21LC305
9999.99 W
9999.99
9999.99
21PY405A
100%
21FI123
9999.99
200# / 650# HDR
21PY405B
100%
21FI124
9999.99
FUEL
25FI104
9999.99
H2
TOTAL DESULF RECY GAS
21FI112
9999.99
DESULF RECY GAS TO H2 DRY
21FC193
9999.99 W
9999.99
9999.99
STRPR GAS FROM FEED COMP
21FI113
9999.99
REFORMER REPRESS GAS
21FC127
9999.99 W
9999.99
9999.99
200# / 650# HDR
21FI123
9999.99
STEAM DRUM
STEAMDRUM
21LC345
9999.99 W
9999.99
9999.99
STEAM
Reserved for Faceplates

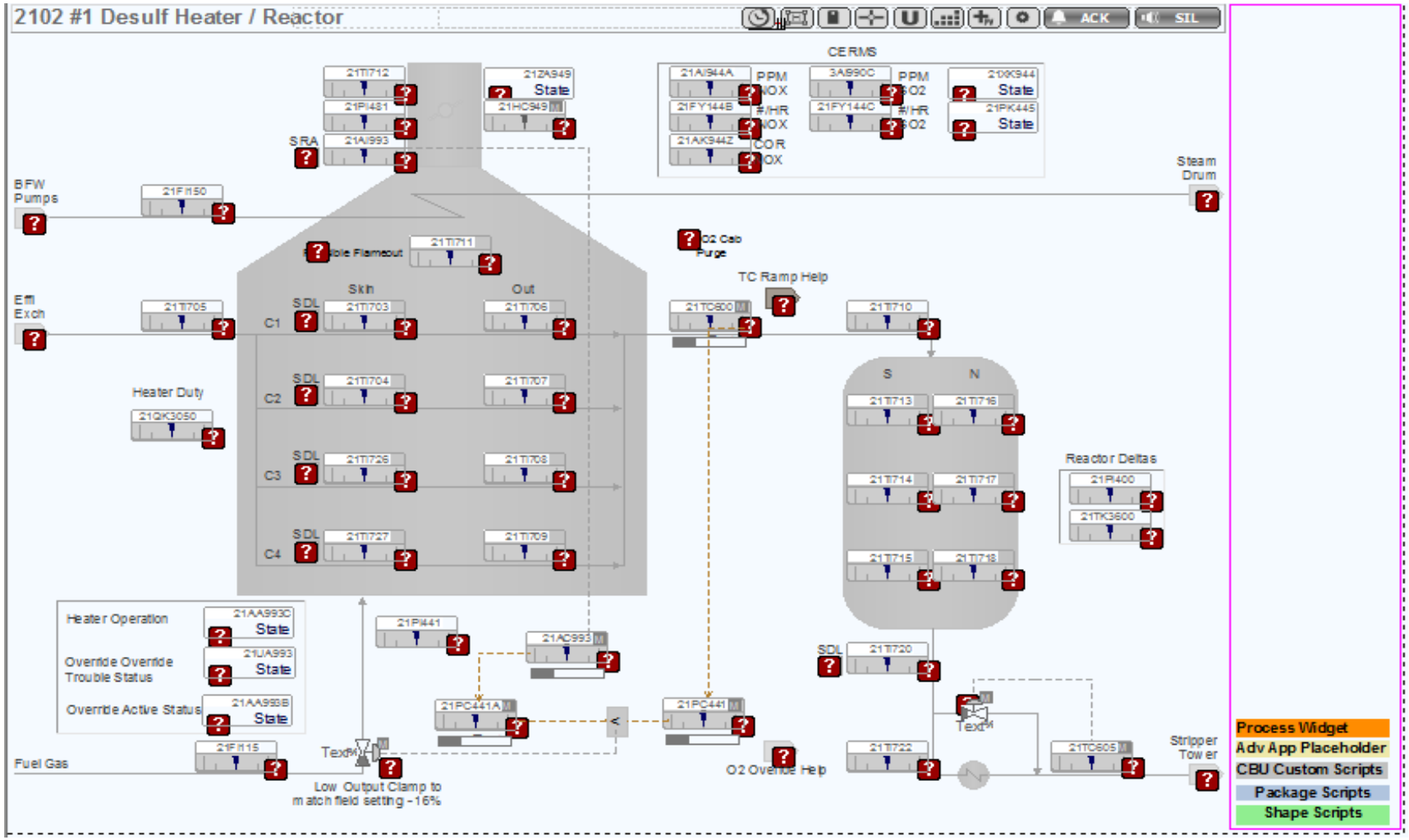
1.65 2101 DESULF FEED / EXCHANGER (Reformer_2101.htm)

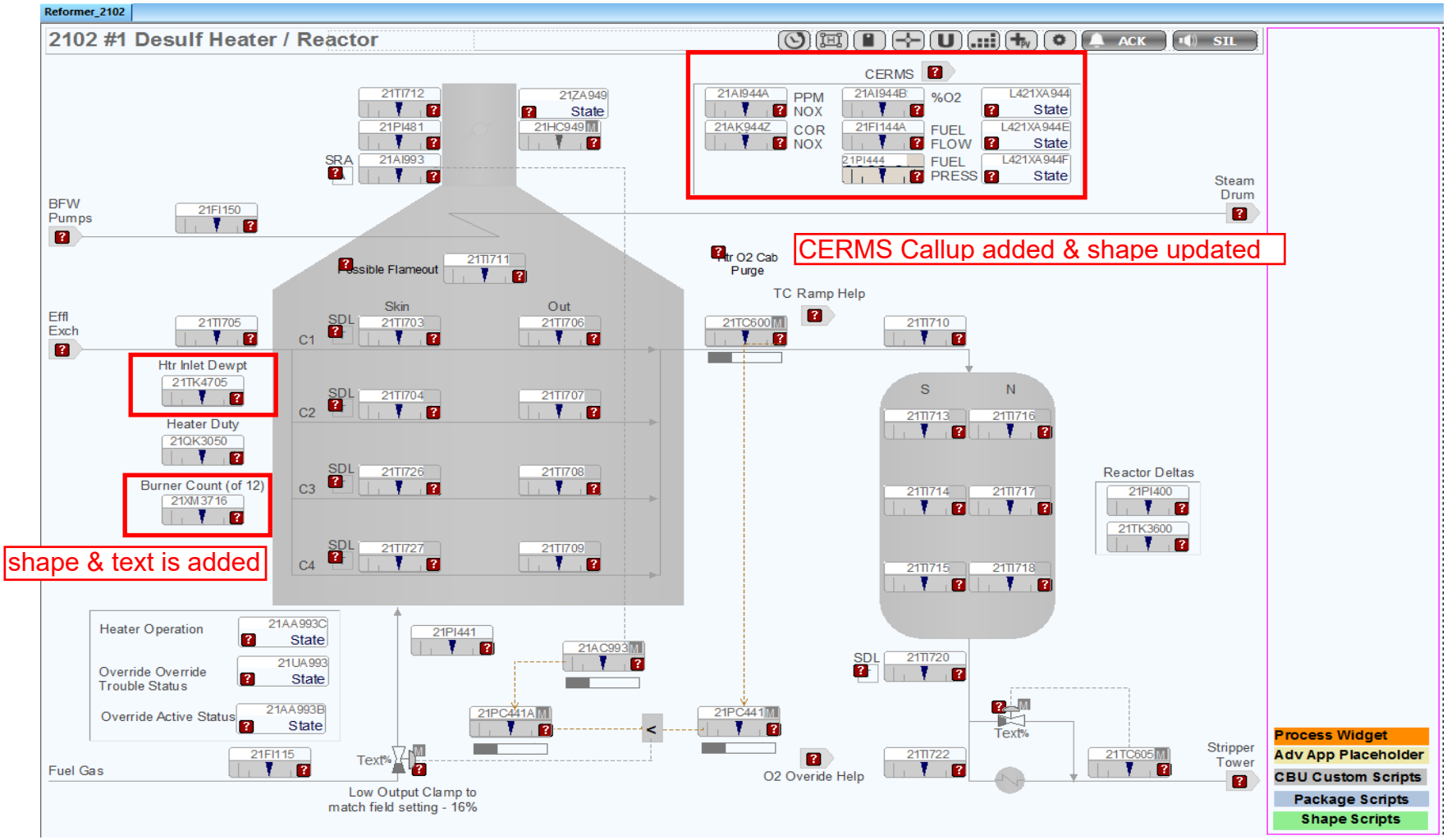


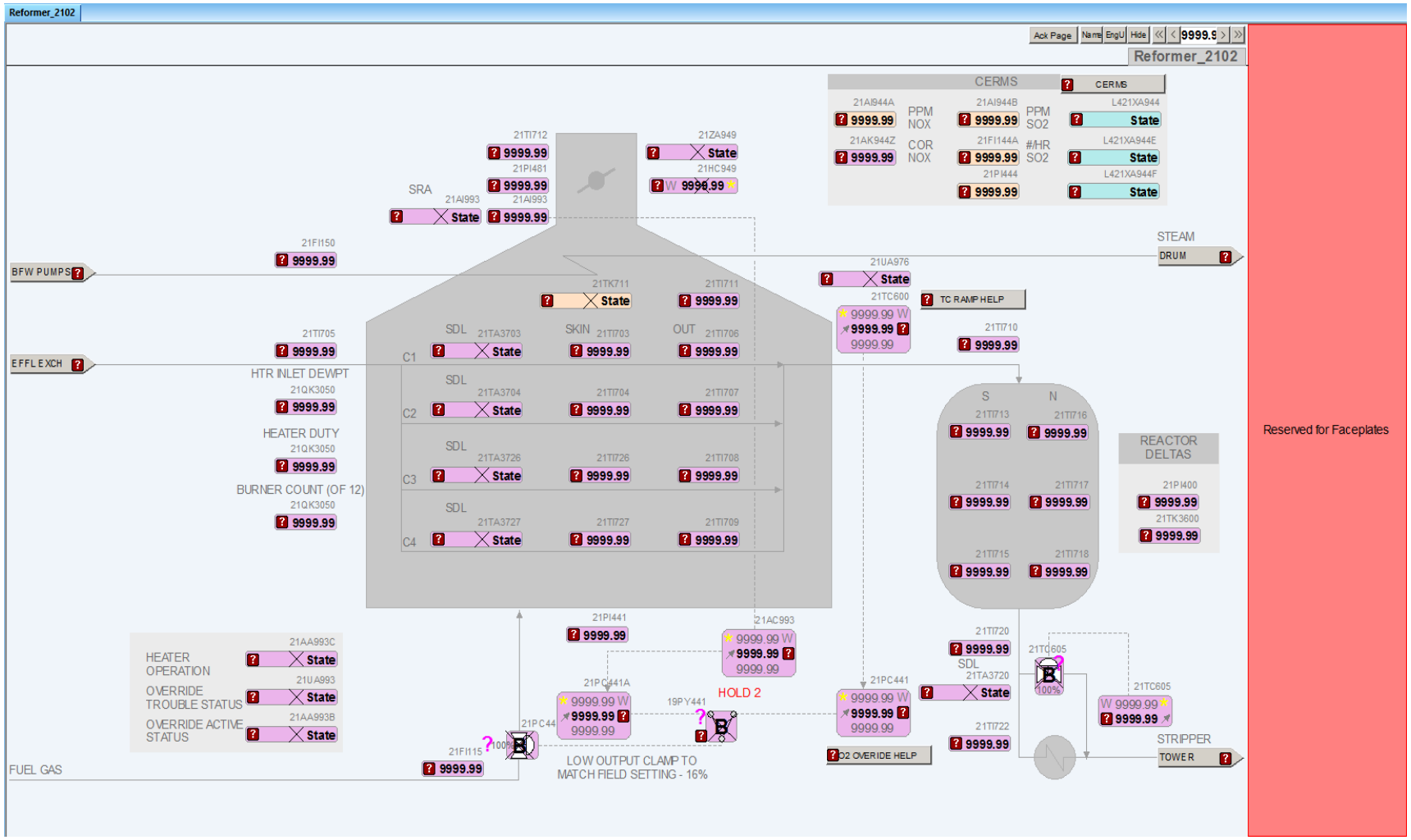

Reformer_2101
2101 Desulf Feed / Exchanger
ACK
SIL
21FC193
H2 Dryers
Reactor
SRA
21FI112
Recy H2
21TI701
21TI705
Heater Feed
#2 Reformer
22FK3160
TK 969
21FI175
21PC462
Text%
21FC105
Text%
Text%
21TC605
Strip Tower
21FC111
#2/#3 Reformer
Strip Tower Btms
New TK 90
Old TK 90
21PC401
Text%
21FI100
21FC107
Text%
Desulf Bypass
21FI110
Ref Exch
21FK3110
Shape added
21UA979 State Turbine Feed Pump Reset
21UA980 State Des Turbine Feed Pump
21PB987 State Electric Des Feed Pump S/D
22HS964A State Old TK-90 Booster Pump
L3\75HS923A State New TK-90 Booster Pump
21PB988 State TK-91 Booster Pump S/D
Text%
21FC108
Des Feed Pumps
Motor
21FC102
Text%
TK 91
Turbine
48FK3101
DHX
48FK3106
SWG
44FK3108
DBT
HUX Direct
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2101
Ack Page
Name
EngU
Hide
Reformer_2101
REACTOR
RECY H2
#2 REFORMER
TK 969
NEW TK 90
OLD TK 90
TK 91
SRA
21FI112
9999.99
22FK3160
21FI175
21PC462
21FC105
21TI701
21TC605
21FC193
21TI705
H2 DRYERS
HEATER
FEED
SREIP
TOWER
21PC401
21FI100
21FC102
21FC107
STRIP TOWER BTMS
DESULF BYPASS
21FC111
#2/#3 REFORMER
21FI110
21FK3110
REF EXCH
Reserved for Faceplates
75HS923A
22HS964A
48FK3101
48FK3106
44FK3108
DHX
SWG
DBT
DES FEED PUMPS
MOTOR
TURBINE
21UA980
HUX DIRECT
21UA979
TURBINE FEED PUMP RESET
DES TURBINE FEED PUMP
21PB987
ELECTRIC DES FEED PUMP S/D
22HS964A
OLD TK-90 BOOSTER PUMP
L3\75HS923A
NEW TK-90 BOOSTER PUMP
21PB988
TK-91 BOOSTER PUMP S/D
21FC108
State
100%

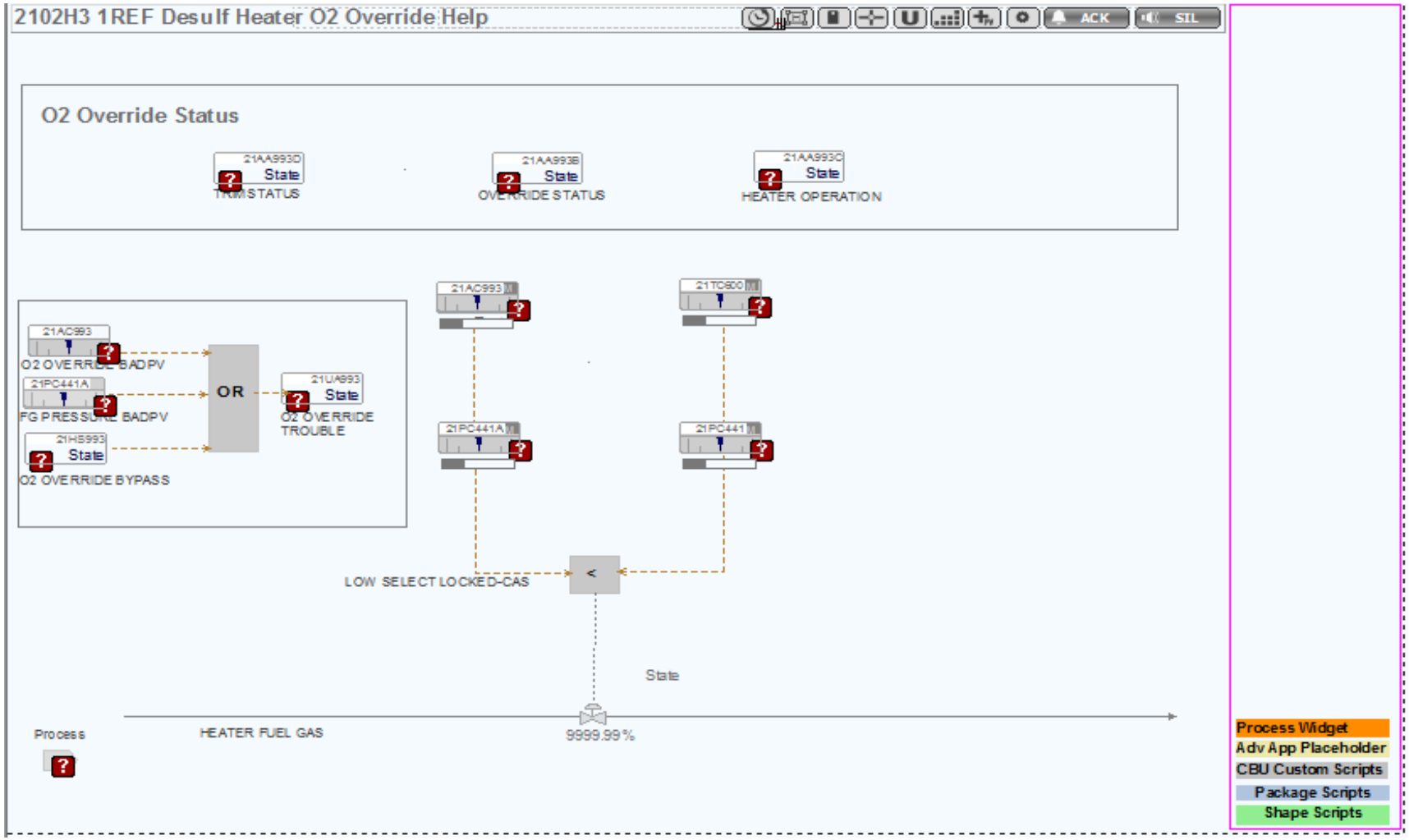
1.66 2102 #1 DESULF HEATER / REACTOR (Reformer_2102.htm)

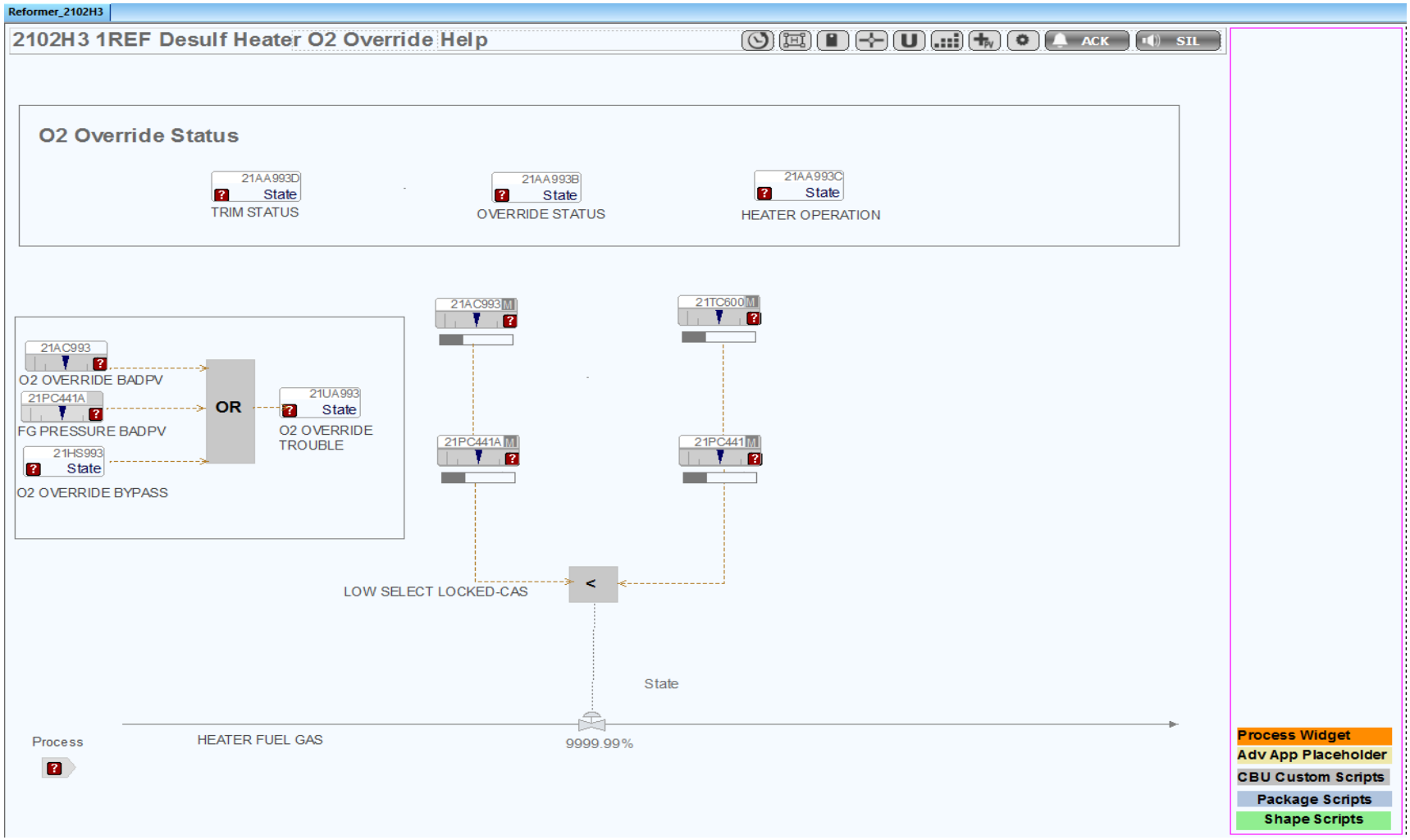


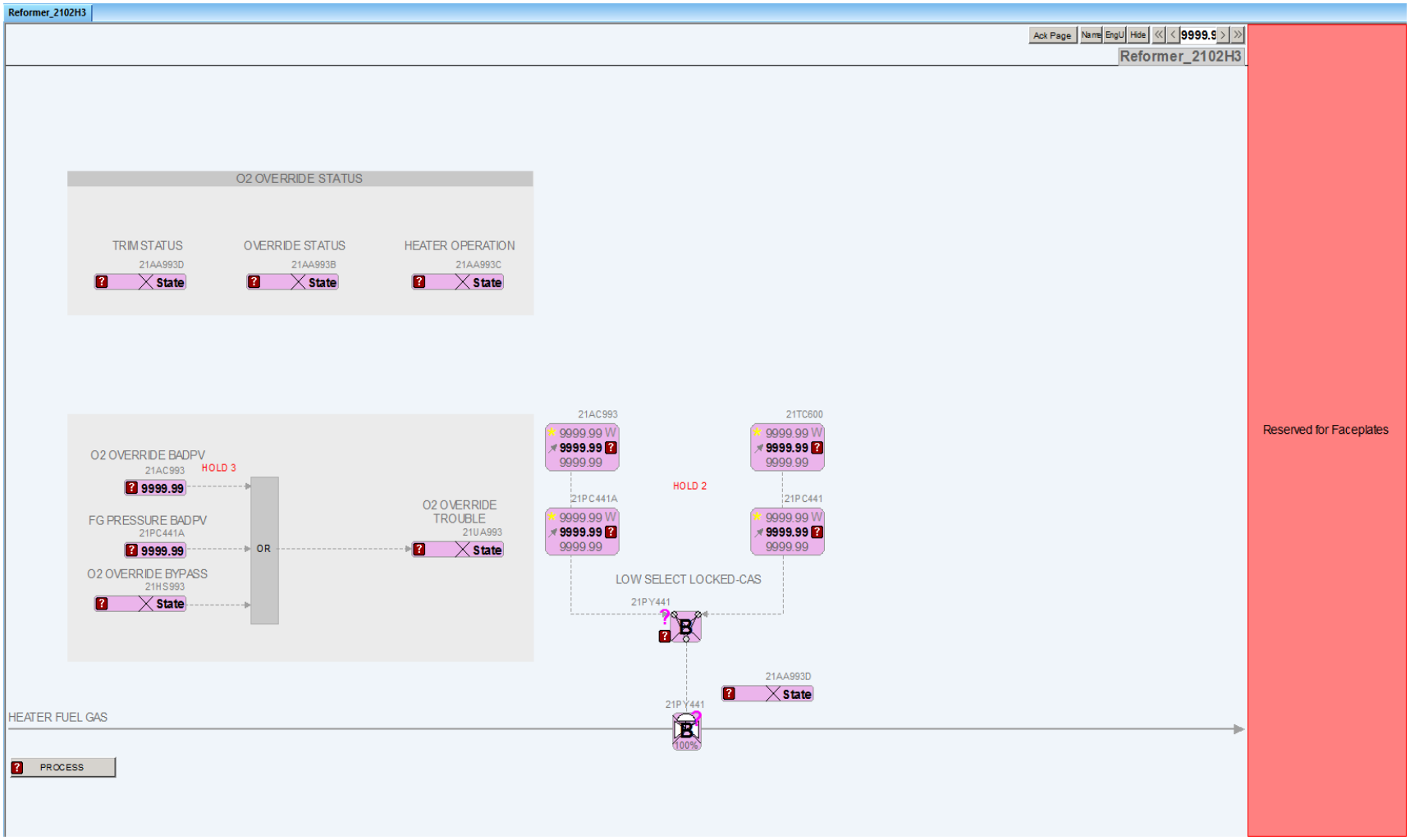

Reformer_2102
2102 #1 Desulf Heater / Reactor
ACK
SIL
CERMS
21AI944A
PPM NOX
21AI944B
%O2
L421XA944 State
21AK944Z
COR NOX
21FI144A
FUEL FLOW
L421XA944E State
21PI444
FUEL PRESS
L421XA944F State
21TI712
21PI481
21AI993
SRA
21ZA949 State
21HC949M
BFW Pumps
21FI150
Steam Drum
CERMS Callup added & shape updated
Htr O2 Cab Purge
Possible Flameout
21TI711
TC Ramp Help
Effl Exch
21TI705
Skin
Out
SDL
C1
21TI703
21TI706
21TC600M
21TI710
Htr Inlet Dewpt
21TK4705
C2
21TI704
21TI707
Heater Duty
21QK3050
S
N
21TI713
21TI716
C3
21TI726
21TI708
Burner Count (of 12)
21XM3716
Reactor Deltas
21PI400
21TK3600
shape & text is added
C4
21TI727
21TI709
21TI714
21TI717
21TI715
21TI718
Heater Operation
21AA993C State
21PI441
21AC993M
Override Override Trouble Status
21UA993 State
SDL
21TI720
Override Active Status
21AA993B State
21PC441AM
21PC441M
Text%
Fuel Gas
21FI115
Text%
21TI722
21TC605M
Stripper Tower
O2 Overide Help
Low Output Clamp to match field setting - 16%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2102
Ack Page
Name
EngU
Hide
Reformer_2102
CERMS
CERMS
21AI944A
9999.99
PPM NOX
21AI944B
9999.99
PPM SO2
L421XA944
State
21AK944Z
9999.99
COR NOX
21FI144A
9999.99
#/HR SO2
L421XA944E
State
21PI444
9999.99
L421XA944F
State
21TI712
9999.99
21PI481
9999.99
21ZA949
State
21HC949
W 9999.99
SRA
21AI993
State
21AI993
9999.99
21FI150
9999.99
BFW PUMPS
STEAM
DRUM
21UA976
State
21TK711
State
21TI711
9999.99
21TC600
9999.99 W
9999.99
9999.99
TC RAMP HELP
21TI710
9999.99
21TI705
9999.99
EFFL EXCH
HTR INLET DEWPT
21QK3050
9999.99
HEATER DUTY
21QK3050
9999.99
BURNER COUNT (OF 12)
21QK3050
9999.99
SDL
21TA3703
State
SKIN
21TI703
9999.99
OUT
21TI706
9999.99
C1
SDL
21TA3704
State
21TI704
9999.99
21TI707
9999.99
C2
SDL
21TA3726
State
21TI726
9999.99
21TI708
9999.99
C3
SDL
21TA3727
State
21TI727
9999.99
21TI709
9999.99
C4
S
N
21TI713
9999.99
21TI716
9999.99
21TI714
9999.99
21TI717
9999.99
21TI715
9999.99
21TI718
9999.99
REACTOR DELTAS
21PI400
9999.99
21TK3600
9999.99
Reserved for Faceplates
21AA993C
HEATER OPERATION
State
21UA993
OVERRIDE TROUBLE STATUS
State
21AA993B
OVERRIDE ACTIVE STATUS
State
21PI441
9999.99
21AC993
9999.99 W
9999.99
9999.99
21PC441A
9999.99 W
9999.99
9999.99
19PY441
HOLD 2
21PC44
100%
21FI115
9999.99
FUEL GAS
LOW OUTPUT CLAMP TO MATCH FIELD SETTING - 16%
21PC441
9999.99 W
9999.99
9999.99
O2 OVERIDE HELP
21TI720
9999.99
SDL
21TA3720
State
21TI722
9999.99
21TC605
100%
21TC605
W 9999.99
9999.99
STRIPPER
TOWER

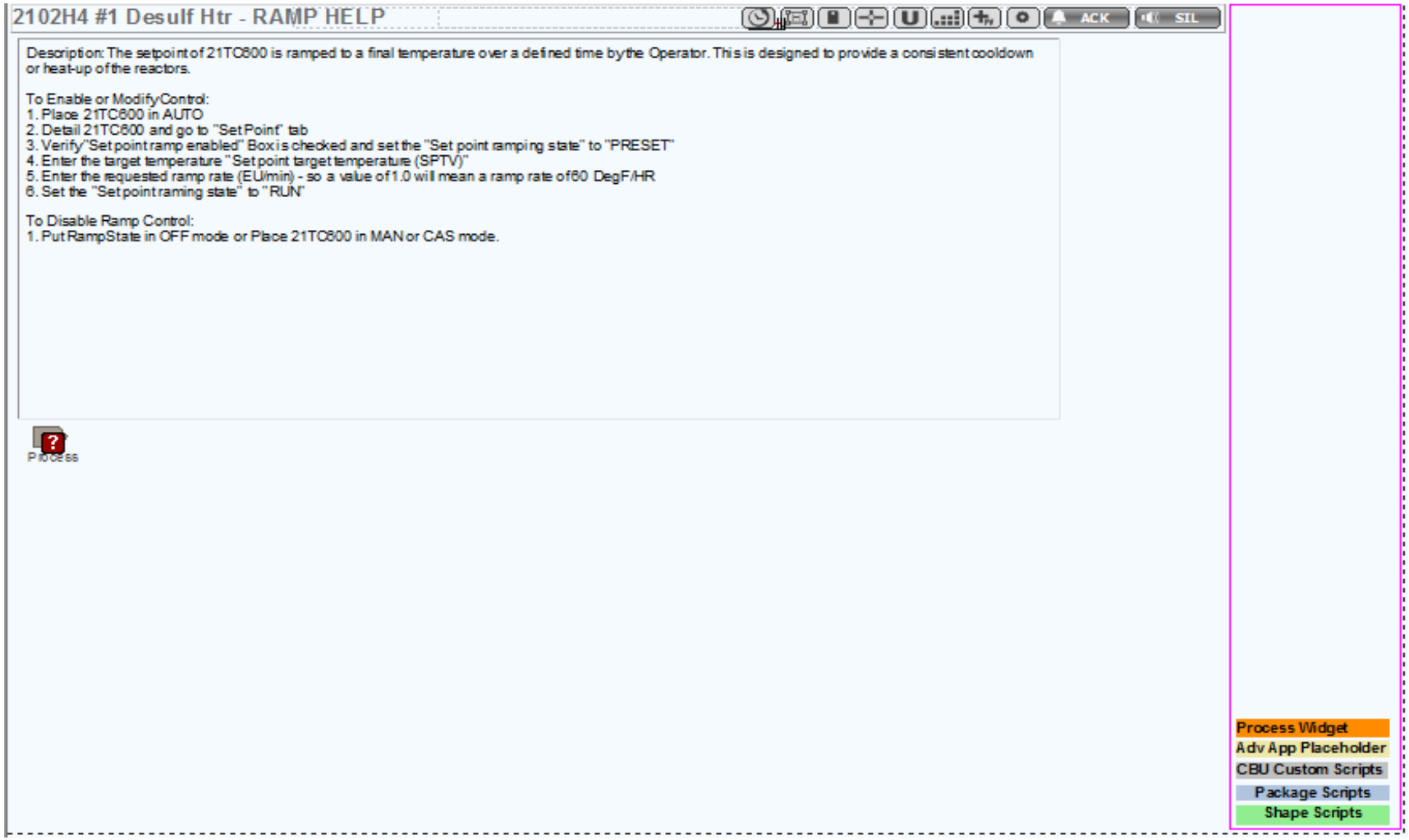
1.67 2102H3 1 REF DESULF HEATER O2 OVERVIEW HELP (Reformer_2102H3.htm)

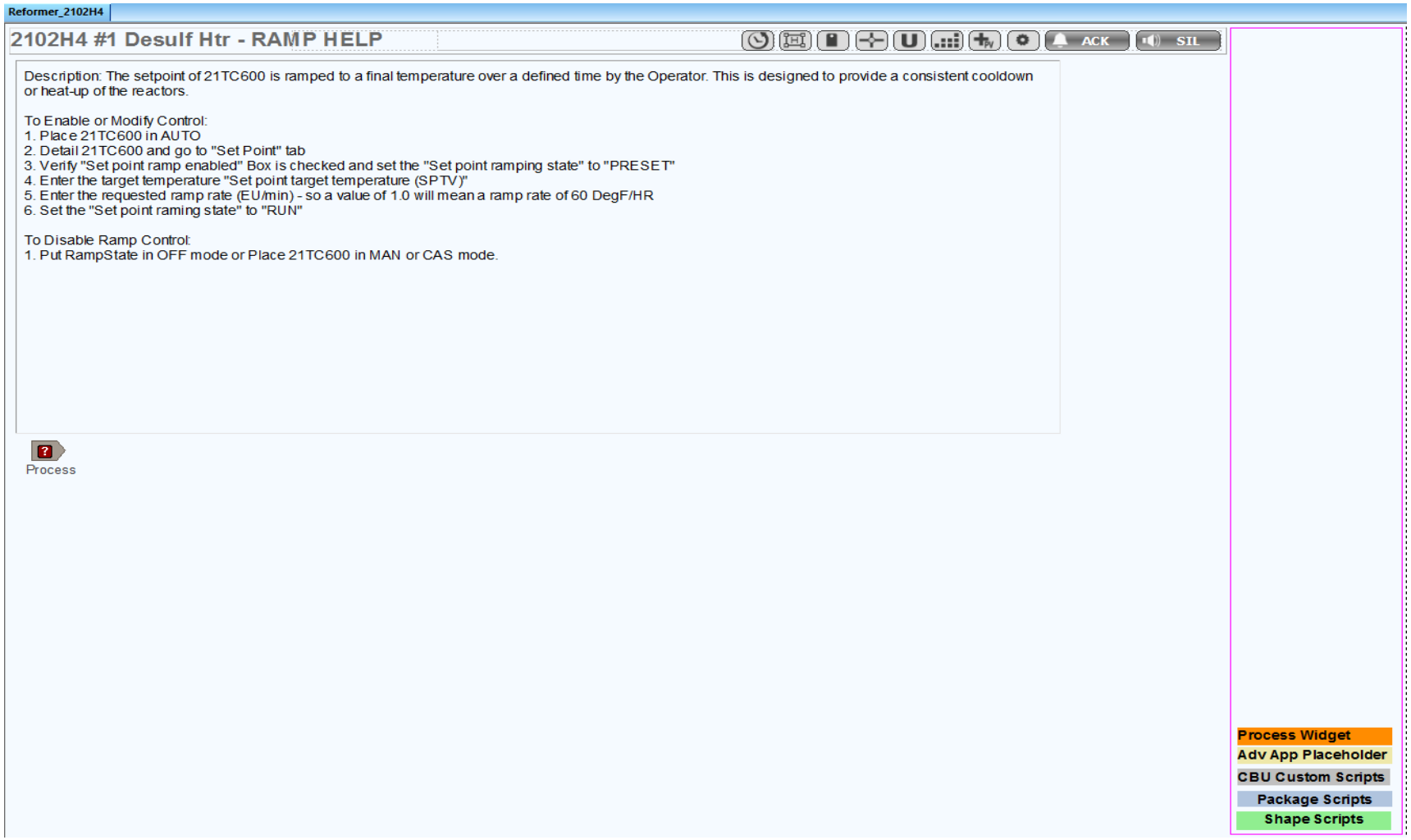


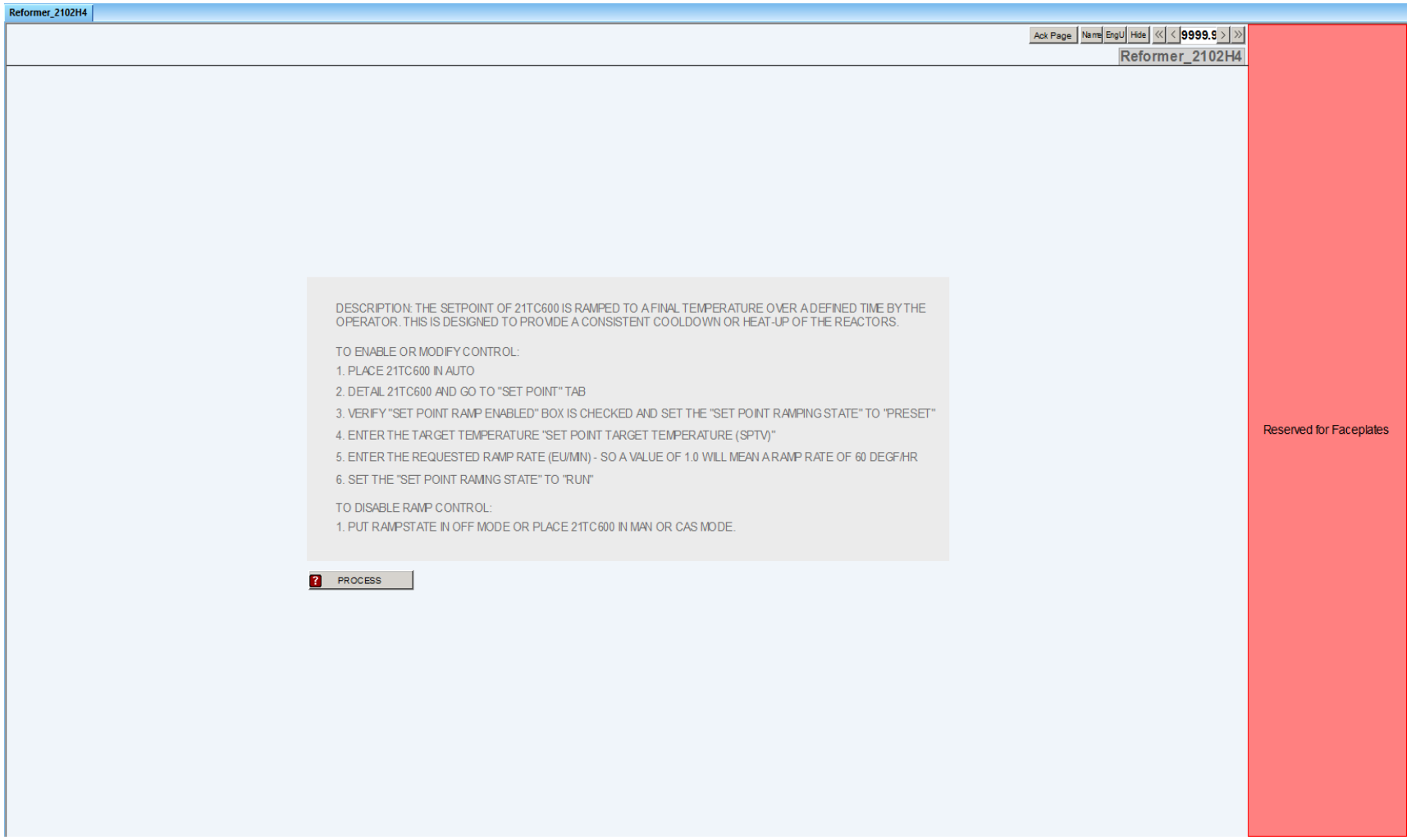

Reformer_2102H3
2102H3 1REF Desulf Heater O2 Override Help
ACK
SIL
O2 Override Status
21AA993D
State
TRIM STATUS
21AA993B
State
OVERRIDE STATUS
21AA993C
State
HEATER OPERATION
21AC993
O2 OVERRIDE BADPV
21PC441A
FG PRESSURE BADPV
21HS993
State
O2 OVERRIDE BYPASS
OR
21UA993
State
O2 OVERRIDE TROUBLE
21AC993 M
21TC600 M
21PC441A M
21PC441 M
LOW SELECT LOCKED-CAS
<
State
Process
HEATER FUEL GAS
9999.99%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2102H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_2102H3
O2 OVERRIDE STATUS
TRIM STATUS
21AA993D
State
OVERRIDE STATUS
21AA993B
State
HEATER OPERATION
21AA993C
State
O2 OVERRIDE BADPV
21AC993
HOLD 3
9999.99
FG PRESSURE BADPV
21PC441A
9999.99
O2 OVERRIDE BYPASS
21HS993
State
OR
O2 OVERRIDE TROUBLE
21UA993
State
21AC993
9999.99 W
9999.99
9999.99
21TC600
9999.99 W
9999.99
9999.99
HOLD 2
21PC441A
9999.99 W
9999.99
9999.99
21PC441
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
21PY441
21AA993D
State
21PY441
100%
HEATER FUEL GAS
PROCESS
Reserved for Faceplates

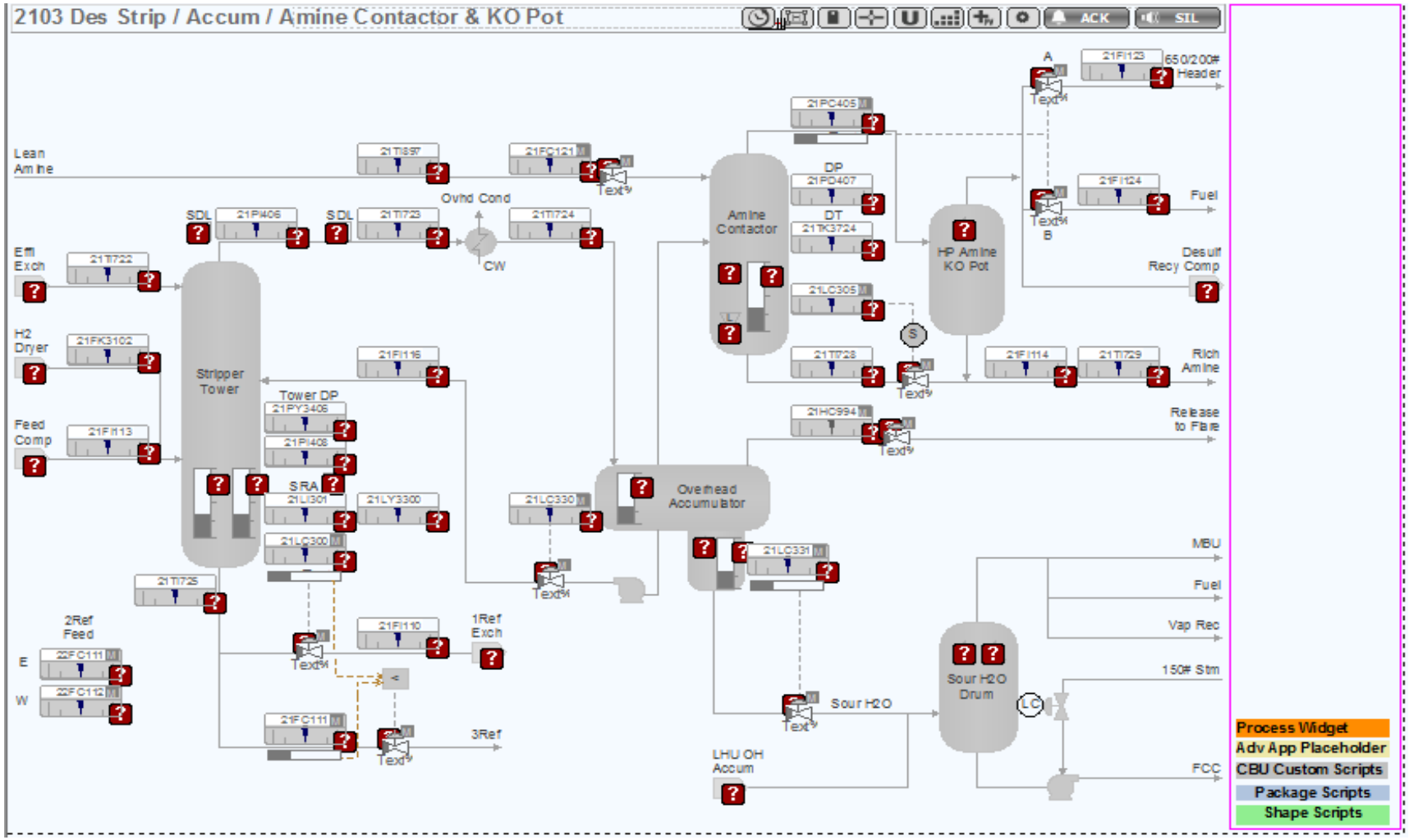
1.68 2102H4 #1 DESULF HTR - RAMP HELP (Reformer_2102H4.htm)

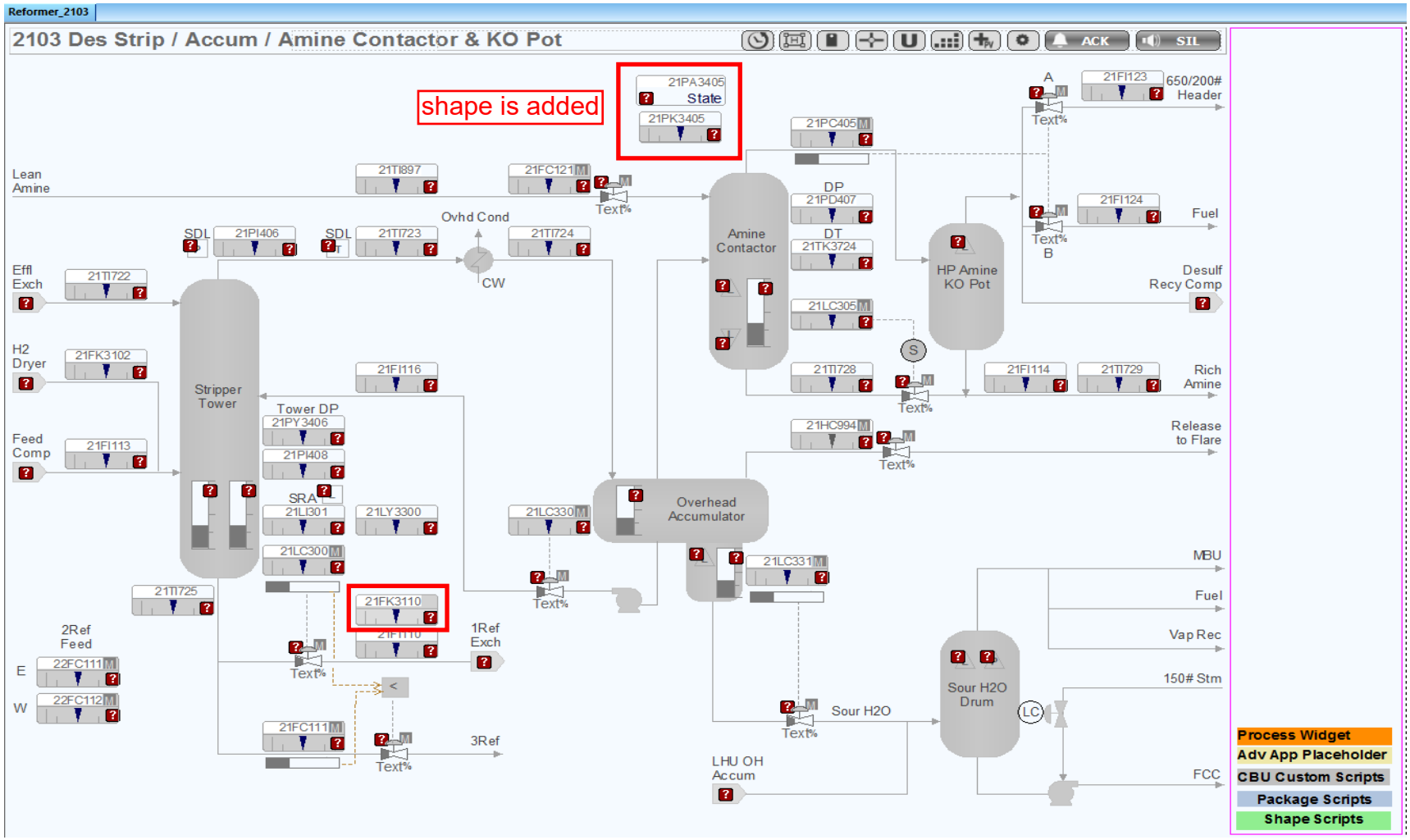


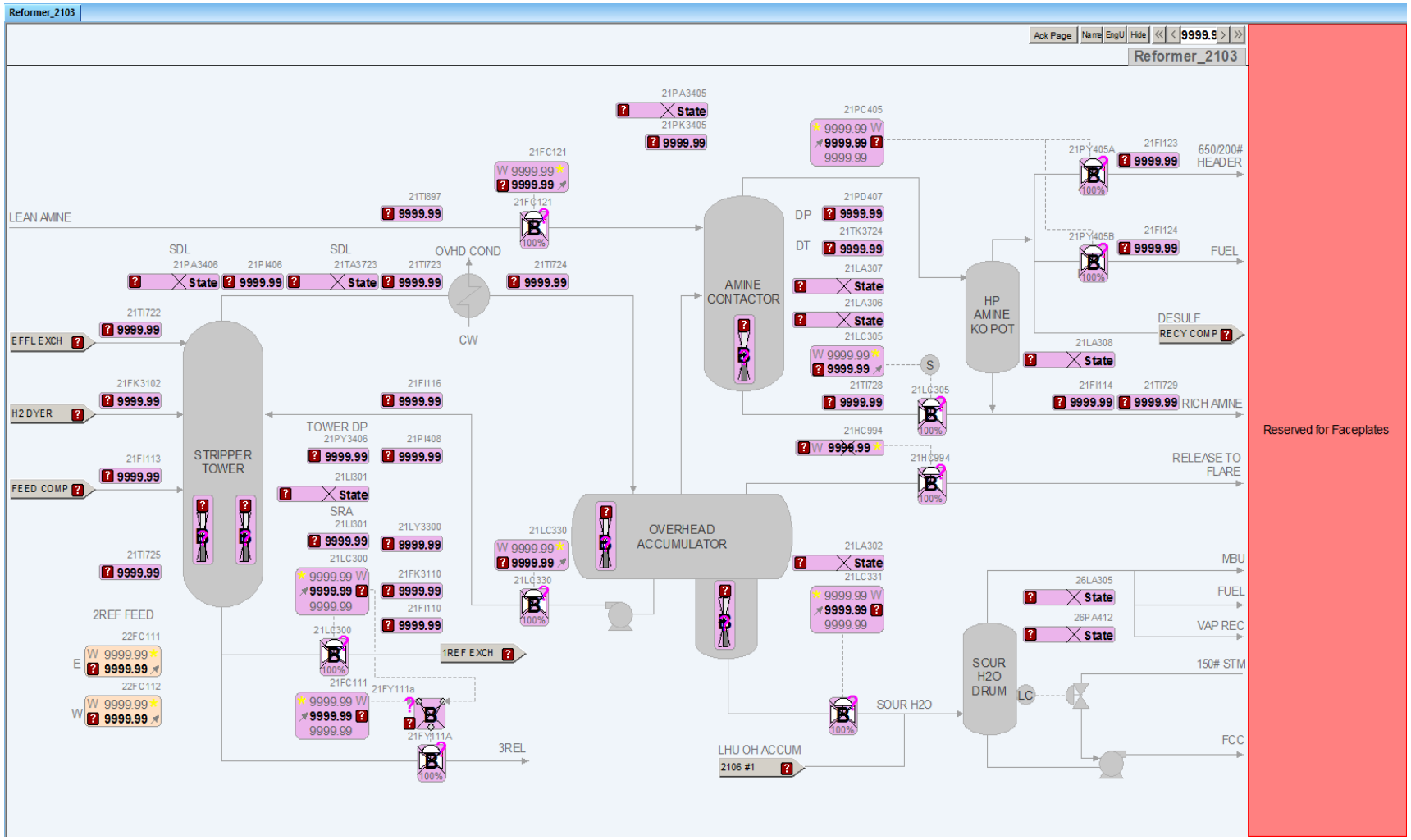

Reformer_2102H4
2102H4 #1 Desulf Htr - RAMP HELP
ACK
SIL
Description: The setpoint of 21TC600 is ramped to a final temperature over a defined time by the Operator. This is designed to provide a consistent cooldown or heat-up of the reactors.
To Enable or Modify Control:
1. Place 21TC600 in AUTO
2. Detail 21TC600 and go to "Set Point" tab
3. Verify "Set point ramp enabled" Box is checked and set the "Set point ramping state" to "PRESET"
4. Enter the target temperature "Set point target temperature (SPTV)"
5. Enter the requested ramp rate (EU/min) - so a value of 1.0 will mean a ramp rate of 60 DegF/HR
6. Set the "Set point raming state" to "RUN"
To Disable Ramp Control:
1. Put RampState in OFF mode or Place 21TC600 in MAN or CAS mode.
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2102H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_2102H4
DESCRIPTION: THE SETPOINT OF 21TC600 IS RAMPED TO A FINAL TEMPERATURE OVER A DEFINED TIME BY THE OPERATOR. THIS IS DESIGNED TO PROVIDE A CONSISTENT COOLDOWN OR HEAT-UP OF THE REACTORS.
TO ENABLE OR MODIFY CONTROL:
1. PLACE 21TC600 IN AUTO
2. DETAIL 21TC600 AND GO TO "SET POINT" TAB
3. VERIFY "SET POINT RAMP ENABLED" BOX IS CHECKED AND SET THE "SET POINT RAMPING STATE" TO "PRESET"
4. ENTER THE TARGET TEMPERATURE "SET POINT TARGET TEMPERATURE (SPTV)"
5. ENTER THE REQUESTED RAMP RATE (EU/MIN) - SO A VALUE OF 1.0 WILL MEAN A RAMP RATE OF 60 DEGF/HR
6. SET THE "SET POINT RAMING STATE" TO "RUN"
TO DISABLE RAMP CONTROL:
1. PUT RAMPSTATE IN OFF MODE OR PLACE 21TC600 IN MAN OR CAS MODE.
PROCESS
Reserved for Faceplates

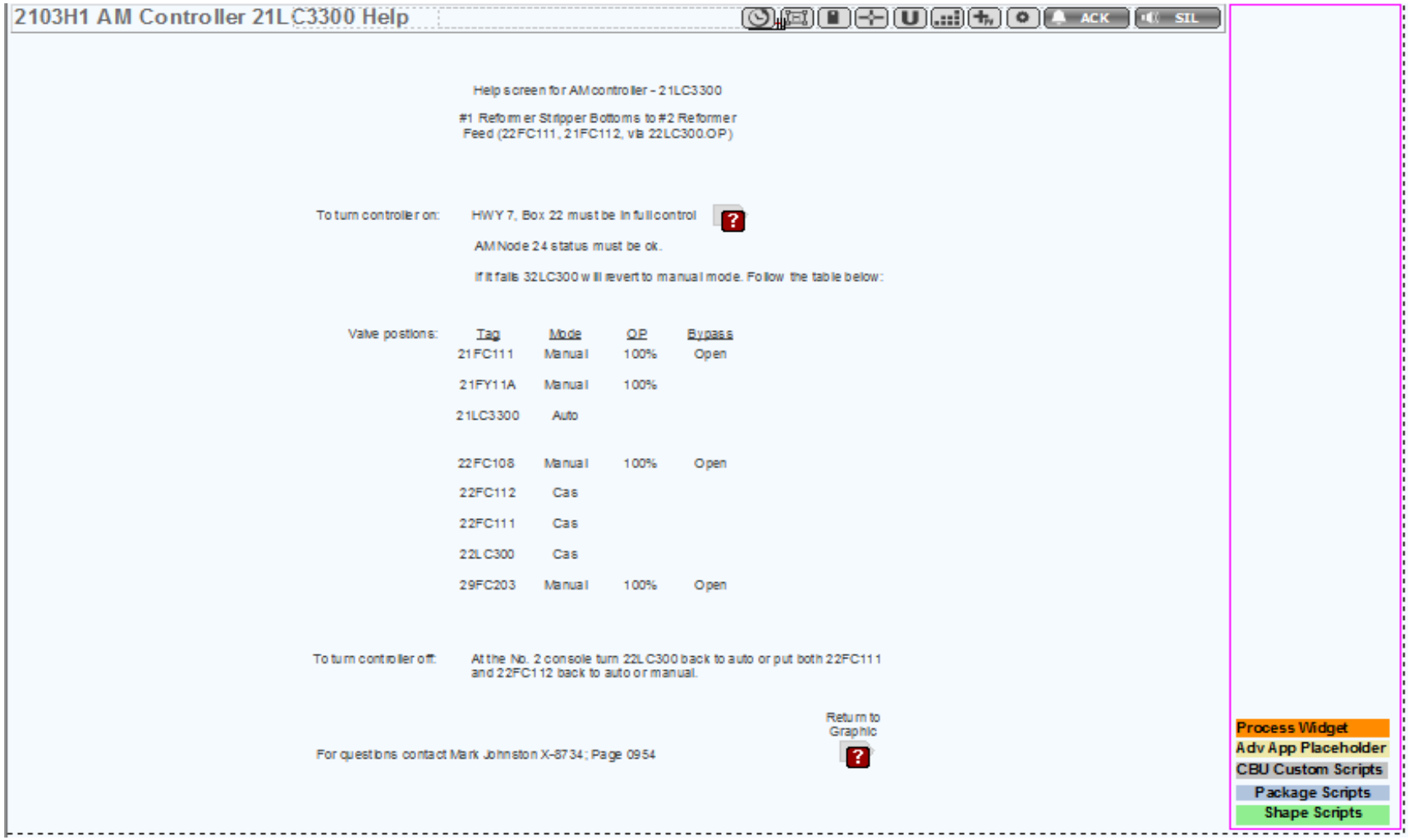
1.69 2103 DES STRIP / ACCUM / AMINE CONTACTOR & KO POT (Reformer_2103.htm)

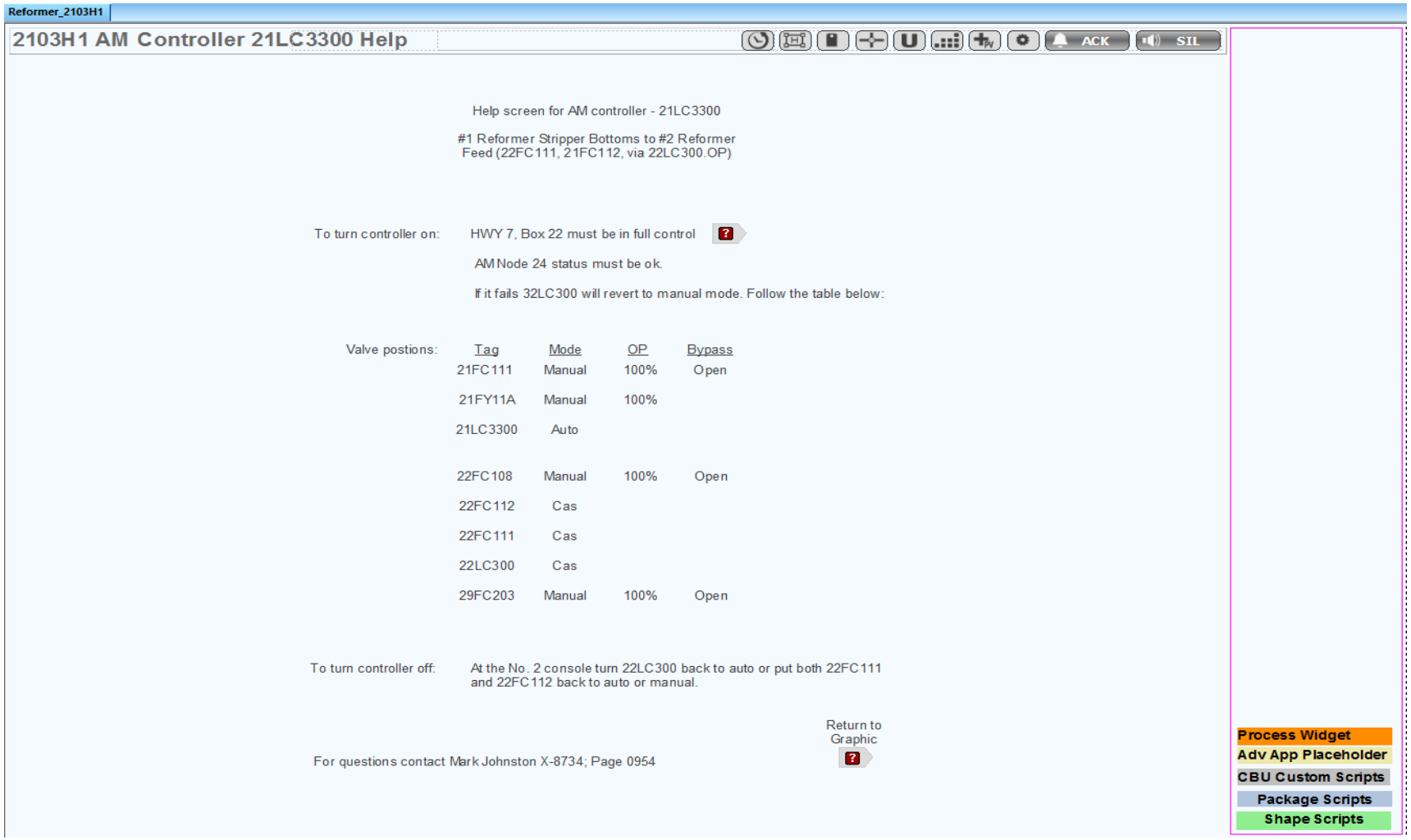


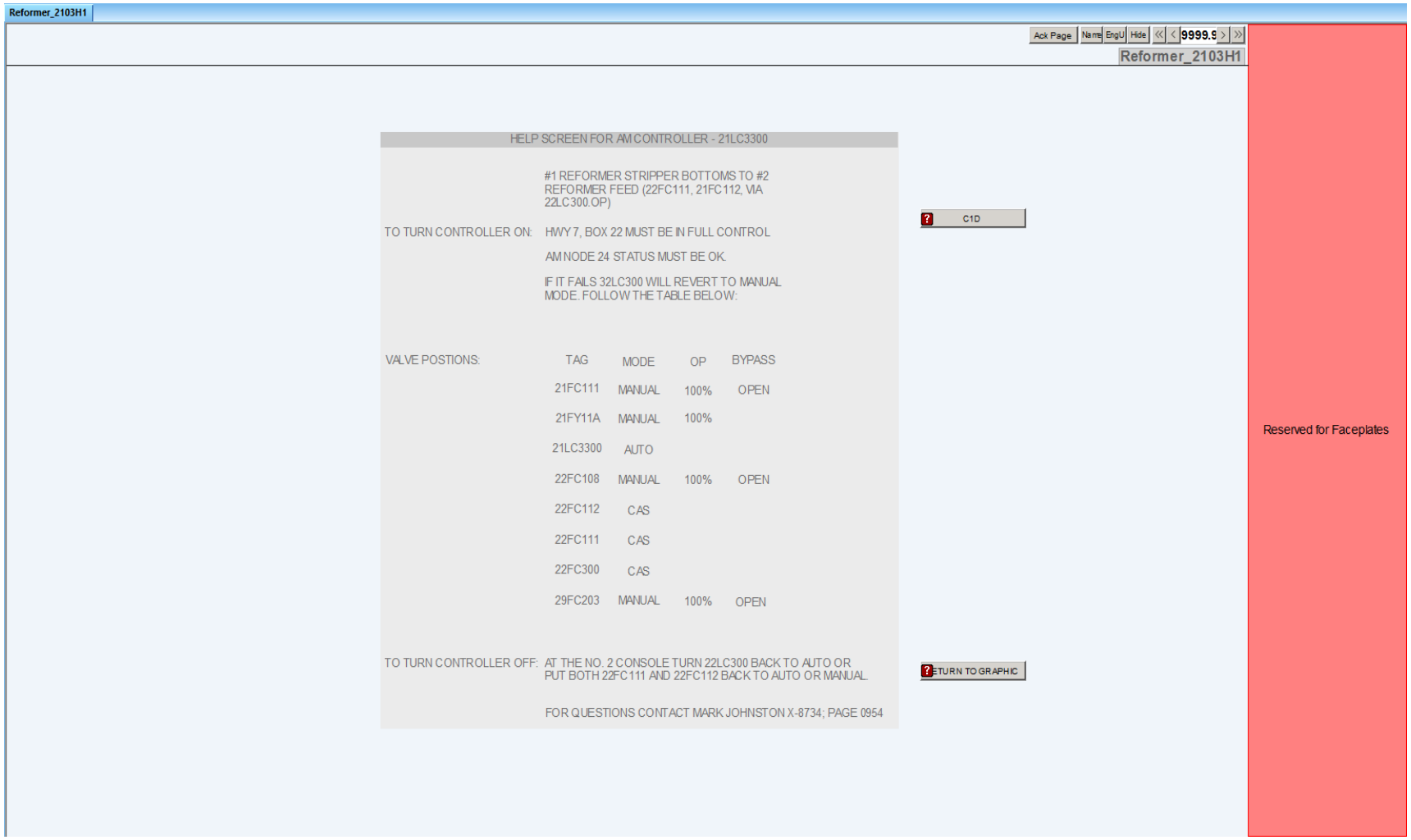

Reformer_2103
2103 Des Strip / Accum / Amine Contactor & KO Pot
ACK
SIL
shape is added
21PA3405
State
21PK3405
Lean Amine
21TI897
21FC121
Text%
Ovhd Cond
CW
SDL
21PI406
SDL
21TI723
21TI724
Effl Exch
21TI722
H2 Dryer
21FK3102
Feed Comp
21FI113
Stripper Tower
Tower DP
21PY3406
21PI408
SRA
21LI301
21LY3300
21LC300
21FI116
21TI725
21FK3110
21FI110
2Ref Feed
E
22FC111
W
22FC112
1Ref Exch
3Ref
21FC111
Amine Contactor
21PC405
DP
21PD407
DT
21TK3724
21LC305
21TI728
Overhead Accumulator
21LC330
21LC331
LHU OH Accum
HP Amine KO Pot
S
21HC994
A
21FI123
650/200# Header
21FI124
Fuel
B
Desulf Recy Comp
21FI114
21TI729
Rich Amine
Release to Flare
MBU
Fuel
Vap Rec
150# Stm
Sour H2O
Sour H2O Drum
LC
FCC
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2103
Ack Page
Name
EngU
Hide
Reformer_2103
LEAN AMINE
SDL
21PA3406
State
21PI406
9999.99
SDL
21TA3723
State
21TI723
9999.99
OVHD COND
CW
21TI724
9999.99
21TI897
9999.99
21FC121
21PA3405
State
21PK3405
9999.99
AMINE CONTACTOR
DP
21PD407
9999.99
DT
21TK3724
9999.99
21LA307
State
21LA306
State
21LC305
21TI728
9999.99
21HC994
21PC405
21PY405A
21FI123
9999.99
650/200# HEADER
21PY405B
21FI124
9999.99
FUEL
HP AMINE KO POT
DESULF RECY COMP
21LA308
State
21TI729
21FI114
9999.99
RICH AMINE
RELEASE TO FLARE
EFFL EXCH
21TI722
9999.99
H2 DYER
21FK3102
9999.99
FEED COMP
21FI113
9999.99
21TI725
9999.99
STRIPPER TOWER
21FI116
9999.99
TOWER DP
21PY3406
21PI408
SRA
21LI301
State
21LI301
21LY3300
21LC300
21FK3110
21FI110
21LC330
OVERHEAD ACCUMULATOR
21LA302
State
21LC331
2REF FEED
22FC111
22FC112
1REF EXCH
21FC111
21FY111a
21FY111A
3REL
LHU OH ACCUM
2106 #1
SOUR H2O
SOUR H2O DRUM
LC
26LA305
State
26PA412
State
MBU
FUEL
VAP REC
150# STM
FCC
Reserved for Faceplates

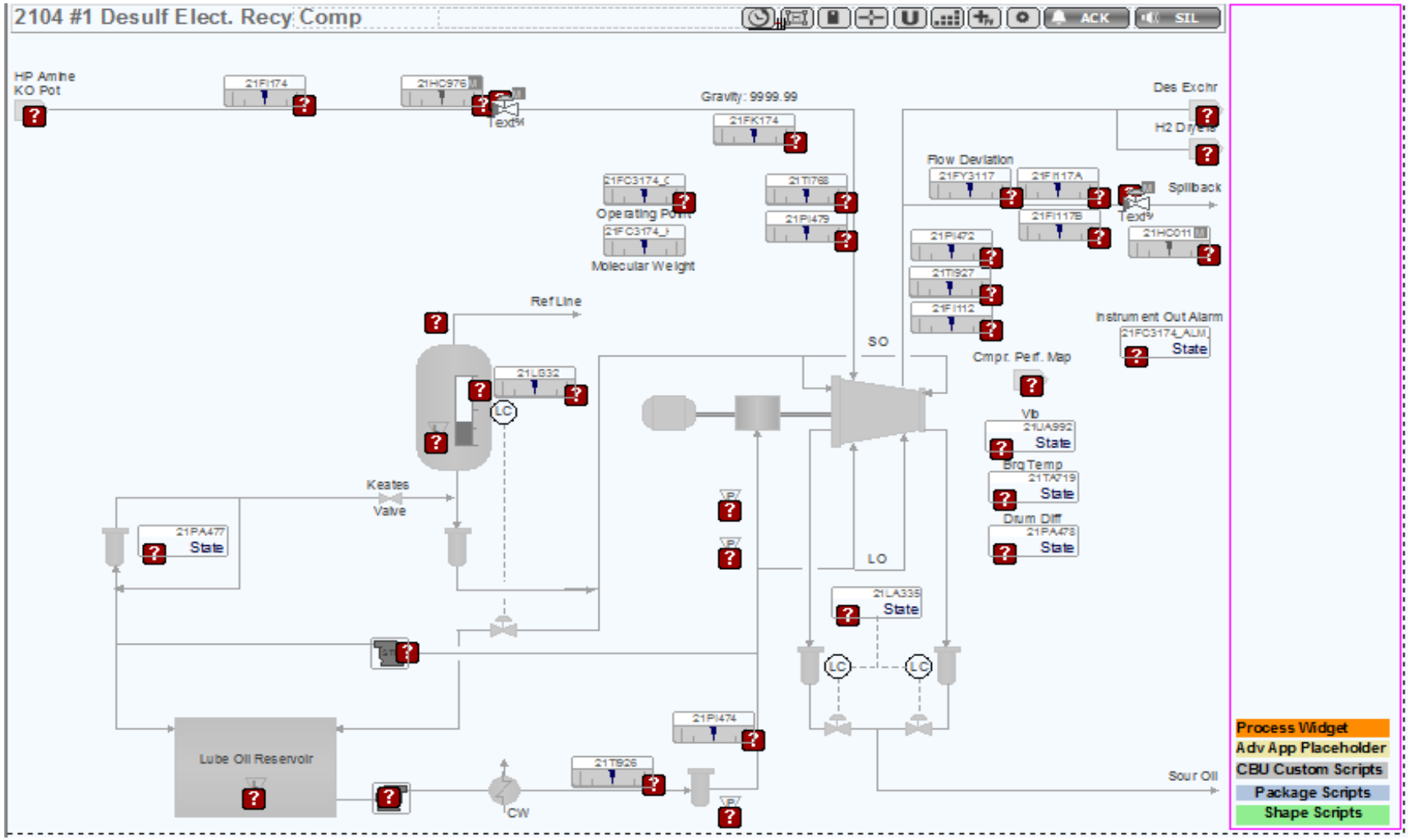
1.70 2103H1 AM CONTROLLER 21LC3300 HELP (Reformer_2103H1.htm)

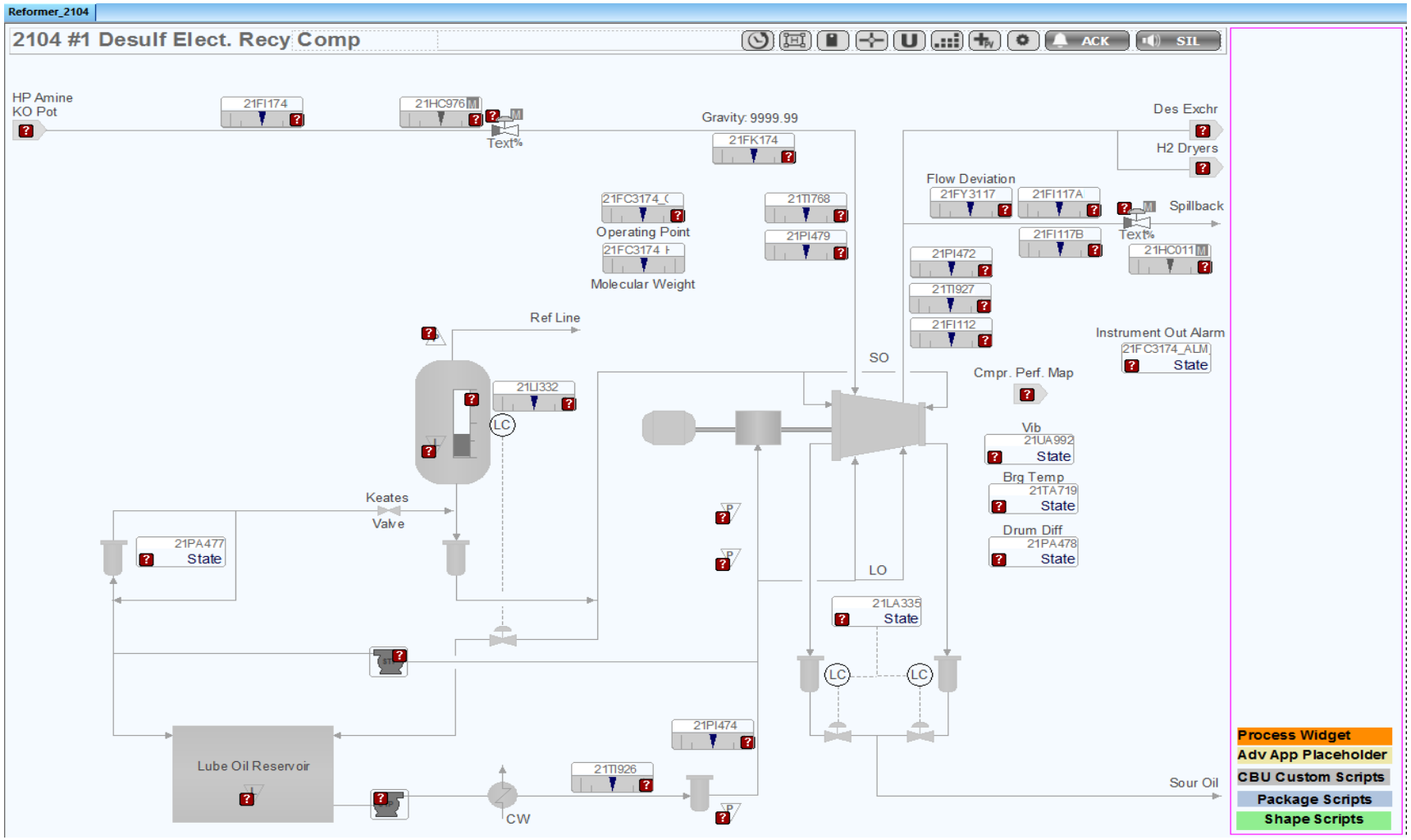


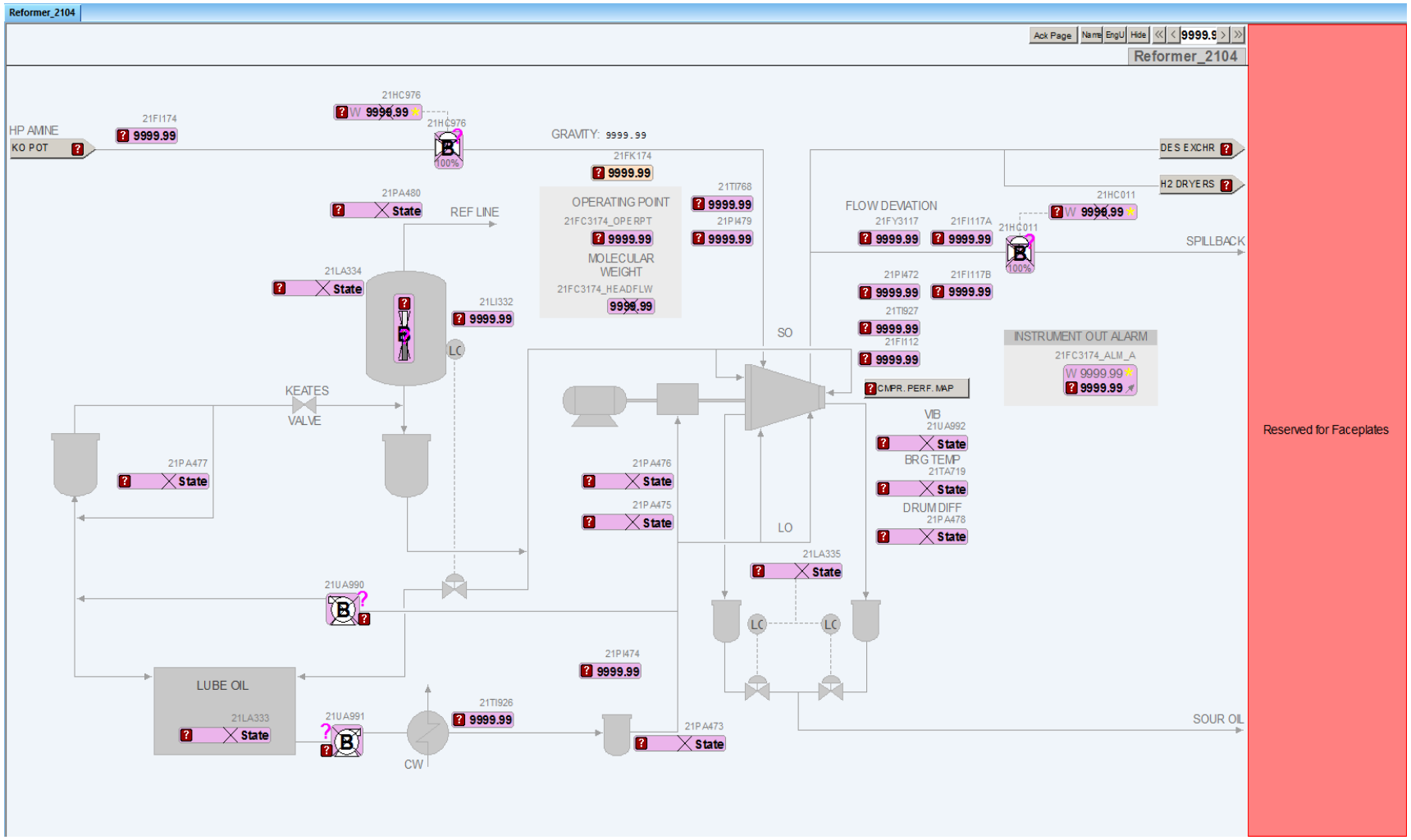

Reformer_2103H1
2103H1 AM Controller 21LC3300 Help
ACK
SIL
Help screen for AM controller - 21LC3300
#1 Reformer Stripper Bottoms to #2 Reformer Feed (22FC111, 21FC112, via 22LC300.OP)
To turn controller on:
HWY 7, Box 22 must be in full control
AM Node 24 status must be ok.
If it fails 32LC300 will revert to manual mode. Follow the table below:
Valve postions:
Tag Mode OP Bypass
21FC111 Manual 100% Open
21FY11A Manual 100%
21LC3300 Auto
22FC108 Manual 100% Open
22FC112 Cas
22FC111 Cas
22LC300 Cas
29FC203 Manual 100% Open
To turn controller off:
At the No. 2 console turn 22LC300 back to auto or put both 22FC111 and 22FC112 back to auto or manual.
Return to Graphic
For questions contact Mark Johnston X-8734; Page 0954
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2103H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2103H1
HELP SCREEN FOR AM CONTROLLER - 21LC3300
#1 REFORMER STRIPPER BOTTOMS TO #2 REFORMER FEED (22FC111, 21FC112, VIA 22LC300.OP)
C1D
TO TURN CONTROLLER ON:
HWY 7, BOX 22 MUST BE IN FULL CONTROL
AM NODE 24 STATUS MUST BE OK.
IF IT FAILS 32LC300 WILL REVERT TO MANUAL MODE. FOLLOW THE TABLE BELOW:
VALVE POSTIONS:
TAG
MODE
OP
BYPASS
21FC111
MANUAL
100%
OPEN
21FY11A
MANUAL
100%
21LC3300
AUTO
22FC108
MANUAL
100%
OPEN
22FC112
CAS
22FC111
CAS
22FC300
CAS
29FC203
MANUAL
100%
OPEN
TO TURN CONTROLLER OFF:
AT THE NO. 2 CONSOLE TURN 22LC300 BACK TO AUTO OR PUT BOTH 22FC111 AND 22FC112 BACK TO AUTO OR MANUAL.
RETURN TO GRAPHIC
FOR QUESTIONS CONTACT MARK JOHNSTON X-8734; PAGE 0954
Reserved for Faceplates

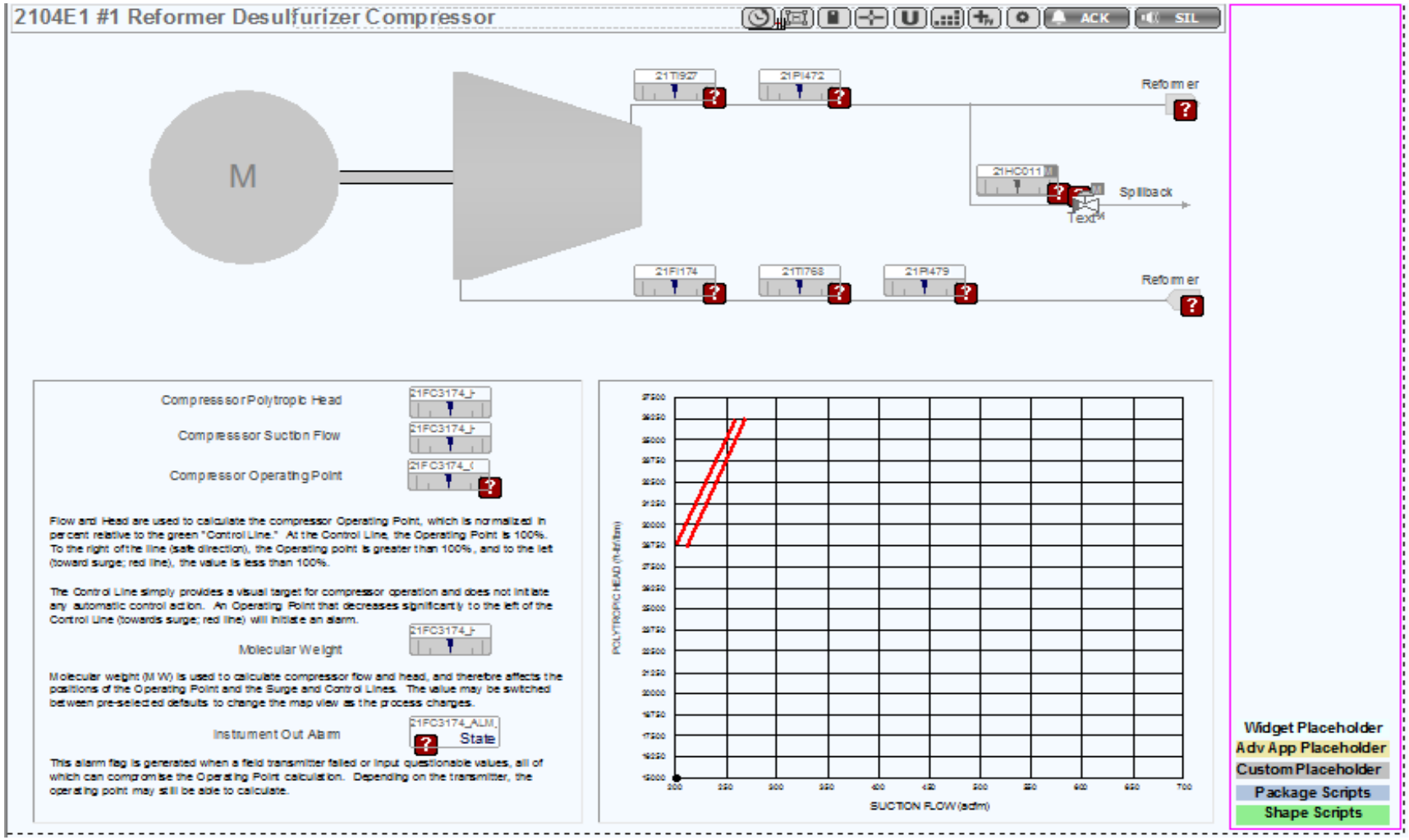
1.71 2104 #1 DESULF ELECT. RECY COMP (Reformer_2104.htm)

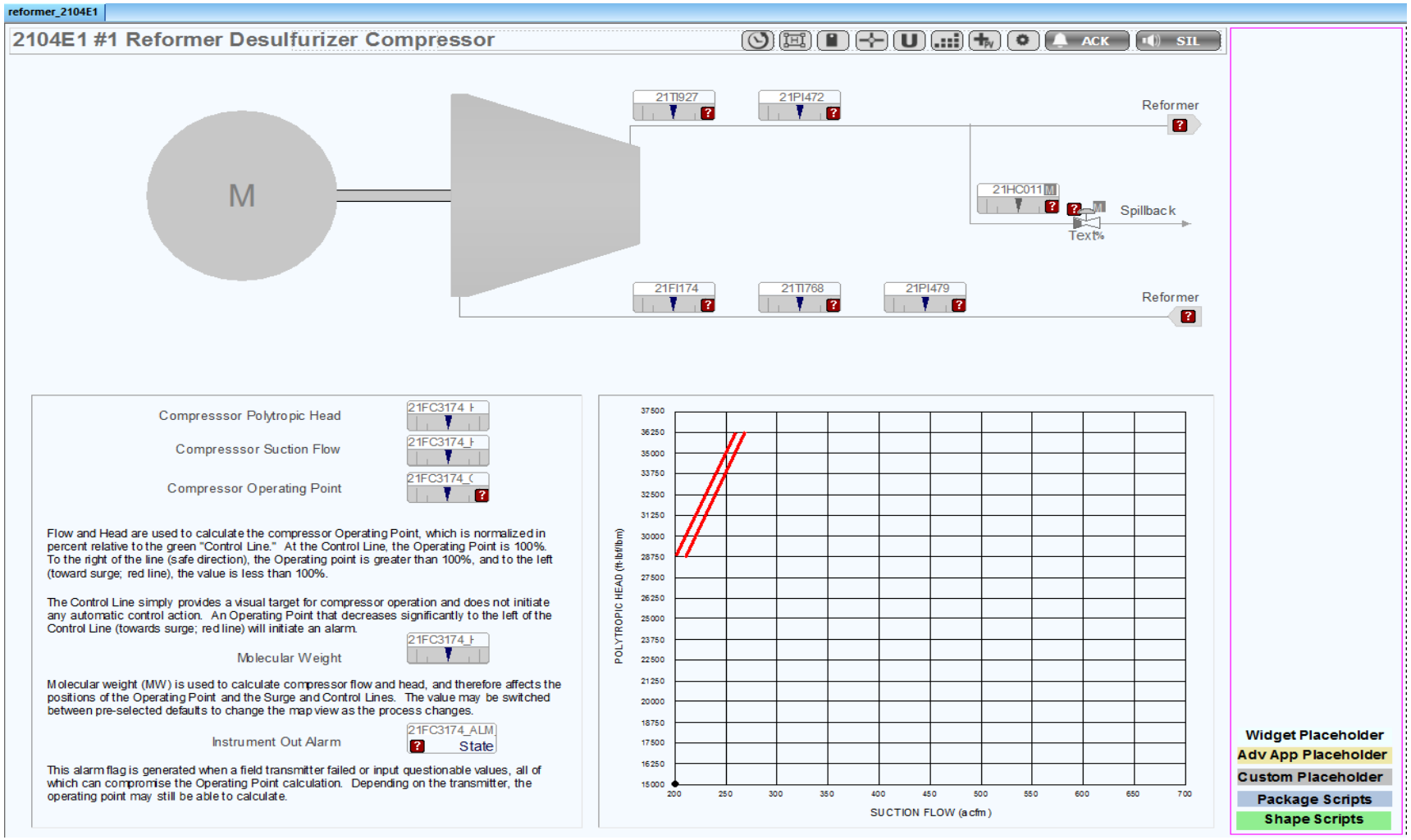


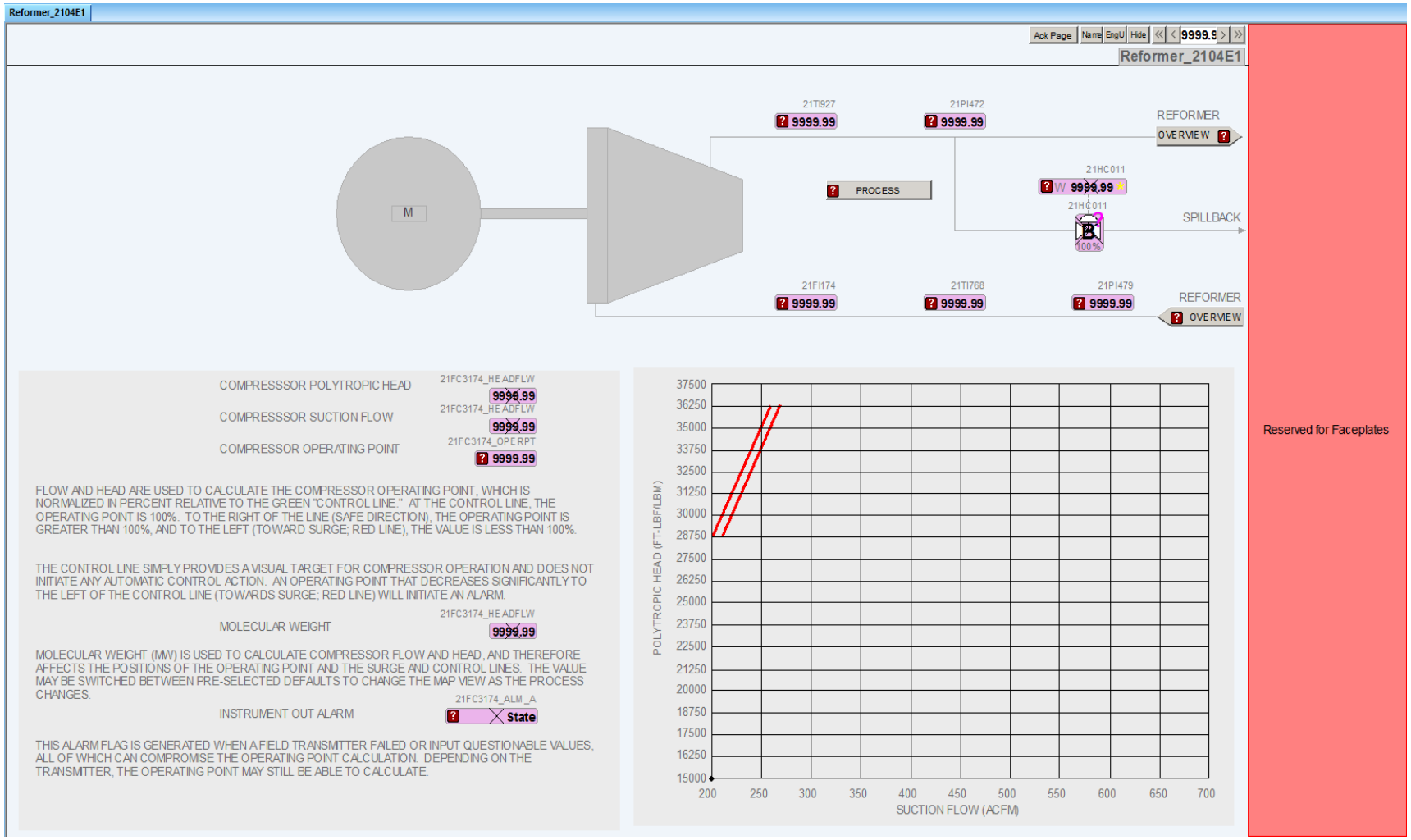

Reformer_2104
2104 #1 Desulf Elect. Recy Comp
ACK
SIL
HP Amine
KO Pot
21FI174
21HC976
Text%
Gravity: 9999.99
21FK174
Des Exchr
H2 Dryers
Flow Deviation
21FY3117
21FI117A
Spillback
21FI117B
Text%
21HC011
21FC3174_(
Operating Point
21FC3174 I
Molecular Weight
21TI768
21PI479
21PI472
21TI927
21FI112
Instrument Out Alarm
21FC3174_ALM
State
Ref Line
SO
Cmpr. Perf. Map
21LI332
LC
Vib
21UA992
State
Brg Temp
21TA719
State
Keates
Valve
21PA477
State
Drum Diff
21PA478
State
LO
21LA335
State
LC
LC
Lube Oil Reservoir
21PI474
21TI926
CW
Sour Oil
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2104
Ack Page
Name
EngU
Hide
Reformer_2104
HP AMINE
KO POT
21FI174
9999.99
21HC976
21HC976
GRAVITY: 9999.99
21FK174
9999.99
21PA480
State
REF LINE
OPERATING POINT
21FC3174_OPERPT
9999.99
MOLECULAR WEIGHT
21FC3174_HEADFLW
9999.99
21TI768
9999.99
21PI479
9999.99
21LA334
State
21LI332
9999.99
LC
KEATES VALVE
21PA477
State
SO
LO
21PA476
State
21PA475
State
CMPR. PERF. MAP
VIB
21UA992
State
BRG TEMP
21TA719
State
DRUM DIFF
21PA478
State
21LA335
State
LC
LC
21UA990
21PI474
9999.99
LUBE OIL
21LA333
State
21UA991
21TI926
9999.99
CW
21PA473
State
SOUR OIL
FLOW DEVIATION
21FY3117
9999.99
21FI117A
9999.99
21HC011
21HC011
SPILLBACK
21PI472
9999.99
21FI117B
9999.99
21TI927
9999.99
21FI112
9999.99
INSTRUMENT OUT ALARM
21FC3174_ALM_A
9999.99
9999.99
DES EXCHR
H2 DRYERS
Reserved for Faceplates

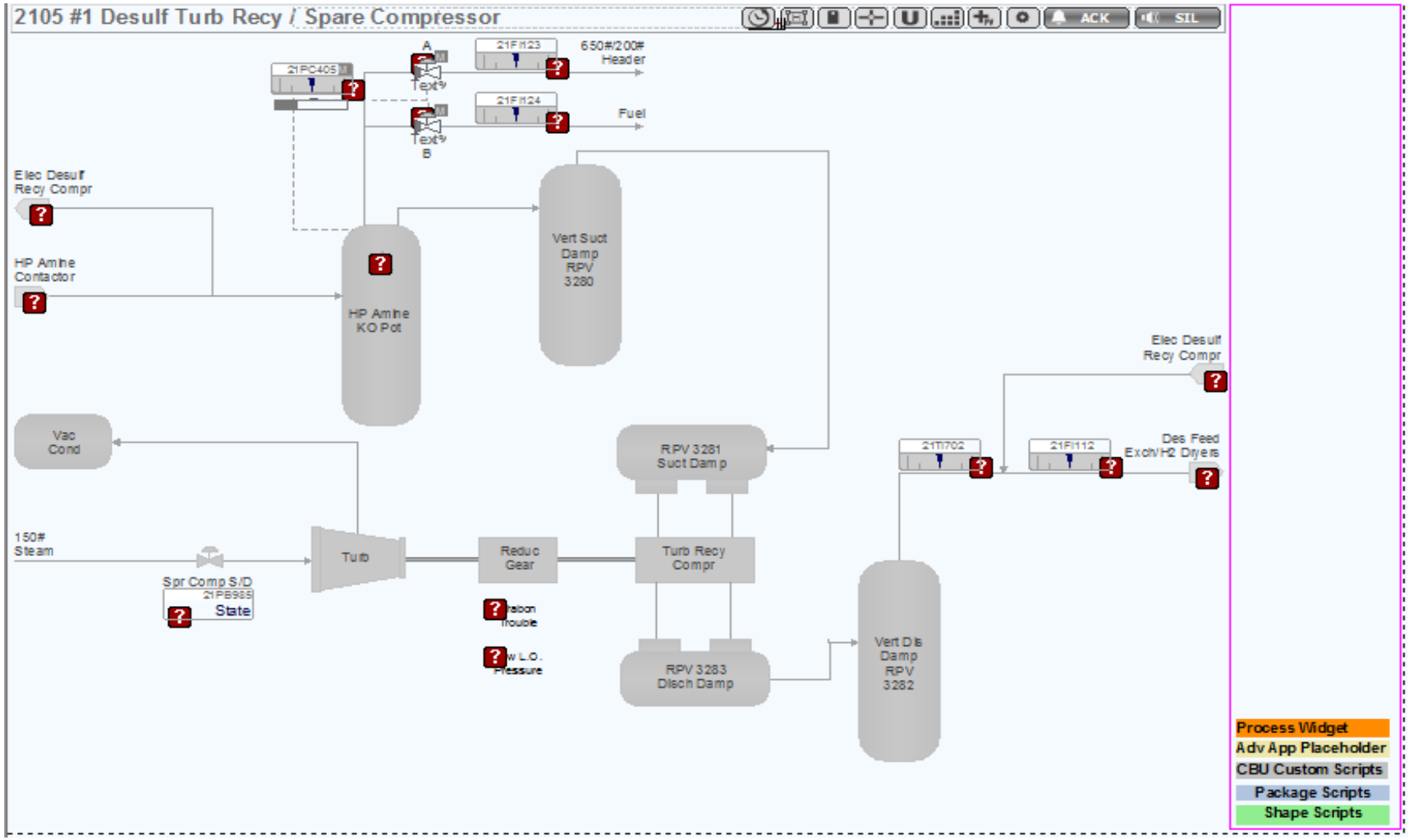
1.72 2104E1 #1 REFORMER DESULFURIZER COMPRESSOR (reformer_2104E1.htm)

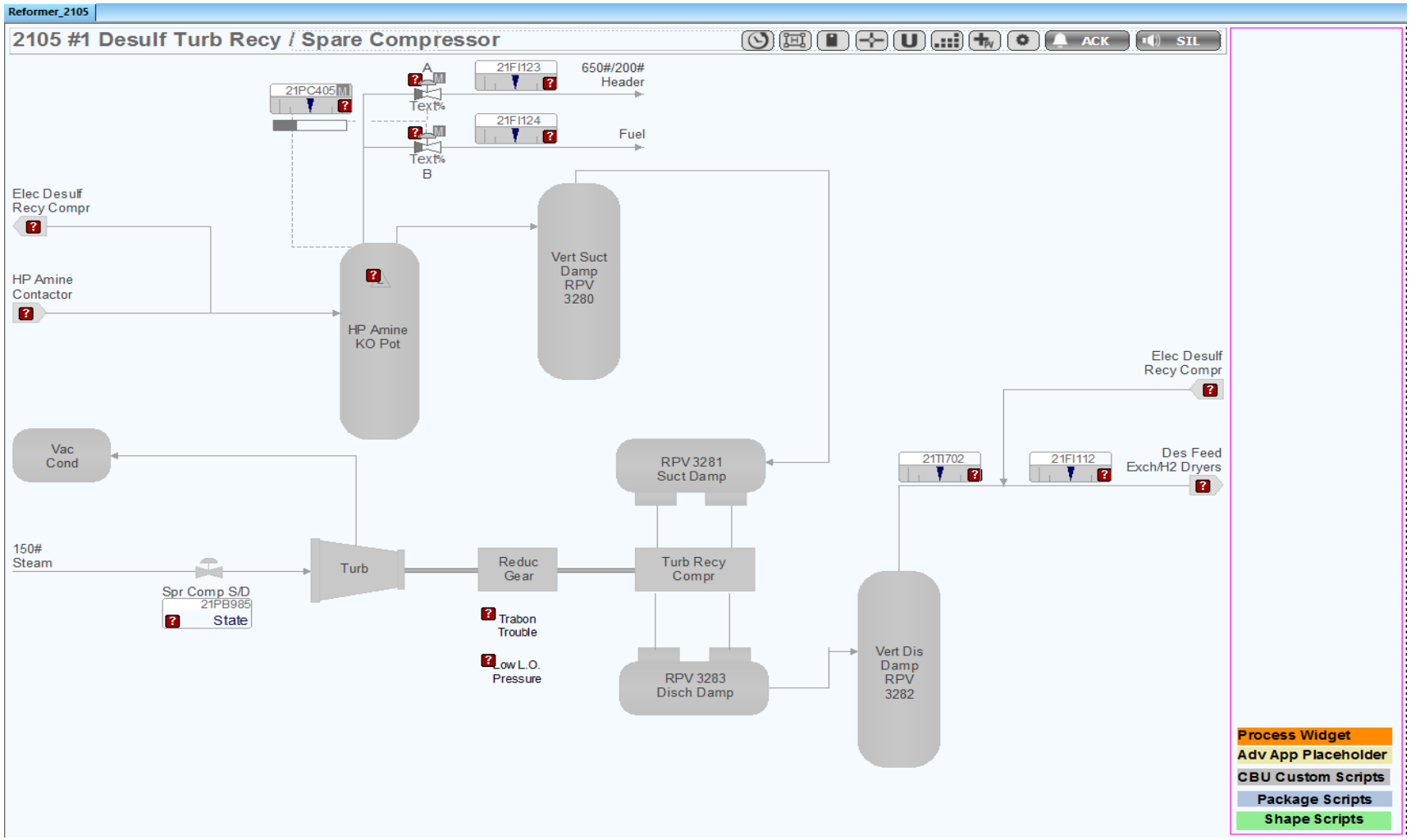


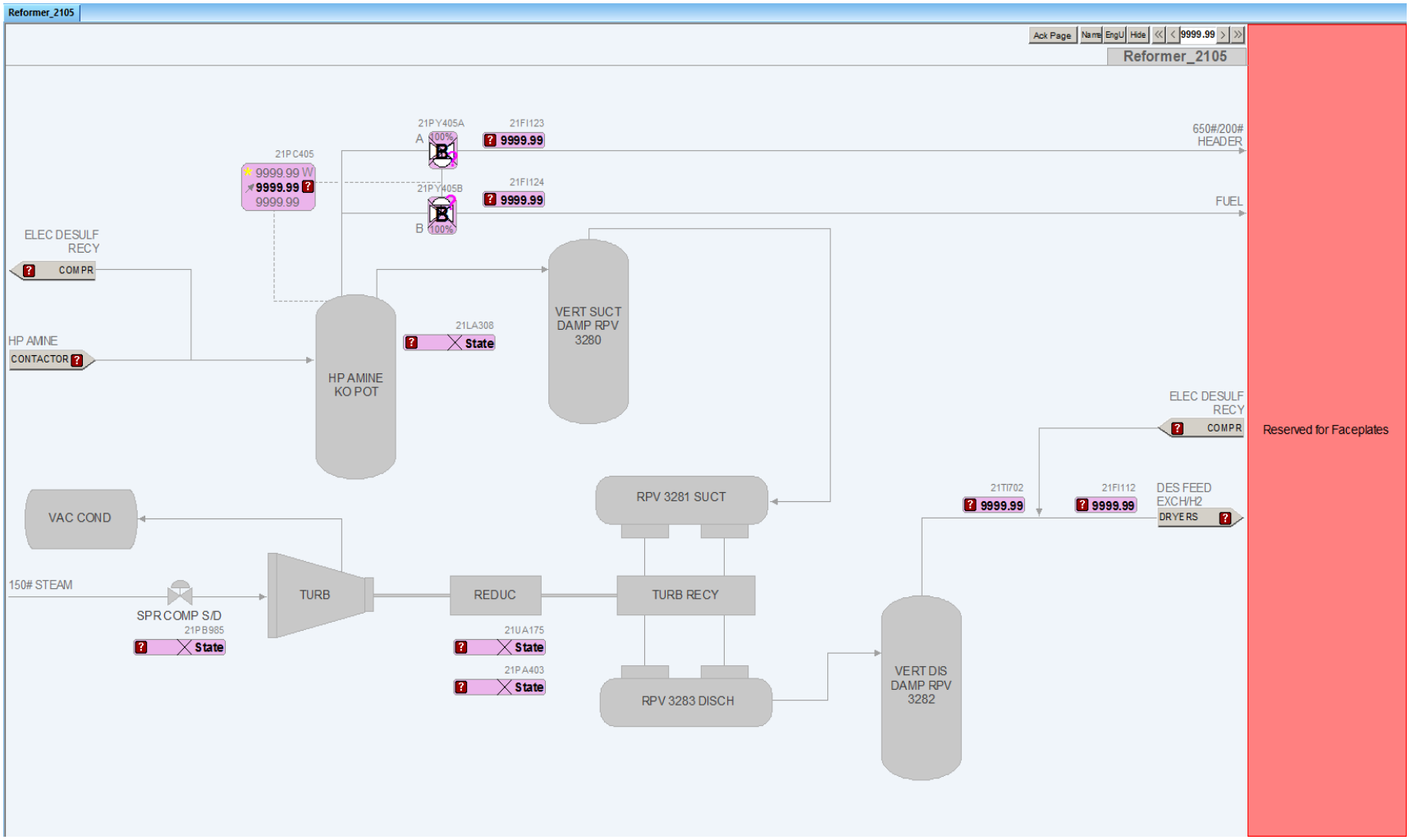

reformer_2104E1
2104E1 #1 Reformer Desulfurizer Compressor
ACK
SIL
M
21TI927
21PI472
Reformer
21HC011
Spillback
Text%
21FI174
21TI768
21PI479
Reformer
Compresssor Polytropic Head
Compresssor Suction Flow
Compressor Operating Point
Flow and Head are used to calculate the compressor Operating Point, which is normalized in percent relative to the green "Control Line." At the Control Line, the Operating Point is 100%. To the right of the line (safe direction), the Operating point is greater than 100%, and to the left (toward surge; red line), the value is less than 100%.
The Control Line simply provides a visual target for compressor operation and does not initiate any automatic control action. An Operating Point that decreases significantly to the left of the Control Line (towards surge; red line) will initiate an alarm.
Molecular Weight
Molecular weight (MW) is used to calculate compressor flow and head, and therefore affects the positions of the Operating Point and the Surge and Control Lines. The value may be switched between pre-selected defaults to change the map view as the process changes.
Instrument Out Alarm
21FC3174_ALM
State
This alarm flag is generated when a field transmitter failed or input questionable values, all of which can compromise the Operating Point calculation. Depending on the transmitter, the operating point may still be able to calculate.
POLYTROPIC HEAD (ft-lbf/lbm)
SUCTION FLOW (acfm)
Widget Placeholder
Adv App Placeholder
Custom Placeholder
Package Scripts
Shape Scripts


Reformer_2104E1
Ack Page
Name
EngU
Hide
Reformer_2104E1
21TI927
9999.99
21PI472
9999.99
REFORMER
OVERVIEW
21HC011
9999.99
PROCESS
21HC011
SPILLBACK
100%
M
21FI174
9999.99
21TI768
9999.99
21PI479
9999.99
REFORMER
OVERVIEW
COMPRESSSOR POLYTROPIC HEAD
21FC3174_HEADFLW
9999.99
COMPRESSSOR SUCTION FLOW
21FC3174_HEADFLW
9999.99
COMPRESSOR OPERATING POINT
21FC3174_OPERPT
9999.99
FLOW AND HEAD ARE USED TO CALCULATE THE COMPRESSOR OPERATING POINT, WHICH IS NORMALIZED IN PERCENT RELATIVE TO THE GREEN "CONTROL LINE." AT THE CONTROL LINE, THE OPERATING POINT IS 100%. TO THE RIGHT OF THE LINE (SAFE DIRECTION), THE OPERATING POINT IS GREATER THAN 100%, AND TO THE LEFT (TOWARD SURGE; RED LINE), THE VALUE IS LESS THAN 100%.
THE CONTROL LINE SIMPLY PROVIDES A VISUAL TARGET FOR COMPRESSOR OPERATION AND DOES NOT INITIATE ANY AUTOMATIC CONTROL ACTION. AN OPERATING POINT THAT DECREASES SIGNIFICANTLY TO THE LEFT OF THE CONTROL LINE (TOWARDS SURGE; RED LINE) WILL INITIATE AN ALARM.
MOLECULAR WEIGHT
21FC3174_HEADFLW
9999.99
MOLECULAR WEIGHT (MW) IS USED TO CALCULATE COMPRESSOR FLOW AND HEAD, AND THEREFORE AFFECTS THE POSITIONS OF THE OPERATING POINT AND THE SURGE AND CONTROL LINES. THE VALUE MAY BE SWITCHED BETWEEN PRE-SELECTED DEFAULTS TO CHANGE THE MAP VIEW AS THE PROCESS CHANGES.
INSTRUMENT OUT ALARM
21FC3174_ALM_A
State
THIS ALARM FLAG IS GENERATED WHEN A FIELD TRANSMITTER FAILED OR INPUT QUESTIONABLE VALUES, ALL OF WHICH CAN COMPROMISE THE OPERATING POINT CALCULATION. DEPENDING ON THE TRANSMITTER, THE OPERATING POINT MAY STILL BE ABLE TO CALCULATE.
POLYTROPIC HEAD (FT-LBF/LBM)
37500
36250
35000
33750
32500
31250
30000
28750
27500
26250
25000
23750
22500
21250
20000
18750
17500
16250
15000
200
250
300
350
400
450
500
550
600
650
700
SUCTION FLOW (ACFM)
Reserved for Faceplates

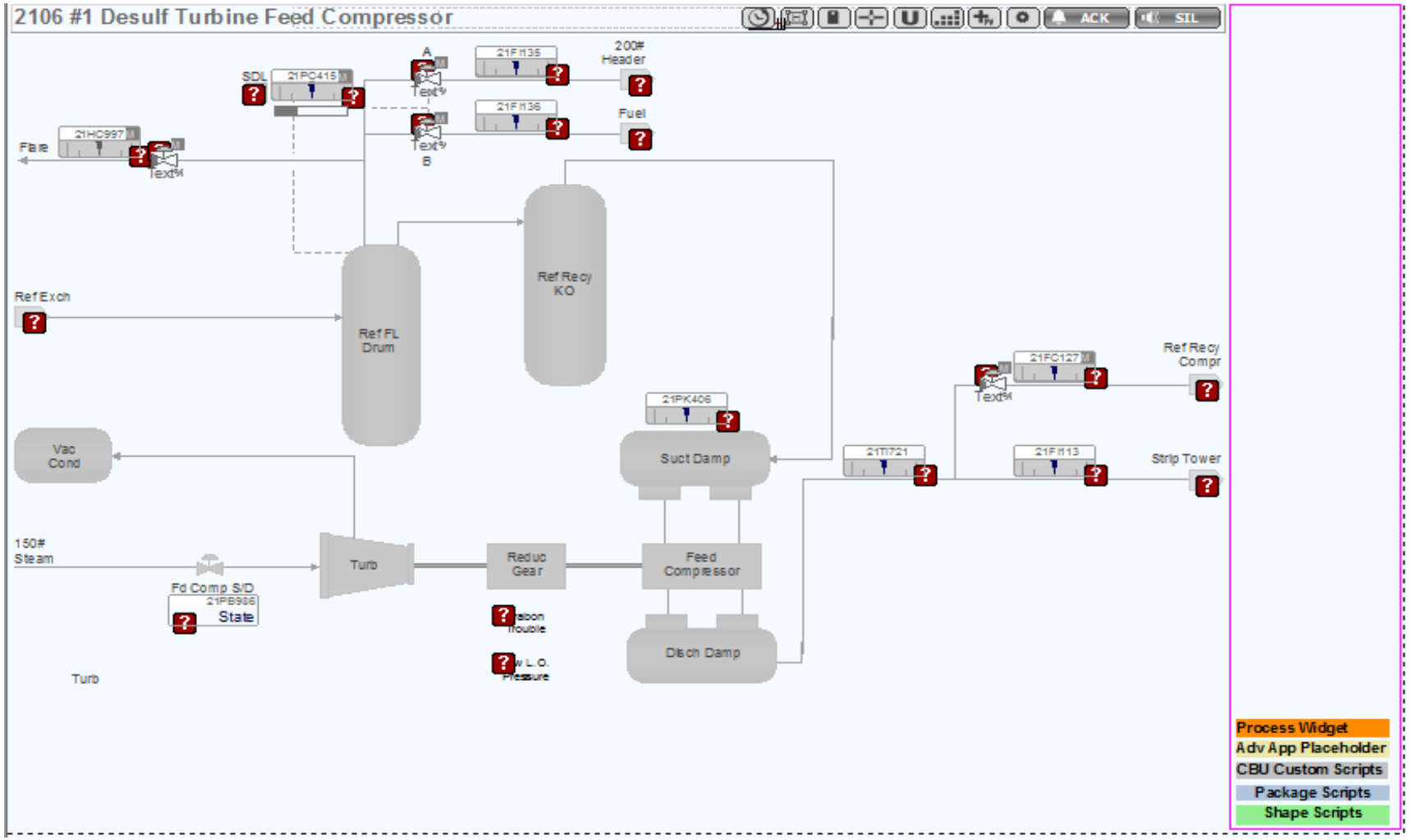
1.73 2105 #1 DESULF TURB RECY / SPARE COMPRESSOR (Reformer_2105.htm)

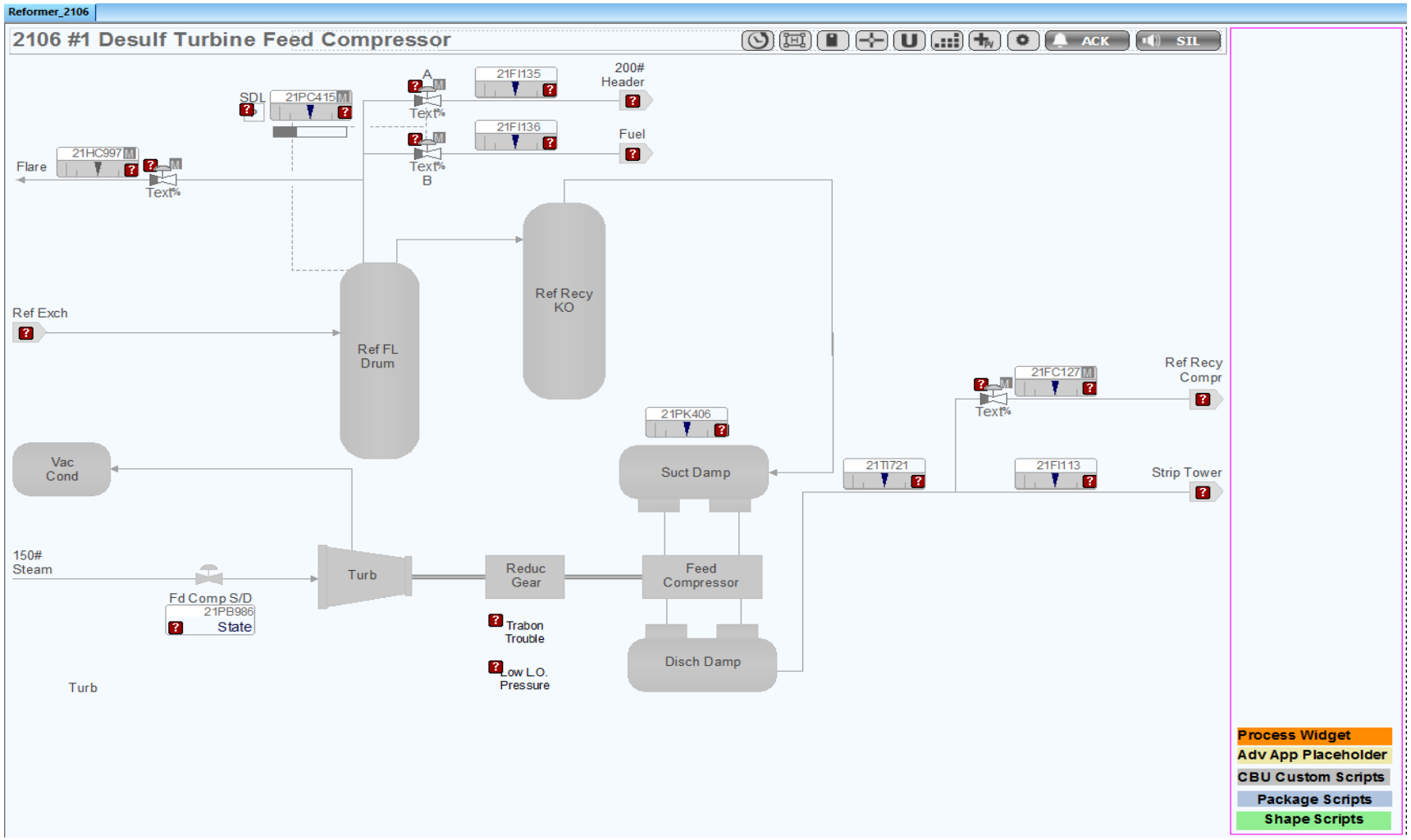


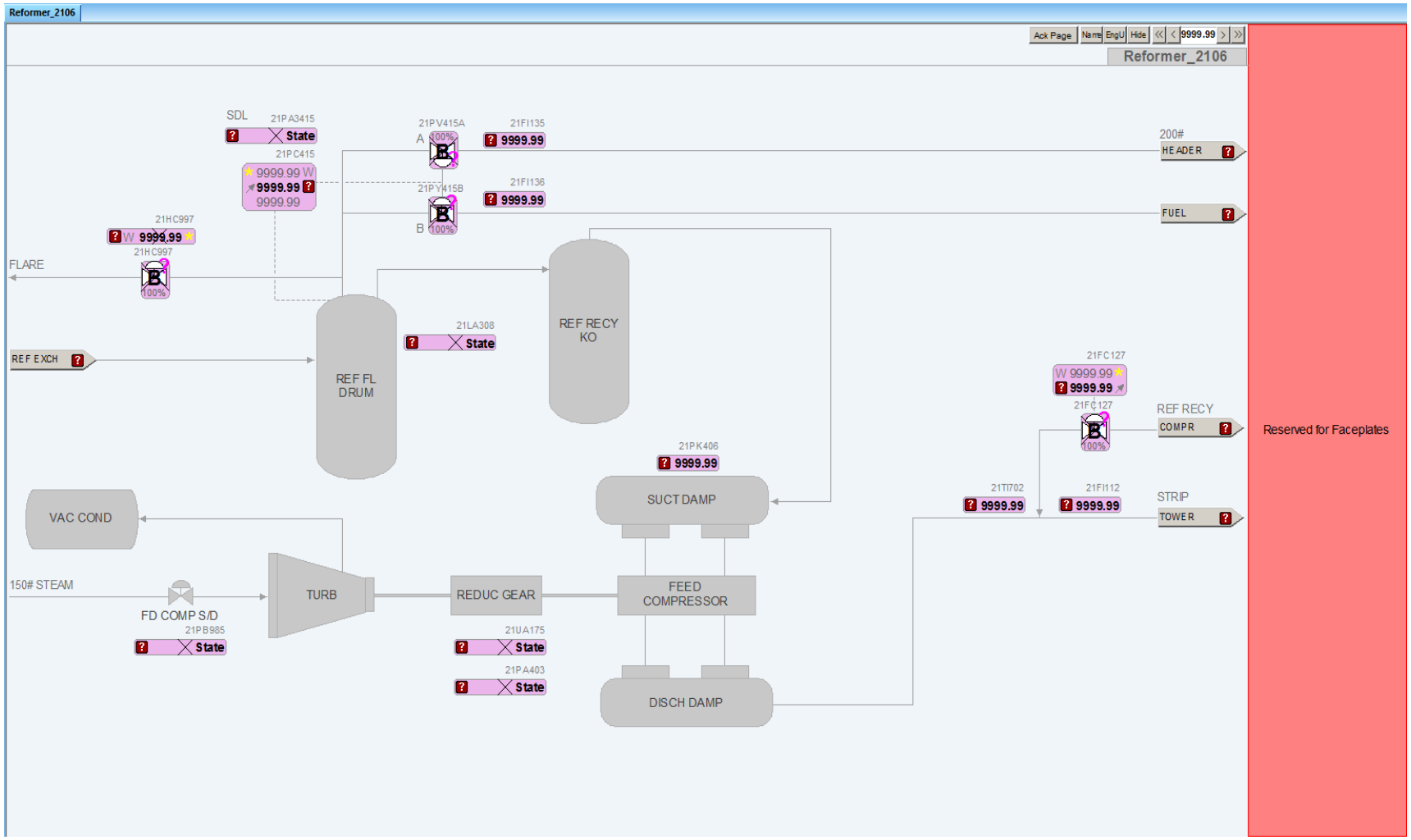

Reformer_2105
2105 #1 Desulf Turb Recy / Spare Compressor
ACK
SIL
21PC405
A
Text%
21FI123
650#/200#
Header
21FI124
Fuel
Text%
B
Elec Desulf
Recy Compr
HP Amine
Contactor
HP Amine
KO Pot
Vert Suct
Damp
RPV
3280
Vac
Cond
RPV 3281
Suct Damp
Elec Desulf
Recy Compr
21TI702
21FI112
Des Feed
Exch/H2 Dryers
150#
Steam
Spr Comp S/D
21PB985
State
Turb
Reduc
Gear
Turb Recy
Compr
Trabon
Trouble
Low L.O.
Pressure
RPV 3283
Disch Damp
Vert Dis
Damp
RPV
3282
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2105
Ack Page
Name
EngU
Hide
9999.99
Reformer_2105
21PY405A
A
100%
21FI123
9999.99
650#/200#
HEADER
21PC405
9999.99 W
9999.99
9999.99
21PY405B
21FI124
9999.99
FUEL
B
100%
ELEC DESULF
RECY
COMPR
HP AMINE
CONTACTOR
HP AMINE
KO POT
21LA308
State
VERT SUCT
DAMP RPV
3280
ELEC DESULF
RECY
COMPR
Reserved for Faceplates
21TI702
9999.99
21FI112
9999.99
DES FEED
EXCH/H2
DRYERS
RPV 3281 SUCT
VAC COND
150# STEAM
SPR COMP S/D
21PB985
State
TURB
REDUC
TURB RECY
21UA175
State
21PA403
State
RPV 3283 DISCH
VERT DIS
DAMP RPV
3282

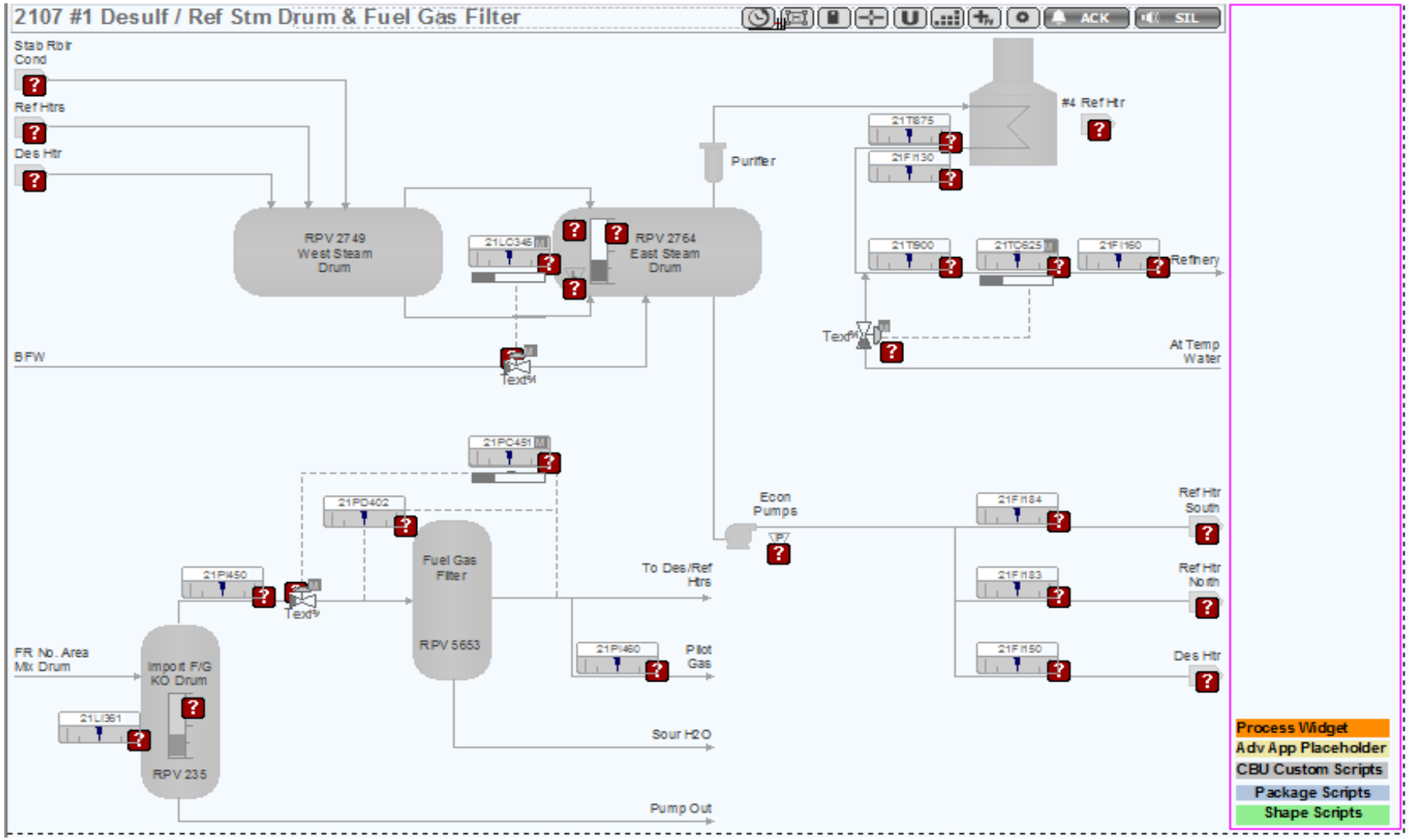
1.74 2106 #1 DESULF TURBINE FEED COMPRESSOR (Reformer_2106.htm)

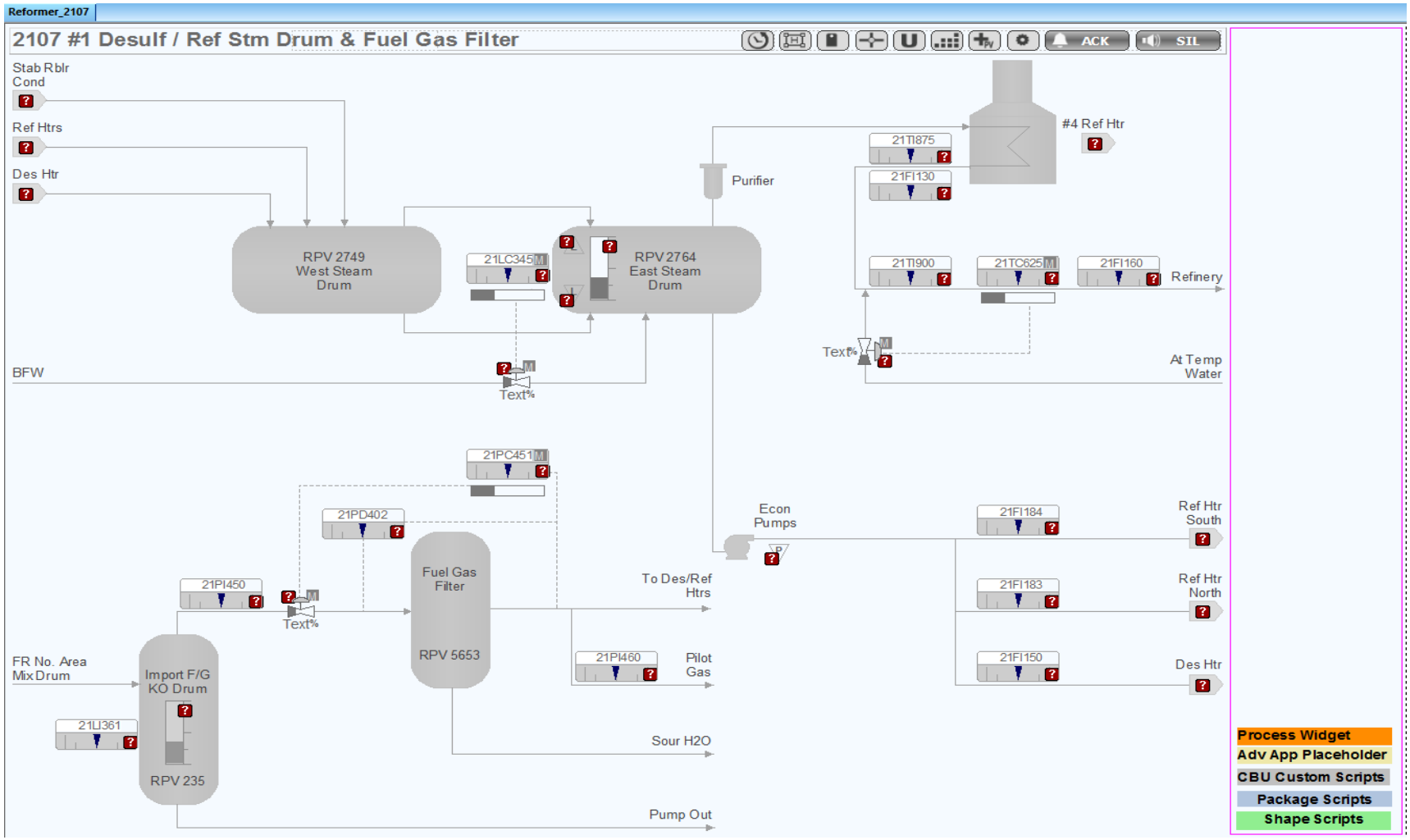


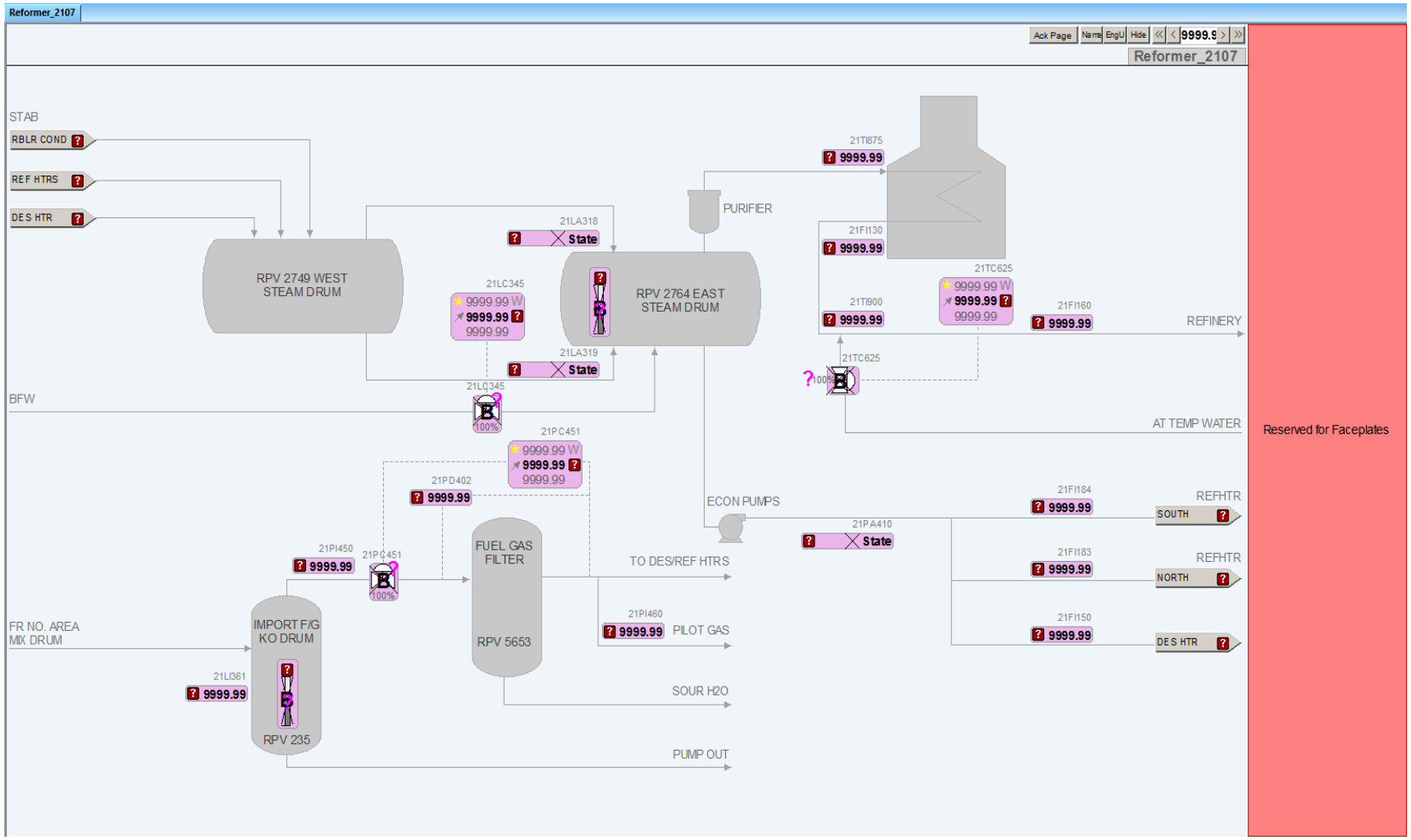

Reformer_2106
2106 #1 Desulf Turbine Feed Compressor
ACK
SIL
SDL
21PC415
A
Text%
21FI135
200#
Header
21FI136
Fuel
Text%
B
Flare
21HC997
Text%
Ref Exch
Ref FL
Drum
Ref Recy
KO
21FC127
Ref Recy
Compr
Text%
21PK406
Vac
Cond
Suct Damp
21TI721
21FI113
Strip Tower
150#
Steam
Turb
Reduc
Gear
Feed
Compressor
Fd Comp S/D
21PB986
State
Trabon
Trouble
Low L.O.
Pressure
Disch Damp
Turb
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2106
Ack Page
Name
EngU
Hide
9999.99
Reformer_2106
SDL
21PA3415
State
21PC415
9999.99 W
9999.99
9999.99
21PV415A
A
100%
21FI135
9999.99
21PV415B
B
100%
21FI136
9999.99
200#
HEADER
FUEL
21HC997
W 9999.99
21HC997
100%
FLARE
REF EXCH
REF FL
DRUM
21LA308
State
REF RECY
KO
21FC127
W 9999.99
9999.99
21FC127
100%
REF RECY
COMPR
Reserved for Faceplates
21PK406
9999.99
SUCT DAMP
21TI702
9999.99
21FI112
9999.99
STRIP
TOWER
VAC COND
150# STEAM
FD COMP S/D
21PB985
State
TURB
REDUC GEAR
FEED
COMPRESSOR
21UA175
State
21PA403
State
DISCH DAMP

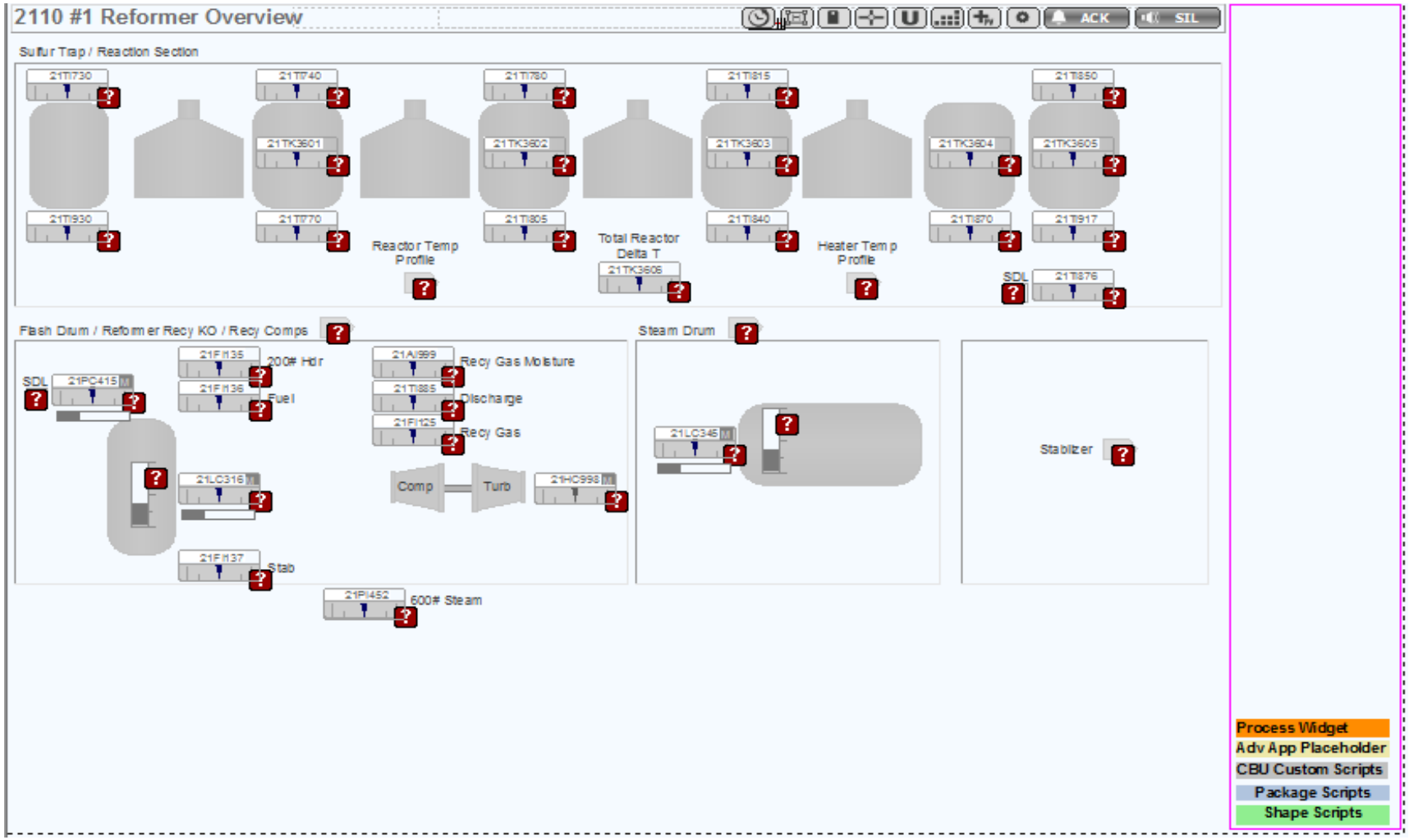
1.75 2107 #1 DESULF / REF STM DRUM & FUEL GAS FILTER (Reformer_2107.htm)

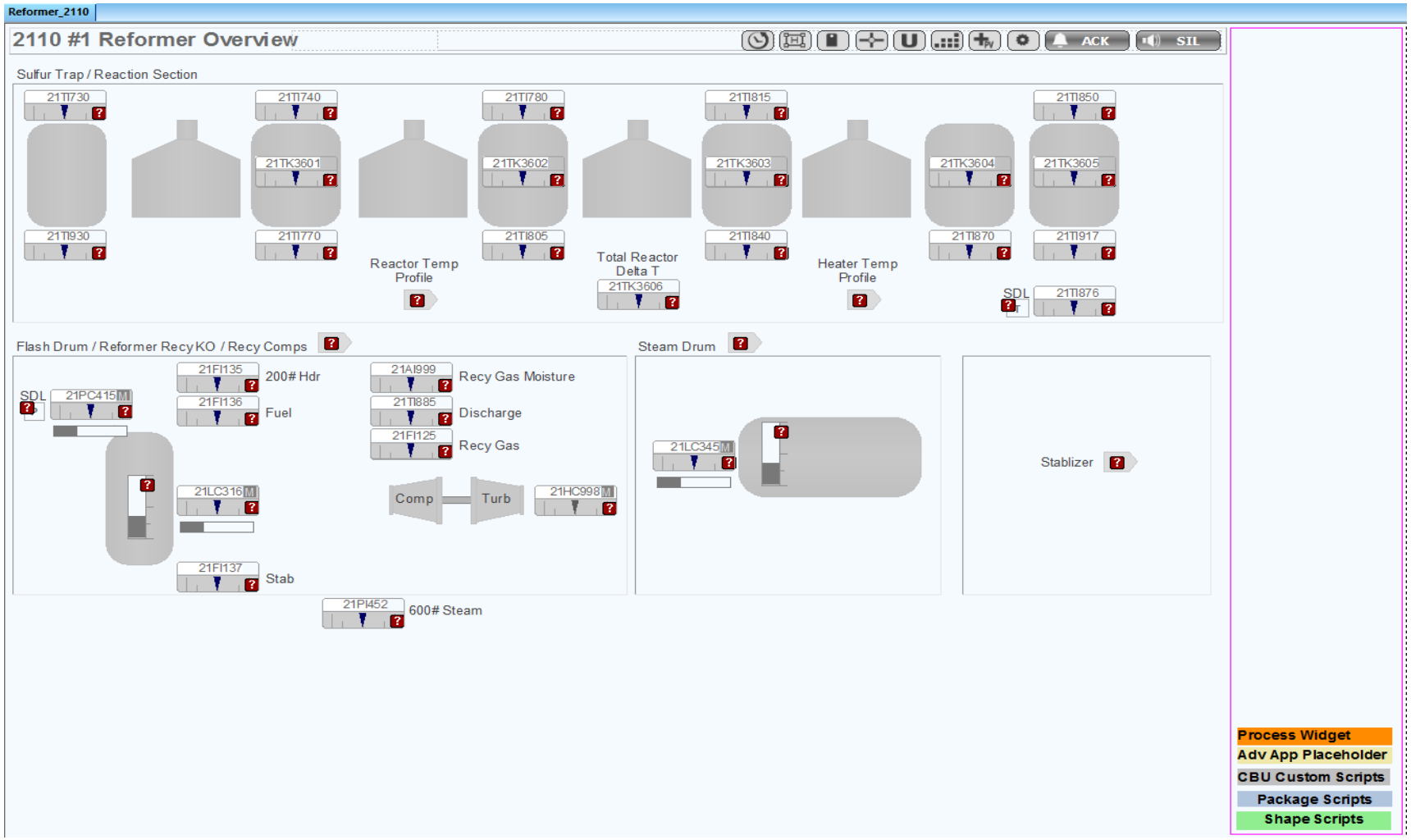


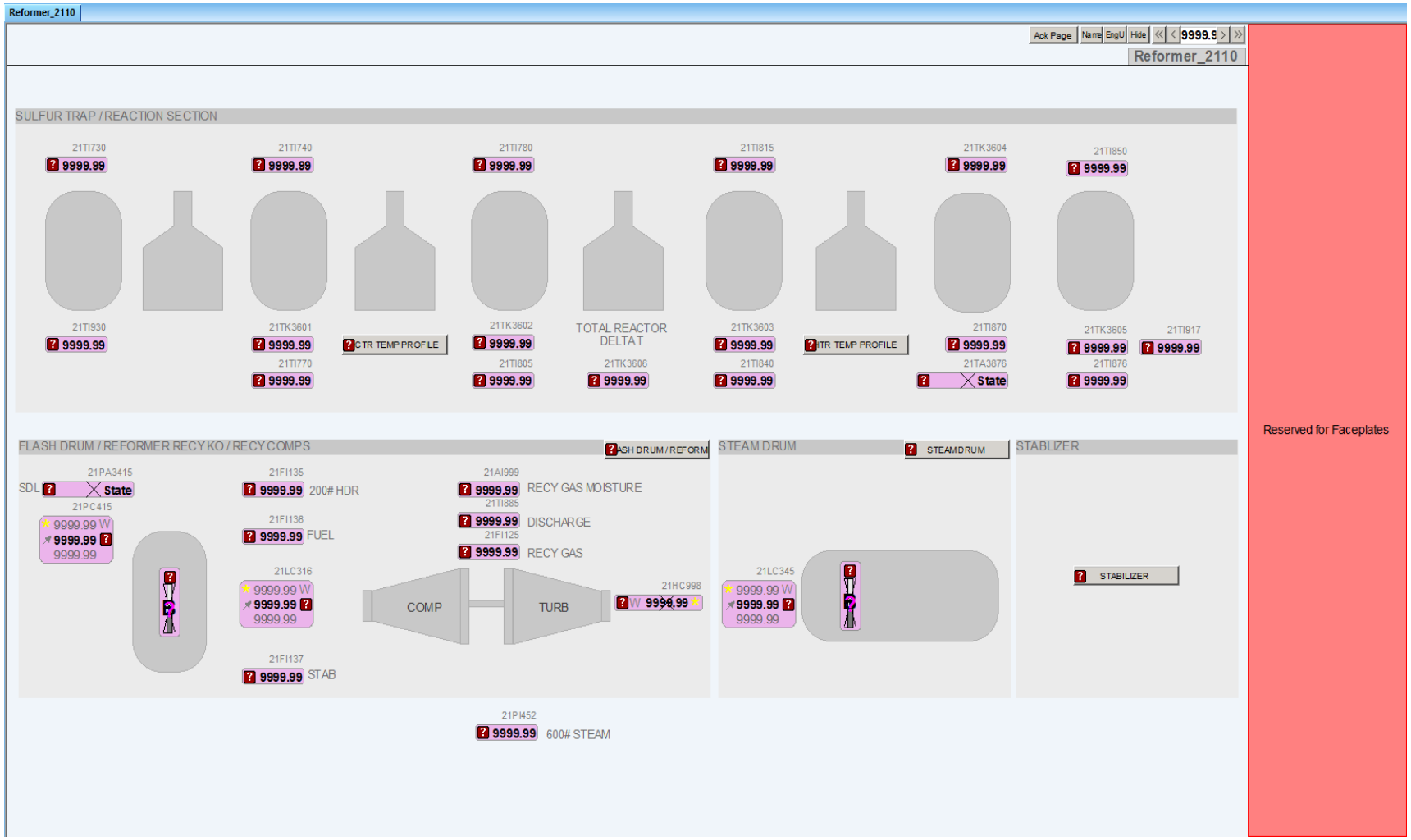

Reformer_2107
2107 #1 Desulf / Ref Stm Drum & Fuel Gas Filter
ACK
SIL
Stab Rblr Cond
Ref Htrs
Des Htr
RPV 2749 West Steam Drum
21LC345
RPV 2764 East Steam Drum
Purifier
#4 Ref Htr
21TI875
21FI130
21TI900
21TC625
21FI160
Refinery
Text%
At Temp Water
BFW
21PC451
21PD402
Econ Pumps
21FI184
Ref Htr South
21FI183
Ref Htr North
21FI150
Des Htr
21PI450
Fuel Gas Filter
RPV 5653
To Des/Ref Htrs
21PI460
Pilot Gas
Sour H2O
FR No. Area Mix Drum
Import F/G KO Drum
21LI361
RPV 235
Pump Out
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2107
Ack Page
Name
EngU
Hide
Reformer_2107
STAB
RBLR COND
REF HTRS
DES HTR
RPV 2749 WEST STEAM DRUM
21LA318
State
21LC345
9999.99 W
9999.99
9999.99
RPV 2764 EAST STEAM DRUM
PURIFIER
21TI875
9999.99
21FI130
9999.99
21TC625
9999.99 W
9999.99
9999.99
21TI900
9999.99
21FI160
9999.99
REFINERY
21LA319
State
21TC625
100%
BFW
21LC345
100%
AT TEMP WATER
21PC451
9999.99 W
9999.99
9999.99
21PD402
9999.99
ECON PUMPS
21FI184
9999.99
REFHTR
SOUTH
21PA410
State
21FI183
9999.99
REFHTR
NORTH
21PI450
9999.99
21PC451
100%
FUEL GAS FILTER
RPV 5653
TO DES/REF HTRS
21FI150
9999.99
DES HTR
21PI460
9999.99
PILOT GAS
FR NO. AREA MIX DRUM
IMPORT F/G KO DRUM
21LI361
9999.99
RPV 235
SOUR H2O
PUMP OUT
Reserved for Faceplates

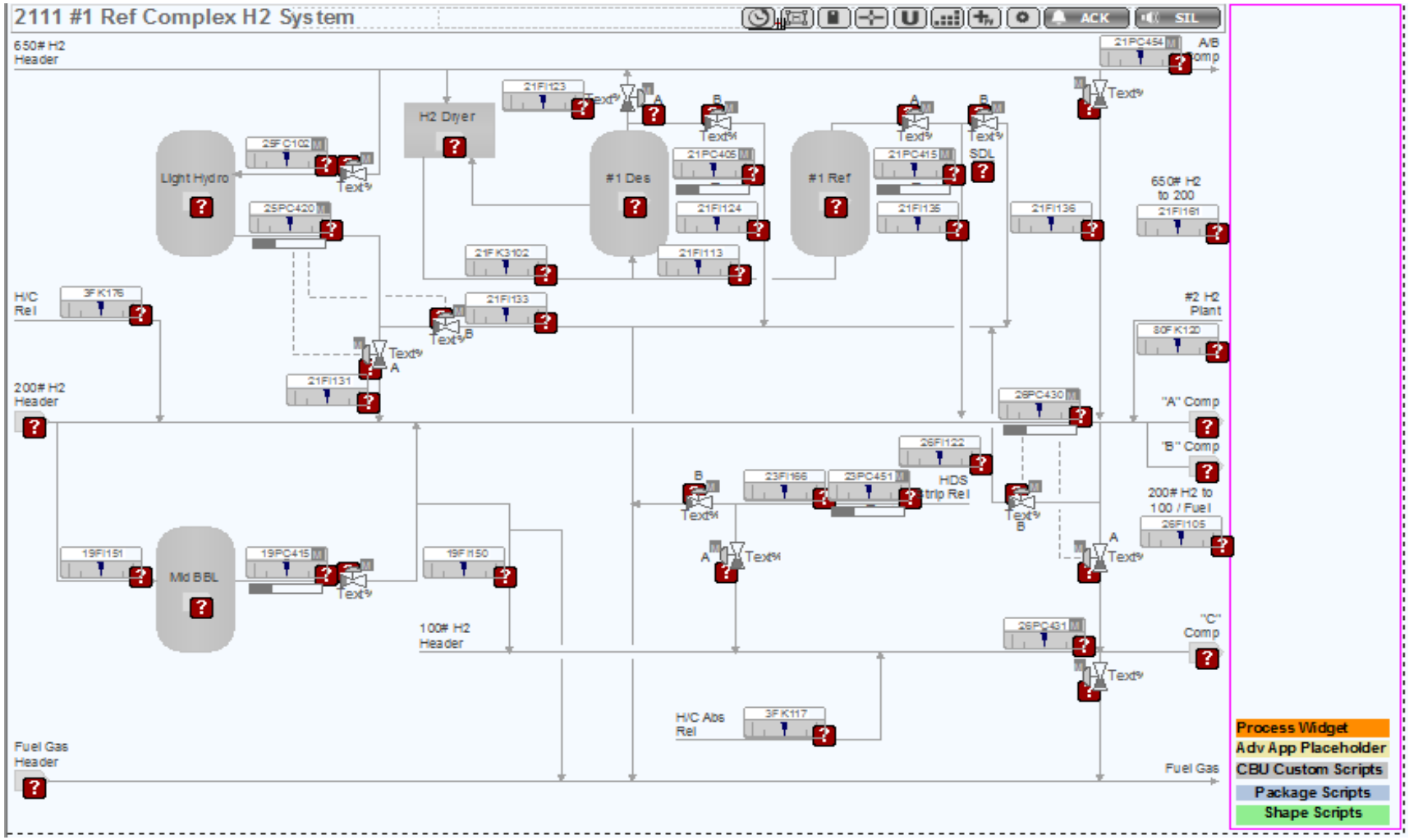
1.76 2110 #1 REFORMER OVERVIEW (Reformer_2110.htm)

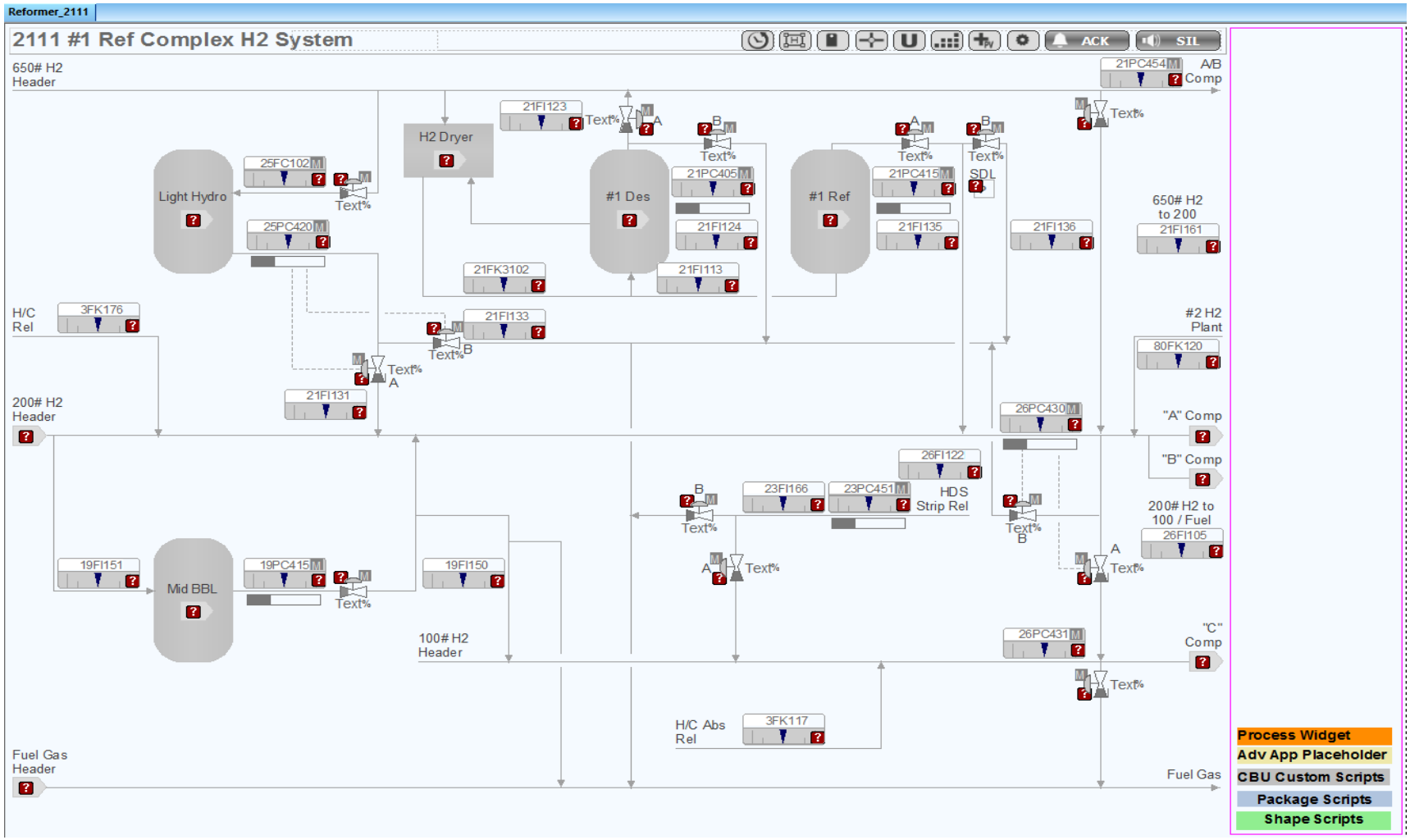


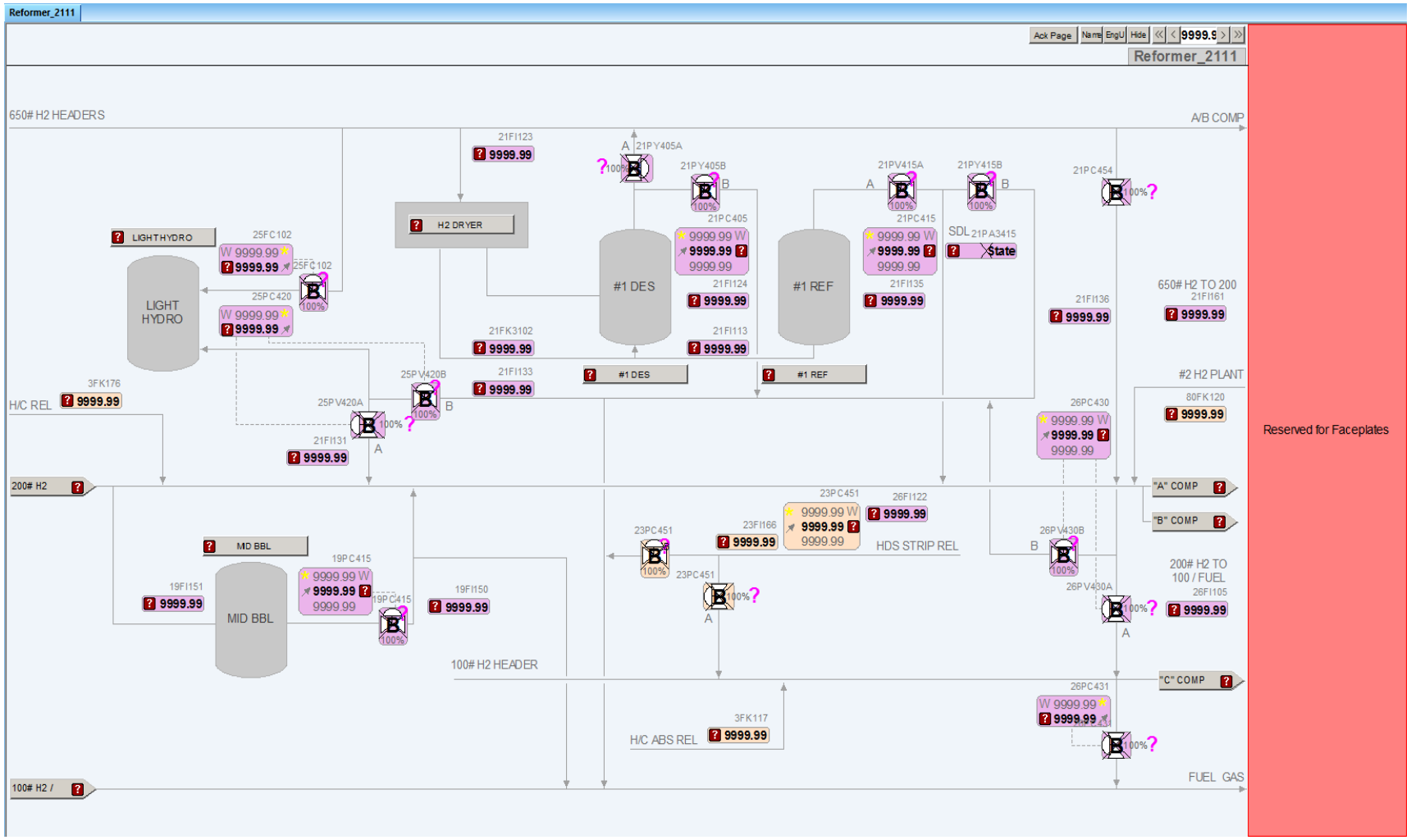

Reformer_2110
2110 #1 Reformer Overview
ACK
SIL
Sulfur Trap / Reaction Section
21TI730
21TI740
21TI780
21TI815
21TI850
21TK3601
21TK3602
21TK3603
21TK3604
21TK3605
21TI930
21TI770
21TI805
21TI840
21TI870
21TI917
Reactor Temp Profile
Total Reactor Delta T
21TK3606
Heater Temp Profile
SDL
21TI876
Flash Drum / Reformer Recy KO / Recy Comps
Steam Drum
21FI135
200# Hdr
21FI136
Fuel
21AI999
Recy Gas Moisture
21TI885
Discharge
21FI125
Recy Gas
SDL
21PC415
21LC316
Comp
Turb
21HC998
21FI137
Stab
21LC345
Stablizer
21PI452
600# Steam
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2110
Ack Page
Name
EngU
Hide
Reformer_2110
SULFUR TRAP / REACTION SECTION
21TI730
9999.99
21TI740
9999.99
21TI780
9999.99
21TI815
9999.99
21TK3604
9999.99
21TI850
9999.99
21TI930
9999.99
21TK3601
9999.99
CTR TEMP PROFILE
21TK3602
9999.99
TOTAL REACTOR DELTAT
21TK3603
9999.99
HTR TEMP PROFILE
21TI870
9999.99
21TK3605
9999.99
21TI917
9999.99
21TI770
9999.99
21TI805
9999.99
21TK3606
9999.99
21TI840
9999.99
21TA3876
State
21TI876
9999.99
FLASH DRUM / REFORMER RECYKO / RECYCOMPS
ASH DRUM / REFORM
STEAM DRUM
STEAMDRUM
STABLIZER
21PA3415
SDL
State
21PC415
9999.99 W
9999.99
9999.99
21FI135
9999.99
200# HDR
21AI999
9999.99
RECY GAS MOISTURE
21TI885
9999.99
DISCHARGE
21FI125
9999.99
RECY GAS
21FI136
9999.99
FUEL
21LC316
9999.99 W
9999.99
9999.99
21FI137
9999.99
STAB
COMP
TURB
21HC998
9999.99
21LC345
9999.99 W
9999.99
9999.99
STABILIZER
21PI452
9999.99
600# STEAM
Reserved for Faceplates

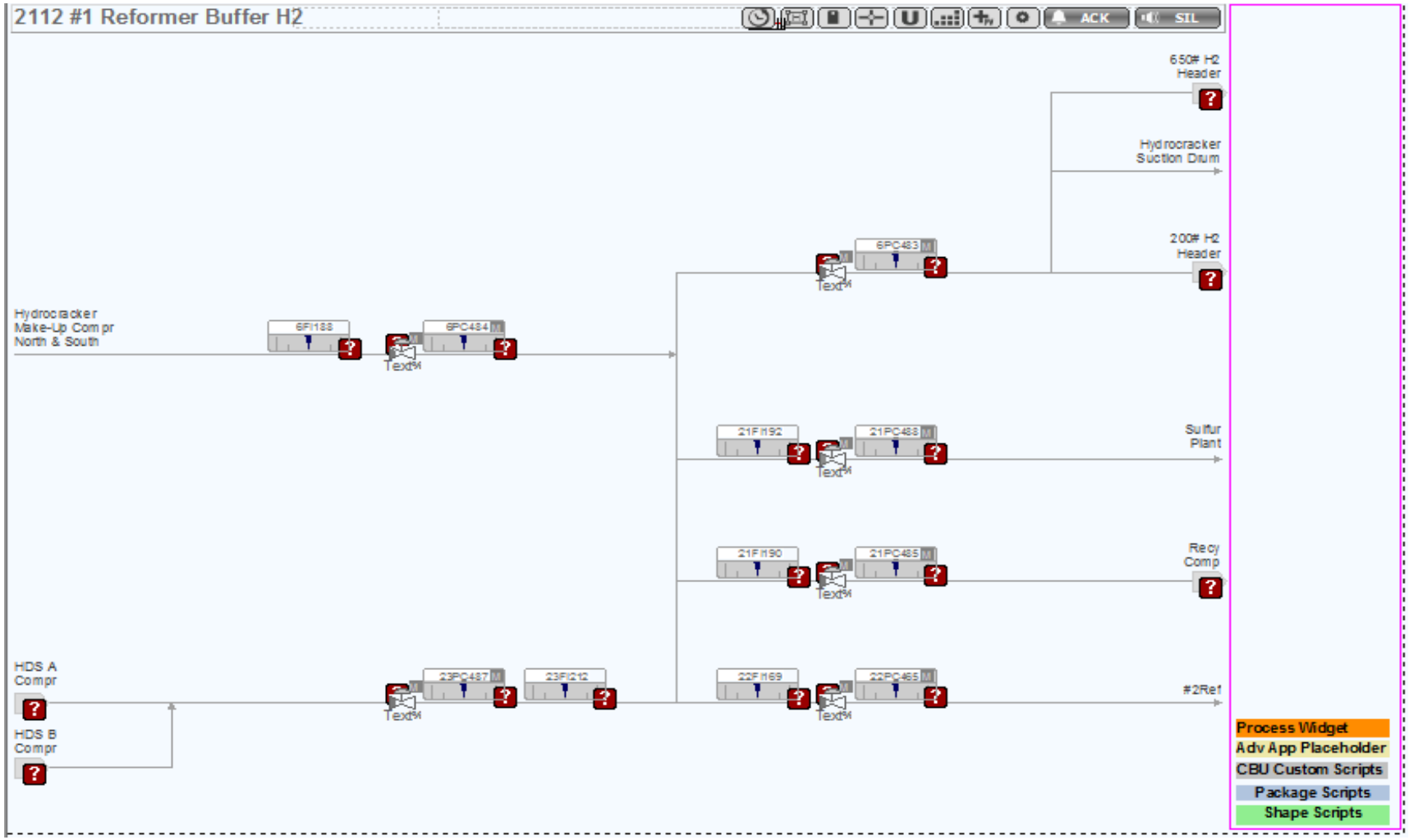
1.77 2111 #1 REF COMPLEX H2 SYSTEM (Reformer_2111.htm)

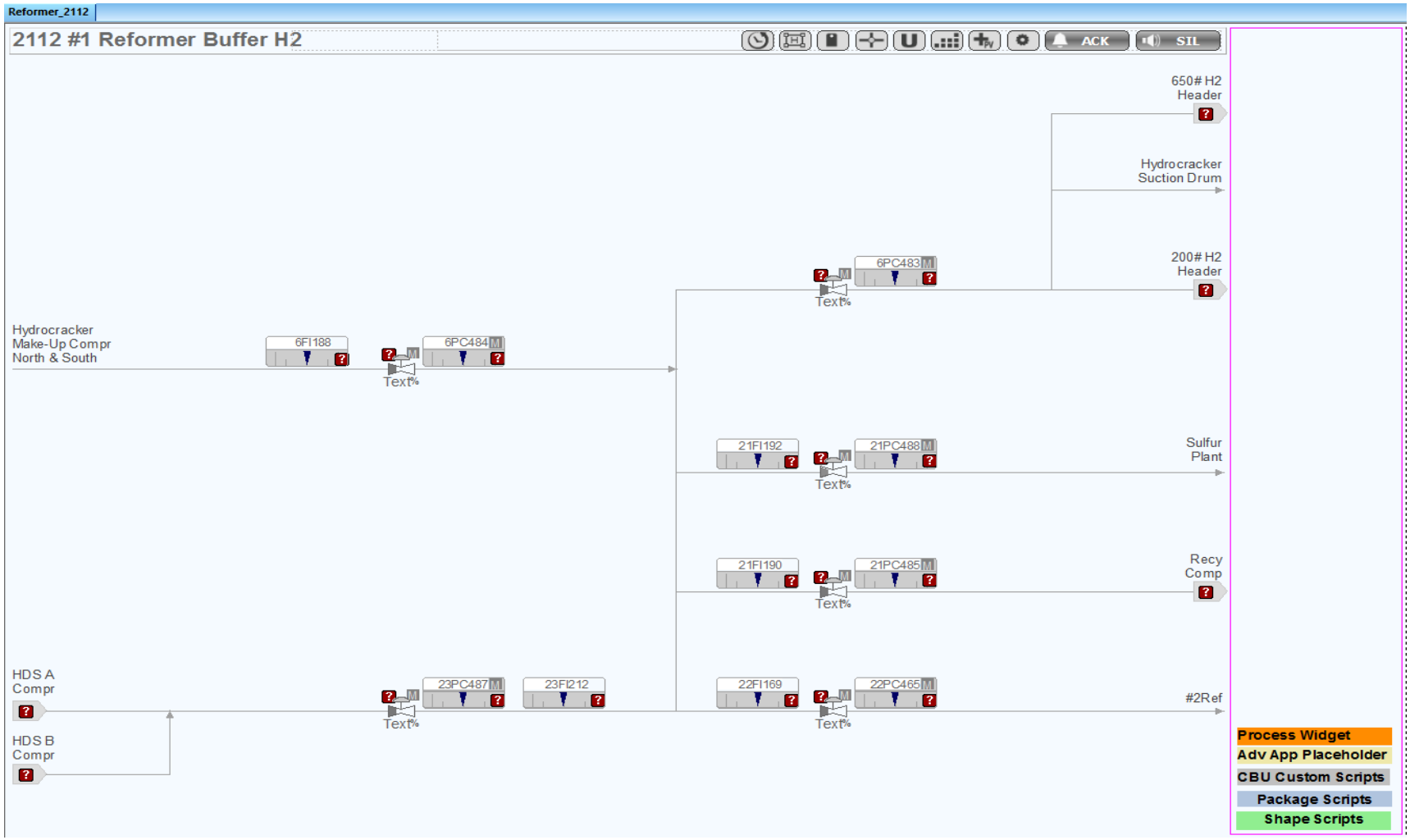


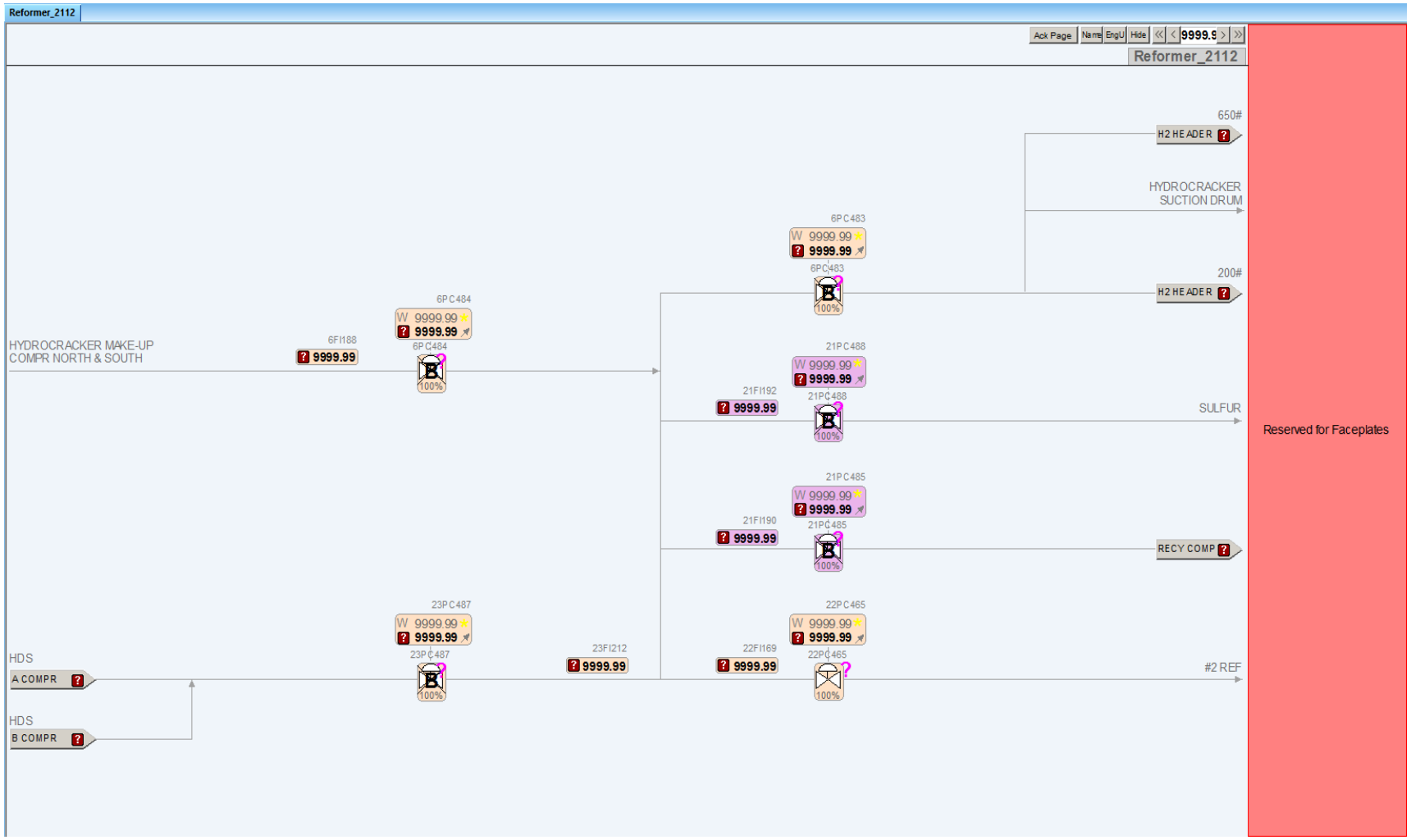

Reformer_2111
2111 #1 Ref Complex H2 System
ACK
SIL
650# H2 Header
21PC454
A/B Comp
21FI123
Text%
H2 Dryer
Light Hydro
25FC102
25PC420
#1 Des
21PC405
21FI124
21FI113
21FK3102
#1 Ref
21PC415
21FI135
SDL
21FI136
650# H2 to 200
21FI161
H/C Rel
3FK176
21FI133
21FI131
#2 H2 Plant
80FK120
200# H2 Header
26PC430
"A" Comp
"B" Comp
26FI122
23FI166
23PC451
HDS Strip Rel
200# H2 to 100 / Fuel
26FI105
19FI151
Mid BBL
19PC415
19FI150
100# H2 Header
26PC431
"C" Comp
H/C Abs Rel
3FK117
Fuel Gas Header
Fuel Gas
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2111
Ack Page
Name
EngU
Hide
Reformer_2111
650# H2 HEADERS
A/B COMP
21FI123
9999.99
H2 DRYER
LIGHT HYDRO
25FC102
25PC420
LIGHT HYDRO
21PY405A
21PY405B
21PC405
#1 DES
21FI124
21FK3102
21FI133
21FI113
#1 DES
21PV415A
21PV415B
21PC415
#1 REF
21FI135
SDL 21PA3415
$tate
#1 REF
21PC454
21FI136
650# H2 TO 200
21FI161
#2 H2 PLANT
80FK120
3FK176
H/C REL
25PV420A
25PV420B
21FI131
26PC430
200# H2
"A" COMP
"B" COMP
23PC451
23FI166
26FI122
HDS STRIP REL
26PV430B
MD BBL
19PC415
19FI151
MID BBL
19FI150
200# H2 TO 100 / FUEL
26FI105
26PV430A
100# H2 HEADER
"C" COMP
26PC431
3FK117
H/C ABS REL
100# H2 /
FUEL GAS
Reserved for Faceplates

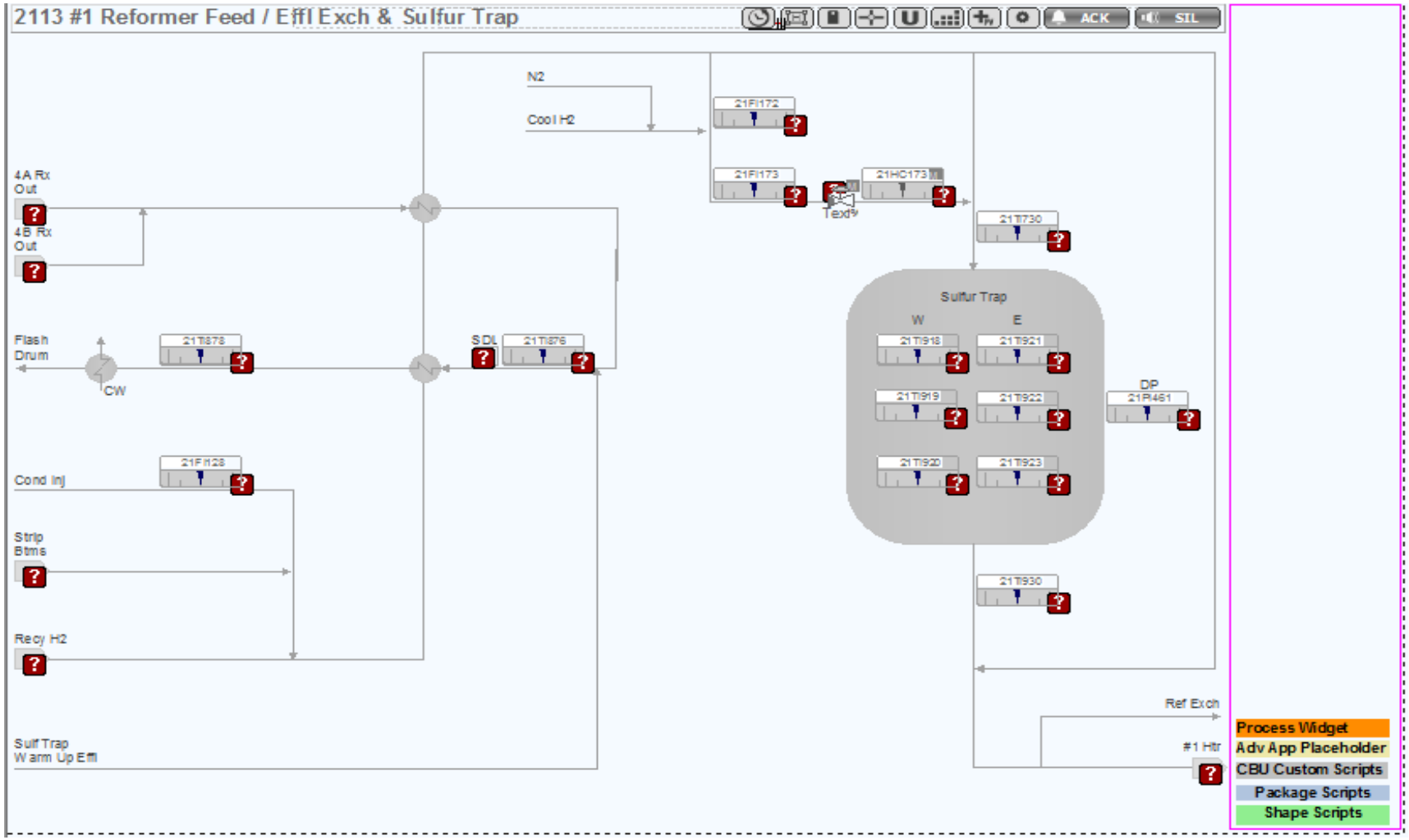
1.78 2112 #1 REFORMER BUFFER H2 (Reformer_2112.htm)

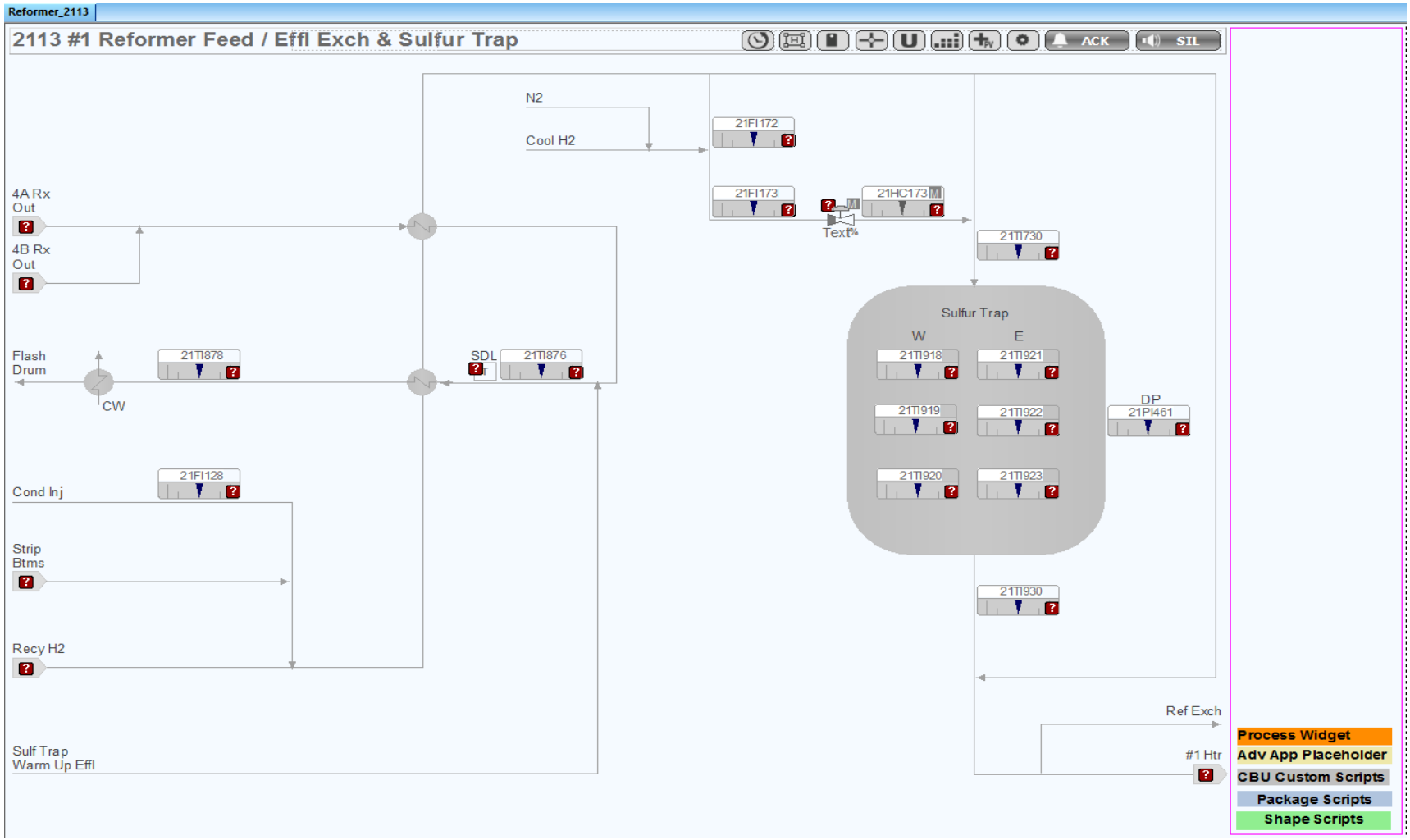


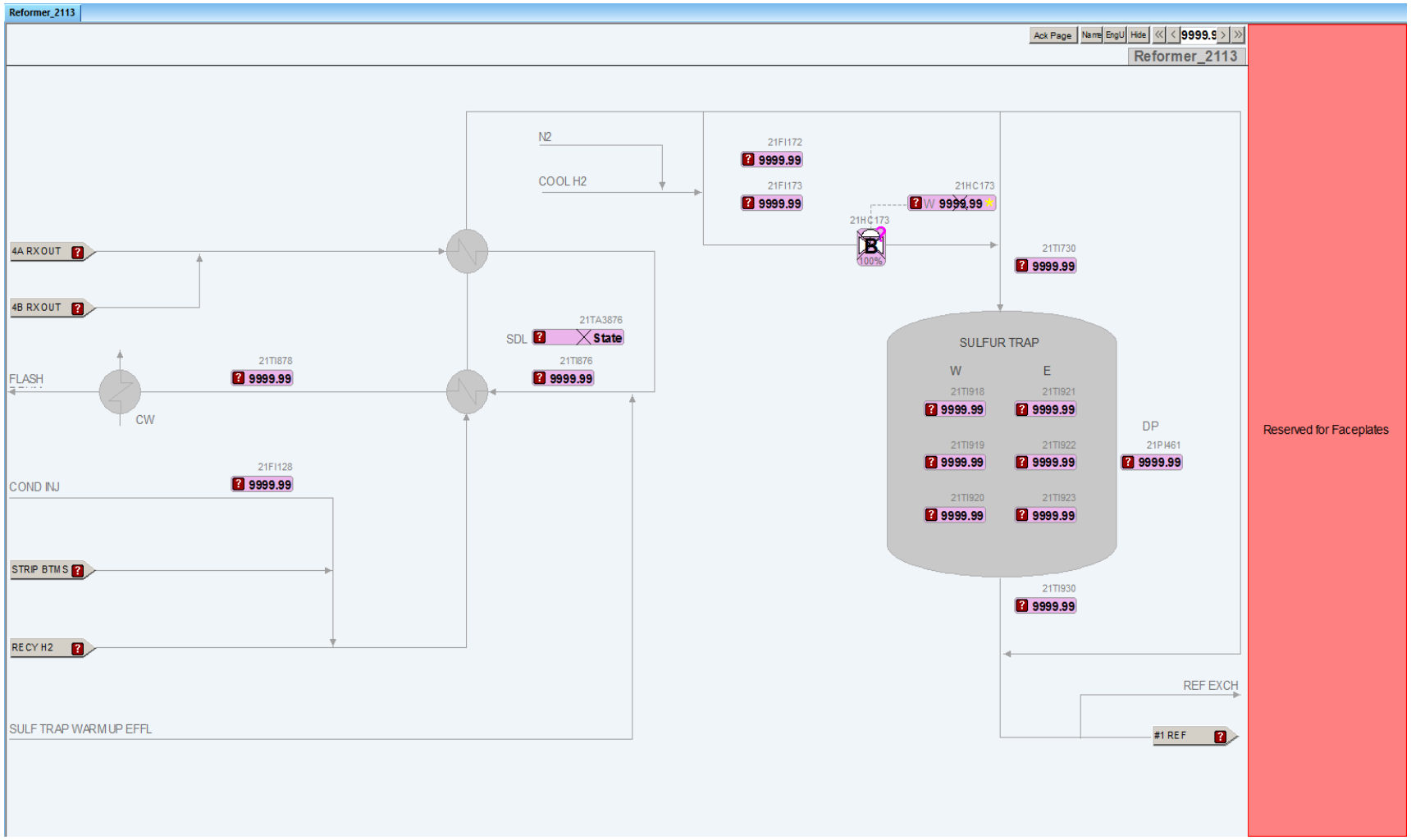

Reformer_2112
2112 #1 Reformer Buffer H2
ACK
SIL
650# H2 Header
Hydrocracker Suction Drum
200# H2 Header
6PC483
Text%
Hydrocracker Make-Up Compr North & South
6FI188
6PC484
Text%
21FI192
21PC488
Text%
Sulfur Plant
21FI190
21PC485
Text%
Recy Comp
HDS A Compr
HDS B Compr
23PC487
23FI212
Text%
22FI169
22PC465
Text%
#2Ref
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2112
Ack Page
Name
EngU
Hide
9999.9
Reformer_2112
650#
H2 HEADER
HYDROCRACKER SUCTION DRUM
6PC483
W 9999.99
9999.99
6PC483
100%
200#
H2 HEADER
6PC484
W 9999.99
9999.99
6PC484
100%
6FI188
9999.99
HYDROCRACKER MAKE-UP COMPR NORTH & SOUTH
21PC488
W 9999.99
9999.99
21FI192
9999.99
21PC488
100%
SULFUR
21PC485
W 9999.99
9999.99
21FI190
9999.99
21PC485
100%
RECY COMP
23PC487
W 9999.99
9999.99
23PC487
100%
23FI212
9999.99
22PC465
W 9999.99
9999.99
22FI169
9999.99
22PC465
100%
#2 REF
HDS
A COMPR
HDS
B COMPR
Reserved for Faceplates

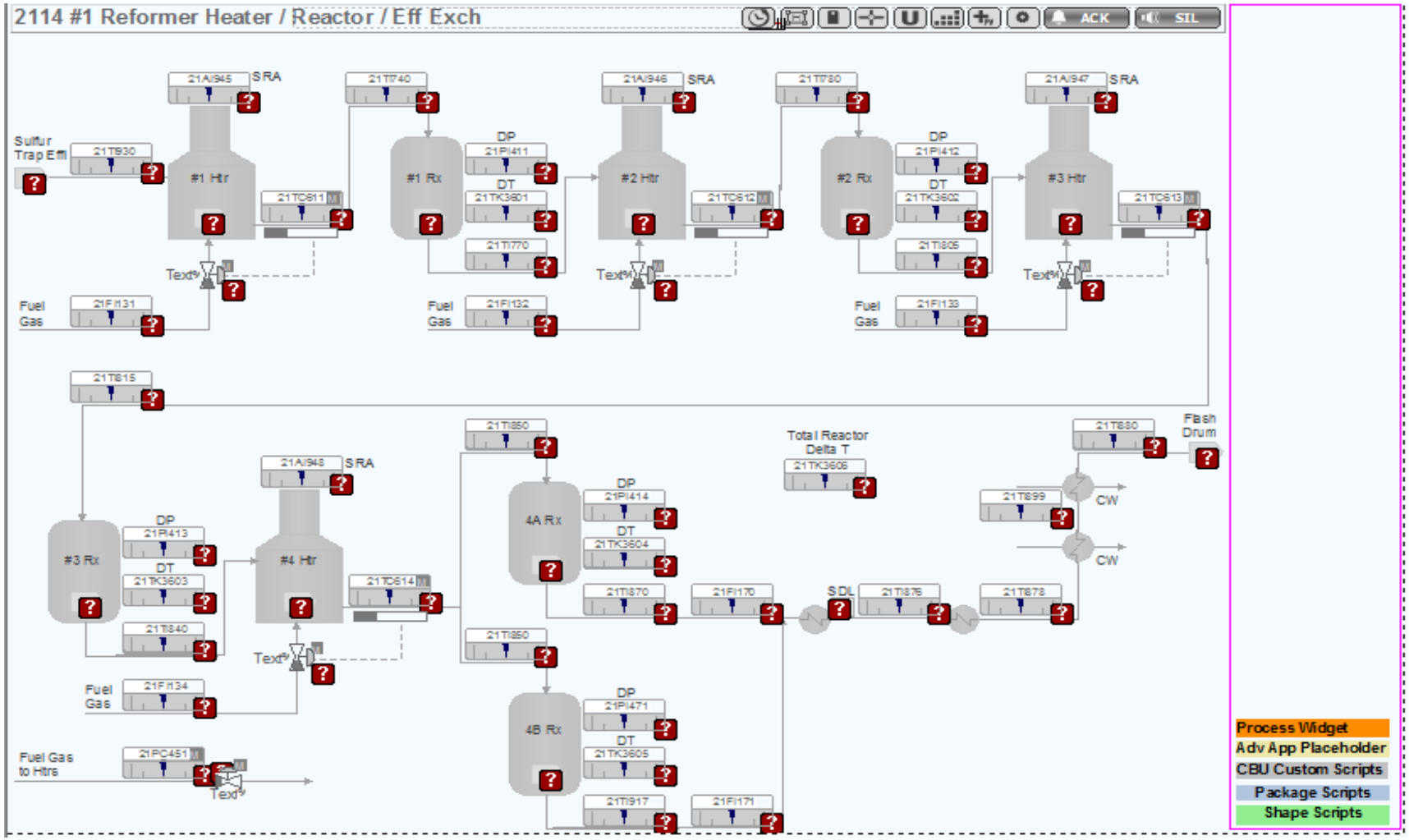
1.79 2113 #1 REFORMER FEED / EFFL EXCH & SULFUR TRAP (Reformer_2113.htm)

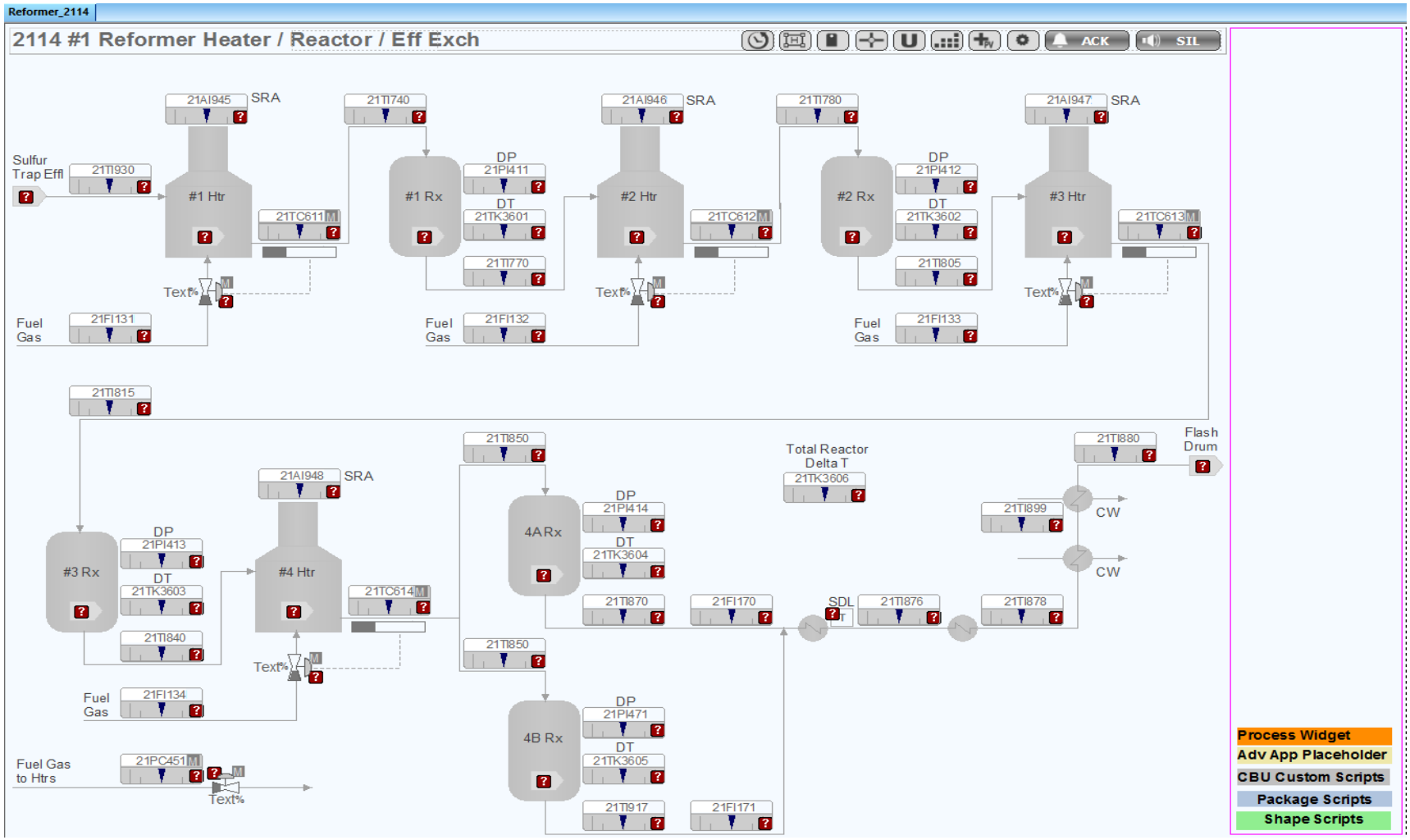


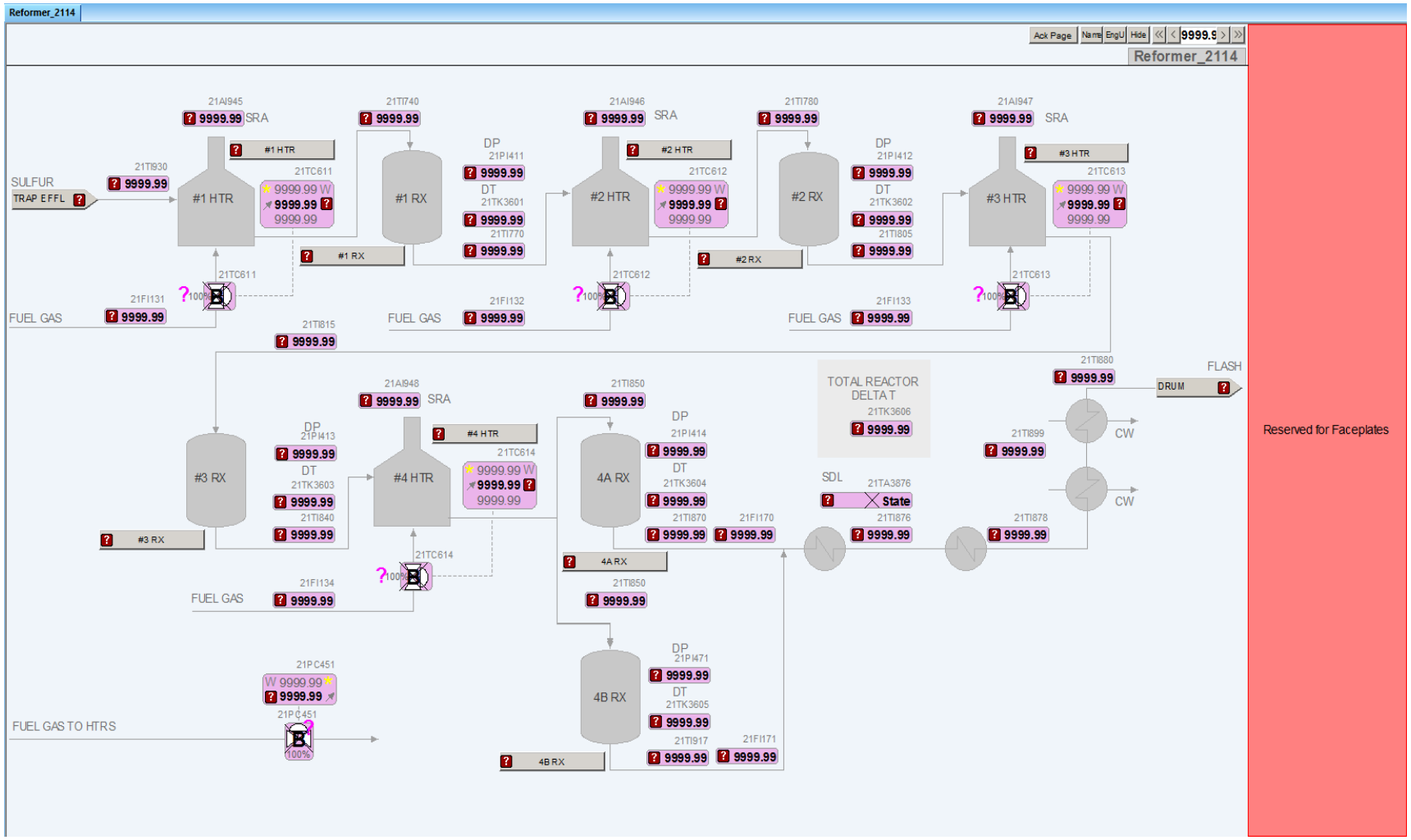

Reformer_2113
2113 #1 Reformer Feed / Effl Exch & Sulfur Trap
ACK
SIL
N2
Cool H2
21FI172
21FI173
21HC173
Text%
21TI730
4A Rx Out
4B Rx Out
Flash Drum
CW
21TI878
SDL
21TI876
Sulfur Trap
W
E
21TI918
21TI921
21TI919
21TI922
21TI920
21TI923
DP
21PI461
21TI930
21FI128
Cond Inj
Strip Btms
Recy H2
Ref Exch
#1 Htr
Sulf Trap Warm Up Effl
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2113
Ack Page
Name
EngU
Hide
9999.9
Reformer_2113
N2
COOL H2
21FI172
9999.99
21FI173
9999.99
21HC173
W 9999.99
21HC173
100%
21TI730
9999.99
4A RXOUT
4B RXOUT
21TA3876
SDL
State
21TI876
9999.99
FLASH
21TI878
9999.99
CW
SULFUR TRAP
W
E
21TI918
9999.99
21TI921
9999.99
21TI919
9999.99
21TI922
9999.99
21TI920
9999.99
21TI923
9999.99
DP
21PI461
9999.99
21FI128
9999.99
COND INJ
STRIP BTMS
RECY H2
21TI930
9999.99
REF EXCH
#1 REF
SULF TRAP WARM UP EFFL
Reserved for Faceplates

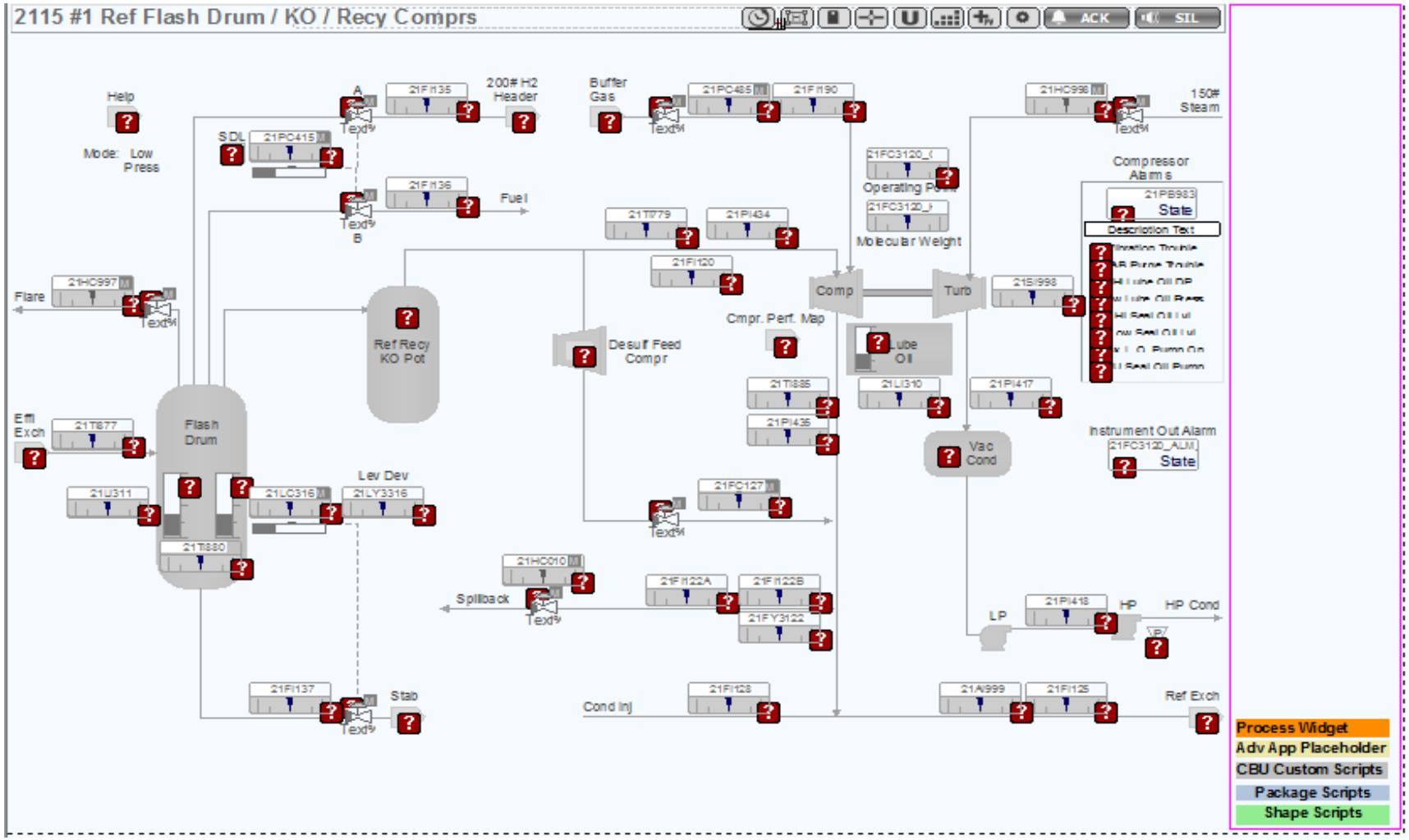
1.80 2114 #1 REFORMER HEATER / REACTOR / EFF EXCH (Reformer_2114.htm)

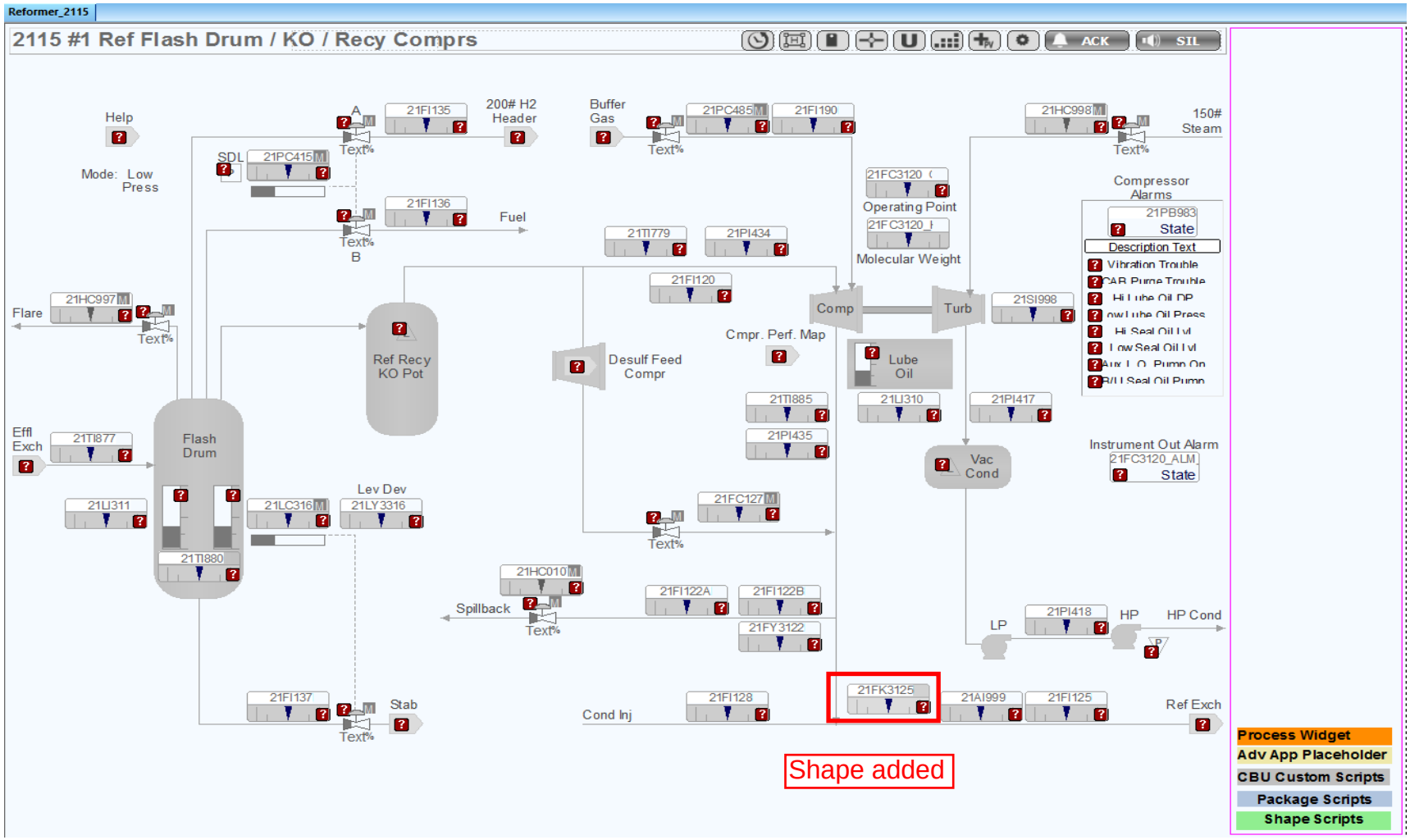


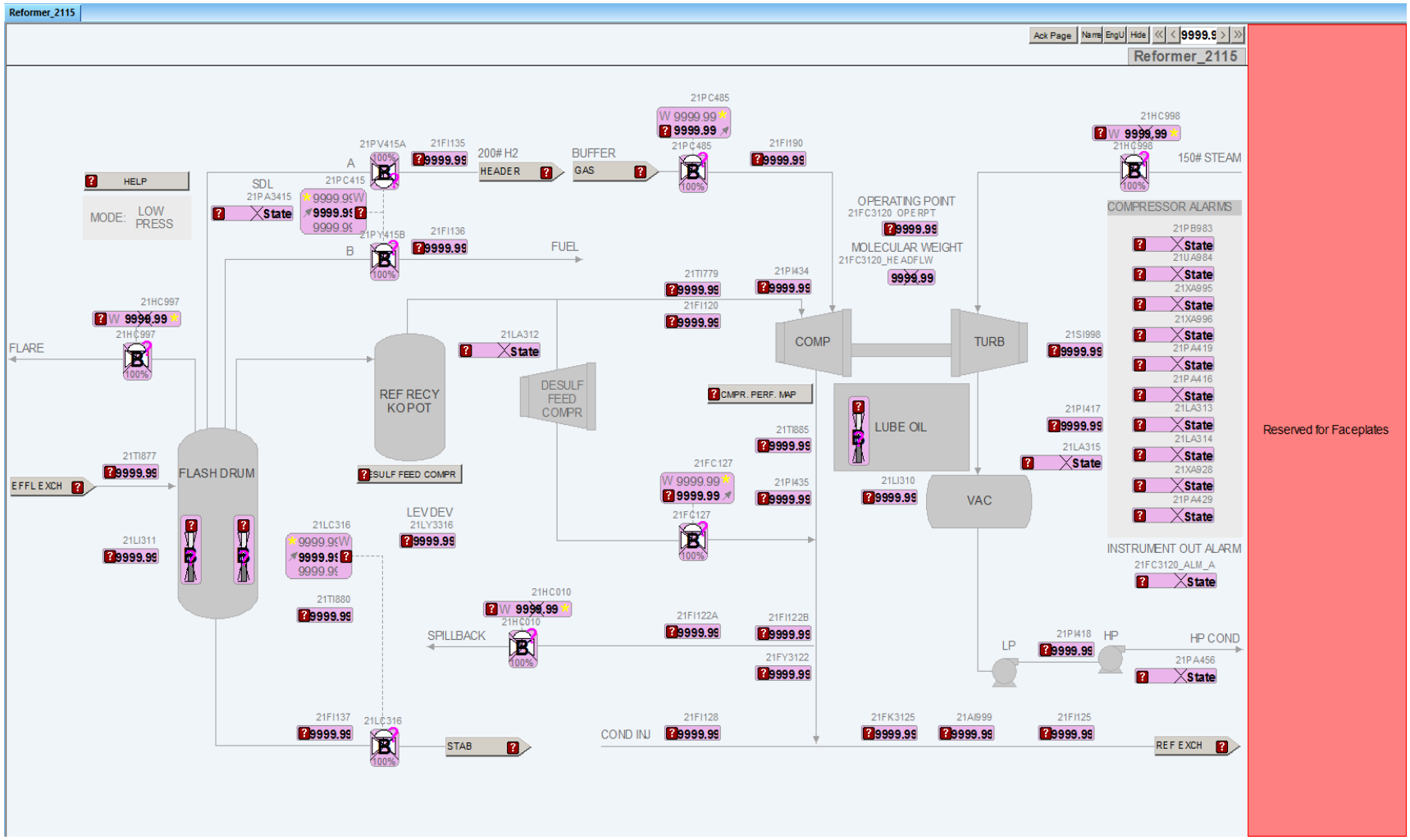

Reformer_2114
2114 #1 Reformer Heater / Reactor / Eff Exch
ACK
SIL
21AI945
SRA
21TI740
21AI946
SRA
21TI780
21AI947
SRA
Sulfur Trap Effl
21TI930
#1 Htr
21TC611
#1 Rx
DP
21PI411
DT
21TK3601
21TI770
#2 Htr
21TC612
#2 Rx
DP
21PI412
DT
21TK3602
21TI805
#3 Htr
21TC613
Text%
Fuel Gas
21FI131
21FI132
21FI133
21TI815
21AI948
SRA
21TI850
Total Reactor Delta T
21TK3606
21TI880
Flash Drum
#3 Rx
DP
21PI413
DT
21TK3603
21TI840
#4 Htr
21TC614
4A Rx
DP
21PI414
DT
21TK3604
21TI870
21FI170
SDL
21TI876
21TI878
21TI899
CW
CW
21FI134
4B Rx
DP
21PI471
DT
21TK3605
21TI917
21FI171
Fuel Gas to Htrs
21PC451
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2114
Ack Page
Name
EngU
Hide
Reformer_2114
21AI945
9999.99
SRA
#1 HTR
21TI740
9999.99
21TI930
9999.99
SULFUR
TRAP EFFL
21TC611
9999.99 W
9999.99
9999.99
#1 RX
DP
21PI411
9999.99
DT
21TK3601
9999.99
21TI770
9999.99
21AI946
9999.99
SRA
#2 HTR
21TI780
9999.99
21TC612
9999.99 W
9999.99
9999.99
#2 RX
DP
21PI412
9999.99
DT
21TK3602
9999.99
21TI805
9999.99
21AI947
9999.99
SRA
#3 HTR
21TC613
9999.99 W
9999.99
9999.99
21TC611
21FI131
9999.99
FUEL GAS
21TC612
21FI132
9999.99
FUEL GAS
21TC613
21FI133
9999.99
FUEL GAS
21TI815
9999.99
21AI948
9999.99
SRA
#4 HTR
21TC614
9999.99 W
9999.99
9999.99
#3 RX
DP
21PI413
9999.99
DT
21TK3603
9999.99
21TI840
9999.99
#3 RX
21TC614
21FI134
9999.99
FUEL GAS
21TI850
9999.99
4A RX
DP
21PI414
9999.99
DT
21TK3604
9999.99
21TI870
9999.99
21FI170
9999.99
4A RX
21TI850
9999.99
TOTAL REACTOR
DELTA T
21TK3606
9999.99
SDL
21TA3876
State
21TI876
9999.99
21TI880
9999.99
FLASH
DRUM
21TI899
9999.99
CW
CW
21TI878
9999.99
21PC451
W 9999.99
9999.99
21PC451
100%
FUEL GAS TO HTRS
4B RX
DP
21PI471
9999.99
DT
21TK3605
9999.99
21TI917
9999.99
21FI171
9999.99
4B RX
Reserved for Faceplates

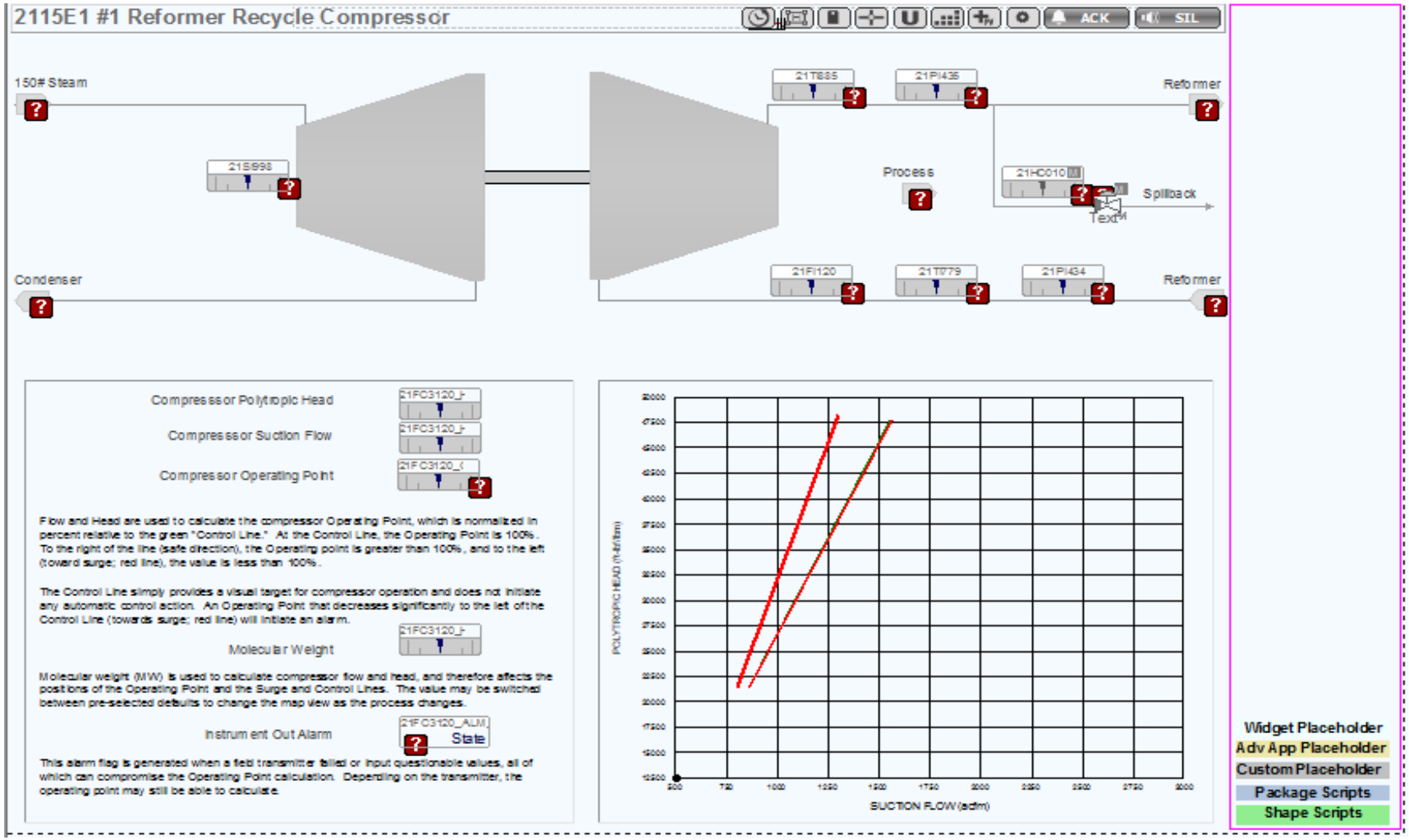
1.81 2115 #1 REF FLASH DRUM / KO / RECY COMPRS (Reformer_2115.htm)

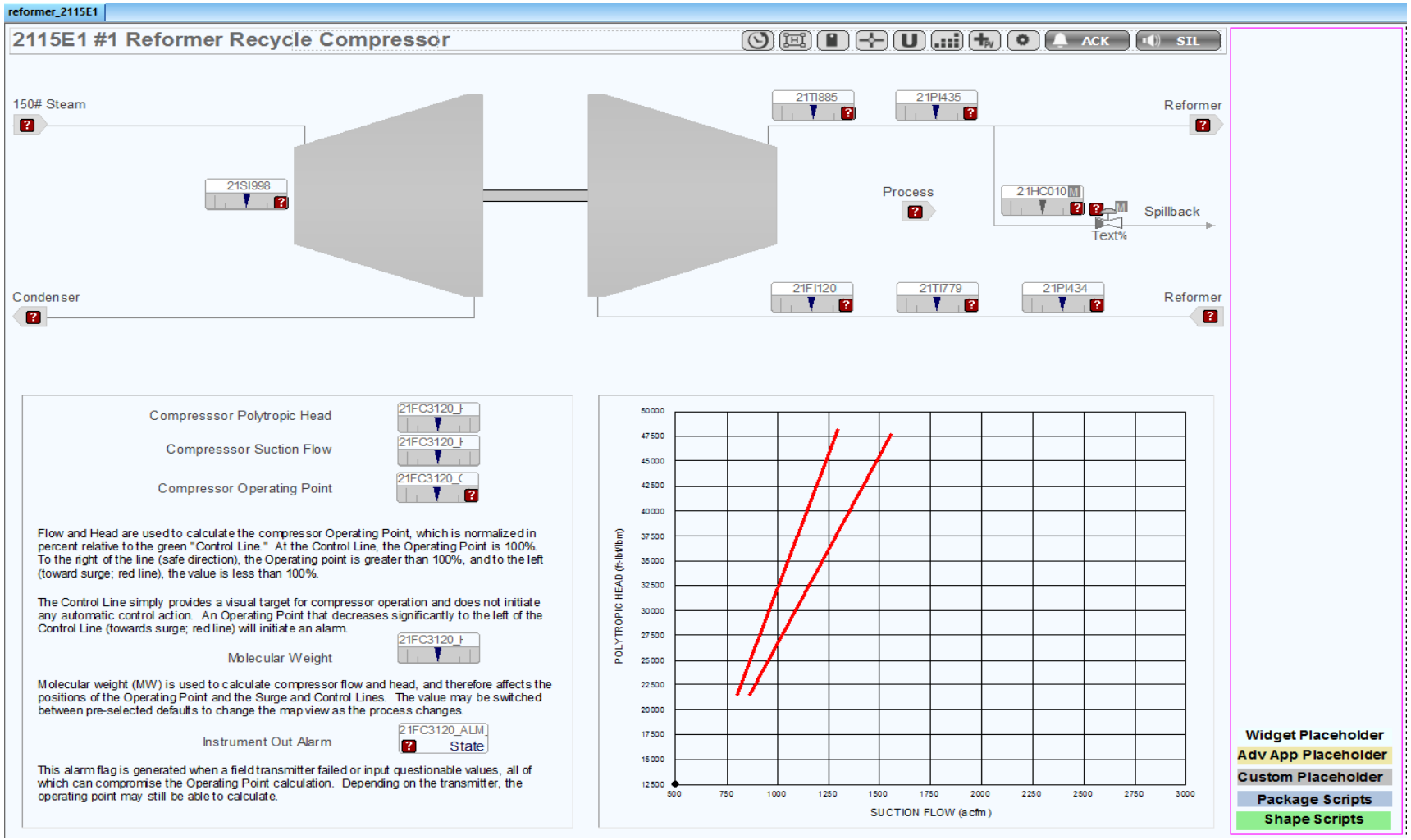


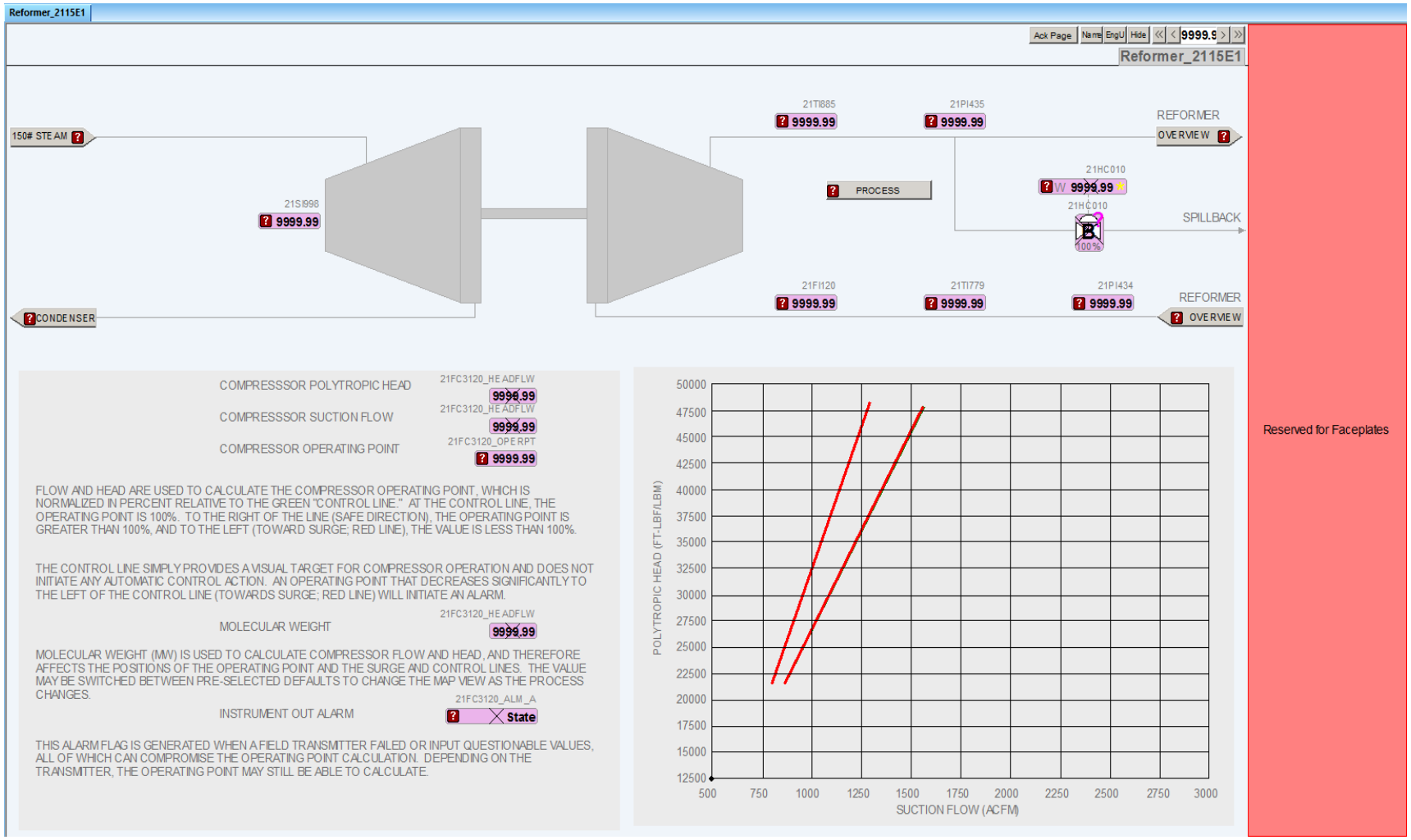

Reformer_2115
2115 #1 Ref Flash Drum / KO / Recy Comprs
ACK
STL
Help
Mode: Low Press
SDL
21PC415
A
21FI135
200# H2 Header
Text%
21FI136
Fuel
B
Buffer Gas
21PC485
21FI190
21HC998
150# Steam
21FC3120
Operating Point
21FC3120_I
Molecular Weight
Compressor Alarms
21PB983
State
Description Text
Vibration Trouble
Hi Lube Oil DP
Low Lube Oil Press
Hi Seal Oil Lvl
Low Seal Oil Lvl
Aux L.O. Pump On
P/U Seal Oil Pump
21TI779
21PI434
21FI120
Comp
Turb
21SI998
Cmpr. Perf. Map
Lube Oil
21LI310
21PI417
21TI885
21PI435
Vac Cond
Instrument Out Alarm
21FC3120_ALM
State
Flare
21HC997
Ref Recy KO Pot
Desulf Feed Compr
Effl Exch
21TI877
Flash Drum
21LI311
21LC316
Lev Dev
21LY3316
21TI880
21FC127
21HC010
Spillback
21FI122A
21FI122B
21FY3122
21PI418
HP
HP Cond
LP
21FI137
Stab
Cond Inj
21FI128
21FK3125
21AI999
21FI125
Ref Exch
Shape added
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2115
Ack Page
Name
EngU
Hide
Reformer_2115
HELP
MODE: LOW PRESS
SDL
21PA3415
State
21PV415A
A
21PC415
21PV415B
B
21FI135
21FI136
200# H2
HEADER
BUFFER
GAS
21PC485
21FI190
FUEL
21TI779
21PI434
21FI120
21HC997
21HC997
FLARE
21LA312
State
REF RECY KO POT
DESULF FEED COMPR
DESULF FEED COMPR
COMP
TURB
CMPR. PERF. MAP
LUBE OIL
21SI998
21PI417
21LA315
State
21TI877
EFFL EXCH
FLASH DRUM
21LI311
21LC316
LEV DEV
21LY3316
21TI885
21FC127
21PI435
21LI310
VAC
21TI880
21HC010
21HC010
SPILLBACK
21FI122A
21FI122B
21FY3122
LP
21PI418
HP
HP COND
21PA456
State
21FI137
21LC316
STAB
COND INJ
21FI128
21FK3125
21AI999
21FI125
REF EXCH
OPERATING POINT
21FC3120 OPERPT
MOLECULAR WEIGHT
21FC3120_HEADFLW
21HC998
21HC998
150# STEAM
COMPRESSOR ALARMS
21PB983
21UA984
21XA995
21XA996
21PA419
21PA416
21LA313
21LA314
21XA928
21PA429
INSTRUMENT OUT ALARM
21FC3120_ALM_A
State
Reserved for Faceplates

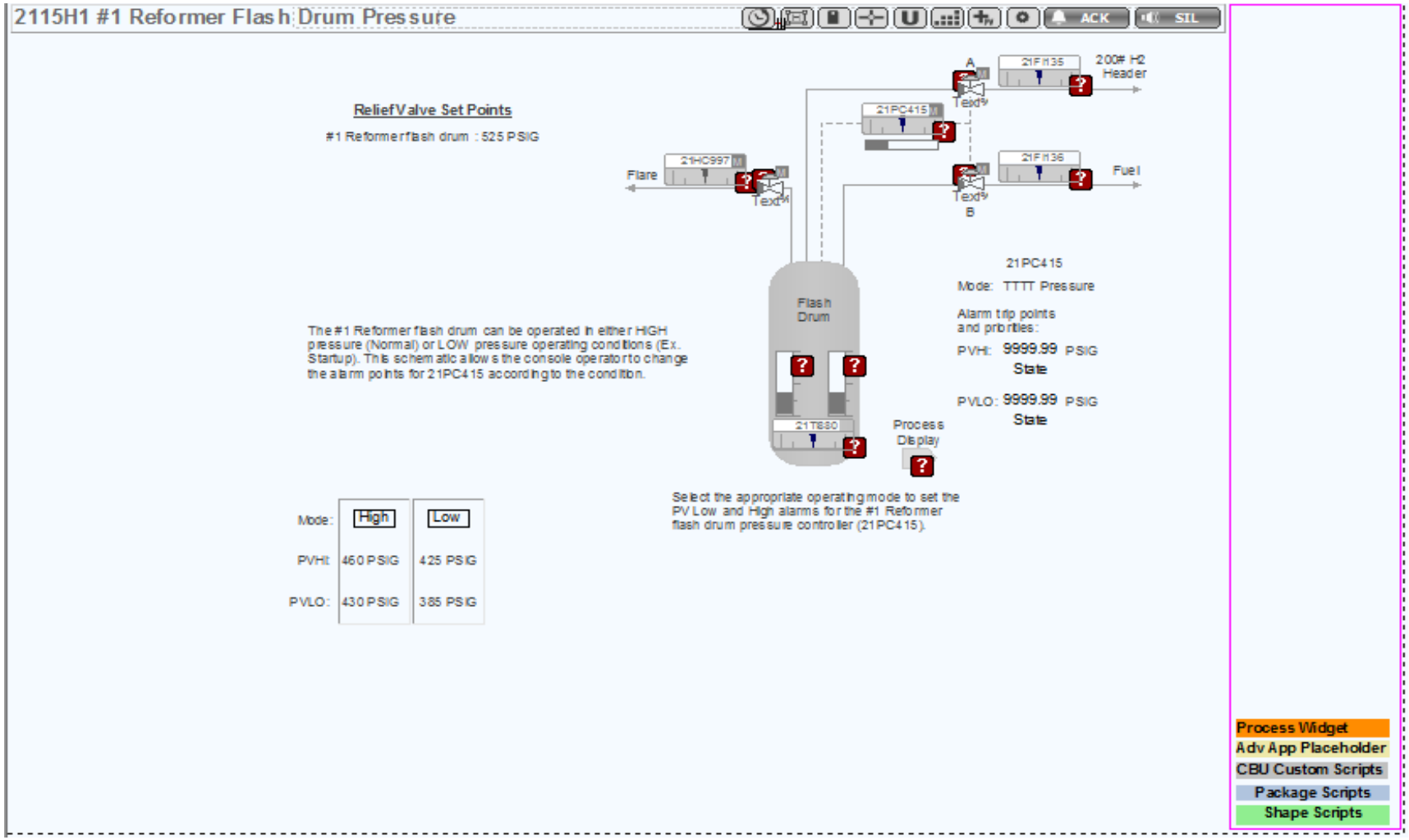
1.82 2115E1 #1 REFORMER RECYCLE COMPRESSOR (reformer_2115E1.htm)

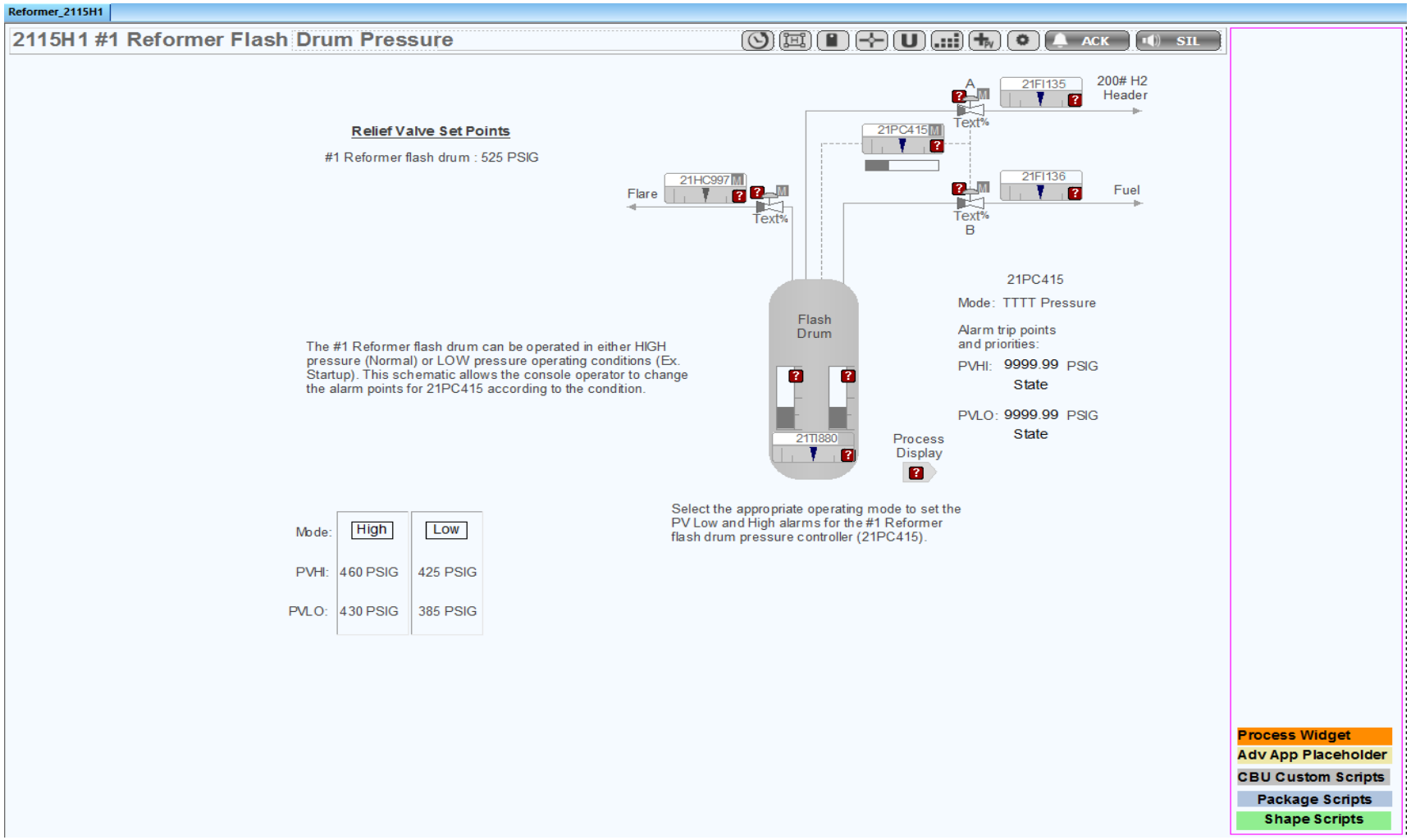


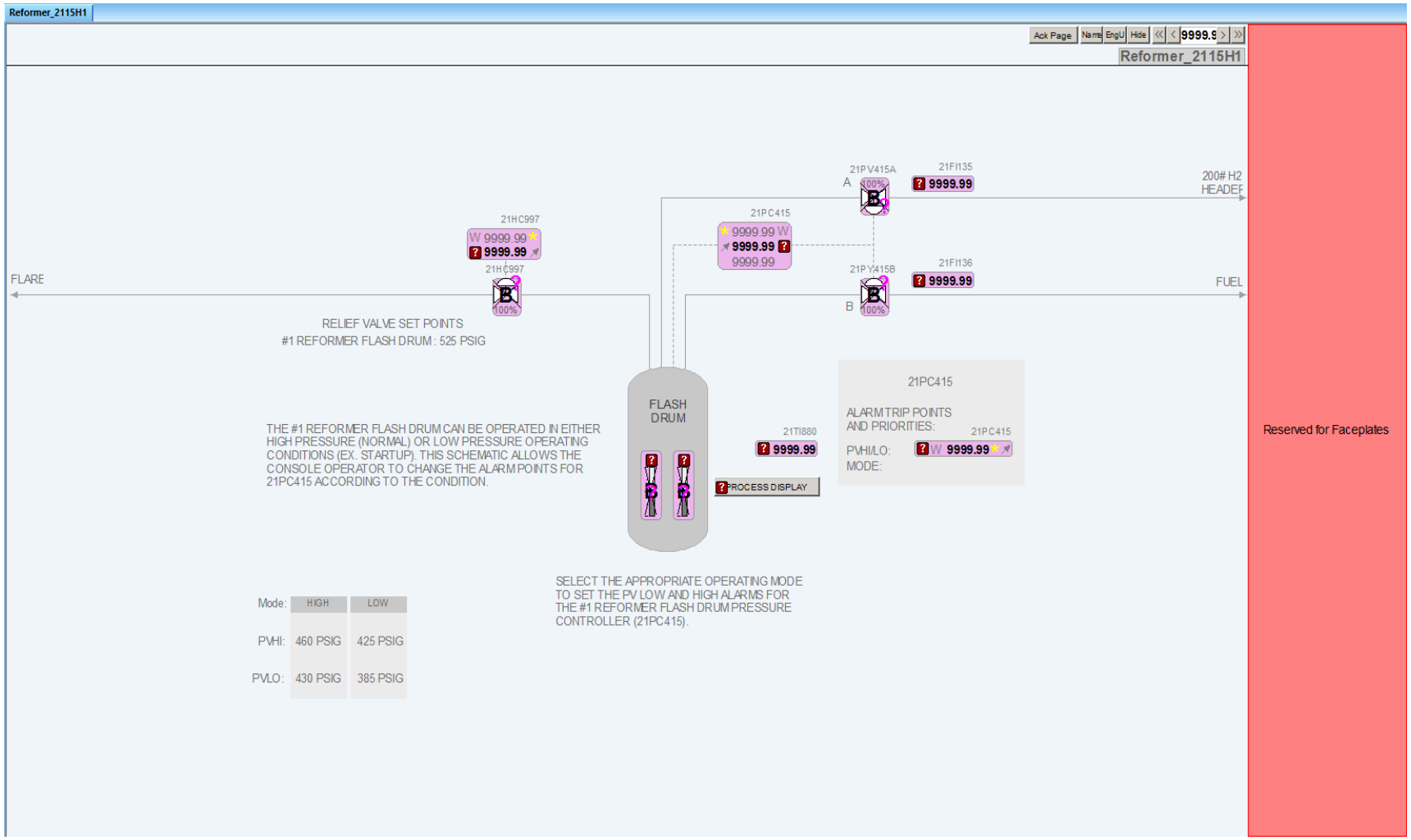

reformer_2115E1
2115E1 #1 Reformer Recycle Compressor
ACK
SIL
150# Steam
21SI998
Condenser
21TI885
21PI435
Reformer
Process
21HC010
Spillback
Text%
21FI120
21TI779
21PI434
Reformer
Compresssor Polytropic Head
21FC3120_I
Compresssor Suction Flow
21FC3120_I
Compressor Operating Point
21FC3120_(
Flow and Head are used to calculate the compressor Operating Point, which is normalized in percent relative to the green "Control Line." At the Control Line, the Operating Point is 100%. To the right of the line (safe direction), the Operating point is greater than 100%, and to the left (toward surge; red line), the value is less than 100%.
The Control Line simply provides a visual target for compressor operation and does not initiate any automatic control action. An Operating Point that decreases significantly to the left of the Control Line (towards surge; red line) will initiate an alarm.
Molecular Weight
21FC3120_I
Molecular weight (MW) is used to calculate compressor flow and head, and therefore affects the positions of the Operating Point and the Surge and Control Lines. The value may be switched between pre-selected defaults to change the map view as the process changes.
Instrument Out Alarm
21FC3120_ALM
State
This alarm flag is generated when a field transmitter failed or input questionable values, all of which can compromise the Operating Point calculation. Depending on the transmitter, the operating point may still be able to calculate.
POLYTROPIC HEAD (ft-lbf/lbm)
50000
47500
45000
42500
40000
37500
35000
32500
30000
27500
25000
22500
20000
17500
15000
12500
500
750
1000
1250
1500
1750
2000
2250
2500
2750
3000
SUCTION FLOW (acfm)
Widget Placeholder
Adv App Placeholder
Custom Placeholder
Package Scripts
Shape Scripts


Reformer_2115E1
Ack Page
Name
EngU
Hide
Reformer_2115E1
150# STEAM
21TI885
9999.99
21PI435
9999.99
REFORMER
OVERVIEW
21HC010
9999.99
PROCESS
21SI998
9999.99
21HC010
SPILLBACK
100%
CONDENSER
21FI120
9999.99
21TI779
9999.99
21PI434
9999.99
REFORMER
OVERVIEW
COMPRESSSOR POLYTROPIC HEAD
21FC3120_HEADFLW
9999.99
COMPRESSSOR SUCTION FLOW
21FC3120_HEADFLW
9999.99
COMPRESSOR OPERATING POINT
21FC3120_OPERPT
9999.99
FLOW AND HEAD ARE USED TO CALCULATE THE COMPRESSOR OPERATING POINT, WHICH IS NORMALIZED IN PERCENT RELATIVE TO THE GREEN "CONTROL LINE." AT THE CONTROL LINE, THE OPERATING POINT IS 100%. TO THE RIGHT OF THE LINE (SAFE DIRECTION), THE OPERATING POINT IS GREATER THAN 100%, AND TO THE LEFT (TOWARD SURGE; RED LINE), THE VALUE IS LESS THAN 100%.
THE CONTROL LINE SIMPLY PROVIDES A VISUAL TARGET FOR COMPRESSOR OPERATION AND DOES NOT INITIATE ANY AUTOMATIC CONTROL ACTION. AN OPERATING POINT THAT DECREASES SIGNIFICANTLY TO THE LEFT OF THE CONTROL LINE (TOWARDS SURGE; RED LINE) WILL INITIATE AN ALARM.
MOLECULAR WEIGHT
21FC3120_HEADFLW
9999.99
MOLECULAR WEIGHT (MW) IS USED TO CALCULATE COMPRESSOR FLOW AND HEAD, AND THEREFORE AFFECTS THE POSITIONS OF THE OPERATING POINT AND THE SURGE AND CONTROL LINES. THE VALUE MAY BE SWITCHED BETWEEN PRE-SELECTED DEFAULTS TO CHANGE THE MAP VIEW AS THE PROCESS CHANGES.
INSTRUMENT OUT ALARM
21FC3120_ALM_A
State
THIS ALARM FLAG IS GENERATED WHEN A FIELD TRANSMITTER FAILED OR INPUT QUESTIONABLE VALUES, ALL OF WHICH CAN COMPROMISE THE OPERATING POINT CALCULATION. DEPENDING ON THE TRANSMITTER, THE OPERATING POINT MAY STILL BE ABLE TO CALCULATE.
POLYTROPIC HEAD (FT-LBF/LBM)
50000
47500
45000
42500
40000
37500
35000
32500
30000
27500
25000
22500
20000
17500
15000
12500
500
750
1000
1250
1500
1750
2000
2250
2500
2750
3000
SUCTION FLOW (ACFM)
Reserved for Faceplates

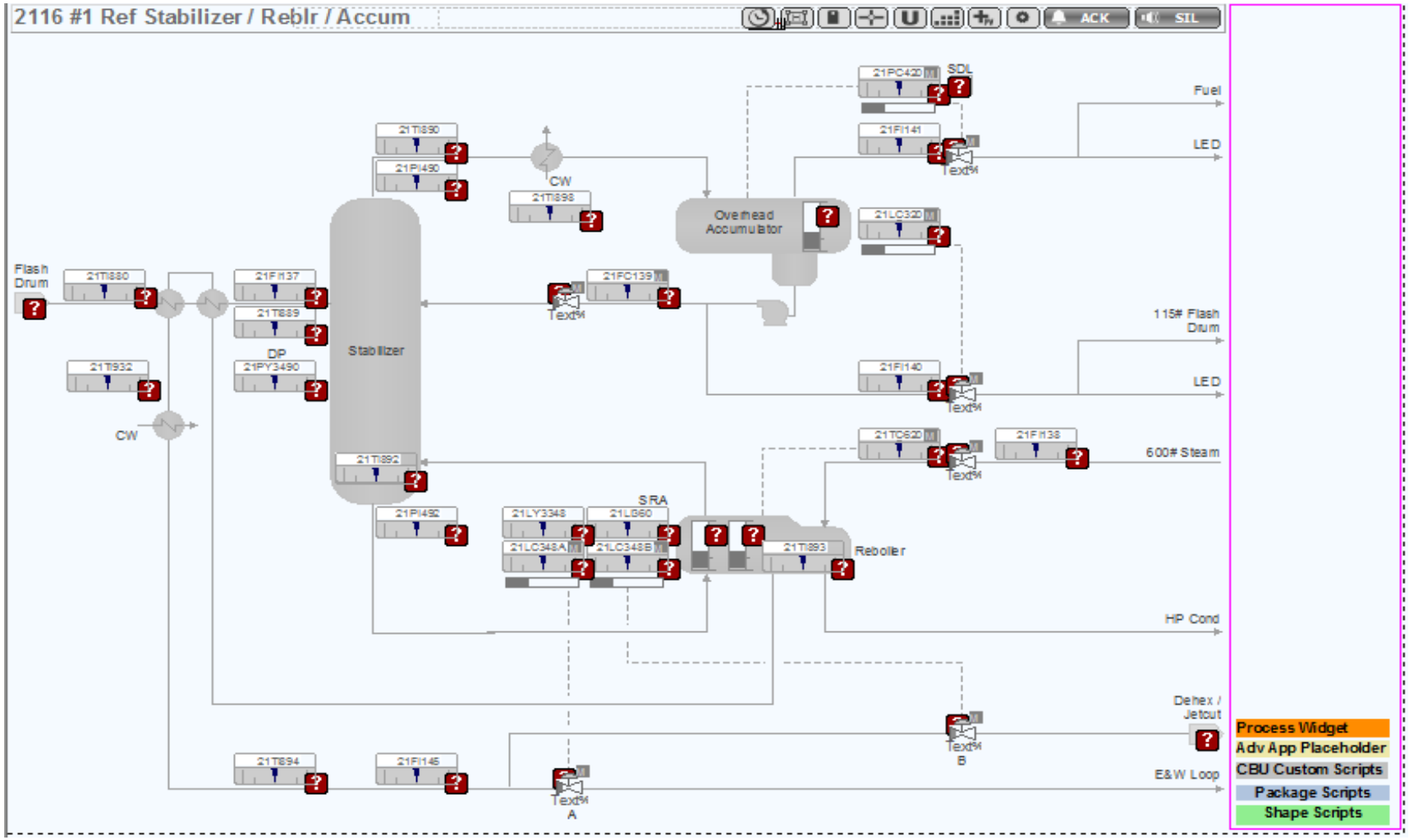
1.83 2115H1 #1 REFORMER FLASH DRUM PRESSURE (Reformer_2115H1.htm)

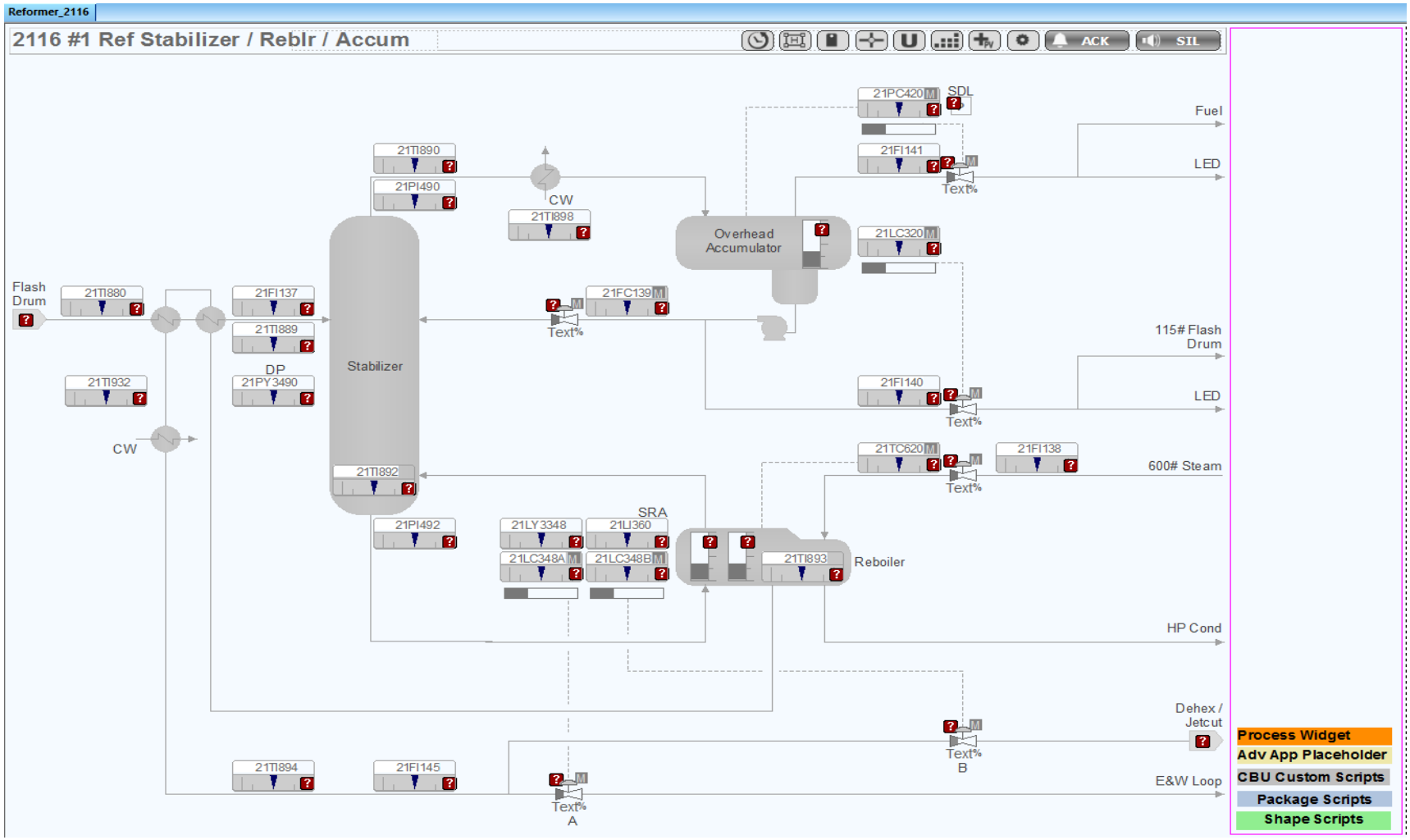


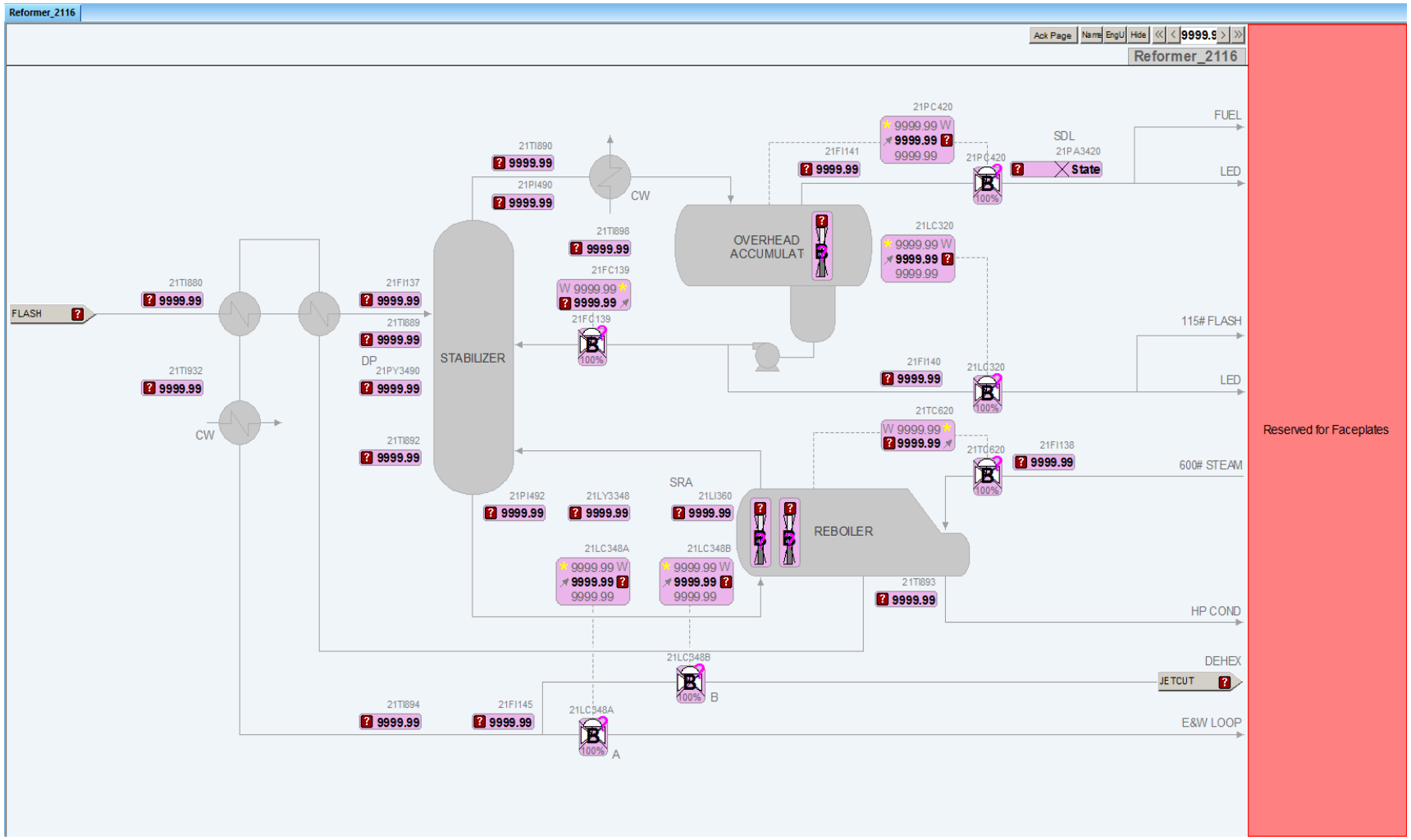

Reformer_2115H1
2115H1 #1 Reformer Flash Drum Pressure
ACK
SIL
Relief Valve Set Points
#1 Reformer flash drum : 525 PSIG
A
21FI135
200# H2 Header
Text%
21PC415
21FI136
Fuel
Flare
21HC997
Text%
B
21PC415
Mode: TTTT Pressure
Alarm trip points and priorities:
PVHI: 9999.99 PSIG
State
PVLO: 9999.99 PSIG
State
Flash Drum
21TI880
Process Display
The #1 Reformer flash drum can be operated in either HIGH pressure (Normal) or LOW pressure operating conditions (Ex. Startup). This schematic allows the console operator to change the alarm points for 21PC415 according to the condition.
Select the appropriate operating mode to set the PV Low and High alarms for the #1 Reformer flash drum pressure controller (21PC415).
Mode: High Low
PVHI: 460 PSIG 425 PSIG
PVLO: 430 PSIG 385 PSIG
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2115H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2115H1
21PV415A
A
100%
21FI135
9999.99
200# H2 HEADER
21PC415
9999.99 W
9999.99
9999.99
21HC997
W 9999.99
9999.99
21HC997
100%
21PV415B
B
100%
21FI136
9999.99
FUEL
FLARE
RELIEF VALVE SET POINTS
#1 REFORMER FLASH DRUM : 525 PSIG
THE #1 REFORMER FLASH DRUM CAN BE OPERATED IN EITHER HIGH PRESSURE (NORMAL) OR LOW PRESSURE OPERATING CONDITIONS (EX. STARTUP). THIS SCHEMATIC ALLOWS THE CONSOLE OPERATOR TO CHANGE THE ALARM POINTS FOR 21PC415 ACCORDING TO THE CONDITION.
FLASH DRUM
21TI880
9999.99
PROCESS DISPLAY
21PC415
ALARM TRIP POINTS AND PRIORITIES:
21PC415
PVHI/LO:
W 9999.99
MODE:
SELECT THE APPROPRIATE OPERATING MODE TO SET THE PV LOW AND HIGH ALARMS FOR THE #1 REFORMER FLASH DRUM PRESSURE CONTROLLER (21PC415).
Mode: HIGH LOW
PVHI: 460 PSIG 425 PSIG
PVLO: 430 PSIG 385 PSIG
Reserved for Faceplates

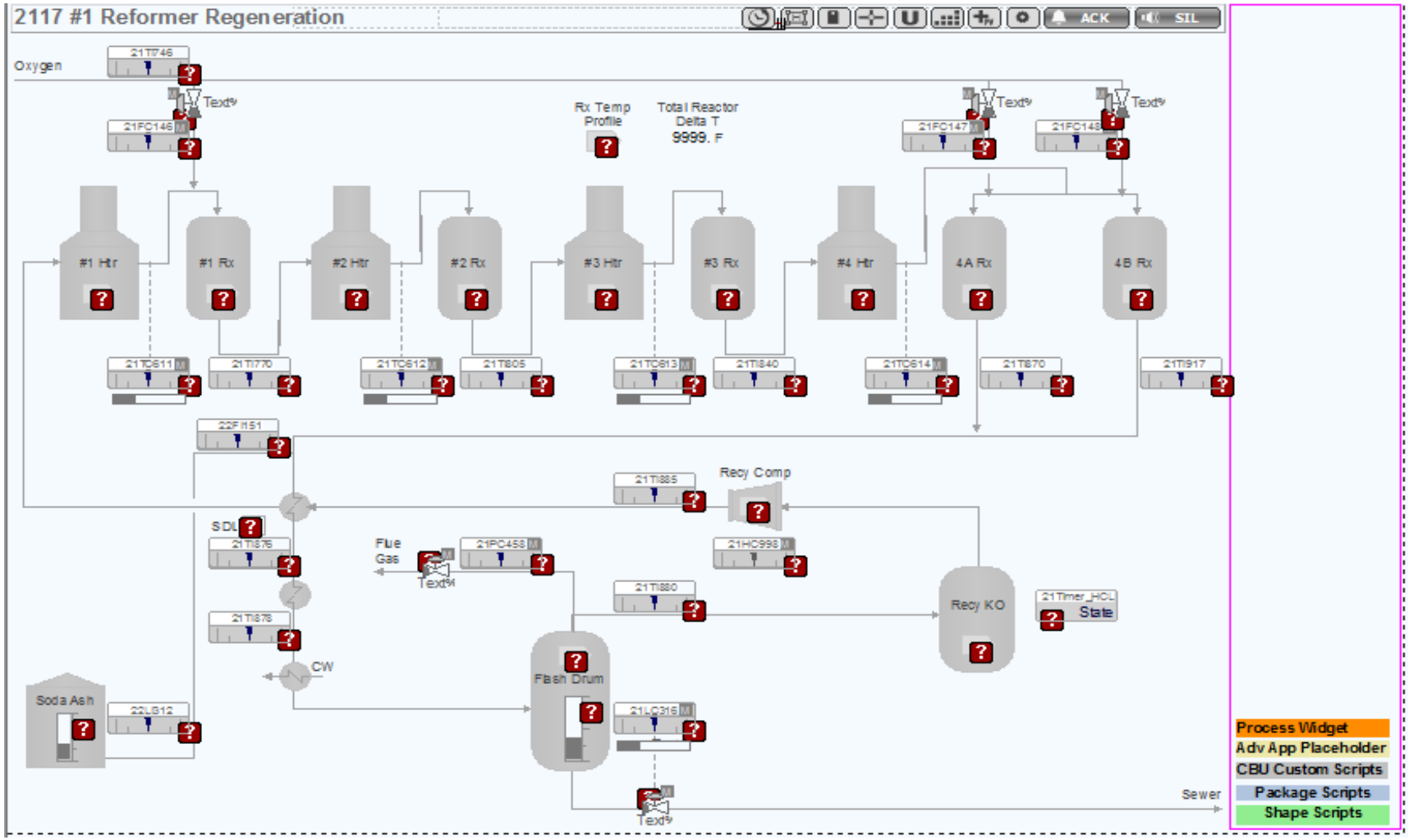
1.84 2116 #1 REF STABILIZER / REBLR / ACCUM (Reformer_2116.htm)

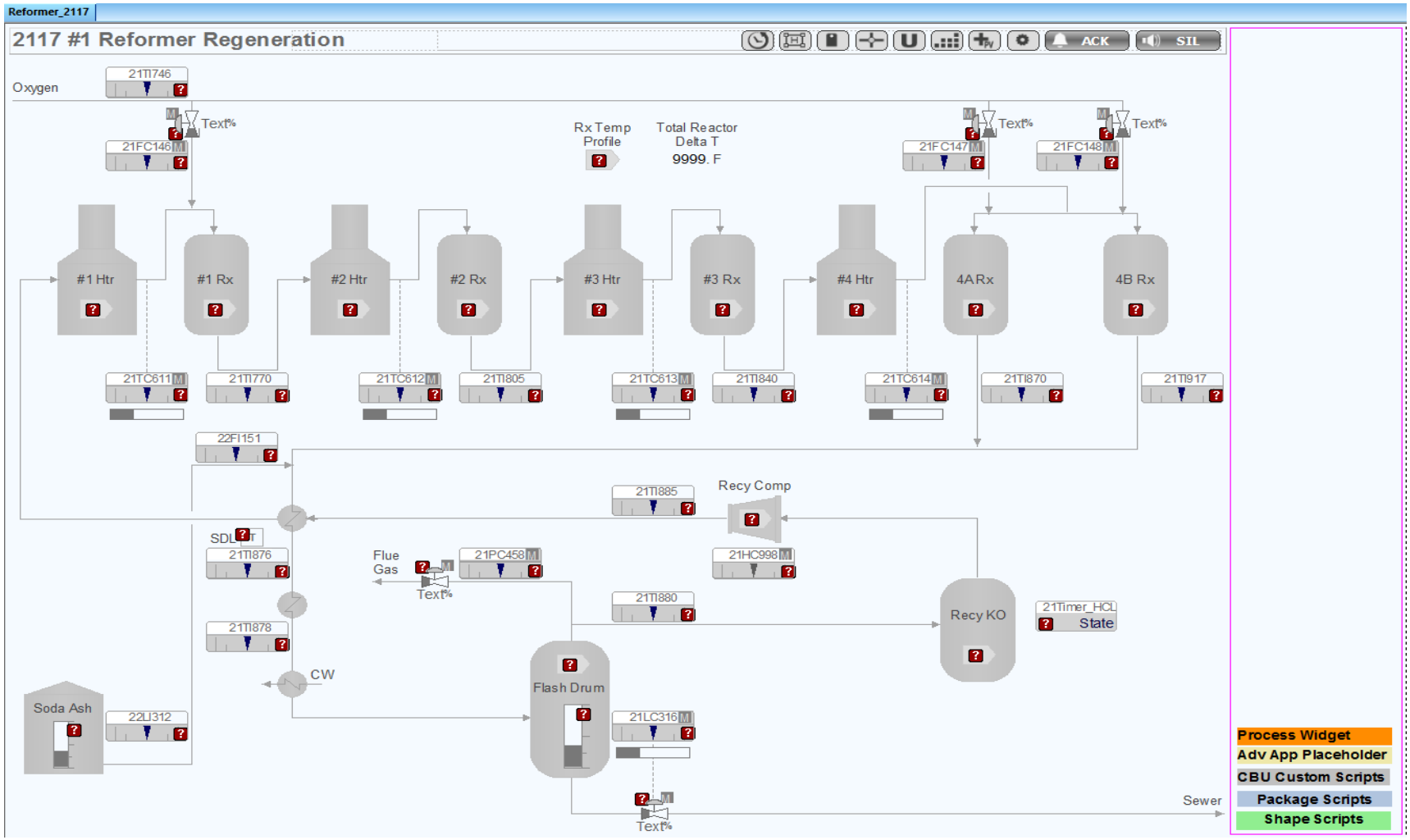


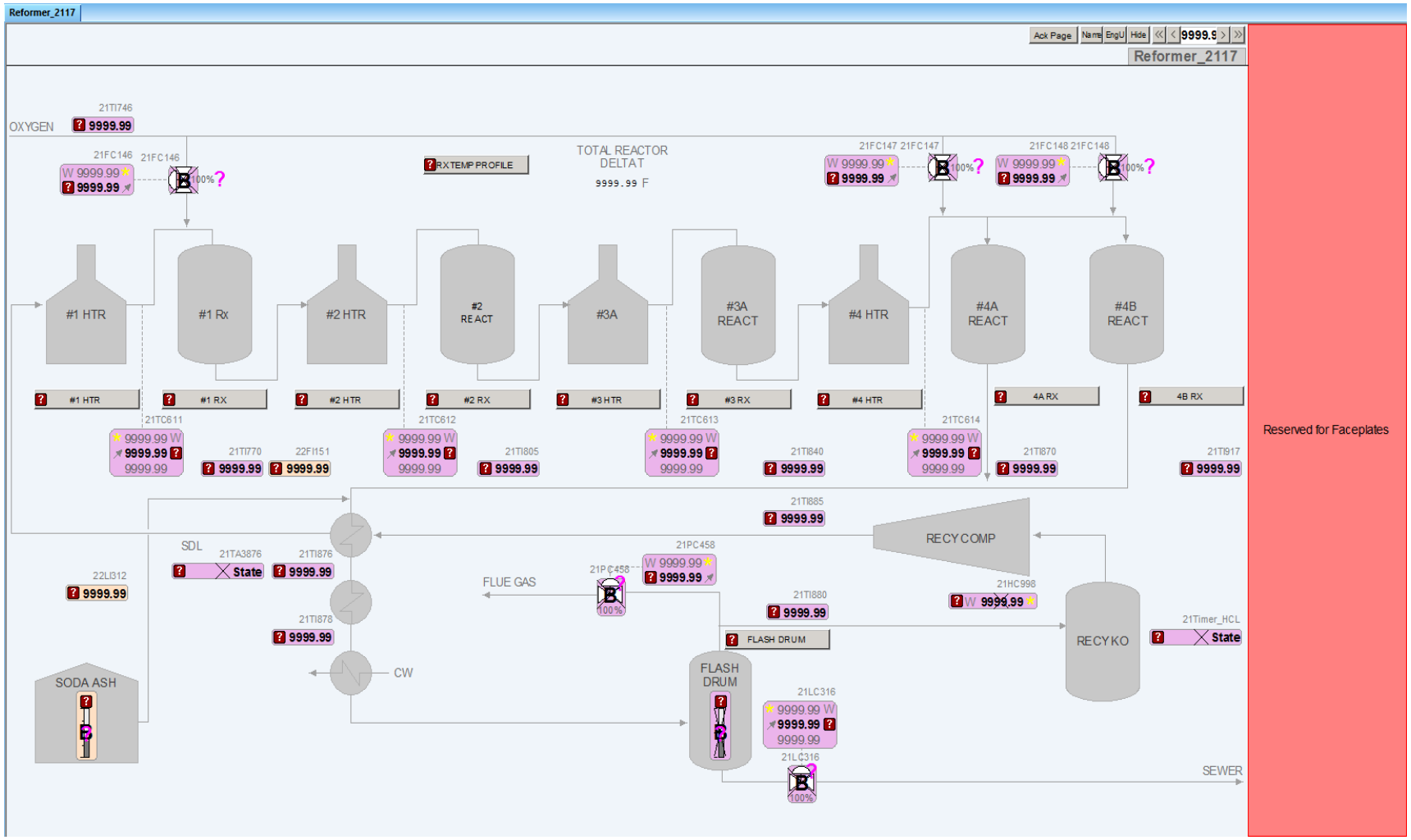

Reformer_2116
2116 #1 Ref Stabilizer / Reblr / Accum
ACK
SIL
21PC420
SDL
Fuel
21FI141
LED
Text%
21TI890
21PI490
CW
21TI898
Overhead Accumulator
21LC320
Flash Drum
21TI880
21FI137
21TI889
DP
21PY3490
21FC139
Text%
Stabilizer
115# Flash Drum
21FI140
LED
Text%
21TI932
CW
21TC620
21FI138
600# Steam
Text%
21TI892
SRA
21PI492
21LY3348
21LJ360
21LC348A
21LC348B
21TI893
Reboiler
HP Cond
Dehex / Jetcut
Text% B
21TI894
21FI145
Text% A
E&W Loop
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2116
Ack Page
Name
EngU
Hide
Reformer_2116
FLASH
21TI880
9999.99
21TI932
9999.99
CW
21FI137
9999.99
21TI889
9999.99
DP
21PY3490
9999.99
21TI892
9999.99
STABILIZER
21TI890
9999.99
21PI490
9999.99
CW
21TI898
9999.99
21FC139
W 9999.99
9999.99
21FC139
100%
OVERHEAD ACCUMULAT
21PC420
9999.99 W
9999.99
9999.99
21FI141
9999.99
21PC420
100%
SDL
21PA3420
State
FUEL
LED
21LC320
9999.99 W
9999.99
9999.99
115# FLASH
LED
21FI140
9999.99
21LC320
100%
21TC620
W 9999.99
9999.99
21TC620
100%
21FI138
9999.99
600# STEAM
SRA
21PI492
9999.99
21LY3348
9999.99
21LI360
9999.99
REBOILER
21LC348A
9999.99 W
9999.99
9999.99
21LC348B
9999.99 W
9999.99
9999.99
21TI893
9999.99
HP COND
21LC348B
100%
B
DEHEX
JETCUT
21TI894
9999.99
21FI145
9999.99
21LC348A
100%
A
E&W LOOP
Reserved for Faceplates

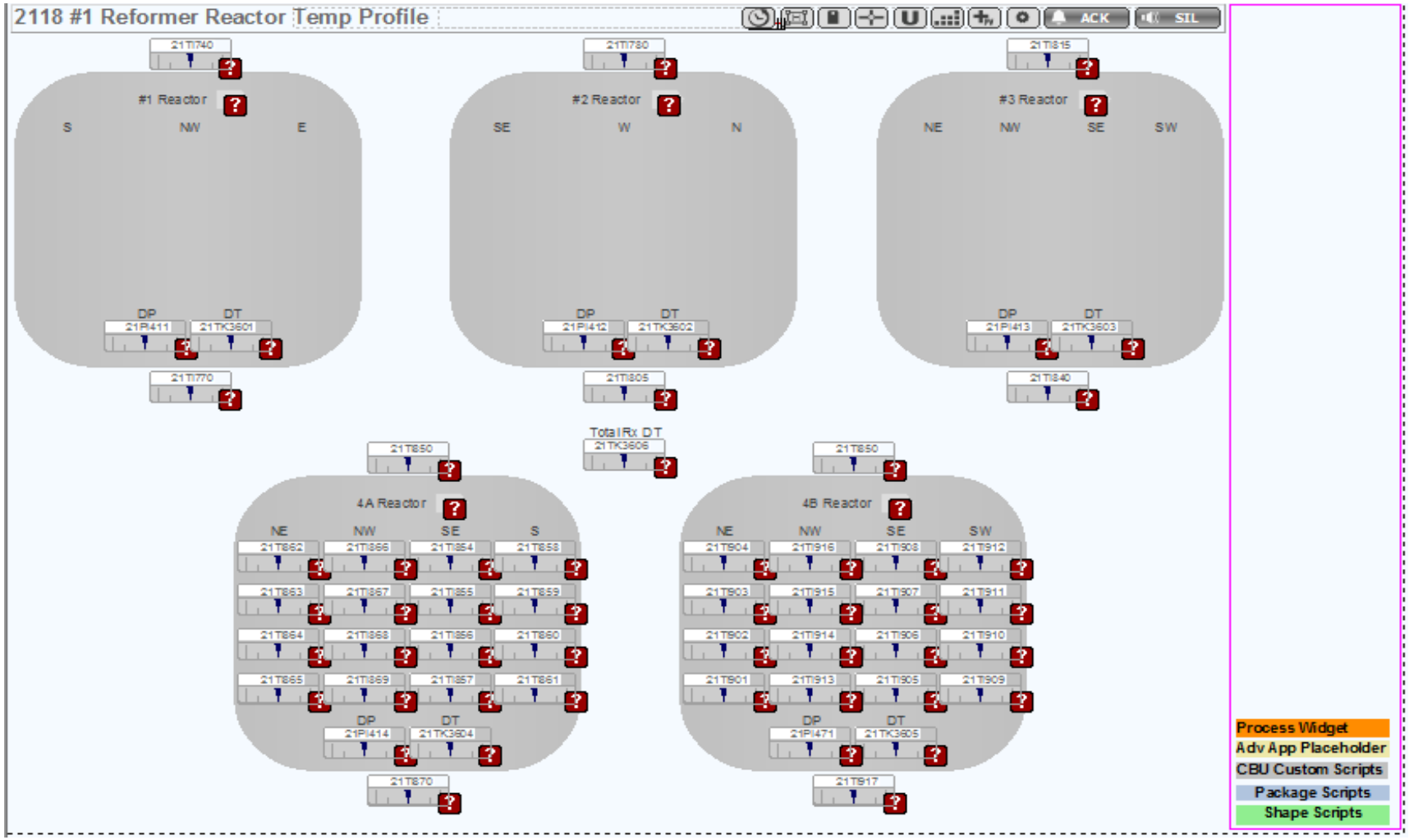
1.85 2117 #1 REFORMER REGENERATION (Reformer_2117.htm)

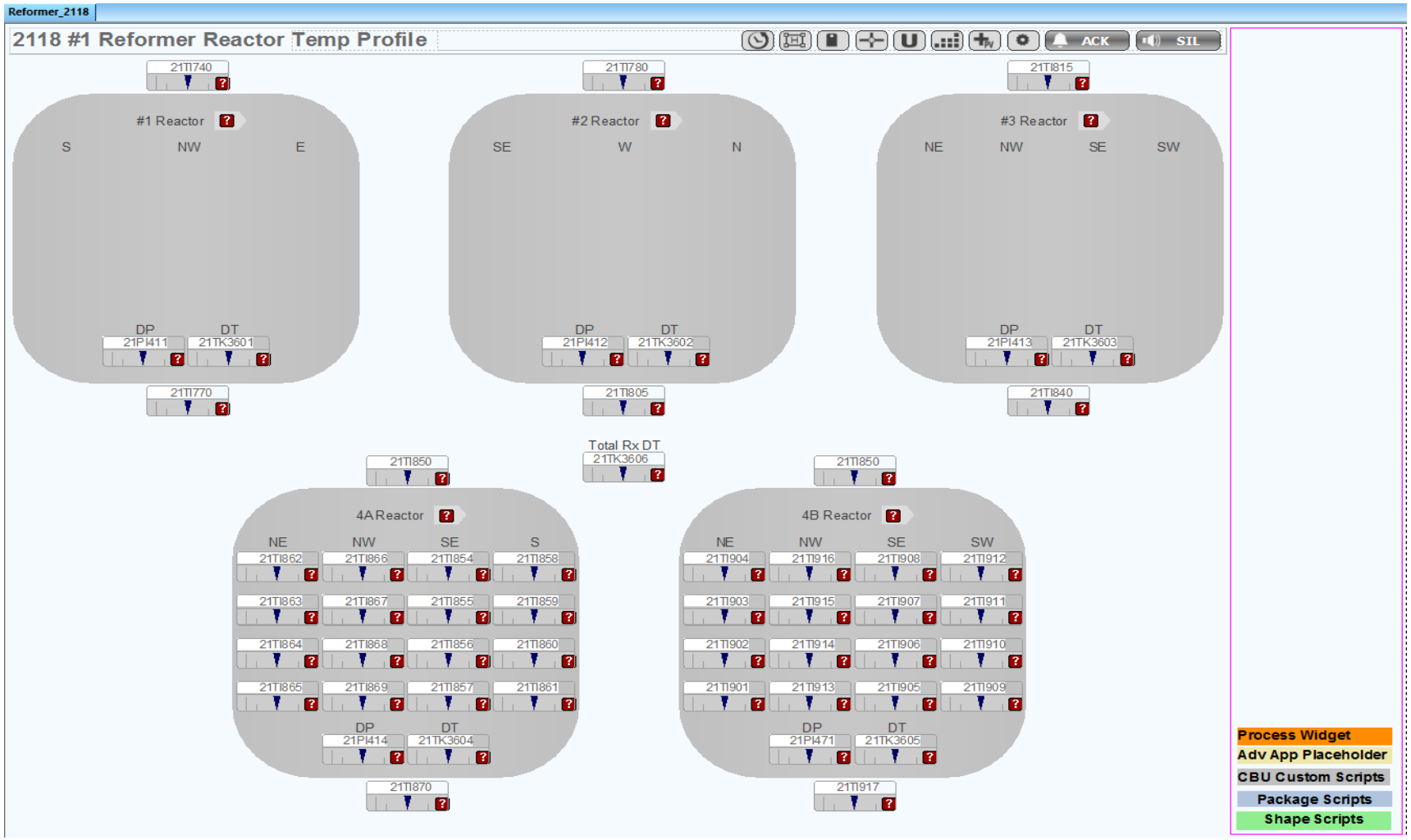


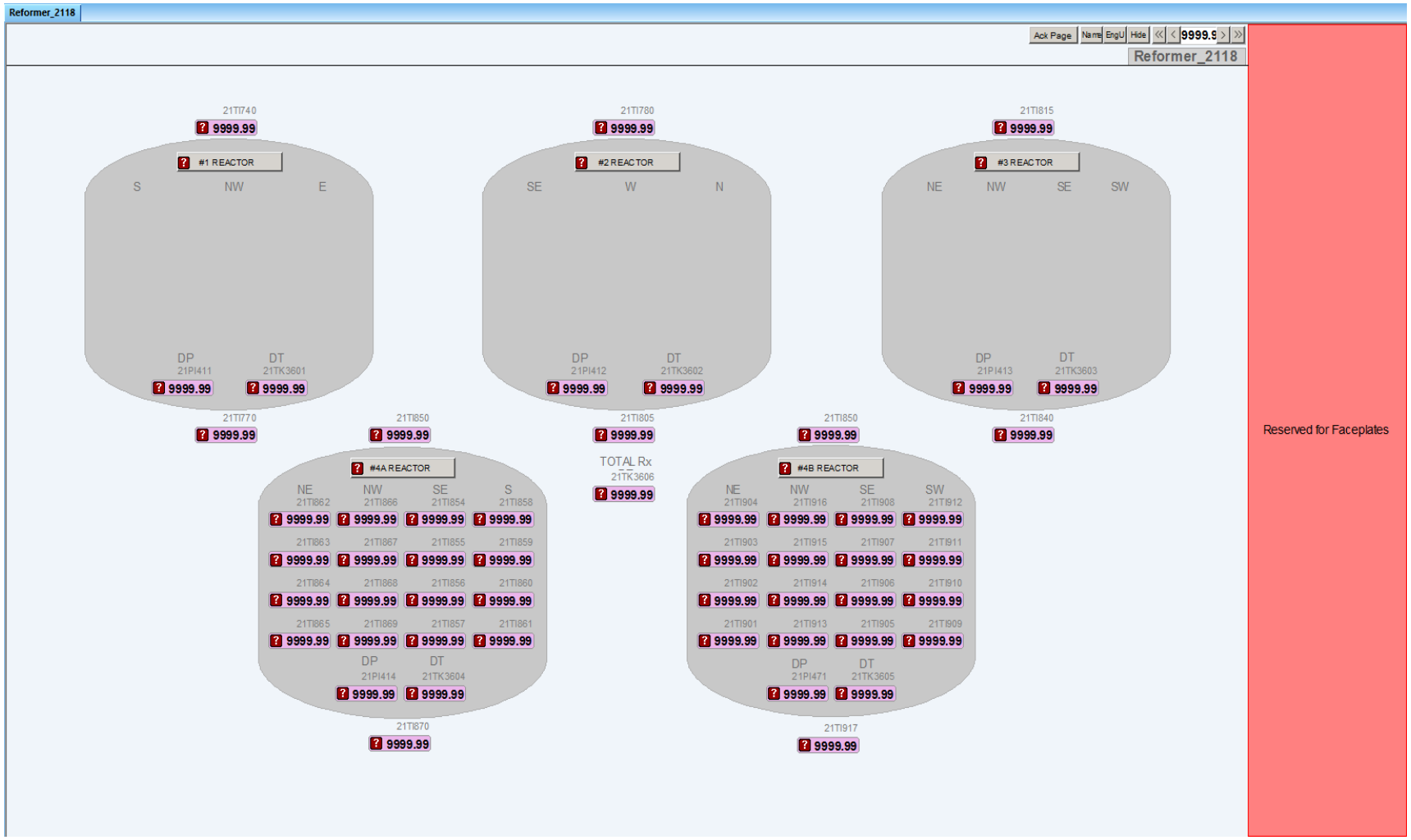

Reformer_2117
2117 #1 Reformer Regeneration
ACK
SIL
Oxygen
21TI746
Text%
21FC146
Rx Temp Profile
Total Reactor Delta T
9999. F
21FC147
21FC148
#1 Htr
#1 Rx
#2 Htr
#2 Rx
#3 Htr
#3 Rx
#4 Htr
4A Rx
4B Rx
21TC611
21TI770
21TC612
21TI805
21TC613
21TI840
21TC614
21TI870
21TI917
22FI151
21TI885
Recy Comp
21HC998
SDL
21TI876
Flue Gas
21PC458
21TI880
Recy KO
21Timer_HCL
State
21TI878
CW
Soda Ash
22LI312
Flash Drum
21LC316
Sewer
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2117
Ack Page
Name
EngU
Hide
Reformer_2117
OXYGEN
21TI746
9999.99
21FC146
21FC146
W 9999.99
9999.99
100%
RX TEMP PROFILE
TOTAL REACTOR DELTA T
9999.99 F
21FC147
21FC147
21FC148
21FC148
#1 HTR
#1 Rx
#2 HTR
#2 REACT
#3A
#3A REACT
#4 HTR
#4A REACT
#4B REACT
#1 HTR
#1 RX
#2 HTR
#2 RX
#3 HTR
#3 RX
#4 HTR
4A RX
4B RX
21TC611
21TC612
21TC613
21TC614
21TI770
22FI151
21TI805
21TI840
21TI870
21TI917
21TI885
RECY COMP
SDL
21TA3876
21TI876
State
21PC458
FLUE GAS
21HC998
22LI312
21TI880
21TI878
FLASH DRUM
21Timer_HCL
RECY KO
CW
SODA ASH
21LC316
21LC316
SEWER
Reserved for Faceplates

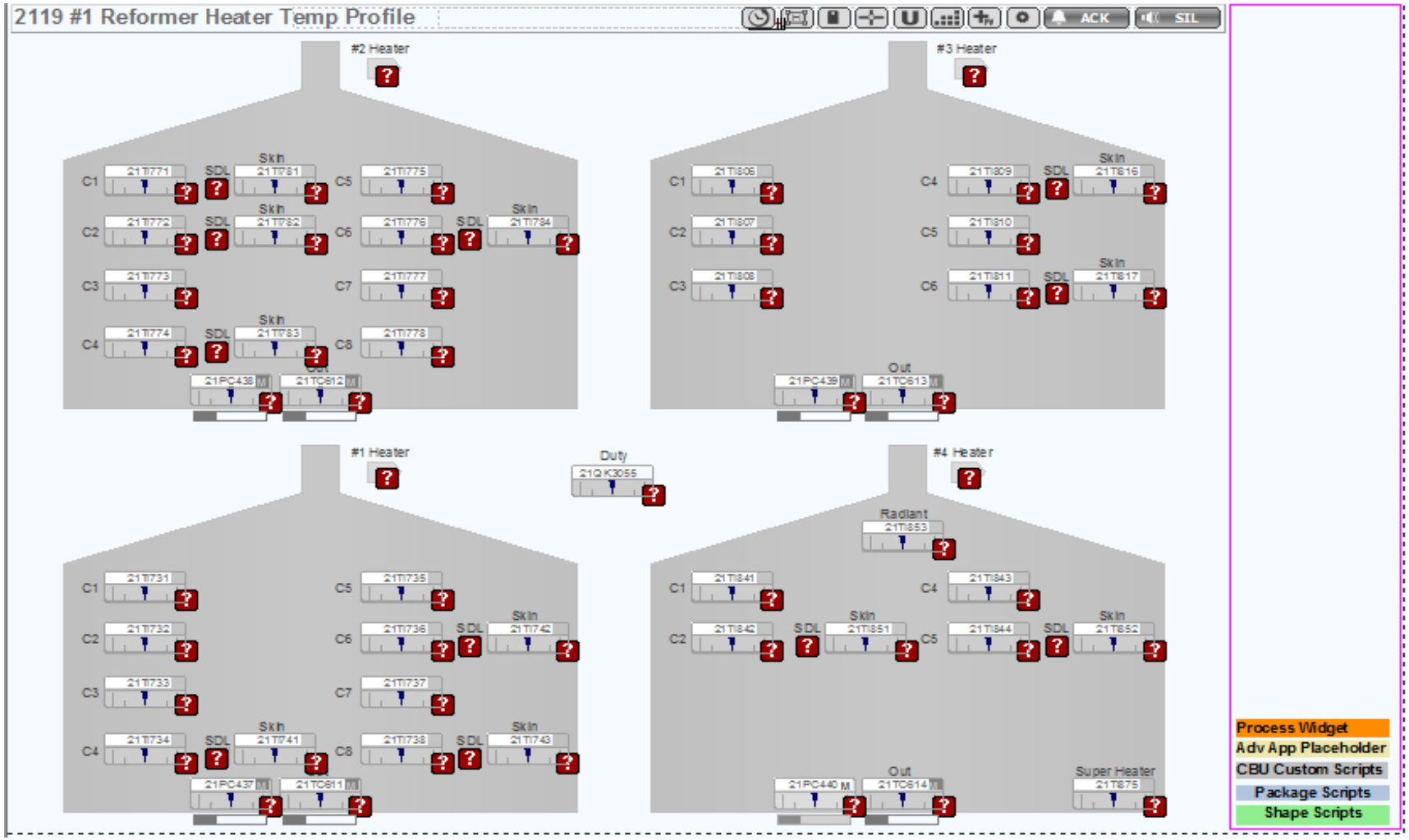
1.86 2118 #1 REFORMER REACTOR TEMP PROFILE (Reformer_2118.htm)

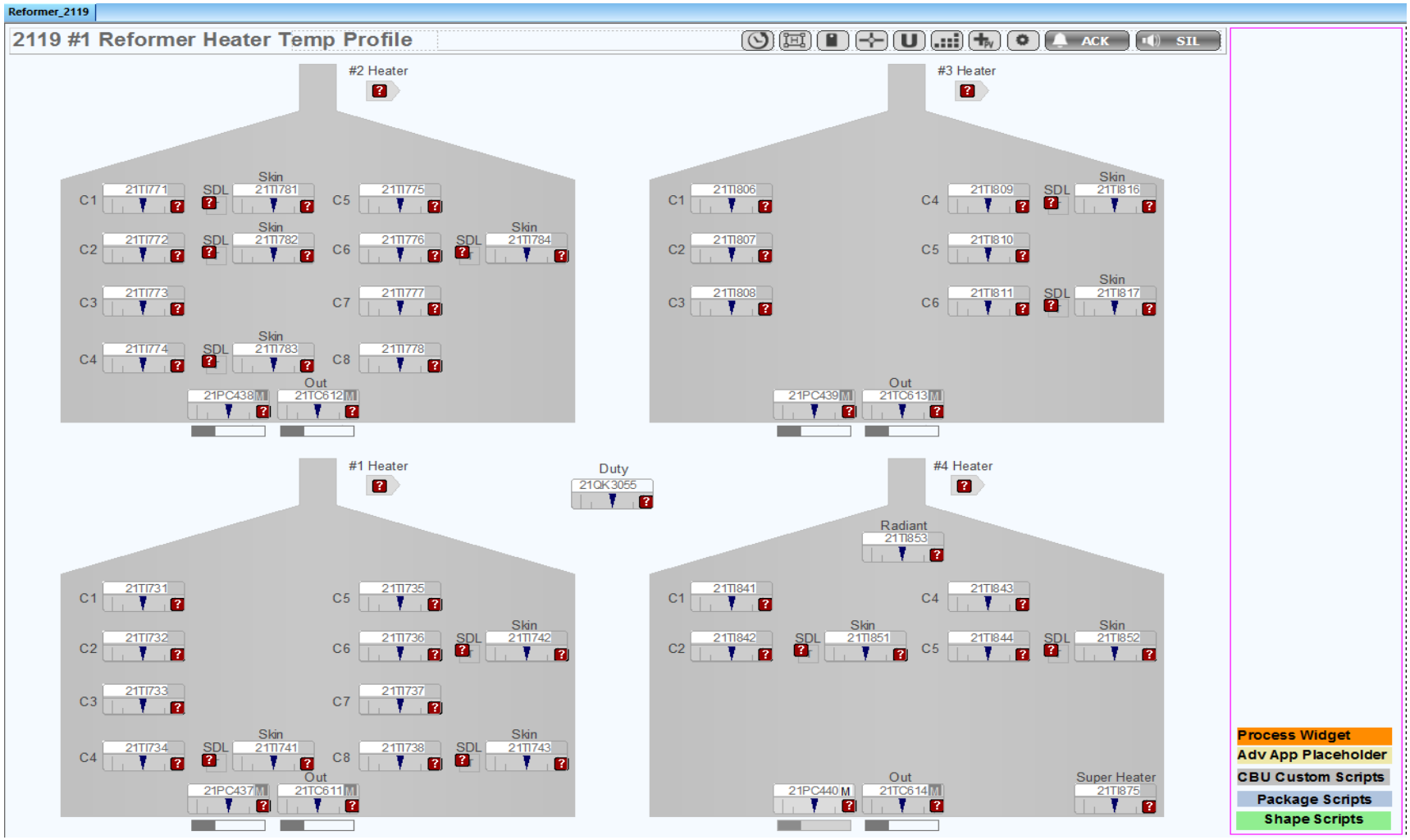


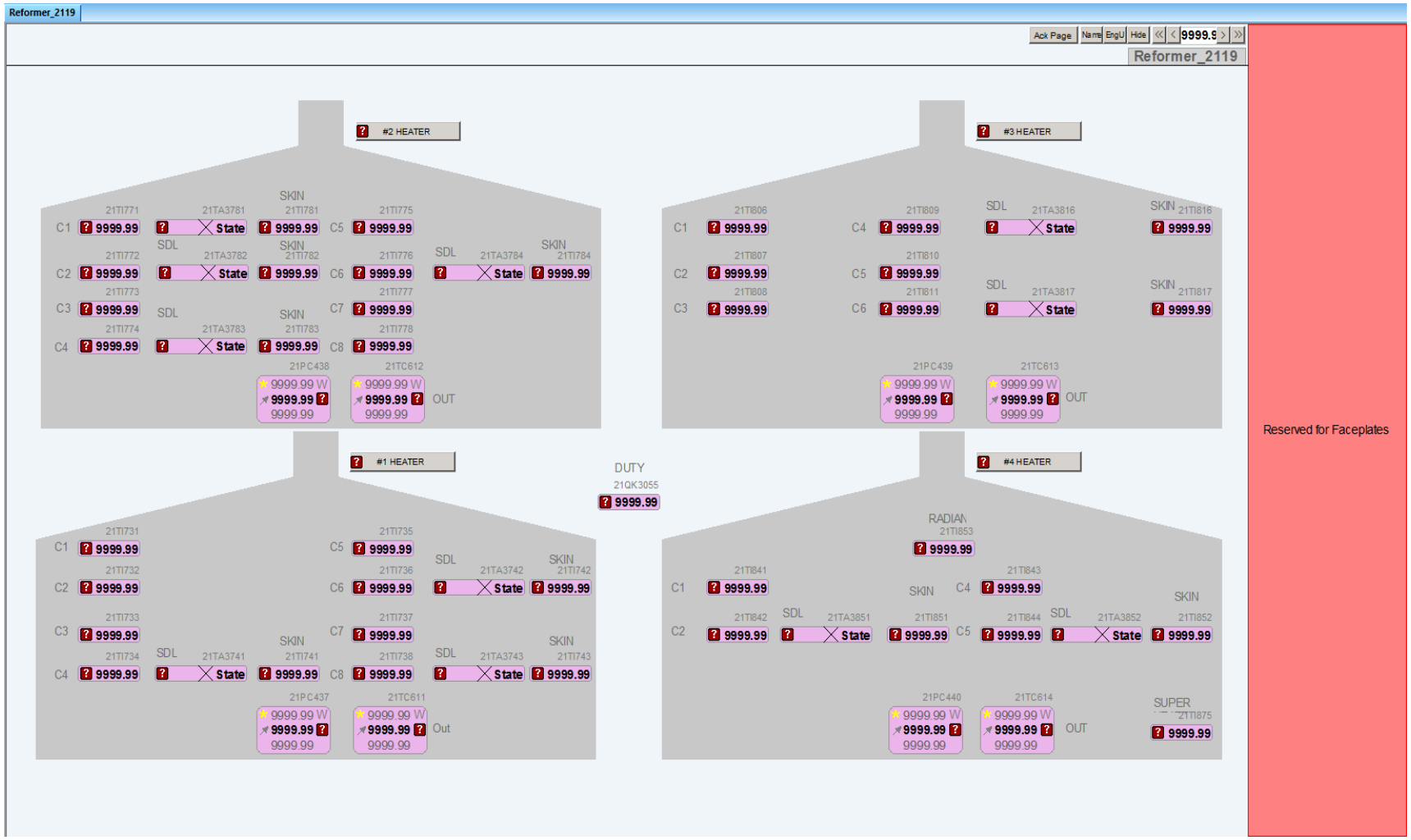

Reformer_2118
2118 #1 Reformer Reactor Temp Profile
ACK
SIL
21TI740
#1 Reactor
S
NW
E
DP
21PI411
DT
21TK3601
21TI770
21TI780
#2 Reactor
SE
W
N
DP
21PI412
DT
21TK3602
21TI805
21TI815
#3 Reactor
NE
NW
SE
SW
DP
21PI413
DT
21TK3603
21TI840
Total Rx DT
21TK3606
21TI850
4A Reactor
NE
NW
SE
S
21TI862
21TI866
21TI854
21TI858
21TI863
21TI867
21TI855
21TI859
21TI864
21TI868
21TI856
21TI860
21TI865
21TI869
21TI857
21TI861
DP
21PI414
DT
21TK3604
21TI870
21TI850
4B Reactor
NE
NW
SE
SW
21TI904
21TI916
21TI908
21TI912
21TI903
21TI915
21TI907
21TI911
21TI902
21TI914
21TI906
21TI910
21TI901
21TI913
21TI905
21TI909
DP
21PI471
DT
21TK3605
21TI917
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2118
Ack Page
Name
EngU
Hide
9999.9
Reformer_2118
21TI740
9999.99
#1 REACTOR
S
NW
E
DP
21PI411
9999.99
DT
21TK3601
9999.99
21TI770
9999.99
21TI780
9999.99
#2 REACTOR
SE
W
N
DP
21PI412
9999.99
DT
21TK3602
9999.99
21TI805
9999.99
21TI815
9999.99
#3 REACTOR
NE
NW
SE
SW
DP
21PI413
9999.99
DT
21TK3603
9999.99
21TI840
9999.99
21TI850
9999.99
#4A REACTOR
NE
21TI862
NW
21TI866
SE
21TI854
S
21TI858
21TI863
21TI867
21TI855
21TI859
21TI864
21TI868
21TI856
21TI860
21TI865
21TI869
21TI857
21TI861
DP
21PI414
9999.99
DT
21TK3604
9999.99
21TI870
9999.99
TOTAL Rx
21TK3606
9999.99
21TI850
9999.99
#4B REACTOR
NE
21TI904
NW
21TI916
SE
21TI908
SW
21TI912
21TI903
21TI915
21TI907
21TI911
21TI902
21TI914
21TI906
21TI910
21TI901
21TI913
21TI905
21TI909
DP
21PI471
9999.99
DT
21TK3605
9999.99
21TI917
9999.99
Reserved for Faceplates

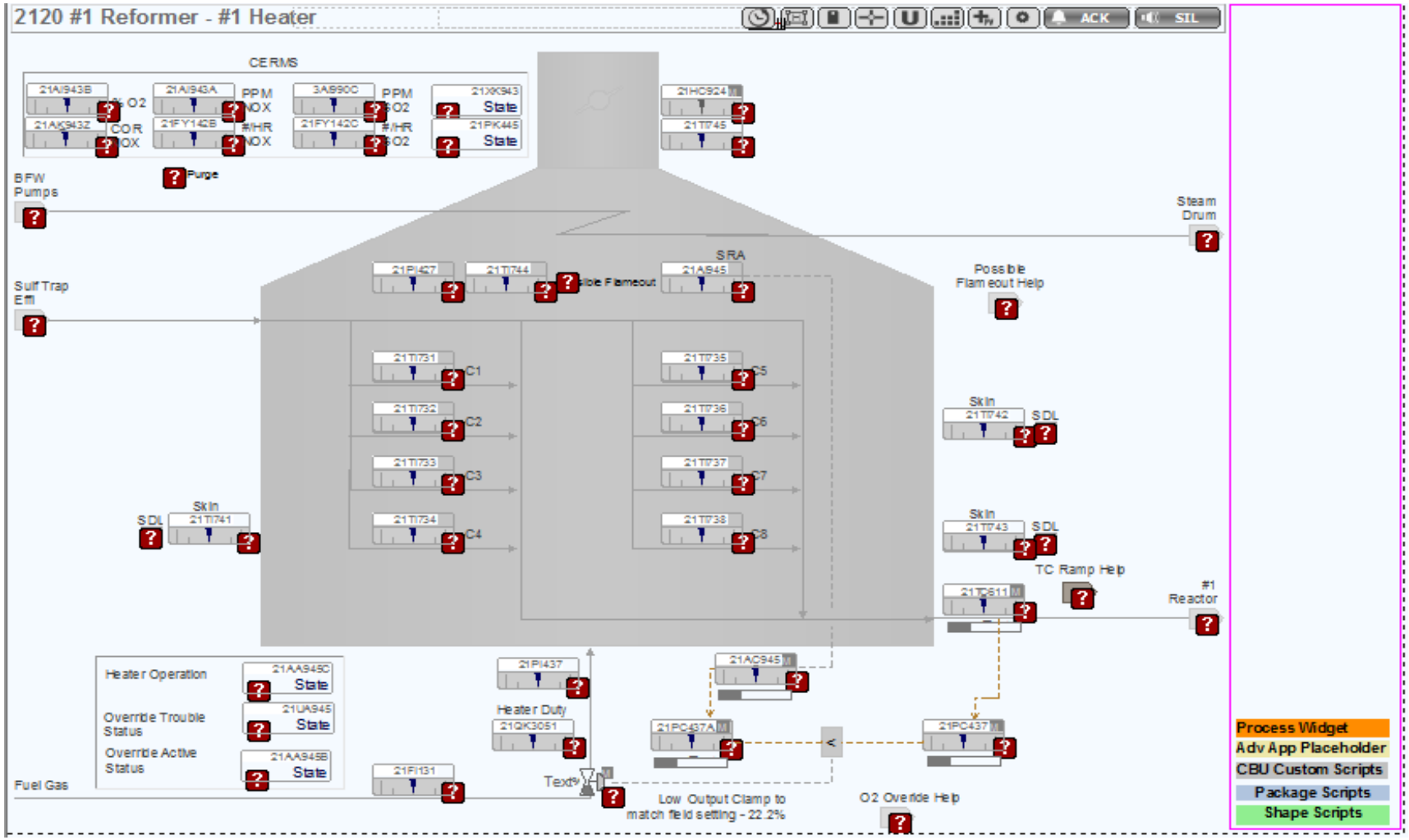
1.87 2119 #1 REFORMER HEATER TEMP PROFILE (Reformer_2119.htm)



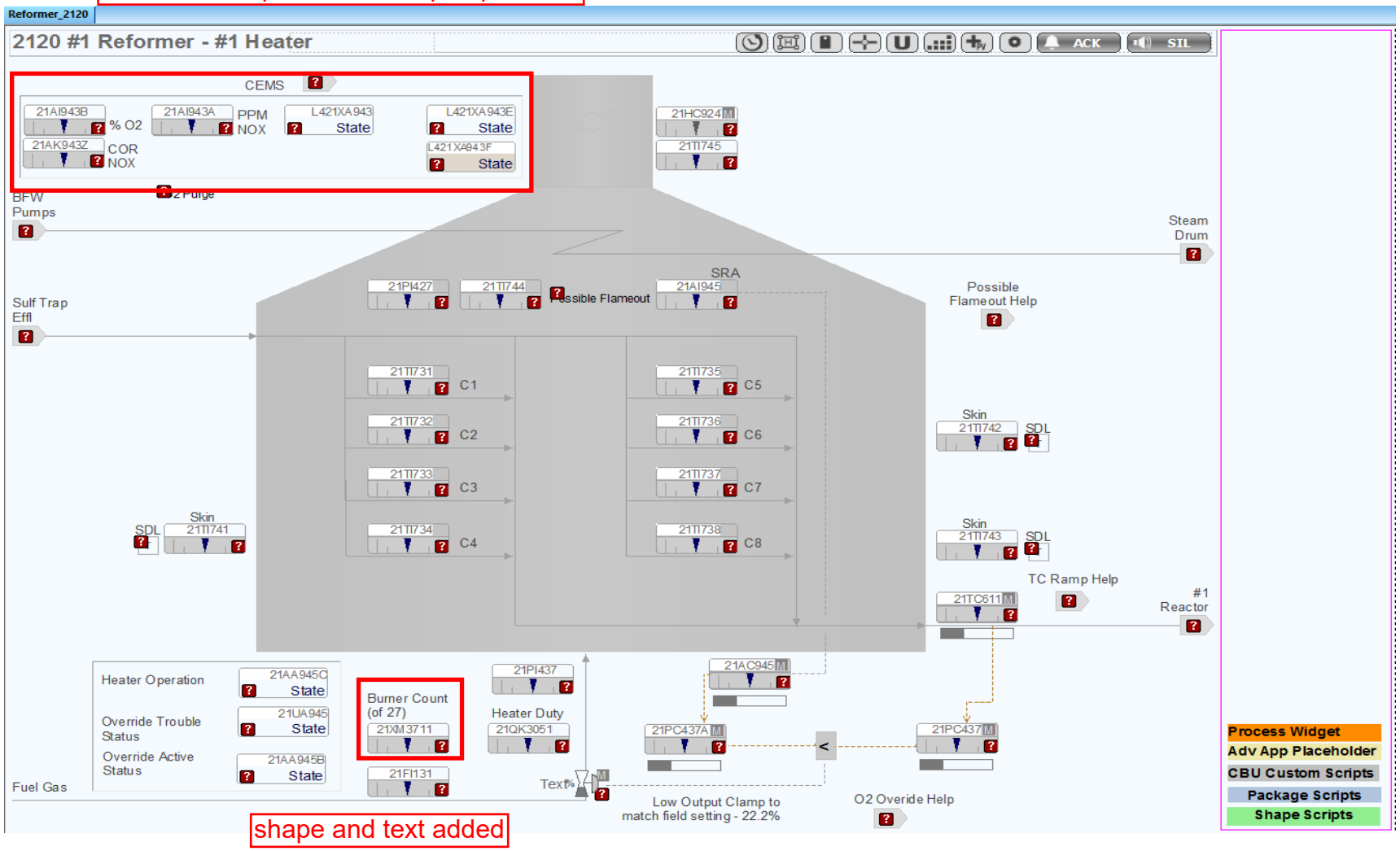

Reformer_2119
2119 #1 Reformer Heater Temp Profile
ACK
SIL
#2 Heater
C1 21TI771 SDL Skin 21TI781 C5 21TI775
C2 21TI772 SDL Skin 21TI782 C6 21TI776 SDL Skin 21TI784
C3 21TI773 C7 21TI777
C4 21TI774 SDL Skin 21TI783 C8 21TI778
Out 21PC438 21TC612
#3 Heater
C1 21TI806 C4 21TI809 SDL Skin 21TI816
C2 21TI807 C5 21TI810
C3 21TI808 C6 21TI811 SDL Skin 21TI817
Out 21PC439 21TC613
#1 Heater
C1 21TI731 C5 21TI735
C2 21TI732 C6 21TI736 SDL Skin 21TI742
C3 21TI733 C7 21TI737
C4 21TI734 SDL Skin 21TI741 C8 21TI738 SDL Skin 21TI743
Out 21PC437 21TC611
Duty 21QK3055
#4 Heater
Radiant 21TI853
C1 21TI841 C4 21TI843
C2 21TI842 SDL Skin 21TI851 C5 21TI844 SDL Skin 21TI852
Out 21PC440 21TC614
Super Heater 21TI875
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2119
Ack Page
Name
Engu
Hide
Reformer_2119
#2 HEATER
#3 HEATER
#1 HEATER
#4 HEATER
DUTY
21QK3055
9999.99
SKIN
SDL
State
OUT
Out
RADIAN
SUPER
Reserved for Faceplates

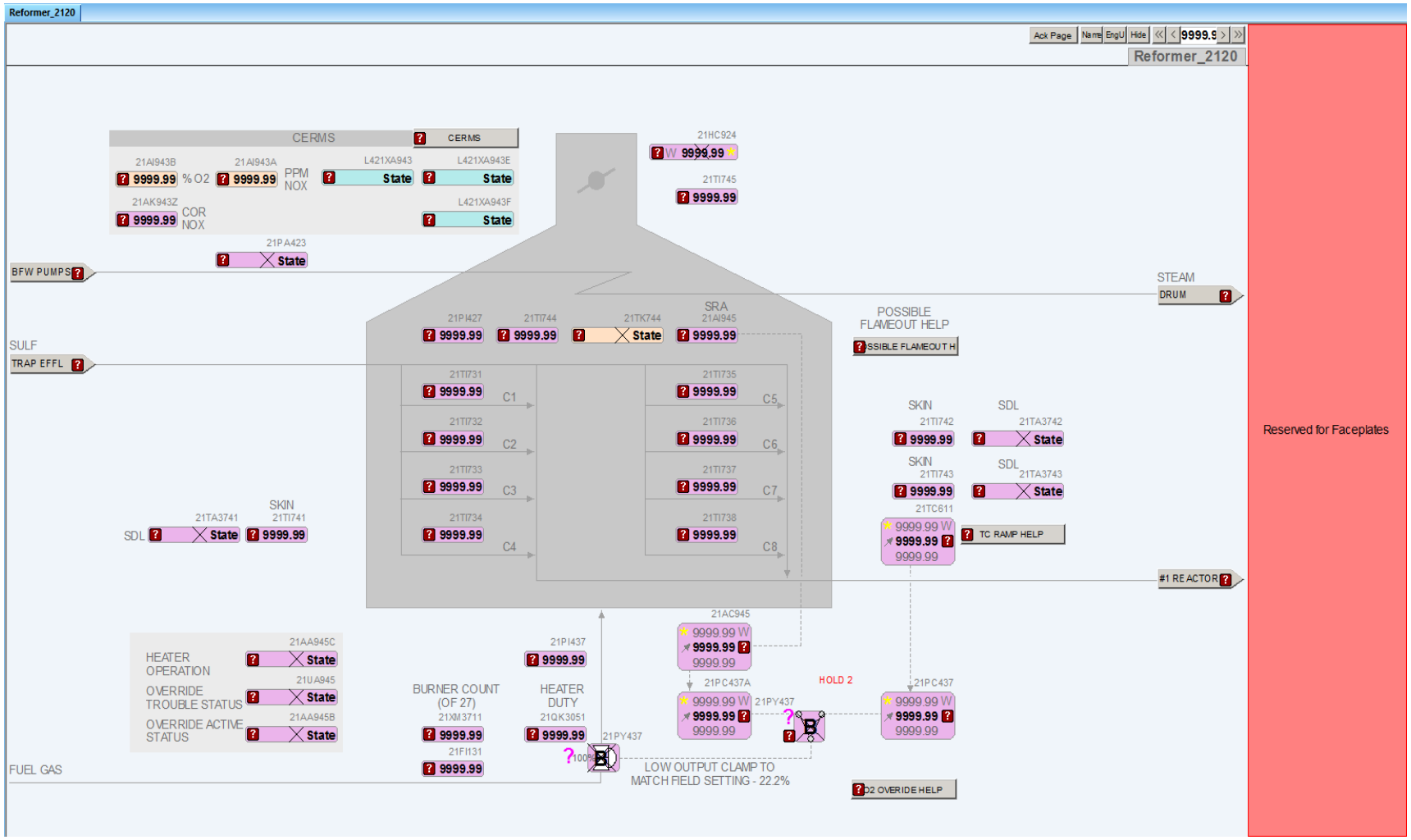
1.88 2120 #1 REFORMER - #1 HEATER (Reformer_2120.htm)



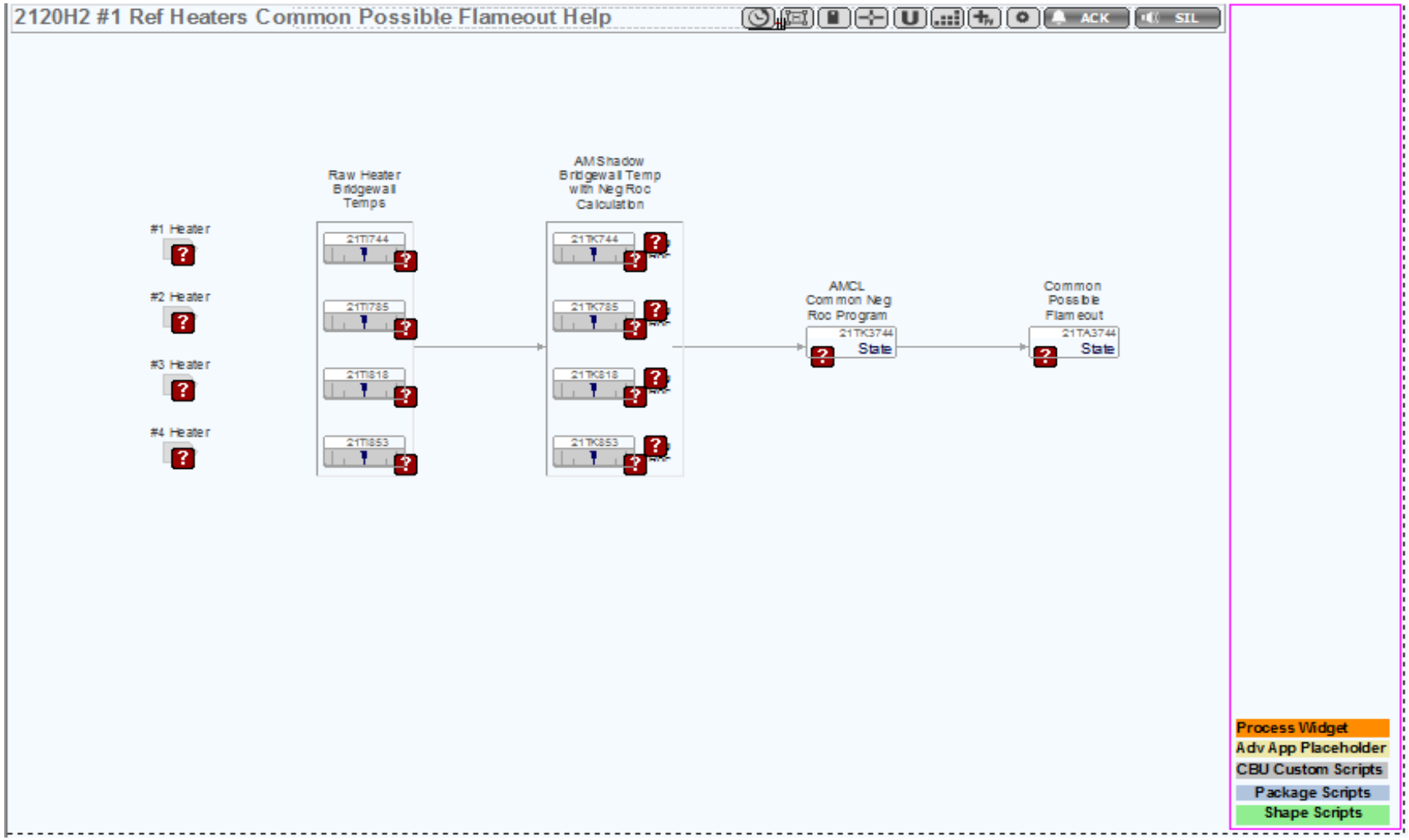
CERMS Callup added & shape updated

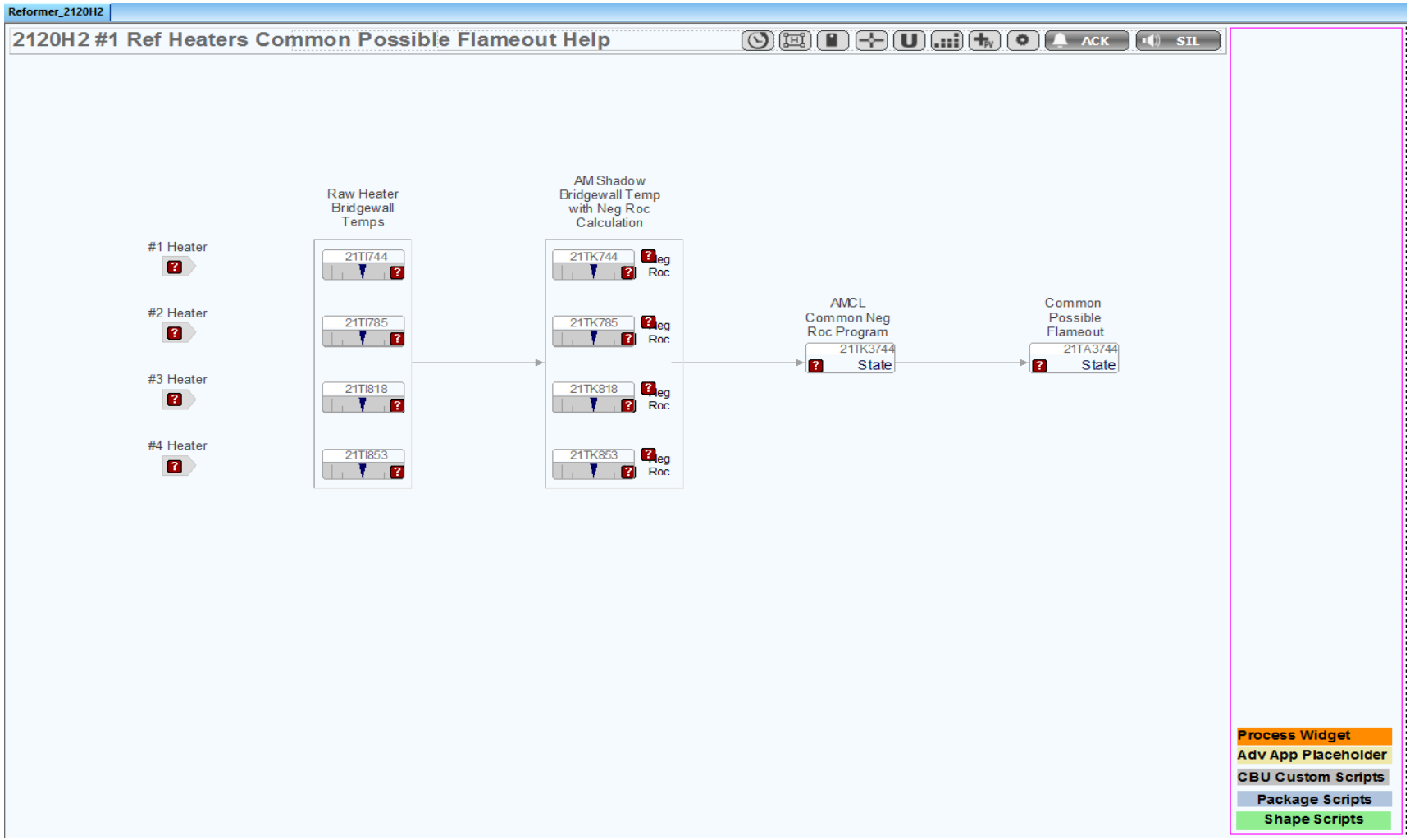


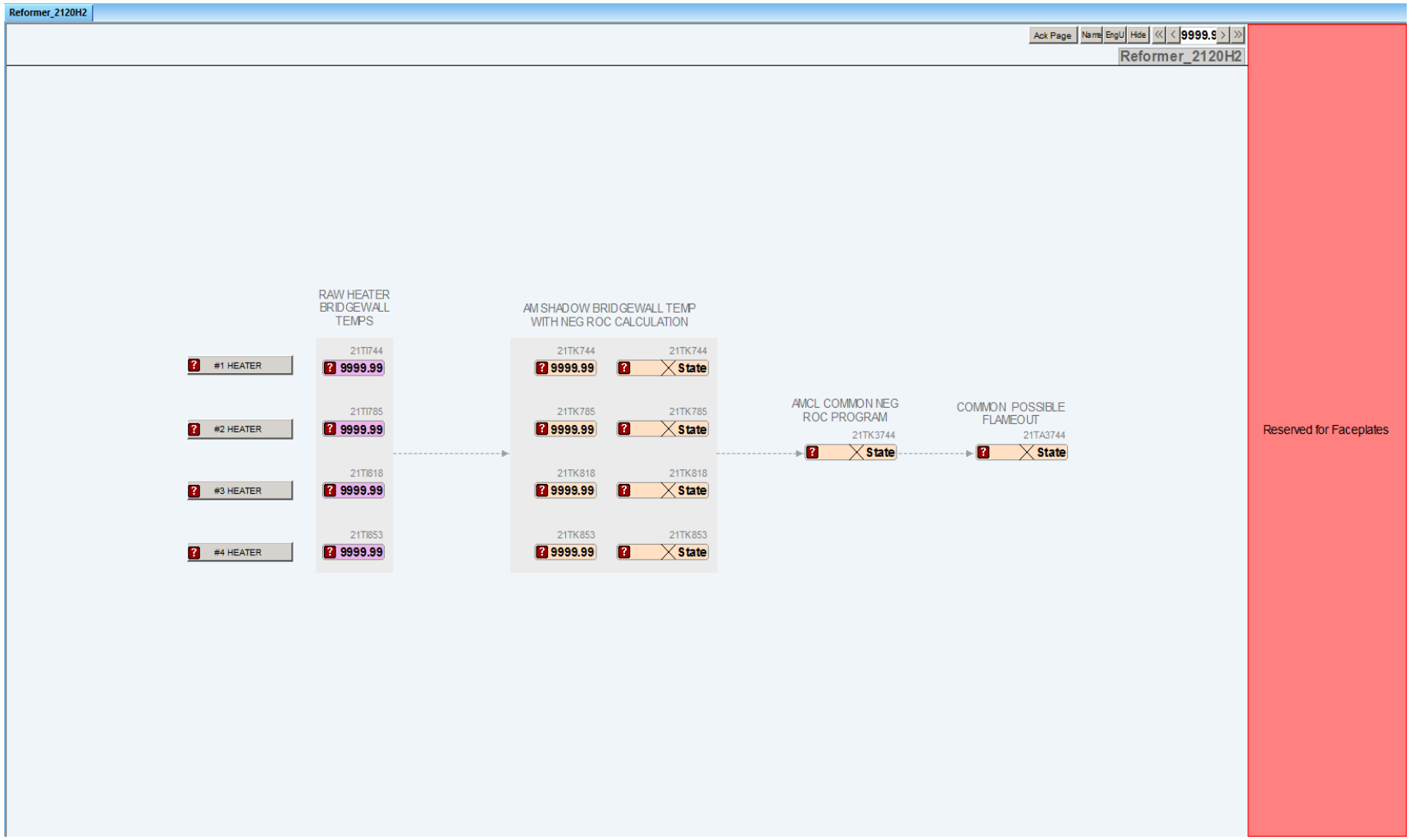
shape and text added


Reformer_2120
Ack Page
Name
EngU
Hide
Reformer_2120
CERMS
CERMS
21AI943B
9999.99
% O2
21AI943A
9999.99
PPM NOX
L421XA943
State
L421XA943E
State
21AK943Z
9999.99
COR NOX
L421XA943F
State
21PA423
State
BFW PUMPS
21HC924
W 9999.99
21TI745
9999.99
STEAM
DRUM
SRA
21PI427
9999.99
21TI744
9999.99
21TK744
State
21AI945
9999.99
POSSIBLE FLAMEOUT HELP
SSIBLE FLAMEOUT H
SULF
TRAP EFFL
21TI731
9999.99
C1
21TI732
9999.99
C2
21TI733
9999.99
C3
21TI734
9999.99
C4
21TI735
9999.99
C5
21TI736
9999.99
C6
21TI737
9999.99
C7
21TI738
9999.99
C8
SKIN
21TI742
9999.99
SDL
21TA3742
State
SKIN
21TI743
9999.99
SDL
21TA3743
State
21TC611
9999.99 W
9999.99
9999.99
TC RAMP HELP
SDL
21TA3741
State
SKIN
21TI741
9999.99
#1 REACTOR
21AC945
9999.99 W
9999.99
9999.99
21PC437A
9999.99 W
9999.99
9999.99
21PY437
HOLD 2
21PC437
9999.99 W
9999.99
9999.99
21AA945C
HEATER OPERATION
State
21UA945
OVERRIDE TROUBLE STATUS
State
21AA945B
OVERRIDE ACTIVE STATUS
State
21PI437
9999.99
BURNER COUNT (OF 27)
21XM3711
9999.99
HEATER DUTY
21QK3051
9999.99
21FI131
9999.99
21PY437
100
LOW OUTPUT CLAMP TO MATCH FIELD SETTING - 22.2%
FUEL GAS
O2 OVERIDE HELP
Reserved for Faceplates

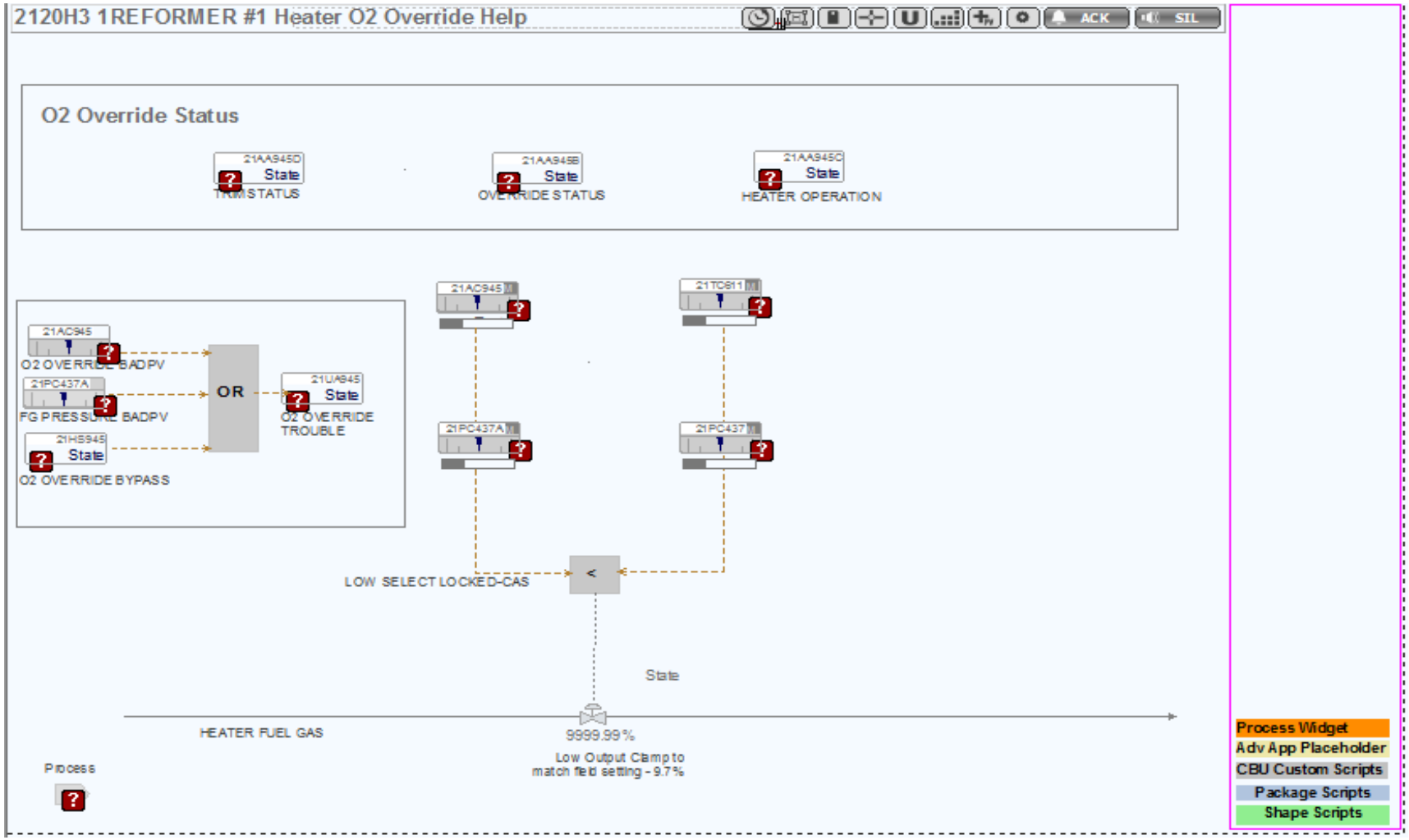
1.89 2120H2 #1 REF HEATERS COMMON POSSIBLE FLAMEOUT HELP (Reformer_2120H2.htm)

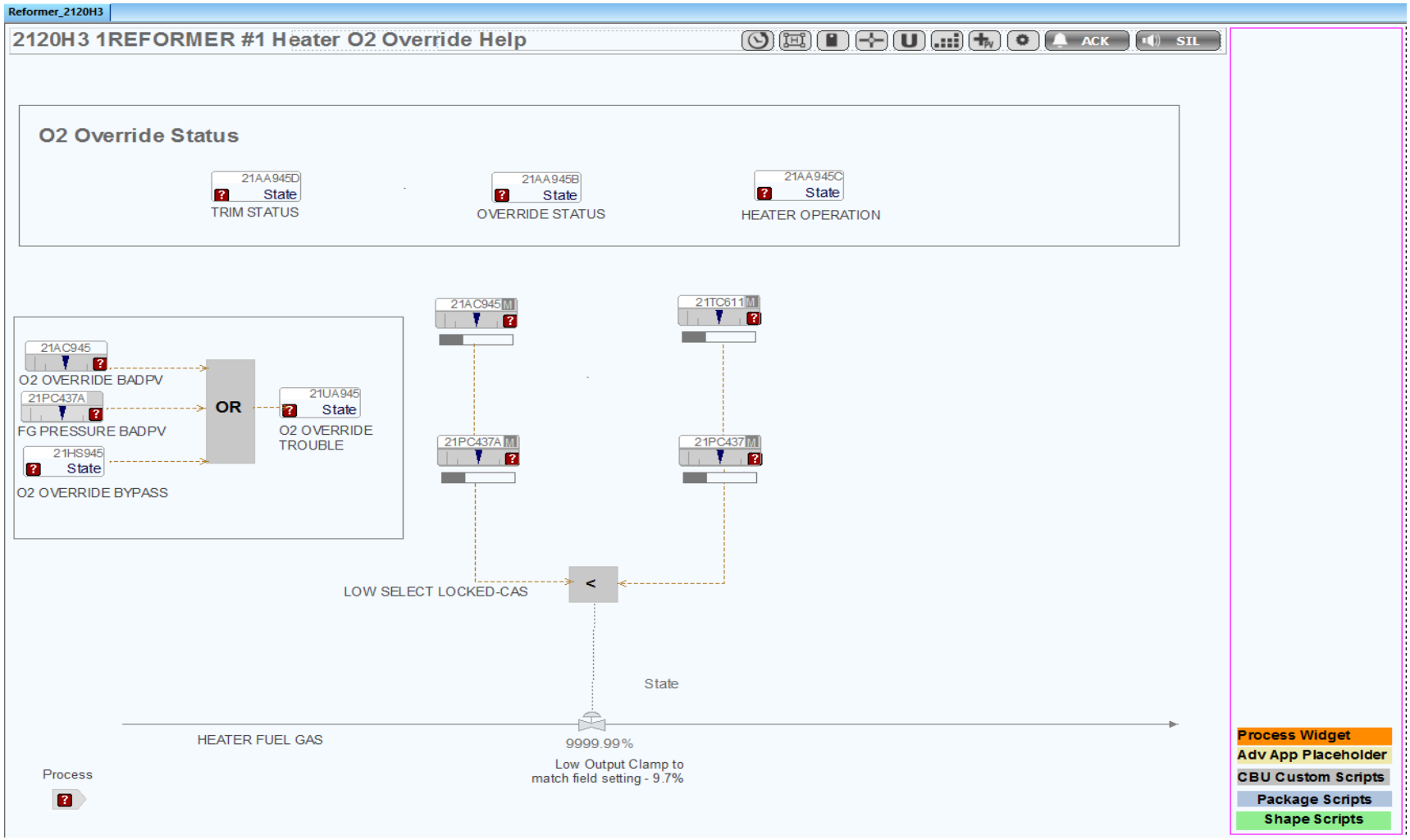


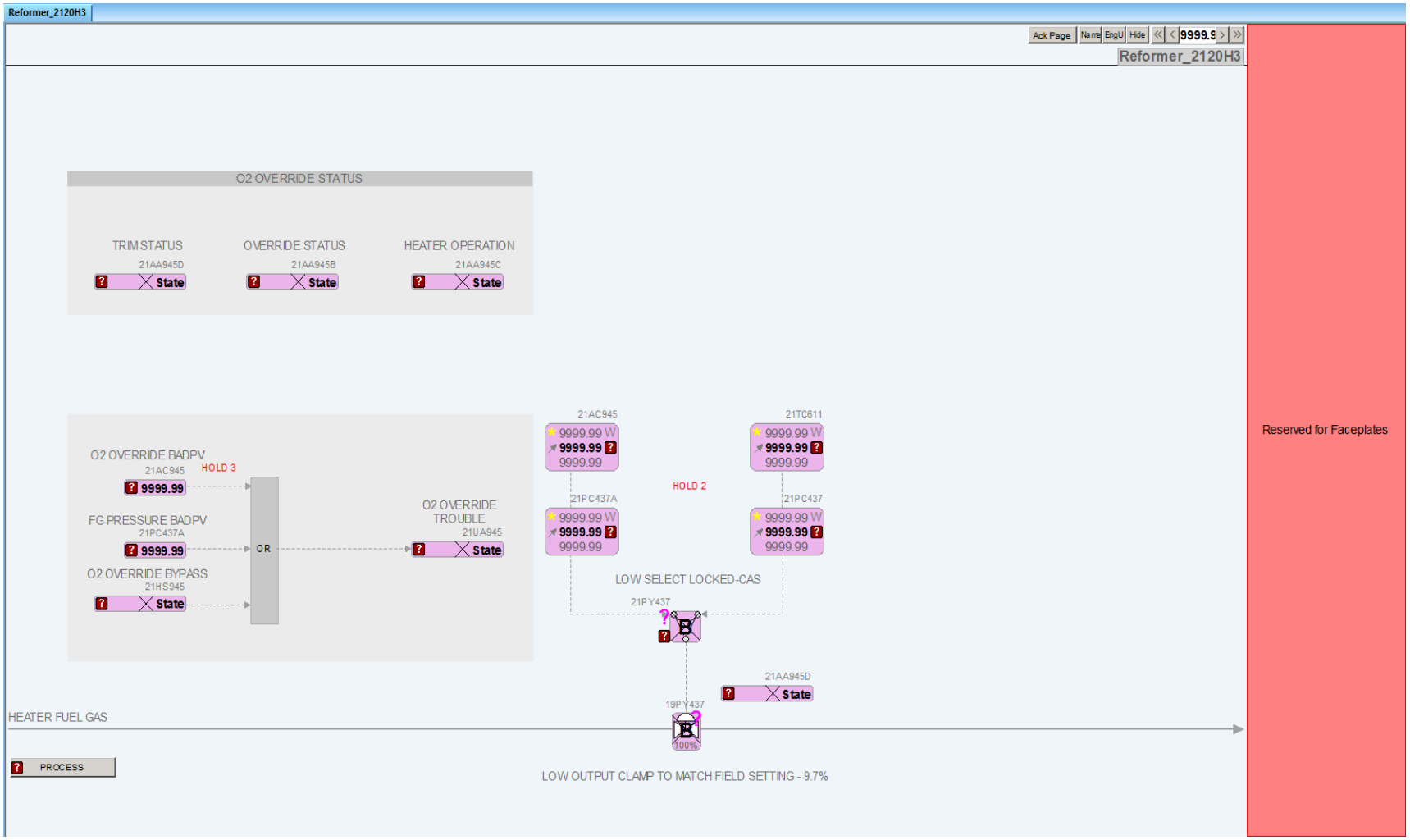

Reformer_2120H2
2120H2 #1 Ref Heaters Common Possible Flameout Help
ACK
SIL
Raw Heater Bridgewall Temps
AM Shadow Bridgewall Temp with Neg Roc Calculation
#1 Heater
#2 Heater
#3 Heater
#4 Heater
21TI744
21TI785
21TI818
21TI853
21TK744
21TK785
21TK818
21TK853
Neg Roc
AMCL Common Neg Roc Program
21TK3744
State
Common Possible Flameout
21TA3744
State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2120H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2120H2
RAW HEATER BRIDGEWALL TEMPS
AM SHADOW BRIDGEWALL TEMP WITH NEG ROC CALCULATION
#1 HEATER
21TI744
9999.99
21TK744
9999.99
21TK744
State
#2 HEATER
21TI785
9999.99
21TK785
9999.99
21TK785
State
#3 HEATER
21TI818
9999.99
21TK818
9999.99
21TK818
State
#4 HEATER
21TI853
9999.99
21TK853
9999.99
21TK853
State
AMCL COMMON NEG ROC PROGRAM
21TK3744
State
COMMON POSSIBLE FLAMEOUT
21TA3744
State
Reserved for Faceplates

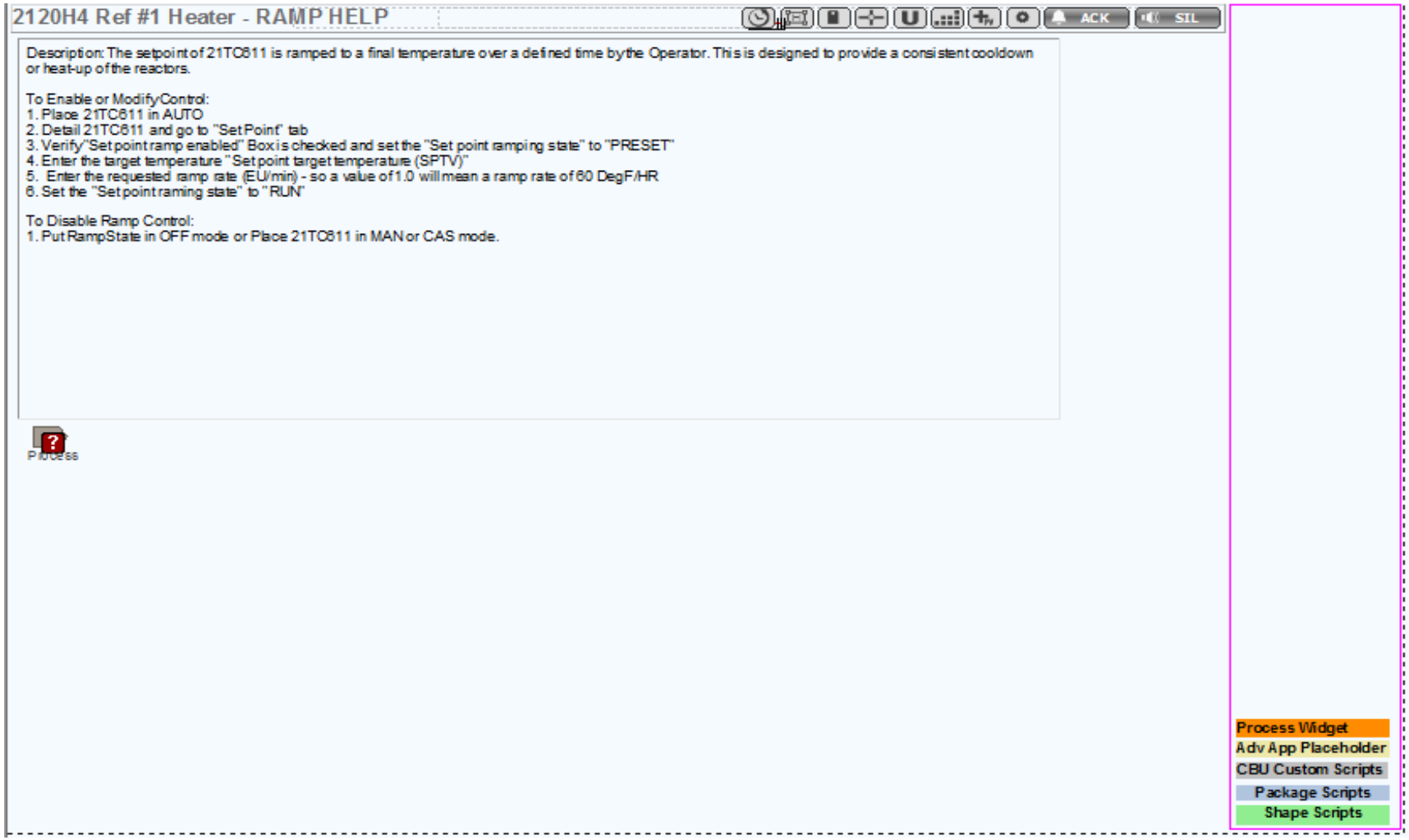
1.90 2120H3 1REFORMER #1 HEATER O2 OVERRIDE HELP (Reformer_2120H3.htm)

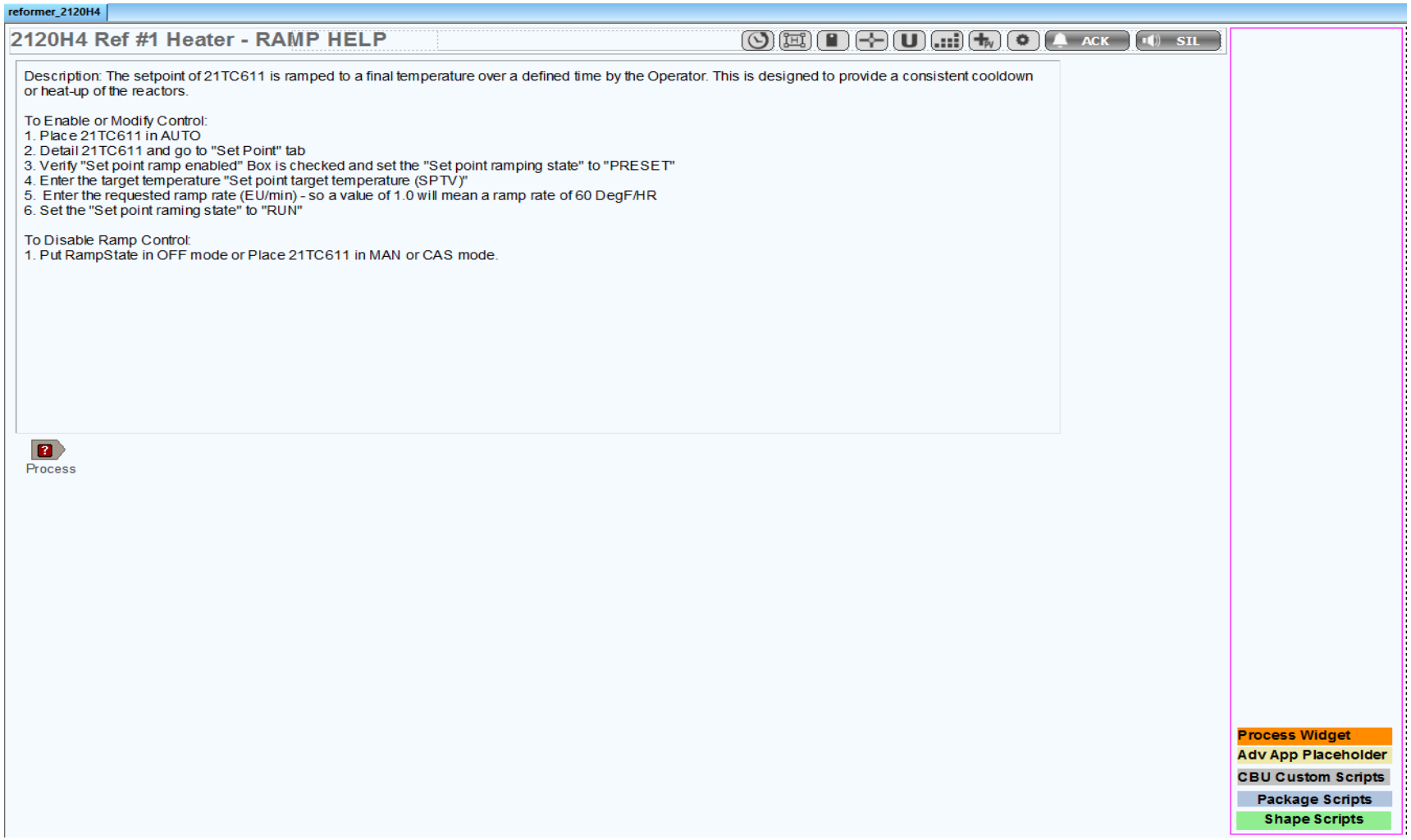


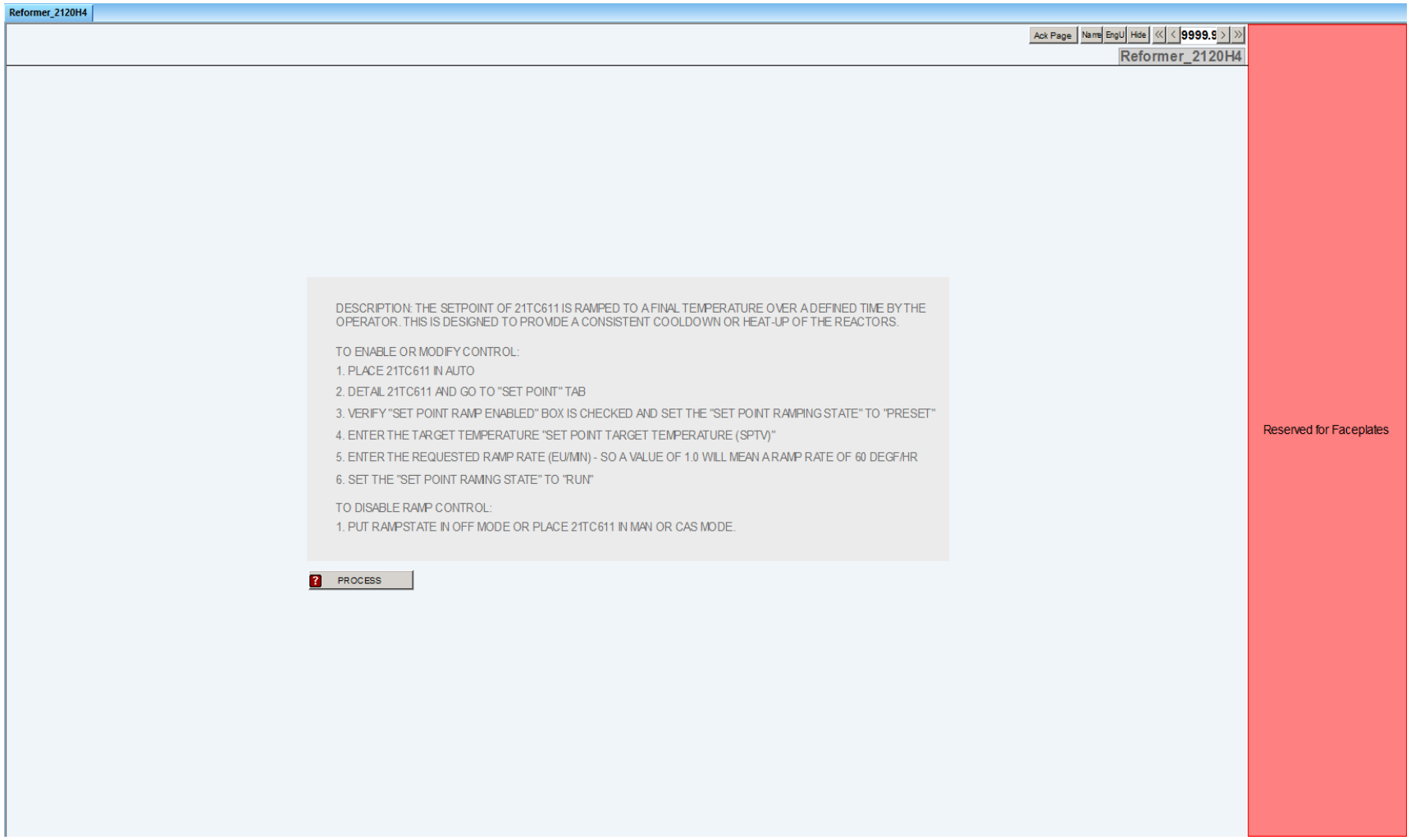

Reformer_2120H3
2120H3 1REFORMER #1 Heater O2 Override Help
ACK
SIL
O2 Override Status
21AA945D
State
TRIM STATUS
21AA945B
State
OVERRIDE STATUS
21AA945C
State
HEATER OPERATION
21AC945
O2 OVERRIDE BADPV
21PC437A
FG PRESSURE BADPV
21HS945
State
O2 OVERRIDE BYPASS
OR
21UA945
State
O2 OVERRIDE TROUBLE
21AC945
21TC611
21PC437A
21PC437
LOW SELECT LOCKED-CAS
<
State
HEATER FUEL GAS
9999.99%
Low Output Clamp to match field setting - 9.7%
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2120H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_2120H3
O2 OVERRIDE STATUS
TRIM STATUS
21AA945D
State
OVERRIDE STATUS
21AA945B
State
HEATER OPERATION
21AA945C
State
O2 OVERRIDE BADPV
21AC945
HOLD 3
9999.99
FG PRESSURE BADPV
21PC437A
9999.99
O2 OVERRIDE BYPASS
21HS945
State
OR
O2 OVERRIDE TROUBLE
21UA945
State
21AC945
9999.99 W
9999.99
9999.99
21TC611
9999.99 W
9999.99
9999.99
HOLD 2
21PC437A
9999.99 W
9999.99
9999.99
21PC437
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
21PY437
21AA945D
State
19PY437
100%
HEATER FUEL GAS
PROCESS
LOW OUTPUT CLAMP TO MATCH FIELD SETTING - 9.7%
Reserved for Faceplates

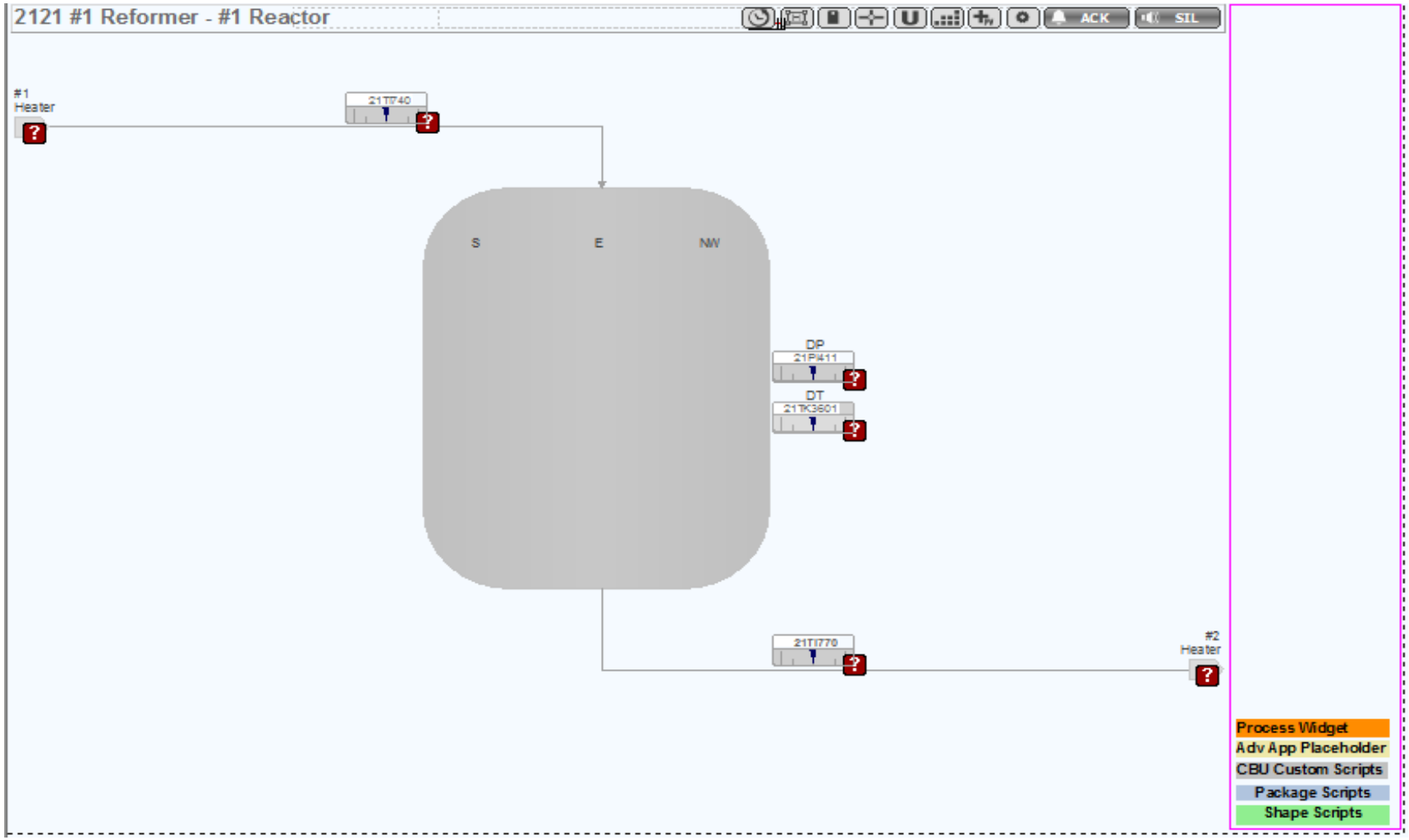
1.91 2120H4 REF #1 HEATER - RAMP HELP (reformer_2120H4.htm)

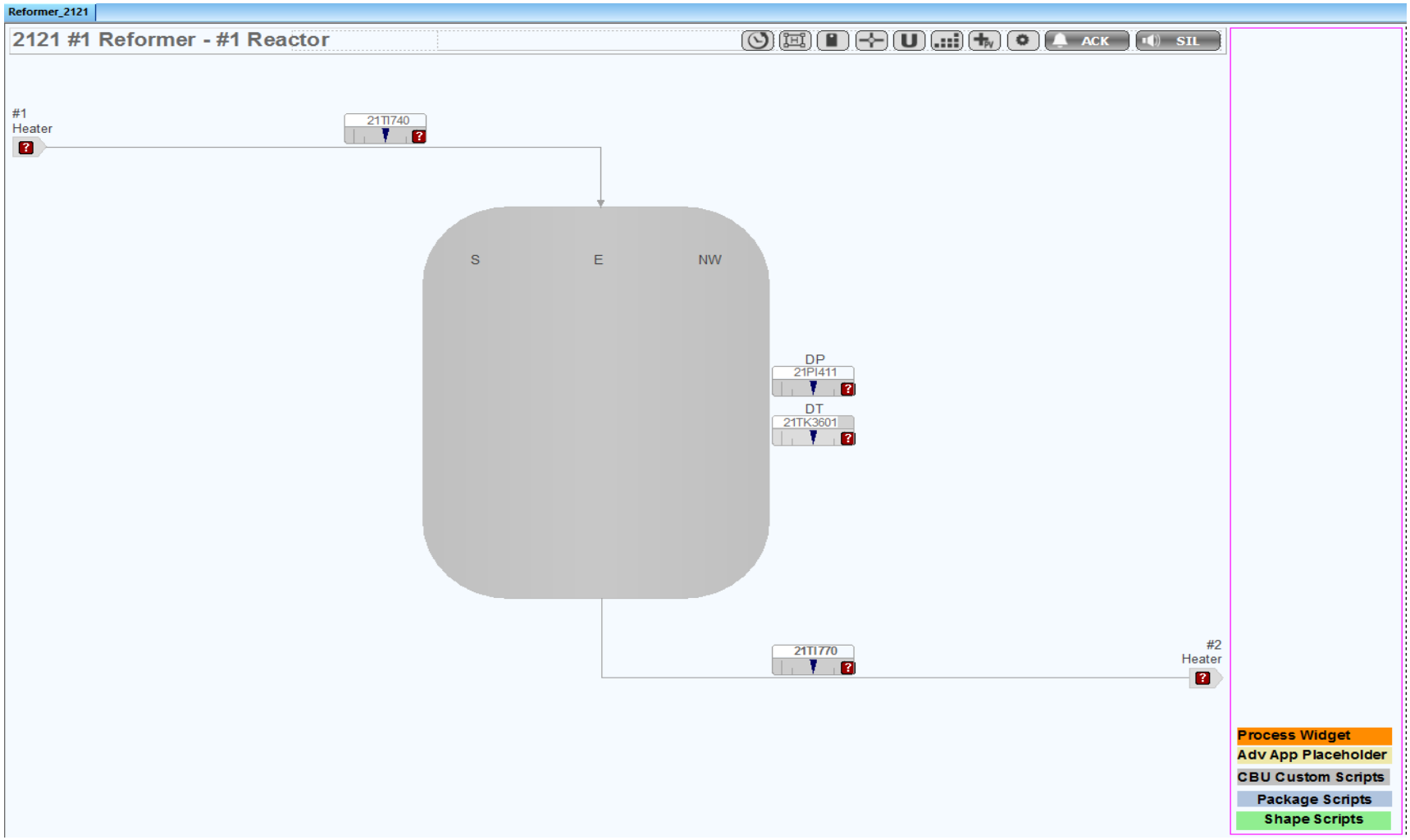


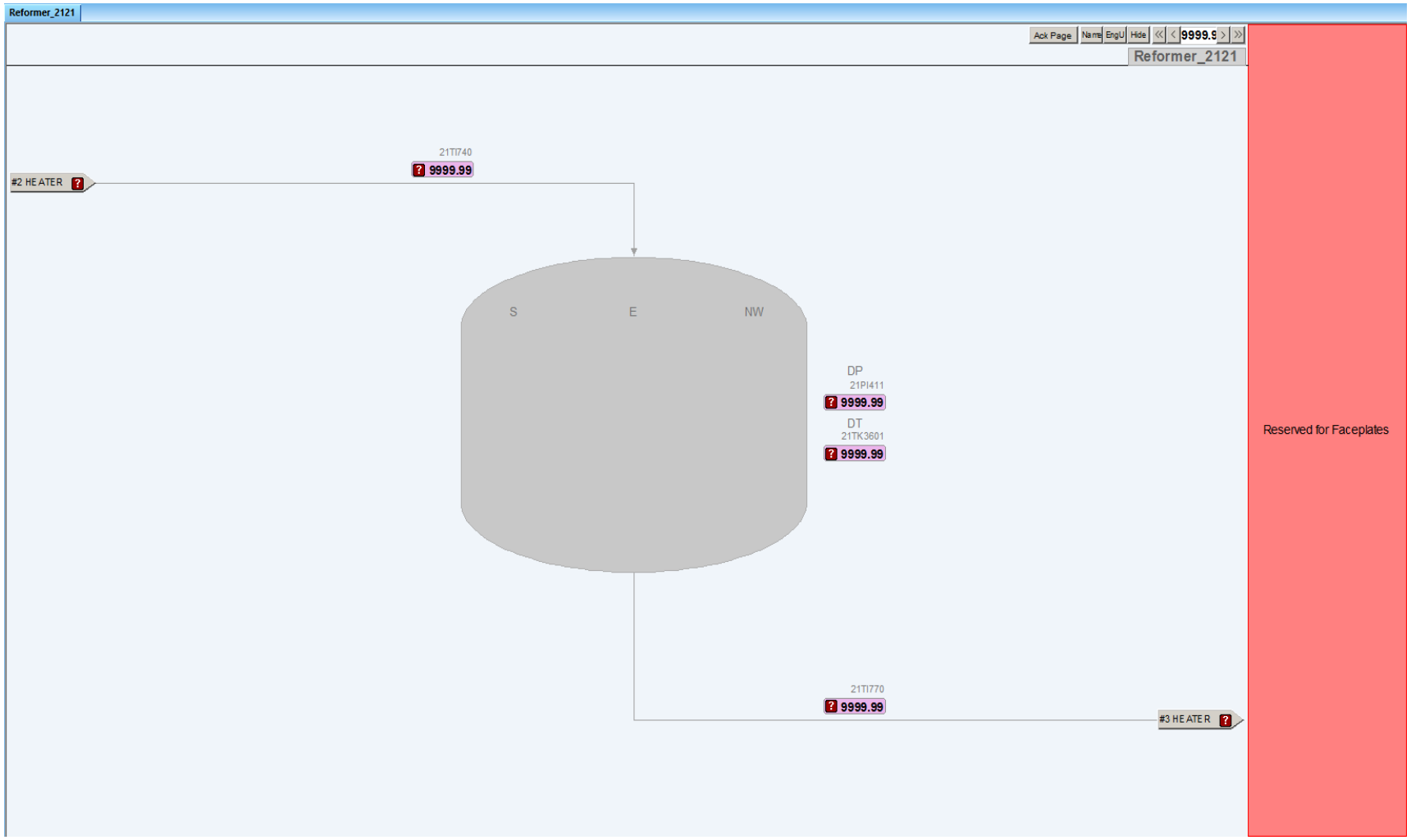

reformer_2120H4
2120H4 Ref #1 Heater - RAMP HELP
ACK
SIL
Description: The setpoint of 21TC611 is ramped to a final temperature over a defined time by the Operator. This is designed to provide a consistent cooldown or heat-up of the reactors.
To Enable or Modify Control:
1. Place 21TC611 in AUTO
2. Detail 21TC611 and go to "Set Point" tab
3. Verify "Set point ramp enabled" Box is checked and set the "Set point ramping state" to "PRESET"
4. Enter the target temperature "Set point target temperature (SPTV)"
5. Enter the requested ramp rate (EU/min) - so a value of 1.0 will mean a ramp rate of 60 DegF/HR
6. Set the "Set point raming state" to "RUN"
To Disable Ramp Control:
1. Put RampState in OFF mode or Place 21TC611 in MAN or CAS mode.
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2120H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_2120H4
DESCRIPTION: THE SETPOINT OF 21TC611 IS RAMPED TO A FINAL TEMPERATURE OVER A DEFINED TIME BY THE OPERATOR. THIS IS DESIGNED TO PROVIDE A CONSISTENT COOLDOWN OR HEAT-UP OF THE REACTORS.
TO ENABLE OR MODIFY CONTROL:
1. PLACE 21TC611 IN AUTO
2. DETAIL 21TC611 AND GO TO "SET POINT" TAB
3. VERIFY "SET POINT RAMP ENABLED" BOX IS CHECKED AND SET THE "SET POINT RAMPING STATE" TO "PRESET"
4. ENTER THE TARGET TEMPERATURE "SET POINT TARGET TEMPERATURE (SPTV)"
5. ENTER THE REQUESTED RAMP RATE (EU/MIN) - SO A VALUE OF 1.0 WILL MEAN A RAMP RATE OF 60 DEGF/HR
6. SET THE "SET POINT RAMING STATE" TO "RUN"
TO DISABLE RAMP CONTROL:
1. PUT RAMPSTATE IN OFF MODE OR PLACE 21TC611 IN MAN OR CAS MODE.
PROCESS
Reserved for Faceplates

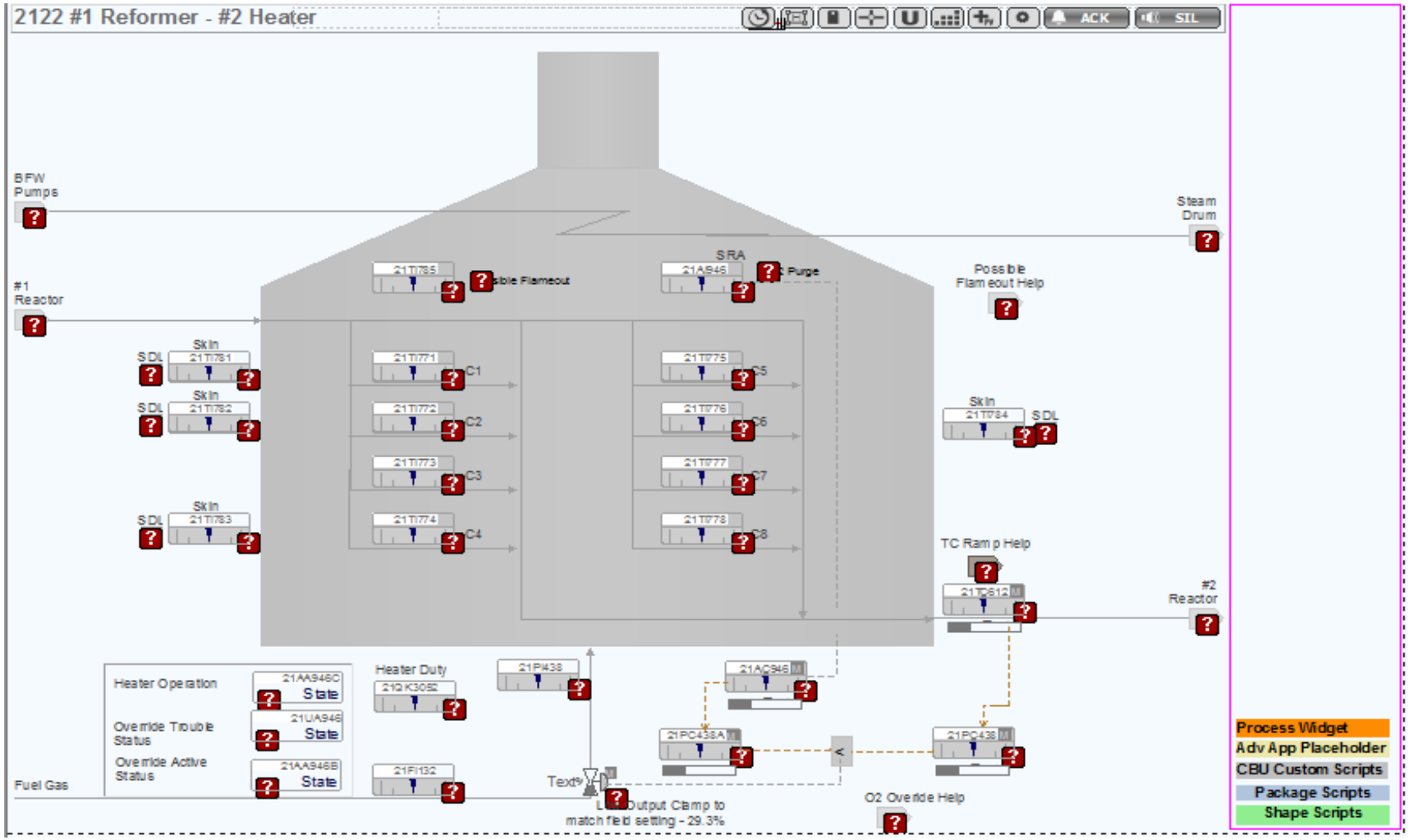
1.92 2121 #1 REFORMER - #1 REACTOR (Reformer_2121.htm)

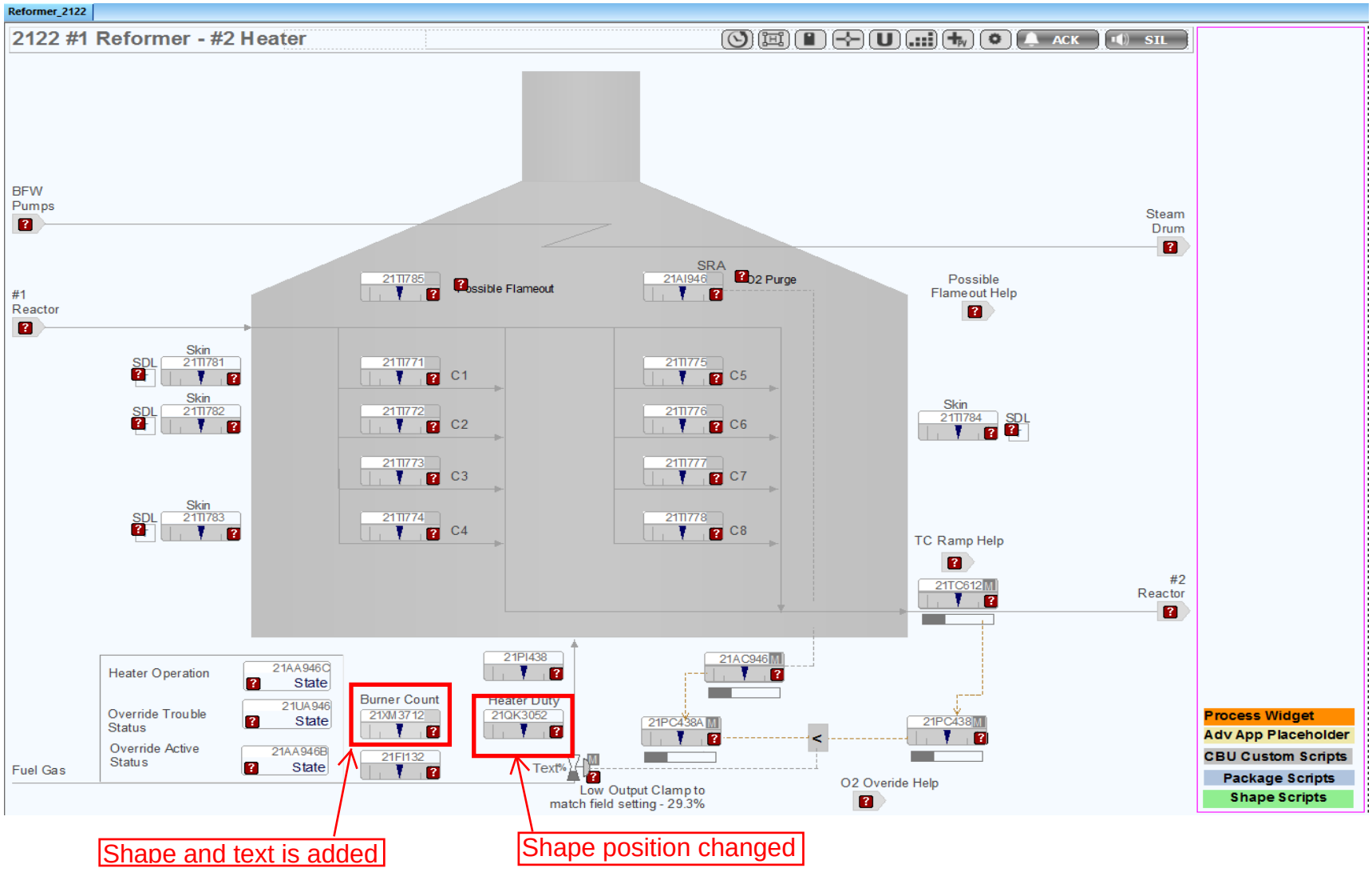


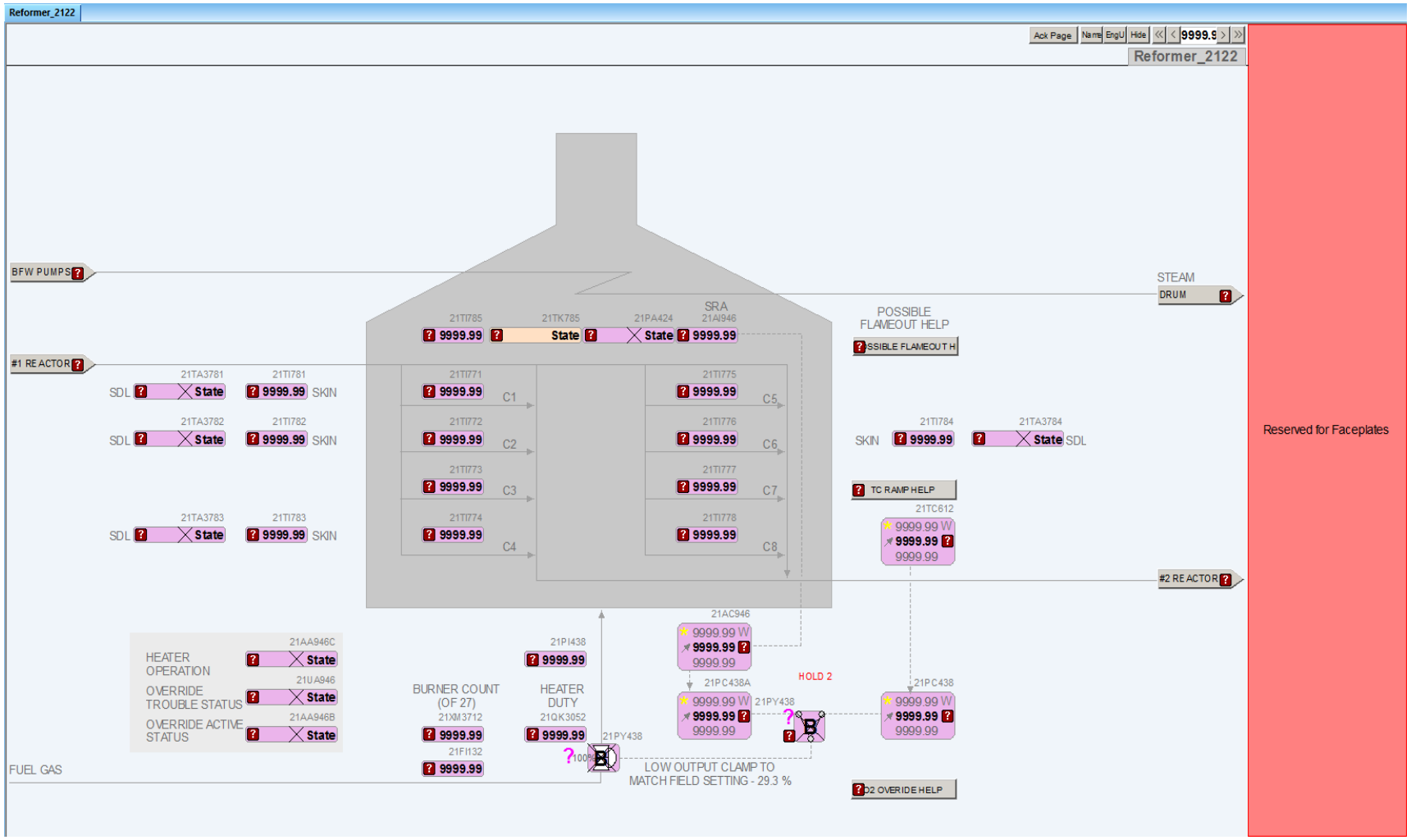

Reformer_2121
2121 #1 Reformer - #1 Reactor
ACK
SIL
#1
Heater
21TI740
S
E
NW
DP
21PI411
DT
21TK3601
21TI770
#2
Heater
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2121
Ack Page
Name
EngU
Hide
Reformer_2121
21TI740
9999.99
#2 HEATER
S
E
NW
DP
21PI411
9999.99
DT
21TK3601
9999.99
21TI770
9999.99
#3 HEATER
Reserved for Faceplates

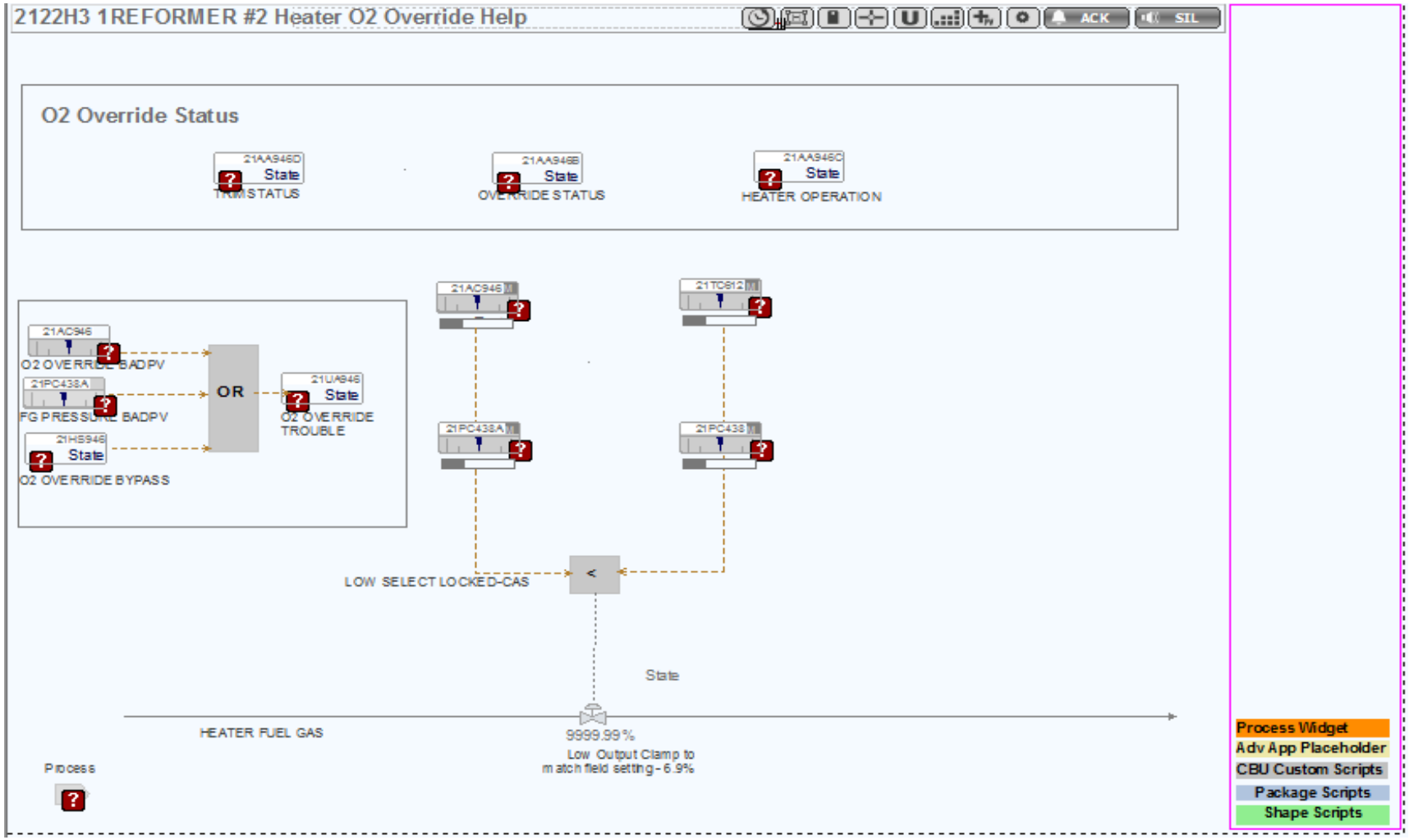
1.93 2122 #1 REFORMER - #2 HEATER (Reformer_2122.htm)

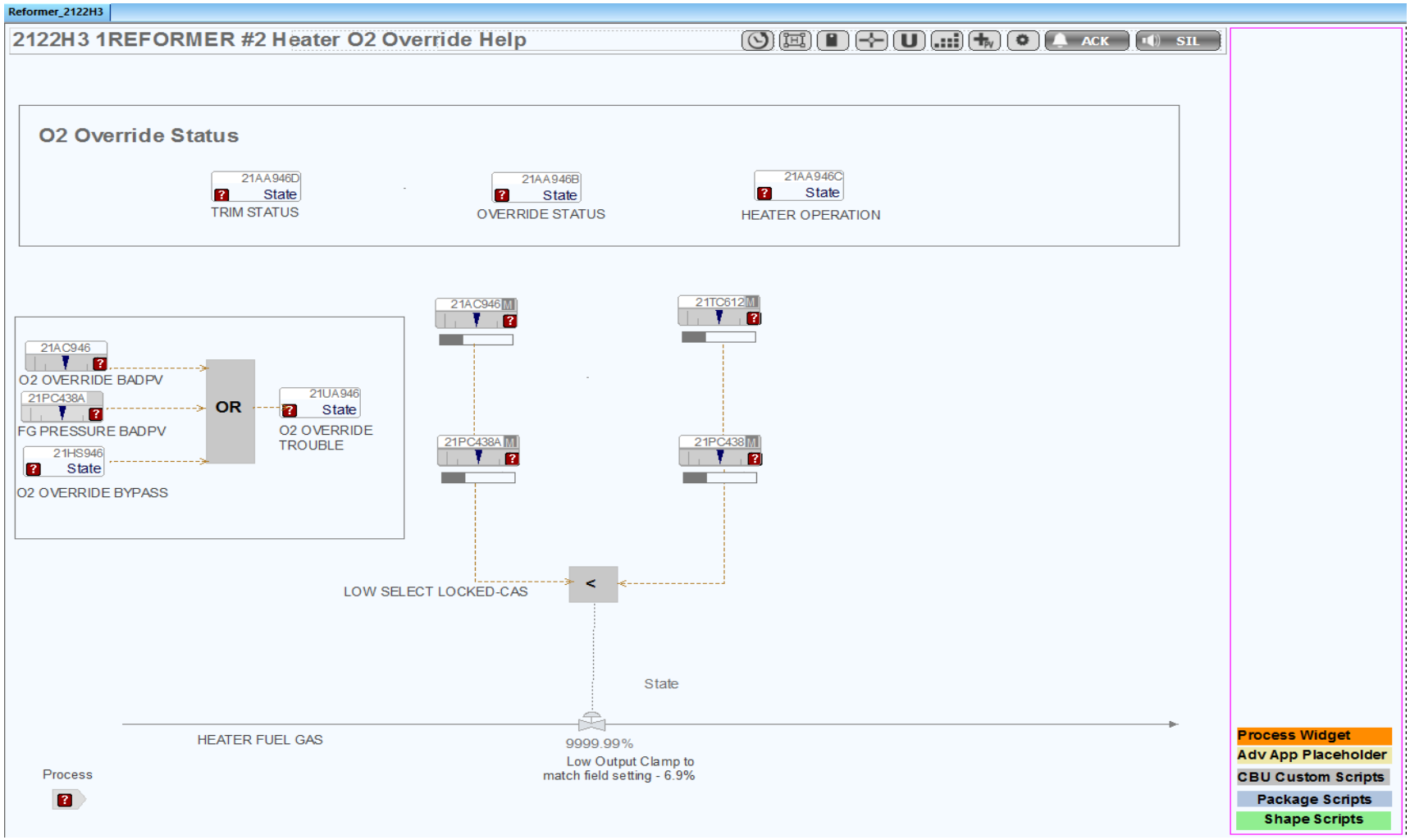


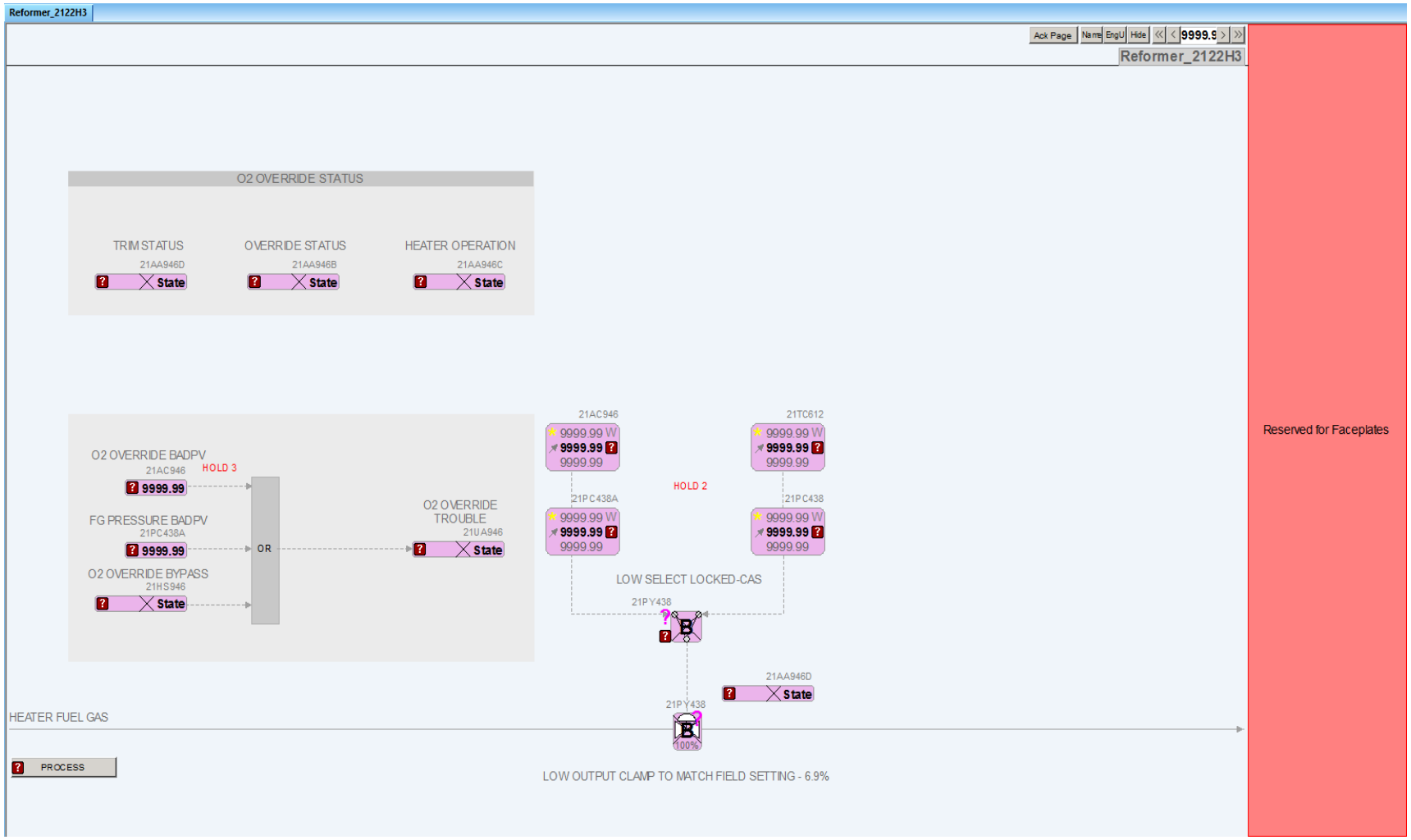

Reformer_2122
2122 #1 Reformer - #2 Heater
ACK
SIL
BFW Pumps
#1 Reactor
Steam Drum
SRA
21AI946
O2 Purge
21TI785
Possible Flameout
Possible Flameout Help
Skin
SDL
21TI781
21TI782
21TI783
21TI771
C1
21TI772
C2
21TI773
C3
21TI774
C4
21TI775
C5
21TI776
C6
21TI777
C7
21TI778
C8
21TI784
TC Ramp Help
21TC612
#2 Reactor
21PI438
21AC946
21PC438A
21PC438
O2 Overide Help
Heater Operation
21AA946C
State
Override Trouble Status
21UA946
Override Active Status
21AA946B
Burner Count
21XM3712
21FI132
Heater Duty
21QK3052
Text%
Low Output Clamp to match field setting - 29.3%
Fuel Gas
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
Shape and text is added
Shape position changed


Reformer_2122
Ack Page
Name
EngU
Hide
Reformer_2122
BFW PUMPS
#1 REACTOR
STEAM
DRUM
#2 REACTOR
SRA
21TI785
21TK785
21PA424
21AI946
9999.99
State
State
9999.99
POSSIBLE
FLAMEOUT HELP
SSIBLE FLAMEOUT H
21TA3781
21TI781
SDL
State
9999.99
SKIN
21TA3782
21TI782
SDL
State
9999.99
SKIN
21TA3783
21TI783
SDL
State
9999.99
SKIN
21TI771
C1
21TI772
C2
21TI773
C3
21TI774
C4
21TI775
C5
21TI776
C6
21TI777
C7
21TI778
C8
21TI784
21TA3784
SKIN
9999.99
State
SDL
TC RAMP HELP
21TC612
9999.99 W
9999.99
9999.99
21AA946C
HEATER
OPERATION
State
21UA946
OVERRIDE
TROUBLE STATUS
State
21AA946B
OVERRIDE ACTIVE
STATUS
State
FUEL GAS
BURNER COUNT
(OF 27)
21XM3712
9999.99
21FI132
9999.99
21PI438
9999.99
HEATER
DUTY
21QK3052
9999.99
21PY438
100
LOW OUTPUT CLAMP TO
MATCH FIELD SETTING - 29.3 %
21AC946
9999.99 W
9999.99
9999.99
21PC438A
9999.99 W
9999.99
9999.99
21PY438
HOLD 2
21PC438
9999.99 W
9999.99
9999.99
O2 OVERIDE HELP
Reserved for Faceplates

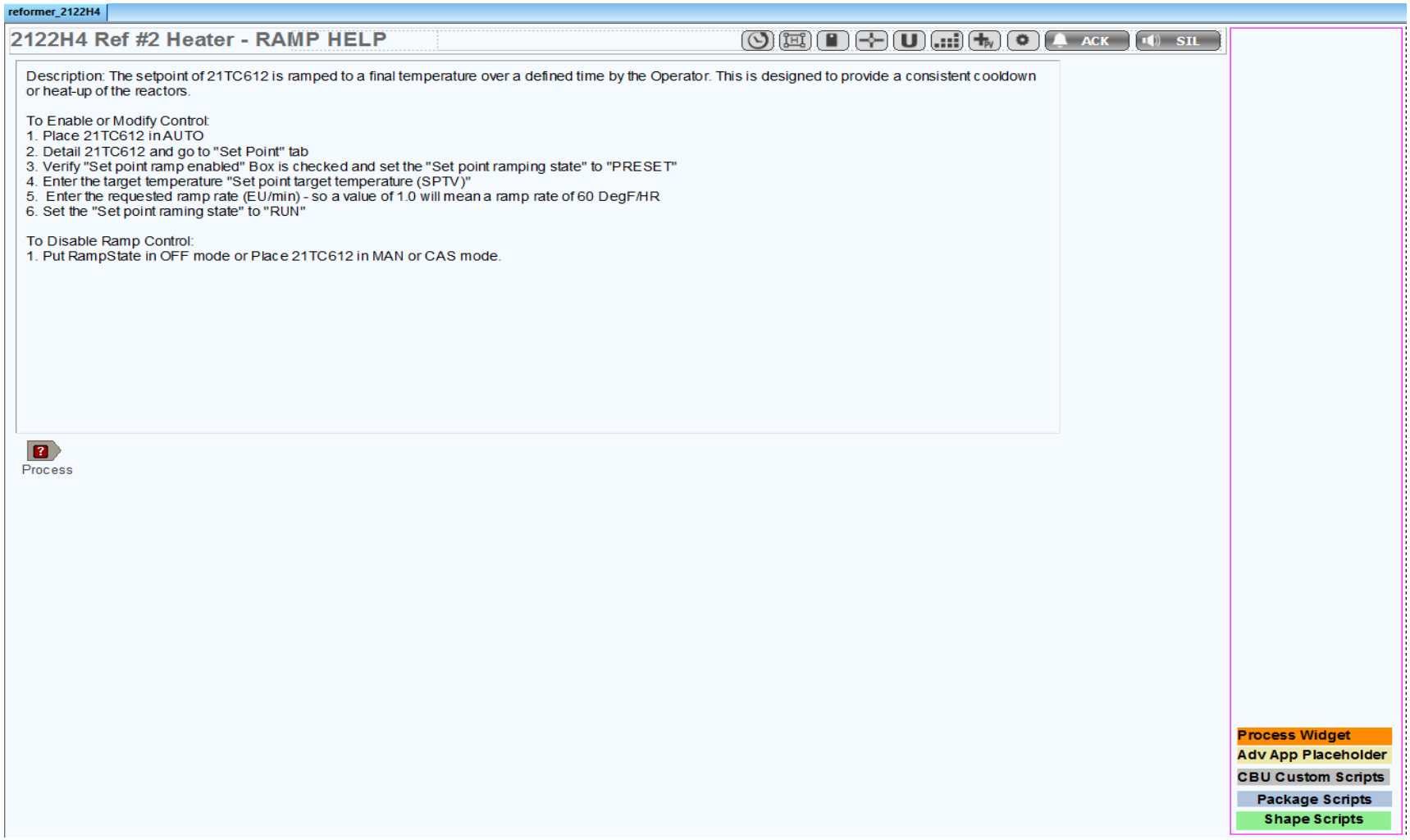
1.94 2123 1REFORMER #2 HEATER O2 OVERRIDE HELP (Reformer_2122H3.htm)

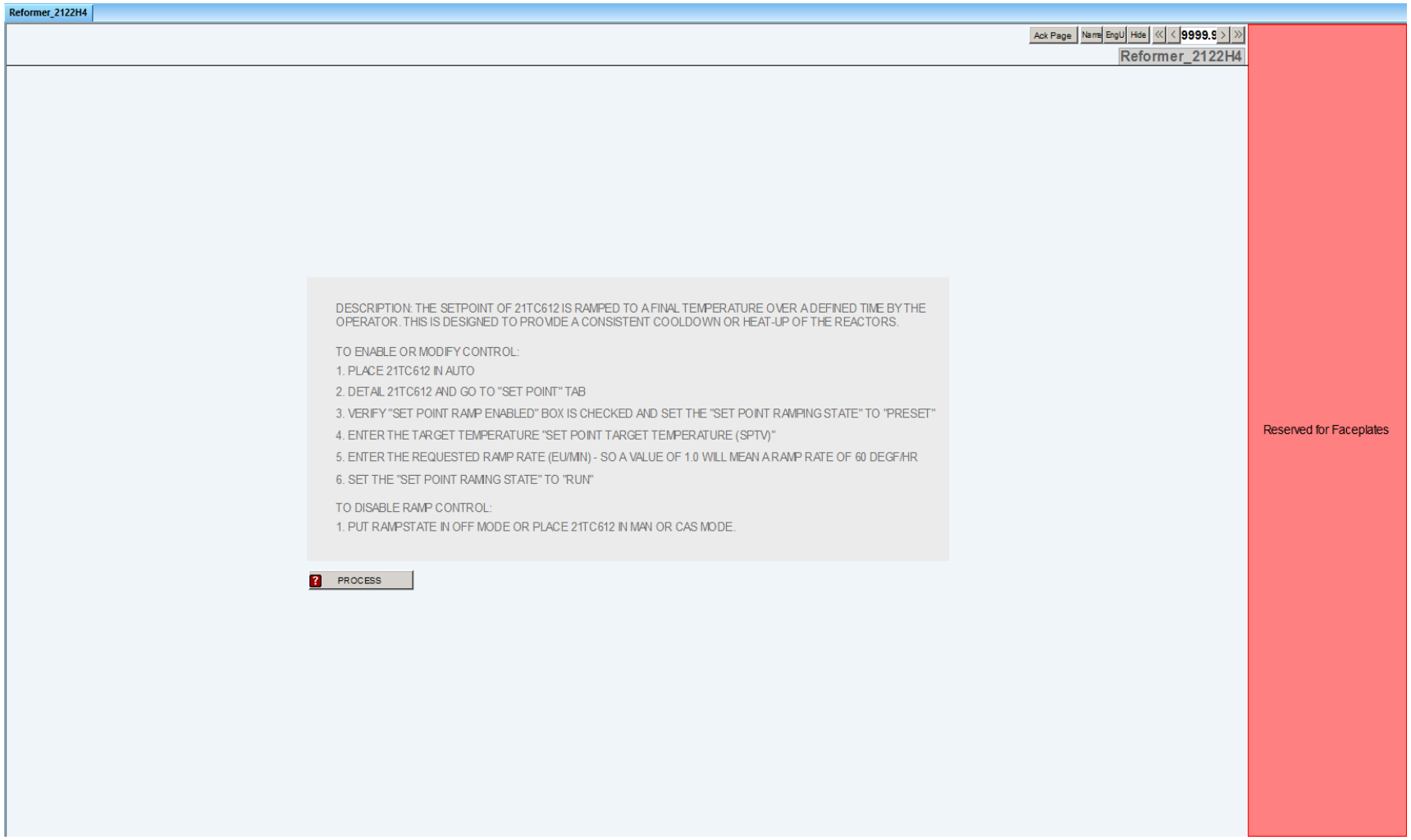



Reformer_2122H3
2122H3 1REFORMER #2 Heater O2 Override Help
ACK
SIL
O2 Override Status
21AA946D
State
TRIM STATUS
21AA946B
State
OVERRIDE STATUS
21AA946C
State
HEATER OPERATION
21AC946
O2 OVERRIDE BADPV
21PC438A
FG PRESSURE BADPV
21HS946
State
O2 OVERRIDE BYPASS
OR
21UA946
State
O2 OVERRIDE TROUBLE
21AC946
21TC612
21PC438A
21PC438
LOW SELECT LOCKED-CAS
<
State
HEATER FUEL GAS
9999.99%
Low Output Clamp to match field setting - 6.9%
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

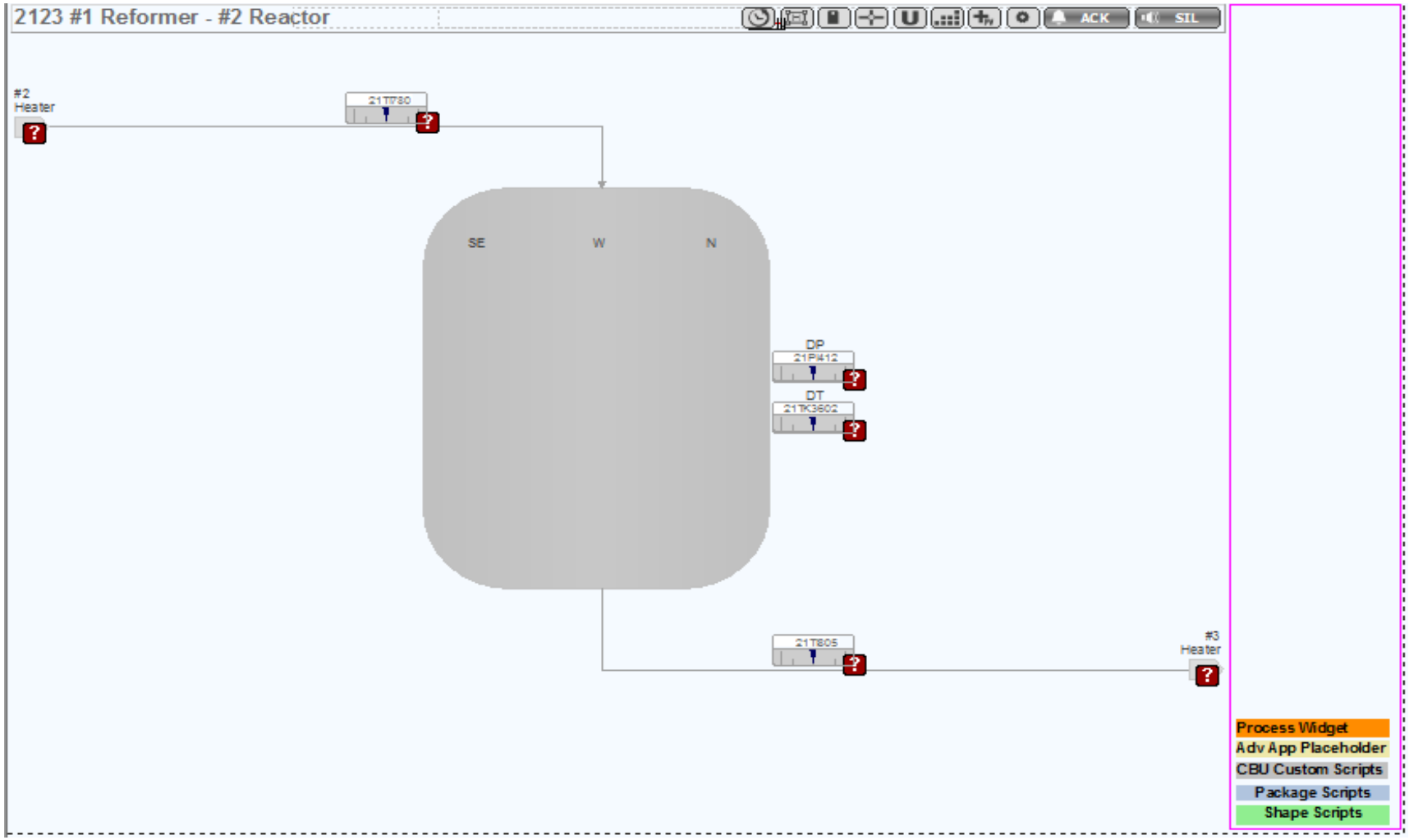

Reformer_2122H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_2122H3
O2 OVERRIDE STATUS
TRIM STATUS
21AA946D
State
OVERRIDE STATUS
21AA946B
State
HEATER OPERATION
21AA946C
State
O2 OVERRIDE BADPV
21AC946
HOLD 3
9999.99
FG PRESSURE BADPV
21PC438A
9999.99
O2 OVERRIDE BYPASS
21HS946
State
OR
O2 OVERRIDE TROUBLE
21UA946
State
21AC946
9999.99 W
9999.99
9999.99
21TC612
9999.99 W
9999.99
9999.99
HOLD 2
21PC438A
9999.99 W
9999.99
9999.99
21PC438
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
21PY438
21AA946D
State
21PY438
100%
HEATER FUEL GAS
PROCESS
LOW OUTPUT CLAMP TO MATCH FIELD SETTING - 6.9%
Reserved for Faceplates

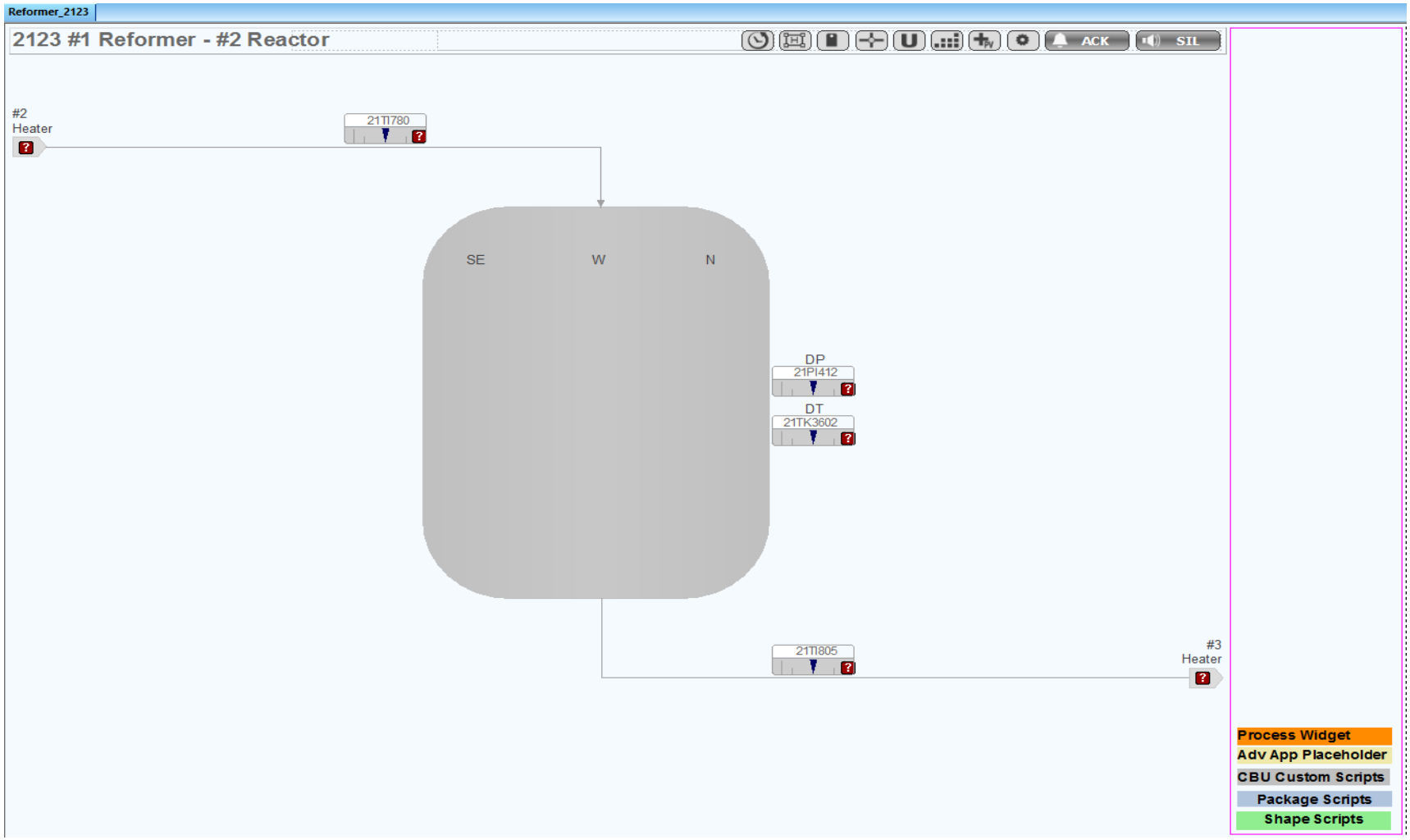
1.95 2122H4 REF #2 HEATER - RAMP HELP (reformer_2122H4.htm)

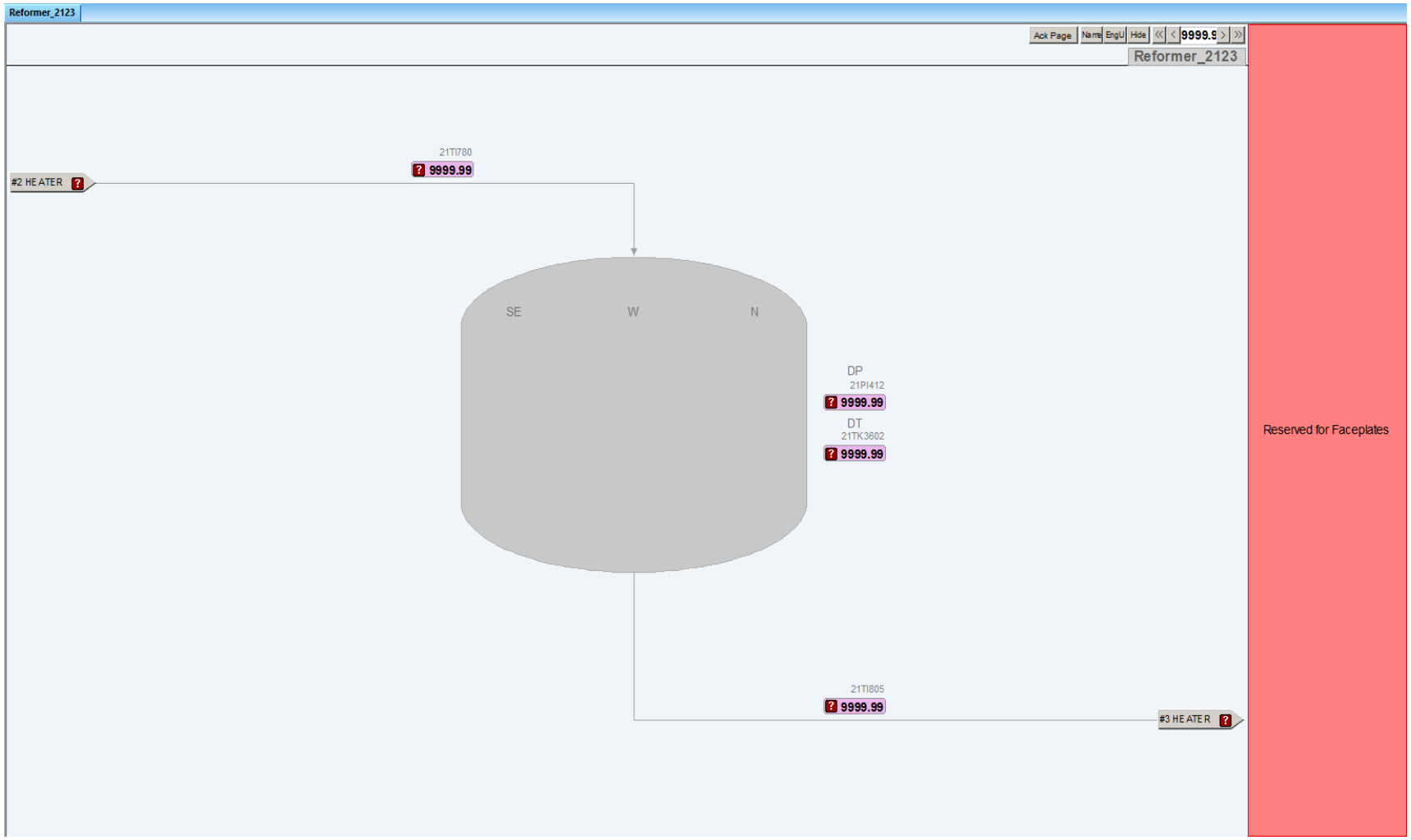

reformer_2122H4
2122H4 Ref #2 Heater - RAMP HELP
ACK
SIL
Description: The setpoint of 21TC612 is ramped to a final temperature over a defined time by the Operator. This is designed to provide a consistent cooldown or heat-up of the reactors.
To Enable or Modify Control:
1. Place 21TC612 in AUTO
2. Detail 21TC612 and go to "Set Point" tab
3. Verify "Set point ramp enabled" Box is checked and set the "Set point ramping state" to "PRESET"
4. Enter the target temperature "Set point target temperature (SPTV)"
5. Enter the requested ramp rate (EU/min) - so a value of 1.0 will mean a ramp rate of 60 DegF/HR
6. Set the "Set point raming state" to "RUN"
To Disable Ramp Control:
1. Put RampState in OFF mode or Place 21TC612 in MAN or CAS mode.
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2122H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_2122H4
DESCRIPTION: THE SETPOINT OF 21TC612 IS RAMPED TO A FINAL TEMPERATURE OVER A DEFINED TIME BY THE OPERATOR. THIS IS DESIGNED TO PROVIDE A CONSISTENT COOLDOWN OR HEAT-UP OF THE REACTORS.
TO ENABLE OR MODIFY CONTROL:
1. PLACE 21TC612 IN AUTO
2. DETAIL 21TC612 AND GO TO "SET POINT" TAB
3. VERIFY "SET POINT RAMP ENABLED" BOX IS CHECKED AND SET THE "SET POINT RAMPING STATE" TO "PRESET"
4. ENTER THE TARGET TEMPERATURE "SET POINT TARGET TEMPERATURE (SPTV)"
5. ENTER THE REQUESTED RAMP RATE (EU/MIN) - SO A VALUE OF 1.0 WILL MEAN A RAMP RATE OF 60 DEGF/HR
6. SET THE "SET POINT RAMING STATE" TO "RUN"
TO DISABLE RAMP CONTROL:
1. PUT RAMPSTATE IN OFF MODE OR PLACE 21TC612 IN MAN OR CAS MODE.
PROCESS
Reserved for Faceplates

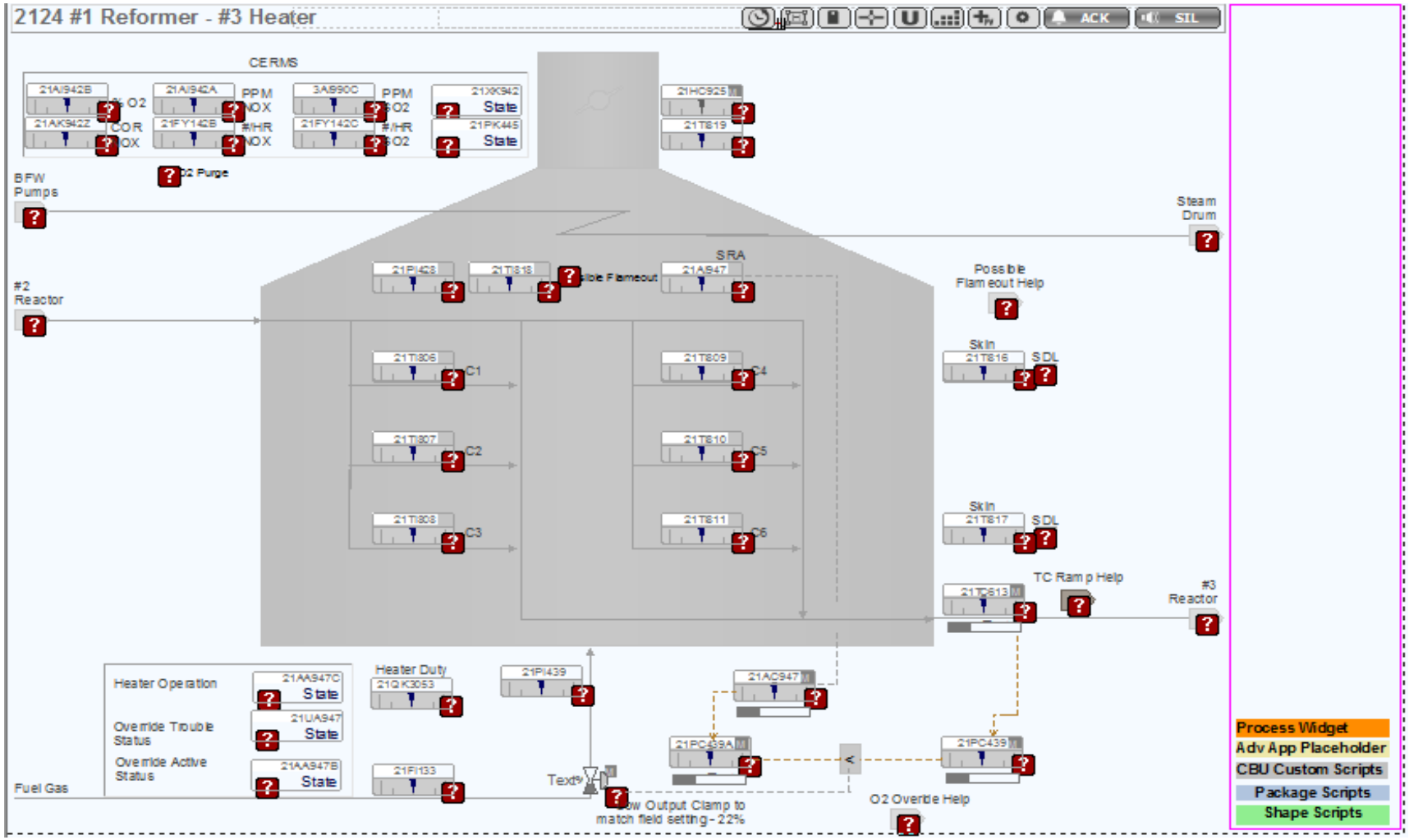
1.96 2123 #1 REFORMER - #2 REACTOR (Reformer_2123.htm)

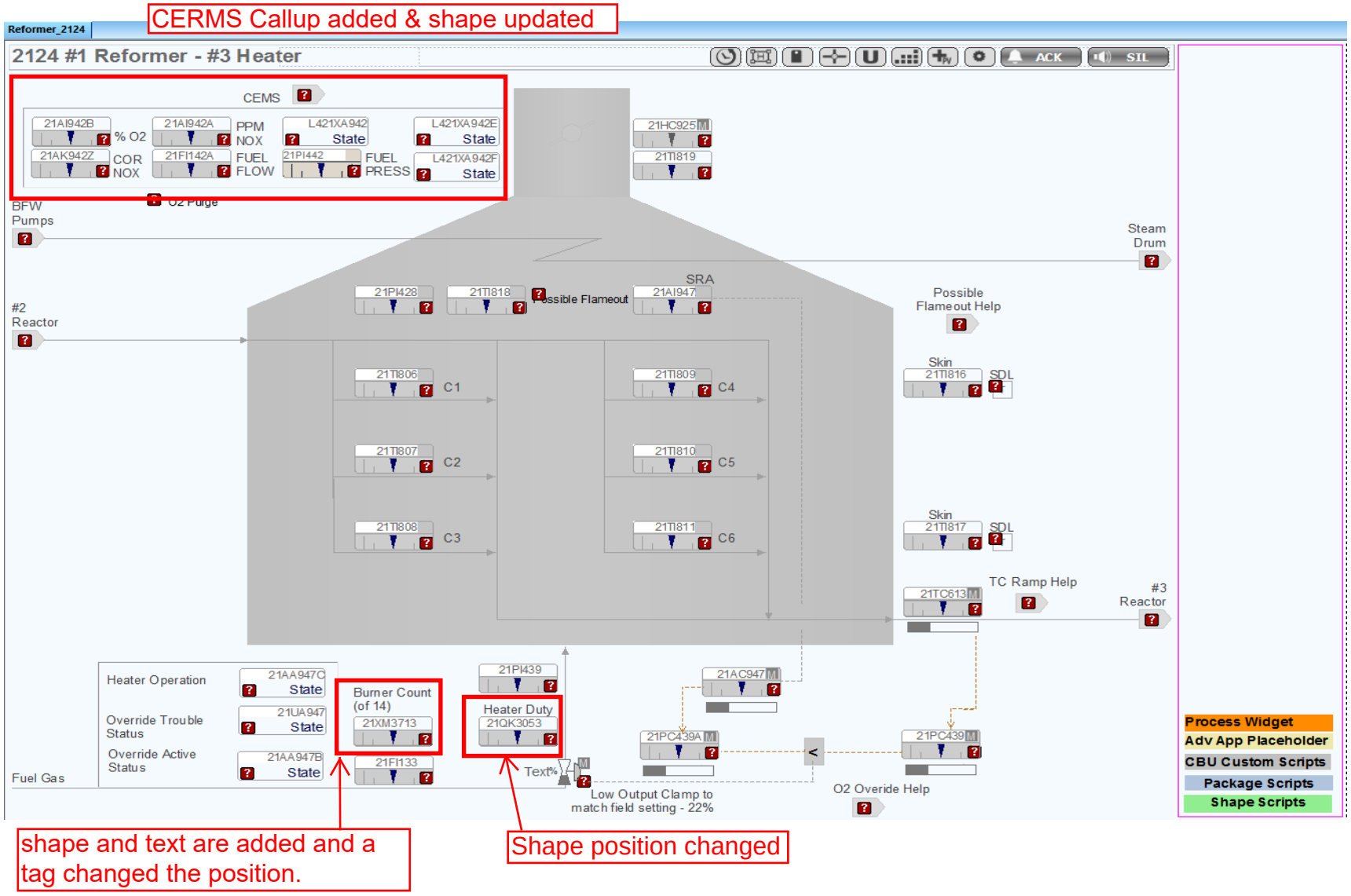


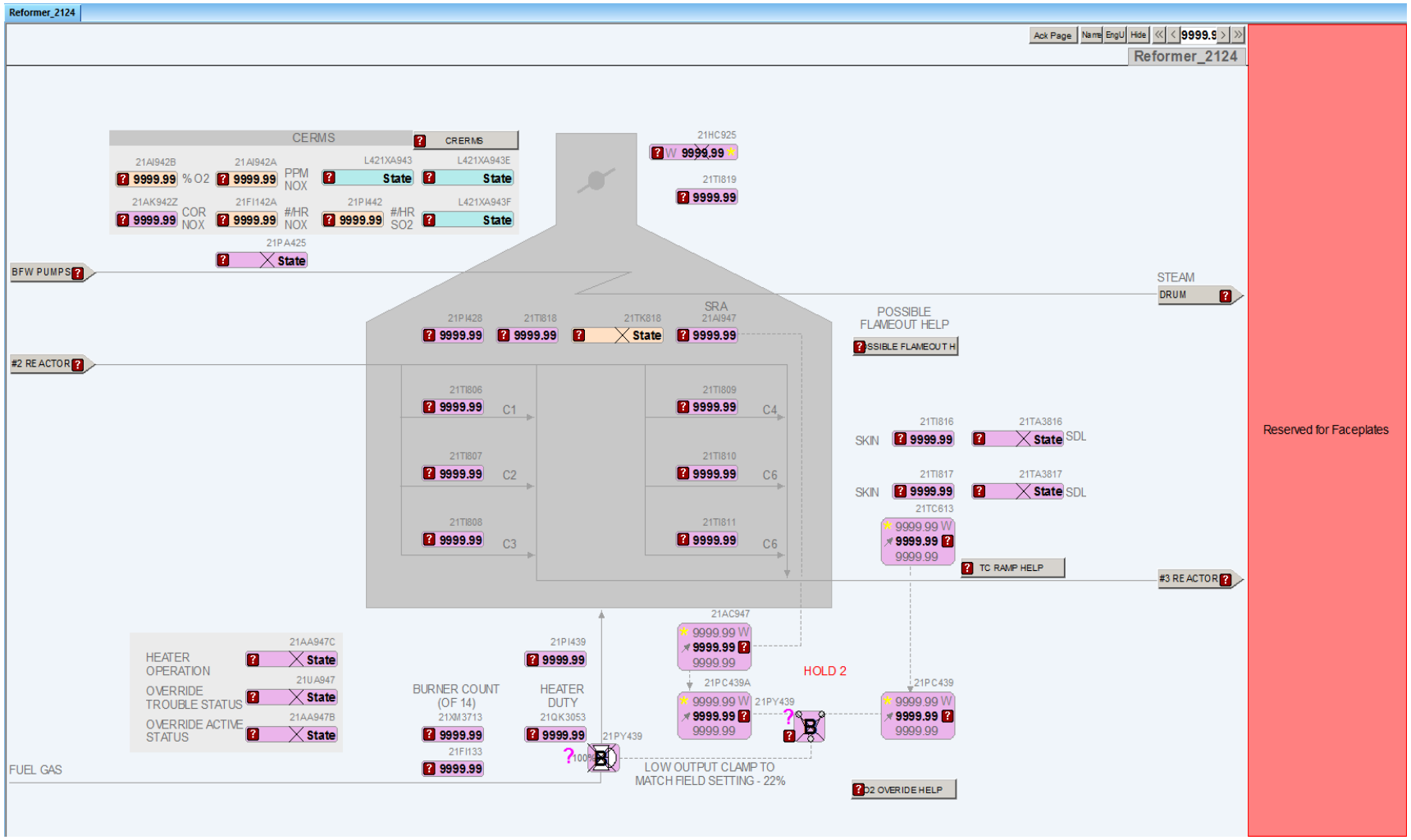

Reformer_2123
2123 #1 Reformer - #2 Reactor
ACK
SIL
#2
Heater
21TI780
SE
W
N
DP
21PI412
DT
21TK3602
21TI805
#3
Heater
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2123
Ack Page
Name
EngU
Hide
9999.9
Reformer_2123
21TI780
9999.99
#2 HEATER
SE
W
N
DP
21PI412
9999.99
DT
21TK3602
9999.99
21TI805
9999.99
#3 HEATER
Reserved for Faceplates

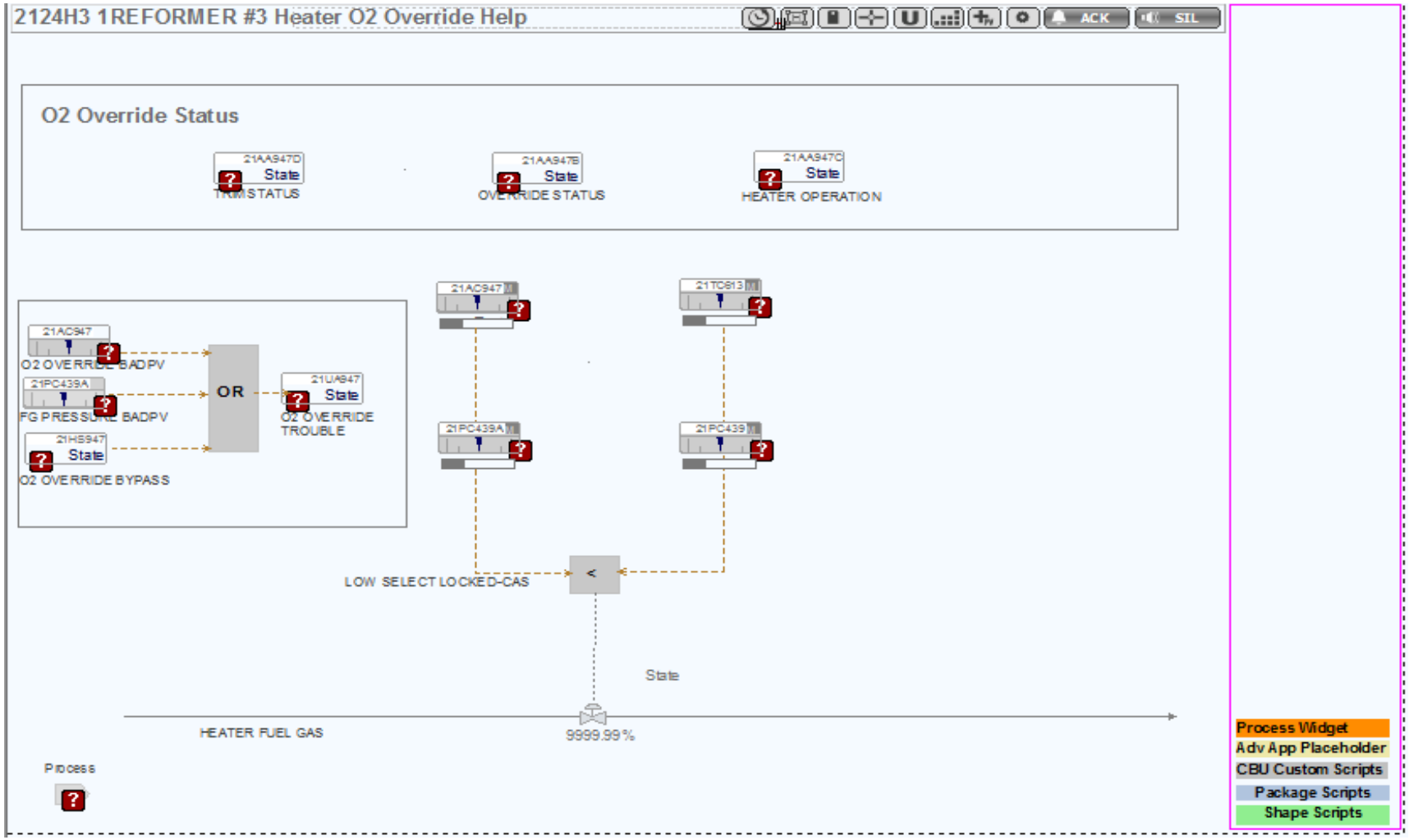
1.97 2124 #1 REFORMER - #3 HEATER (Reformer_2124.htm)

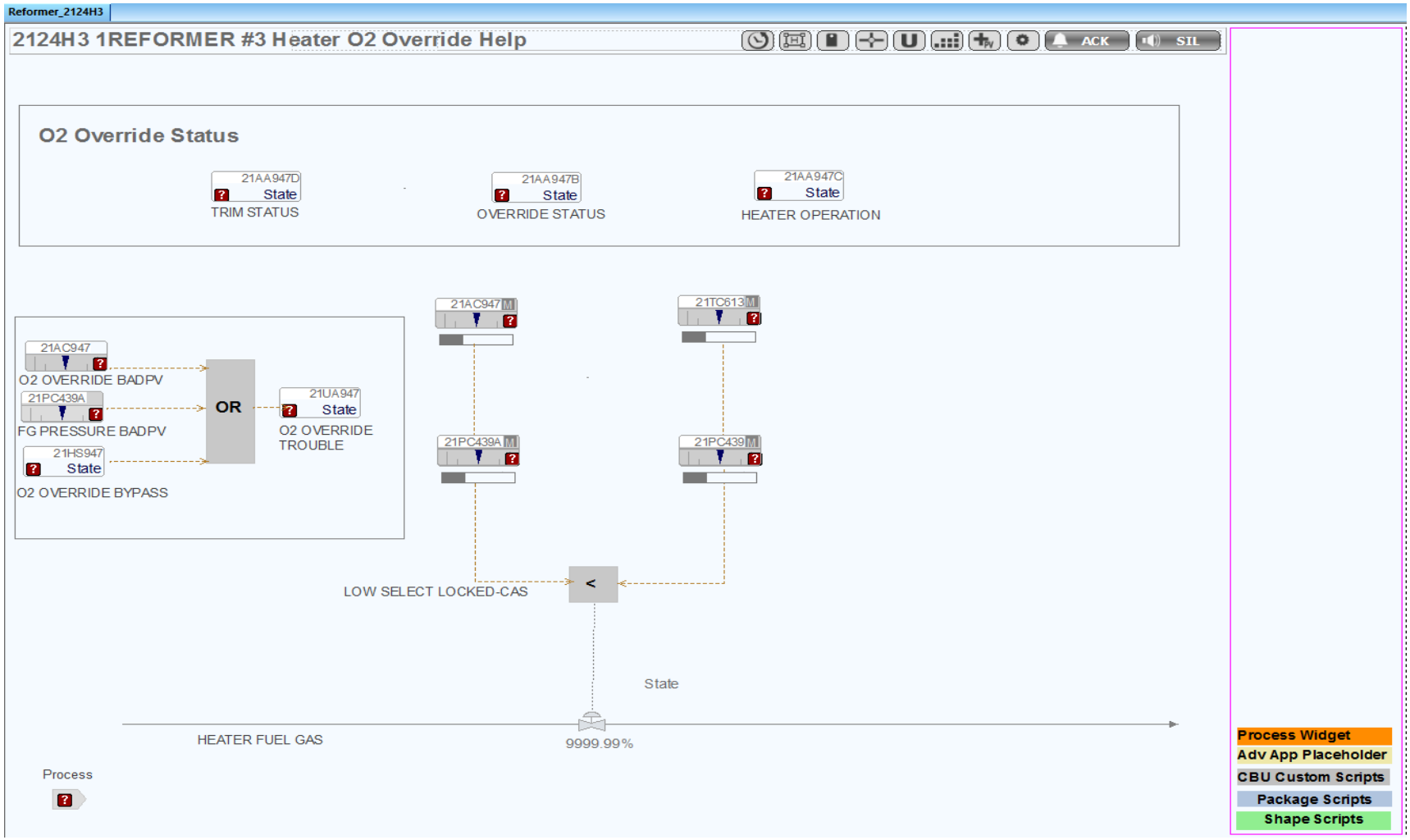


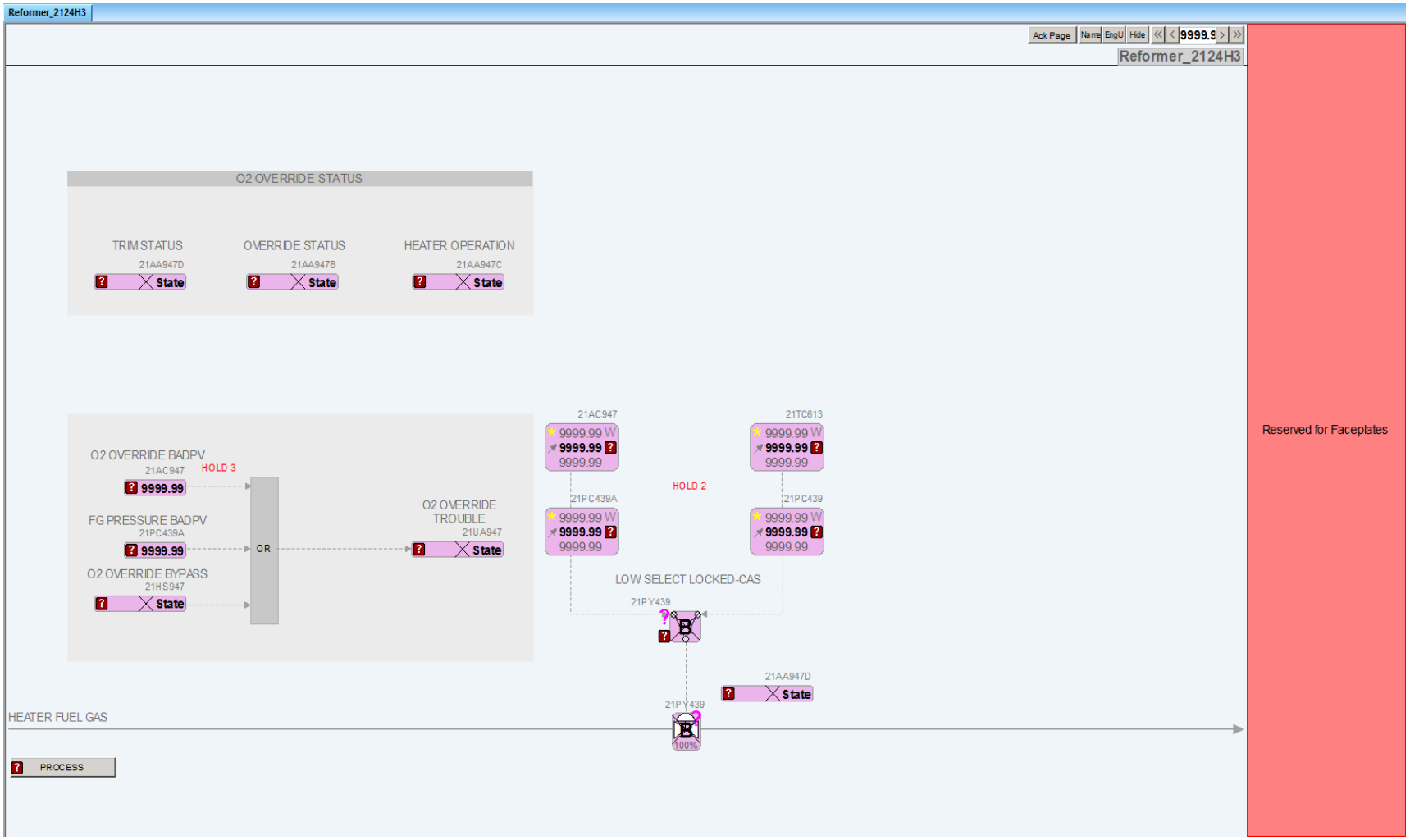

CERMS Callup added & shape updated
Reformer_2124
2124 #1 Reformer - #3 Heater
ACK
SIL
CEMS
21AI942B
% O2
21AI942A
PPM NOX
L421XA942
State
L421XA942E
State
21AK942Z
COR NOX
21FI142A
FUEL FLOW
21PI442
FUEL PRESS
L421XA942F
State
21HC925M
21TI819
O2 Purge
BFW Pumps
Steam Drum
#2 Reactor
SRA
21PI428
21TI818
Possible Flameout
21AI947
Possible Flameout Help
Skin
21TI816
SDL
21TI806
C1
21TI809
C4
21TI807
C2
21TI810
C5
21TI808
C3
21TI811
C6
Skin
21TI817
SDL
TC Ramp Help
21TC613M
#3 Reactor
Heater Operation
21AA947C
State
Override Trouble Status
21UA947
State
Override Active Status
21AA947B
State
Burner Count (of 14)
21XM3713
21FI133
21PI439
Heater Duty
21QK3053
Text%
21AC947M
21PC439AM
21PC439M
<
Low Output Clamp to match field setting - 22%
O2 Overide Help
Fuel Gas
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
shape and text are added and a tag changed the position.
Shape position changed


Reformer_2124
Ack Page
Name
EngU
Hide
Reformer_2124
CERMS
CRERMS
21AI942B
9999.99
% O2
21AI942A
9999.99
PPM NOX
L421XA943
State
L421XA943E
State
21AK942Z
9999.99
COR NOX
21FI142A
9999.99
#/HR NOX
21PI442
9999.99
#/HR SO2
L421XA943F
State
21PA425
State
21HC925
W 9999.99
21TI819
9999.99
BFW PUMPS
STEAM
DRUM
SRA
21PI428
9999.99
21TI818
9999.99
21TK818
State
21AI947
9999.99
POSSIBLE FLAMEOUT HELP
SSIBLE FLAMEOUT H
#2 REACTOR
21TI806
9999.99
C1
21TI807
9999.99
C2
21TI808
9999.99
C3
21TI809
9999.99
C4
21TI810
9999.99
C6
21TI811
9999.99
C6
21TI816
SKIN
9999.99
21TA3816
State
SDL
21TI817
SKIN
9999.99
21TA3817
State
SDL
21TC613
9999.99 W
9999.99
9999.99
TC RAMP HELP
#3 REACTOR
Reserved for Faceplates
21AA947C
HEATER OPERATION
State
21UA947
OVERRIDE TROUBLE STATUS
State
21AA947B
OVERRIDE ACTIVE STATUS
State
21PI439
9999.99
BURNER COUNT (OF 14)
21XM3713
9999.99
HEATER DUTY
21QK3053
9999.99
21FI133
9999.99
21AC947
9999.99 W
9999.99
9999.99
HOLD 2
21PC439A
9999.99 W
9999.99
9999.99
21PY439
21PC439
9999.99 W
9999.99
9999.99
21PY439
100
LOW OUTPUT CLAMP TO MATCH FIELD SETTING - 22%
FUEL GAS
O2 OVERIDE HELP

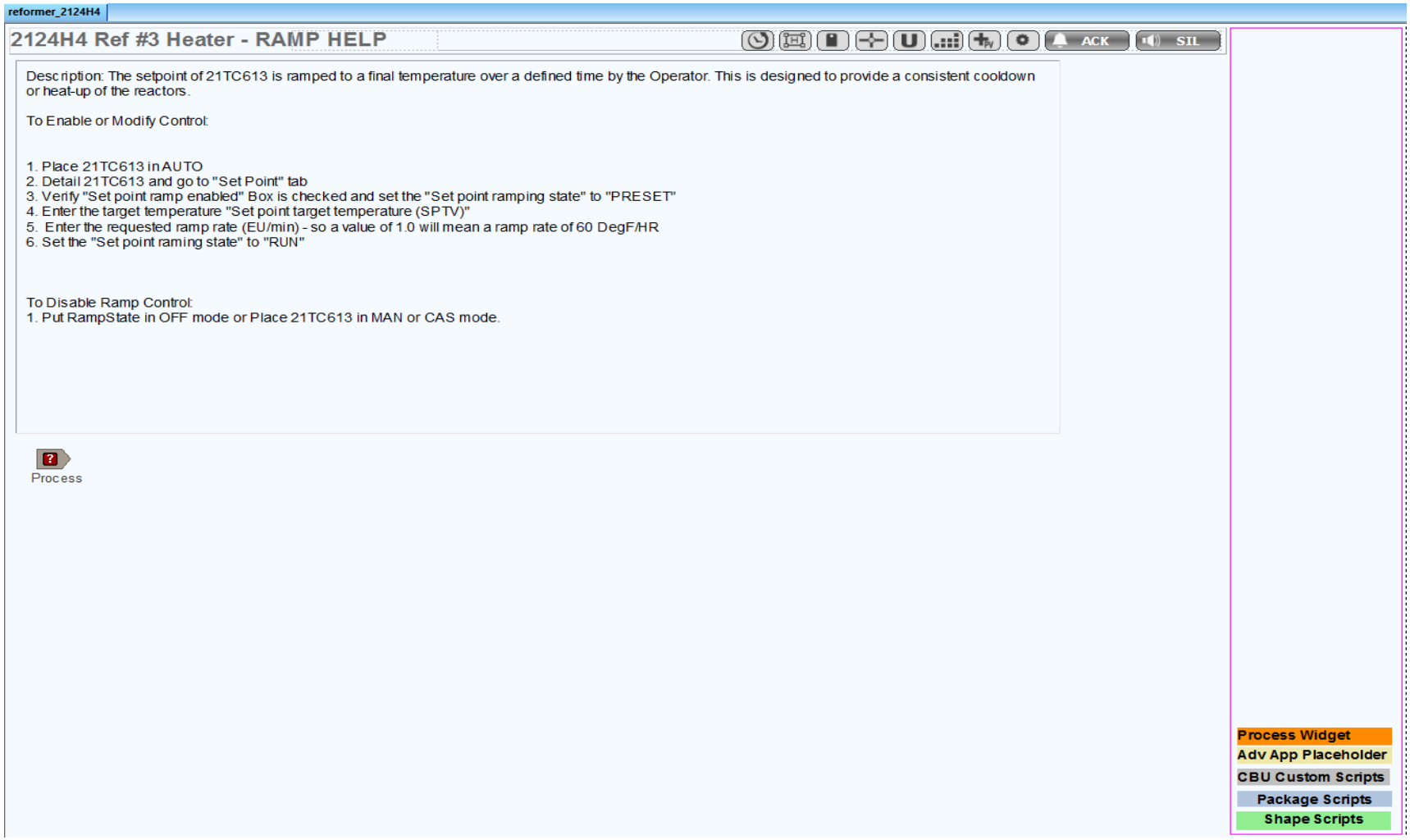
1.98 2124H3 1REFORMER #3 HEATER O2 OVERRIDE HELP (Reformer_2124H3.htm)

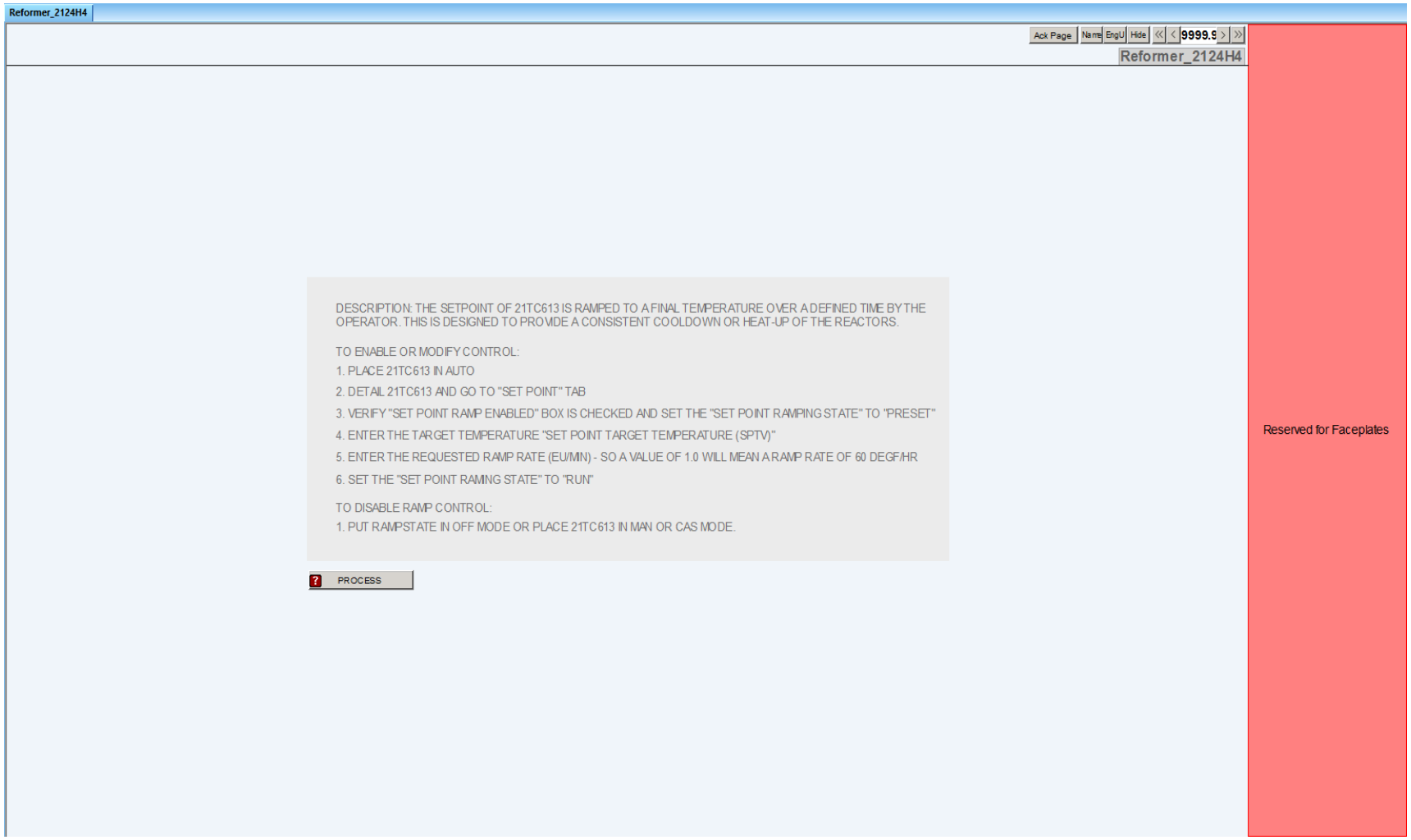



Reformer_2124H3
2124H3 1REFORMER #3 Heater O2 Override Help
ACK
SIL
O2 Override Status
21AA947D
State
TRIM STATUS
21AA947B
State
OVERRIDE STATUS
21AA947C
State
HEATER OPERATION
21AC947
O2 OVERRIDE BADPV
21PC439A
FG PRESSURE BADPV
21HS947
State
O2 OVERRIDE BYPASS
OR
21UA947
State
O2 OVERRIDE TROUBLE
21AC947 M
21TC613 M
21PC439A M
21PC439 M
LOW SELECT LOCKED-CAS
<
State
HEATER FUEL GAS
9999.99%
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

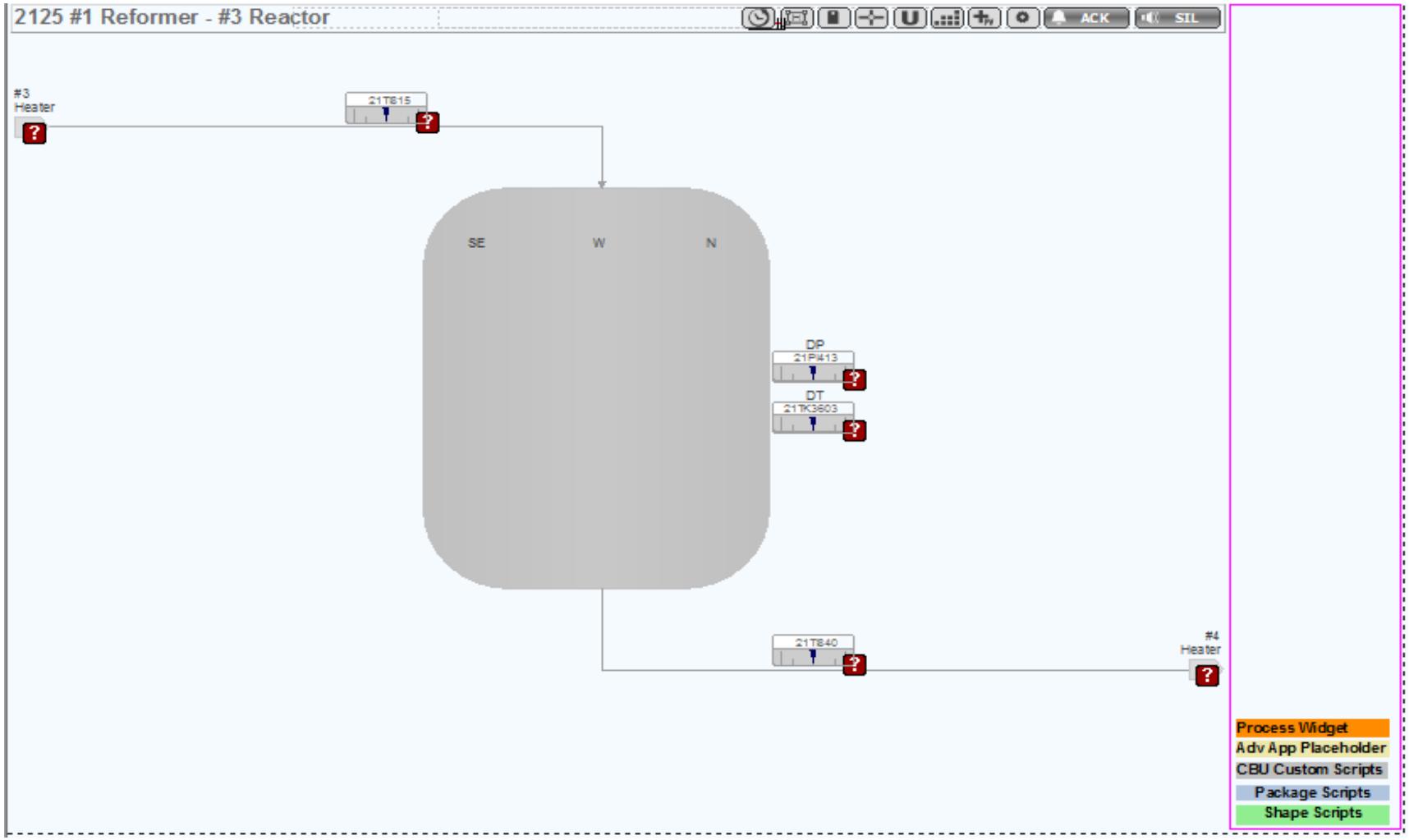

Reformer_2124H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_2124H3
O2 OVERRIDE STATUS
TRIM STATUS
21AA947D
State
OVERRIDE STATUS
21AA947B
State
HEATER OPERATION
21AA947C
State
O2 OVERRIDE BADPV
21AC947
HOLD 3
9999.99
FG PRESSURE BADPV
21PC439A
9999.99
O2 OVERRIDE BYPASS
21HS947
State
OR
O2 OVERRIDE TROUBLE
21UA947
State
21AC947
9999.99 W
9999.99
9999.99
21TC613
9999.99 W
9999.99
9999.99
HOLD 2
21PC439A
9999.99 W
9999.99
9999.99
21PC439
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
21PY439
21AA947D
State
21PY439
100%
HEATER FUEL GAS
PROCESS
Reserved for Faceplates

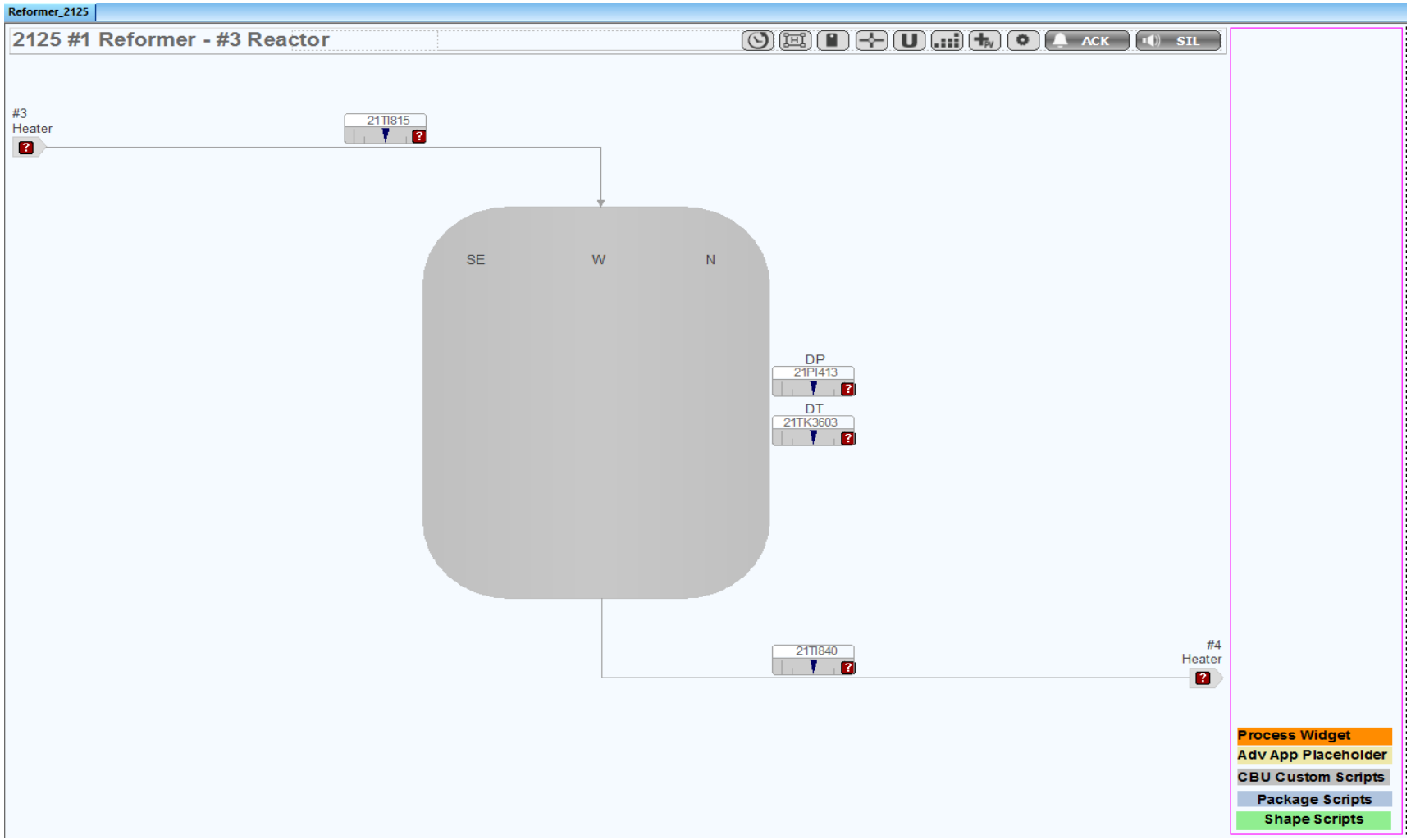
1.99 2124H4 REF #3 HEATER - RAMP HELP (reformer_2124H4.htm)

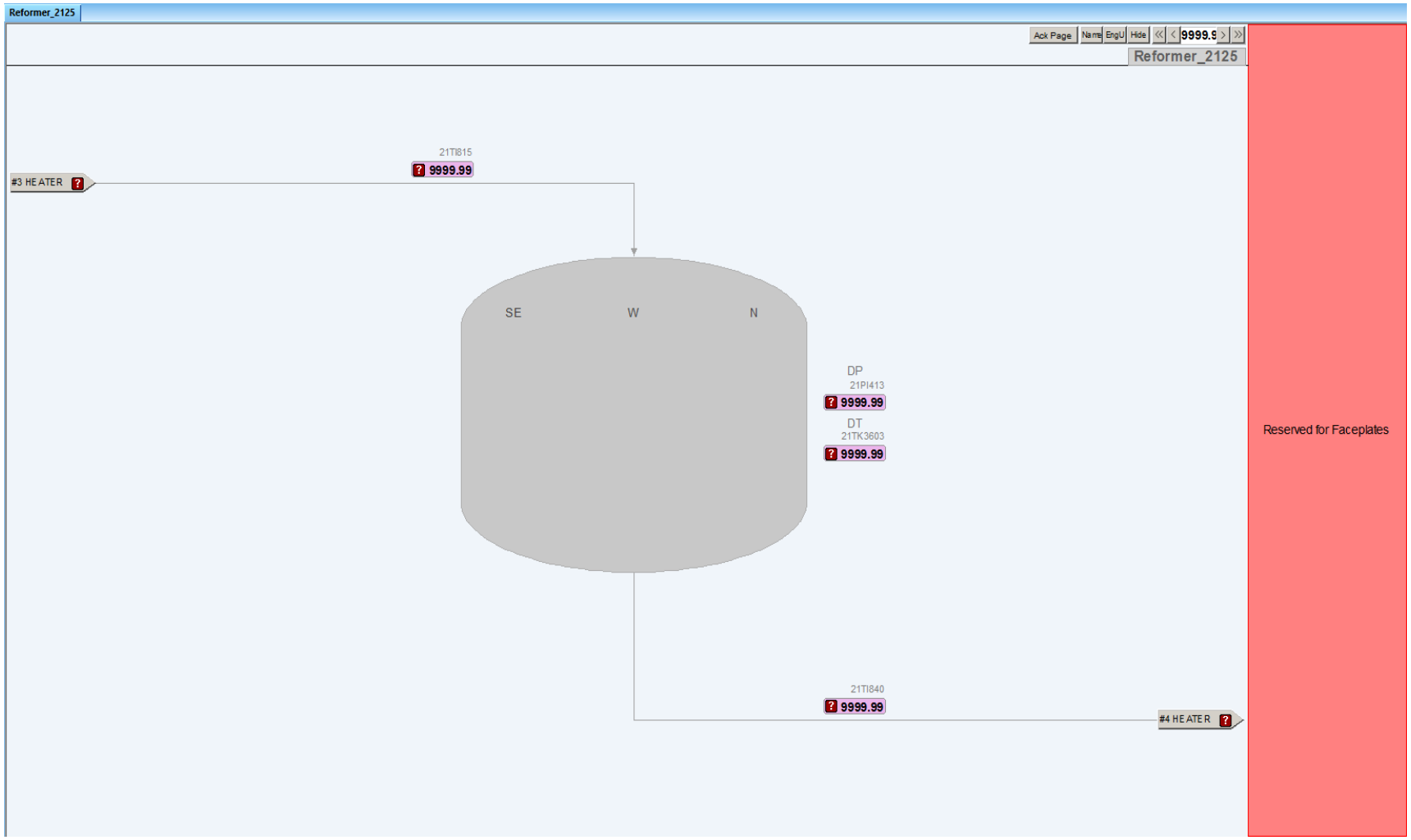

reformer_2124H4
2124H4 Ref #3 Heater - RAMP HELP
ACK
SIL
Description: The setpoint of 21TC613 is ramped to a final temperature over a defined time by the Operator. This is designed to provide a consistent cooldown or heat-up of the reactors.
To Enable or Modify Control:
1. Place 21TC613 in AUTO
2. Detail 21TC613 and go to "Set Point" tab
3. Verify "Set point ramp enabled" Box is checked and set the "Set point ramping state" to "PRESET"
4. Enter the target temperature "Set point target temperature (SPTV)"
5. Enter the requested ramp rate (EU/min) - so a value of 1.0 will mean a ramp rate of 60 DegF/HR
6. Set the "Set point raming state" to "RUN"
To Disable Ramp Control:
1. Put RampState in OFF mode or Place 21TC613 in MAN or CAS mode.
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2124H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_2124H4
DESCRIPTION: THE SETPOINT OF 21TC613 IS RAMPED TO A FINAL TEMPERATURE OVER A DEFINED TIME BY THE OPERATOR. THIS IS DESIGNED TO PROVIDE A CONSISTENT COOLDOWN OR HEAT-UP OF THE REACTORS.
TO ENABLE OR MODIFY CONTROL:
1. PLACE 21TC613 IN AUTO
2. DETAIL 21TC613 AND GO TO "SET POINT" TAB
3. VERIFY "SET POINT RAMP ENABLED" BOX IS CHECKED AND SET THE "SET POINT RAMPING STATE" TO "PRESET"
4. ENTER THE TARGET TEMPERATURE "SET POINT TARGET TEMPERATURE (SPTV)"
5. ENTER THE REQUESTED RAMP RATE (EU/MIN) - SO A VALUE OF 1.0 WILL MEAN A RAMP RATE OF 60 DEGF/HR
6. SET THE "SET POINT RAMING STATE" TO "RUN"
TO DISABLE RAMP CONTROL:
1. PUT RAMPSTATE IN OFF MODE OR PLACE 21TC613 IN MAN OR CAS MODE.
PROCESS
Reserved for Faceplates

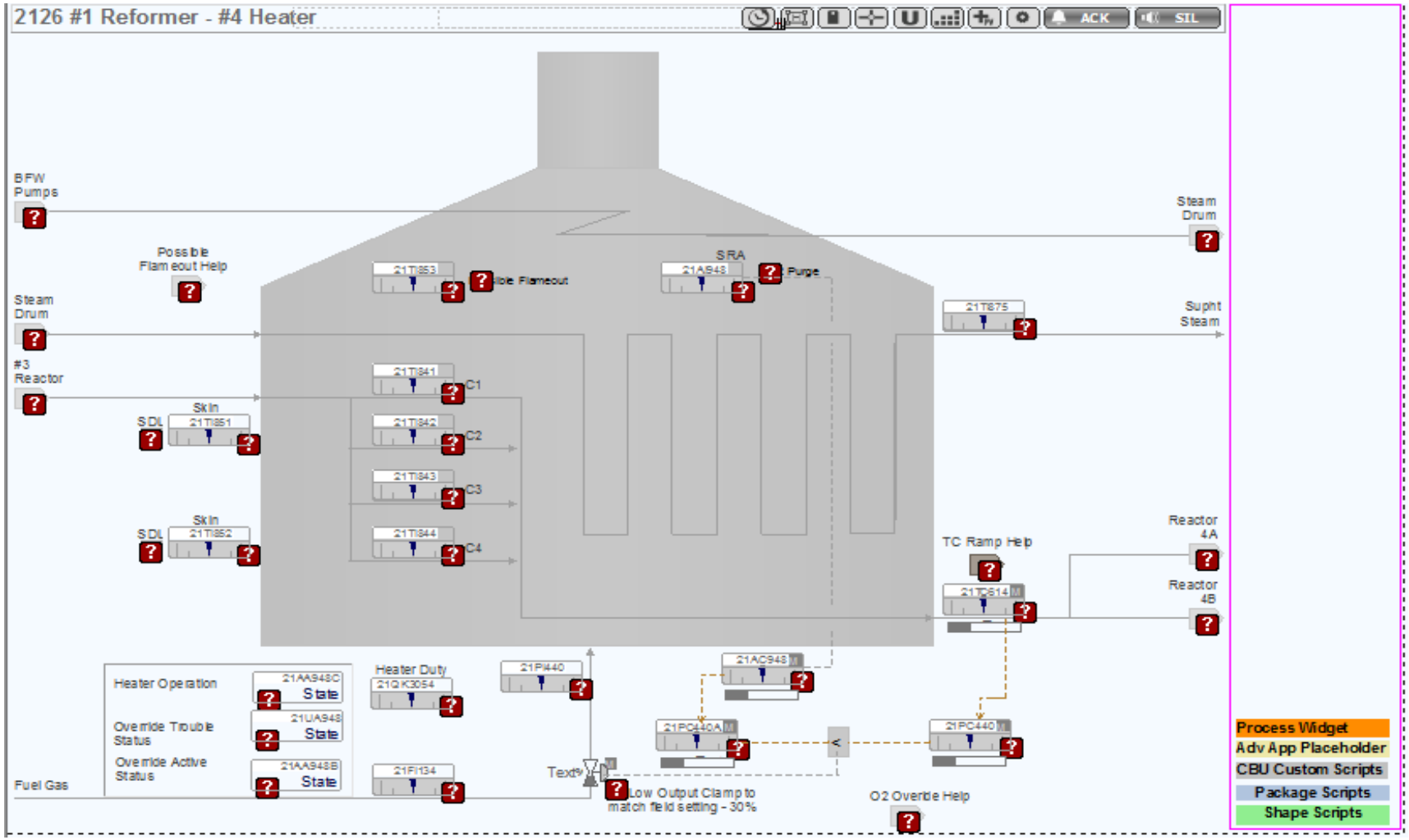
1.100 2125 #1 REFORMER - #3 REACTOR (Reformer_2125.htm)

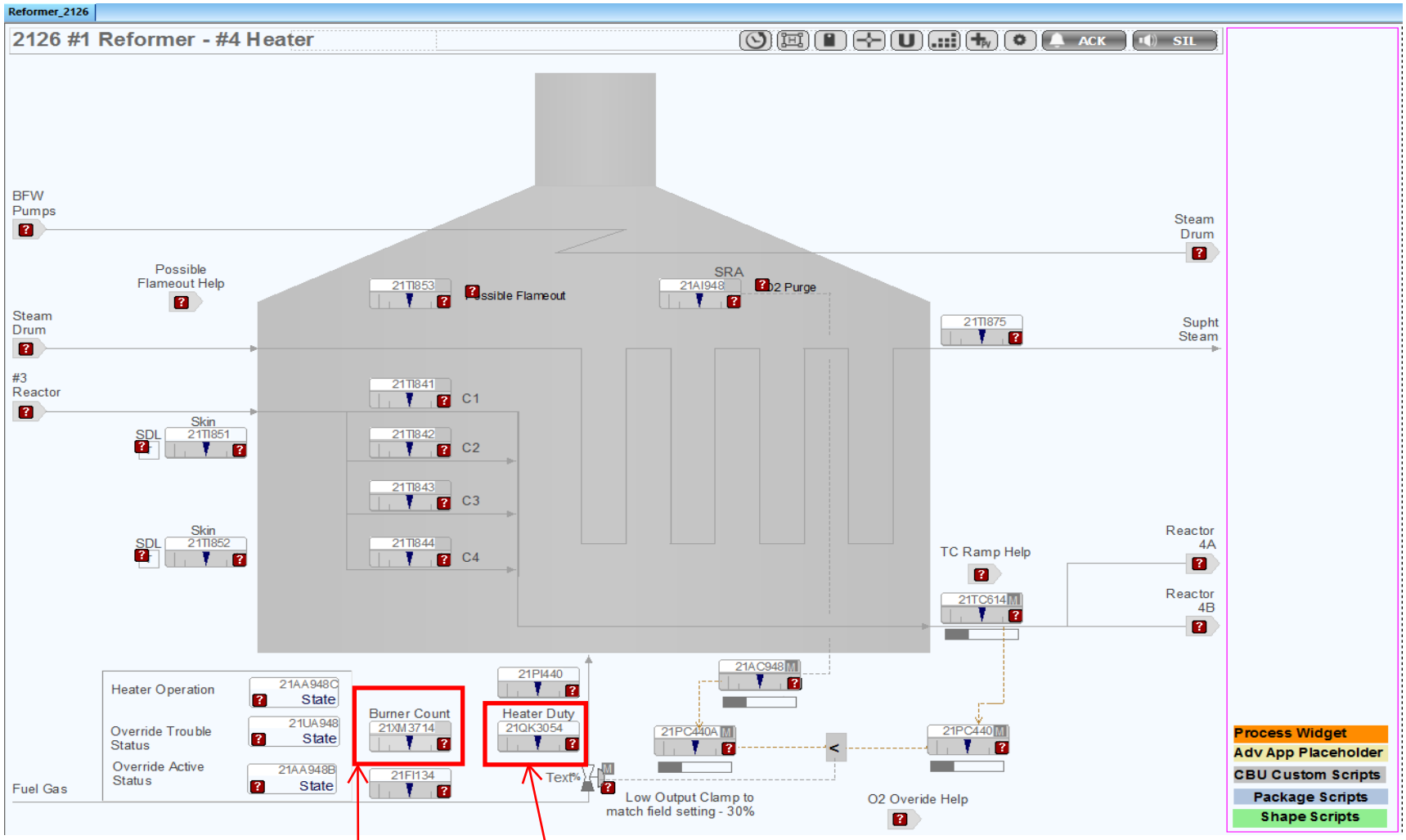



Reformer_2125
2125 #1 Reformer - #3 Reactor
ACK
SIL
#3
Heater
21TI815
SE
W
N
DP
21PI413
DT
21TK3603
21TI840
#4
Heater
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2125
Ack Page
Name
EngU
Hide
9999.9
Reformer_2125
21TI815
9999.99
#3 HEATER
SE
W
N
DP
21PI413
9999.99
DT
21TK3603
9999.99
21TI840
9999.99
#4 HEATER
Reserved for Faceplates

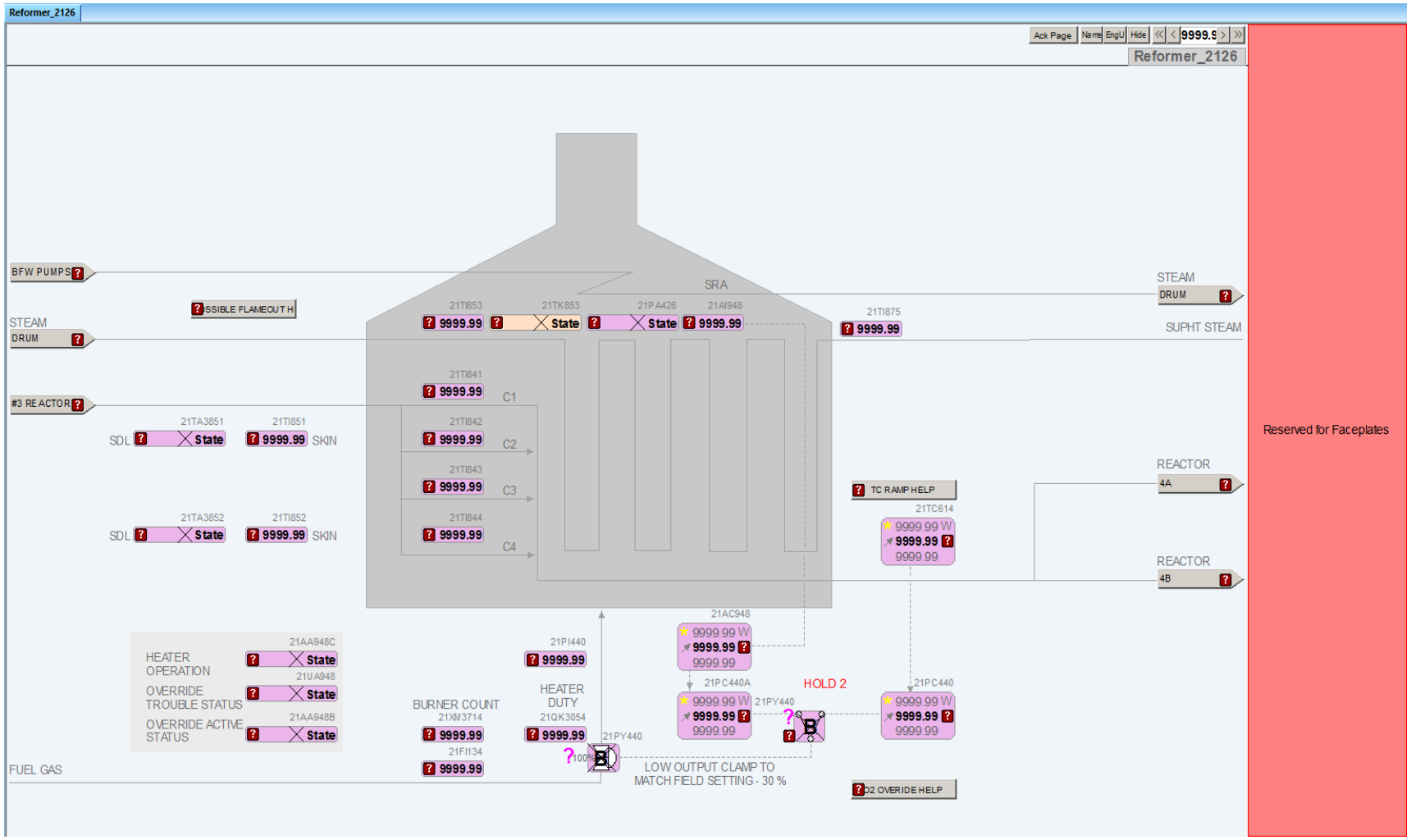
1.101 2126 #1 REFORMER - #4 HEATER (Reformer_2126.htm)



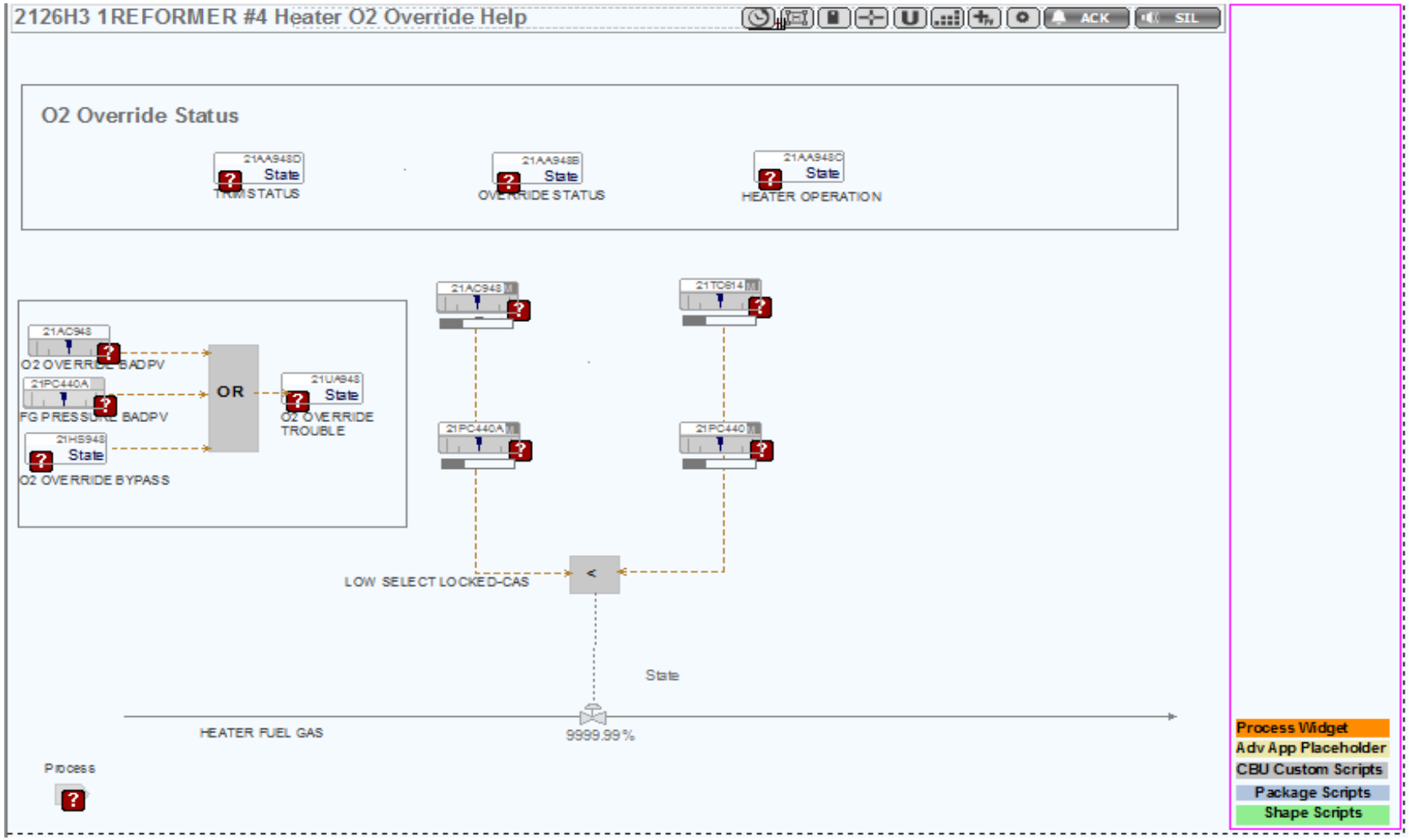


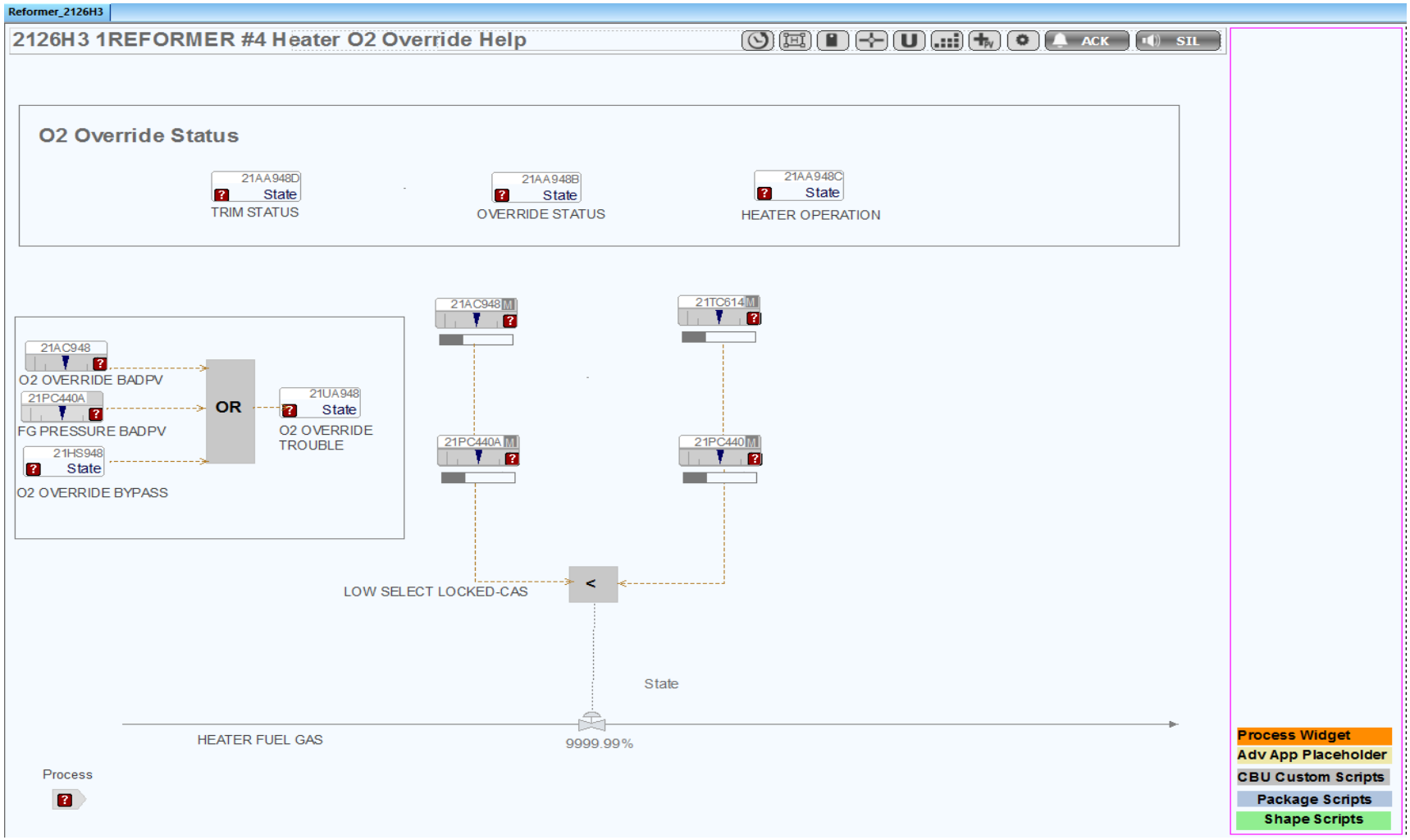
shape and text are added and a tag changed the position.

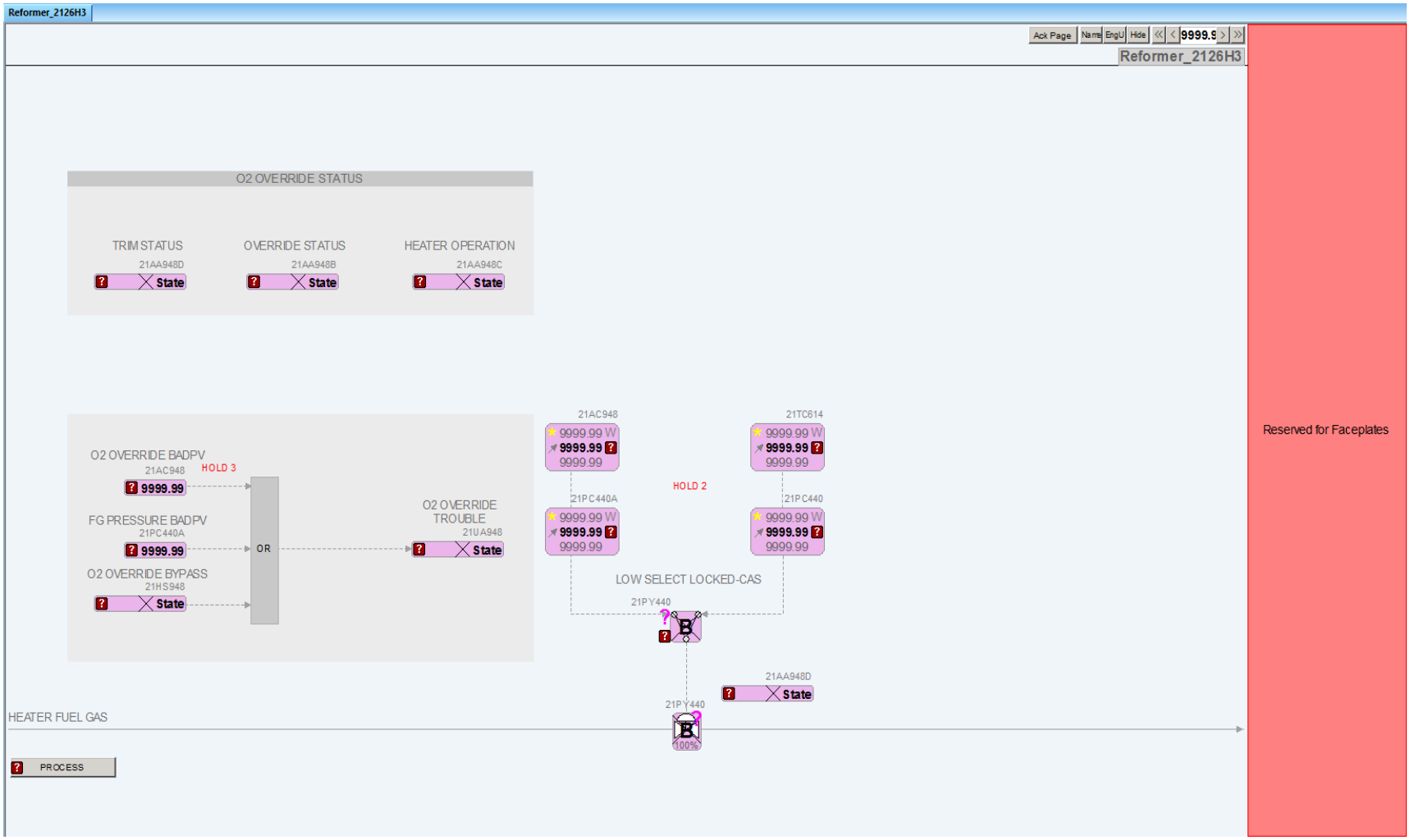
Shape position changed


Reformer_2126
Ack Page
Name
EngU
Hide
Reformer_2126
BFW PUMPS
STEAM
DRUM
#3 REACTOR
SSIBLE FLAMEOUT H
SRA
21TI853
9999.99
21TK853
State
21PA426
State
21AI948
9999.99
21TI875
9999.99
STEAM
DRUM
SUPHT STEAM
21TI841
9999.99
C1
21TI842
9999.99
C2
21TI843
9999.99
C3
21TI844
9999.99
C4
21TA3851
SDL
State
21TI851
9999.99
SKIN
21TA3852
SDL
State
21TI852
9999.99
SKIN
TC RAMP HELP
21TC614
9999.99 W
9999.99
9999.99
REACTOR
4A
REACTOR
4B
Reserved for Faceplates
21AC948
9999.99 W
9999.99
9999.99
21PC440A
9999.99 W
9999.99
9999.99
21PY440
HOLD 2
21PC440
9999.99 W
9999.99
9999.99
21AA948C
HEATER OPERATION
State
21UA948
OVERRIDE TROUBLE STATUS
State
21AA948B
OVERRIDE ACTIVE STATUS
State
21PI440
9999.99
HEATER DUTY
21QK3054
9999.99
BURNER COUNT
21XM3714
9999.99
21FI134
9999.99
21PY440
100%
LOW OUTPUT CLAMP TO MATCH FIELD SETTING - 30 %
FUEL GAS
O2 OVERIDE HELP

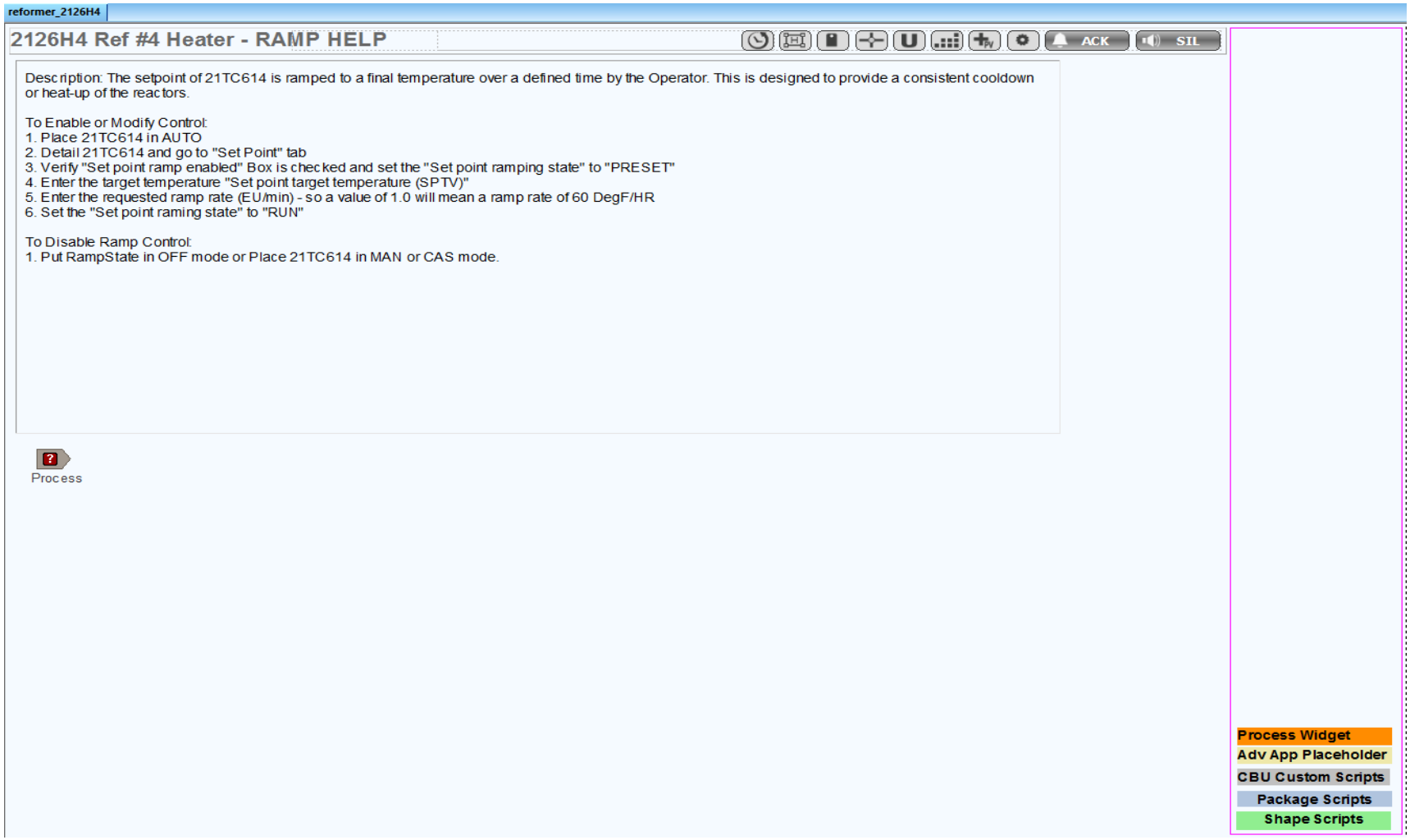
1.102 2126H3 1REFORMER #4 HEATER O2 OVERRIDE HELP (Reformer_2126H3.htm)

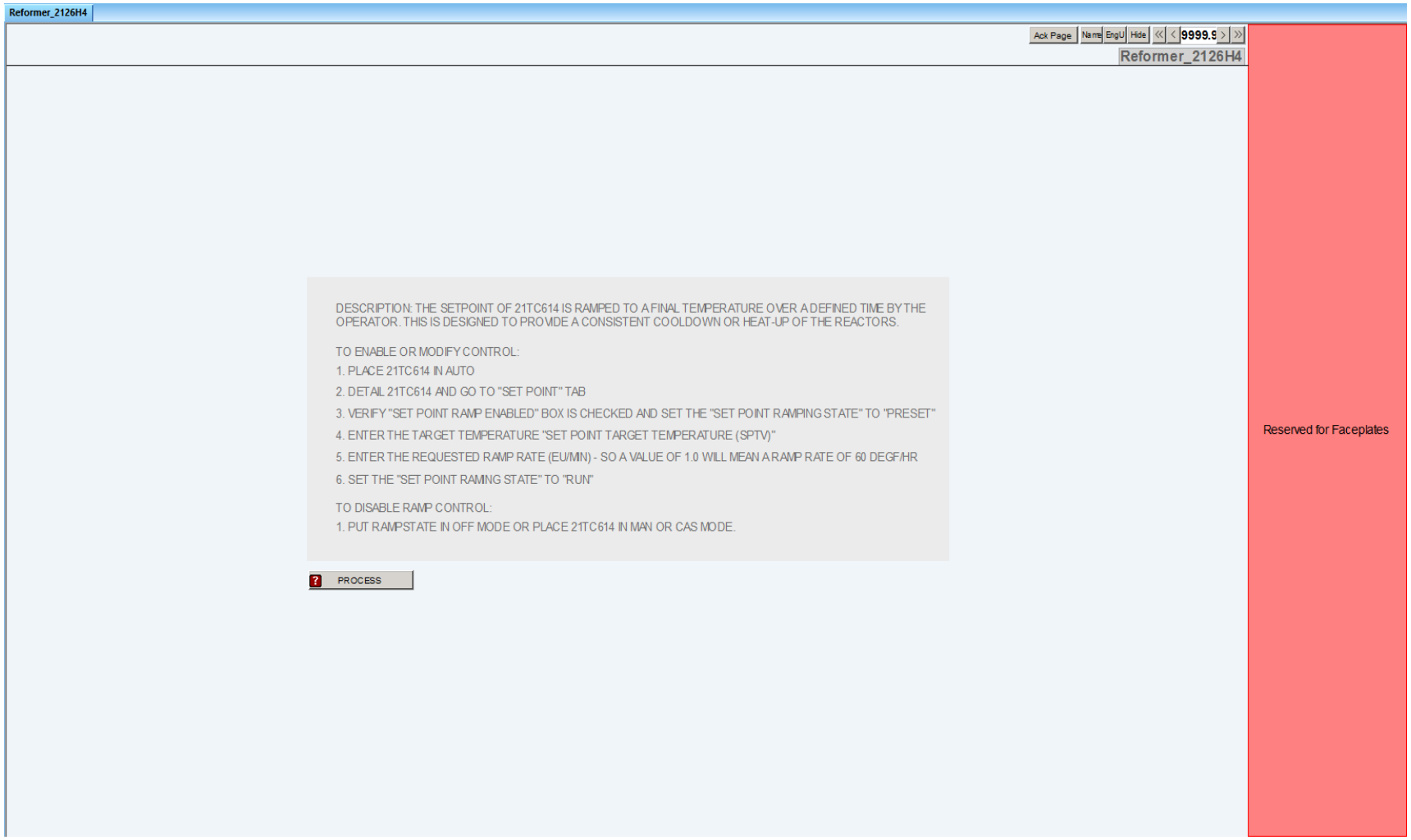



Reformer_2126H3
2126H3 1REFORMER #4 Heater O2 Override Help
ACK
SIL
O2 Override Status
21AA948D
State
TRIM STATUS
21AA948B
State
OVERRIDE STATUS
21AA948C
State
HEATER OPERATION
21AC948
O2 OVERRIDE BADPV
21PC440A
FG PRESSURE BADPV
21HS948
State
O2 OVERRIDE BYPASS
OR
21UA948
State
O2 OVERRIDE TROUBLE
21AC948M
21TC614M
21PC440AM
21PC440M
LOW SELECT LOCKED-CAS
<
State
HEATER FUEL GAS
9999.99%
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

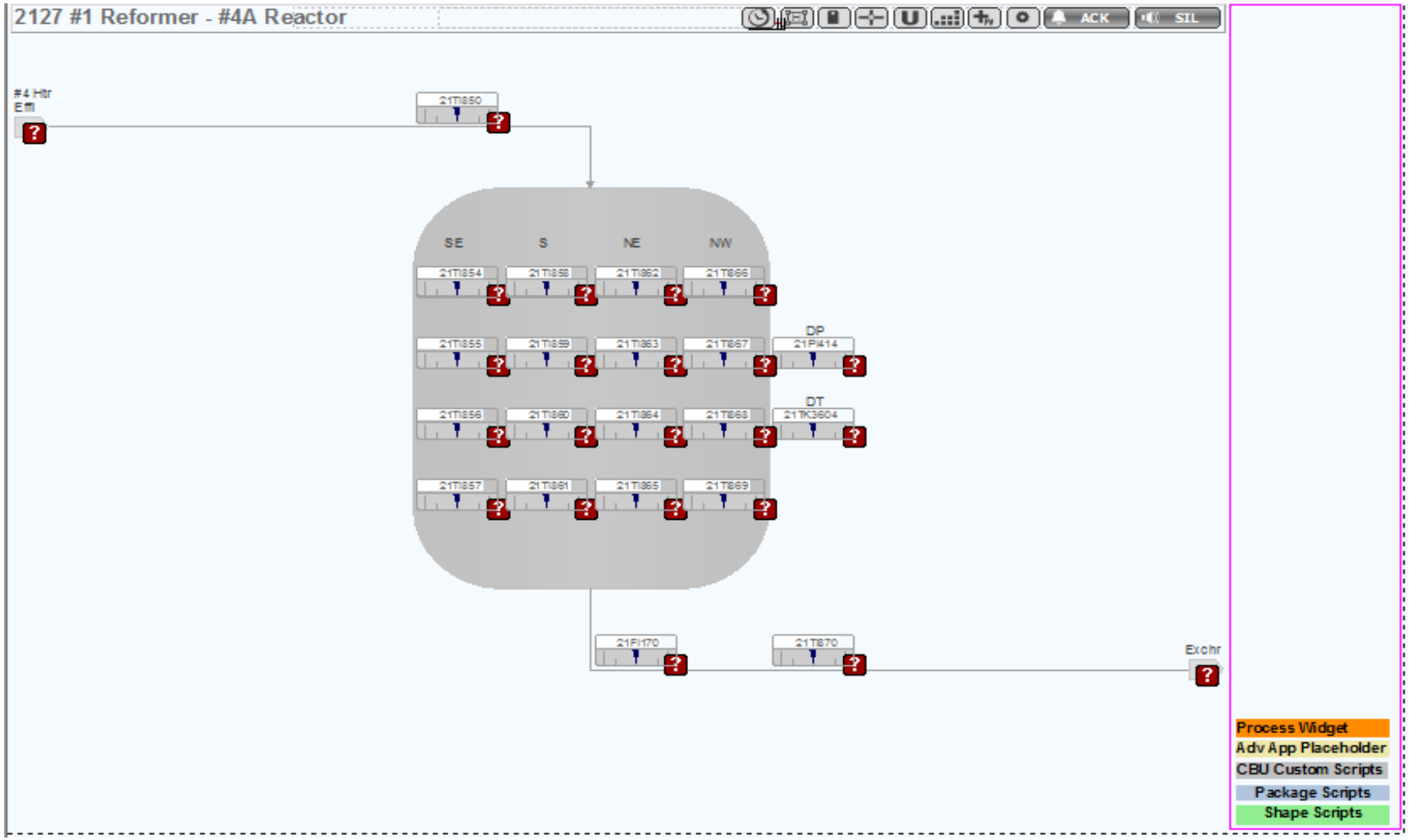

Reformer_2126H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_2126H3
O2 OVERRIDE STATUS
TRIM STATUS
21AA948D
State
OVERRIDE STATUS
21AA948B
State
HEATER OPERATION
21AA948C
State
O2 OVERRIDE BADPV
21AC948
HOLD 3
9999.99
FG PRESSURE BADPV
21PC440A
9999.99
O2 OVERRIDE BYPASS
21HS948
State
OR
O2 OVERRIDE TROUBLE
21UA948
State
21AC948
9999.99 W
9999.99
9999.99
21PC440A
HOLD 2
21TC614
9999.99 W
9999.99
9999.99
21PC440
LOW SELECT LOCKED-CAS
21PY440
21AA948D
State
21PY440
100%
HEATER FUEL GAS
PROCESS
Reserved for Faceplates

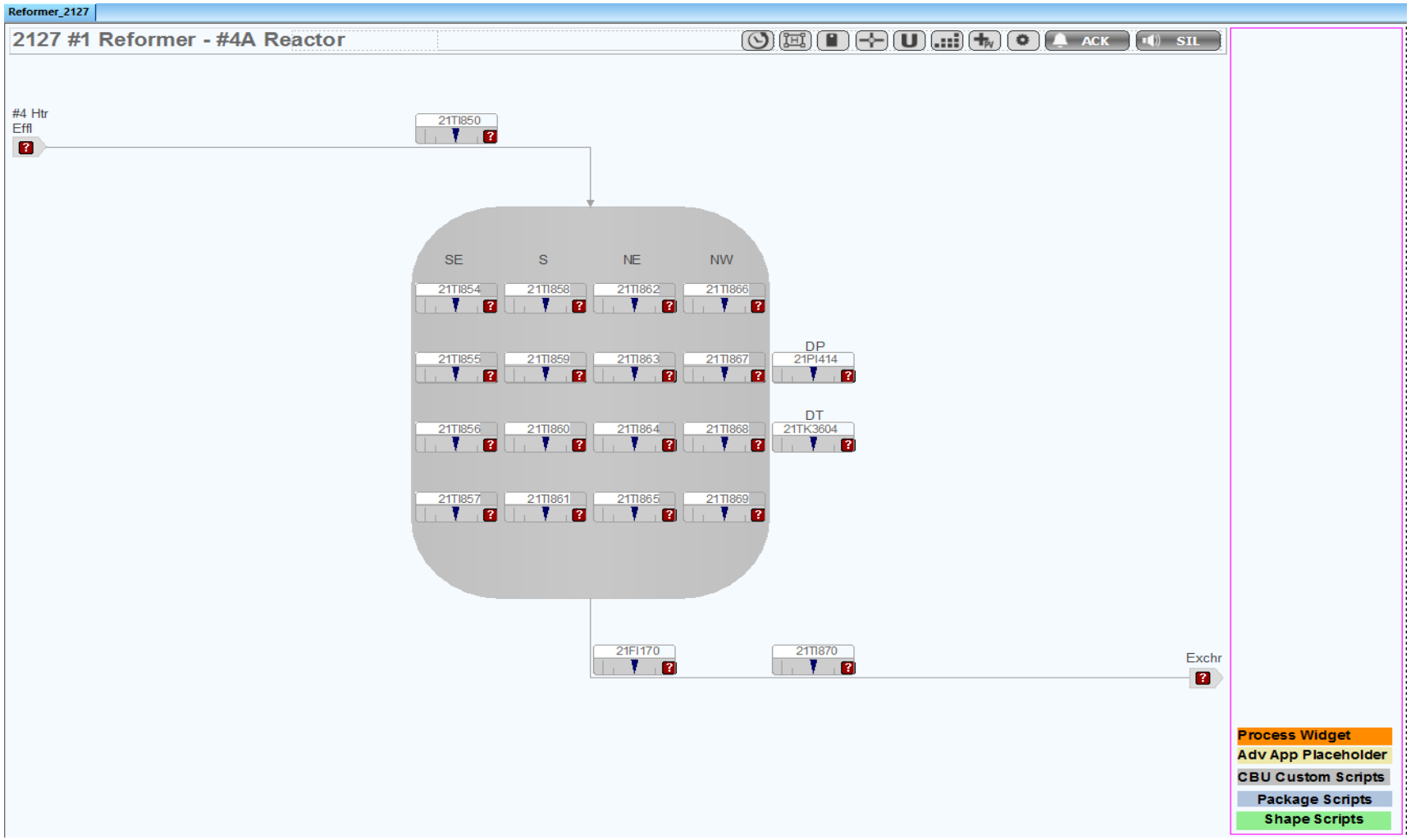
1.103 2126h4 Ref #4 Heater - Ramp Help (Reformer_2126H4.htm)

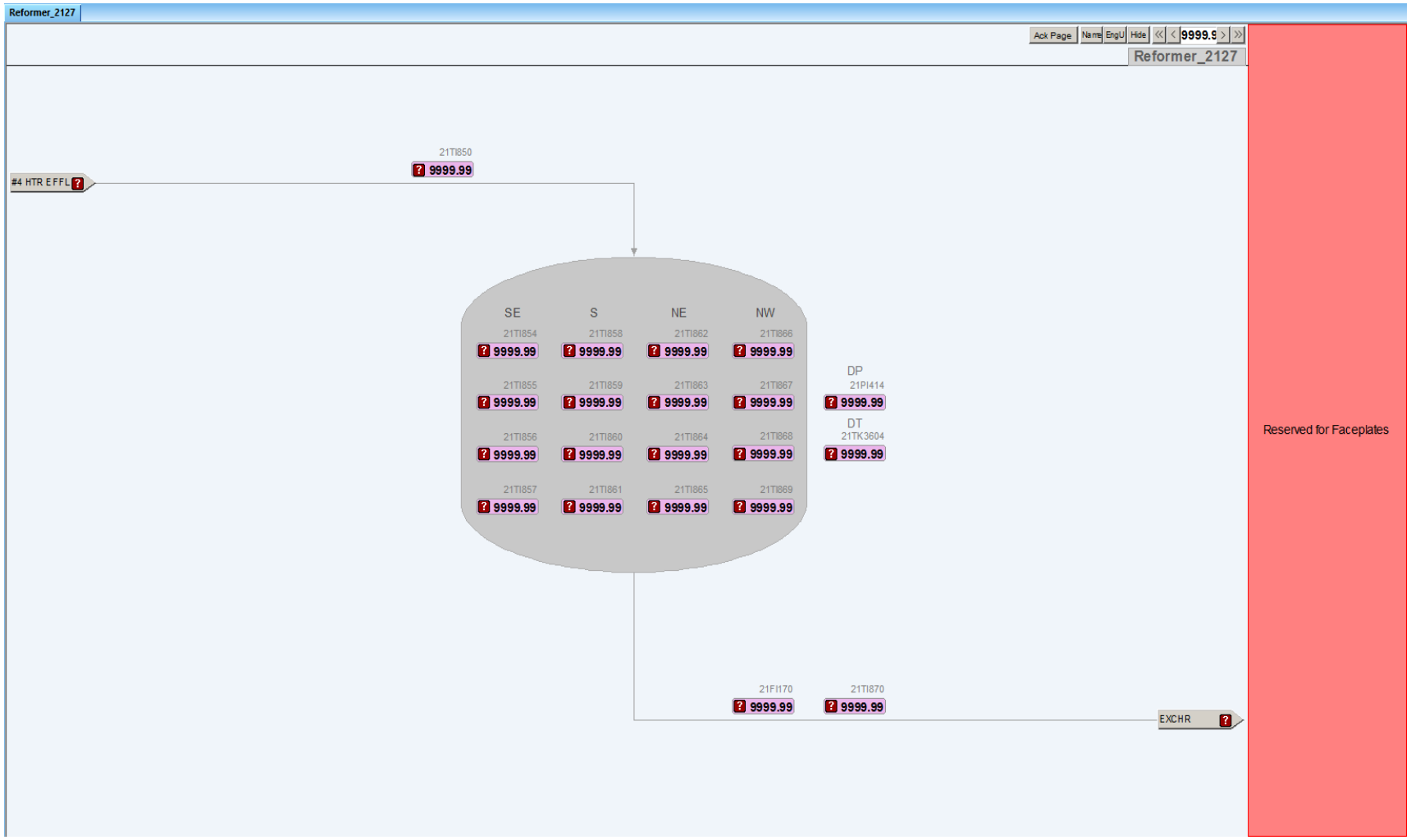

reformer_2126H4
2126H4 Ref #4 Heater - RAMP HELP
ACK
SIL
Description: The setpoint of 21TC614 is ramped to a final temperature over a defined time by the Operator. This is designed to provide a consistent cooldown or heat-up of the reactors.
To Enable or Modify Control:
1. Place 21TC614 in AUTO
2. Detail 21TC614 and go to "Set Point" tab
3. Verify "Set point ramp enabled" Box is checked and set the "Set point ramping state" to "PRESET"
4. Enter the target temperature "Set point target temperature (SPTV)"
5. Enter the requested ramp rate (EU/min) - so a value of 1.0 will mean a ramp rate of 60 DegF/HR
6. Set the "Set point raming state" to "RUN"
To Disable Ramp Control:
1. Put RampState in OFF mode or Place 21TC614 in MAN or CAS mode.
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2126H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_2126H4
DESCRIPTION: THE SETPOINT OF 21TC614 IS RAMPED TO A FINAL TEMPERATURE OVER A DEFINED TIME BY THE OPERATOR. THIS IS DESIGNED TO PROVIDE A CONSISTENT COOLDOWN OR HEAT-UP OF THE REACTORS.
TO ENABLE OR MODIFY CONTROL:
1. PLACE 21TC614 IN AUTO
2. DETAIL 21TC614 AND GO TO "SET POINT" TAB
3. VERIFY "SET POINT RAMP ENABLED" BOX IS CHECKED AND SET THE "SET POINT RAMPING STATE" TO "PRESET"
4. ENTER THE TARGET TEMPERATURE "SET POINT TARGET TEMPERATURE (SPTV)"
5. ENTER THE REQUESTED RAMP RATE (EU/MIN) - SO A VALUE OF 1.0 WILL MEAN A RAMP RATE OF 60 DEGF/HR
6. SET THE "SET POINT RAMING STATE" TO "RUN"
TO DISABLE RAMP CONTROL:
1. PUT RAMPSTATE IN OFF MODE OR PLACE 21TC614 IN MAN OR CAS MODE.
PROCESS
Reserved for Faceplates

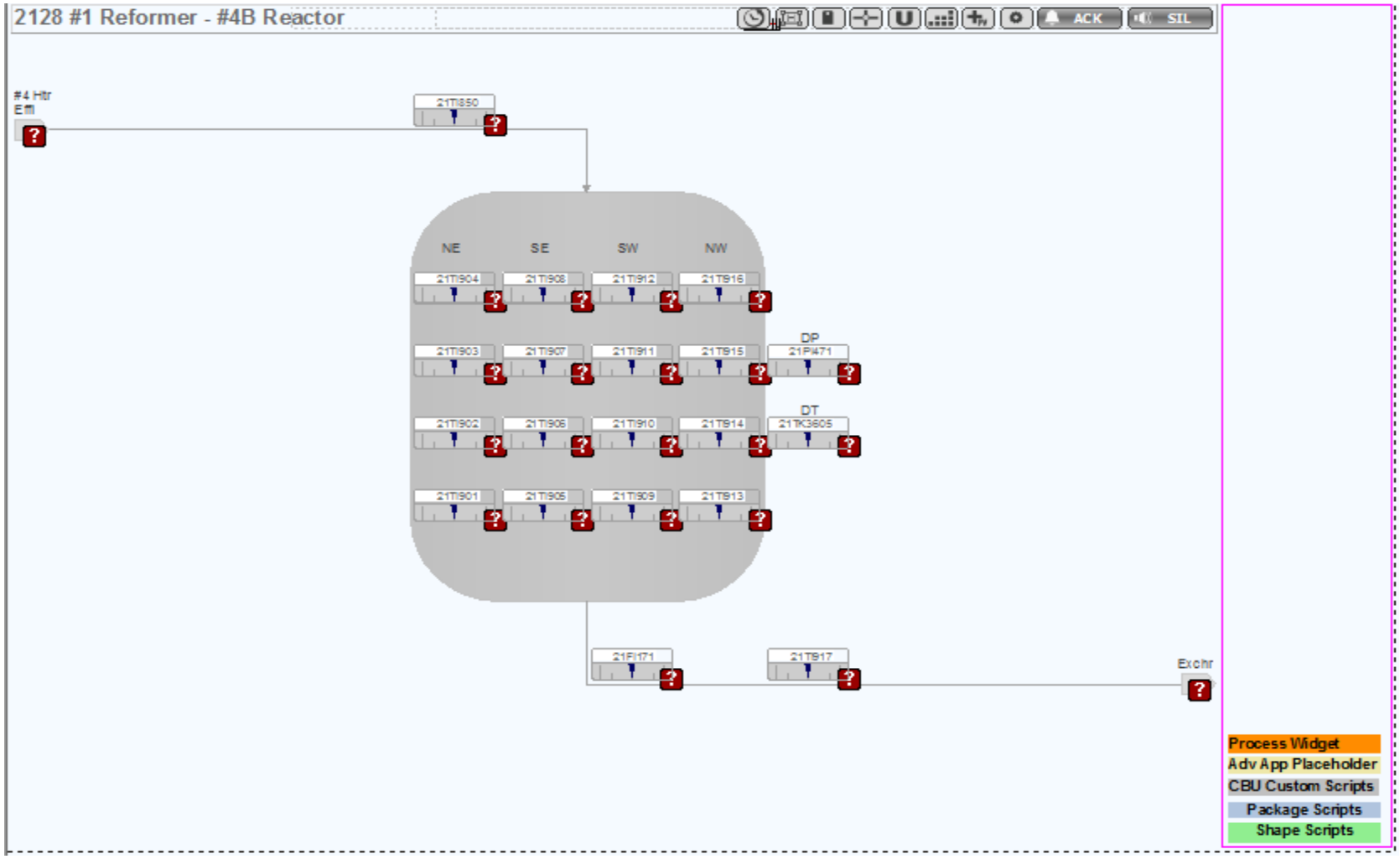
1.104 2127 #1 REFORMER - #4A REACTOR (Reformer_2127.htm)

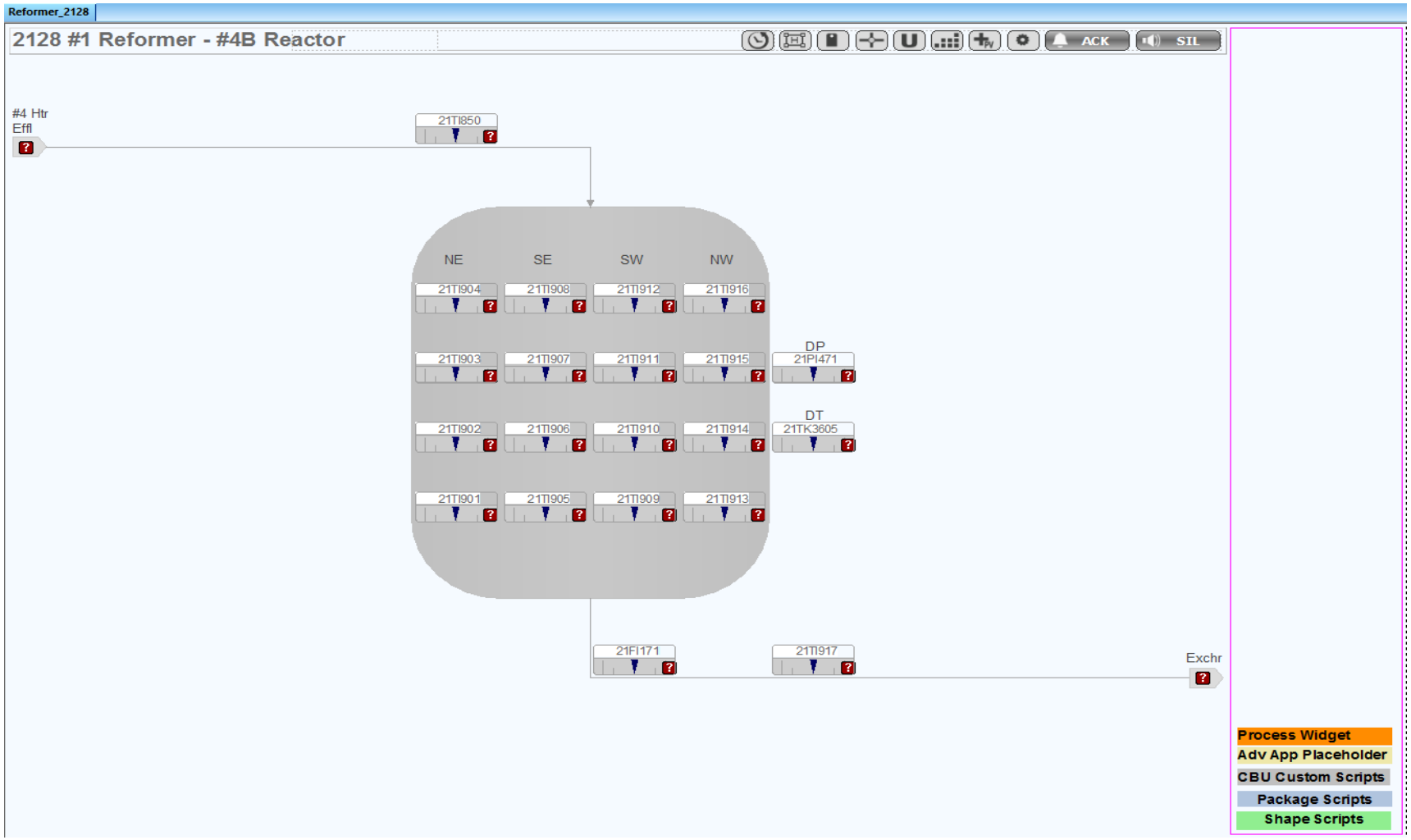


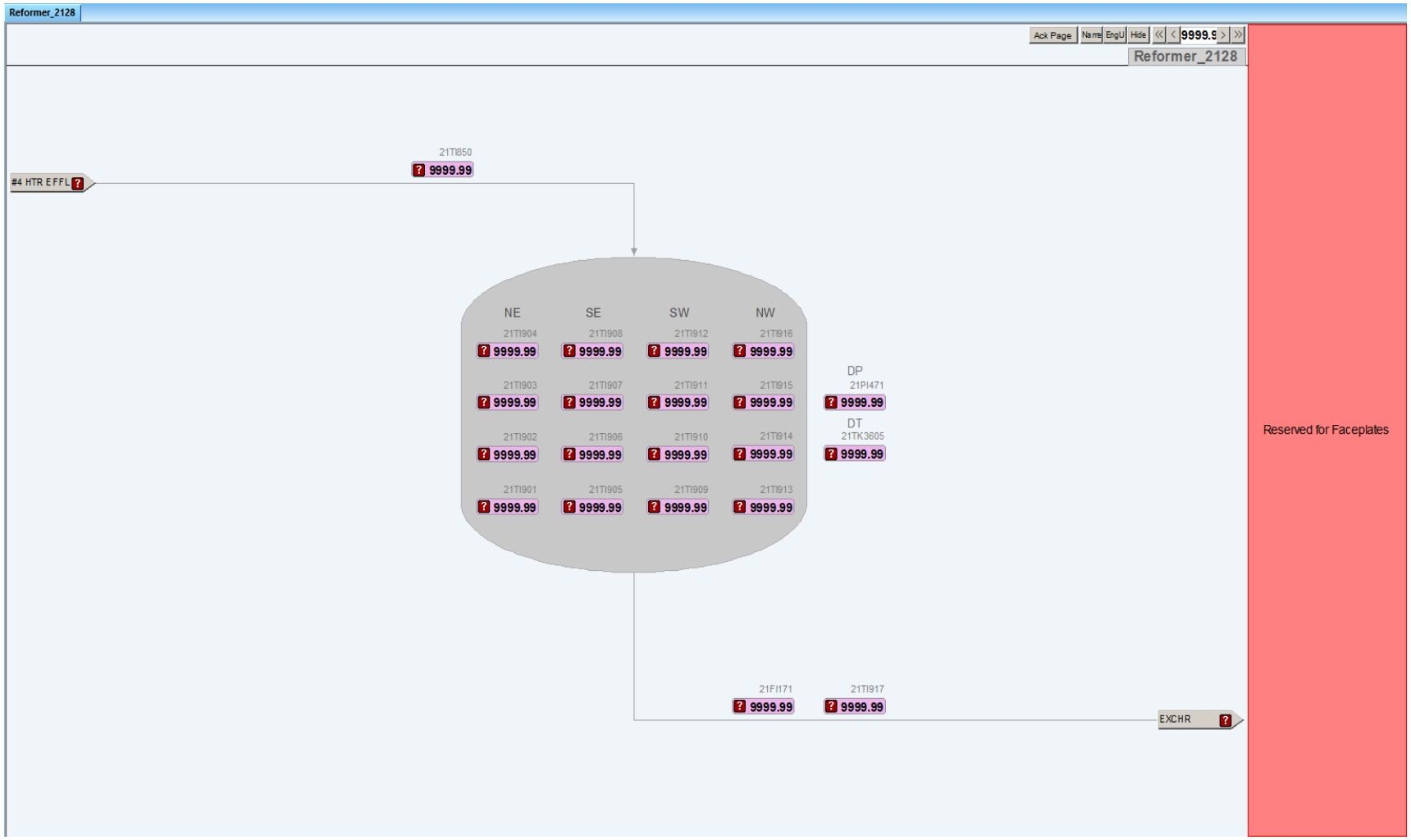

Reformer_2127
2127 #1 Reformer - #4A Reactor
ACK
SIL
#4 Htr
Effl
21TI850
SE
S
NE
NW
21TI854
21TI858
21TI862
21TI866
21TI855
21TI859
21TI863
21TI867
DP
21PI414
21TI856
21TI860
21TI864
21TI868
DT
21TK3604
21TI857
21TI861
21TI865
21TI869
21FI170
21TI870
Exchr
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2127
Ack Page
Name
EngU
Hide
9999.9
Reformer_2127
21TI850
9999.99
#4 HTR EFFL
SE
S
NE
NW
21TI854
21TI858
21TI862
21TI866
21TI855
21TI859
21TI863
21TI867
21TI856
21TI860
21TI864
21TI868
21TI857
21TI861
21TI865
21TI869
DP
21PI414
DT
21TK3604
21FI170
21TI870
EXCHR
Reserved for Faceplates

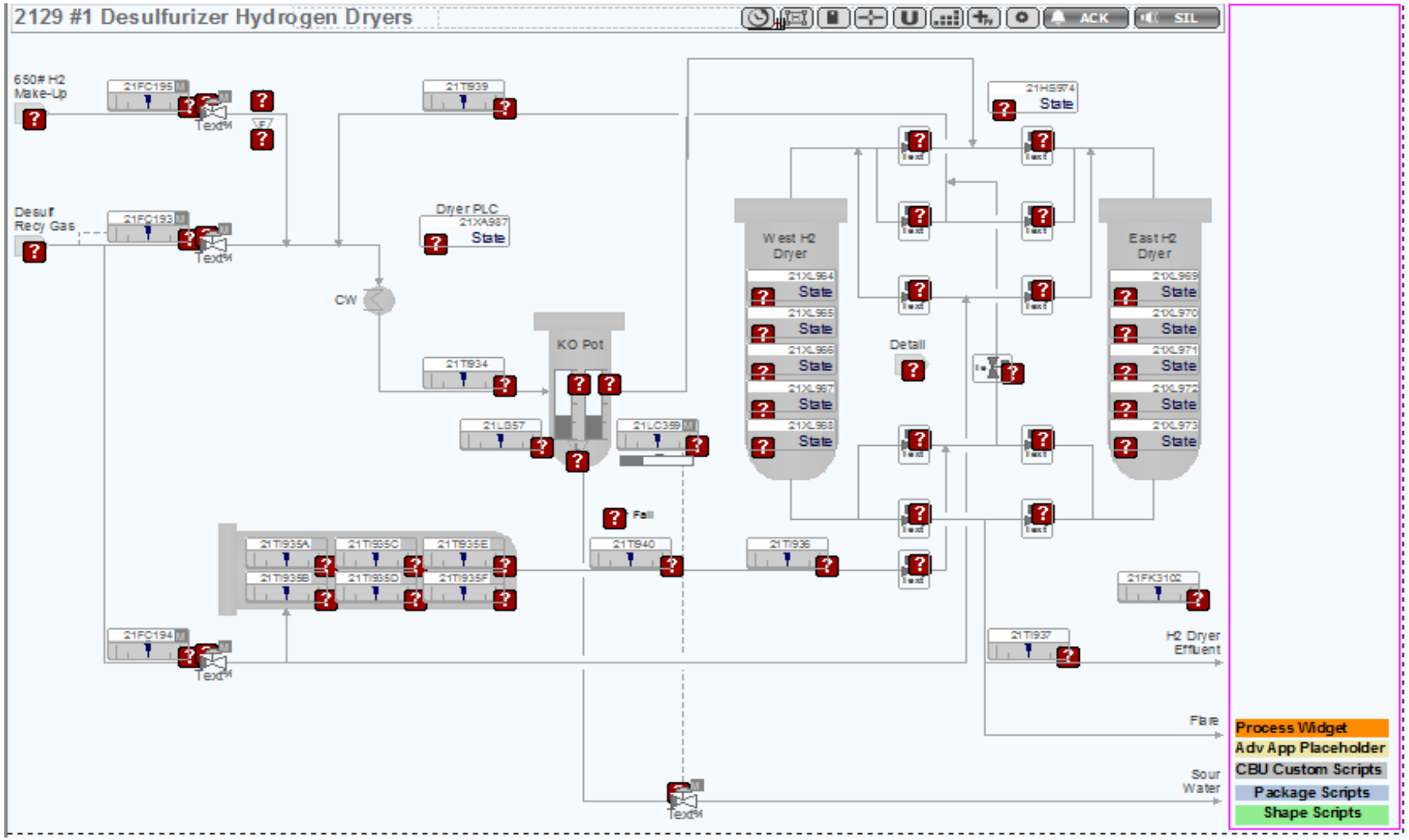
1.105 2128 #1 REFORMER - #4B REACTOR (Reformer_2128.htm)

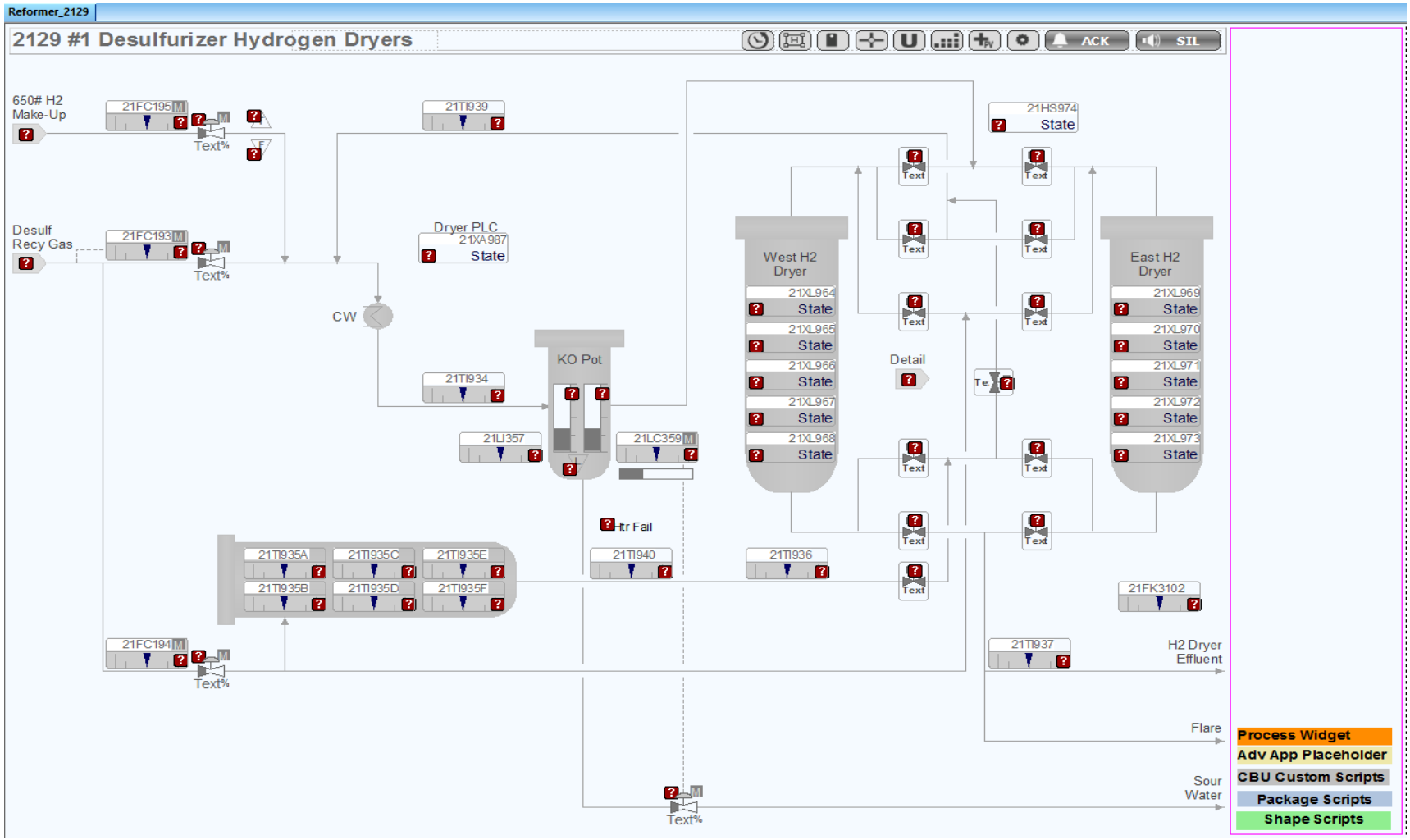


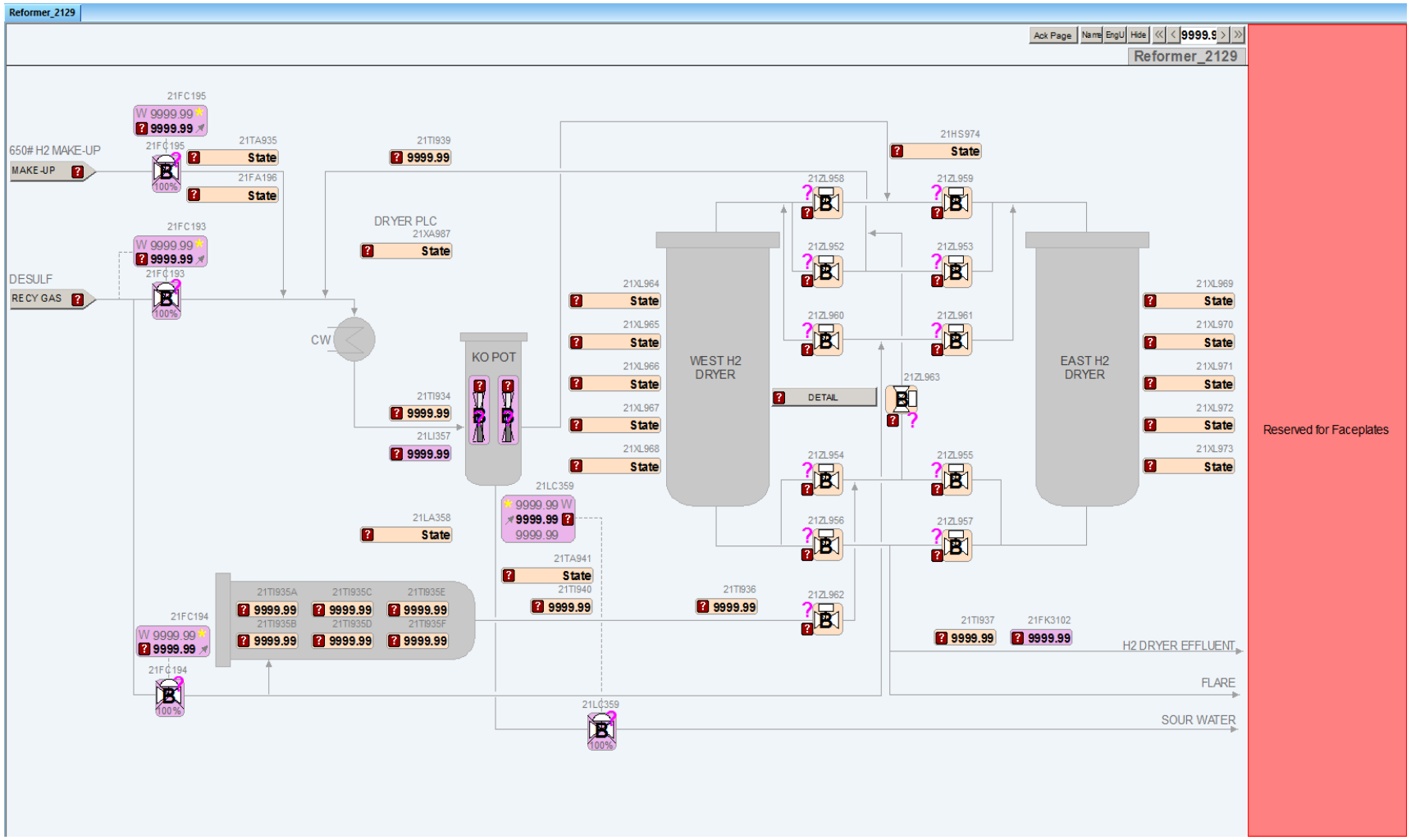

Reformer_2128
2128 #1 Reformer - #4B Reactor
ACK
SIL
#4 Htr
Effl
21TI850
NE
SE
SW
NW
21TI904
21TI908
21TI912
21TI916
21TI903
21TI907
21TI911
21TI915
DP
21PI471
21TI902
21TI906
21TI910
21TI914
DT
21TK3605
21TI901
21TI905
21TI909
21TI913
21FI171
21TI917
Exchr
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2128
Ack Page
Name
EngU
Hide
9999.9
Reformer_2128
21TI850
9999.99
#4 HTR EFFL
NE
SE
SW
NW
21TI904
21TI908
21TI912
21TI916
21TI903
21TI907
21TI911
21TI915
21TI902
21TI906
21TI910
21TI914
21TI901
21TI905
21TI909
21TI913
DP
21PI471
DT
21TK3605
21FI171
21TI917
EXCHR
Reserved for Faceplates

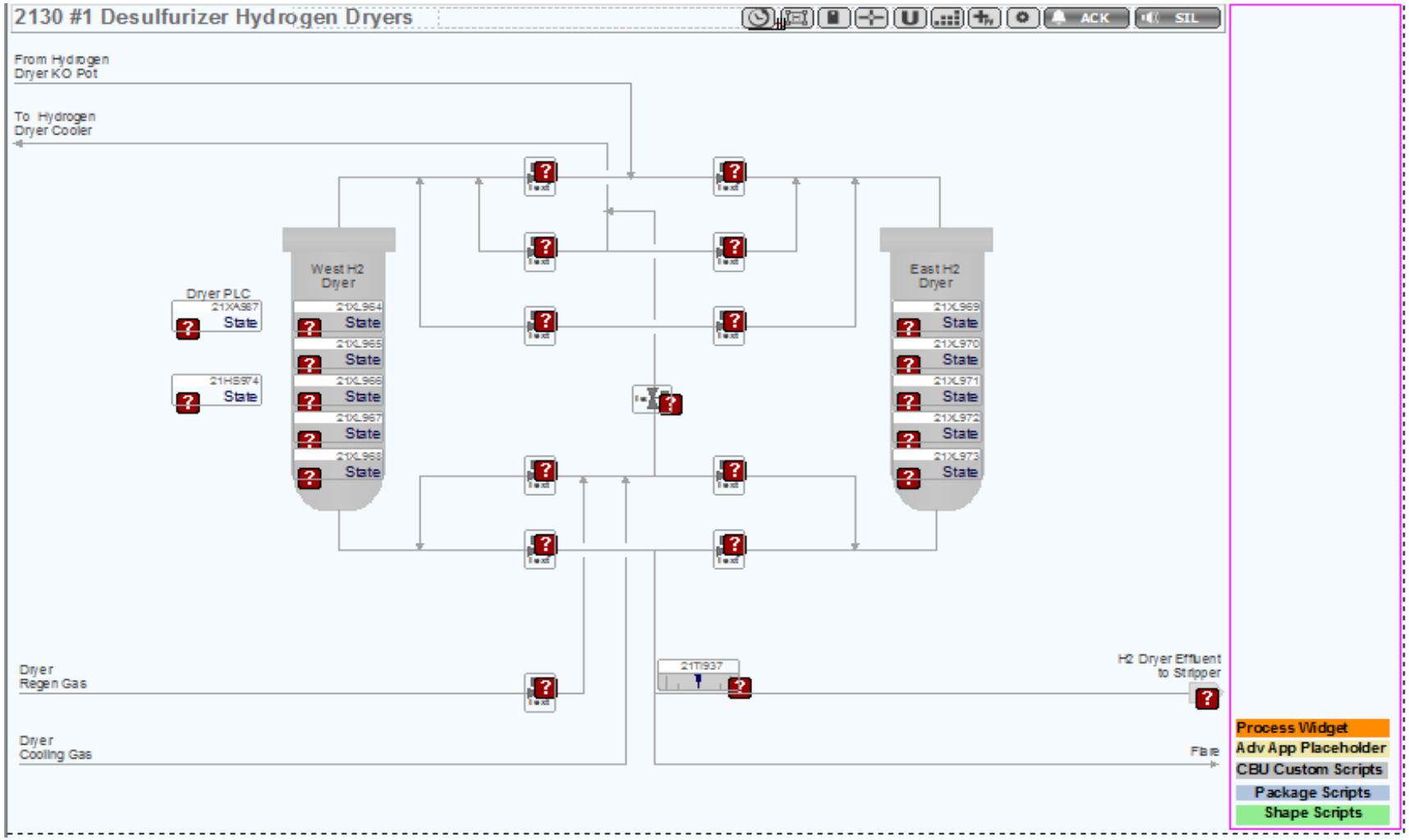
1.106 2129 #1 DESULFURIZER HYDROGEN DRYERS (Reformer_2129.htm)

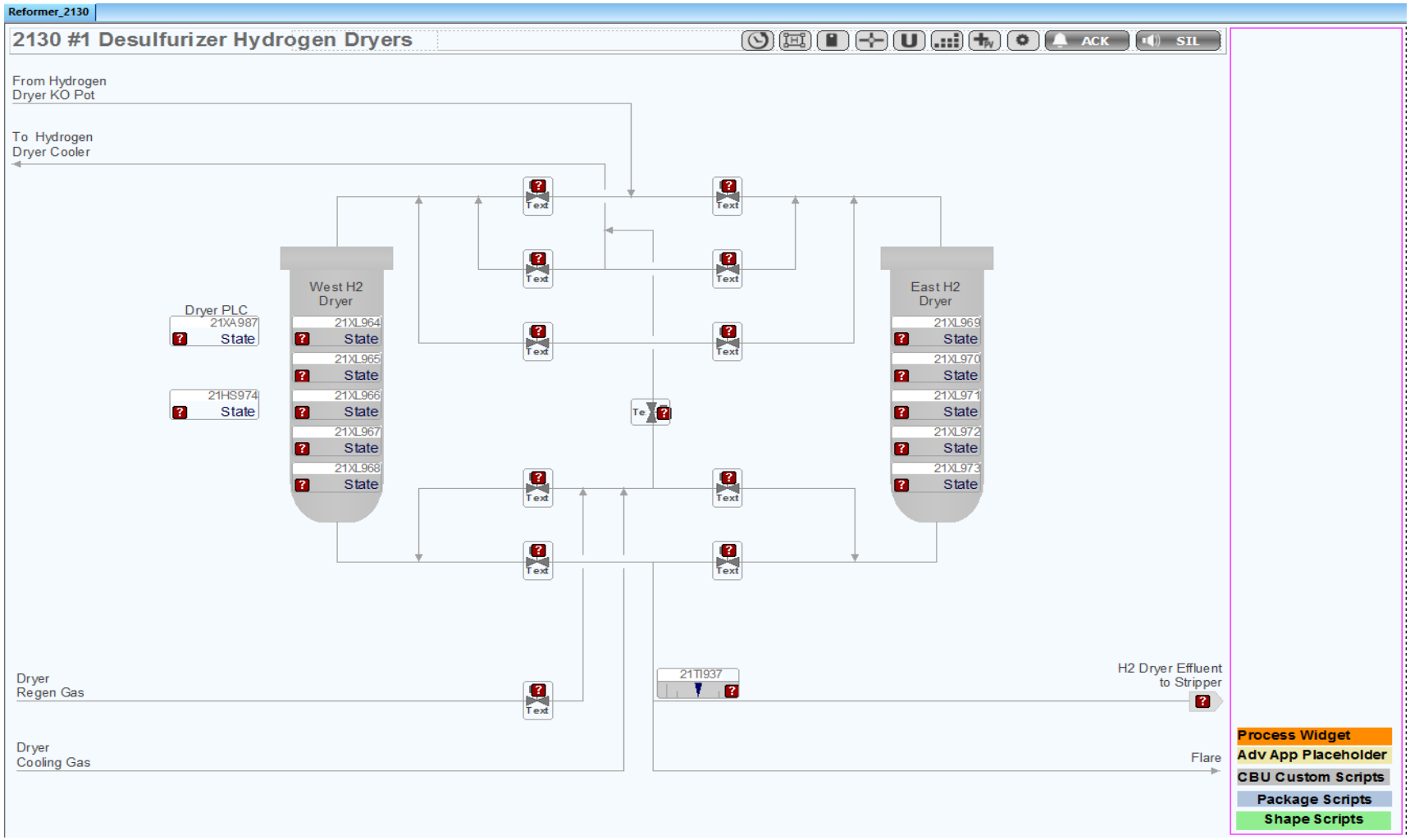


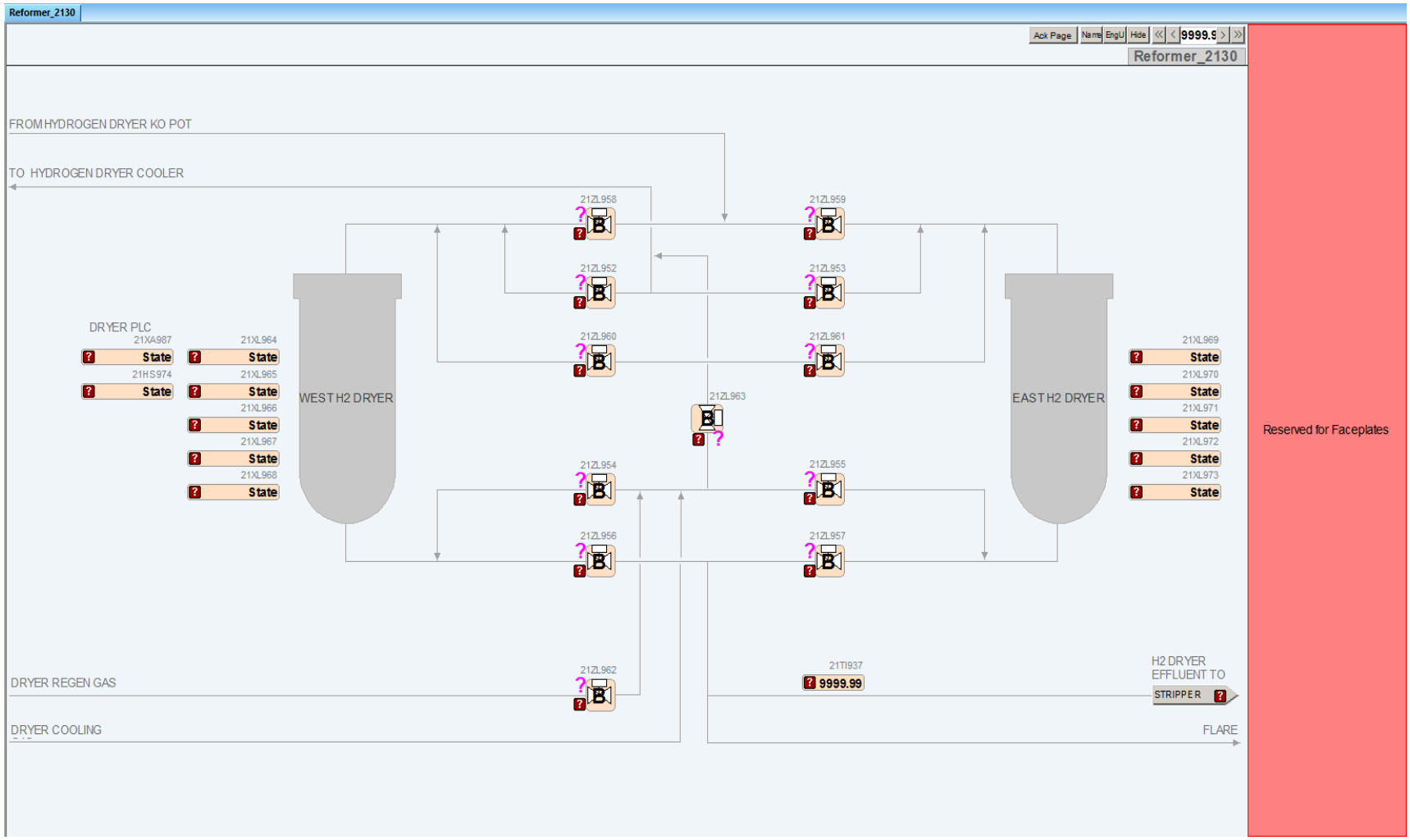

Reformer_2129
2129 #1 Desulfurizer Hydrogen Dryers
ACK
SIL
650# H2 Make-Up
21FC195
Text%
21TI939
21HS974
State
Desulf Recy Gas
21FC193
Text%
Dryer PLC
21XA987
State
CW
KO Pot
West H2 Dryer
21XL964
State
21XL965
State
21XL966
State
21XL967
State
21XL968
State
East H2 Dryer
21XL969
State
21XL970
State
21XL971
State
21XL972
State
21XL973
State
Detail
21TI934
21LI357
21LC359
Itr Fail
21TI940
21TI936
21TI935A
21TI935B
21TI935C
21TI935D
21TI935E
21TI935F
21FK3102
21FC194
Text%
21TI937
H2 Dryer Effluent
Flare
Sour Water
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2129
Ack Page
Name
EngU
Hide
Reformer_2129
650# H2 MAKE-UP
MAKE-UP
DESULF
RECY GAS
21FC195
21FC193
21FC194
21TA935
21FA196
21TI939
DRYER PLC
21XA987
CW
KO POT
21TI934
21LI357
21LA358
21LC359
21TA941
21TI940
21TI935A
21TI935B
21TI935C
21TI935D
21TI935E
21TI935F
21TI936
21HS974
21ZL958
21ZL959
21ZL952
21ZL953
21ZL960
21ZL961
21ZL963
DETAIL
21ZL954
21ZL955
21ZL956
21ZL957
21ZL962
WEST H2 DRYER
EAST H2 DRYER
21XL964
21XL965
21XL966
21XL967
21XL968
21XL969
21XL970
21XL971
21XL972
21XL973
21TI937
21FK3102
H2 DRYER EFFLUENT
FLARE
SOUR WATER
Reserved for Faceplates

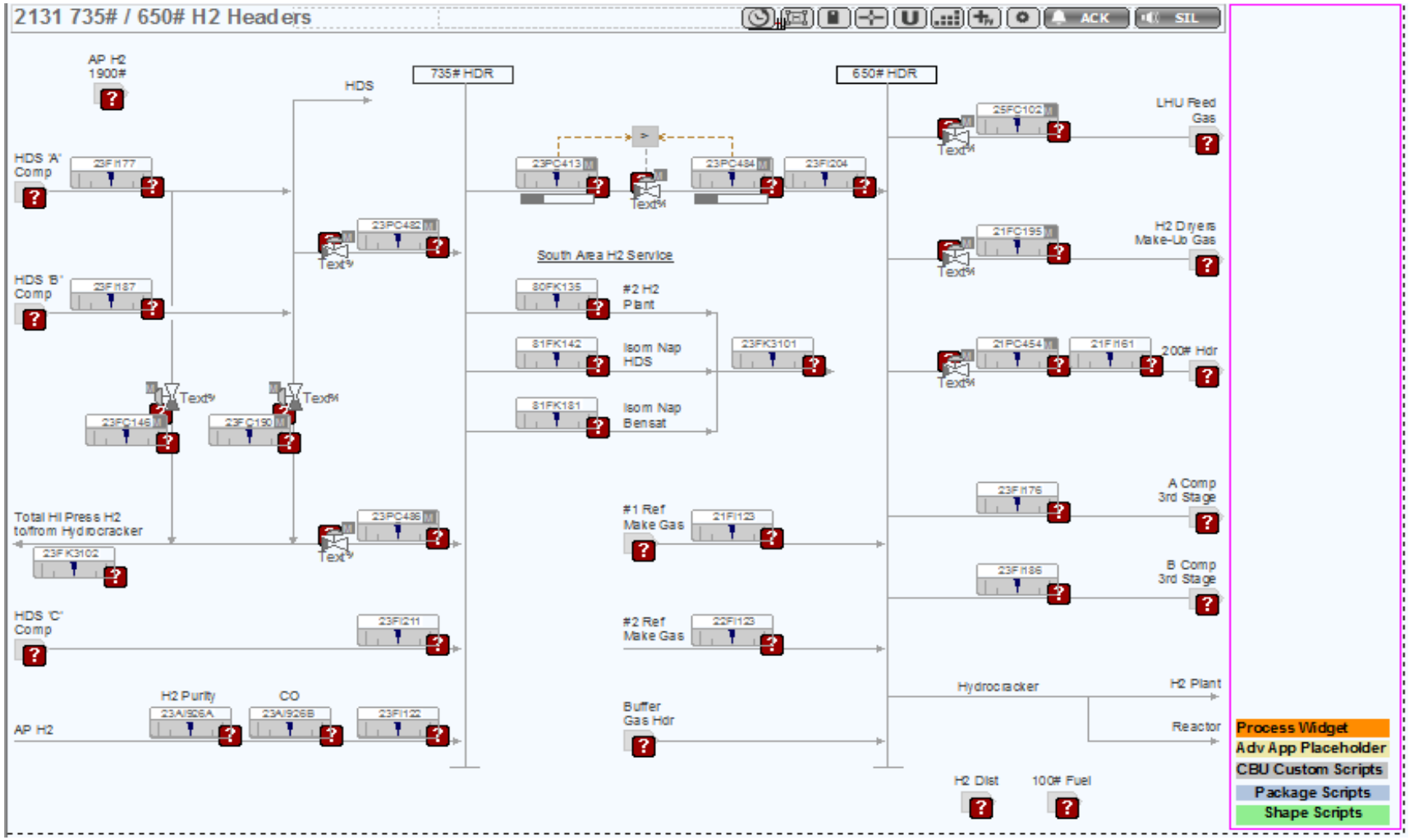
1.107 2130 #1 DESULFURIZER HYDROGEN DRYERS (Reformer_2130.htm)

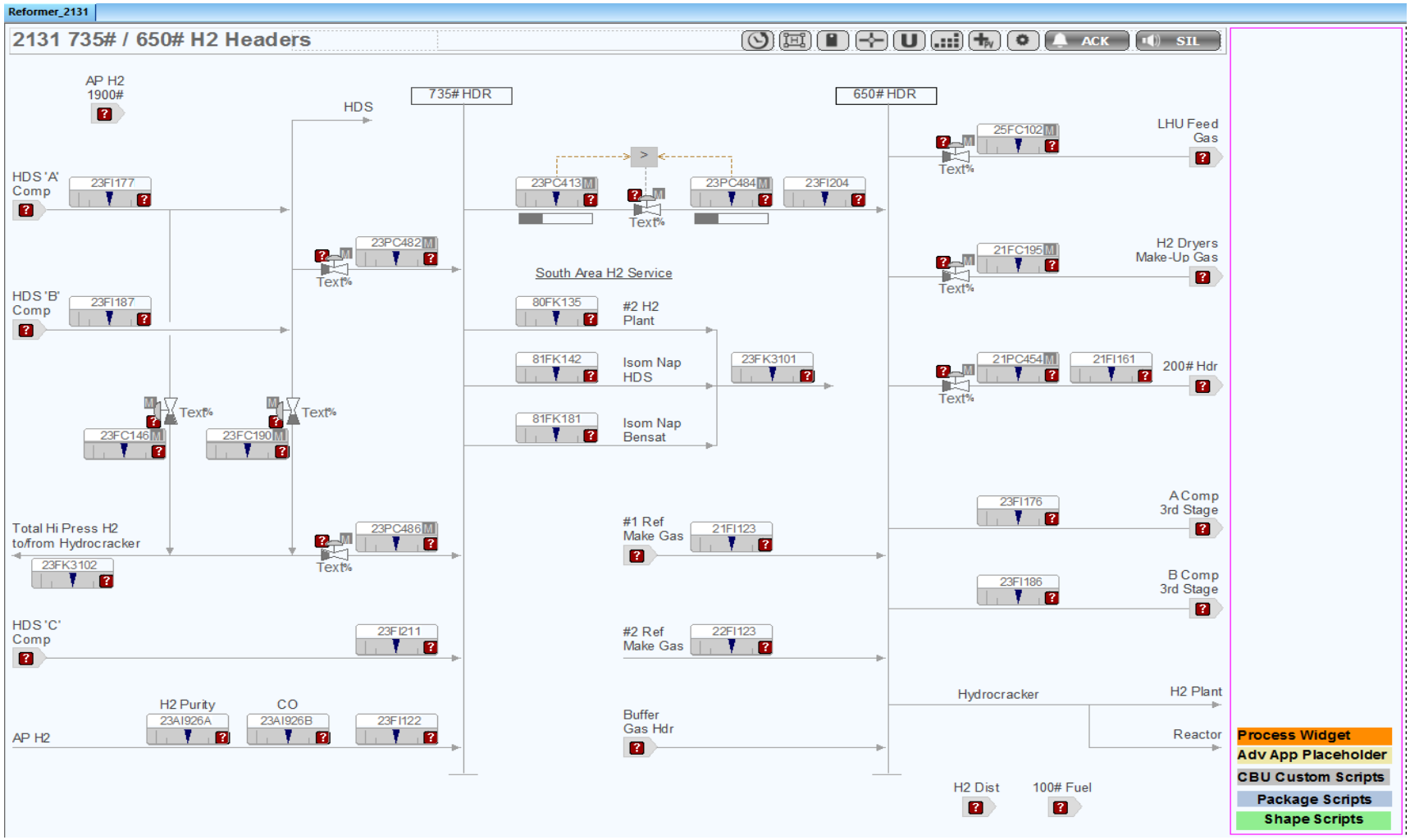


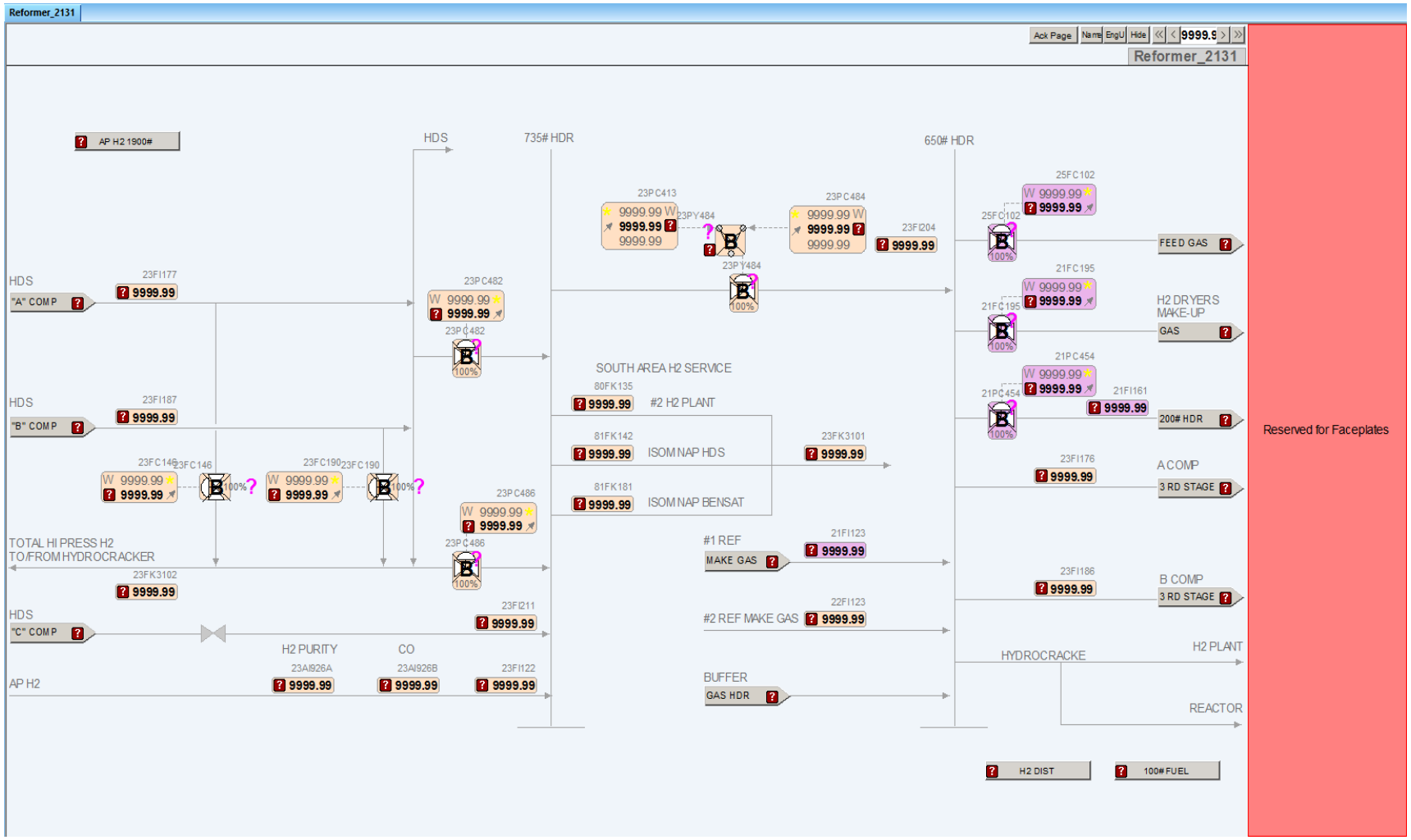

Reformer_2130
2130 #1 Desulfurizer Hydrogen Dryers
ACK
SIL
From Hydrogen
Dryer KO Pot
To Hydrogen
Dryer Cooler
West H2
Dryer
East H2
Dryer
Dryer PLC
21XA987
State
21HS974
State
21XL964
21XL965
21XL966
21XL967
21XL968
21XL969
21XL970
21XL971
21XL972
21XL973
Text
Te
21TI937
Dryer
Regen Gas
Dryer
Cooling Gas
H2 Dryer Effluent
to Stripper
Flare
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2130
Ack Page
Name
EngU
Hide
9999.9
Reformer_2130
FROM HYDROGEN DRYER KO POT
TO HYDROGEN DRYER COOLER
21ZL958
21ZL959
21ZL952
21ZL953
21ZL960
21ZL961
21ZL963
21ZL954
21ZL955
21ZL956
21ZL957
21ZL962
DRYER PLC
21XA987
State
21HS974
State
21XL964
State
21XL965
State
21XL966
State
21XL967
State
21XL968
State
WEST H2 DRYER
EAST H2 DRYER
21XL969
State
21XL970
State
21XL971
State
21XL972
State
21XL973
State
Reserved for Faceplates
DRYER REGEN GAS
DRYER COOLING
21TI937
9999.99
H2 DRYER EFFLUENT TO
STRIPPER
FLARE

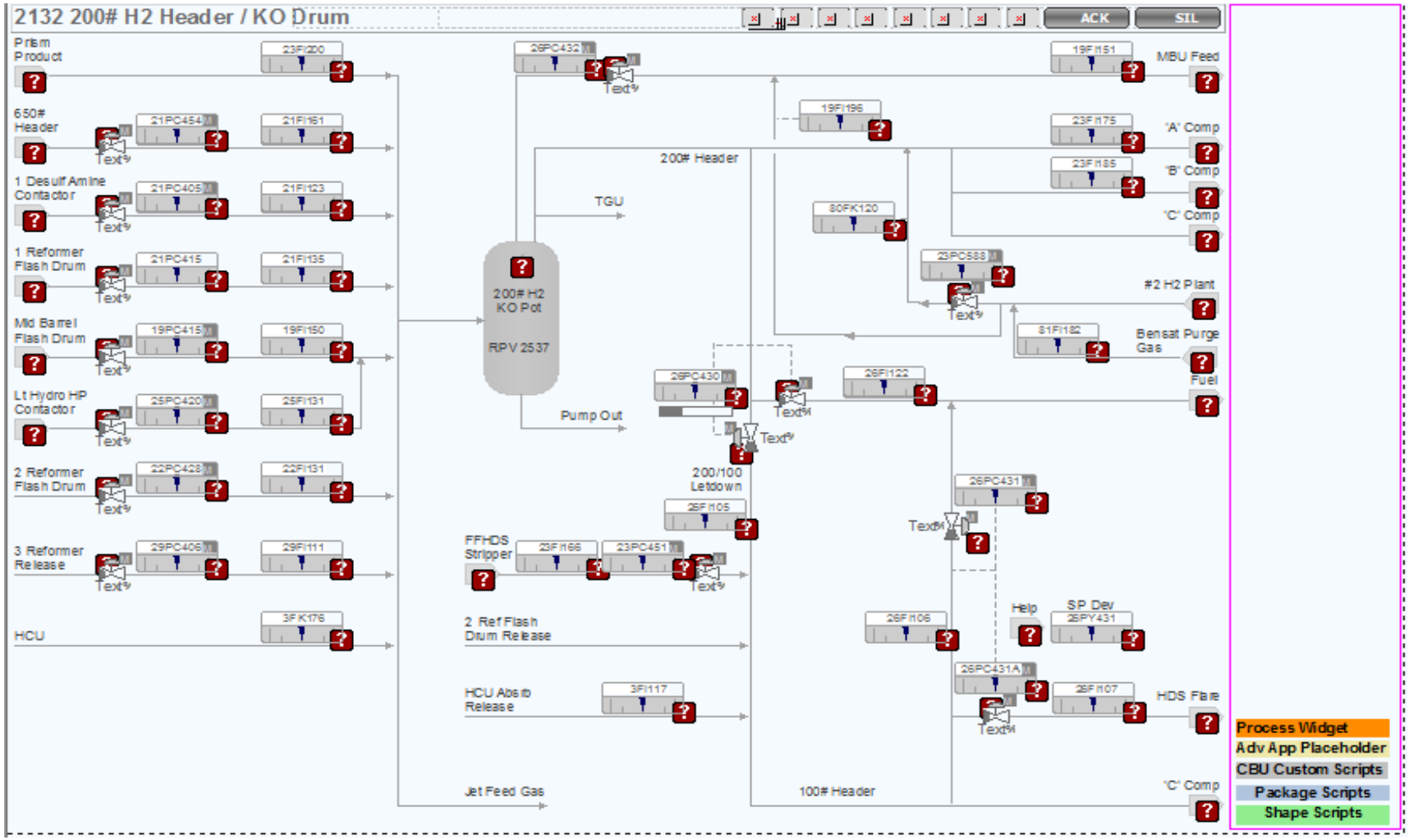
1.108 2131 735# / 650# H2 HEADERS (Reformer_2131.htm)

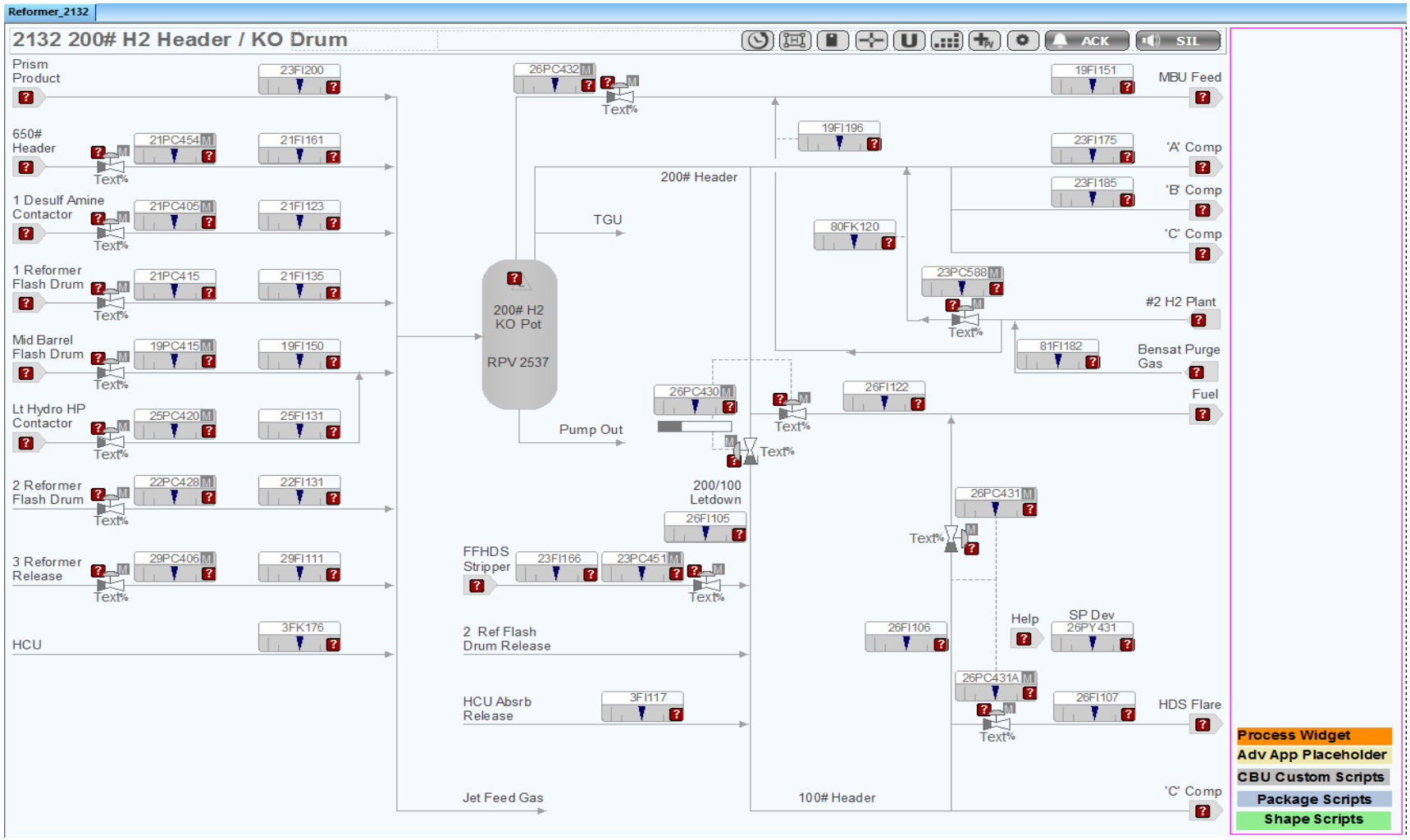


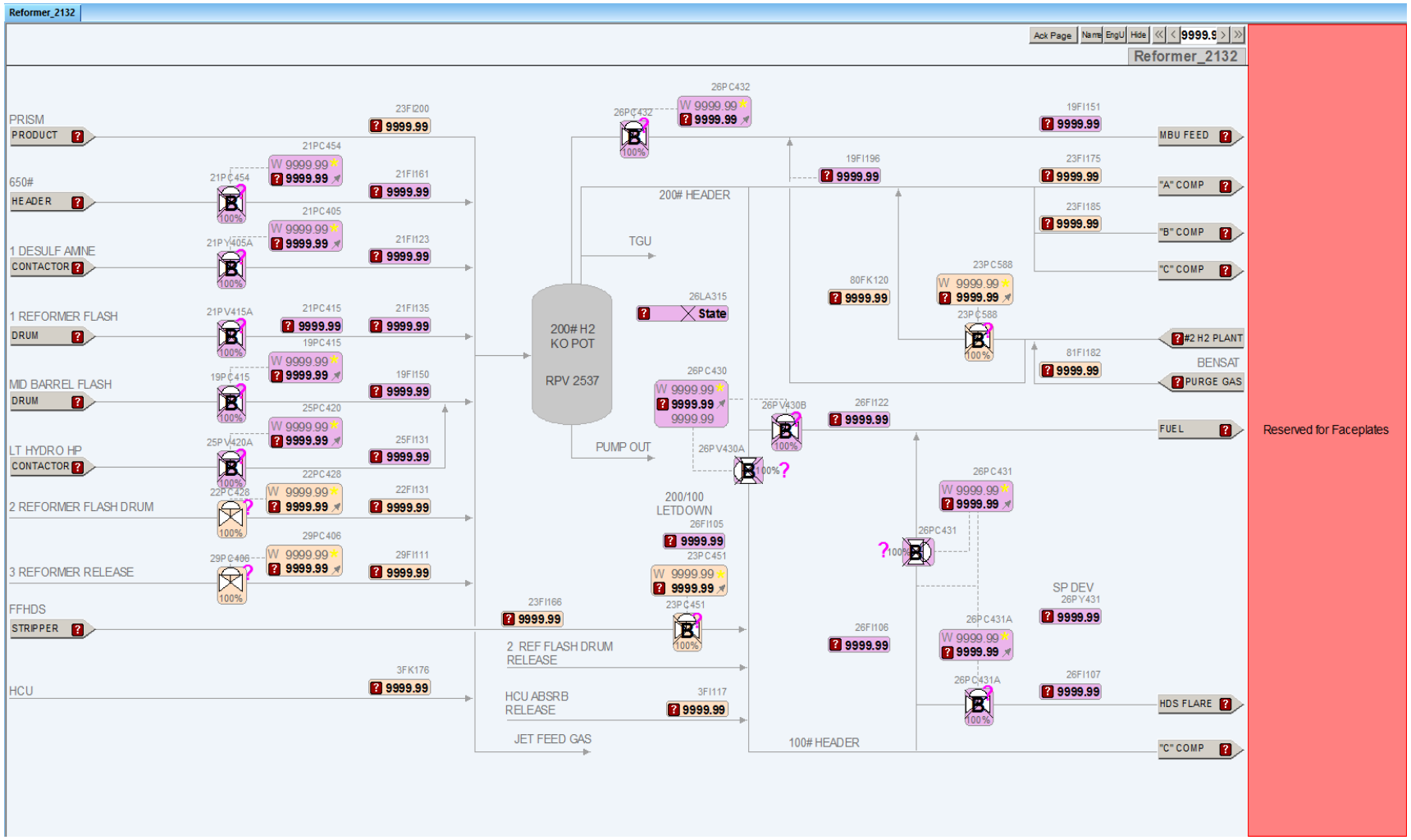

Reformer_2131
2131 735# / 650# H2 Headers
ACK
SIL
AP H2
1900#
HDS
735# HDR
650# HDR
HDS 'A'
Comp
23FI177
23PC413
23PC484
23FI204
Text%
25FC102
LHU Feed
Gas
23PC482
South Area H2 Service
HDS 'B'
Comp
23FI187
80FK135
#2 H2
Plant
21FC195
H2 Dryers
Make-Up Gas
81FK142
Isom Nap
HDS
23FK3101
21PC454
21FI161
200# Hdr
23FC146
23FC190
81FK181
Isom Nap
Bensat
23FI176
A Comp
3rd Stage
Total Hi Press H2
to/from Hydrocracker
23PC486
23FK3102
#1 Ref
Make Gas
21FI123
23FI186
B Comp
3rd Stage
HDS 'C'
Comp
23FI211
#2 Ref
Make Gas
22FI123
H2 Purity
CO
Hydrocracker
H2 Plant
23AI926A
23AI926B
23FI122
AP H2
Buffer
Gas Hdr
Reactor
H2 Dist
100# Fuel
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2131
Ack Page
Name
EngU
Hide
Reformer_2131
AP H2 1900#
HDS
735# HDR
650# HDR
HDS
"A" COMP
23FI177
9999.99
HDS
"B" COMP
23FI187
9999.99
HDS
"C" COMP
23FI211
9999.99
TOTAL HI PRESS H2
TO/FROM HYDROCRACKER
23FK3102
9999.99
AP H2
H2 PURITY
23AI926A
CO
23AI926B
23FI122
23PC482
23PC486
23PC413
23PY484
23PC484
23FI204
23PY484
SOUTH AREA H2 SERVICE
80FK135
#2 H2 PLANT
81FK142
ISOM NAP HDS
23FK3101
81FK181
ISOM NAP BENSAT
#1 REF
MAKE GAS
21FI123
#2 REF MAKE GAS
22FI123
BUFFER
GAS HDR
25FC102
FEED GAS
21FC195
H2 DRYERS
MAKE-UP
GAS
21PC454
21FI161
200# HDR
23FI176
A COMP
3 RD STAGE
23FI186
B COMP
3 RD STAGE
HYDROCRACKE
H2 PLANT
REACTOR
H2 DIST
100# FUEL
Reserved for Faceplates

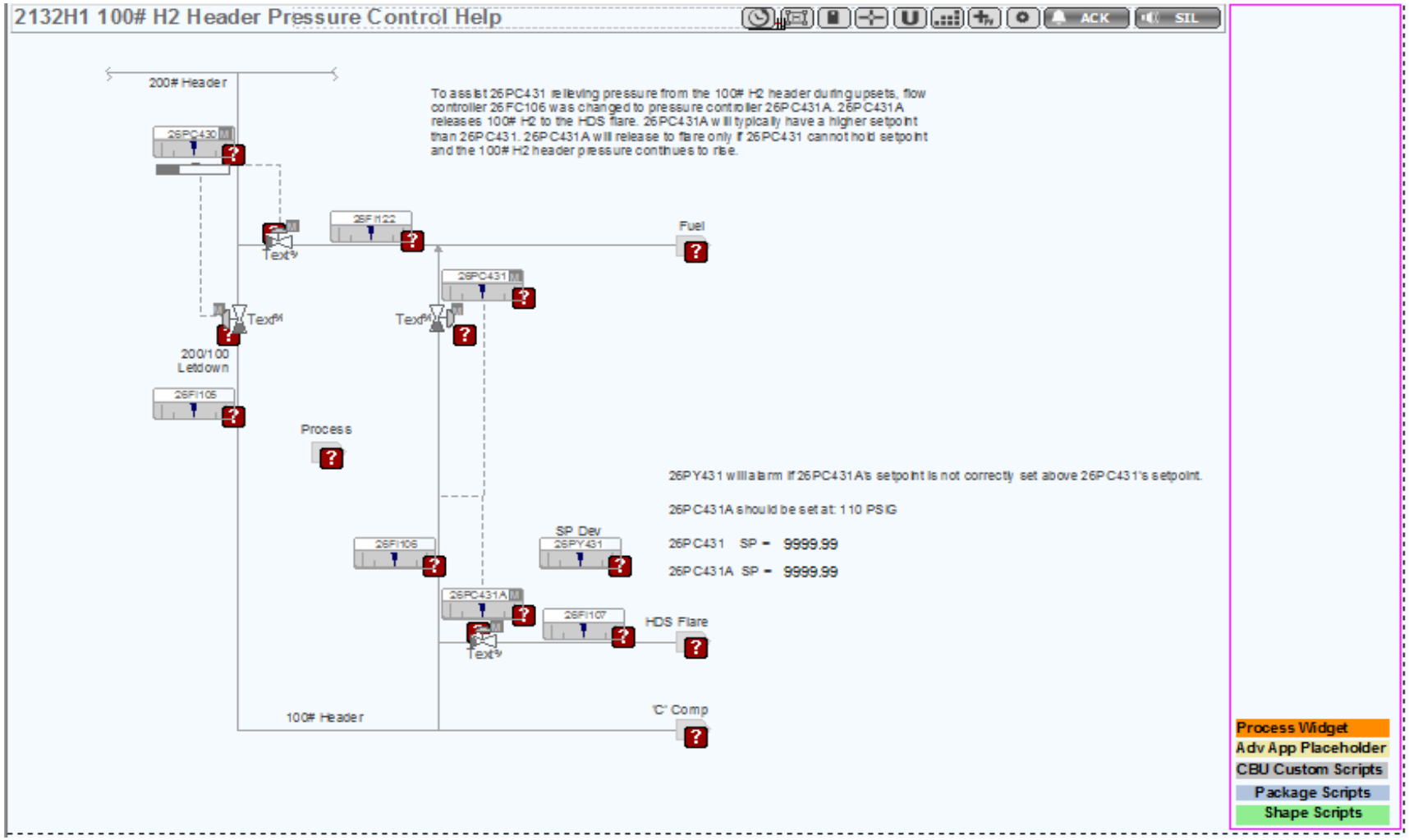
1.109 2132 200# H2 HEADER / KO DRUM (Reformer_2132.htm)

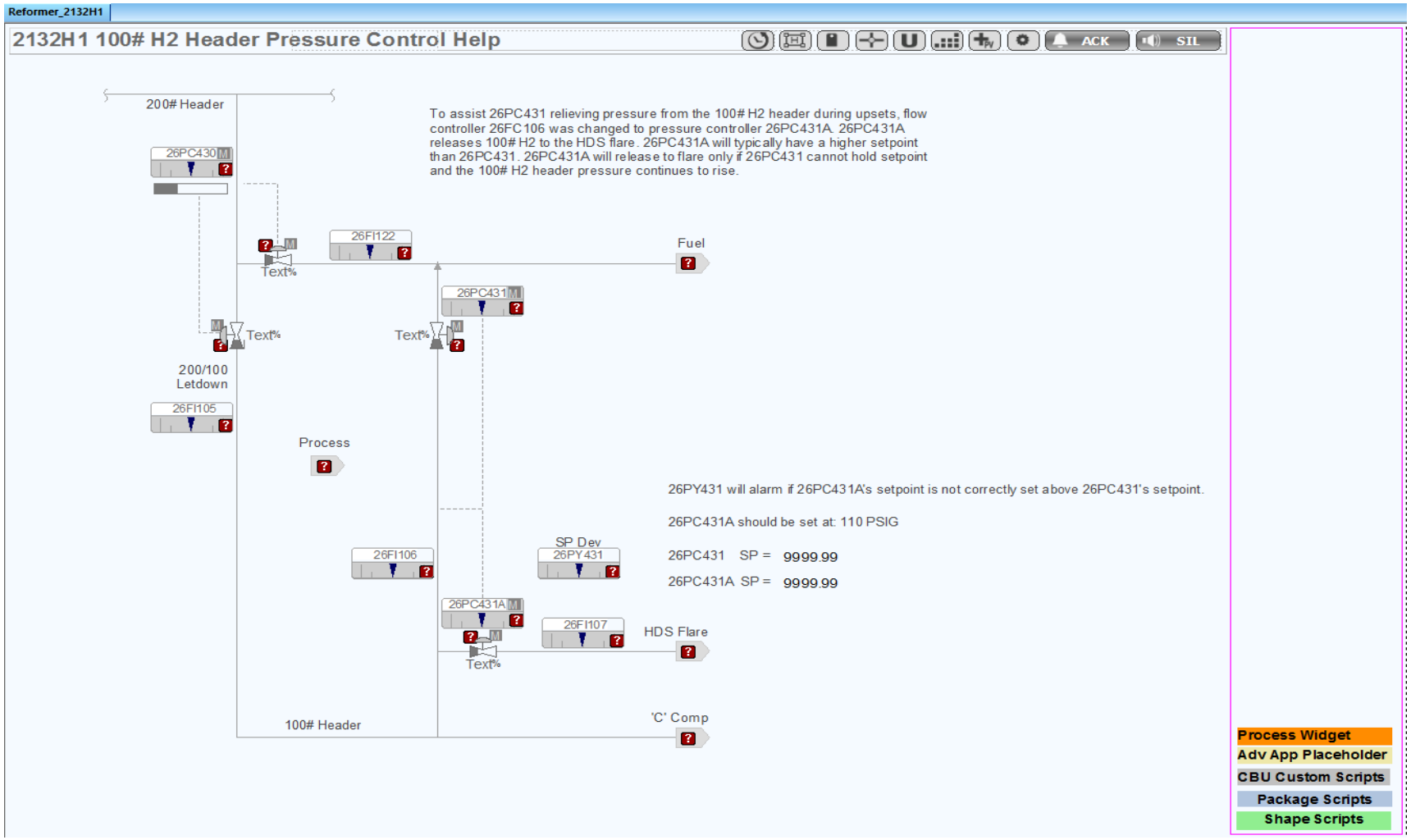


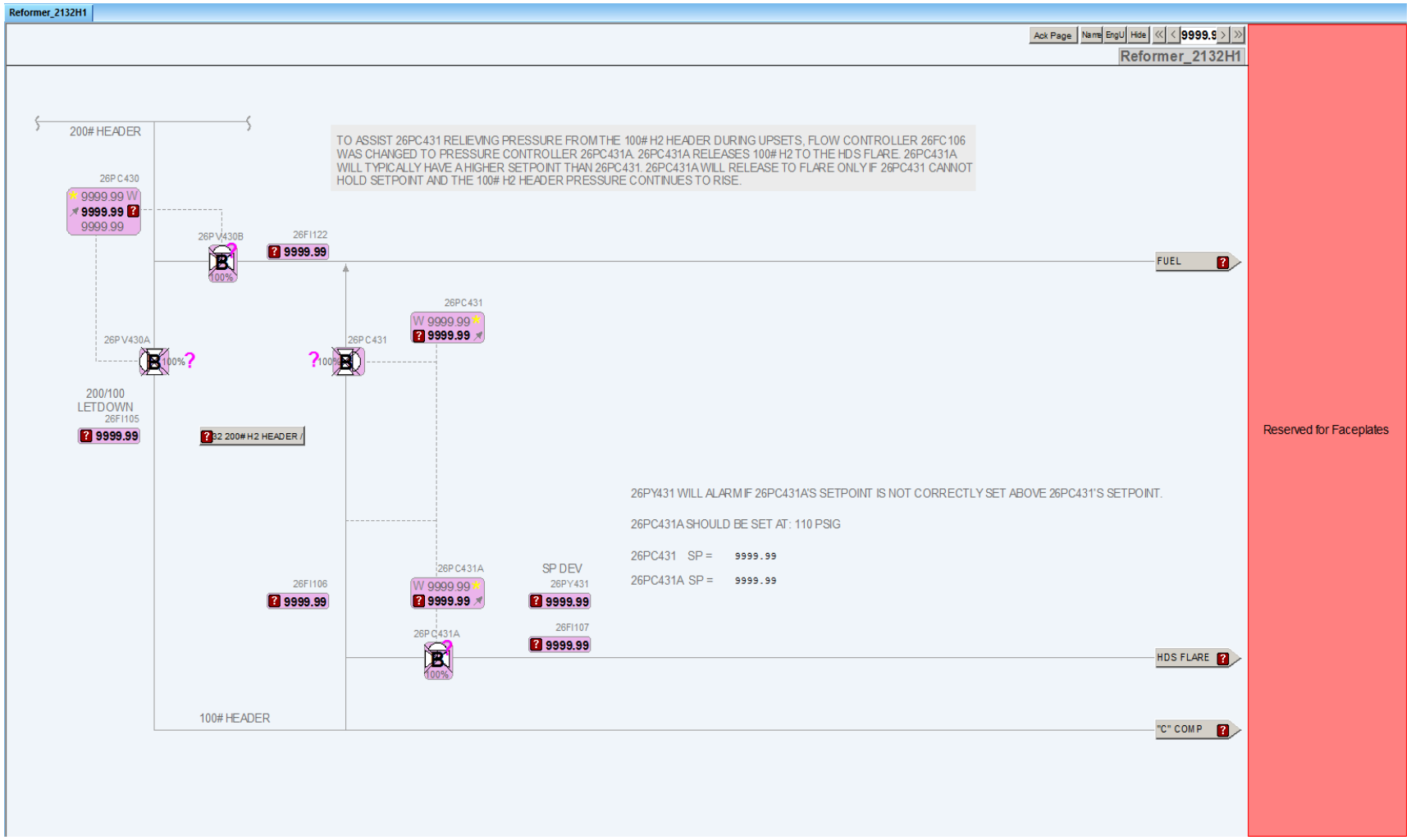

Reformer_2132
2132 200# H2 Header / KO Drum
ACK
SIL
Prism Product
23FI200
650# Header
21PC454
21FI161
Text%
1 Desulf Amine Contactor
21PC405
21FI123
1 Reformer Flash Drum
21PC415
21FI135
Mid Barrel Flash Drum
19PC415
19FI150
Lt Hydro HP Contactor
25PC420
25FI131
2 Reformer Flash Drum
22PC428
22FI131
3 Reformer Release
29PC406
29FI111
HCU
3FK176
26PC432
19FI151
MBU Feed
19FI196
23FI175
'A' Comp
200# Header
23FI185
'B' Comp
TGU
80FK120
'C' Comp
23PC588
#2 H2 Plant
200# H2 KO Pot
RPV 2537
81FI182
Bensat Purge Gas
26PC430
26FI122
Fuel
Pump Out
200/100 Letdown
26FI105
26PC431
FFHDS Stripper
23FI166
23PC451
Help
SP Dev
26PY431
26FI106
2 Ref Flash Drum Release
26PC431A
26FI107
HDS Flare
HCU Absrb Release
3FI117
Jet Feed Gas
100# Header
'C' Comp
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2132
Ack Page
Name
EngU
Hide
Reformer_2132
PRISM
PRODUCT
650#
HEADER
1 DESULF AMNE
CONTACTOR
1 REFORMER FLASH
DRUM
MID BARREL FLASH
DRUM
LT HYDRO HP
CONTACTOR
2 REFORMER FLASH DRUM
3 REFORMER RELEASE
FFHDS
STRIPPER
HCU
23FI200
21PC454
21FI161
21PC405
21PY405A
21FI123
21PV415A
21PC415
21FI135
19PC415
19FI150
25PC420
25PV420A
25FI131
22PC428
22FI131
29PC406
29FI111
3FK176
200# H2
KO POT
RPV 2537
TGU
PUMP OUT
26LA315
State
26PC432
26PV430A
26PC430
26PV430B
26FI122
200/100
LETDOWN
26FI105
23PC451
23FI166
2 REF FLASH DRUM
RELEASE
HCU ABSRB
RELEASE
3FI117
JET FEED GAS
200# HEADER
100# HEADER
19FI196
80FK120
23PC588
81FI182
BENSAT
19FI151
MBU FEED
23FI175
"A" COMP
23FI185
"B" COMP
"C" COMP
#2 H2 PLANT
PURGE GAS
FUEL
26PC431
26PC431A
SP DEV
26PY431
26FI106
26FI107
HDS FLARE
"C" COMP
Reserved for Faceplates

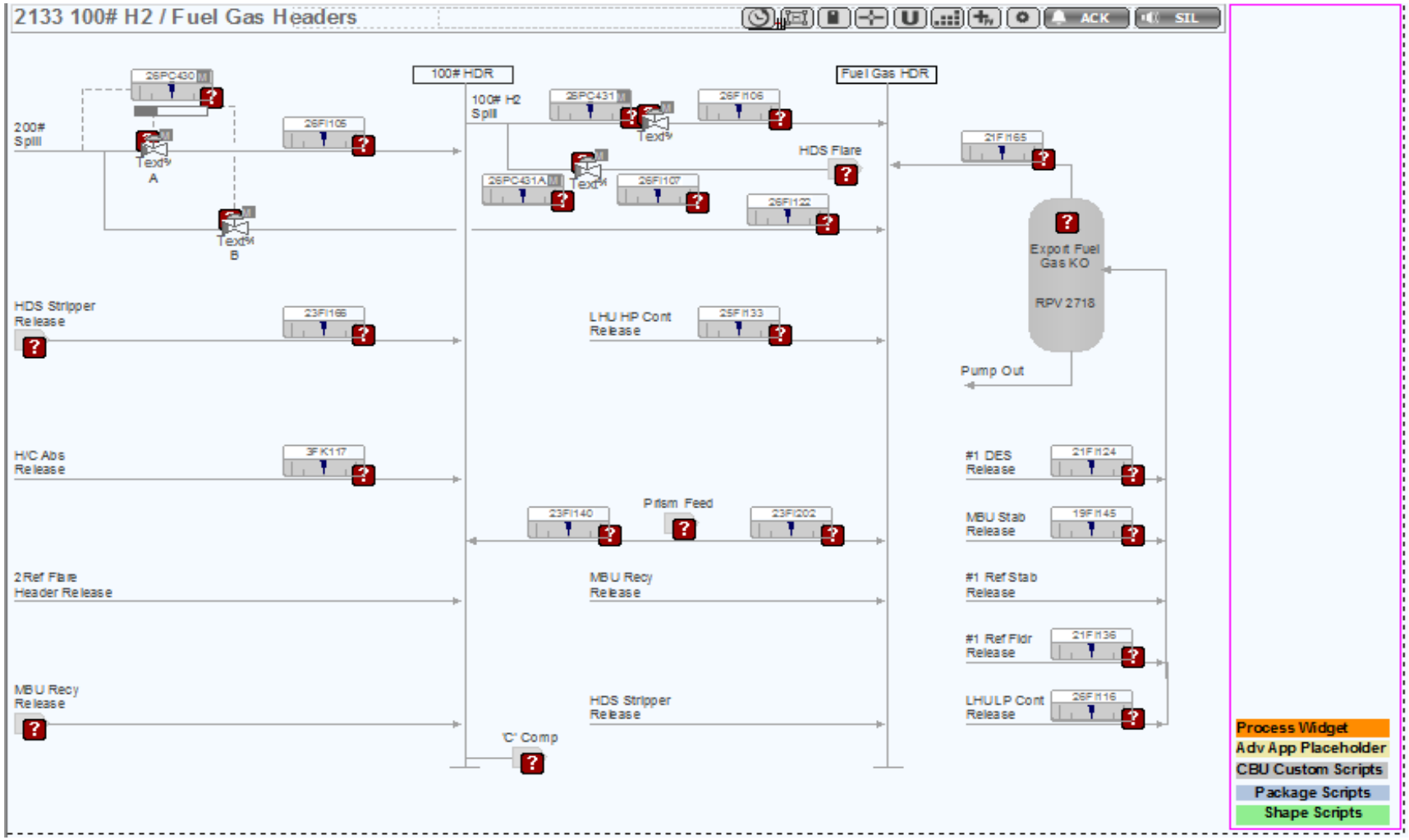
1.110 2132H1 100# H2 HEADER PRESSURE CONTROL HELP (Reformer_2132H1.htm)

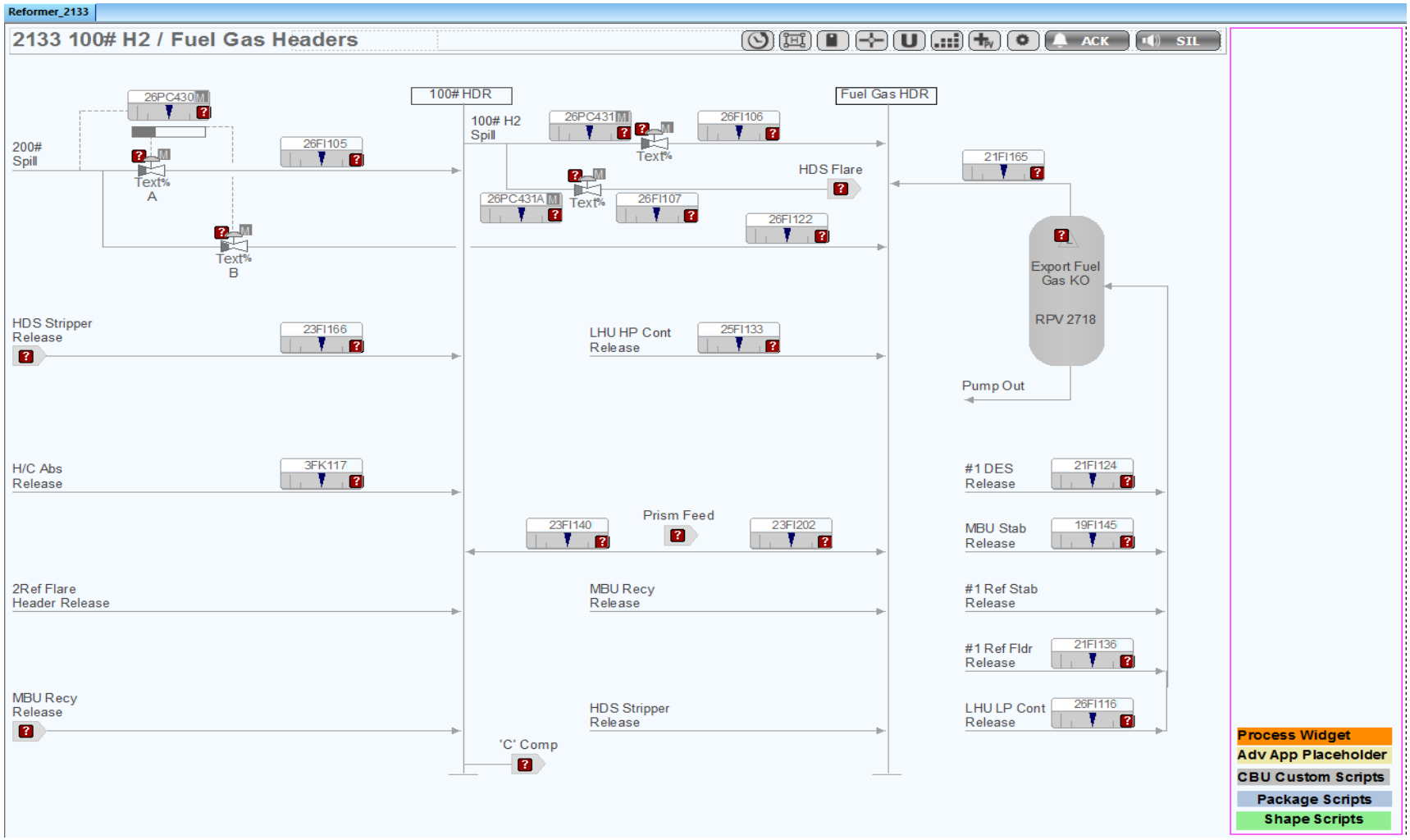


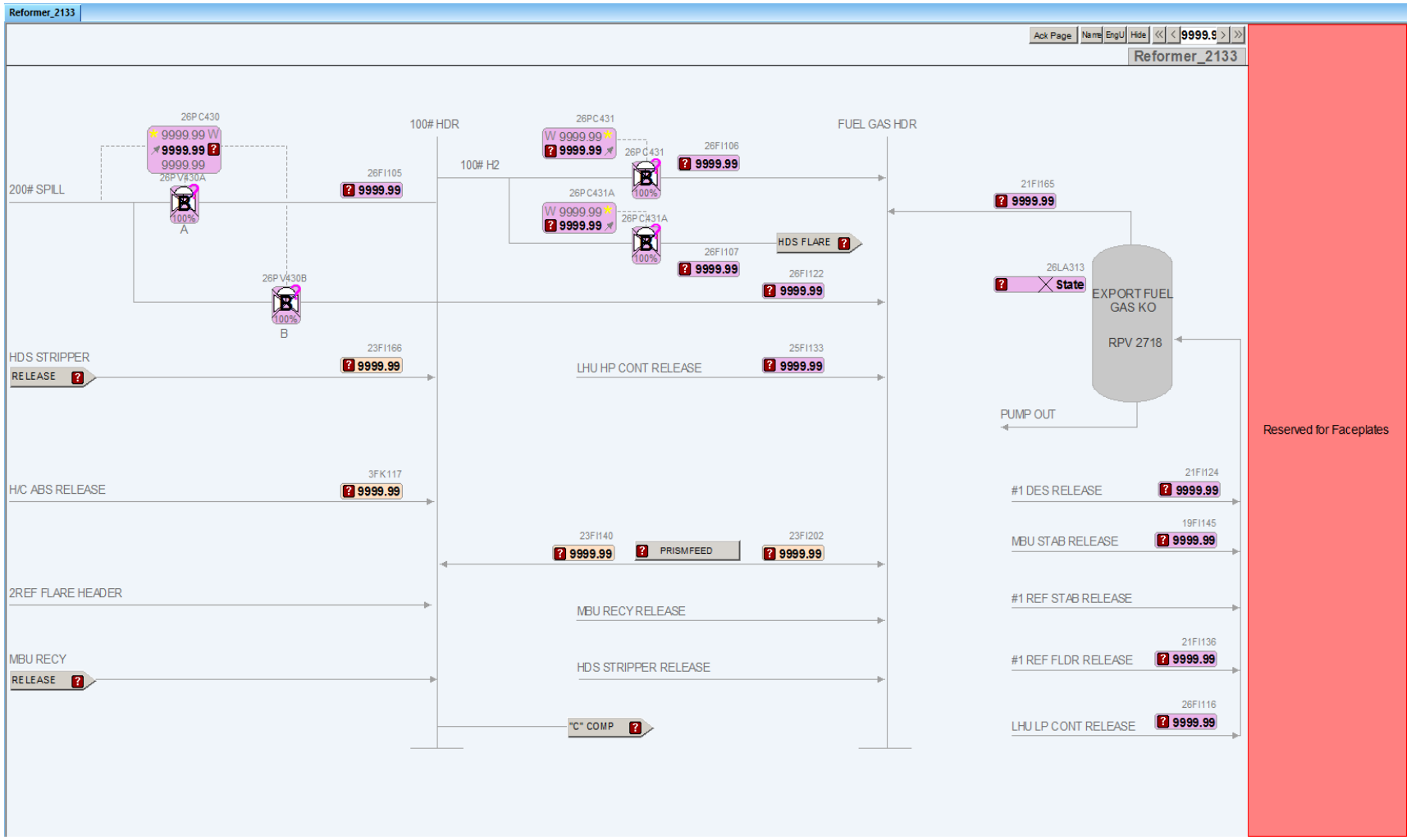

Reformer_2132H1
2132H1 100# H2 Header Pressure Control Help
ACK
SIL
200# Header
To assist 26PC431 relieving pressure from the 100# H2 header during upsets, flow controller 26FC106 was changed to pressure controller 26PC431A. 26PC431A releases 100# H2 to the HDS flare. 26PC431A will typically have a higher setpoint than 26PC431. 26PC431A will release to flare only if 26PC431 cannot hold setpoint and the 100# H2 header pressure continues to rise.
26PC430
26FI122
Fuel
Text%
26PC431
Text%
Text%
200/100
Letdown
26FI105
Process
26PY431 will alarm if 26PC431A's setpoint is not correctly set above 26PC431's setpoint.
26PC431A should be set at: 110 PSIG
SP Dev
26PY431
26PC431 SP = 9999.99
26PC431A SP = 9999.99
26FI106
26PC431A
26FI107
HDS Flare
Text%
100# Header
'C' Comp
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2132H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2132H1
200# HEADER
TO ASSIST 26PC431 RELIEVING PRESSURE FROM THE 100# H2 HEADER DURING UPSETS, FLOW CONTROLLER 26FC106 WAS CHANGED TO PRESSURE CONTROLLER 26PC431A. 26PC431A RELEASES 100# H2 TO THE HDS FLARE. 26PC431A WILL TYPICALLY HAVE A HIGHER SETPOINT THAN 26PC431. 26PC431A WILL RELEASE TO FLARE ONLY IF 26PC431 CANNOT HOLD SETPOINT AND THE 100# H2 HEADER PRESSURE CONTINUES TO RISE.
26PC430
9999.99 W
9999.99
9999.99
26PV430B
100%
26FI122
9999.99
FUEL
26PC431
W 9999.99
9999.99
26PV430A
100%
26PC431
100%
200/100
LETDOWN
26FI105
9999.99
32 200# H2 HEADER
26PY431 WILL ALARM IF 26PC431A'S SETPOINT IS NOT CORRECTLY SET ABOVE 26PC431'S SETPOINT.
26PC431A SHOULD BE SET AT: 110 PSIG
26PC431 SP = 9999.99
26PC431A SP = 9999.99
26PC431A
W 9999.99
9999.99
SP DEV
26PY431
9999.99
26FI106
9999.99
26PC431A
100%
26FI107
9999.99
HDS FLARE
100# HEADER
"C" COMP
Reserved for Faceplates

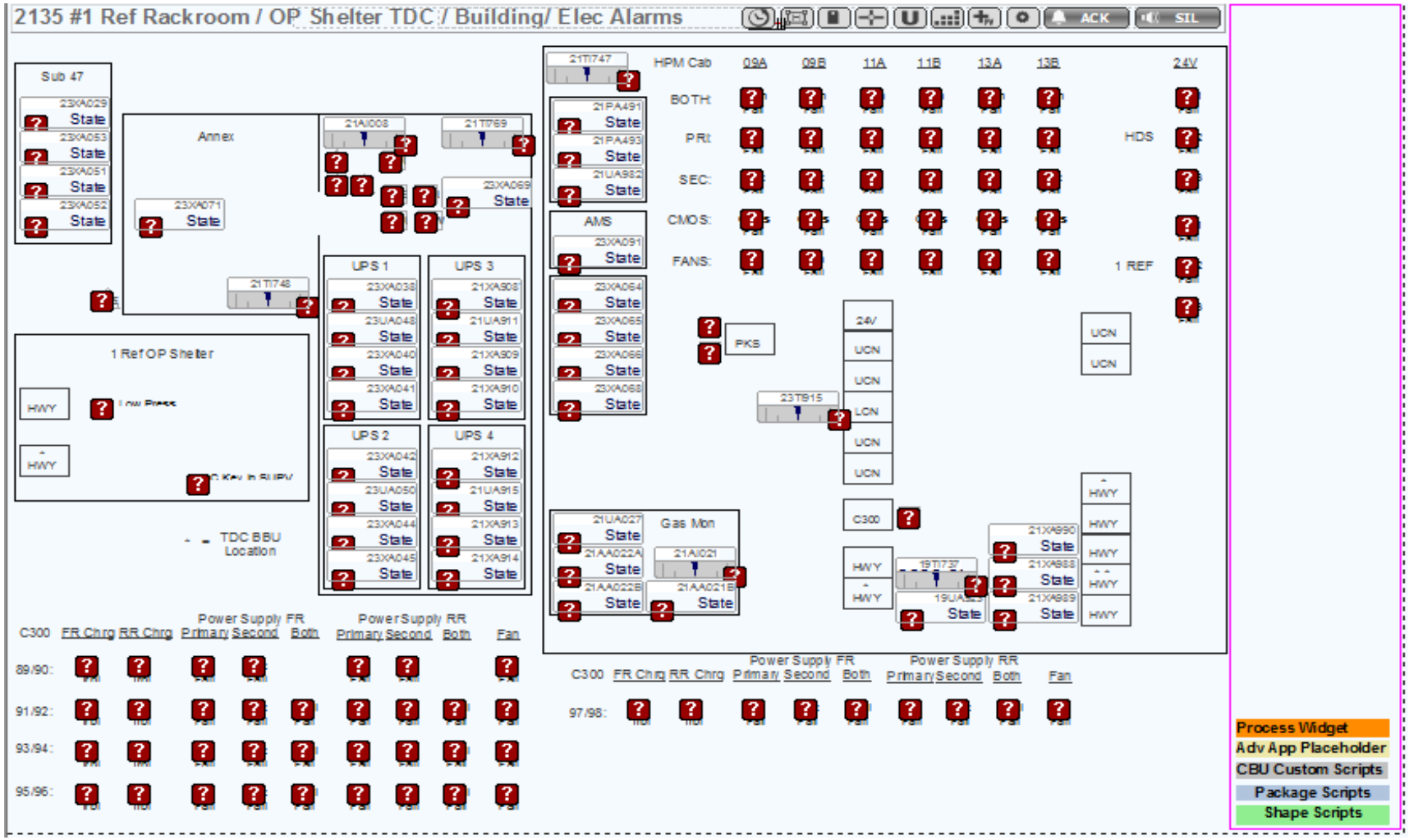
1.111 2133 100# H2 / FUEL GAS HEADERS (Reformer_2133.htm)

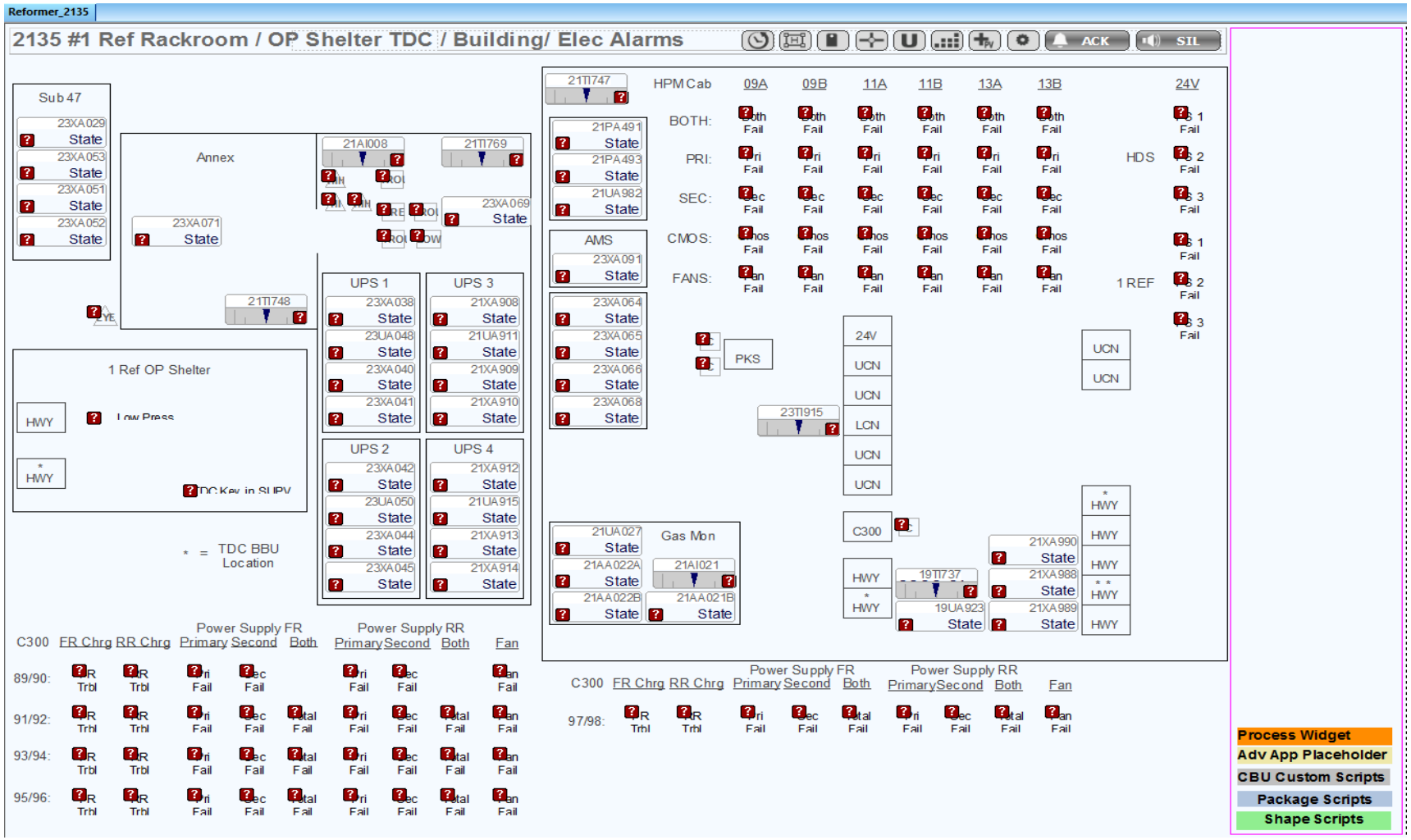


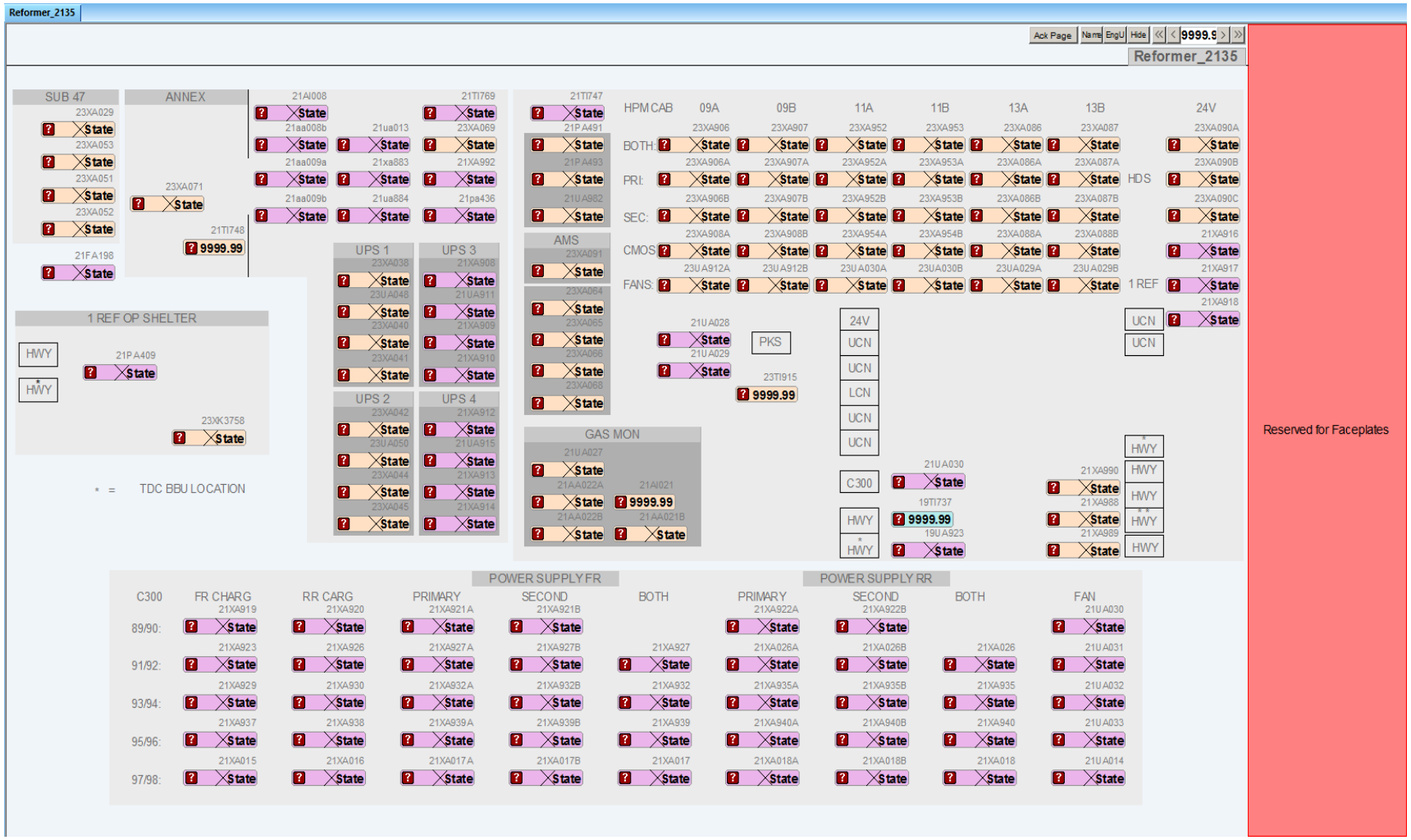

Reformer_2133
2133 100# H2 / Fuel Gas Headers
ACK
SIL
100# HDR
Fuel Gas HDR
26PC430
200# Spill
26FI105
Text%
A
Text%
B
100# H2 Spill
26PC431
Text%
26FI106
HDS Flare
26PC431A
Text%
26FI107
26FI122
21FI165
Export Fuel Gas KO
RPV 2718
Pump Out
HDS Stripper Release
23FI166
LHU HP Cont Release
25FI133
H/C Abs Release
3FK117
#1 DES Release
21FI124
Prism Feed
23FI140
23FI202
MBU Stab Release
19FI145
2Ref Flare Header Release
MBU Recy Release
#1 Ref Stab Release
#1 Ref Fldr Release
21FI136
MBU Recy Release
HDS Stripper Release
LHU LP Cont Release
26FI116
'C' Comp
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2133
Ack Page
Name
EngU
Hide
9999.9
Reformer_2133
26PC430
9999.99 W
9999.99
9999.99
26PV430A
100%
A
26FI105
9999.99
200# SPILL
100# HDR
100# H2
26PC431
W 9999.99
9999.99
26PC431
100%
26FI106
9999.99
26PC431A
W 9999.99
9999.99
26PC431A
100%
HDS FLARE
26FI107
9999.99
26FI122
9999.99
26PV430B
100%
B
FUEL GAS HDR
21FI165
9999.99
26LA313
State
EXPORT FUEL GAS KO
RPV 2718
PUMP OUT
HDS STRIPPER
RELEASE
23FI166
9999.99
LHU HP CONT RELEASE
25FI133
9999.99
H/C ABS RELEASE
3FK117
9999.99
23FI140
9999.99
PRISMFEED
23FI202
9999.99
2REF FLARE HEADER
MBU RECY RELEASE
MBU RECY
RELEASE
HDS STRIPPER RELEASE
"C" COMP
#1 DES RELEASE
21FI124
9999.99
MBU STAB RELEASE
19FI145
9999.99
#1 REF STAB RELEASE
#1 REF FLDR RELEASE
21FI136
9999.99
LHU LP CONT RELEASE
26FI116
9999.99
Reserved for Faceplates

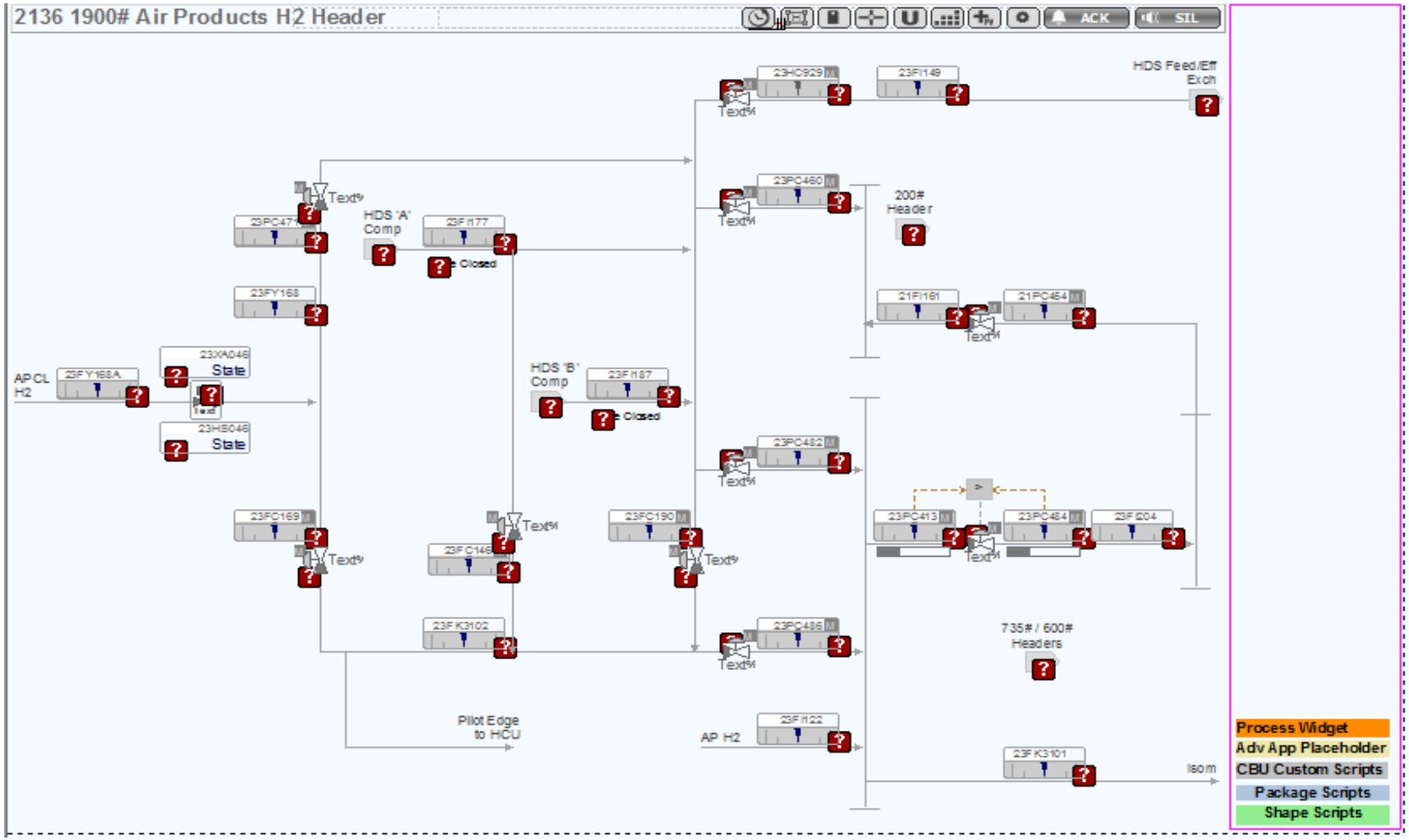
1.112 2135 #1 REF RACKROOM / OP SHELTER TDC / BUILDING/ ELEC ALARMS (Reformer_2135.htm)

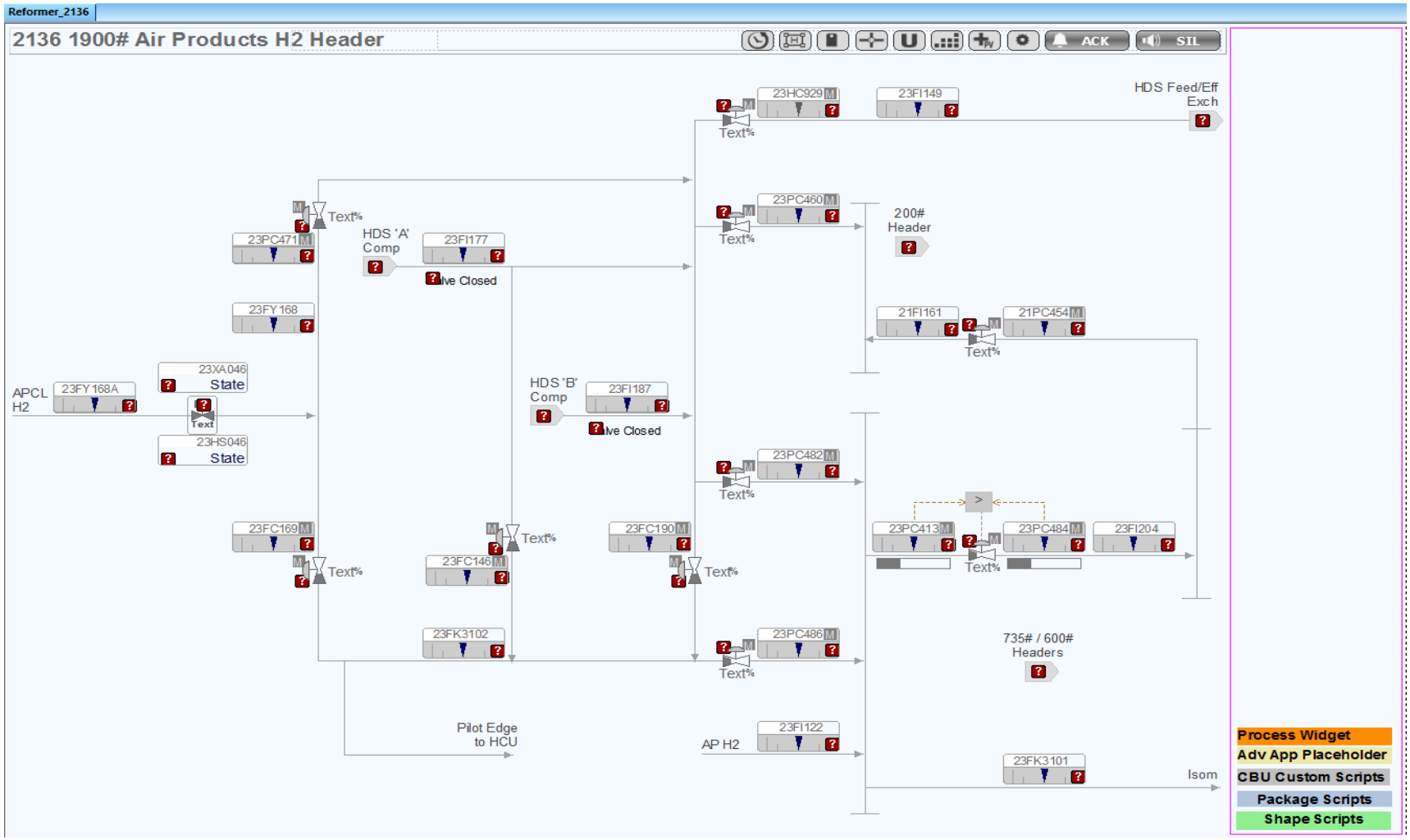


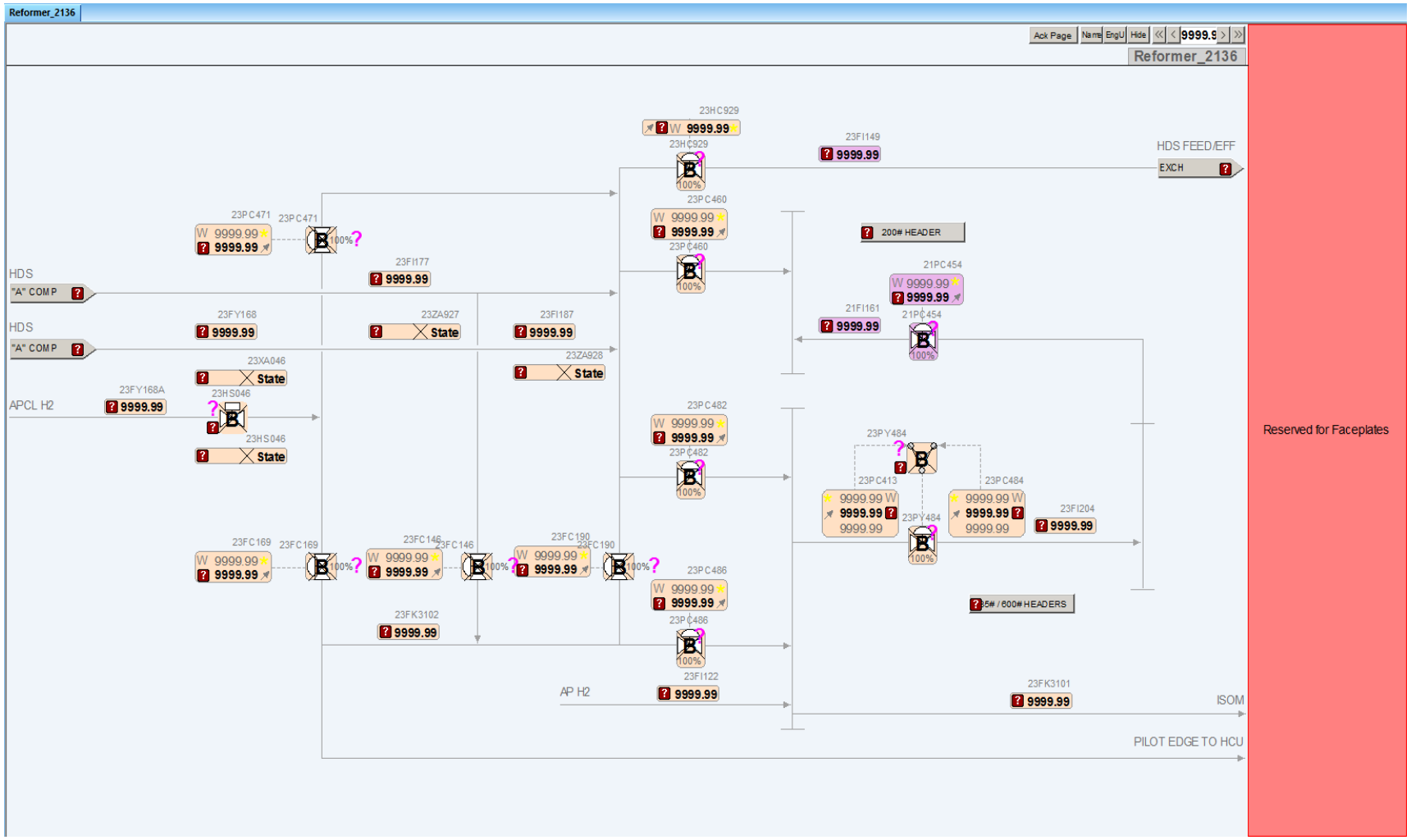

Reformer_2135
2135 #1 Ref Rackroom / OP Shelter TDC / Building/ Elec Alarms
ACK
SIL
Sub 47
23XA029 State
23XA053 State
23XA051 State
23XA052 State
Annex
23XA071 State
21AI008
21TI769
23XA069 State
21TI748
1 Ref OP Shelter
HWY
Low Press
HWY
TDC Key in SUPV
* = TDC BBU Location
UPS 1
23XA038 State
23UA048 State
23XA040 State
23XA041 State
UPS 3
21XA908 State
21UA911 State
21XA909 State
21XA910 State
UPS 2
23XA042 State
23UA050 State
23XA044 State
23XA045 State
UPS 4
21XA912 State
21UA915 State
21XA913 State
21XA914 State
21TI747
21PA491 State
21PA493 State
21UA982 State
AMS
23XA091 State
23XA064 State
23XA065 State
23XA066 State
23XA068 State
HPM Cab
09A
09B
11A
11B
13A
13B
24V
BOTH:
PRI:
SEC:
CMOS:
FANS:
HDS
1 REF
PKS
23TI915
24V
UCN
UCN
UCN
LCN
UCN
UCN
C300
HWY
HWY
21UA027 State
21AA022A State
21AA022B State
Gas Mon
21AI021
21AA021B State
19TI737
19UA923 State
21XA990 State
21XA988 State
21XA989 State
C300 FR Chrg RR Chrg Power Supply FR Primary Second Both Power Supply RR Primary Second Both Fan
89/90:
91/92:
93/94:
95/96:
97/98:
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2135
Ack Page
Name
EngU
Hide
Reformer_2135
SUB 47
ANNEX
1 REF OP SHELTER
HWY
HWY
TDC BBU LOCATION
UPS 1
UPS 2
UPS 3
UPS 4
AMS
GAS MON
HPM CAB
09A
09B
11A
11B
13A
13B
24V
BOTH:
PRI:
SEC:
CMOS:
FANS:
HDS
1 REF
PKS
24V
UCN
LCN
C300
POWER SUPPLY FR
POWER SUPPLY RR
C300
FR CHARG
RR CARG
PRIMARY
SECOND
BOTH
FAN
89/90:
91/92:
93/94:
95/96:
97/98:
Reserved for Faceplates

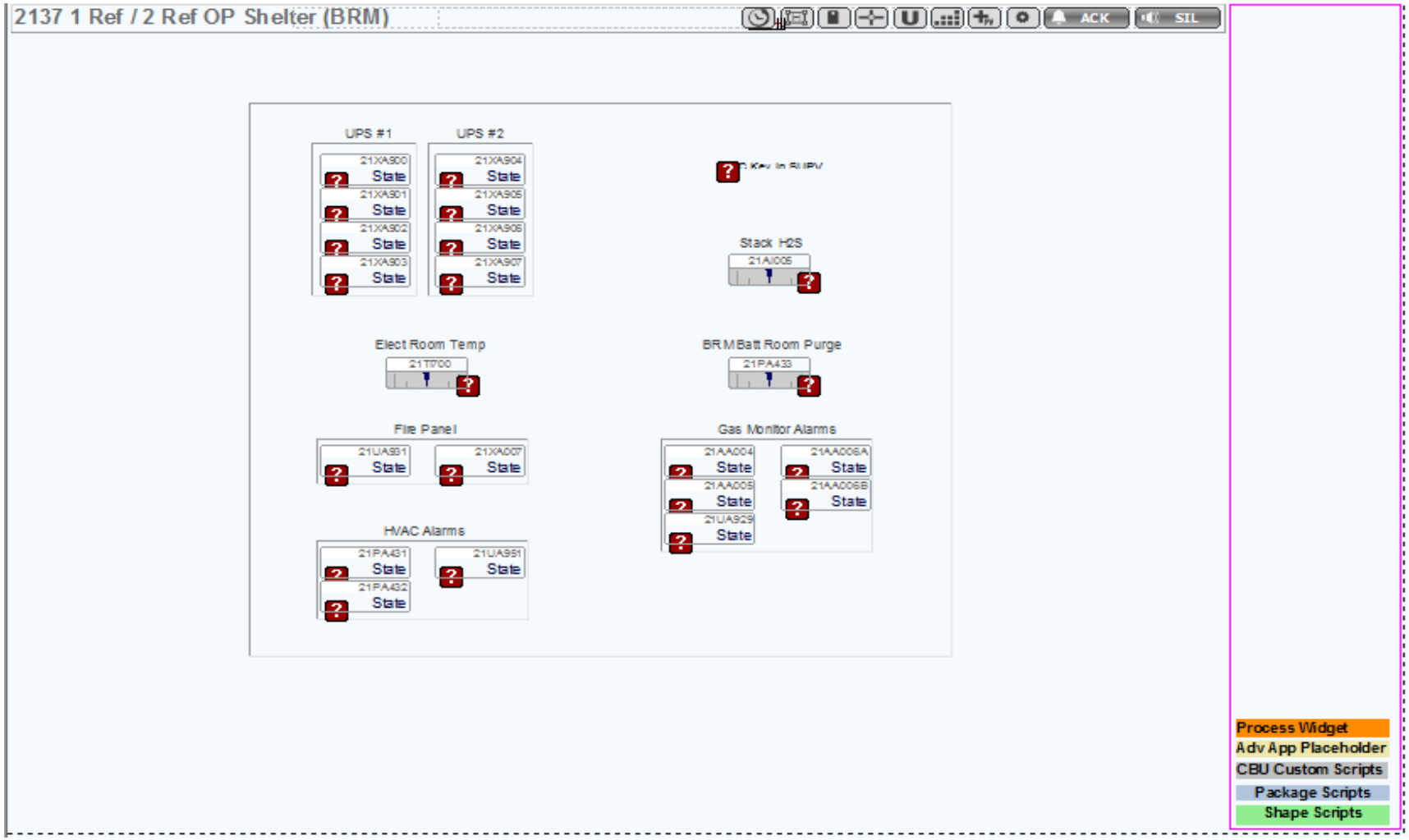
1.113 2136 1900# AIR PRODUCTS H2 HEADER (Reformer_2136.htm)

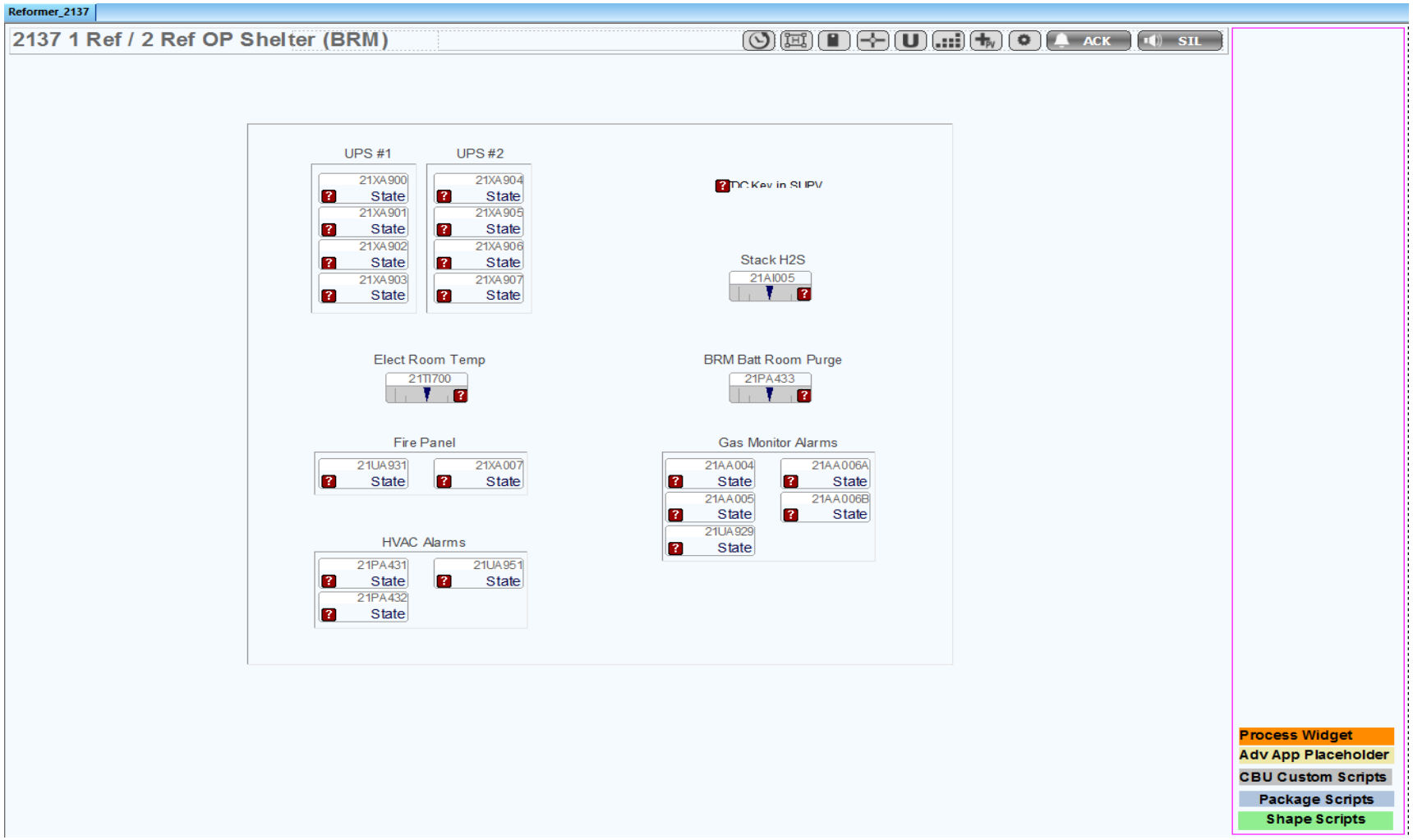


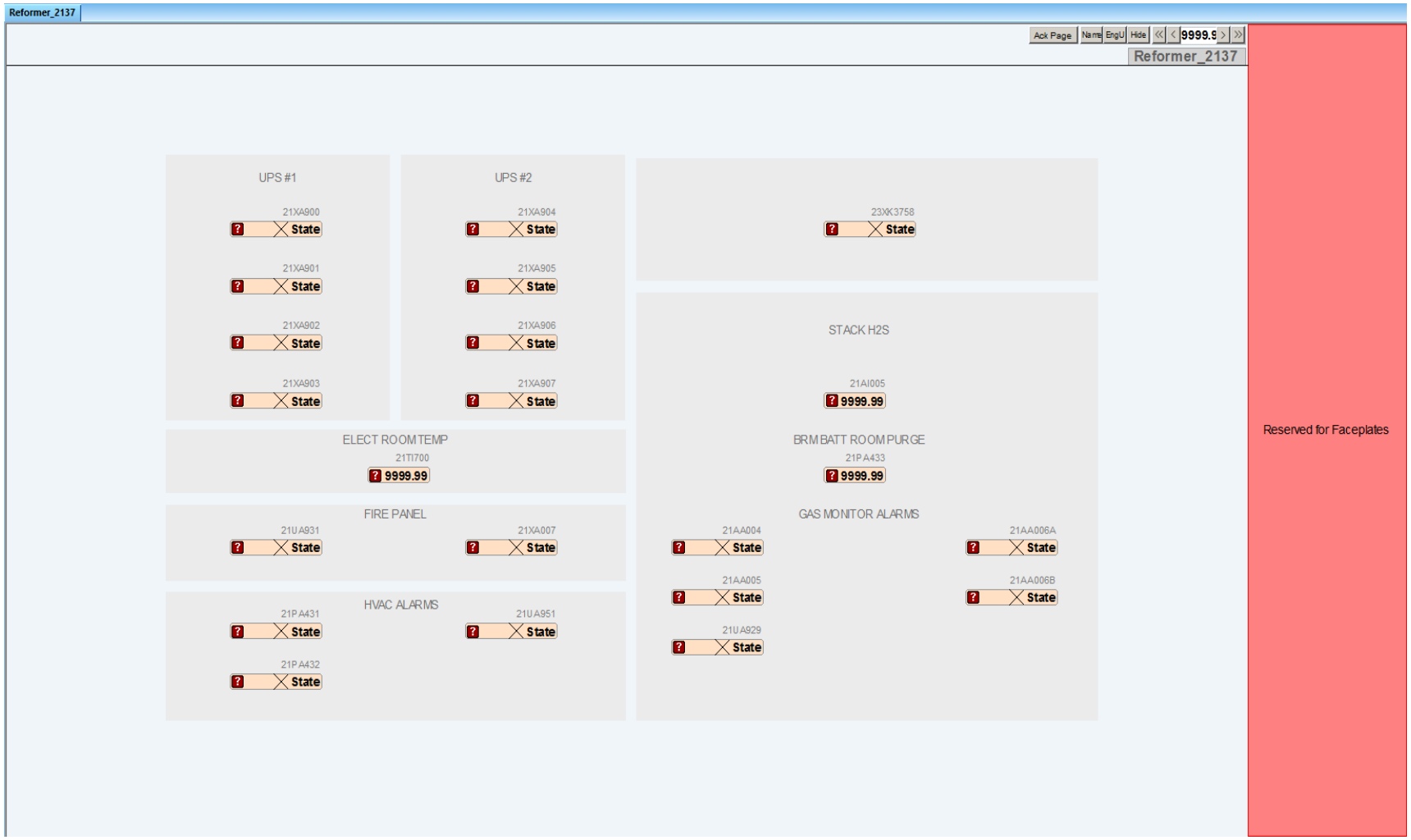

Reformer_2136
2136 1900# Air Products H2 Header
ACK
SIL
23HC929
23FI149
HDS Feed/Eff Exch
Text%
23PC460
200# Header
23PC471
HDS 'A' Comp
23FI177
Ive Closed
23FY 168
21FI161
21PC454
APCL H2
23FY 168A
23XA046
State
Text
23HS046
State
HDS 'B' Comp
23FI187
Ive Closed
23PC482
23FC169
23FC146
23FC190
23PC413
23PC484
23FI204
23FK3102
23PC486
735# / 600# Headers
Pilot Edge to HCU
AP H2
23FI122
23FK3101
Isom
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2136
Ack Page
Name
EngU
Hide
Reformer_2136
23HC929
W 9999.99
9999.99
23FI149
HDS FEED/EFF
EXCH
23PC471
23PC460
200# HEADER
23FI177
HDS
"A" COMP
21PC454
21FI161
23FY168
23ZA927
State
23FI187
HDS
"A" COMP
23XA046
23ZA928
23FY168A
APCL H2
23HS046
23PC482
23PY484
23PC413
23PC484
23FI204
23FC169
23FC146
23FC190
23PC486
25# / 600# HEADERS
23FK3102
23FI122
AP H2
23FK3101
ISOM
PILOT EDGE TO HCU
Reserved for Faceplates

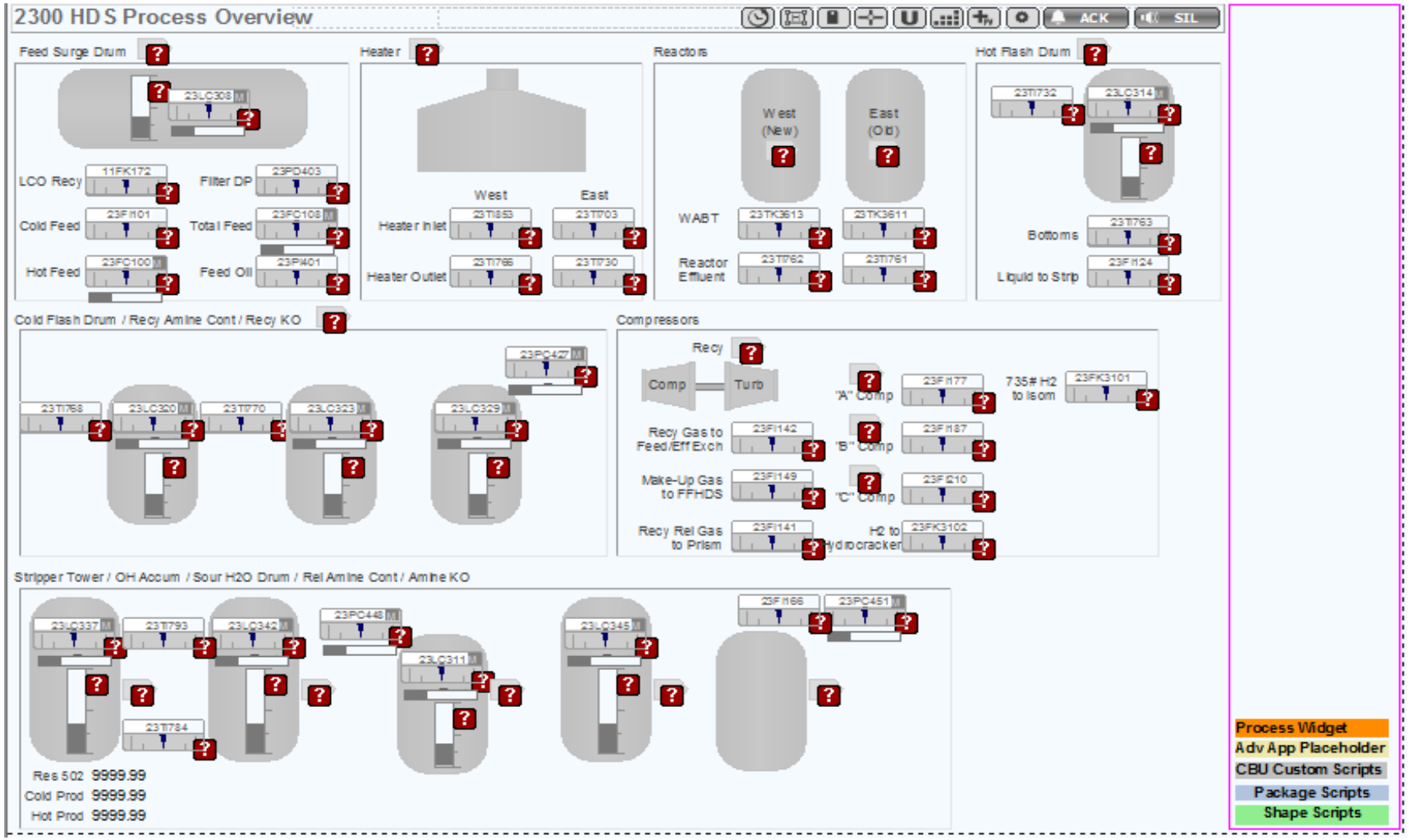
1.114 2137 1 REF / 2 REF OP SHELTER (BRM) (Reformer_2137.htm)

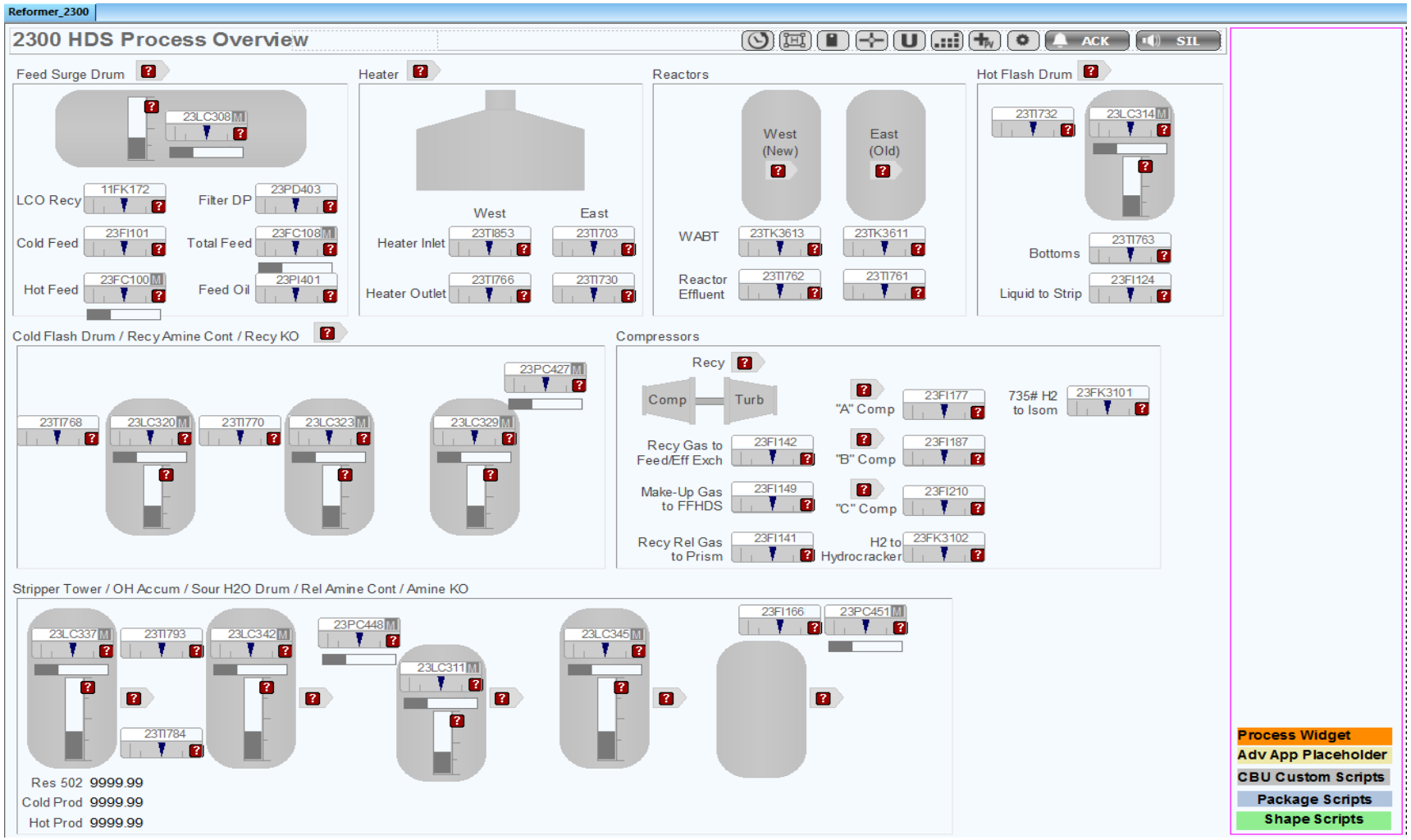


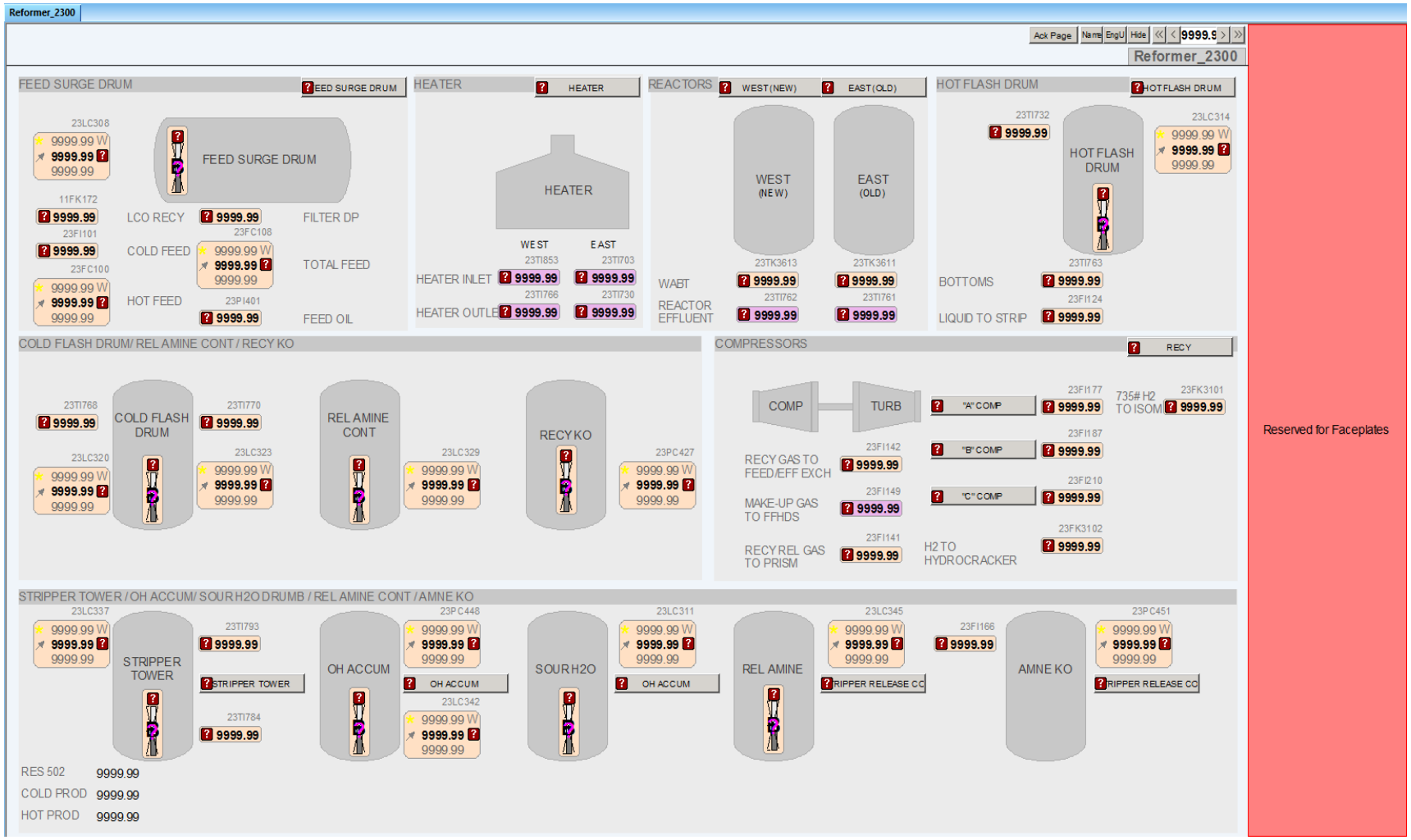

Reformer_2137
2137 1 Ref / 2 Ref OP Shelter (BRM)
ACK
SIL
UPS #1
21XA900 State
21XA901 State
21XA902 State
21XA903 State
UPS #2
21XA904 State
21XA905 State
21XA906 State
21XA907 State
DC Key in SLIPV
Stack H2S
21AI005
Elect Room Temp
21TI700
BRM Batt Room Purge
21PA433
Fire Panel
21UA931 State
21XA007 State
Gas Monitor Alarms
21AA004 State
21AA006A State
21AA005 State
21AA006B State
21UA929 State
HVAC Alarms
21PA431 State
21UA951 State
21PA432 State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2137
Ack Page
Name
EngU
Hide
9999.9
Reformer_2137
UPS #1
21XA900
State
21XA901
State
21XA902
State
21XA903
State
UPS #2
21XA904
State
21XA905
State
21XA906
State
21XA907
State
ELECT ROOM TEMP
21TI700
9999.99
FIRE PANEL
21UA931
State
21XA007
State
HVAC ALARMS
21PA431
State
21UA951
State
21PA432
State
23XK3758
State
STACK H2S
21AI005
9999.99
BRM BATT ROOM PURGE
21PA433
9999.99
GAS MONITOR ALARMS
21AA004
State
21AA005
State
21UA929
State
21AA006A
State
21AA006B
State
Reserved for Faceplates

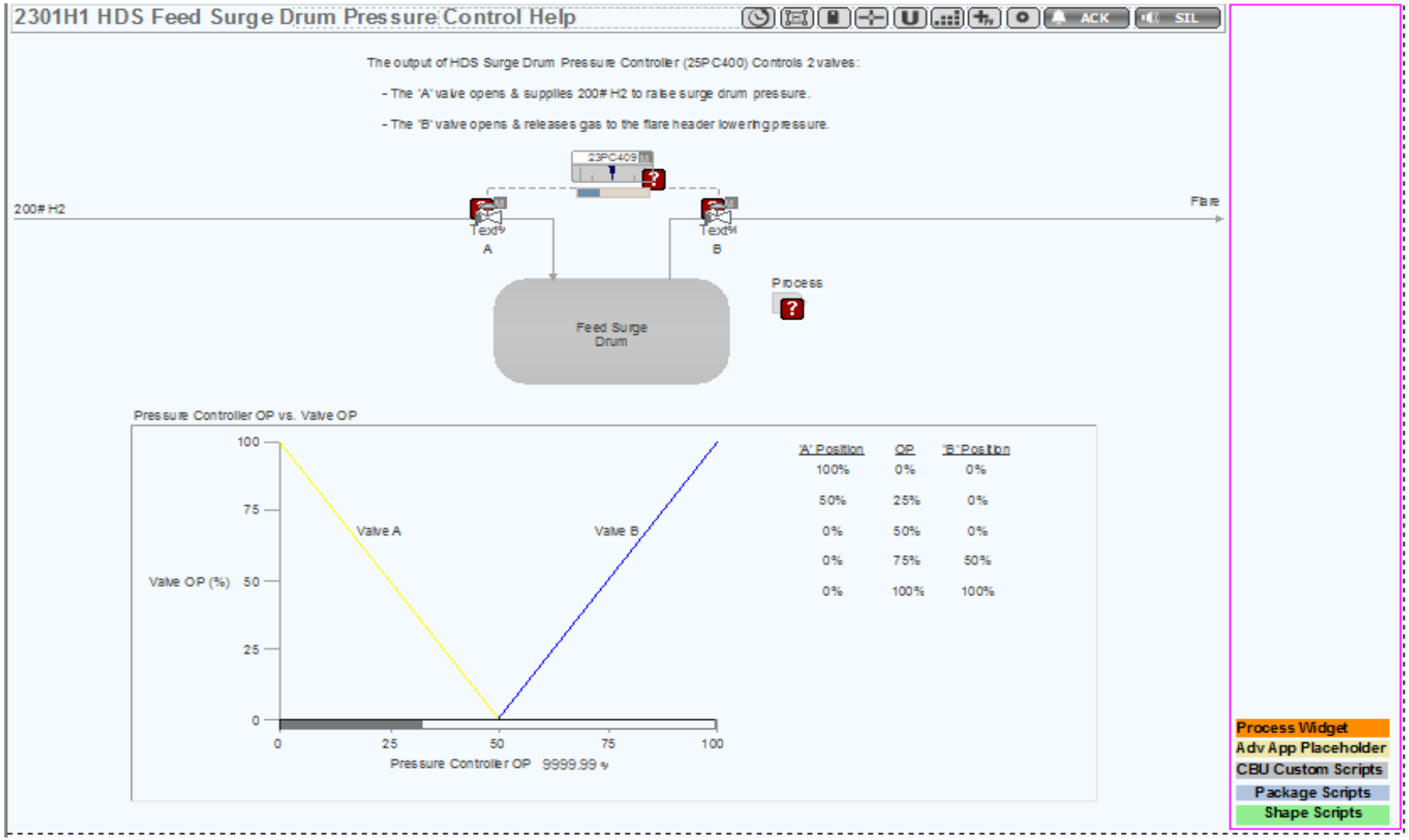
1.115 2300 HDS PROCESS OVERVIEW (Reformer_2300.htm)

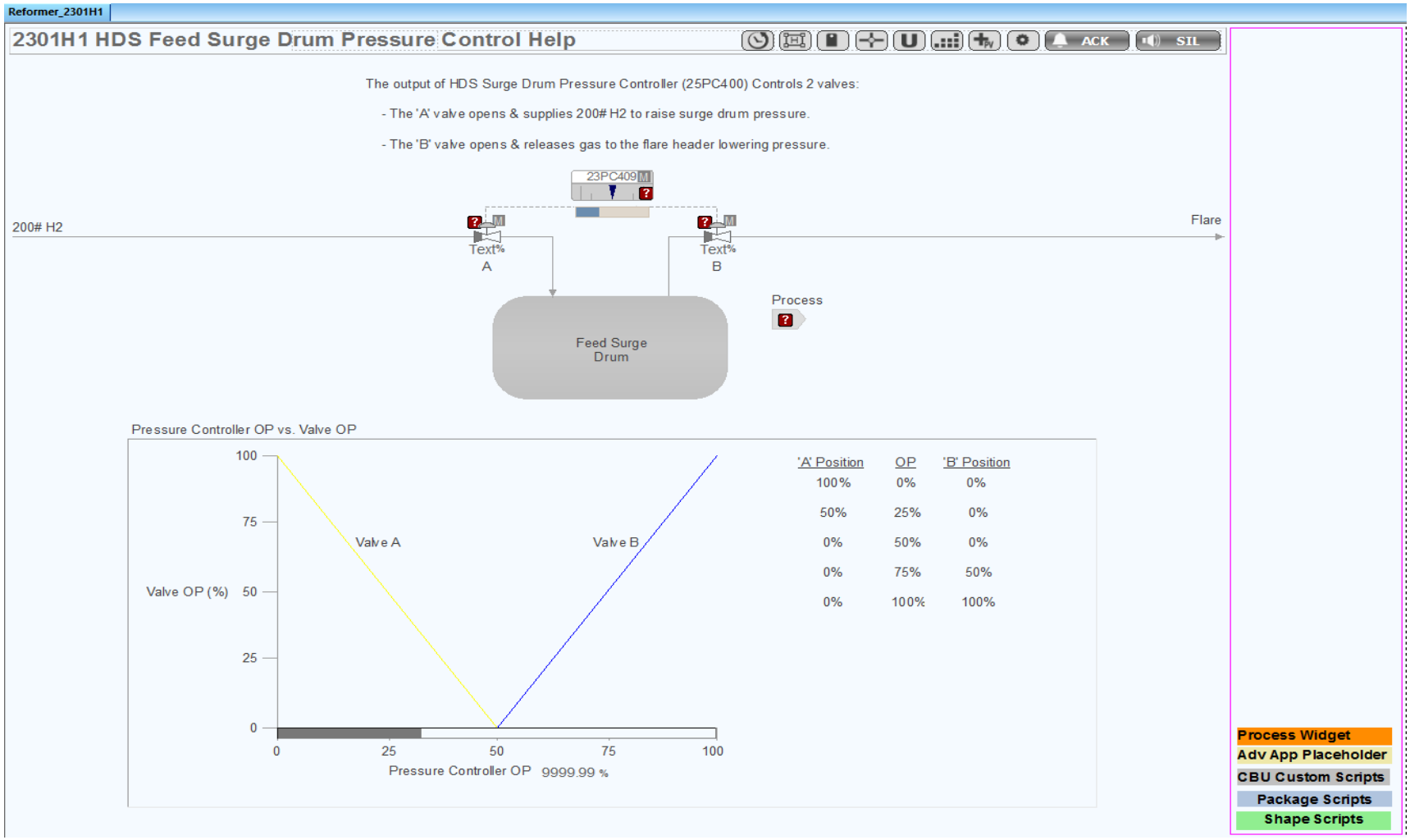


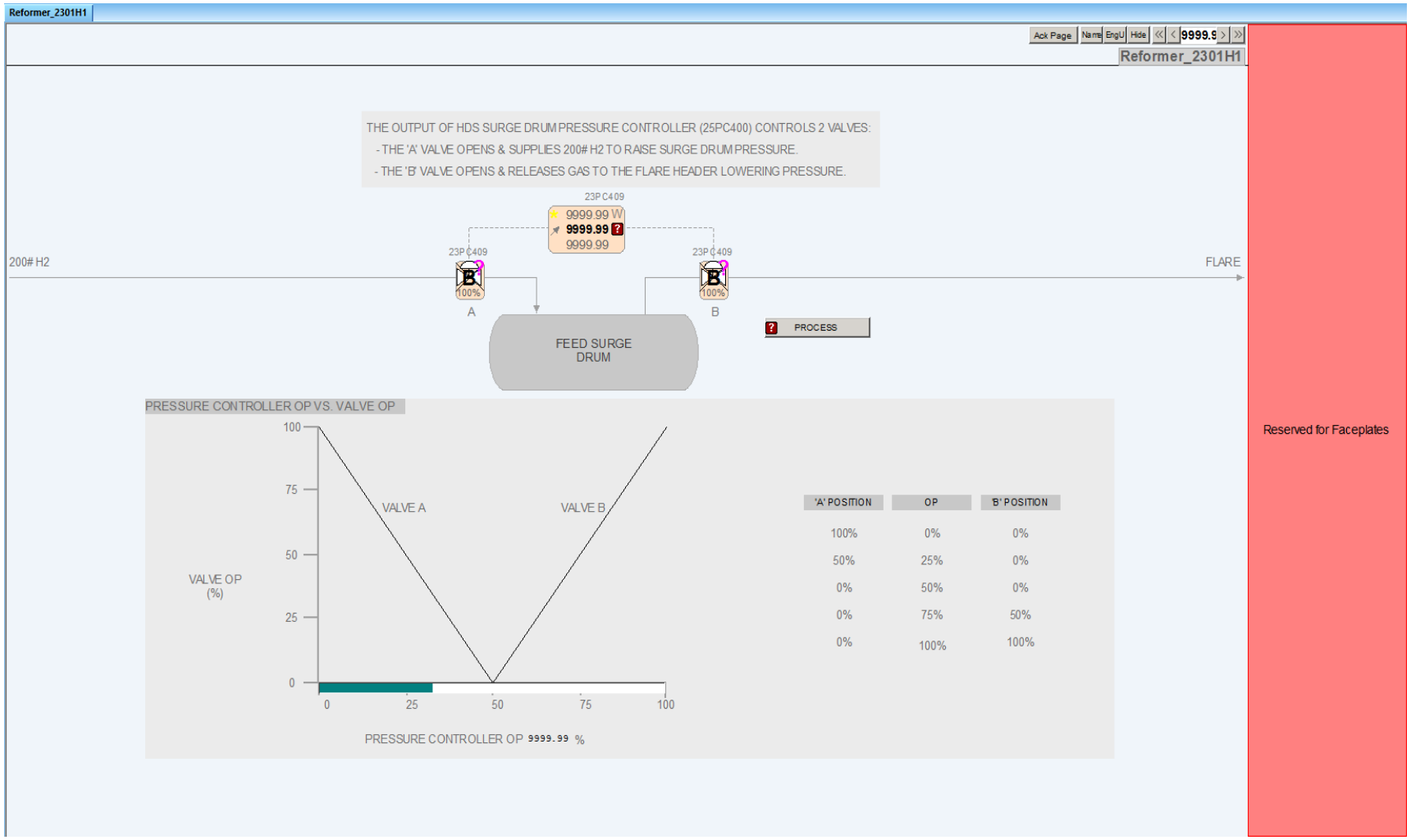

Reformer_2300
2300 HDS Process Overview
ACK
SIL
Feed Surge Drum
23LC308
LCO Recy
11FK172
Filter DP
23PD403
Cold Feed
23FI101
Total Feed
23FC108
Hot Feed
23FC100
Feed Oil
23PI401
Heater
West
East
Heater Inlet
23TI853
23TI703
Heater Outlet
23TI766
23TI730
Reactors
West (New)
East (Old)
WABT
23TK3613
23TK3611
Reactor Effluent
23TI762
23TI761
Hot Flash Drum
23TI732
23LC314
Bottoms
23TI763
Liquid to Strip
23FI124
Cold Flash Drum / Recy Amine Cont / Recy KO
23TI768
23LC320
23TI770
23LC323
23PC427
23LC329
Compressors
Recy
Comp
Turb
"A" Comp
23FI177
735# H2 to Isom
23FK3101
Recy Gas to Feed/Eff Exch
23FI142
"B" Comp
23FI187
Make-Up Gas to FFHDS
23FI149
"C" Comp
23FI210
Recy Rel Gas to Prism
23FI141
H2 to Hydrocracker
23FK3102
Stripper Tower / OH Accum / Sour H2O Drum / Rel Amine Cont / Amine KO
23LC337
23TI793
23TI784
23LC342
23PC448
23LC311
23LC345
23FI166
23PC451
Res 502 9999.99
Cold Prod 9999.99
Hot Prod 9999.99
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2300
Ack Page
Name
EngU
Hide
Reformer_2300
FEED SURGE DRUM
FEED SURGE DRUM
23LC308
9999.99 W
9999.99
9999.99
11FK172
9999.99
LCO RECY
9999.99
FILTER DP
23FI101
9999.99
COLD FEED
23FC108
9999.99 W
9999.99
9999.99
TOTAL FEED
23FC100
9999.99 W
9999.99
9999.99
HOT FEED
23PI401
9999.99
FEED OIL
HEATER
HEATER
HEATER
WEST
EAST
23TI853
23TI703
HEATER INLET
9999.99
9999.99
23TI766
23TI730
HEATER OUTLE
9999.99
9999.99
REACTORS
WEST (NEW)
EAST (OLD)
WEST
(NEW)
EAST
(OLD)
23TK3613
23TK3611
WABT
9999.99
9999.99
23TI762
23TI761
REACTOR
EFFLUENT
9999.99
9999.99
HOT FLASH DRUM
HOT FLASH DRUM
23TI732
9999.99
HOT FLASH
DRUM
23LC314
9999.99 W
9999.99
9999.99
23TI763
BOTTOMS
9999.99
23FI124
LIQUID TO STRIP
9999.99
COLD FLASH DRUM/ REL AMINE CONT / RECY KO
23TI768
9999.99
COLD FLASH
DRUM
23TI770
9999.99
23LC320
9999.99 W
9999.99
9999.99
23LC323
9999.99 W
9999.99
9999.99
REL AMINE
CONT
23LC329
9999.99 W
9999.99
9999.99
RECY KO
23PC427
9999.99 W
9999.99
9999.99
COMPRESSORS
RECY
COMP
TURB
"A" COMP
"B" COMP
"C" COMP
23FI177
9999.99
23FI187
9999.99
23FI210
9999.99
735# H2
TO ISOM
23FK3101
9999.99
RECY GAS TO
FEED/EFF EXCH
23FI142
9999.99
MAKE-UP GAS
TO FFHDS
23FI149
9999.99
RECY REL GAS
TO PRISM
23FI141
9999.99
H2 TO
HYDROCRACKER
23FK3102
9999.99
STRIPPER TOWER / OH ACCUM/ SOUR H2O DRUMB / REL AMINE CONT / AMNE KO
23LC337
9999.99 W
9999.99
9999.99
STRIPPER
TOWER
23TI793
9999.99
STRIPPER TOWER
23TI784
9999.99
OH ACCUM
23PC448
9999.99 W
9999.99
9999.99
OH ACCUM
23LC342
9999.99 W
9999.99
9999.99
SOUR H2O
23LC311
9999.99 W
9999.99
9999.99
OH ACCUM
REL AMINE
23LC345
9999.99 W
9999.99
9999.99
RIPPER RELEASE CC
23FI166
9999.99
AMNE KO
23PC451
9999.99 W
9999.99
9999.99
RIPPER RELEASE CC
RES 502
9999.99
COLD PROD
9999.99
HOT PROD
9999.99
Reserved for Faceplates

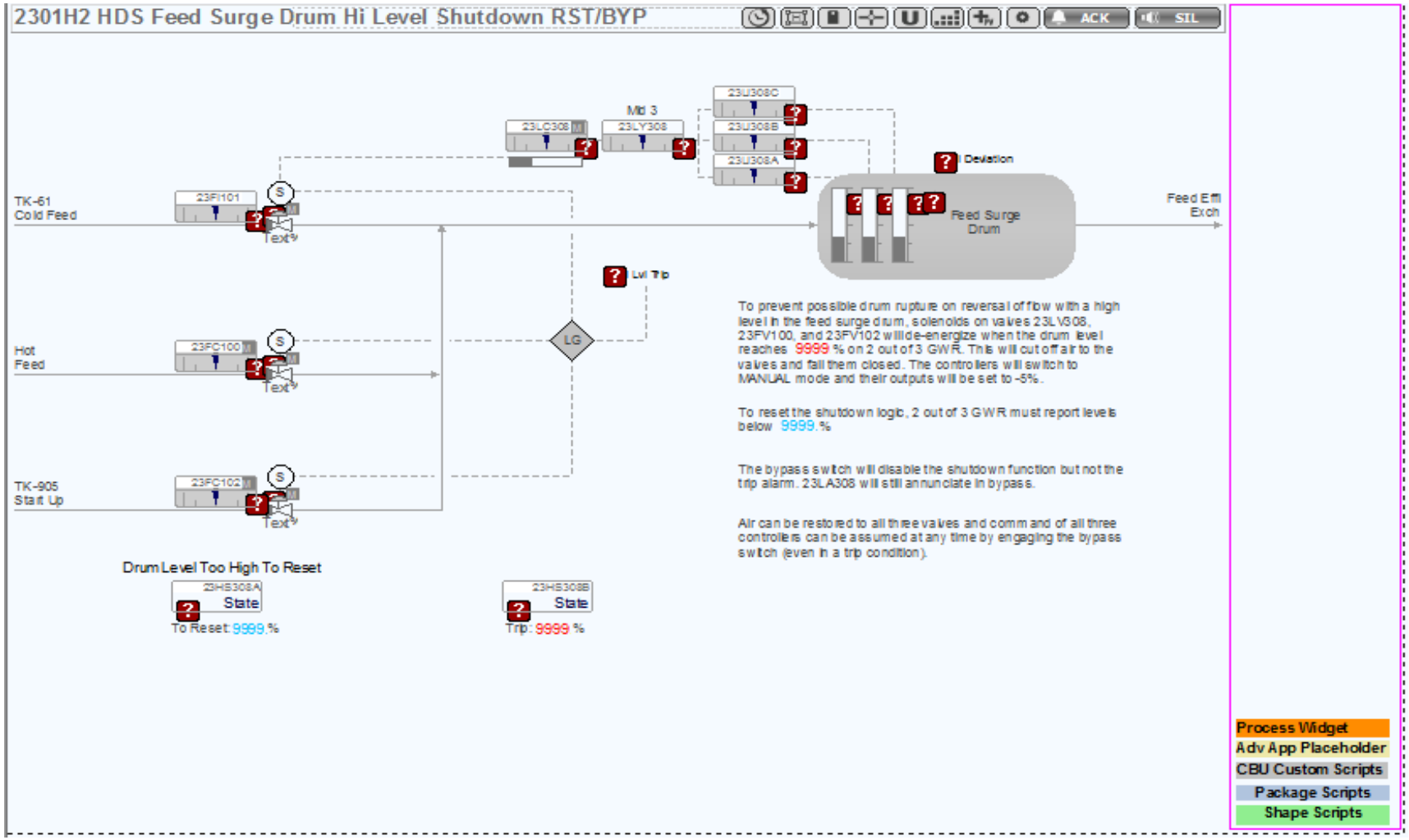
1.116 2301H1 HDS FEED SURGE DRUM PRESSURE CONTROL HELP (Reformer_2301H1.htm)

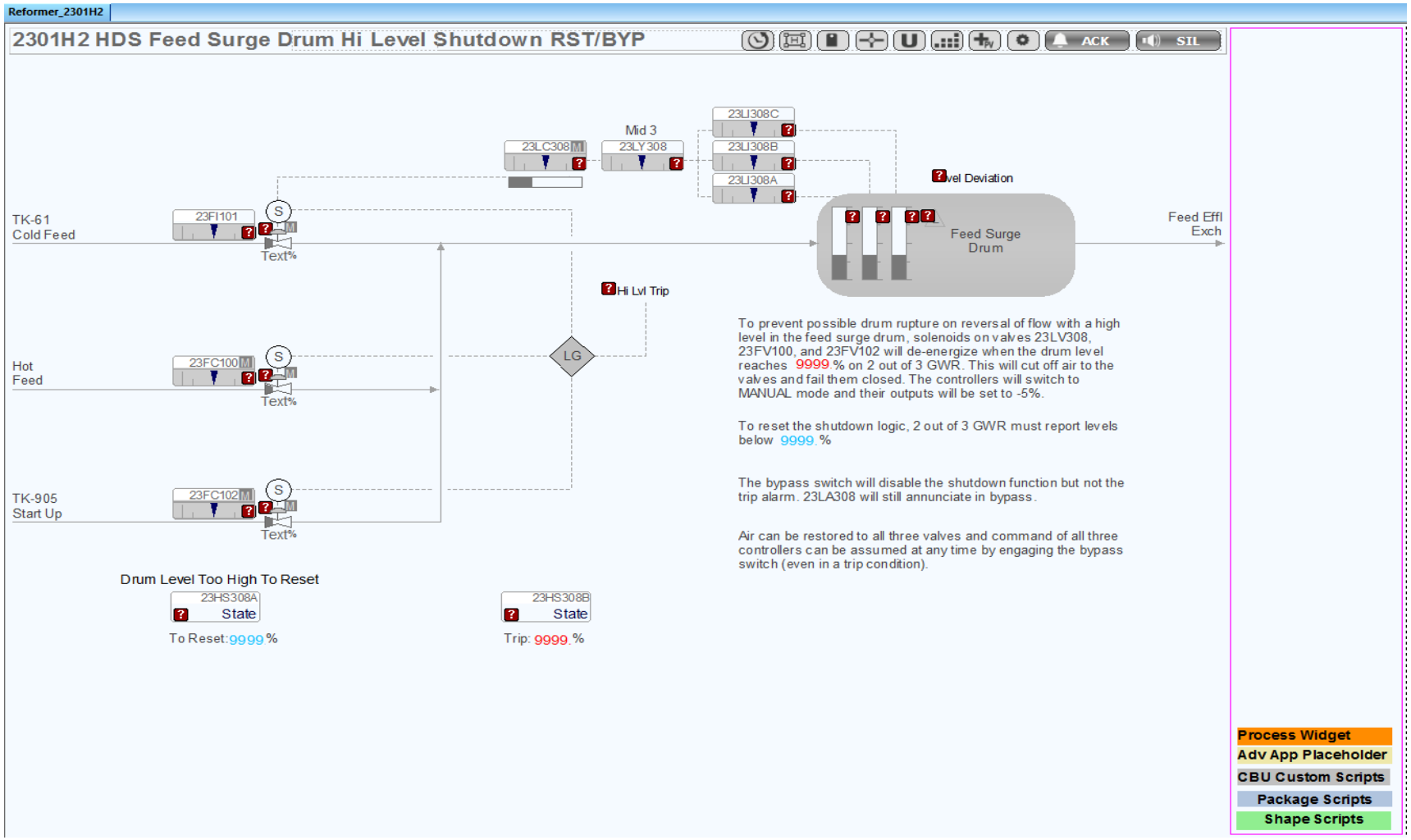


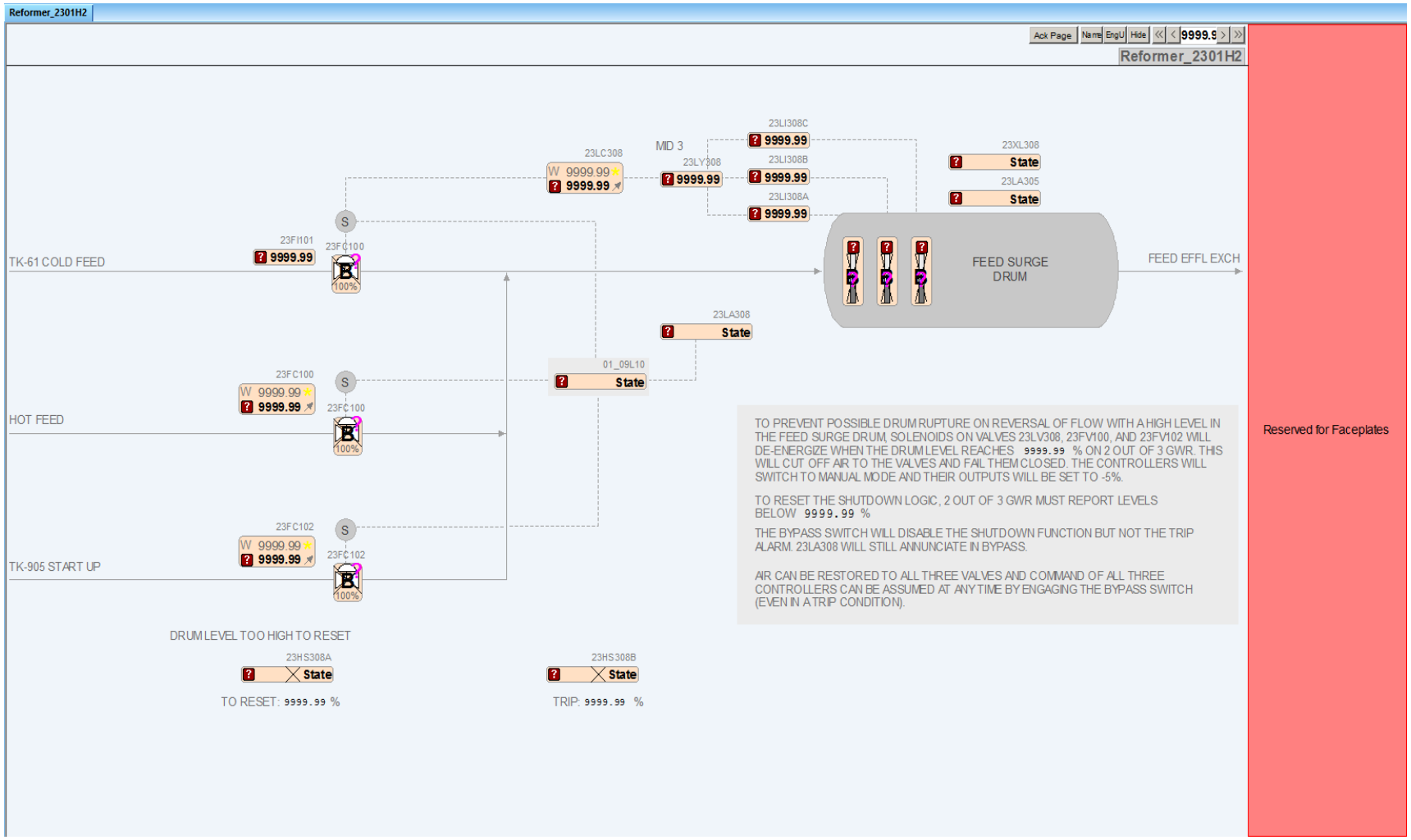

Reformer_2301H1
2301H1 HDS Feed Surge Drum Pressure Control Help
ACK
SIL
The output of HDS Surge Drum Pressure Controller (25PC400) Controls 2 valves:
- The 'A' valve opens & supplies 200# H2 to raise surge drum pressure.
- The 'B' valve opens & releases gas to the flare header lowering pressure.
23PC409
200# H2
Flare
Text%
A
Text%
B
Process
Feed Surge
Drum
Pressure Controller OP vs. Valve OP
100
75
50
25
0
Valve OP (%)
Valve A
Valve B
0
25
50
75
100
Pressure Controller OP 9999.99 %
'A' Position
OP
'B' Position
100%
0%
0%
50%
25%
0%
0%
50%
0%
0%
75%
50%
0%
100%
100%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2301H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2301H1
THE OUTPUT OF HDS SURGE DRUM PRESSURE CONTROLLER (25PC400) CONTROLS 2 VALVES:
- THE 'A' VALVE OPENS & SUPPLIES 200# H2 TO RAISE SURGE DRUM PRESSURE.
- THE 'B' VALVE OPENS & RELEASES GAS TO THE FLARE HEADER LOWERING PRESSURE.
23PC409
9999.99 W
9999.99
9999.99
200# H2
23PC409
100%
A
23PC409
100%
B
FLARE
PROCESS
FEED SURGE DRUM
PRESSURE CONTROLLER OP VS. VALVE OP
100
75
50
25
0
VALVE A
VALVE B
VALVE OP (%)
0
25
50
75
100
PRESSURE CONTROLLER OP 9999.99 %
'A' POSITION
OP
'B' POSITION
100%
0%
0%
50%
25%
0%
0%
50%
0%
0%
75%
50%
0%
100%
100%
Reserved for Faceplates

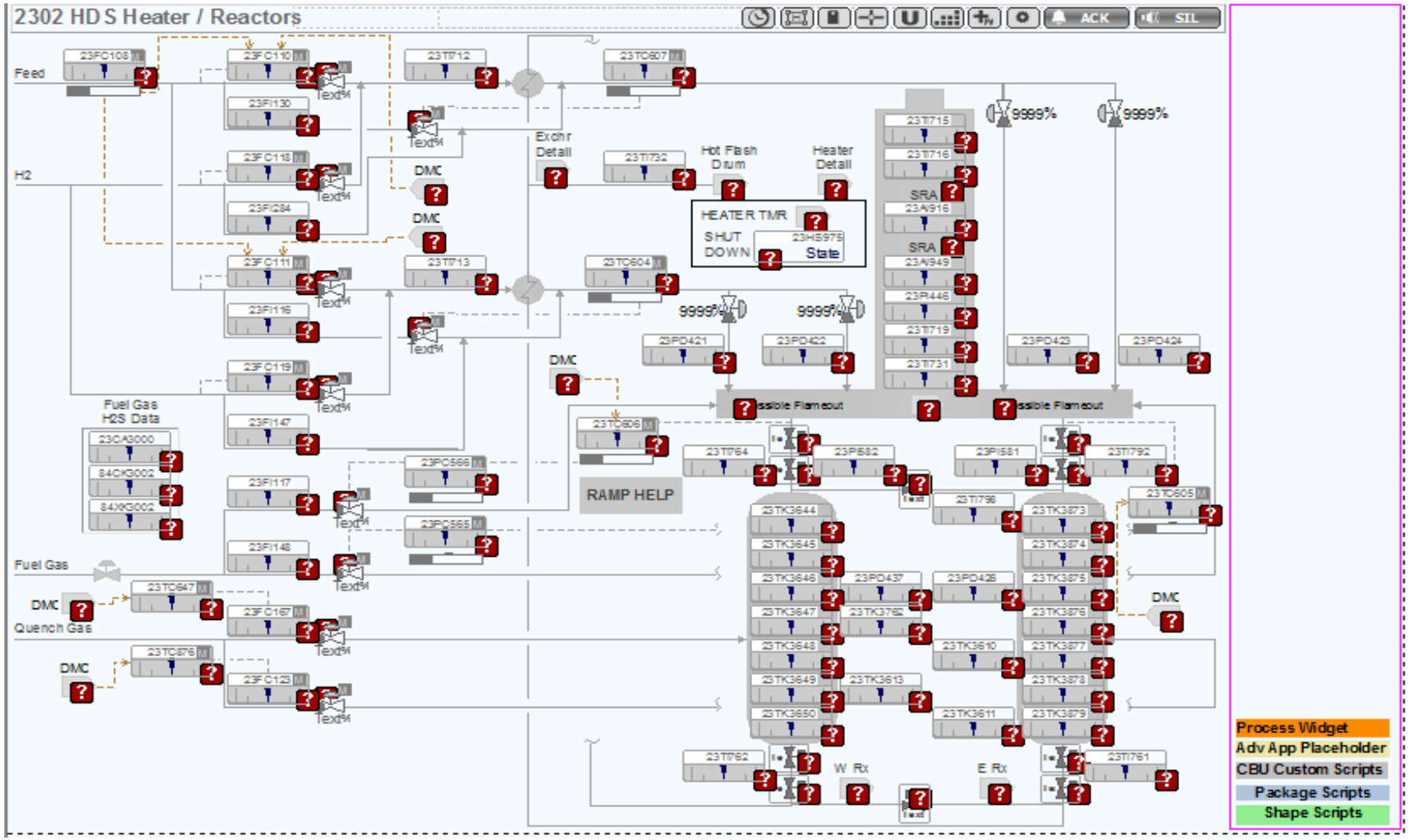
1.117 2301H2 HDS FEED SURGE DRUM HI LEVEL SHUTDOWN RST/BYP (Reformer_2301H2.htm)

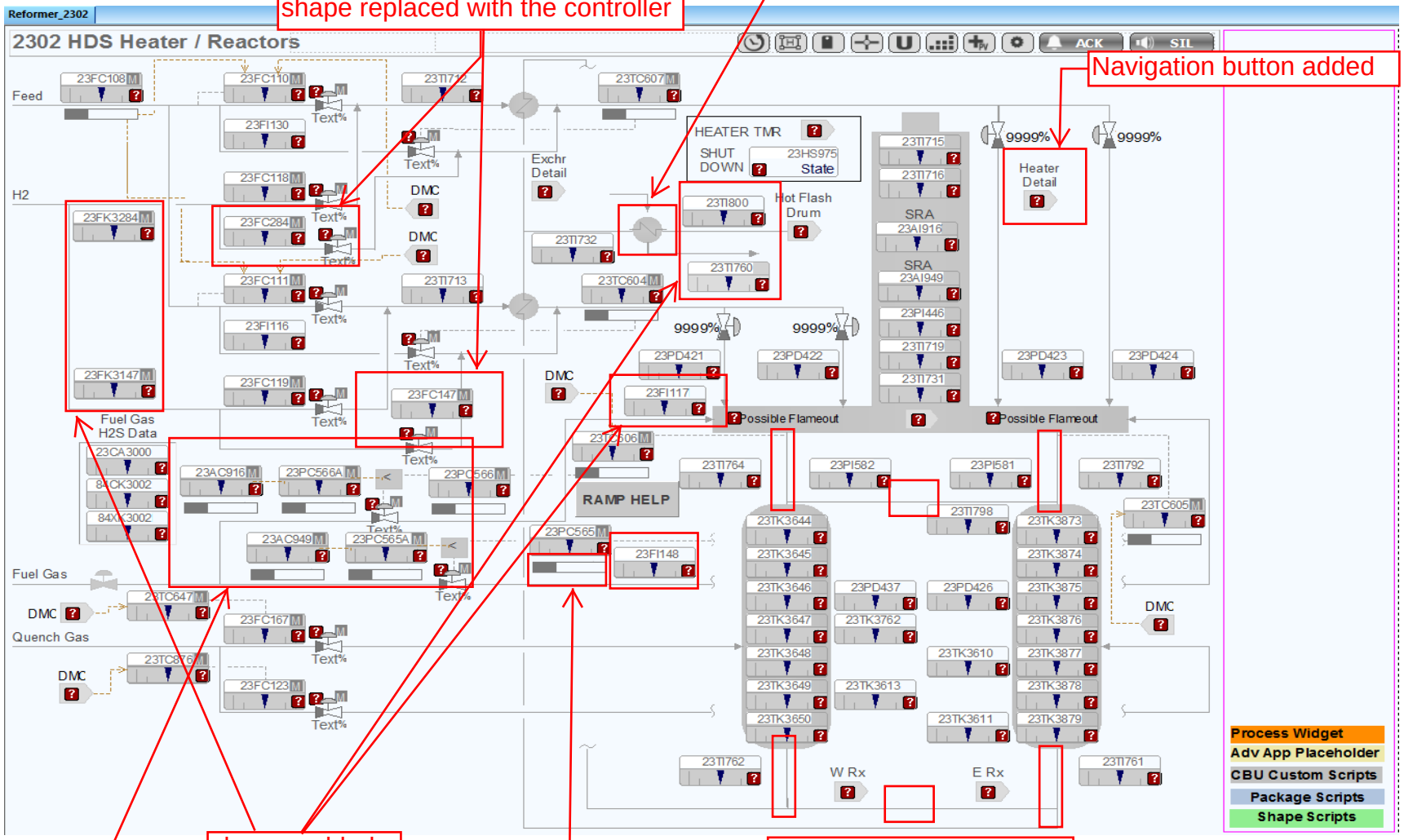


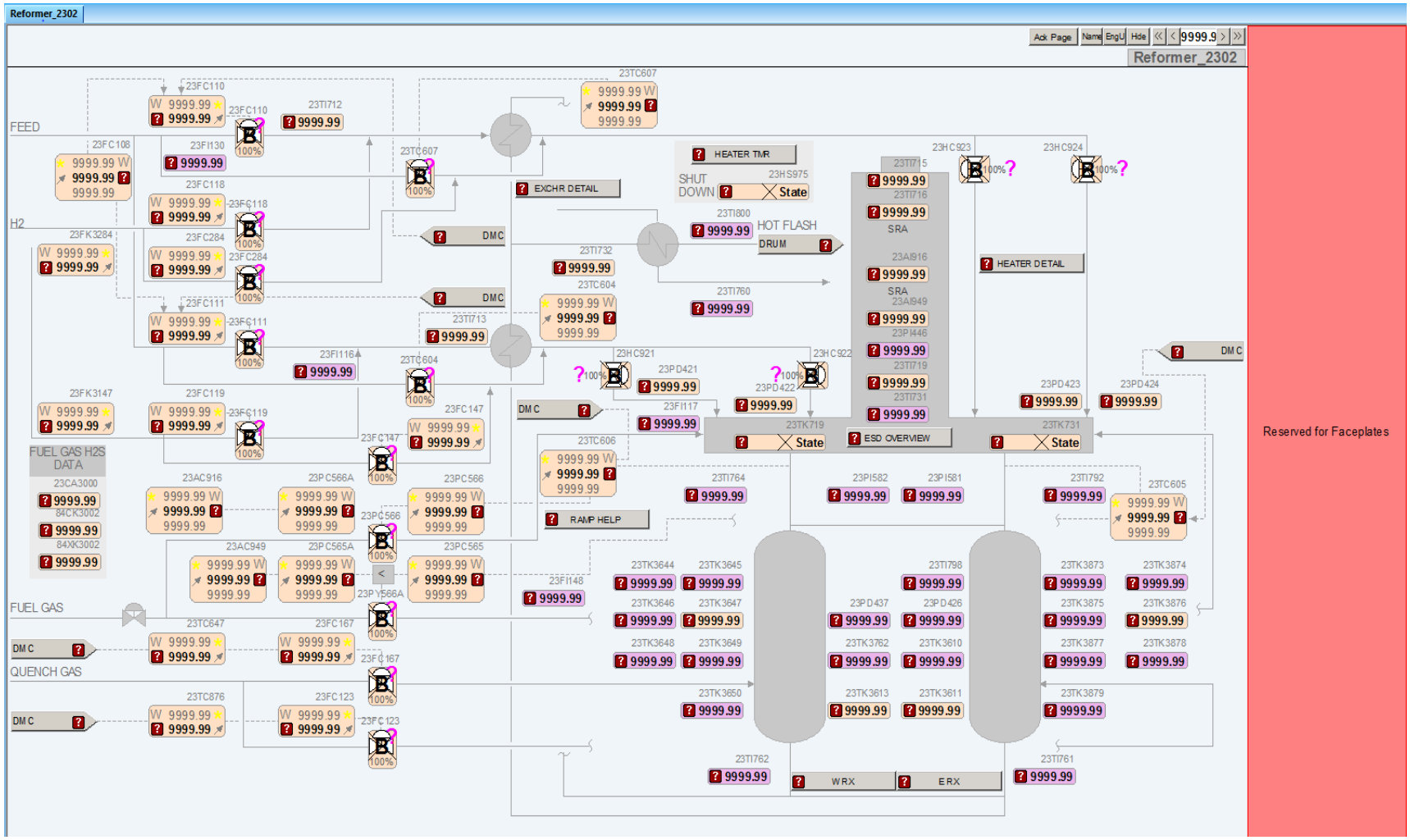

Reformer_2301H2
2301H2 HDS Feed Surge Drum Hi Level Shutdown RST/BYP
ACK
SIL
23LI308C
Mid 3
23LC308
23LY308
23LI308B
23LI308A
Level Deviation
TK-61
Cold Feed
23FI101
Text%
Feed Surge
Drum
Feed Effl
Exch
Hi Lvl Trip
LG
Hot
Feed
23FC100
Text%
TK-905
Start Up
23FC102
Text%
To prevent possible drum rupture on reversal of flow with a high level in the feed surge drum, solenoids on valves 23LV308, 23FV100, and 23FV102 will de-energize when the drum level reaches 9999 % on 2 out of 3 GWR. This will cut off air to the valves and fail them closed. The controllers will switch to MANUAL mode and their outputs will be set to -5%.
To reset the shutdown logic, 2 out of 3 GWR must report levels below 9999 %
The bypass switch will disable the shutdown function but not the trip alarm. 23LA308 will still annunciate in bypass.
Air can be restored to all three valves and command of all three controllers can be assumed at any time by engaging the bypass switch (even in a trip condition).
Drum Level Too High To Reset
23HS308A
State
To Reset: 9999 %
23HS308B
State
Trip: 9999 %
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2301H2
Ack Page
Name
EngU
Hide
Reformer_2301H2
23LI308C
9999.99
MID 3
23LC308
W 9999.99
9999.99
23LY308
9999.99
23LI308B
9999.99
23LI308A
9999.99
23XL308
State
23LA305
State
23FI101
9999.99
23FC100
100%
TK-61 COLD FEED
FEED SURGE DRUM
FEED EFFL EXCH
23LA308
State
01_09L10
State
23FC100
W 9999.99
9999.99
23FC100
100%
HOT FEED
23FC102
W 9999.99
9999.99
23FC102
100%
TK-905 START UP
TO PREVENT POSSIBLE DRUM RUPTURE ON REVERSAL OF FLOW WITH A HIGH LEVEL IN THE FEED SURGE DRUM, SOLENOIDS ON VALVES 23LV308, 23FV100, AND 23FV102 WILL DE-ENERGIZE WHEN THE DRUM LEVEL REACHES 9999.99 % ON 2 OUT OF 3 GWR. THIS WILL CUT OFF AIR TO THE VALVES AND FAIL THEM CLOSED. THE CONTROLLERS WILL SWITCH TO MANUAL MODE AND THEIR OUTPUTS WILL BE SET TO -5%.
TO RESET THE SHUTDOWN LOGIC, 2 OUT OF 3 GWR MUST REPORT LEVELS BELOW 9999.99 %
THE BYPASS SWITCH WILL DISABLE THE SHUTDOWN FUNCTION BUT NOT THE TRIP ALARM. 23LA308 WILL STILL ANNUNCIATE IN BYPASS.
AIR CAN BE RESTORED TO ALL THREE VALVES AND COMMAND OF ALL THREE CONTROLLERS CAN BE ASSUMED AT ANY TIME BY ENGAGING THE BYPASS SWITCH (EVEN IN A TRIP CONDITION).
DRUM LEVEL TOO HIGH TO RESET
23HS308A
State
TO RESET: 9999.99 %
23HS308B
State
TRIP: 9999.99 %
Reserved for Faceplates

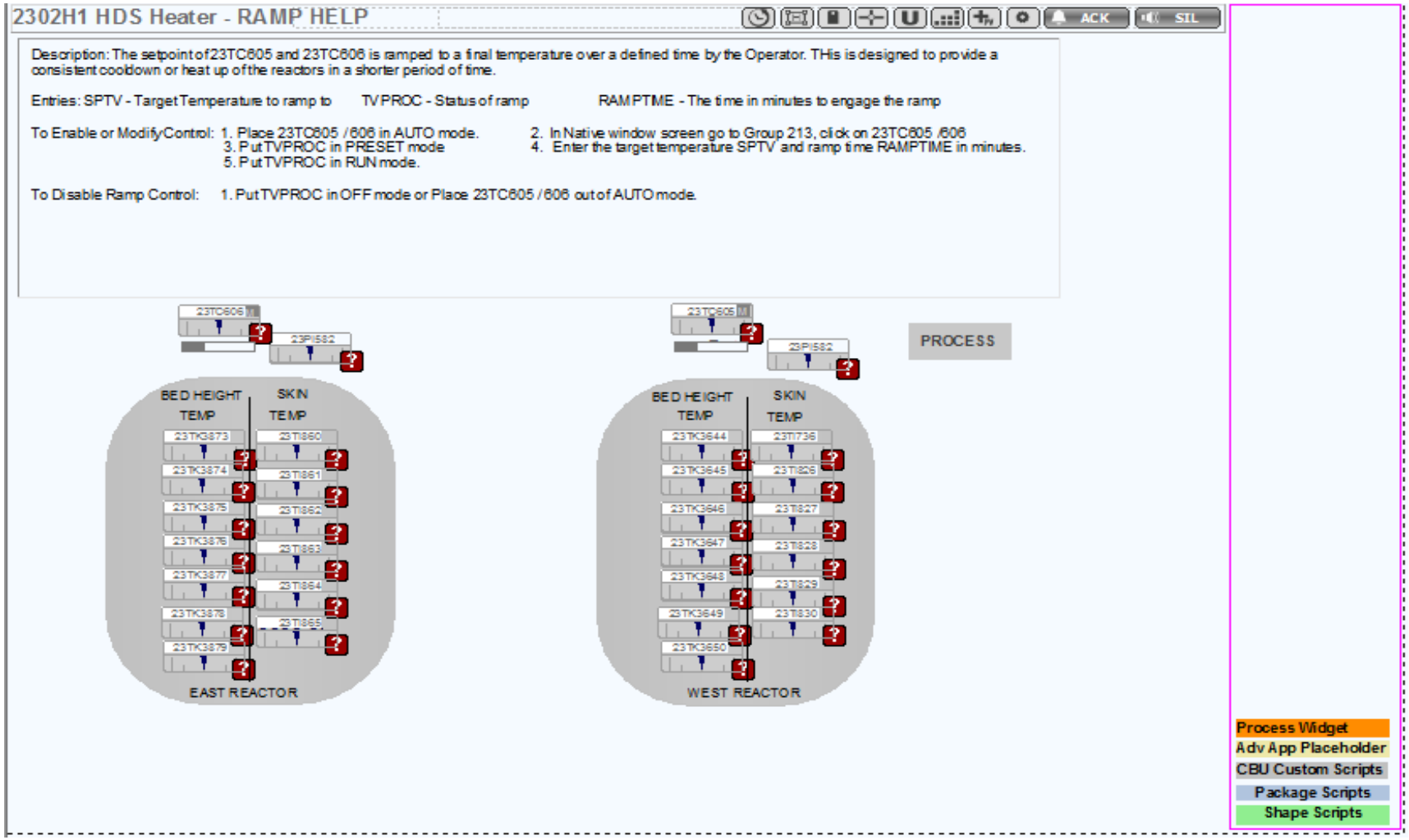
1.118 2302 HDS HEATER / REACTORS (Reformer_2302.htm)

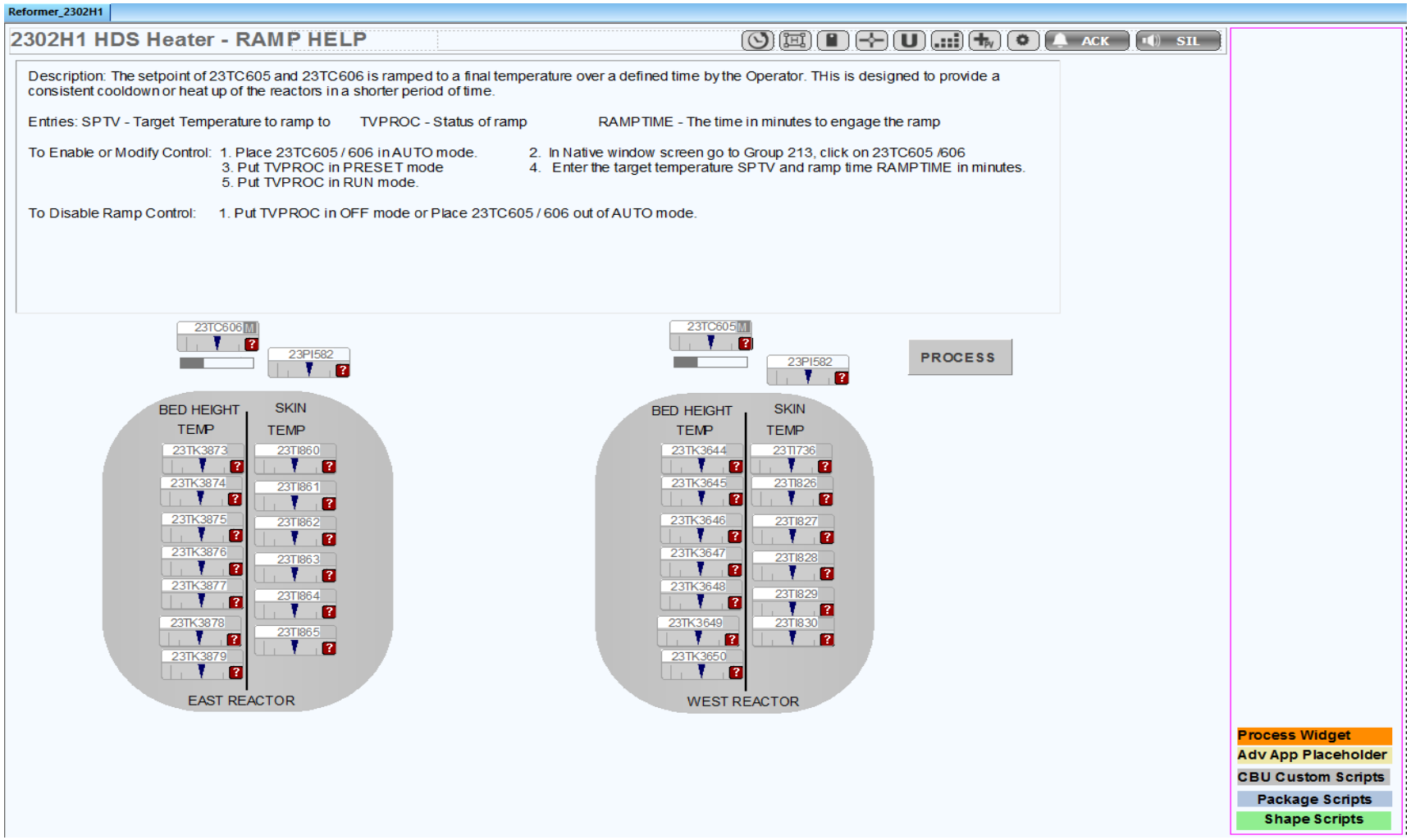


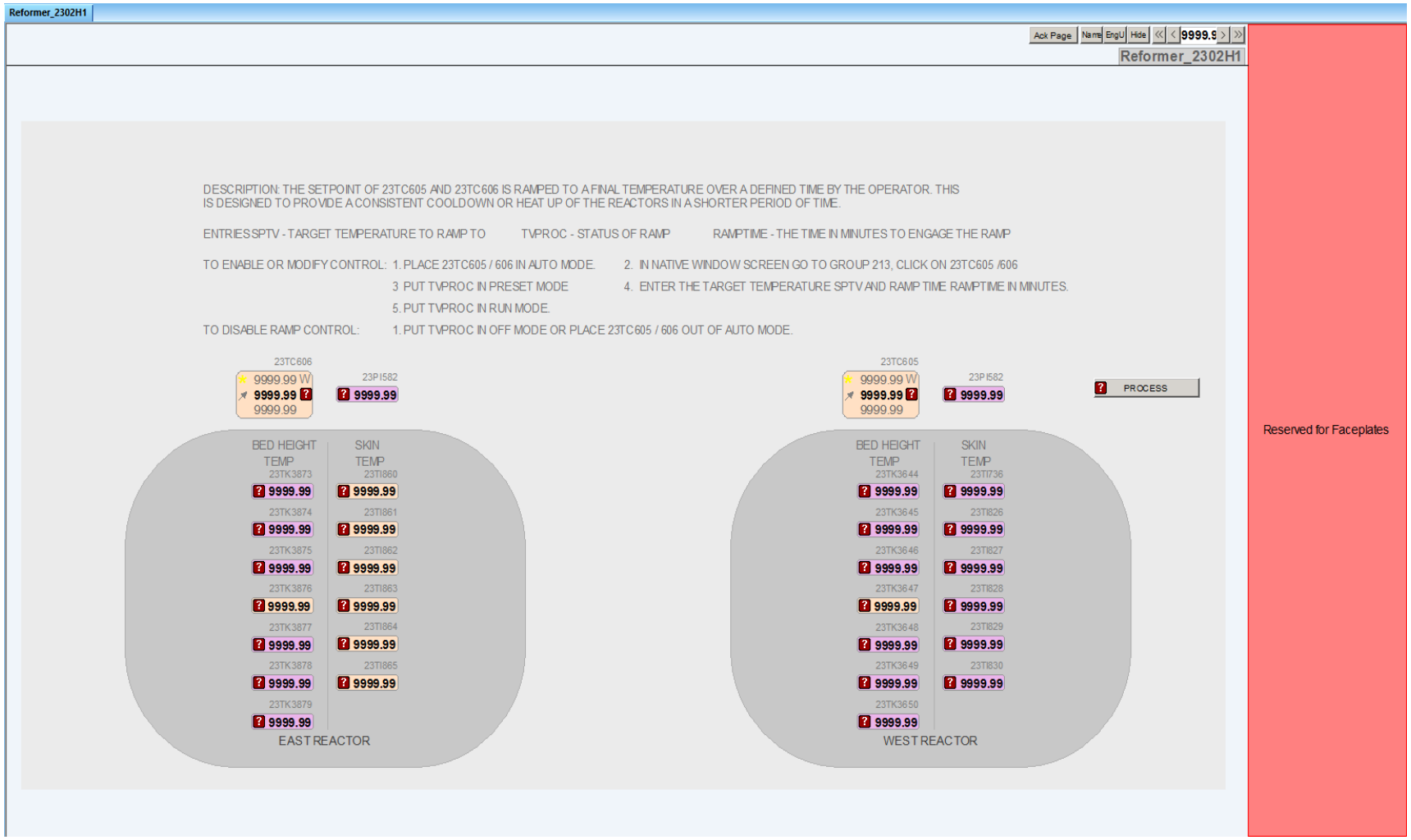

control valve added & Analog shape replaced with the controller
Heat exchanger is added
Navigation button added
Reformer_2302
2302 HDS Heater / Reactors
ACK
SIL
Feed
H2
Fuel Gas
H2S Data
Fuel Gas
DMC
Quench Gas
DMC
Exchr Detail
DMC
DMC
HEATER TMR
SHUT DOWN
23HS975 State
Hot Flash Drum
SRA
SRA
9999%
9999%
Heater Detail
9999%
9999%
DMC
RAMP HELP
Possible Flameout
Possible Flameout
W Rx
E Rx
DMC
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
shapes added
On off valves are deleted
2 shapes are deleted & 4 new controller shapes are added
shape position changed


Reformer_2302
Ack Page
Name
EngU
Hde
9999.9
Reformer_2302
FEED
H2
FUEL GAS
QUENCH GAS
FUEL GAS H2S DATA
HEATER TMR
SHUT DOWN
23HS975
State
EXCHR DETAIL
HOT FLASH DRUM
HEATER DETAIL
SRA
DMC
RAMP HELP
ESD OVERVIEW
WRX
ERX
Reserved for Faceplates

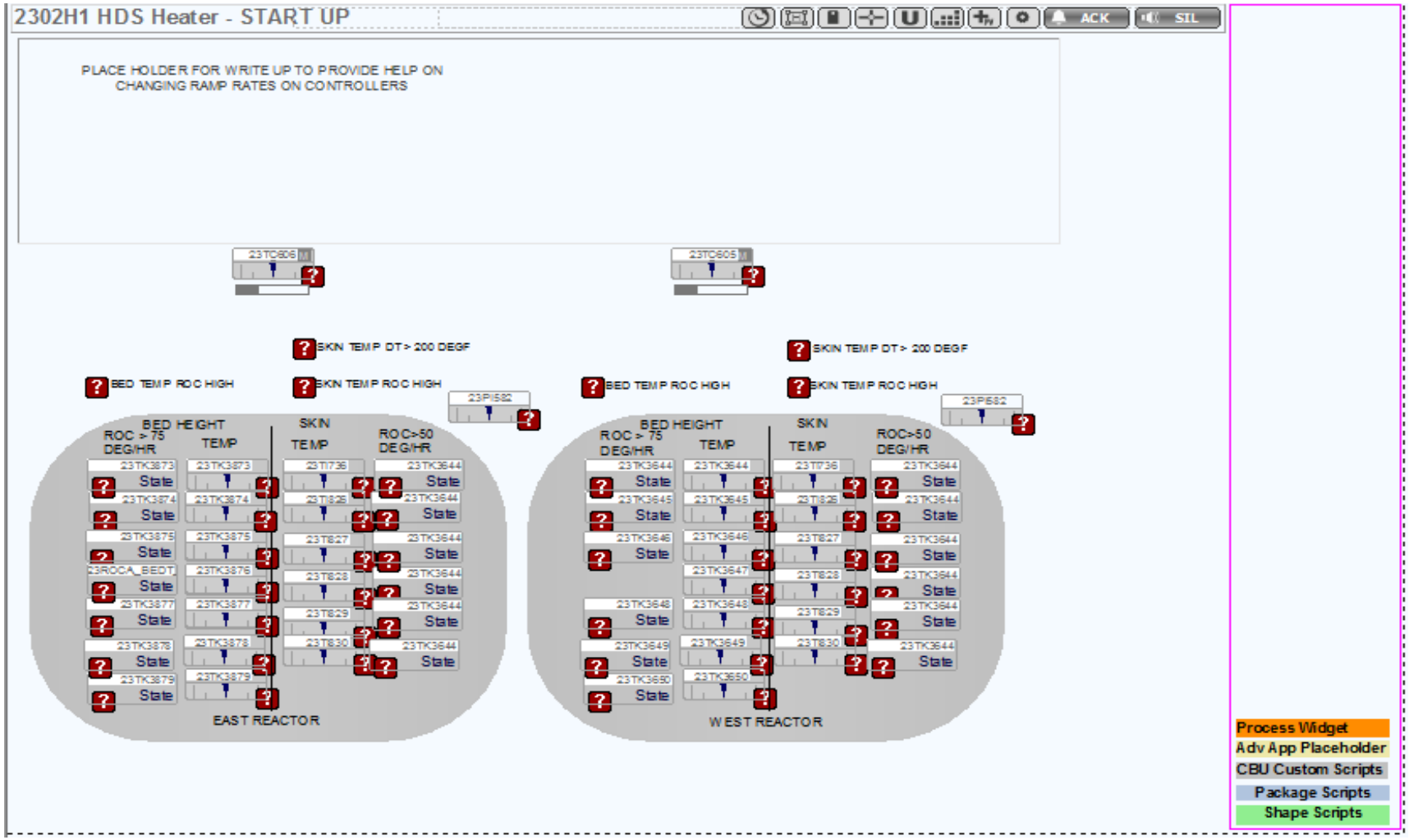
1.119 2302H1 HDS HEATER - RAMP HELP (Reformer_2302H1.htm)

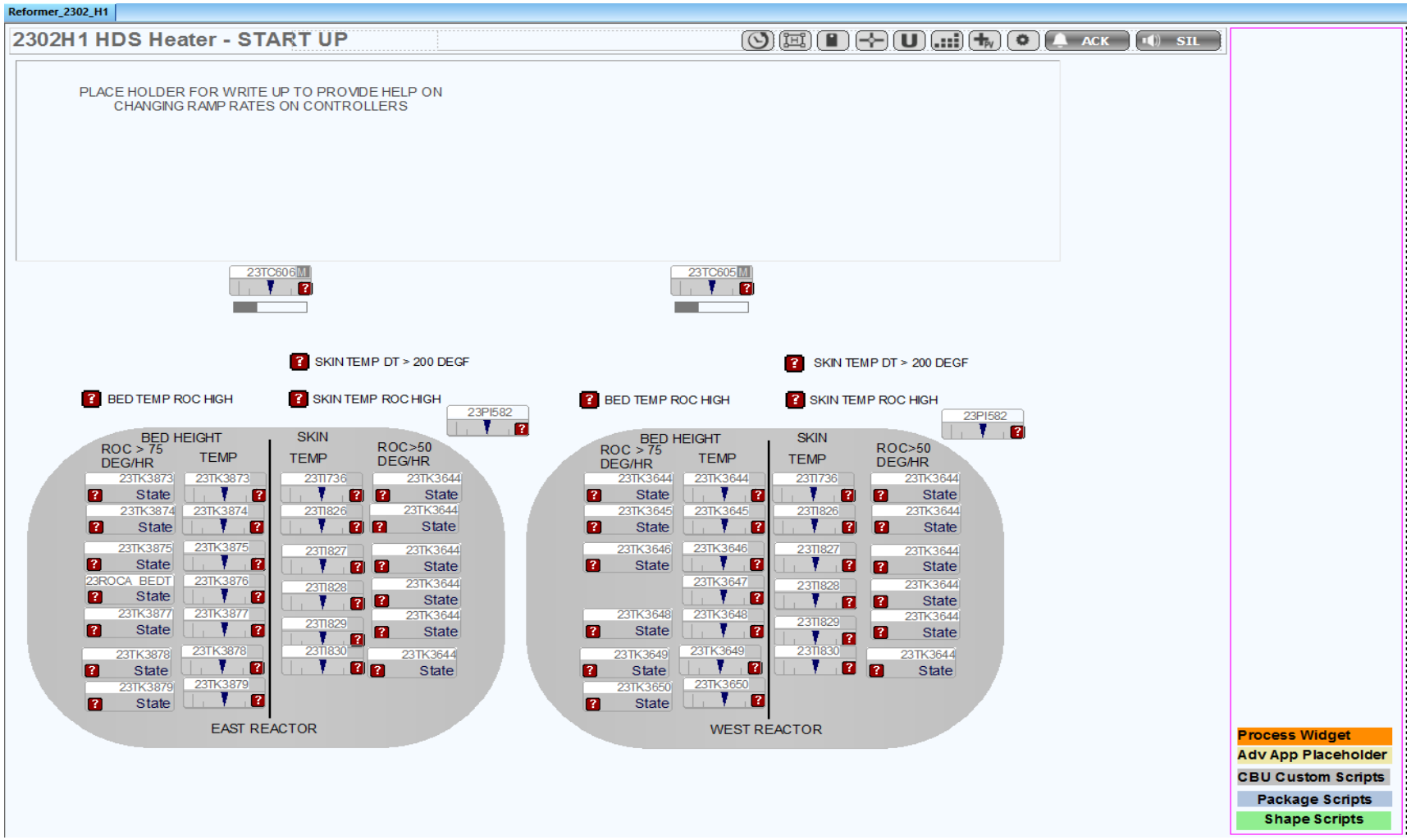


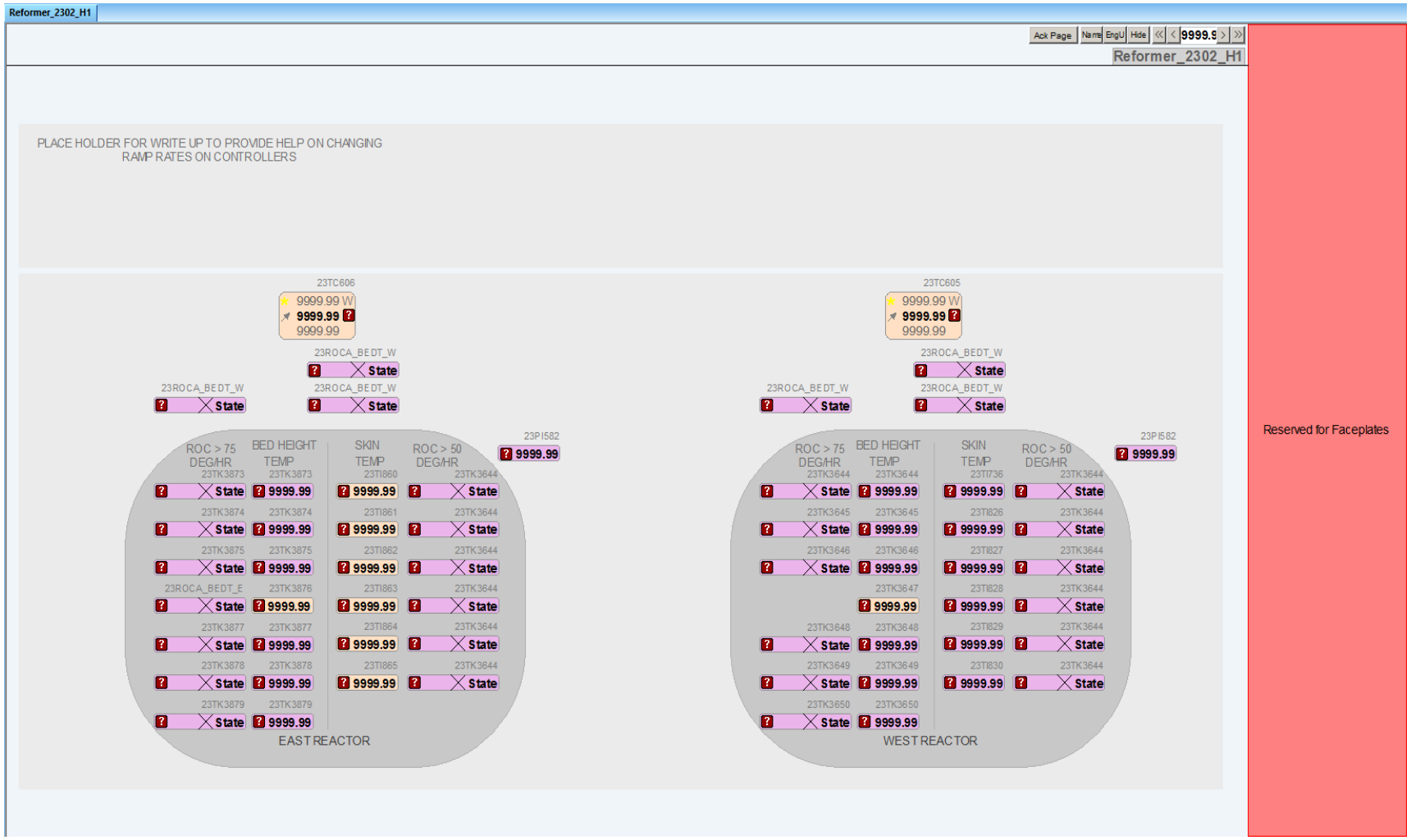

Reformer_2302H1
2302H1 HDS Heater - RAMP HELP
ACK
SIL
Description: The setpoint of 23TC605 and 23TC606 is ramped to a final temperature over a defined time by the Operator. THis is designed to provide a consistent cooldown or heat up of the reactors in a shorter period of time.
Entries: SPTV - Target Temperature to ramp to TVPROC - Status of ramp RAMPTIME - The time in minutes to engage the ramp
To Enable or Modify Control: 1. Place 23TC605 / 606 in AUTO mode. 2. In Native window screen go to Group 213, click on 23TC605 /606
3. Put TVPROC in PRESET mode 4. Enter the target temperature SPTV and ramp time RAMPTIME in minutes.
5. Put TVPROC in RUN mode.
To Disable Ramp Control: 1. Put TVPROC in OFF mode or Place 23TC605 / 606 out of AUTO mode.
23TC606
23PI582
BED HEIGHT TEMP
SKIN TEMP
23TK3873
23TK3874
23TK3875
23TK3876
23TK3877
23TK3878
23TK3879
23TI860
23TI861
23TI862
23TI863
23TI864
23TI865
EAST REACTOR
23TC605
23PI582
PROCESS
BED HEIGHT TEMP
SKIN TEMP
23TK3644
23TK3645
23TK3646
23TK3647
23TK3648
23TK3649
23TK3650
23TI736
23TI826
23TI827
23TI828
23TI829
23TI830
WEST REACTOR
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2302H1
Ack Page
Name
EngU
Hide
Reformer_2302H1
DESCRIPTION: THE SETPOINT OF 23TC605 AND 23TC606 IS RAMPED TO A FINAL TEMPERATURE OVER A DEFINED TIME BY THE OPERATOR. THIS IS DESIGNED TO PROVIDE A CONSISTENT COOLDOWN OR HEAT UP OF THE REACTORS IN A SHORTER PERIOD OF TIME.
ENTRIES SPTV - TARGET TEMPERATURE TO RAMP TO TVPROC - STATUS OF RAMP RAMPTIME - THE TIME IN MINUTES TO ENGAGE THE RAMP
TO ENABLE OR MODIFY CONTROL: 1. PLACE 23TC605 / 606 IN AUTO MODE. 2. IN NATIVE WINDOW SCREEN GO TO GROUP 213, CLICK ON 23TC605 /606
3 PUT TVPROC IN PRESET MODE 4. ENTER THE TARGET TEMPERATURE SPTV AND RAMP TIME RAMPTIME IN MINUTES.
5. PUT TVPROC IN RUN MODE.
TO DISABLE RAMP CONTROL: 1. PUT TVPROC IN OFF MODE OR PLACE 23TC605 / 606 OUT OF AUTO MODE.
23TC606
9999.99 W
9999.99
9999.99
23PI582
9999.99
23TC605
9999.99 W
9999.99
9999.99
23PI582
9999.99
PROCESS
BED HEIGHT TEMP
SKIN TEMP
23TK3873
23TI860
23TK3874
23TI861
23TK3875
23TI862
23TK3876
23TI863
23TK3877
23TI864
23TK3878
23TI865
23TK3879
EAST REACTOR
BED HEIGHT TEMP
SKIN TEMP
23TK3644
23TI736
23TK3645
23TI826
23TK3646
23TI827
23TK3647
23TI828
23TK3648
23TI829
23TK3649
23TI830
23TK3650
WEST REACTOR
Reserved for Faceplates

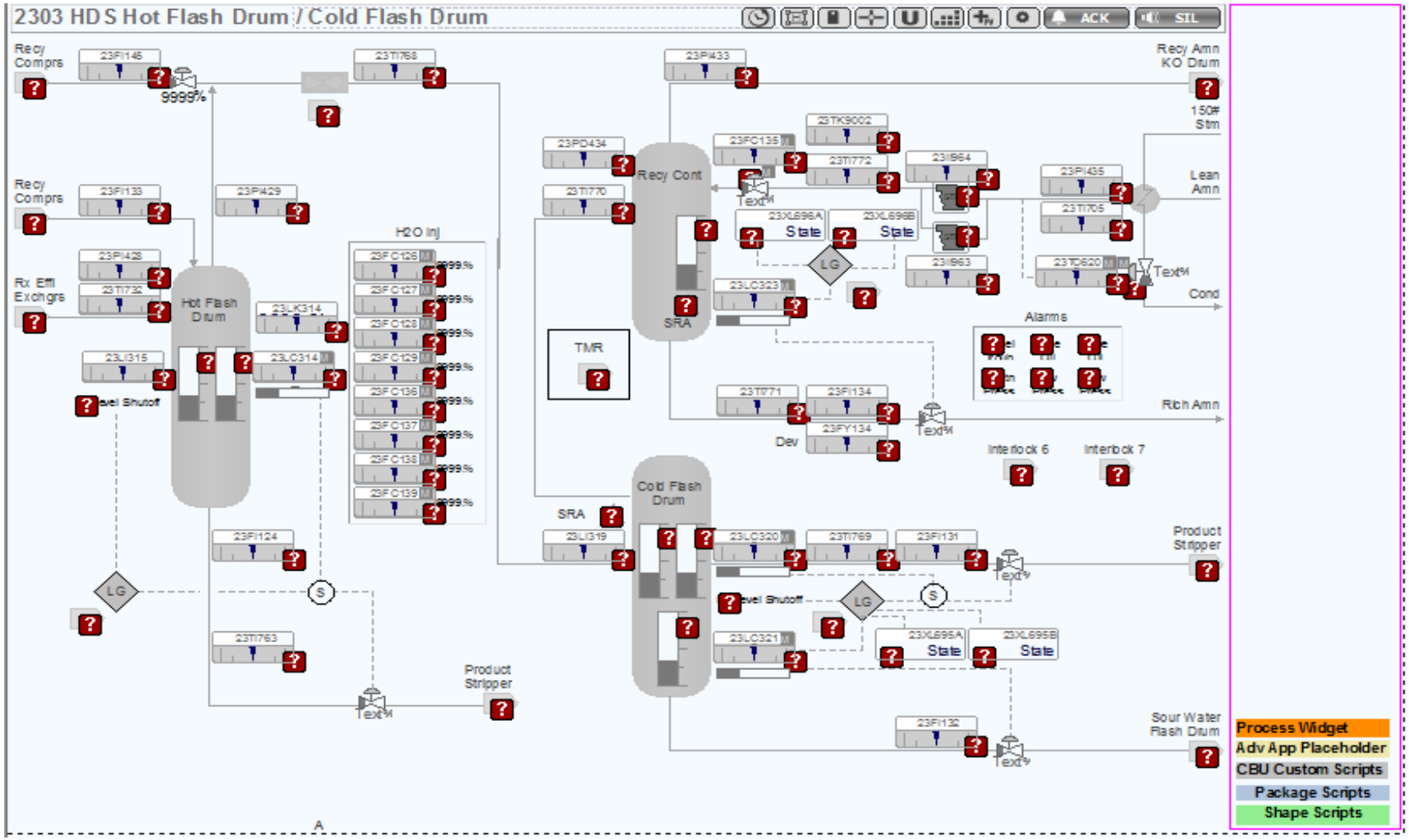
1.120 2302H1 HDS HEATER - START UP (Reformer_2302_H1.htm)

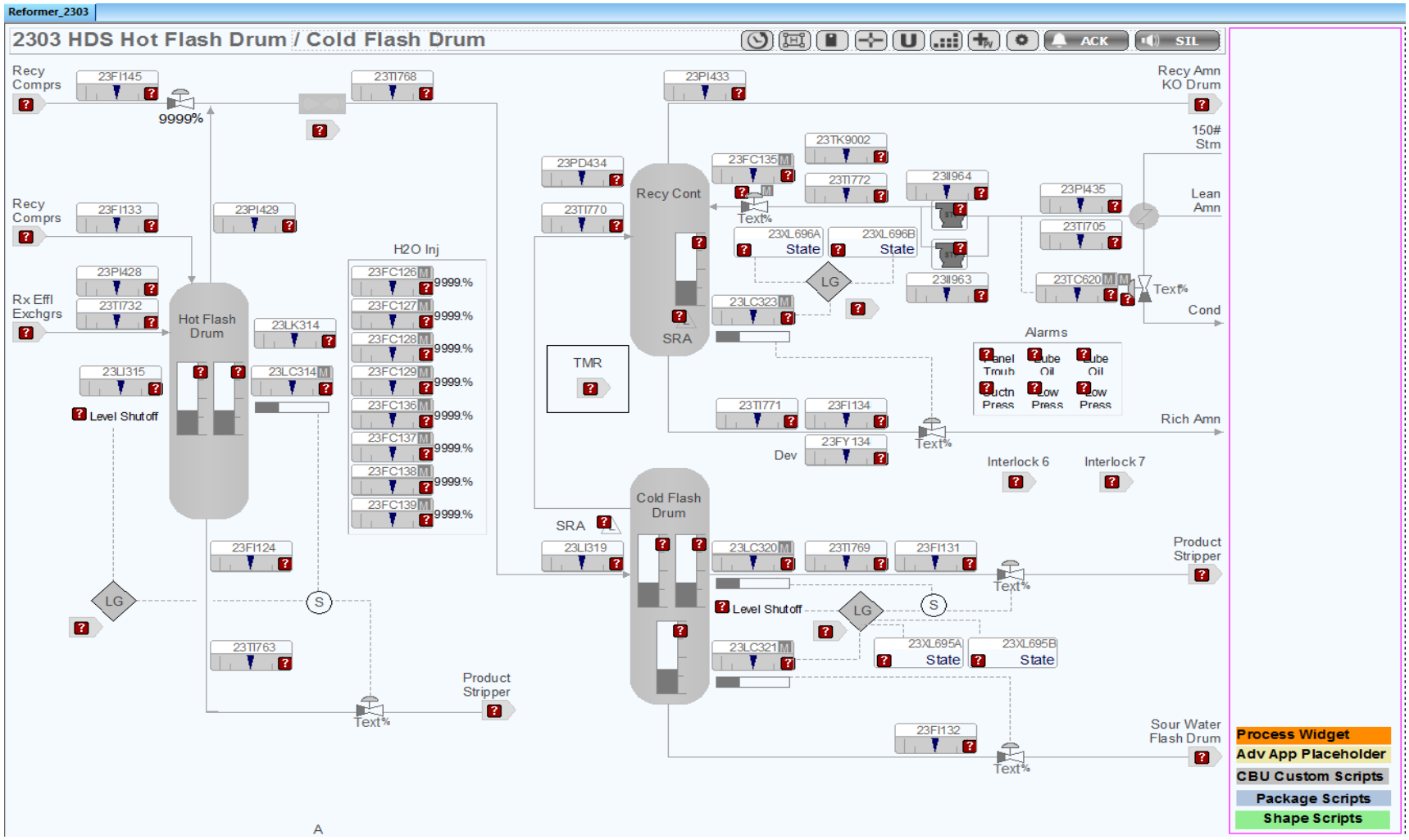


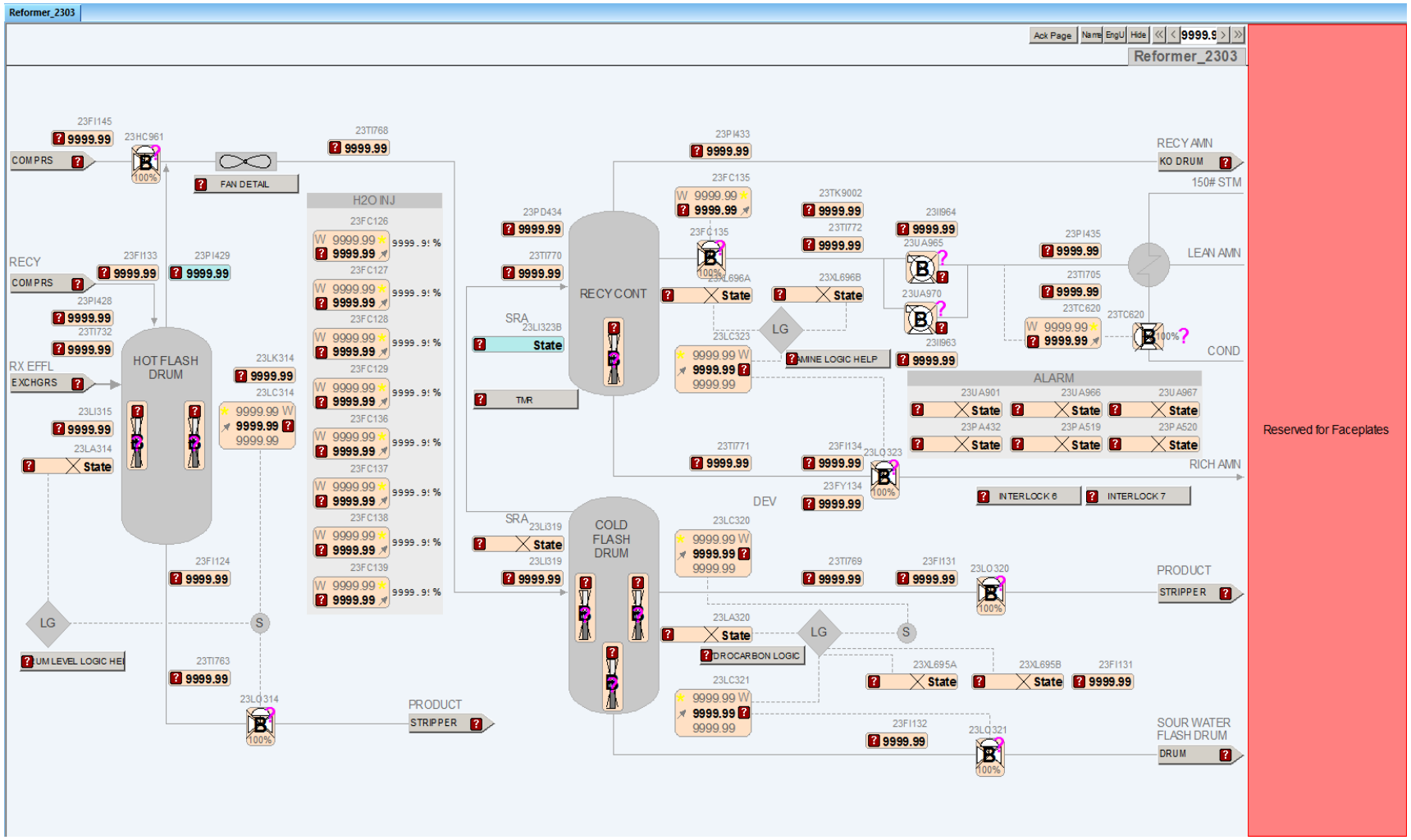

Reformer_2302_H1
2302H1 HDS Heater - START UP
ACK
SIL
PLACE HOLDER FOR WRITE UP TO PROVIDE HELP ON
CHANGING RAMP RATES ON CONTROLLERS
23TC606
23TC605
SKIN TEMP DT > 200 DEGF
BED TEMP ROC HIGH
SKIN TEMP ROC HIGH
23PI582
BED HEIGHT
ROC > 75 DEG/HR
TEMP
SKIN TEMP
ROC>50 DEG/HR
23TK3873
23TK3874
23TK3875
23ROCA_BEDT
23TK3877
23TK3878
23TK3879
State
23TI736
23TI826
23TI827
23TI828
23TI829
23TI830
23TK3644
23TK3645
23TK3646
23TK3647
23TK3648
23TK3649
23TK3650
EAST REACTOR
WEST REACTOR
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2302_H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2302_H1
PLACE HOLDER FOR WRITE UP TO PROVIDE HELP ON CHANGING
RAMP RATES ON CONTROLLERS
23TC606
9999.99 W
9999.99
9999.99
23TC605
9999.99 W
9999.99
9999.99
23ROCA_BEDT_W
State
ROC > 75 DEG/HR
BED HEIGHT TEMP
SKIN TEMP
ROC > 50 DEG/HR
23PI582
9999.99
EAST REACTOR
WEST REACTOR
Reserved for Faceplates

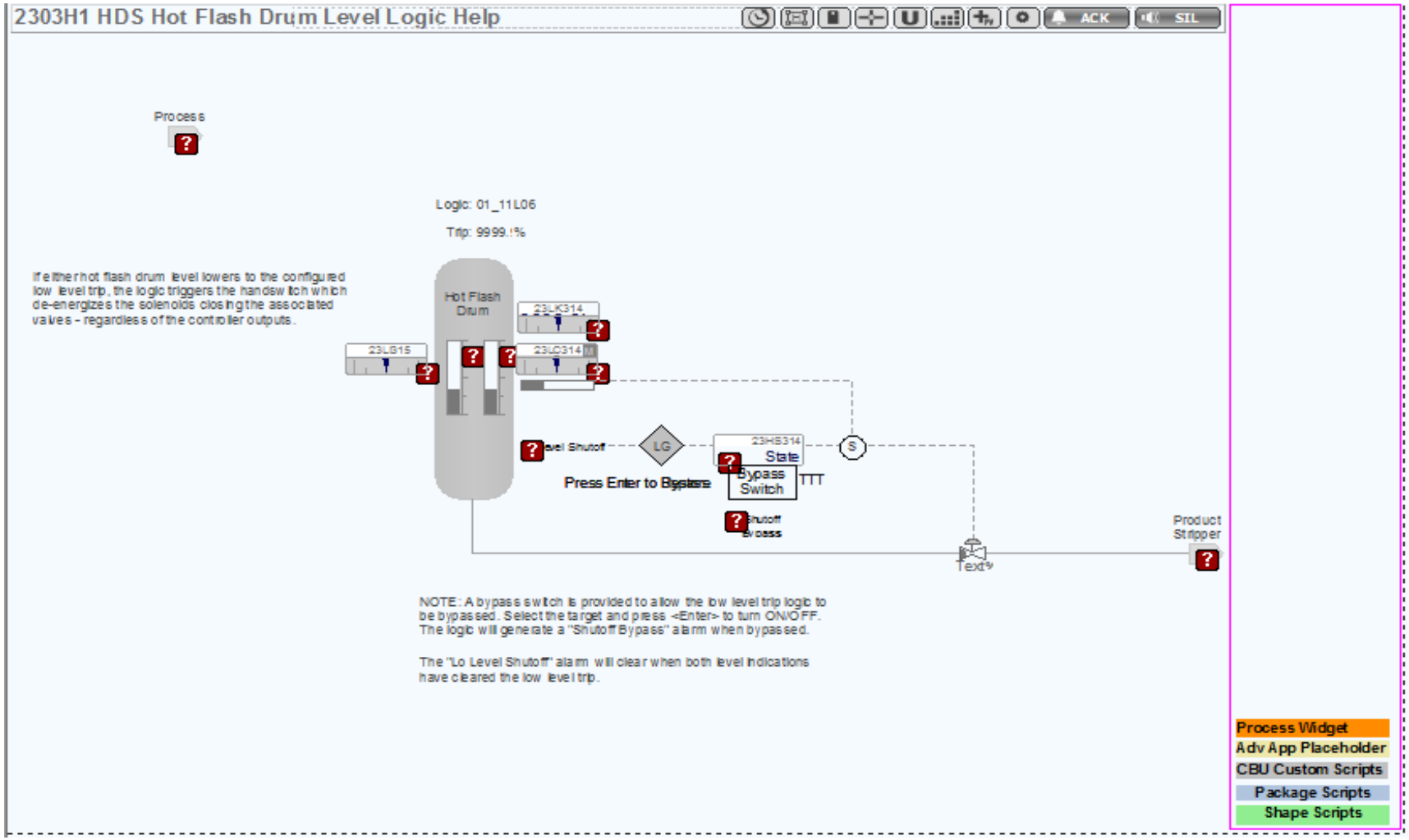
1.121 2303 HDS HOT FLASH DRUM / COLD FLASH DRUM (Reformer_2303.htm)

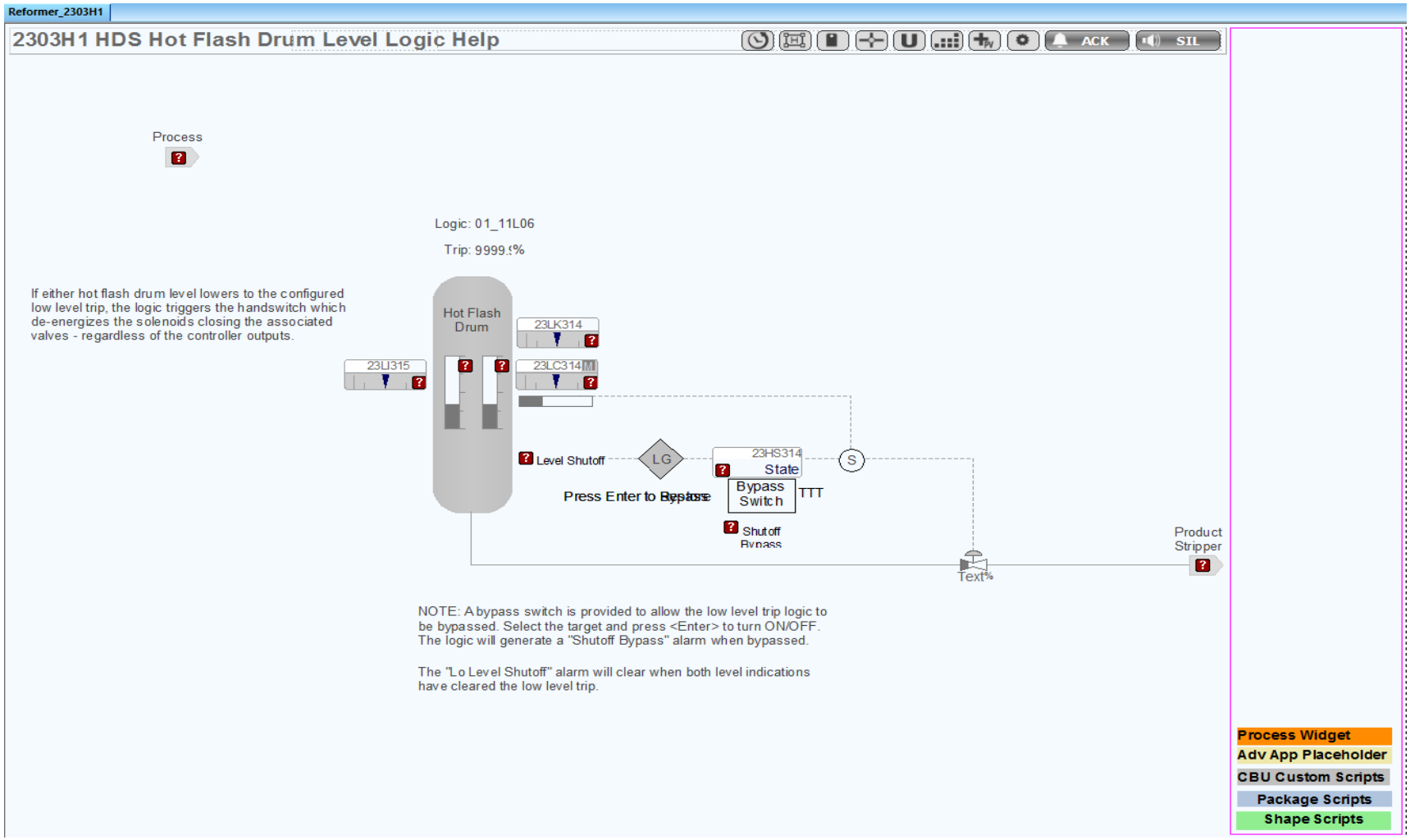


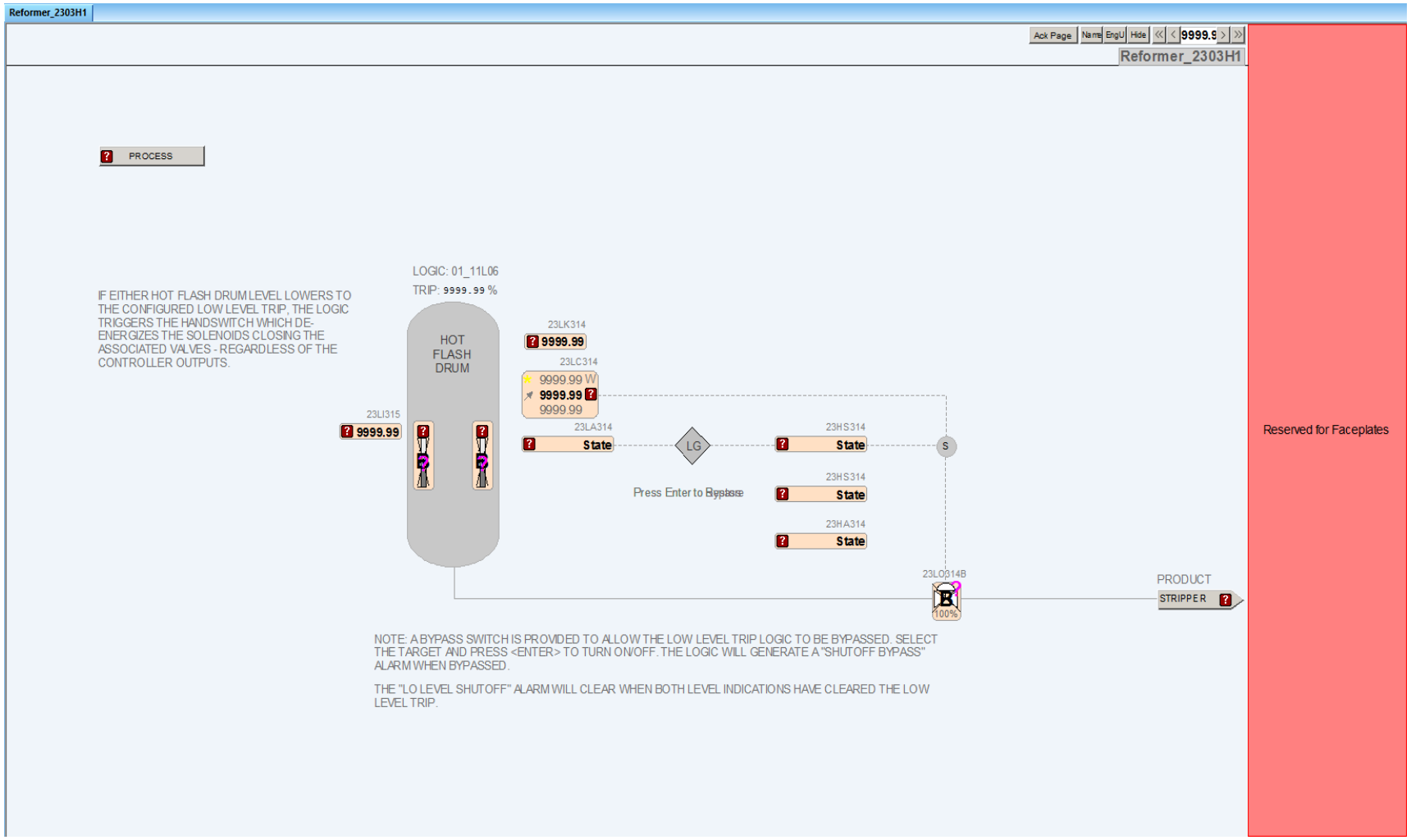

Reformer_2303
2303 HDS Hot Flash Drum / Cold Flash Drum
ACK
SIL
Recy Comprs
23FI145
9999%
23TI768
Recy Comprs
23FI133
23PI429
23PI428
Rx Effl Exchgrs
23TI732
Hot Flash Drum
23LK314
23LI315
23LC314
Level Shutoff
H2O Inj
23FC126
23FC127
23FC128
23FC129
23FC136
23FC137
23FC138
23FC139
9999.%
23FI124
LG
S
23TI763
Text%
Product Stripper
23PI433
Recy Amn KO Drum
150# Stm
23PD434
23TI770
Recy Cont
SRA
TMR
23FC135
23TK9002
23TI772
23II964
23PI435
Lean Amn
23TI705
23XL696A
State
23XL696B
State
LG
23II963
23TC620
Text%
Cond
23LC323
Alarms
Panel Troub
Lube Oil Ductn Press
Lube Oil Low Press
Lube Oil Low Press
23TI771
23FI134
23FY 134
Dev
Text%
Rich Amn
Interlock 6
Interlock 7
Cold Flash Drum
SRA
23LI319
23LC320
23TI769
23FI131
Text%
Product Stripper
Level Shutoff
LG
S
23LC321
23XL695A
State
23XL695B
State
23FI132
Text%
Sour Water Flash Drum
A
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2303
Reformer_2303
Reserved for Faceplates
HOT FLASH DRUM
COLD FLASH DRUM
RECY CONT
H2O INJ
ALARM
RECY AMN KO DRUM
150# STM
LEAN AMN
COND
RICH AMN
PRODUCT STRIPPER
SOUR WATER FLASH DRUM
RECY COMPRS
RX EFFL EXCHGRS
FAN DETAIL
SRA
TMR
DEV
LG
INTERLOCK 6
INTERLOCK 7

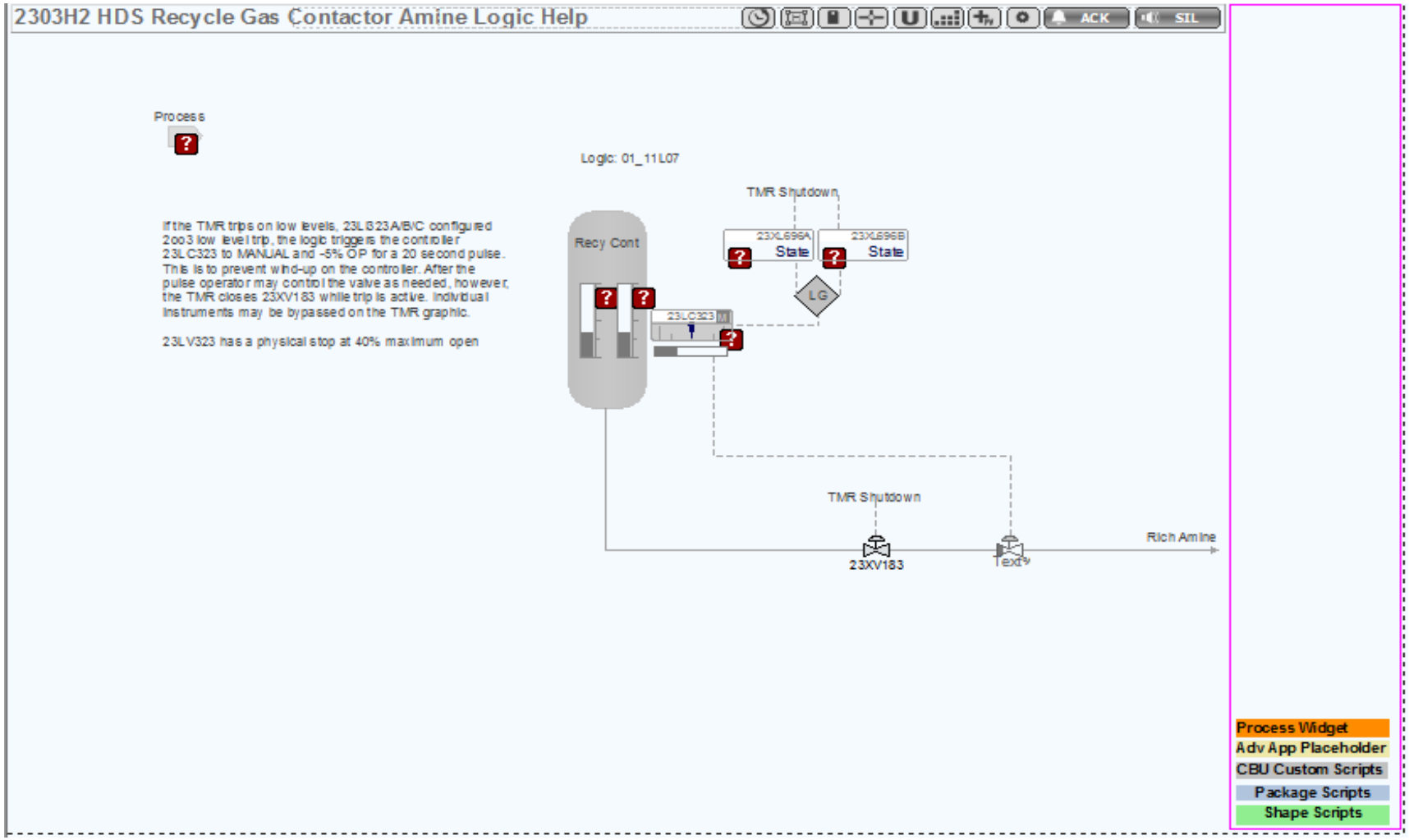
1.122 2303H1 HDS HOT FLASH DRUM LEVEL LOGIC HELP (Reformer_2303H1.htm)

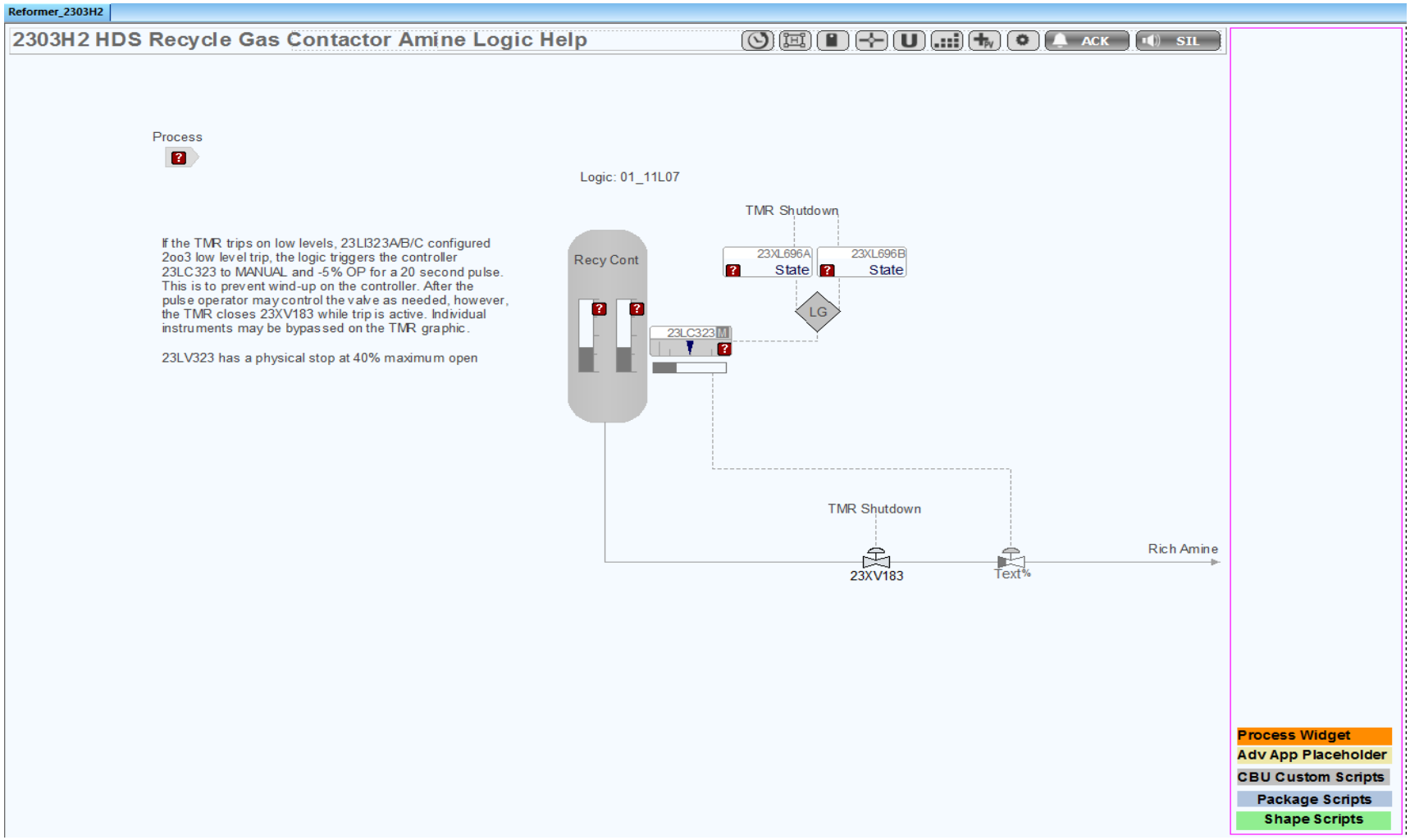


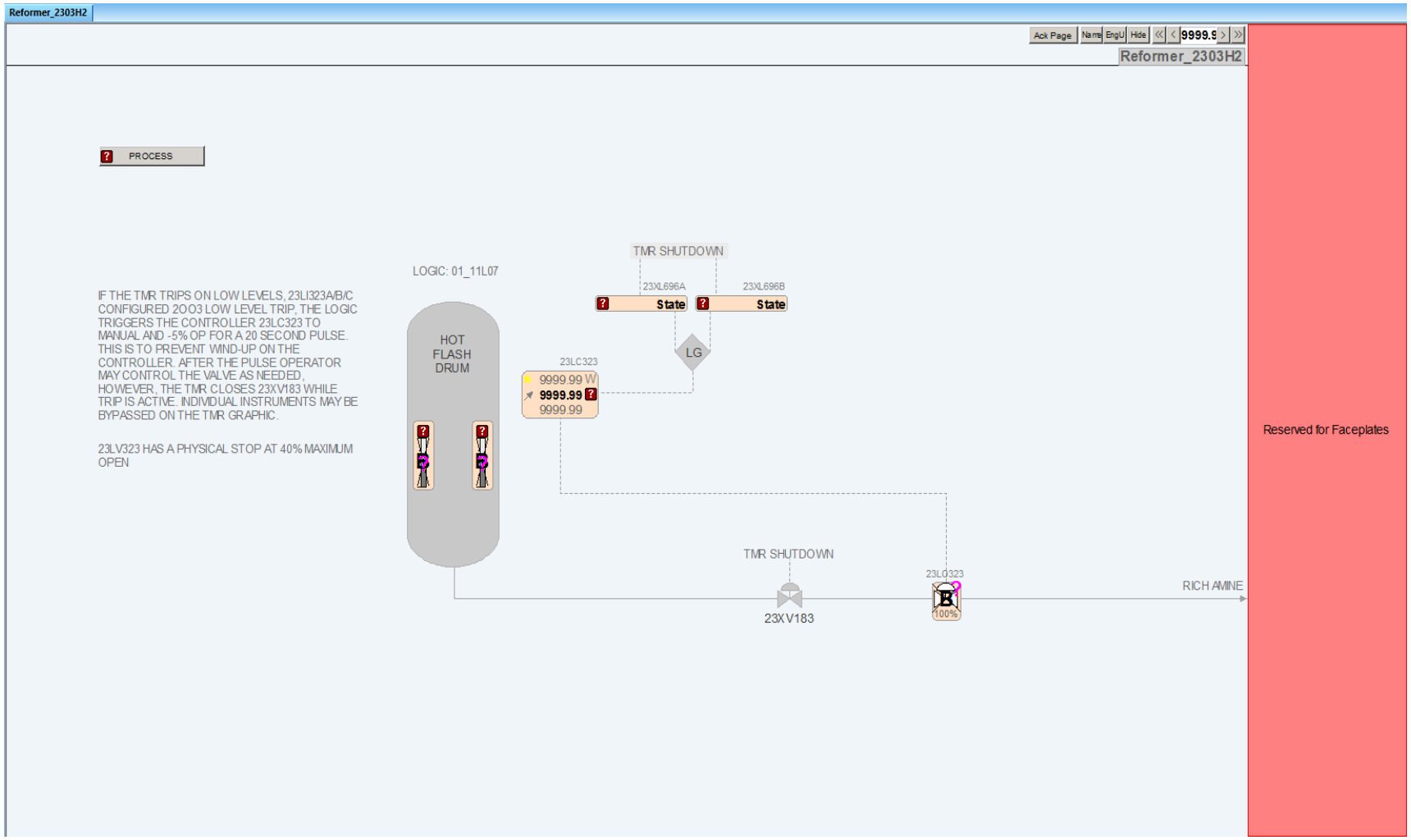

Reformer_2303H1
2303H1 HDS Hot Flash Drum Level Logic Help
ACK
SIL
Process
Logic: 01_11L06
Trip: 9999.9%
If either hot flash drum level lowers to the configured low level trip, the logic triggers the handswitch which de-energizes the solenoids closing the associated valves - regardless of the controller outputs.
Hot Flash Drum
23LK314
23LI315
23LC314
Level Shutoff
LG
23HS314
State
Bypass Switch
TTT
Press Enter to Bypass
Shutoff Bypass
Product Stripper
Text%
NOTE: A bypass switch is provided to allow the low level trip logic to be bypassed. Select the target and press <Enter> to turn ON/OFF. The logic will generate a "Shutoff Bypass" alarm when bypassed.
The "Lo Level Shutoff" alarm will clear when both level indications have cleared the low level trip.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2303H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2303H1
PROCESS
IF EITHER HOT FLASH DRUM LEVEL LOWERS TO THE CONFIGURED LOW LEVEL TRIP, THE LOGIC TRIGGERS THE HANDSWITCH WHICH DE-ENERGIZES THE SOLENOIDS CLOSING THE ASSOCIATED VALVES - REGARDLESS OF THE CONTROLLER OUTPUTS.
LOGIC: 01_11L06
TRIP: 9999.99 %
HOT FLASH DRUM
23LI315
9999.99
23LK314
9999.99
23LC314
9999.99 W
9999.99
9999.99
23LA314
State
LG
Press Enter to Bypass
23HS314
State
S
23HS314
State
23HA314
State
23LO314B
100%
PRODUCT
STRIPPER
NOTE: A BYPASS SWITCH IS PROVIDED TO ALLOW THE LOW LEVEL TRIP LOGIC TO BE BYPASSED. SELECT THE TARGET AND PRESS <ENTER> TO TURN ON/OFF. THE LOGIC WILL GENERATE A "SHUTOFF BYPASS" ALARM WHEN BYPASSED.
THE "LO LEVEL SHUTOFF" ALARM WILL CLEAR WHEN BOTH LEVEL INDICATIONS HAVE CLEARED THE LOW LEVEL TRIP.
Reserved for Faceplates

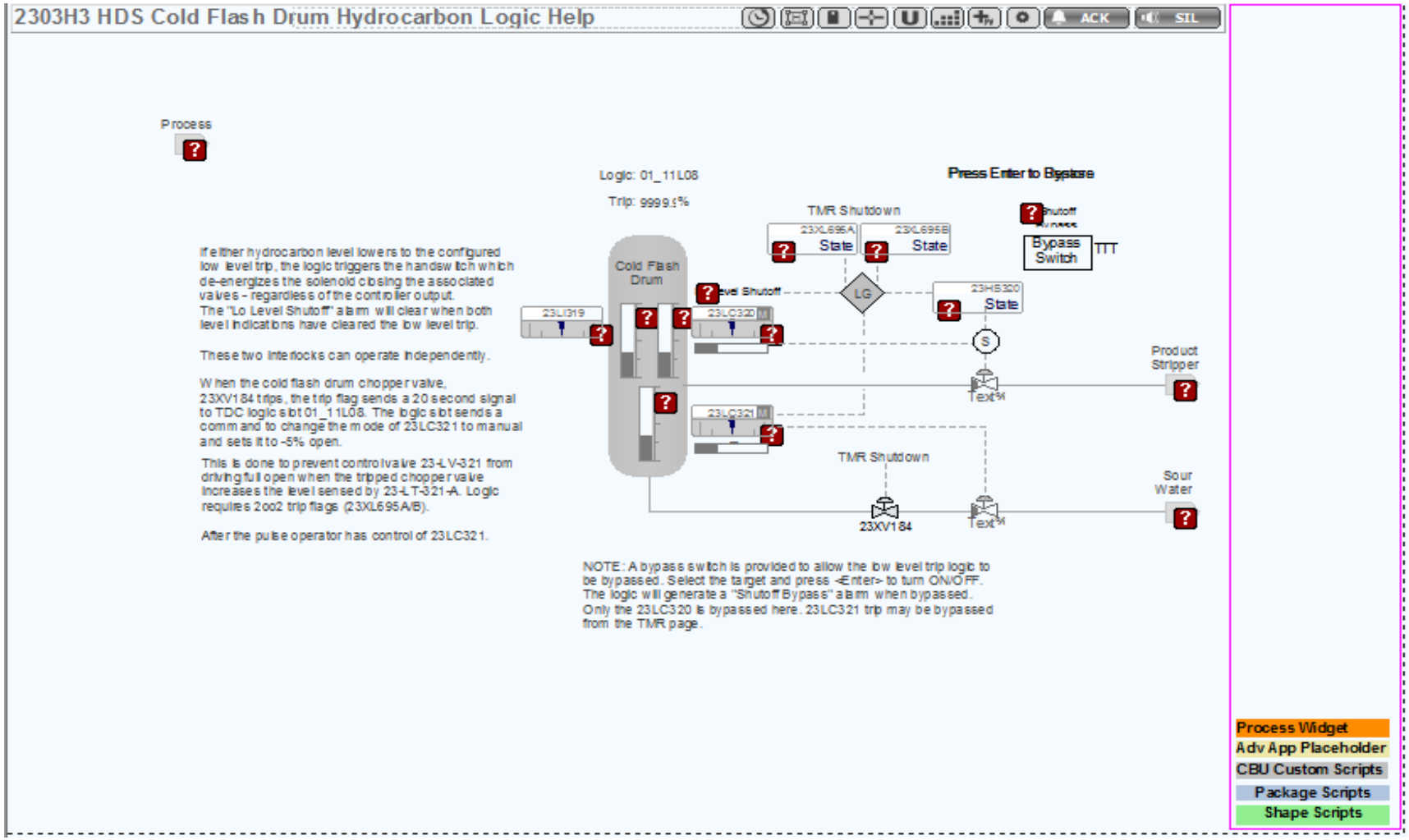
1.123 2303H2 HDS RECYCLE GAS CONTACTOR AMINE LOGIC HELP (Reformer_2303H2.htm)

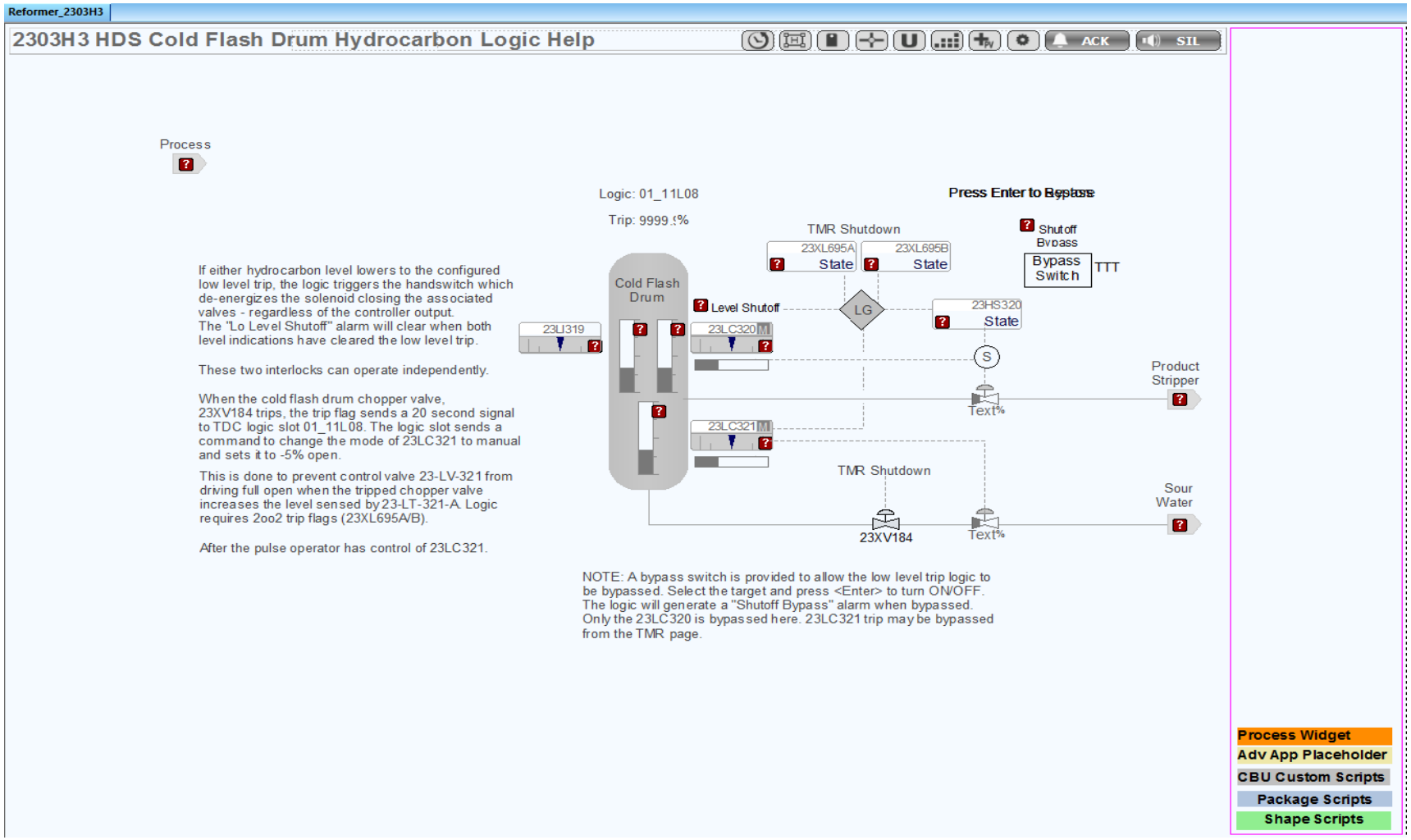


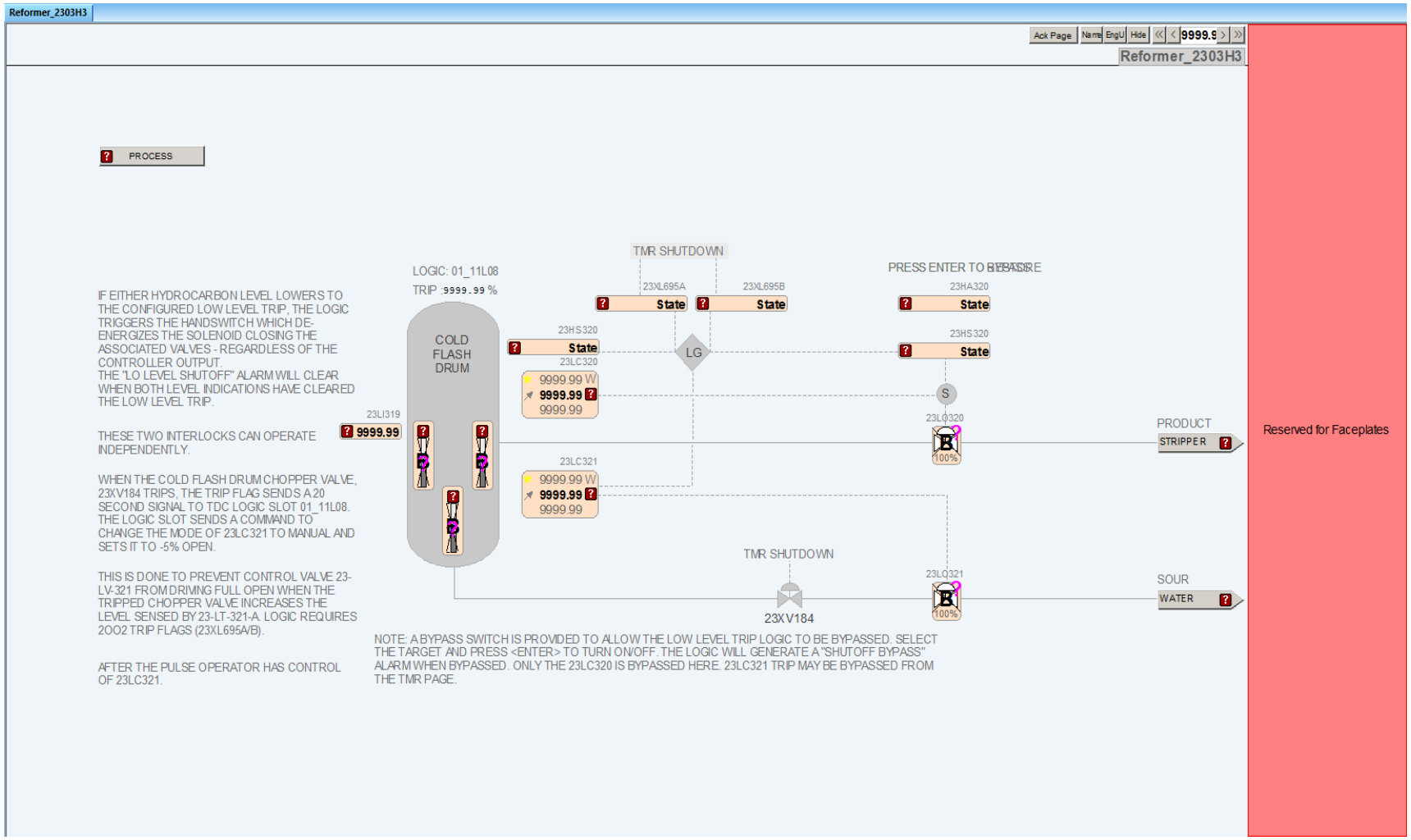

Reformer_2303H2
2303H2 HDS Recycle Gas Contactor Amine Logic Help
ACK
SIL
Process
Logic: 01_11L07
If the TMR trips on low levels, 23LI323A/B/C configured 2oo3 low level trip, the logic triggers the controller 23LC323 to MANUAL and -5% OP for a 20 second pulse. This is to prevent wind-up on the controller. After the pulse operator may control the valve as needed, however, the TMR closes 23XV183 while trip is active. Individual instruments may be bypassed on the TMR graphic.
23LV323 has a physical stop at 40% maximum open
TMR Shutdown
Recy Cont
23XL696A
State
23XL696B
State
LG
23LC323
TMR Shutdown
Rich Amine
23XV183
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2303H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2303H2
PROCESS
IF THE TMR TRIPS ON LOW LEVELS, 23LI323A/B/C CONFIGURED 2O3 LOW LEVEL TRIP, THE LOGIC TRIGGERS THE CONTROLLER 23LC323 TO MANUAL AND -5% OP FOR A 20 SECOND PULSE. THIS IS TO PREVENT WIND-UP ON THE CONTROLLER. AFTER THE PULSE OPERATOR MAY CONTROL THE VALVE AS NEEDED, HOWEVER, THE TMR CLOSES 23XV183 WHILE TRIP IS ACTIVE. INDIVIDUAL INSTRUMENTS MAY BE BYPASSED ON THE TMR GRAPHIC.
23LV323 HAS A PHYSICAL STOP AT 40% MAXIMUM OPEN
LOGIC: 01_11L07
HOT FLASH DRUM
TMR SHUTDOWN
23XL696A
23XL696B
State
State
LG
23LC323
9999.99 W
9999.99
9999.99
TMR SHUTDOWN
23XV183
23LC323
100%
RICH AMINE
Reserved for Faceplates

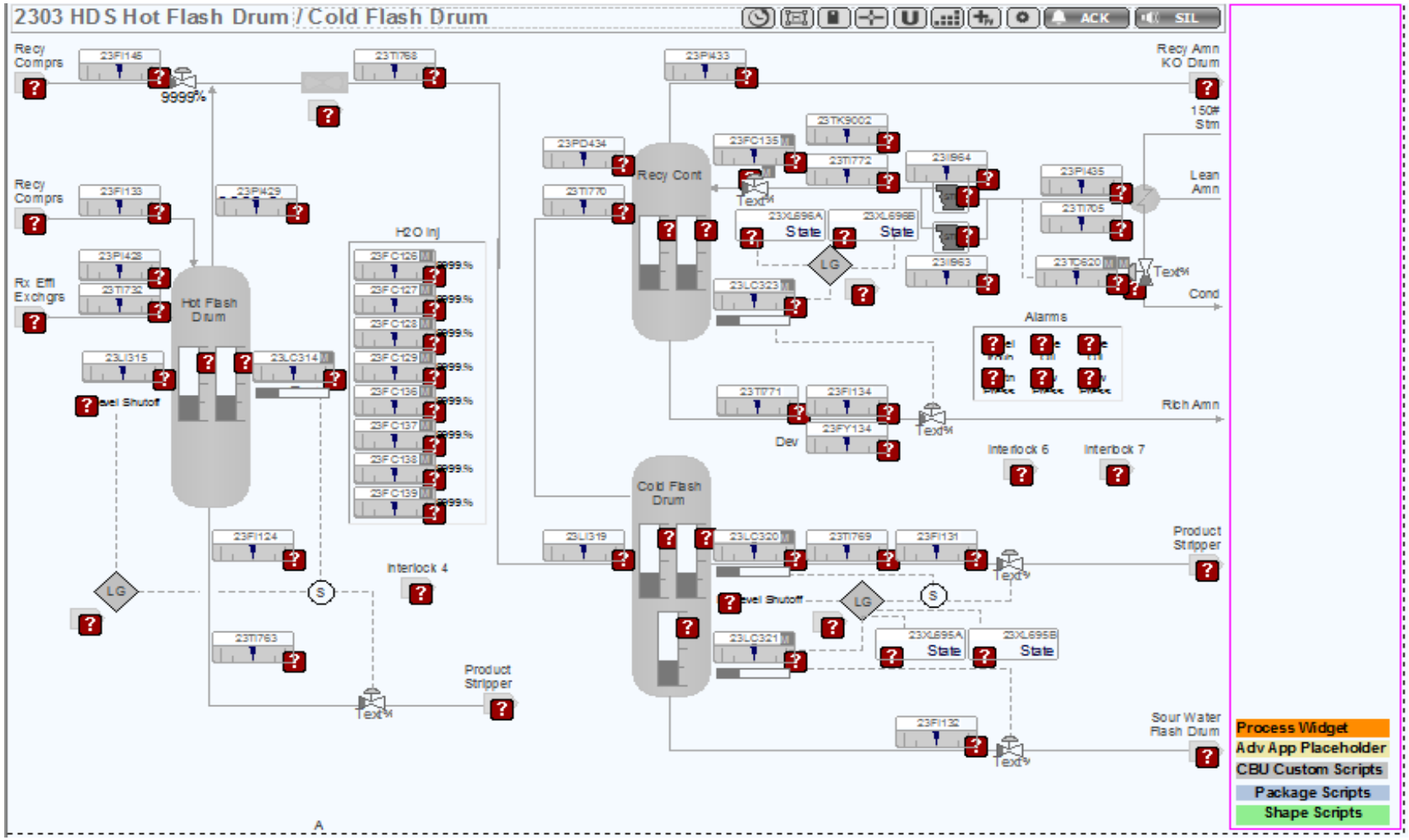
1.124 2303H3 HDS COLD FLASH DRUM HYDROCARBON LOGIC HELP (Reformer_2303H3.htm)

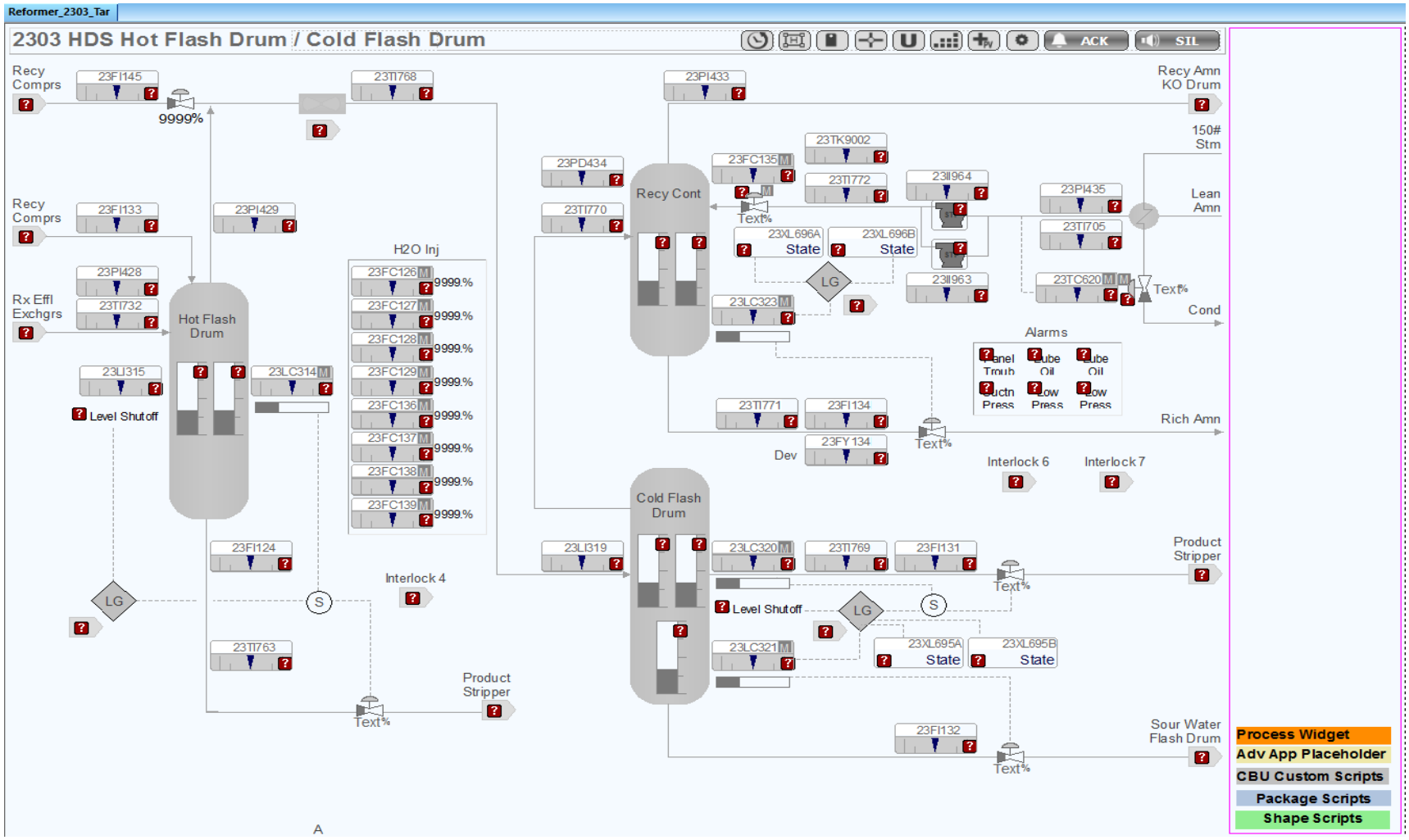


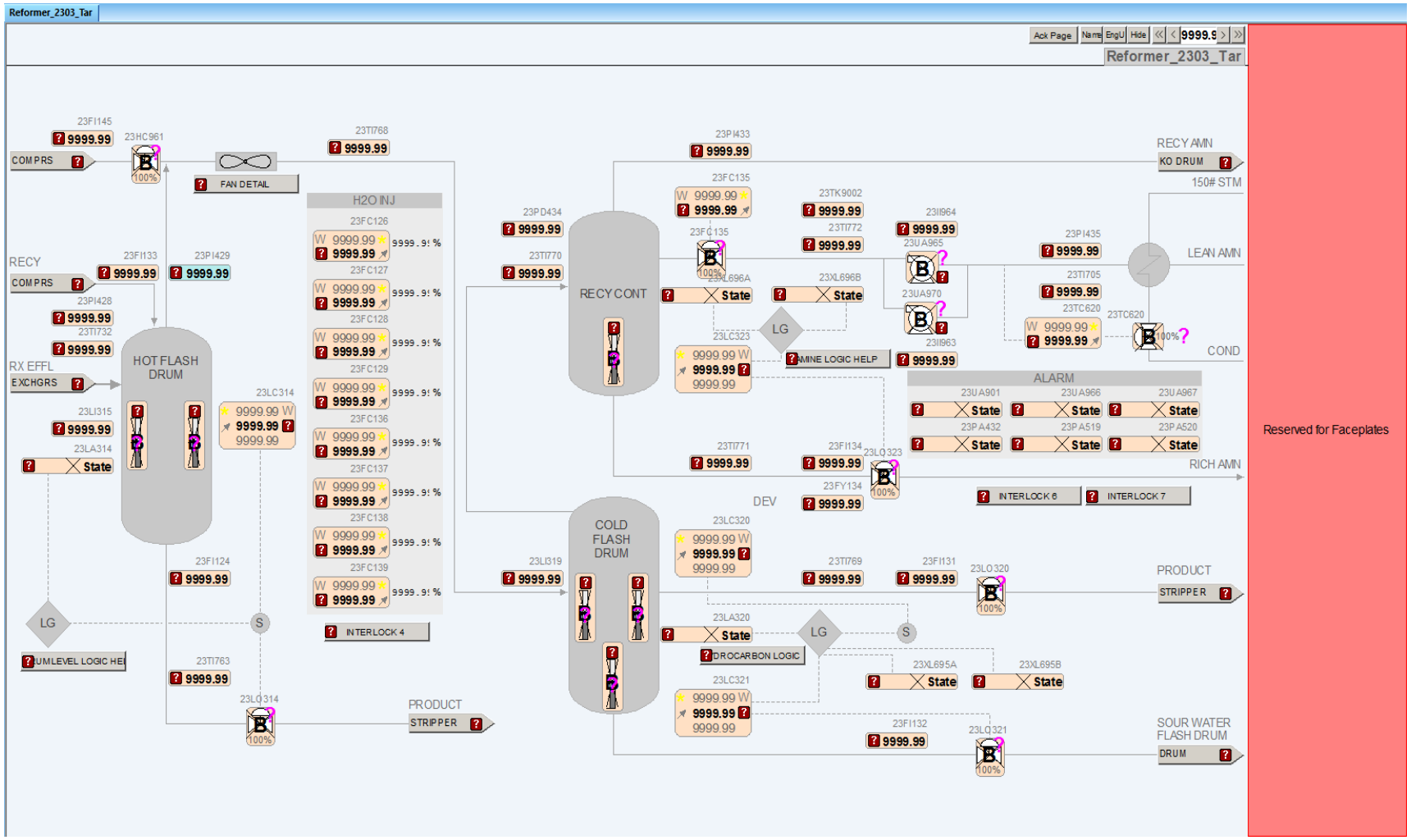

Reformer_2303H3
2303H3 HDS Cold Flash Drum Hydrocarbon Logic Help
ACK
SIL
Process
If either hydrocarbon level lowers to the configured low level trip, the logic triggers the handswitch which de-energizes the solenoid closing the associated valves - regardless of the controller output.
The "Lo Level Shutoff" alarm will clear when both level indications have cleared the low level trip.
These two interlocks can operate independently.
When the cold flash drum chopper valve, 23XV184 trips, the trip flag sends a 20 second signal to TDC logic slot 01_11L08. The logic slot sends a command to change the mode of 23LC321 to manual and sets it to -5% open.
This is done to prevent control valve 23-LV-321 from driving full open when the tripped chopper valve increases the level sensed by 23-LT-321-A. Logic requires 2oo2 trip flags (23XL695A/B).
After the pulse operator has control of 23LC321.
Logic: 01_11L08
Trip: 9999.9%
Press Enter to Bypass
TMR Shutdown
23XL695A
State
23XL695B
State
Shutoff Bypass
Bypass Switch
TTT
Cold Flash Drum
Level Shutoff
LG
23HS320
State
23LI319
23LC320
S
Product Stripper
Text%
23LC321
TMR Shutdown
Sour Water
23XV184
Text%
NOTE: A bypass switch is provided to allow the low level trip logic to be bypassed. Select the target and press <Enter> to turn ON/OFF. The logic will generate a "Shutoff Bypass" alarm when bypassed. Only the 23LC320 is bypassed here. 23LC321 trip may be bypassed from the TMR page.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2303H3
Ack Page
Name
EngU
Hide
Reformer_2303H3
PROCESS
IF EITHER HYDROCARBON LEVEL LOWERS TO THE CONFIGURED LOW LEVEL TRIP, THE LOGIC TRIGGERS THE HANDSWITCH WHICH DE-ENERGIZES THE SOLENOID CLOSING THE ASSOCIATED VALVES - REGARDLESS OF THE CONTROLLER OUTPUT.
THE "LO LEVEL SHUTOFF" ALARM WILL CLEAR WHEN BOTH LEVEL INDICATIONS HAVE CLEARED THE LOW LEVEL TRIP.
THESE TWO INTERLOCKS CAN OPERATE INDEPENDENTLY.
WHEN THE COLD FLASH DRUM CHOPPER VALVE, 23XV184 TRIPS, THE TRIP FLAG SENDS A 20 SECOND SIGNAL TO TDC LOGIC SLOT 01_11L08. THE LOGIC SLOT SENDS A COMMAND TO CHANGE THE MODE OF 23LC321 TO MANUAL AND SETS IT TO -5% OPEN.
THIS IS DONE TO PREVENT CONTROL VALVE 23-LV-321 FROM DRIVING FULL OPEN WHEN THE TRIPPED CHOPPER VALVE INCREASES THE LEVEL SENSED BY 23-LT-321-A. LOGIC REQUIRES 2OO2 TRIP FLAGS (23XL695A/B).
AFTER THE PULSE OPERATOR HAS CONTROL OF 23LC321.
LOGIC: 01_11L08
TRIP :9999.99 %
TMR SHUTDOWN
23XL695A
23XL695B
State
State
PRESS ENTER TO BYPASS
23HA320
State
23HS320
State
LG
23HS320
State
23LC320
9999.99 W
9999.99
9999.99
S
23LI319
9999.99
COLD FLASH DRUM
23LC321
9999.99 W
9999.99
9999.99
23LC320
100%
PRODUCT
STRIPPER
TMR SHUTDOWN
23XV184
23LC321
100%
SOUR
WATER
NOTE: A BYPASS SWITCH IS PROVIDED TO ALLOW THE LOW LEVEL TRIP LOGIC TO BE BYPASSED. SELECT THE TARGET AND PRESS <ENTER> TO TURN ON/OFF. THE LOGIC WILL GENERATE A "SHUTOFF BYPASS" ALARM WHEN BYPASSED. ONLY THE 23LC320 IS BYPASSED HERE. 23LC321 TRIP MAY BE BYPASSED FROM THE TMR PAGE.
Reserved for Faceplates

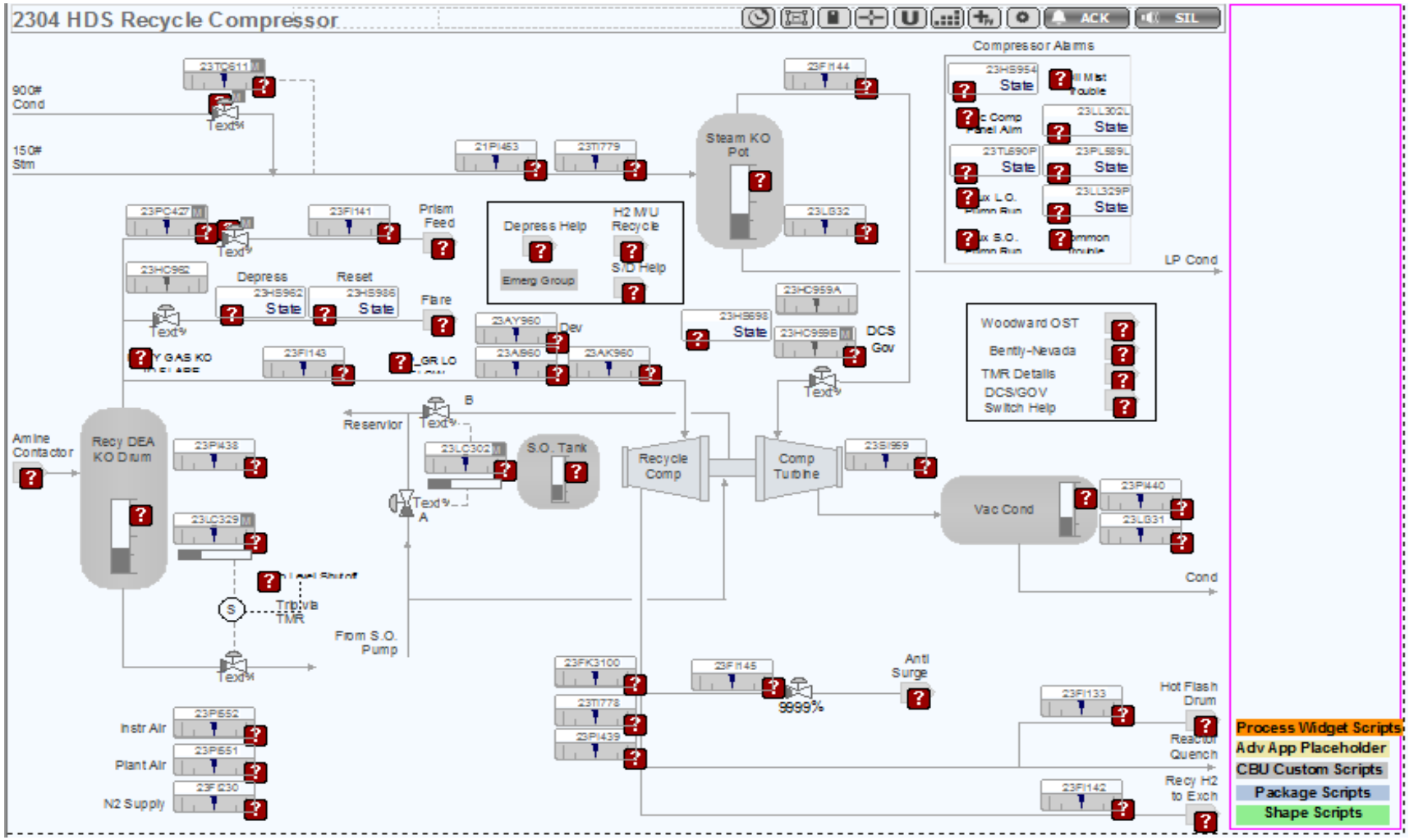
1.125 2303 HDS HOT FLASH DRUM / COLD FLASH DRUM (Reformer_2303_Tar.htm)

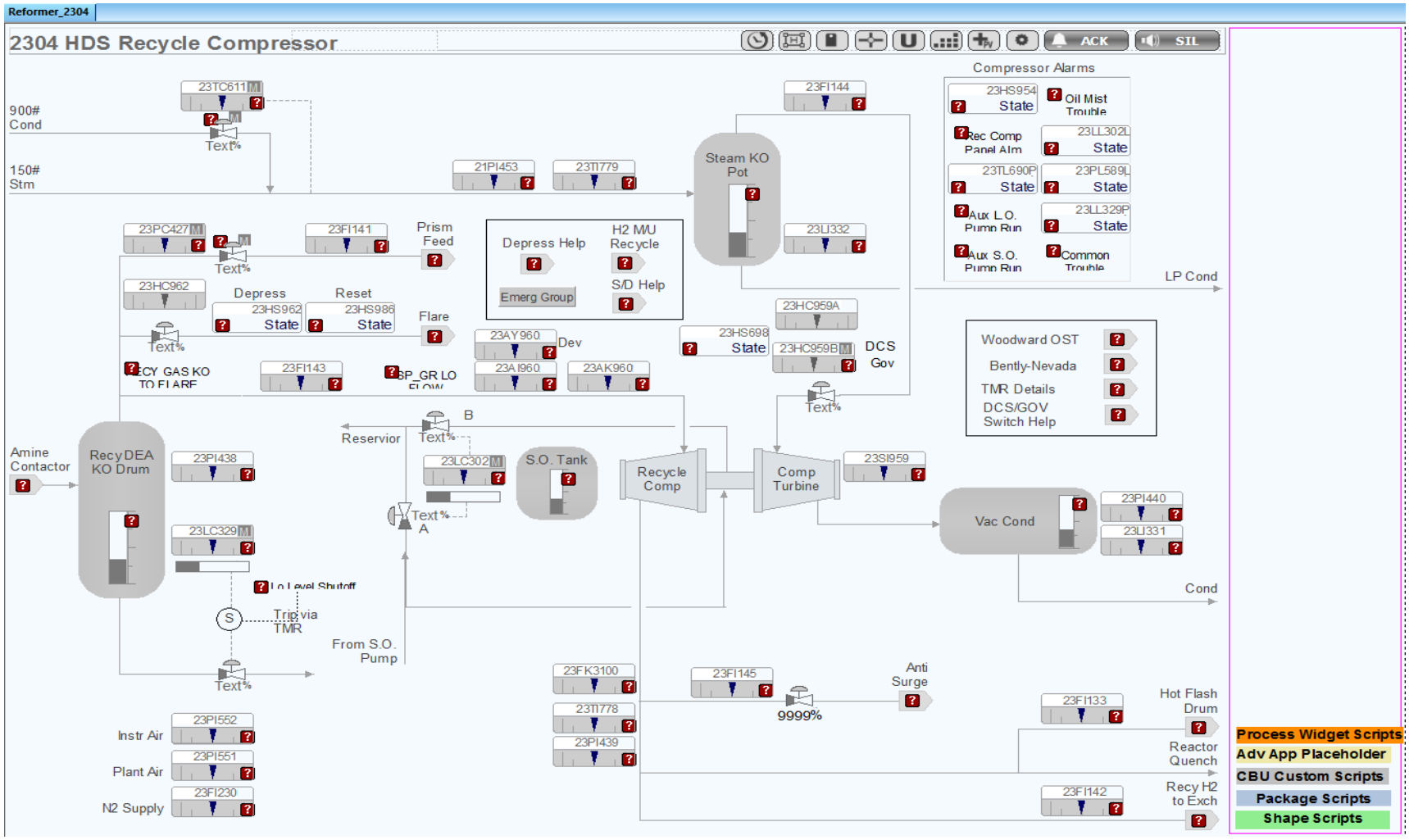


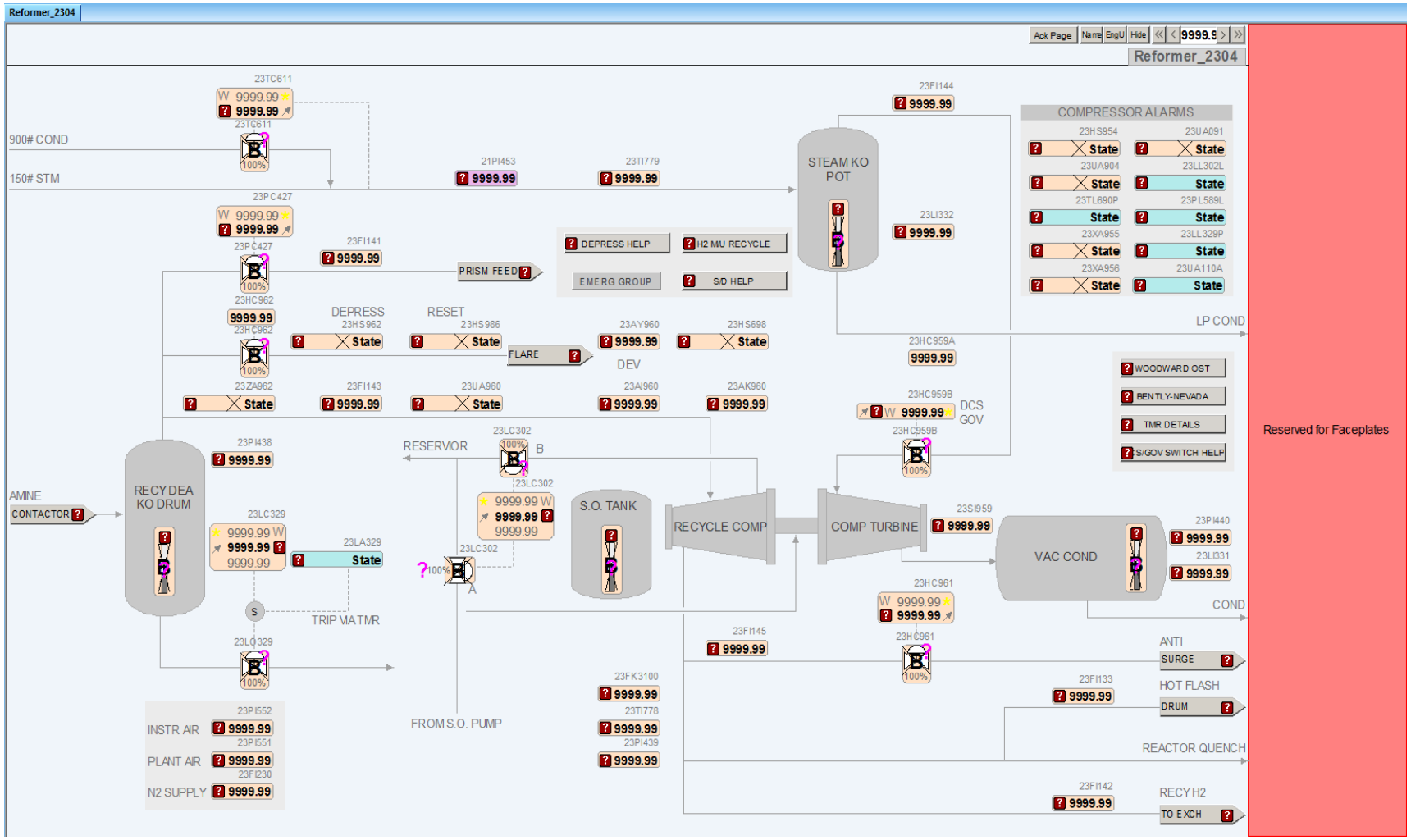

Reformer_2303_Tar
2303 HDS Hot Flash Drum / Cold Flash Drum
ACK
SIL
Recy Comprs
23FI145
9999%
23TI768
Recy Comprs
23FI133
23PI429
23PI428
Rx Effl Exchgrs
23TI732
Hot Flash Drum
23LI315
Level Shutoff
23LC314
H2O Inj
23FC126
23FC127
23FC128
23FC129
23FC136
23FC137
23FC138
23FC139
9999.%
23FI124
LG
S
Interlock 4
23TI763
Text%
Product Stripper
23PI433
Recy Amn KO Drum
150# Stm
23PD434
23TI770
Recy Cont
23FC135
23TK9002
23TI772
23II964
23PI435
Lean Amn
23TI705
23XL696A
23XL696B
State
LG
23II963
23TC620
Text%
Cond
23LC323
Alarms
Panel Troub
Lube Oil Ductn Press
Lube Oil Low Press
23TI771
23FI134
23FY 134
Dev
Rich Amn
Interlock 6
Interlock 7
Cold Flash Drum
23LI319
23LC320
23TI769
23FI131
Product Stripper
Level Shutoff
LG
S
23LC321
23XL695A
23XL695B
State
23FI132
Sour Water Flash Drum
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
A


Reformer_2303_Tar
Ack Page
Name
EngU
Hide
Reformer_2303_Tar
COMPRS
FAN DETAIL
H2O INJ
RECY
COMPRS
RX EFFL
EXCHGRS
HOT FLASH DRUM
RECY CONT
COLD FLASH DRUM
DEV
RECY AMN
KO DRUM
150# STM
LEAN AMN
COND
ALARM
RICH AMN
PRODUCT
STRIPPER
SOUR WATER FLASH DRUM
DRUM
INTERLOCK 4
INTERLOCK 6
INTERLOCK 7
Reserved for Faceplates

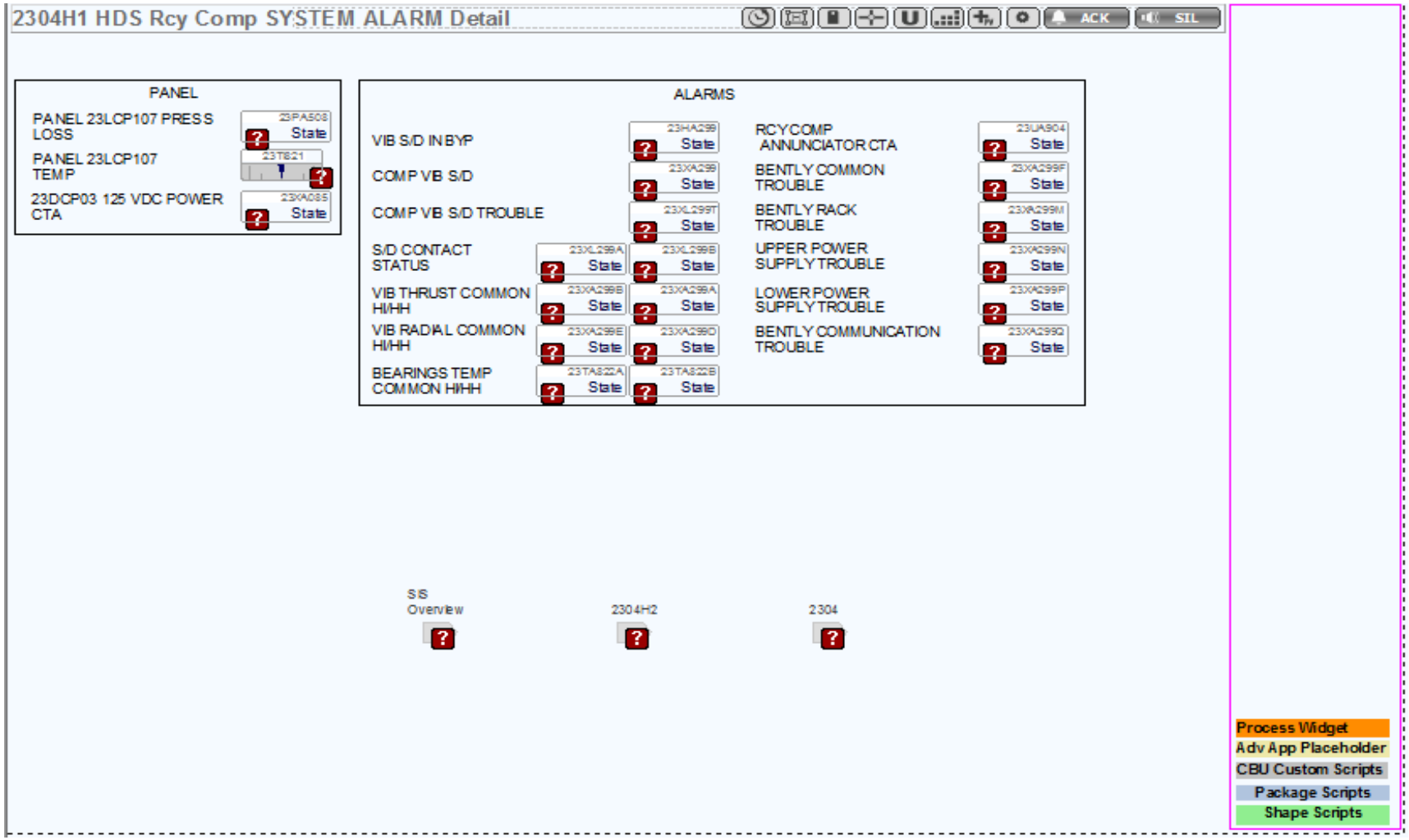
1.126 2304 HDS RECYCLE COMPRESSOR (Reformer_2304.htm)

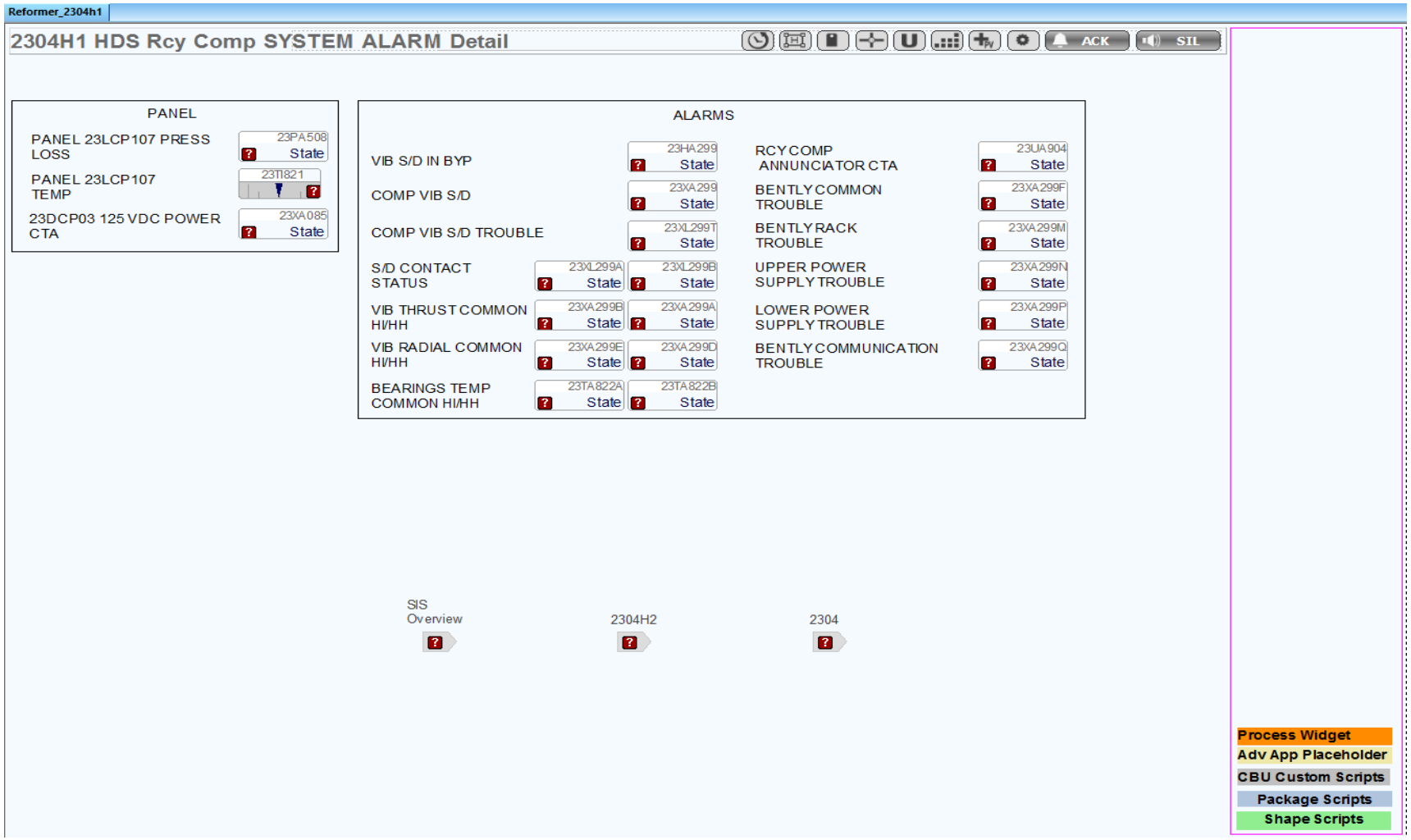


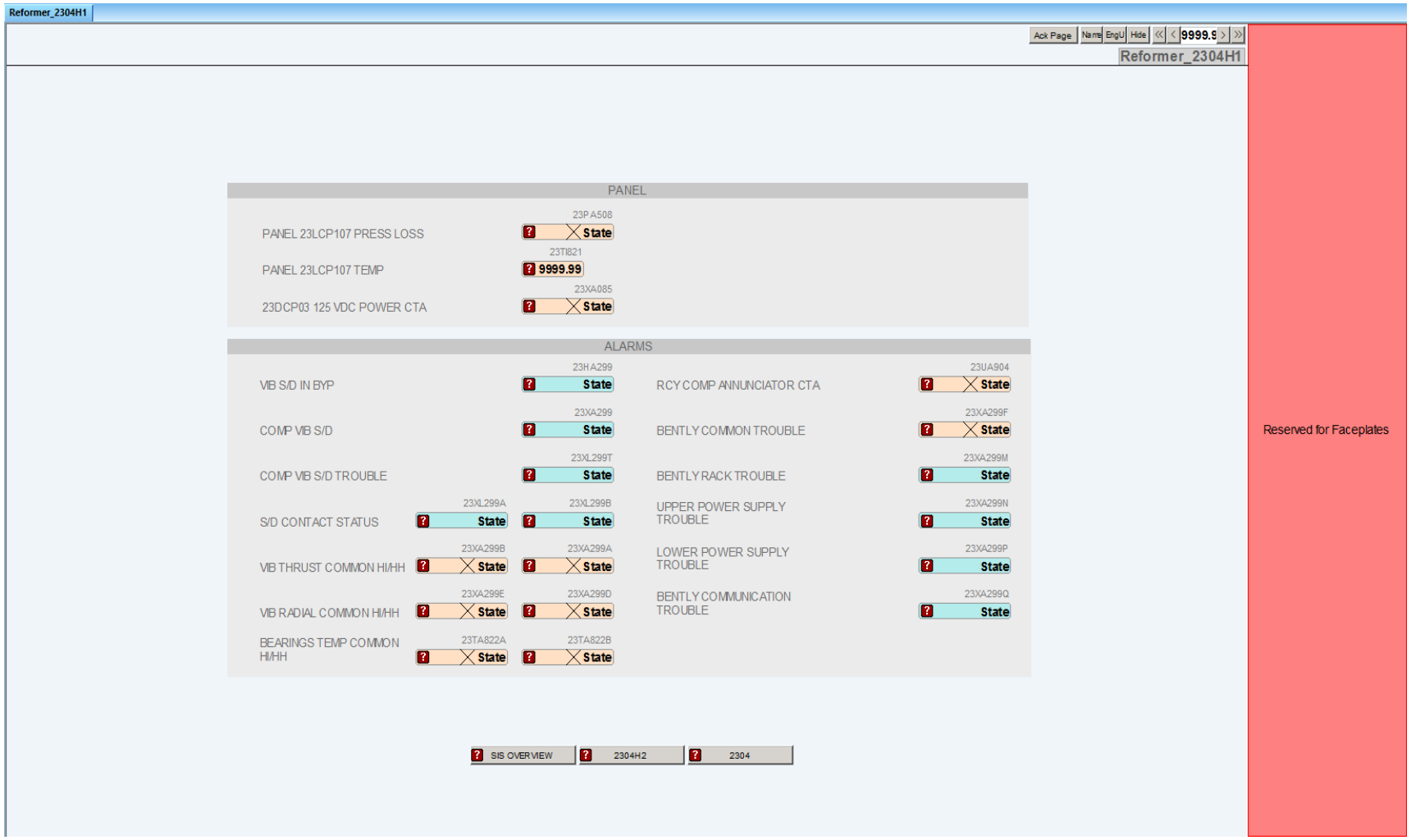

Reformer_2304
2304 HDS Recycle Compressor
ACK
SIL
Compressor Alarms
23HS954 State
Oil Mist Trouble
Rec Comp Panel Alm
23LL302L State
23TL690P State
23PL589L State
Aux L.O. Pump Run
23LL329P State
Aux S.O. Pump Run
Common Trouble
900# Cond
150# Stm
23TC611
Text%
21PI453
23TI779
23FI144
Steam KO Pot
23LI332
LP Cond
23PC427
23FI141
Prism Feed
Depress Help
H2 MU Recycle
Emerg Group
S/D Help
23HC962
Depress
Reset
23HS962 State
23HS986 State
Flare
23AY960
Dev
23HS698 State
23HC959A
23HC959B
DCS Gov
Woodward OST
Bently-Nevada
TMR Details
DCS/GOV Switch Help
23FI143
23AI960
23AK960
Amine Contactor
Recy DEA KO Drum
23PI438
23LC329
Lo Level Shutoff
Trip via TMR
Reservior
B
23LC302
A
S.O. Tank
Recycle Comp
Comp Turbine
23SI959
Vac Cond
23PI440
23LI331
Cond
From S.O. Pump
23FK3100
23TI778
23PI439
23FI145
9999%
Anti Surge
23FI133
Hot Flash Drum
Reactor Quench
23FI142
Recy H2 to Exch
Instr Air
23PI552
Plant Air
23PI551
N2 Supply
23FI230
Process Widget Scripts
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2304
Ack Page
Name
EngU
Hide
Reformer_2304
900# COND
150# STM
23TC611
21PI453
23TI779
23FI144
STEAM KO POT
23LI332
COMPRESSOR ALARMS
23HS954
23UA091
23UA904
23LL302L
23TL690P
23PL589L
23XA955
23LL329P
23XA956
23UA110A
State
23PC427
23FI141
PRISM FEED
DEPRESS HELP
H2 MU RECYCLE
EMERG GROUP
S/D HELP
23HC962
9999.99
DEPRESS
RESET
23HS962
23HS986
FLARE
23AY960
DEV
23HS698
LP COND
23HC959A
23ZA962
23FI143
23UA960
23AI960
23AK960
23HC959B
DCS GOV
WOODWARD OST
BENTLY-NEVADA
TMR DETAILS
S/GOV SWITCH HELP
Reserved for Faceplates
23PI438
RESERVIOR
23LC302
B
AMINE
CONTACTOR
RECY DEA KO DRUM
23LC329
23LA329
S.O. TANK
RECYCLE COMP
COMP TURBINE
23SI959
VAC COND
23PI440
23LI331
COND
23HC961
TRIP VIA TMR
A
23FI145
ANTI SURGE
23FI133
HOT FLASH DRUM
23FK3100
23TI778
23PI439
REACTOR QUENCH
23PI552
INSTR AIR
23PI551
PLANT AIR
23FI230
N2 SUPPLY
FROM S.O. PUMP
23FI142
RECY H2 TO EXCH

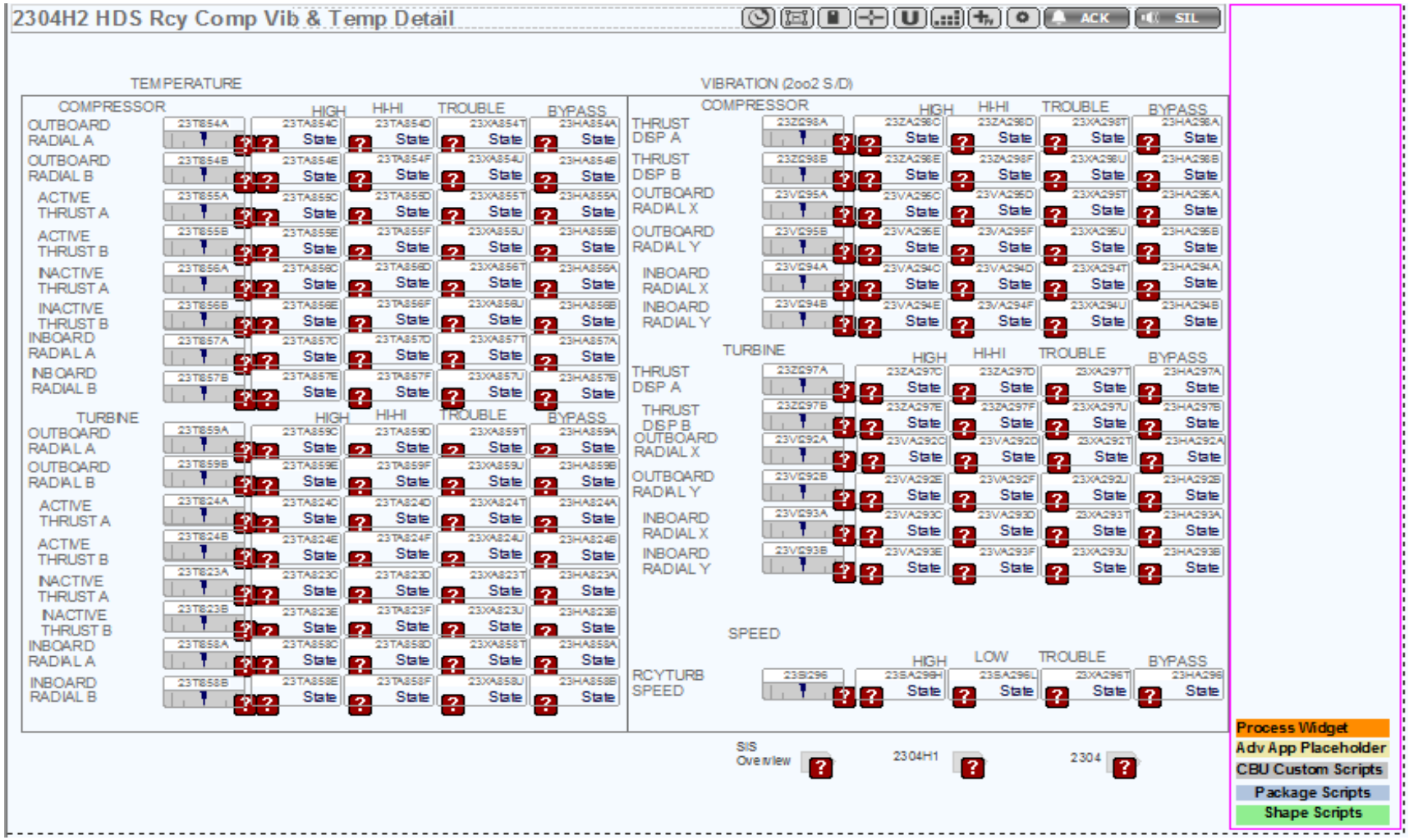
1.127 2304H1 HDS RCY COMP SYSTEM ALARM DETAIL (Reformer_2304h1.htm)

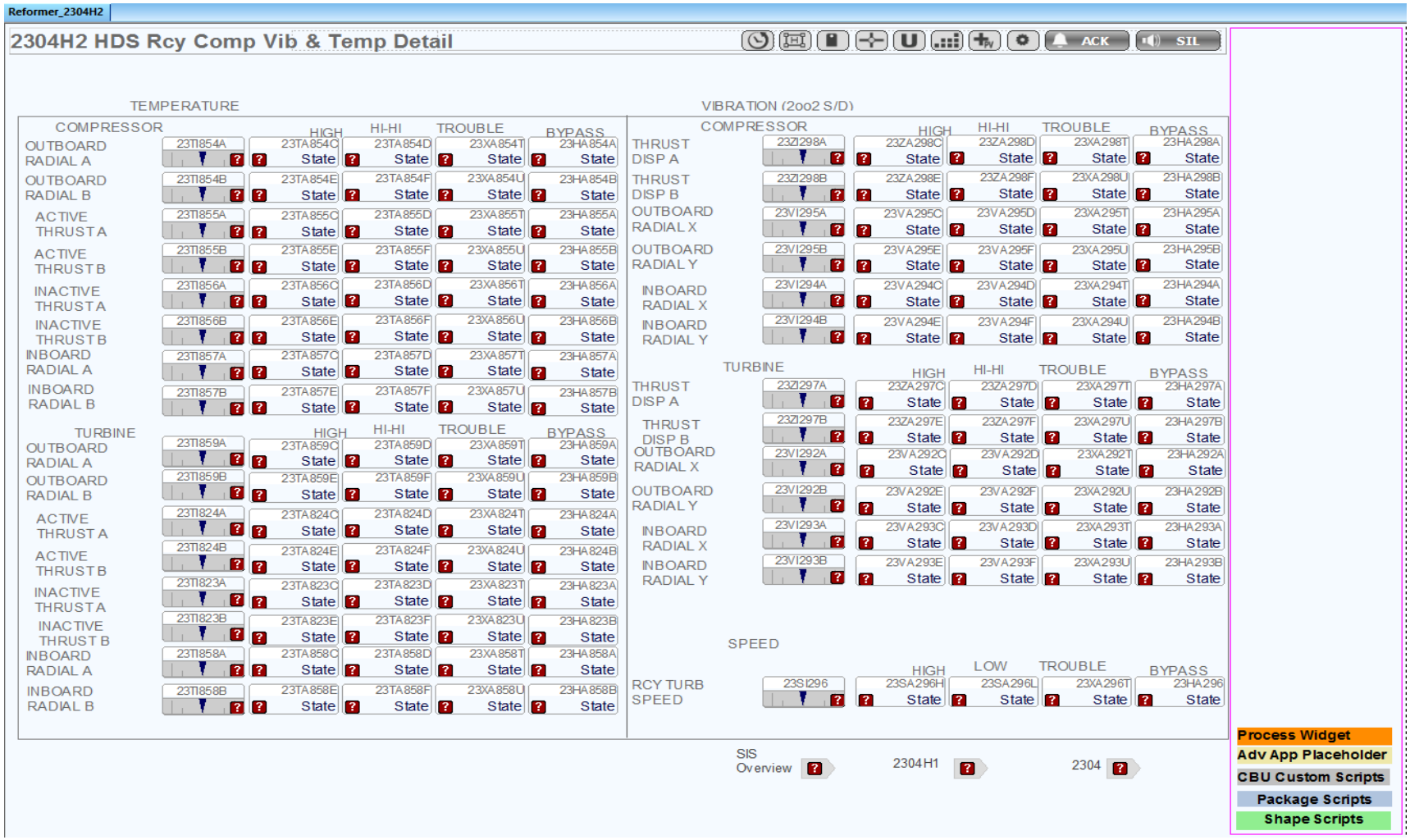


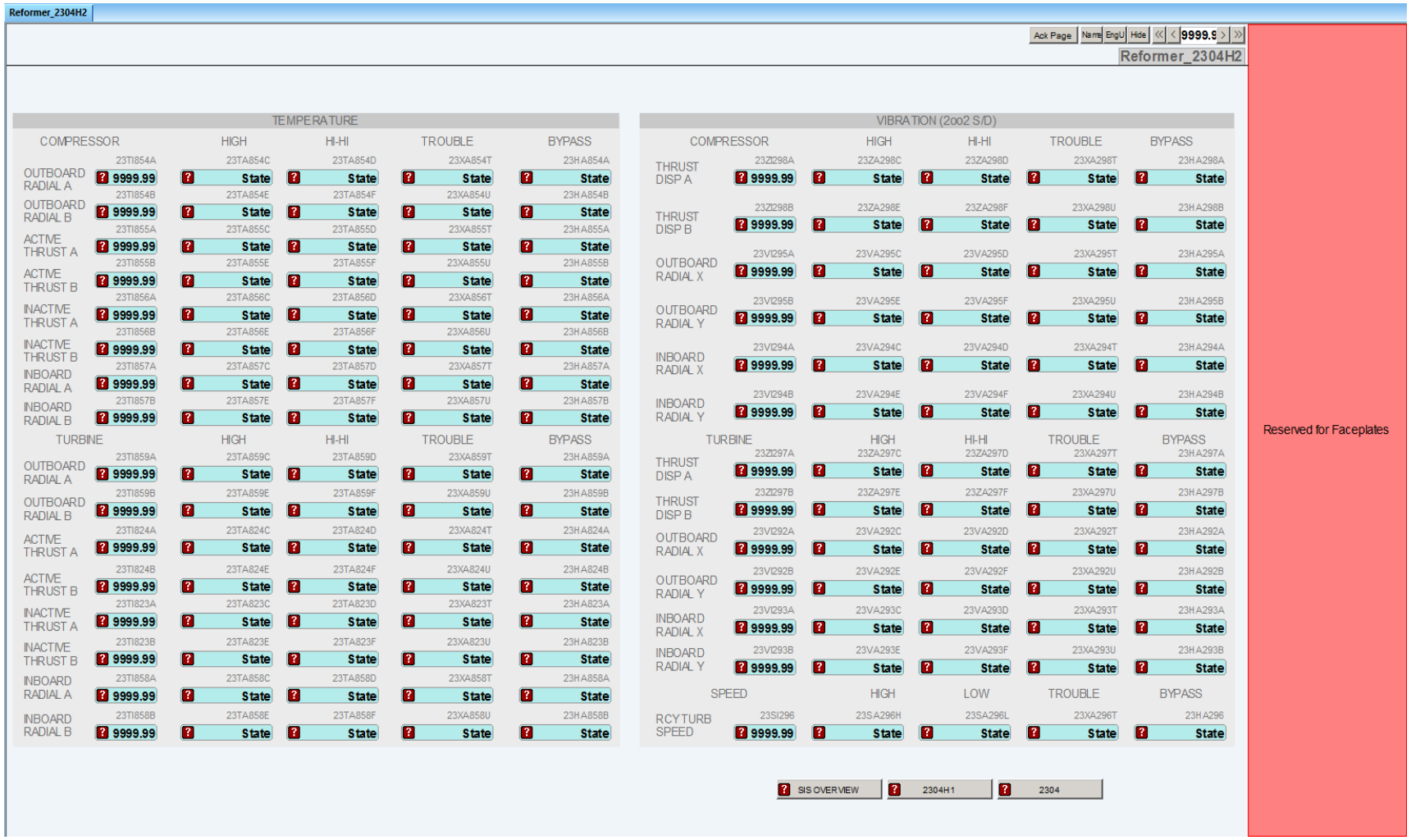

Reformer_2304h1
2304H1 HDS Rcy Comp SYSTEM ALARM Detail
ACK
SIL
PANEL
PANEL 23LCP107 PRESS LOSS
23PA508 State
PANEL 23LCP107 TEMP
23TI821
23DCP03 125 VDC POWER CTA
23XA085 State
ALARMS
VIB S/D IN BYP
23HA299 State
COMP VIB S/D
23XA299 State
COMP VIB S/D TROUBLE
23XL299T State
S/D CONTACT STATUS
23XL299A State
23XL299B State
VIB THRUST COMMON HI/HH
23XA299B State
23XA299A State
VIB RADIAL COMMON HI/HH
23XA299E State
23XA299D State
BEARINGS TEMP COMMON HI/HH
23TA822A State
23TA822B State
RCY COMP ANNUNCIATOR CTA
23UA904 State
BENTLY COMMON TROUBLE
23XA299F State
BENTLY RACK TROUBLE
23XA299M State
UPPER POWER SUPPLY TROUBLE
23XA299N State
LOWER POWER SUPPLY TROUBLE
23XA299P State
BENTLY COMMUNICATION TROUBLE
23XA299Q State
SIS Overview
2304H2
2304
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2304H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2304H1
PANEL
23PA508
PANEL 23LCP107 PRESS LOSS
State
23TI821
PANEL 23LCP107 TEMP
9999.99
23XA085
23DCP03 125 VDC POWER CTA
State
ALARMS
23HA299
VIB S/D IN BYP
State
23XA299
COMP VIB S/D
State
23XL299T
COMP VIB S/D TROUBLE
State
23XL299A
23XL299B
S/D CONTACT STATUS
State
State
23XA299B
23XA299A
VIB THRUST COMMON HI/HH
State
State
23XA299E
23XA299D
VIB RADIAL COMMON HI/HH
State
State
23TA822A
23TA822B
BEARINGS TEMP COMMON HI/HH
State
State
23UA904
RCY COMP ANNUNCIATOR CTA
State
23XA299F
BENTLY COMMON TROUBLE
State
23XA299M
BENTLY RACK TROUBLE
State
23XA299N
UPPER POWER SUPPLY TROUBLE
State
23XA299P
LOWER POWER SUPPLY TROUBLE
State
23XA299Q
BENTLY COMMUNICATION TROUBLE
State
SIS OVERVIEW
2304H2
2304
Reserved for Faceplates

1.128 2304H2 HDS RCY COMP VIB & TEMP DETAIL (Reformer_2304H2.htm)




Reformer_2304H2
2304H2 HDS Rcy Comp Vib & Temp Detail
ACK
SIL
TEMPERATURE
COMPRESSOR
HIGH
HI-HI
TROUBLE
BYPASS
OUTBOARD RADIAL A
23TI854A
23TA854C State
23TA854D State
23XA854T State
23HA854A State
OUTBOARD RADIAL B
23TI854B
23TA854E State
23TA854F State
23XA854U State
23HA854B State
ACTIVE THRUST A
23TI855A
23TA855C State
23TA855D State
23XA855T State
23HA855A State
ACTIVE THRUST B
23TI855B
23TA855E State
23TA855F State
23XA855U State
23HA855B State
INACTIVE THRUST A
23TI856A
23TA856C State
23TA856D State
23XA856T State
23HA856A State
INACTIVE THRUST B
23TI856B
23TA856E State
23TA856F State
23XA856U State
23HA856B State
INBOARD RADIAL A
23TI857A
23TA857C State
23TA857D State
23XA857T State
23HA857A State
INBOARD RADIAL B
23TI857B
23TA857E State
23TA857F State
23XA857U State
23HA857B State
TURBINE
HIGH
HI-HI
TROUBLE
BYPASS
OUTBOARD RADIAL A
23TI859A
23TA859C State
23TA859D State
23XA859T State
23HA859A State
OUTBOARD RADIAL B
23TI859B
23TA859E State
23TA859F State
23XA859U State
23HA859B State
ACTIVE THRUST A
23TI824A
23TA824C State
23TA824D State
23XA824T State
23HA824A State
ACTIVE THRUST B
23TI824B
23TA824E State
23TA824F State
23XA824U State
23HA824B State
INACTIVE THRUST A
23TI823A
23TA823C State
23TA823D State
23XA823T State
23HA823A State
INACTIVE THRUST B
23TI823B
23TA823E State
23TA823F State
23XA823U State
23HA823B State
INBOARD RADIAL A
23TI858A
23TA858C State
23TA858D State
23XA858T State
23HA858A State
INBOARD RADIAL B
23TI858B
23TA858E State
23TA858F State
23XA858U State
23HA858B State
VIBRATION (2oo2 S/D)
COMPRESSOR
HIGH
HI-HI
TROUBLE
BYPASS
THRUST DISP A
23ZI298A
23ZA298C State
23ZA298D State
23XA298T State
23HA298A State
THRUST DISP B
23ZI298B
23ZA298E State
23ZA298F State
23XA298U State
23HA298B State
OUTBOARD RADIAL X
23VI295A
23VA295C State
23VA295D State
23XA295T State
23HA295A State
OUTBOARD RADIAL Y
23VI295B
23VA295E State
23VA295F State
23XA295U State
23HA295B State
INBOARD RADIAL X
23VI294A
23VA294C State
23VA294D State
23XA294T State
23HA294A State
INBOARD RADIAL Y
23VI294B
23VA294E State
23VA294F State
23XA294U State
23HA294B State
TURBINE
HIGH
HI-HI
TROUBLE
BYPASS
THRUST DISP A
23ZI297A
23ZA297C State
23ZA297D State
23XA297T State
23HA297A State
THRUST DISP B
23ZI297B
23ZA297E State
23ZA297F State
23XA297U State
23HA297B State
OUTBOARD RADIAL X
23VI292A
23VA292C State
23VA292D State
23XA292T State
23HA292A State
OUTBOARD RADIAL Y
23VI292B
23VA292E State
23VA292F State
23XA292U State
23HA292B State
INBOARD RADIAL X
23VI293A
23VA293C State
23VA293D State
23XA293T State
23HA293A State
INBOARD RADIAL Y
23VI293B
23VA293E State
23VA293F State
23XA293U State
23HA293B State
SPEED
HIGH
LOW
TROUBLE
BYPASS
RCY TURB SPEED
23SI296
23SA296H State
23SA296L State
23XA296T State
23HA296 State
SIS Overview
2304H1
2304
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2304H2
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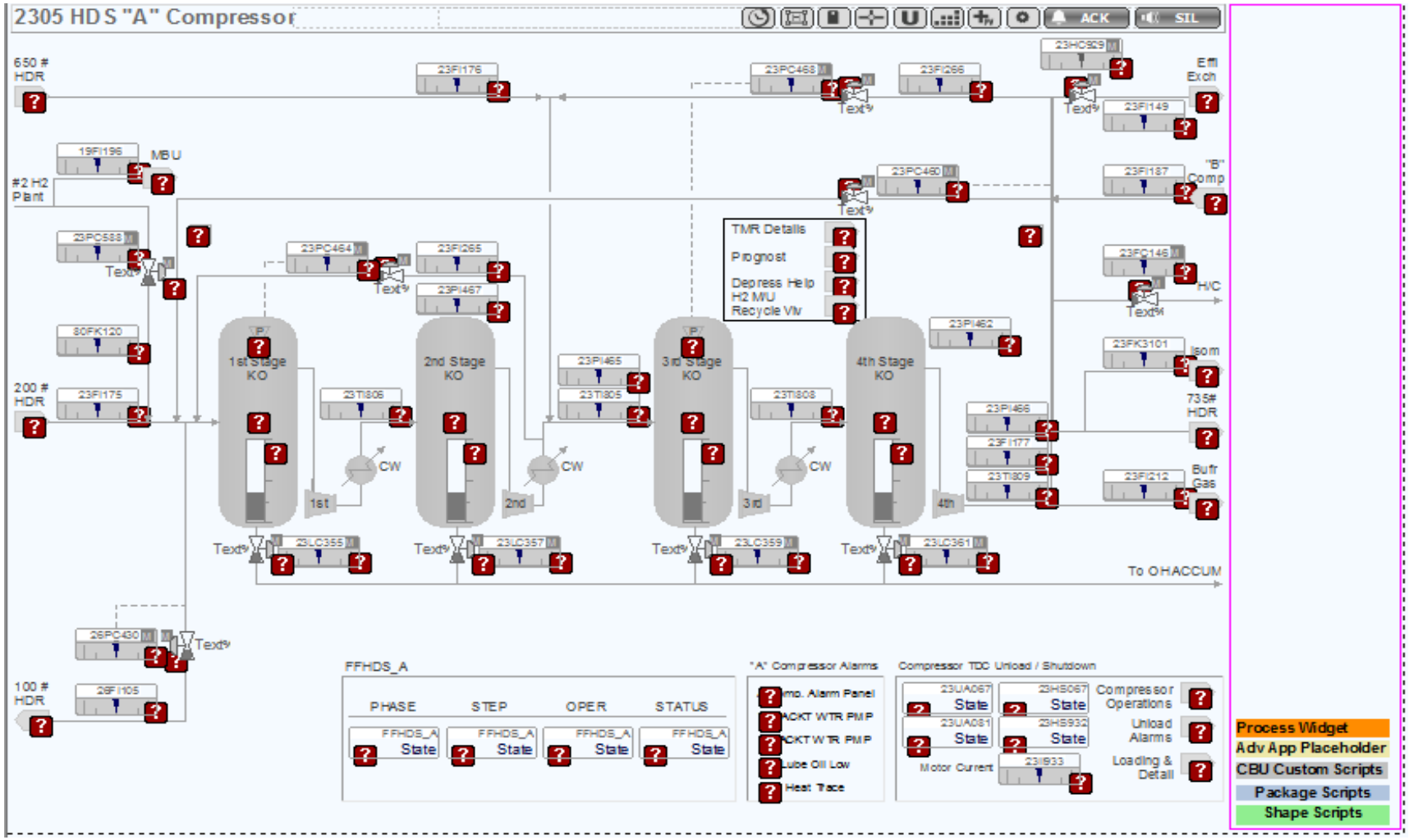
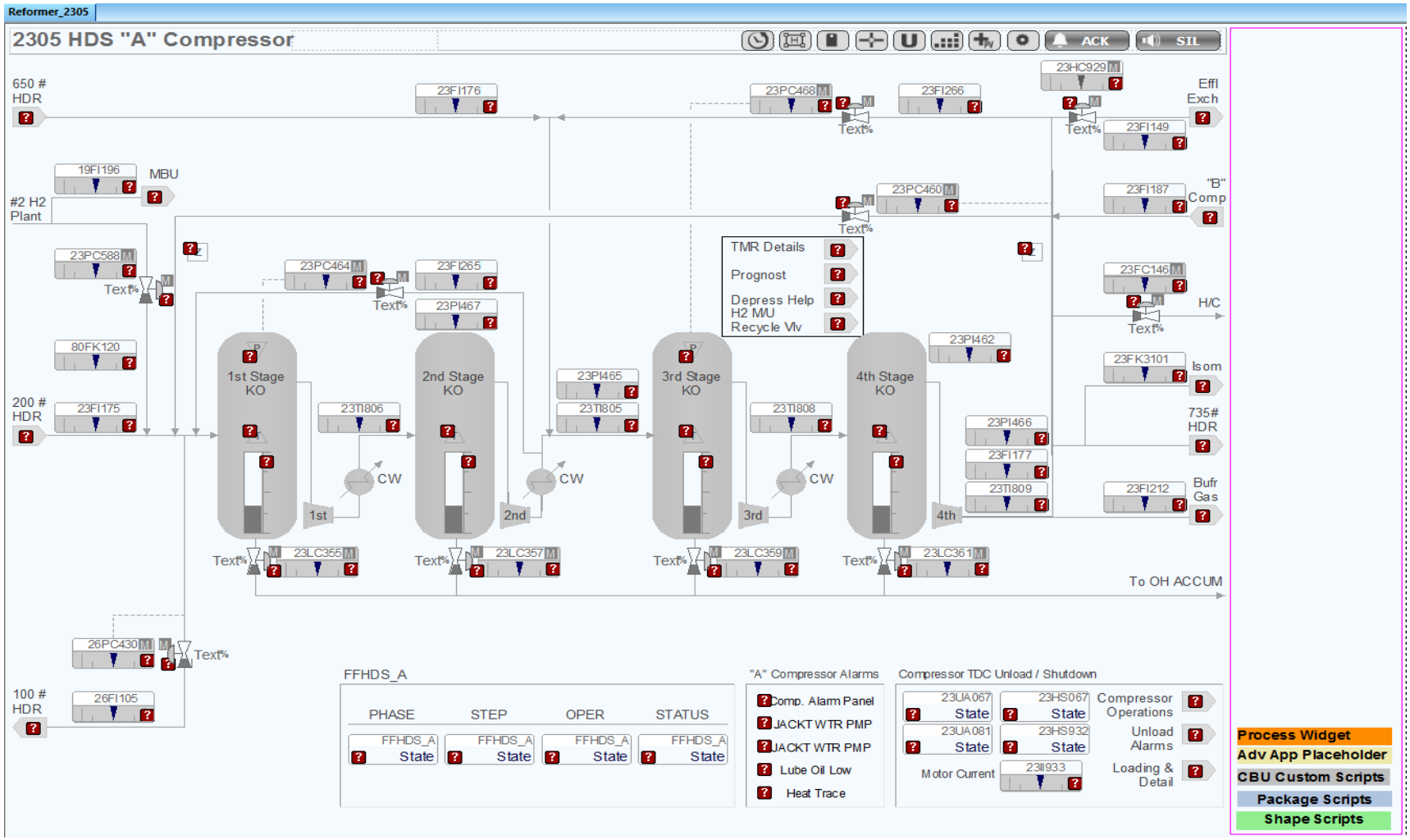
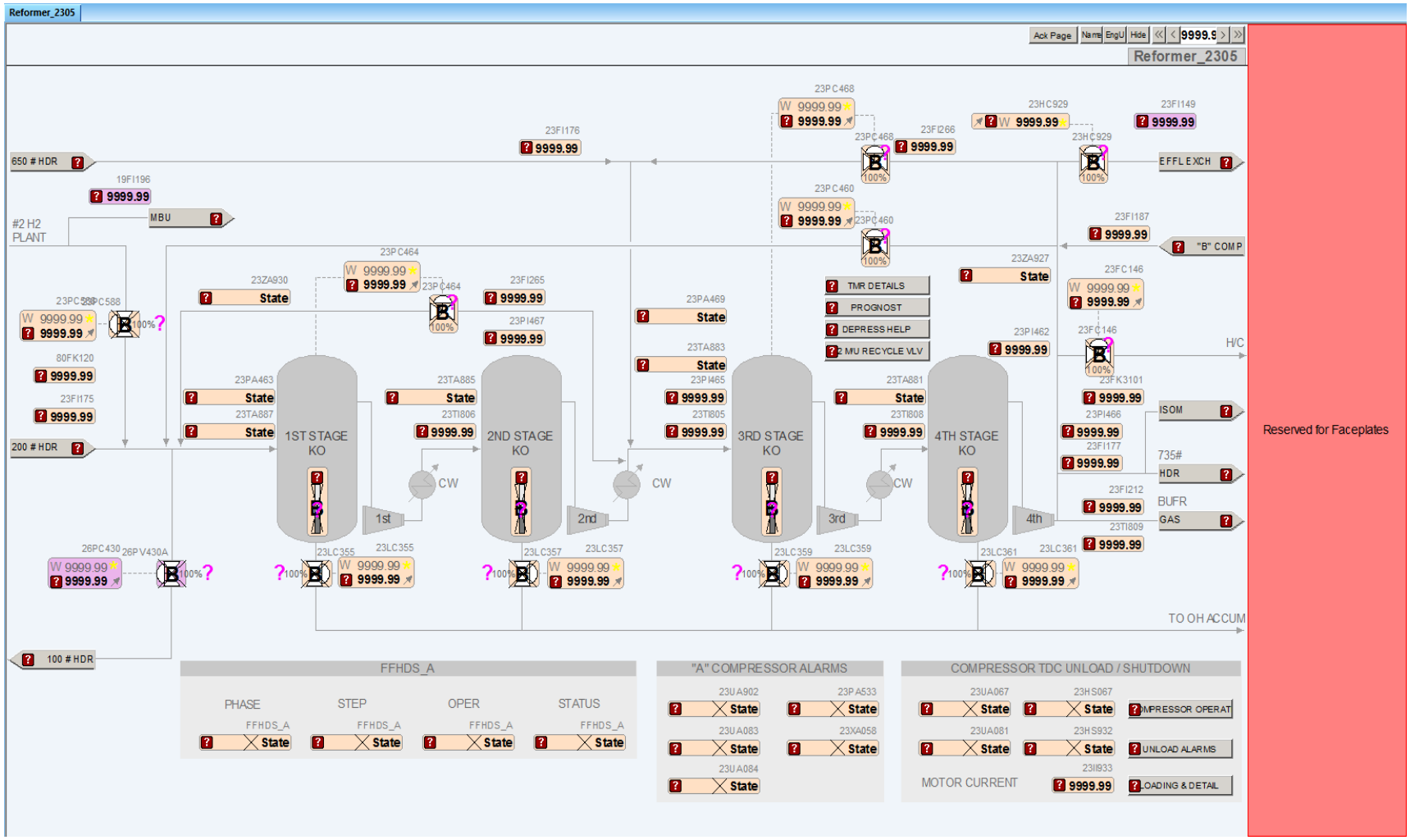
Name
EngU
Hide
9999.9
Reformer_2304H2
TEMPERATURE
COMPRESSOR
HIGH
HI-HI
TROUBLE
BYPASS
OUTBOARD RADIAL A
OUTBOARD RADIAL B
ACTIVE THRUST A
ACTIVE THRUST B
INACTIVE THRUST A
INACTIVE THRUST B
INBOARD RADIAL A
INBOARD RADIAL B
TURBINE
HIGH
HI-HI
TROUBLE
BYPASS
OUTBOARD RADIAL A
OUTBOARD RADIAL B
ACTIVE THRUST A
ACTIVE THRUST B
INACTIVE THRUST A
INACTIVE THRUST B
INBOARD RADIAL A
INBOARD RADIAL B
9999.99
State
VIBRATION (2oo2 S/D)
COMPRESSOR
HIGH
HI-HI
TROUBLE
BYPASS
THRUST DISP A
THRUST DISP B
OUTBOARD RADIAL X
OUTBOARD RADIAL Y
INBOARD RADIAL X
INBOARD RADIAL Y
TURBINE
HIGH
HI-HI
TROUBLE
BYPASS
THRUST DISP A
THRUST DISP B
OUTBOARD RADIAL X
OUTBOARD RADIAL Y
INBOARD RADIAL X
INBOARD RADIAL Y
SPEED
HIGH
LOW
TROUBLE
BYPASS
RCY TURB SPEED
SIS OVERVIEW
2304H1
2304
Reserved for Faceplates

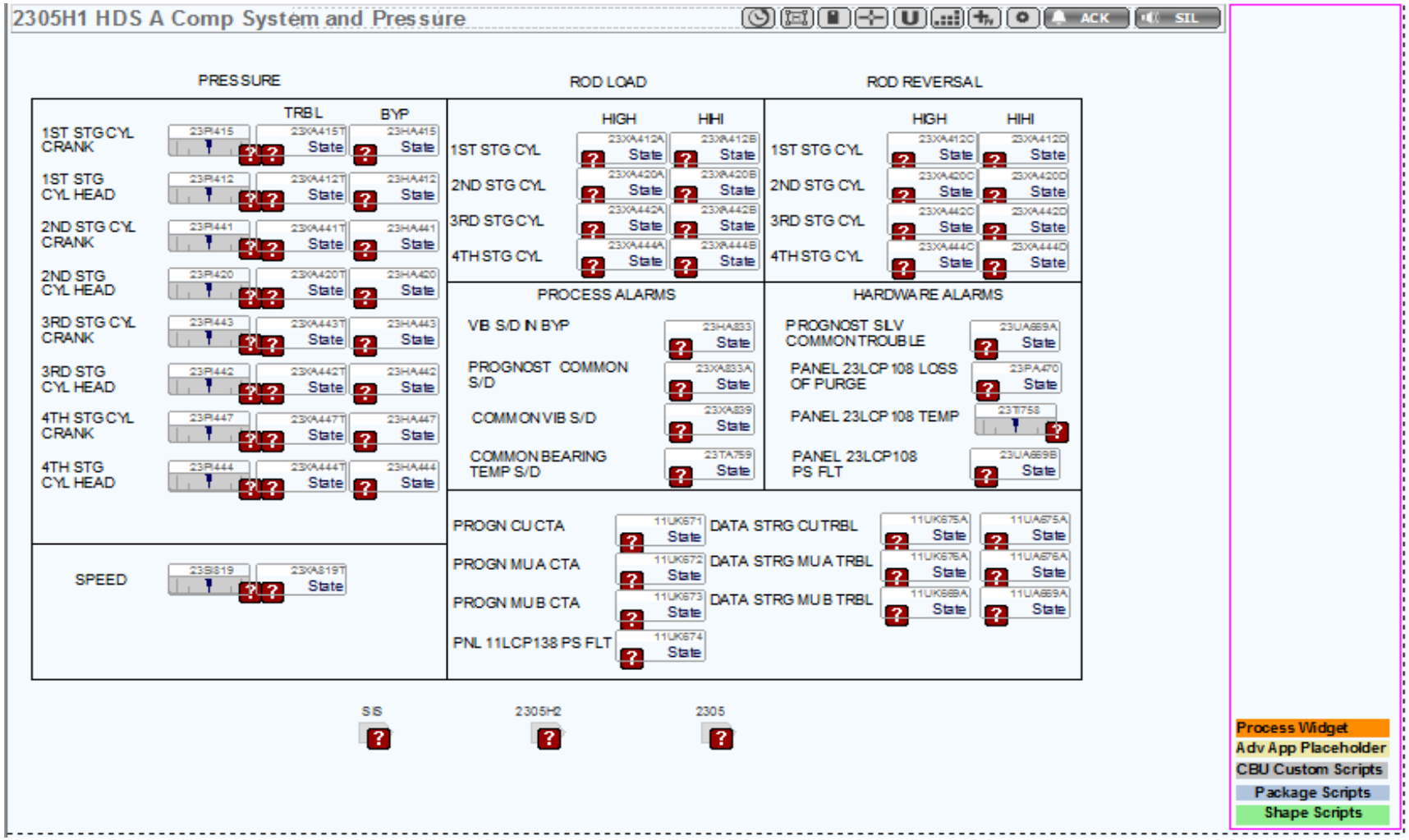
1.129 2305 HDS "A" COMPRESSOR (Reformer_2305.htm)

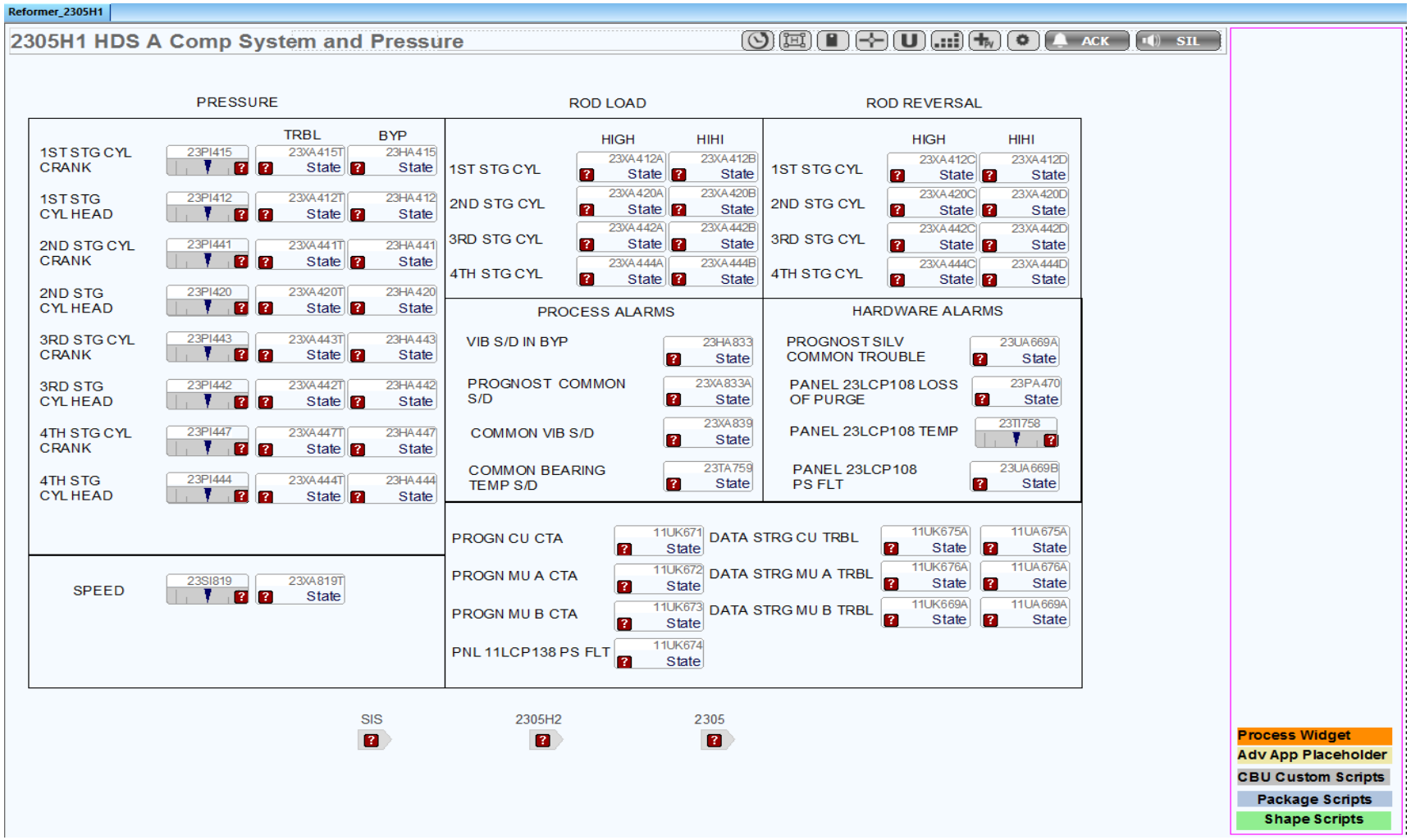


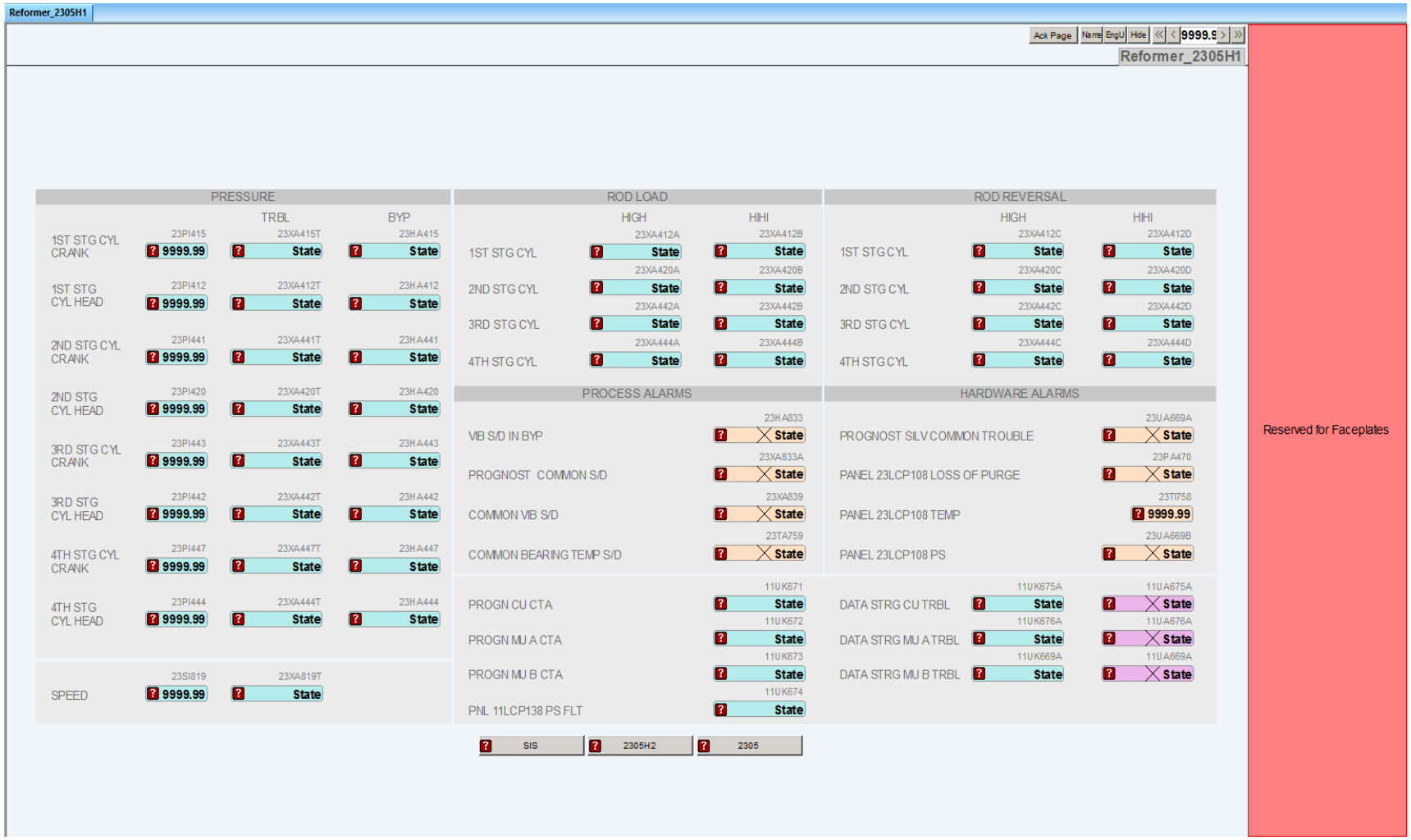

Reformer_2305
2305 HDS "A" Compressor
ACK
SIL
650 # HDR
23FI176
23PC468
Text%
23FI266
23HC929
Effl Exch
23FI149
19FI196
MBU
#2 H2 Plant
23PC460
23FI187
"B" Comp
23PC588
Text%
23PC464
23FI265
23PI467
TMR Details
Prognost
Depress Help
H2 MU
Recycle Vlv
23FC146
H/C
80FK120
1st Stage KO
2nd Stage KO
3rd Stage KO
4th Stage KO
23PI462
23FK3101
Isom
200 # HDR
23FI175
23TI806
23PI465
23TI805
23TI808
23PI466
23FI177
23TI809
735# HDR
CW
1st
2nd
3rd
4th
23FI212
Bufr Gas
23LC355
23LC357
23LC359
23LC361
To OH ACCUM
26PC430
26FI105
100 # HDR
FFHDS_A
PHASE
STEP
OPER
STATUS
State
"A" Compressor Alarms
Comp. Alarm Panel
JACKT WTR PMP
JACKT WTR PMP
Lube Oil Low
Heat Trace
Compressor TDC Unload / Shutdown
23UA067
23HS067
Compressor Operations
23UA081
23HS932
Unload Alarms
Motor Current
23II933
Loading & Detail
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2305
Ack Page
Name
EngU
Hide
Reformer_2305
650 # HDR
19FI196
9999.99
MBU
#2 H2 PLANT
23FI176
9999.99
23PC468
W 9999.99
9999.99
23FI266
9999.99
23HC929
23FI149
9999.99
EFFL EXCH
23PC460
23FI187
9999.99
"B" COMP
23ZA927
State
23FC146
H/C
TMR DETAILS
PROGNOST
DEPRESS HELP
2 MU RECYCLE VLV
23PC464
23ZA930
23FI265
23PA469
23PI467
23PI462
80FK120
23FI175
200 # HDR
23PA463
23TA887
23TA885
23TI806
23TA883
23PI465
23TI805
23TA881
23TI808
23FK3101
23PI466
23FI177
ISOM
735#
HDR
BUFR
GAS
23FI212
23TI809
1ST STAGE KO
2ND STAGE KO
3RD STAGE KO
4TH STAGE KO
CW
1st
2nd
3rd
4th
Reserved for Faceplates
26PC430
26PV430A
23LC355
23LC357
23LC359
23LC361
TO OH ACCUM
100 # HDR
FFHDS_A
PHASE
STEP
OPER
STATUS
"A" COMPRESSOR ALARMS
23UA902
23PA533
23UA083
23XA058
23UA084
COMPRESSOR TDC UNLOAD / SHUTDOWN
23UA067
23HS067
COMPRESSOR OPERAT
23UA081
23HS932
UNLOAD ALARMS
MOTOR CURRENT
23II933
LOADING & DETAIL

1.130 2305H1 HDS A COMP SYSTEM AND PRESSURE ALARM DETAIL (Reformer_2305H1.htm)




Reformer_2305H1
2305H1 HDS A Comp System and Pressure
ACK
SIL
PRESSURE
TRBL
BYP
1ST STG CYL CRANK
23PI415
23XA415T
State
23HA415
State
1ST STG CYL HEAD
23PI412
23XA412T
State
23HA412
State
2ND STG CYL CRANK
23PI441
23XA441T
State
23HA441
State
2ND STG CYL HEAD
23PI420
23XA420T
State
23HA420
State
3RD STG CYL CRANK
23PI443
23XA443T
State
23HA443
State
3RD STG CYL HEAD
23PI442
23XA442T
State
23HA442
State
4TH STG CYL CRANK
23PI447
23XA447T
State
23HA447
State
4TH STG CYL HEAD
23PI444
23XA444T
State
23HA444
State
SPEED
23SI819
23XA819T
State
ROD LOAD
HIGH
HIHI
1ST STG CYL
23XA412A
State
23XA412B
State
2ND STG CYL
23XA420A
State
23XA420B
State
3RD STG CYL
23XA442A
State
23XA442B
State
4TH STG CYL
23XA444A
State
23XA444B
State
ROD REVERSAL
HIGH
HIHI
1ST STG CYL
23XA412C
State
23XA412D
State
2ND STG CYL
23XA420C
State
23XA420D
State
3RD STG CYL
23XA442C
State
23XA442D
State
4TH STG CYL
23XA444C
State
23XA444D
State
PROCESS ALARMS
VIB S/D IN BYP
23HA833
State
PROGNOST COMMON S/D
23XA833A
State
COMMON VIB S/D
23XA839
State
COMMON BEARING TEMP S/D
23TA759
State
HARDWARE ALARMS
PROGNOST SILV COMMON TROUBLE
23UA669A
State
PANEL 23LCP108 LOSS OF PURGE
23PA470
State
PANEL 23LCP108 TEMP
23TI758
PANEL 23LCP108 PS FLT
23UA669B
State
PROGN CU CTA
11UK671
State
PROGN MU A CTA
11UK672
State
PROGN MU B CTA
11UK673
State
PNL 11LCP138 PS FLT
11UK674
State
DATA STRG CU TRBL
11UK675A
State
11UA675A
State
DATA STRG MU A TRBL
11UK676A
State
11UA676A
State
DATA STRG MU B TRBL
11UK669A
State
11UA669A
State
SIS
2305H2
2305
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2305H1
Ack Page
Name
EngU
Hide
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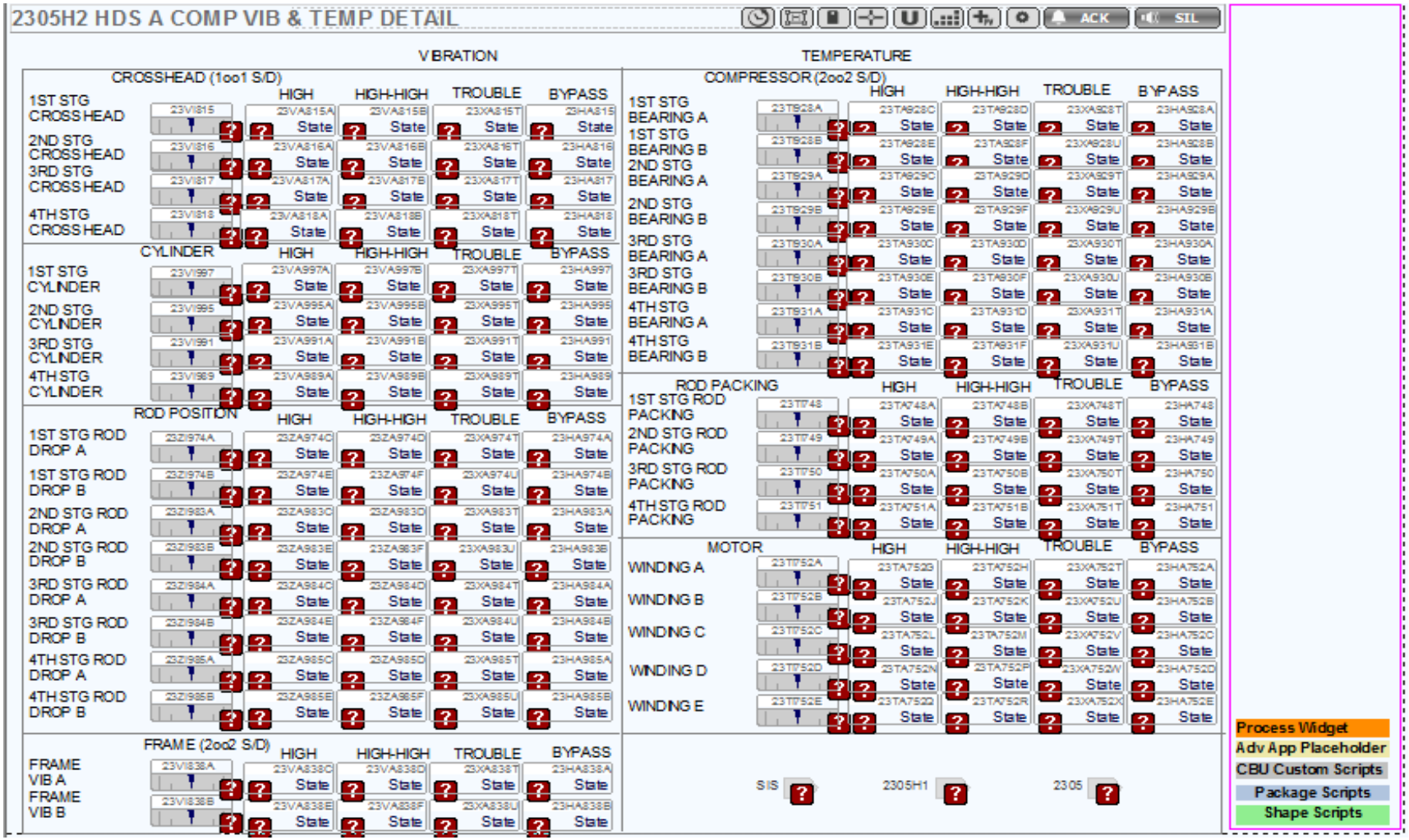
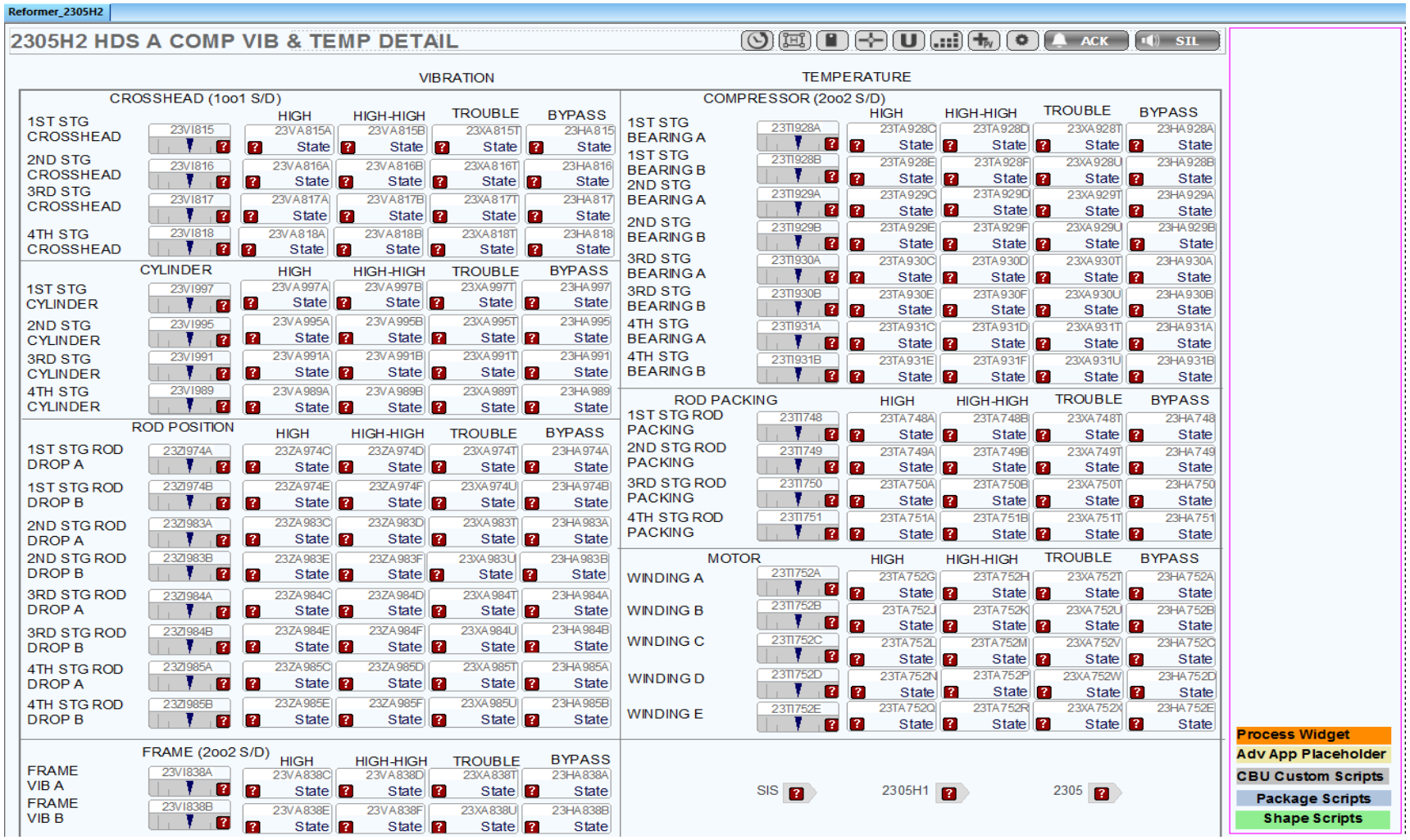
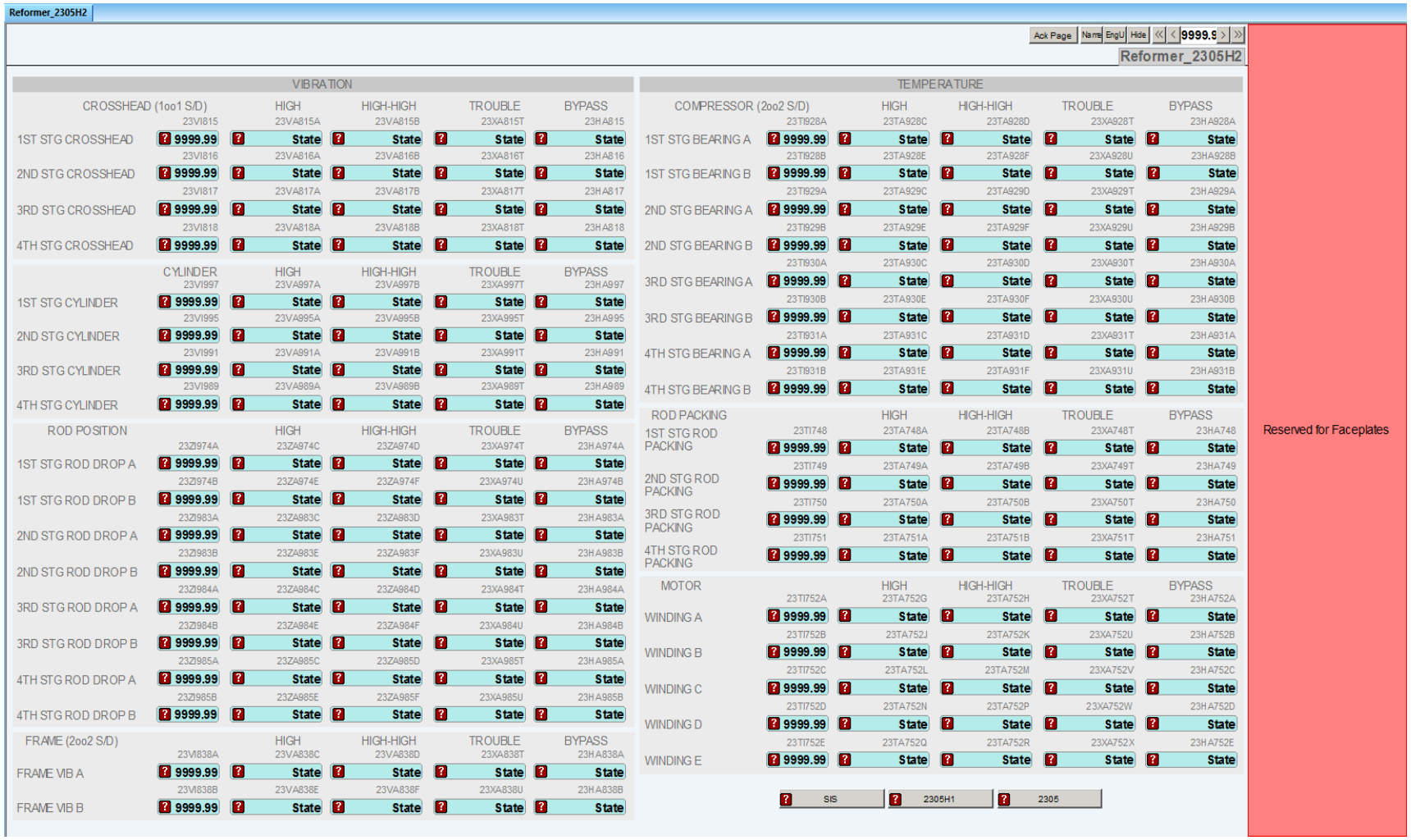
Reformer_2305H1
PRESSURE
TRBL
BYP
1ST STG CYL CRANK
23PI415
9999.99
23XA415T
State
23HA415
State
1ST STG CYL HEAD
23PI412
9999.99
23XA412T
State
23HA412
State
2ND STG CYL CRANK
23PI441
9999.99
23XA441T
State
23HA441
State
2ND STG CYL HEAD
23PI420
9999.99
23XA420T
State
23HA420
State
3RD STG CYL CRANK
23PI443
9999.99
23XA443T
State
23HA443
State
3RD STG CYL HEAD
23PI442
9999.99
23XA442T
State
23HA442
State
4TH STG CYL CRANK
23PI447
9999.99
23XA447T
State
23HA447
State
4TH STG CYL HEAD
23PI444
9999.99
23XA444T
State
23HA444
State
SPEED
23SI819
9999.99
23XA819T
State
ROD LOAD
HIGH
HIHI
1ST STG CYL
23XA412A
State
23XA412B
State
2ND STG CYL
23XA420A
State
23XA420B
State
3RD STG CYL
23XA442A
State
23XA442B
State
4TH STG CYL
23XA444A
State
23XA444B
State
PROCESS ALARMS
VIB S/D IN BYP
23HA833
State
PROGNOST COMMON S/D
23XA833A
State
COMMON VIB S/D
23XA839
State
COMMON BEARING TEMP S/D
23TA759
State
PROGN CU CTA
11UK671
State
PROGN MU A CTA
11UK672
State
PROGN MU B CTA
11UK673
State
PNL 11LCP138 PS FLT
11UK674
State
ROD REVERSAL
HIGH
HIHI
1ST STG CYL
23XA412C
State
23XA412D
State
2ND STG CYL
23XA420C
State
23XA420D
State
3RD STG CYL
23XA442C
State
23XA442D
State
4TH STG CYL
23XA444C
State
23XA444D
State
HARDWARE ALARMS
PROGNOST SILV COMMON TROUBLE
23UA669A
State
PANEL 23LCP108 LOSS OF PURGE
23PA470
State
PANEL 23LCP108 TEMP
23TI758
9999.99
PANEL 23LCP108 PS
23UA669B
State
DATA STRG CU TRBL
11UK675A
State
11UA675A
State
DATA STRG MU A TRBL
11UK676A
State
11UA676A
State
DATA STRG MU B TRBL
11UK669A
State
11UA669A
State
SIS
2305H2
2305
Reserved for Faceplates

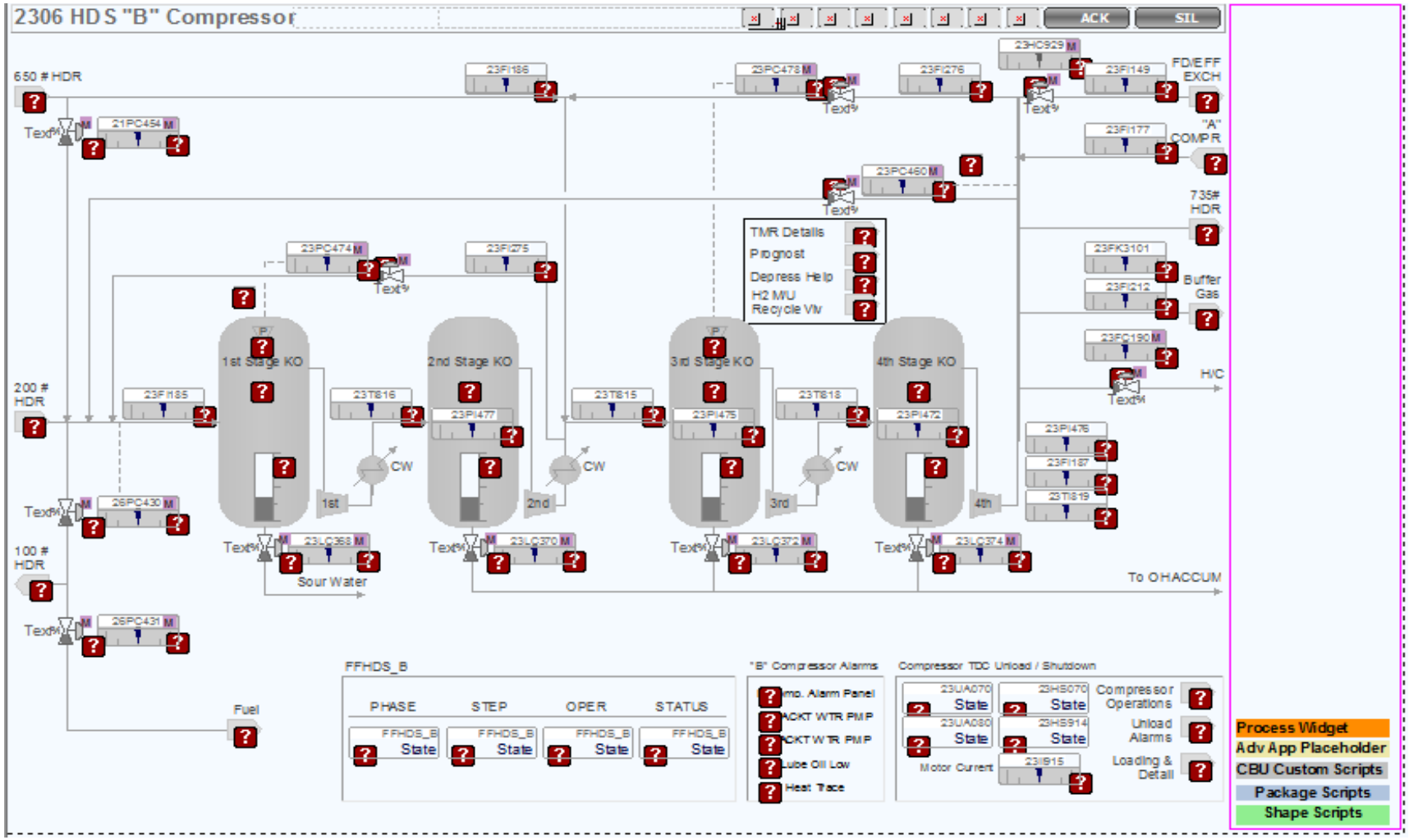
1.131 2305H2 HDS A COMP VIB & TEMP DETAIL (Reformer_2305H2.htm)

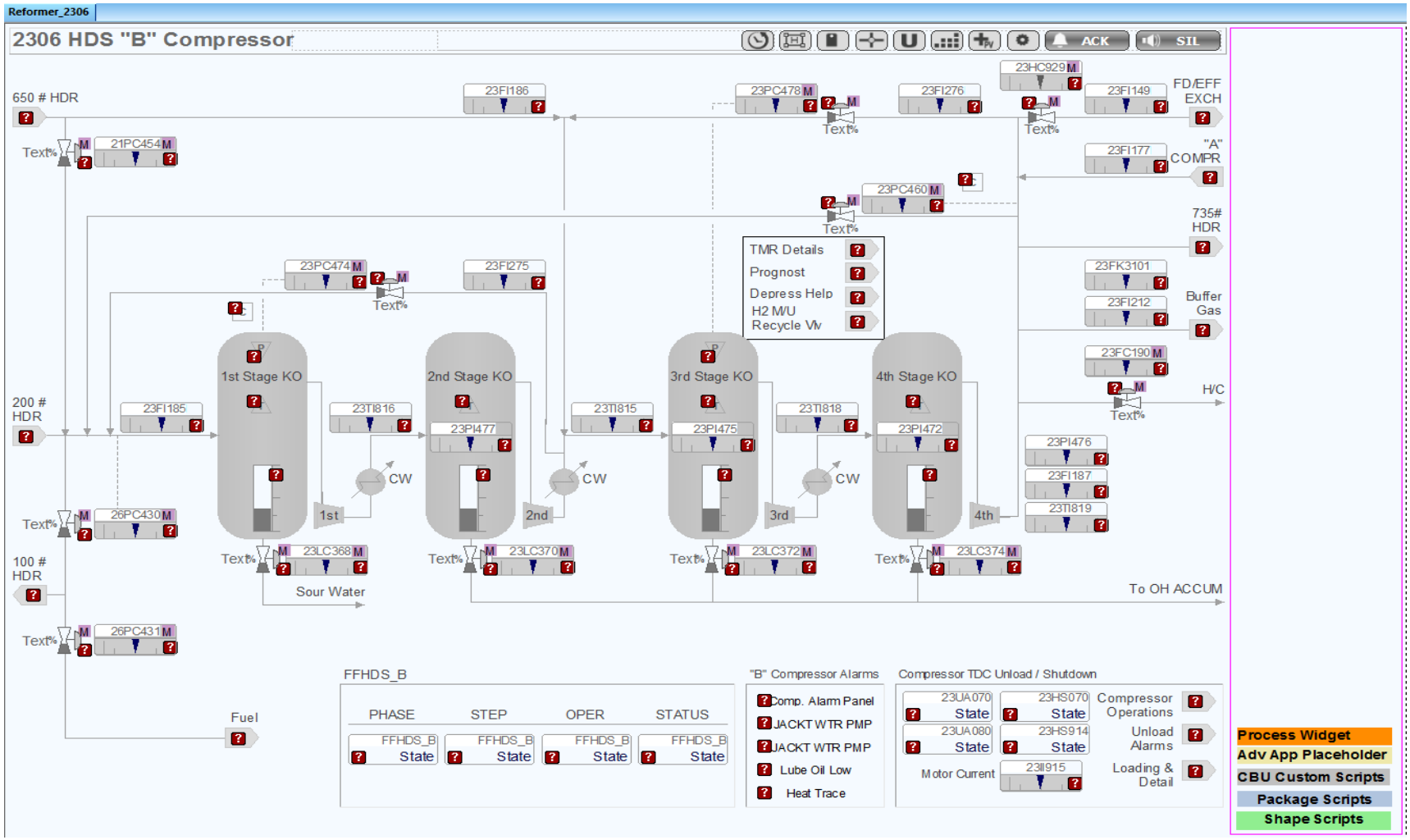


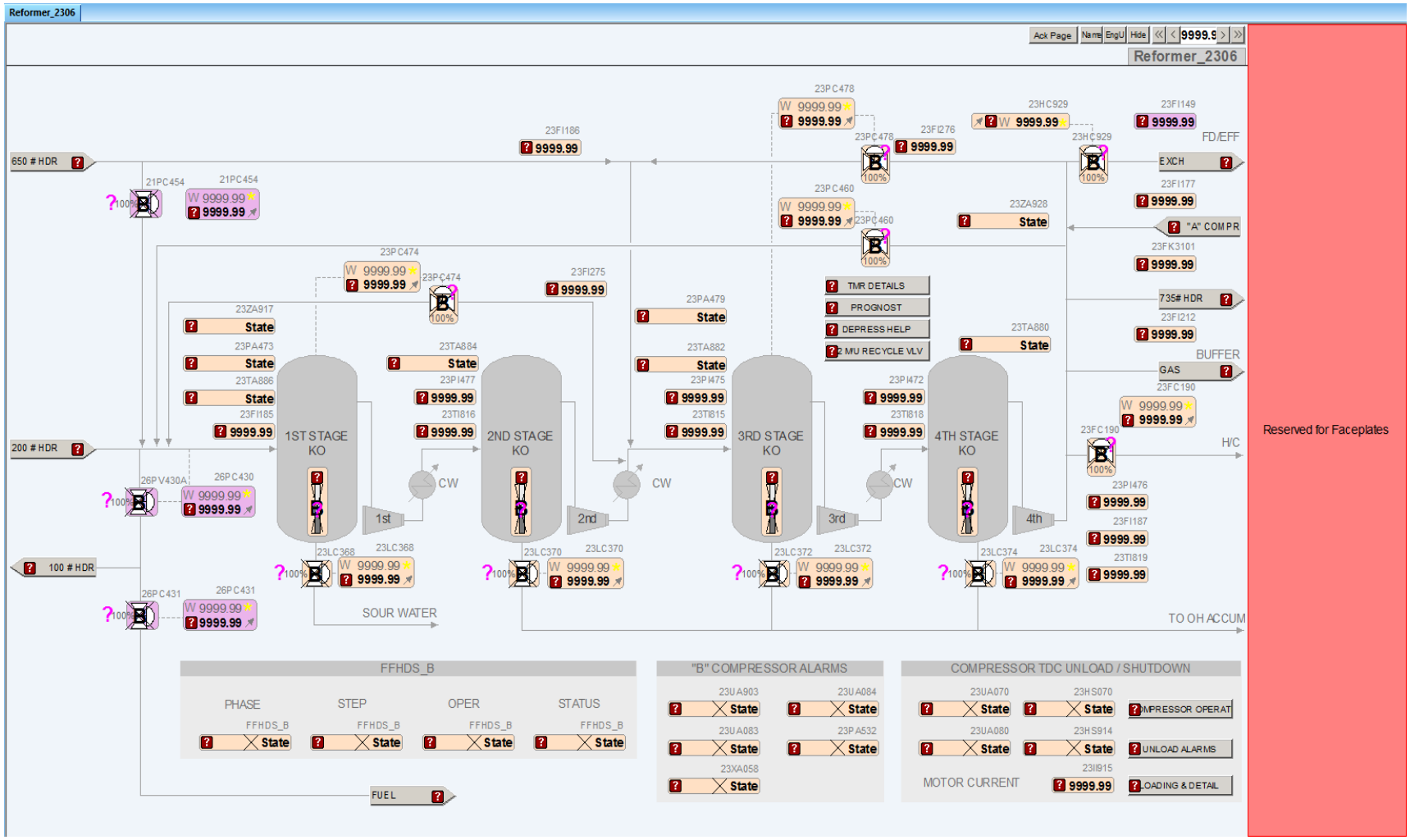

Reformer_2305H2
2305H2 HDS A COMP VIB & TEMP DETAIL
ACK
SIL
VIBRATION
TEMPERATURE
CROSSHEAD (1oo1 S/D)
HIGH
HIGH-HIGH
TROUBLE
BYPASS
1ST STG CROSSHEAD
2ND STG CROSSHEAD
3RD STG CROSSHEAD
4TH STG CROSSHEAD
CYLINDER
1ST STG CYLINDER
2ND STG CYLINDER
3RD STG CYLINDER
4TH STG CYLINDER
ROD POSITION
1ST STG ROD DROP A
1ST STG ROD DROP B
2ND STG ROD DROP A
2ND STG ROD DROP B
3RD STG ROD DROP A
3RD STG ROD DROP B
4TH STG ROD DROP A
4TH STG ROD DROP B
FRAME (2oo2 S/D)
FRAME VIB A
FRAME VIB B
COMPRESSOR (2oo2 S/D)
1ST STG BEARING A
1ST STG BEARING B
2ND STG BEARING A
2ND STG BEARING B
3RD STG BEARING A
3RD STG BEARING B
4TH STG BEARING A
4TH STG BEARING B
ROD PACKING
1ST STG ROD PACKING
2ND STG ROD PACKING
3RD STG ROD PACKING
4TH STG ROD PACKING
MOTOR
WINDING A
WINDING B
WINDING C
WINDING D
WINDING E
State
SIS
2305H1
2305
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2305H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2305H2
VIBRATION
CROSSHEAD (1oo1 S/D)
HIGH
HIGH-HIGH
TROUBLE
BYPASS
23VI815
23VA815A
23VA815B
23XA815T
23HA815
1ST STG CROSSHEAD
9999.99
State
23VI816
23VA816A
23VA816B
23XA816T
23HA816
2ND STG CROSSHEAD
23VI817
23VA817A
23VA817B
23XA817T
23HA817
3RD STG CROSSHEAD
23VI818
23VA818A
23VA818B
23XA818T
23HA818
4TH STG CROSSHEAD
CYLINDER
23VI997
23VA997A
23VA997B
23XA997T
23HA997
1ST STG CYLINDER
23VI995
23VA995A
23VA995B
23XA995T
23HA995
2ND STG CYLINDER
23VI991
23VA991A
23VA991B
23XA991T
23HA991
3RD STG CYLINDER
23VI989
23VA989A
23VA989B
23XA989T
23HA989
4TH STG CYLINDER
ROD POSITION
23ZI974A
23ZA974C
23ZA974D
23XA974T
23HA974A
1ST STG ROD DROP A
23ZI974B
23ZA974E
23ZA974F
23XA974U
23HA974B
1ST STG ROD DROP B
23ZI983A
23ZA983C
23ZA983D
23XA983T
23HA983A
2ND STG ROD DROP A
23ZI983B
23ZA983E
23ZA983F
23XA983U
23HA983B
2ND STG ROD DROP B
23ZI984A
23ZA984C
23ZA984D
23XA984T
23HA984A
3RD STG ROD DROP A
23ZI984B
23ZA984E
23ZA984F
23XA984U
23HA984B
3RD STG ROD DROP B
23ZI985A
23ZA985C
23ZA985D
23XA985T
23HA985A
4TH STG ROD DROP A
23ZI985B
23ZA985E
23ZA985F
23XA985U
23HA985B
4TH STG ROD DROP B
FRAME (2oo2 S/D)
23VI838A
23VA838C
23VA838D
23XA838T
23HA838A
FRAME VIB A
23VI838B
23VA838E
23VA838F
23XA838U
23HA838B
FRAME VIB B
TEMPERATURE
COMPRESSOR (2oo2 S/D)
HIGH
HIGH-HIGH
TROUBLE
BYPASS
23TI928A
23TA928C
23TA928D
23XA928T
23HA928A
1ST STG BEARING A
23TI928B
23TA928E
23TA928F
23XA928U
23HA928B
1ST STG BEARING B
23TI929A
23TA929C
23TA929D
23XA929T
23HA929A
2ND STG BEARING A
23TI929B
23TA929E
23TA929F
23XA929U
23HA929B
2ND STG BEARING B
23TI930A
23TA930C
23TA930D
23XA930T
23HA930A
3RD STG BEARING A
23TI930B
23TA930E
23TA930F
23XA930U
23HA930B
3RD STG BEARING B
23TI931A
23TA931C
23TA931D
23XA931T
23HA931A
4TH STG BEARING A
23TI931B
23TA931E
23TA931F
23XA931U
23HA931B
4TH STG BEARING B
ROD PACKING
HIGH
HIGH-HIGH
TROUBLE
BYPASS
1ST STG ROD PACKING
23TI748
23TA748A
23TA748B
23XA748T
23HA748
2ND STG ROD PACKING
23TI749
23TA749A
23TA749B
23XA749T
23HA749
3RD STG ROD PACKING
23TI750
23TA750A
23TA750B
23XA750T
23HA750
4TH STG ROD PACKING
23TI751
23TA751A
23TA751B
23XA751T
23HA751
MOTOR
HIGH
HIGH-HIGH
TROUBLE
BYPASS
23TI752A
23TA752G
23TA752H
23XA752T
23HA752A
WINDING A
23TI752B
23TA752J
23TA752K
23XA752U
23HA752B
WINDING B
23TI752C
23TA752L
23TA752M
23XA752V
23HA752C
WINDING C
23TI752D
23TA752N
23TA752P
23XA752W
23HA752D
WINDING D
23TI752E
23TA752Q
23TA752R
23XA752X
23HA752E
WINDING E
SIS
2305H1
2305
Reserved for Faceplates

1.132 2306 HDS "B" COMPRESSOR (Reformer_2306.htm)




Reformer_2306
2306 HDS "B" Compressor
ACK
SIL
650 # HDR
23FI186
23PC478 M
23FI276
23HC929 M
23FI149
FD/EFF EXCH
21PC454 M
23FI177
"A" COMPR
23PC460 M
735# HDR
TMR Details
Prognost
Depress Help
H2 M/U Recycle Vlv
23PC474 M
23FI275
23FK3101
23FI212
Buffer Gas
23FC190 M
H/C
1st Stage KO
2nd Stage KO
3rd Stage KO
4th Stage KO
200 # HDR
23FI185
23TI816
23TI815
23TI818
23PI477
23PI475
23PI472
23PI476
23FI187
23TI819
CW
1st
2nd
3rd
4th
26PC430 M
23LC368 M
23LC370 M
23LC372 M
23LC374 M
100 # HDR
Sour Water
To OH ACCUM
26PC431 M
Fuel
FFHDS_B
PHASE
STEP
OPER
STATUS
"B" Compressor Alarms
Comp. Alarm Panel
JACKT WTR PMP
JACKT WTR PMP
Lube Oil Low
Heat Trace
Compressor TDC Unload / Shutdown
23UA070
23HS070
Compressor Operations
23UA080
23HS914
Unload Alarms
Motor Current
23II915
Loading & Detail
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2306
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Name
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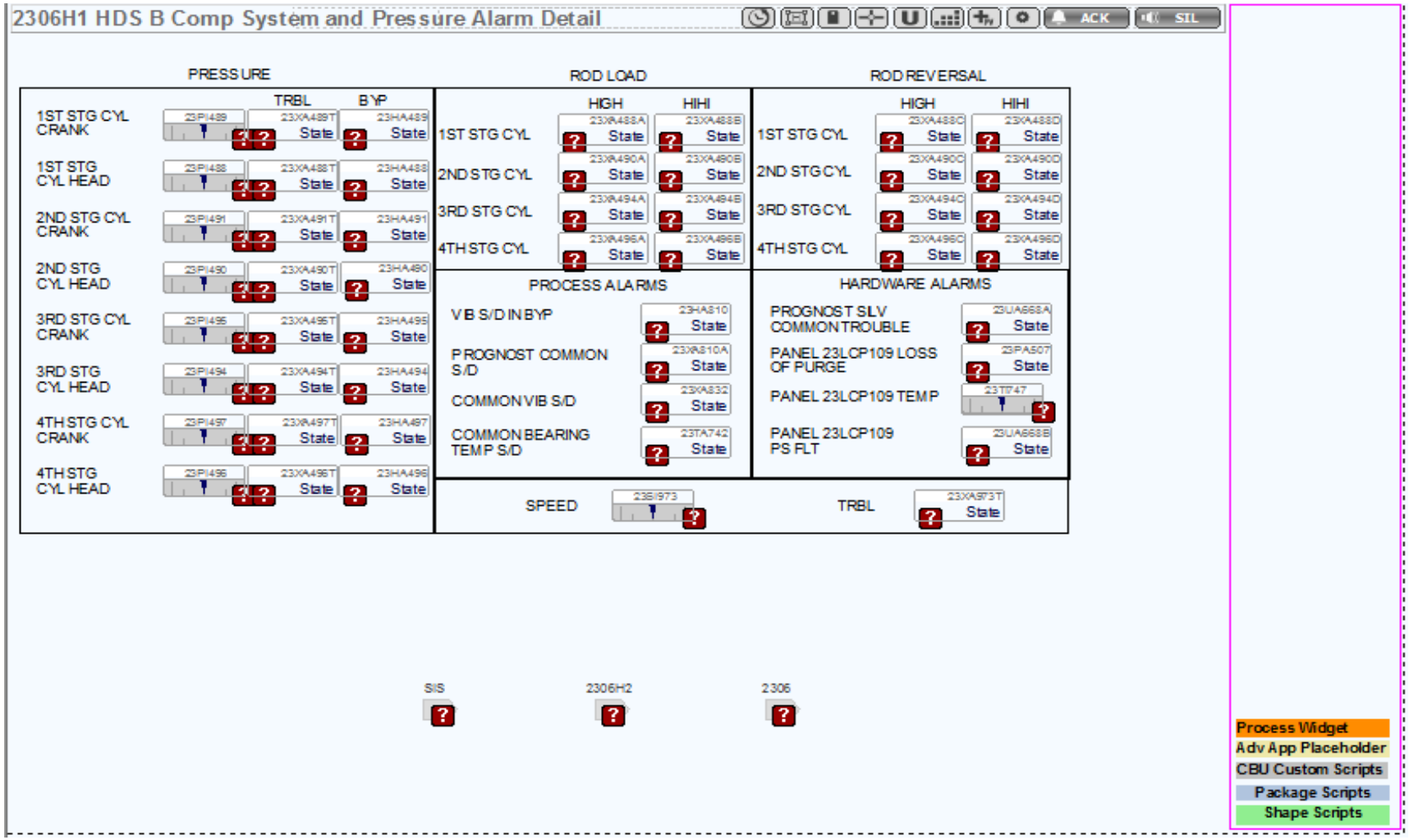
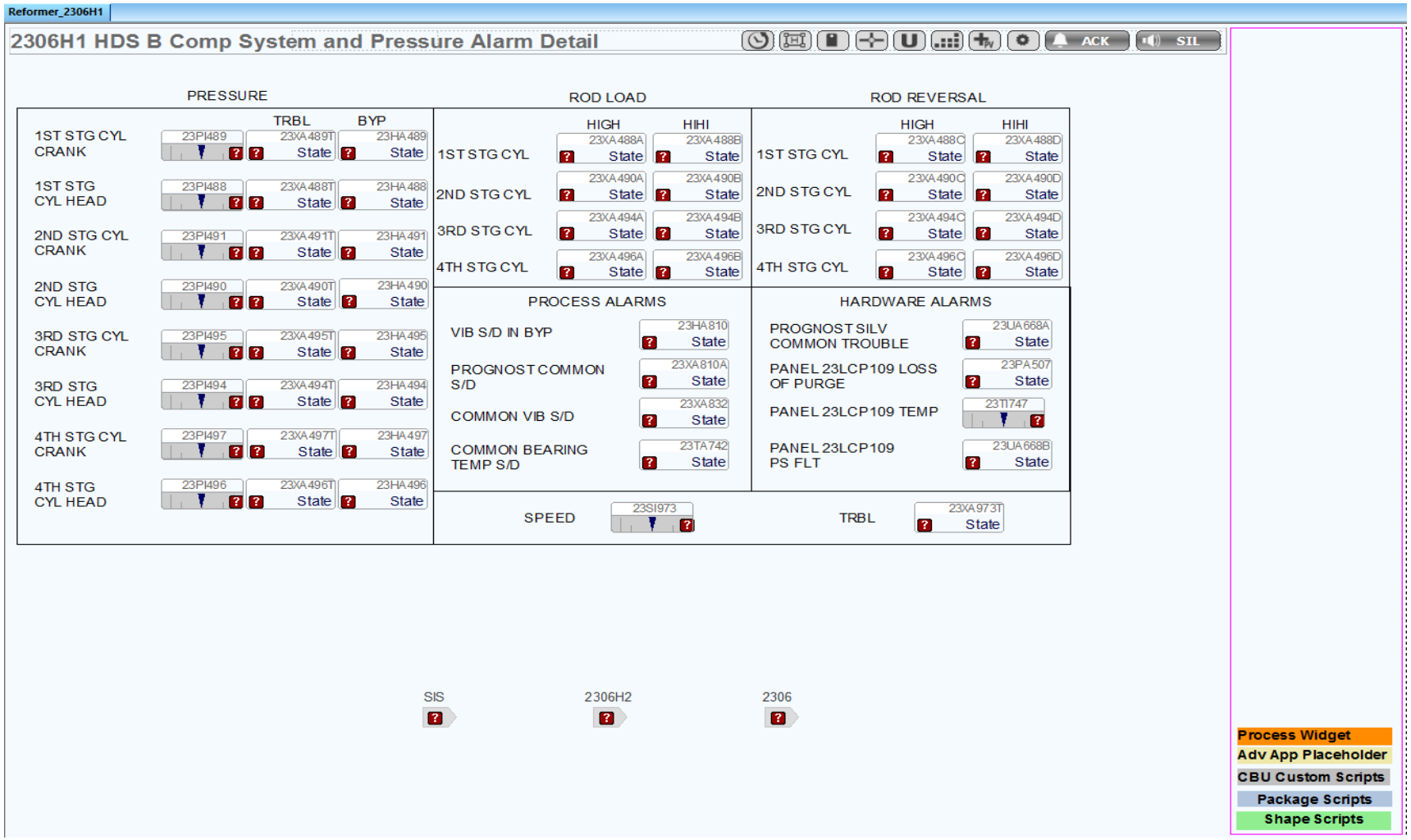
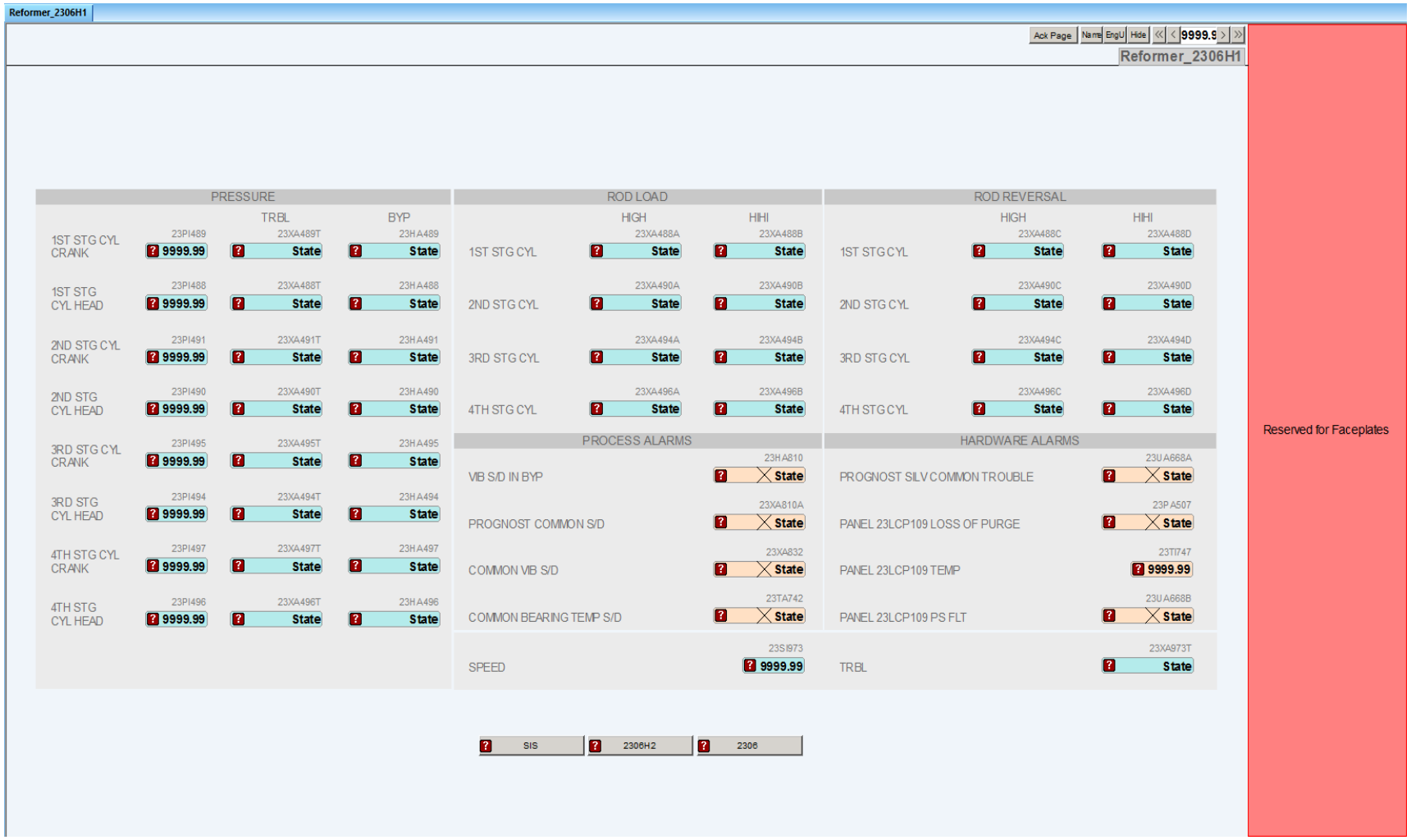
Reformer_2306
650 # HDR
200 # HDR
100 # HDR
1ST STAGE KO
2ND STAGE KO
3RD STAGE KO
4TH STAGE KO
CW
1st
2nd
3rd
4th
SOUR WATER
TO OH ACCUM
FUEL
FD/EFF
EXCH
"A" COMPR
BUFFER
GAS
735# HDR
H/C
TMR DETAILS
PROGNOST
DEPRESS HELP
2 M/U RECYCLE VLV
Reserved for Faceplates
FFHDS_B
PHASE
STEP
OPER
STATUS
"B" COMPRESSOR ALARMS
COMPRESSOR TDC UNLOAD / SHUTDOWN
MOTOR CURRENT

1.133 2306H1 HDS B COMP SYSTEM AND PRESSURE ALARM DETAIL (Reformer_2306H1.htm)




Reformer_2306H1
2306H1 HDS B Comp System and Pressure Alarm Detail
ACK
SIL
PRESSURE
TRBL
BYP
1ST STG CYL CRANK
23PI489
23XA489T State
23HA489 State
1ST STG CYL HEAD
23PI488
23XA488T State
23HA488 State
2ND STG CYL CRANK
23PI491
23XA491T State
23HA491 State
2ND STG CYL HEAD
23PI490
23XA490T State
23HA490 State
3RD STG CYL CRANK
23PI495
23XA495T State
23HA495 State
3RD STG CYL HEAD
23PI494
23XA494T State
23HA494 State
4TH STG CYL CRANK
23PI497
23XA497T State
23HA497 State
4TH STG CYL HEAD
23PI496
23XA496T State
23HA496 State
ROD LOAD
HIGH
HIHI
1ST STG CYL
23XA488A State
23XA488B State
2ND STG CYL
23XA490A State
23XA490B State
3RD STG CYL
23XA494A State
23XA494B State
4TH STG CYL
23XA496A State
23XA496B State
ROD REVERSAL
HIGH
HIHI
1ST STG CYL
23XA488C State
23XA488D State
2ND STG CYL
23XA490C State
23XA490D State
3RD STG CYL
23XA494C State
23XA494D State
4TH STG CYL
23XA496C State
23XA496D State
PROCESS ALARMS
VIB S/D IN BYP
23HA810 State
PROGNOST COMMON S/D
23XA810A State
COMMON VIB S/D
23XA832 State
COMMON BEARING TEMP S/D
23TA742 State
HARDWARE ALARMS
PROGNOST SILV COMMON TROUBLE
23UA668A State
PANEL 23LCP109 LOSS OF PURGE
23PA507 State
PANEL 23LCP109 TEMP
23TI747
PANEL 23LCP109 PS FLT
23UA668B State
SPEED
23SI973
TRBL
23XA973T State
SIS
2306H2
2306
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2306H1
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Name
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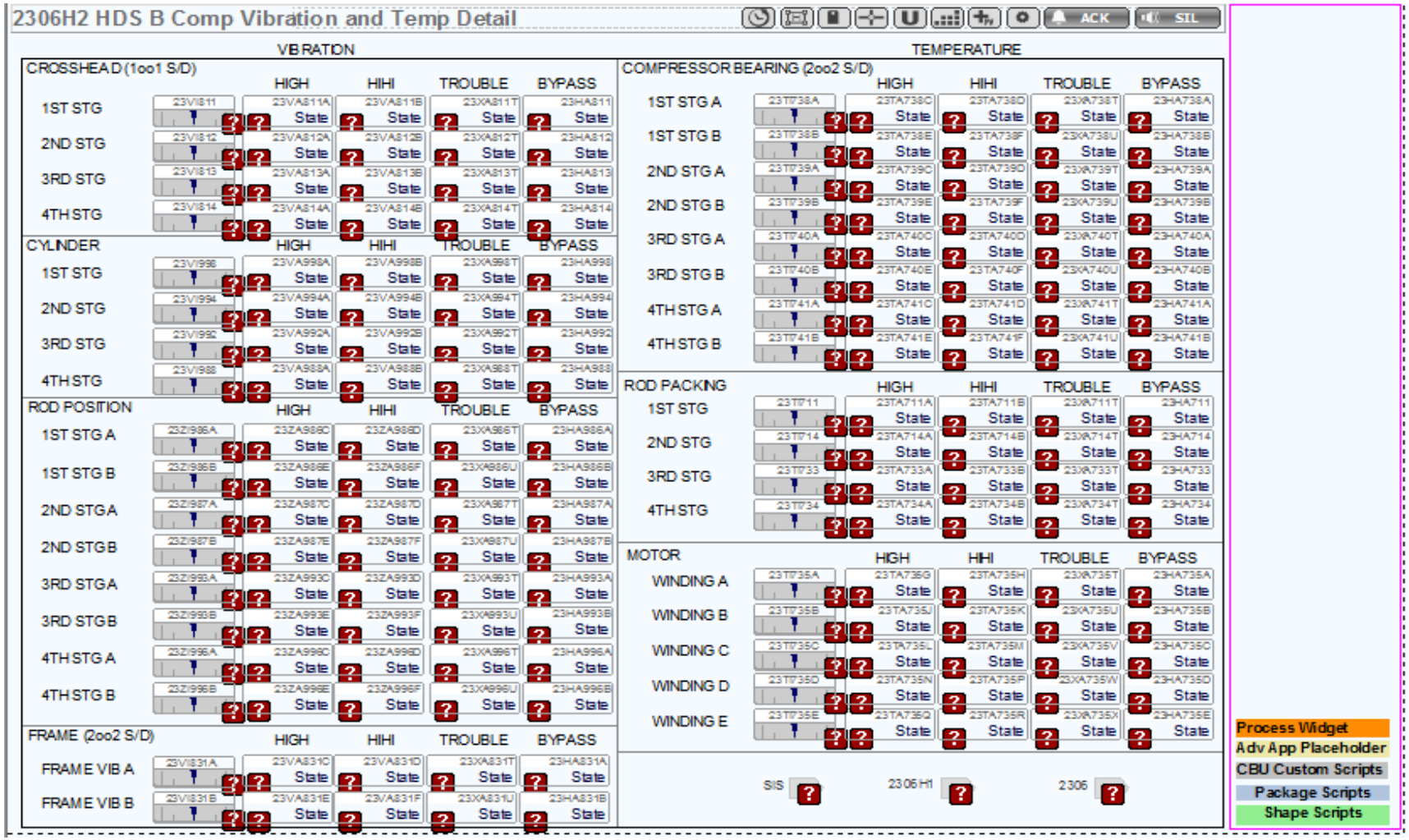
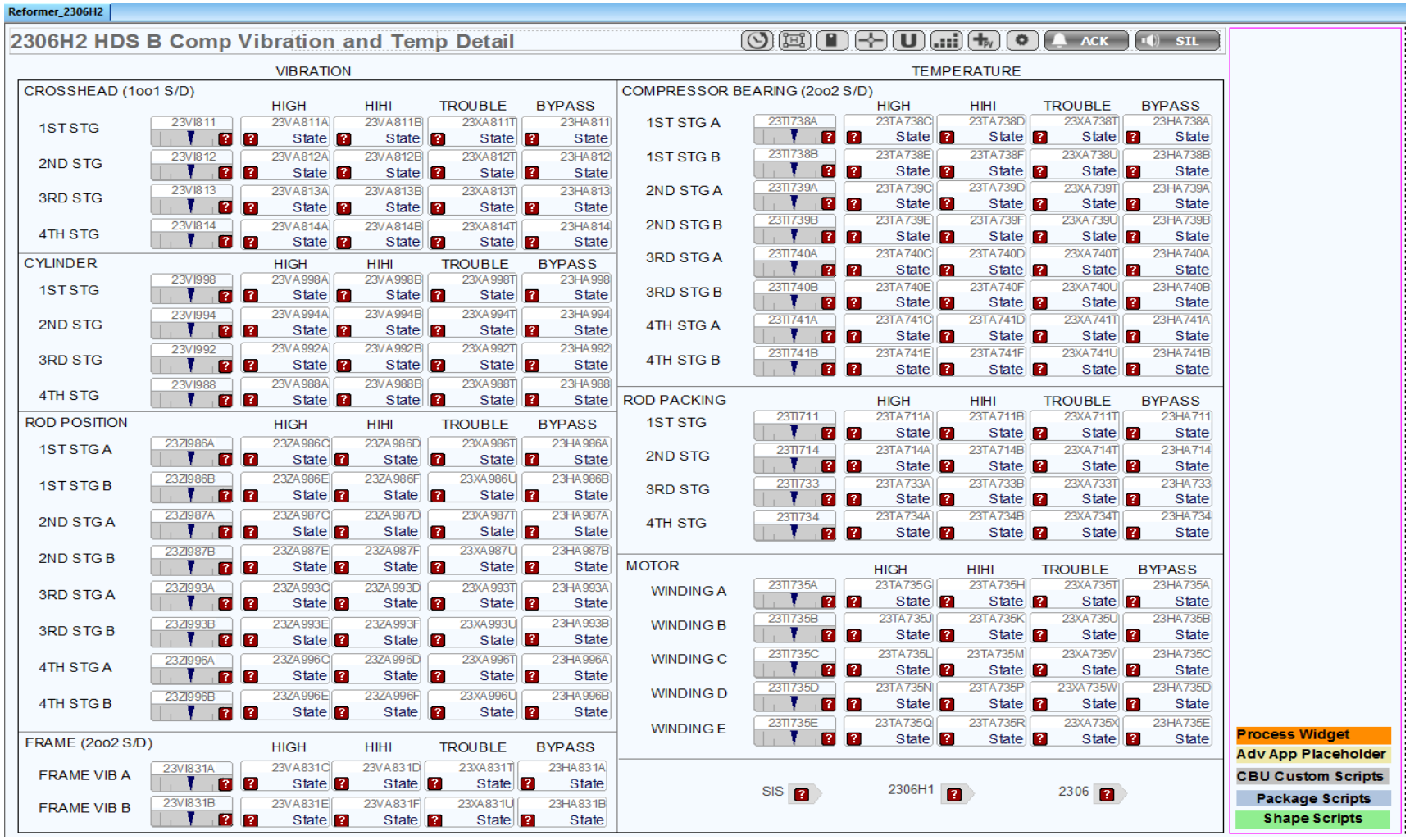
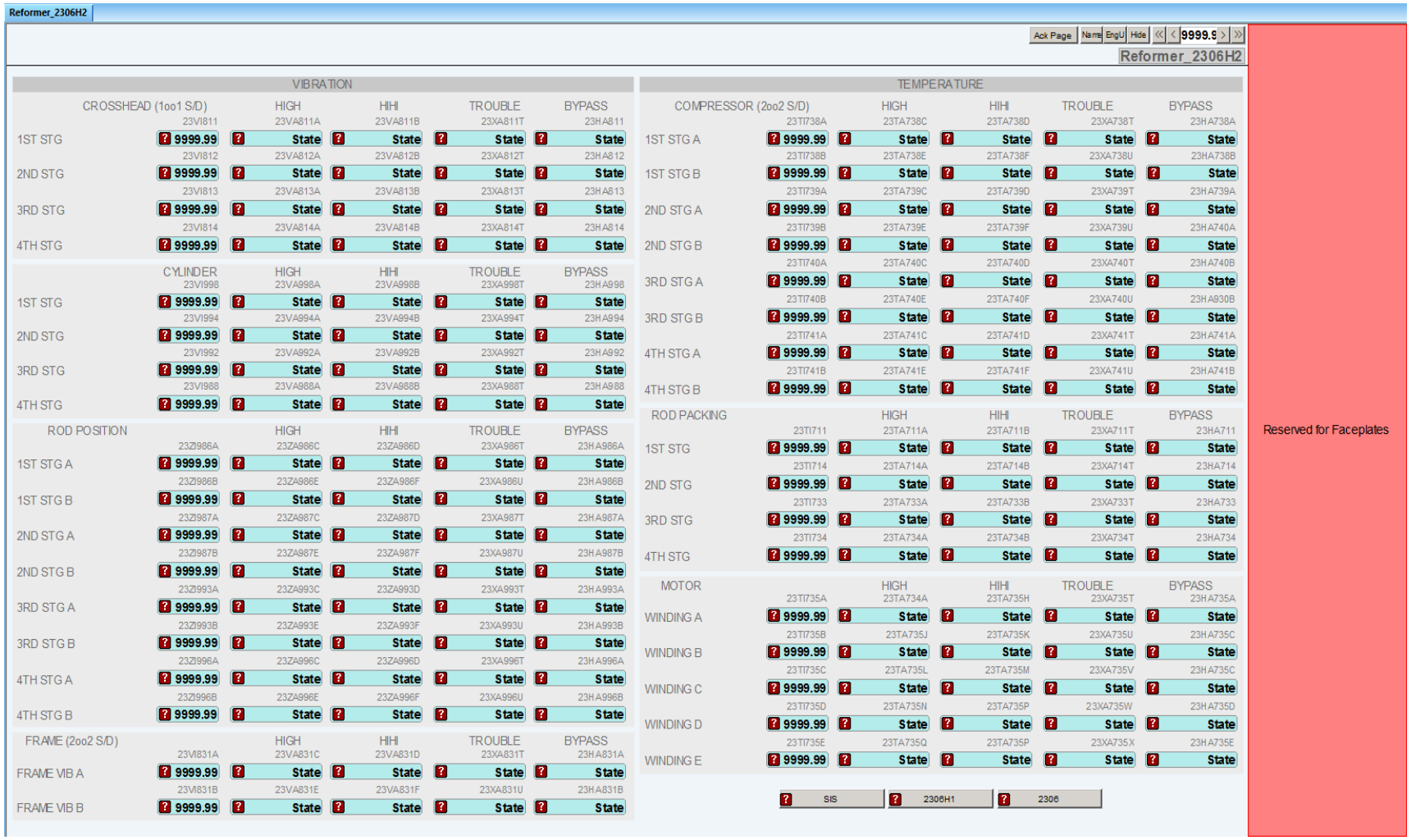
Reformer_2306H1
PRESSURE
TRBL
BYP
1ST STG CYL CRANK
23PI489
9999.99
23XA489T
State
23HA489
State
1ST STG CYL HEAD
23PI488
9999.99
23XA488T
State
23HA488
State
2ND STG CYL CRANK
23PI491
9999.99
23XA491T
State
23HA491
State
2ND STG CYL HEAD
23PI490
9999.99
23XA490T
State
23HA490
State
3RD STG CYL CRANK
23PI495
9999.99
23XA495T
State
23HA495
State
3RD STG CYL HEAD
23PI494
9999.99
23XA494T
State
23HA494
State
4TH STG CYL CRANK
23PI497
9999.99
23XA497T
State
23HA497
State
4TH STG CYL HEAD
23PI496
9999.99
23XA496T
State
23HA496
State
ROD LOAD
HIGH
HIHI
1ST STG CYL
23XA488A
State
23XA488B
State
2ND STG CYL
23XA490A
State
23XA490B
State
3RD STG CYL
23XA494A
State
23XA494B
State
4TH STG CYL
23XA496A
State
23XA496B
State
PROCESS ALARMS
VIB S/D IN BYP
23HA810
State
PROGNOST COMMON S/D
23XA810A
State
COMMON VIB S/D
23XA832
State
COMMON BEARING TEMP S/D
23TA742
State
SPEED
23SI973
9999.99
ROD REVERSAL
HIGH
HIHI
1ST STG CYL
23XA488C
State
23XA488D
State
2ND STG CYL
23XA490C
State
23XA490D
State
3RD STG CYL
23XA494C
State
23XA494D
State
4TH STG CYL
23XA496C
State
23XA496D
State
HARDWARE ALARMS
PROGNOST SILV COMMON TROUBLE
23UA668A
State
PANEL 23LCP109 LOSS OF PURGE
23PA507
State
PANEL 23LCP109 TEMP
23TI747
9999.99
PANEL 23LCP109 PS FLT
23UA668B
State
TRBL
23XA973T
State
SIS
2306H2
2306
Reserved for Faceplates

1.134 2306H2 HDS B COMP VIBRATION AND TEMP DETAIL (Reformer_2306H2.htm)




Reformer_2306H2
2306H2 HDS B Comp Vibration and Temp Detail
ACK
SIL
VIBRATION
TEMPERATURE
CROSSHEAD (1oo1 S/D)
HIGH HIHI TROUBLE BYPASS
1ST STG 23VI811 23VA811A 23VA811B 23XA811T 23HA811
2ND STG 23VI812 23VA812A 23VA812B 23XA812T 23HA812
3RD STG 23VI813 23VA813A 23VA813B 23XA813T 23HA813
4TH STG 23VI814 23VA814A 23VA814B 23XA814T 23HA814
CYLINDER
HIGH HIHI TROUBLE BYPASS
1ST STG 23VI998 23VA998A 23VA998B 23XA998T 23HA998
2ND STG 23VI994 23VA994A 23VA994B 23XA994T 23HA994
3RD STG 23VI992 23VA992A 23VA992B 23XA992T 23HA992
4TH STG 23VI988 23VA988A 23VA988B 23XA988T 23HA988
ROD POSITION
HIGH HIHI TROUBLE BYPASS
1ST STG A 23ZI986A 23ZA986C 23ZA986D 23XA986T 23HA986A
1ST STG B 23ZI986B 23ZA986E 23ZA986F 23XA986U 23HA986B
2ND STG A 23ZI987A 23ZA987C 23ZA987D 23XA987T 23HA987A
2ND STG B 23ZI987B 23ZA987E 23ZA987F 23XA987U 23HA987B
3RD STG A 23ZI993A 23ZA993C 23ZA993D 23XA993T 23HA993A
3RD STG B 23ZI993B 23ZA993E 23ZA993F 23XA993U 23HA993B
4TH STG A 23ZI996A 23ZA996C 23ZA996D 23XA996T 23HA996A
4TH STG B 23ZI996B 23ZA996E 23ZA996F 23XA996U 23HA996B
FRAME (2oo2 S/D)
HIGH HIHI TROUBLE BYPASS
FRAME VIB A 23VI831A 23VA831C 23VA831D 23XA831T 23HA831A
FRAME VIB B 23VI831B 23VA831E 23VA831F 23XA831U 23HA831B
COMPRESSOR BEARING (2oo2 S/D)
HIGH HIHI TROUBLE BYPASS
1ST STG A 23TI738A 23TA738C 23TA738D 23XA738T 23HA738A
1ST STG B 23TI738B 23TA738E 23TA738F 23XA738U 23HA738B
2ND STG A 23TI739A 23TA739C 23TA739D 23XA739T 23HA739A
2ND STG B 23TI739B 23TA739E 23TA739F 23XA739U 23HA739B
3RD STG A 23TI740A 23TA740C 23TA740D 23XA740T 23HA740A
3RD STG B 23TI740B 23TA740E 23TA740F 23XA740U 23HA740B
4TH STG A 23TI741A 23TA741C 23TA741D 23XA741T 23HA741A
4TH STG B 23TI741B 23TA741E 23TA741F 23XA741U 23HA741B
ROD PACKING
HIGH HIHI TROUBLE BYPASS
1ST STG 23TI711 23TA711A 23TA711B 23XA711T 23HA711
2ND STG 23TI714 23TA714A 23TA714B 23XA714T 23HA714
3RD STG 23TI733 23TA733A 23TA733B 23XA733T 23HA733
4TH STG 23TI734 23TA734A 23TA734B 23XA734T 23HA734
MOTOR
HIGH HIHI TROUBLE BYPASS
WINDING A 23TI735A 23TA735G 23TA735H 23XA735T 23HA735A
WINDING B 23TI735B 23TA735J 23TA735K 23XA735U 23HA735B
WINDING C 23TI735C 23TA735L 23TA735M 23XA735V 23HA735C
WINDING D 23TI735D 23TA735N 23TA735P 23XA735W 23HA735D
WINDING E 23TI735E 23TA735Q 23TA735R 23XA735X 23HA735E
SIS
2306H1
2306
State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2306H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2306H2
VIBRATION
CROSSHEAD (1oo1 S/D)
HIGH
HIHI
TROUBLE
BYPASS
23VI811
23VA811A
23VA811B
23XA811T
23HA811
1ST STG
9999.99
State
23VI812
23VA812A
23VA812B
23XA812T
23HA812
2ND STG
23VI813
23VA813A
23VA813B
23XA813T
23HA813
3RD STG
23VI814
23VA814A
23VA814B
23XA814T
23HA814
4TH STG
CYLINDER
23VI998
23VA998A
23VA998B
23XA998T
23HA998
23VI994
23VA994A
23VA994B
23XA994T
23HA994
23VI992
23VA992A
23VA992B
23XA992T
23HA992
23VI988
23VA988A
23VA988B
23XA988T
23HA988
ROD POSITION
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23XA986T
23HA986A
23ZI986B
23ZA986E
23ZA986F
23XA986U
23HA986B
23ZI987A
23ZA987C
23ZA987D
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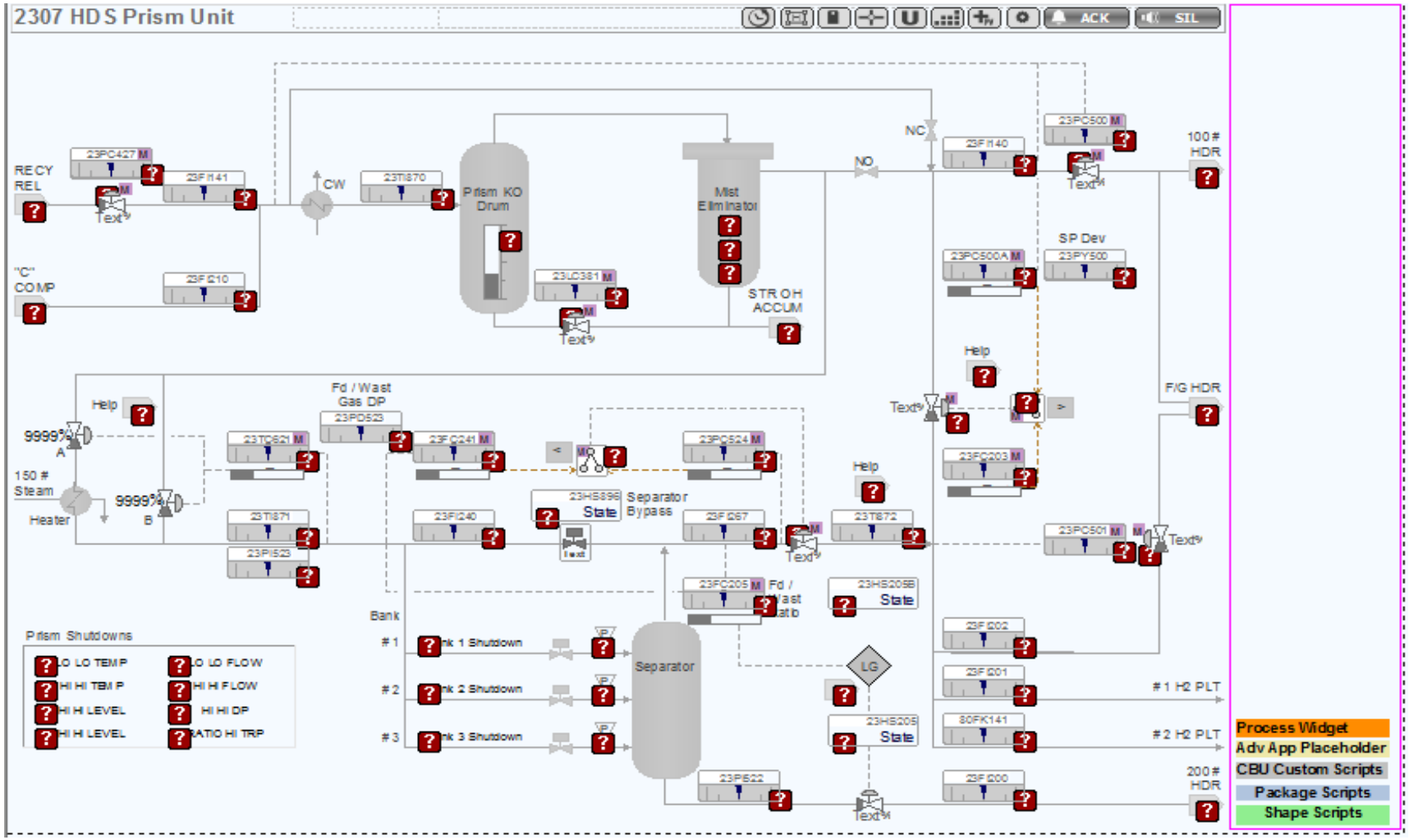
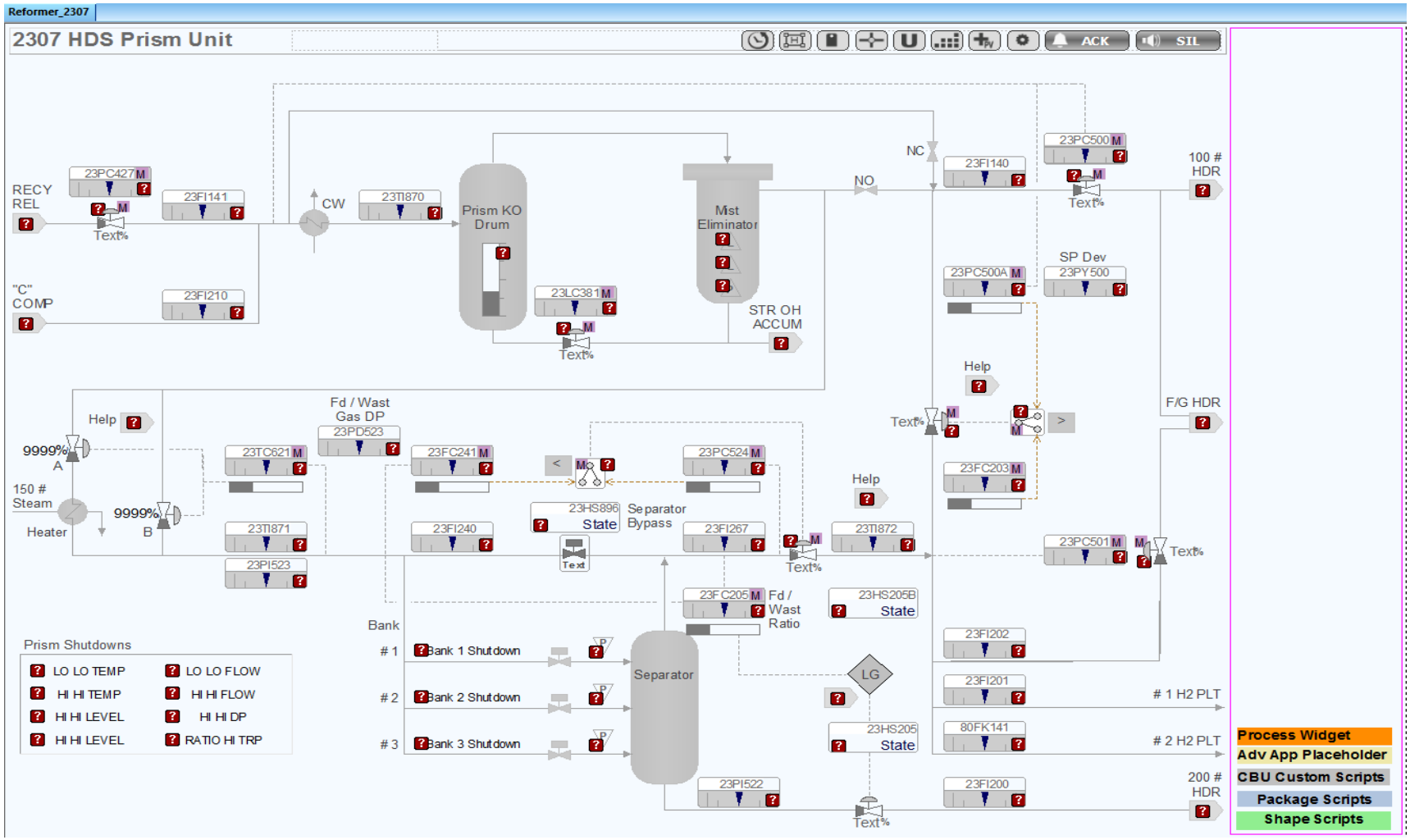
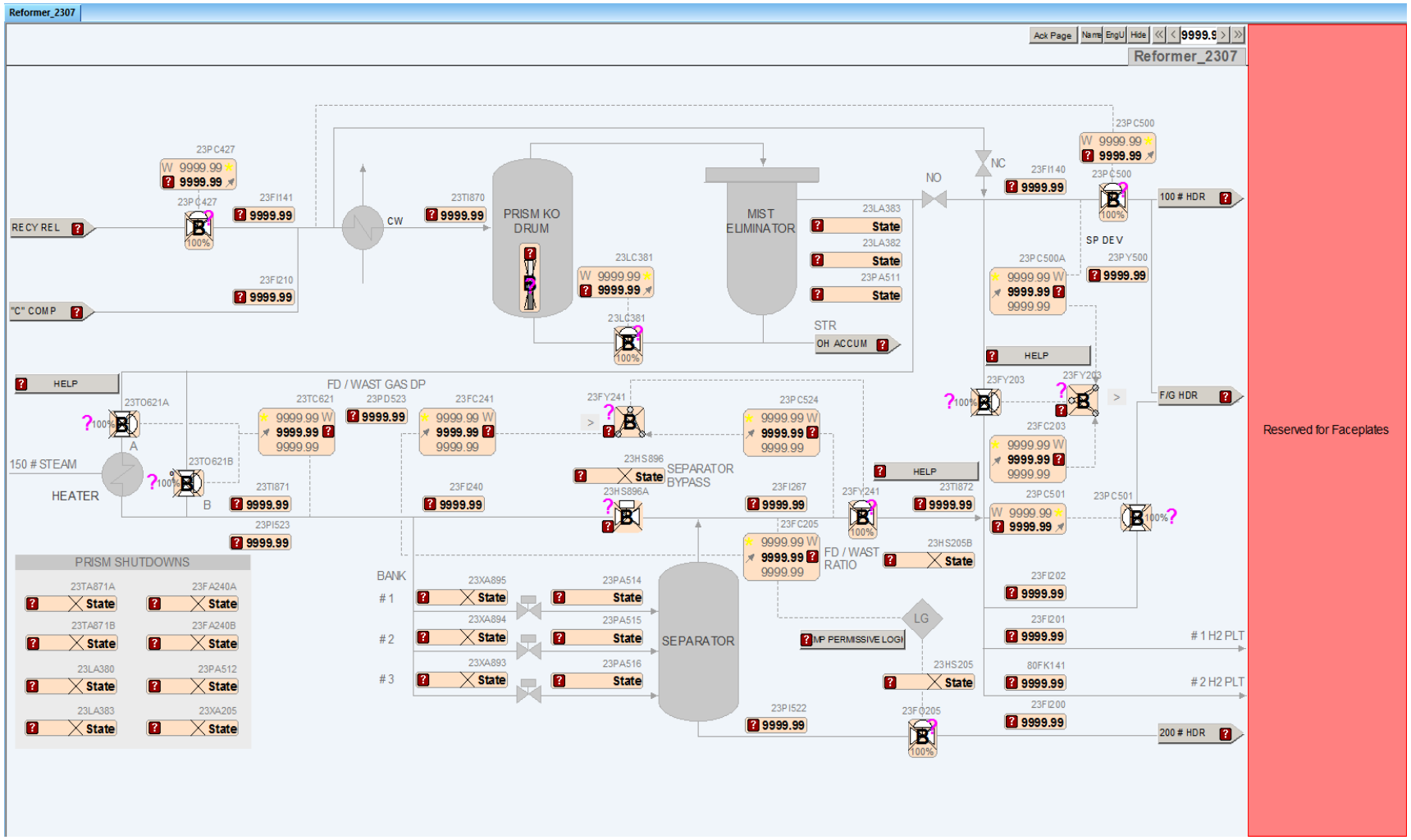
23ZI996A
23ZA996C
23ZA996D
23XA996T
23HA996A
23ZI996B
23ZA996E
23ZA996F
23XA996U
23HA996B
FRAME (2oo2 S/D)
23VI831A
23VA831C
23VA831D
23XA831T
23HA831A
FRAME VIB A
23VI831B
23VA831E
23VA831F
23XA831U
23HA831B
FRAME VIB B
TEMPERATURE
COMPRESSOR (2oo2 S/D)
23TI738A
23TA738C
23TA738D
23XA738T
23HA738A
1ST STG A
23TI738B
23TA738E
23TA738F
23XA738U
23HA738B
1ST STG B
23TI739A
23TA739C
23TA739D
23XA739T
23HA739A
2ND STG A
23TI739B
23TA739E
23TA739F
23XA739U
23HA740A
2ND STG B
23TI740A
23TA740C
23TA740D
23XA740T
23HA740B
3RD STG A
23TI740B
23TA740E
23TA740F
23XA740U
23HA930B
3RD STG B
23TI741A
23TA741C
23TA741D
23XA741T
23HA741A
4TH STG A
23TI741B
23TA741E
23TA741F
23XA741U
23HA741B
4TH STG B
ROD PACKING
23TI711
23TA711A
23TA711B
23XA711T
23HA711
1ST STG
23TI714
23TA714A
23TA714B
23XA714T
23HA714
2ND STG
23TI733
23TA733A
23TA733B
23XA733T
23HA733
3RD STG
23TI734
23TA734A
23TA734B
23XA734T
23HA734
4TH STG
MOTOR
23TI735A
23TA734A
23TA735H
23XA735T
23HA735A
WINDING A
23TI735B
23TA735J
23TA735K
23XA735U
23HA735C
WINDING B
23TI735C
23TA735L
23TA735M
23XA735V
23HA735C
WINDING C
23TI735D
23TA735N
23TA735P
23XA735W
23HA735D
WINDING D
23TI735E
23TA735Q
23TA735P
23XA735X
23HA735E
WINDING E
SIS
2306H1
2306
Reserved for Faceplates

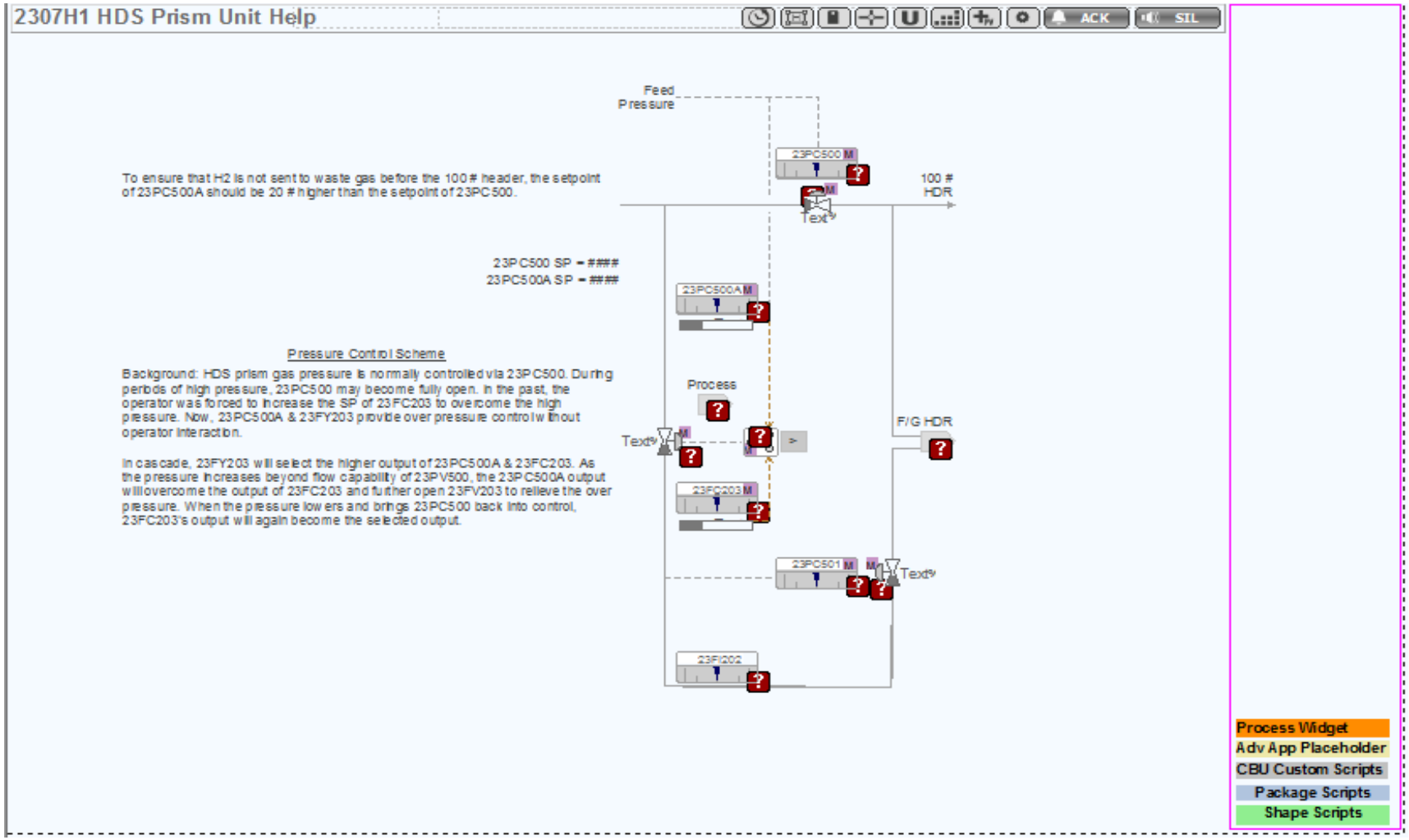
1.135 2307 HDS PRISM UNIT (Reformer_2307.htm)

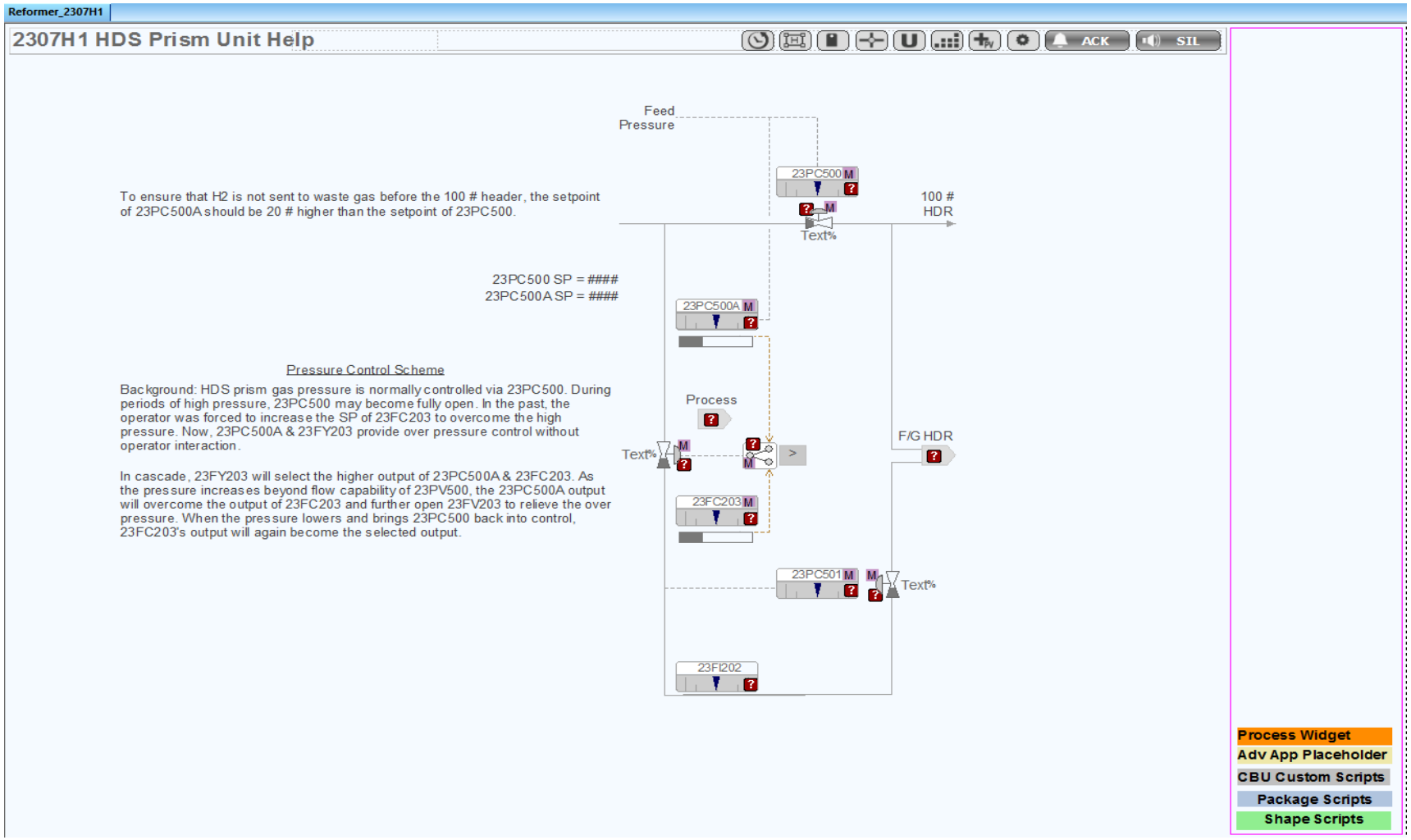


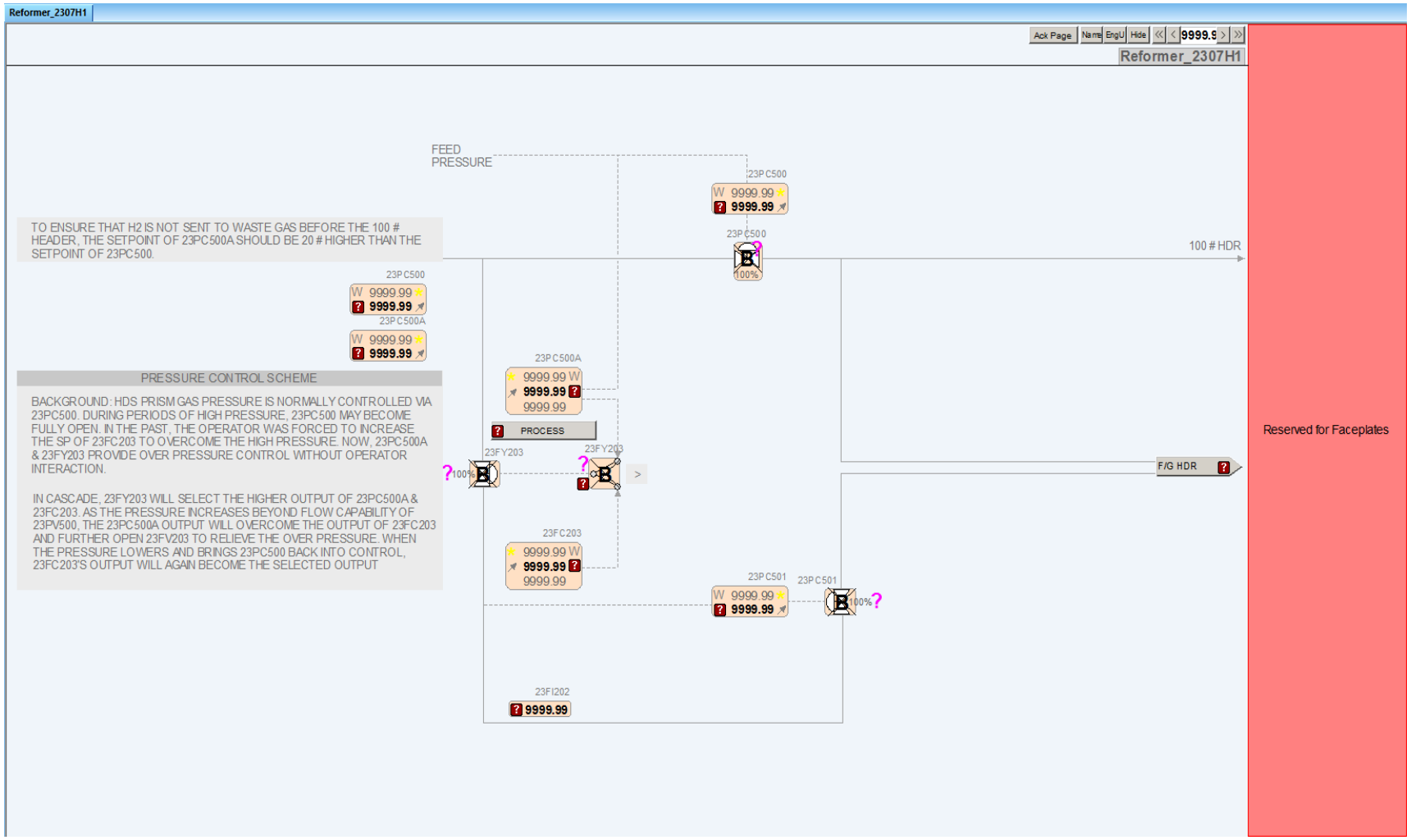

Reformer_2307
2307 HDS Prism Unit
ACK
SIL
RECY REL
23PC427
23FI141
Text%
CW
23TI870
Prism KO Drum
23LC381
Text%
Mist Eliminator
STR OH ACCUM
"C" COMP
23FI210
NC
NO
23FI140
23PC500
Text%
100 # HDR
SP Dev
23PC500A
23PY500
Help
Text%
F/G HDR
23FC203
Fd / Wast Gas DP
23PD523
23TC621
23FC241
23PC524
9999% A
150 # Steam
Heater
9999% B
23HS896 State
Separator Bypass
23TI871
23FI240
23FI267
23TI872
23PC501
Text%
23PI523
Text
23FC205
Fd / Wast Ratio
23HS205B State
Bank
1
2
3
Bank 1 Shutdown
Bank 2 Shutdown
Bank 3 Shutdown
Separator
LG
23HS205 State
23FI202
23FI201
1 H2 PLT
80FK141
2 H2 PLT
23PI522
23FI200
200 # HDR
Prism Shutdowns
LO LO TEMP
LO LO FLOW
HI HI TEMP
HI HI FLOW
HI HI LEVEL
HI HI DP
HI HI LEVEL
RATIO HI TRP
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2307
Ack Page
Name
EngU
Hide
Reformer_2307
23PC427
23FI141
23PC427
RECY REL
23FI210
"C" COMP
CW
23TI870
PRISM KO DRUM
23LC381
23LC381
MIST ELIMINATOR
23LA383
23LA382
23PA511
STR
OH ACCUM
NO
NC
23FI140
23PC500
23PC500
100 # HDR
SP DEV
23PC500A
23PY500
HELP
23FY203
23FY203
F/G HDR
23FC203
HELP
23TO621A
A
150 # STEAM
HEATER
23TO621B
B
FD / WAST GAS DP
23TC621
23PD523
23FC241
23FY241
23PC524
23HS896
SEPARATOR BYPASS
23HS896A
23TI871
23FI240
23PI523
23FI267
23FY241
23TI872
23PC501
23PC501
23FC205
FD / WAST RATIO
23HS205B
PRISM SHUTDOWNS
23TA871A
23FA240A
23TA871B
23FA240B
23LA380
23PA512
23LA383
23XA205
BANK
#1
#2
#3
23XA895
23XA894
23XA893
23PA514
23PA515
23PA516
SEPARATOR
MP PERMISSIVE LOGI
LG
23HS205
23FI202
23FI201
80FK141
23FI200
23PI522
23FC205
1 H2 PLT
2 H2 PLT
200 # HDR
Reserved for Faceplates

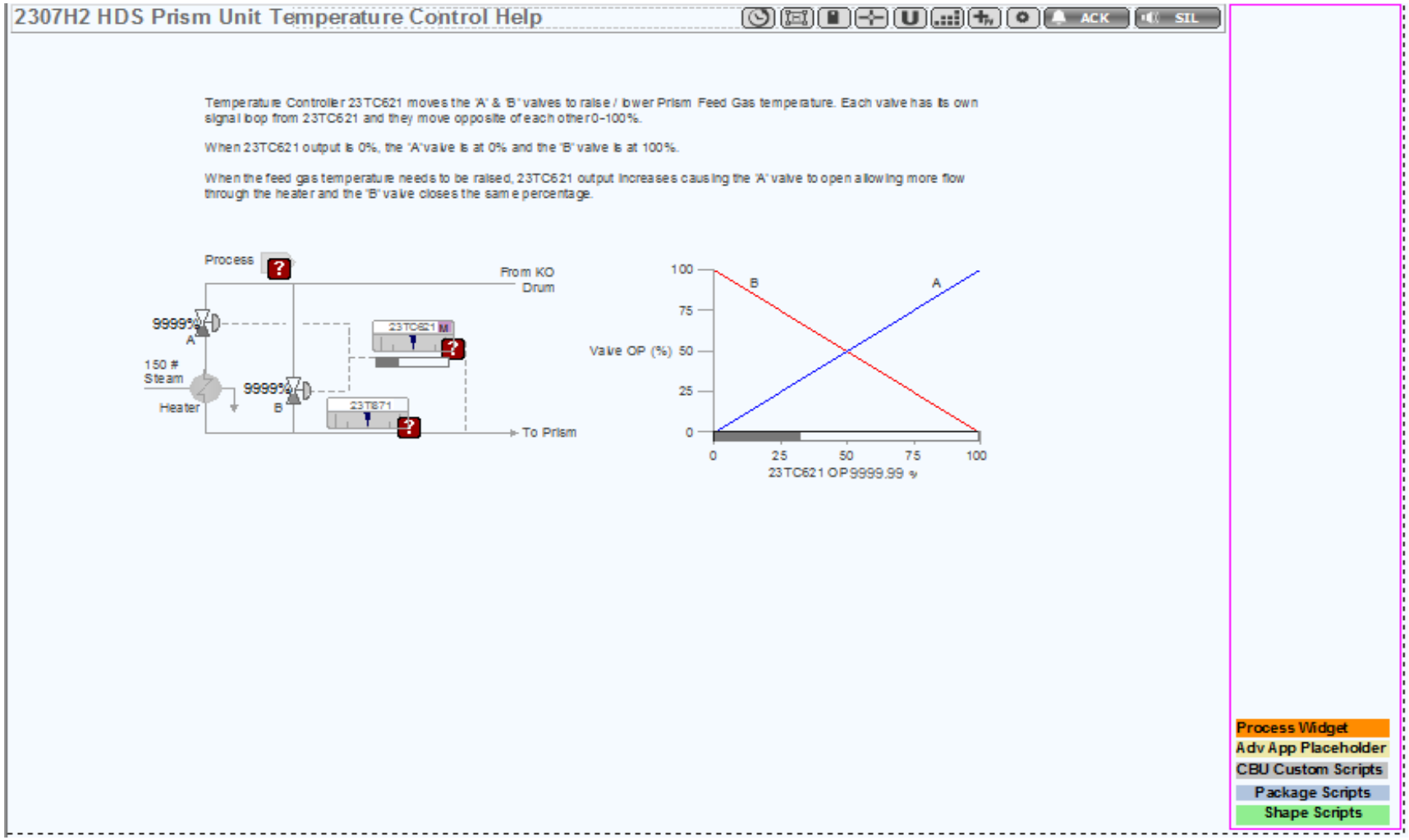
1.136 2307H1 HDS PRISM UNIT HELP (Reformer_2307H1.htm)




Reformer_2307H1
2307H1 HDS Prism Unit Help
ACK
SIL
To ensure that H2 is not sent to waste gas before the 100 # header, the setpoint of 23PC500A should be 20 # higher than the setpoint of 23PC500.
23PC500 SP = ####
23PC500A SP = ####
Pressure Control Scheme
Background: HDS prism gas pressure is normally controlled via 23PC500. During periods of high pressure, 23PC500 may become fully open. In the past, the operator was forced to increase the SP of 23FC203 to overcome the high pressure. Now, 23PC500A & 23FY203 provide over pressure control without operator interaction.
In cascade, 23FY203 will select the higher output of 23PC500A & 23FC203. As the pressure increases beyond flow capability of 23PV500, the 23PC500A output will overcome the output of 23FC203 and further open 23FV203 to relieve the over pressure. When the pressure lowers and brings 23PC500 back into control, 23FC203's output will again become the selected output.
Feed Pressure
23PC500
100 # HDR
Text%
23PC500A
Process
Text%
>
F/G HDR
23FC203
23PC501
Text%
23FI202
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2307H1
Ack Page
Name
EngU
Hide
Reformer_2307H1
FEED
PRESSURE
23PC500
W 9999.99
9999.99
TO ENSURE THAT H2 IS NOT SENT TO WASTE GAS BEFORE THE 100 # HEADER, THE SETPOINT OF 23PC500A SHOULD BE 20 # HIGHER THAN THE SETPOINT OF 23PC500.
23PC500
100%
100 # HDR
23PC500
W 9999.99
9999.99
23PC500A
W 9999.99
9999.99
PRESSURE CONTROL SCHEME
BACKGROUND: HDS PRISM GAS PRESSURE IS NORMALLY CONTROLLED VIA 23PC500. DURING PERIODS OF HIGH PRESSURE, 23PC500 MAY BECOME FULLY OPEN. IN THE PAST, THE OPERATOR WAS FORCED TO INCREASE THE SP OF 23FC203 TO OVERCOME THE HIGH PRESSURE. NOW, 23PC500A & 23FY203 PROVIDE OVER PRESSURE CONTROL WITHOUT OPERATOR INTERACTION.
IN CASCADE, 23FY203 WILL SELECT THE HIGHER OUTPUT OF 23PC500A & 23FC203. AS THE PRESSURE INCREASES BEYOND FLOW CAPABILITY OF 23PV500, THE 23PC500A OUTPUT WILL OVERCOME THE OUTPUT OF 23FC203 AND FURTHER OPEN 23FV203 TO RELIEVE THE OVER PRESSURE. WHEN THE PRESSURE LOWERS AND BRINGS 23PC500 BACK INTO CONTROL, 23FC203'S OUTPUT WILL AGAIN BECOME THE SELECTED OUTPUT
23PC500A
9999.99 W
9999.99
9999.99
PROCESS
23FY203
100%
23FY203
F/G HDR
23FC203
9999.99 W
9999.99
9999.99
23PC501
W 9999.99
9999.99
23PC501
100%
23FI202
9999.99
Reserved for Faceplates

1.137 2307H2 HDS PRISM UNIT TEMPERATURE CONTROL HELP (Reformer_2307H2.htm)



Reformer_2307H2

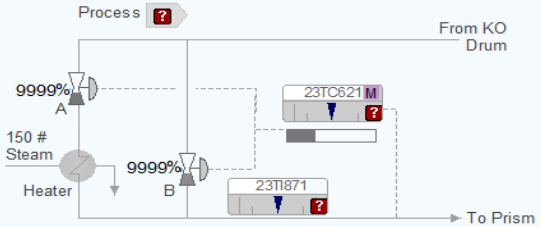
2307H2 HDS Prism Unit Temperature Control Help

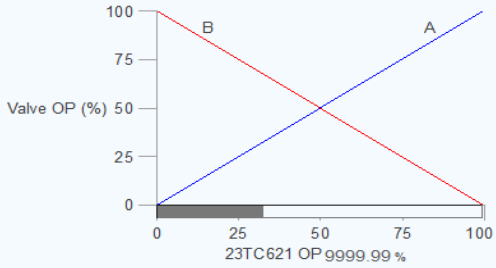
ACK SIL

Temperature Controller 23TC621 moves the 'A' & 'B' valves to raise / lower Prism Feed Gas temperature. Each valve has its own signal loop from 23TC621 and they move opposite of each other 0-100%.

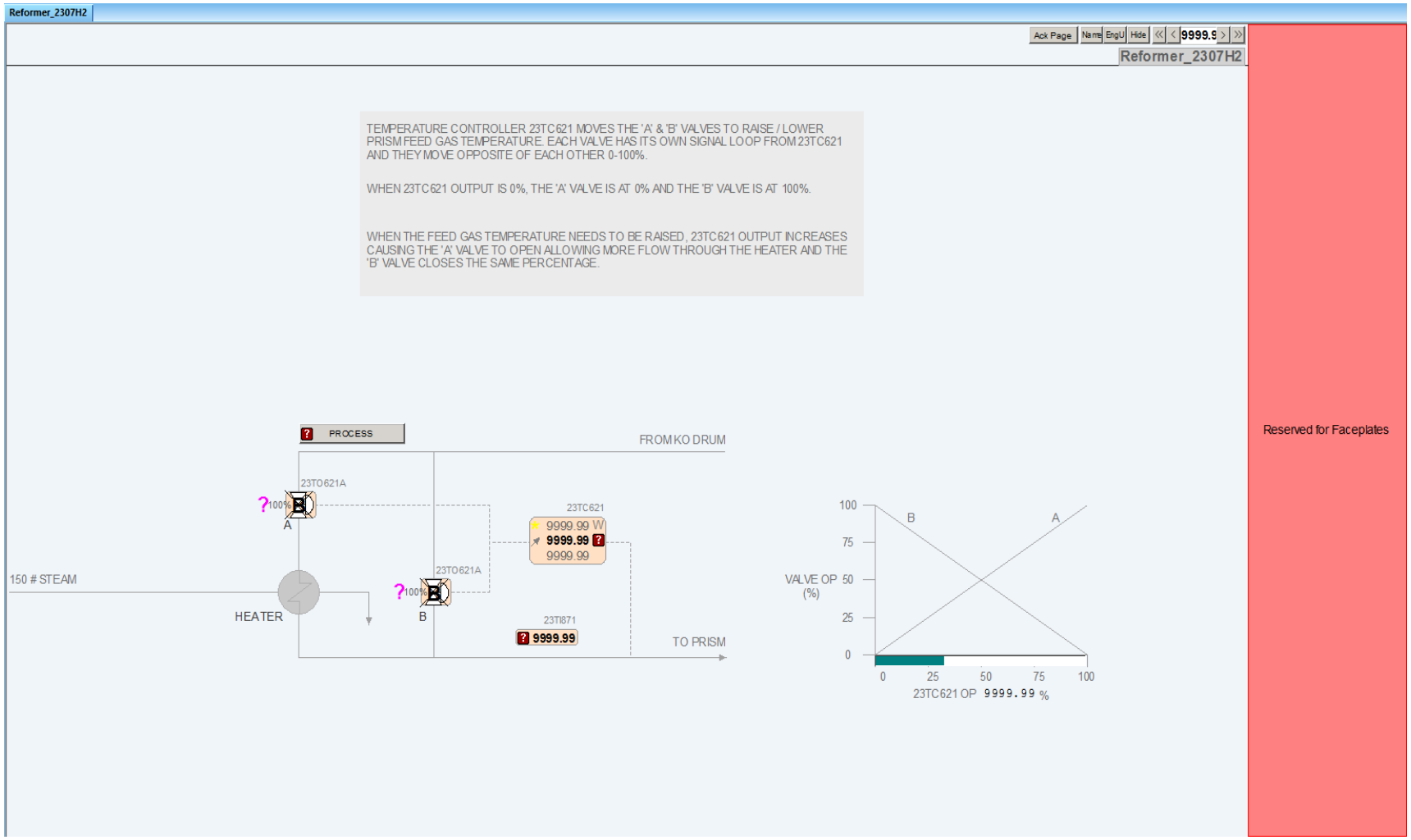
When 23TC621 output is 0%, the 'A' valve is at 0% and the 'B' valve is at 100%.

When the feed gas temperature needs to be raised, 23TC621 output increases causing the 'A' valve to open allowing more flow through the heater and the 'B' valve closes the same percentage.

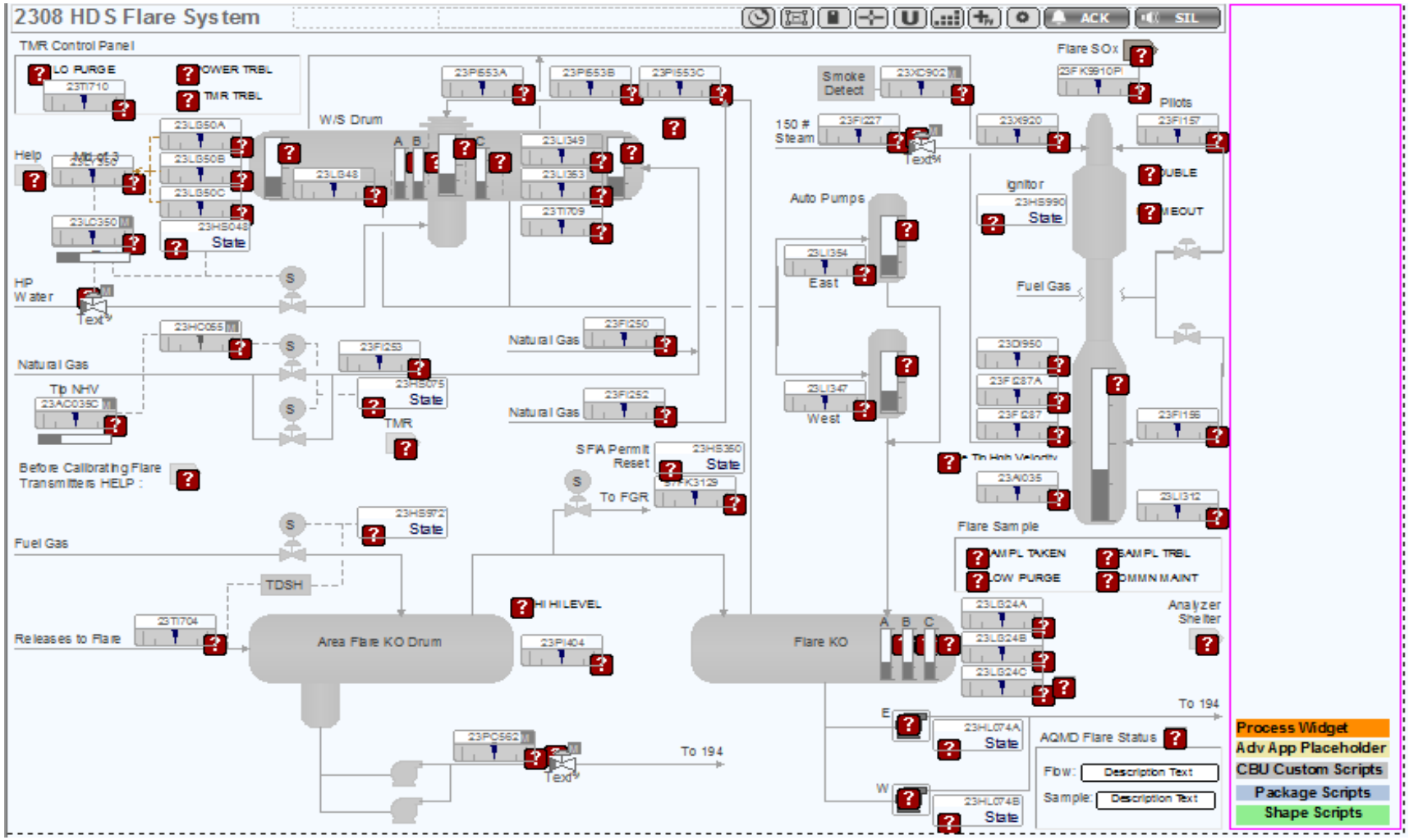


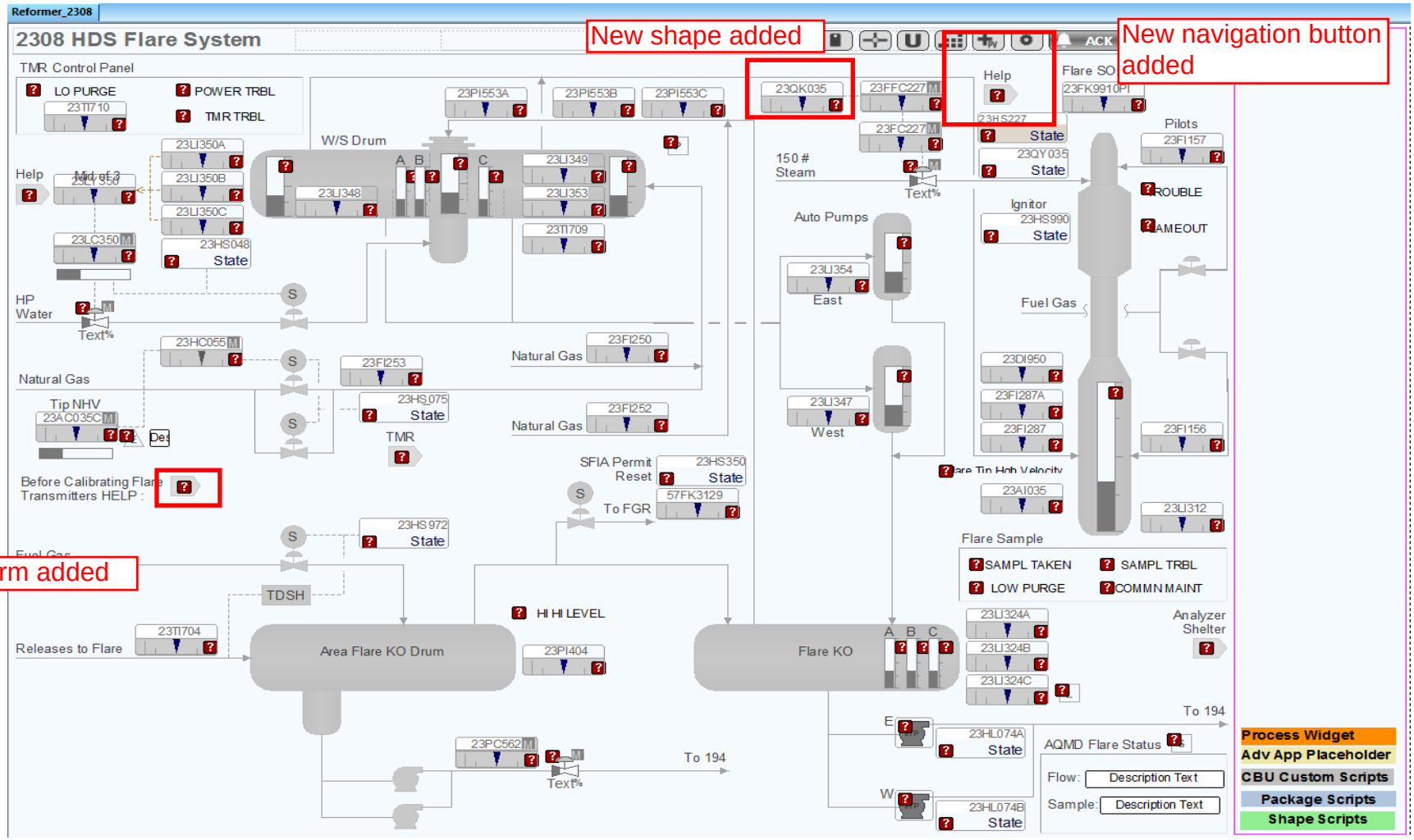


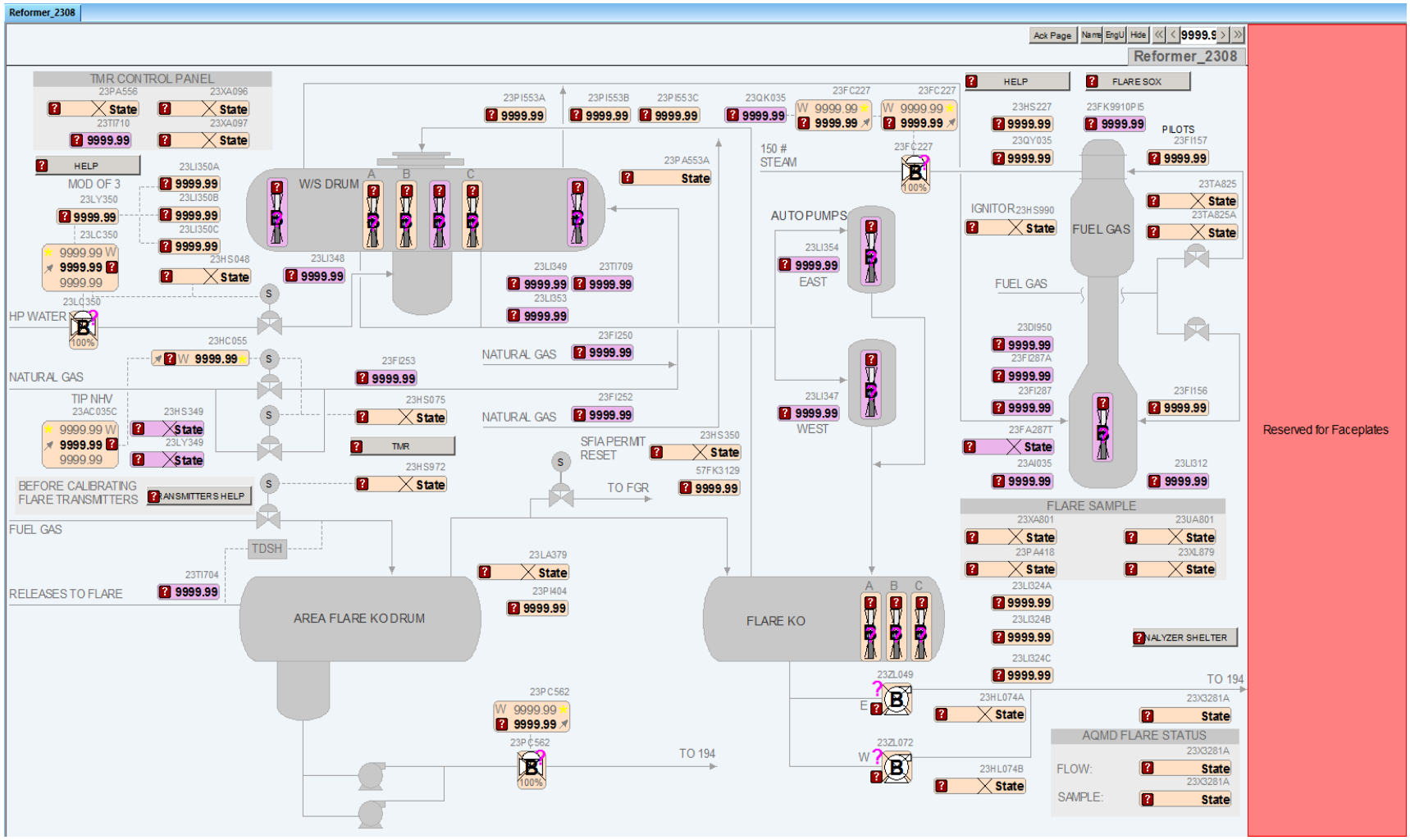
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2307H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2307H2
TEMPERATURE CONTROLLER 23TC621 MOVES THE 'A' & 'B' VALVES TO RAISE / LOWER PRISM FEED GAS TEMPERATURE. EACH VALVE HAS ITS OWN SIGNAL LOOP FROM 23TC621 AND THEY MOVE OPPOSITE OF EACH OTHER 0-100%.
WHEN 23TC621 OUTPUT IS 0%, THE 'A' VALVE IS AT 0% AND THE 'B' VALVE IS AT 100%.
WHEN THE FEED GAS TEMPERATURE NEEDS TO BE RAISED, 23TC621 OUTPUT INCREASES CAUSING THE 'A' VALVE TO OPEN ALLOWING MORE FLOW THROUGH THE HEATER AND THE 'B' VALVE CLOSES THE SAME PERCENTAGE.
PROCESS
FROM KO DRUM
23TO621A
100%
A
23TC621
9999.99 W
9999.99
9999.99
150 # STEAM
HEATER
23TO621A
100%
B
23TI871
9999.99
TO PRISM
100
75
VALVE OP (%) 50
25
0
B
A
0
25
50
75
100
23TC621 OP 9999.99 %
Reserved for Faceplates

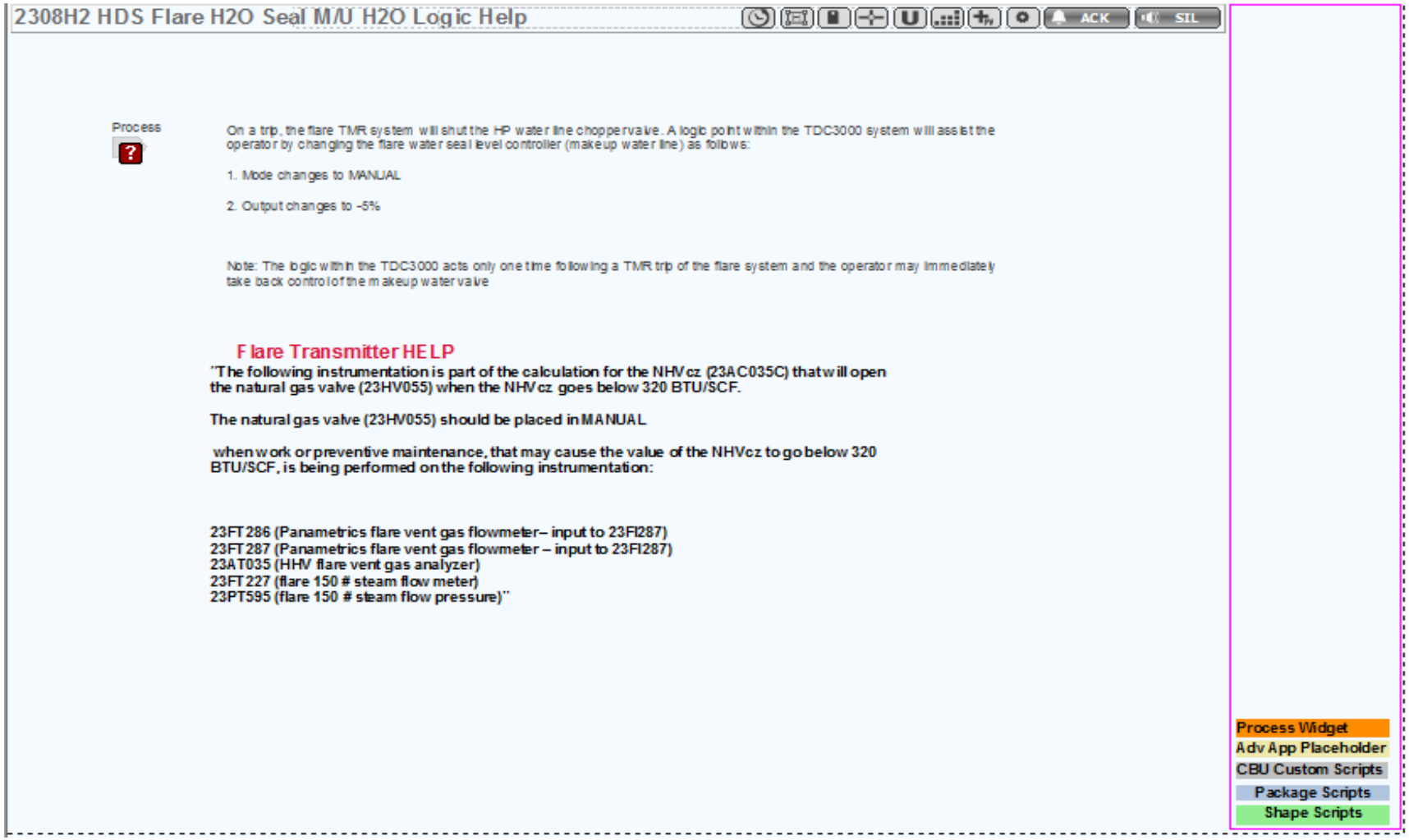
1.138 2308 HDS FLARE SYSTEM (Reformer_2308.htm)

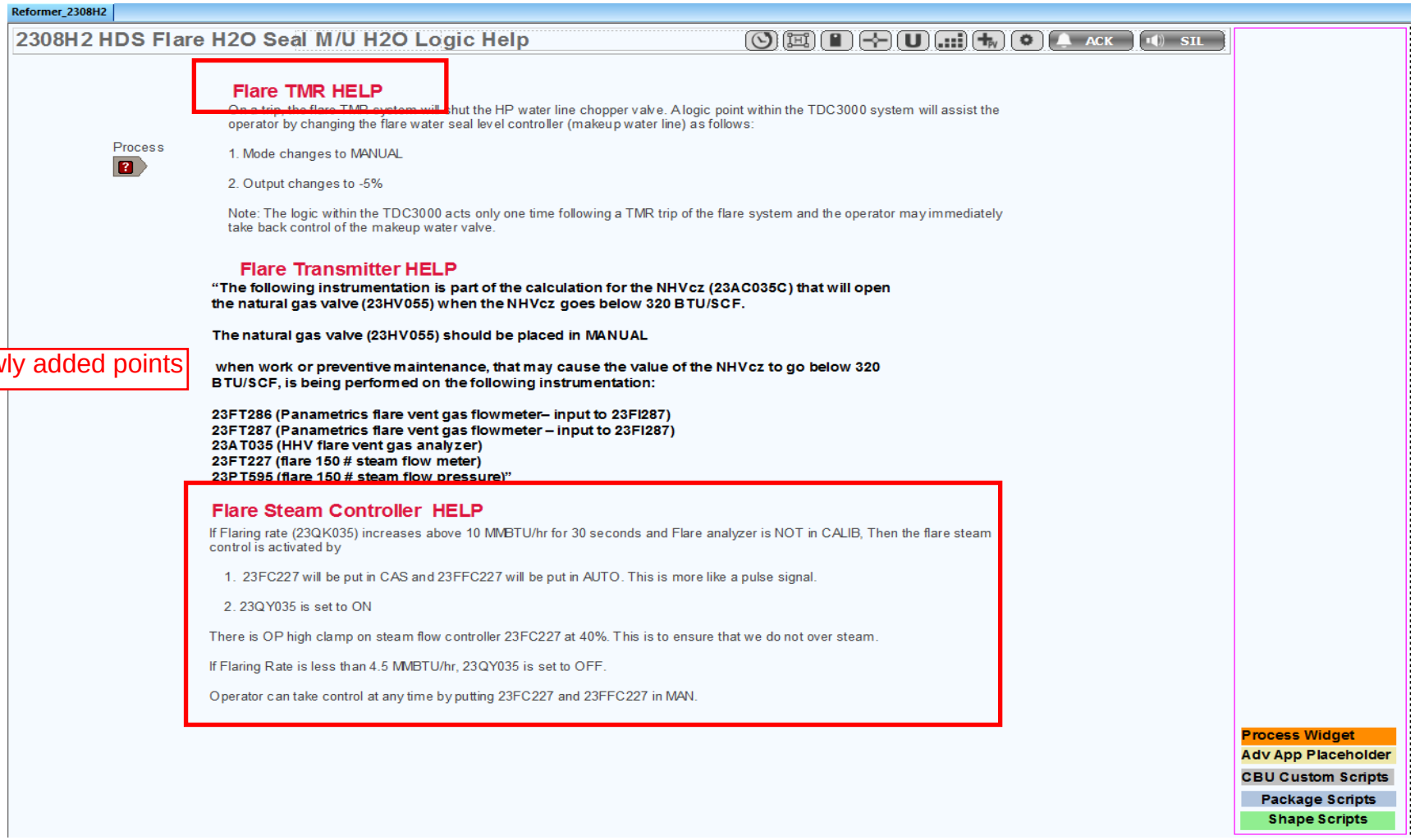


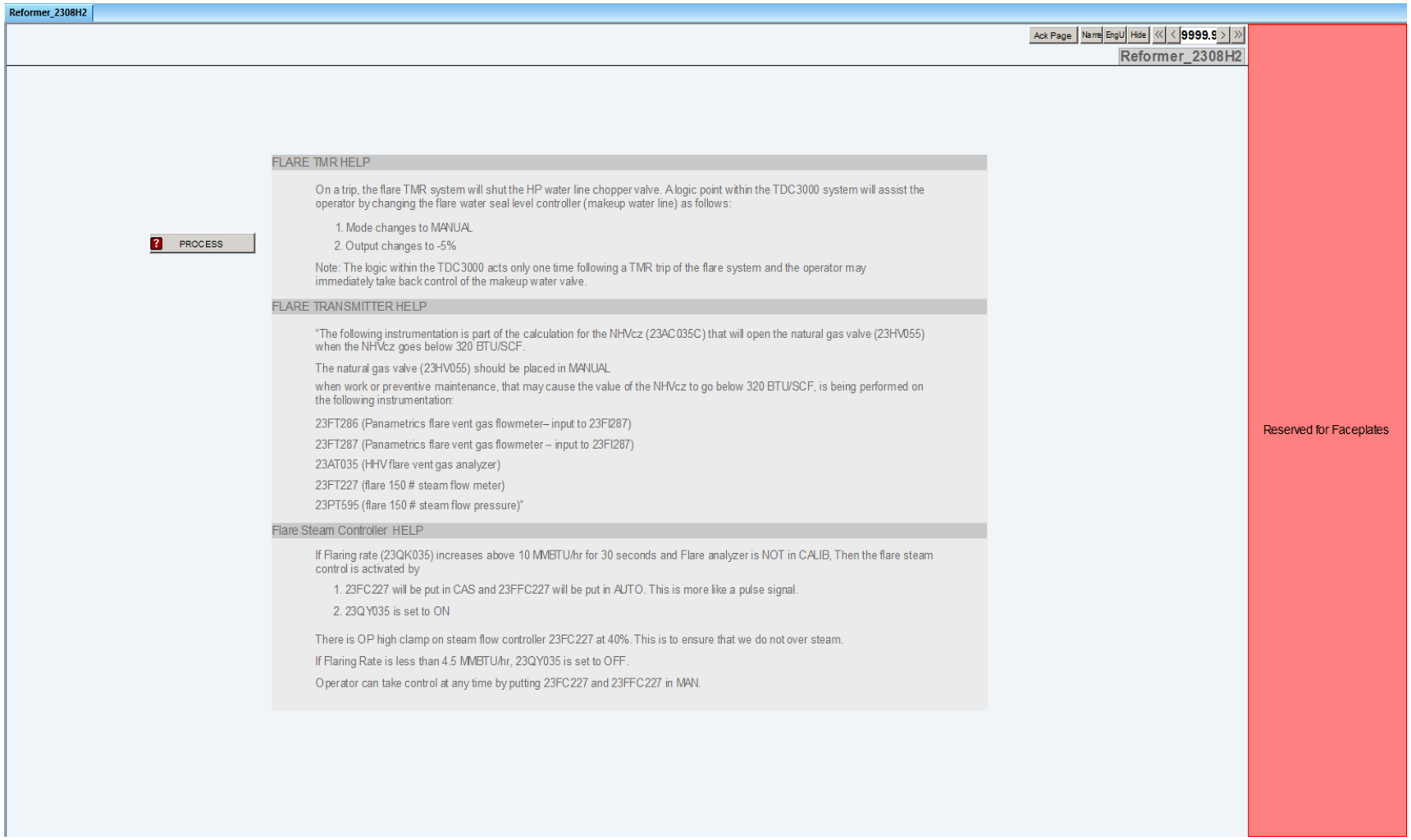

Reformer_2308
2308 HDS Flare System
New shape added
New navigation button added
New alarm added
TMR Control Panel
LO PURGE
POWER TRBL
TMR TRBL
W/S Drum
Help
150 # Steam
Auto Pumps
Ignitor
Fuel Gas
Pilots
HP Water
Natural Gas
Tip NHV
TMR
SFIA Permit Reset
To FGR
Before Calibrating Flare Transmitters HELP :
TDSH
HI HI LEVEL
Area Flare KO Drum
Flare KO
Releases to Flare
Flare Sample
SAMPL TAKEN
SAMPL TRBL
LOW PURGE
COMMN MAINT
Analyzer Shelter
AQMD Flare Status
Flow:
Sample:
Description Text
To 194
East
West
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2308
Reformer_2308
TMR CONTROL PANEL
HELP
MOD OF 3
W/S DRUM
150 # STEAM
AUTO PUMPS
EAST
WEST
IGNITOR
FUEL GAS
PILOTS
HP WATER
NATURAL GAS
TIP NHV
BEFORE CALIBRATING FLARE TRANSMITTERS
TRANSMITTERS HELP
TMR
SFIA PERMT RESET
TO FGR
FUEL GAS
TDSH
RELEASES TO FLARE
AREA FLARE KO DRUM
FLARE KO
FLARE SOX
FLARE SAMPLE
ANALYZER SHELTER
TO 194
AQMD FLARE STATUS
FLOW:
SAMPLE:
Reserved for Faceplates

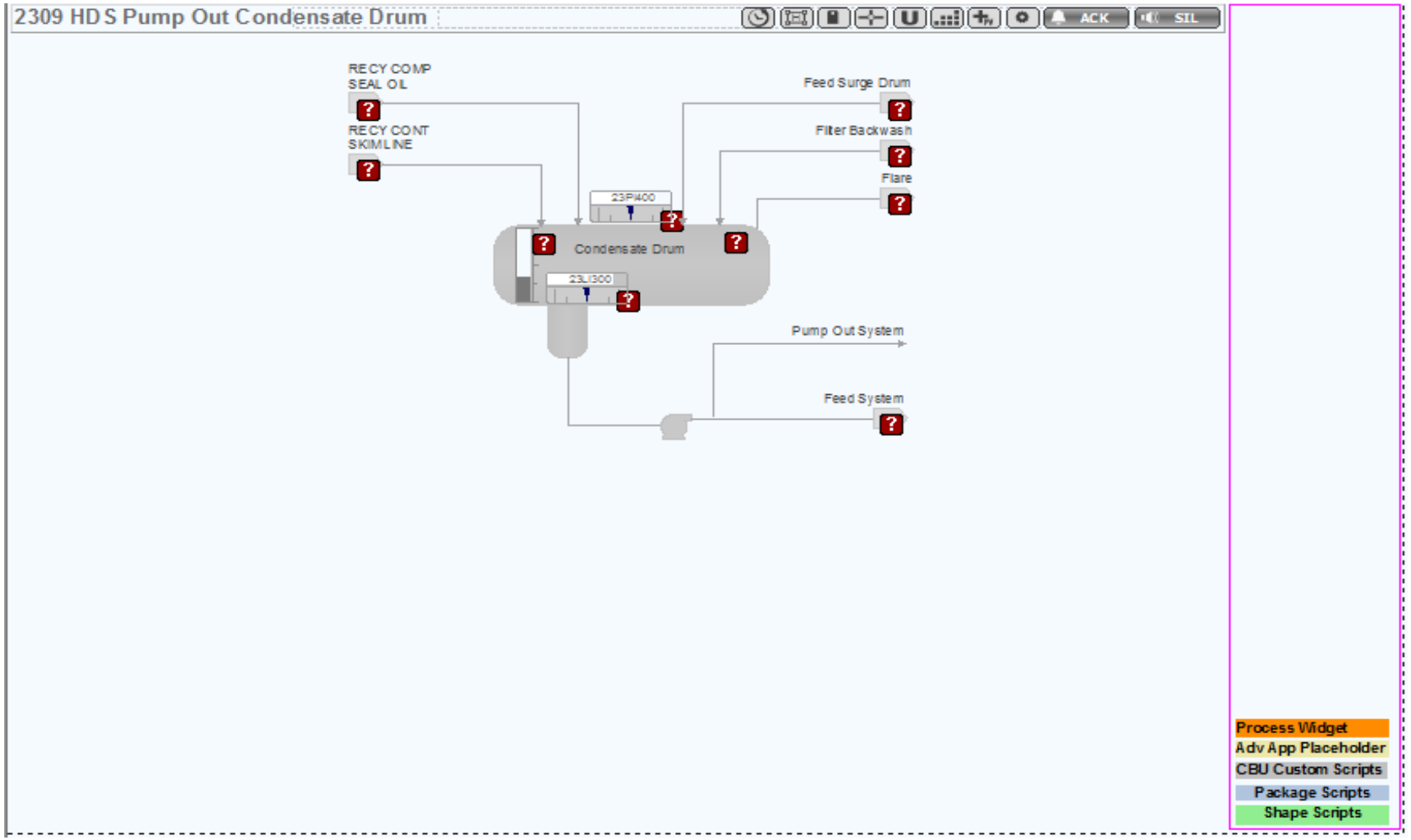
1.139 2308H2 HDS FLARE H2O SEAL M/U H2O LOGIC HELP (Reformer_2308H2.htm)

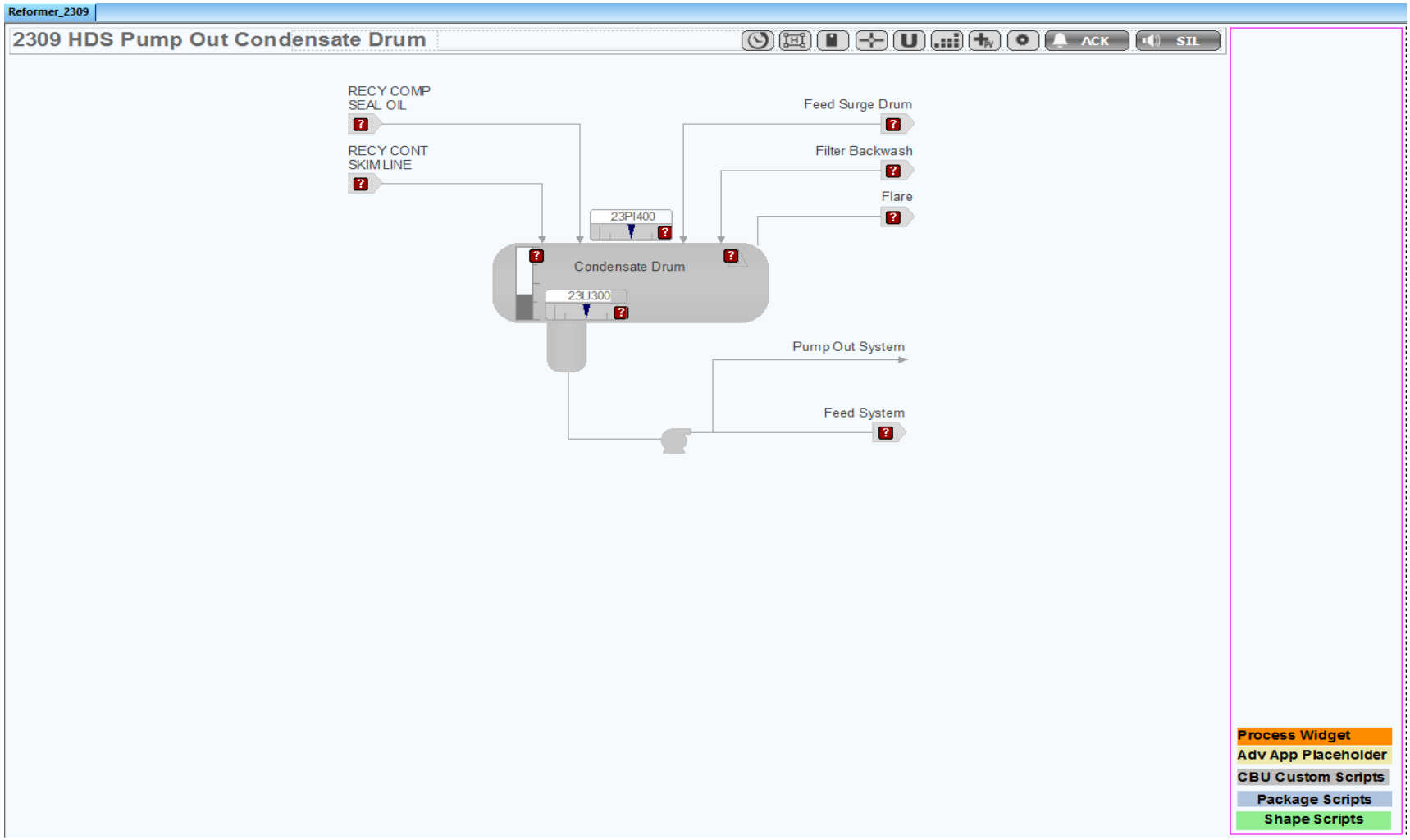


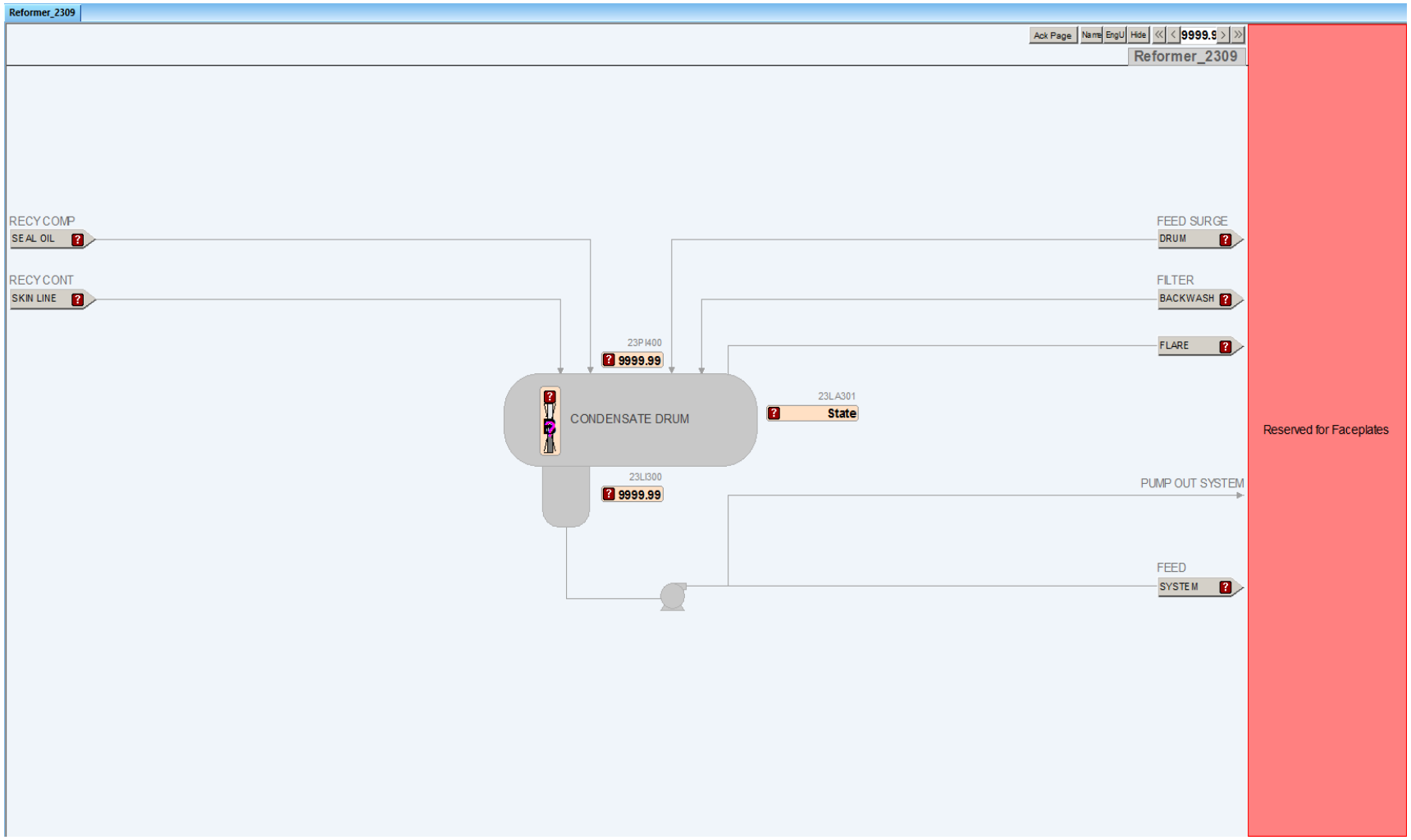

Reformer_2308H2
2308H2 HDS Flare H2O Seal M/U H2O Logic Help
ACK
SIL
Flare TMR HELP
On a trip, the flare TMR system will shut the HP water line chopper valve. A logic point within the TDC3000 system will assist the operator by changing the flare water seal level controller (makeup water line) as follows:
Process
1. Mode changes to MANUAL
2. Output changes to -5%
Note: The logic within the TDC3000 acts only one time following a TMR trip of the flare system and the operator may immediately take back control of the makeup water valve.
Flare Transmitter HELP
"The following instrumentation is part of the calculation for the NHVcz (23AC035C) that will open the natural gas valve (23HV055) when the NHVcz goes below 320 BTU/SCF.
The natural gas valve (23HV055) should be placed in MANUAL
when work or preventive maintenance, that may cause the value of the NHVcz to go below 320 BTU/SCF, is being performed on the following instrumentation:
23FT286 (Panametrics flare vent gas flowmeter– input to 23FI287)
23FT287 (Panametrics flare vent gas flowmeter – input to 23FI287)
23AT035 (HHV flare vent gas analyzer)
23FT227 (flare 150 # steam flow meter)
23PT595 (flare 150 # steam flow pressure)"
Newly added points
Flare Steam Controller HELP
If Flaring rate (23QK035) increases above 10 MMBTU/hr for 30 seconds and Flare analyzer is NOT in CALIB, Then the flare steam control is activated by
1. 23FC227 will be put in CAS and 23FFC227 will be put in AUTO. This is more like a pulse signal.
2. 23QY035 is set to ON
There is OP high clamp on steam flow controller 23FC227 at 40%. This is to ensure that we do not over steam.
If Flaring Rate is less than 4.5 MMBTU/hr, 23QY035 is set to OFF.
Operator can take control at any time by putting 23FC227 and 23FFC227 in MAN.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2308H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2308H2
PROCESS
FLARE TMR HELP
On a trip, the flare TMR system will shut the HP water line chopper valve. A logic point within the TDC3000 system will assist the operator by changing the flare water seal level controller (makeup water line) as follows:
1. Mode changes to MANUAL
2. Output changes to -5%
Note: The logic within the TDC3000 acts only one time following a TMR trip of the flare system and the operator may immediately take back control of the makeup water valve.
FLARE TRANSMITTER HELP
"The following instrumentation is part of the calculation for the NHVcz (23AC035C) that will open the natural gas valve (23HV055) when the NHVcz goes below 320 BTU/SCF.
The natural gas valve (23HV055) should be placed in MANUAL
when work or preventive maintenance, that may cause the value of the NHVcz to go below 320 BTU/SCF, is being performed on the following instrumentation:
23FT286 (Panametrics flare vent gas flowmeter– input to 23FI287)
23FT287 (Panametrics flare vent gas flowmeter – input to 23FI287)
23AT035 (HHV flare vent gas analyzer)
23FT227 (flare 150 # steam flow meter)
23PT595 (flare 150 # steam flow pressure)"
Flare Steam Controller HELP
If Flaring rate (23QK035) increases above 10 MMBTU/hr for 30 seconds and Flare analyzer is NOT in CALIB, Then the flare steam control is activated by
1. 23FC227 will be put in CAS and 23FFC227 will be put in AUTO. This is more like a pulse signal.
2. 23QY035 is set to ON
There is OP high clamp on steam flow controller 23FC227 at 40%. This is to ensure that we do not over steam.
If Flaring Rate is less than 4.5 MMBTU/hr, 23QY035 is set to OFF.
Operator can take control at any time by putting 23FC227 and 23FFC227 in MAN.
Reserved for Faceplates

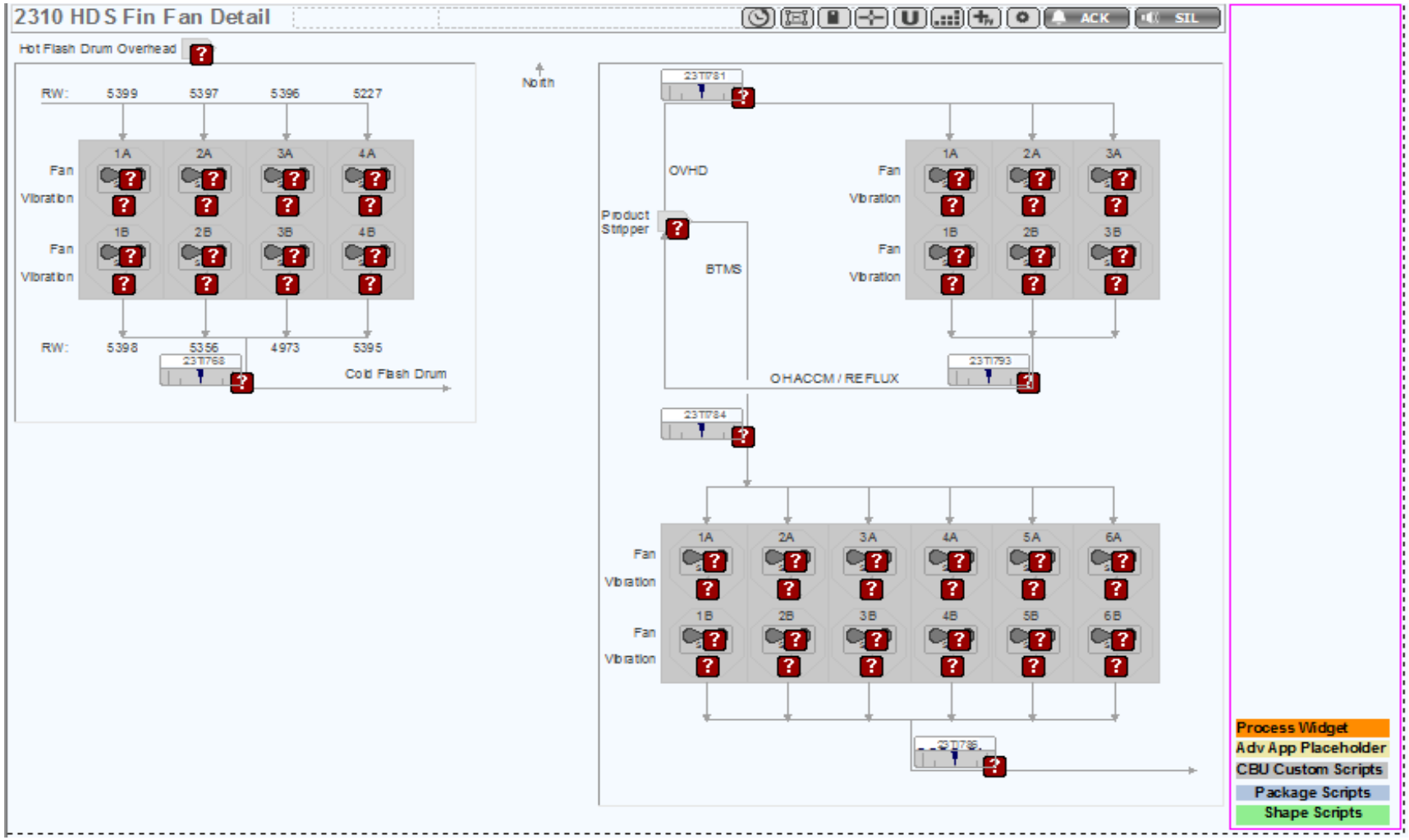
1.140 2309 HDS PUMP OUT CONDENSATE DRUM (Reformer_2309.htm)

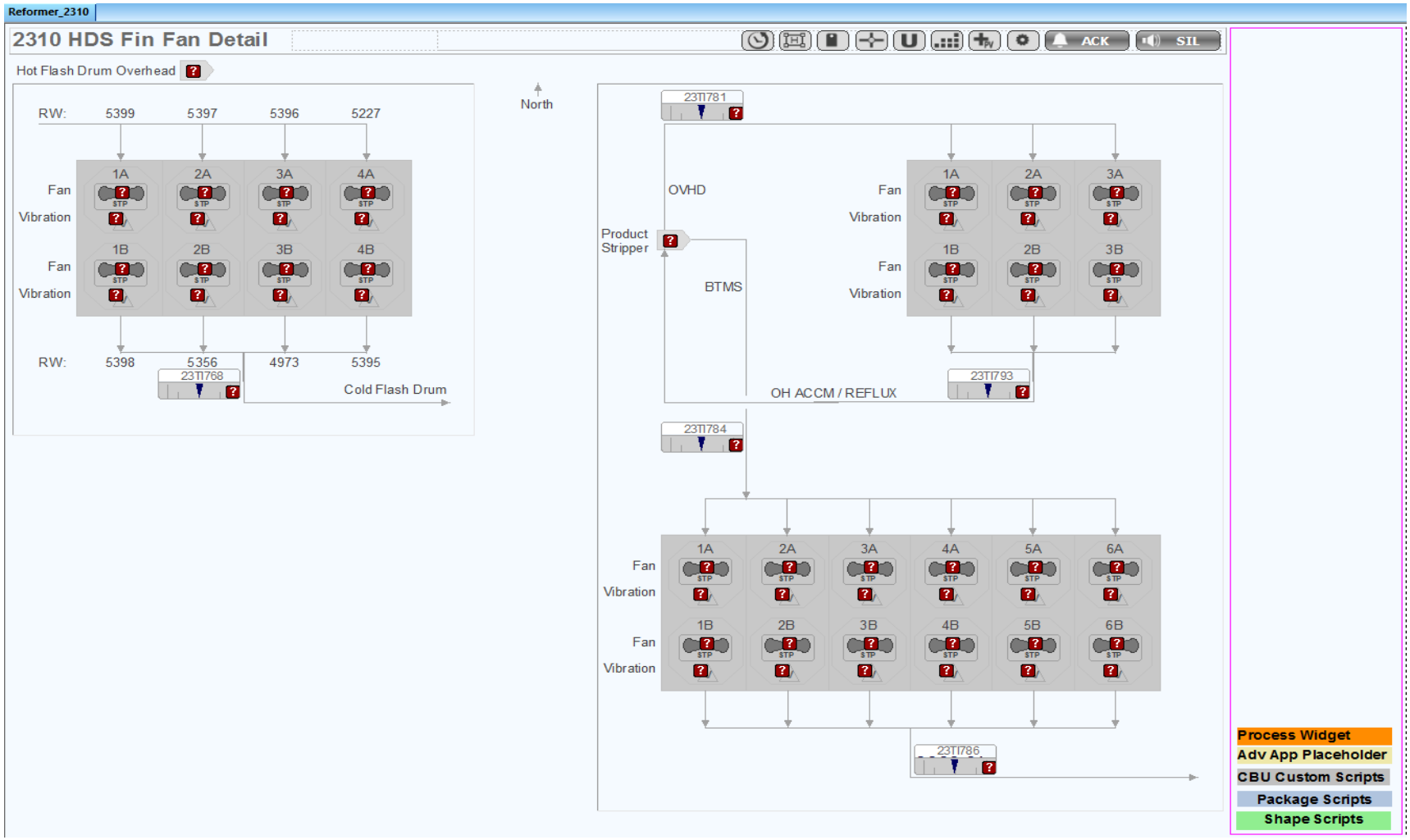


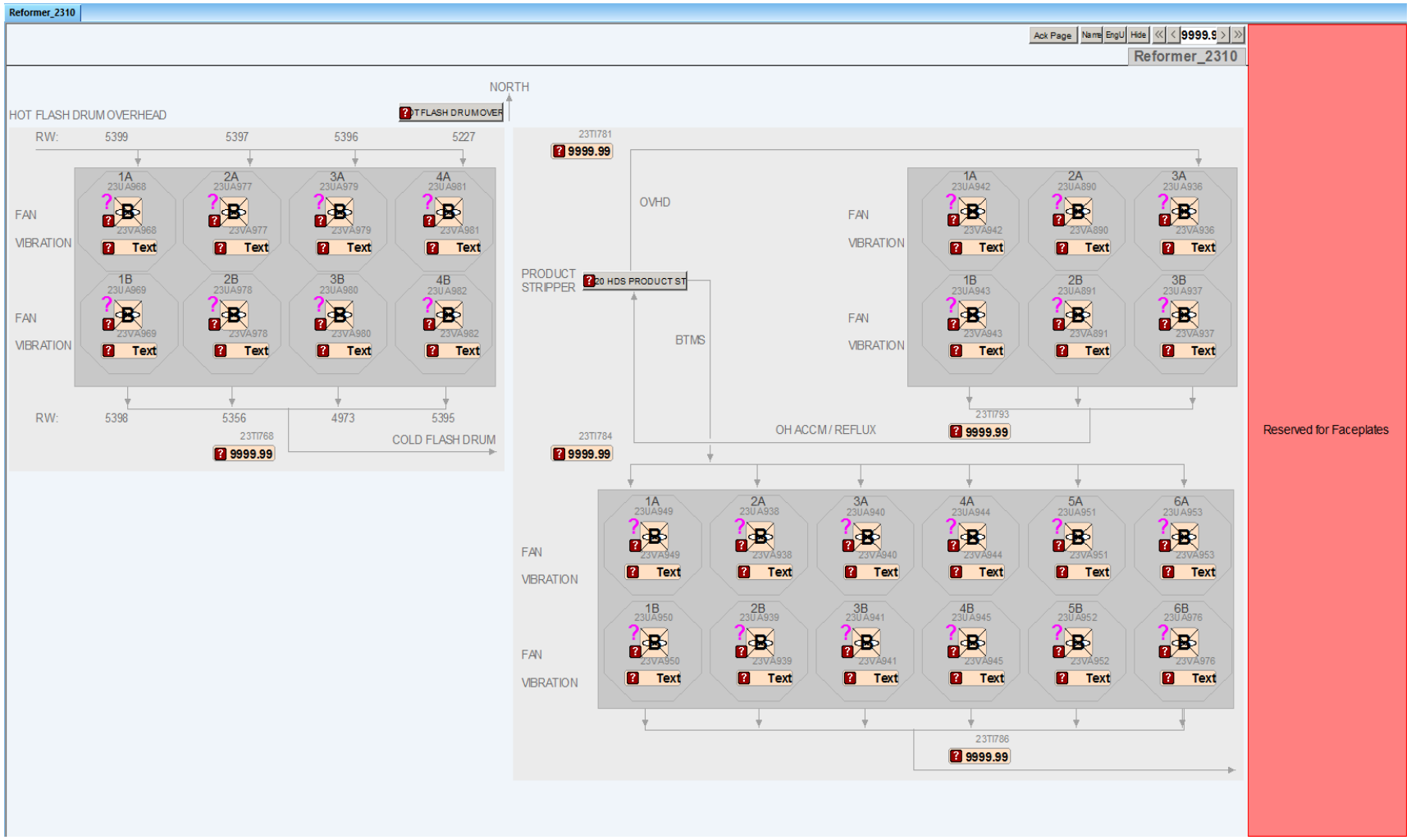

Reformer_2309
2309 HDS Pump Out Condensate Drum
ACK
SIL
RECY COMP SEAL OIL
RECY CONT SKIM LINE
Feed Surge Drum
Filter Backwash
Flare
23PI400
Condensate Drum
23LI300
Pump Out System
Feed System
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2309
Ack Page
Name
EngU
Hide
9999.9
Reformer_2309
RECY COMP
SEAL OIL
RECY CONT
SKIN LINE
23PI400
9999.99
CONDENSATE DRUM
23LA301
State
23LI300
9999.99
FEED SURGE
DRUM
FILTER
BACKWASH
FLARE
PUMP OUT SYSTEM
FEED
SYSTEM
Reserved for Faceplates

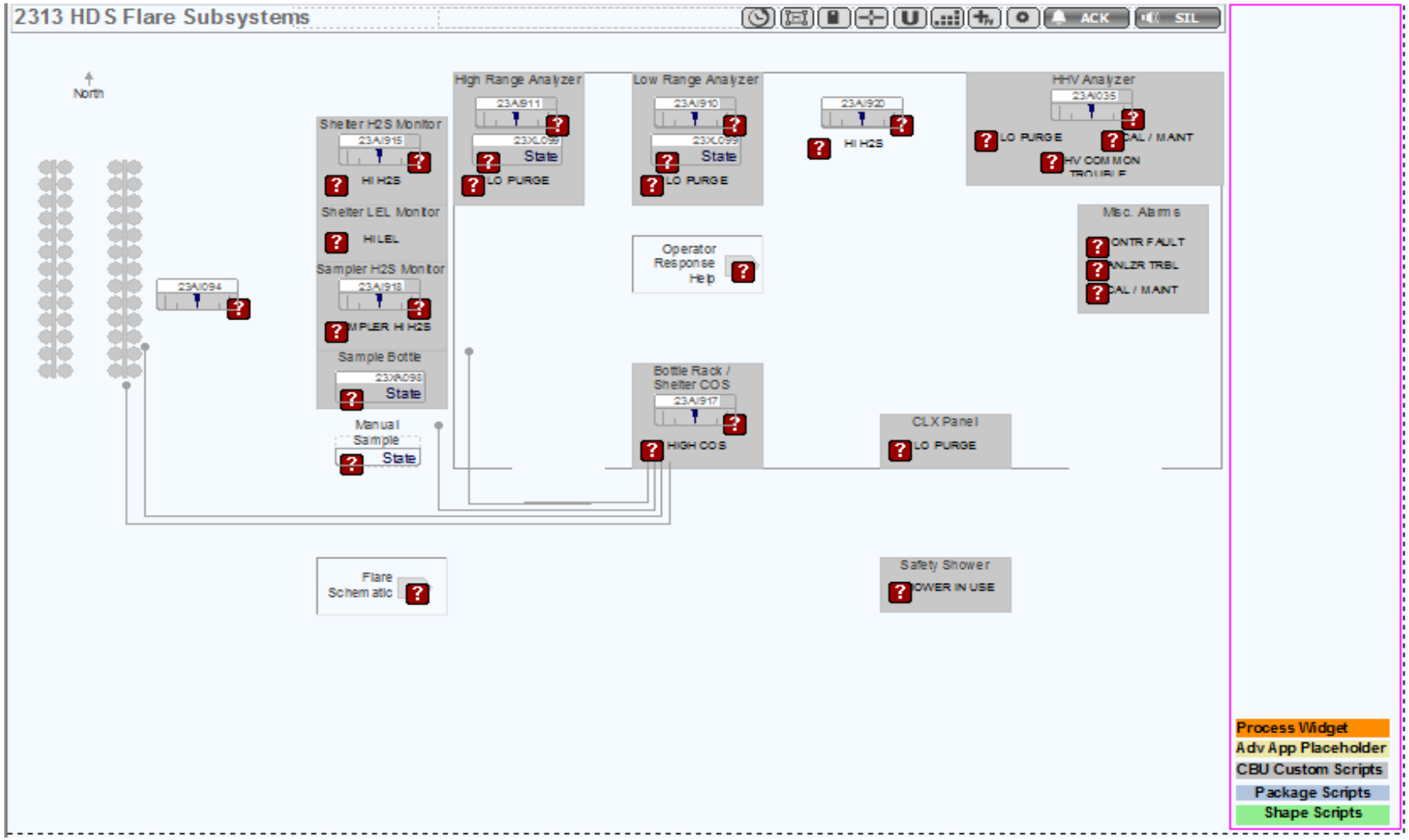
1.141 2310 HDS FIN FAN DETAIL (Reformer_2310.htm)

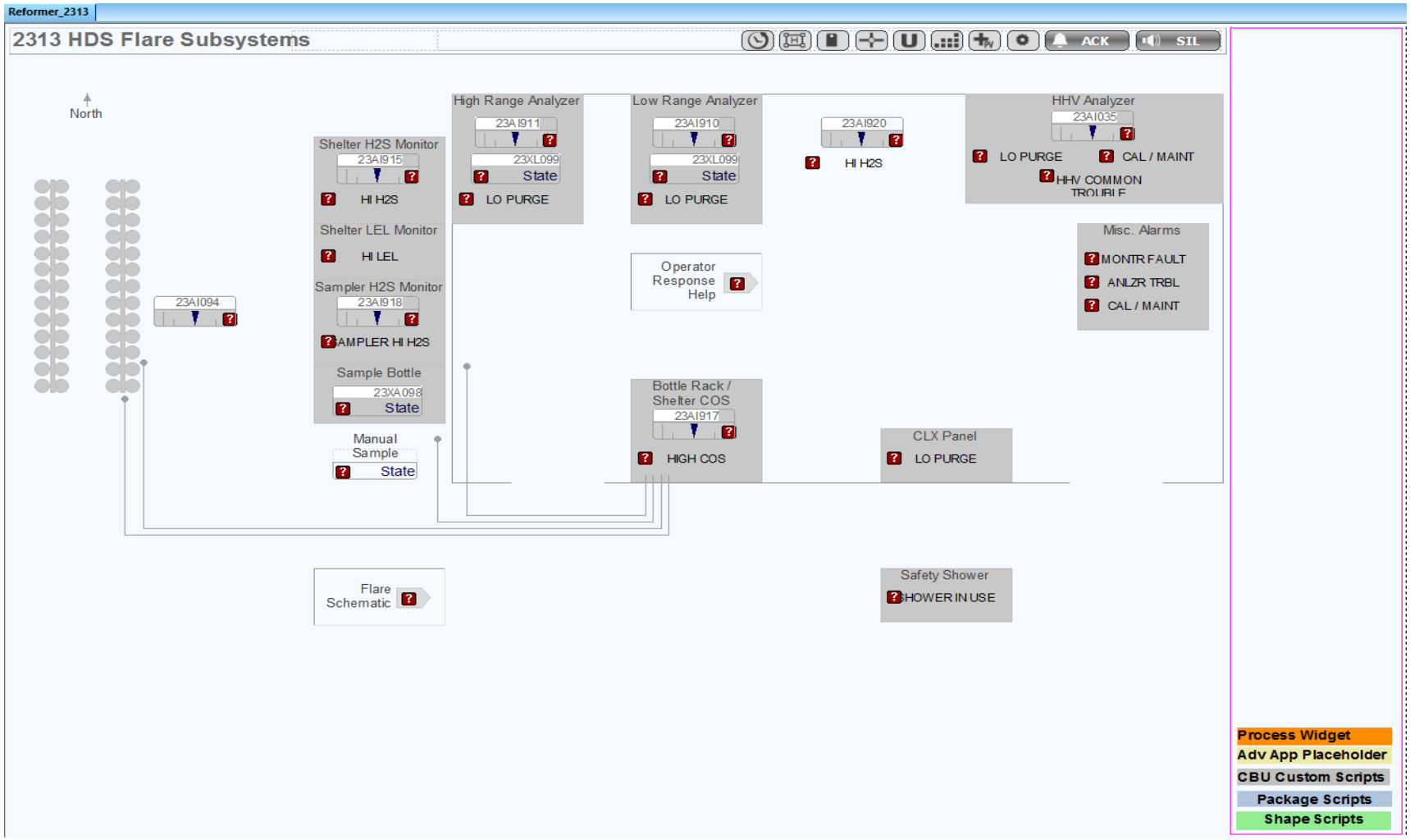


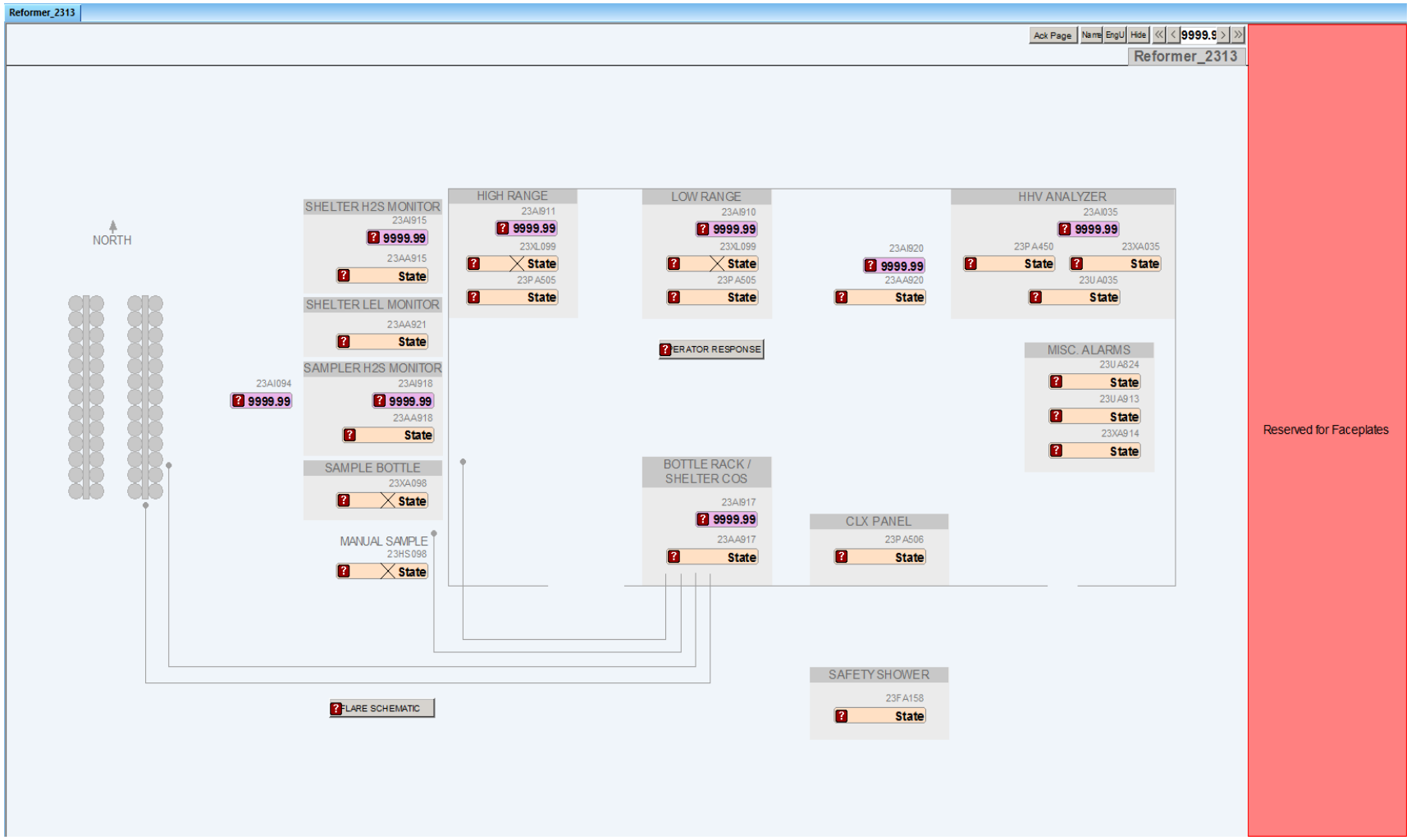

Reformer_2310
2310 HDS Fin Fan Detail
ACK
SIL
Hot Flash Drum Overhead
RW:
5399
5397
5396
5227
Fan
Vibration
1A
2A
3A
4A
1B
2B
3B
4B
RW:
5398
5356
4973
5395
23TI768
Cold Flash Drum
North
23TI781
OVHD
Product Stripper
BTMS
OH ACCM / REFLUX
23TI793
23TI784
5A
6A
5B
6B
23TI786
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2310
Ack Page
Name
EngU
Hide
9999.9
Reformer_2310
NORTH
HOT FLASH DRUM OVERHEAD
T FLASH DRUM OVER
RW:
5399
5397
5396
5227
1A 23UA968 23VA968
2A 23UA977 23VA977
3A 23UA979 23VA979
4A 23UA981 23VA981
1B 23UA969 23VA969
2B 23UA978 23VA978
3B 23UA980 23VA980
4B 23UA982 23VA982
FAN VIBRATION
Text
RW:
5398
5356
4973
5395
23TI768
9999.99
COLD FLASH DRUM
23TI781
9999.99
OVHD
PRODUCT STRIPPER
20 HDS PRODUCT ST
BTMS
1A 23UA942 23VA942
2A 23UA890 23VA890
3A 23UA936 23VA936
1B 23UA943 23VA943
2B 23UA891 23VA891
3B 23UA937 23VA937
23TI793
9999.99
OH ACCM / REFLUX
23TI784
9999.99
1A 23UA949 23VA949
2A 23UA938 23VA938
3A 23UA940 23VA940
4A 23UA944 23VA944
5A 23UA951 23VA951
6A 23UA953 23VA953
1B 23UA950 23VA950
2B 23UA939 23VA939
3B 23UA941 23VA941
4B 23UA945 23VA945
5B 23UA952 23VA952
6B 23UA976 23VA976
23TI786
9999.99
Reserved for Faceplates

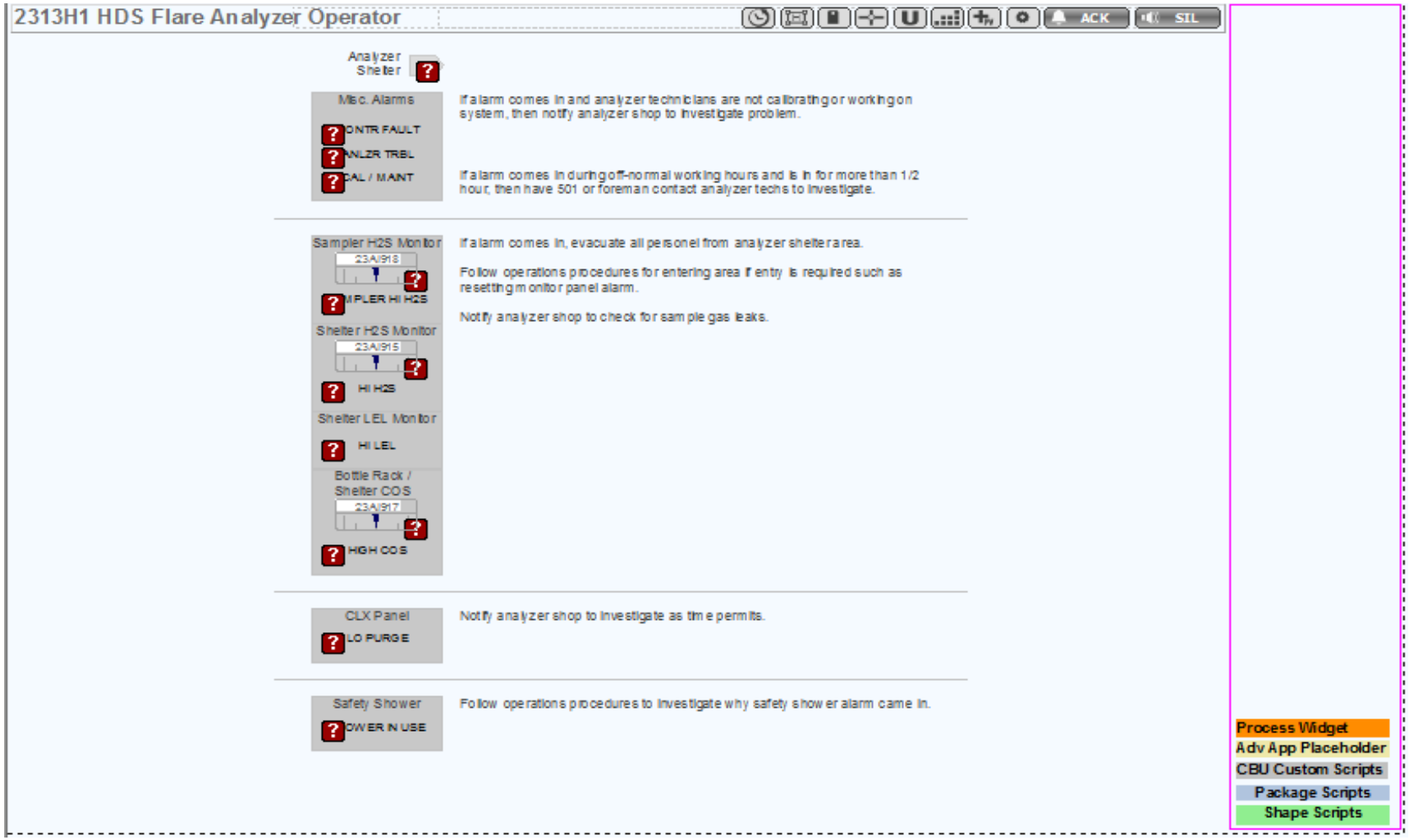
1.142 2313 HDS FLARE SUBSYSTEMS (Reformer_2313.htm)

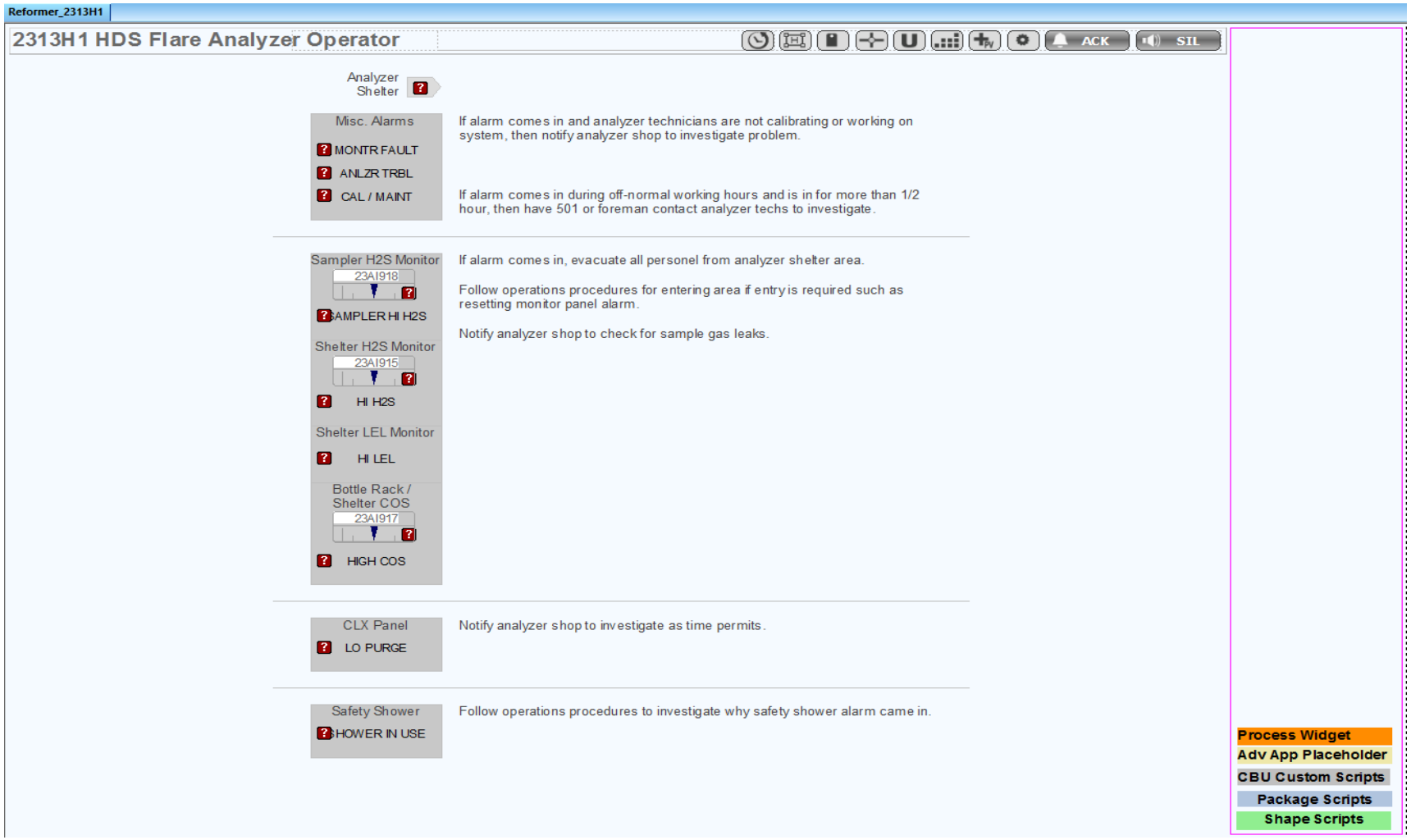


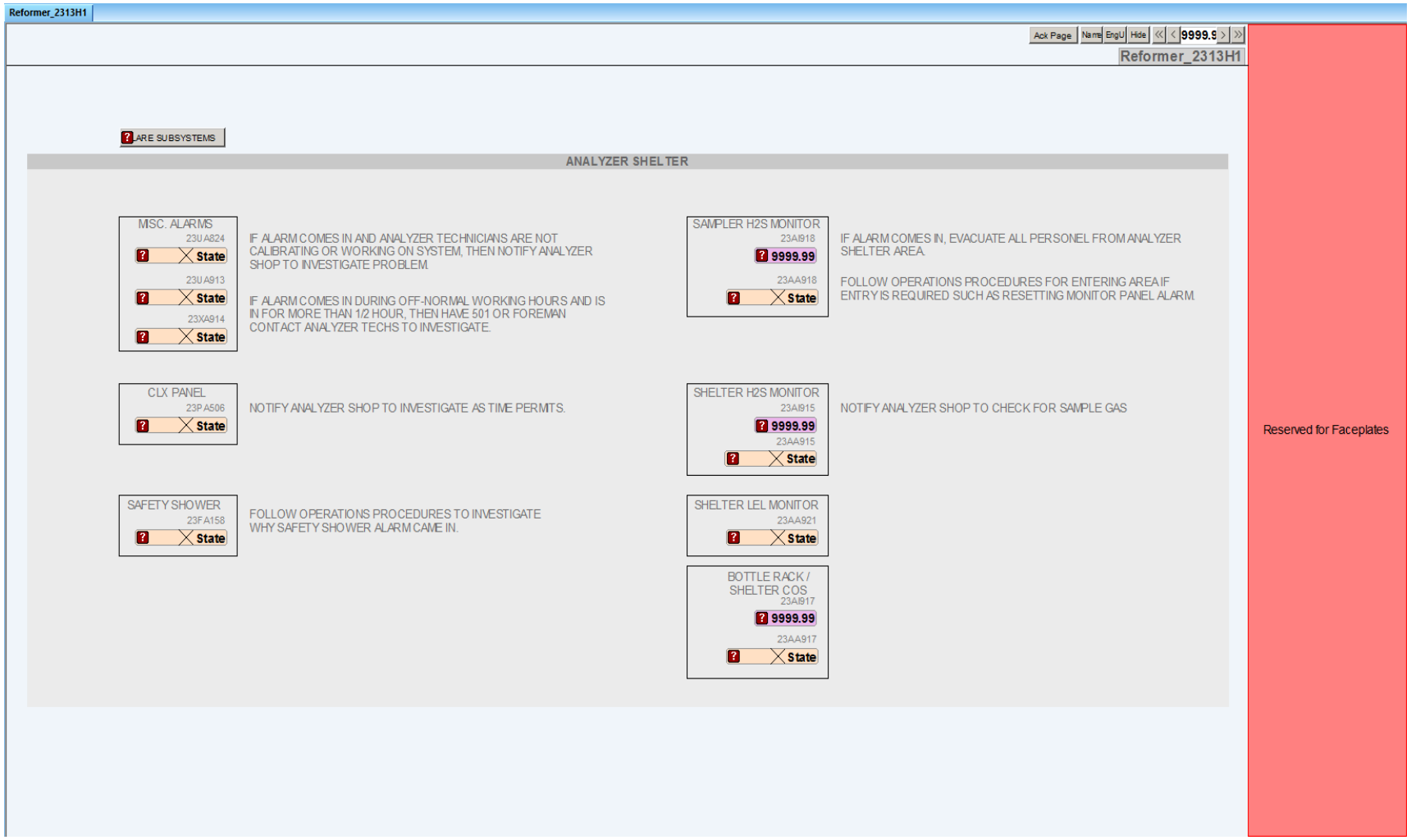

Reformer_2313
2313 HDS Flare Subsystems
ACK
SIL
North
23AI094
Shelter H2S Monitor
23AI915
HI H2S
Shelter LEL Monitor
HI LEL
Sampler H2S Monitor
23AI918
SAMPLER HI H2S
Sample Bottle
23XA098
State
Manual Sample
State
High Range Analyzer
23AI911
23XL099
State
LO PURGE
Low Range Analyzer
23AI910
23XL099
State
LO PURGE
Operator Response Help
Bottle Rack / Shelter COS
23AI917
HIGH COS
23AI920
HI H2S
HHV Analyzer
23AI035
LO PURGE
CAL / MAINT
HHV COMMON TROUBLE
Misc. Alarms
MONTR FAULT
ANLZR TRBL
CAL / MAINT
CLX Panel
LO PURGE
Flare Schematic
Safety Shower
SHOWER IN USE
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2313
Ack Page
Name
EngU
Hide
9999.9
Reformer_2313
NORTH
SHELTER H2S MONITOR
23AI915
9999.99
23AA915
State
SHELTER LEL MONITOR
23AA921
State
SAMPLER H2S MONITOR
23AI918
9999.99
23AA918
State
23AI094
9999.99
SAMPLE BOTTLE
23XA098
State
MANUAL SAMPLE
23HS098
State
HIGH RANGE
23AI911
9999.99
23XL099
State
23PA505
State
LOW RANGE
23AI910
9999.99
23XL099
State
23PA505
State
23AI920
9999.99
23AA920
State
HHV ANALYZER
23AI035
9999.99
23PA450
State
23XA035
State
23UA035
State
OPERATOR RESPONSE
MISC. ALARMS
23UA824
State
23UA913
State
23XA914
State
BOTTLE RACK / SHELTER COS
23AI917
9999.99
23AA917
State
CLX PANEL
23PA506
State
SAFETY SHOWER
23FA158
State
FLARE SCHEMATIC
Reserved for Faceplates

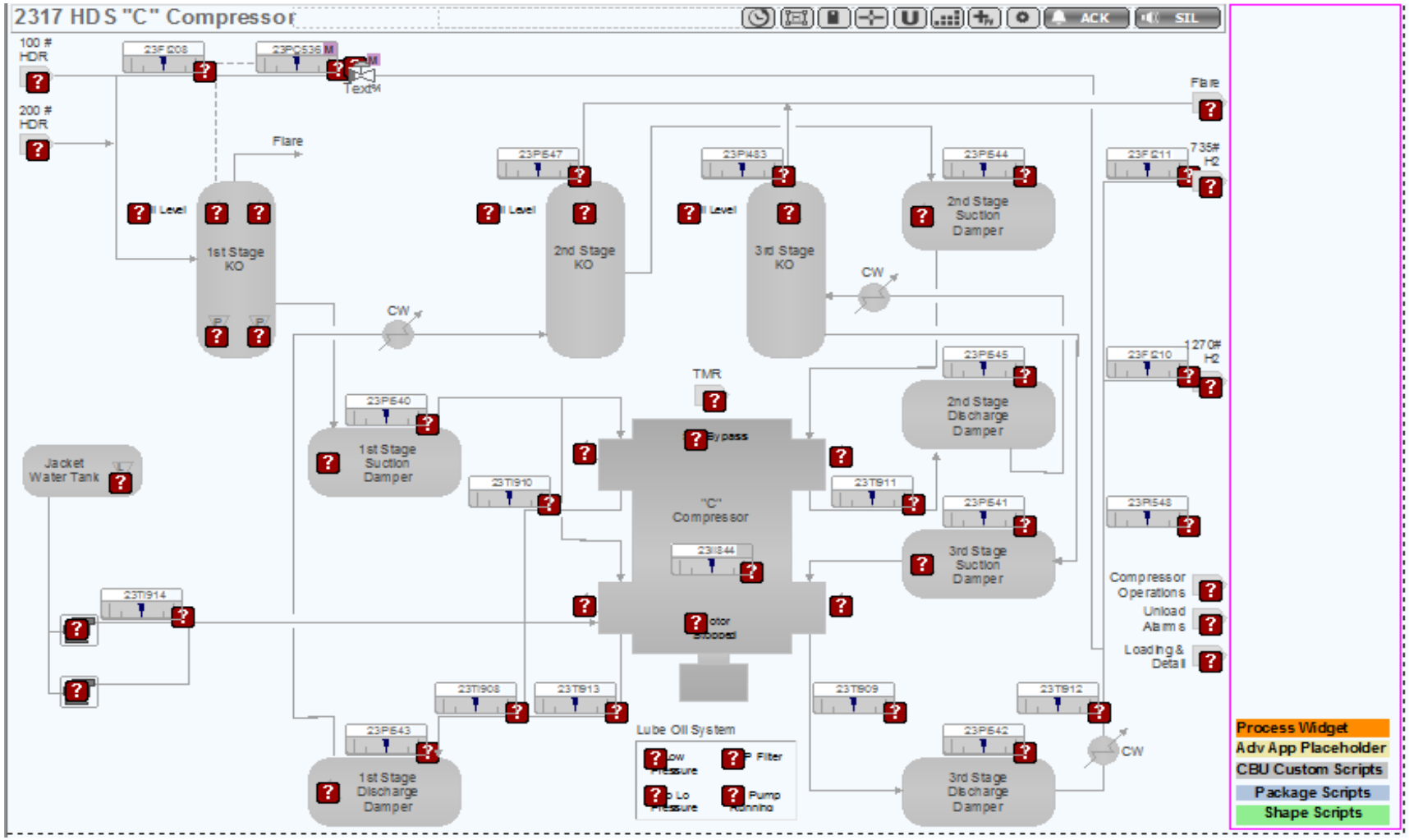
1.143 2313H1 HDS FLARE ANALYZER OPERATOR RESPONSE HELP (Reformer_2313H1.htm)

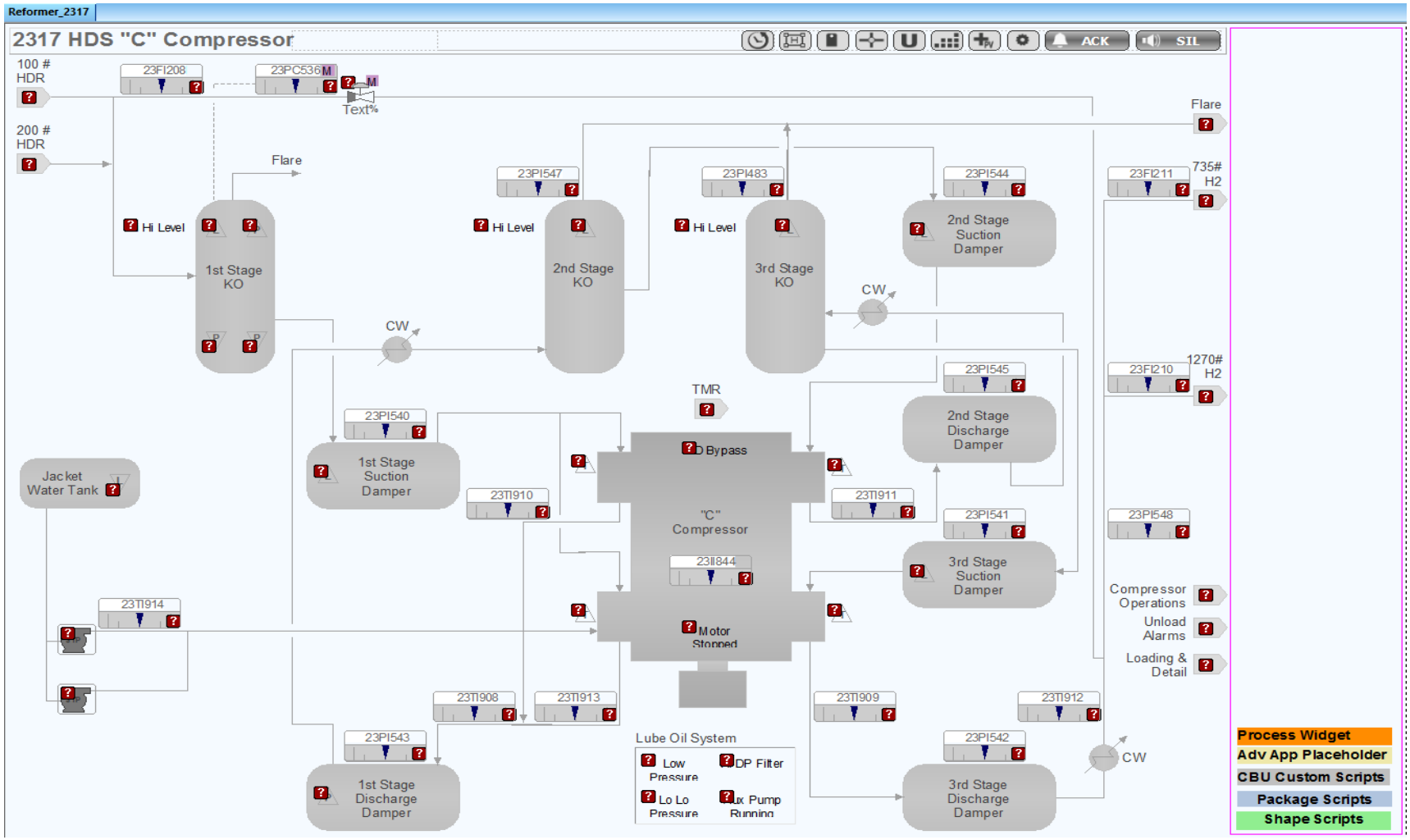


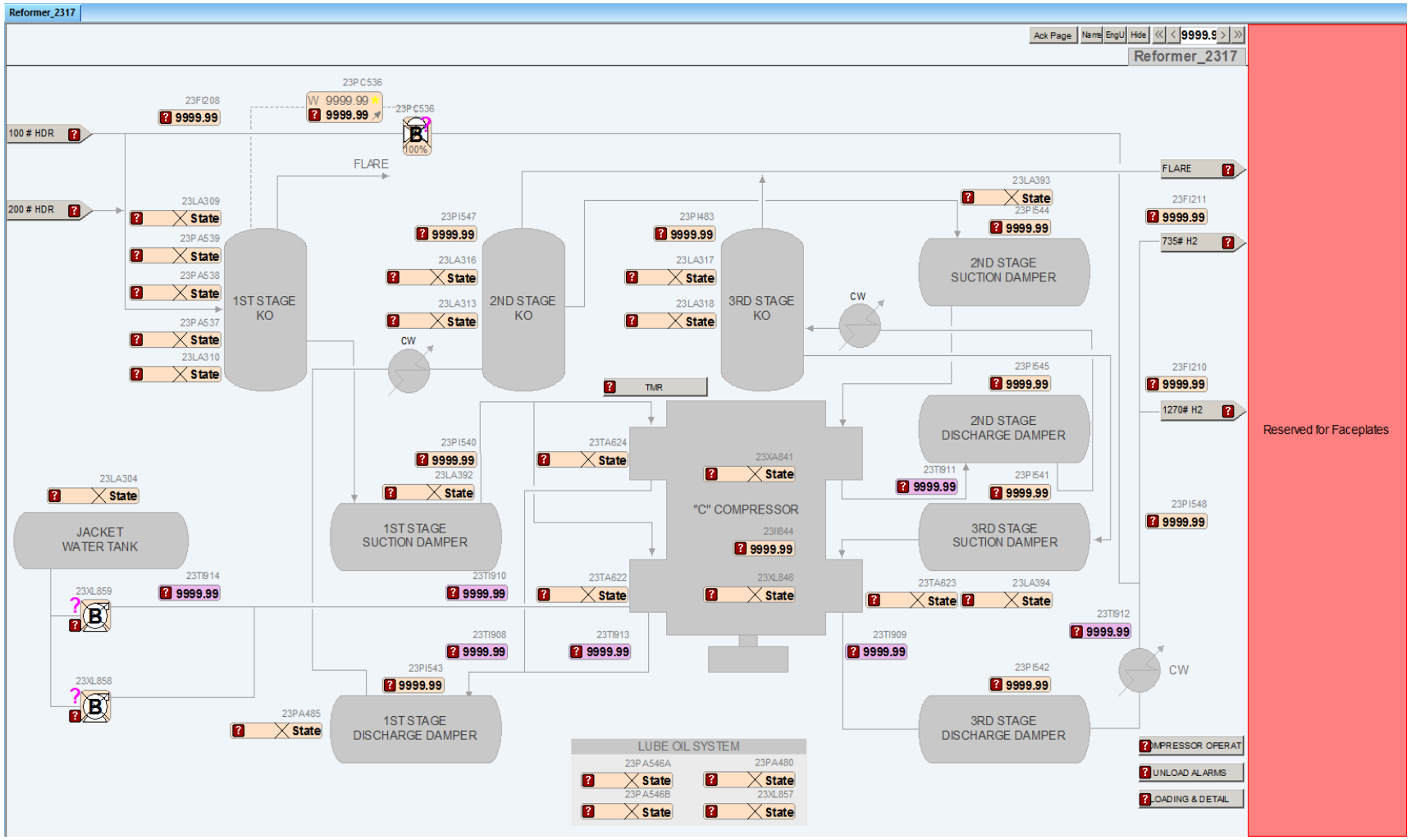

Reformer_2313H1
2313H1 HDS Flare Analyzer Operator
ACK
SIL
Analyzer Shelter
Misc. Alarms
MONTR FAULT
ANLZR TRBL
CAL / MAINT
If alarm comes in and analyzer technicians are not calibrating or working on system, then notify analyzer shop to investigate problem.
If alarm comes in during off-normal working hours and is in for more than 1/2 hour, then have 501 or foreman contact analyzer techs to investigate.
Sampler H2S Monitor
23AI918
SAMPLER HI H2S
Shelter H2S Monitor
23AI915
HI H2S
Shelter LEL Monitor
HI LEL
Bottle Rack / Shelter COS
23AI917
HIGH COS
If alarm comes in, evacuate all personel from analyzer shelter area.
Follow operations procedures for entering area if entry is required such as resetting monitor panel alarm.
Notify analyzer shop to check for sample gas leaks.
CLX Panel
LO PURGE
Notify analyzer shop to investigate as time permits.
Safety Shower
SHOWER IN USE
Follow operations procedures to investigate why safety shower alarm came in.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2313H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2313H1
ARE SUBSYSTEMS
ANALYZER SHELTER
MSC. ALARMS
23UA824
State
23UA913
State
23XA914
State
IF ALARM COMES IN AND ANALYZER TECHNICIANS ARE NOT CALIBRATING OR WORKING ON SYSTEM, THEN NOTIFY ANALYZER SHOP TO INVESTIGATE PROBLEM.
IF ALARM COMES IN DURING OFF-NORMAL WORKING HOURS AND IS IN FOR MORE THAN 1/2 HOUR, THEN HAVE 501 OR FOREMAN CONTACT ANALYZER TECHS TO INVESTIGATE.
CLX PANEL
23PA506
State
NOTIFY ANALYZER SHOP TO INVESTIGATE AS TIME PERMITS.
SAFETY SHOWER
23FA158
State
FOLLOW OPERATIONS PROCEDURES TO INVESTIGATE WHY SAFETY SHOWER ALARM CAME IN.
SAMPLER H2S MONITOR
23AI918
9999.99
23AA918
State
IF ALARM COMES IN, EVACUATE ALL PERSONEL FROM ANALYZER SHELTER AREA.
FOLLOW OPERATIONS PROCEDURES FOR ENTERING AREA IF ENTRY IS REQUIRED SUCH AS RESETTING MONITOR PANEL ALARM.
SHELTER H2S MONITOR
23AI915
9999.99
23AA915
State
NOTIFY ANALYZER SHOP TO CHECK FOR SAMPLE GAS
SHELTER LEL MONITOR
23AA921
State
BOTTLE RACK / SHELTER COS
23AI917
9999.99
23AA917
State
Reserved for Faceplates

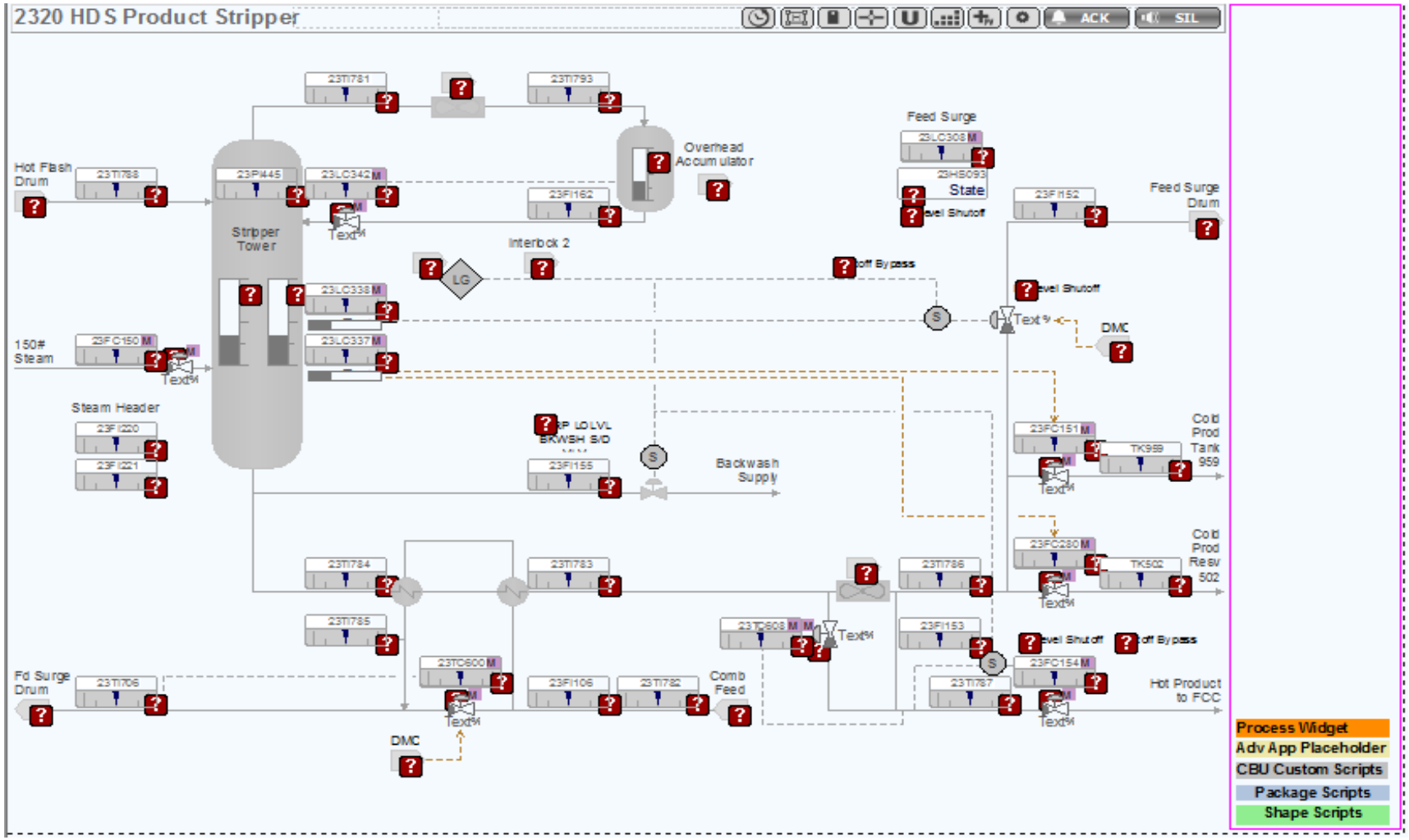
1.144 2317 HDS "C" COMPRESSOR (Reformer_2317.htm)

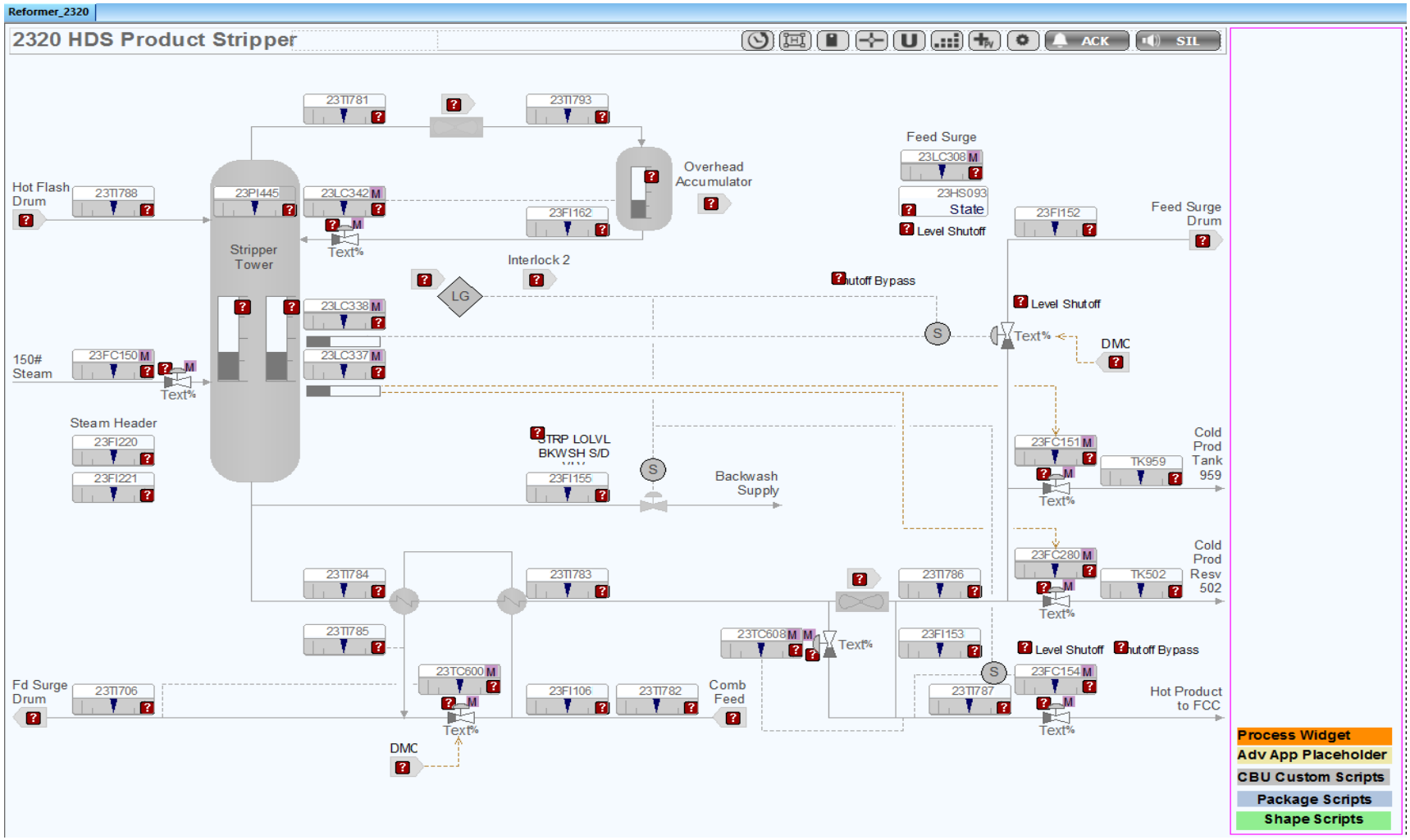


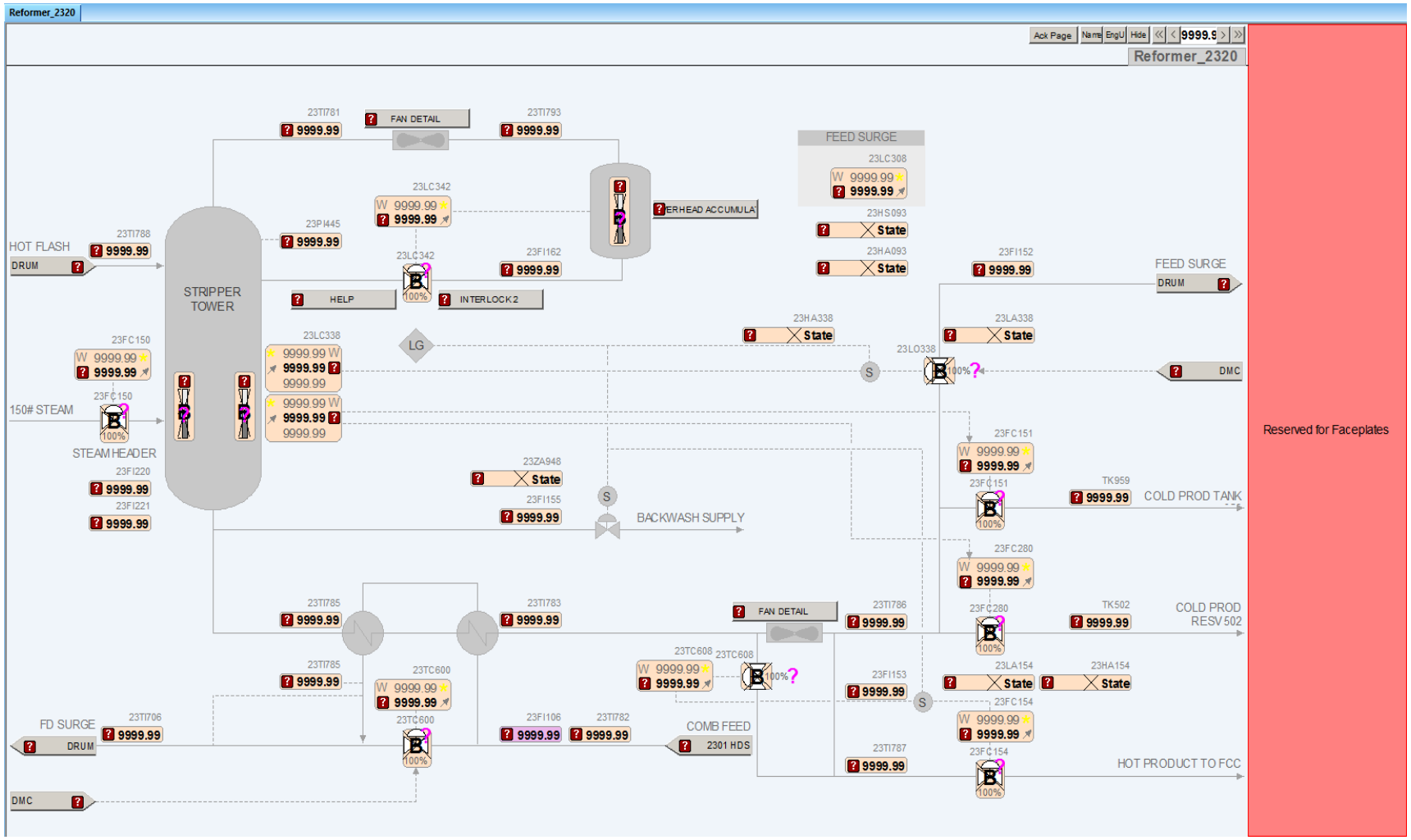

Reformer_2317
2317 HDS "C" Compressor
ACK
SIL
100 # HDR
200 # HDR
23FI208
23PC536
Text%
Flare
Hi Level
1st Stage KO
2nd Stage KO
3rd Stage KO
23PI547
23PI483
23PI544
2nd Stage Suction Damper
23FI211
735# H2
CW
23PI545
2nd Stage Discharge Damper
23FI210
1270# H2
TMR
23PI540
1st Stage Suction Damper
Jacket Water Tank
23TI910
D Bypass
"C" Compressor
23TI911
23PI541
3rd Stage Suction Damper
23PI548
23II844
Motor Stopped
23TI914
Compressor Operations
Unload Alarms
Loading & Detail
23TI908
23TI913
23TI909
23TI912
23PI543
1st Stage Discharge Damper
Lube Oil System
Low Pressure
DP Filter
Lo Lo Pressure
Lx Pump Running
23PI542
3rd Stage Discharge Damper
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2317
Ack Page
Name
EngU
Hide
Reformer_2317
23PC536
23FI208
9999.99
100 # HDR
200 # HDR
FLARE
23LA309
23PA539
23PA538
23PA537
23LA310
1ST STAGE KO
23PI547
23LA316
23LA313
2ND STAGE KO
CW
23PI483
23LA317
23LA318
3RD STAGE KO
23LA393
23PI544
2ND STAGE SUCTION DAMPER
23FI211
735# H2
1270# H2
23PI545
2ND STAGE DISCHARGE DAMPER
23FI210
TMR
23PI540
23LA392
1ST STAGE SUCTION DAMPER
23TA624
23XA841
"C" COMPRESSOR
23II844
23XL846
23TA622
23TI910
23TI911
23PI541
3RD STAGE SUCTION DAMPER
23PI548
23LA304
JACKET WATER TANK
23XL859
23TI914
23XL858
23TI908
23TI913
23PI543
1ST STAGE DISCHARGE DAMPER
23PA485
23TA623
23LA394
23TI912
23TI909
23PI542
3RD STAGE DISCHARGE DAMPER
LUBE OIL SYSTEM
23PA546A
23PA546B
23PA480
23XL857
COMPRESSOR OPERAT
UNLOAD ALARMS
LOADING & DETAIL
Reserved for Faceplates

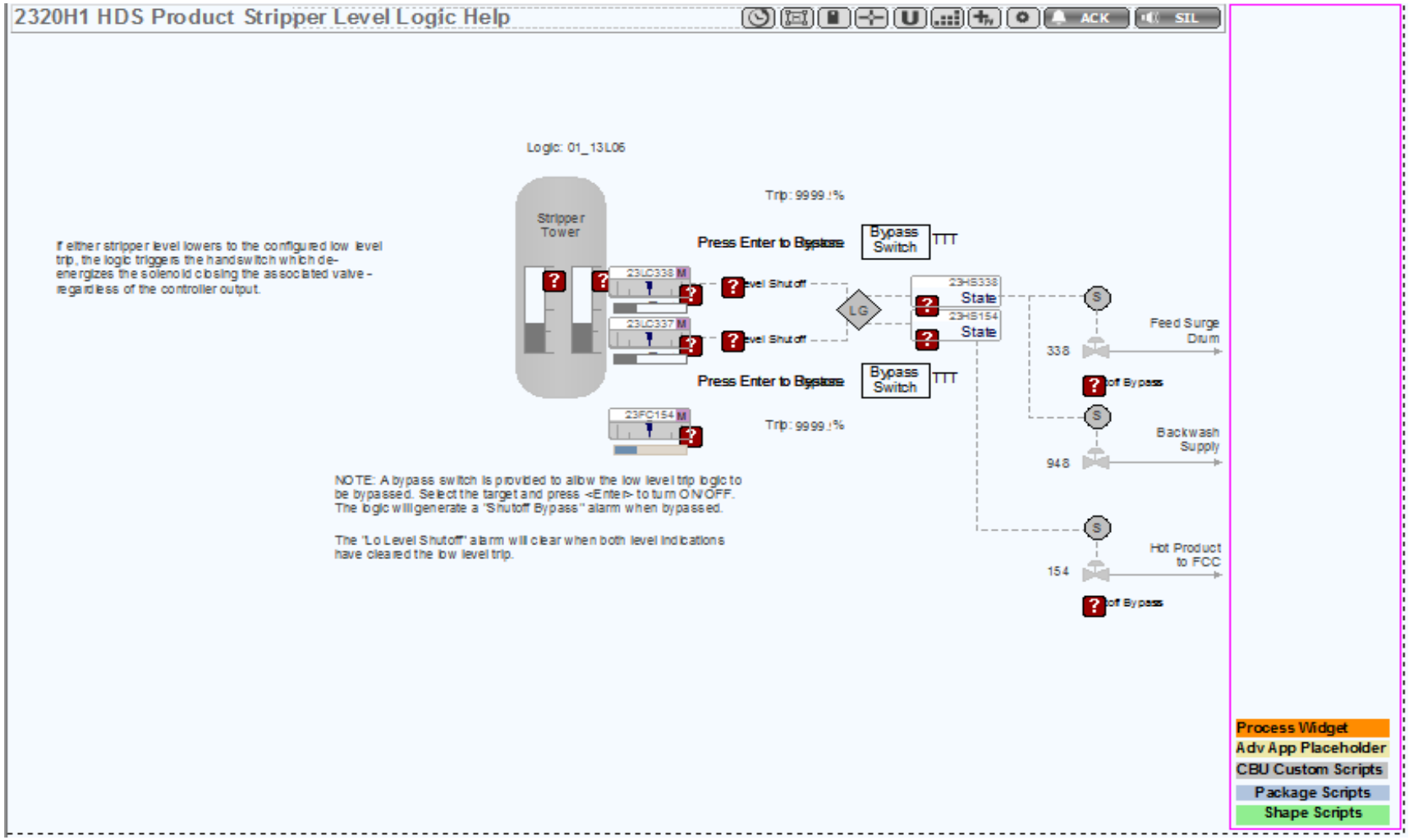
1.145 2320 HDS PRODUCT STRIPPER (Reformer_2320.htm)

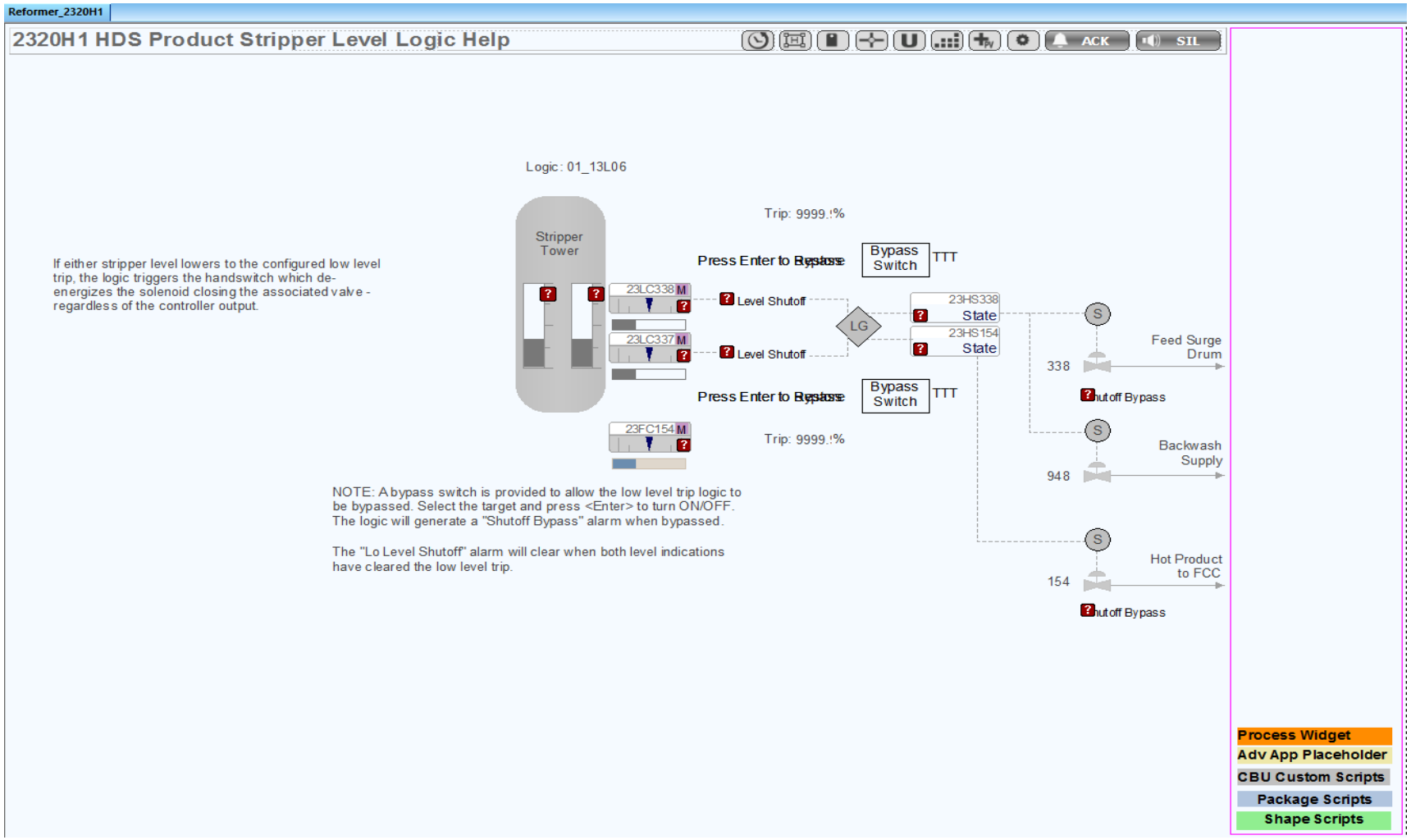


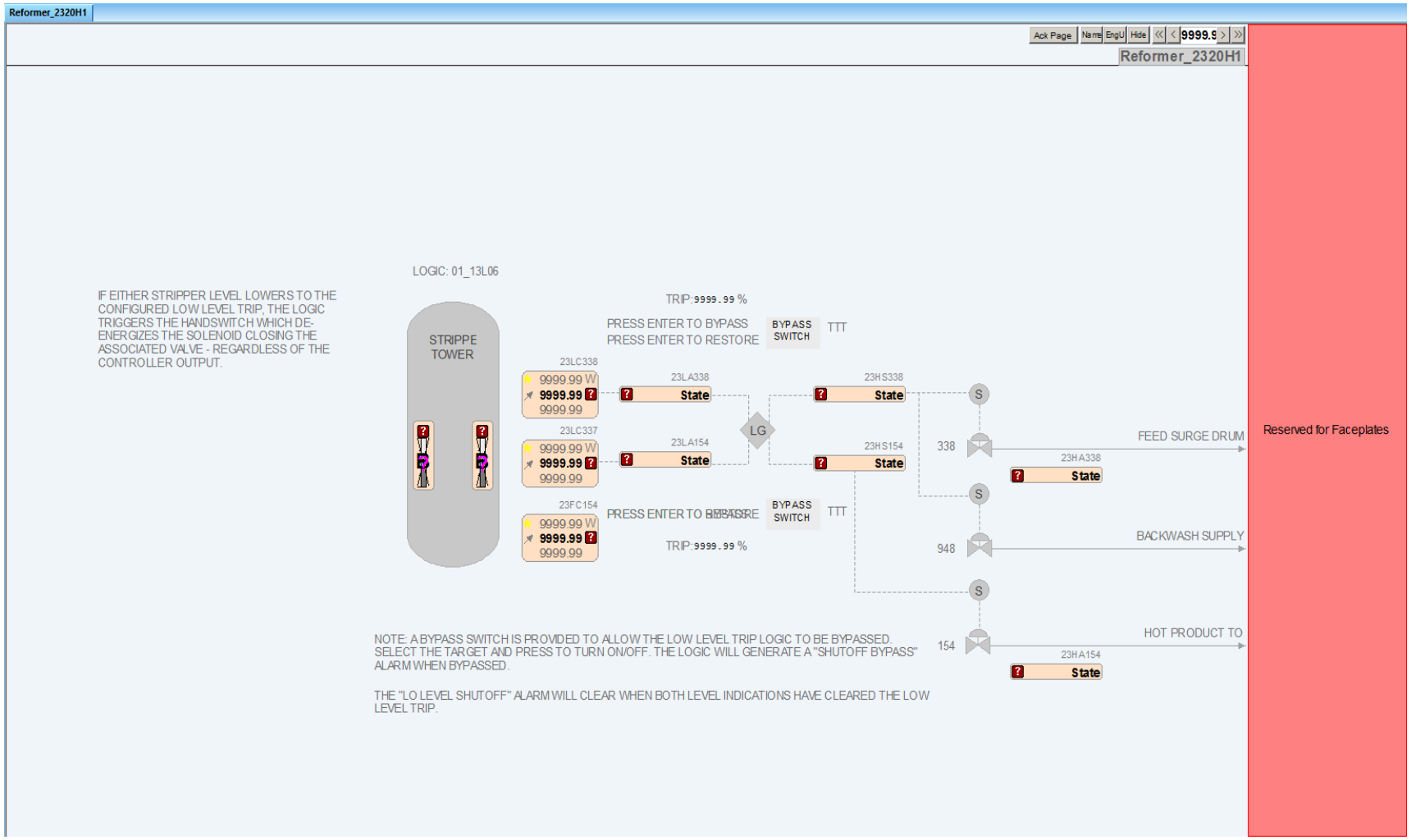

Reformer_2320
2320 HDS Product Stripper
ACK
SIL
23TI781
23TI793
Overhead Accumulator
Feed Surge
23LC308
23HS093
State
Level Shutoff
23FI152
Feed Surge Drum
Hot Flash Drum
23TI788
23PI445
23LC342
23FI162
Stripper Tower
Text%
Interlock 2
LG
Shutoff Bypass
Level Shutoff
23LC338
23LC337
23FC150
150# Steam
DMC
Steam Header
23FI220
23FI221
STRP LOLVL BKWSH S/D
23FI155
Backwash Supply
23FC151
TK959
Cold Prod Tank 959
23TI784
23TI783
23TI786
23FC280
TK502
Cold Prod Resv 502
23TI785
23TC608
23FI153
Level Shutoff
Shutoff Bypass
Fd Surge Drum
23TI706
23TC600
23FI106
23TI782
Comb Feed
23TI787
23FC154
Hot Product to FCC
DMC
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2320
Ack Page
Name
EngU
Hide
Reformer_2320
23TI781
9999.99
FAN DETAIL
23TI793
9999.99
FEED SURGE
23LC308
9999.99
23LC342
9999.99
ERHEAD ACCUMULA
23HS093
State
HOT FLASH
DRUM
23TI788
9999.99
23PI445
9999.99
23HA093
State
23FI152
9999.99
FEED SURGE
DRUM
STRIPPER
TOWER
23LC342
100%
23FI162
9999.99
HELP
INTERLOCK2
23HA338
State
23LA338
State
23LC338
9999.99
9999.99
LG
23LO338
100%
DMC
23FC150
9999.99
150# STEAM
23FC150
100%
STEAM HEADER
23FI220
9999.99
23FI221
9999.99
23ZA948
State
23FI155
9999.99
BACKWASH SUPPLY
23FC151
9999.99
23FC151
100%
TK959
9999.99
COLD PROD TANK
23FC280
9999.99
23TI785
9999.99
23TI783
9999.99
FAN DETAIL
23TI786
9999.99
23FC280
100%
TK502
9999.99
COLD PROD
RESV 502
23TC608
9999.99
23TC608
100%
23TI785
9999.99
23TC600
9999.99
23FI153
9999.99
23LA154
State
23HA154
State
23FC154
9999.99
FD SURGE
DRUM
23TI706
9999.99
23TC600
100%
23FI106
9999.99
23TI782
9999.99
COMB FEED
2301 HDS
23TI787
9999.99
23FC154
100%
HOT PRODUCT TO FCC
DMC
Reserved for Faceplates

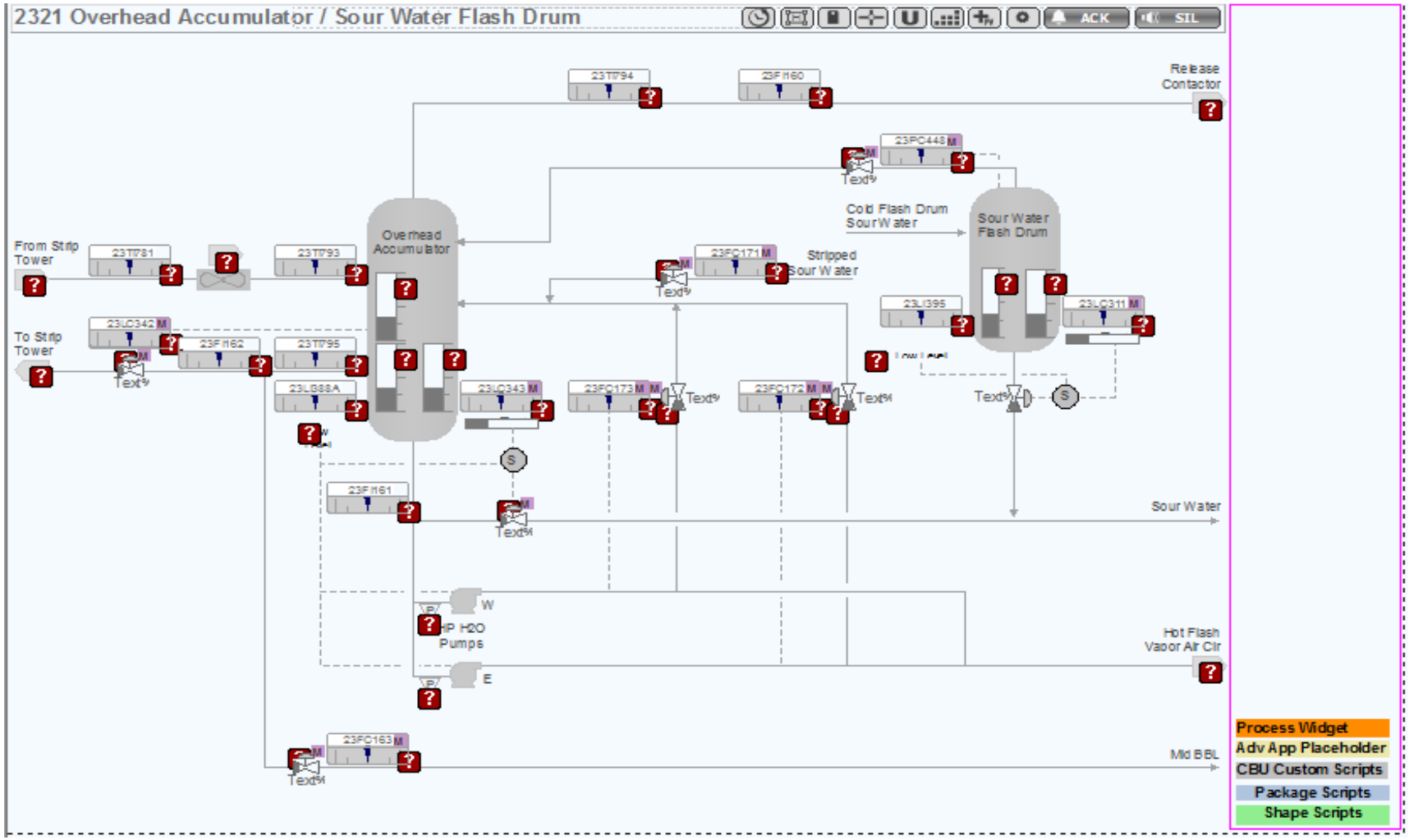
1.146 2320H1 HDS PRODUCT STRIPPER LEVEL LOGIC HELP (Reformer_2320H1.htm)

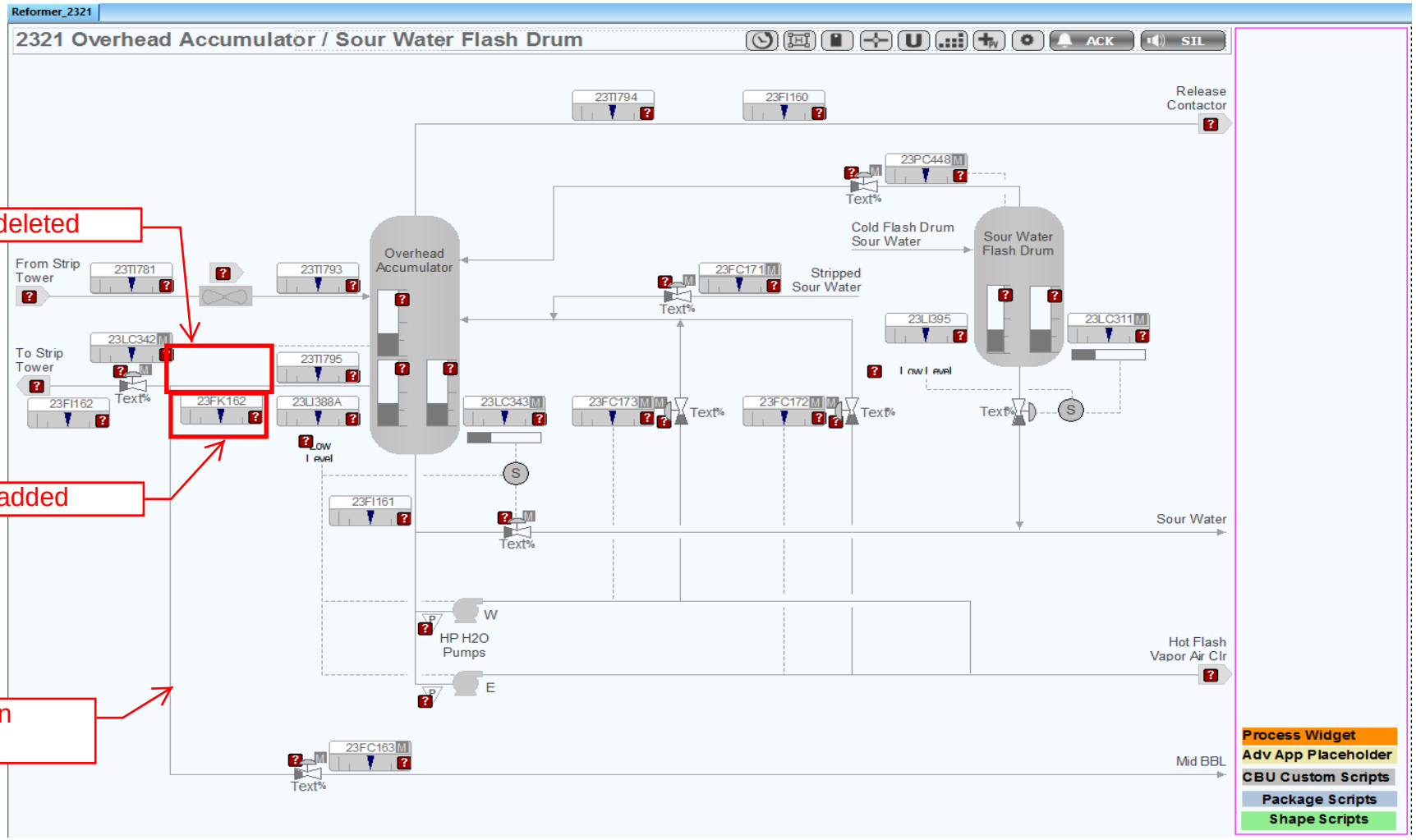


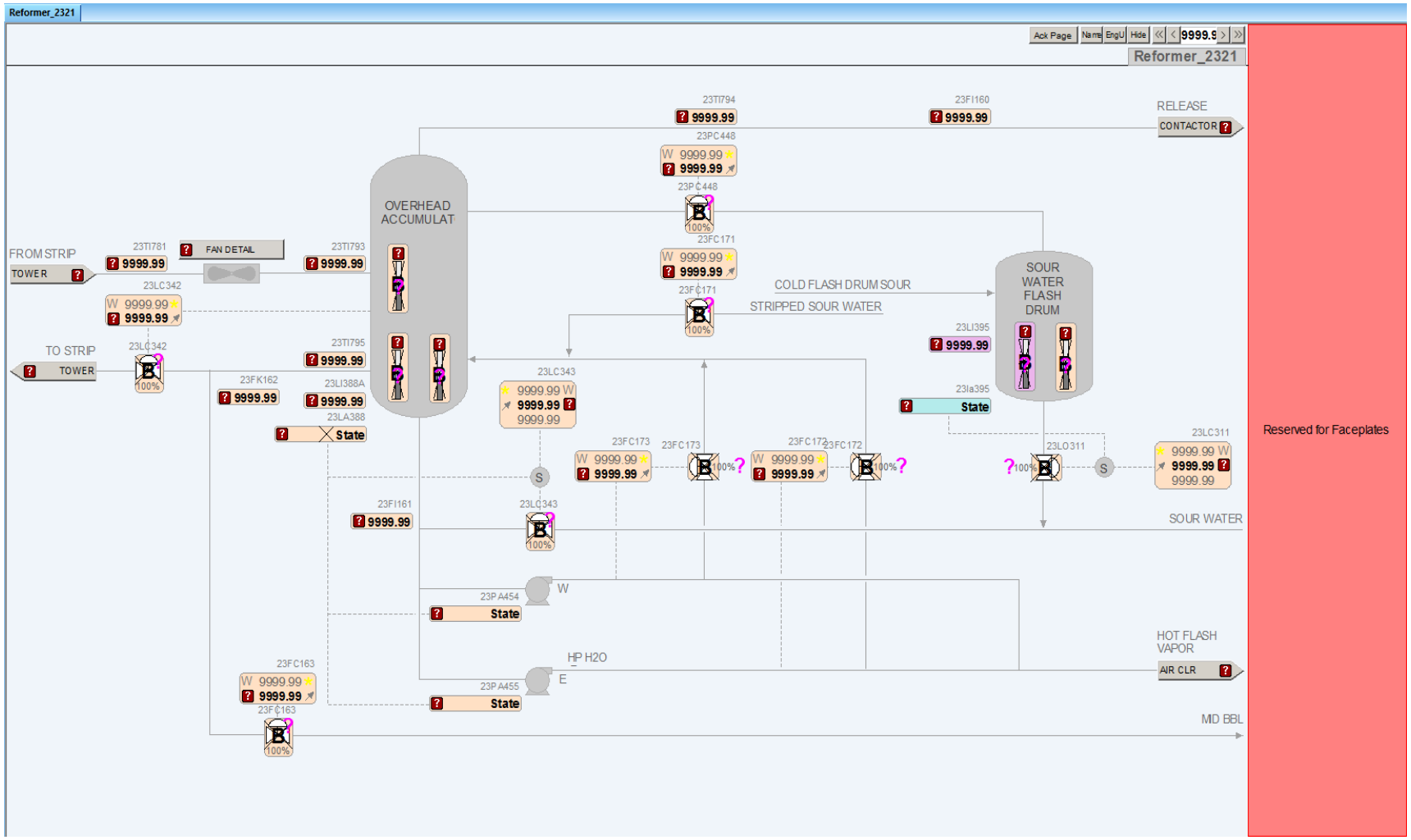

Reformer_2320H1
2320H1 HDS Product Stripper Level Logic Help
ACK
SIL
Logic: 01_13L06
If either stripper level lowers to the configured low level trip, the logic triggers the handswitch which de-energizes the solenoid closing the associated valve - regardless of the controller output.
Stripper Tower
Trip: 9999.!%
Press Enter to Bypass
Bypass Switch
TTT
23LC338 M
Level Shutoff
23LC337 M
Level Shutoff
LG
23HS338 State
23HS154 State
Press Enter to Bypass
Bypass Switch
TTT
23FC154 M
Trip: 9999.!%
Feed Surge Drum
338
Backwash Supply
948
Hot Product to FCC
154
NOTE: A bypass switch is provided to allow the low level trip logic to be bypassed. Select the target and press <Enter> to turn ON/OFF. The logic will generate a "Shutoff Bypass" alarm when bypassed.
The "Lo Level Shutoff" alarm will clear when both level indications have cleared the low level trip.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2320H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2320H1
IF EITHER STRIPPER LEVEL LOWERS TO THE CONFIGURED LOW LEVEL TRIP, THE LOGIC TRIGGERS THE HANDSWITCH WHICH DE-ENERGIZES THE SOLENOID CLOSING THE ASSOCIATED VALVE - REGARDLESS OF THE CONTROLLER OUTPUT.
LOGIC: 01_13L06
STRIPPE TOWER
TRIP: 9999.99 %
PRESS ENTER TO BYPASS
PRESS ENTER TO RESTORE
BYPASS SWITCH
TTT
23LC338
9999.99 W
9999.99
9999.99
23LA338
State
23HS338
State
23LC337
9999.99 W
9999.99
9999.99
23LA154
State
LG
23HS154
State
23FC154
9999.99 W
9999.99
9999.99
PRESS ENTER TO BYPASS
BYPASS SWITCH
TTT
TRIP: 9999.99 %
338
FEED SURGE DRUM
23HA338
State
948
BACKWASH SUPPLY
154
HOT PRODUCT TO
23HA154
State
NOTE: A BYPASS SWITCH IS PROVIDED TO ALLOW THE LOW LEVEL TRIP LOGIC TO BE BYPASSED. SELECT THE TARGET AND PRESS TO TURN ON/OFF. THE LOGIC WILL GENERATE A "SHUTOFF BYPASS" ALARM WHEN BYPASSED.
THE "LO LEVEL SHUTOFF" ALARM WILL CLEAR WHEN BOTH LEVEL INDICATIONS HAVE CLEARED THE LOW LEVEL TRIP.
Reserved for Faceplates

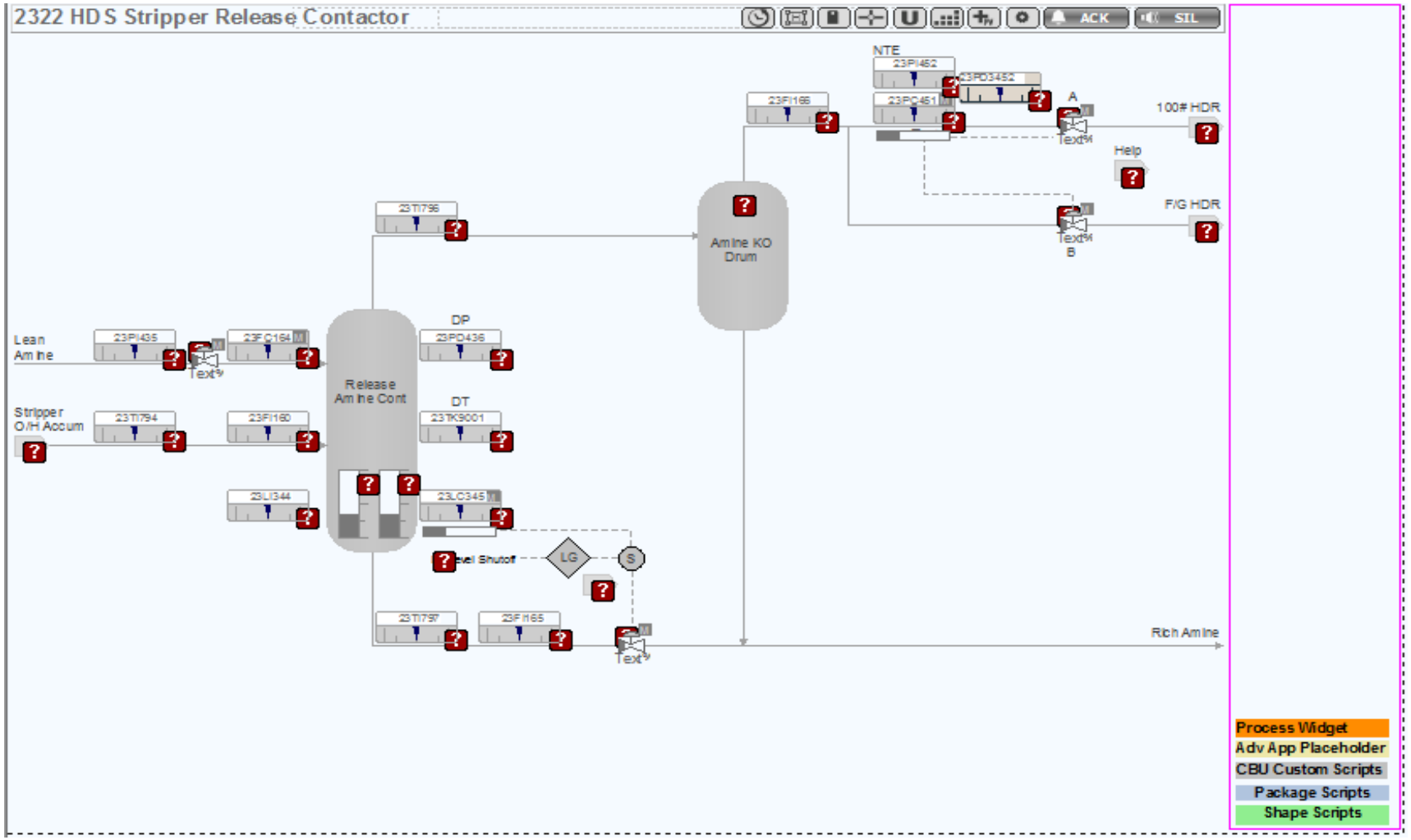
1.147 2321 OVERHEAD ACCUMULATOR / SOUR WATER FLASH DRUM (Reformer_2321.htm)

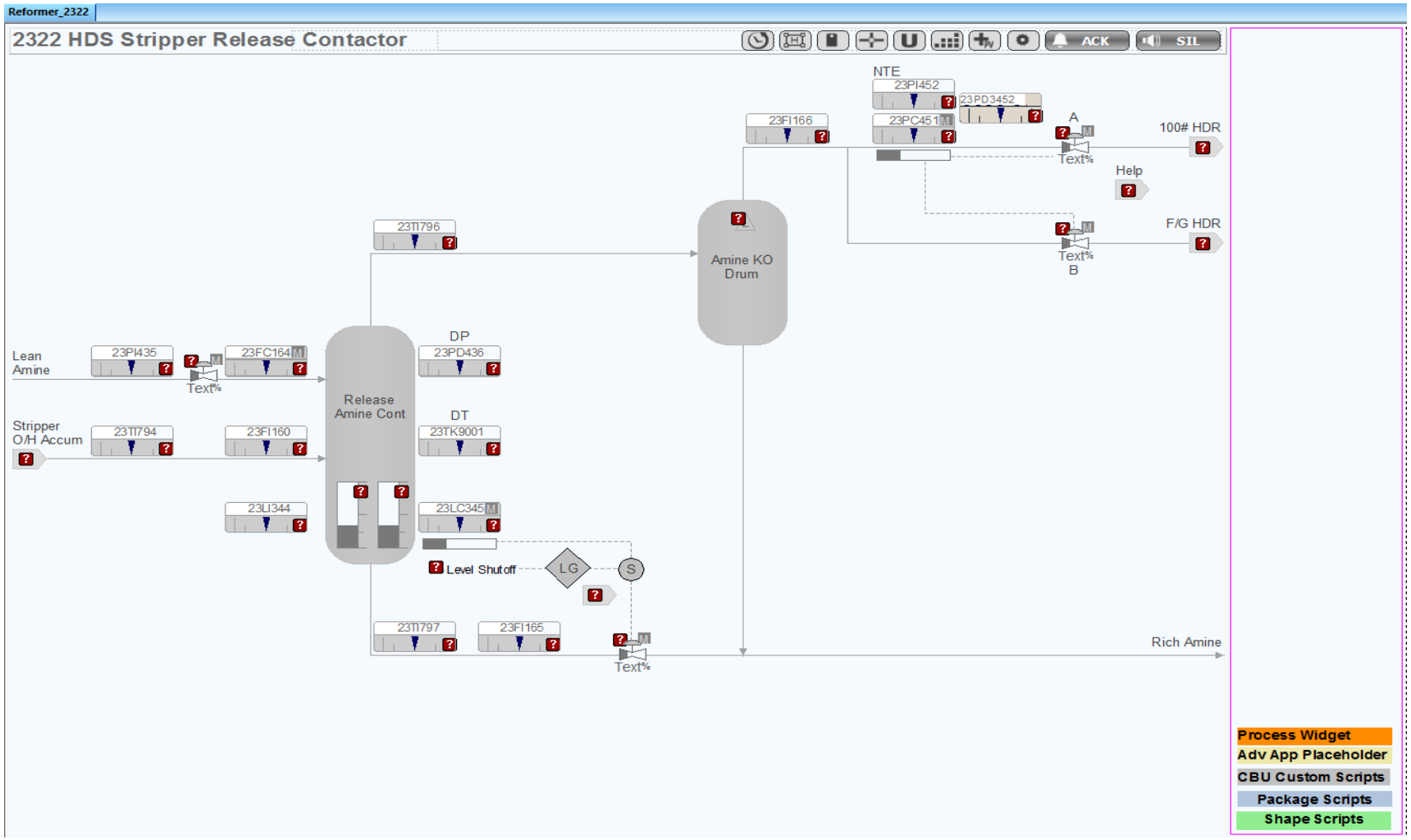


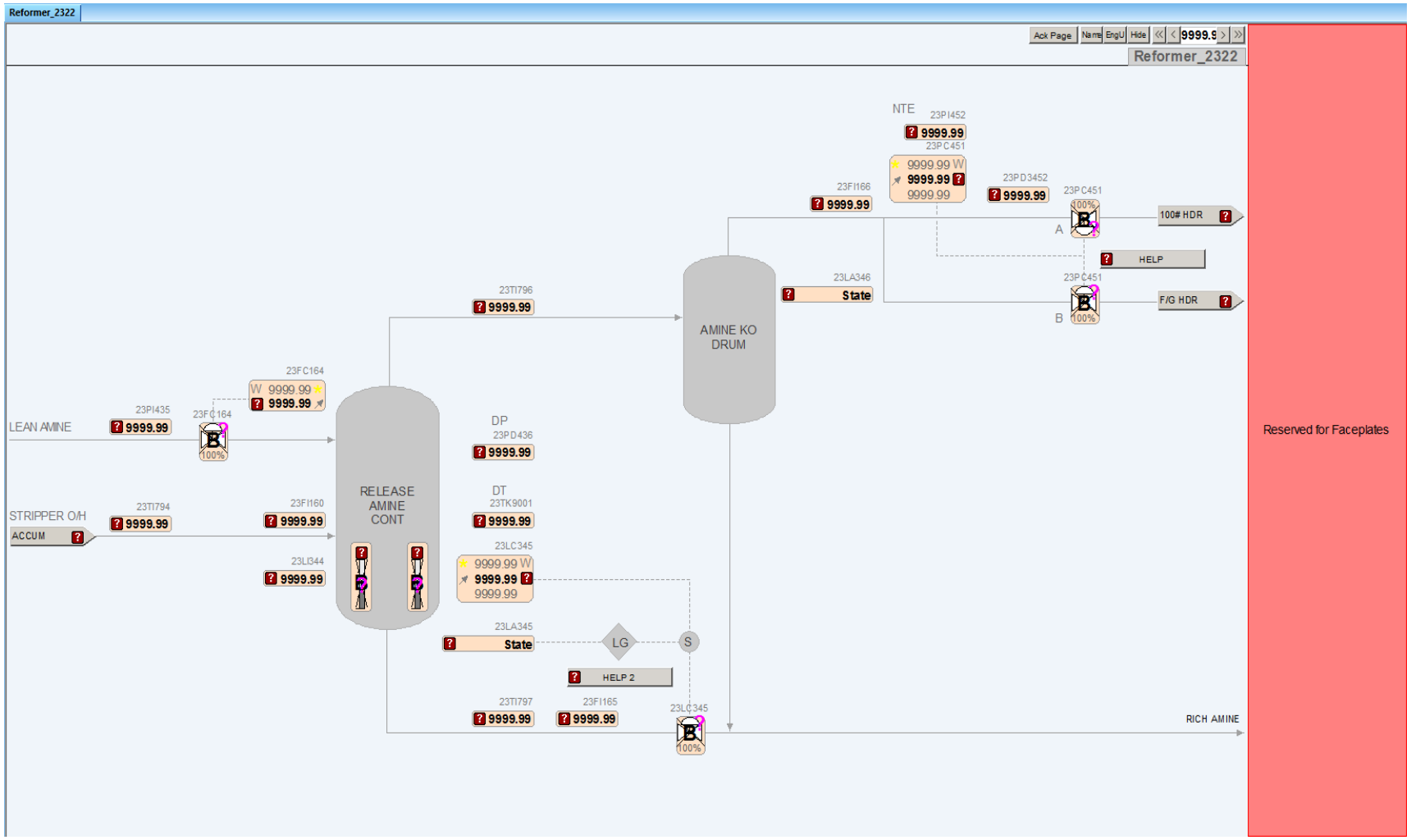

Reformer_2321
2321 Overhead Accumulator / Sour Water Flash Drum
ACK
SIL
Shape deleted
Shape added
Line position changed
23TI794
23FI160
Release Contactor
23PC448
Text%
Cold Flash Drum Sour Water
Sour Water Flash Drum
From Strip Tower
23TI781
23TI793
Overhead Accumulator
23FC171
Stripped Sour Water
23LI395
23LC311
To Strip Tower
23LC342
23TI795
23FI162
23FK162
23LI388A
23LC343
23FC173
23FC172
Low Level
23FI161
Sour Water
W
HP H2O Pumps
E
Hot Flash Vapor Air Clr
23FC163
Mid BBL
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2321
Ack Page
Name
EngU
Hide
Reformer_2321
23TI794
9999.99
23FI160
9999.99
RELEASE
CONTACTOR
23PC448
W 9999.99
9999.99
23PC448
100%
OVERHEAD ACCUMULAT
23FC171
W 9999.99
9999.99
23FC171
100%
COLD FLASH DRUM SOUR
STRIPPED SOUR WATER
SOUR WATER FLASH DRUM
23LI395
9999.99
23la395
State
FROM STRIP TOWER
23TI781
9999.99
FAN DETAIL
23TI793
9999.99
23LC342
W 9999.99
9999.99
23LC342
100%
TO STRIP TOWER
23TI795
9999.99
23FK162
9999.99
23LI388A
9999.99
23LA388
State
23LC343
9999.99 W
9999.99
9999.99
23FC173
W 9999.99
9999.99
23FC173
100%
23FC172
W 9999.99
9999.99
23FC172
100%
23LO311
100%
S
23LC311
9999.99 W
9999.99
9999.99
23FI161
9999.99
23LO343
100%
SOUR WATER
W
23PA454
State
HP H2O
E
23PA455
State
23FC163
W 9999.99
9999.99
23FC163
100%
HOT FLASH VAPOR
AIR CLR
MD BBL
Reserved for Faceplates

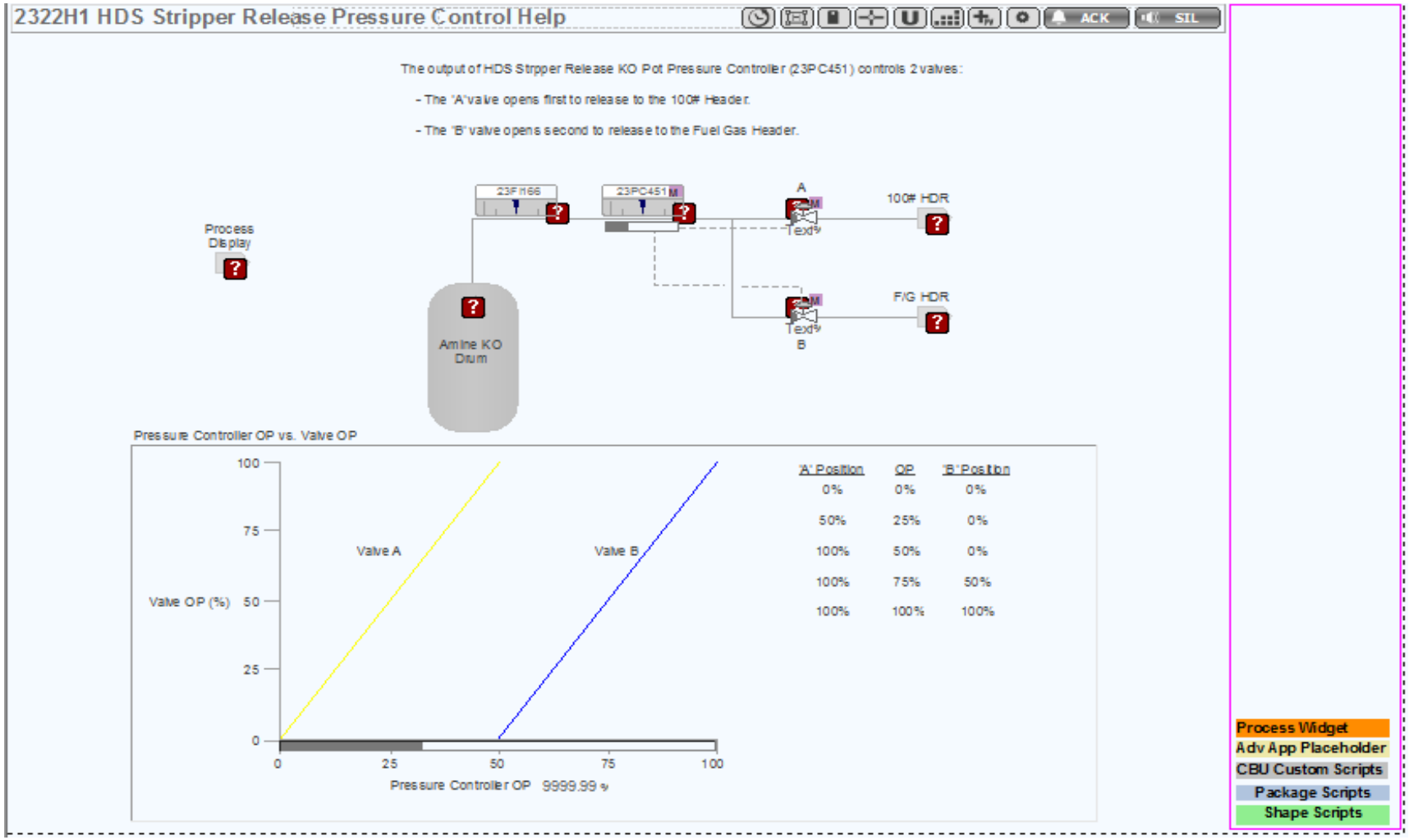
1.148 2322 HDS STRIPPER RELEASE CONTACTOR (Reformer_2322.htm)

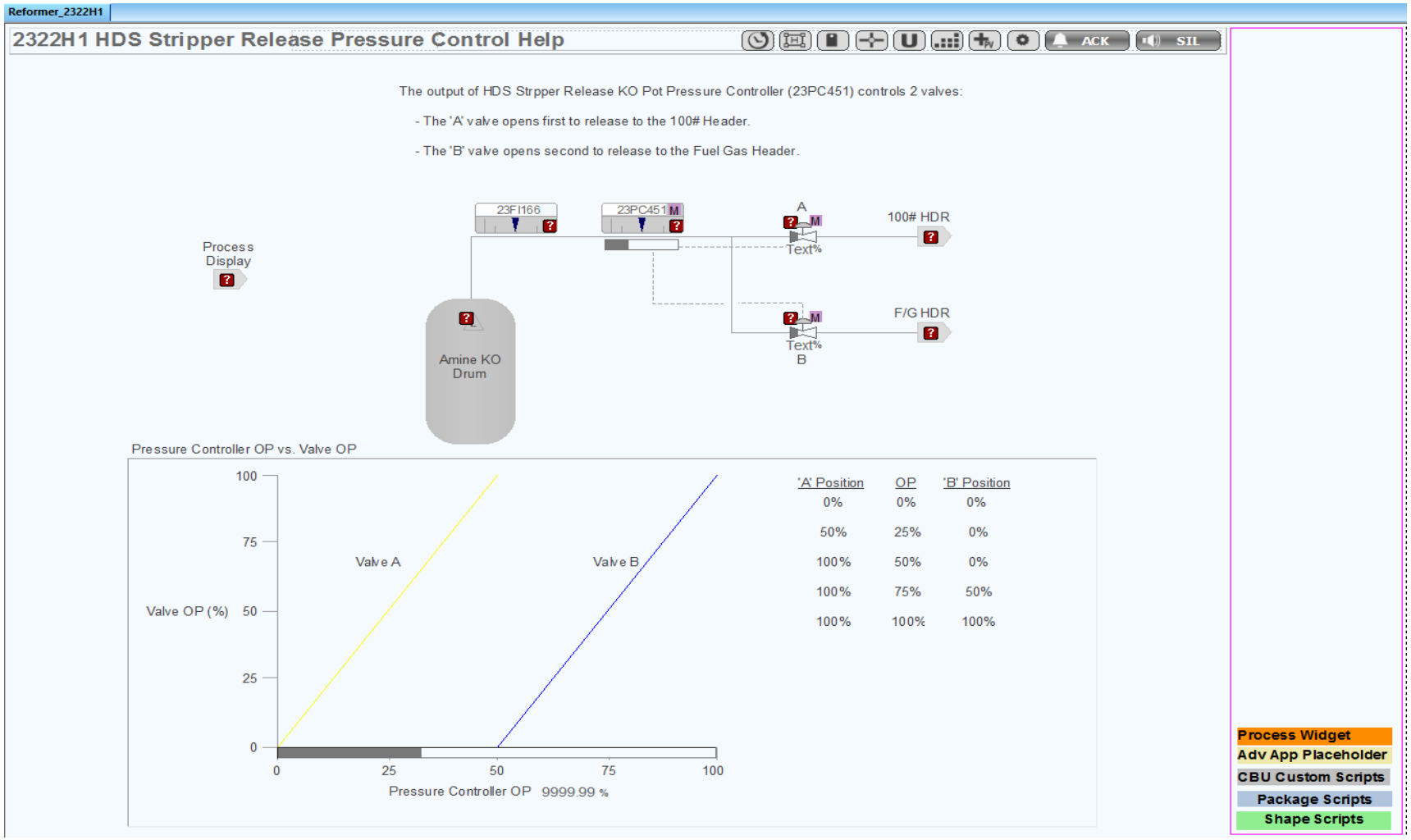


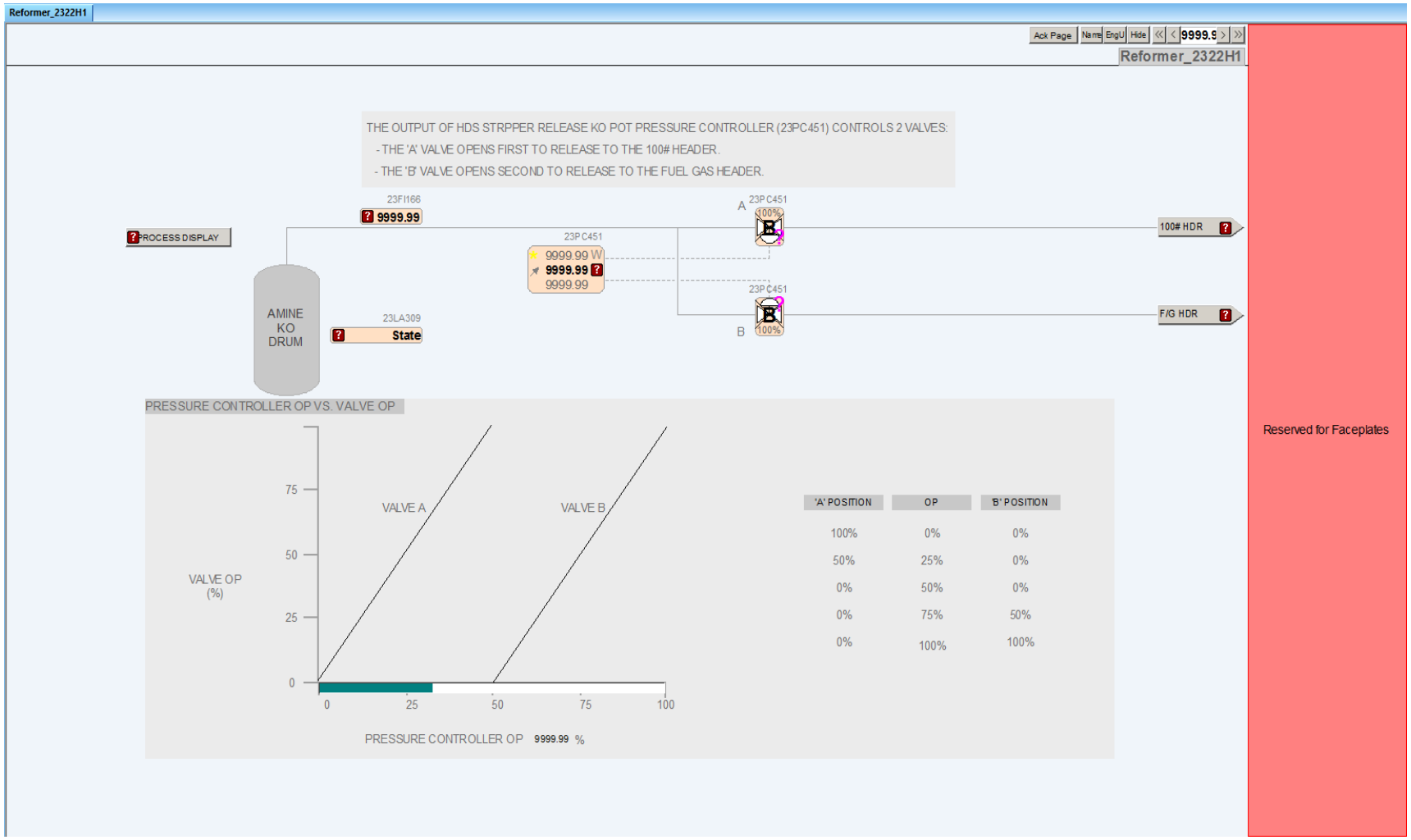

Reformer_2322
2322 HDS Stripper Release Contactor
ACK
SIL
NTE
23PI452
23PD3452
23FI166
23PC451
A
100# HDR
Text%
Help
F/G HDR
Text%
B
23TI796
Amine KO Drum
Lean Amine
23PI435
23FC164
Text%
DP
23PD436
Release Amine Cont
Stripper O/H Accum
23TI794
23FI160
DT
23TK9001
23LI344
23LC345
Level Shutoff
LG
S
23TI797
23FI165
Text%
Rich Amine
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2322
Ack Page
Name
EngU
Hide
Reformer_2322
NTE
23PI452
9999.99
23PC451
9999.99 W
9999.99
9999.99
23FI166
9999.99
23PD3452
9999.99
23PC451
100%
A
100# HDR
HELP
23LA346
State
23PC451
B
100%
F/G HDR
23TI796
9999.99
AMINE KO DRUM
23FC164
W 9999.99
9999.99
LEAN AMINE
23PI435
9999.99
23FC164
100%
DP
23PD436
9999.99
RELEASE AMINE CONT
DT
23TK9001
9999.99
STRIPPER O/H
ACCUM
23TI794
9999.99
23FI160
9999.99
23LI344
9999.99
23LC345
9999.99 W
9999.99
9999.99
23LA345
State
LG
S
HELP 2
23TI797
9999.99
23FI165
9999.99
23LC345
100%
RICH AMINE
Reserved for Faceplates

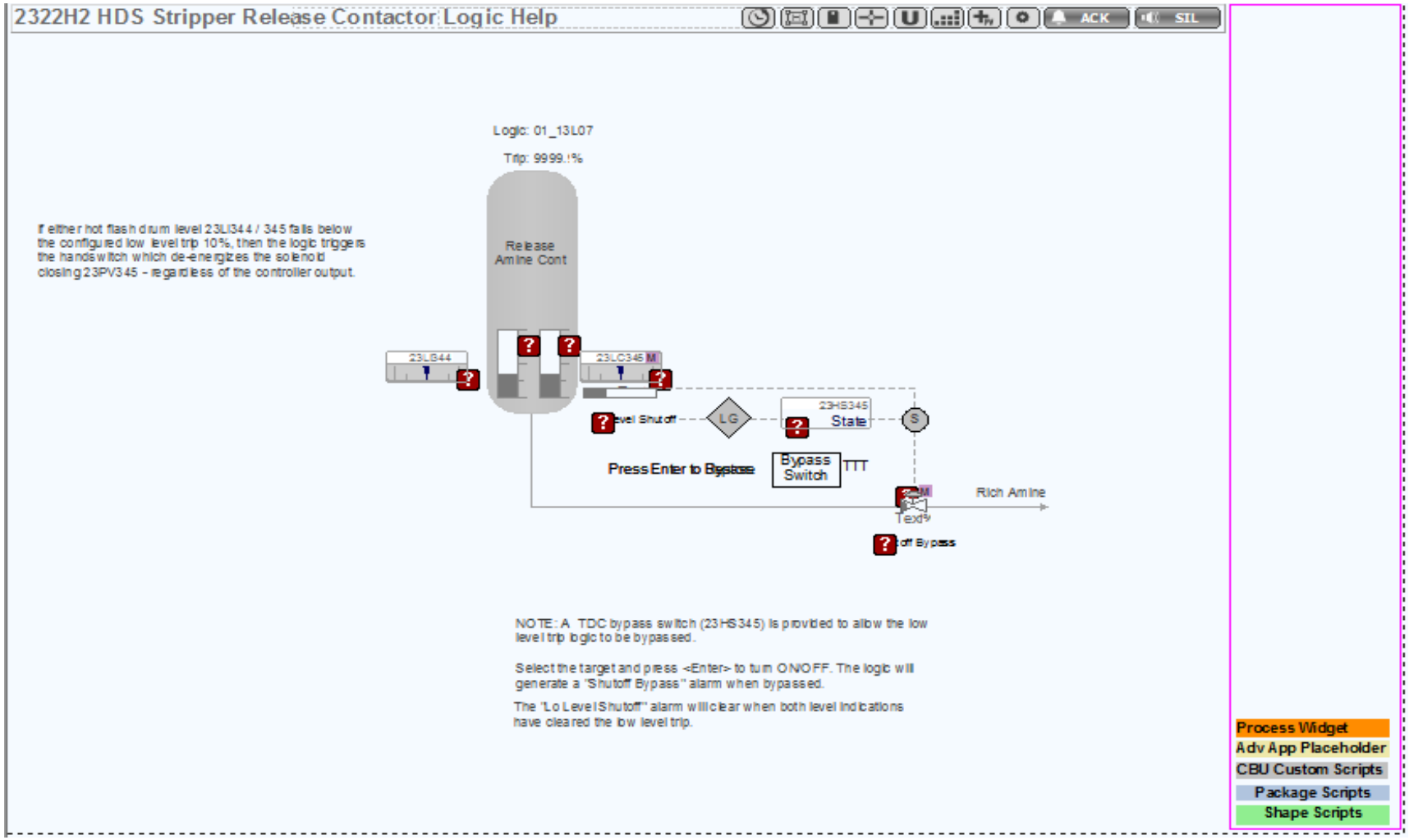
1.149 2322H1 HDS STRIPPER RELEASE PRESSURE CONTROL HELP (Reformer_2322H1.htm)

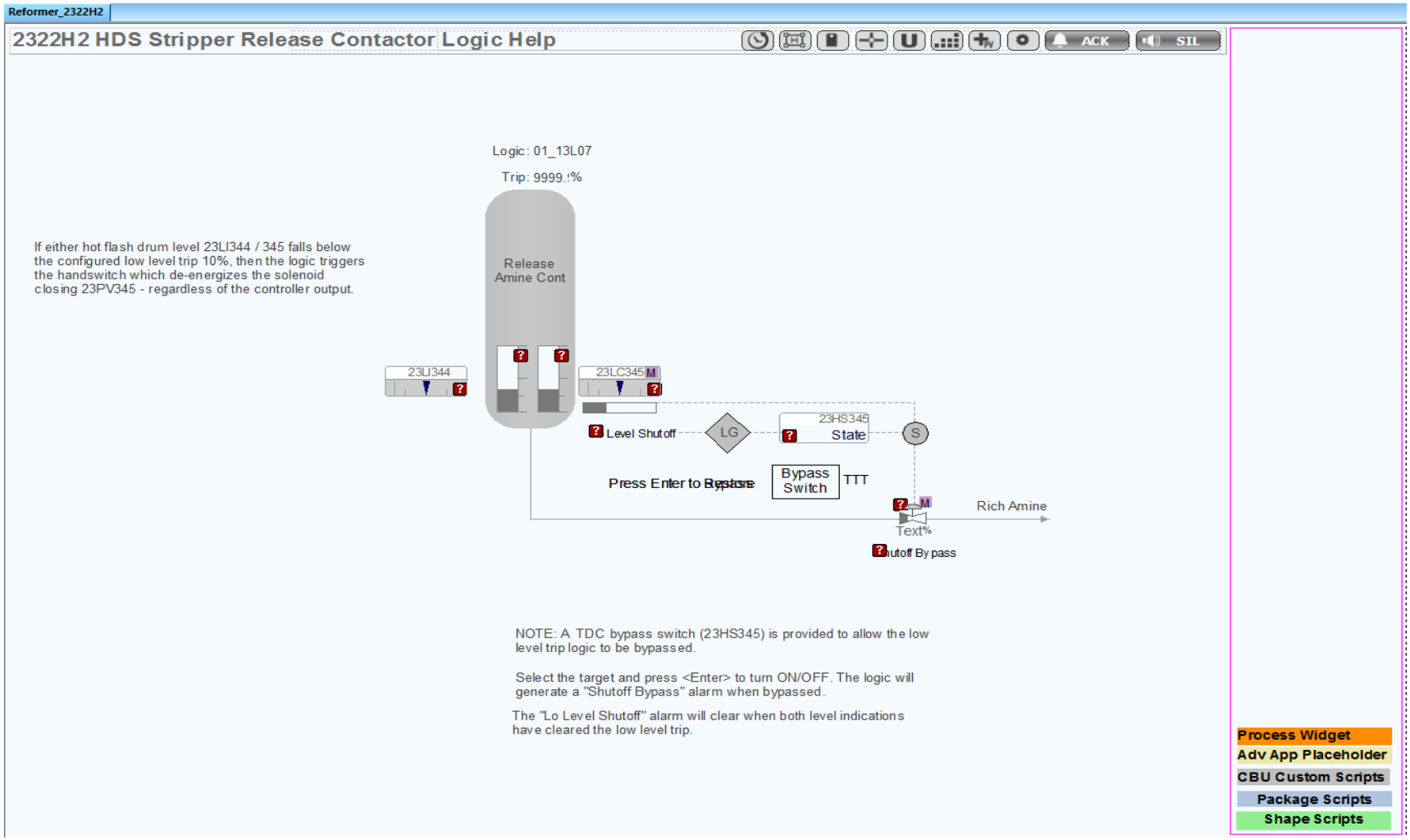


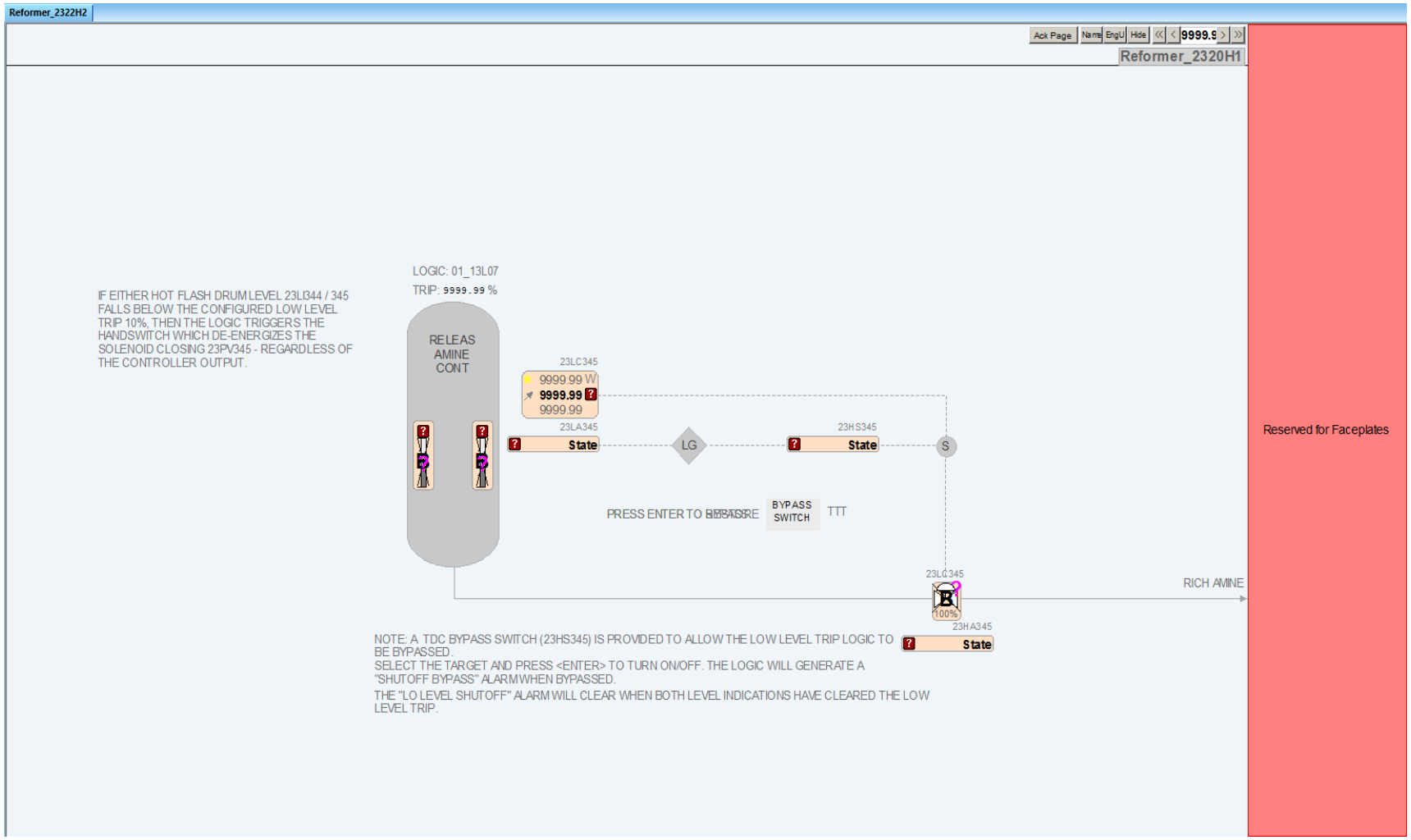

Reformer_2322H1
2322H1 HDS Stripper Release Pressure Control Help
ACK
SIL
The output of HDS Strpper Release KO Pot Pressure Controller (23PC451) controls 2 valves:
- The 'A' valve opens first to release to the 100# Header.
- The 'B' valve opens second to release to the Fuel Gas Header.
Process Display
23FI166
23PC451
M
A
Text%
100# HDR
Amine KO Drum
Text% B
F/G HDR
Pressure Controller OP vs. Valve OP
Valve OP (%)
100
75
50
25
0
Valve A
Valve B
0
25
50
75
100
Pressure Controller OP 9999.99 %
'A' Position OP 'B' Position
0% 0% 0%
50% 25% 0%
100% 50% 0%
100% 75% 50%
100% 100% 100%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2322H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2322H1
THE OUTPUT OF HDS STRPPER RELEASE KO POT PRESSURE CONTROLLER (23PC451) CONTROLS 2 VALVES:
- THE 'A' VALVE OPENS FIRST TO RELEASE TO THE 100# HEADER.
- THE 'B' VALVE OPENS SECOND TO RELEASE TO THE FUEL GAS HEADER.
23FI166
9999.99
PROCESS DISPLAY
AMINE KO DRUM
23LA309
State
23PC451
9999.99 W
9999.99
9999.99
A
B
23PC451
23PC451
100%
100%
100# HDR
F/G HDR
PRESSURE CONTROLLER OP VS. VALVE OP
VALVE OP (%)
75
50
25
0
VALVE A
VALVE B
0
25
50
75
100
'A' POSITION
OP
'B' POSITION
100% 0% 0%
50% 25% 0%
0% 50% 0%
0% 75% 50%
0% 100% 100%
PRESSURE CONTROLLER OP 9999.99 %
Reserved for Faceplates

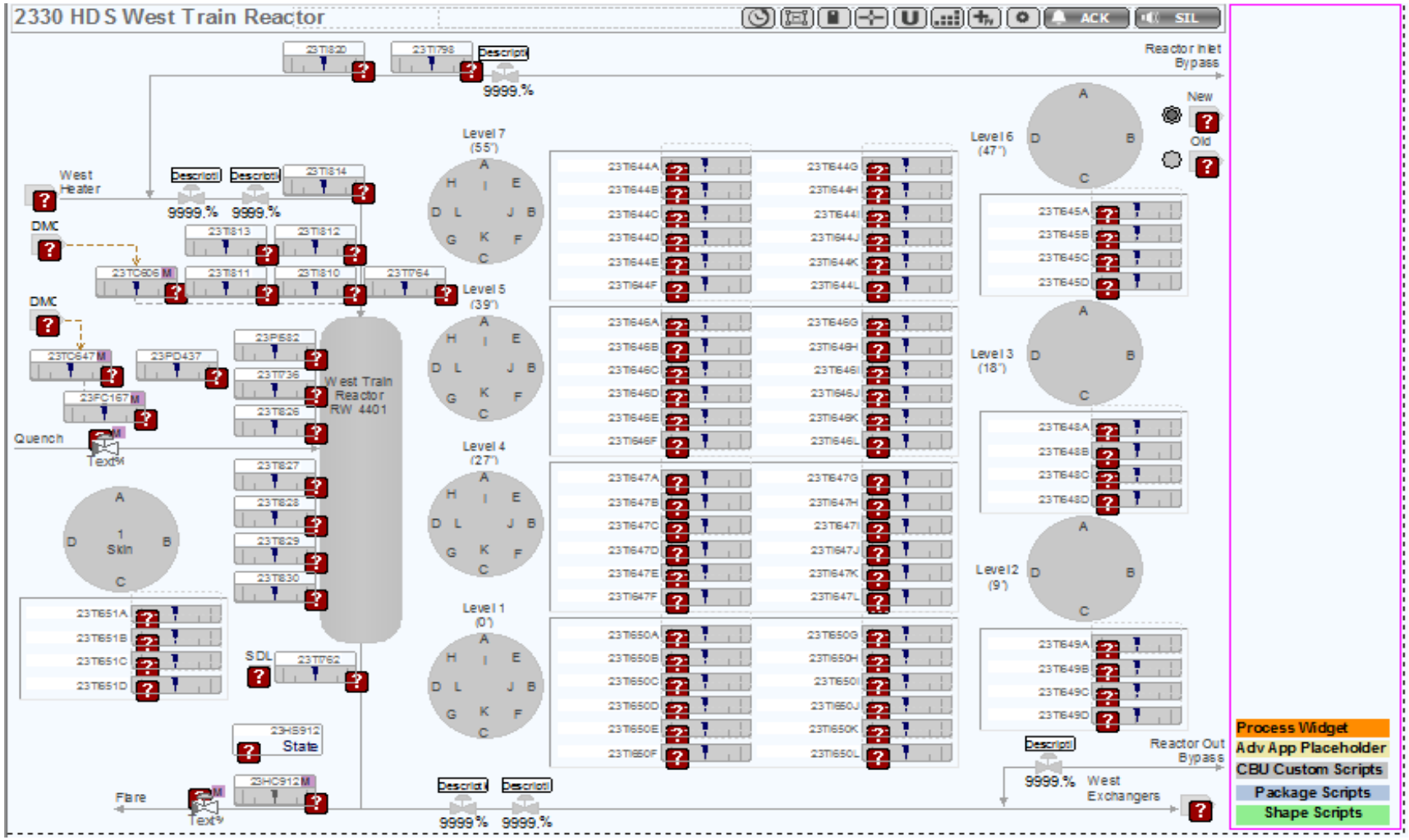
1.150 2322H2 HDS STRIPPER RELEASE CONTACTOR LOGIC HELP (Reformer_2322H2.htm)

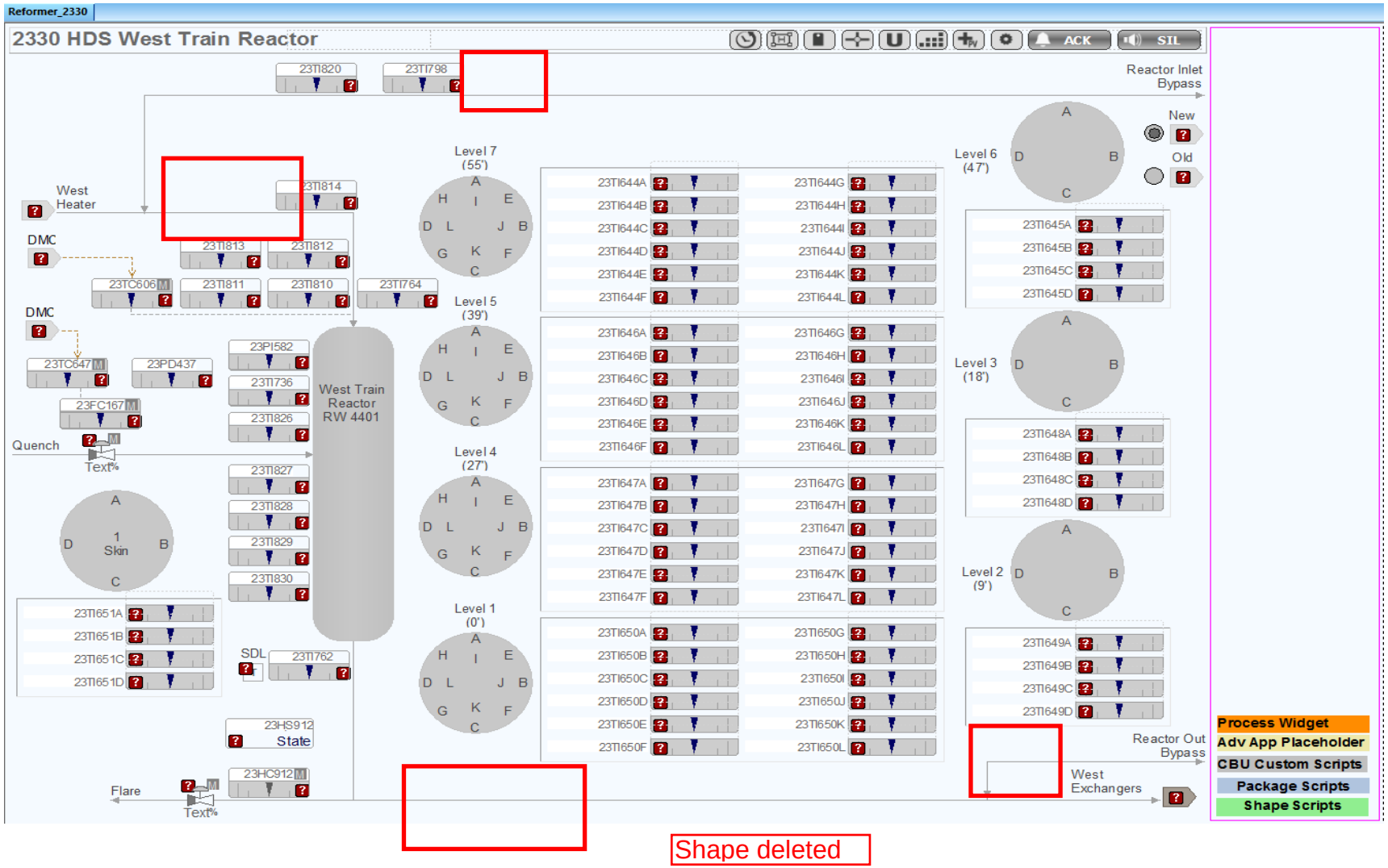



Reformer_2322H2
2322H2 HDS Stripper Release Contactor Logic Help
ACK
SIL
Logic: 01_13L07
Trip: 9999.!%
If either hot flash drum level 23LI344 / 345 falls below the configured low level trip 10%, then the logic triggers the handswitch which de-energizes the solenoid closing 23PV345 - regardless of the controller output.
Release Amine Cont
23LI344
23LC345
M
Level Shutoff
LG
23HS345
State
S
Press Enter to Bypass
Bypass Switch
TTT
M
Rich Amine
Text!%
Shutoff By pass
NOTE: A TDC bypass switch (23HS345) is provided to allow the low level trip logic to be bypassed.
Select the target and press <Enter> to turn ON/OFF. The logic will generate a "Shutoff Bypass" alarm when bypassed.
The "Lo Level Shutoff" alarm will clear when both level indications have cleared the low level trip.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

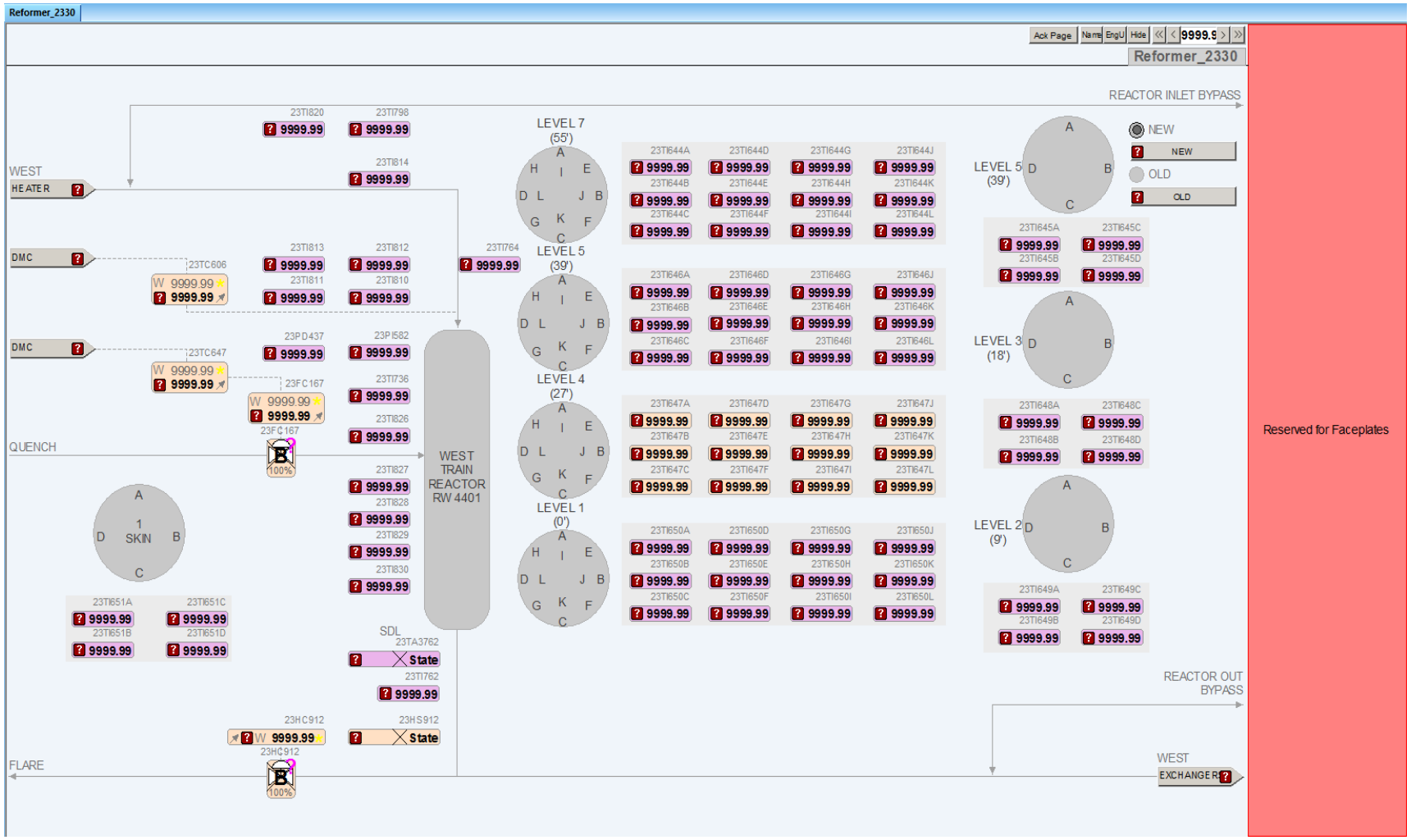

Reformer_2322H2
Ack Page
Name
EngU
Hide
Reformer_2320H1
IF EITHER HOT FLASH DRUM LEVEL 23LI344 / 345 FALLS BELOW THE CONFIGURED LOW LEVEL TRIP 10%, THEN THE LOGIC TRIGGERS THE HANDSWITCH WHICH DE-ENERGIZES THE SOLENOID CLOSING 23PV345 - REGARDLESS OF THE CONTROLLER OUTPUT.
LOGIC: 01_13L07
TRIP: 9999.99 %
RELEAS
AMINE
CONT
23LC345
9999.99 W
9999.99
9999.99
23LA345
State
LG
23HS345
State
S
PRESS ENTER TO
BYPASS
SWITCH
TTT
23LC345
100%
RICH AMINE
23HA345
State
NOTE: A TDC BYPASS SWITCH (23HS345) IS PROVIDED TO ALLOW THE LOW LEVEL TRIP LOGIC TO BE BYPASSED.
SELECT THE TARGET AND PRESS <ENTER> TO TURN ON/OFF. THE LOGIC WILL GENERATE A "SHUTOFF BYPASS" ALARM WHEN BYPASSED.
THE "LO LEVEL SHUTOFF" ALARM WILL CLEAR WHEN BOTH LEVEL INDICATIONS HAVE CLEARED THE LOW LEVEL TRIP.
Reserved for Faceplates

1.151 2330 HDS WEST TRAIN REACTOR (Reformer_2330.htm)

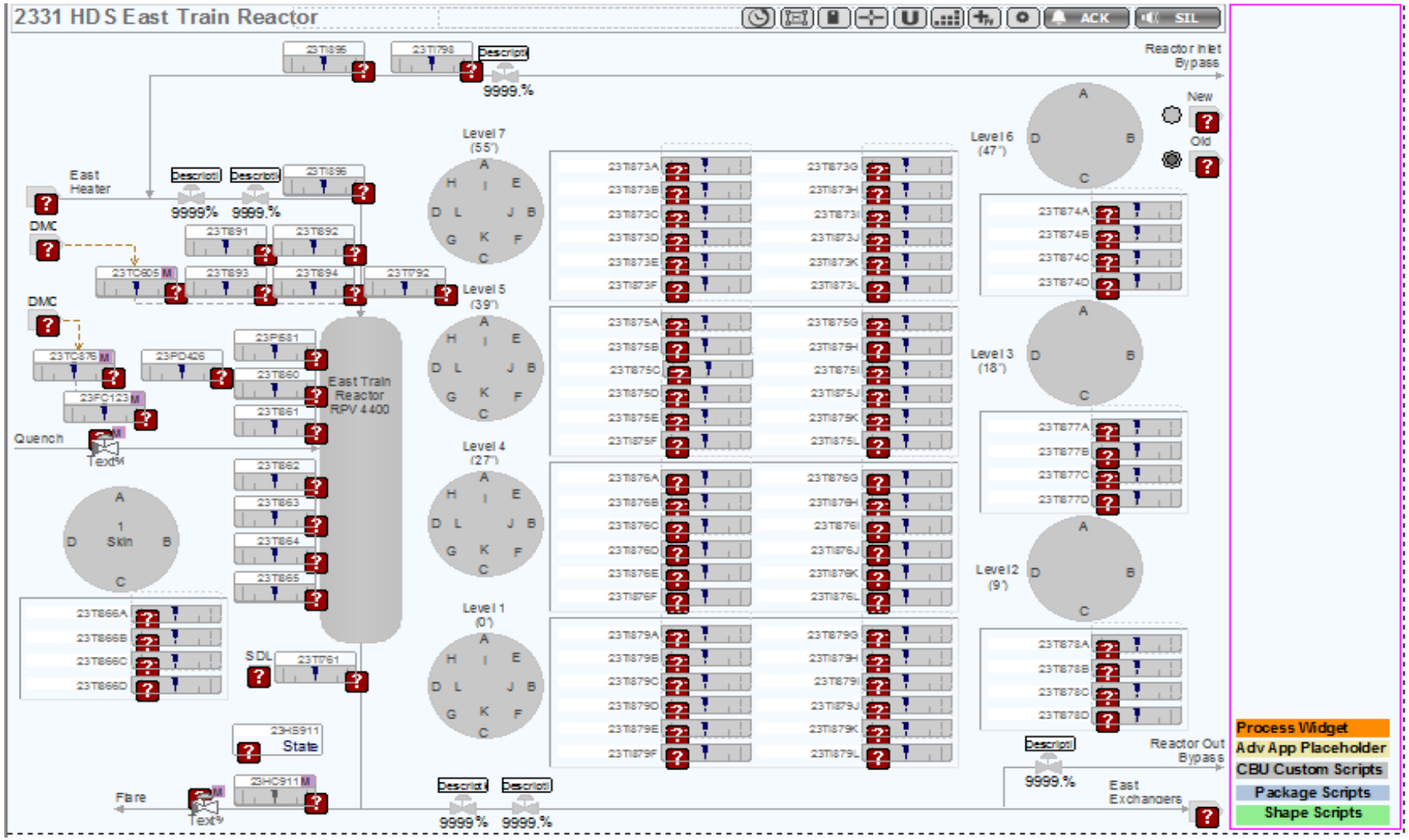


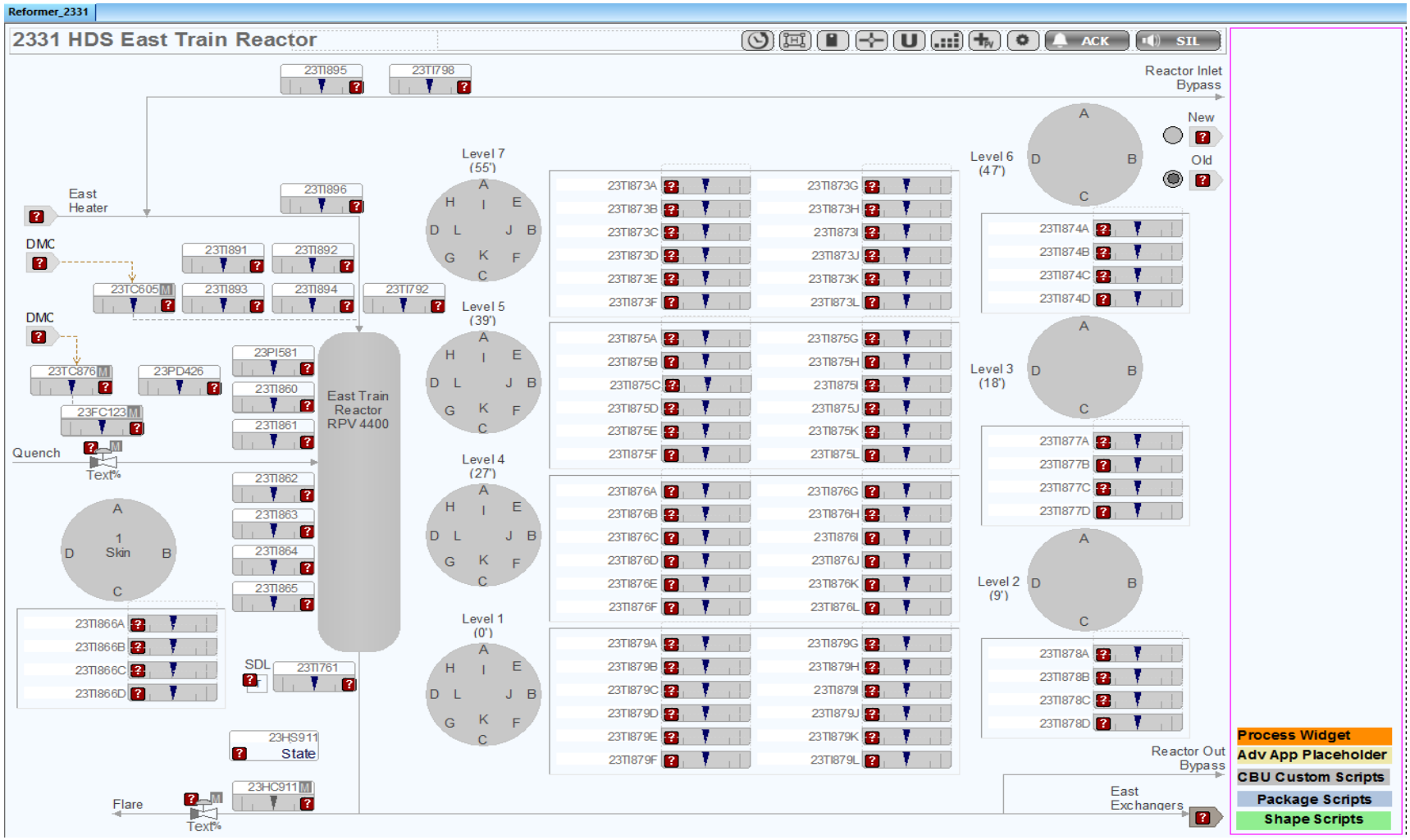


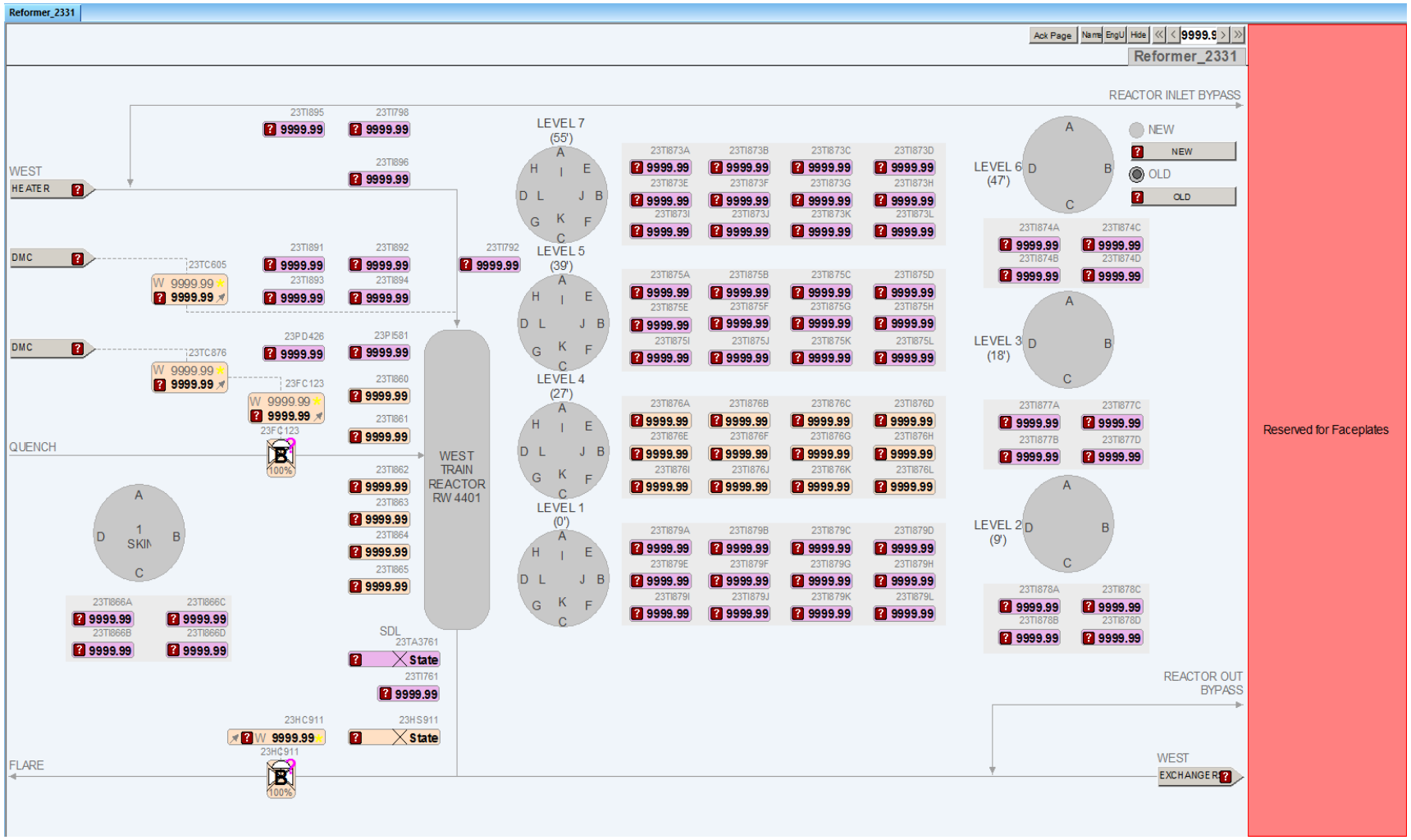
Shape deleted


Reformer_2330
Ack Page
Name
EngU
Hide
Reformer_2330
REACTOR INLET BYPASS
WEST HEATER
DMC
DMC
QUENCH
FLARE
WEST TRAIN REACTOR RW 4401
LEVEL 7 (55')
LEVEL 5 (39')
LEVEL 4 (27')
LEVEL 1 (0')
LEVEL 5 (39')
LEVEL 3 (18')
LEVEL 2 (9')
NEW
OLD
SDL
State
State
REACTOR OUT BYPASS
WEST EXCHANGER
Reserved for Faceplates

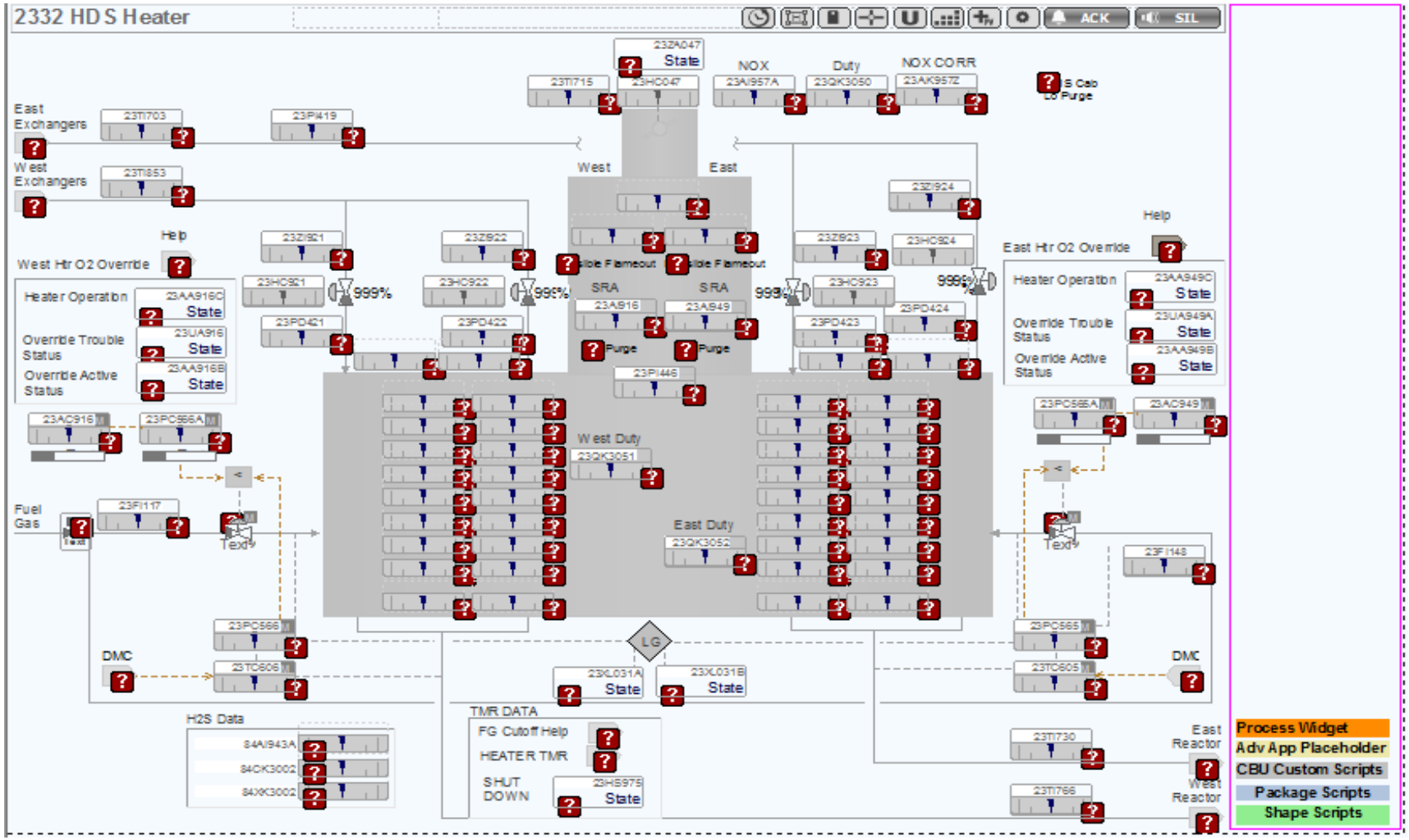
1.152 2331 HDS EAST TRAIN REACTOR (Reformer_2331.htm)

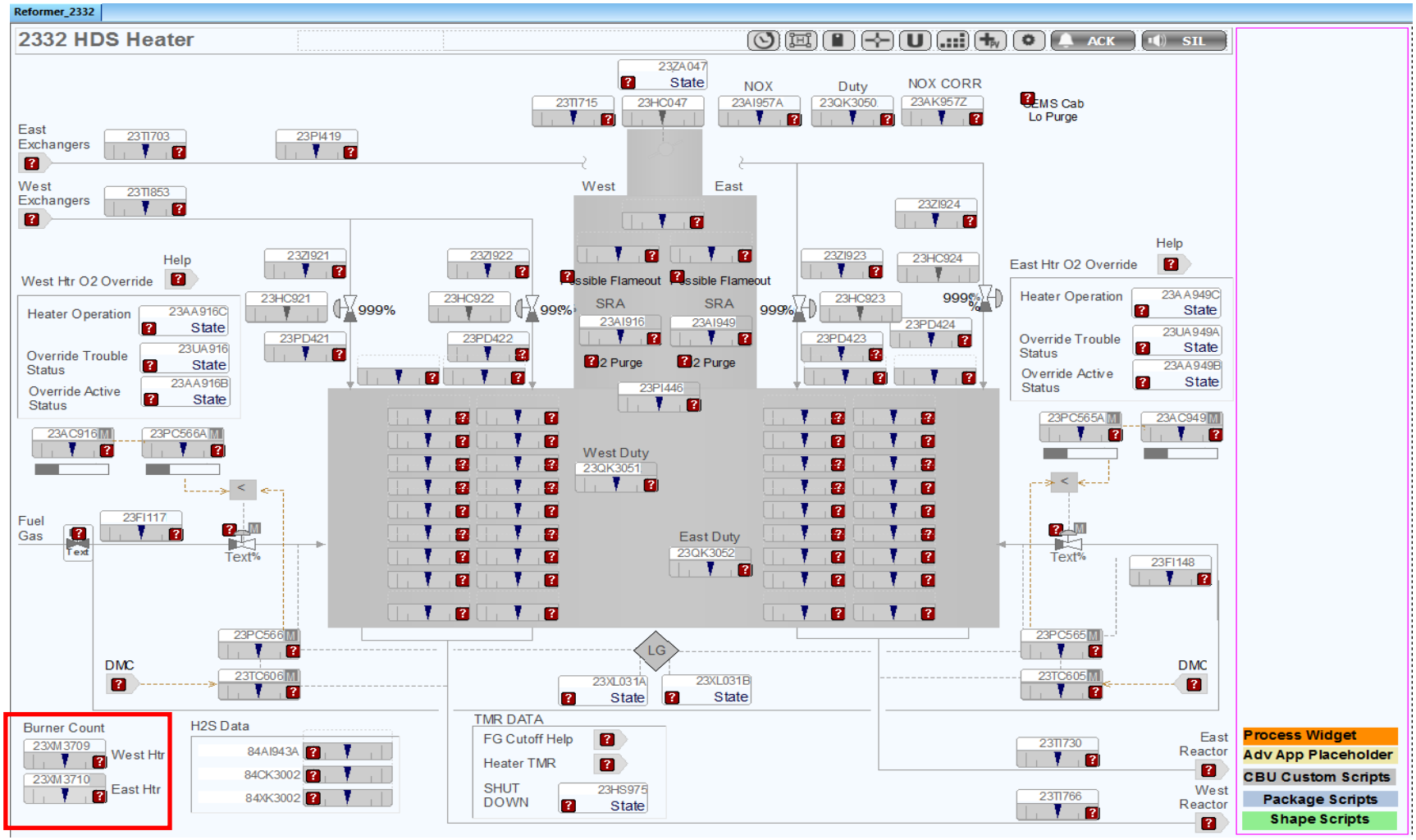



Reformer_2331
2331 HDS East Train Reactor
ACK
SIL
23TI895
23TI798
Reactor Inlet Bypass
New
Old
East Heater
23TI896
DMC
23TI891
23TI892
23TC605
23TI893
23TI894
23TI792
DMC
23TC876
23PD426
23FC123
23PI581
23TI860
23TI861
23TI862
23TI863
23TI864
23TI865
Quench
Text%
East Train Reactor RPV 4400
Level 7 (55')
Level 5 (39')
Level 4 (27')
Level 1 (0')
Level 6 (47')
Level 3 (18')
Level 2 (9')
1 Skin
23TI866A
23TI866B
23TI866C
23TI866D
SDL
23TI761
23HS911
State
23HC911
Flare
Text%
23TI873A
23TI873B
23TI873C
23TI873D
23TI873E
23TI873F
23TI873G
23TI873H
23TI873I
23TI873J
23TI873K
23TI873L
23TI874A
23TI874B
23TI874C
23TI874D
23TI875A
23TI875B
23TI875C
23TI875D
23TI875E
23TI875F
23TI875G
23TI875H
23TI875I
23TI875J
23TI875K
23TI875L
23TI877A
23TI877B
23TI877C
23TI877D
23TI876A
23TI876B
23TI876C
23TI876D
23TI876E
23TI876F
23TI876G
23TI876H
23TI876I
23TI876J
23TI876K
23TI876L
23TI878A
23TI878B
23TI878C
23TI878D
23TI879A
23TI879B
23TI879C
23TI879D
23TI879E
23TI879F
23TI879G
23TI879H
23TI879I
23TI879J
23TI879K
23TI879L
Reactor Out Bypass
East Exchangers
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

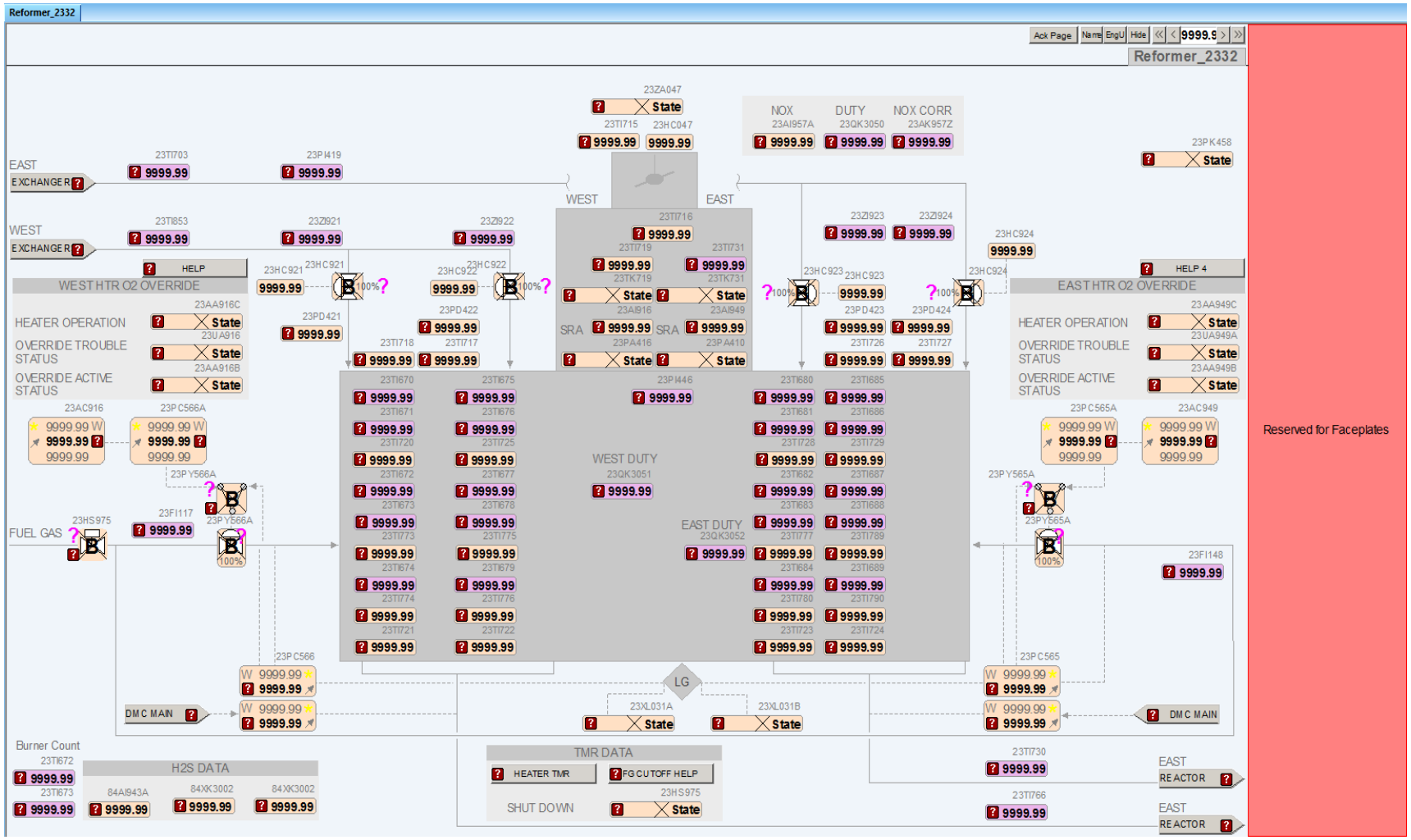

Reformer_2331
Ack Page
Name
EngU
Hide
Reformer_2331
REACTOR INLET BYPASS
WEST HEATER
DMC
DMC
QUENCH
FLARE
WEST TRAIN REACTOR RW 4401
LEVEL 7 (55')
LEVEL 6 (47')
LEVEL 5 (39')
LEVEL 4 (27')
LEVEL 3 (18')
LEVEL 2 (9')
LEVEL 1 (0')
NEW
OLD
SDL
23TA3761
State
23HS911
State
REACTOR OUT BYPASS
WEST EXCHANGER
Reserved for Faceplates

1.153 2332 HDS HEATER (Reformer_2332.htm)

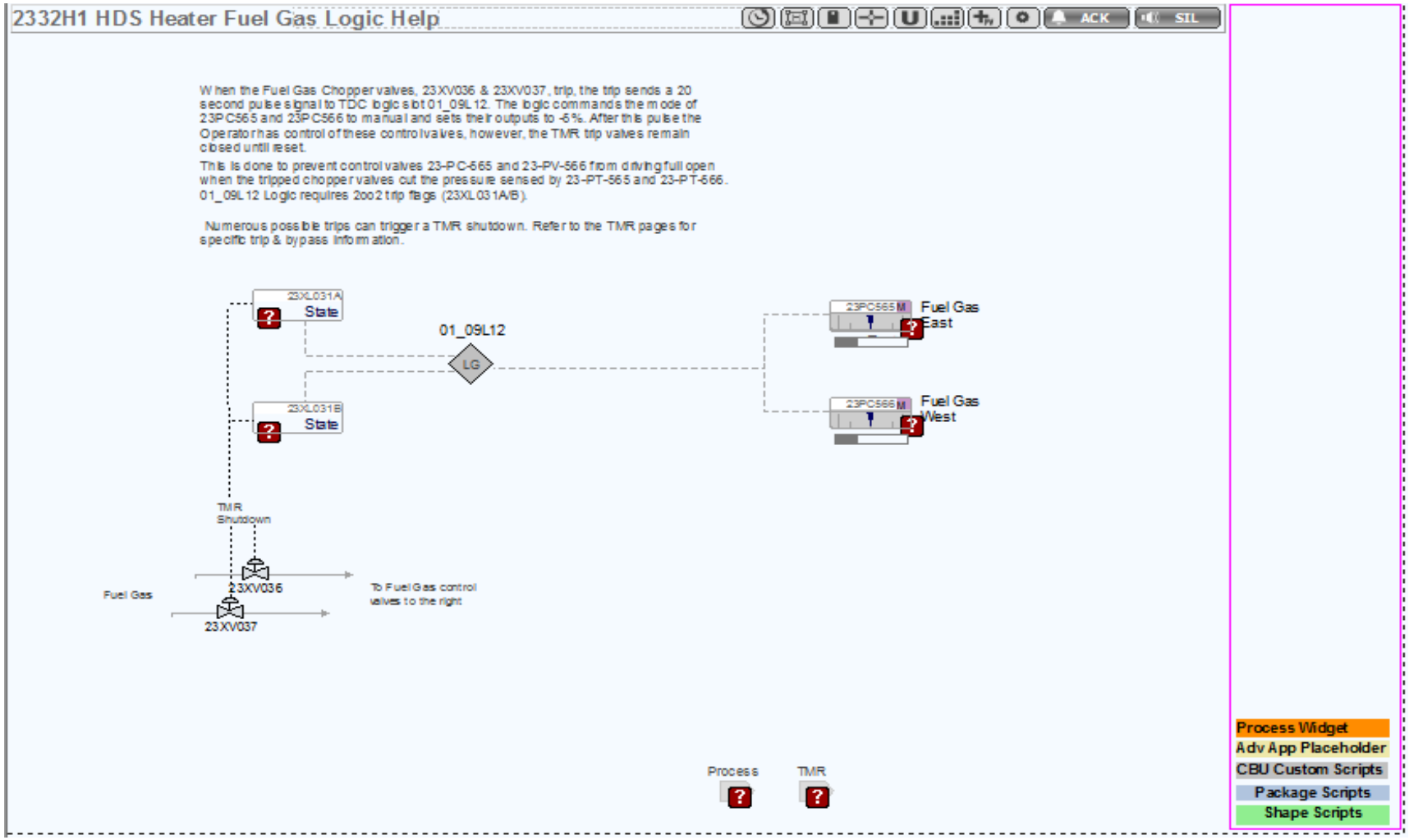


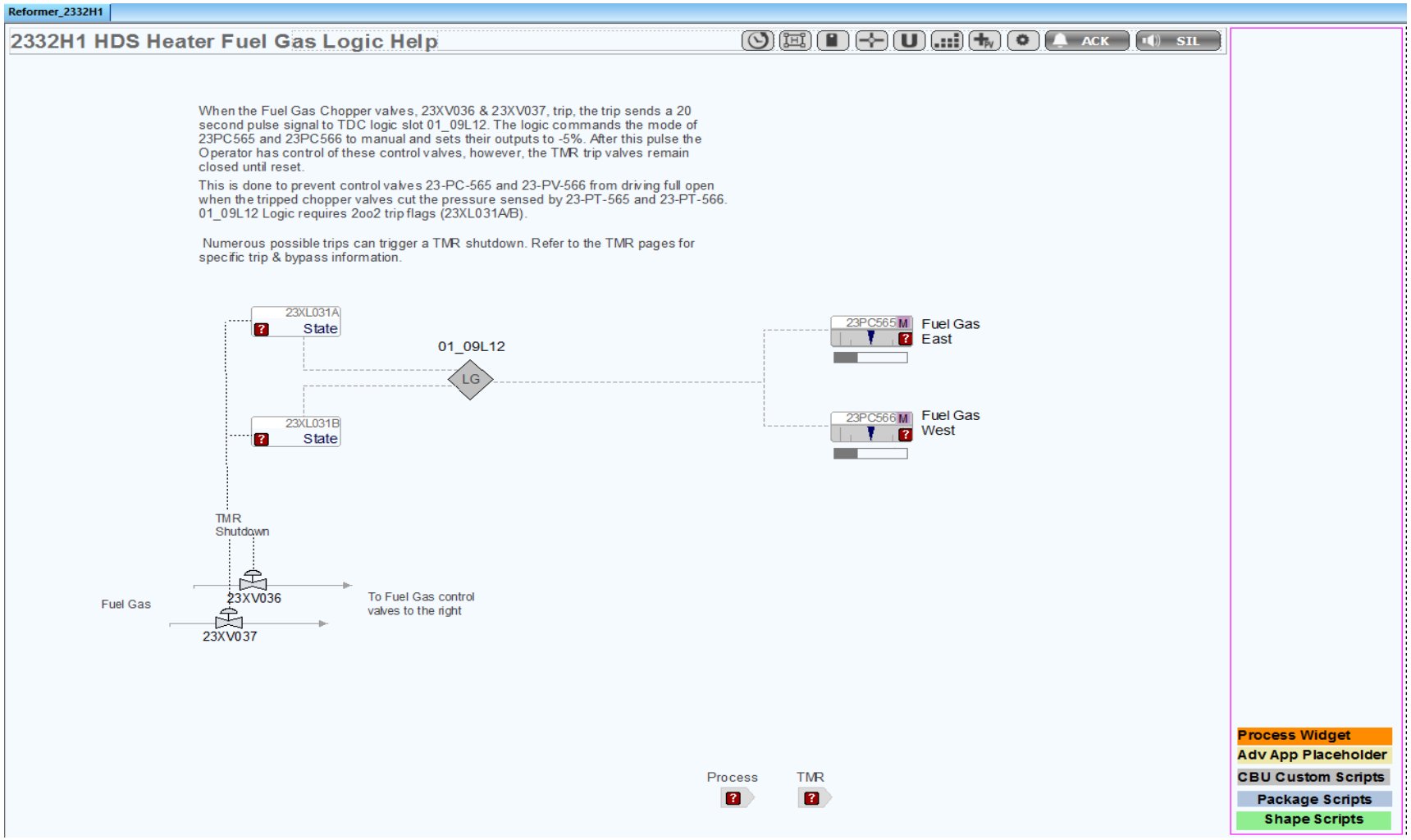


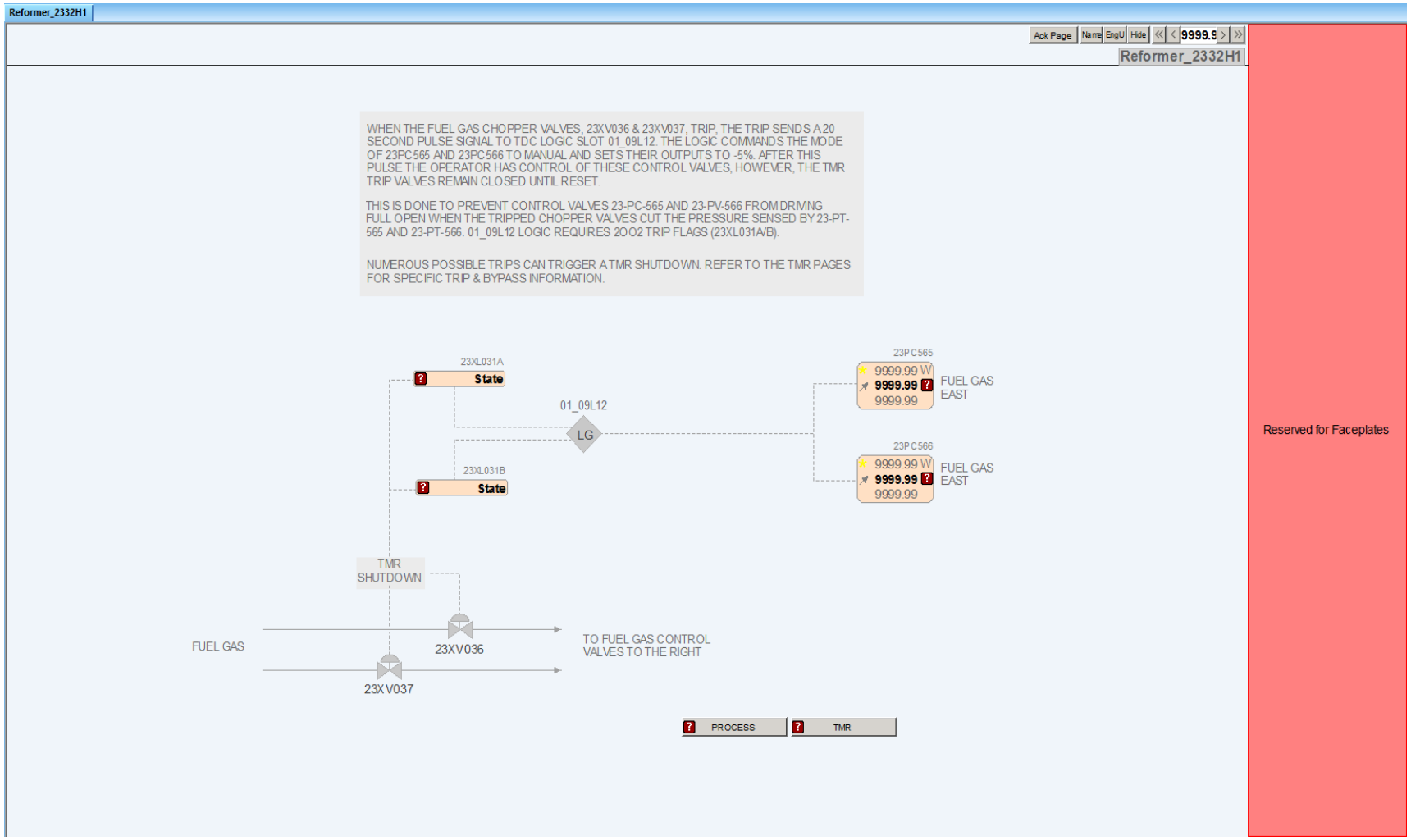
Shapes added


Reformer_2332
Reformer_2332
Reserved for Faceplates
WEST HTR O2 OVERRIDE
EAST HTR O2 OVERRIDE
HEATER OPERATION
OVERRIDE TROUBLE STATUS
OVERRIDE ACTIVE STATUS
WEST DUTY
EAST DUTY
NOX
DUTY
NOX CORR
SRA
FUEL GAS
DMC MAIN
LG
H2S DATA
TMR DATA
HEATER TMR
FG CUTOFF HELP
SHUT DOWN
Burner Count
EAST EXCHANGER
WEST EXCHANGER
EAST REACTOR
WEST
EAST

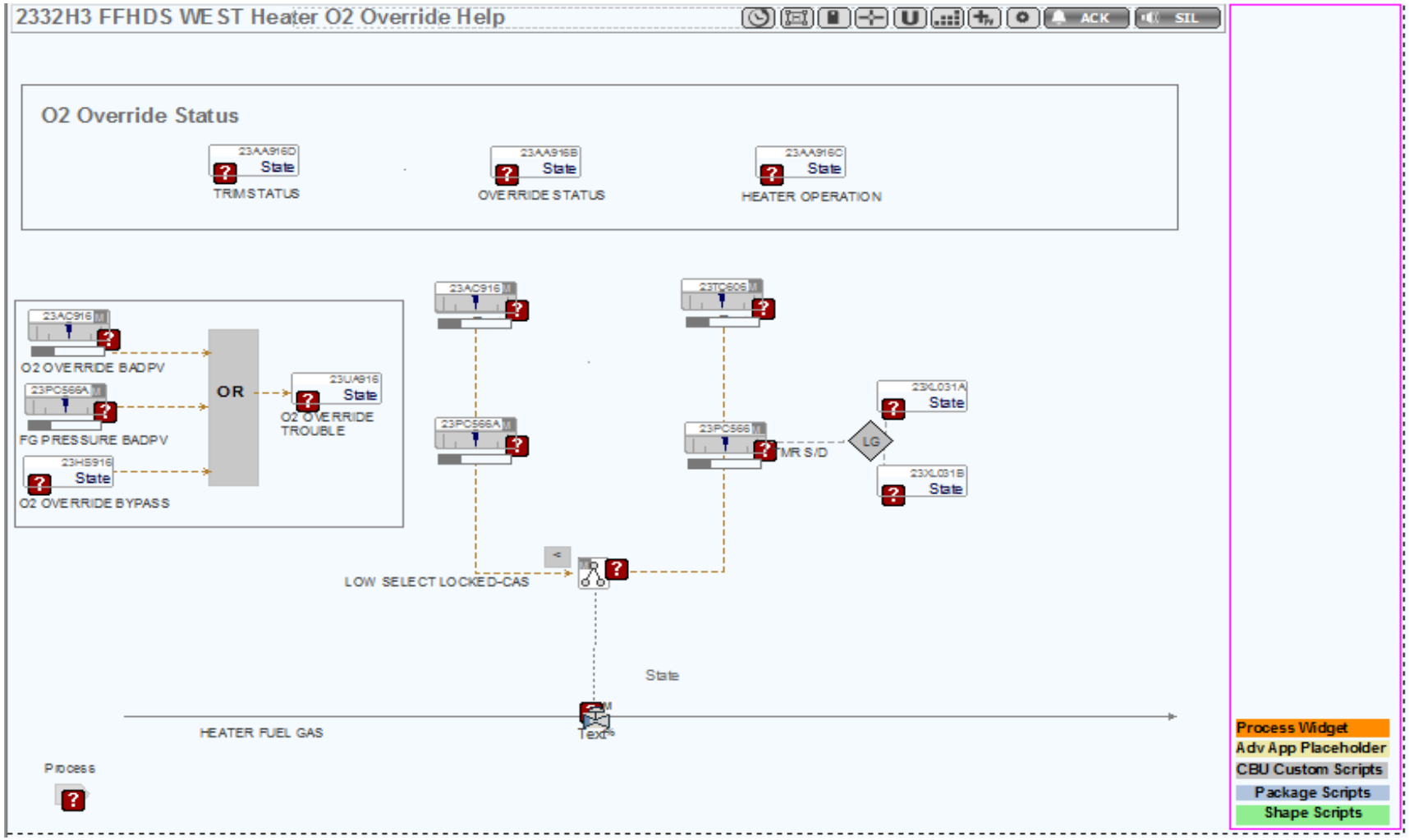
1.154 2332H1 HDS HEATER FUEL GAS LOGIC HELP (Reformer_2332H1.htm)

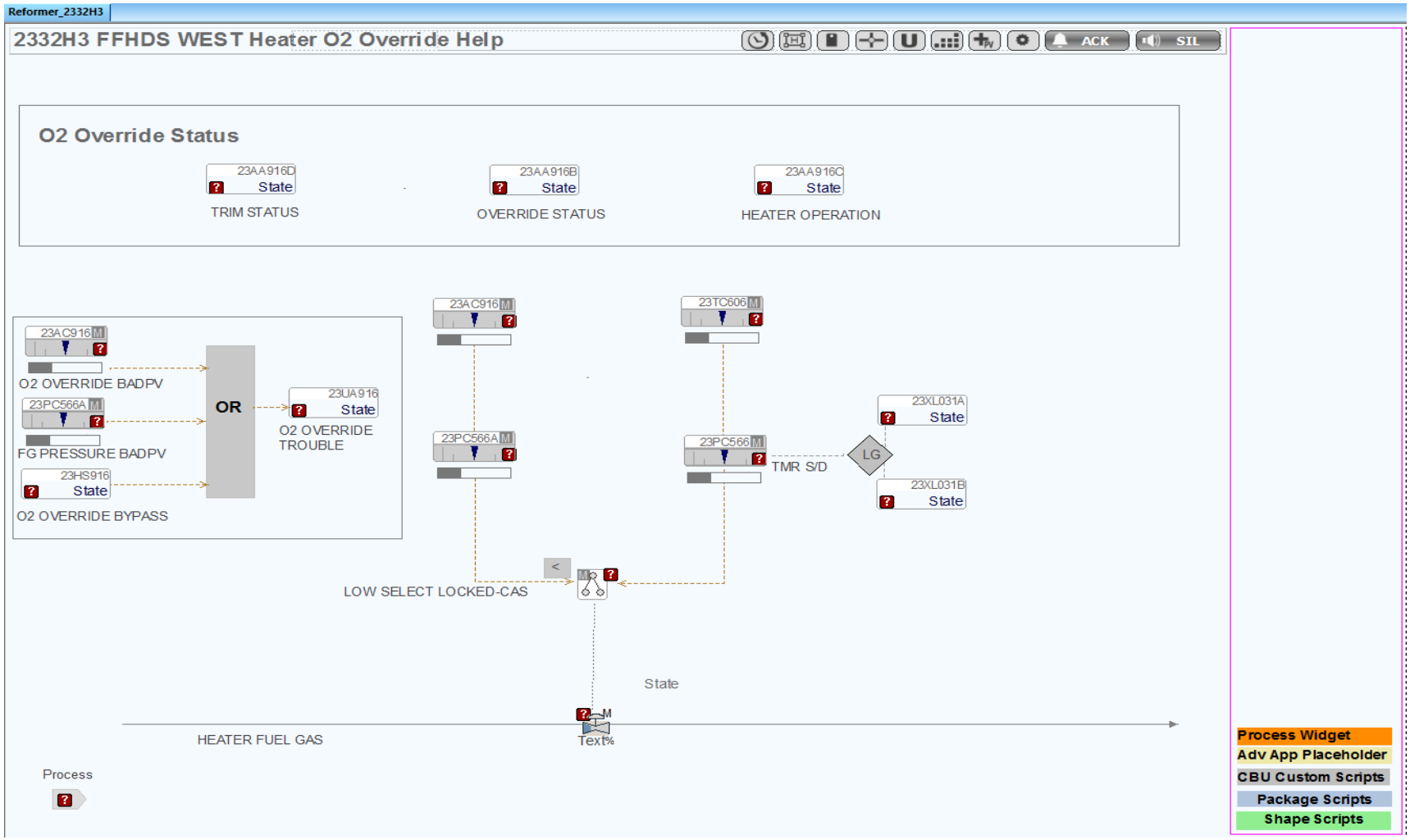


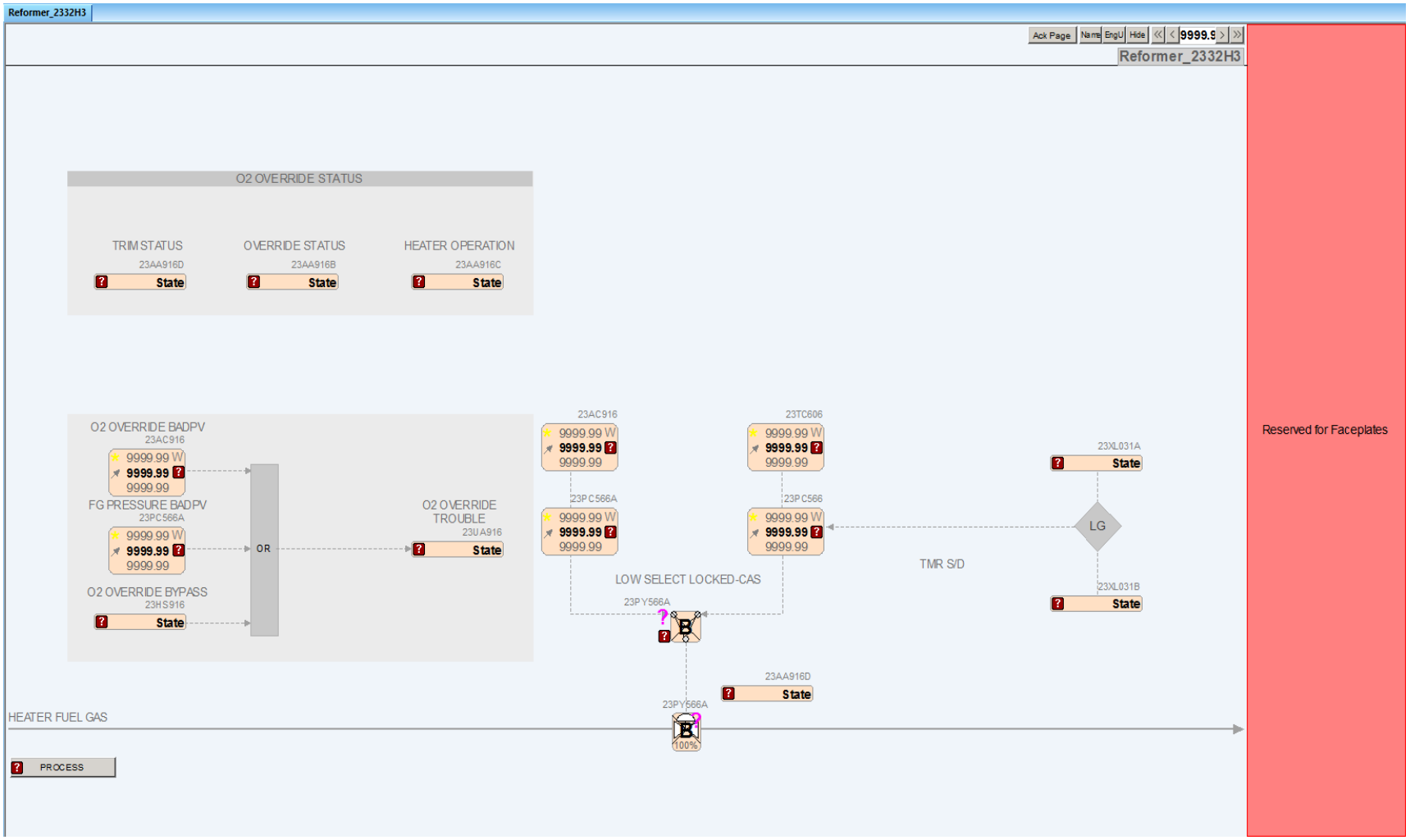

Reformer_2332H1
2332H1 HDS Heater Fuel Gas Logic Help
ACK
SIL
When the Fuel Gas Chopper valves, 23XV036 & 23XV037, trip, the trip sends a 20 second pulse signal to TDC logic slot 01_09L12. The logic commands the mode of 23PC565 and 23PC566 to manual and sets their outputs to -5%. After this pulse the Operator has control of these control valves, however, the TMR trip valves remain closed until reset.
This is done to prevent control valves 23-PC-565 and 23-PV-566 from driving full open when the tripped chopper valves cut the pressure sensed by 23-PT-565 and 23-PT-566. 01_09L12 Logic requires 2oo2 trip flags (23XL031A/B).
Numerous possible trips can trigger a TMR shutdown. Refer to the TMR pages for specific trip & bypass information.
23XL031A
State
23XL031B
State
01_09L12
LG
23PC565 M
Fuel Gas East
23PC566 M
Fuel Gas West
TMR Shutdown
Fuel Gas
23XV036
23XV037
To Fuel Gas control valves to the right
Process
TMR
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2332H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2332H1
WHEN THE FUEL GAS CHOPPER VALVES, 23XV036 & 23XV037, TRIP, THE TRIP SENDS A 20 SECOND PULSE SIGNAL TO TDC LOGIC SLOT 01_09L12. THE LOGIC COMMANDS THE MODE OF 23PC565 AND 23PC566 TO MANUAL AND SETS THEIR OUTPUTS TO -5%. AFTER THIS PULSE THE OPERATOR HAS CONTROL OF THESE CONTROL VALVES, HOWEVER, THE TMR TRIP VALVES REMAIN CLOSED UNTIL RESET.
THIS IS DONE TO PREVENT CONTROL VALVES 23-PC-565 AND 23-PV-566 FROM DRIVING FULL OPEN WHEN THE TRIPPED CHOPPER VALVES CUT THE PRESSURE SENSED BY 23-PT-565 AND 23-PT-566. 01_09L12 LOGIC REQUIRES 2OO2 TRIP FLAGS (23XL031A/B).
NUMEROUS POSSIBLE TRIPS CAN TRIGGER A TMR SHUTDOWN. REFER TO THE TMR PAGES FOR SPECIFIC TRIP & BYPASS INFORMATION.
23XL031A
State
01_09L12
LG
23XL031B
State
23PC565
9999.99 W
9999.99
9999.99
FUEL GAS EAST
23PC566
9999.99 W
9999.99
9999.99
FUEL GAS EAST
TMR SHUTDOWN
FUEL GAS
23XV036
23XV037
TO FUEL GAS CONTROL VALVES TO THE RIGHT
PROCESS
TMR
Reserved for Faceplates

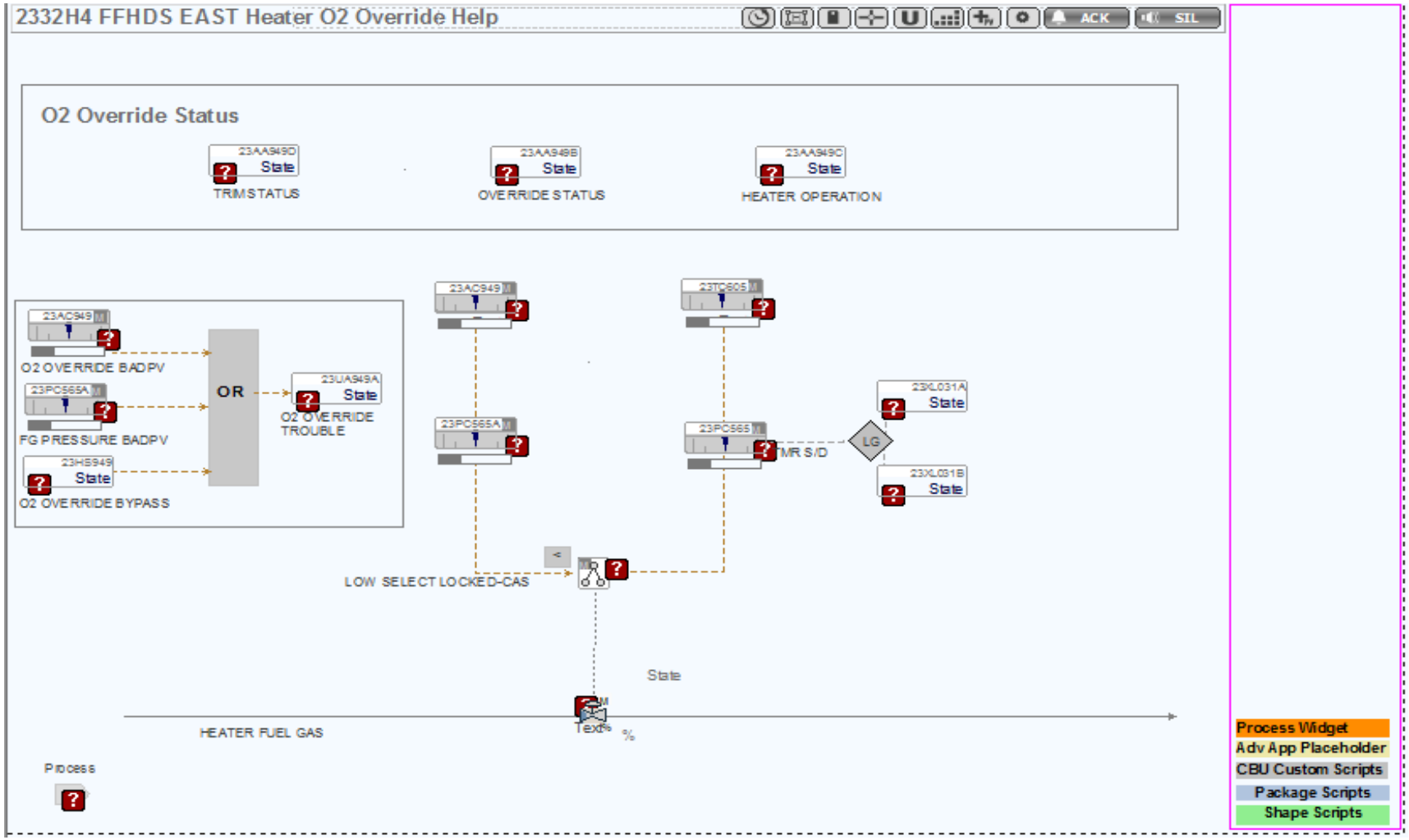
1.155 2332H3 FFHDS WEST HEATER O2 OVERRIDE HELP (Reformer_2332H3.htm)

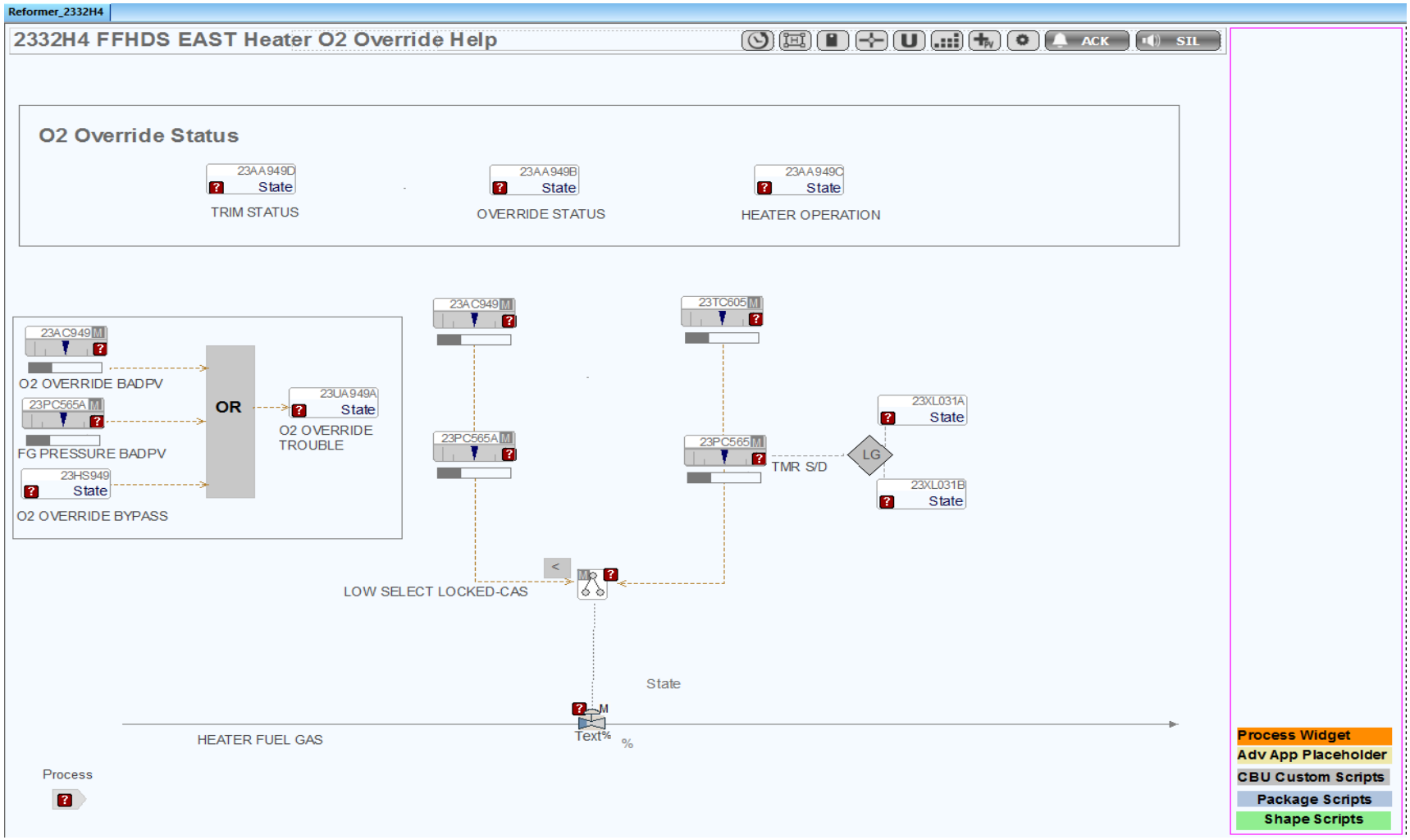


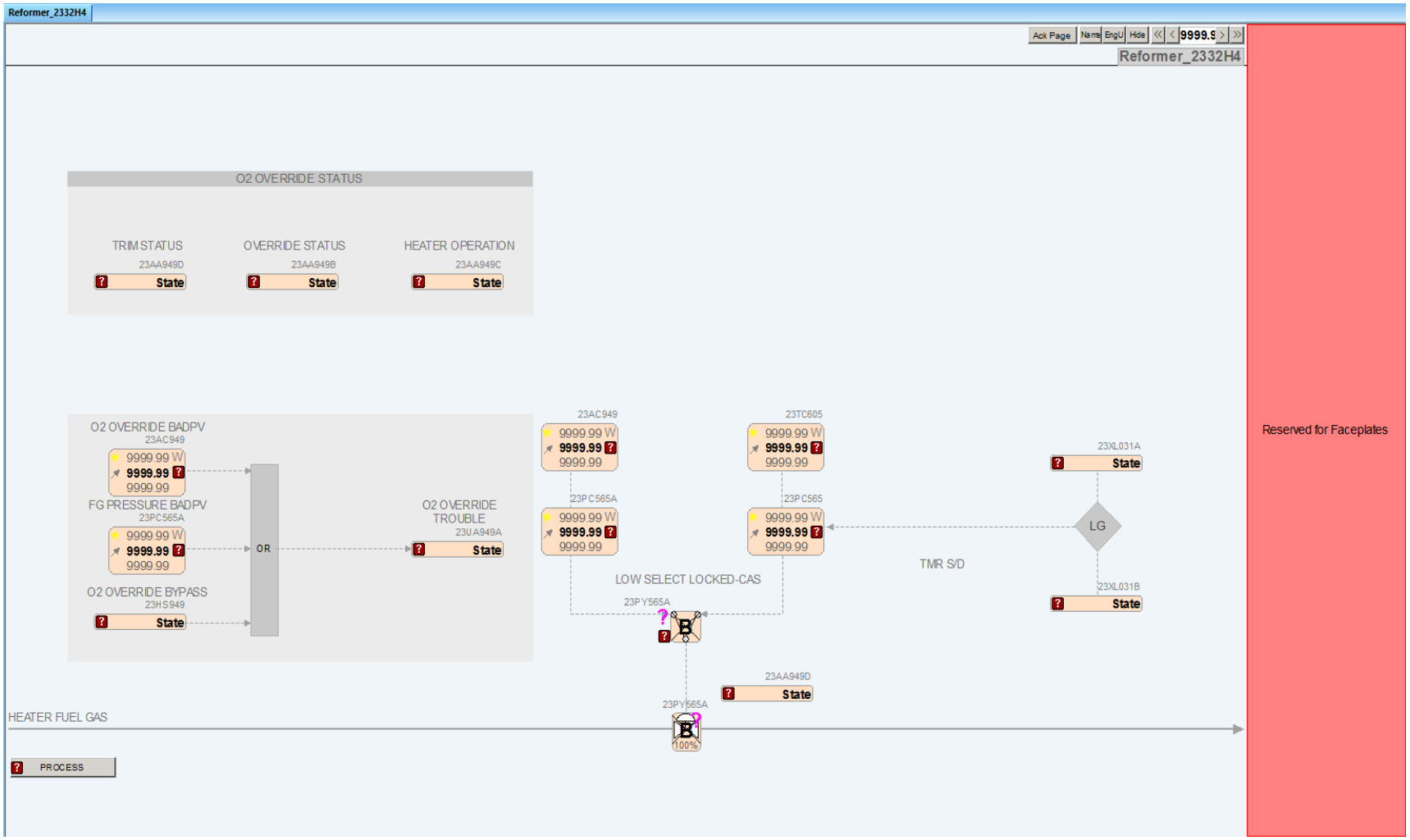

Reformer_2332H3
2332H3 FFHDS WEST Heater O2 Override Help
ACK
SIL
O2 Override Status
23AA916D
State
TRIM STATUS
23AA916B
State
OVERRIDE STATUS
23AA916C
State
HEATER OPERATION
23AC916
O2 OVERRIDE BADPV
23PC566A
FG PRESSURE BADPV
23HS916
State
O2 OVERRIDE BYPASS
OR
23UA916
State
O2 OVERRIDE TROUBLE
23AC916
23PC566A
LOW SELECT LOCKED-CAS
23TC606
23PC566
TMR S/D
LG
23XL031A
State
23XL031B
State
State
HEATER FUEL GAS
Text%
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2332H3
Ack Page
Name
EngU
Hide
Reformer_2332H3
O2 OVERRIDE STATUS
TRIM STATUS
23AA916D
State
OVERRIDE STATUS
23AA916B
State
HEATER OPERATION
23AA916C
State
O2 OVERRIDE BADPV
23AC916
9999.99 W
9999.99
9999.99
FG PRESSURE BADPV
23PC566A
9999.99 W
9999.99
9999.99
O2 OVERRIDE BYPASS
23HS916
State
OR
O2 OVERRIDE TROUBLE
23UA916
State
23AC916
9999.99 W
9999.99
9999.99
23TC606
9999.99 W
9999.99
9999.99
23PC566A
9999.99 W
9999.99
9999.99
23PC566
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
23PY566A
TMR S/D
LG
23XL031A
State
23XL031B
State
23AA916D
State
23PY566A
100%
HEATER FUEL GAS
PROCESS
Reserved for Faceplates

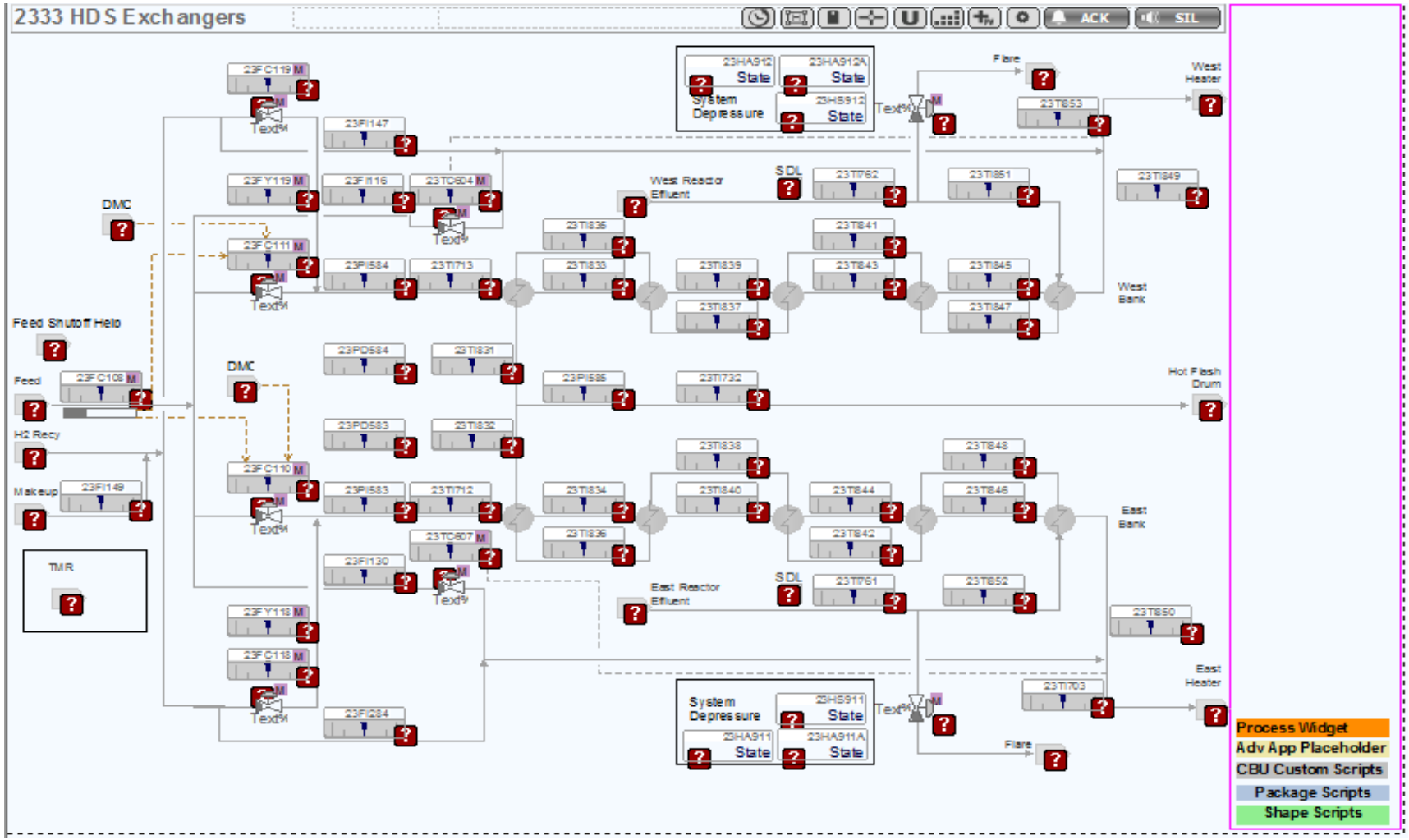
1.156 2332H4 FFHDS EAST HEATER O2 OVERRIDE HELP (Reformer_2332H4.htm)

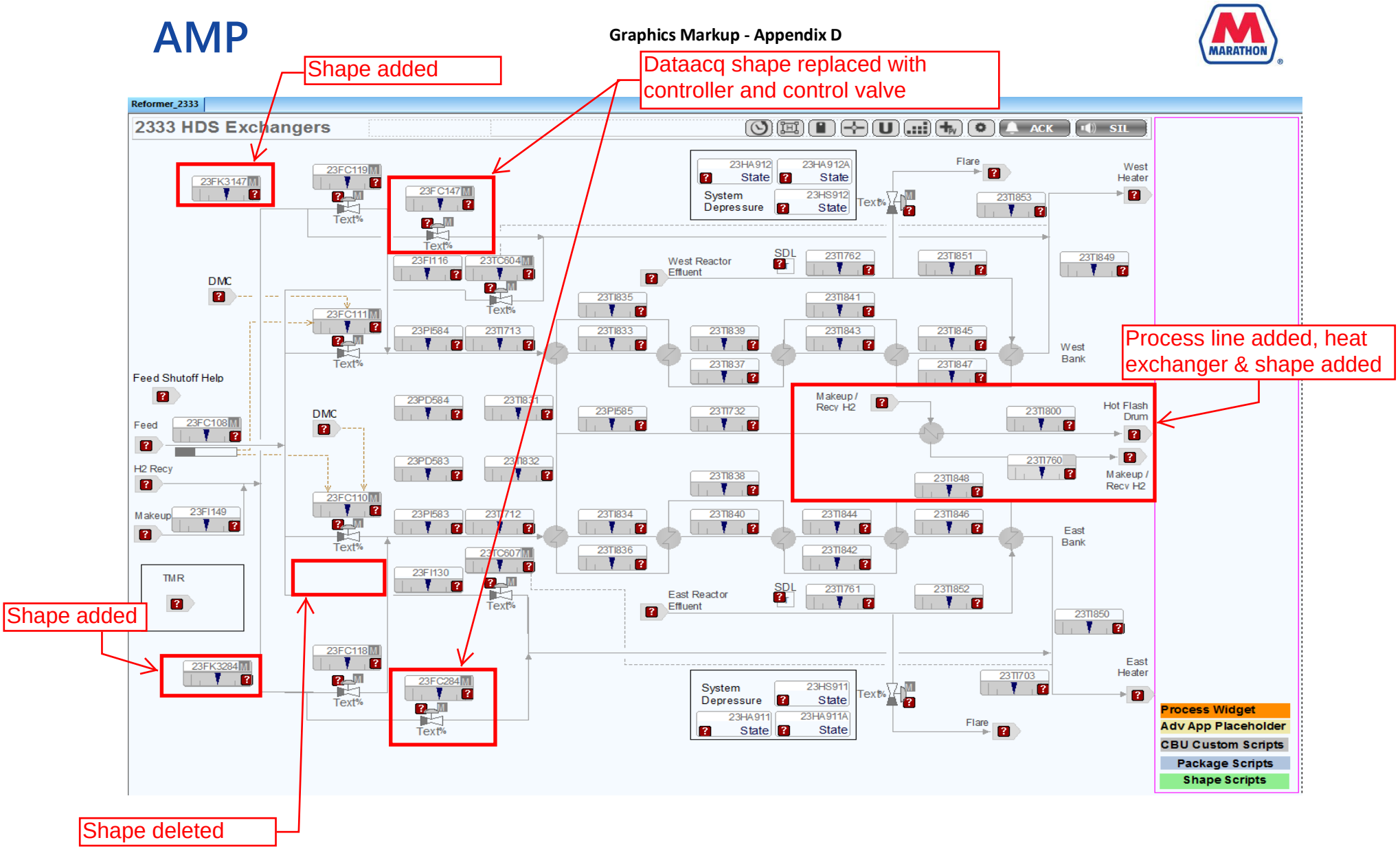


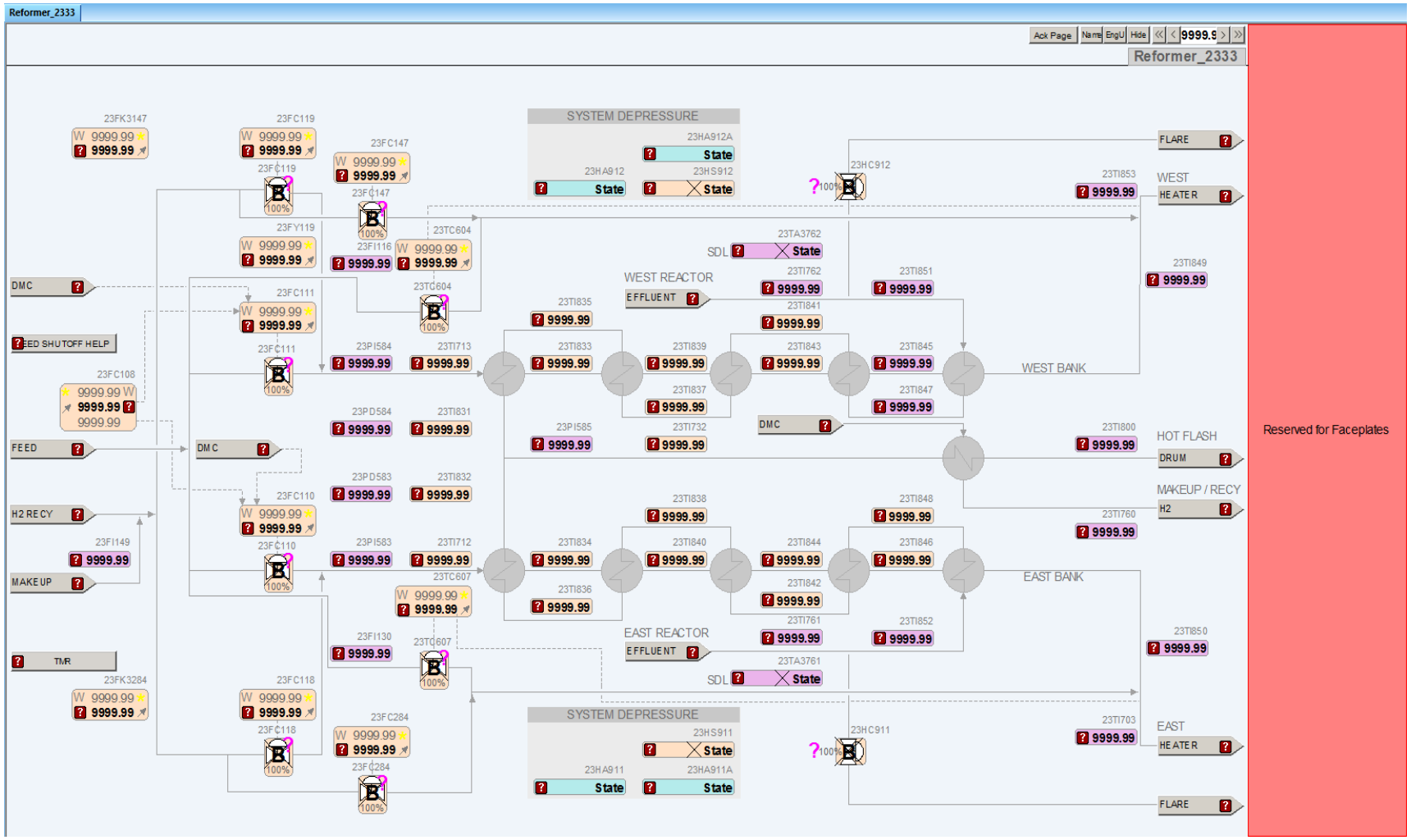

Reformer_2332H4
2332H4 FFHDS EAST Heater O2 Override Help
ACK
SIL
O2 Override Status
23AA949D
State
TRIM STATUS
23AA949B
State
OVERRIDE STATUS
23AA949C
State
HEATER OPERATION
23AC949
O2 OVERRIDE BADPV
23PC565A
FG PRESSURE BADPV
23HS949
State
O2 OVERRIDE BYPASS
OR
23UA949A
State
O2 OVERRIDE TROUBLE
23AC949
23TC605
23PC565A
23PC565
TMR S/D
LG
23XL031A
State
23XL031B
State
LOW SELECT LOCKED-CAS
State
Text%
%
HEATER FUEL GAS
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2332H4
Ack Page
Name
EngU
Hide
Reformer_2332H4
O2 OVERRIDE STATUS
TRIM STATUS
23AA949D
State
OVERRIDE STATUS
23AA949B
State
HEATER OPERATION
23AA949C
State
O2 OVERRIDE BADPV
23AC949
9999.99 W
9999.99
9999.99
FG PRESSURE BADPV
23PC565A
9999.99 W
9999.99
9999.99
O2 OVERRIDE BYPASS
23HS949
State
OR
O2 OVERRIDE TROUBLE
23UA949A
State
23AC949
9999.99 W
9999.99
9999.99
23PC565A
9999.99 W
9999.99
9999.99
23TC605
9999.99 W
9999.99
9999.99
23PC565
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
23PY565A
TMR S/D
LG
23XL031A
State
23XL031B
State
23AA949D
State
23PY565A
100%
HEATER FUEL GAS
PROCESS
Reserved for Faceplates

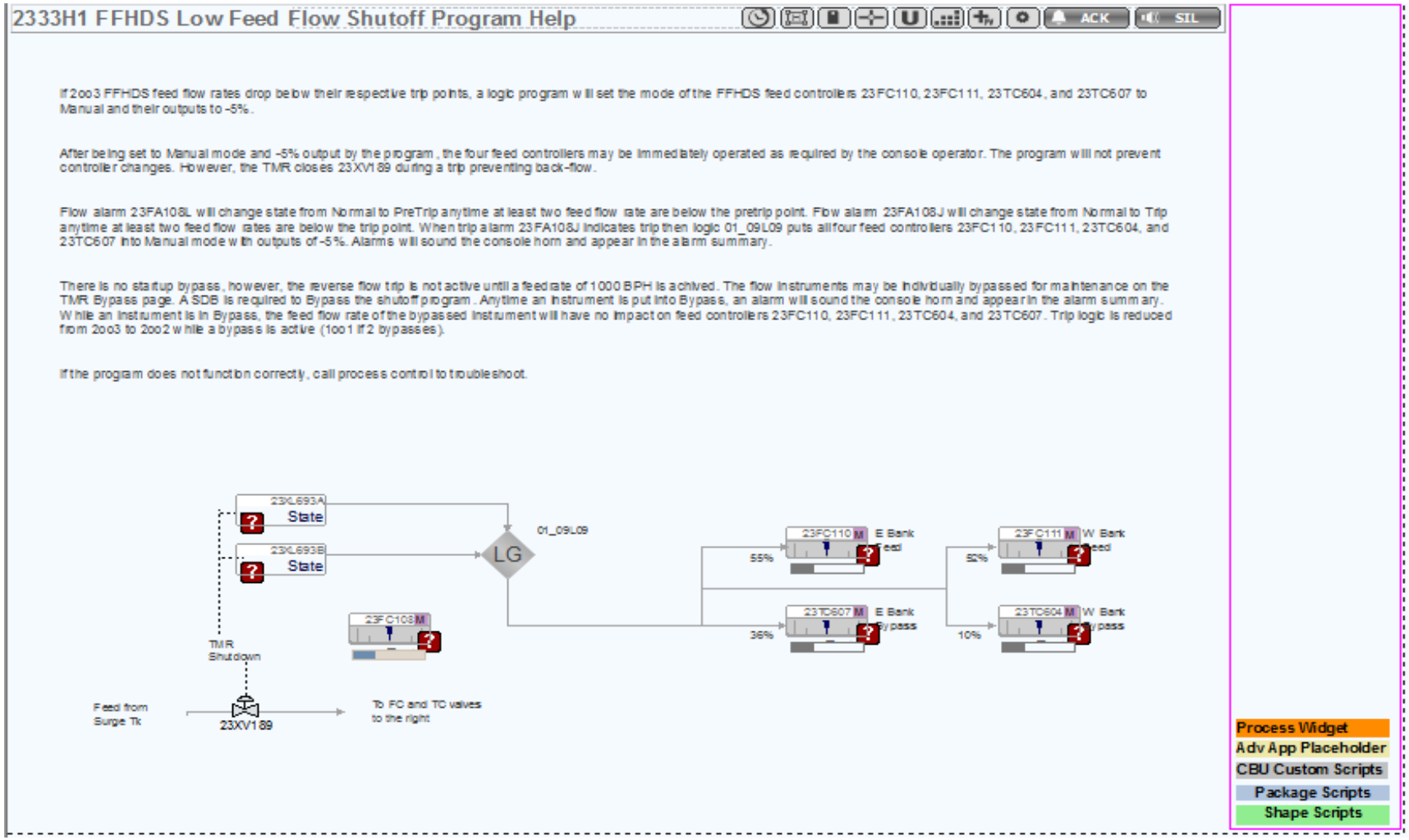
1.157 2333 HDS EXCHANGERS (Reformer_2333.htm)

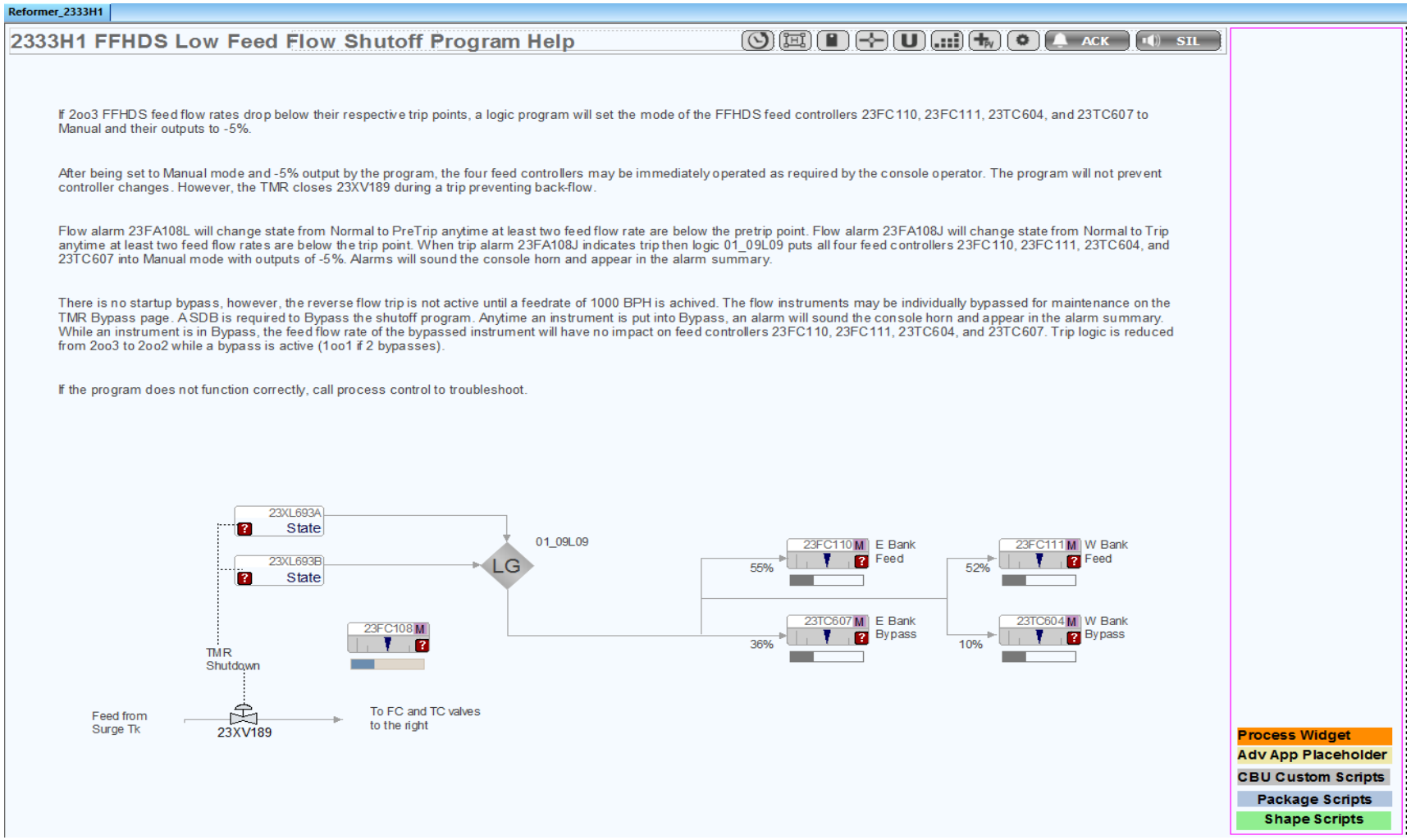


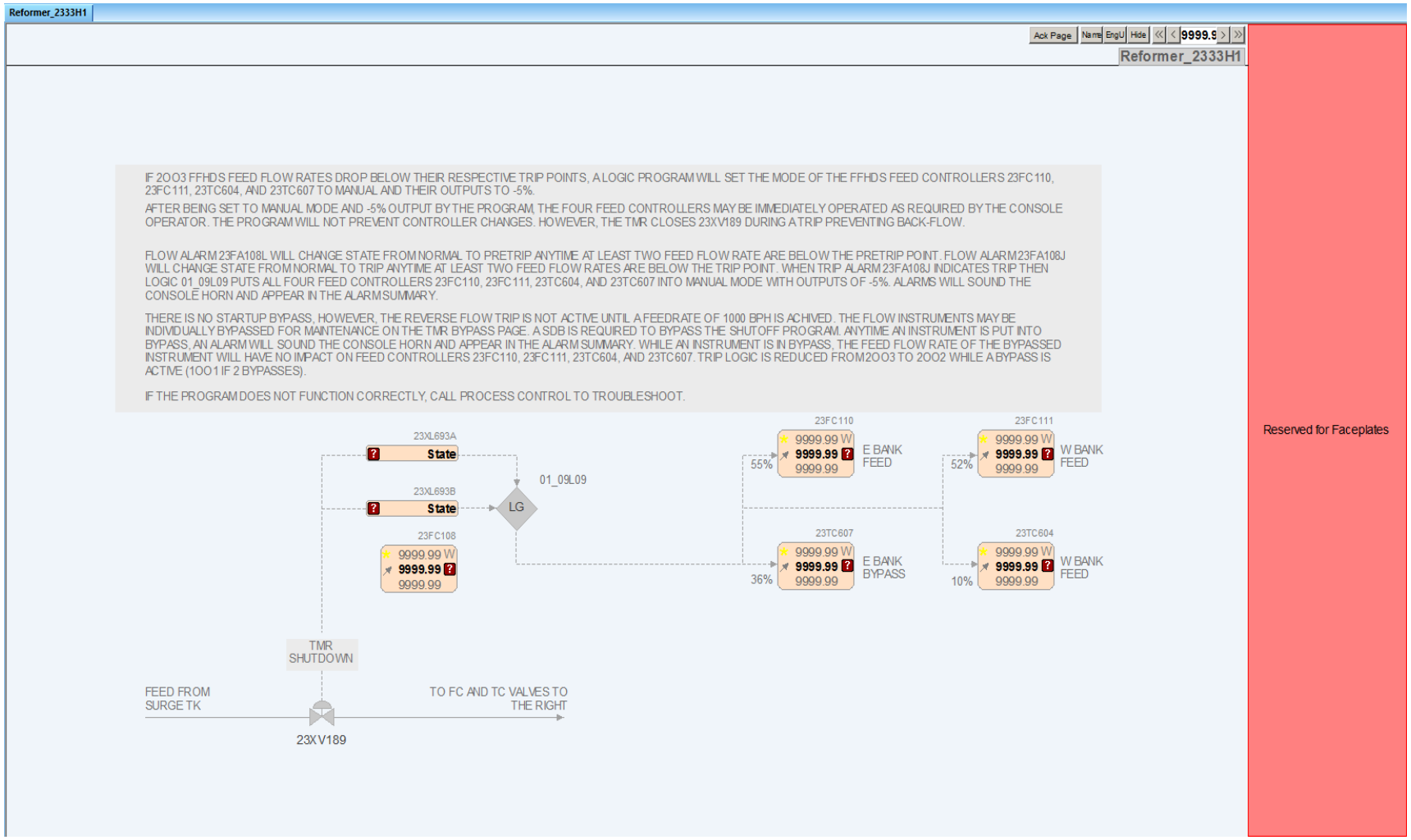

Shape added
Dataacq shape replaced with controller and control valve
Process line added, heat exchanger & shape added
Shape added
Shape deleted
Reformer_2333
2333 HDS Exchangers
ACK
SIL
23FK3147
23FC119
23FC147
23FI116
23TC604
23FC111
23PI584
23TI713
23PD584
23TI831
23PD583
23TI832
23FC110
23PI583
23TI712
23TC607
23FI130
23FC118
23FK3284
23FC284
DMC
Feed Shutoff Help
Feed
23FC108
H2 Recy
Makeup
23FI149
TMR
23HA912 State
23HA912A State
System Depressure
23HS912 State
Flare
West Heater
23TI853
West Reactor Effluent
SDL
23TI762
23TI851
23TI849
23TI835
23TI841
23TI833
23TI839
23TI843
23TI845
23TI837
23TI847
West Bank
Makeup / Recy H2
23PI585
23TI732
23TI800
Hot Flash Drum
23TI760
23TI848
23TI838
23TI834
23TI840
23TI844
23TI846
23TI836
23TI842
East Bank
East Reactor Effluent
23TI761
23TI852
23TI850
East Heater
23TI703
23HS911 State
23HA911 State
23HA911A State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2333
Ack Page
Name
EngU
Hide
Reformer_2333
SYSTEM DEPRESSURE
23HA912A
State
23HA912
State
23HS912
State
23HC912
FLARE
WEST
HEATER
23TI853
9999.99
23TI849
9999.99
23TA3762
SDL
State
WEST REACTOR
EFFLUENT
23TI762
9999.99
23TI851
9999.99
23TI841
9999.99
23TI835
9999.99
23TI833
9999.99
23TI839
9999.99
23TI843
9999.99
23TI845
9999.99
23TI837
9999.99
23TI847
9999.99
WEST BANK
DMC
23TI732
9999.99
23PI585
9999.99
23TI800
9999.99
HOT FLASH
DRUM
MAKEUP / RECY
H2
23TI760
9999.99
23TI838
9999.99
23TI848
9999.99
23TI834
9999.99
23TI840
9999.99
23TI844
9999.99
23TI846
9999.99
23TI836
9999.99
23TI842
9999.99
EAST BANK
EAST REACTOR
EFFLUENT
23TI761
9999.99
23TI852
9999.99
23TI850
9999.99
23TA3761
SDL
State
SYSTEM DEPRESSURE
23HS911
State
23HA911
State
23HA911A
State
23HC911
23TI703
9999.99
EAST
HEATER
FLARE
23FK3147
23FC119
23FC147
23FY119
23FI116
23TC604
23FC111
23PI584
23TI713
23FC108
23PD584
23TI831
FEED
DMC
23PD583
23TI832
23FC110
H2 RECY
23FI149
23PI583
23TI712
MAKEUP
23TC607
23FI130
23TC607
TMR
23FK3284
23FC118
23FC284
23FC284
FEED SHUTOFF HELP
Reserved for Faceplates

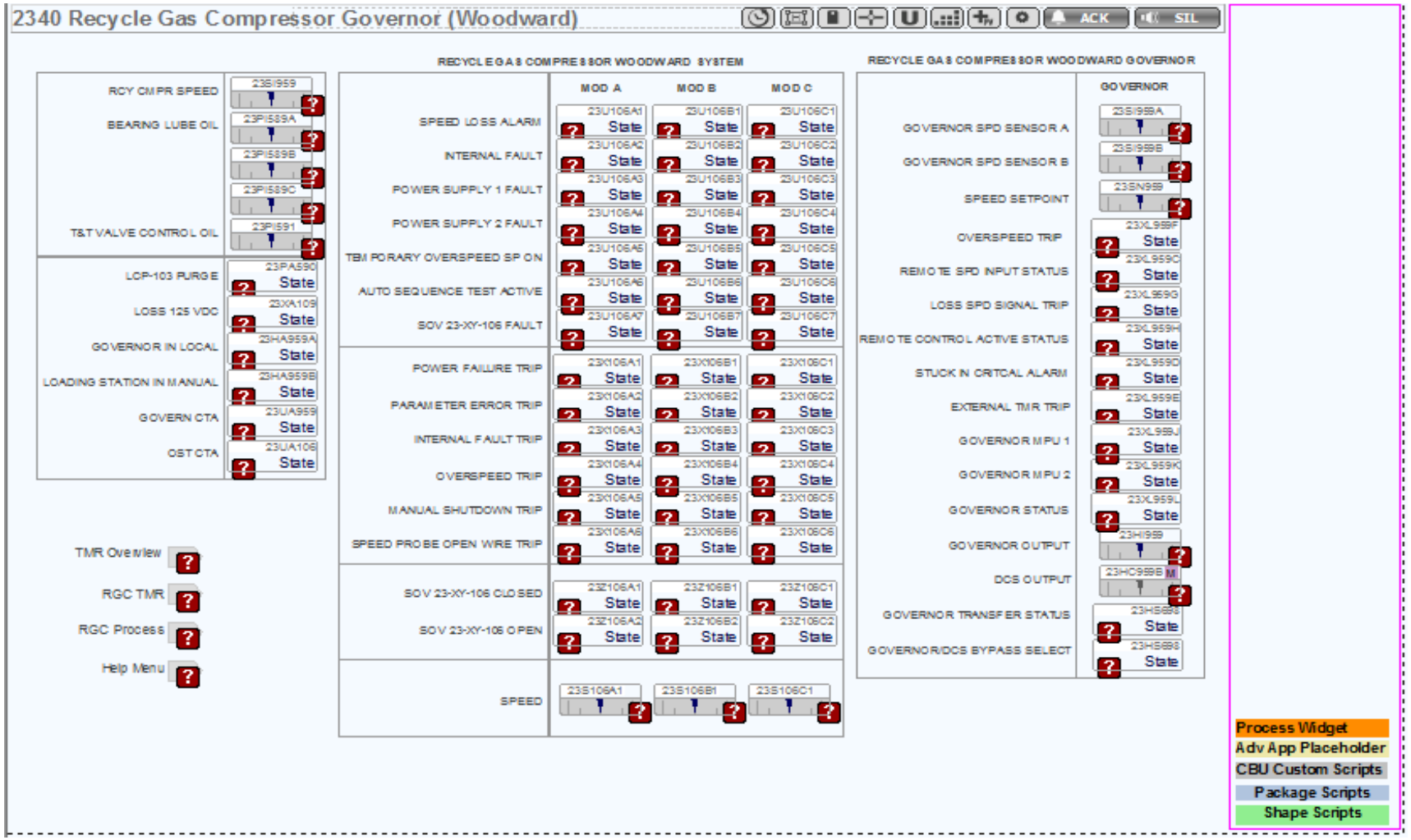
1.158 2333H1 FFHDS LOW FEED FLOW SHUTOFF PROGRAM HELP (Reformer_2333H1.htm)

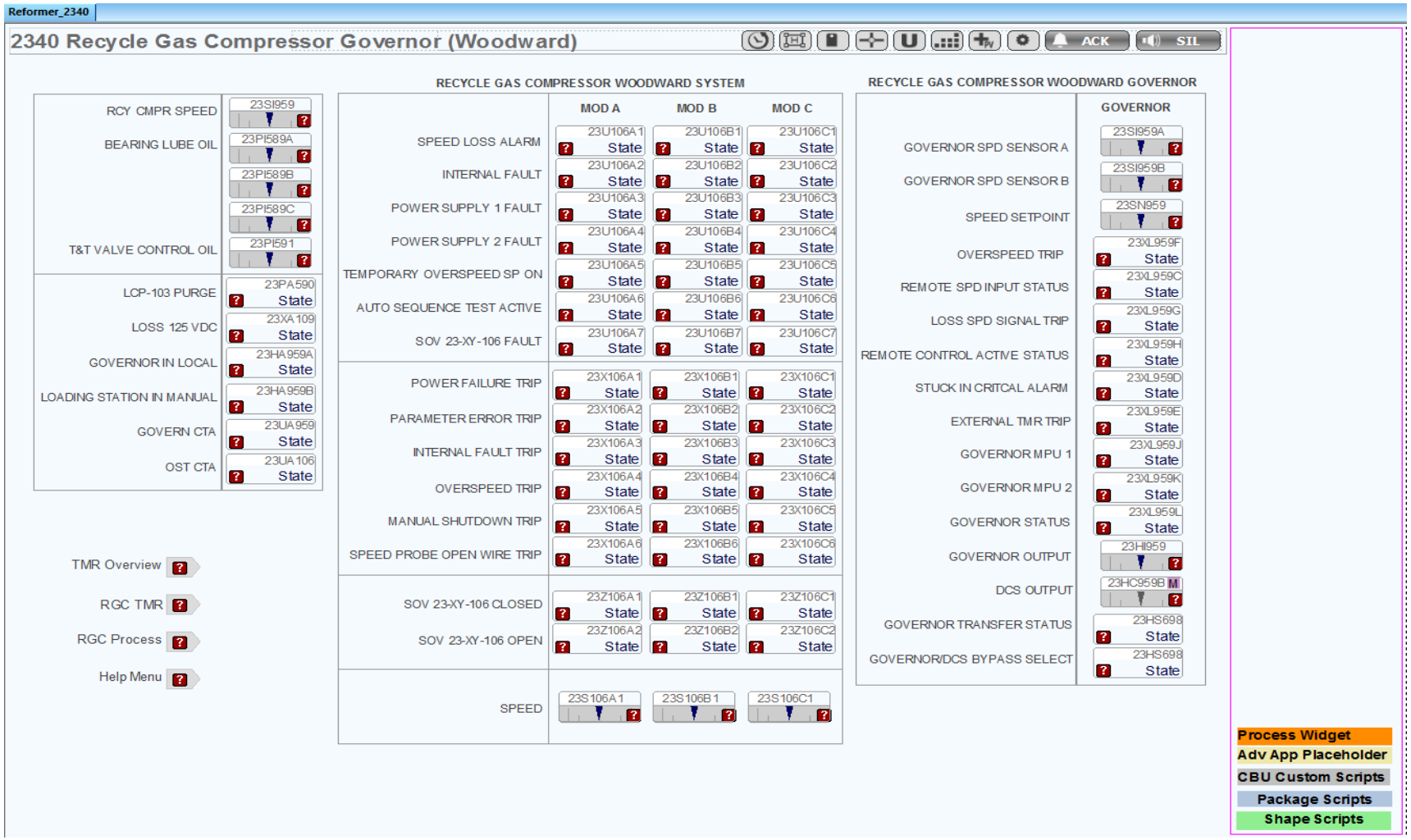


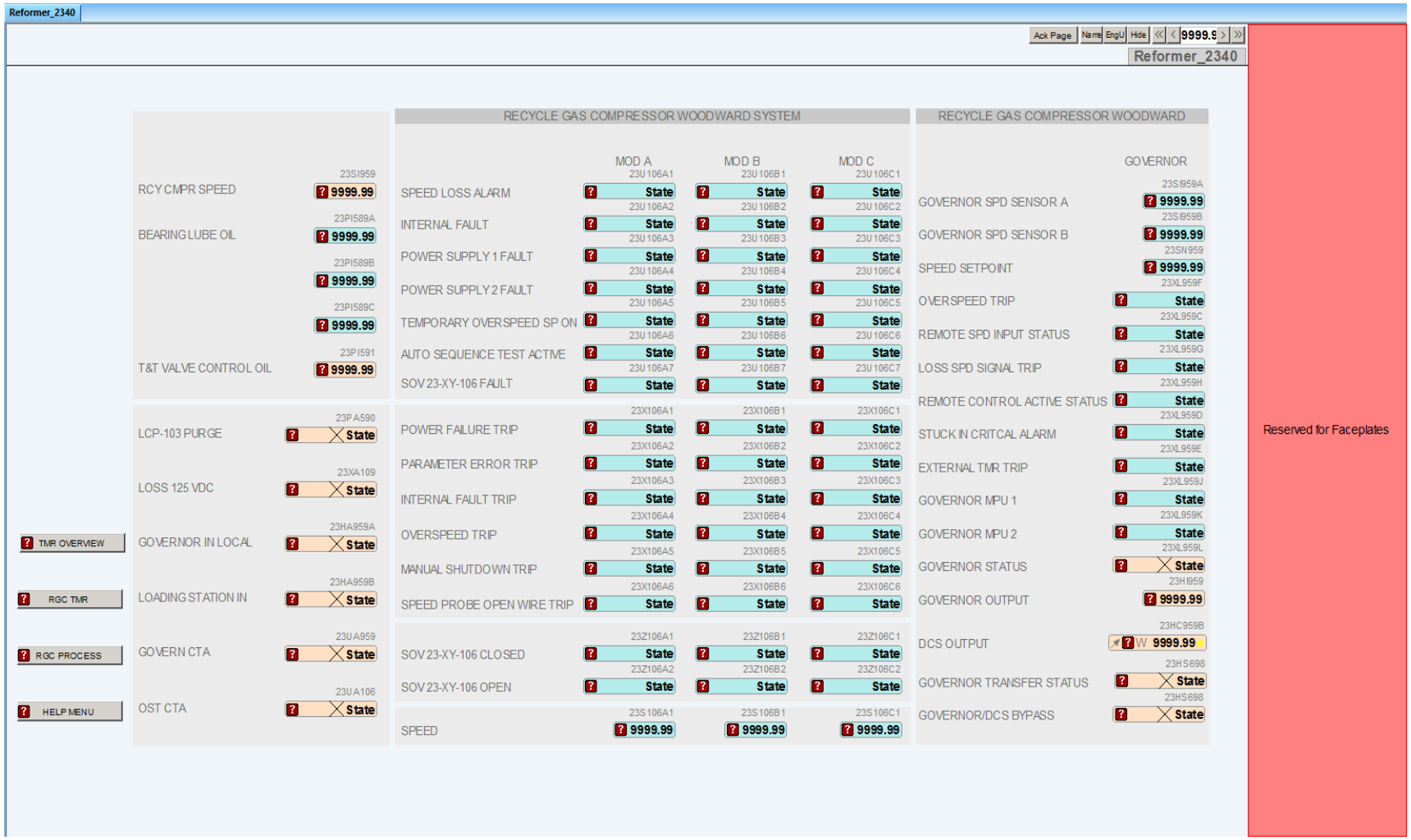

Reformer_2333H1
2333H1 FFHDS Low Feed Flow Shutoff Program Help
ACK
SIL
If 2oo3 FFHDS feed flow rates drop below their respective trip points, a logic program will set the mode of the FFHDS feed controllers 23FC110, 23FC111, 23TC604, and 23TC607 to Manual and their outputs to -5%.
After being set to Manual mode and -5% output by the program, the four feed controllers may be immediately operated as required by the console operator. The program will not prevent controller changes. However, the TMR closes 23XV189 during a trip preventing back-flow.
Flow alarm 23FA108L will change state from Normal to PreTrip anytime at least two feed flow rate are below the pretrip point. Flow alarm 23FA108J will change state from Normal to Trip anytime at least two feed flow rates are below the trip point. When trip alarm 23FA108J indicates trip then logic 01_09L09 puts all four feed controllers 23FC110, 23FC111, 23TC604, and 23TC607 into Manual mode with outputs of -5%. Alarms will sound the console horn and appear in the alarm summary.
There is no startup bypass, however, the reverse flow trip is not active until a feedrate of 1000 BPH is achived. The flow instruments may be individually bypassed for maintenance on the TMR Bypass page. A SDB is required to Bypass the shutoff program. Anytime an instrument is put into Bypass, an alarm will sound the console horn and appear in the alarm summary. While an instrument is in Bypass, the feed flow rate of the bypassed instrument will have no impact on feed controllers 23FC110, 23FC111, 23TC604, and 23TC607. Trip logic is reduced from 2oo3 to 2oo2 while a bypass is active (1oo1 if 2 bypasses).
If the program does not function correctly, call process control to troubleshoot.
23XL693A
State
23XL693B
State
LG
01_09L09
23FC108 M
TMR
Shutdown
Feed from
Surge Tk
23XV189
To FC and TC valves
to the right
23FC110 M
E Bank
Feed
55%
23FC111 M
W Bank
Feed
52%
23TC607 M
E Bank
Bypass
36%
23TC604 M
W Bank
Bypass
10%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2333H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2333H1
IF 2OO3 FFHDS FEED FLOW RATES DROP BELOW THEIR RESPECTIVE TRIP POINTS, A LOGIC PROGRAM WILL SET THE MODE OF THE FFHDS FEED CONTROLLERS 23FC110, 23FC111, 23TC604, AND 23TC607 TO MANUAL AND THEIR OUTPUTS TO -5%.
AFTER BEING SET TO MANUAL MODE AND -5% OUTPUT BY THE PROGRAM, THE FOUR FEED CONTROLLERS MAY BE IMMEDIATELY OPERATED AS REQUIRED BY THE CONSOLE OPERATOR. THE PROGRAM WILL NOT PREVENT CONTROLLER CHANGES. HOWEVER, THE TMR CLOSES 23XV189 DURING A TRIP PREVENTING BACK-FLOW.
FLOW ALARM 23FA108L WILL CHANGE STATE FROM NORMAL TO PRETRIP ANYTIME AT LEAST TWO FEED FLOW RATE ARE BELOW THE PRETRIP POINT. FLOW ALARM 23FA108J WILL CHANGE STATE FROM NORMAL TO TRIP ANYTIME AT LEAST TWO FEED FLOW RATES ARE BELOW THE TRIP POINT. WHEN TRIP ALARM 23FA108J INDICATES TRIP THEN LOGIC 01_09L09 PUTS ALL FOUR FEED CONTROLLERS 23FC110, 23FC111, 23TC604, AND 23TC607 INTO MANUAL MODE WITH OUTPUTS OF -5%. ALARMS WILL SOUND THE CONSOLE HORN AND APPEAR IN THE ALARM SUMMARY.
THERE IS NO STARTUP BYPASS, HOWEVER, THE REVERSE FLOW TRIP IS NOT ACTIVE UNTIL A FEEDRATE OF 1000 BPH IS ACHIVED. THE FLOW INSTRUMENTS MAY BE INDIVIDUALLY BYPASSED FOR MAINTENANCE ON THE TMR BYPASS PAGE. A SDB IS REQUIRED TO BYPASS THE SHUTOFF PROGRAM. ANYTIME AN INSTRUMENT IS PUT INTO BYPASS, AN ALARM WILL SOUND THE CONSOLE HORN AND APPEAR IN THE ALARM SUMMARY. WHILE AN INSTRUMENT IS IN BYPASS, THE FEED FLOW RATE OF THE BYPASSED INSTRUMENT WILL HAVE NO IMPACT ON FEED CONTROLLERS 23FC110, 23FC111, 23TC604, AND 23TC607. TRIP LOGIC IS REDUCED FROM2OO3 TO 2OO2 WHILE A BYPASS IS ACTIVE (1OO1 IF 2 BYPASSES).
IF THE PROGRAM DOES NOT FUNCTION CORRECTLY, CALL PROCESS CONTROL TO TROUBLESHOOT.
23XL693A
State
23XL693B
State
01_09L09
LG
23FC108
9999.99 W
9999.99
9999.99
23FC110
9999.99 W
9999.99
9999.99
55%
E BANK FEED
23FC111
9999.99 W
9999.99
9999.99
52%
W BANK FEED
23TC607
9999.99 W
9999.99
9999.99
36%
E BANK BYPASS
23TC604
9999.99 W
9999.99
9999.99
10%
W BANK FEED
TMR SHUTDOWN
FEED FROM SURGE TK
TO FC AND TC VALVES TO THE RIGHT
23XV189
Reserved for Faceplates

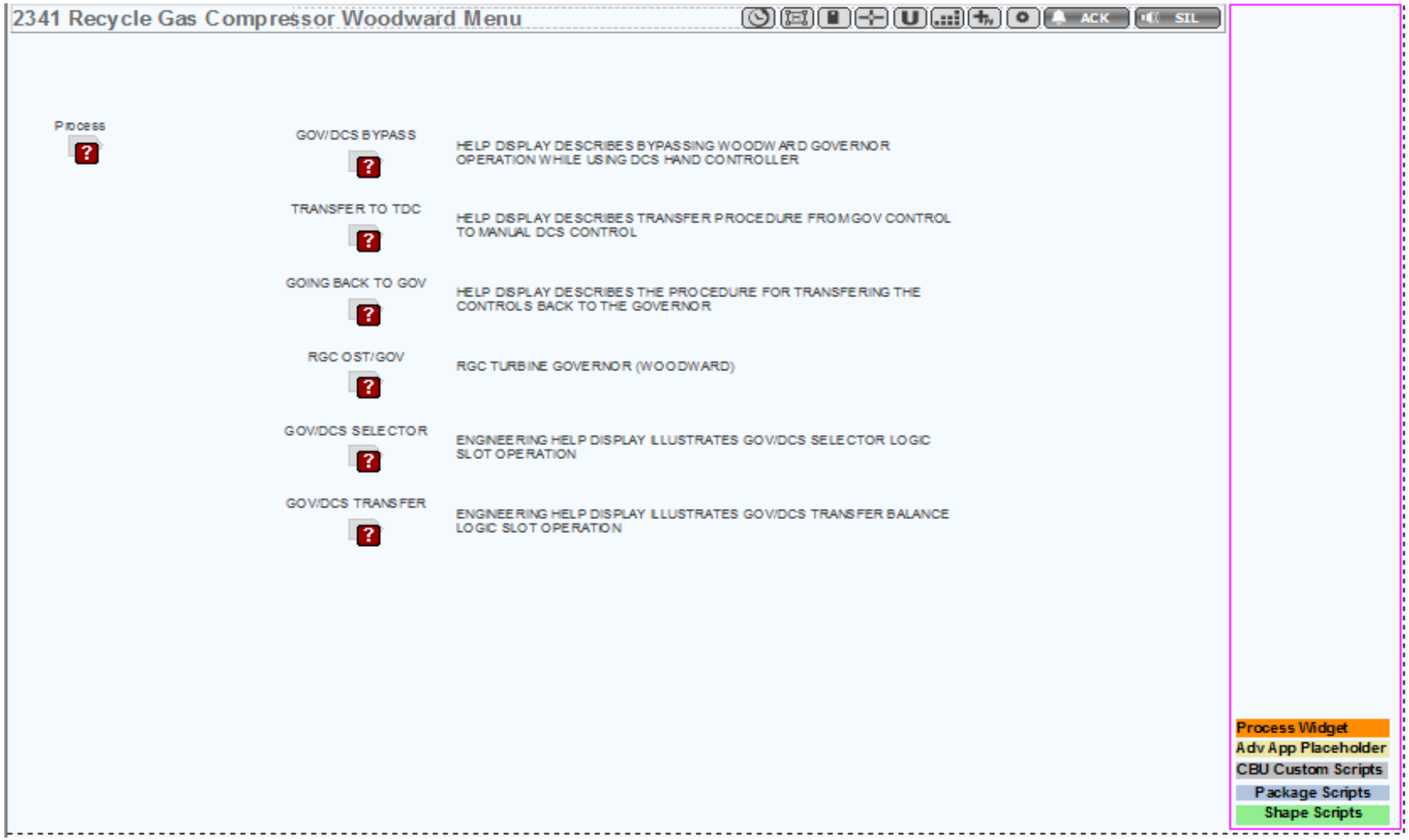
1.159 2340 RECYCLE GAS COMPRESSOR GOVERNOR (WOODWARD) (Reformer_2340.htm)

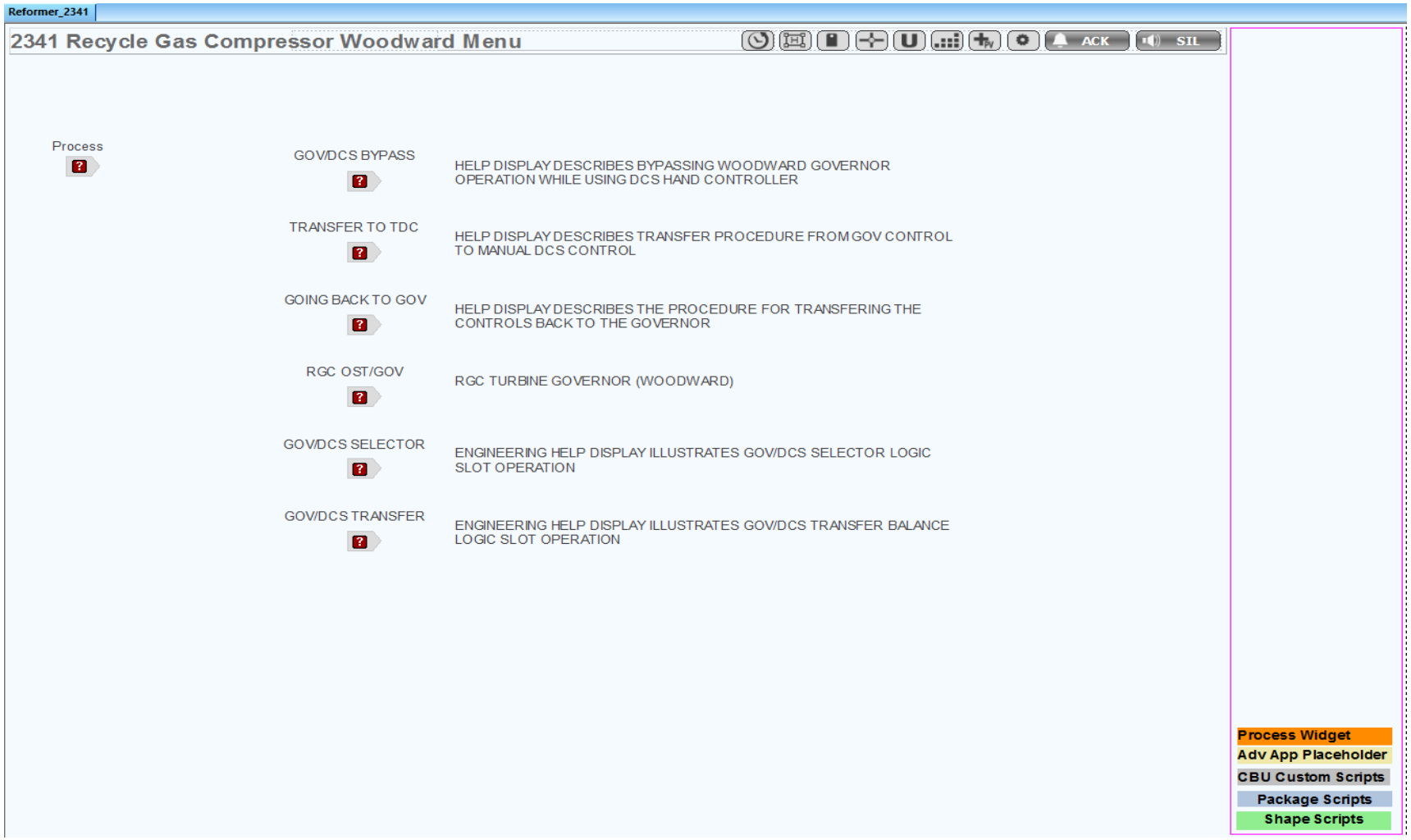


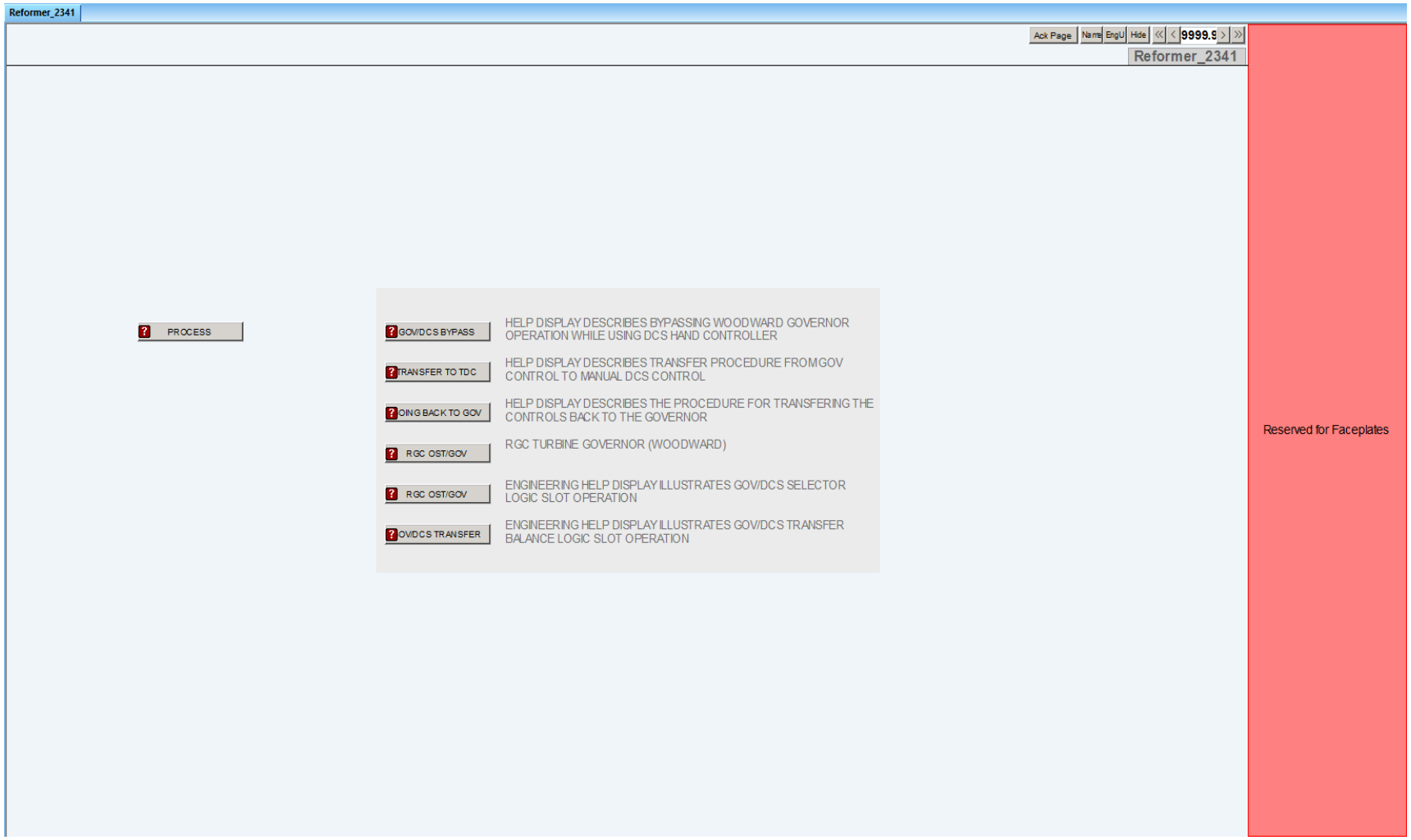

Reformer_2340
2340 Recycle Gas Compressor Governor (Woodward)
ACK
SIL
RCY CMPR SPEED
23SI959
BEARING LUBE OIL
23PI589A
23PI589B
23PI589C
T&T VALVE CONTROL OIL
23PI591
LCP-103 PURGE
23PA590 State
LOSS 125 VDC
23XA109 State
GOVERNOR IN LOCAL
23HA959A State
LOADING STATION IN MANUAL
23HA959B State
GOVERN CTA
23UA959 State
OST CTA
23UA106 State
TMR Overview
RGC TMR
RGC Process
Help Menu
RECYCLE GAS COMPRESSOR WOODWARD SYSTEM
MOD A
MOD B
MOD C
SPEED LOSS ALARM
INTERNAL FAULT
POWER SUPPLY 1 FAULT
POWER SUPPLY 2 FAULT
TEMPORARY OVERSPEED SP ON
AUTO SEQUENCE TEST ACTIVE
SOV 23-XY-106 FAULT
POWER FAILURE TRIP
PARAMETER ERROR TRIP
INTERNAL FAULT TRIP
OVERSPEED TRIP
MANUAL SHUTDOWN TRIP
SPEED PROBE OPEN WIRE TRIP
SOV 23-XY-106 CLOSED
SOV 23-XY-106 OPEN
SPEED
23S106A1
23S106B1
23S106C1
RECYCLE GAS COMPRESSOR WOODWARD GOVERNOR
GOVERNOR
GOVERNOR SPD SENSOR A
23SI959A
GOVERNOR SPD SENSOR B
23SI959B
SPEED SETPOINT
23SN959
OVERSPEED TRIP
REMOTE SPD INPUT STATUS
LOSS SPD SIGNAL TRIP
REMOTE CONTROL ACTIVE STATUS
STUCK IN CRITCAL ALARM
EXTERNAL TMR TRIP
GOVERNOR MPU 1
GOVERNOR MPU 2
GOVERNOR STATUS
GOVERNOR OUTPUT
23HI959
DCS OUTPUT
23HC959B
GOVERNOR TRANSFER STATUS
23HS698 State
GOVERNOR/DCS BYPASS SELECT
23HS698 State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2340
Ack Page
Name
EngU
Hide
9999.9
Reformer_2340
RECYCLE GAS COMPRESSOR WOODWARD SYSTEM
RECYCLE GAS COMPRESSOR WOODWARD
MOD A
MOD B
MOD C
GOVERNOR
RCY CMPR SPEED
23SI959
9999.99
BEARING LUBE OIL
23PI589A
23PI589B
23PI589C
T&T VALVE CONTROL OIL
23PI591
LCP-103 PURGE
23PA590
LOSS 125 VDC
23XA109
GOVERNOR IN LOCAL
23HA959A
LOADING STATION IN
23HA959B
GOVERN CTA
23UA959
OST CTA
23UA106
TMR OVERVIEW
RGC TMR
RGC PROCESS
HELP MENU
SPEED LOSS ALARM
23U106A1
23U106B1
23U106C1
INTERNAL FAULT
23U106A2
23U106B2
23U106C2
POWER SUPPLY 1 FAULT
23U106A3
23U106B3
23U106C3
POWER SUPPLY 2 FAULT
23U106A4
23U106B4
23U106C4
TEMPORARY OVERSPEED SP ON
23U106A5
23U106B5
23U106C5
AUTO SEQUENCE TEST ACTIVE
23U106A6
23U106B6
23U106C6
SOV 23-XY-106 FAULT
23U106A7
23U106B7
23U106C7
POWER FAILURE TRIP
23X106A1
23X106B1
23X106C1
PARAMETER ERROR TRIP
23X106A2
23X106B2
23X106C2
INTERNAL FAULT TRIP
23X106A3
23X106B3
23X106C3
OVERSPEED TRIP
23X106A4
23X106B4
23X106C4
MANUAL SHUTDOWN TRIP
23X106A5
23X106B5
23X106C5
SPEED PROBE OPEN WIRE TRIP
23X106A6
23X106B6
23X106C6
SOV 23-XY-106 CLOSED
23Z106A1
23Z106B1
23Z106C1
SOV 23-XY-106 OPEN
23Z106A2
23Z106B2
23Z106C2
SPEED
23S106A1
23S106B1
23S106C1
GOVERNOR SPD SENSOR A
23SI959A
GOVERNOR SPD SENSOR B
23SI959B
SPEED SETPOINT
23SN959
OVERSPEED TRIP
23XL959F
REMOTE SPD INPUT STATUS
23XL959C
LOSS SPD SIGNAL TRIP
23XL959G
REMOTE CONTROL ACTIVE STATUS
23XL959H
STUCK IN CRITCAL ALARM
23XL959D
EXTERNAL TMR TRIP
23XL959E
GOVERNOR MPU 1
23XL959J
GOVERNOR MPU 2
23XL959K
GOVERNOR STATUS
23XL959L
GOVERNOR OUTPUT
23HI959
DCS OUTPUT
23HC959B
GOVERNOR TRANSFER STATUS
23HS698
GOVERNOR/DCS BYPASS
23HS698
State
Reserved for Faceplates

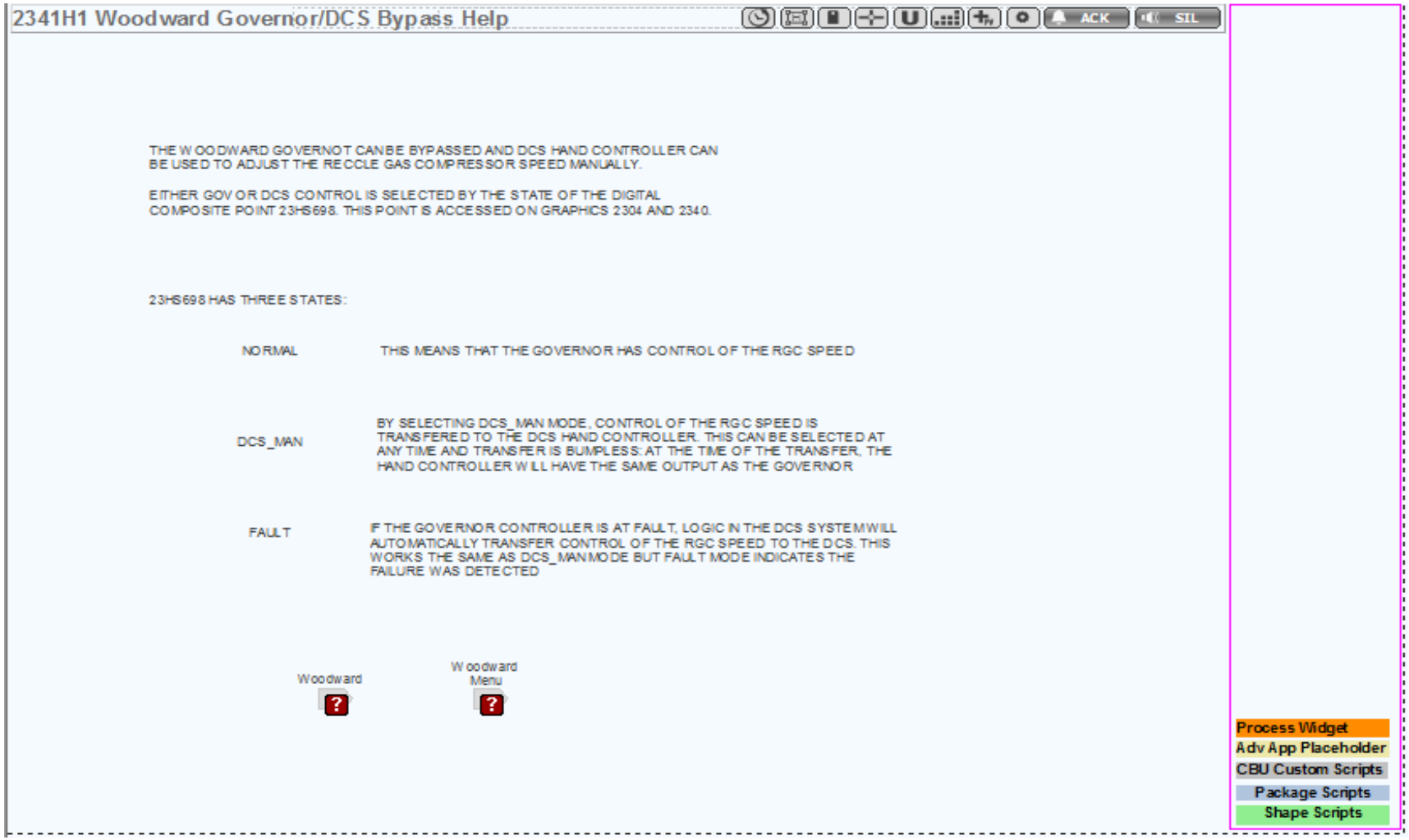
1.160 2341 RECYCLE GAS COMPRESSOR WOODWARD MENU (Reformer_2341.htm)

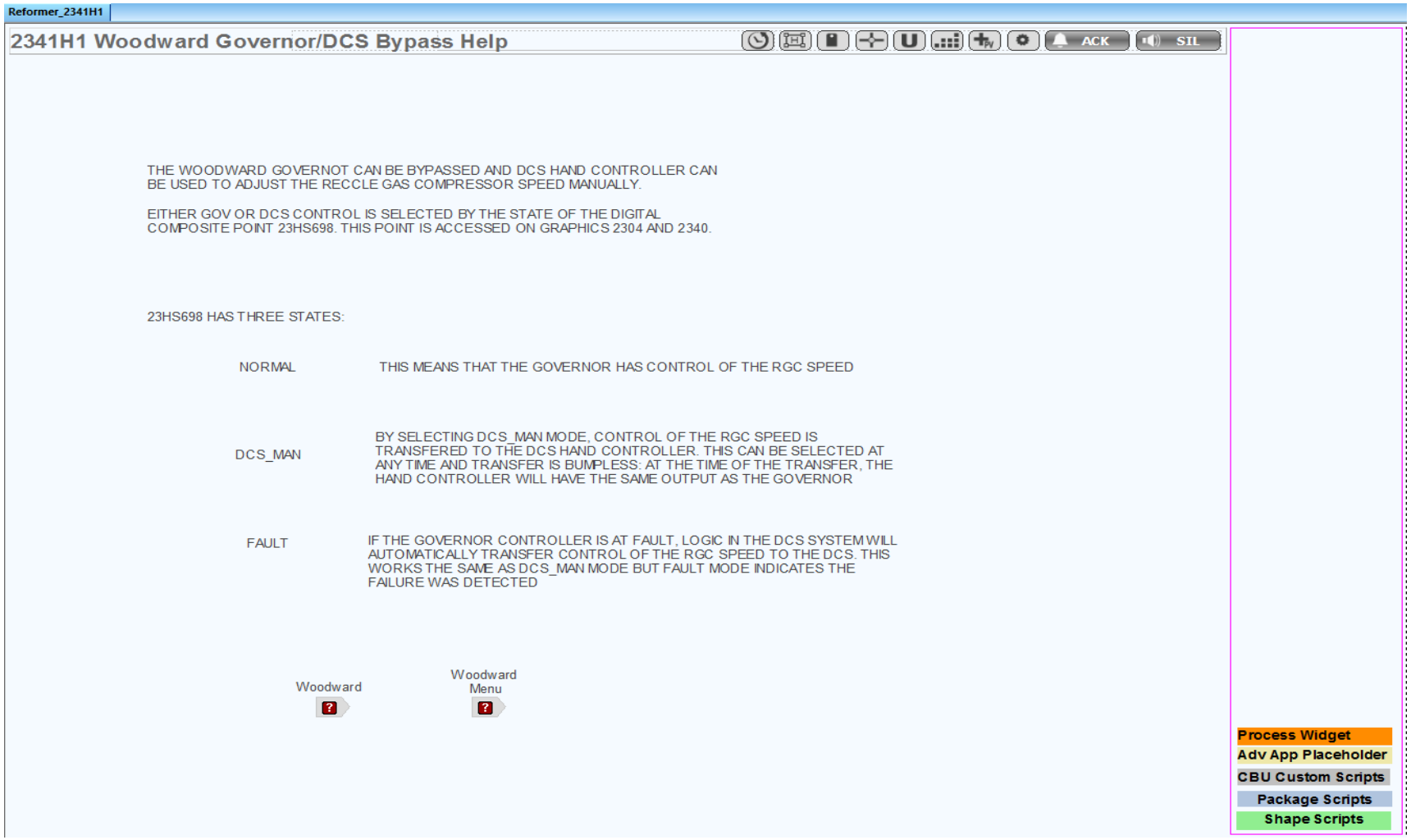



Reformer_2341
2341 Recycle Gas Compressor Woodward Menu
ACK
SIL
Process
GOV/DCS BYPASS
HELP DISPLAY DESCRIBES BYPASSING WOODWARD GOVERNOR OPERATION WHILE USING DCS HAND CONTROLLER
TRANSFER TO TDC
HELP DISPLAY DESCRIBES TRANSFER PROCEDURE FROM GOV CONTROL TO MANUAL DCS CONTROL
GOING BACK TO GOV
HELP DISPLAY DESCRIBES THE PROCEDURE FOR TRANSFERING THE CONTROLS BACK TO THE GOVERNOR
RGC OST/GOV
RGC TURBINE GOVERNOR (WOODWARD)
GOV/DCS SELECTOR
ENGINEERING HELP DISPLAY ILLUSTRATES GOV/DCS SELECTOR LOGIC SLOT OPERATION
GOV/DCS TRANSFER
ENGINEERING HELP DISPLAY ILLUSTRATES GOV/DCS TRANSFER BALANCE LOGIC SLOT OPERATION
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2341
Ack Page
Name
EngU
Hide
9999.9
Reformer_2341
PROCESS
GOV/DCS BYPASS
HELP DISPLAY DESCRIBES BYPASSING WOODWARD GOVERNOR OPERATION WHILE USING DCS HAND CONTROLLER
TRANSFER TO TDC
HELP DISPLAY DESCRIBES TRANSFER PROCEDURE FROM GOV CONTROL TO MANUAL DCS CONTROL
OING BACK TO GOV
HELP DISPLAY DESCRIBES THE PROCEDURE FOR TRANSFERING THE CONTROLS BACK TO THE GOVERNOR
RGC OST/GOV
RGC TURBINE GOVERNOR (WOODWARD)
RGC OST/GOV
ENGINEERING HELP DISPLAY ILLUSTRATES GOV/DCS SELECTOR LOGIC SLOT OPERATION
OV/DCS TRANSFER
ENGINEERING HELP DISPLAY ILLUSTRATES GOV/DCS TRANSFER BALANCE LOGIC SLOT OPERATION
Reserved for Faceplates

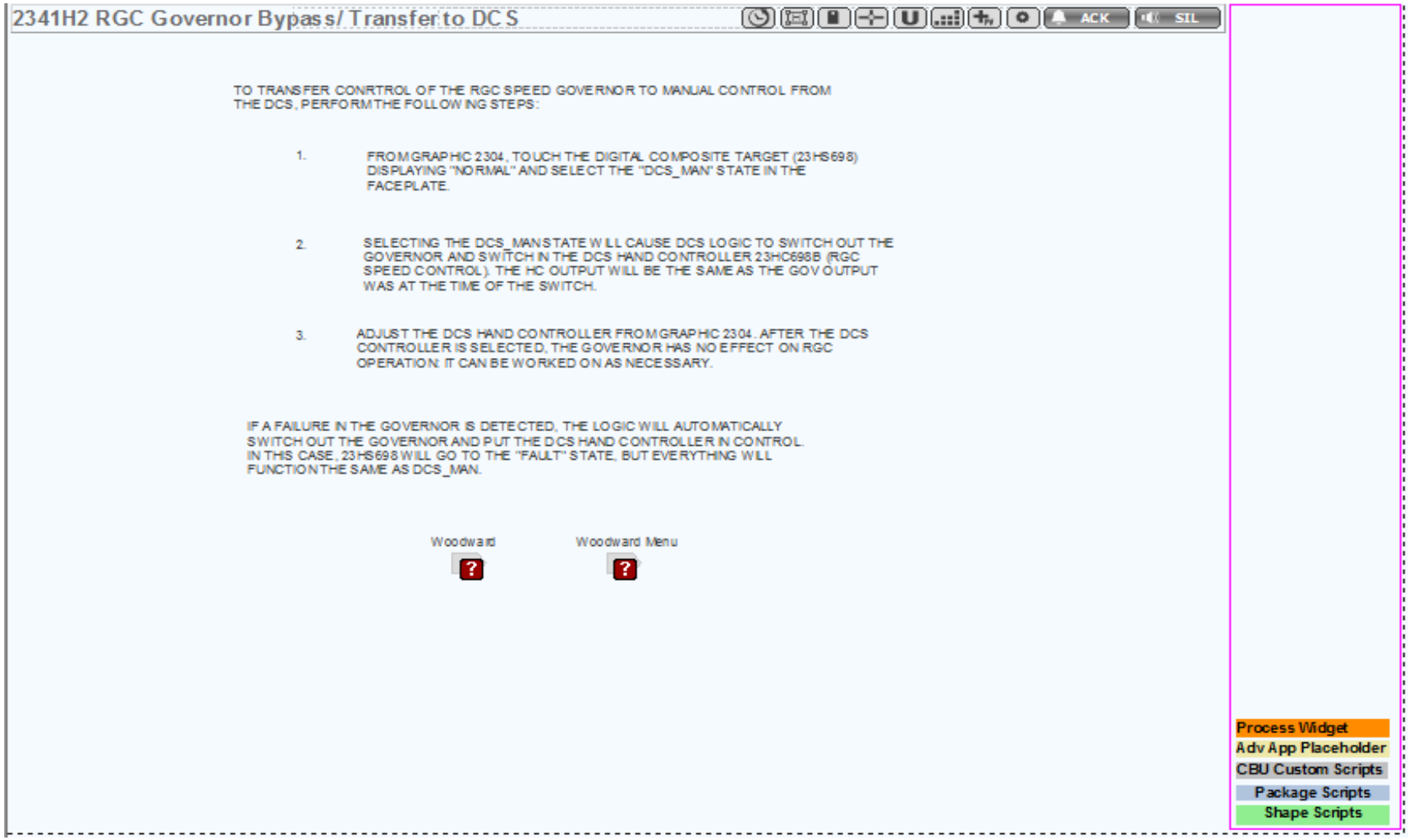
1.161 2341H1 WOODWARD GOVERNOR/DCS BYPASS HELP (Reformer_2341H1.htm)

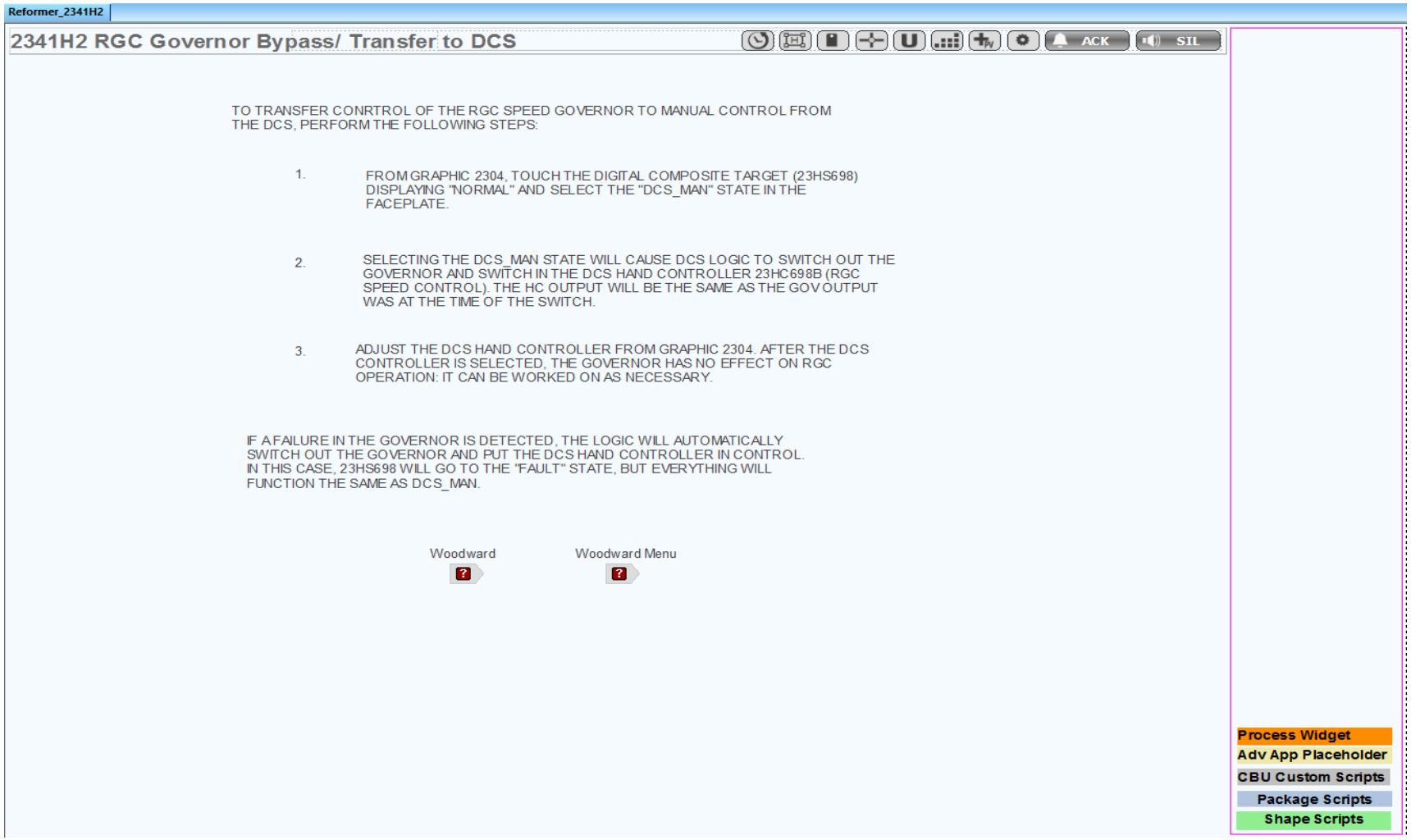



Reformer_2341H1
2341H1 Woodward Governor/DCS Bypass Help
ACK
SIL
THE WOODWARD GOVERNOT CAN BE BYPASSED AND DCS HAND CONTROLLER CAN BE USED TO ADJUST THE RECCLE GAS COMPRESSOR SPEED MANUALLY.
EITHER GOV OR DCS CONTROL IS SELECTED BY THE STATE OF THE DIGITAL COMPOSITE POINT 23HS698. THIS POINT IS ACCESSED ON GRAPHICS 2304 AND 2340.
23HS698 HAS THREE STATES:
NORMAL
THIS MEANS THAT THE GOVERNOR HAS CONTROL OF THE RGC SPEED
DCS_MAN
BY SELECTING DCS_MAN MODE, CONTROL OF THE RGC SPEED IS TRANSFERED TO THE DCS HAND CONTROLLER. THIS CAN BE SELECTED AT ANY TIME AND TRANSFER IS BUMPLESS: AT THE TIME OF THE TRANSFER, THE HAND CONTROLLER WILL HAVE THE SAME OUTPUT AS THE GOVERNOR
FAULT
IF THE GOVERNOR CONTROLLER IS AT FAULT, LOGIC IN THE DCS SYSTEM WILL AUTOMATICALLY TRANSFER CONTROL OF THE RGC SPEED TO THE DCS. THIS WORKS THE SAME AS DCS_MAN MODE BUT FAULT MODE INDICATES THE FAILURE WAS DETECTED
Woodward
Woodward Menu
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

Reformer_2341H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2341H1
THE WOODWARD GOVERNOR CAN BE BYPASSED AND DCS HAND CONTROLLER CAN BE USED TO ADJUST THE RECCLE GAS COMPRESSOR SPEED MANUALLY.
EITHER GOV OR DCS CONTROL IS SELECTED BY THE STATE OF THE DIGITAL COMPOSITE POINT 23HS698. THIS POINT IS ACCESSED ON GRAPHICS 2304 AND 2340.
23HS698 HAS THREE STATES:
NORMAL
THIS MEANS THAT THE GOVERNOR HAS CONTROL OF THE RGC SPEED
DCS_MAN
BY SELECTING DCS_MAN MODE, CONTROL OF THE RGC SPEED IS TRANSFERED TO THE DCS HAND CONTROLLER. THIS CAN BE SELECTED AT ANY TIME AND TRANSFER IS BUMPLESS: AT THE TIME OF THE TRANSFER, THE HAND CONTROLLER WILL HAVE THE SAME OUTPUT AS THE GOVERNOR
FAULT
IF THE GOVERNOR CONTROLLER IS AT FAULT, LOGIC IN THE DCS SYSTEM WILL AUTOMATICALLY TRANSFER CONTROL OF THE RGC SPEED TO THE DCS. THIS WORKS THE SAME AS DCS_MAN MODE BUT FAULT MODE INDICATES THE FAILURE WAS DETECTED
WOODWARD
WOODWARD MENU
Reserved for Faceplates

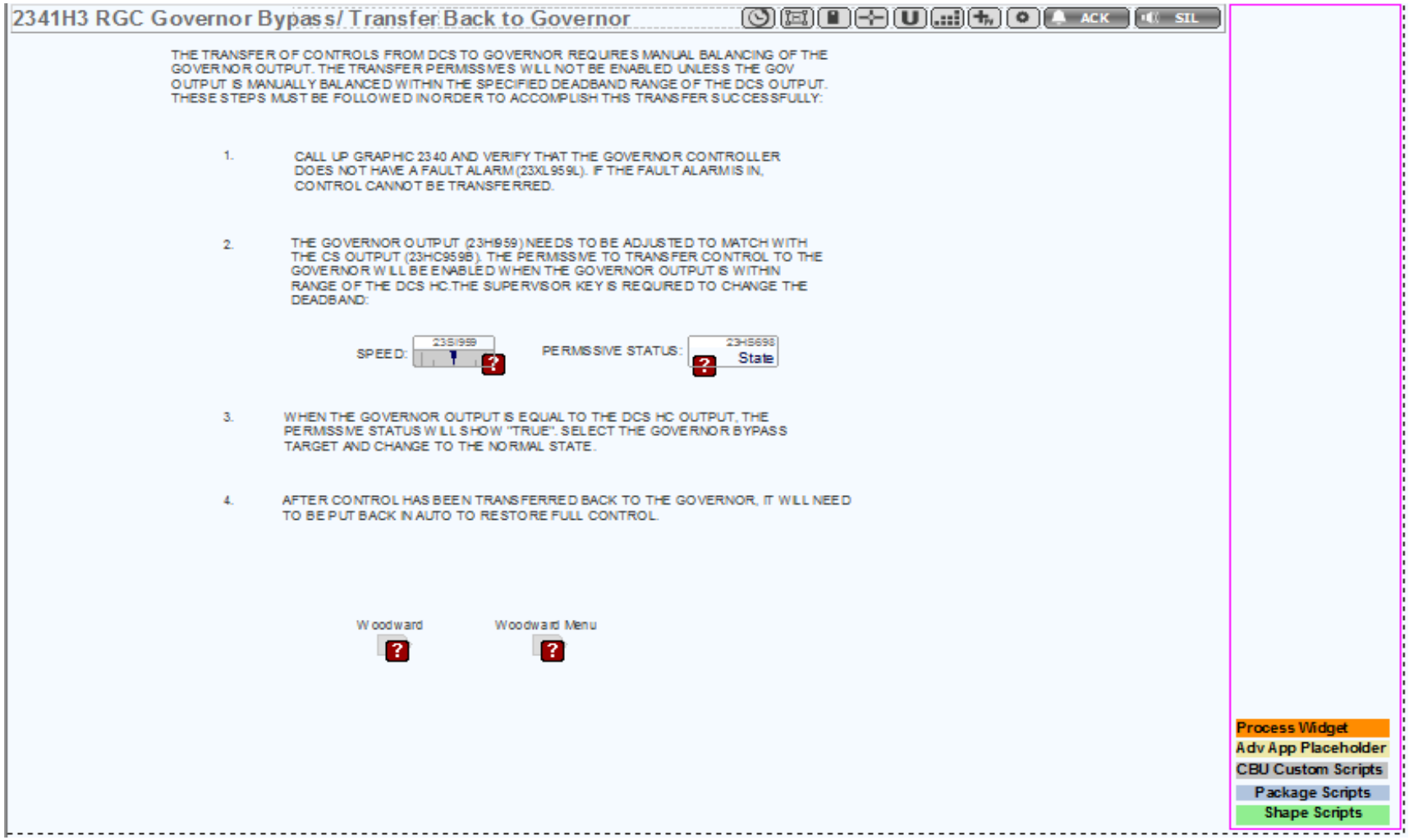
1.162 2341H2 RGC GOVERNOR BYPASS/ TRANSFER TO DCS (Reformer_2341H2.htm)

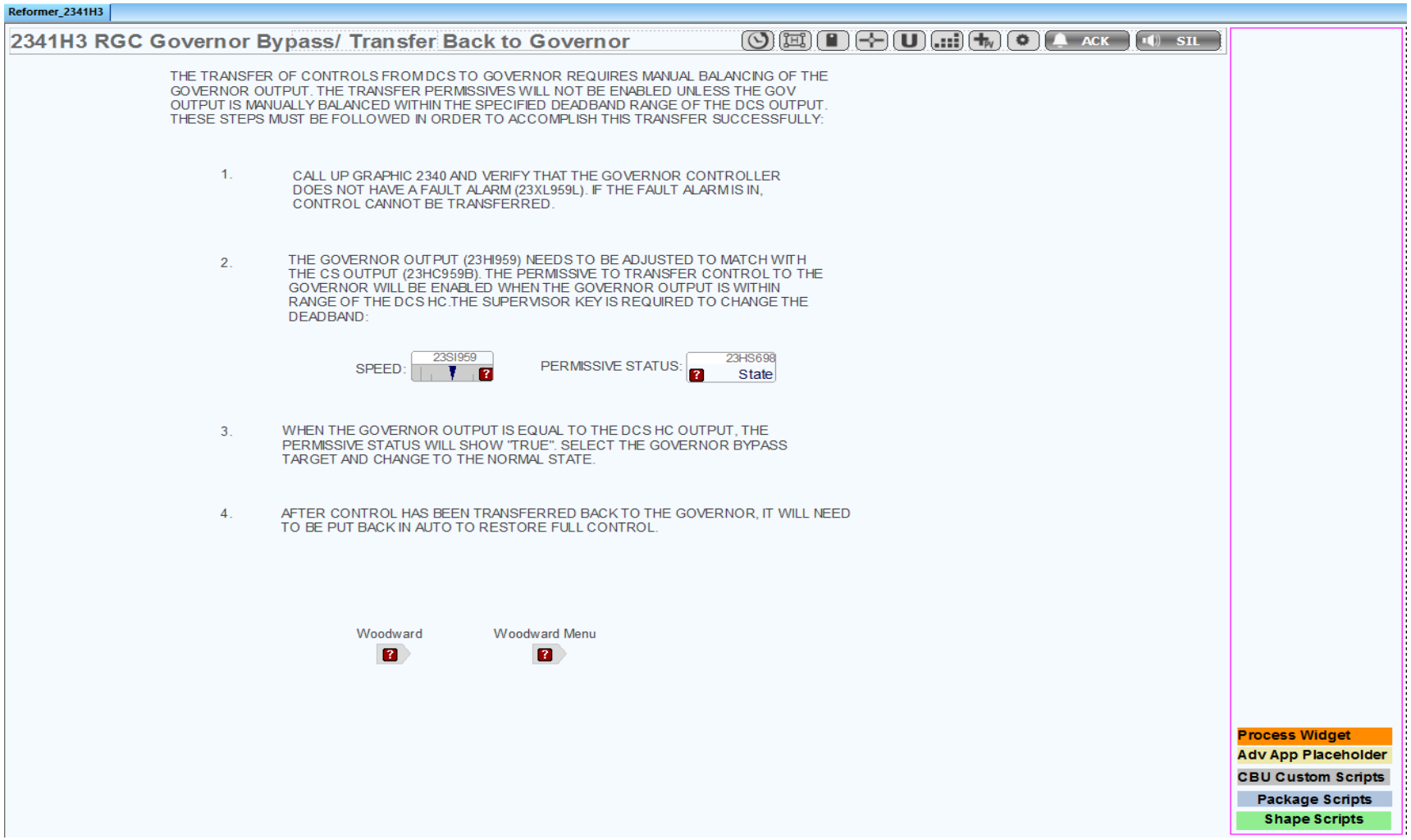



Reformer_2341H2
2341H2 RGC Governor Bypass/ Transfer to DCS
ACK
SIL
TO TRANSFER CONRTROL OF THE RGC SPEED GOVERNOR TO MANUAL CONTROL FROM THE DCS, PERFORM THE FOLLOWING STEPS:
1. FROM GRAPHIC 2304, TOUCH THE DIGITAL COMPOSITE TARGET (23HS698) DISPLAYING "NORMAL" AND SELECT THE "DCS_MAN" STATE IN THE FACEPLATE.
2. SELECTING THE DCS_MAN STATE WILL CAUSE DCS LOGIC TO SWITCH OUT THE GOVERNOR AND SWITCH IN THE DCS HAND CONTROLLER 23HC698B (RGC SPEED CONTROL). THE HC OUTPUT WILL BE THE SAME AS THE GOV OUTPUT WAS AT THE TIME OF THE SWITCH.
3. ADJUST THE DCS HAND CONTROLLER FROM GRAPHIC 2304. AFTER THE DCS CONTROLLER IS SELECTED, THE GOVERNOR HAS NO EFFECT ON RGC OPERATION: IT CAN BE WORKED ON AS NECESSARY.
IF A FAILURE IN THE GOVERNOR IS DETECTED, THE LOGIC WILL AUTOMATICALLY SWITCH OUT THE GOVERNOR AND PUT THE DCS HAND CONTROLLER IN CONTROL. IN THIS CASE, 23HS698 WILL GO TO THE "FAULT" STATE, BUT EVERYTHING WILL FUNCTION THE SAME AS DCS_MAN.
Woodward
Woodward Menu
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

Reformer_2341H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2341H2
TO TRANSFER CONRTROL OF THE RGC SPEED GOVERNOR TO MANUAL CONTROL FROM THE DCS, PERFORM THE FOLLOWING STEPS:
1. FROM GRAPHIC 2304, TOUCH THE DIGITAL COMPOSITE TARGET (23HS698) DISPLAYING "NORMAL" AND SELECT THE "DCS_MAN" STATE IN THE FACEPLATE.
2. SELECTING THE DCS_MAN STATE WILL CAUSE DCS LOGIC TO SWITCH OUT THE GOVERNOR AND SWITCH IN THE DCS HAND CONTROLLER 23HC698B (RGC SPEED CONTROL). THE HC OUTPUT WILL BE THE SAME AS THE GOV OUTPUT WAS AT THE TIME OF THE SWITCH.
3. ADJUST THE DCS HAND CONTROLLER FROM GRAPHIC 2304. AFTER THE DCS CONTROLLER IS SELECTED, THE GOVERNOR HAS NO EFFECT ON RGC OPERATION. IT CAN BE WORKED ON AS NECESSARY.
IF A FAILURE IN THE GOVERNOR IS DETECTED, THE LOGIC WILL AUTOMATICALLY SWITCH OUT THE GOVERNOR AND PUT THE DCS HAND CONTROLLER IN CONTROL. IN THIS CASE, 23HS698 WILL GO TO THE "FAULT" STATE, BUT EVERYTHING WILL FUNCTION THE SAME AS DCS_MAN.
WOODWARD
WOODWARD MENU
Reserved for Faceplates

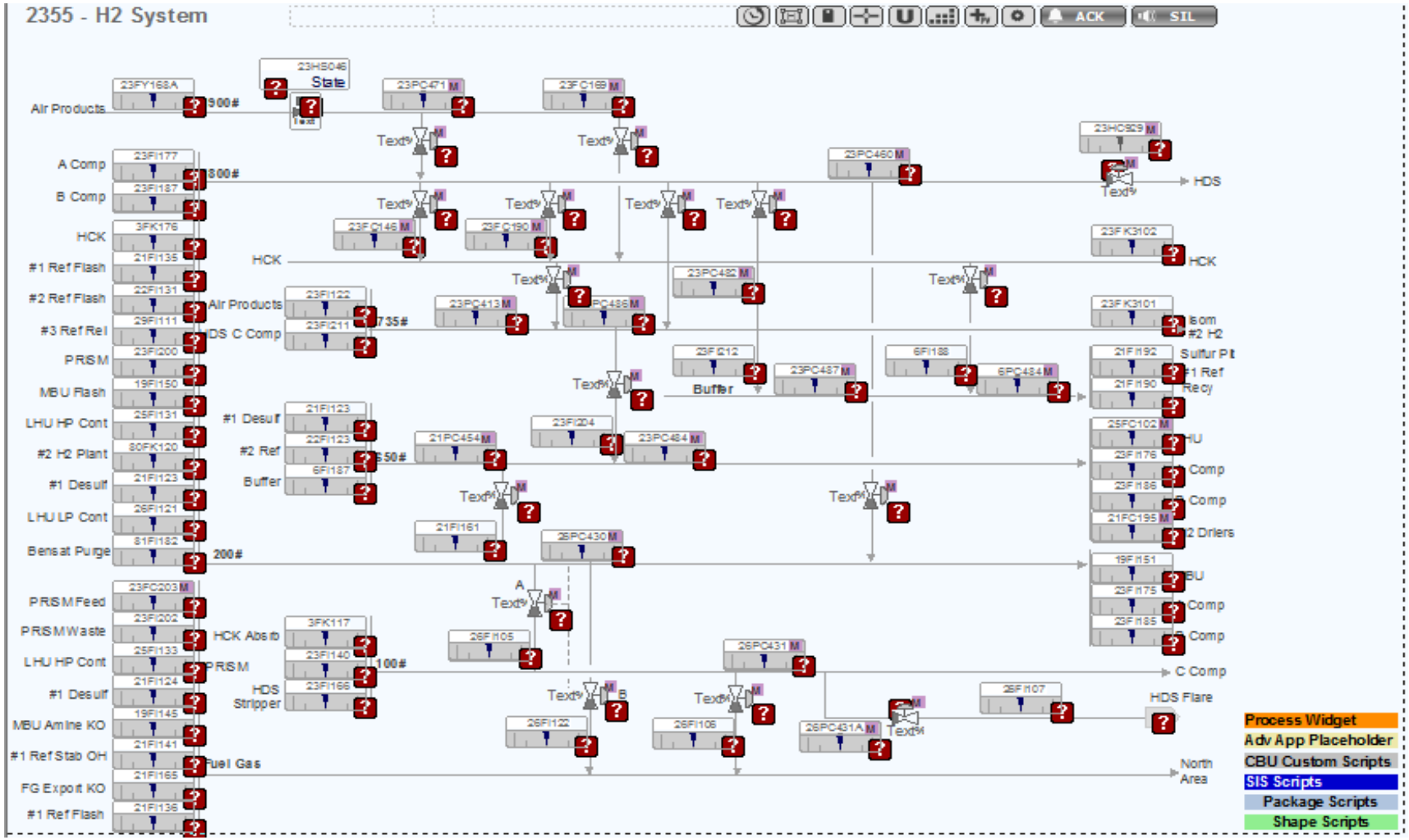
1.163 2341H3 RGC GOVERNOR BYPASS/ TRANSFER BACK TO GOVERNOR (Reformer_2341H3.htm)

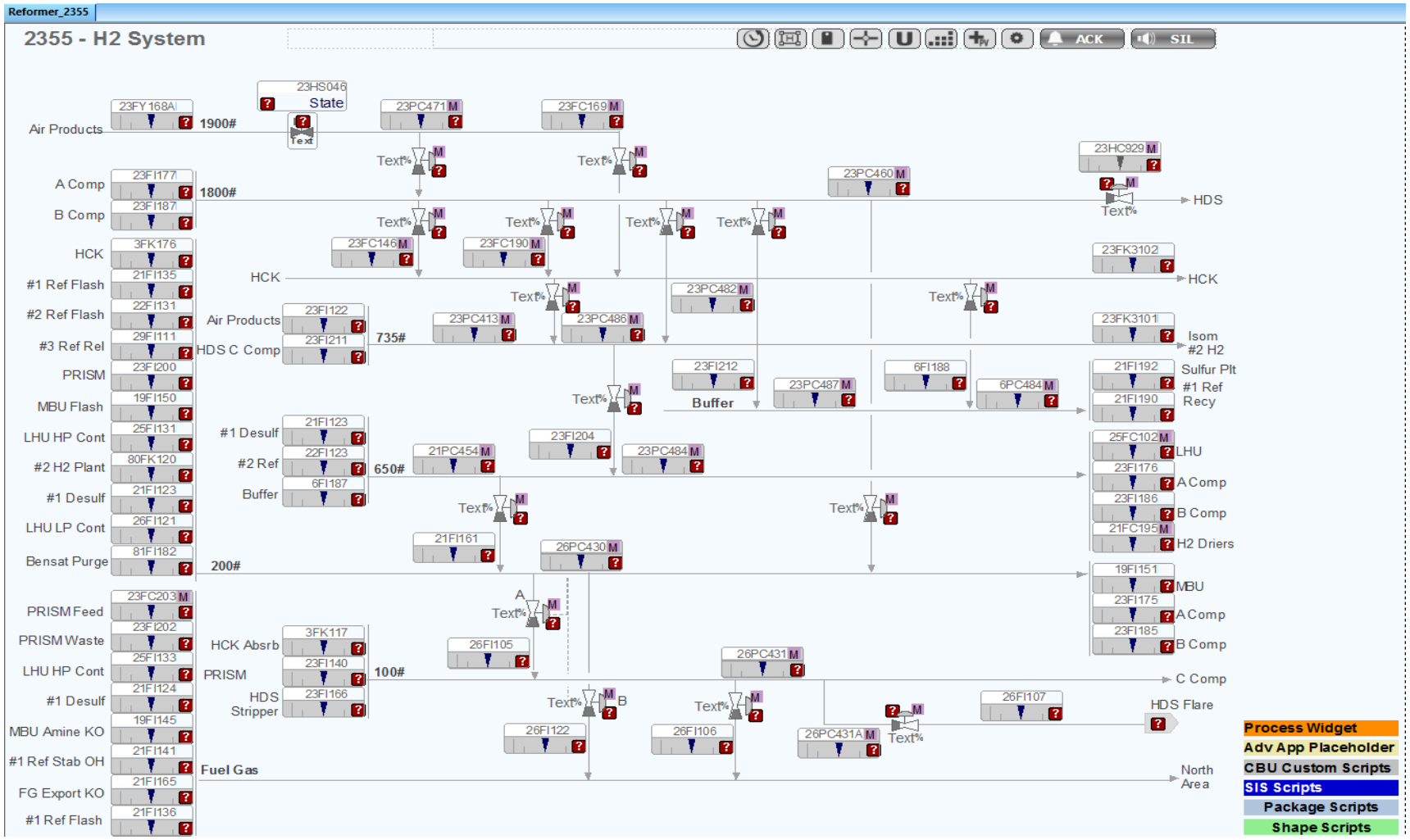


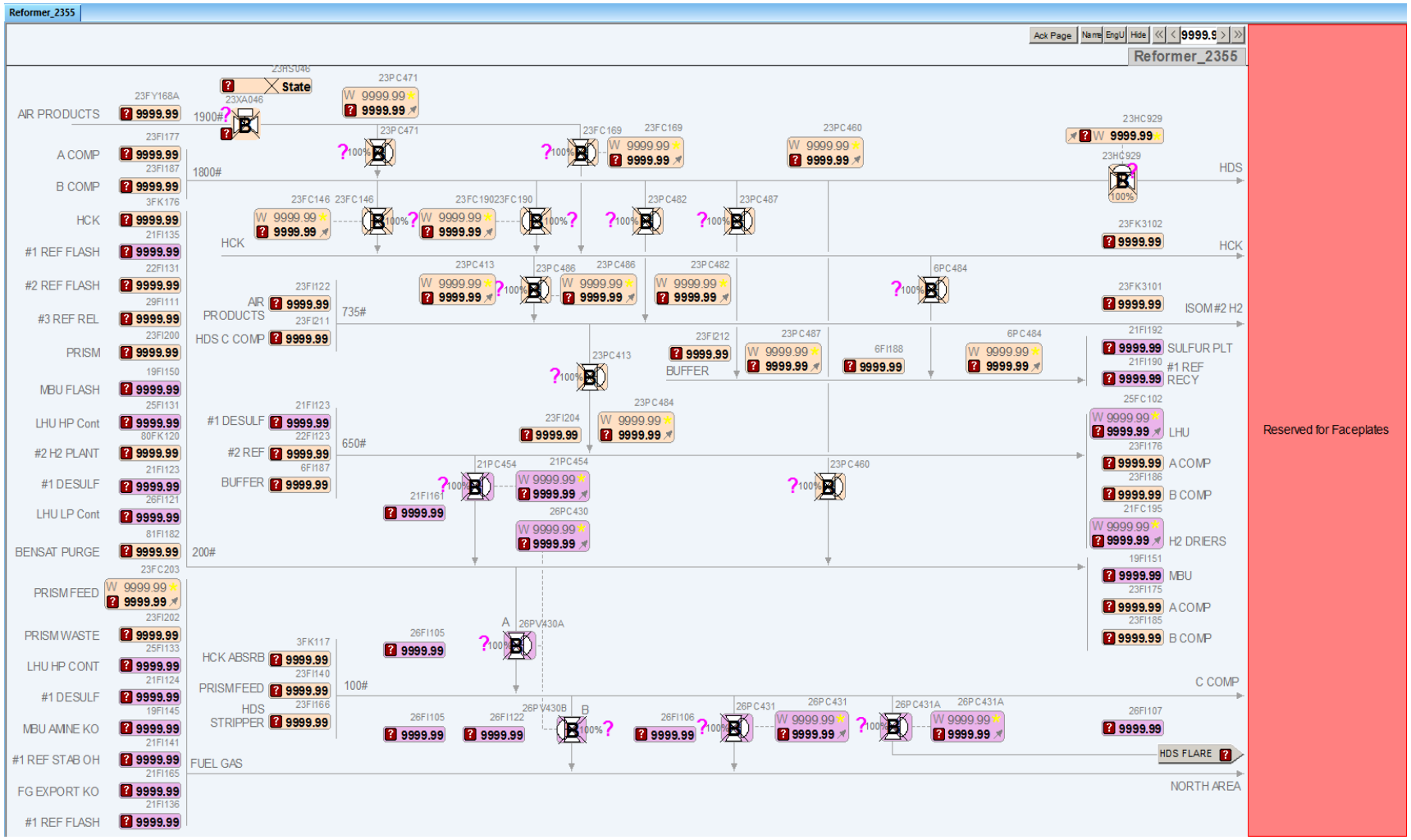

Reformer_2341H3
2341H3 RGC Governor Bypass/ Transfer Back to Governor
ACK
SIL
THE TRANSFER OF CONTROLS FROM DCS TO GOVERNOR REQUIRES MANUAL BALANCING OF THE GOVERNOR OUTPUT. THE TRANSFER PERMISSIVES WILL NOT BE ENABLED UNLESS THE GOV OUTPUT IS MANUALLY BALANCED WITHIN THE SPECIFIED DEADBAND RANGE OF THE DCS OUTPUT. THESE STEPS MUST BE FOLLOWED IN ORDER TO ACCOMPLISH THIS TRANSFER SUCCESSFULLY:
1. CALL UP GRAPHIC 2340 AND VERIFY THAT THE GOVERNOR CONTROLLER DOES NOT HAVE A FAULT ALARM (23XL959L). IF THE FAULT ALARM IS IN, CONTROL CANNOT BE TRANSFERRED.
2. THE GOVERNOR OUTPUT (23HI959) NEEDS TO BE ADJUSTED TO MATCH WITH THE CS OUTPUT (23HC959B). THE PERMISSIVE TO TRANSFER CONTROL TO THE GOVERNOR WILL BE ENABLED WHEN THE GOVERNOR OUTPUT IS WITHIN RANGE OF THE DCS HC.THE SUPERVISOR KEY IS REQUIRED TO CHANGE THE DEADBAND:
SPEED:
23SI959
PERMISSIVE STATUS:
23HS698
State
3. WHEN THE GOVERNOR OUTPUT IS EQUAL TO THE DCS HC OUTPUT, THE PERMISSIVE STATUS WILL SHOW "TRUE". SELECT THE GOVERNOR BYPASS TARGET AND CHANGE TO THE NORMAL STATE.
4. AFTER CONTROL HAS BEEN TRANSFERRED BACK TO THE GOVERNOR, IT WILL NEED TO BE PUT BACK IN AUTO TO RESTORE FULL CONTROL.
Woodward
Woodward Menu
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

Reformer_2341H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_2341H3
THE TRANSFER OF CONTROLS FROM DCS TO GOVERNOR REQUIRES MANUAL BALANCING OF THE GOVERNOR OUTPUT. THE TRANSFER PERMISSIVES WILL NOT BE ENABLED UNLESS THE GOV OUTPUT IS MANUALLY BALANCED WITHIN THE SPECIFIED DEADBAND RANGE OF THE DCS OUTPUT. THESE STEPS MUST BE FOLLOWED IN ORDER TO ACCOMPLISH THIS TRANSFER SUCCESSFULLY:
1. CALL UP GRAPHIC 2340 AND VERIFY THAT THE GOVERNOR CONTROLLER DOES NOT HAVE A FAULT ALARM (23XL959L). IF THE FAULT ALARM IS IN, CONTROL CANNOT BE TRANSFERRED.
2. THE GOVERNOR OUTPUT (23HI959) NEEDS TO BE ADJUSTED TO MATCH WITH THE CS OUTPUT (23HC959B). THE PERMISSIVE TO TRANSFER CONTROL TO THE GOVERNOR WILL BE ENABLED WHEN THE GOVERNOR OUTPUT IS WITHIN RANGE OF THE DCS HC.THE SUPERVISOR KEY IS REQUIRED TO CHANGE THE DEADBAND:
23SI959
SPEED: 9999.99
PERMISSIVE STATUS:
23HS698
State
3. WHEN THE GOVERNOR OUTPUT IS EQUAL TO THE DCS HC OUTPUT, THE PERMISSIVE STATUS WILL SHOW "TRUE". SELECT THE GOVERNOR BYPASS TARGET AND CHANGE TO THE NORMAL STATE.
4. AFTER CONTROL HAS BEEN TRANSFERRED BACK TO THE GOVERNOR, IT WILL NEED TO BE PUT BACK IN AUTO TO RESTORE FULL CONTROL.
WOODWARD
WOODWARD MENU
Reserved for Faceplates

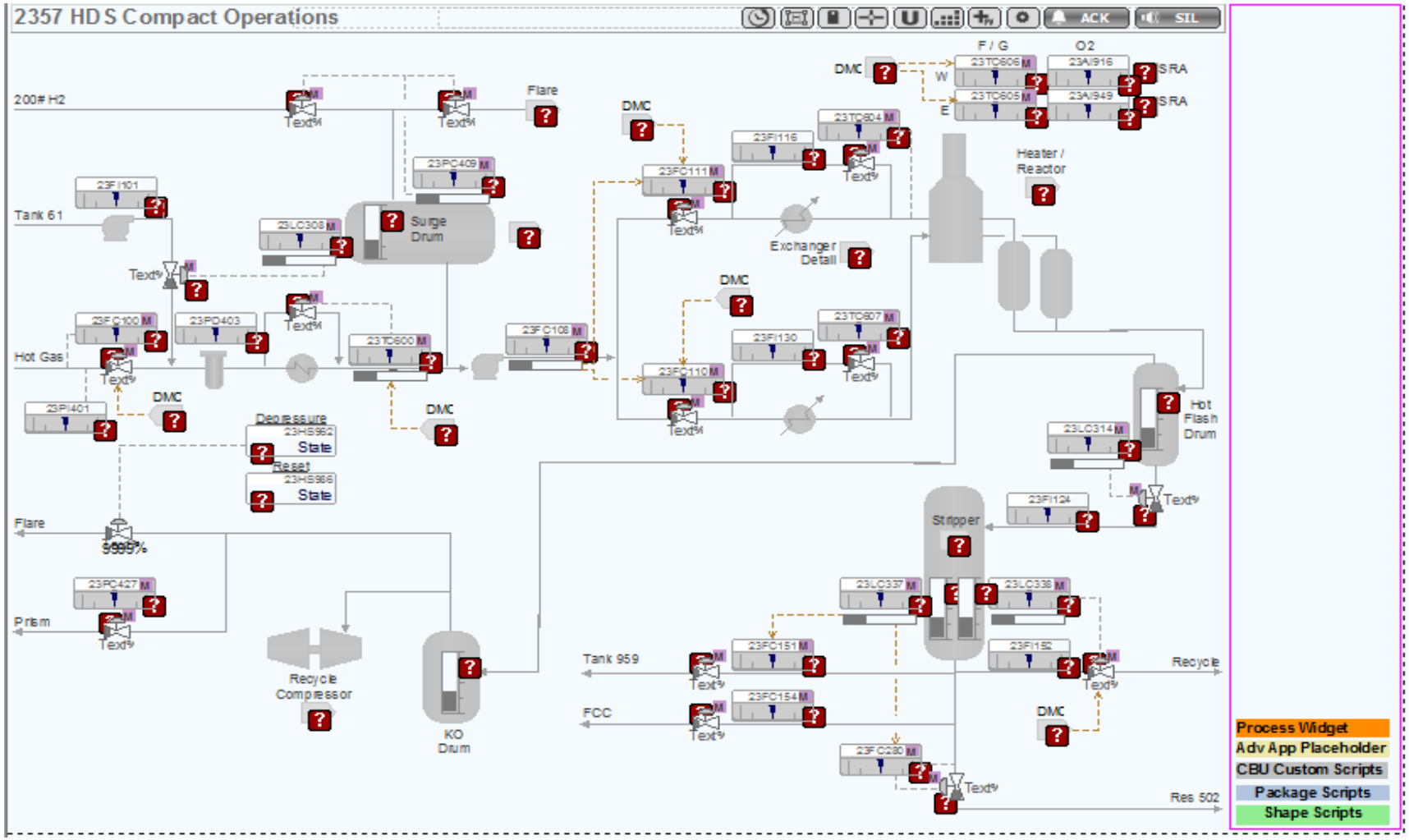
1.164 2355 - H2 SYSTEM (Reformer_2355.htm)

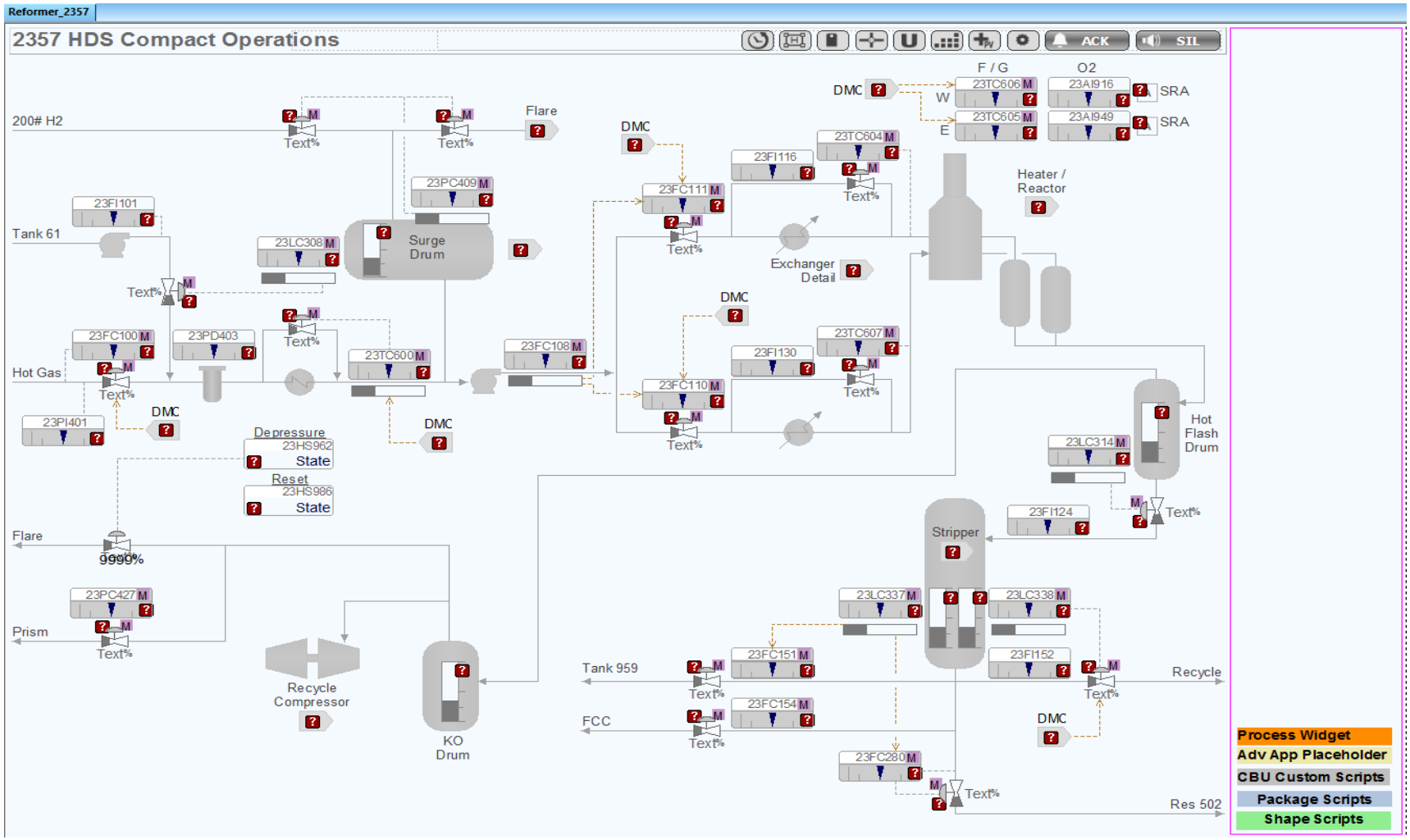


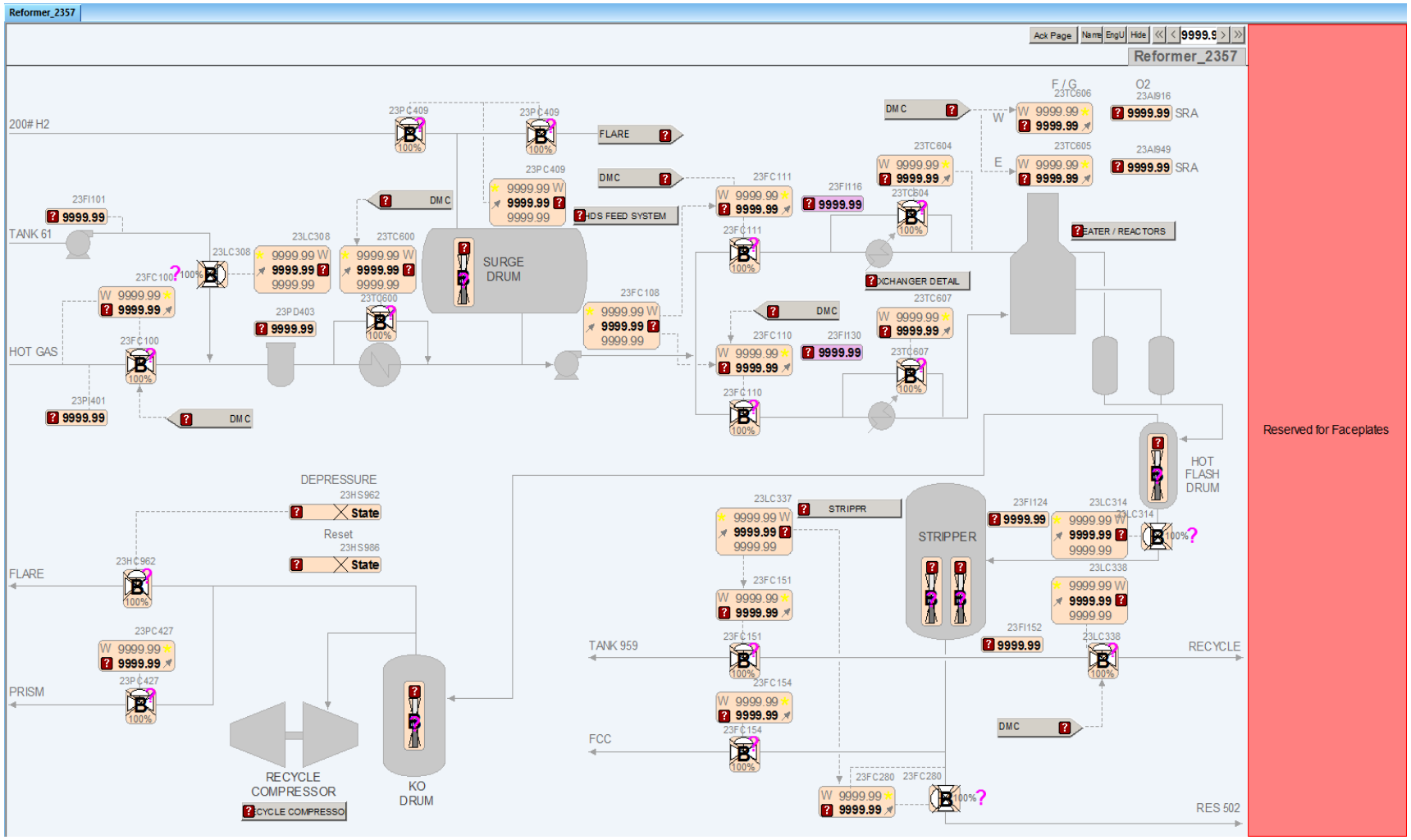

Reformer_2355
2355 - H2 System
ACK
SIL
23HS046
State
Text
23FY168A
Air Products
1900#
23PC471 M
23FC169 M
23HC929 M
23PC460 M
HDS
A Comp
23FI177
B Comp
23FI187
1800#
23FC146 M
23FC190 M
23FK3102
HCK
3FK176
HCK
#1 Ref Flash
21FI135
#2 Ref Flash
22FI131
#3 Ref Rel
29FI111
PRISM
23FI200
MBU Flash
19FI150
LHU HP Cont
25FI131
#2 H2 Plant
80FK120
#1 Desulf
21FI123
LHU LP Cont
26FI121
Bensat Purge
81FI182
200#
Air Products
23FI122
HDS C Comp
23FI211
735#
23PC413 M
23PC486 M
23PC482 M
23FK3101
Isom
#2 H2
#1 Desulf
21FI123
#2 Ref
22FI123
Buffer
6FI187
650#
21PC454 M
23FI204
23PC484 M
23FI212
Buffer
23PC487 M
6FI188
6PC484 M
21FI192
Sulfur Plt
#1 Ref
Recy
21FI190
25FC102 M
LHU
23FI176
A Comp
23FI186
B Comp
21FC195 M
H2 Driers
21FI161
26PC430 M
19FI151
MBU
23FI175
A Comp
23FI185
B Comp
PRISM Feed
23FC203 M
PRISM Waste
23FI202
LHU HP Cont
25FI133
#1 Desulf
21FI124
MBU Amine KO
19FI145
#1 Ref Stab OH
21FI141
FG Export KO
21FI165
#1 Ref Flash
21FI136
HCK Absrb
3FK117
PRISM
23FI140
HDS
Stripper
23FI166
100#
26FI105
26PC431 M
C Comp
26FI107
HDS Flare
26FI122
26FI106
26PC431A M
Fuel Gas
North
Area
Process Widget
Adv App Placeholder
CBU Custom Scripts
SIS Scripts
Package Scripts
Shape Scripts


Reformer_2355
Ack Page
Name
EngU
Hide
Reformer_2355
AIR PRODUCTS
A COMP
B COMP
HCK
#1 REF FLASH
#2 REF FLASH
#3 REF REL
PRISM
MBU FLASH
LHU HP Cont
#2 H2 PLANT
#1 DESULF
LHU LP Cont
BENSAT PURGE
PRISM FEED
PRISM WASTE
LHU HP CONT
#1 DESULF
MBU AMINE KO
#1 REF STAB OH
FG EXPORT KO
#1 REF FLASH
1900#
1800#
HCK
735#
AIR PRODUCTS
HDS C COMP
650#
#1 DESULF
#2 REF
BUFFER
200#
HCK ABSRB
PRISM FEED
HDS STRIPPER
100#
FUEL GAS
HDS
HCK
ISOM #2 H2
BUFFER
SULFUR PLT
#1 REF RECY
LHU
A COMP
B COMP
H2 DRIERS
MBU
A COMP
B COMP
C COMP
HDS FLARE
NORTH AREA
Reserved for Faceplates

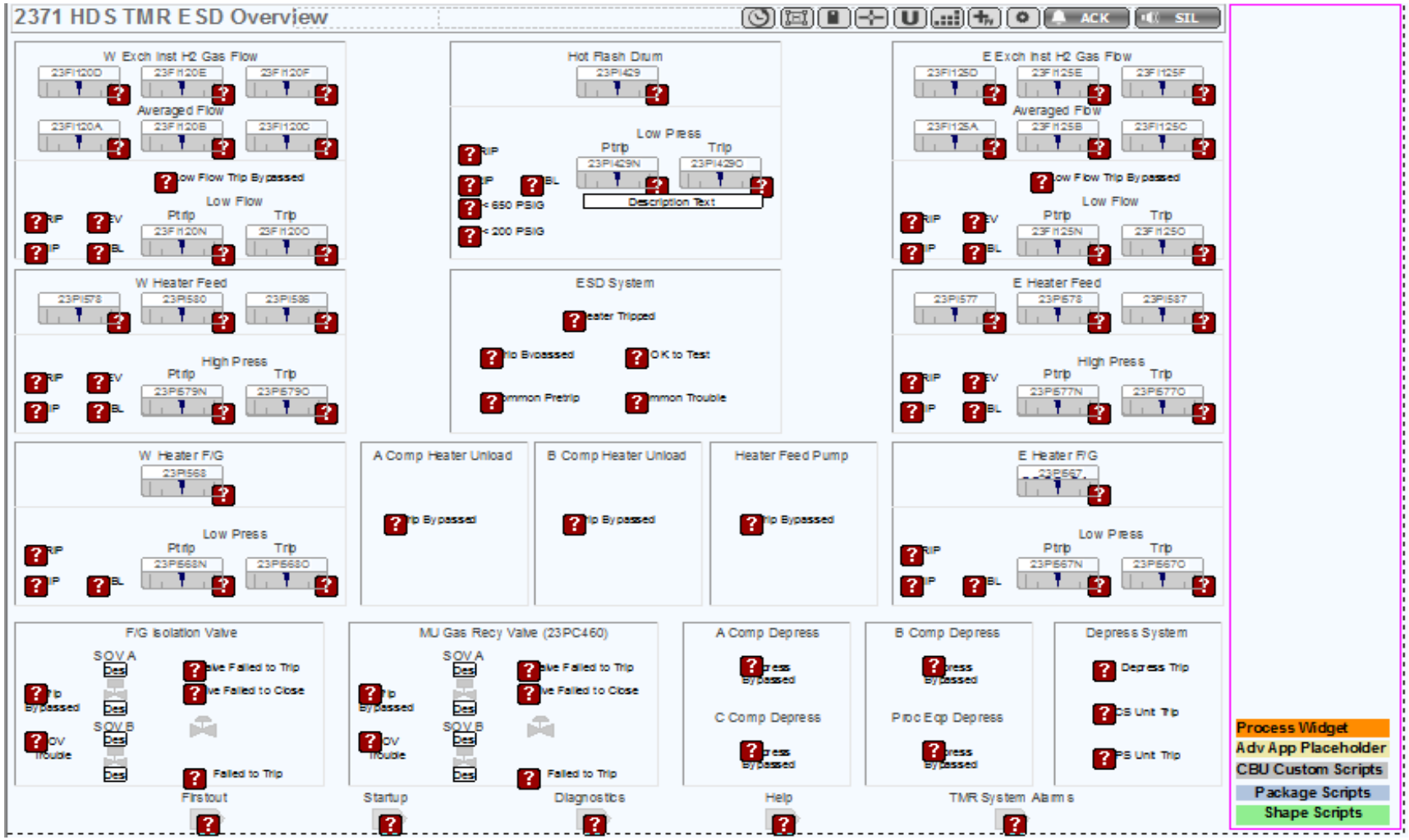
1.165 2357 HDS COMPACT OPERATIONS (Reformer_2357.htm)

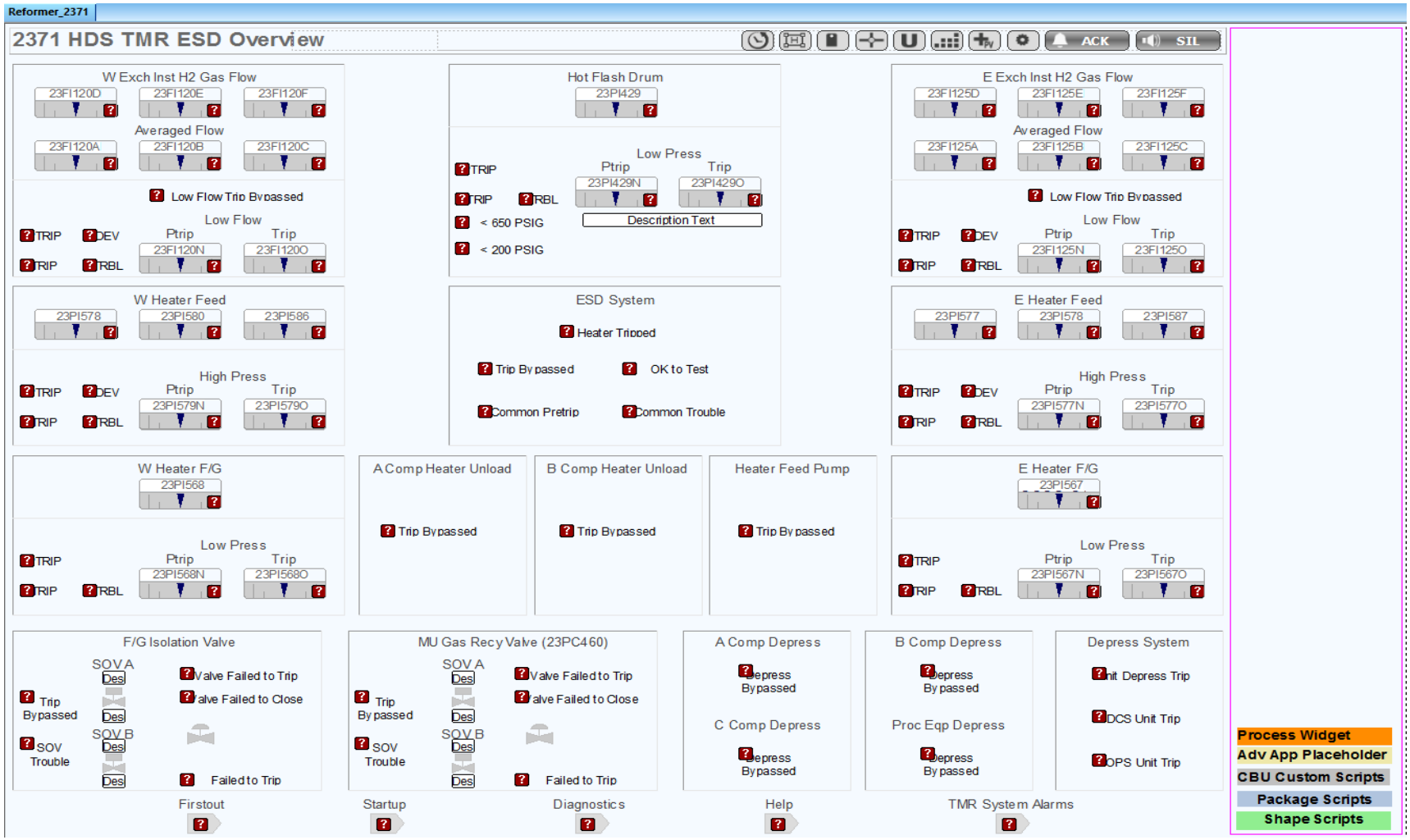


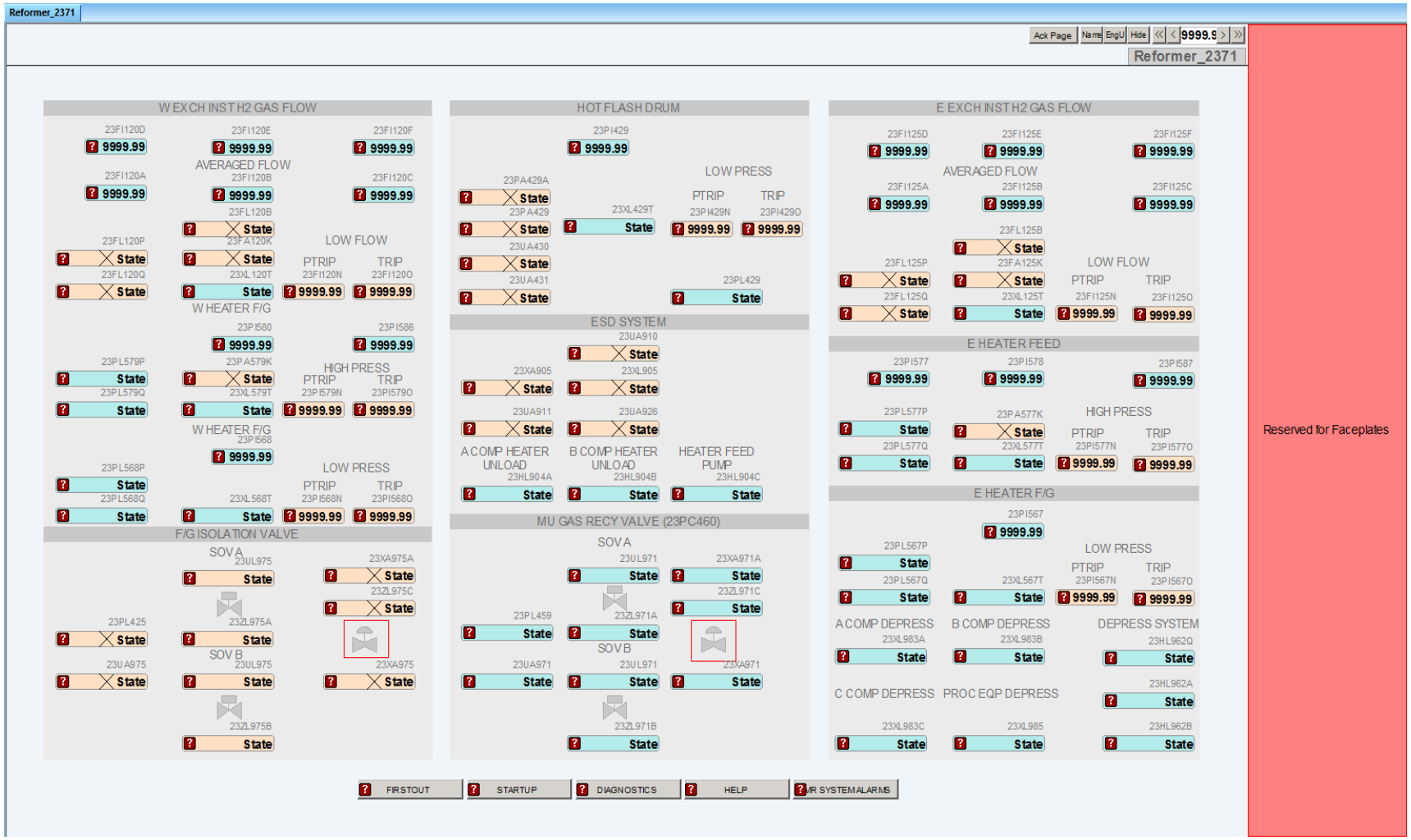

Reformer_2357
2357 HDS Compact Operations
ACK
SIL
200# H2
Flare
DMC
F / G
O2
W
E
23TC606
23AI916
23TC605
23AI949
SRA
SRA
23TC604
23FI116
23PC409
23FI101
Tank 61
23LC308
Surge Drum
23FC111
Heater / Reactor
Exchanger Detail
23FC100
23PD403
23TC600
23FC108
Hot Gas
23TC607
23FI130
23FC110
23PI401
Depressure
23HS962
State
Reset
23HS986
State
Hot Flash Drum
23LC314
23FI124
Stripper
Flare
23PC427
Prism
23LC337
23LC338
23FC151
23FI152
Tank 959
Recycle
23FC154
FCC
Recycle Compressor
KO Drum
23FC280
Res 502
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2357
Reformer_2357
Ack Page
Name
EngU
Hide
200# H2
TANK 61
HOT GAS
FLARE
PRISM
FCC
TANK 959
RES 502
RECYCLE
SURGE DRUM
HDS FEED SYSTEM
DMC
FLARE
HEATER / REACTORS
EXCHANGER DETAIL
HOT FLASH DRUM
STRIPPER
STRIPPR
DEPRESSURE
State
Reset
RECYCLE COMPRESSOR
KO DRUM
F / G
O2
SRA
Reserved for Faceplates

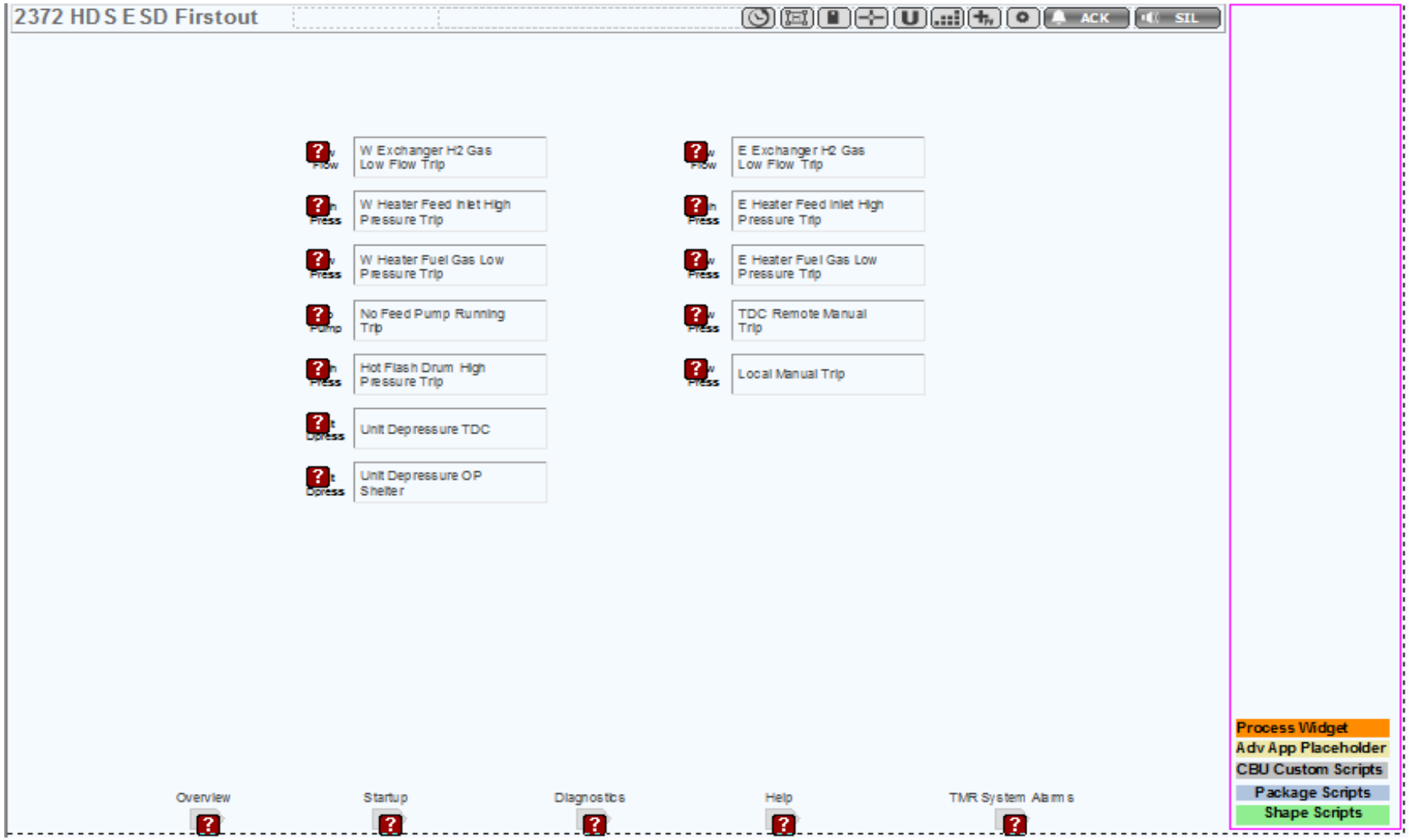
1.166 2371 HDS TMR ESD OVERVIEW (Reformer_2371.htm)

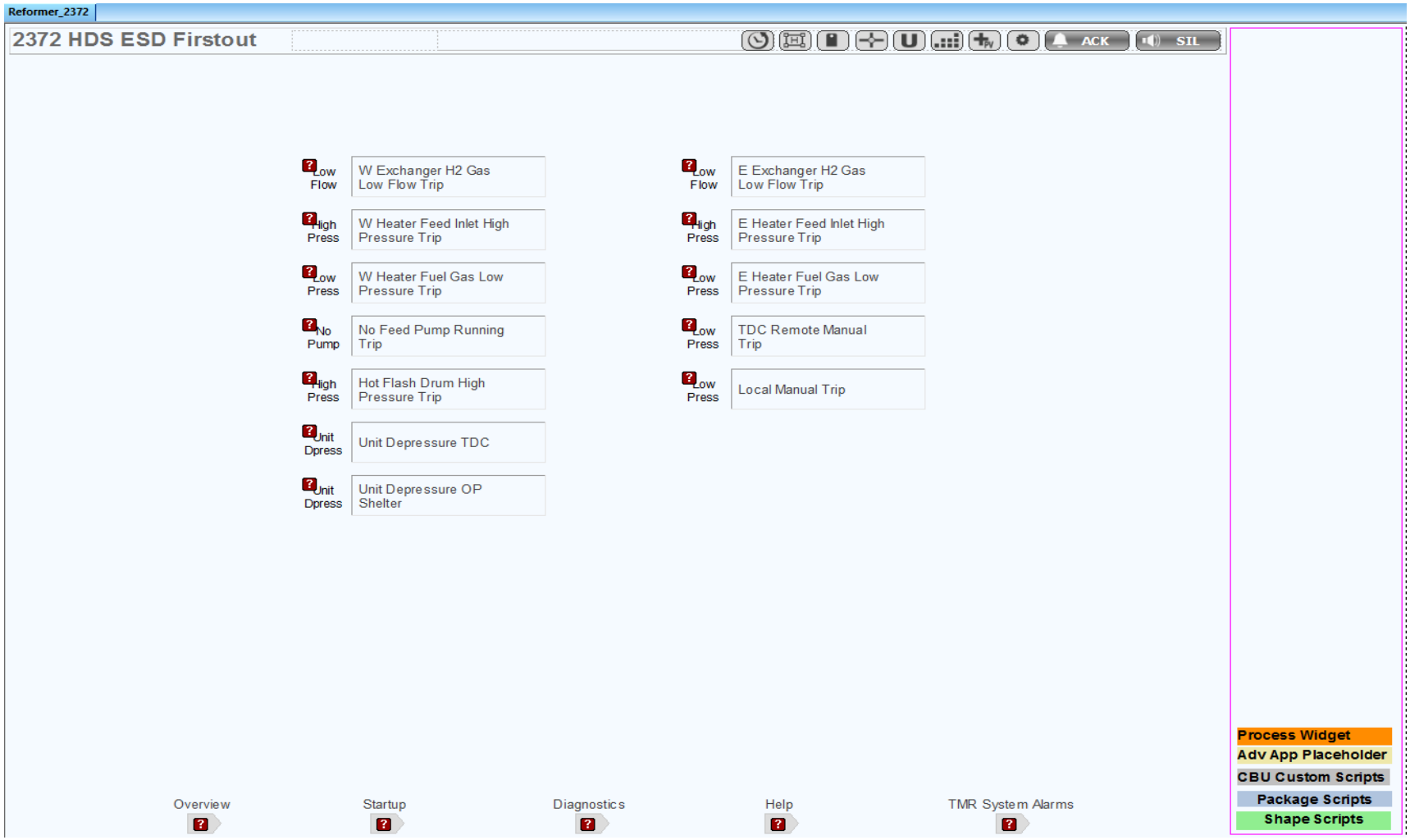


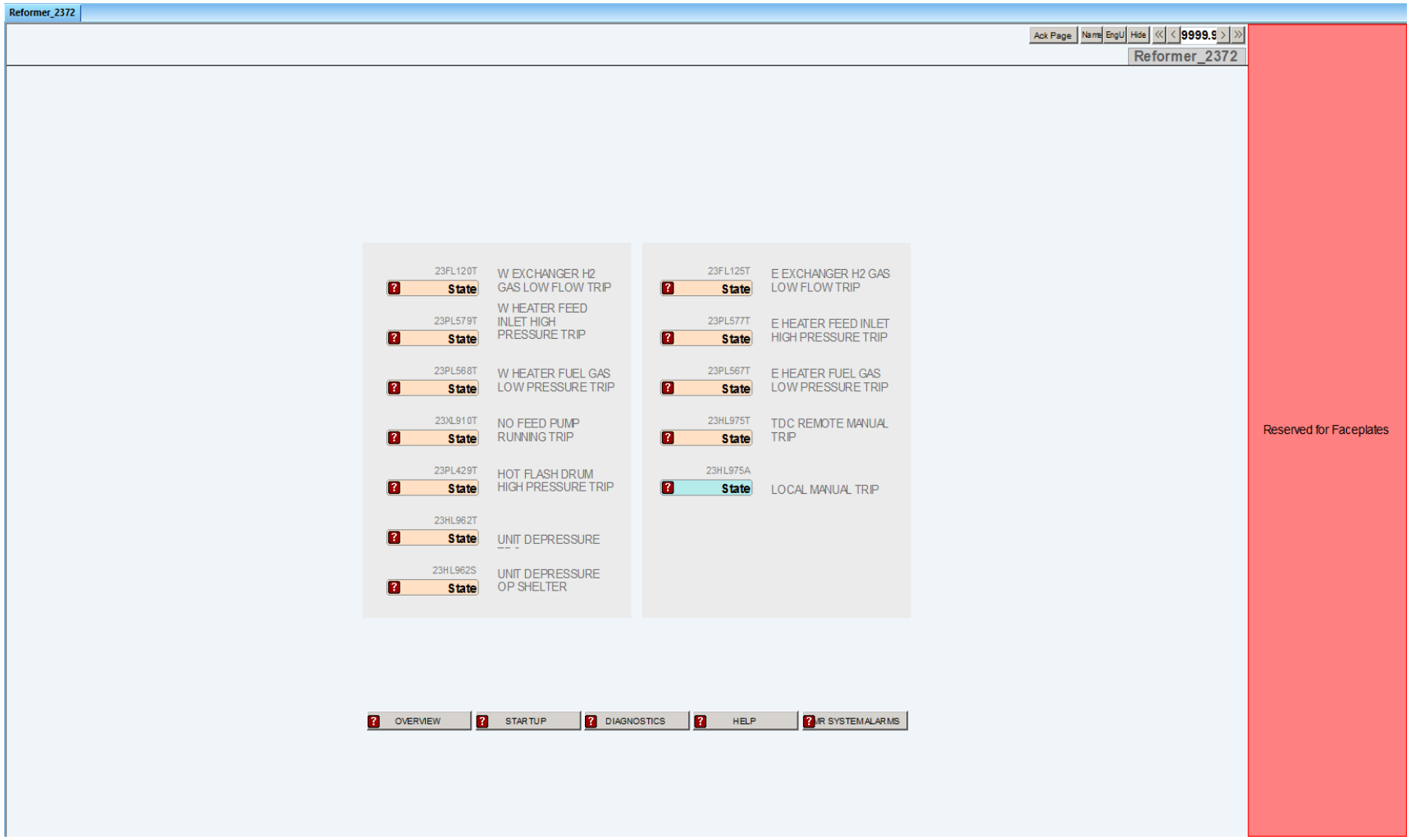

Reformer_2371
2371 HDS TMR ESD Overview
ACK
SIL
W Exch Inst H2 Gas Flow
23FI120D
23FI120E
23FI120F
Averaged Flow
23FI120A
23FI120B
23FI120C
Low Flow Trip Bypassed
Low Flow
TRIP
DEV
Ptrip
Trip
23FI120N
23FI120O
TRIP
RBL
Hot Flash Drum
23PI429
Low Press
TRIP
Ptrip
Trip
23PI429N
23PI429O
TRIP
RBL
< 650 PSIG
Description Text
< 200 PSIG
E Exch Inst H2 Gas Flow
23FI125D
23FI125E
23FI125F
Averaged Flow
23FI125A
23FI125B
23FI125C
Low Flow Trip Bypassed
Low Flow
TRIP
DEV
Ptrip
Trip
23FI125N
23FI125O
TRIP
RBL
W Heater Feed
23PI578
23PI580
23PI586
High Press
TRIP
DEV
Ptrip
Trip
23PI579N
23PI579O
TRIP
RBL
ESD System
Heater Tripped
Trip Bypassed
OK to Test
Common Pretrip
Common Trouble
E Heater Feed
23PI577
23PI578
23PI587
High Press
TRIP
DEV
Ptrip
Trip
23PI577N
23PI577O
TRIP
RBL
W Heater F/G
23PI568
Low Press
TRIP
Ptrip
Trip
23PI568N
23PI568O
TRIP
RBL
A Comp Heater Unload
Trip Bypassed
B Comp Heater Unload
Trip Bypassed
Heater Feed Pump
Trip Bypassed
E Heater F/G
23PI567
Low Press
TRIP
Ptrip
Trip
23PI567N
23PI567O
TRIP
RBL
F/G Isolation Valve
SOV A
Des
Valve Failed to Trip
Trip Bypassed
Valve Failed to Close
Des
SOV B
Des
SOV Trouble
Des
Failed to Trip
MU Gas Recy Valve (23PC460)
SOV A
Des
Valve Failed to Trip
Trip Bypassed
Valve Failed to Close
Des
SOV B
Des
SOV Trouble
Des
Failed to Trip
A Comp Depress
Depress Bypassed
C Comp Depress
Depress Bypassed
B Comp Depress
Depress Bypassed
Proc Eqp Depress
Depress Bypassed
Depress System
Unit Depress Trip
DCS Unit Trip
OPS Unit Trip
Firstout
Startup
Diagnostics
Help
TMR System Alarms
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2371
Ack Page
Name
EngU
Hide
Reformer_2371
W EXCH INST H2 GAS FLOW
23FI120D
23FI120E
23FI120F
AVERAGED FLOW
23FI120A
23FI120B
23FI120C
23FL120B
23FL120P
23FA120K
LOW FLOW
PTRIP
TRIP
23FL120Q
23XL120T
23FI120N
23FI120O
W HEATER F/G
23PI580
23PI586
23PL579P
23PA579K
HIGH PRESS
23PL579Q
23XL579T
23PI579N
23PI579O
W HEATER F/G
23PI568
23PL568P
LOW PRESS
23PL568Q
23XL568T
23PI568N
23PI568O
F/G ISOLATION VALVE
SOV A
23UL975
23XA975A
23ZL975C
23PL425
23ZL975A
SOV B
23UA975
23UL975
23XA975
23ZL975B
HOT FLASH DRUM
23PI429
LOW PRESS
23PA429A
PTRIP
TRIP
23PA429
23XL429T
23PI429N
23PI429O
23UA430
23UA431
23PL429
ESD SYSTEM
23UA910
23XA905
23XL905
23UA911
23UA926
A COMP HEATER UNLOAD
B COMP HEATER UNLOAD
HEATER FEED PUMP
23HL904A
23HL904B
23HL904C
MU GAS RECY VALVE (23PC460)
SOV A
23UL971
23XA971A
23PL459
23ZL971A
23ZL971C
SOV B
23UA971
23UL971
23XA971
23ZL971B
E EXCH INST H2 GAS FLOW
23FI125D
23FI125E
23FI125F
AVERAGED FLOW
23FI125A
23FI125B
23FI125C
23FL125B
23FL125P
23FA125K
LOW FLOW
PTRIP
TRIP
23FL125Q
23XL125T
23FI125N
23FI125O
E HEATER FEED
23PI577
23PI578
23PI587
23PL577P
23PA577K
HIGH PRESS
23PL577Q
23XL577T
PTRIP
TRIP
23PI577N
23PI577O
E HEATER F/G
23PI567
23PL567P
LOW PRESS
PTRIP
TRIP
23PL567Q
23XL567T
23PI567N
23PI567O
A COMP DEPRESS
B COMP DEPRESS
DEPRESS SYSTEM
23XL983A
23XL983B
23HL962O
C COMP DEPRESS
PROC EQP DEPRESS
23HL962A
23XL983C
23XL985
23HL962B
FIRSTOUT
STARTUP
DIAGNOSTICS
HELP
MR SYSTEMALARMS
Reserved for Faceplates

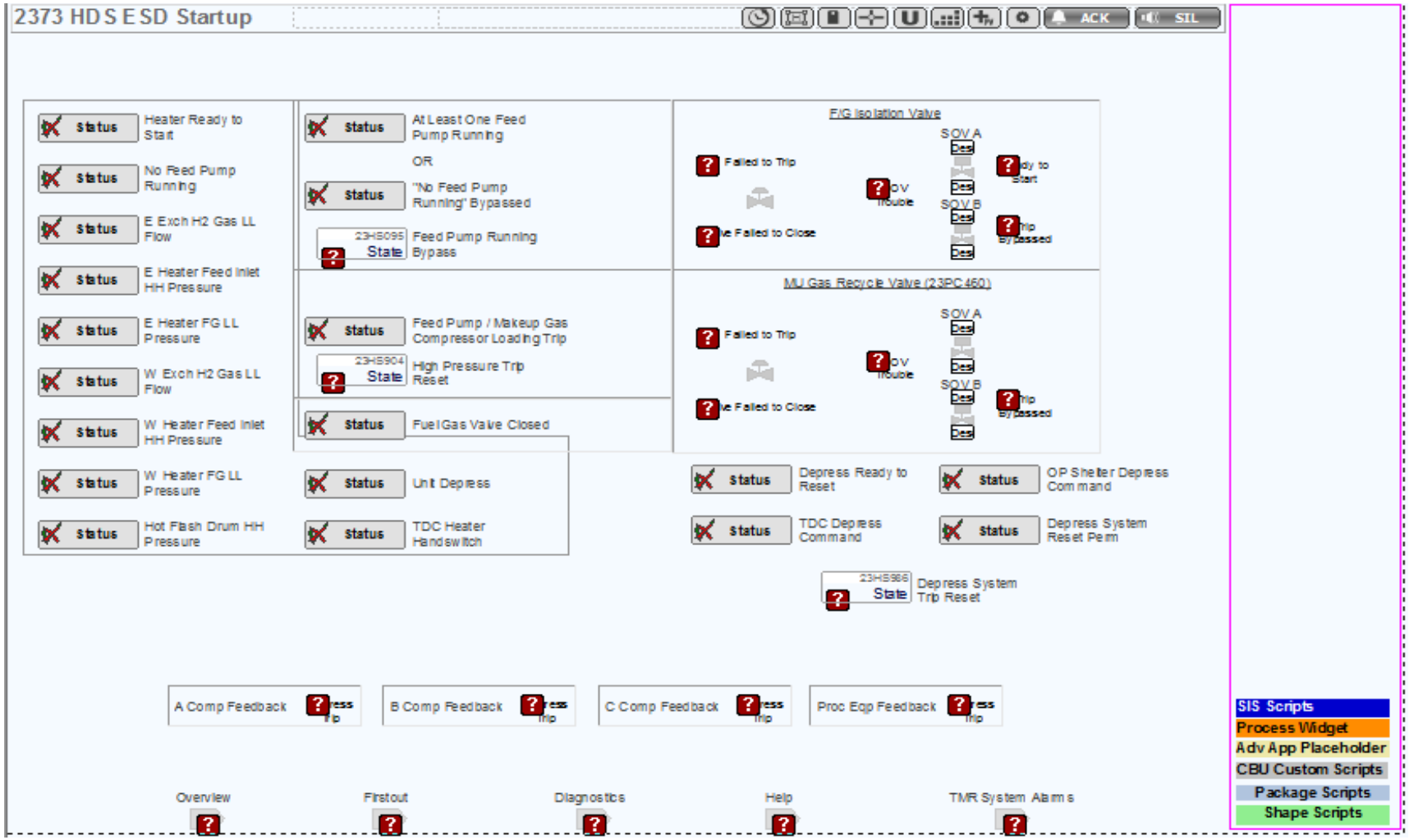
1.167 2372 HDS ESD FIRSTOUT (Reformer_2372.htm)

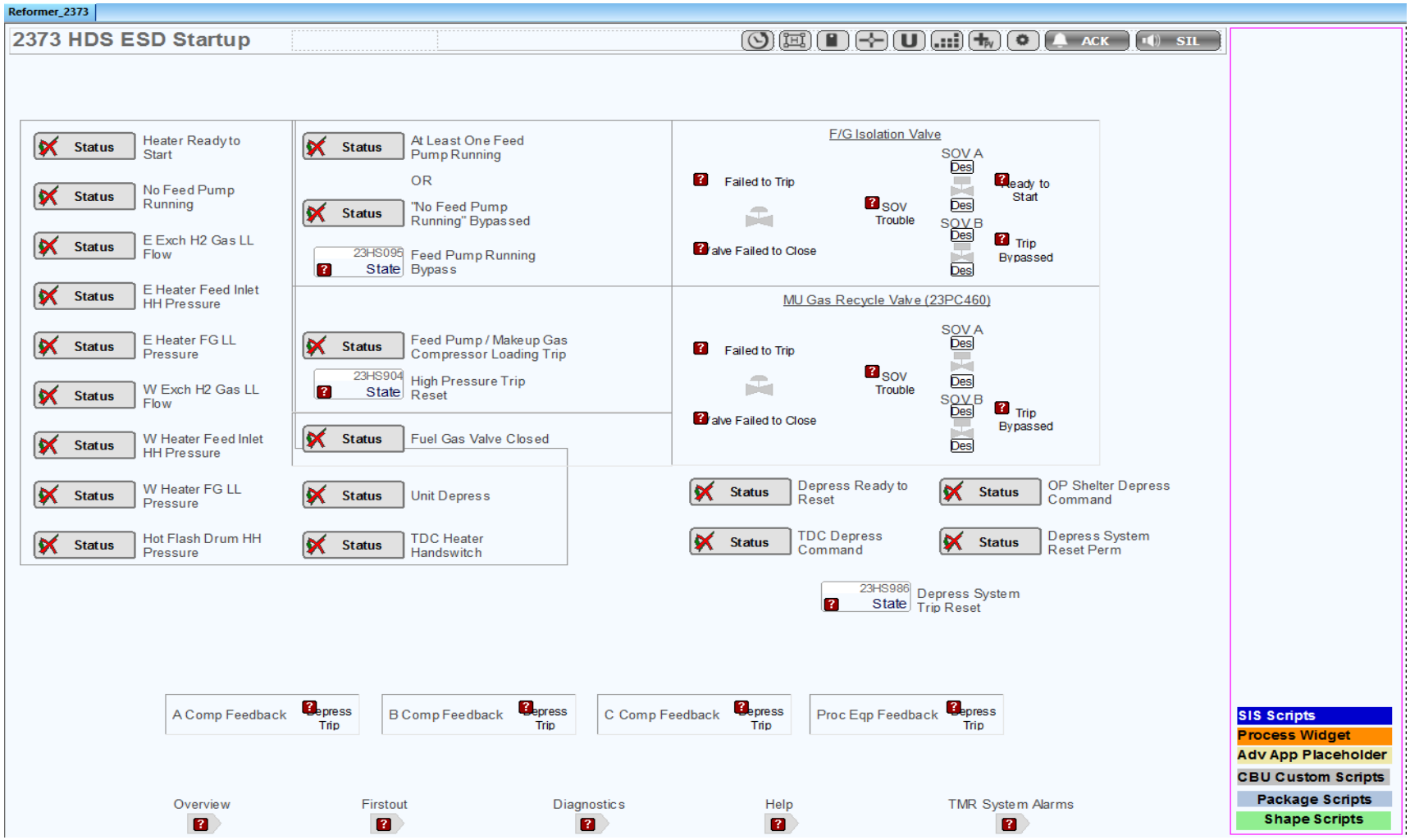


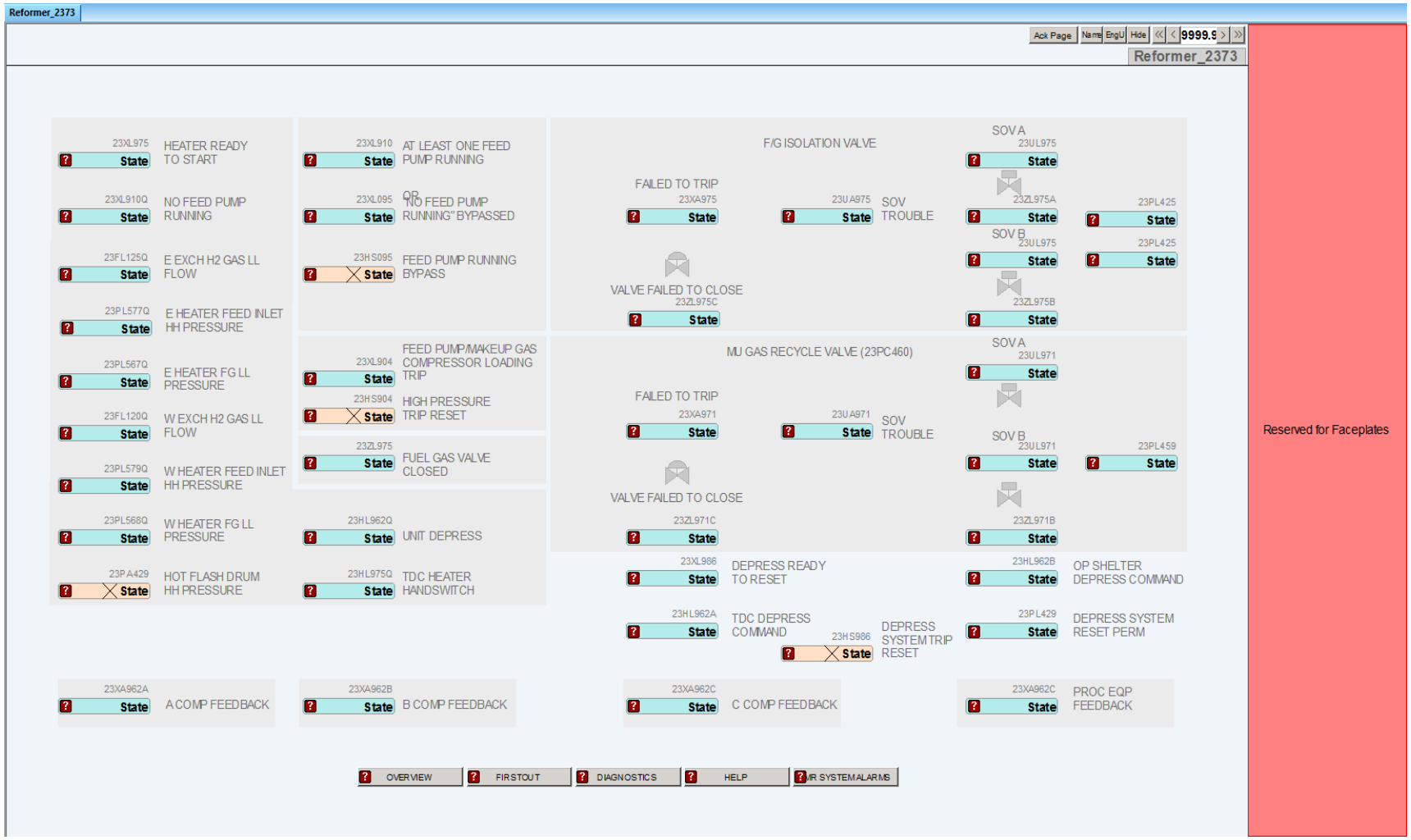

Reformer_2372
2372 HDS ESD Firstout
ACK
SIL
Low Flow
W Exchanger H2 Gas Low Flow Trip
High Press
W Heater Feed Inlet High Pressure Trip
Low Press
W Heater Fuel Gas Low Pressure Trip
No Pump
No Feed Pump Running Trip
High Press
Hot Flash Drum High Pressure Trip
Unit Dpress
Unit Depressure TDC
Unit Dpress
Unit Depressure OP Shelter
Low Flow
E Exchanger H2 Gas Low Flow Trip
High Press
E Heater Feed Inlet High Pressure Trip
Low Press
E Heater Fuel Gas Low Pressure Trip
Low Press
TDC Remote Manual Trip
Low Press
Local Manual Trip
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
Overview
Startup
Diagnostics
Help
TMR System Alarms


Reformer_2372
Ack Page
Name
EngU
Hide
9999.9
Reformer_2372
23FL120T
State
W EXCHANGER H2 GAS LOW FLOW TRIP
23PL579T
State
W HEATER FEED INLET HIGH PRESSURE TRIP
23PL568T
State
W HEATER FUEL GAS LOW PRESSURE TRIP
23XL910T
State
NO FEED PUMP RUNNING TRIP
23PL429T
State
HOT FLASH DRUM HIGH PRESSURE TRIP
23HL962T
State
UNIT DEPRESSURE
23HL962S
State
UNIT DEPRESSURE OP SHELTER
23FL125T
State
E EXCHANGER H2 GAS LOW FLOW TRIP
23PL577T
State
E HEATER FEED INLET HIGH PRESSURE TRIP
23PL567T
State
E HEATER FUEL GAS LOW PRESSURE TRIP
23HL975T
State
TDC REMOTE MANUAL TRIP
23HL975A
State
LOCAL MANUAL TRIP
OVERVIEW
STARTUP
DIAGNOSTICS
HELP
MR SYSTEM ALARMS
Reserved for Faceplates

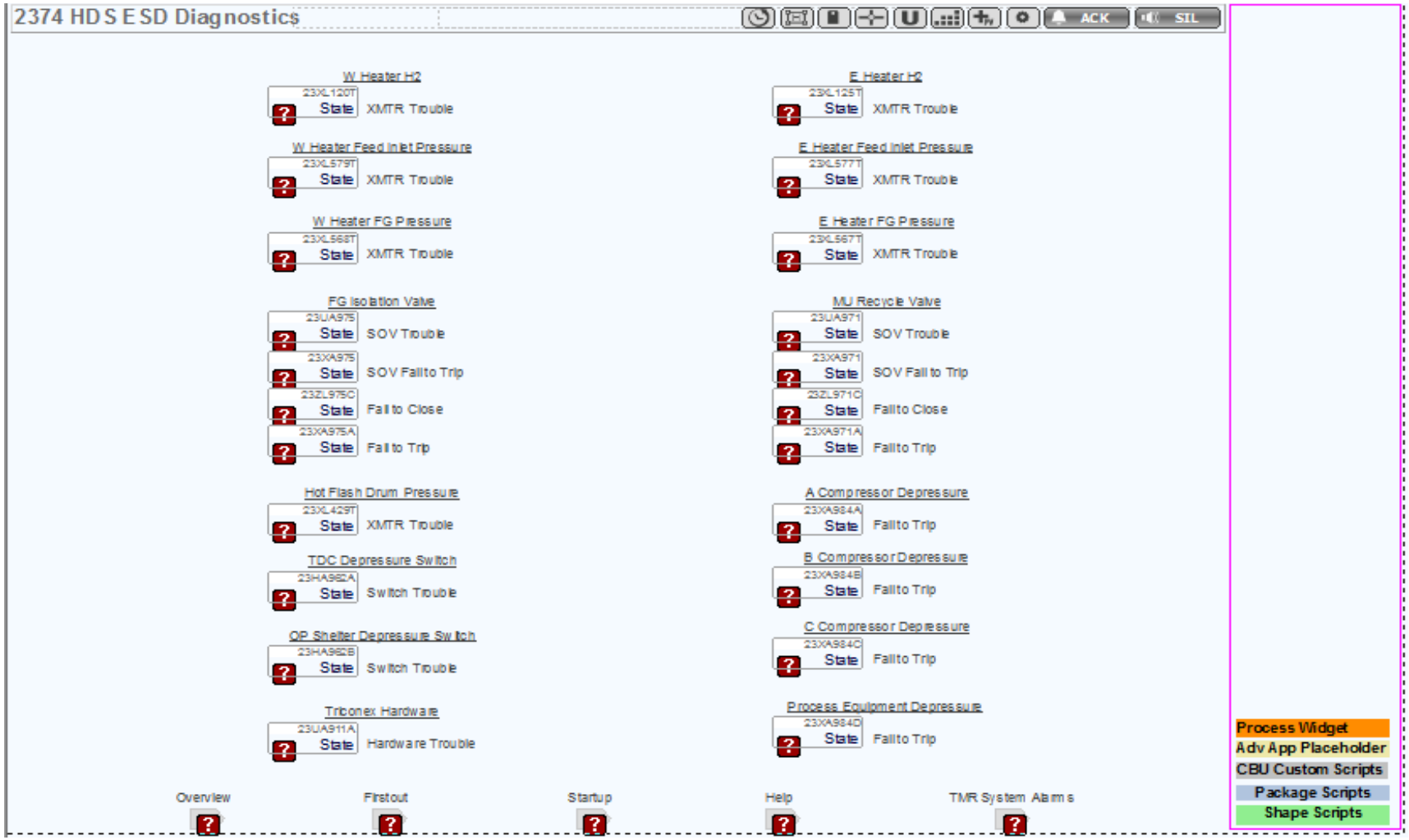
1.168 2373 HDS ESD STARTUP (Reformer_2373.htm)



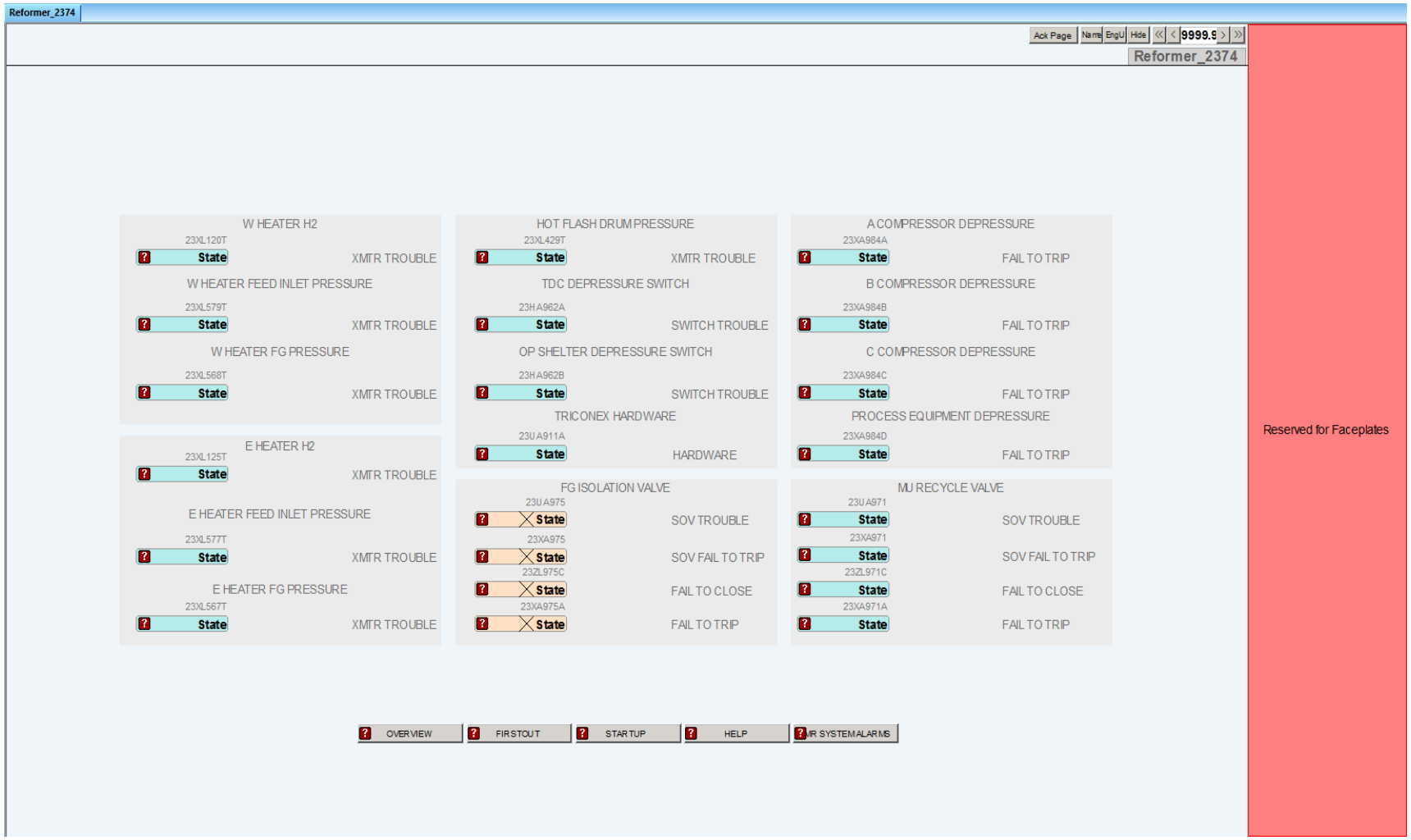

Reformer_2373
2373 HDS ESD Startup
ACK
SIL
Status
Heater Ready to Start
Status
No Feed Pump Running
Status
E Exch H2 Gas LL Flow
Status
E Heater Feed Inlet HH Pressure
Status
E Heater FG LL Pressure
Status
W Exch H2 Gas LL Flow
Status
W Heater Feed Inlet HH Pressure
Status
W Heater FG LL Pressure
Status
Hot Flash Drum HH Pressure
Status
At Least One Feed Pump Running
OR
Status
"No Feed Pump Running" Bypassed
23HS095
State
Feed Pump Running Bypass
Status
Feed Pump / Makeup Gas Compressor Loading Trip
23HS904
State
High Pressure Trip Reset
Status
Fuel Gas Valve Closed
Status
Unit Depress
Status
TDC Heater Handswitch
F/G Isolation Valve
Failed to Trip
Valve Failed to Close
SOV Trouble
SOV A
SOV B
Des
Ready to Start
Trip Bypassed
MU Gas Recycle Valve (23PC460)
Failed to Trip
Valve Failed to Close
SOV Trouble
SOV A
SOV B
Des
Trip Bypassed
Status
Depress Ready to Reset
Status
TDC Depress Command
Status
OP Shelter Depress Command
Status
Depress System Reset Perm
23HS986
State
Depress System Trip Reset
A Comp Feedback
Depress Trip
B Comp Feedback
Depress Trip
C Comp Feedback
Depress Trip
Proc Eqp Feedback
Depress Trip
Overview
Firstout
Diagnostics
Help
TMR System Alarms
SIS Scripts
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2373
Ack Page
Name
EngU
Hide
9999.9
Reformer_2373
23XL975
HEATER READY TO START
State
23XL910Q
NO FEED PUMP RUNNING
23FL125Q
E EXCH H2 GAS LL FLOW
23PL577Q
E HEATER FEED INLET HH PRESSURE
23PL567Q
E HEATER FG LL PRESSURE
23FL120Q
W EXCH H2 GAS LL FLOW
23PL579Q
W HEATER FEED INLET HH PRESSURE
23PL568Q
W HEATER FG LL PRESSURE
23PA429
HOT FLASH DRUM HH PRESSURE
23XL910
AT LEAST ONE FEED PUMP RUNNING
23XL095
OR "NO FEED PUMP RUNNING" BYPASSED
23HS095
FEED PUMP RUNNING BYPASS
23XL904
FEED PUMP/MAKEUP GAS COMPRESSOR LOADING TRIP
23HS904
HIGH PRESSURE TRIP RESET
23ZL975
FUEL GAS VALVE CLOSED
23HL962Q
UNIT DEPRESS
23HL975Q
TDC HEATER HANDSWITCH
F/G ISOLATION VALVE
FAILED TO TRIP
23XA975
23UA975
SOV TROUBLE
VALVE FAILED TO CLOSE
23ZL975C
SOV A
23UL975
23ZL975A
23PL425
SOV B
23UL975
23PL425
23ZL975B
MU GAS RECYCLE VALVE (23PC460)
FAILED TO TRIP
23XA971
23UA971
SOV TROUBLE
VALVE FAILED TO CLOSE
23ZL971C
SOV A
23UL971
SOV B
23UL971
23PL459
23ZL971B
23XL986
DEPRESS READY TO RESET
23HL962A
TDC DEPRESS COMMAND
23HS986
DEPRESS SYSTEM TRIP RESET
23HL962B
OP SHELTER DEPRESS COMMAND
23PL429
DEPRESS SYSTEM RESET PERM
23XA962A
A COMP FEEDBACK
23XA962B
B COMP FEEDBACK
23XA962C
C COMP FEEDBACK
23XA962C
PROC EQP FEEDBACK
OVERVIEW
FIRSTOUT
DIAGNOSTICS
HELP
MR SYSTEMALARMS
Reserved for Faceplates

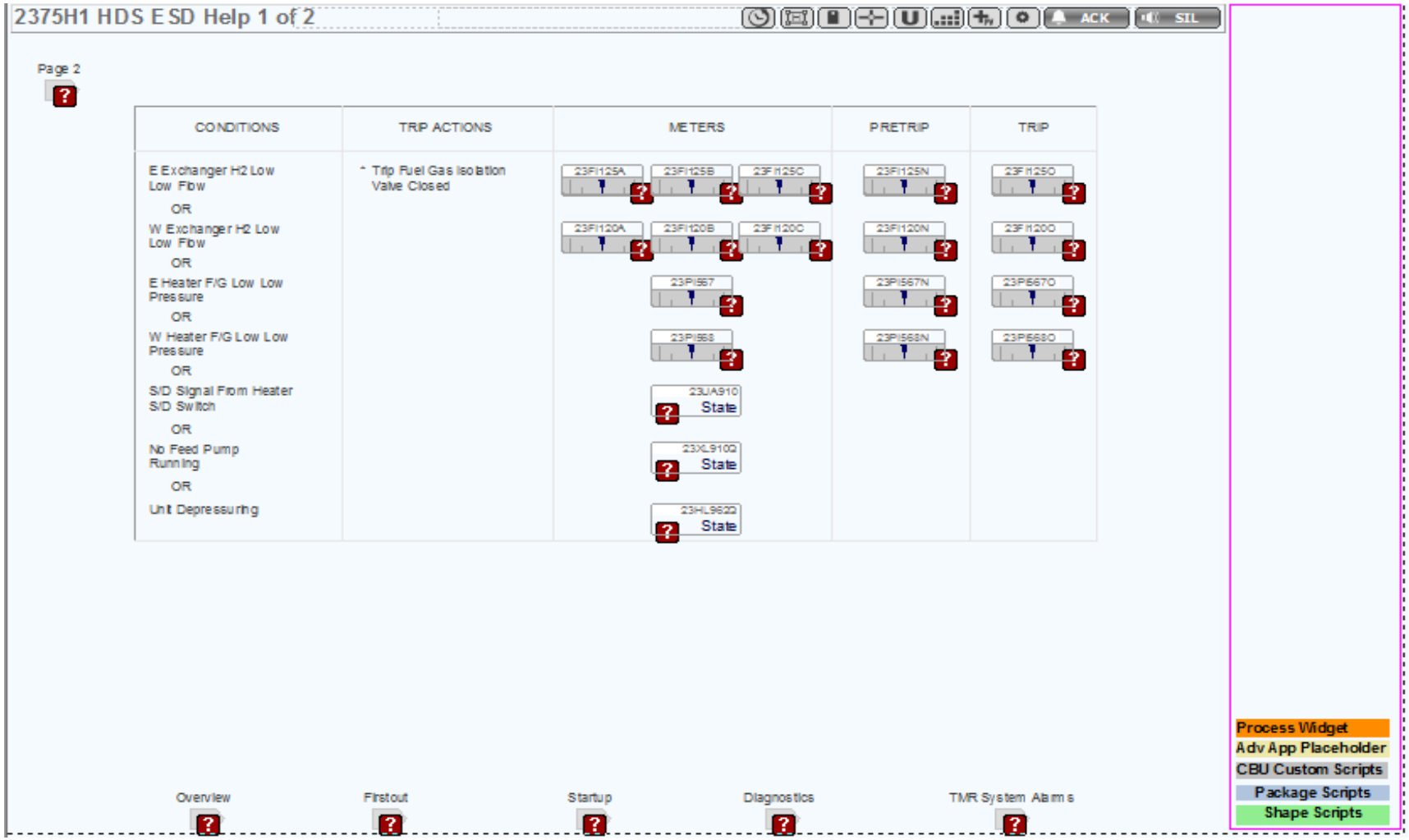
1.169 2374 HDS ESD DIAGNOSTICS (Reformer_2374.htm)

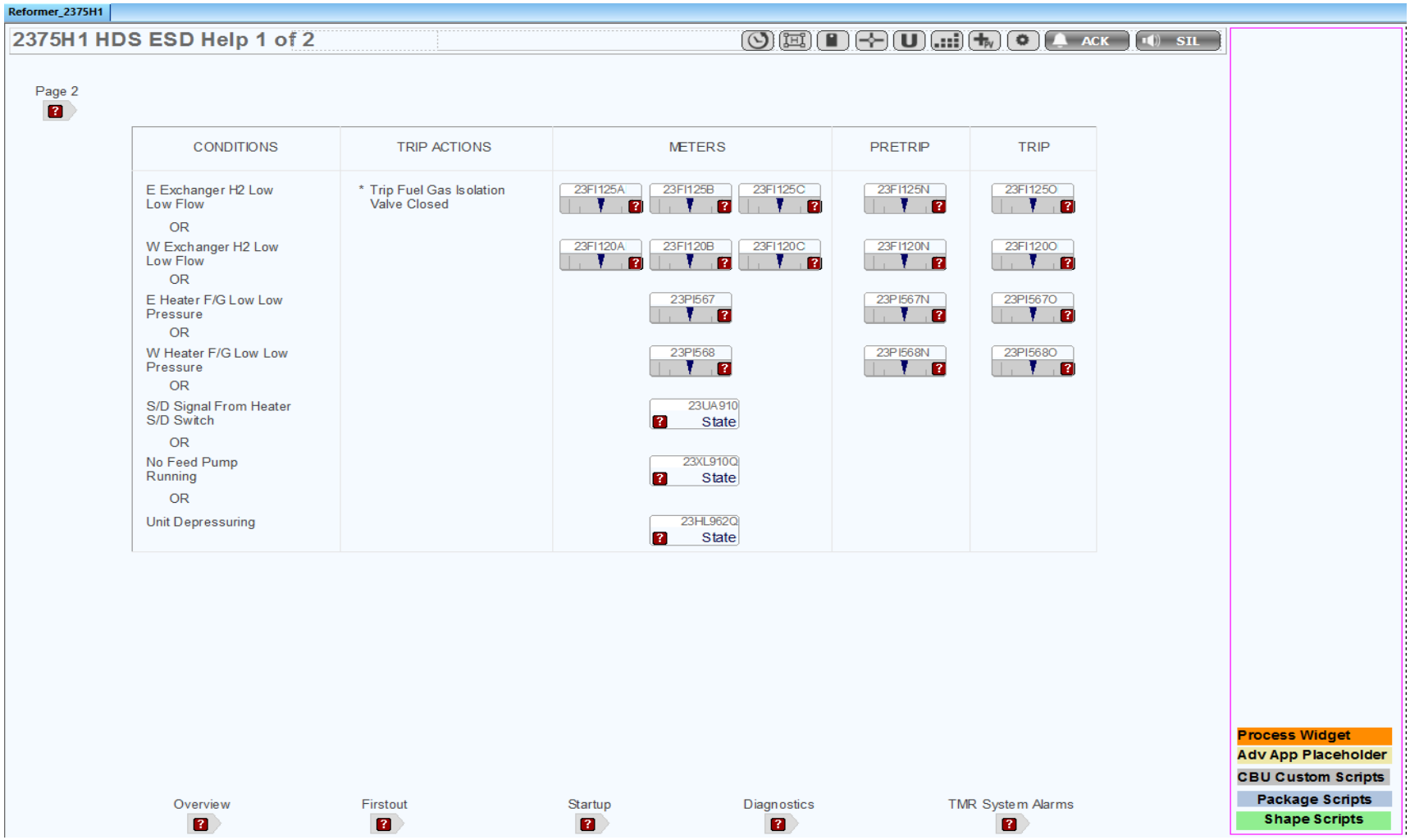


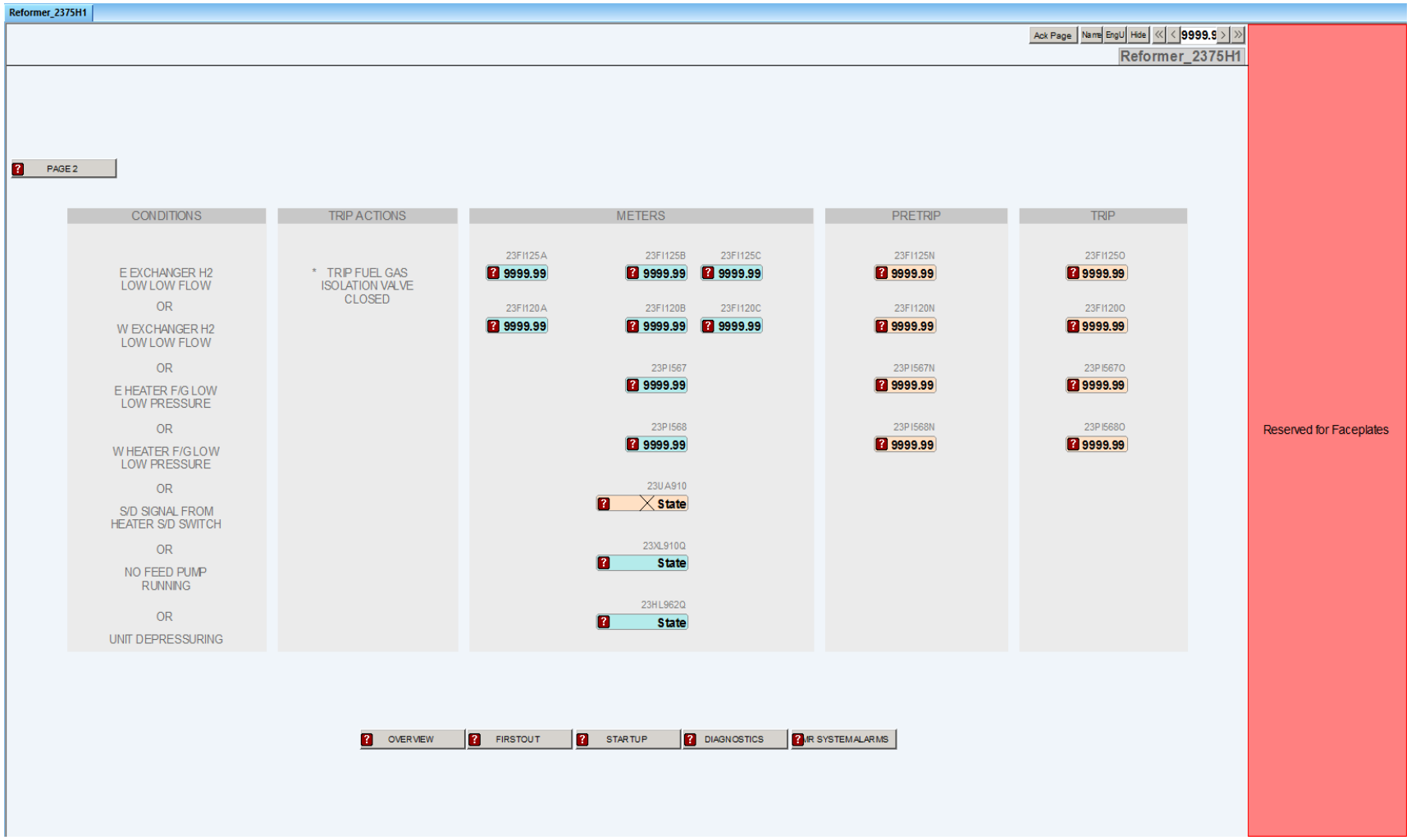
Reformer_2374
2374 HDS ESD Diagnostics
ACK
SIL
W Heater H2
23XL120T
State
XMTR Trouble
E Heater H2
23XL125T
State
XMTR Trouble
W Heater Feed Inlet Pressure
23XL579T
State
XMTR Trouble
E Heater Feed Inlet Pressure
23XL577T
State
XMTR Trouble
W Heater FG Pressure
23XL568T
State
XMTR Trouble
E Heater FG Pressure
23XL567T
State
XMTR Trouble
FG Isolation Valve
23UA975
State
SOV Trouble
23XA975
State
SOV Fail to Trip
23ZL975C
State
Fail to Close
23XA975A
State
Fail to Trip
MU Recycle Valve
23UA971
State
SOV Trouble
23XA971
State
SOV Fail to Trip
23ZL971C
State
Fail to Close
23XA971A
State
Fail to Trip
Hot Flash Drum Pressure
23XL429T
State
XMTR Trouble
A Compressor Depressure
23XA984A
State
Fail to Trip
TDC Depressure Switch
23HA962A
State
Switch Trouble
B Compressor Depressure
23XA984B
State
Fail to Trip
OP Shelter Depressure Switch
23HA962B
State
Switch Trouble
C Compressor Depressure
23XA984C
State
Fail to Trip
Triconex Hardware
23UA911A
State
Hardware Trouble
Process Equipment Depressure
23XA984D
State
Fail to Trip
Overview
Firstout
Startup
Help
TMR System Alarms
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2374
Ack Page
Name
EngU
Hide
9999.9
Reformer_2374
W HEATER H2
23XL120T
State
XMTR TROUBLE
W HEATER FEED INLET PRESSURE
23XL579T
State
XMTR TROUBLE
W HEATER FG PRESSURE
23XL568T
State
XMTR TROUBLE
E HEATER H2
23XL125T
State
XMTR TROUBLE
E HEATER FEED INLET PRESSURE
23XL577T
State
XMTR TROUBLE
E HEATER FG PRESSURE
23XL567T
State
XMTR TROUBLE
HOT FLASH DRUM PRESSURE
23XL429T
State
XMTR TROUBLE
TDC DEPRESSURE SWITCH
23HA962A
State
SWITCH TROUBLE
OP SHELTER DEPRESSURE SWITCH
23HA962B
State
SWITCH TROUBLE
TRICONEX HARDWARE
23UA911A
State
HARDWARE
FG ISOLATION VALVE
23UA975
State
SOV TROUBLE
23XA975
State
SOV FAIL TO TRIP
23ZL975C
State
FAIL TO CLOSE
23XA975A
State
FAIL TO TRIP
A COMPRESSOR DEPRESSURE
23XA984A
State
FAIL TO TRIP
B COMPRESSOR DEPRESSURE
23XA984B
State
FAIL TO TRIP
C COMPRESSOR DEPRESSURE
23XA984C
State
FAIL TO TRIP
PROCESS EQUIPMENT DEPRESSURE
23XA984D
State
FAIL TO TRIP
MJ RECYCLE VALVE
23UA971
State
SOV TROUBLE
23XA971
State
SOV FAIL TO TRIP
23ZL971C
State
FAIL TO CLOSE
23XA971A
State
FAIL TO TRIP
OVERVIEW
FIRSTOUT
STARTUP
HELP
MR SYSTEMALARMS
Reserved for Faceplates

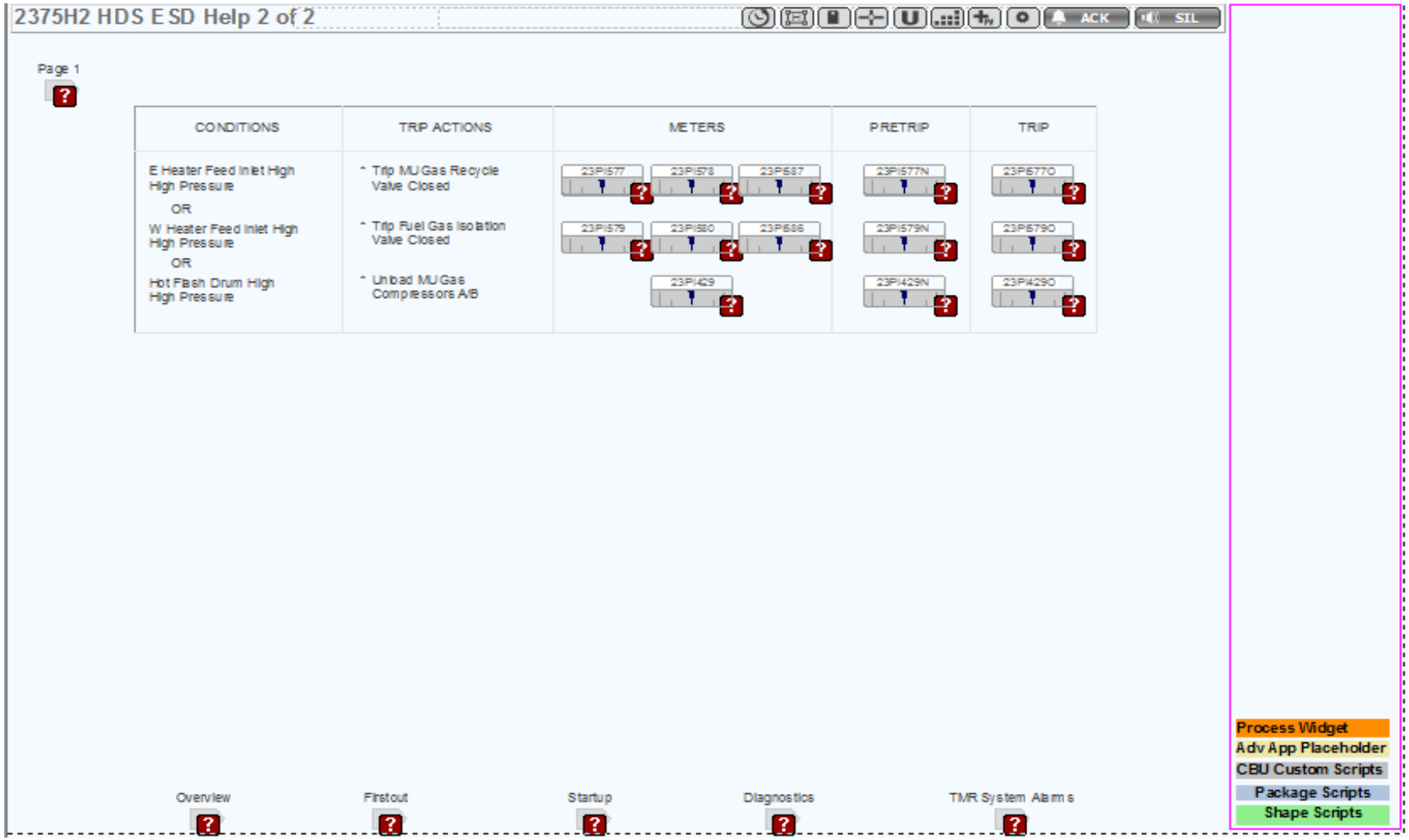
1.170 2375H1 HDS ESD HELP 1 OF 2 (Reformer_2375H1.htm)

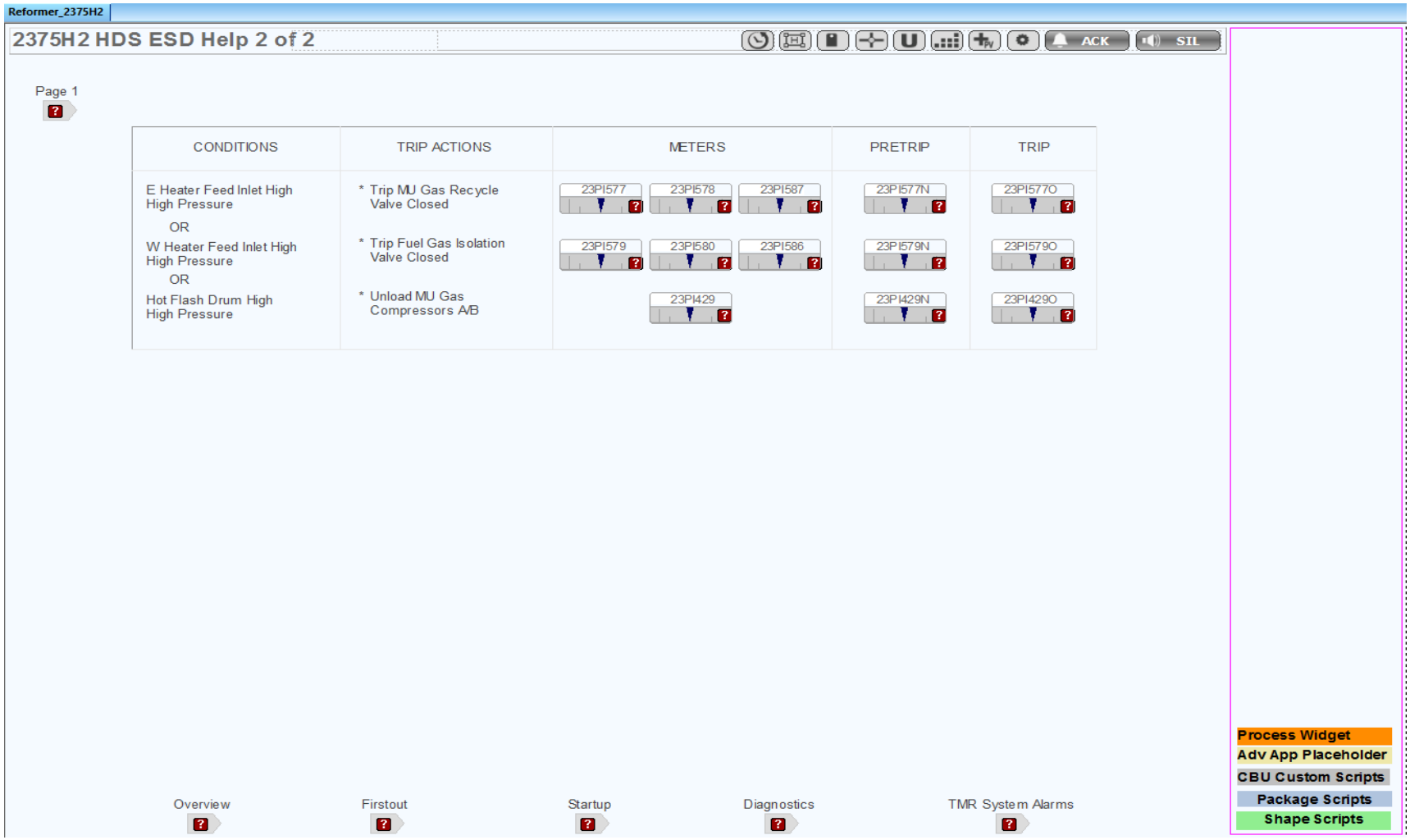


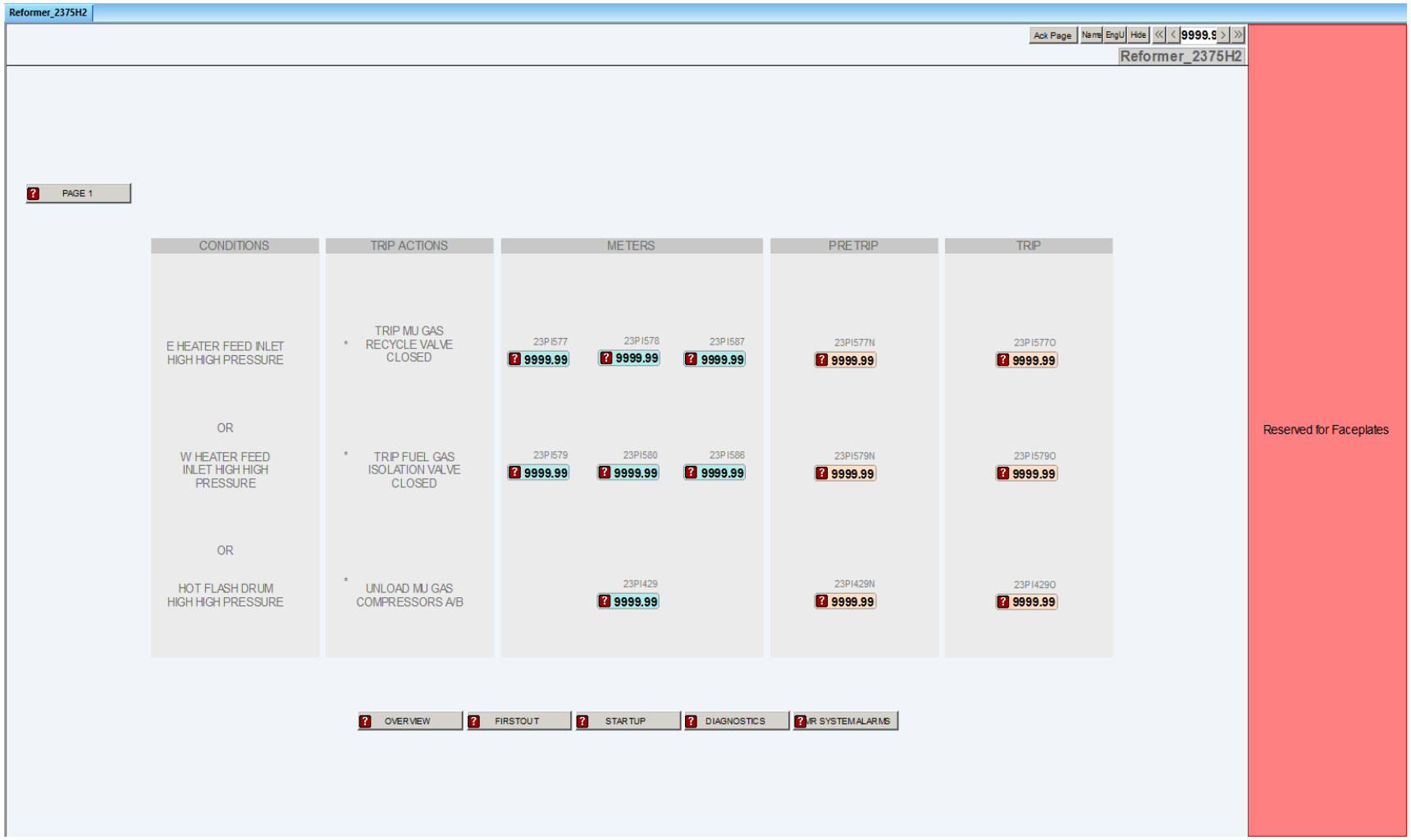

Reformer_2375H1
2375H1 HDS ESD Help 1 of 2
ACK
SIL
Page 2
CONDITIONS
TRIP ACTIONS
METERS
PRETRIP
TRIP
E Exchanger H2 Low Low Flow
OR
W Exchanger H2 Low Low Flow
OR
E Heater F/G Low Low Pressure
OR
W Heater F/G Low Low Pressure
OR
S/D Signal From Heater S/D Switch
OR
No Feed Pump Running
OR
Unit Depressuring
* Trip Fuel Gas Isolation Valve Closed
23FI125A
23FI125B
23FI125C
23FI125N
23FI125O
23FI120A
23FI120B
23FI120C
23FI120N
23FI120O
23PI567
23PI567N
23PI567O
23PI568
23PI568N
23PI568O
23UA910
State
23XL910Q
State
23HL962Q
State
Overview
Firstout
Startup
Diagnostics
TMR System Alarms
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2375H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2375H1
PAGE 2
CONDITIONS
TRIP ACTIONS
METERS
PRETRIP
TRIP
E EXCHANGER H2 LOW LOW FLOW
OR
W EXCHANGER H2 LOW LOW FLOW
OR
E HEATER F/G LOW LOW PRESSURE
OR
W HEATER F/G LOW LOW PRESSURE
OR
S/D SIGNAL FROM HEATER S/D SWITCH
OR
NO FEED PUMP RUNNING
OR
UNIT DEPRESSURING
* TRIP FUEL GAS ISOLATION VALVE CLOSED
23FI125A
23FI125B
23FI125C
23FI120A
23FI120B
23FI120C
23PI567
23PI568
23UA910
23XL910Q
23HL962Q
9999.99
State
23FI125N
23FI120N
23PI567N
23PI568N
23FI125O
23FI120O
23PI567O
23PI568O
OVERVIEW
FIRSTOUT
STARTUP
DIAGNOSTICS
MR SYSTEMALARMS
Reserved for Faceplates

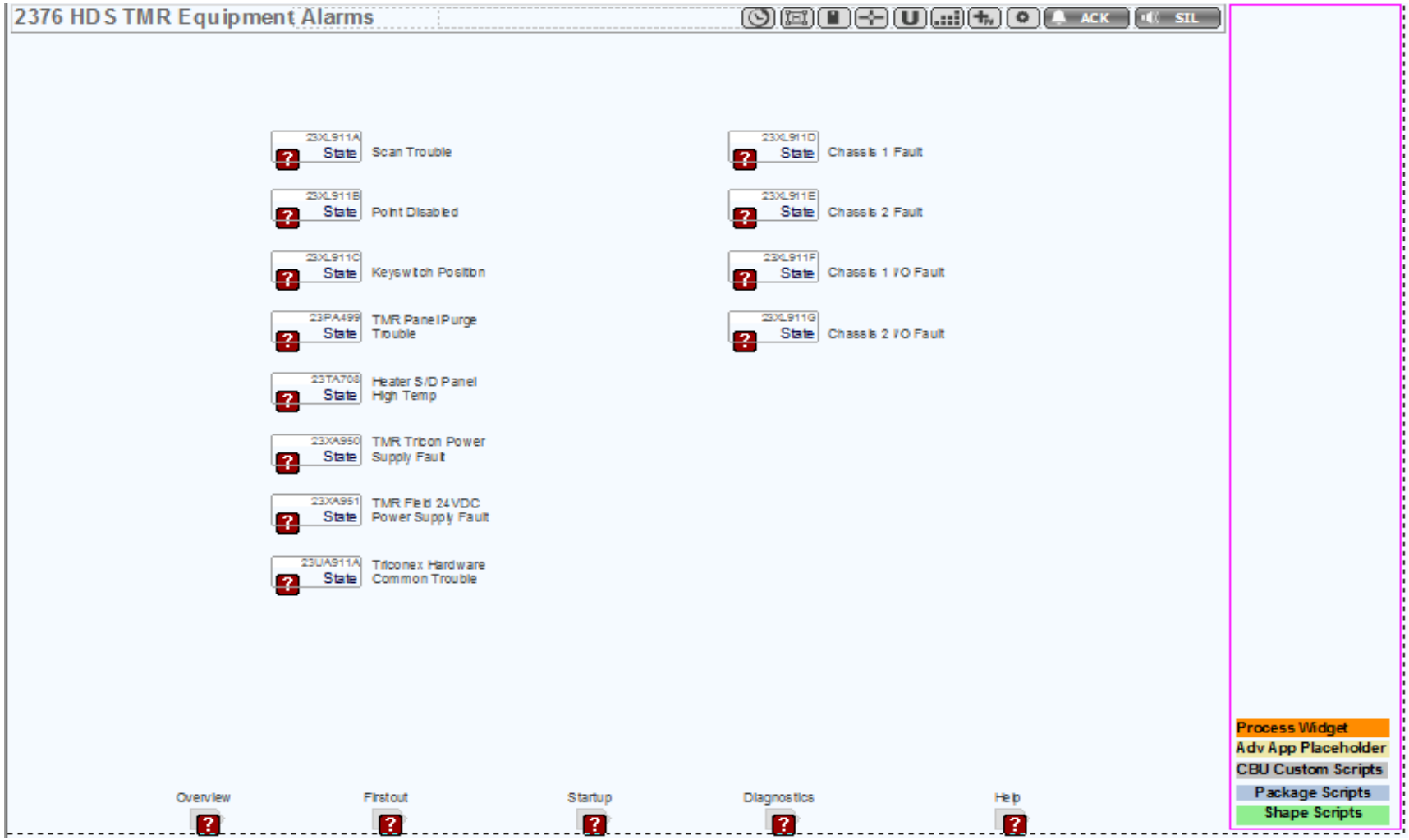
1.171 2375H2 HDS ESD HELP 2 OF 2 (Reformer_2375H2.htm)

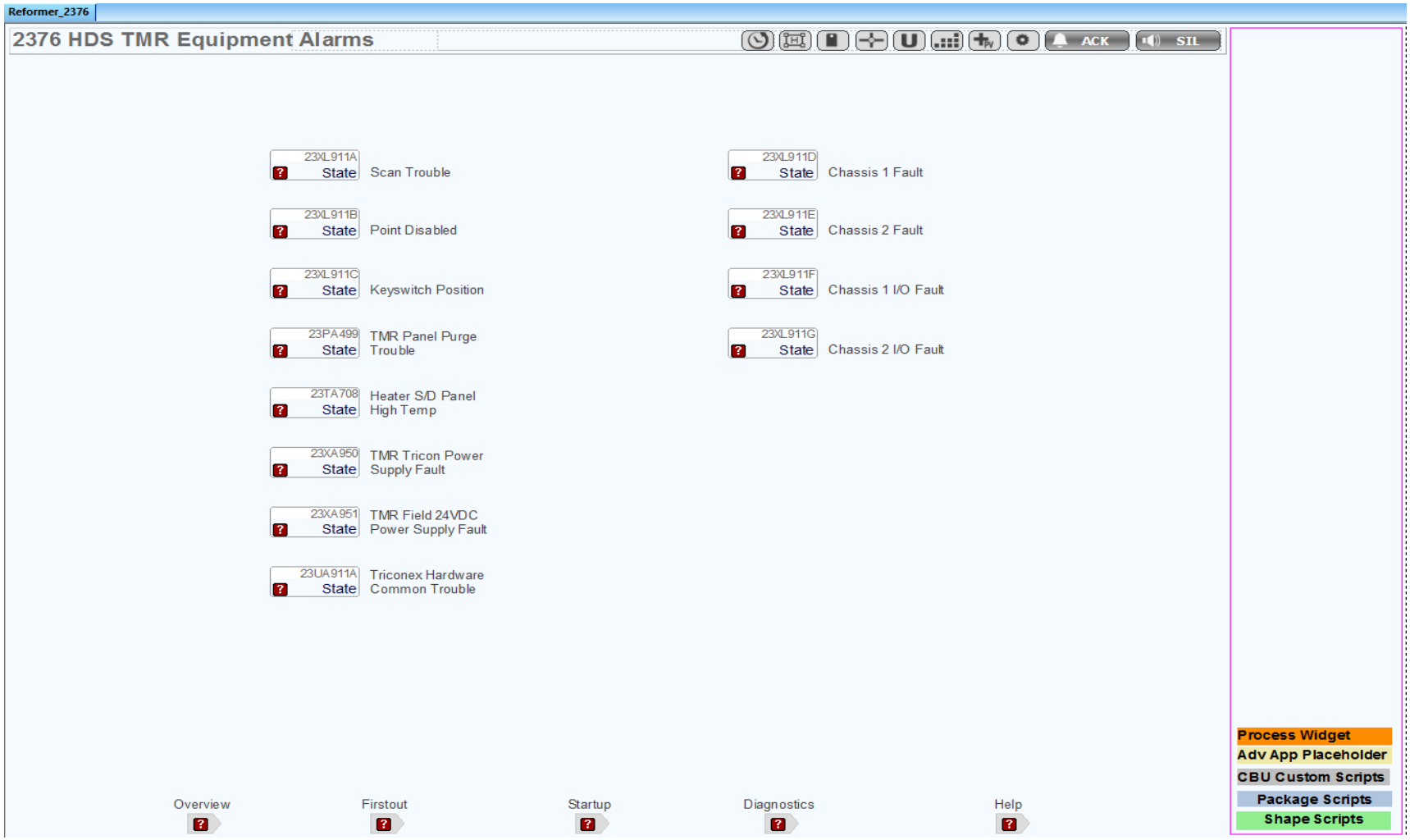


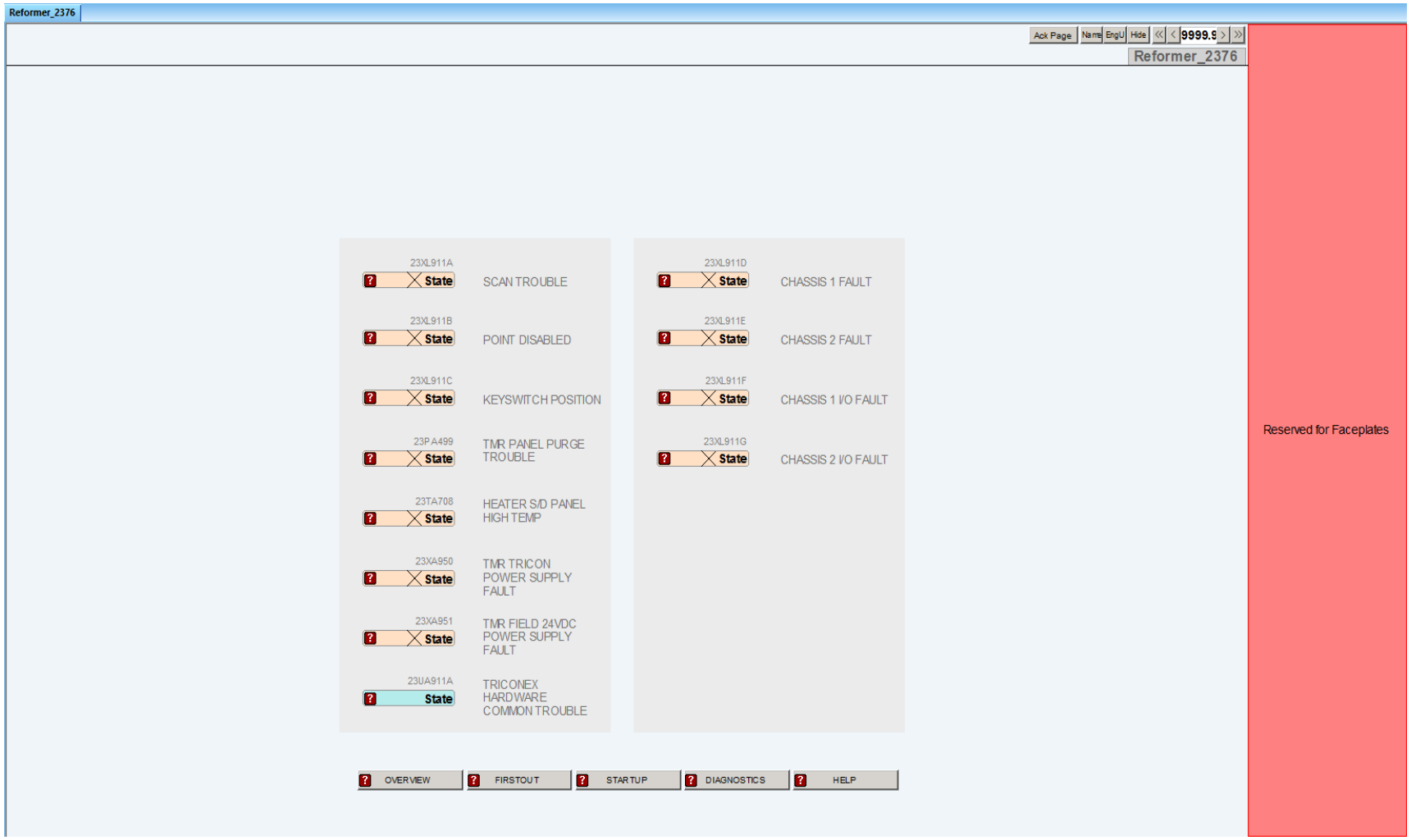

Reformer_2375H2
2375H2 HDS ESD Help 2 of 2
ACK
SIL
Page 1
CONDITIONS
TRIP ACTIONS
METERS
PRETRIP
TRIP
E Heater Feed Inlet High High Pressure
OR
W Heater Feed Inlet High High Pressure
OR
Hot Flash Drum High High Pressure
* Trip MU Gas Recycle Valve Closed
* Trip Fuel Gas Isolation Valve Closed
* Unload MU Gas Compressors A/B
23PI577
23PI578
23PI587
23PI579
23PI580
23PI586
23PI429
23PI577N
23PI579N
23PI429N
23PI577O
23PI579O
23PI429O
Overview
Firstout
Startup
Diagnostics
TMR System Alarms
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2375H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2375H2
PAGE 1
CONDITIONS
TRIP ACTIONS
METERS
PRETRIP
TRIP
E HEATER FEED INLET HIGH HIGH PRESSURE
* TRIP MU GAS RECYCLE VALVE CLOSED
23PI577
9999.99
23PI578
9999.99
23PI587
9999.99
23PI577N
9999.99
23PI577O
9999.99
OR
W HEATER FEED INLET HIGH HIGH PRESSURE
* TRIP FUEL GAS ISOLATION VALVE CLOSED
23PI579
9999.99
23PI580
9999.99
23PI586
9999.99
23PI579N
9999.99
23PI579O
9999.99
OR
HOT FLASH DRUM HIGH HIGH PRESSURE
* UNLOAD MU GAS COMPRESSORS A/B
23PI429
9999.99
23PI429N
9999.99
23PI429O
9999.99
OVERVIEW
FIRSTOUT
STARTUP
DIAGNOSTICS
MR SYSTEMALARMS
Reserved for Faceplates

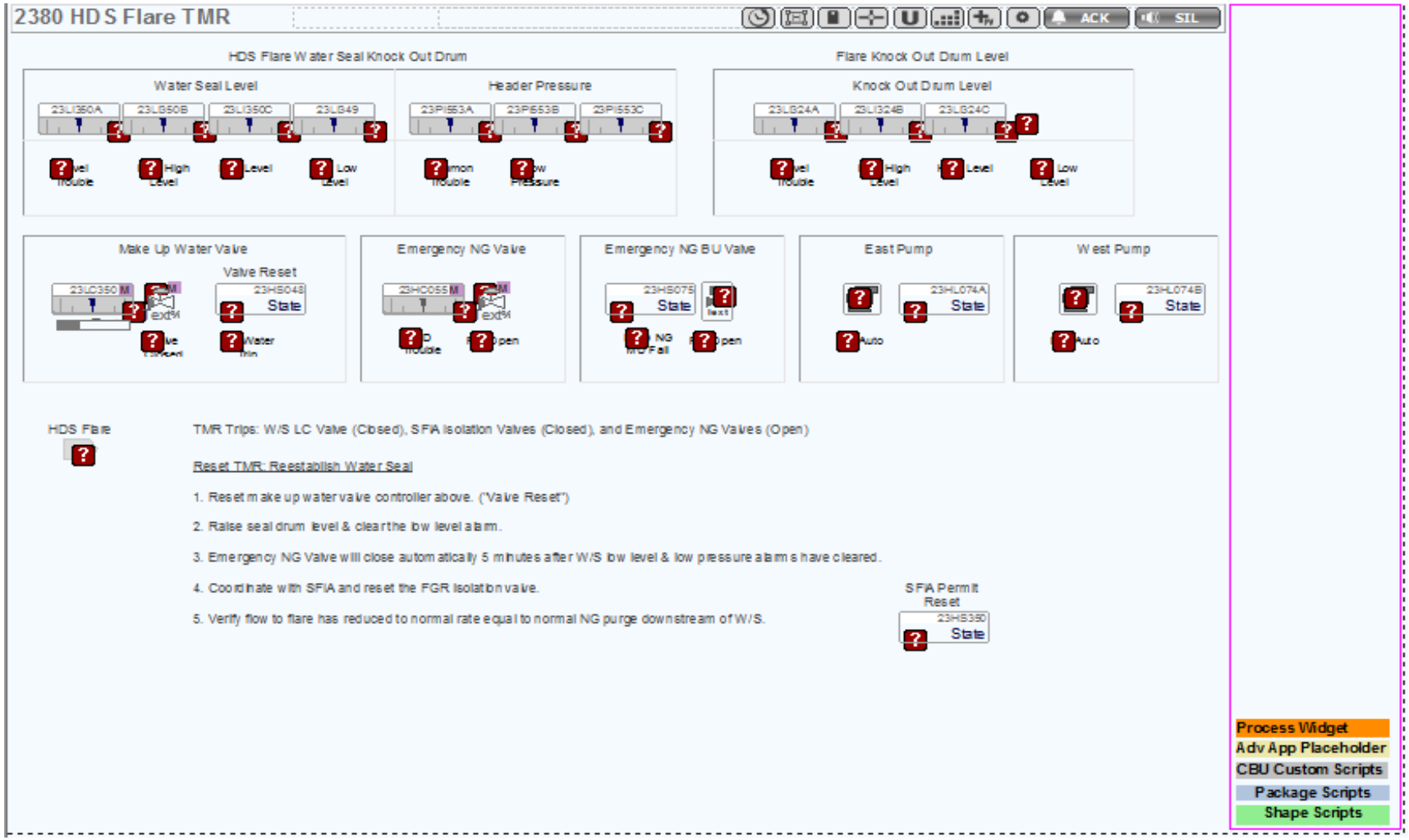
1.172 2376 HDS TMR EQUIPMENT ALARMS (Reformer_2376.htm)

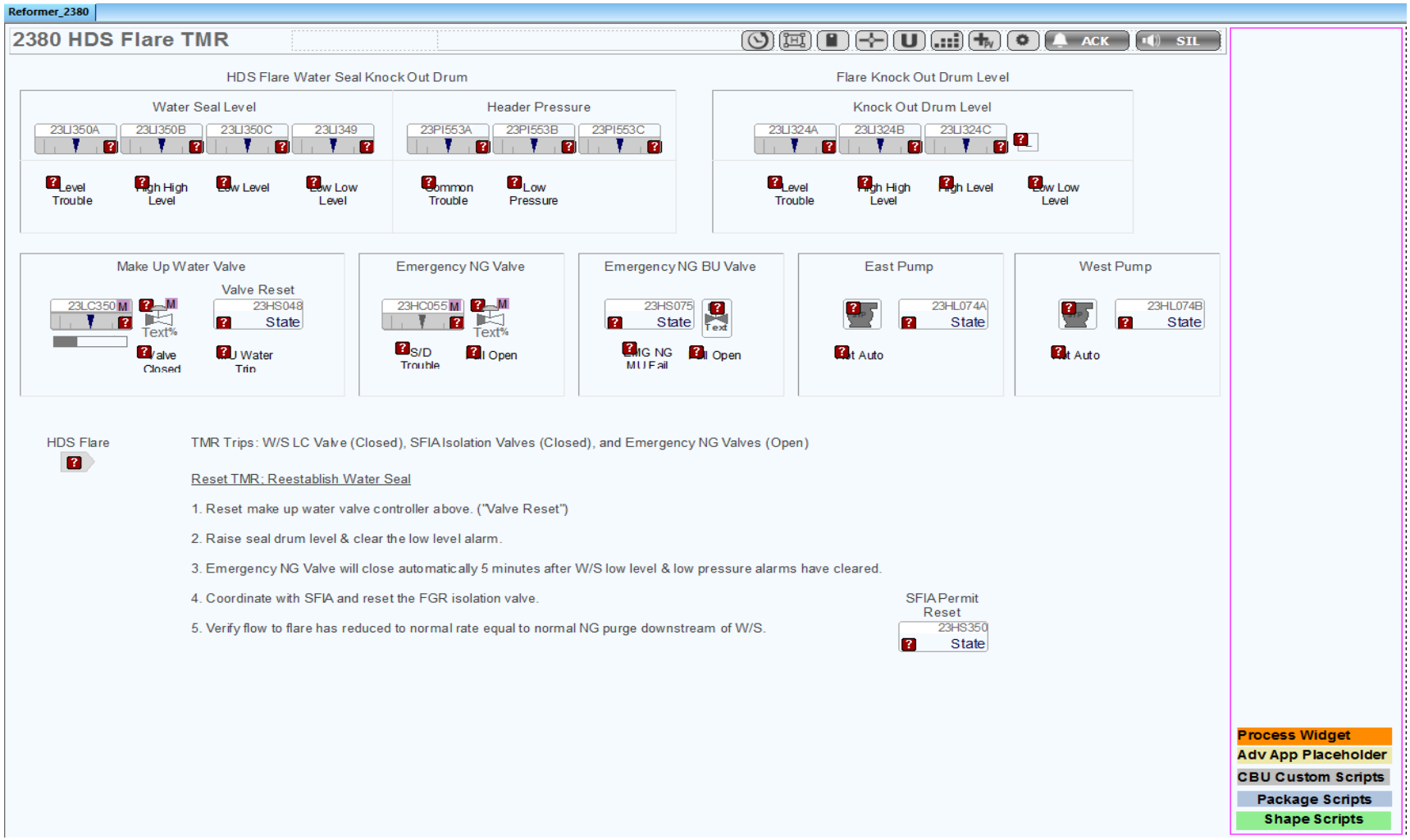



Reformer_2376
2376 HDS TMR Equipment Alarms
ACK
SIL
23XL911A State Scan Trouble
23XL911B State Point Disabled
23XL911C State Keyswitch Position
23PA499 State TMR Panel Purge Trouble
23TA708 State Heater S/D Panel High Temp
23XA950 State TMR Tricon Power Supply Fault
23XA951 State TMR Field 24VDC Power Supply Fault
23UA911A State Triconex Hardware Common Trouble
23XL911D State Chassis 1 Fault
23XL911E State Chassis 2 Fault
23XL911F State Chassis 1 I/O Fault
23XL911G State Chassis 2 I/O Fault
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
Overview
Firstout
Startup
Diagnostics
Help


Reformer_2376
Ack Page
Name
EngU
Hide
9999.9
Reformer_2376
23XL911A
State
SCAN TROUBLE
23XL911B
State
POINT DISABLED
23XL911C
State
KEYSWITCH POSITION
23PA499
State
TMR PANEL PURGE TROUBLE
23TA708
State
HEATER S/D PANEL HIGH TEMP
23XA950
State
TMR TRICON POWER SUPPLY FAULT
23XA951
State
TMR FIELD 24VDC POWER SUPPLY FAULT
23UA911A
State
TRICONEX HARDWARE COMMON TROUBLE
23XL911D
State
CHASSIS 1 FAULT
23XL911E
State
CHASSIS 2 FAULT
23XL911F
State
CHASSIS 1 I/O FAULT
23XL911G
State
CHASSIS 2 I/O FAULT
OVERVIEW
FIRSTOUT
STARTUP
DIAGNOSTICS
HELP
Reserved for Faceplates

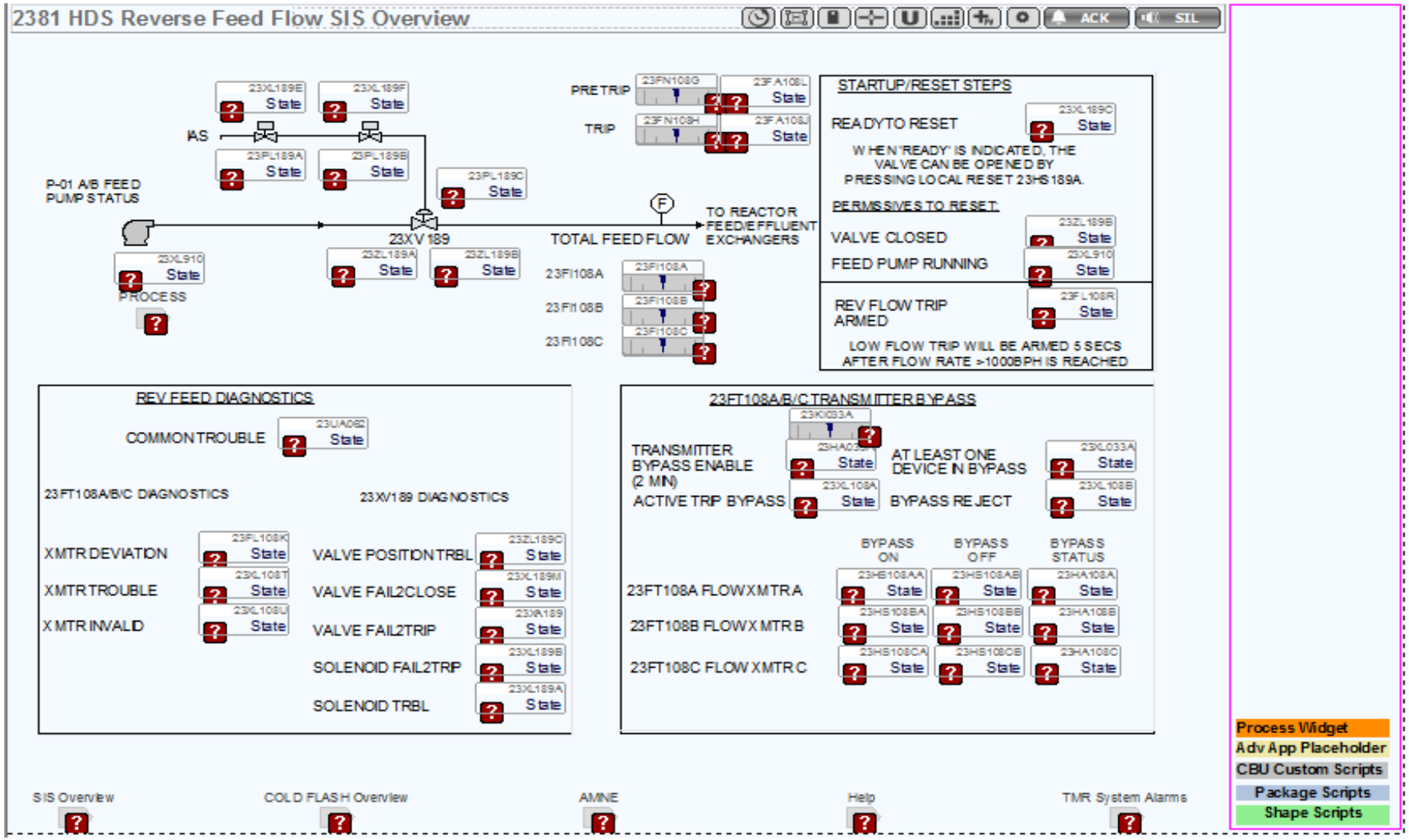
1.173 2380 HDS FLARE TMR (Reformer_2380.htm)

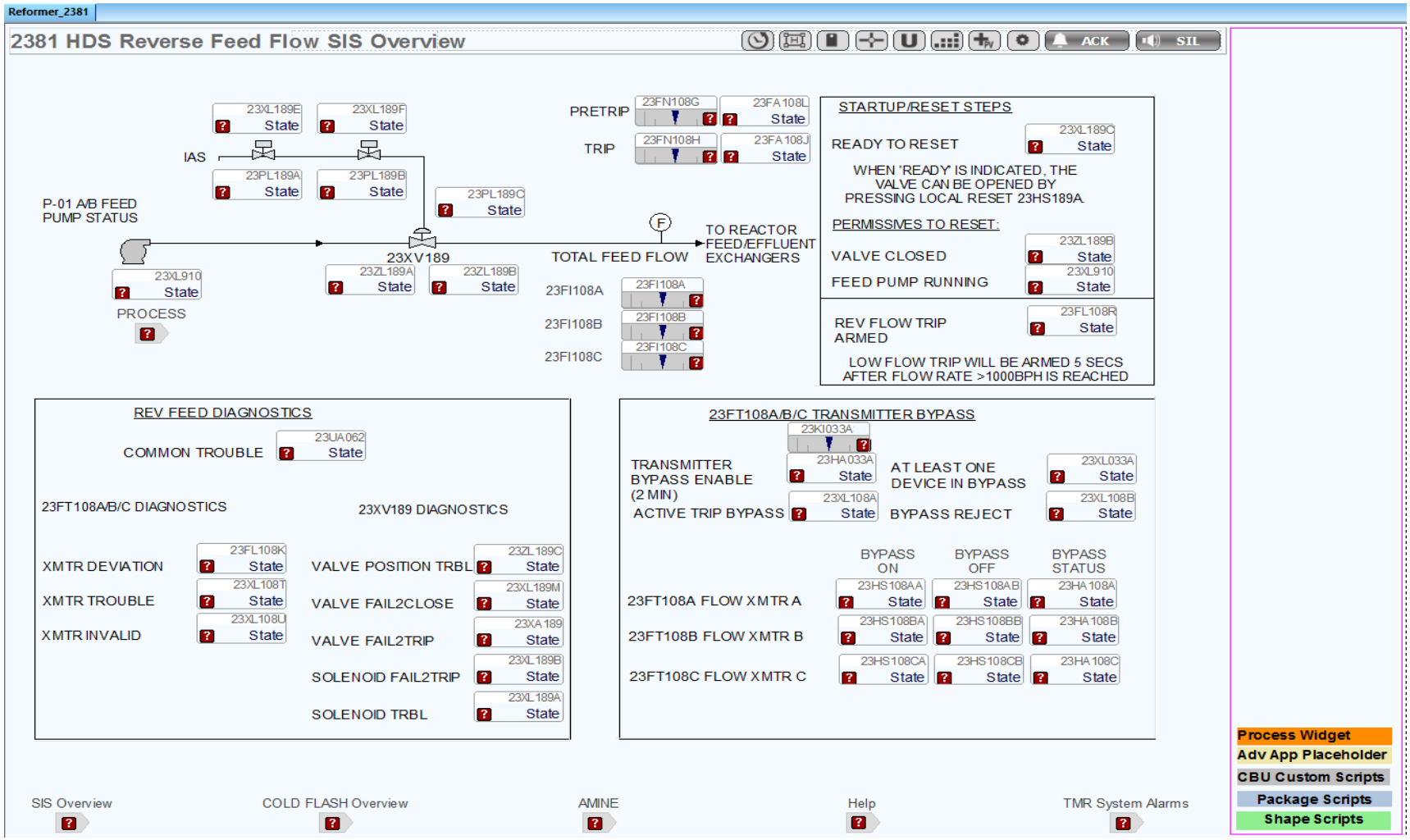


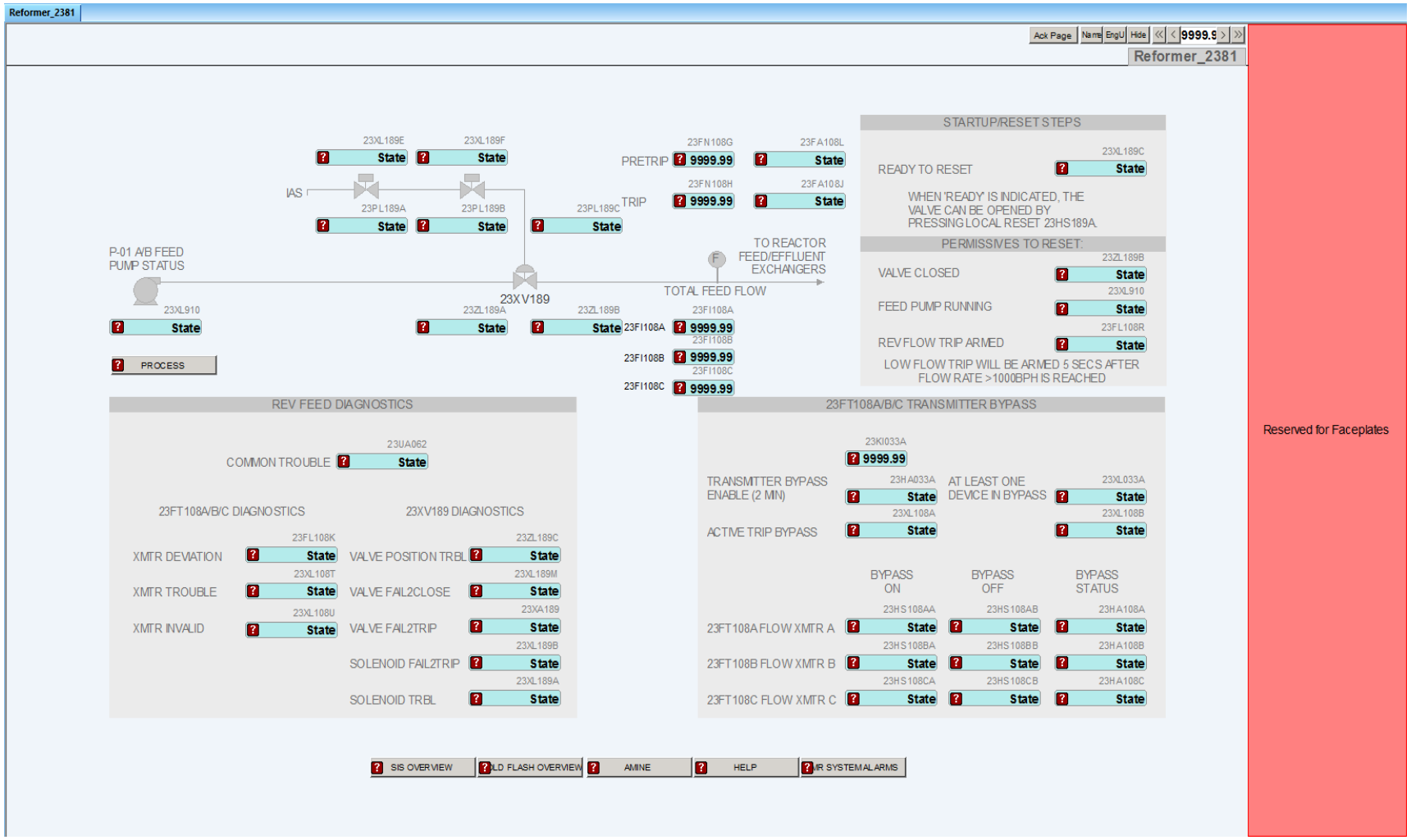

Reformer_2380
2380 HDS Flare TMR
ACK
SIL
HDS Flare Water Seal Knock Out Drum
Water Seal Level
23LI350A
23LI350B
23LI350C
23LI349
Level Trouble
High High Level
Low Level
Low Low Level
Header Pressure
23PI553A
23PI553B
23PI553C
Common Trouble
Low Pressure
Flare Knock Out Drum Level
Knock Out Drum Level
23LI324A
23LI324B
23LI324C
Level Trouble
High High Level
High Level
Low Low Level
Make Up Water Valve
23LC350
Text%
Valve Reset
23HS048
State
Valve Closed
MU Water Trip
Emergency NG Valve
23HC055
Text%
S/D Trouble
Full Open
Emergency NG BU Valve
23HS075
State
Text
NG NG MU Fail
Full Open
East Pump
23HL074A
State
Not Auto
West Pump
23HL074B
State
Not Auto
HDS Flare
TMR Trips: W/S LC Valve (Closed), SFIA Isolation Valves (Closed), and Emergency NG Valves (Open)
Reset TMR: Reestablish Water Seal
1. Reset make up water valve controller above. ("Valve Reset")
2. Raise seal drum level & clear the low level alarm.
3. Emergency NG Valve will close automatically 5 minutes after W/S low level & low pressure alarms have cleared.
4. Coordinate with SFIA and reset the FGR isolation valve.
5. Verify flow to flare has reduced to normal rate equal to normal NG purge downstream of W/S.
SFIA Permit Reset
23HS350
State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

Reformer_2380
Ack Page
Name
EngU
Hide
9999.9
Reformer_2380
HDS FLARE WATER SEAL KNOCK OUT DRUM
WATER SEAL LEVEL
HEADER PRESSURE
23LI350A
23LI350B
23LI350C
23LI349
23PI553A
23PI553B
23PI553C
9999.99
LEVEL TROUBLE
HIGH HIGH LEVEL
LOW LEVEL
LOW LOW LEVEL
COMMON TROUBLE
LOW PRESSURE
23LA350E
23LA350D
23LA350C
23LA350A
23PA553A
23PA553
State
FLARE KNOCK OUT DRUM LEVEL
KNOCK OUT DRUM LEVEL
23LI324A
23LI324B
23LI324C
23LI324C
LEVEL TROUBLE
HIGH HIGH LEVEL
HIGH LEVEL
LOW LOW LEVEL
23LA324E
23LA324C
23LA324B
23LA324D
MAKE UP WATER VALVE
23LC350
9999.99 W
9999.99
9999.99
100%
VALVE RESET
23HS048
VALVE CLOSED
23ZL047
MU WATER TRIP
23XA350A
EMERGENCY NG VALVE
23HC055
23HC055
9999.99
100%
S/D TROUBLE
23XA055
FULL OPEN
23ZL055
EMERGENCY NG BU VALVE
23HS075
23ZL975A
EMG NG MU FAIL
23FA253
FULL OPEN
23ZL075
EAST PUMP
23ZL049
23HL074A
NOT AUTO
23HA050
WEST PUMP
23ZL072
23HL074B
Not Auto
23HA073
HDS FLARE
TMR TRIPS: W/S LC VALVE (CLOSED), SFIA ISOLATION VALVES (CLOSED), AND EMERGENCY NG VALVES (OPEN)
RESET TMR; REESTABLISH WATER SEAL
1. RESET MAKE UP WATER VALVE CONTROLLER ABOVE. ("VALVE RESET")
2. RAISE SEAL DRUM LEVEL & CLEAR THE LOW LEVEL ALARM.
3. EMERGENCY NG VALVE WILL CLOSE AUTOMATICALLY 5 MINUTES AFTER W/S LOW LEVEL & LOW PRESSURE ALARMS HAVE CLEARED.
4. COORDINATE WITH SFIA AND RESET THE FGR ISOLATION VALVE.
5. VERIFY FLOW TO FLARE HAS REDUCED TO NORMAL RATE EQUAL TO NORMAL NG PURGE DOWNSTREAM OF W/S.
SFIA PERMIT RESET
23HS350
Reserved for Faceplates

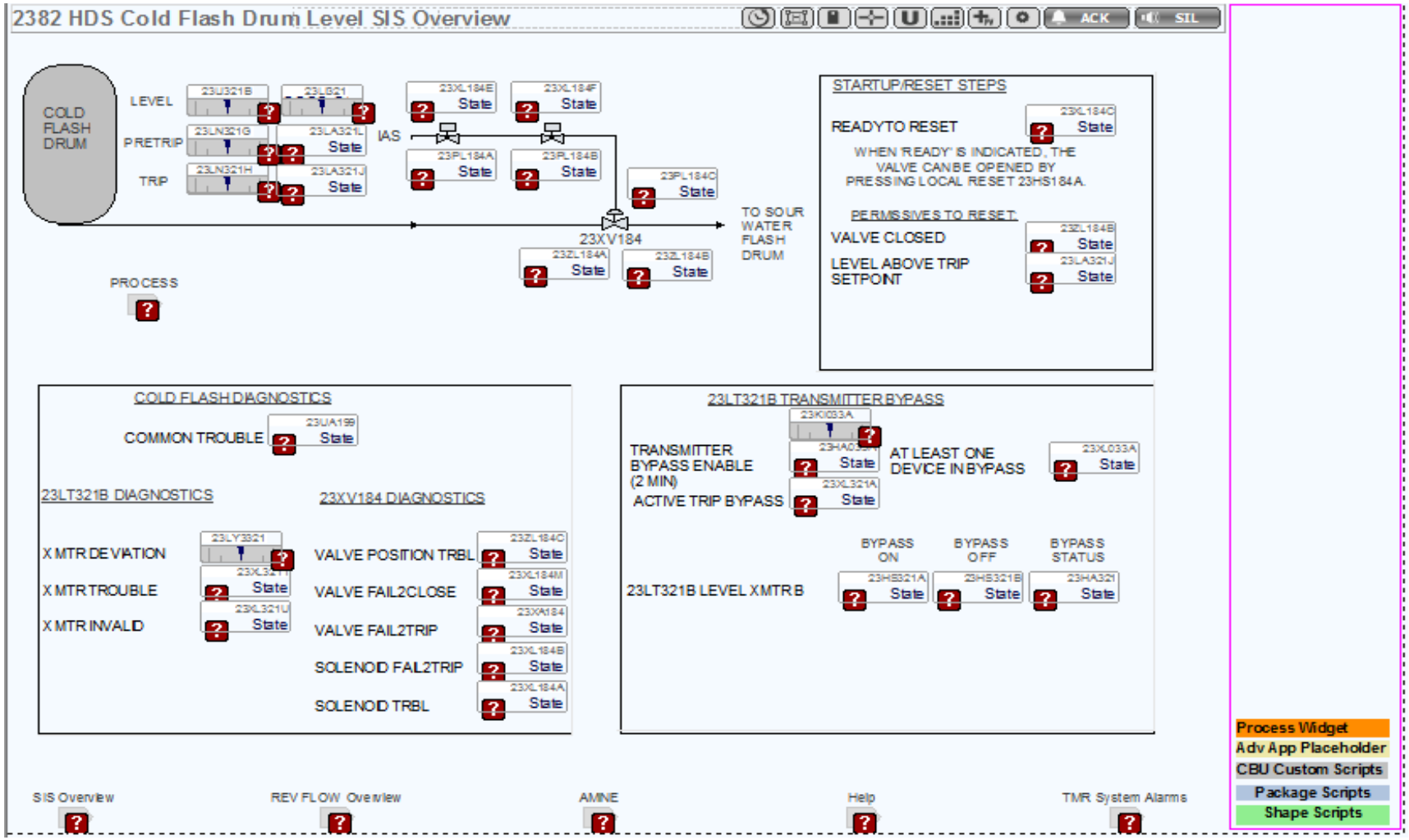
1.174 2381 HDS REVERSE FEED FLOW SIS OVERVIEW (Reformer_2381.htm)

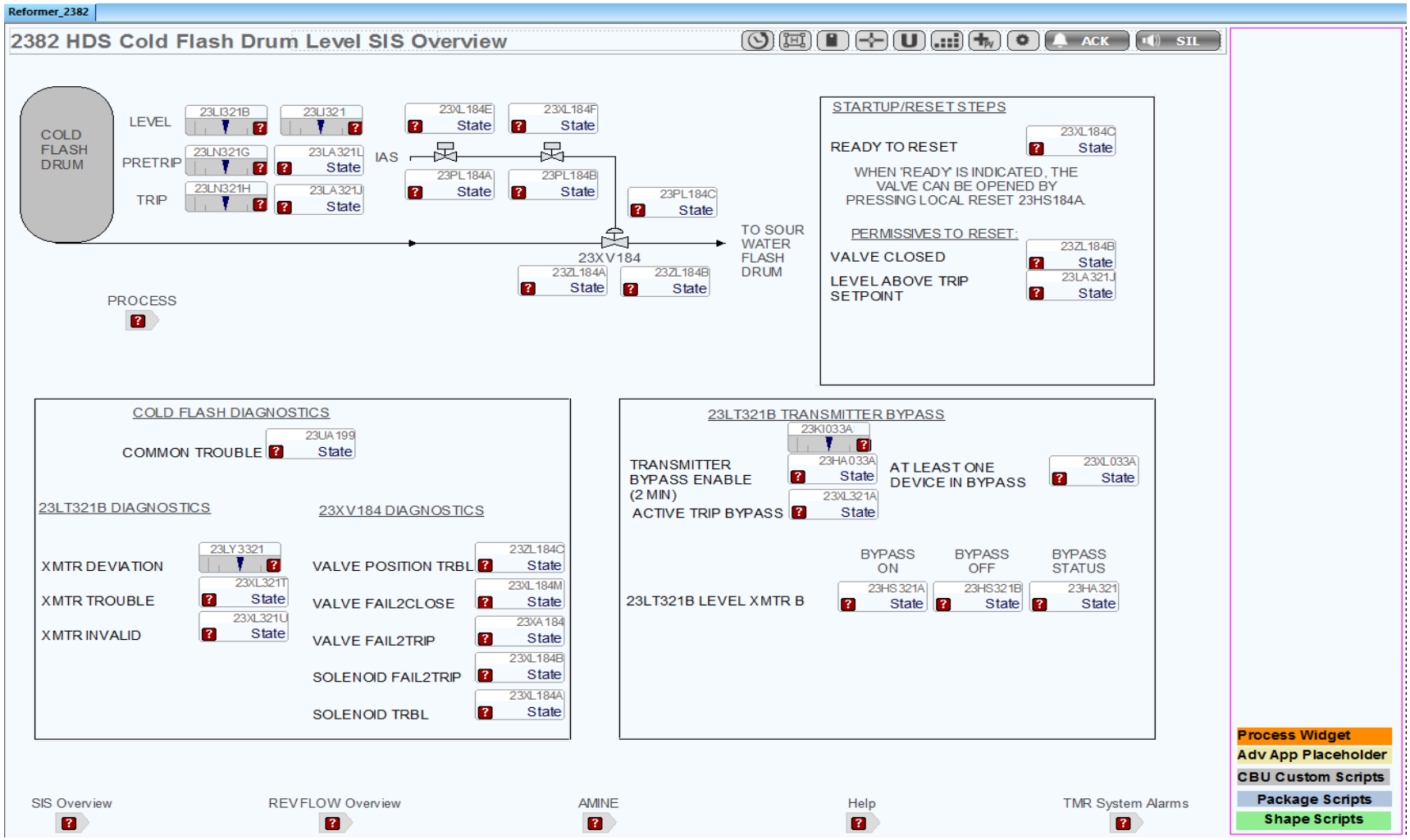


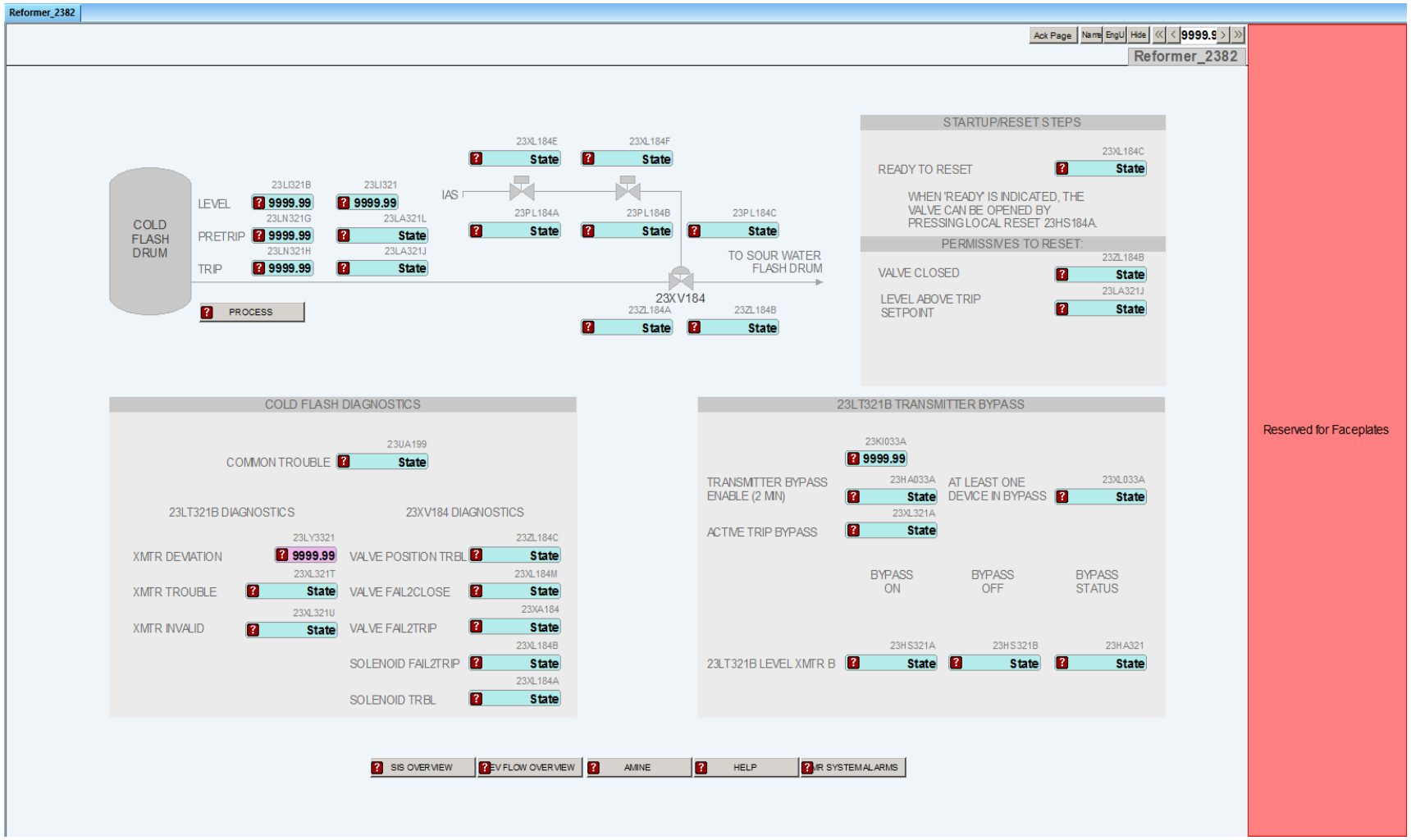

Reformer_2381
2381 HDS Reverse Feed Flow SIS Overview
ACK
SIL
23XL189E State
23XL189F State
IAS
23PL189A State
23PL189B State
23PL189C State
P-01 A/B FEED PUMP STATUS
23XL910 State
PROCESS
23XV189
23ZL189A State
23ZL189B State
PRETRIP
23FN108G
23FA108L State
TRIP
23FN108H
23FA108J State
TOTAL FEED FLOW
TO REACTOR FEED/EFFLUENT EXCHANGERS
23FI108A
23FI108B
23FI108C
STARTUP/RESET STEPS
READY TO RESET
23XL189C State
WHEN 'READY' IS INDICATED, THE VALVE CAN BE OPENED BY PRESSING LOCAL RESET 23HS189A
PERMISSIVES TO RESET:
VALVE CLOSED
23ZL189B State
FEED PUMP RUNNING
23XL910 State
REV FLOW TRIP ARMED
23FL108R State
LOW FLOW TRIP WILL BE ARMED 5 SECS AFTER FLOW RATE >1000BPH IS REACHED
REV FEED DIAGNOSTICS
COMMON TROUBLE
23UA062 State
23FT108A/B/C DIAGNOSTICS
XMTR DEVIATION
23FL108K State
XMTR TROUBLE
23XL108T State
XMTR INVALID
23XL108U State
23XV189 DIAGNOSTICS
VALVE POSITION TRBL
23ZL189C State
VALVE FAIL2CLOSE
23XL189M State
VALVE FAIL2TRIP
23XA189 State
SOLENOID FAIL2TRIP
23XL189B State
SOLENOID TRBL
23XL189A State
23FT108A/B/C TRANSMITTER BYPASS
23KI033A
TRANSMITTER BYPASS ENABLE (2 MIN)
23HA033A State
ACTIVE TRIP BYPASS
23XL108A State
AT LEAST ONE DEVICE IN BYPASS
23XL033A State
BYPASS REJECT
23XL108B State
BYPASS ON
BYPASS OFF
BYPASS STATUS
23FT108A FLOW XMTR A
23HS108AA State
23HS108AB State
23HA108A State
23FT108B FLOW XMTR B
23HS108BA State
23HS108BB State
23HA108B State
23FT108C FLOW XMTR C
23HS108CA State
23HS108CB State
23HA108C State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
SIS Overview
COLD FLASH Overview
AMINE
Help
TMR System Alarms


Reformer_2381
Ack Page
Name
EngU
Hide
9999.9
Reformer_2381
STARTUP/RESET STEPS
READY TO RESET
23XL189C
State
WHEN 'READY' IS INDICATED, THE VALVE CAN BE OPENED BY PRESSING LOCAL RESET 23HS189A.
PERMISSIVES TO RESET:
VALVE CLOSED
23ZL189B
FEED PUMP RUNNING
23XL910
REV FLOW TRIP ARMED
23FL108R
LOW FLOW TRIP WILL BE ARMED 5 SECS AFTER FLOW RATE >1000BPH IS REACHED
23XL189E
23XL189F
IAS
23PL189A
23PL189B
23PL189C
PRETRIP
TRIP
23FN108G
23FN108H
23FA108L
23FA108J
P-01 A/B FEED PUMP STATUS
23XL910
PROCESS
23XV189
TO REACTOR FEED/EFFLUENT EXCHANGERS
TOTAL FEED FLOW
23ZL189A
23ZL189B
23FI108A
23FI108B
23FI108C
9999.99
REV FEED DIAGNOSTICS
COMMON TROUBLE
23UA062
23FT108A/B/C DIAGNOSTICS
XMTR DEVIATION
23FL108K
XMTR TROUBLE
23XL108T
XMTR INVALID
23XL108U
23XV189 DIAGNOSTICS
VALVE POSITION TRBL
23ZL189C
VALVE FAIL2CLOSE
23XL189M
VALVE FAIL2TRIP
23XA189
SOLENOID FAIL2TRIP
23XL189B
SOLENOID TRBL
23XL189A
23FT108A/B/C TRANSMITTER BYPASS
23KI033A
TRANSMITTER BYPASS ENABLE (2 MIN)
23HA033A
ACTIVE TRIP BYPASS
23XL108A
AT LEAST ONE DEVICE IN BYPASS
23XL033A
23XL108B
BYPASS ON
BYPASS OFF
BYPASS STATUS
23FT108A FLOW XMTR A
23HS108AA
23HS108AB
23HA108A
23FT108B FLOW XMTR B
23HS108BA
23HS108BB
23HA108B
23FT108C FLOW XMTR C
23HS108CA
23HS108CB
23HA108C
SIS OVERVIEW
FLD FLASH OVERVIEW
AMINE
HELP
AIR SYSTEM ALARMS
Reserved for Faceplates

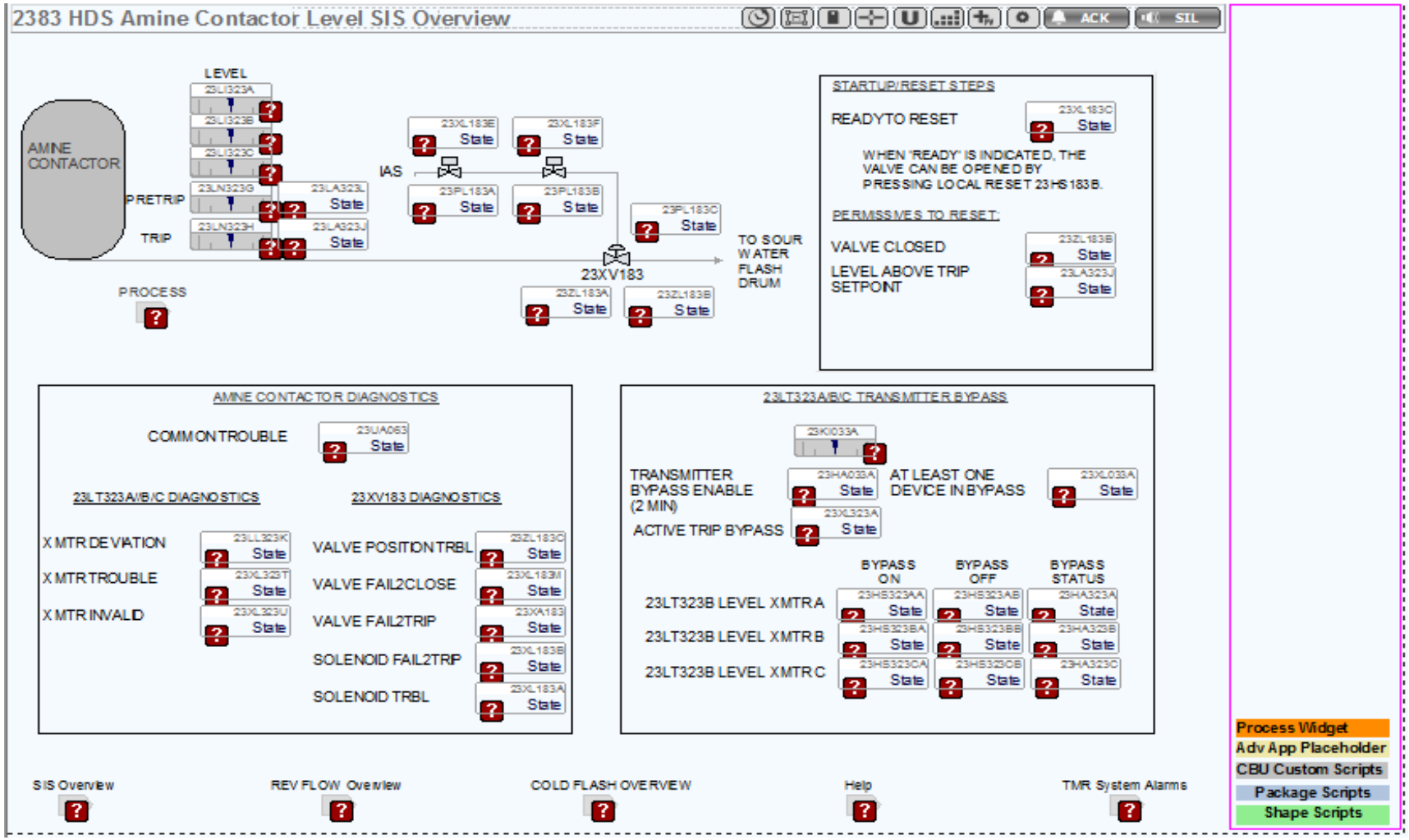
1.175 2382 HDS COLD FLASH DRUM LEVEL SIS OVERVIEW (Reformer_2382.htm)

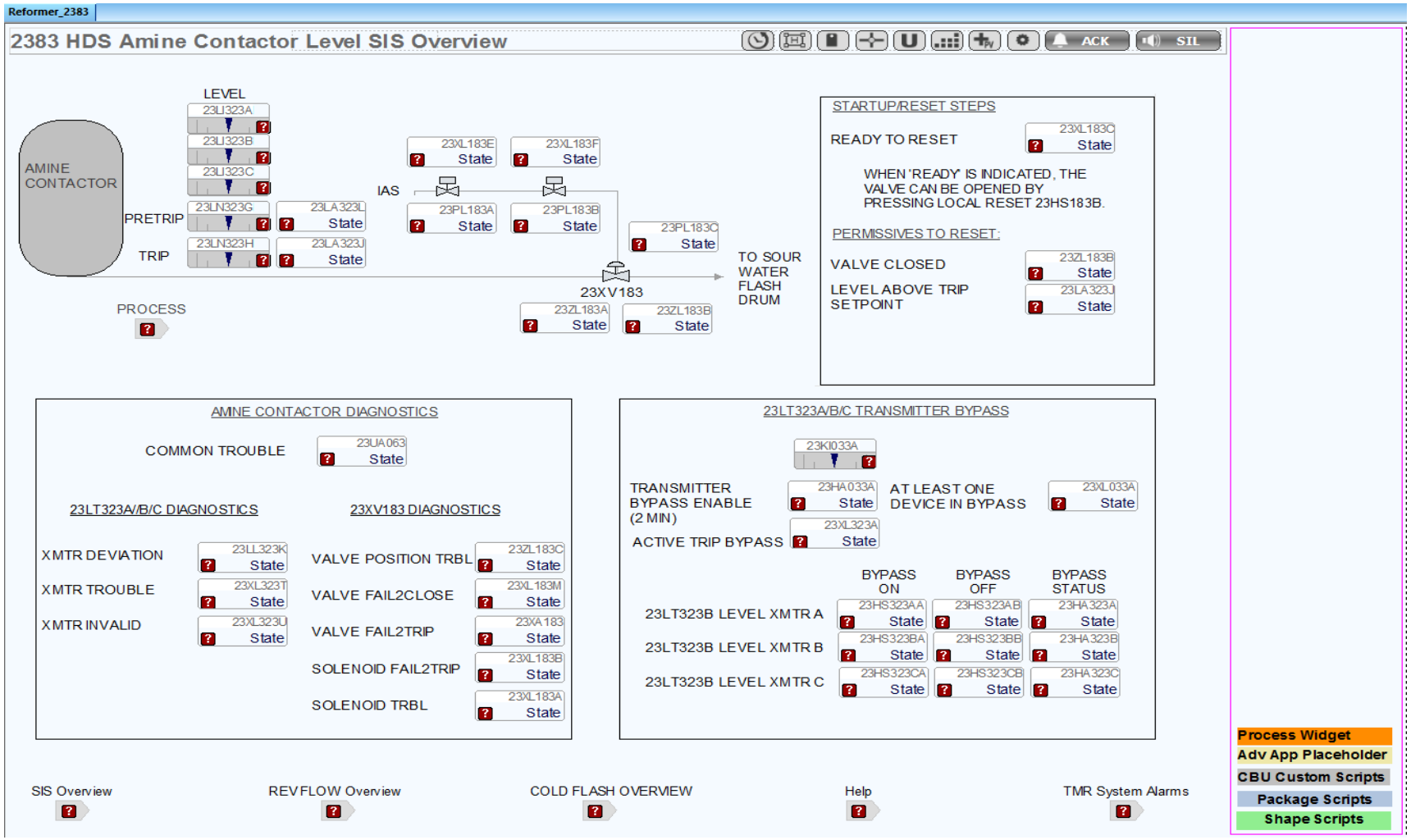


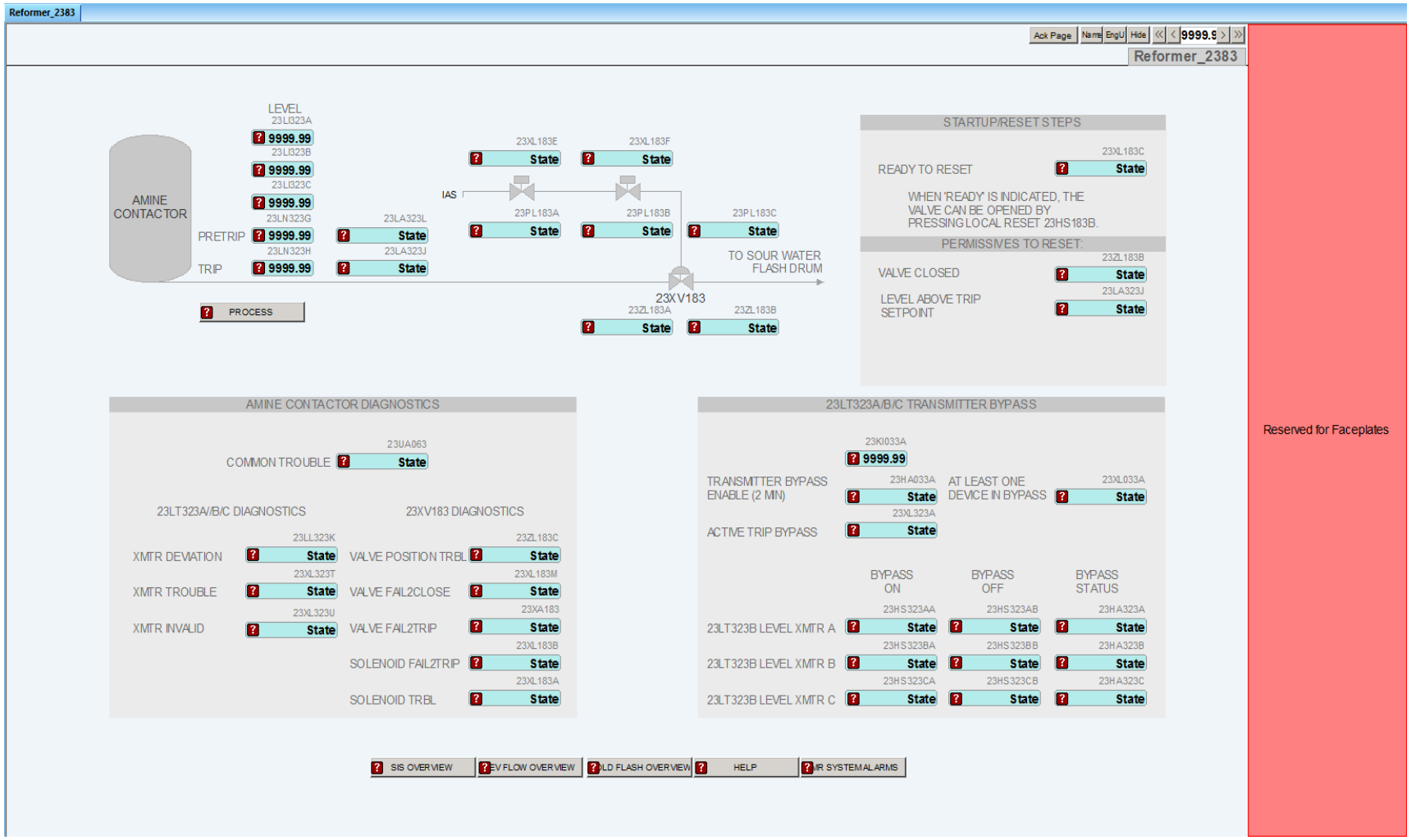

Reformer_2382
2382 HDS Cold Flash Drum Level SIS Overview
ACK
SIL
COLD FLASH DRUM
LEVEL
PRETRIP
TRIP
23LI321B
23LI321
23LN321G
23LA321L
State
23LN321H
23LA321J
State
IAS
23XL184E
State
23XL184F
State
23PL184A
State
23PL184B
State
23PL184C
State
23XV184
23ZL184A
State
23ZL184B
State
TO SOUR WATER FLASH DRUM
PROCESS
STARTUP/RESET STEPS
READY TO RESET
23XL184C
State
WHEN 'READY' IS INDICATED, THE VALVE CAN BE OPENED BY PRESSING LOCAL RESET 23HS184A.
PERMISSIVES TO RESET:
VALVE CLOSED
23ZL184B
State
LEVEL ABOVE TRIP SETPOINT
23LA321J
State
COLD FLASH DIAGNOSTICS
COMMON TROUBLE
23UA199
State
23LT321B DIAGNOSTICS
XMTR DEVIATION
23LY3321
XMTR TROUBLE
23XL321T
State
XMTR INVALID
23XL321U
State
23XV184 DIAGNOSTICS
VALVE POSITION TRBL
23ZL184C
State
VALVE FAIL2CLOSE
23XL184M
State
VALVE FAIL2TRIP
23XA184
State
SOLENOID FAIL2TRIP
23XL184B
State
SOLENOID TRBL
23XL184A
State
23LT321B TRANSMITTER BYPASS
23KI033A
TRANSMITTER BYPASS ENABLE (2 MIN)
23HA033A
State
ACTIVE TRIP BYPASS
23XL321A
State
AT LEAST ONE DEVICE IN BYPASS
23XL033A
State
BYPASS ON
BYPASS OFF
BYPASS STATUS
23LT321B LEVEL XMTR B
23HS321A
State
23HS321B
State
23HA321
State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
SIS Overview
REVFLOW Overview
AMINE
Help
TMR System Alarms


Reformer_2382
Ack Page
Name
EngU
Hide
9999.9
Reformer_2382
COLD FLASH DRUM
LEVEL
PRETRIP
TRIP
23LI321B
23LI321
23LN321G
23LA321L
23LN321H
23LA321J
9999.99
State
PROCESS
IAS
23XL184E
23XL184F
23PL184A
23PL184B
23PL184C
TO SOUR WATER FLASH DRUM
23XV184
23ZL184A
23ZL184B
STARTUP/RESET STEPS
READY TO RESET
23XL184C
WHEN 'READY' IS INDICATED, THE VALVE CAN BE OPENED BY PRESSING LOCAL RESET 23HS184A.
PERMISSIVES TO RESET:
VALVE CLOSED
23ZL184B
LEVEL ABOVE TRIP SETPOINT
23LA321J
COLD FLASH DIAGNOSTICS
COMMON TROUBLE
23UA199
23LT321B DIAGNOSTICS
23XV184 DIAGNOSTICS
XMTR DEVIATION
23LY3321
XMTR TROUBLE
23XL321T
XMTR INVALID
23XL321U
VALVE POSITION TRBL
23ZL184C
VALVE FAIL2CLOSE
23XL184M
VALVE FAIL2TRIP
23XA184
SOLENOID FAIL2TRIP
23XL184B
SOLENOID TRBL
23XL184A
23LT321B TRANSMITTER BYPASS
23KI033A
TRANSMITTER BYPASS ENABLE (2 MN)
23HA033A
ACTIVE TRIP BYPASS
23XL321A
AT LEAST ONE DEVICE IN BYPASS
23XL033A
BYPASS ON
BYPASS OFF
BYPASS STATUS
23LT321B LEVEL XMTR B
23HS321A
23HS321B
23HA321
SIS OVERVIEW
EV FLOW OVERVIEW
AMINE
HELP
IR SYSTEM ALARMS
Reserved for Faceplates

1.176 2383 HDS AMINE CONTACTOR LEVEL SIS OVERVIEW (Reformer_2383.htm)




Reformer_2383
2383 HDS Amine Contactor Level SIS Overview
ACK
SIL
LEVEL
23LI323A
23LI323B
23LI323C
AMINE CONTACTOR
PRETRIP
TRIP
23LN323G
23LN323H
23LA323L
23LA323J
State
IAS
23XL183E
23XL183F
23PL183A
23PL183B
23PL183C
23XV183
TO SOUR WATER FLASH DRUM
PROCESS
23ZL183A
23ZL183B
STARTUP/RESET STEPS
READY TO RESET
23XL183C
WHEN 'READY' IS INDICATED, THE VALVE CAN BE OPENED BY PRESSING LOCAL RESET 23HS183B.
PERMISSIVES TO RESET:
VALVE CLOSED
23ZL183B
LEVEL ABOVE TRIP SETPOINT
AMINE CONTACTOR DIAGNOSTICS
COMMON TROUBLE
23UA063
23LT323A/B/C DIAGNOSTICS
XMTR DEVIATION
23LL323K
XMTR TROUBLE
23XL323T
XMTR INVALID
23XL323U
23XV183 DIAGNOSTICS
VALVE POSITION TRBL
23ZL183C
VALVE FAIL2CLOSE
23XL183M
VALVE FAIL2TRIP
23XA183
SOLENOID FAIL2TRIP
23XL183B
SOLENOID TRBL
23XL183A
23LT323A/B/C TRANSMITTER BYPASS
23KI033A
TRANSMITTER BYPASS ENABLE (2 MIN)
23HA033A
AT LEAST ONE DEVICE IN BYPASS
23XL033A
ACTIVE TRIP BYPASS
23XL323A
BYPASS ON
BYPASS OFF
BYPASS STATUS
23LT323B LEVEL XMTR A
23HS323AA
23HS323AB
23HA323A
23LT323B LEVEL XMTR B
23HS323BA
23HS323BB
23HA323B
23LT323B LEVEL XMTR C
23HS323CA
23HS323CB
23HA323C
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
SIS Overview
REVFLOW Overview
COLD FLASH OVERVIEW
Help
TMR System Alarms


Reformer_2383
Ack Page
Name
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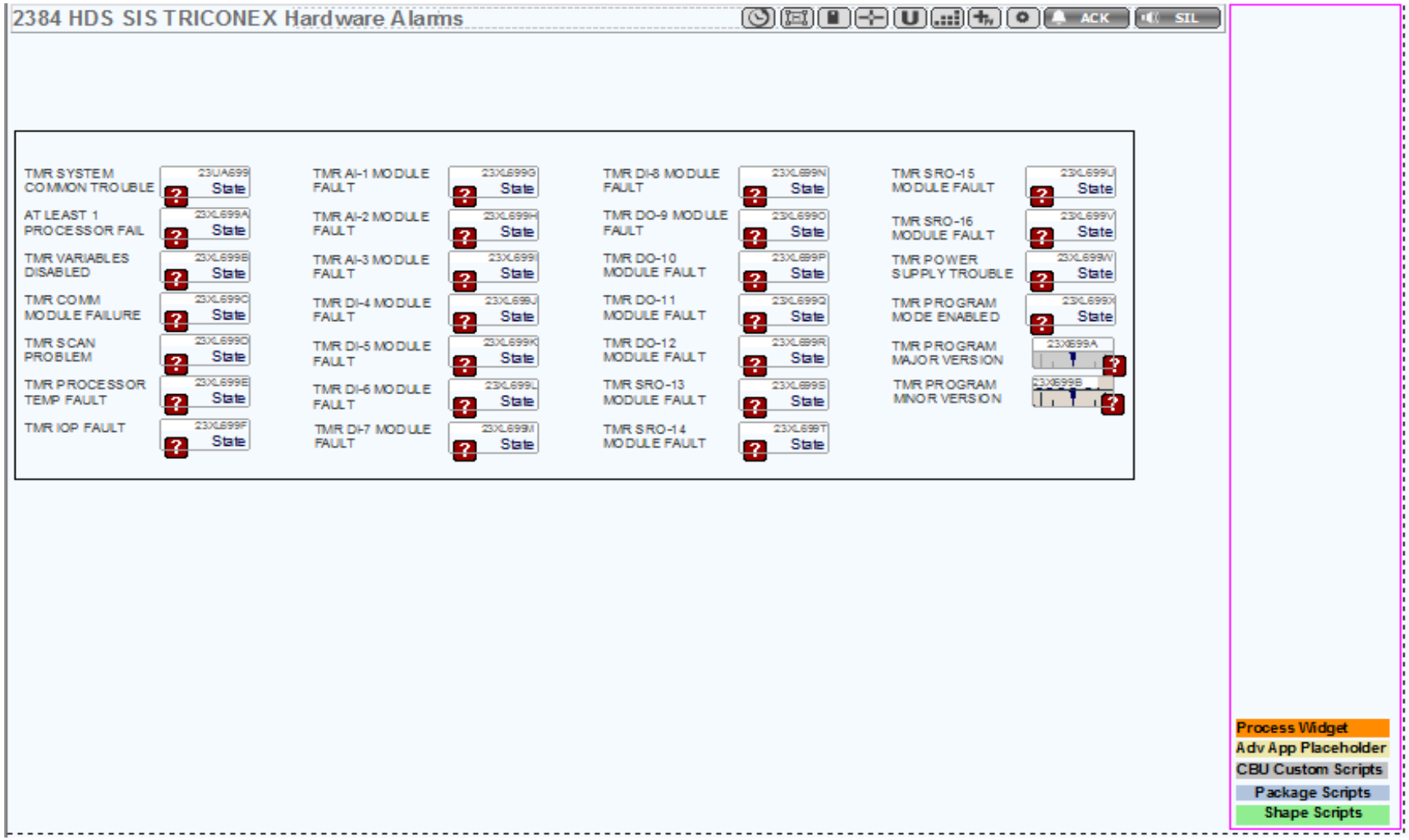
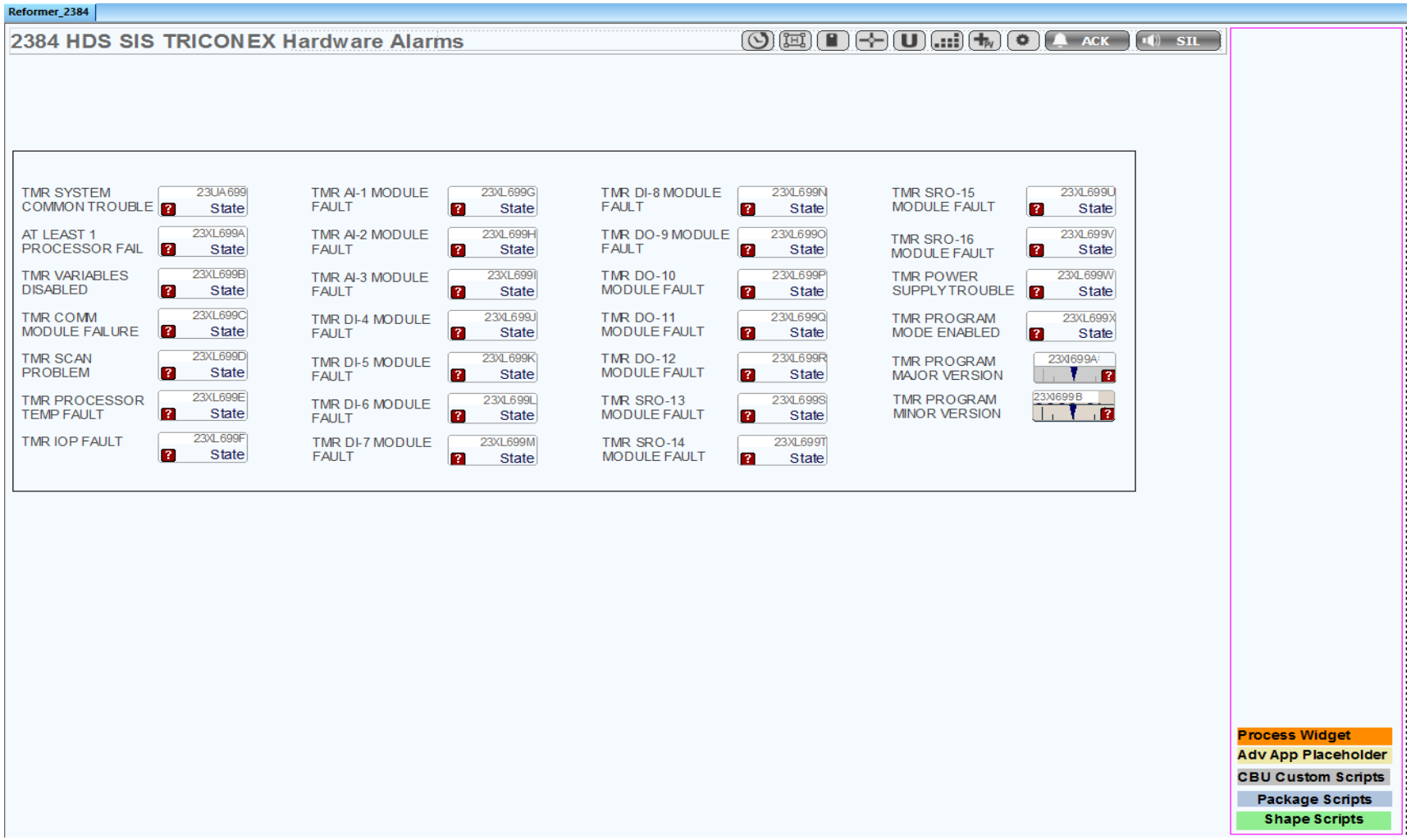
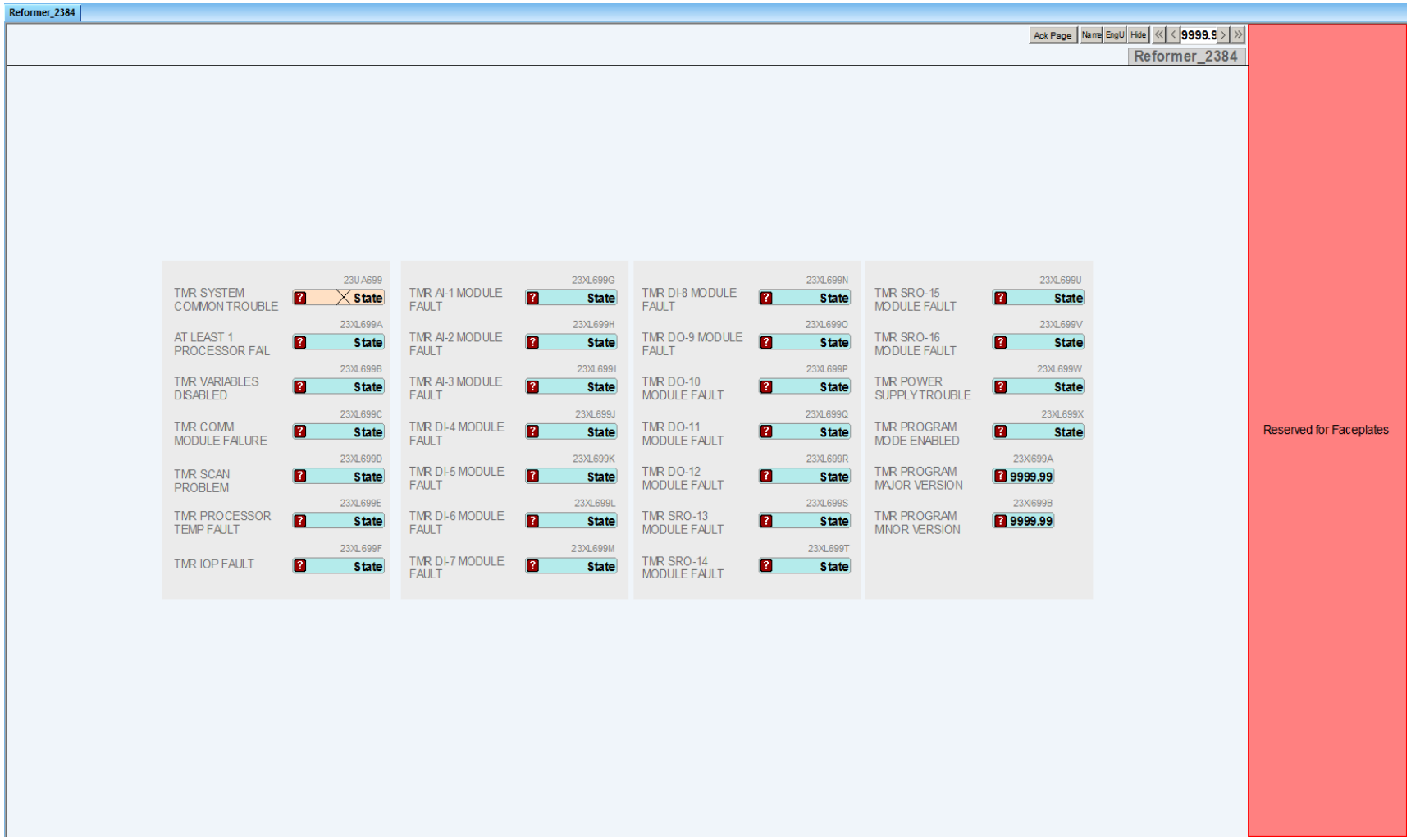
Reformer_2383
LEVEL
23LI323A
9999.99
23LI323B
9999.99
23LI323C
9999.99
AMINE CONTACTOR
23LN323G
PRETRIP
9999.99
23LN323H
TRIP
9999.99
23LA323L
State
23LA323J
State
PROCESS
23XL183E
State
23XL183F
State
IAS
23PL183A
State
23PL183B
State
23PL183C
State
TO SOUR WATER FLASH DRUM
23XV183
23ZL183A
State
23ZL183B
State
STARTUP/RESET STEPS
READY TO RESET
23XL183C
State
WHEN 'READY' IS INDICATED, THE VALVE CAN BE OPENED BY PRESSING LOCAL RESET 23HS183B.
PERMISSIVES TO RESET:
VALVE CLOSED
23ZL183B
State
LEVEL ABOVE TRIP SETPOINT
23LA323J
State
AMINE CONTACTOR DIAGNOSTICS
COMMON TROUBLE
23UA063
State
23LT323A/B/C DIAGNOSTICS
XMTR DEVIATION
23LL323K
State
XMTR TROUBLE
23XL323T
State
XMTR INVALID
23XL323U
State
23XV183 DIAGNOSTICS
VALVE POSITION TRBL
23ZL183C
State
VALVE FAIL2CLOSE
23XL183M
State
VALVE FAIL2TRIP
23XA183
State
SOLENOID FAIL2TRIP
23XL183B
State
SOLENOID TRBL
23XL183A
State
23LT323A/B/C TRANSMITTER BYPASS
23KI033A
9999.99
TRANSMITTER BYPASS ENABLE (2 MIN)
23HA033A
State
ACTIVE TRIP BYPASS
23XL323A
State
AT LEAST ONE DEVICE IN BYPASS
23XL033A
State
BYPASS ON
BYPASS OFF
BYPASS STATUS
23LT323B LEVEL XMTR A
23HS323AA
State
23HS323AB
State
23HA323A
State
23LT323B LEVEL XMTR B
23HS323BA
State
23HS323BB
State
23HA323B
State
23LT323B LEVEL XMTR C
23HS323CA
State
23HS323CB
State
23HA323C
State
SIS OVERVIEW
EV FLOW OVERVIEW
LD FLASH OVERVIEW
HELP
IR SYSTEM ALARMS
Reserved for Faceplates

1.177 2384 HDS SIS TRICONEX HARDWARE ALARMS (Reformer_2384.htm)




Reformer_2384
2384 HDS SIS TRICONEX Hardware Alarms
ACK
SIL
TMR SYSTEM COMMON TROUBLE
23UA699
State
AT LEAST 1 PROCESSOR FAIL
23XL699A
State
TMR VARIABLES DISABLED
23XL699B
State
TMR COMM MODULE FAILURE
23XL699C
State
TMR SCAN PROBLEM
23XL699D
State
TMR PROCESSOR TEMP FAULT
23XL699E
State
TMR IOP FAULT
23XL699F
State
TMR AI-1 MODULE FAULT
23XL699G
State
TMR AI-2 MODULE FAULT
23XL699H
State
TMR AI-3 MODULE FAULT
23XL699I
State
TMR DI-4 MODULE FAULT
23XL699J
State
TMR DI-5 MODULE FAULT
23XL699K
State
TMR DI-6 MODULE FAULT
23XL699L
State
TMR DI-7 MODULE FAULT
23XL699M
State
TMR DI-8 MODULE FAULT
23XL699N
State
TMR DO-9 MODULE FAULT
23XL699O
State
TMR DO-10 MODULE FAULT
23XL699P
State
TMR DO-11 MODULE FAULT
23XL699Q
State
TMR DO-12 MODULE FAULT
23XL699R
State
TMR SRO-13 MODULE FAULT
23XL699S
State
TMR SRO-14 MODULE FAULT
23XL699T
State
TMR SRO-15 MODULE FAULT
23XL699U
State
TMR SRO-16 MODULE FAULT
23XL699V
State
TMR POWER SUPPLY TROUBLE
23XL699W
State
TMR PROGRAM MODE ENABLED
23XL699X
State
TMR PROGRAM MAJOR VERSION
23XI699A
TMR PROGRAM MINOR VERSION
23XI699B
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2384
Ack Page
Name
EngU
Hide
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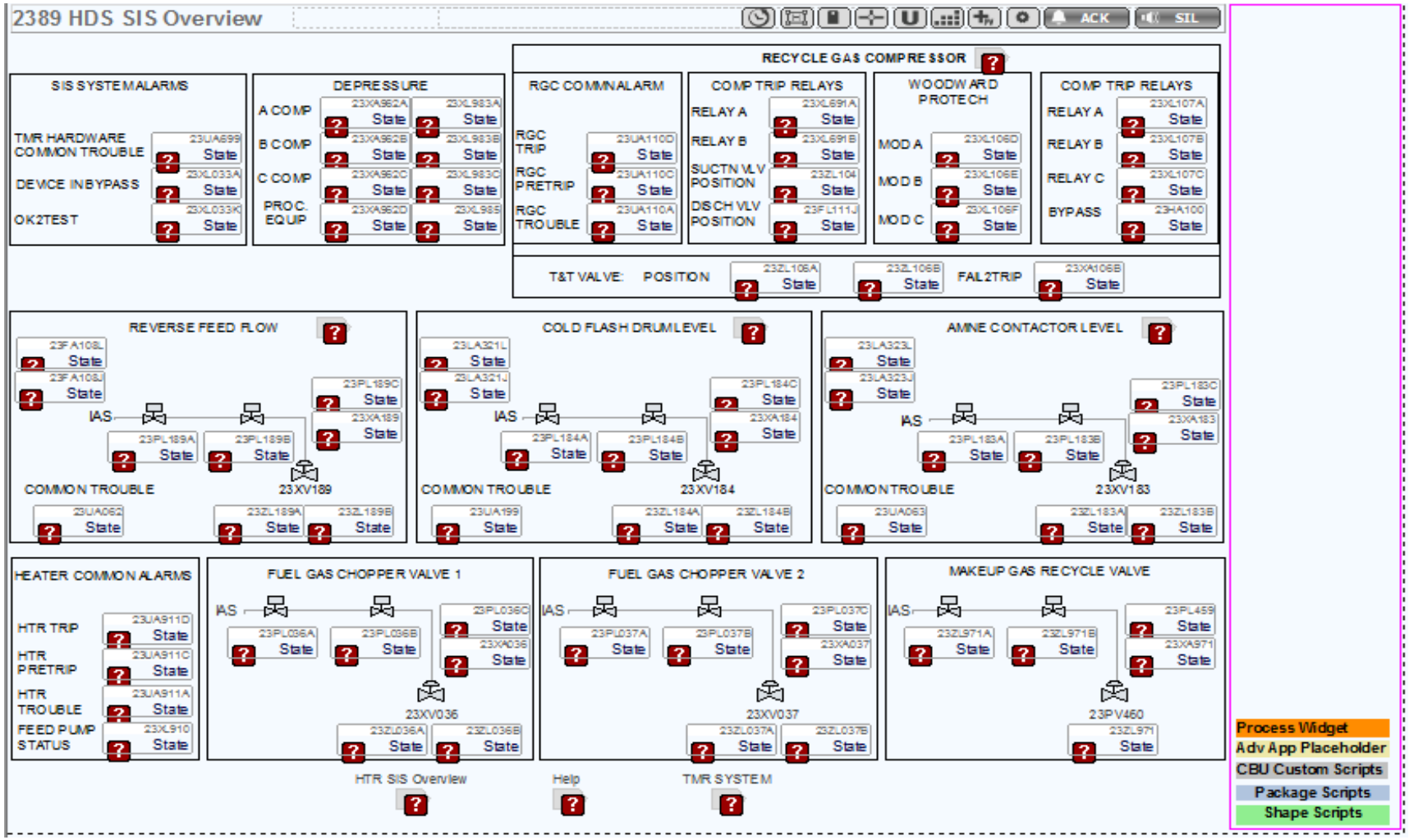
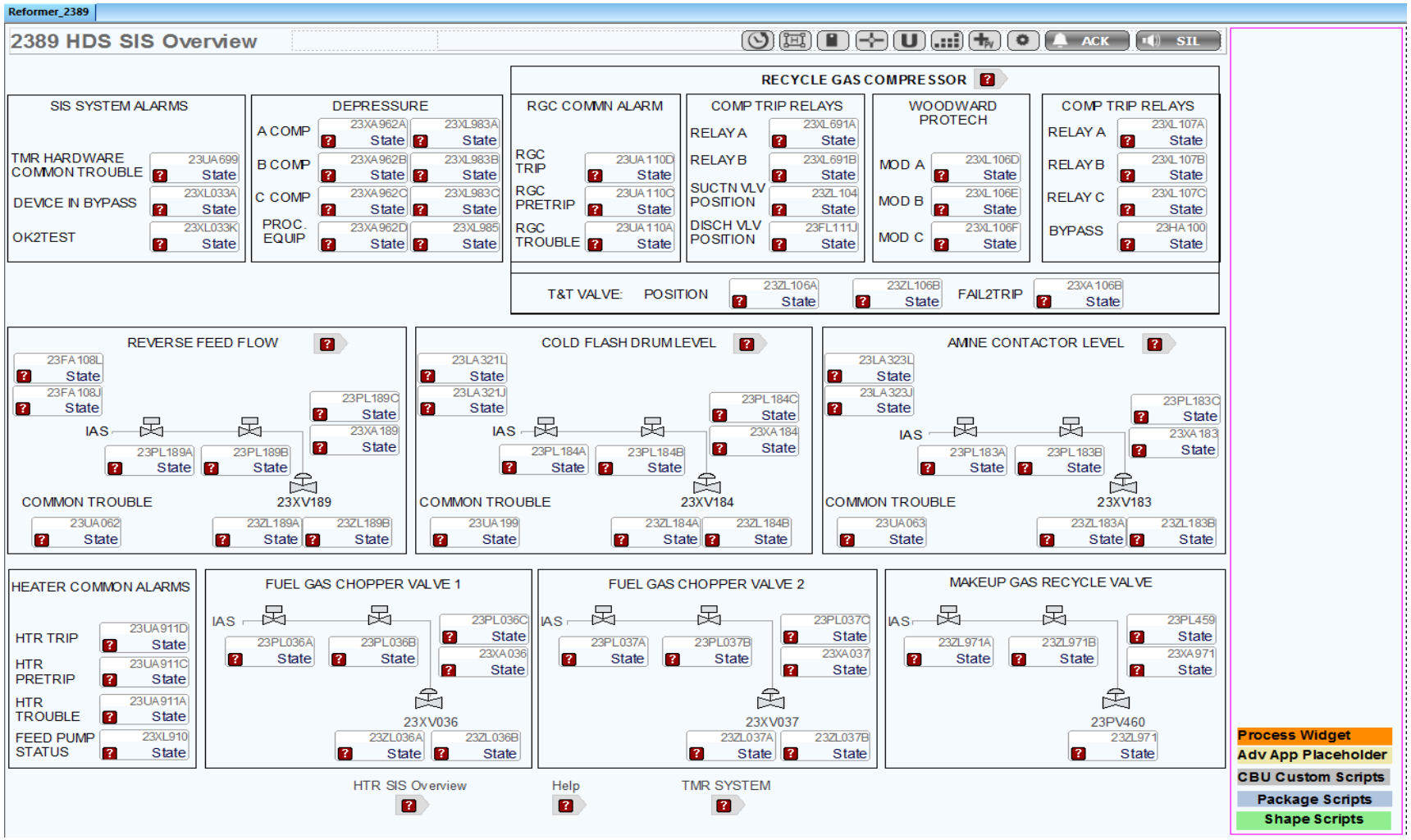
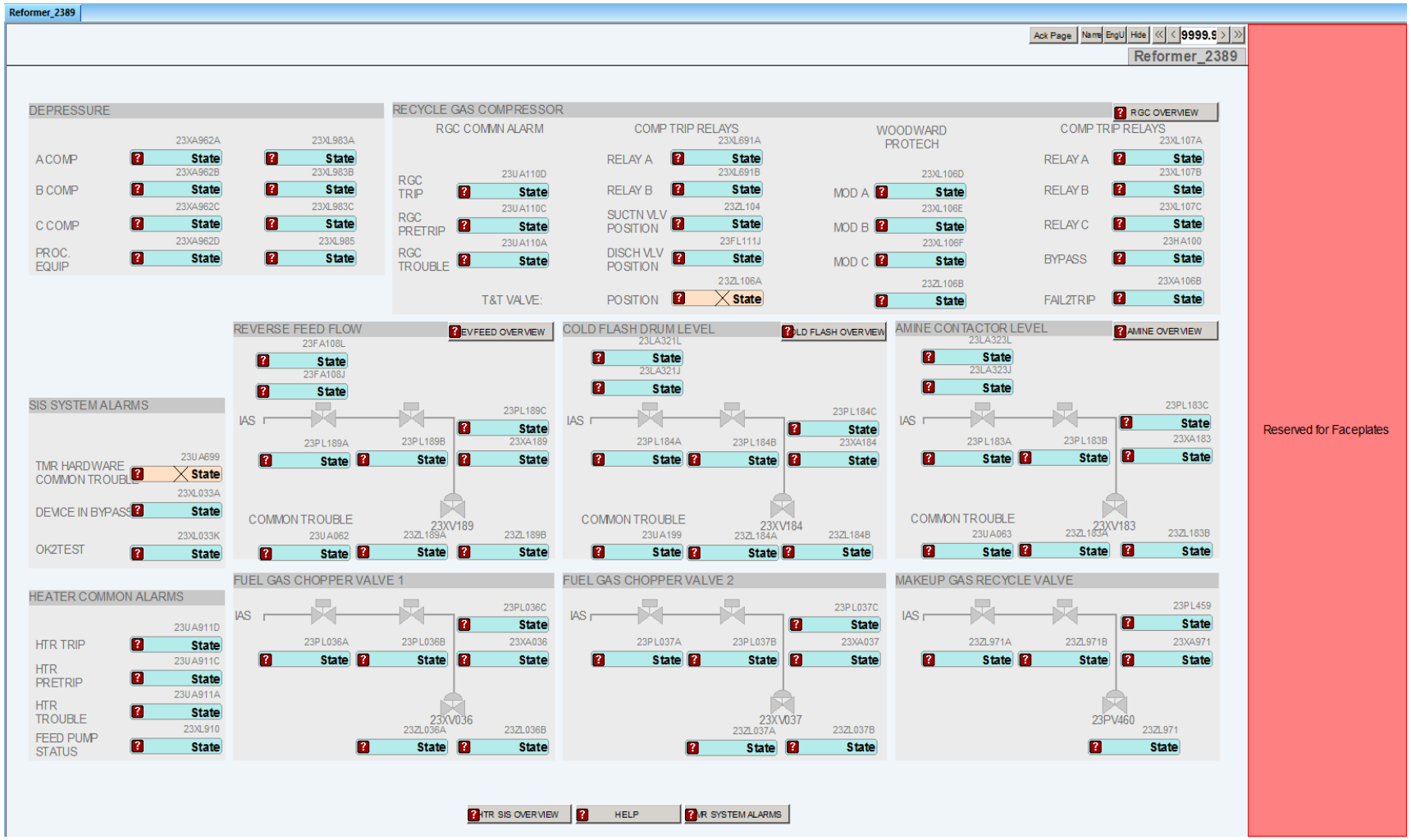
Reformer_2384
23U A699
TMR SYSTEM COMMON TROUBLE
State
23XL699A
AT LEAST 1 PROCESSOR FAIL
State
23XL699B
TMR VARIABLES DISABLED
State
23XL699C
TMR COMM MODULE FAILURE
State
23XL699D
TMR SCAN PROBLEM
State
23XL699E
TMR PROCESSOR TEMP FAULT
State
23XL699F
TMR IOP FAULT
State
23XL699G
TMR AI-1 MODULE FAULT
State
23XL699H
TMR AI-2 MODULE FAULT
State
23XL699I
TMR AI-3 MODULE FAULT
State
23XL699J
TMR DI-4 MODULE FAULT
State
23XL699K
TMR DI-5 MODULE FAULT
State
23XL699L
TMR DI-6 MODULE FAULT
State
23XL699M
TMR DI-7 MODULE FAULT
State
23XL699N
TMR DI-8 MODULE FAULT
State
23XL699O
TMR DO-9 MODULE FAULT
State
23XL699P
TMR DO-10 MODULE FAULT
State
23XL699Q
TMR DO-11 MODULE FAULT
State
23XL699R
TMR DO-12 MODULE FAULT
State
23XL699S
TMR SRO-13 MODULE FAULT
State
23XL699T
TMR SRO-14 MODULE FAULT
State
23XL699U
TMR SRO-15 MODULE FAULT
State
23XL699V
TMR SRO-16 MODULE FAULT
State
23XL699W
TMR POWER SUPPLY TROUBLE
State
23XL699X
TMR PROGRAM MODE ENABLED
State
23XI699A
TMR PROGRAM MAJOR VERSION
9999.99
23XI699B
TMR PROGRAM MINOR VERSION
9999.99
Reserved for Faceplates

1.178 2384 HDS SIS TRICONEX HARDWARE ALARMS (Reformer_2389.htm)




Reformer_2389
2389 HDS SIS Overview
ACK
SIL
SIS SYSTEM ALARMS
TMR HARDWARE COMMON TROUBLE
DEVICE IN BYPASS
OK2TEST
DEPRESSURE
A COMP
B COMP
C COMP
PROC. EQUIP
RECYCLE GAS COMPRESSOR
RGC COMMN ALARM
RGC TRIP
RGC PRETRIP
RGC TROUBLE
COMP TRIP RELAYS
RELAY A
RELAY B
SUCTN VLV POSITION
DISCH VLV POSITION
WOODWARD PROTECH
MOD A
MOD B
MOD C
COMP TRIP RELAYS
RELAY A
RELAY B
RELAY C
BYPASS
T&T VALVE: POSITION
FAIL2TRIP
REVERSE FEED FLOW
IAS
COMMON TROUBLE
23XV189
COLD FLASH DRUM LEVEL
IAS
COMMON TROUBLE
23XV184
AMINE CONTACTOR LEVEL
IAS
COMMON TROUBLE
23XV183
HEATER COMMON ALARMS
HTR TRIP
HTR PRETRIP
HTR TROUBLE
FEED PUMP STATUS
FUEL GAS CHOPPER VALVE 1
IAS
23XV036
FUEL GAS CHOPPER VALVE 2
IAS
23XV037
MAKEUP GAS RECYCLE VALVE
IAS
23PV460
HTR SIS Overview
Help
TMR SYSTEM
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2389
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Name
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Hide
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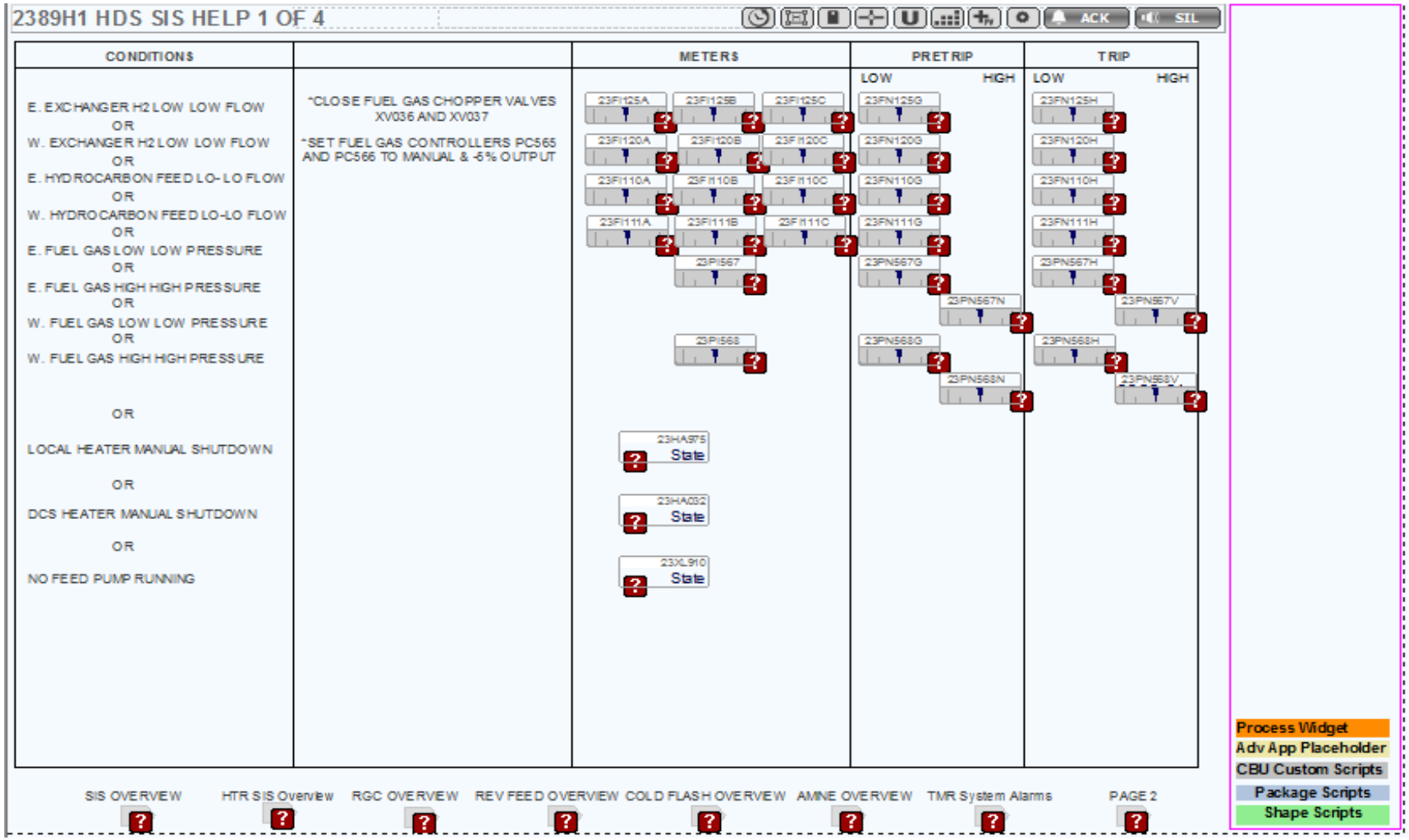
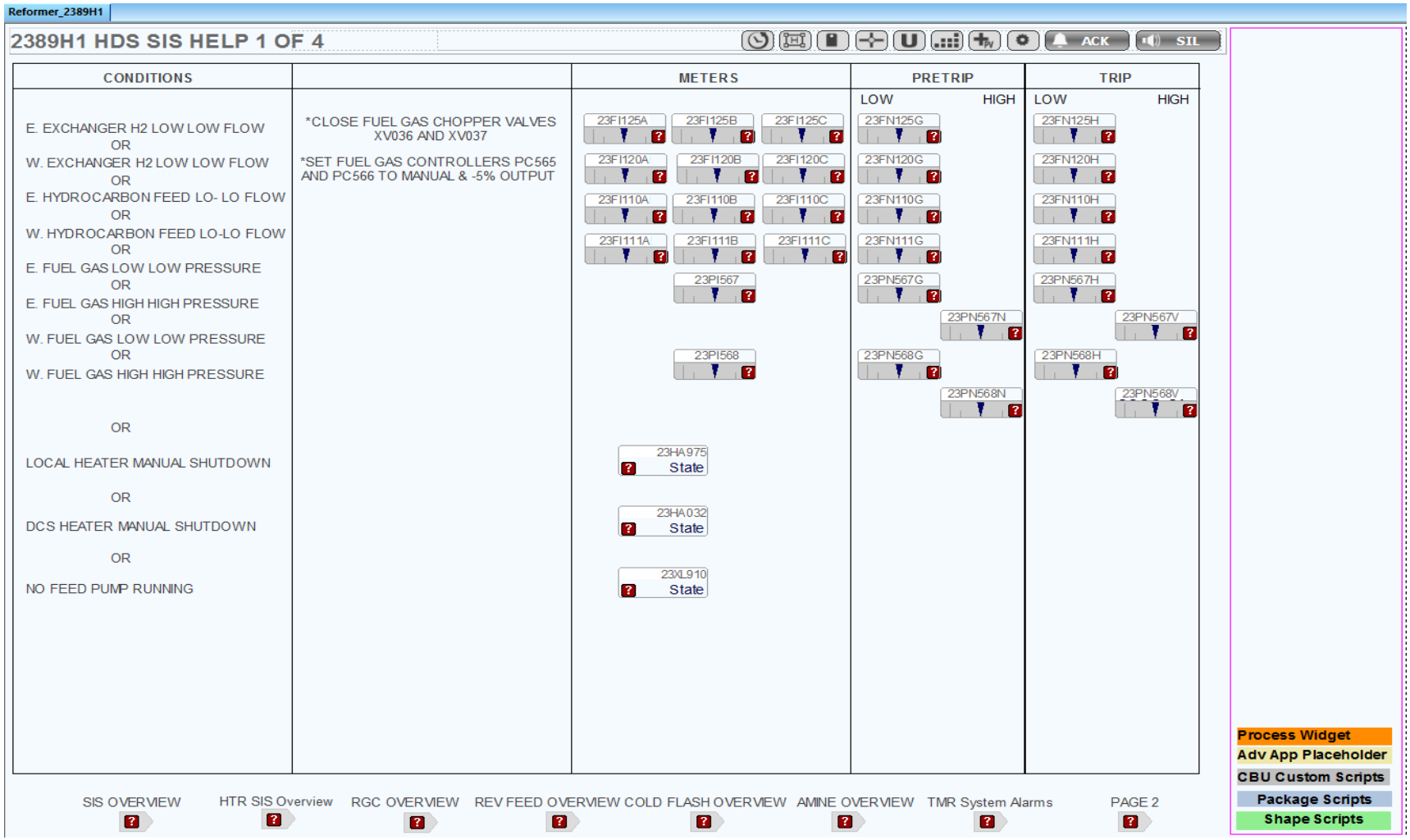
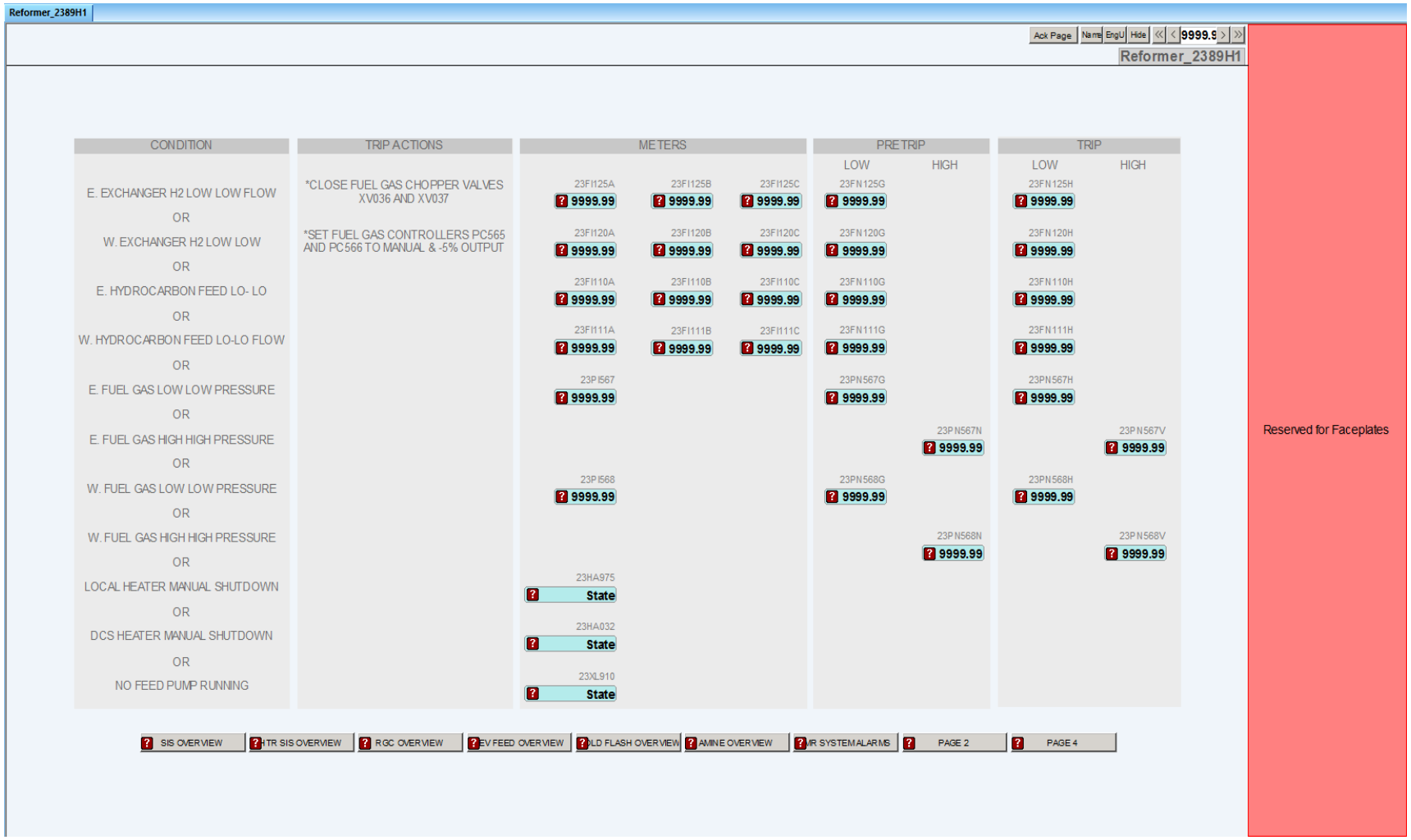
Reformer_2389
DEPRESSURE
23XA962A
23XL983A
A COMP
State
23XA962B
23XL983B
B COMP
State
23XA962C
23XL983C
C COMP
State
23XA962D
23XL985
PROC. EQUIP
State
RECYCLE GAS COMPRESSOR
RGC OVERVIEW
RGC COMMN ALARM
23UA110D
RGC TRIP
State
23UA110C
RGC PRETRIP
State
23UA110A
RGC TROUBLE
State
T&T VALVE:
COMP TRIP RELAYS
23XL691A
RELAY A
State
23XL691B
RELAY B
State
23ZL104
SUCTN VLV POSITION
State
23FL111J
DISCH VLV POSITION
State
23ZL106A
POSITION
State
WOODWARD PROTECH
23XL106D
MOD A
State
23XL106E
MOD B
State
23XL106F
MOD C
State
23ZL106B
State
COMP TRIP RELAYS
23XL107A
RELAY A
State
23XL107B
RELAY B
State
23XL107C
RELAY C
State
23HA100
BYPASS
State
23XA106B
FAIL2TRIP
State
SIS SYSTEM ALARMS
23UA699
TMR HARDWARE COMMON TROUBLE
State
23XL033A
DEVICE IN BYPASS
State
23XL033K
OK2TEST
State
REVERSE FEED FLOW
REV FEED OVERVIEW
23FA108L
State
23FA108J
State
IAS
23PL189C
State
23PL189A
State
23PL189B
State
23XA189
State
COMMON TROUBLE
23XV189
23UA062
State
23ZL189A
State
23ZL189B
State
COLD FLASH DRUM LEVEL
COLD FLASH OVERVIEW
23LA321L
State
23LA321J
State
IAS
23PL184C
State
23PL184A
State
23PL184B
State
23XA184
State
COMMON TROUBLE
23XV184
23UA199
State
23ZL184A
State
23ZL184B
State
AMINE CONTACTOR LEVEL
AMINE OVERVIEW
23LA323L
State
23LA323J
State
IAS
23PL183C
State
23PL183A
State
23PL183B
State
23XA183
State
COMMON TROUBLE
23XV183
23UA063
State
23ZL183A
State
23ZL183B
State
HEATER COMMON ALARMS
23UA911D
HTR TRIP
State
23UA911C
HTR PRETRIP
State
23UA911A
HTR TROUBLE
State
23XL910
FEED PUMP STATUS
State
FUEL GAS CHOPPER VALVE 1
IAS
23PL036C
State
23PL036A
State
23PL036B
State
23XA036
State
23XV036
23ZL036A
State
23ZL036B
State
FUEL GAS CHOPPER VALVE 2
IAS
23PL037C
State
23PL037A
State
23PL037B
State
23XA037
State
23XV037
23ZL037A
State
23ZL037B
State
MAKEUP GAS RECYCLE VALVE
IAS
23PL459
State
23ZL971A
State
23ZL971B
State
23XA971
State
23PV460
23ZL971
State
HTR SIS OVERVIEW
HELP
HTR SYSTEM ALARMS
Reserved for Faceplates

1.179 2389H1 HDS SIS HELP 1 OF 4 (Reformer_2389H1.htm)




Reformer_2389H1
2389H1 HDS SIS HELP 1 OF 4
ACK
SIL
CONDITIONS
METERS
PRETRIP
TRIP
LOW
HIGH
LOW
HIGH
E. EXCHANGER H2 LOW LOW FLOW
OR
W. EXCHANGER H2 LOW LOW FLOW
OR
E. HYDROCARBON FEED LO- LO FLOW
OR
W. HYDROCARBON FEED LO-LO FLOW
OR
E. FUEL GAS LOW LOW PRESSURE
OR
E. FUEL GAS HIGH HIGH PRESSURE
OR
W. FUEL GAS LOW LOW PRESSURE
OR
W. FUEL GAS HIGH HIGH PRESSURE
OR
LOCAL HEATER MANUAL SHUTDOWN
OR
DCS HEATER MANUAL SHUTDOWN
OR
NO FEED PUMP RUNNING
*CLOSE FUEL GAS CHOPPER VALVES XV036 AND XV037
*SET FUEL GAS CONTROLLERS PC565 AND PC566 TO MANUAL & -5% OUTPUT
23FI125A
23FI125B
23FI125C
23FI120A
23FI120B
23FI120C
23FI110A
23FI110B
23FI110C
23FI111A
23FI111B
23FI111C
23PI567
23PI568
23HA975 State
23HA032 State
23XL910 State
23FN125G
23FN120G
23FN110G
23FN111G
23FN567G
23FN567N
23FN568G
23FN568N
23FN125H
23FN120H
23FN110H
23FN111H
23FN567H
23FN567V
23FN568H
23FN568V
SIS OVERVIEW
HTR SIS Overview
RGC OVERVIEW
REV FEED OVERVIEW
COLD FLASH OVERVIEW
AMINE OVERVIEW
TMR System Alarms
PAGE 2
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2389H1
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Name
EngU
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Reformer_2389H1
CONDITION
TRIP ACTIONS
METERS
PRETRIP
TRIP
LOW
HIGH
LOW
HIGH
E. EXCHANGER H2 LOW LOW FLOW
OR
W. EXCHANGER H2 LOW LOW
OR
E. HYDROCARBON FEED LO- LO
OR
W. HYDROCARBON FEED LO-LO FLOW
OR
E. FUEL GAS LOW LOW PRESSURE
OR
E. FUEL GAS HIGH HIGH PRESSURE
OR
W. FUEL GAS LOW LOW PRESSURE
OR
W. FUEL GAS HIGH HIGH PRESSURE
OR
LOCAL HEATER MANUAL SHUTDOWN
OR
DCS HEATER MANUAL SHUTDOWN
OR
NO FEED PUMP RUNNING
*CLOSE FUEL GAS CHOPPER VALVES XV036 AND XV037
*SET FUEL GAS CONTROLLERS PC565 AND PC566 TO MANUAL & -5% OUTPUT
23FI125A
23FI125B
23FI125C
23FN125G
23FN125H
23FI120A
23FI120B
23FI120C
23FN120G
23FN120H
23FI110A
23FI110B
23FI110C
23FN110G
23FN110H
23FI111A
23FI111B
23FI111C
23FN111G
23FN111H
23PI567
23PN567G
23PN567H
23PN567N
23PN567V
23PI568
23PN568G
23PN568H
23PN568N
23PN568V
23HA975
State
23HA032
State
23XL910
State
9999.99
SIS OVERVIEW
HTR SIS OVERVIEW
RGC OVERVIEW
FEV FEED OVERVIEW
OLD FLASH OVERVIEW
AMINE OVERVIEW
MR SYSTEM ALARMS
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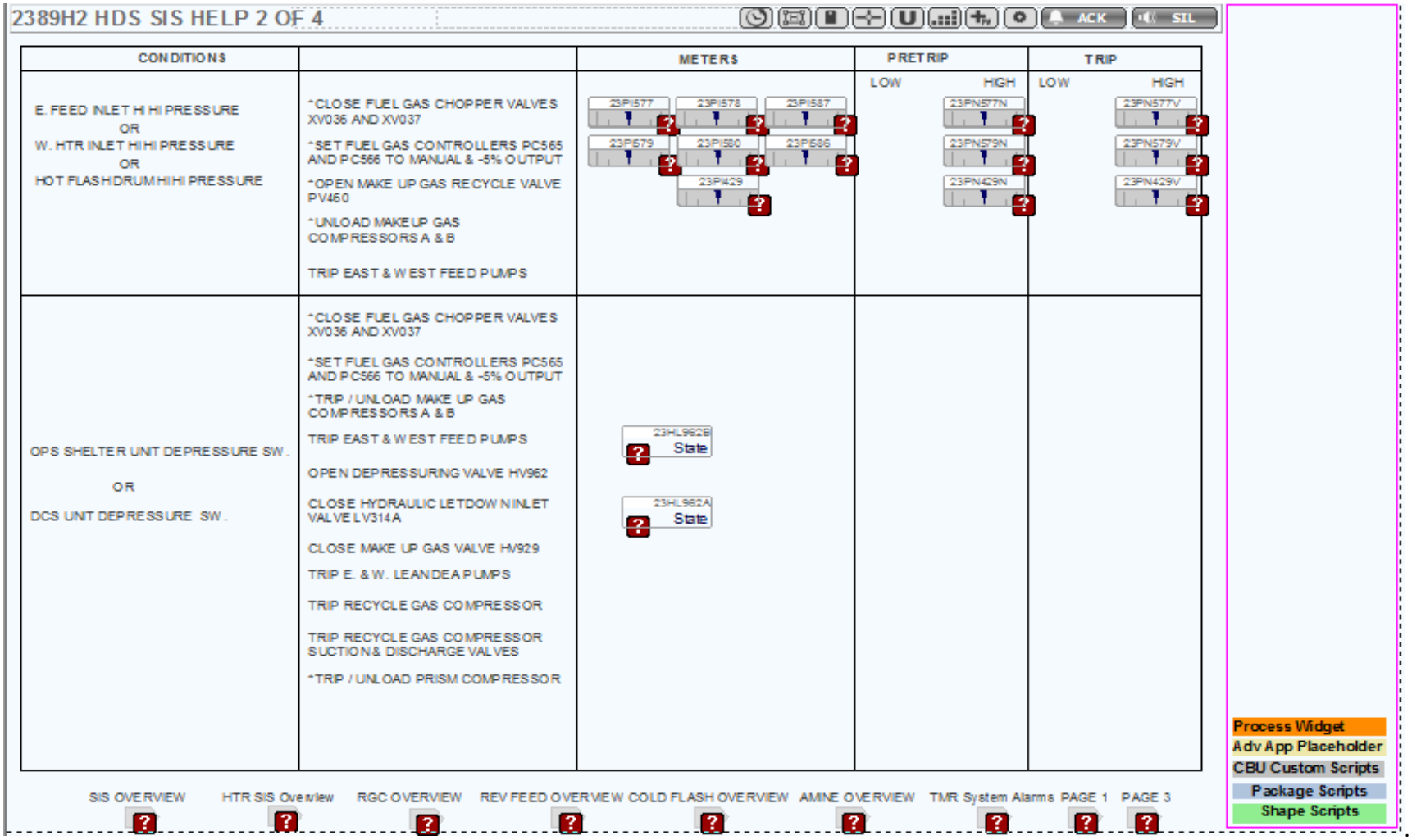
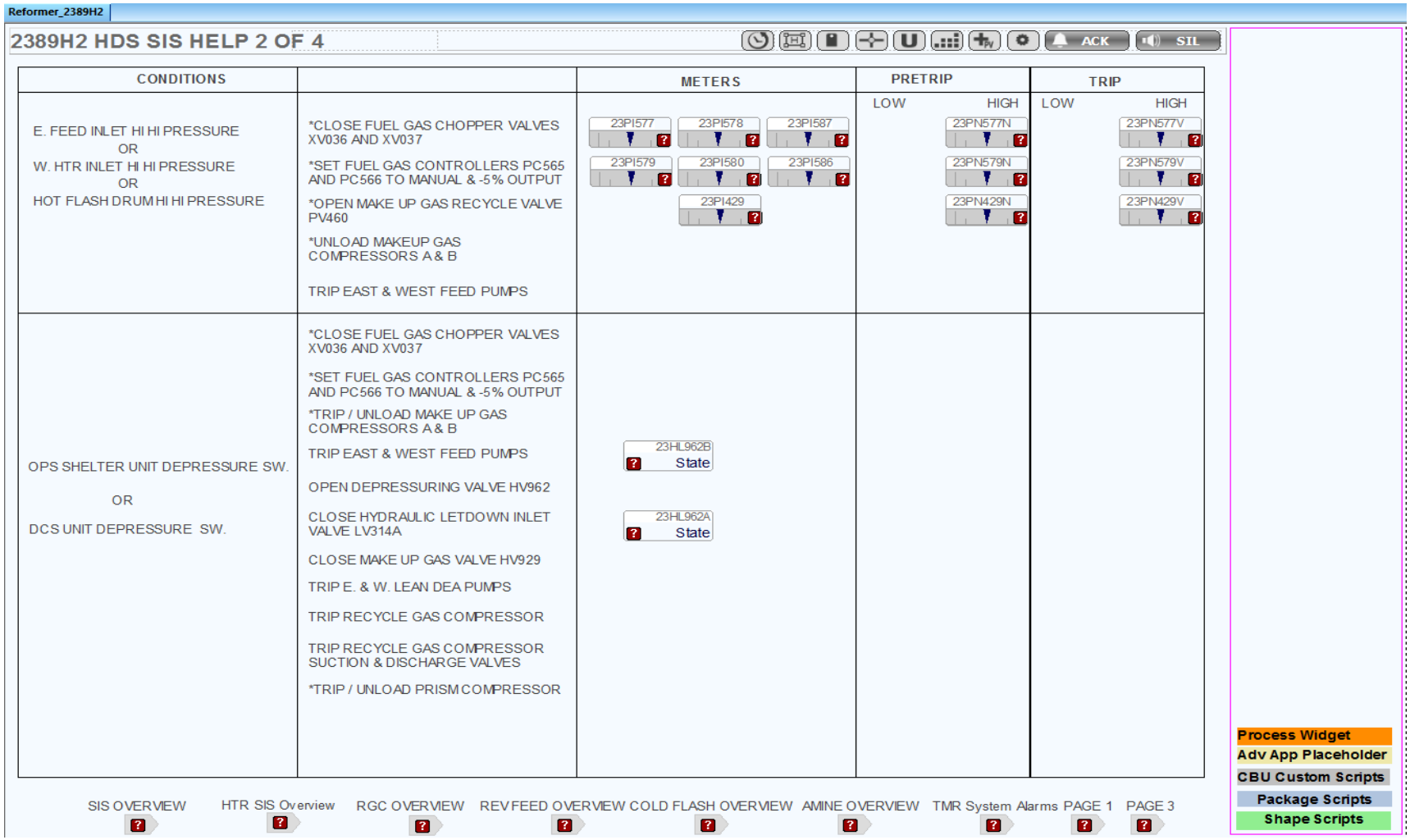
1.180 2389H2 HDS SIS HELP 2 OF 4 (Reformer_2389H2.htm)




Reformer_2389H2
2389H2 HDS SIS HELP 2 OF 4
ACK
SIL
CONDITIONS
METERS
PRETRIP
LOW
HIGH
TRIP
LOW
HIGH
E. FEED INLET HI HI PRESSURE
OR
W. HTR INLET HI HI PRESSURE
OR
HOT FLASH DRUM HI HI PRESSURE
*CLOSE FUEL GAS CHOPPER VALVES XV036 AND XV037
*SET FUEL GAS CONTROLLERS PC565 AND PC566 TO MANUAL & -5% OUTPUT
*OPEN MAKE UP GAS RECYCLE VALVE PV460
*UNLOAD MAKEUP GAS COMPRESSORS A & B
TRIP EAST & WEST FEED PUMPS
23PI577
23PI578
23PI587
23PI579
23PI580
23PI586
23PI429
23PN577N
23PN579N
23PN429N
23PN577V
23PN579V
23PN429V
OPS SHELTER UNIT DEPRESSURE SW.
OR
DCS UNIT DEPRESSURE SW.
*CLOSE FUEL GAS CHOPPER VALVES XV036 AND XV037
*SET FUEL GAS CONTROLLERS PC565 AND PC566 TO MANUAL & -5% OUTPUT
*TRIP / UNLOAD MAKE UP GAS COMPRESSORS A & B
TRIP EAST & WEST FEED PUMPS
OPEN DEPRESSURING VALVE HV962
CLOSE HYDRAULIC LETDOWN INLET VALVE LV314A
CLOSE MAKE UP GAS VALVE HV929
TRIP E. & W. LEAN DEA PUMPS
TRIP RECYCLE GAS COMPRESSOR
TRIP RECYCLE GAS COMPRESSOR SUCTION & DISCHARGE VALVES
*TRIP / UNLOAD PRISM COMPRESSOR
23HL962B
State
23HL962A
State
SIS OVERVIEW
HTR SIS Overview
RGC OVERVIEW
REV FEED OVERVIEW
COLD FLASH OVERVIEW
AMINE OVERVIEW
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Adv App Placeholder
CBU Custom Scripts
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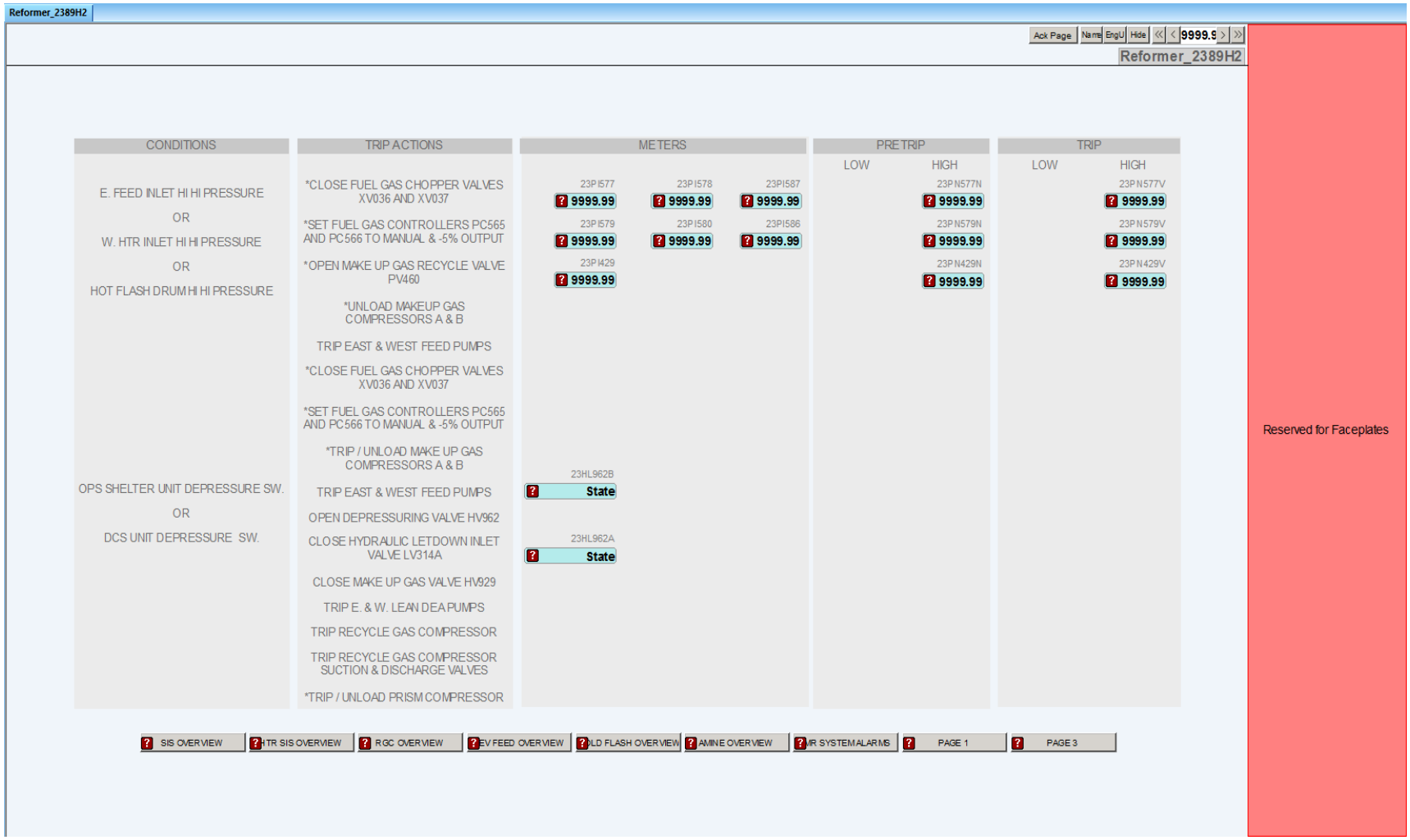
Shape Scripts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Reformer_2389H2
CONDITIONS
TRIP ACTIONS
METERS
PRETRIP
TRIP
LOW
HIGH
LOW
HIGH
E. FEED INLET HI HI PRESSURE
OR
W. HTR INLET HI HI PRESSURE
OR
HOT FLASH DRUM HI HI PRESSURE
OPS SHELTER UNIT DEPRESSURE SW.
OR
DCS UNIT DEPRESSURE SW.
*CLOSE FUEL GAS CHOPPER VALVES XV036 AND XV037
*SET FUEL GAS CONTROLLERS PC565 AND PC566 TO MANUAL & -5% OUTPUT
*OPEN MAKE UP GAS RECYCLE VALVE PV460
*UNLOAD MAKEUP GAS COMPRESSORS A & B
TRIP EAST & WEST FEED PUMPS
*CLOSE FUEL GAS CHOPPER VALVES XV036 AND XV037
*SET FUEL GAS CONTROLLERS PC565 AND PC566 TO MANUAL & -5% OUTPUT
*TRIP / UNLOAD MAKE UP GAS COMPRESSORS A & B
TRIP EAST & WEST FEED PUMPS
OPEN DEPRESSURING VALVE HV962
CLOSE HYDRAULIC LETDOWN INLET VALVE LV314A
CLOSE MAKE UP GAS VALVE HV929
TRIP E. & W. LEAN DEA PUMPS
TRIP RECYCLE GAS COMPRESSOR
TRIP RECYCLE GAS COMPRESSOR SUCTION & DISCHARGE VALVES
*TRIP / UNLOAD PRISM COMPRESSOR
23PI577
23PI578
23PI587
23PI579
23PI580
23PI586
23PI429
23HL962B
State
23HL962A
State
23PN577N
23PN577V
23PN579N
23PN579V
23PN429N
23PN429V
9999.99
SIS OVERVIEW
HTR SIS OVERVIEW
RGC OVERVIEW
FEED OVERVIEW
HOT FLASH OVERVIEW
AMINE OVERVIEW
MR SYSTEM ALARMS
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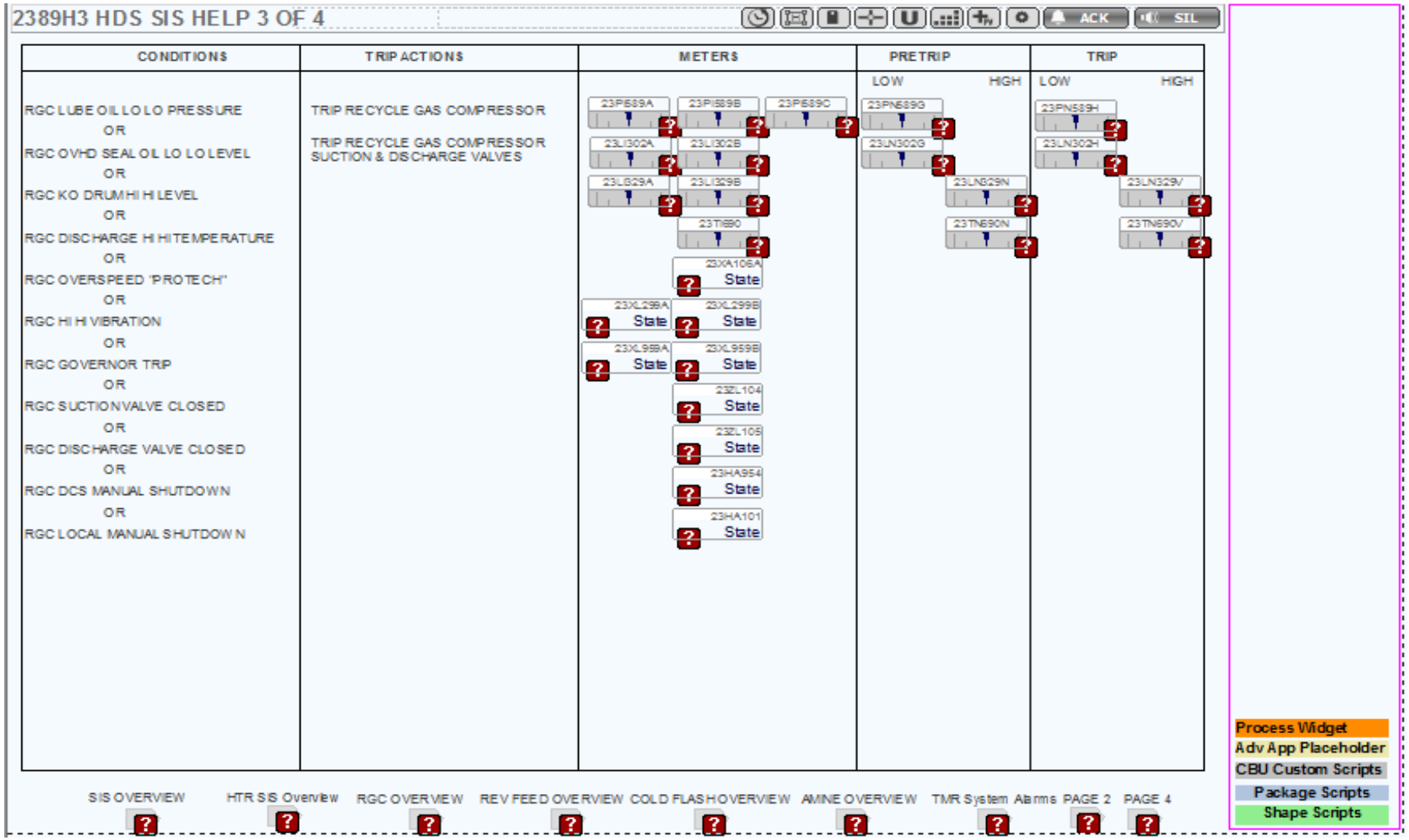
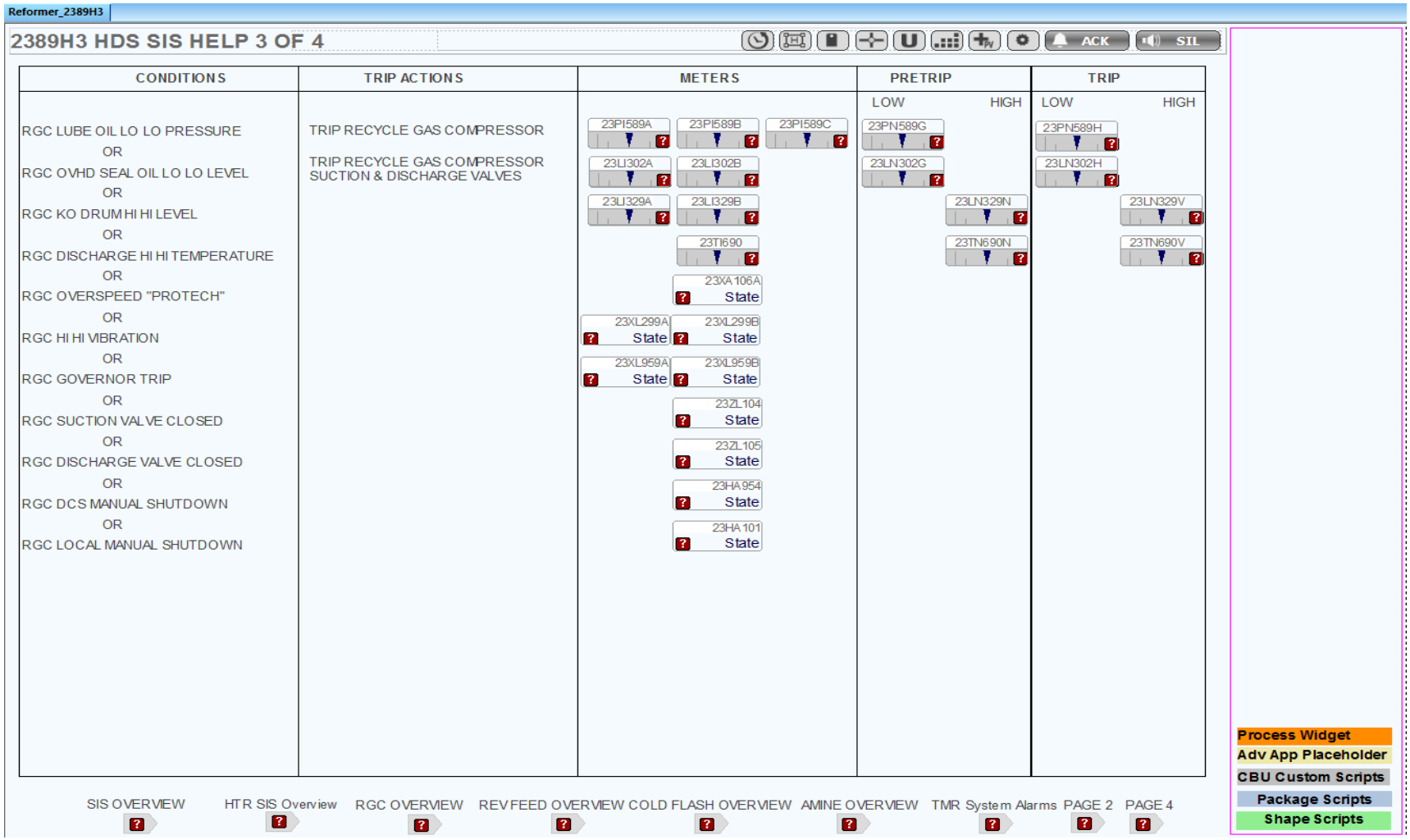
1.181 2389H3 HDS SIS HELP 3 OF 4 (Reformer_2389H3.htm)

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2389H3 HDS SIS HELP 3 OF 4
ACK
SIL
CONDITIONS
TRIP ACTIONS
METERS
PRETRIP
TRIP
LOW
HIGH
LOW
HIGH
RGC LUBE OIL LO LO PRESSURE
OR
RGC OVHD SEAL OIL LO LO LEVEL
OR
RGC KO DRUM HI HI LEVEL
OR
RGC DISCHARGE HI HI TEMPERATURE
OR
RGC OVERSPEED "PROTECH"
OR
RGC HI HI VIBRATION
OR
RGC GOVERNOR TRIP
OR
RGC SUCTION VALVE CLOSED
OR
RGC DISCHARGE VALVE CLOSED
OR
RGC DCS MANUAL SHUTDOWN
OR
RGC LOCAL MANUAL SHUTDOWN
TRIP RECYCLE GAS COMPRESSOR
TRIP RECYCLE GAS COMPRESSOR SUCTION & DISCHARGE VALVES
23PI589A
23PI589B
23PI589C
23LI302A
23LI302B
23LI329A
23LI329B
23TI690
23XA106A State
23XL299A State
23XL299B State
23XL959A State
23XL959B State
23ZL104 State
23ZL105 State
23HA954 State
23HA101 State
23PN589G
23LN302G
23LN329N
23TN690N
23PN589H
23LN302H
23LN329V
23TN690V
SIS OVERVIEW
HTR SIS Overview
RGC OVERVIEW
REV FEED OVERVIEW
COLD FLASH OVERVIEW
AMINE OVERVIEW
TMR System Alarms
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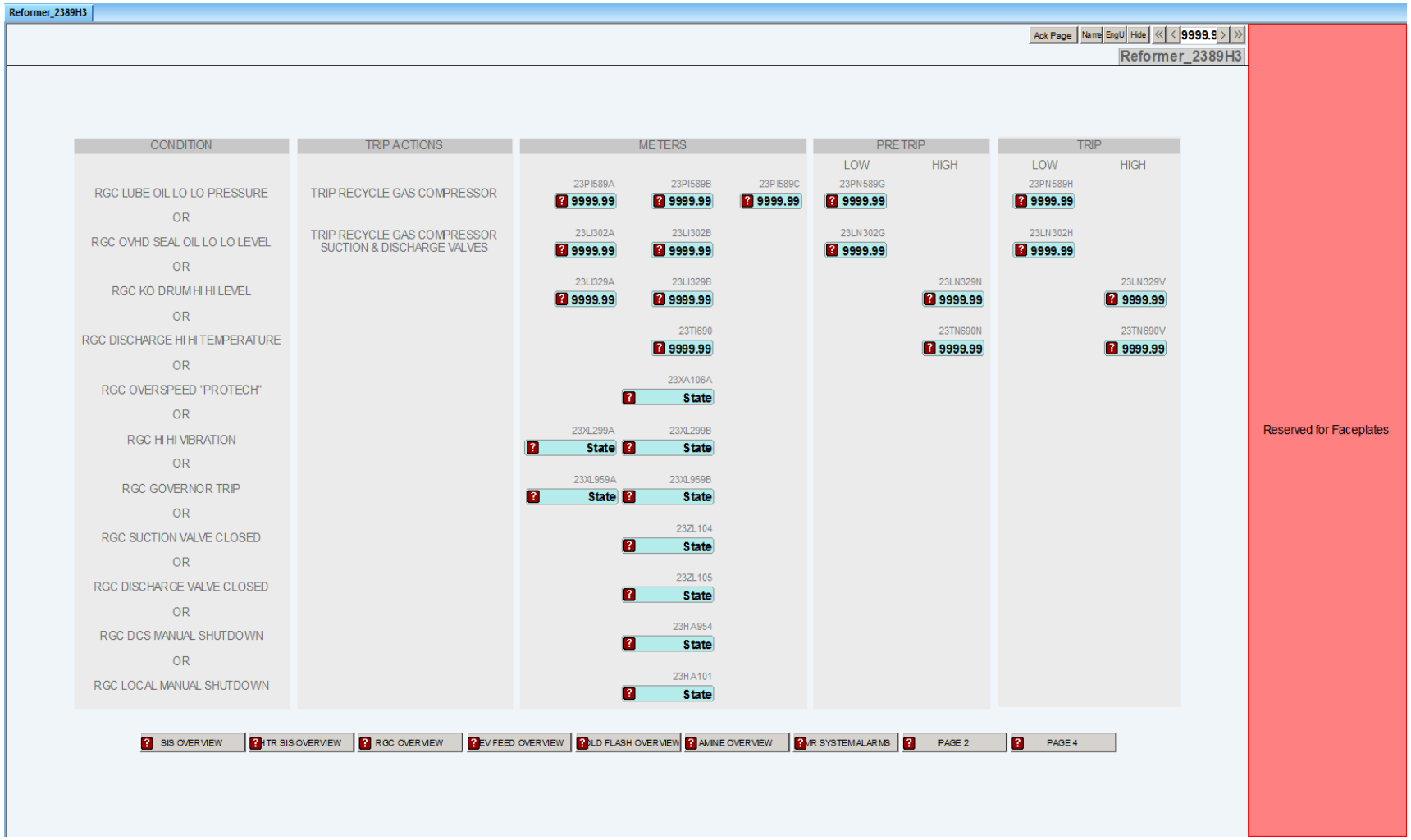
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts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Reformer_2389H3
CONDITION
TRIP ACTIONS
METERS
PRETRIP
TRIP
LOW
HIGH
LOW
HIGH
RGC LUBE OIL LO LO PRESSURE
OR
RGC OVHD SEAL OIL LO LO LEVEL
OR
RGC KO DRUM HI HI LEVEL
OR
RGC DISCHARGE HI HI TEMPERATURE
OR
RGC OVERSPEED "PROTECH"
OR
RGC HI HI VIBRATION
OR
RGC GOVERNOR TRIP
OR
RGC SUCTION VALVE CLOSED
OR
RGC DISCHARGE VALVE CLOSED
OR
RGC DCS MANUAL SHUTDOWN
OR
RGC LOCAL MANUAL SHUTDOWN
TRIP RECYCLE GAS COMPRESSOR
TRIP RECYCLE GAS COMPRESSOR SUCTION & DISCHARGE VALVES
23PI589A
23PI589B
23PI589C
23PN589G
23PN589H
23LI302A
23LI302B
23LN302G
23LN302H
23LI329A
23LI329B
23LN329N
23LN329V
23TI690
23TN690N
23TN690V
23XA106A
23XL299A
23XL299B
23XL959A
23XL959B
23ZL104
23ZL105
23HA954
23HA101
9999.99
State
SIS OVERVIEW
HTR SIS OVERVIEW
RGC OVERVIEW
EV FEED OVERVIEW
QLD FLASH OVERVIEW
AMINE OVERVIEW
MR SYSTEMALARMS
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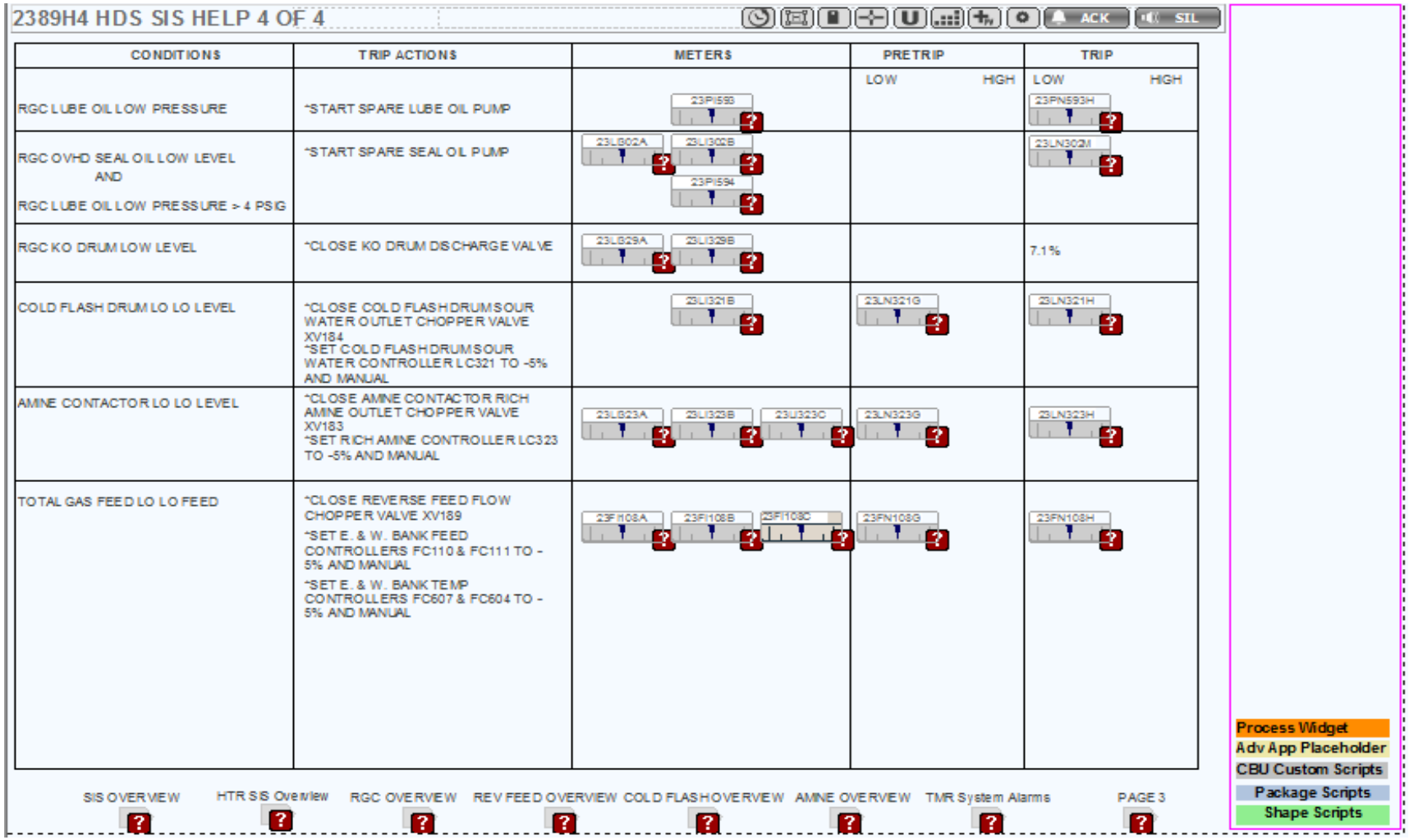
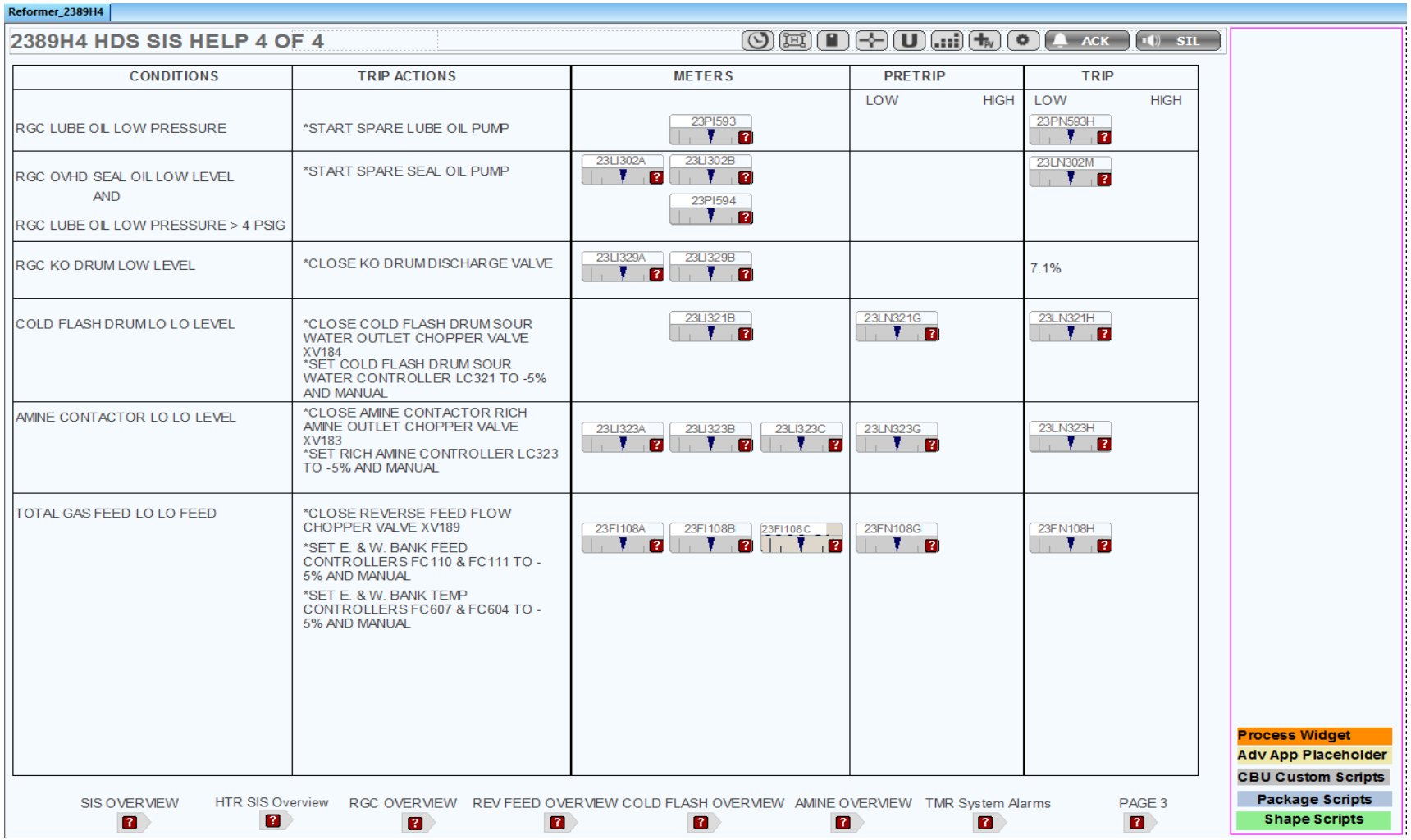
Reserved for Faceplates

1.182 2389H4 HDS SIS HELP 4 OF 4 (Reformer_2389H4.htm)




Reformer_2389H4
2389H4 HDS SIS HELP 4 OF 4
ACK
SIL
CONDITIONS
TRIP ACTIONS
METERS
PRETRIP
TRIP
LOW
HIGH
LOW
HIGH
RGC LUBE OIL LOW PRESSURE
*START SPARE LUBE OIL PUMP
23PI593
23PN593H
RGC OVHD SEAL OIL LOW LEVEL
AND
RGC LUBE OIL LOW PRESSURE > 4 PSIG
*START SPARE SEAL OIL PUMP
23LI302A
23LI302B
23PI594
23LN302M
RGC KO DRUM LOW LEVEL
*CLOSE KO DRUM DISCHARGE VALVE
23LI329A
23LI329B
7.1%
COLD FLASH DRUM LO LO LEVEL
*CLOSE COLD FLASH DRUM SOUR WATER OUTLET CHOPPER VALVE XV184
*SET COLD FLASH DRUM SOUR WATER CONTROLLER LC321 TO -5% AND MANUAL
23LI321B
23LN321G
23LN321H
AMINE CONTACTOR LO LO LEVEL
*CLOSE AMINE CONTACTOR RICH AMINE OUTLET CHOPPER VALVE XV183
*SET RICH AMINE CONTROLLER LC323 TO -5% AND MANUAL
23LI323A
23LI323B
23LI323C
23LN323G
23LN323H
TOTAL GAS FEED LO LO FEED
*CLOSE REVERSE FEED FLOW CHOPPER VALVE XV189
*SET E. & W. BANK FEED CONTROLLERS FC110 & FC111 TO -5% AND MANUAL
*SET E. & W. BANK TEMP CONTROLLERS FC607 & FC604 TO -5% AND MANUAL
23FI108A
23FI108B
23FI108C
23FN108G
23FN108H
SIS OVERVIEW
HTR SIS Overview
RGC OVERVIEW
REV FEED OVERVIEW
COLD FLASH OVERVIEW
AMINE OVERVIEW
TMR System Alarms
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Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
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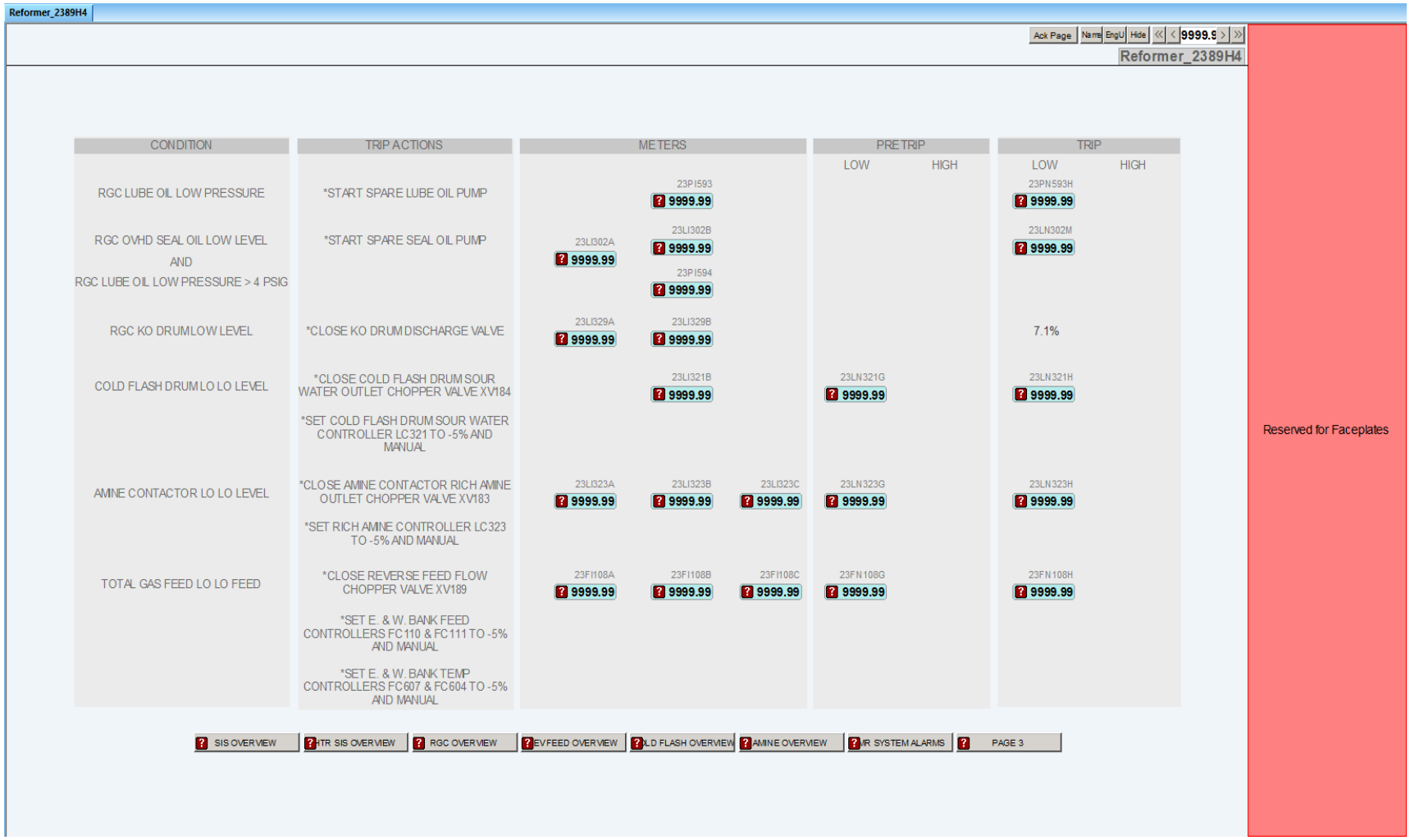
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Reformer_2389H4
CONDITION
TRIP ACTIONS
METERS
PRETRIP
TRIP
LOW
HIGH
LOW
HIGH
RGC LUBE OIL LOW PRESSURE
*START SPARE LUBE OIL PUMP
23PI593
9999.99
23PN593H
9999.99
RGC OVHD SEAL OIL LOW LEVEL
AND
RGC LUBE OIL LOW PRESSURE > 4 PSIG
*START SPARE SEAL OIL PUMP
23LI302A
9999.99
23LI302B
9999.99
23PI594
9999.99
23LN302M
9999.99
RGC KO DRUM LOW LEVEL
*CLOSE KO DRUM DISCHARGE VALVE
23LI329A
9999.99
23LI329B
9999.99
7.1%
COLD FLASH DRUM LO LO LEVEL
*CLOSE COLD FLASH DRUM SOUR WATER OUTLET CHOPPER VALVE XV184
*SET COLD FLASH DRUM SOUR WATER CONTROLLER LC321 TO -5% AND MANUAL
23LI321B
9999.99
23LN321G
9999.99
23LN321H
9999.99
AMINE CONTACTOR LO LO LEVEL
*CLOSE AMINE CONTACTOR RICH AMINE OUTLET CHOPPER VALVE XV183
*SET RICH AMINE CONTROLLER LC323 TO -5% AND MANUAL
23LI323A
9999.99
23LI323B
9999.99
23LI323C
9999.99
23LN323G
9999.99
23LN323H
9999.99
TOTAL GAS FEED LO LO FEED
*CLOSE REVERSE FEED FLOW CHOPPER VALVE XV189
*SET E. & W. BANK FEED CONTROLLERS FC110 & FC111 TO -5% AND MANUAL
*SET E. & W. BANK TEMP CONTROLLERS FC607 & FC604 TO -5% AND MANUAL
23FI108A
9999.99
23FI108B
9999.99
23FI108C
9999.99
23FN108G
9999.99
23FN108H
9999.99
SIS OVERVIEW
HTR SIS OVERVIEW
RGC OVERVIEW
FEED OVERVIEW
COLD FLASH OVERVIEW
AMINE OVERVIEW
HMR SYSTEM ALARMS
PAGE 3
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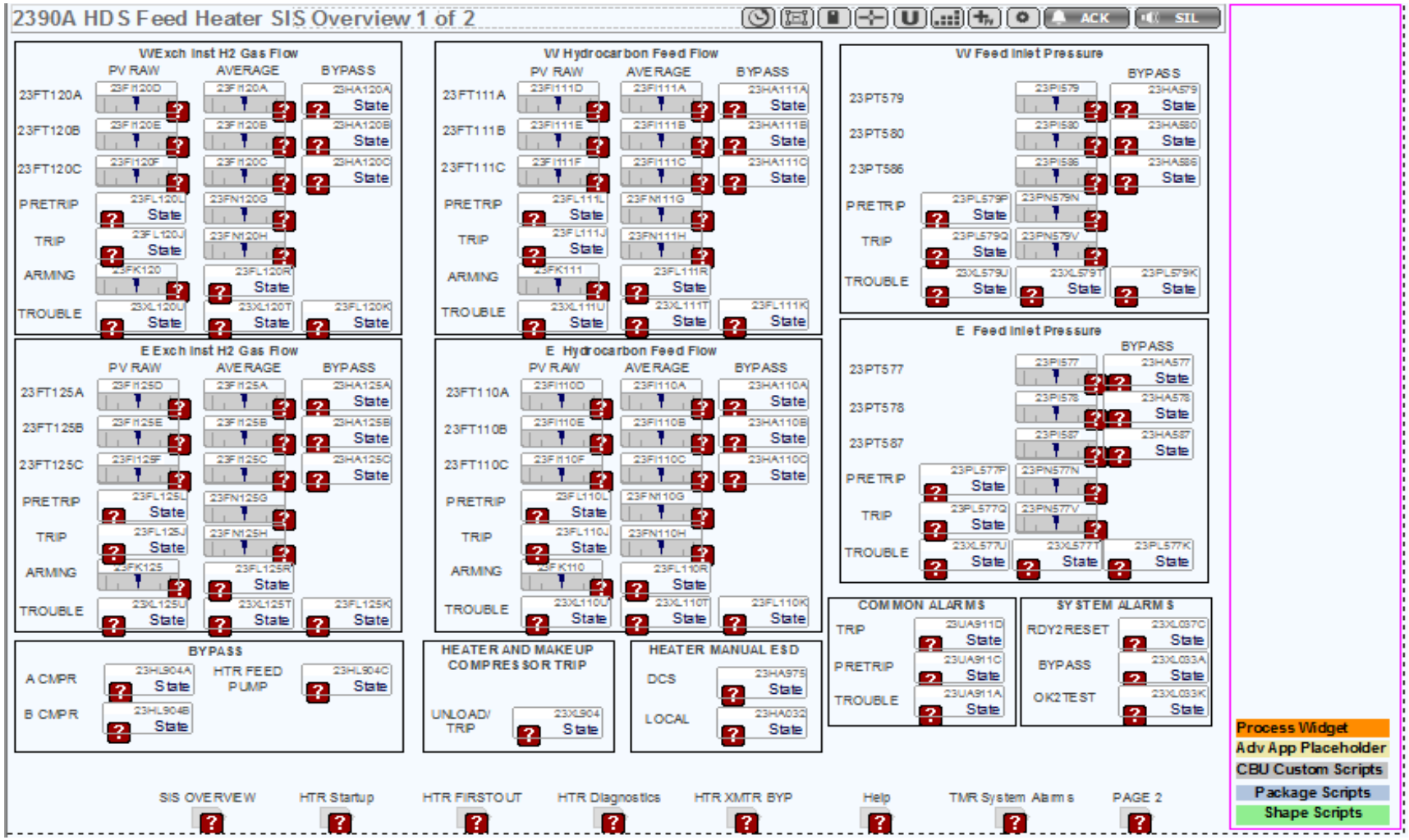
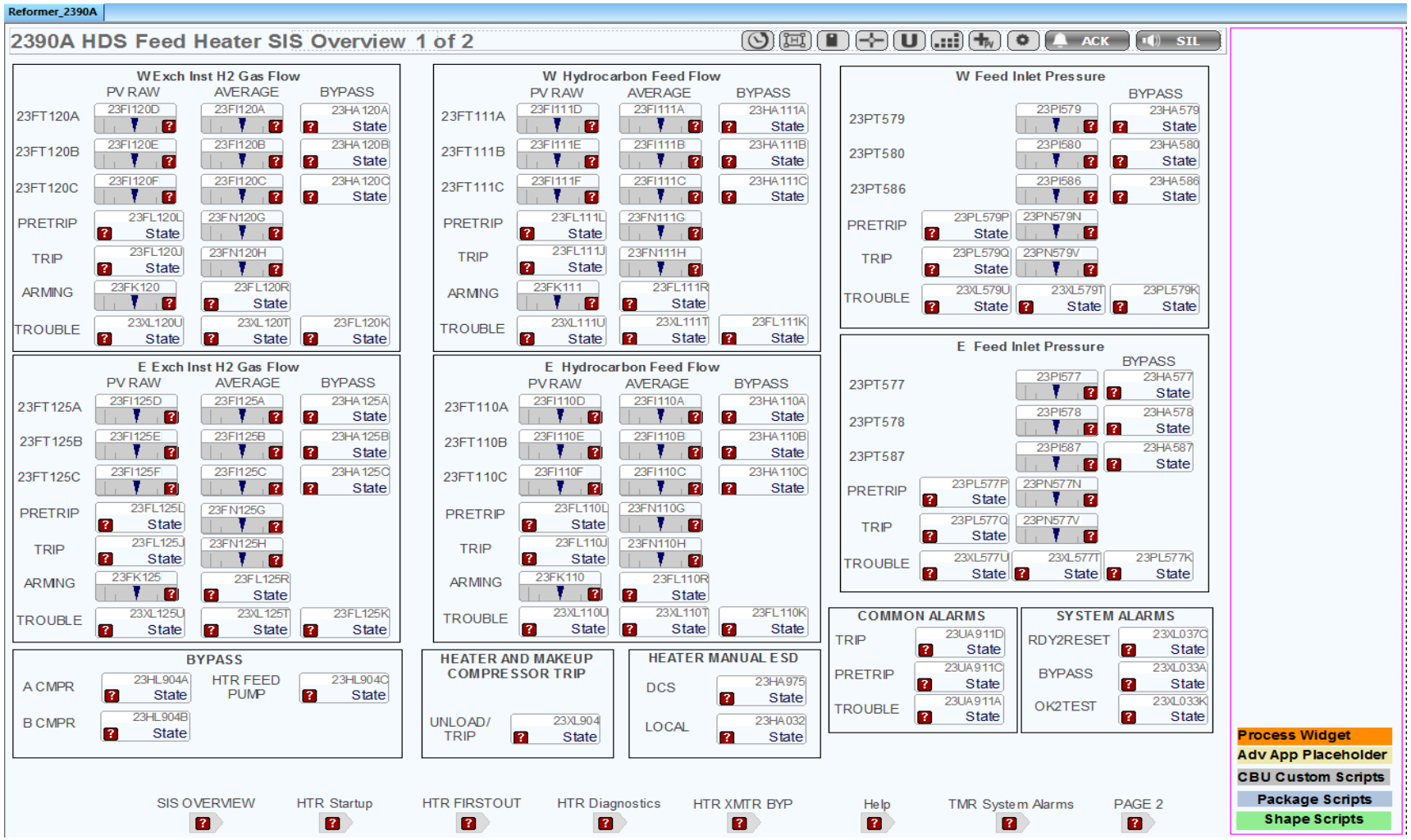
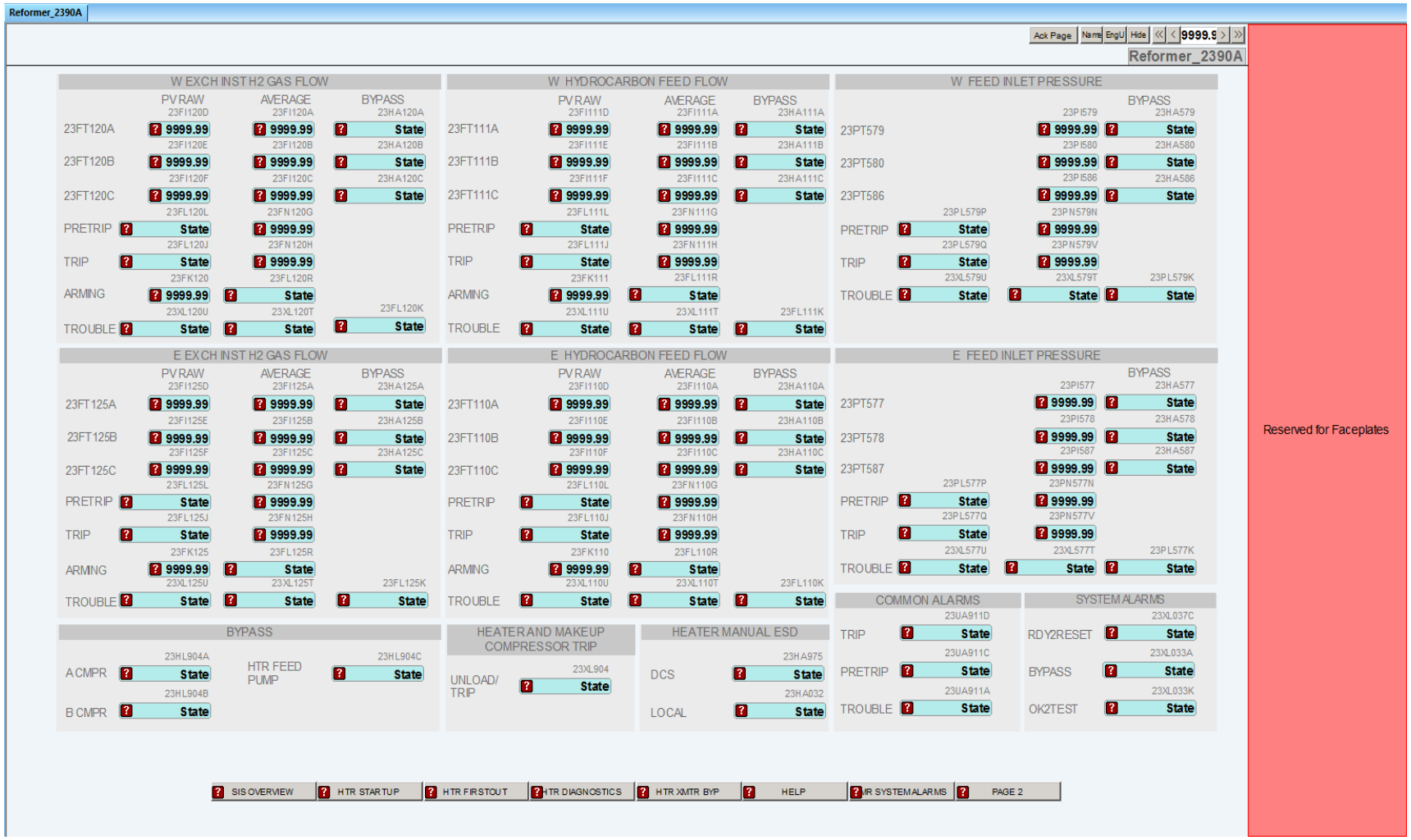
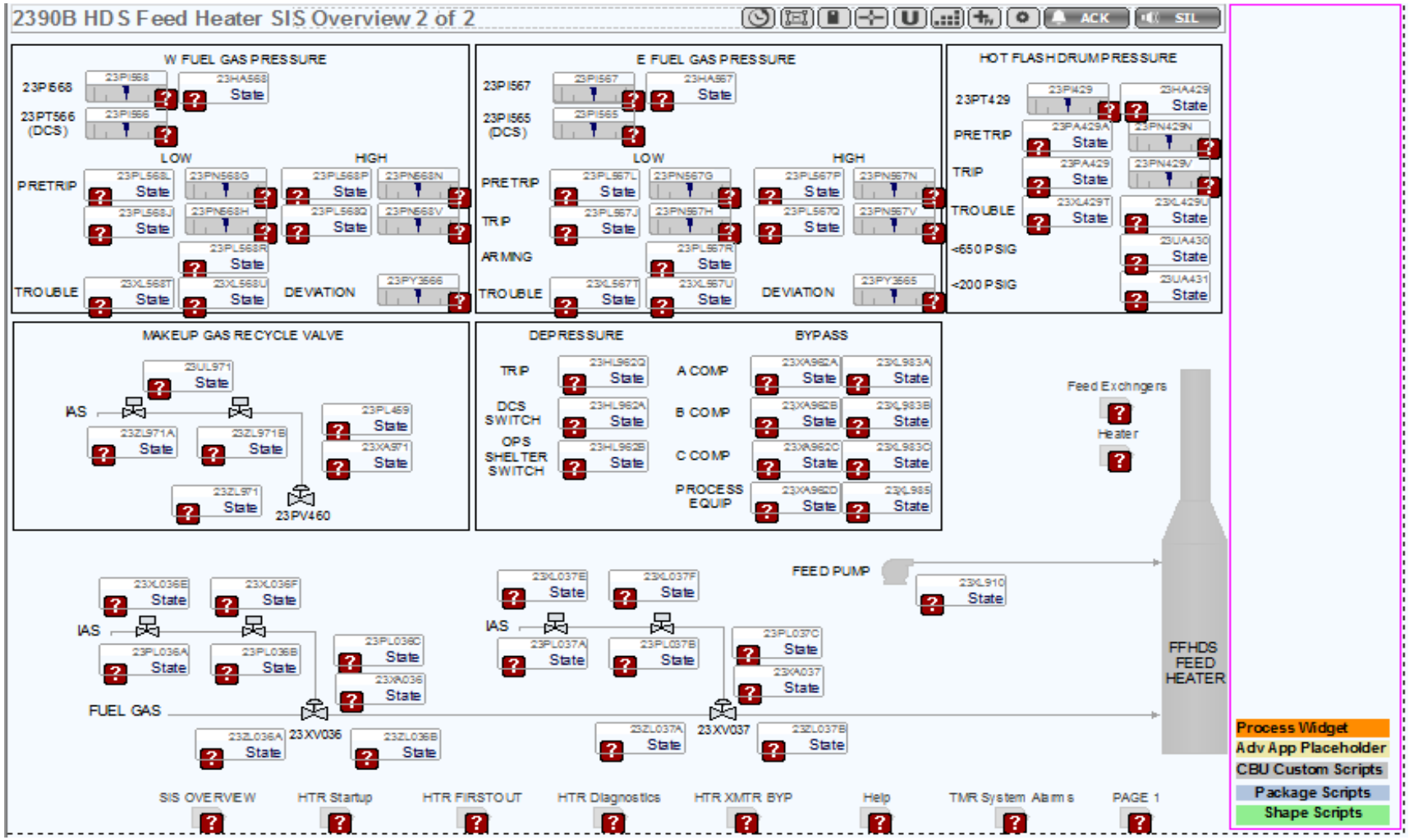
1.183 2390A HDS FEED HEATER SIS OVERVIEW 1 OF 2 (Reformer_2390A.htm)

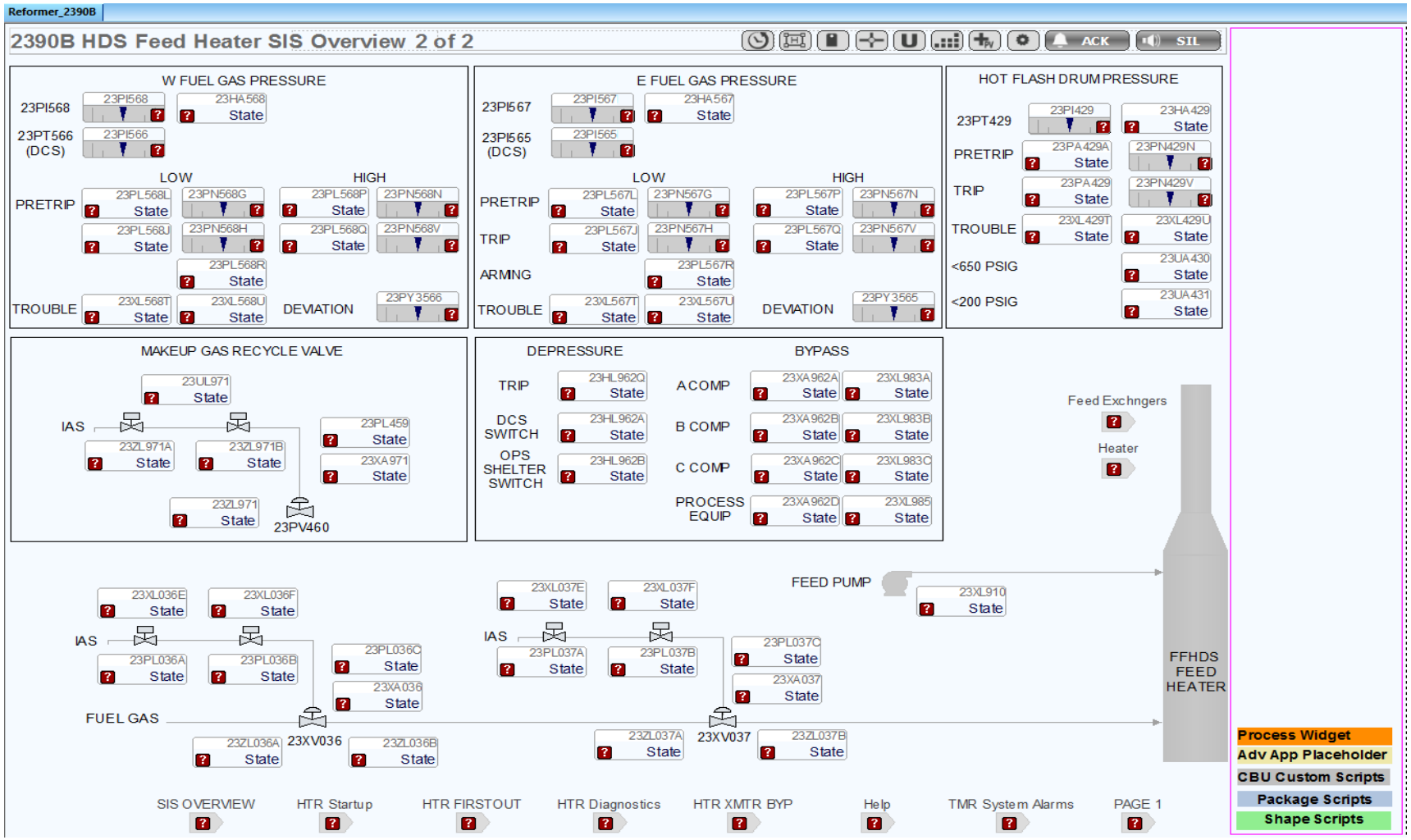


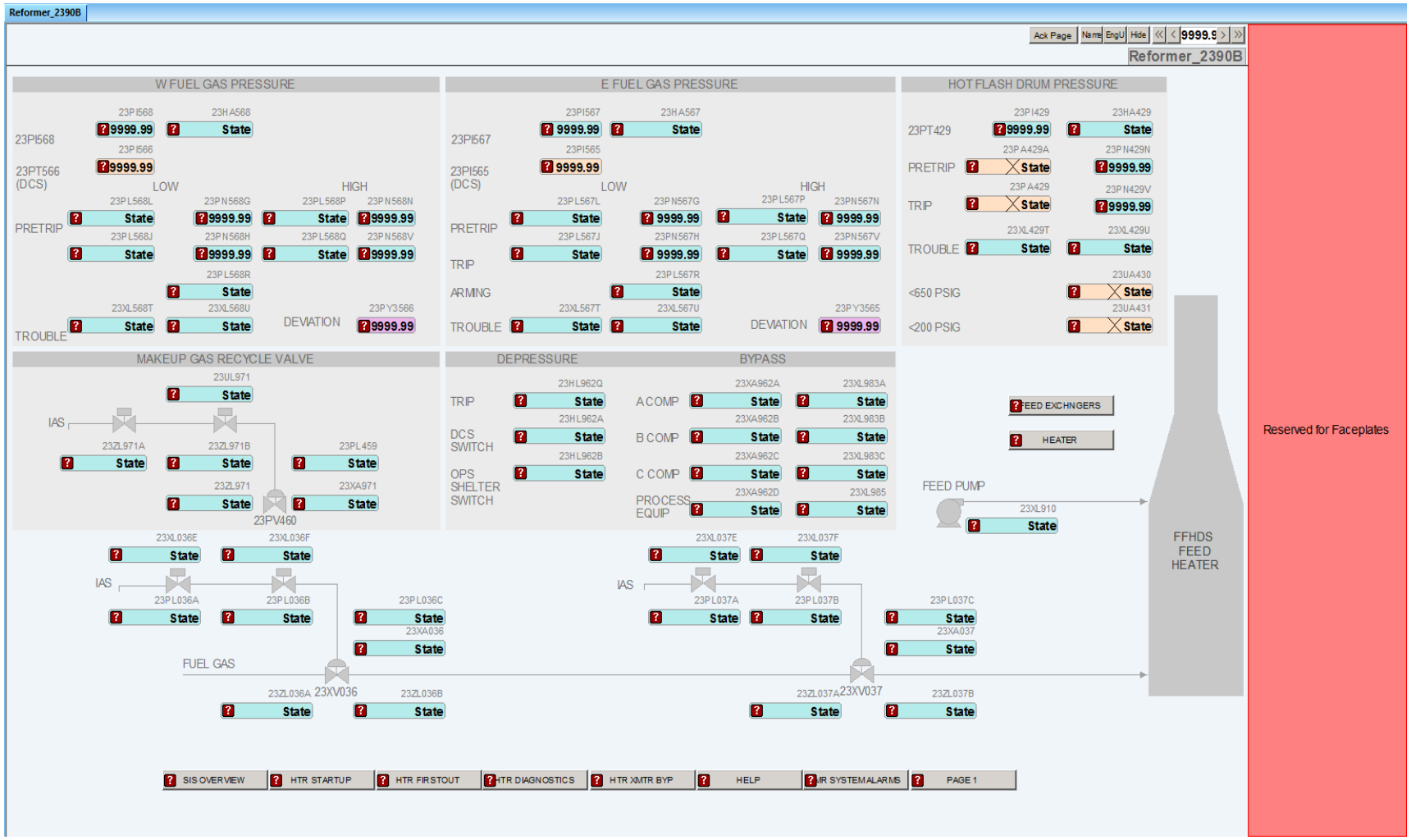

Reformer_2390A
2390A HDS Feed Heater SIS Overview 1 of 2
ACK
SIL
W Exch Inst H2 Gas Flow
PV RAW
AVERAGE
BYPASS
23FT120A
23FT120B
23FT120C
PRETRIP
TRIP
ARMING
TROUBLE
W Hydrocarbon Feed Flow
23FT111A
23FT111B
23FT111C
W Feed Inlet Pressure
23PT579
23PT580
23PT586
E Exch Inst H2 Gas Flow
23FT125A
23FT125B
23FT125C
E Hydrocarbon Feed Flow
23FT110A
23FT110B
23FT110C
E Feed Inlet Pressure
23PT577
23PT578
23PT587
BYPASS
A CMPR
B CMPR
HTR FEED PUMP
HEATER AND MAKEUP COMPRESSOR TRIP
UNLOAD/ TRIP
HEATER MANUAL ESD
DCS
LOCAL
COMMON ALARMS
SYSTEM ALARMS
RDY2RESET
BYPASS
OK2TEST
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
SIS OVERVIEW
HTR Startup
HTR FIRSTOUT
HTR Diagnostics
HTR XMTR BYP
Help
TMR System Alarms
PAGE 2


Reformer_2390A
Ack Page
Name
EngU
Hide
Reformer_2390A
W EXCH INST H2 GAS FLOW
PV RAW
AVERAGE
BYPASS
23FT120A
23FT120B
23FT120C
PRETRIP
TRIP
ARMING
TROUBLE
W HYDROCARBON FEED FLOW
23FT111A
23FT111B
23FT111C
W FEED INLET PRESSURE
23PT579
23PT580
23PT586
E EXCH INST H2 GAS FLOW
23FT125A
23FT125B
23FT125C
E HYDROCARBON FEED FLOW
23FT110A
23FT110B
23FT110C
E FEED INLET PRESSURE
23PT577
23PT578
23PT587
BYPASS
A CMPR
B CMPR
HTR FEED PUMP
HEATER AND MAKEUP COMPRESSOR TRIP
UNLOAD/ TRIP
HEATER MANUAL ESD
DCS
LOCAL
COMMON ALARMS
TRIP
PRETRIP
TROUBLE
SYSTEM ALARMS
RDY2RESET
BYPASS
OK2TEST
SIS OVERVIEW
HTR STARTUP
HTR FIRSTOUT
HTR DIAGNOSTICS
HTR XMTR BYP
HELP
MR SYSTEM ALARMS
PAGE 2
Reserved for Faceplates

1.184 2390B HDS FEED HEATER SIS OVERVIEW 2 OF 2 (Reformer_2390B.htm)




Reformer_2390B
2390B HDS Feed Heater SIS Overview 2 of 2
ACK
SIL
W FUEL GAS PRESSURE
23PI568
23HA568
State
23PT566 (DCS)
23PI566
LOW
HIGH
PRETRIP
23PL568L
23PN568G
23PL568P
23PN568N
23PL568J
23PN568H
23PL568Q
23PN568V
23PL568R
TROUBLE
23XL568T
23XL568U
DEVIATION
23PY3566
E FUEL GAS PRESSURE
23PI567
23HA567
23PI565 (DCS)
23PI565
23PL567L
23PN567G
23PL567P
23PN567N
TRIP
23PL567J
23PN567H
23PL567Q
23PN567V
ARMING
23PL567R
23XL567T
23XL567U
23PY3565
HOT FLASH DRUM PRESSURE
23PT429
23PI429
23HA429
23PA429A
23PN429N
23PA429
23PN429V
23XL429T
23XL429U
<650 PSIG
23UA430
<200 PSIG
23UA431
MAKEUP GAS RECYCLE VALVE
23UL971
IAS
23ZL971A
23ZL971B
23PL459
23XA971
23ZL971
23PV460
DEPRESSURE
BYPASS
TRIP
23HL962Q
A COMP
23XA962A
23XL983A
DCS SWITCH
23HL962A
B COMP
23XA962B
23XL983B
OPS SHELTER SWITCH
23HL962B
C COMP
23XA962C
23XL983C
PROCESS EQUIP
23XA962D
23XL985
Feed Exchngers
Heater
FEED PUMP
23XL910
23XL036E
23XL036F
23PL036A
23PL036B
23PL036C
23XA036
FUEL GAS
23ZL036A
23XV036
23ZL036B
23XL037E
23XL037F
23PL037A
23PL037B
23PL037C
23XA037
23ZL037A
23XV037
23ZL037B
FFHDS FEED HEATER
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
SIS OVERVIEW
HTR Startup
HTR FIRSTOUT
HTR Diagnostics
HTR XMTR BYP
Help
TMR System Alarms
PAGE 1


Reformer_2390B
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Name
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W FUEL GAS PRESSURE
23PI568
23HA568
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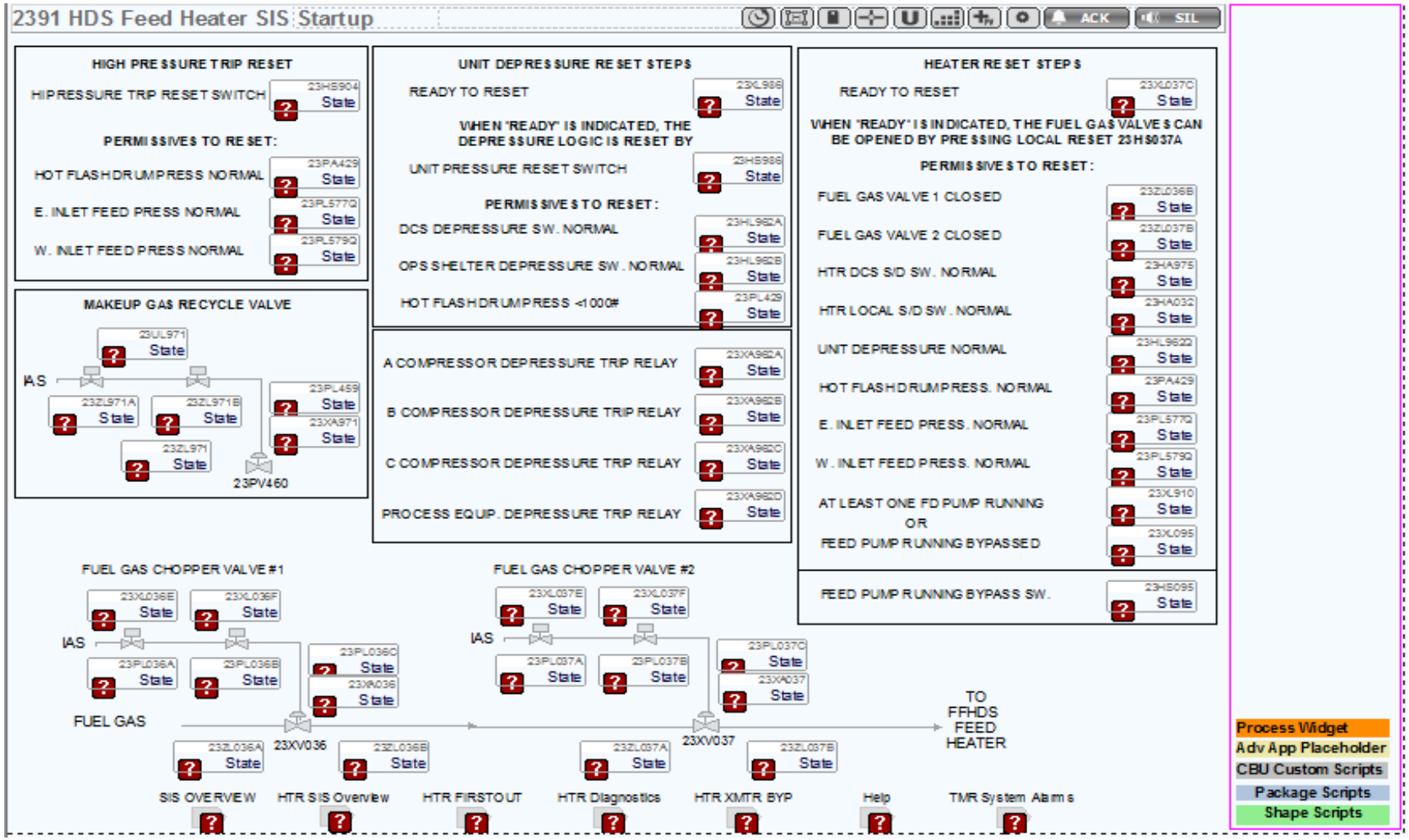
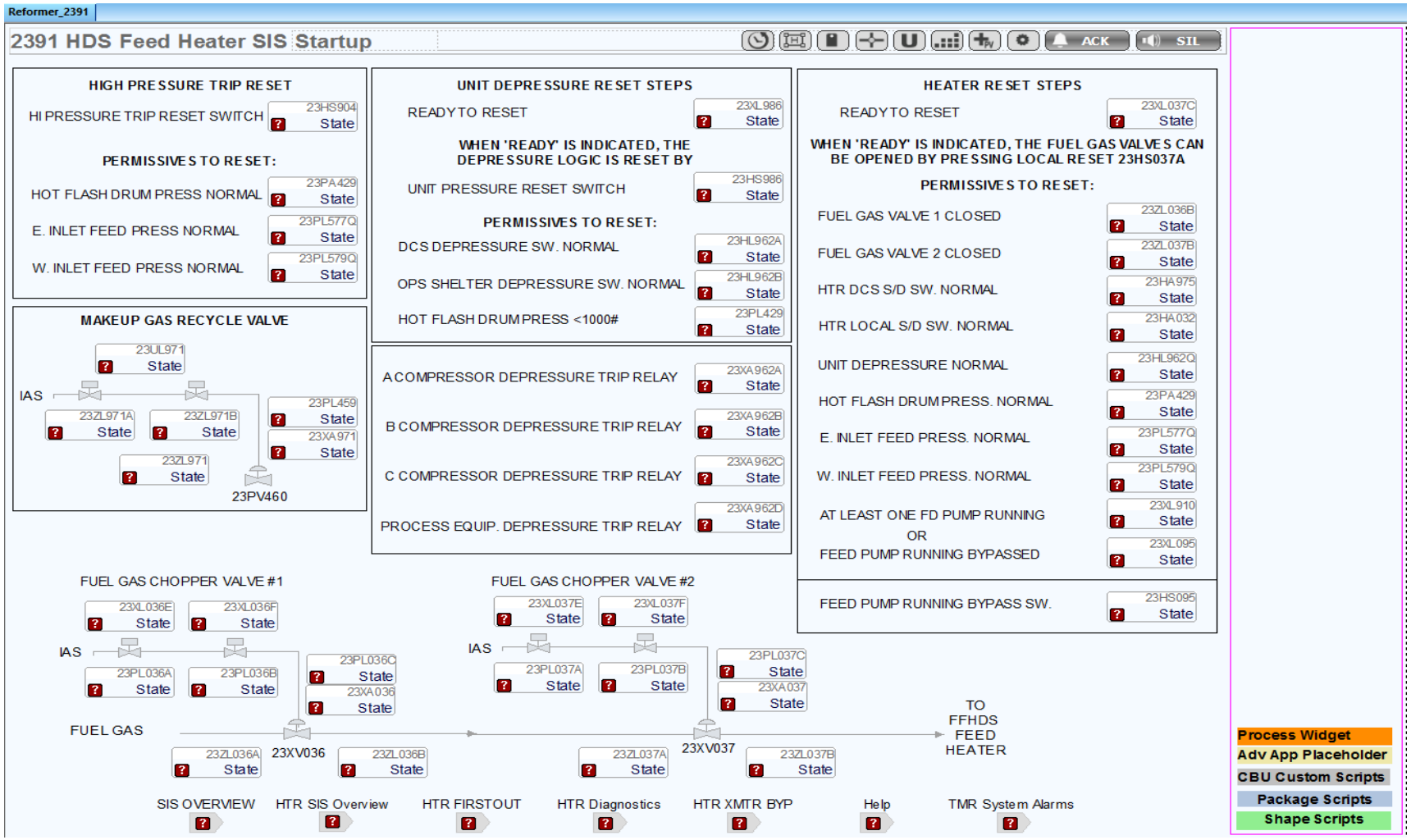
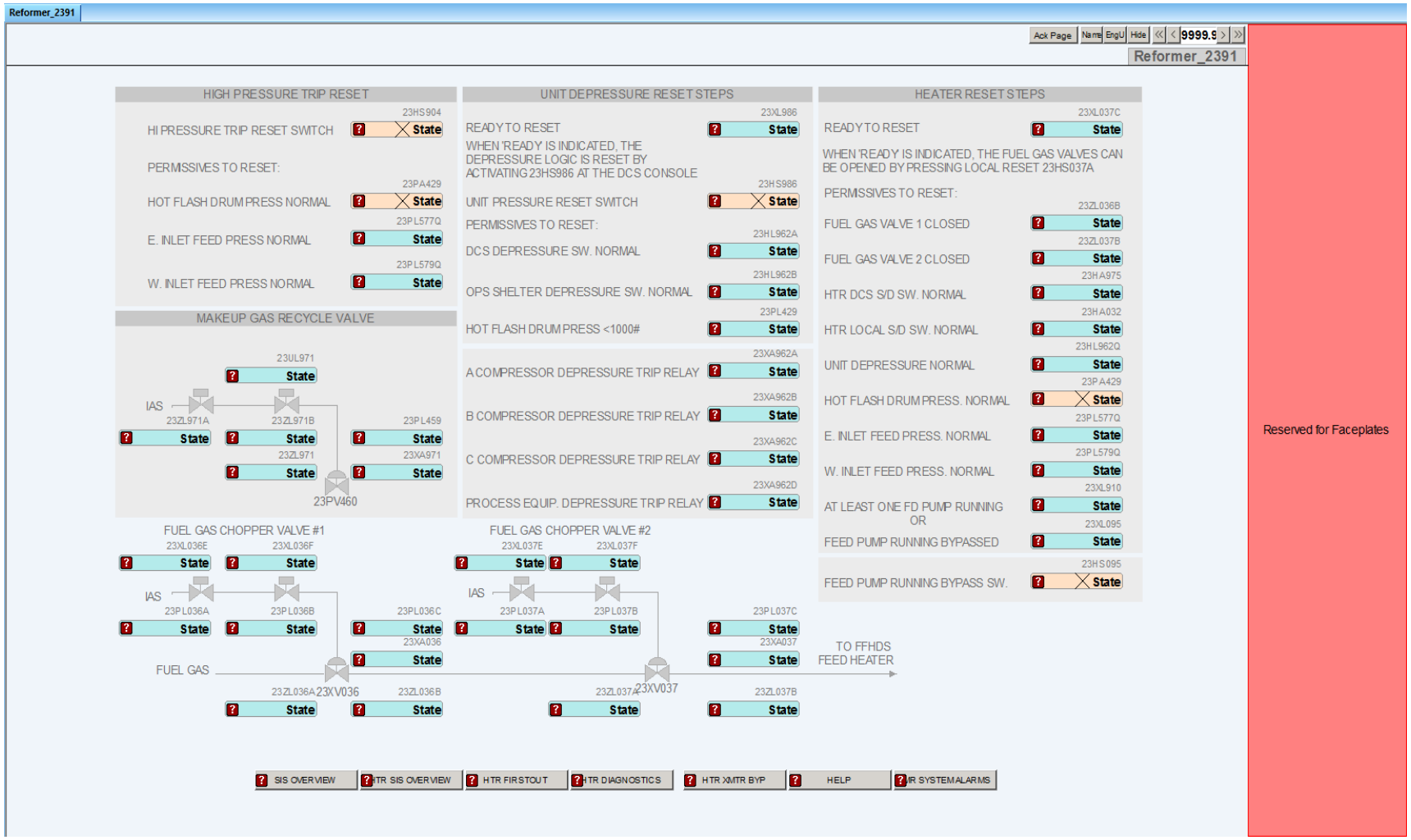
State
23PI566
23PT566 (DCS)
LOW
HIGH
PRETRIP
TRIP
TROUBLE
DEVIATION
23PY3566
E FUEL GAS PRESSURE
23PI567
23HA567
23PI565
23PI565 (DCS)
ARMING
23PY3565
HOT FLASH DRUM PRESSURE
23PT429
23PI429
23HA429
23PA429A
23PN429N
23PA429
23PN429V
23XL429T
23XL429U
<650 PSIG
23UA430
<200 PSIG
23UA431
MAKEUP GAS RECYCLE VALVE
23UL971
IAS
23ZL971A
23ZL971B
23PL459
23ZL971
23XA971
23PV460
DEPRESSURE
BYPASS
TRIP
DCS SWITCH
OPS SHELTER SWITCH
A COMP
B COMP
C COMP
PROCESS EQUIP
23HL962Q
23HL962A
23HL962B
23XA962A
23XL983A
23XA962B
23XL983B
23XA962C
23XL983C
23XA962D
23XL985
FEED EXCHNGERS
HEATER
FEED PUMP
23XL910
FFHDS FEED HEATER
23XL036E
23XL036F
23PL036A
23PL036B
23PL036C
23XA036
FUEL GAS
23ZL036A
23XV036
23ZL036B
23XL037E
23XL037F
23PL037A
23PL037B
23PL037C
23XA037
23ZL037A
23XV037
23ZL037B
SIS OVERVIEW
HTR STARTUP
HTR FIRSTOUT
HTR DIAGNOSTICS
HTR XMTR BYP
HELP
HTR SYSTEMALARMS
PAGE 1
Reserved for Faceplates

1.185 2391 HDS FEED HEATER SIS STARTUP (Reformer_2391.htm)




Reformer_2391
2391 HDS Feed Heater SIS Startup
ACK
SIL
HIGH PRESSURE TRIP RESET
HI PRESSURE TRIP RESET SWITCH
23HS904 State
PERMISSIVES TO RESET:
HOT FLASH DRUM PRESS NORMAL
23PA429 State
E. INLET FEED PRESS NORMAL
23PL577Q State
W. INLET FEED PRESS NORMAL
23PL579Q State
MAKEUP GAS RECYCLE VALVE
23UL971 State
IAS
23ZL971A State
23ZL971B State
23PL459 State
23XA971 State
23ZL971 State
23PV460
UNIT DEPRESSURE RESET STEPS
READY TO RESET
23XL986 State
WHEN 'READY' IS INDICATED, THE DEPRESSURE LOGIC IS RESET BY
UNIT PRESSURE RESET SWITCH
23HS986 State
PERMISSIVES TO RESET:
DCS DEPRESSURE SW. NORMAL
23HL962A State
OPS SHELTER DEPRESSURE SW. NORMAL
23HL962B State
HOT FLASH DRUM PRESS <1000#
23PL429 State
A COMPRESSOR DEPRESSURE TRIP RELAY
23XA962A State
B COMPRESSOR DEPRESSURE TRIP RELAY
23XA962B State
C COMPRESSOR DEPRESSURE TRIP RELAY
23XA962C State
PROCESS EQUIP. DEPRESSURE TRIP RELAY
23XA962D State
HEATER RESET STEPS
READY TO RESET
23XL037C State
WHEN 'READY' IS INDICATED, THE FUEL GAS VALVES CAN BE OPENED BY PRESSING LOCAL RESET 23HS037A
PERMISSIVES TO RESET:
FUEL GAS VALVE 1 CLOSED
23ZL036B State
FUEL GAS VALVE 2 CLOSED
23ZL037B State
HTR DCS S/D SW. NORMAL
23HA975 State
HTR LOCAL S/D SW. NORMAL
23HA032 State
UNIT DEPRESSURE NORMAL
23HL962Q State
HOT FLASH DRUM PRESS. NORMAL
23PA429 State
E. INLET FEED PRESS. NORMAL
23PL577Q State
W. INLET FEED PRESS. NORMAL
23PL579Q State
AT LEAST ONE FD PUMP RUNNING
OR
FEED PUMP RUNNING BYPASSED
23XL910 State
23XL095 State
FEED PUMP RUNNING BYPASS SW.
23HS095 State
FUEL GAS CHOPPER VALVE #1
23XL036E State
23XL036F State
IAS
23PL036A State
23PL036B State
23PL036C State
23XA036 State
FUEL GAS
23ZL036A State
23XV036
23ZL036B State
FUEL GAS CHOPPER VALVE #2
23XL037E State
23XL037F State
IAS
23PL037A State
23PL037B State
23PL037C State
23XA037 State
23ZL037A State
23XV037
23ZL037B State
TO FFHDS FEED HEATER
SIS OVERVIEW
HTR SIS Overview
HTR FIRSTOUT
HTR Diagnostics
HTR XMTR BYP
Help
TMR System Alarms
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2391
Ack Page
Name
EngU
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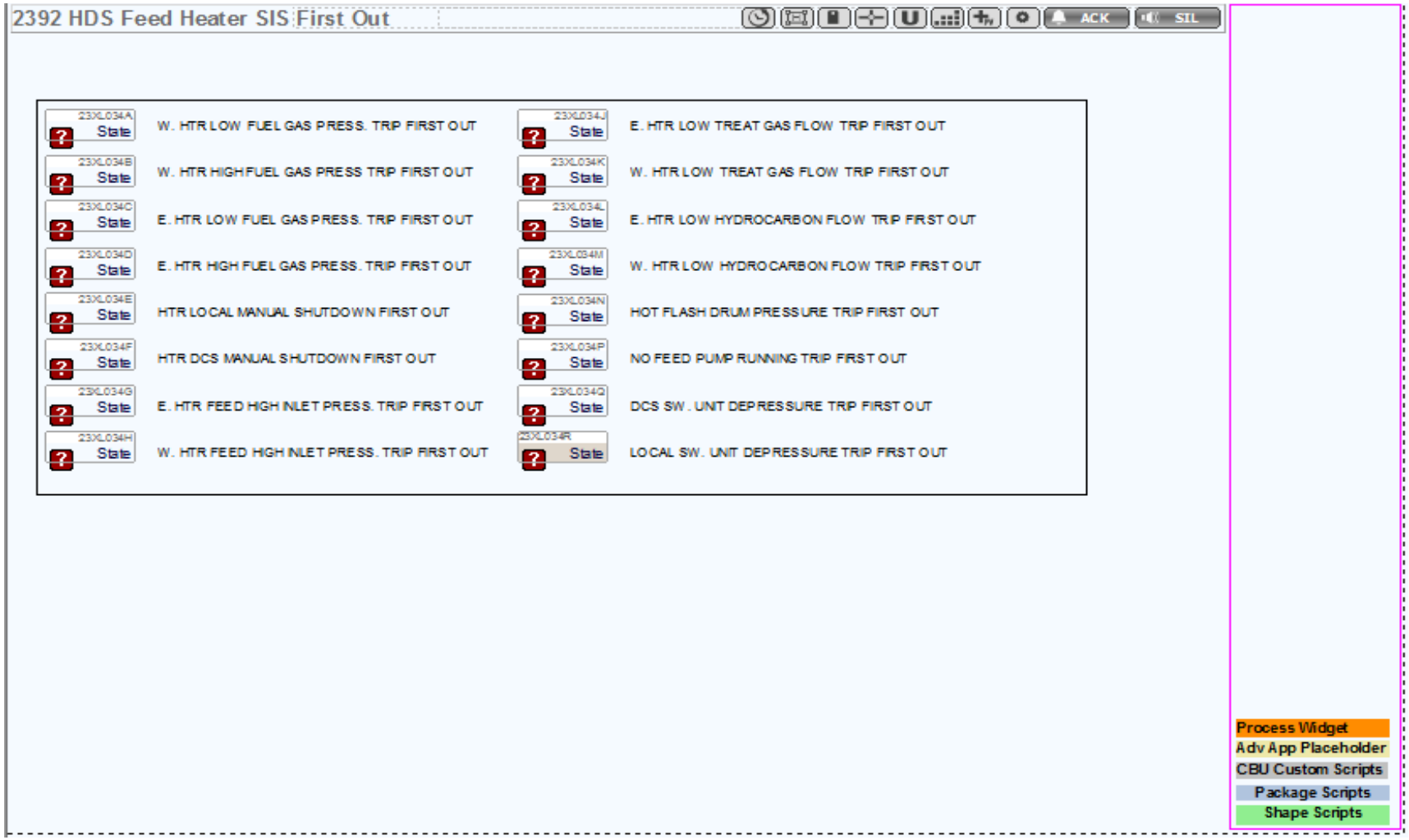
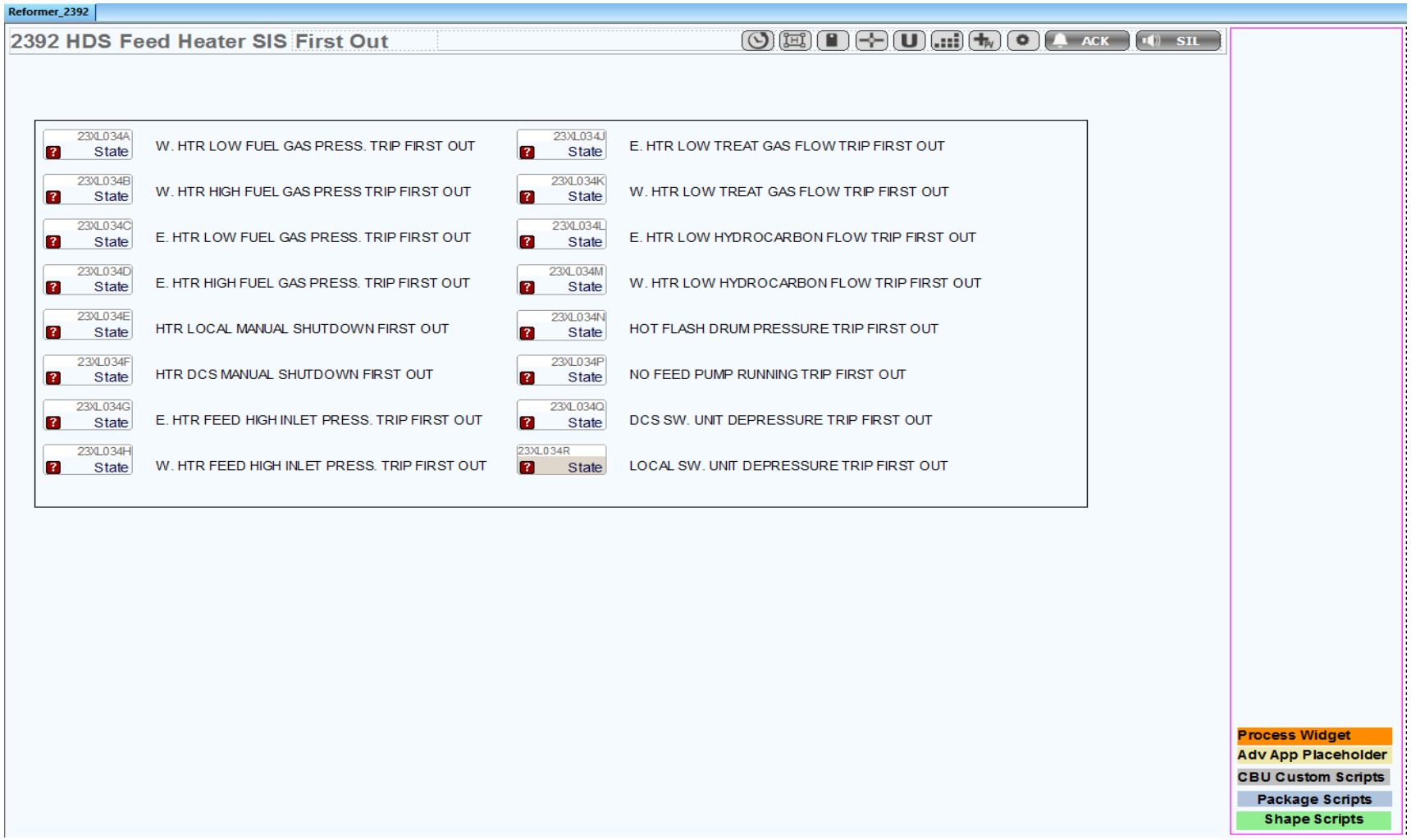
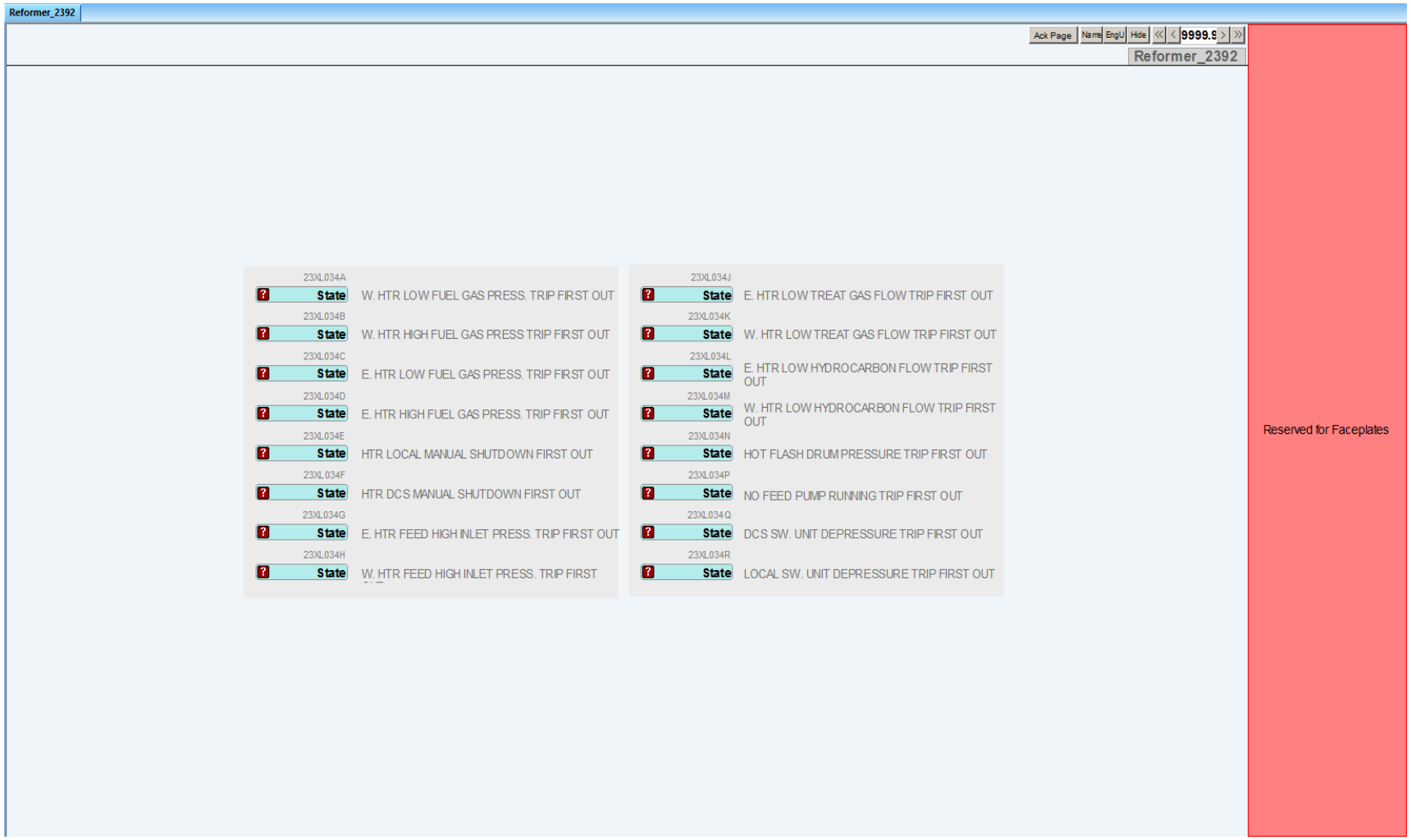
9999.9
Reformer_2391
HIGH PRESSURE TRIP RESET
23HS904
HI PRESSURE TRIP RESET SWITCH
State
PERMISSIVES TO RESET:
23PA429
HOT FLASH DRUM PRESS NORMAL
State
23PL577Q
E. INLET FEED PRESS NORMAL
State
23PL579Q
W. INLET FEED PRESS NORMAL
State
MAKEUP GAS RECYCLE VALVE
23UL971
State
IAS
23ZL971A
23ZL971B
23PL459
State
23ZL971
23XA971
23PV460
UNIT DEPRESSURE RESET STEPS
23XL986
READY TO RESET
State
WHEN 'READY' IS INDICATED, THE DEPRESSURE LOGIC IS RESET BY ACTIVATING 23HS986 AT THE DCS CONSOLE
23HS986
UNIT PRESSURE RESET SWITCH
State
PERMISSIVES TO RESET:
23HL962A
DCS DEPRESSURE SW. NORMAL
State
23HL962B
OPS SHELTER DEPRESSURE SW. NORMAL
State
23PL429
HOT FLASH DRUM PRESS <1000#
State
23XA962A
A COMPRESSOR DEPRESSURE TRIP RELAY
State
23XA962B
B COMPRESSOR DEPRESSURE TRIP RELAY
State
23XA962C
C COMPRESSOR DEPRESSURE TRIP RELAY
State
23XA962D
PROCESS EQUIP. DEPRESSURE TRIP RELAY
State
HEATER RESET STEPS
23XL037C
READY TO RESET
State
WHEN 'READY' IS INDICATED, THE FUEL GAS VALVES CAN BE OPENED BY PRESSING LOCAL RESET 23HS037A
PERMISSIVES TO RESET:
23ZL036B
FUEL GAS VALVE 1 CLOSED
State
23ZL037B
FUEL GAS VALVE 2 CLOSED
State
23HA975
HTR DCS S/D SW. NORMAL
State
23HA032
HTR LOCAL S/D SW. NORMAL
State
23HL962Q
UNIT DEPRESSURE NORMAL
State
23PA429
HOT FLASH DRUM PRESS. NORMAL
State
23PL577Q
E. INLET FEED PRESS. NORMAL
State
23PL579Q
W. INLET FEED PRESS. NORMAL
State
23XL910
AT LEAST ONE FD PUMP RUNNING OR
State
23XL095
FEED PUMP RUNNING BYPASSED
State
23HS095
FEED PUMP RUNNING BYPASS SW.
State
FUEL GAS CHOPPER VALVE #1
23XL036E
23XL036F
State
IAS
23PL036A
23PL036B
23PL036C
State
23XA036
FUEL GAS
23ZL036A
23XV036
23ZL036B
FUEL GAS CHOPPER VALVE #2
23XL037E
23XL037F
State
IAS
23PL037A
23PL037B
23PL037C
State
23XA037
TO FFHDS FEED HEATER
23ZL037A
23XV037
23ZL037B
SIS OVERVIEW
HTR SIS OVERVIEW
HTR FIRSTOUT
HTR DIAGNOSTICS
HTR XMTR BYP
HELP
HTR SYSTEM ALARMS
Reserved for Faceplates

1.186 2392 HDS FEED HEATER SIS FIRST OUT (Reformer_2392.htm)




Reformer_2392
2392 HDS Feed Heater SIS First Out
ACK
SIL
23XL034A State
W. HTR LOW FUEL GAS PRESS. TRIP FIRST OUT
23XL034B State
W. HTR HIGH FUEL GAS PRESS TRIP FIRST OUT
23XL034C State
E. HTR LOW FUEL GAS PRESS. TRIP FIRST OUT
23XL034D State
E. HTR HIGH FUEL GAS PRESS. TRIP FIRST OUT
23XL034E State
HTR LOCAL MANUAL SHUTDOWN FIRST OUT
23XL034F State
HTR DCS MANUAL SHUTDOWN FIRST OUT
23XL034G State
E. HTR FEED HIGH INLET PRESS. TRIP FIRST OUT
23XL034H State
W. HTR FEED HIGH INLET PRESS. TRIP FIRST OUT
23XL034J State
E. HTR LOW TREAT GAS FLOW TRIP FIRST OUT
23XL034K State
W. HTR LOW TREAT GAS FLOW TRIP FIRST OUT
23XL034L State
E. HTR LOW HYDROCARBON FLOW TRIP FIRST OUT
23XL034M State
W. HTR LOW HYDROCARBON FLOW TRIP FIRST OUT
23XL034N State
HOT FLASH DRUM PRESSURE TRIP FIRST OUT
23XL034P State
NO FEED PUMP RUNNING TRIP FIRST OUT
23XL034Q State
DCS SW. UNIT DEPRESSURE TRIP FIRST OUT
23XL034R State
LOCAL SW. UNIT DEPRESSURE TRIP FIRST OUT
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2392
Ack Page
Name
EngU
Hide
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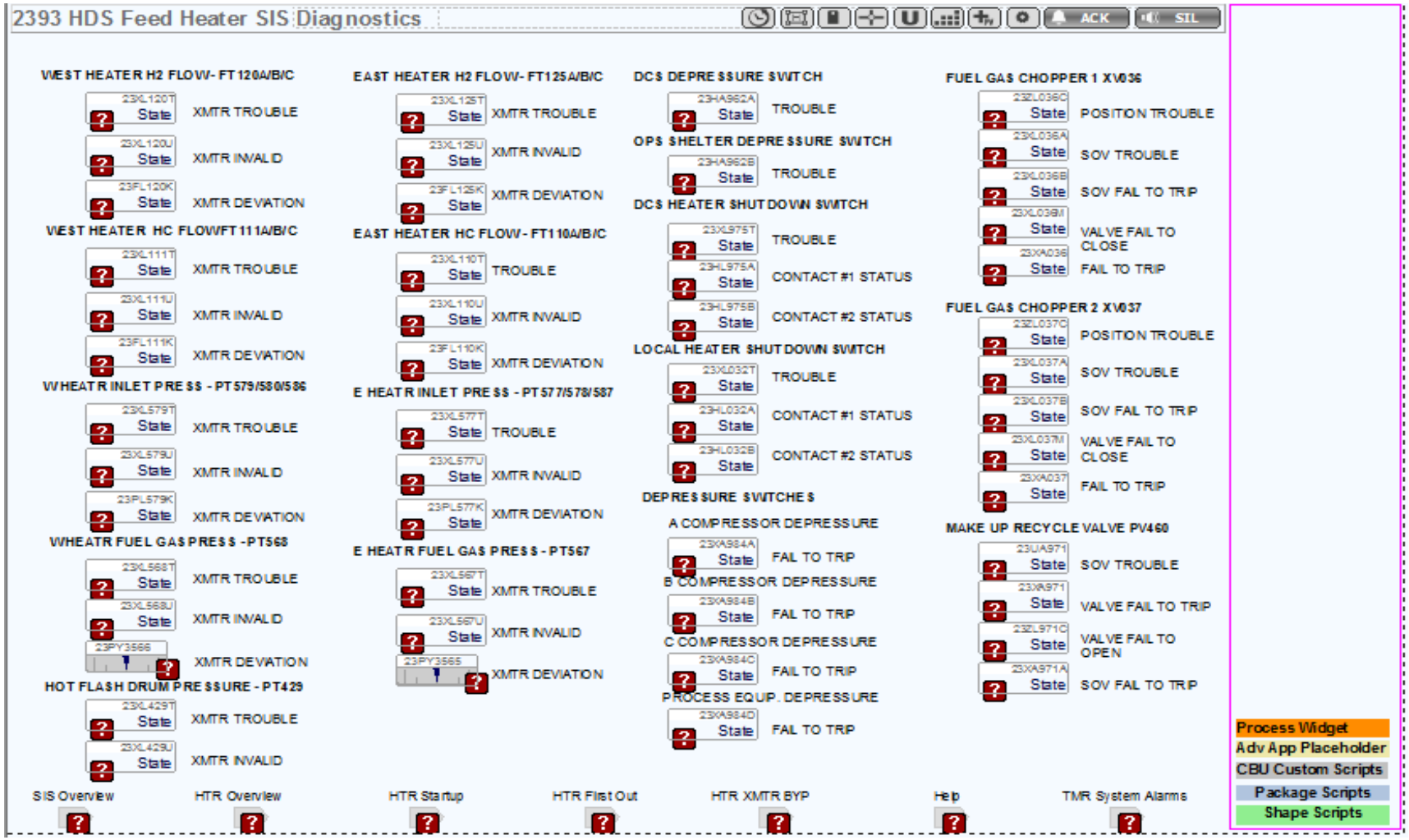
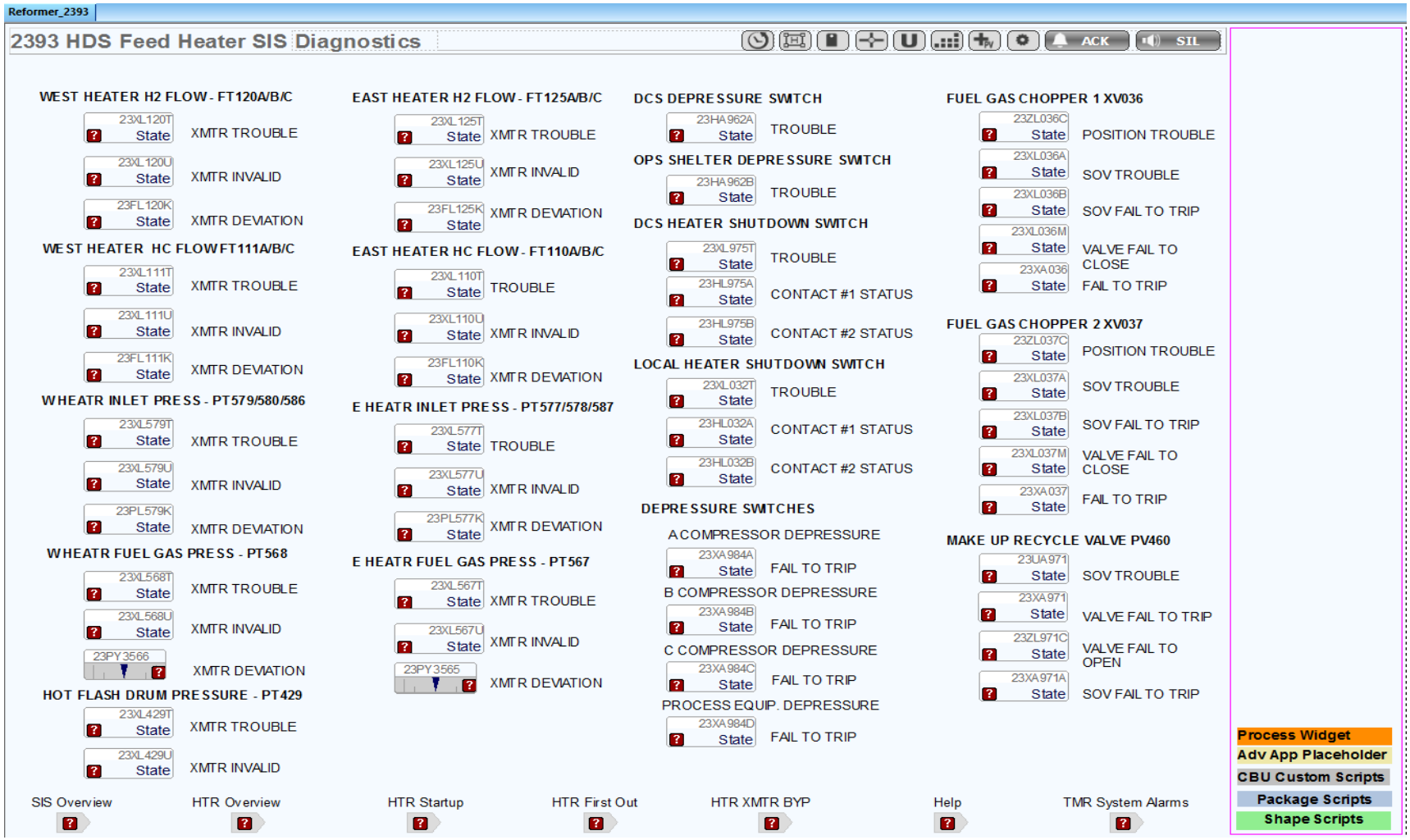
Reformer_2392
23XL034A
State
W. HTR LOW FUEL GAS PRESS. TRIP FIRST OUT
23XL034B
State
W. HTR HIGH FUEL GAS PRESS TRIP FIRST OUT
23XL034C
State
E. HTR LOW FUEL GAS PRESS. TRIP FIRST OUT
23XL034D
State
E. HTR HIGH FUEL GAS PRESS. TRIP FIRST OUT
23XL034E
State
HTR LOCAL MANUAL SHUTDOWN FIRST OUT
23XL034F
State
HTR DCS MANUAL SHUTDOWN FIRST OUT
23XL034G
State
E. HTR FEED HIGH INLET PRESS. TRIP FIRST OUT
23XL034H
State
W. HTR FEED HIGH INLET PRESS. TRIP FIRST
23XL034J
State
E. HTR LOW TREAT GAS FLOW TRIP FIRST OUT
23XL034K
State
W. HTR LOW TREAT GAS FLOW TRIP FIRST OUT
23XL034L
State
E. HTR LOW HYDROCARBON FLOW TRIP FIRST OUT
23XL034M
State
W. HTR LOW HYDROCARBON FLOW TRIP FIRST OUT
23XL034N
State
HOT FLASH DRUM PRESSURE TRIP FIRST OUT
23XL034P
State
NO FEED PUMP RUNNING TRIP FIRST OUT
23XL034Q
State
DCS SW. UNIT DEPRESSURE TRIP FIRST OUT
23XL034R
State
LOCAL SW. UNIT DEPRESSURE TRIP FIRST OUT
Reserved for Faceplates

1.187 2393 HDS FEED HEATER SIS DIAGNOSTICS (Reformer_2393.htm)




Reformer_2393
2393 HDS Feed Heater SIS Diagnostics
ACK
SIL
WEST HEATER H2 FLOW - FT120A/B/C
23XL120T State XMTR TROUBLE
23XL120U State XMTR INVALID
23FL120K State XMTR DEVIATION
WEST HEATER HC FLOW FT111A/B/C
23XL111T State XMTR TROUBLE
23XL111U State XMTR INVALID
23FL111K State XMTR DEVIATION
WHEATR INLET PRESS - PT579/580/586
23XL579T State XMTR TROUBLE
23XL579U State XMTR INVALID
23PL579K State XMTR DEVIATION
WHEATR FUEL GAS PRESS - PT568
23XL568T State XMTR TROUBLE
23XL568U State XMTR INVALID
23PY3566 XMTR DEVIATION
HOT FLASH DRUM PRESSURE - PT429
23XL429T State XMTR TROUBLE
23XL429U State XMTR INVALID
EAST HEATER H2 FLOW - FT125A/B/C
23XL125T State XMTR TROUBLE
23XL125U State XMTR INVALID
23FL125K State XMTR DEVIATION
EAST HEATER HC FLOW - FT110A/B/C
23XL110T State TROUBLE
23XL110U State XMTR INVALID
23FL110K State XMTR DEVIATION
E HEATR INLET PRESS - PT577/578/587
23XL577T State TROUBLE
23XL577U State XMTR INVALID
23PL577K State XMTR DEVIATION
E HEATR FUEL GAS PRESS - PT567
23XL567T State XMTR TROUBLE
23XL567U State XMTR INVALID
23PY3565 XMTR DEVIATION
DCS DEPRESSURE SWITCH
23HA962A State TROUBLE
OPS SHELTER DEPRESSURE SWITCH
23HA962B State TROUBLE
DCS HEATER SHUTDOWN SWITCH
23XL975T State TROUBLE
23HL975A State CONTACT #1 STATUS
23HL975B State CONTACT #2 STATUS
LOCAL HEATER SHUTDOWN SWITCH
23XL032T State TROUBLE
23HL032A State CONTACT #1 STATUS
23HL032B State CONTACT #2 STATUS
DEPRESSURE SWITCHES
A COMPRESSOR DEPRESSURE
23XA984A State FAIL TO TRIP
B COMPRESSOR DEPRESSURE
23XA984B State FAIL TO TRIP
C COMPRESSOR DEPRESSURE
23XA984C State FAIL TO TRIP
PROCESS EQUIP. DEPRESSURE
23XA984D State FAIL TO TRIP
FUEL GAS CHOPPER 1 XV036
23ZL036C State POSITION TROUBLE
23XL036A State SOV TROUBLE
23XL036B State SOV FAIL TO TRIP
23XL036M State VALVE FAIL TO CLOSE
23XA036 State FAIL TO TRIP
FUEL GAS CHOPPER 2 XV037
23ZL037C State POSITION TROUBLE
23XL037A State SOV TROUBLE
23XL037B State SOV FAIL TO TRIP
23XL037M State VALVE FAIL TO CLOSE
23XA037 State FAIL TO TRIP
MAKE UP RECYCLE VALVE PV460
23UA971 State SOV TROUBLE
23XA971 State VALVE FAIL TO TRIP
23ZL971C State VALVE FAIL TO OPEN
23XA971A State SOV FAIL TO TRIP
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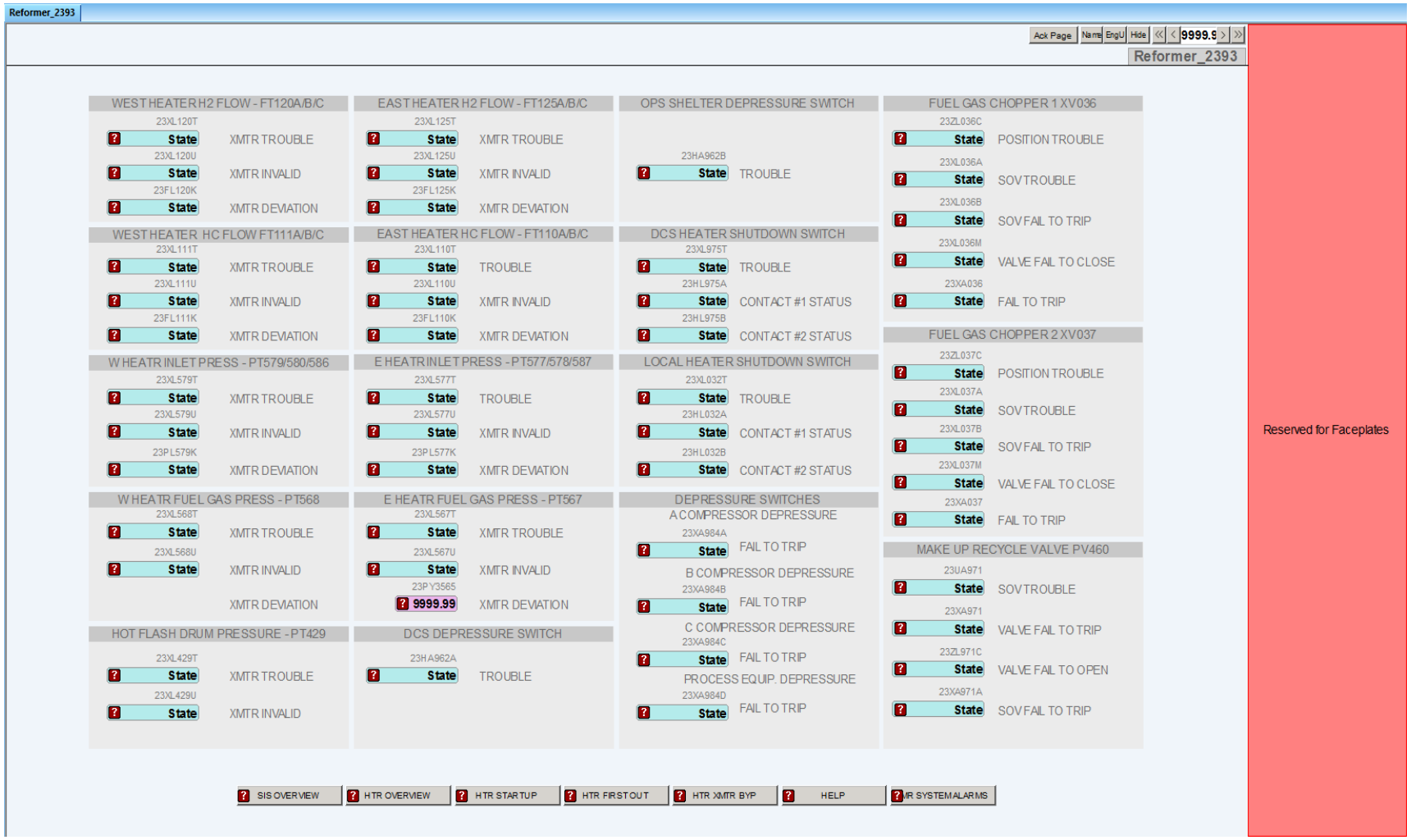
HTR Overview
HTR Startup
HTR First Out
HTR XMTR BYP
Help
TMR System Alarms
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts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EngU
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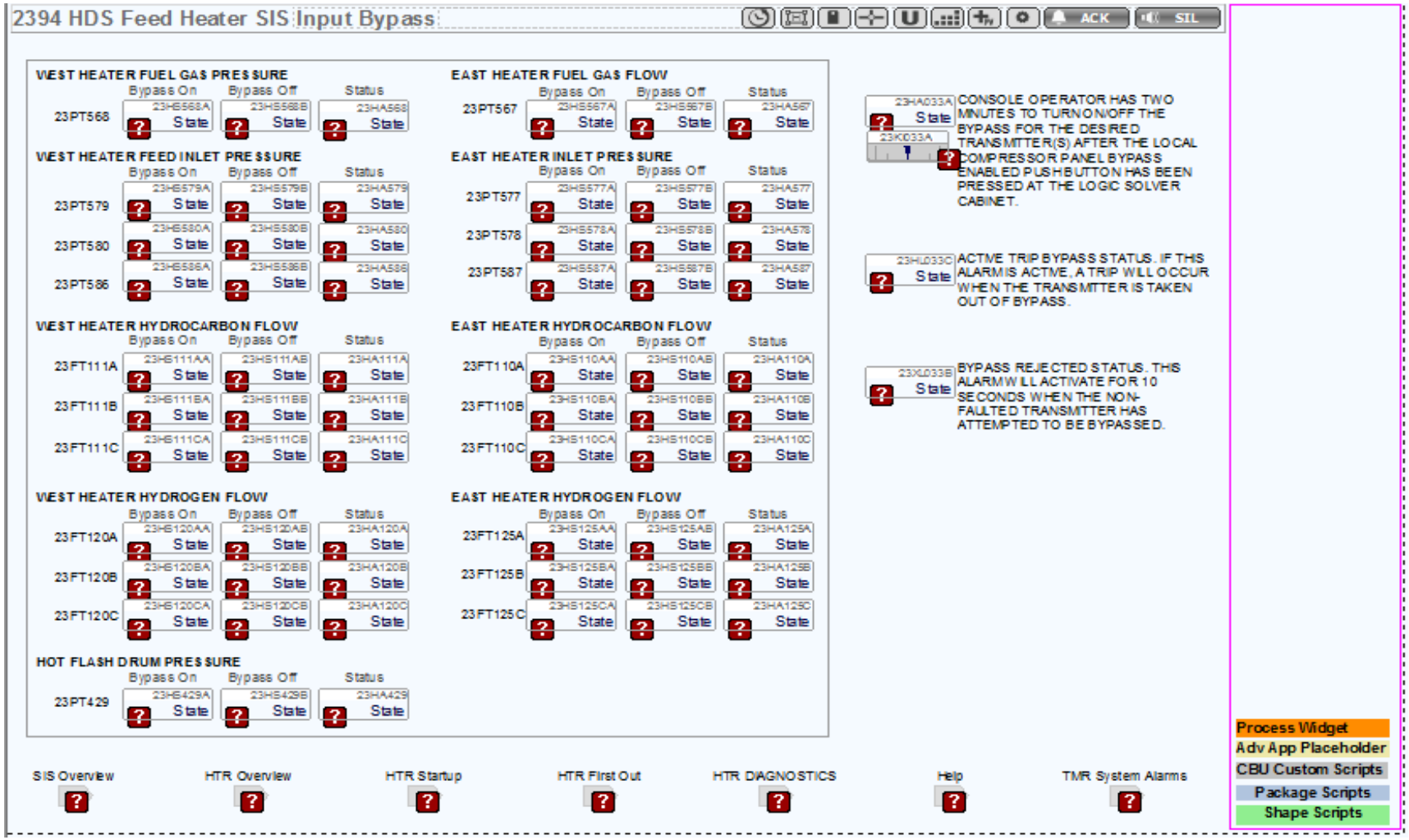
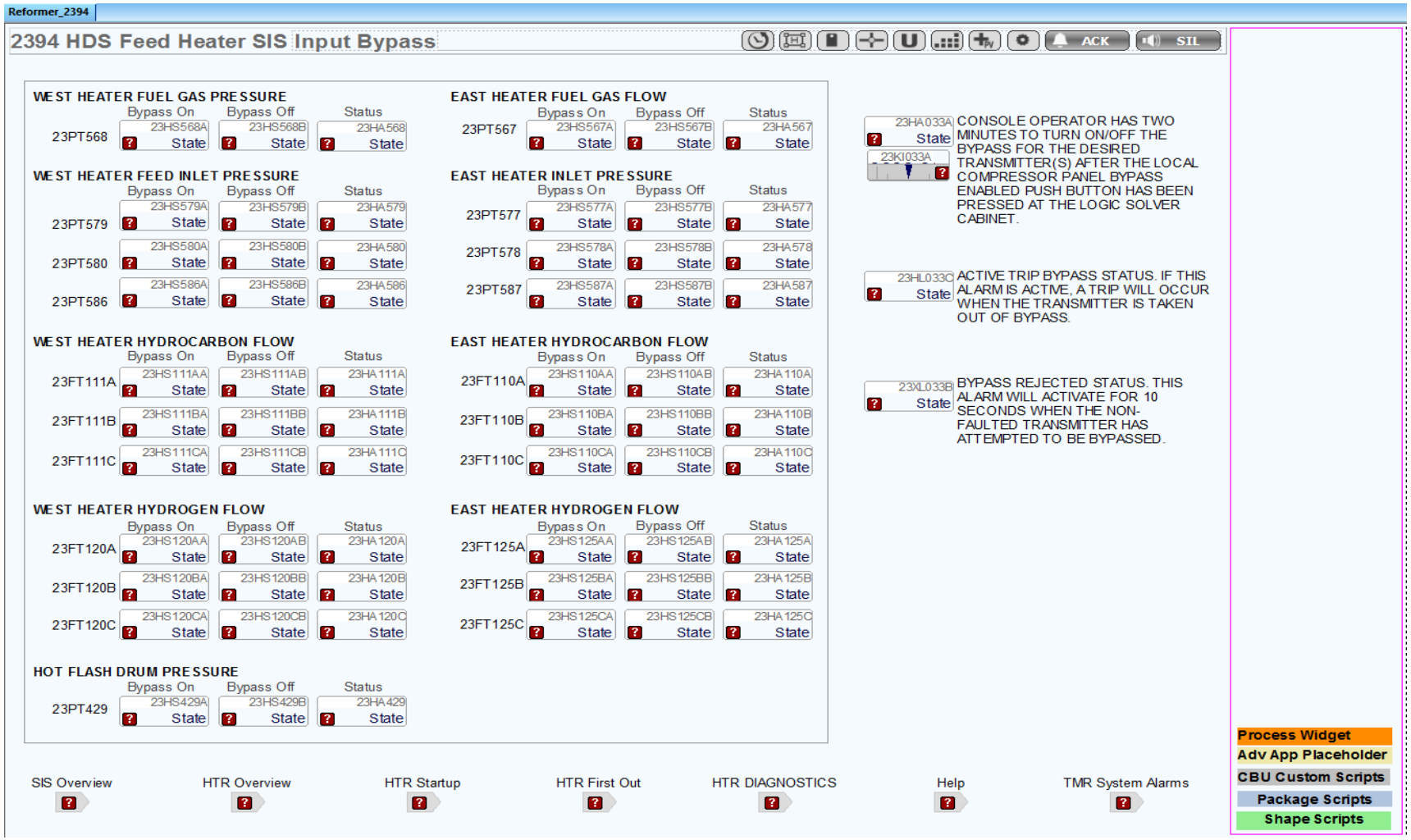
Reformer_2393
WEST HEATER H2 FLOW - FT120A/B/C
23XL120T
State
XMTR TROUBLE
23XL120U
State
XMTR INVALID
23FL120K
State
XMTR DEVIATION
EAST HEATER H2 FLOW - FT125A/B/C
23XL125T
State
XMTR TROUBLE
23XL125U
State
XMTR INVALID
23FL125K
State
XMTR DEVIATION
OPS SHELTER DEPRESSURE SWITCH
23HA962B
State
TROUBLE
FUEL GAS CHOPPER 1 XV036
23ZL036C
State
POSITION TROUBLE
23XL036A
State
SOV TROUBLE
23XL036B
State
SOV FAIL TO TRIP
23XL036M
State
VALVE FAIL TO CLOSE
23XA036
State
FAIL TO TRIP
WEST HEATER HC FLOW FT111A/B/C
23XL111T
State
XMTR TROUBLE
23XL111U
State
XMTR INVALID
23FL111K
State
XMTR DEVIATION
EAST HEATER HC FLOW - FT110A/B/C
23XL110T
State
TROUBLE
23XL110U
State
XMTR INVALID
23FL110K
State
XMTR DEVIATION
DCS HEATER SHUTDOWN SWITCH
23XL975T
State
TROUBLE
23HL975A
State
CONTACT #1 STATUS
23HL975B
State
CONTACT #2 STATUS
FUEL GAS CHOPPER 2 XV037
23ZL037C
State
POSITION TROUBLE
23XL037A
State
SOV TROUBLE
23XL037B
State
SOV FAIL TO TRIP
23XL037M
State
VALVE FAIL TO CLOSE
23XA037
State
FAIL TO TRIP
W HEATR INLET PRESS - PT579/580/586
23XL579T
State
XMTR TROUBLE
23XL579U
State
XMTR INVALID
23PL579K
State
XMTR DEVIATION
E HEATR INLET PRESS - PT577/578/587
23XL577T
State
TROUBLE
23XL577U
State
XMTR INVALID
23PL577K
State
XMTR DEVIATION
LOCAL HEATER SHUTDOWN SWITCH
23XL032T
State
TROUBLE
23HL032A
State
CONTACT #1 STATUS
23HL032B
State
CONTACT #2 STATUS
MAKE UP RECYCLE VALVE PV460
23UA971
State
SOV TROUBLE
23XA971
State
VALVE FAIL TO TRIP
23ZL971C
State
VALVE FAIL TO OPEN
23XA971A
State
SOV FAIL TO TRIP
W HEATR FUEL GAS PRESS - PT568
23XL568T
State
XMTR TROUBLE
23XL568U
State
XMTR INVALID
XMTR DEVIATION
E HEATR FUEL GAS PRESS - PT567
23XL567T
State
XMTR TROUBLE
23XL567U
State
XMTR INVALID
23PY3565
9999.99
XMTR DEVIATION
DEPRESSURE SWITCHES
A COMPRESSOR DEPRESSURE
23XA984A
State
FAIL TO TRIP
B COMPRESSOR DEPRESSURE
23XA984B
State
FAIL TO TRIP
C COMPRESSOR DEPRESSURE
23XA984C
State
FAIL TO TRIP
PROCESS EQUIP. DEPRESSURE
23XA984D
State
FAIL TO TRIP
HOT FLASH DRUM PRESSURE - PT429
23XL429T
State
XMTR TROUBLE
23XL429U
State
XMTR INVALID
DCS DEPRESSURE SWITCH
23HA962A
State
TROUBLE
SIS OVERVIEW
HTR OVERVIEW
HTR STARTUP
HTR FIRST OUT
HTR XMTR BYP
HELP
HTR SYSTEM ALARMS
Reserved for Faceplates

1.188 2394 HDS FEED HEATER SIS INPUT BYPASS (Reformer_2394.htm)




Reformer_2394
2394 HDS Feed Heater SIS Input Bypass
ACK
SIL
WEST HEATER FUEL GAS PRESSURE
Bypass On
Bypass Off
Status
23PT568
23HS568A State
23HS568B State
23HA568 State
WEST HEATER FEED INLET PRESSURE
23PT579
23HS579A State
23HS579B State
23HA579 State
23PT580
23HS580A State
23HS580B State
23HA580 State
23PT586
23HS586A State
23HS586B State
23HA586 State
WEST HEATER HYDROCARBON FLOW
23FT111A
23HS111AA State
23HS111AB State
23HA111A State
23FT111B
23HS111BA State
23HS111BB State
23HA111B State
23FT111C
23HS111CA State
23HS111CB State
23HA111C State
WEST HEATER HYDROGEN FLOW
23FT120A
23HS120AA State
23HS120AB State
23HA120A State
23FT120B
23HS120BA State
23HS120BB State
23HA120B State
23FT120C
23HS120CA State
23HS120CB State
23HA120C State
HOT FLASH DRUM PRESSURE
23PT429
23HS429A State
23HS429B State
23HA429 State
EAST HEATER FUEL GAS FLOW
23PT567
23HS567A State
23HS567B State
23HA567 State
EAST HEATER INLET PRESSURE
23PT577
23HS577A State
23HS577B State
23HA577 State
23PT578
23HS578A State
23HS578B State
23HA578 State
23PT587
23HS587A State
23HS587B State
23HA587 State
EAST HEATER HYDROCARBON FLOW
23FT110A
23HS110AA State
23HS110AB State
23HA110A State
23FT110B
23HS110BA State
23HS110BB State
23HA110B State
23FT110C
23HS110CA State
23HS110CB State
23HA110C State
EAST HEATER HYDROGEN FLOW
23FT125A
23HS125AA State
23HS125AB State
23HA125A State
23FT125B
23HS125BA State
23HS125BB State
23HA125B State
23FT125C
23HS125CA State
23HS125CB State
23HA125C State
23HA033A State
23KI033A
CONSOLE OPERATOR HAS TWO MINUTES TO TURN ON/OFF THE BYPASS FOR THE DESIRED TRANSMITTER(S) AFTER THE LOCAL COMPRESSOR PANEL BYPASS ENABLED PUSH BUTTON HAS BEEN PRESSED AT THE LOGIC SOLVER CABINET.
23HL033C State
ACTIVE TRIP BYPASS STATUS. IF THIS ALARM IS ACTIVE, A TRIP WILL OCCUR WHEN THE TRANSMITTER IS TAKEN OUT OF BYPASS.
23XL033B State
BYPASS REJECTED STATUS. THIS ALARM WILL ACTIVATE FOR 10 SECONDS WHEN THE NON-FAULTED TRANSMITTER HAS ATTEMPTED TO BE BYPASSED.
SIS Overview
HTR Overview
HTR Startup
HTR First Out
HTR DIAGNOSTICS
Help
TMR System Alarms
Process Widget
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CBU Custom Scripts
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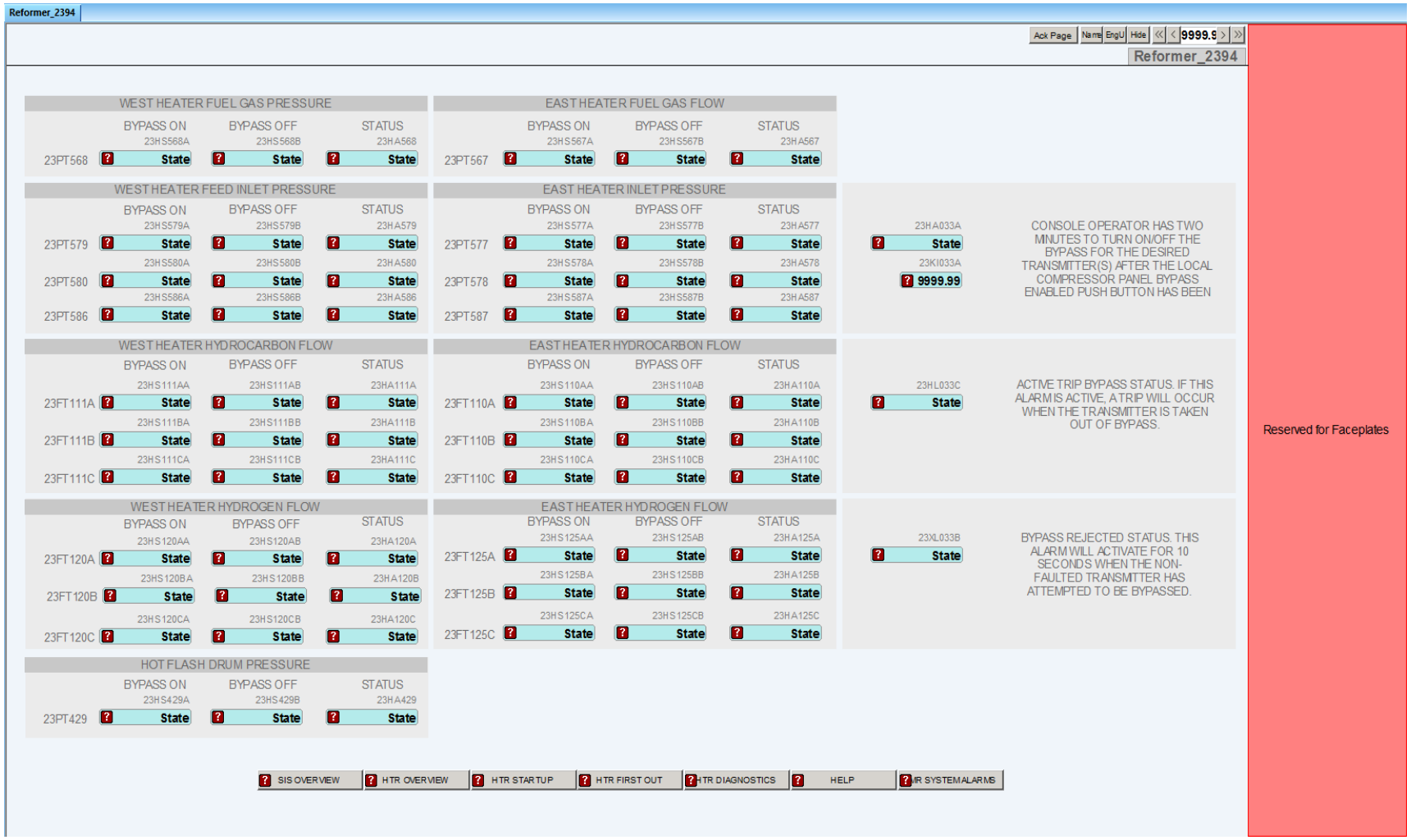
Reformer_2394
Ack Page
Name
EngU
Hide
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Reformer_2394
WEST HEATER FUEL GAS PRESSURE
BYPASS ON
BYPASS OFF
STATUS
23HS568A
23HS568B
23HA568
23PT568
State
EAST HEATER FUEL GAS FLOW
23HS567A
23HS567B
23HA567
23PT567
WEST HEATER FEED INLET PRESSURE
23HS579A
23HS579B
23HA579
23PT579
23HS580A
23HS580B
23HA580
23PT580
23HS586A
23HS586B
23HA586
23PT586
EAST HEATER INLET PRESSURE
23HS577A
23HS577B
23HA577
23PT577
23HS578A
23HS578B
23HA578
23PT578
23HS587A
23HS587B
23HA587
23PT587
23HA033A
23KI033A
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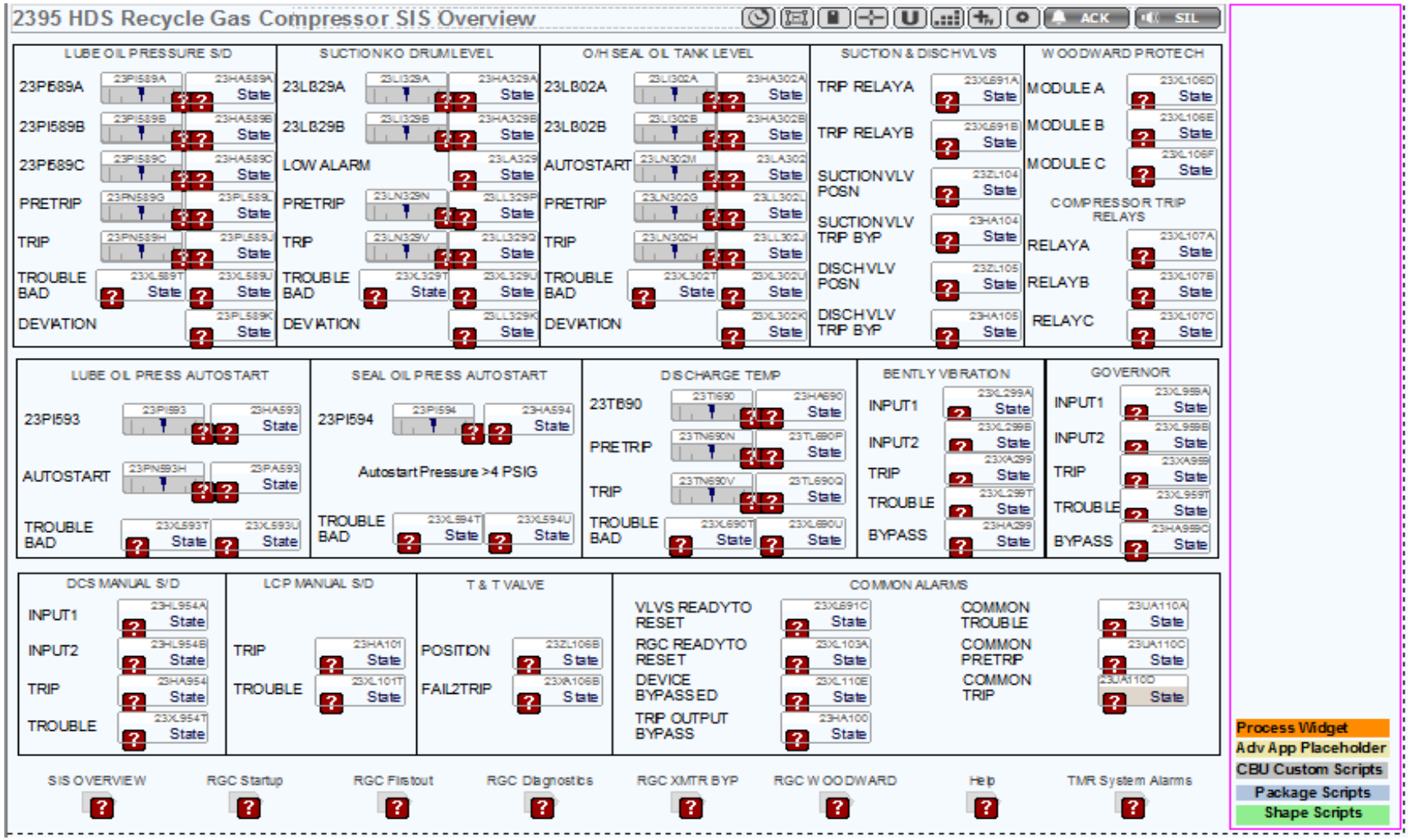
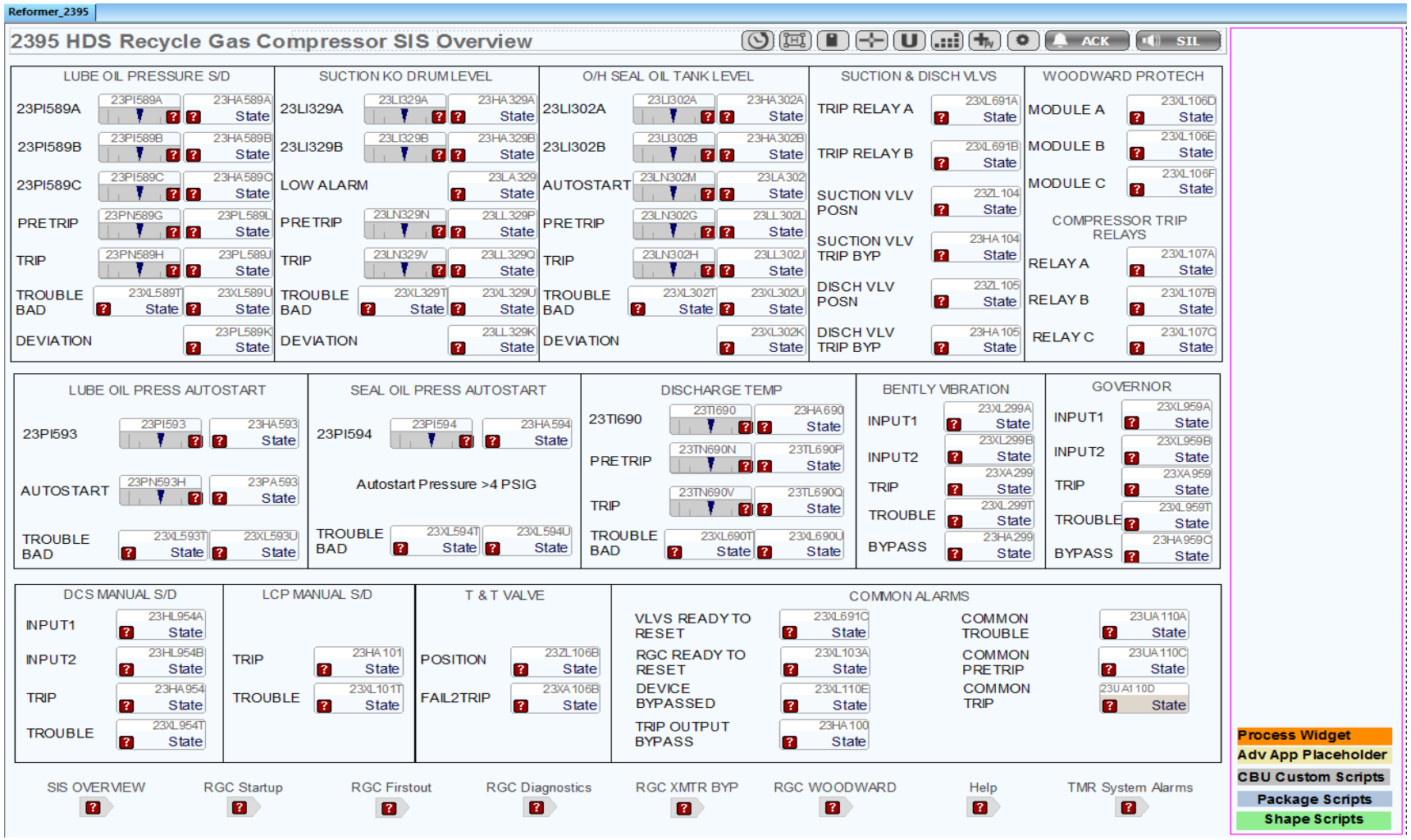
CONSOLE OPERATOR HAS TWO MINUTES TO TURN ON/OFF THE BYPASS FOR THE DESIRED TRANSMITTER(S) AFTER THE LOCAL COMPRESSOR PANEL BYPASS ENABLED PUSH BUTTON HAS BEEN
WEST HEATER HYDROCARBON FLOW
23HS111AA
23HS111AB
23HA111A
23FT111A
23HS111BA
23HS111BB
23HA111B
23FT111B
23HS111CA
23HS111CB
23HA111C
23FT111C
EAST HEATER HYDROCARBON FLOW
23HS110AA
23HS110AB
23HA110A
23FT110A
23HS110BA
23HS110BB
23HA110B
23FT110B
23HS110CA
23HS110CB
23HA110C
23FT110C
23HL033C
ACTIVE TRIP BYPASS STATUS. IF THIS ALARM IS ACTIVE, A TRIP WILL OCCUR WHEN THE TRANSMITTER IS TAKEN OUT OF BYPASS.
WEST HEATER HYDROGEN FLOW
23HS120AA
23HS120AB
23HA120A
23FT120A
23HS120BA
23HS120BB
23HA120B
23FT120B
23HS120CA
23HS120CB
23HA120C
23FT120C
EAST HEATER HYDROGEN FLOW
23HS125AA
23HS125AB
23HA125A
23FT125A
23HS125BA
23HS125BB
23HA125B
23FT125B
23HS125CA
23HS125CB
23HA125C
23FT125C
23XL033B
BYPASS REJECTED STATUS. THIS ALARM WILL ACTIVATE FOR 10 SECONDS WHEN THE NON-FAULTED TRANSMITTER HAS ATTEMPTED TO BE BYPASSED.
HOT FLASH DRUM PRESSURE
23HS429A
23HS429B
23HA429
23PT429
SIS OVERVIEW
HTR OVERVIEW
HTR STARTUP
HTR FIRST OUT
HTR DIAGNOSTICS
HELP
HR SYSTEM ALARMS
Reserved for Faceplates

1.189 2395 HDS RECYCLE GAS COMPRESSOR SIS OVERVIEW (Reformer_2395.htm)




Reformer_2395
2395 HDS Recycle Gas Compressor SIS Overview
ACK
SIL
LUBE OIL PRESSURE S/D
23PI589A
23PI589B
23PI589C
PRETRIP
TRIP
TROUBLE BAD
DEVIATION
SUCTION KO DRUM LEVEL
23LI329A
23LI329B
LOW ALARM
PRETRIP
TRIP
TROUBLE BAD
DEVIATION
O/H SEAL OIL TANK LEVEL
23LI302A
23LI302B
AUTOSTART
PRETRIP
TRIP
TROUBLE BAD
DEVIATION
SUCTION & DISCH VLVS
TRIP RELAY A
TRIP RELAY B
SUCTION VLV POSN
SUCTION VLV TRIP BYP
DISCH VLV POSN
DISCH VLV TRIP BYP
WOODWARD PROTECH
MODULE A
MODULE B
MODULE C
COMPRESSOR TRIP RELAYS
RELAY A
RELAY B
RELAY C
LUBE OIL PRESS AUTOSTART
23PI593
AUTOSTART
TROUBLE BAD
SEAL OIL PRESS AUTOSTART
23PI594
Autostart Pressure >4 PSIG
TROUBLE BAD
DISCHARGE TEMP
23TI690
PRETRIP
TRIP
TROUBLE BAD
BENTLY VIBRATION
INPUT1
INPUT2
TRIP
TROUBLE
BYPASS
GOVERNOR
INPUT1
INPUT2
TRIP
TROUBLE
BYPASS
DCS MANUAL S/D
INPUT1
INPUT2
TRIP
TROUBLE
LCP MANUAL S/D
TRIP
TROUBLE
T & T VALVE
POSITION
FAIL2TRIP
COMMON ALARMS
VLVS READY TO RESET
RGC READY TO RESET
DEVICE BYPASSED
TRIP OUTPUT BYPASS
COMMON TROUBLE
COMMON PRETRIP
COMMON TRIP
SIS OVERVIEW
RGC Startup
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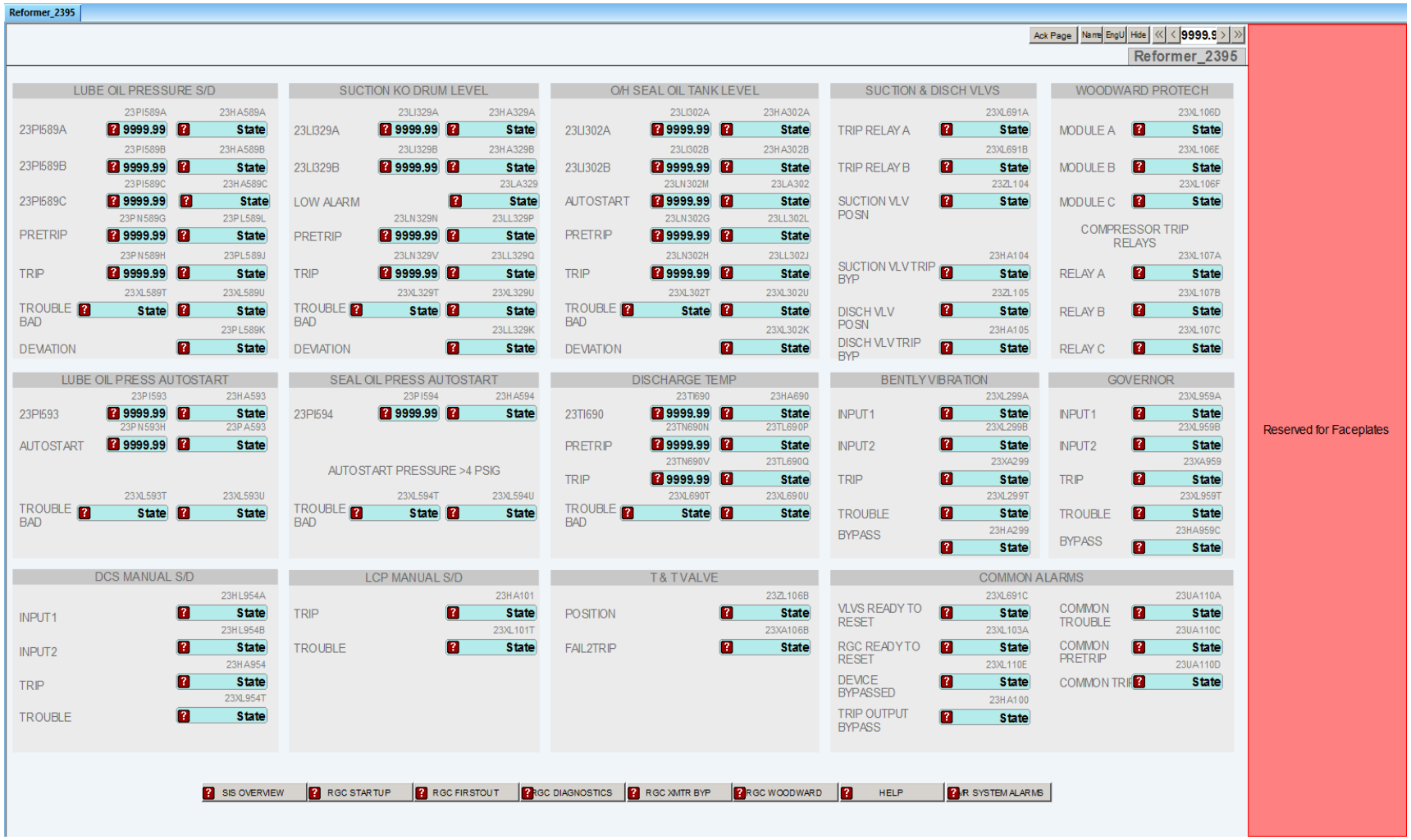
RGC Diagnostics
RGC XMTR BYP
RGC WOODWARD
Help
TMR System Alarms
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts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LUBE OIL PRESSURE S/D
23PI589A
23HA589A
23PI589A
9999.99
State
23PI589B
23HA589B
23PI589B
9999.99
State
23PI589C
23HA589C
23PI589C
9999.99
State
23PN589G
23PL589L
PRETRIP
9999.99
State
23PN589H
23PL589J
TRIP
9999.99
State
23XL589T
23XL589U
TROUBLE BAD
State
State
23PL589K
DEVIATION
State
SUCTION KO DRUM LEVEL
23LI329A
23HA329A
23LI329A
9999.99
State
23LI329B
23HA329B
23LI329B
9999.99
State
23LA329
LOW ALARM
State
23LN329N
23LL329P
PRETRIP
9999.99
State
23LN329V
23LL329Q
TRIP
9999.99
State
23XL329T
23XL329U
TROUBLE BAD
State
State
23LL329K
DEVIATION
State
O/H SEAL OIL TANK LEVEL
23LI302A
23HA302A
23LI302A
9999.99
State
23LI302B
23HA302B
23LI302B
9999.99
State
23LN302M
23LA302
AUTOSTART
9999.99
State
23LN302G
23LL302L
PRETRIP
9999.99
State
23LN302H
23LL302J
TRIP
9999.99
State
23XL302T
23XL302U
TROUBLE BAD
State
State
23XL302K
DEVIATION
State
SUCTION & DISCH VLVS
23XL691A
TRIP RELAY A
State
23XL691B
TRIP RELAY B
State
23ZL104
SUCTION VLV POSN
State
23HA104
SUCTION VLV TRIP BYP
State
23ZL105
DISCH VLV POSN
State
23HA105
DISCH VLV TRIP BYP
State
WOODWARD PROTECH
23XL106D
MODULE A
State
23XL106E
MODULE B
State
23XL106F
MODULE C
State
COMPRESSOR TRIP RELAYS
23XL107A
RELAY A
State
23XL107B
RELAY B
State
23XL107C
RELAY C
State
LUBE OIL PRESS AUTOSTART
23PI593
23HA593
23PI593
9999.99
State
23PN593H
23PA593
AUTOSTART
9999.99
State
23XL593T
23XL593U
TROUBLE BAD
State
State
SEAL OIL PRESS AUTOSTART
23PI594
23HA594
23PI594
9999.99
State
AUTOSTART PRESSURE >4 PSIG
23XL594T
23XL594U
TROUBLE BAD
State
State
DISCHARGE TEMP
23TI690
23HA690
23TI690
9999.99
State
23TN690N
23TL690P
PRETRIP
9999.99
State
23TN690V
23TL690Q
TRIP
9999.99
State
23XL690T
23XL690U
TROUBLE BAD
State
State
BENTLY VIBRATION
23XL299A
INPUT1
State
23XL299B
INPUT2
State
23XA299
TRIP
State
23XL299T
TROUBLE
State
23HA299
BYPASS
State
GOVERNOR
23XL959A
INPUT1
State
23XL959B
INPUT2
State
23XA959
TRIP
State
23XL959T
TROUBLE
State
23HA959C
BYPASS
State
Reserved for Faceplates
DCS MANUAL S/D
23HL954A
INPUT1
State
23HL954B
INPUT2
State
23HA954
TRIP
State
23XL954T
TROUBLE
State
LCP MANUAL S/D
23HA101
TRIP
State
23XL101T
TROUBLE
State
T & T VALVE
23ZL106B
POSITION
State
23XA106B
FAIL2TRIP
State
COMMON ALARMS
23XL691C
VLVS READY TO RESET
State
23XL103A
RGC READY TO RESET
State
23XL110E
DEVICE BYPASSED
State
23HA100
TRIP OUTPUT BYPASS
State
23UA110A
COMMON TROUBLE
State
23UA110C
COMMON PRETRIP
State
23UA110D
COMMON TRIP
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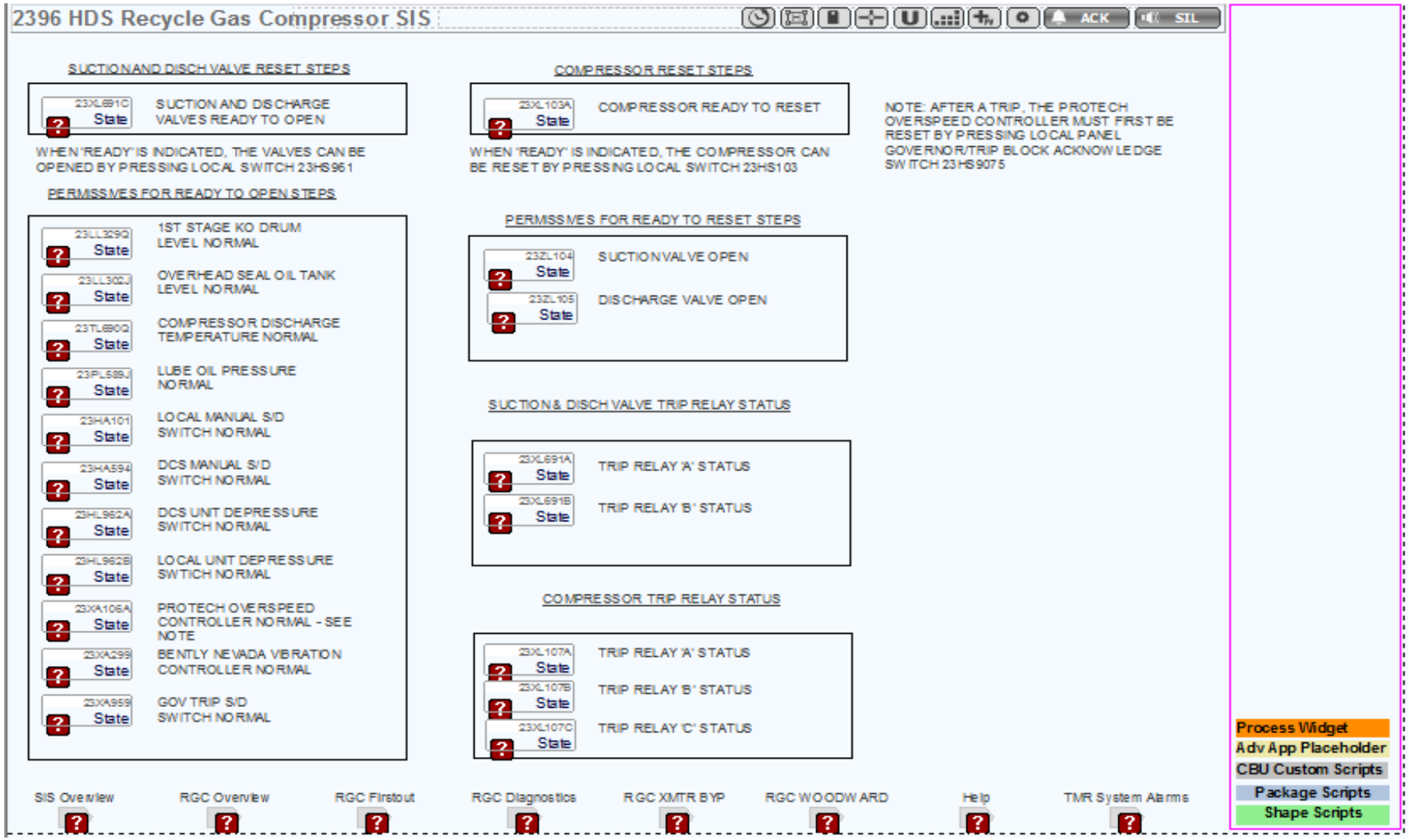
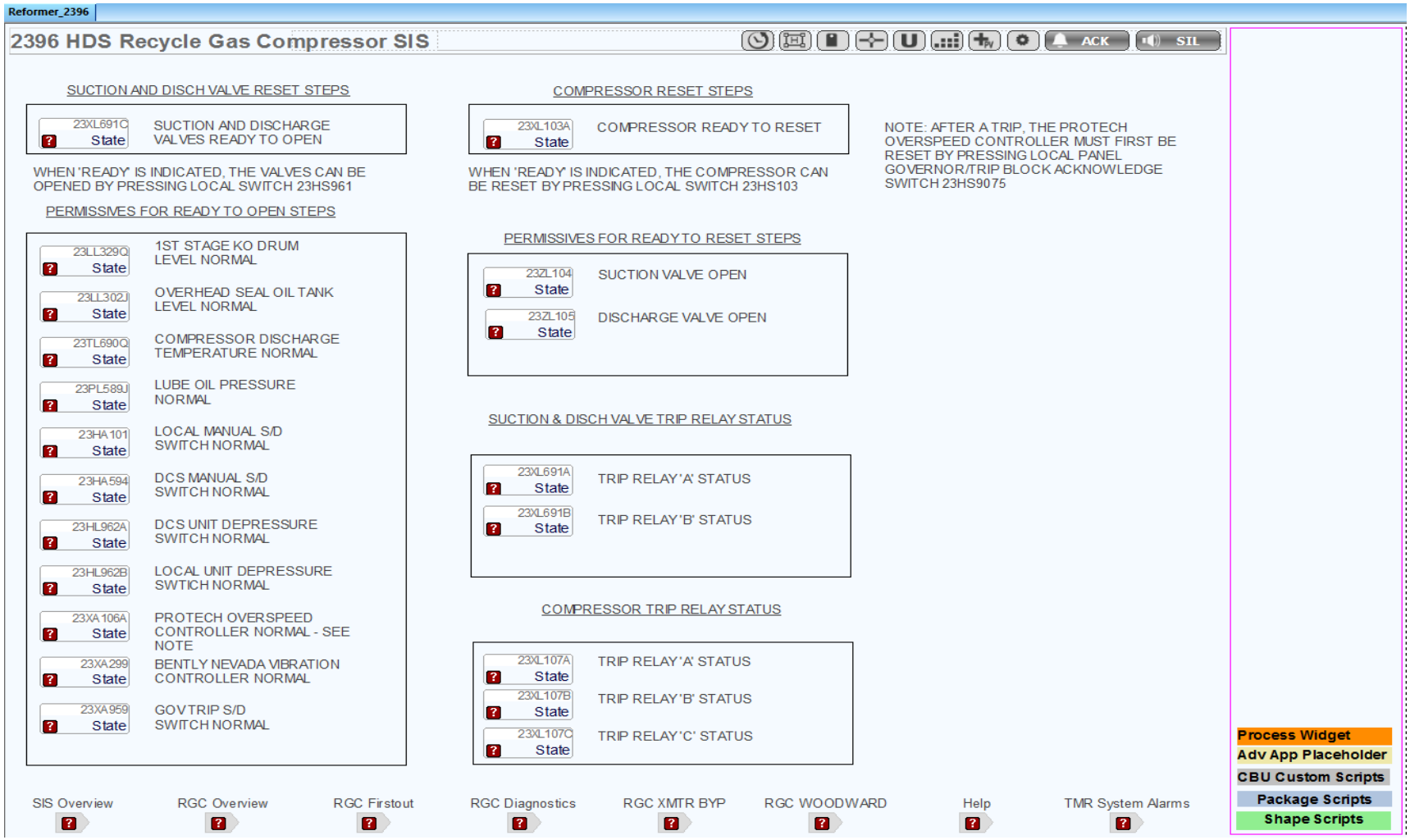
HELP
R SYSTEM ALARMS

1.190 2396 HDS RECYCLE GAS COMPRESSOR SIS STARTUP (Reformer_2396.htm)




Reformer_2396
2396 HDS Recycle Gas Compressor SIS
ACK
SIL
SUCTION AND DISCH VALVE RESET STEPS
23XL691C State
SUCTION AND DISCHARGE VALVES READY TO OPEN
WHEN 'READY' IS INDICATED, THE VALVES CAN BE OPENED BY PRESSING LOCAL SWITCH 23HS961
PERMISSIVES FOR READY TO OPEN STEPS
23LL329Q State
1ST STAGE KO DRUM LEVEL NORMAL
23LL302J State
OVERHEAD SEAL OIL TANK LEVEL NORMAL
23TL690Q State
COMPRESSOR DISCHARGE TEMPERATURE NORMAL
23PL589J State
LUBE OIL PRESSURE NORMAL
23HA101 State
LOCAL MANUAL S/D SWITCH NORMAL
23HA594 State
DCS MANUAL S/D SWITCH NORMAL
23HL962A State
DCS UNIT DEPRESSURE SWITCH NORMAL
23HL962B State
LOCAL UNIT DEPRESSURE SWTICH NORMAL
23XA106A State
PROTECH OVERSPEED CONTROLLER NORMAL - SEE NOTE
23XA299 State
BENTLY NEVADA VIBRATION CONTROLLER NORMAL
23XA959 State
GOV TRIP S/D SWITCH NORMAL
COMPRESSOR RESET STEPS
23XL103A State
COMPRESSOR READY TO RESET
WHEN 'READY' IS INDICATED, THE COMPRESSOR CAN BE RESET BY PRESSING LOCAL SWITCH 23HS103
PERMISSIVES FOR READY TO RESET STEPS
23ZL104 State
SUCTION VALVE OPEN
23ZL105 State
DISCHARGE VALVE OPEN
SUCTION & DISCH VALVE TRIP RELAY STATUS
23XL691A State
TRIP RELAY 'A' STATUS
23XL691B State
TRIP RELAY 'B' STATUS
COMPRESSOR TRIP RELAY STATUS
23XL107A State
TRIP RELAY 'A' STATUS
23XL107B State
TRIP RELAY 'B' STATUS
23XL107C State
TRIP RELAY 'C' STATUS
NOTE: AFTER A TRIP, THE PROTECH OVERSPEED CONTROLLER MUST FIRST BE RESET BY PRESSING LOCAL PANEL GOVERNOR/TRIP BLOCK ACKNOWLEDGE SWITCH 23HS9075
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RGC Diagnostics
RGC XMTR BYP
RGC WOODWARD
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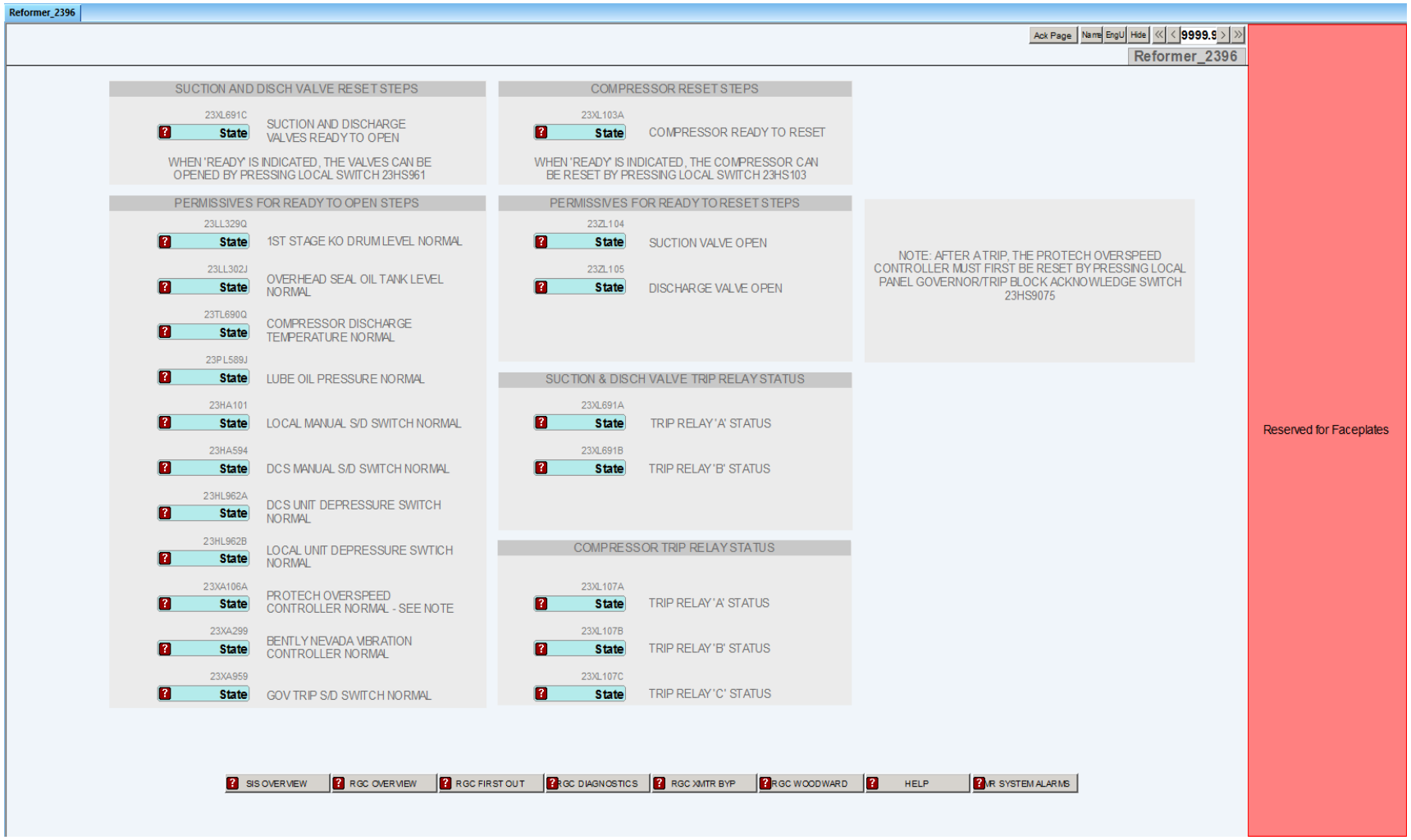
TMR System Alarms
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2396
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EngU
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Reformer_2396
SUCTION AND DISCH VALVE RESET STEPS
23XL691C
State
SUCTION AND DISCHARGE VALVES READY TO OPEN
WHEN 'READY' IS INDICATED, THE VALVES CAN BE OPENED BY PRESSING LOCAL SWITCH 23HS961
COMPRESSOR RESET STEPS
23XL103A
State
COMPRESSOR READY TO RESET
WHEN 'READY' IS INDICATED, THE COMPRESSOR CAN BE RESET BY PRESSING LOCAL SWITCH 23HS103
PERMISSIVES FOR READY TO OPEN STEPS
23LL329Q
State
1ST STAGE KO DRUM LEVEL NORMAL
23LL302J
State
OVERHEAD SEAL OIL TANK LEVEL NORMAL
23TL690Q
State
COMPRESSOR DISCHARGE TEMPERATURE NORMAL
23PL589J
State
LUBE OIL PRESSURE NORMAL
23HA101
State
LOCAL MANUAL S/D SWITCH NORMAL
23HA594
State
DCS MANUAL S/D SWITCH NORMAL
23HL962A
State
DCS UNIT DEPRESSURE SWITCH NORMAL
23HL962B
State
LOCAL UNIT DEPRESSURE SWTICH NORMAL
23XA106A
State
PROTECH OVERSPEED CONTROLLER NORMAL - SEE NOTE
23XA299
State
BENTLY NEVADA VIBRATION CONTROLLER NORMAL
23XA959
State
GOV TRIP S/D SWITCH NORMAL
PERMISSIVES FOR READY TO RESET STEPS
23ZL104
State
SUCTION VALVE OPEN
23ZL105
State
DISCHARGE VALVE OPEN
SUCTION & DISCH VALVE TRIP RELAY STATUS
23XL691A
State
TRIP RELAY 'A' STATUS
23XL691B
State
TRIP RELAY 'B' STATUS
COMPRESSOR TRIP RELAY STATUS
23XL107A
State
TRIP RELAY 'A' STATUS
23XL107B
State
TRIP RELAY 'B' STATUS
23XL107C
State
TRIP RELAY 'C' STATUS
NOTE: AFTER A TRIP, THE PROTECH OVERSPEED CONTROLLER MUST FIRST BE RESET BY PRESSING LOCAL PANEL GOVERNOR/TRIP BLOCK ACKNOWLEDGE SWITCH 23HS9075
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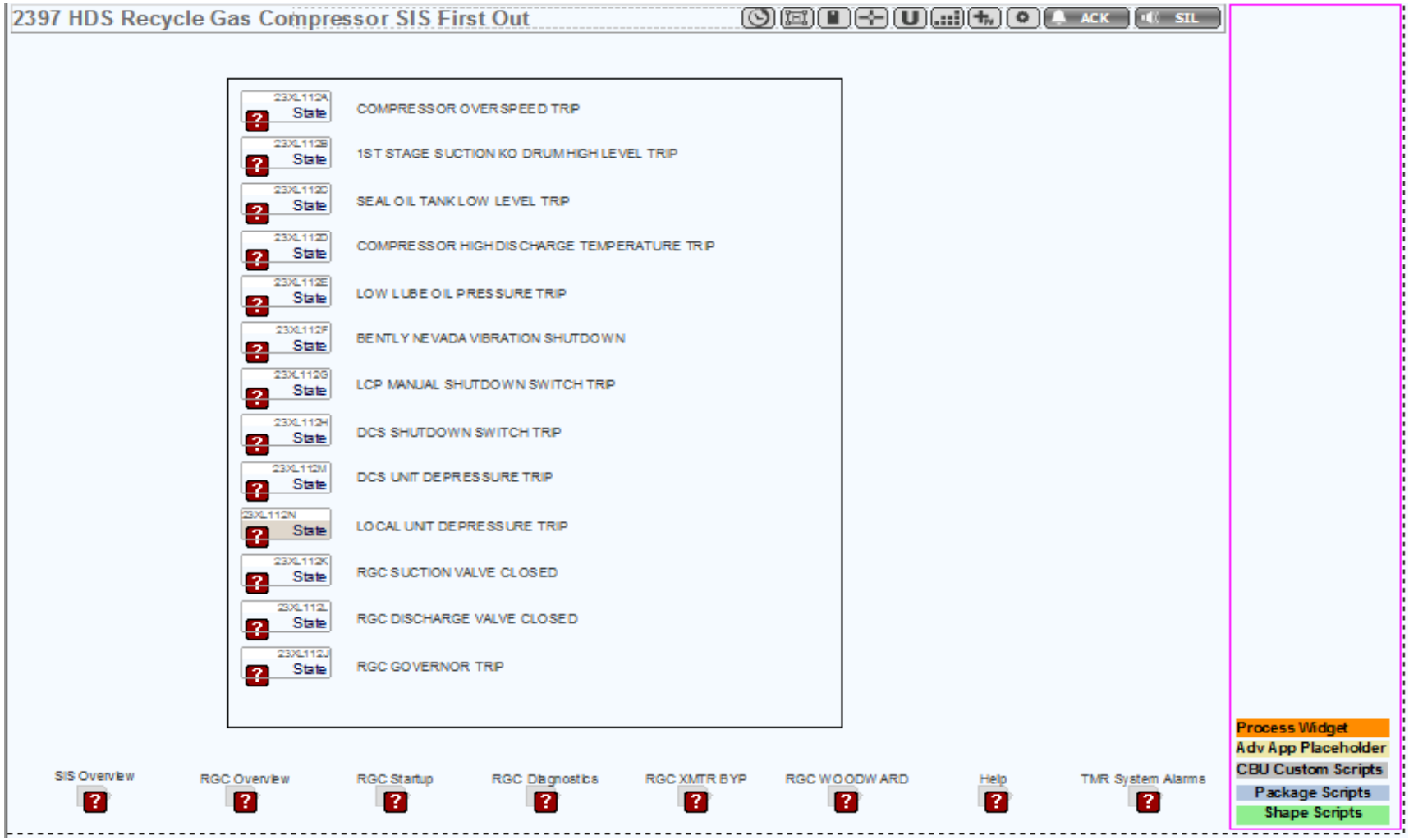
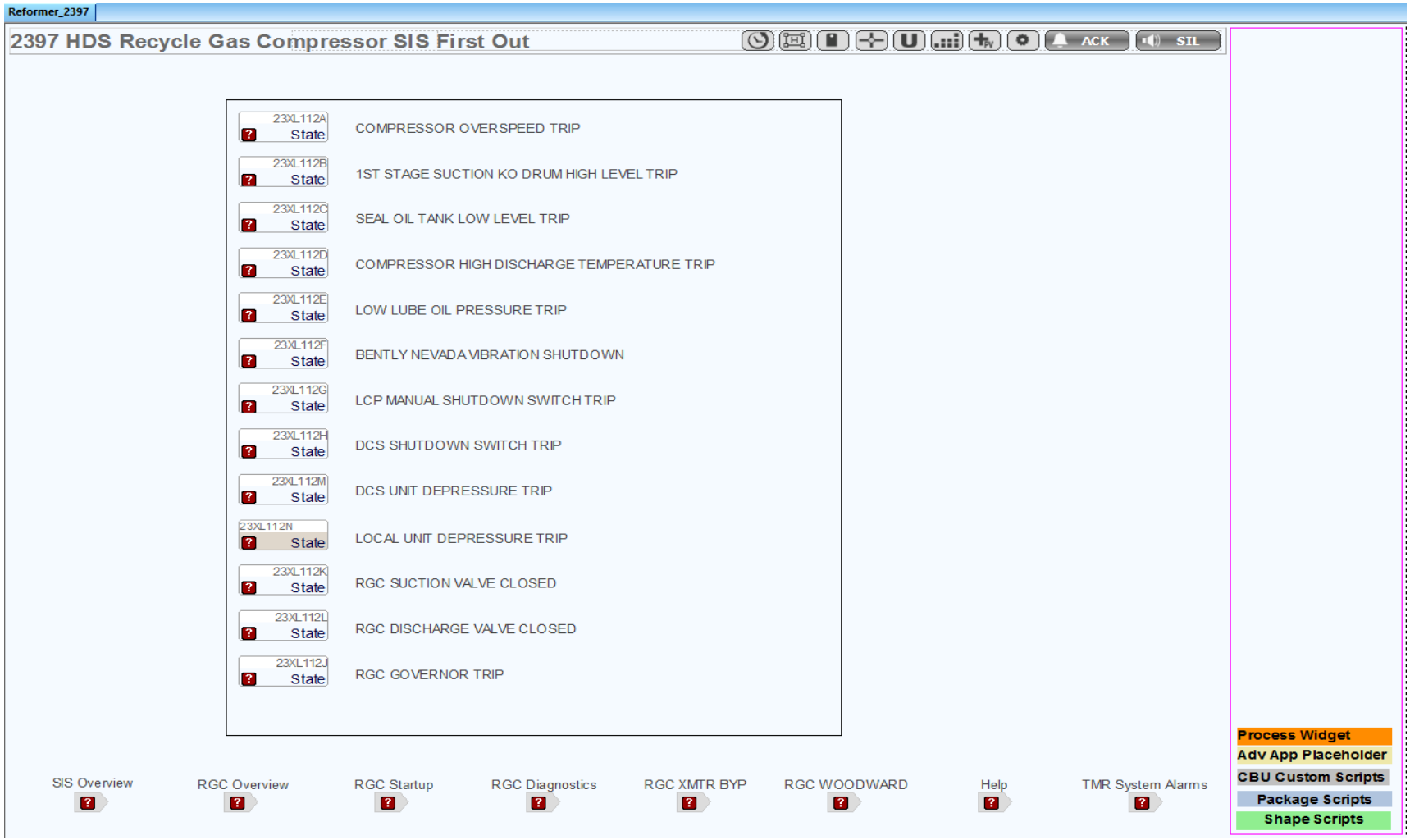
1.191 2397 HDS RECYCLE GAS COMPRESSOR SIS FIRST OUT (Reformer_2397.htm)




Reformer_2397
2397 HDS Recycle Gas Compressor SIS First Out
ACK
SIL
23XL112A State
COMPRESSOR OVERSPEED TRIP
23XL112B State
1ST STAGE SUCTION KO DRUM HIGH LEVEL TRIP
23XL112C State
SEAL OIL TANK LOW LEVEL TRIP
23XL112D State
COMPRESSOR HIGH DISCHARGE TEMPERATURE TRIP
23XL112E State
LOW LUBE OIL PRESSURE TRIP
23XL112F State
BENTLY NEVADA VIBRATION SHUTDOWN
23XL112G State
LCP MANUAL SHUTDOWN SWITCH TRIP
23XL112H State
DCS SHUTDOWN SWITCH TRIP
23XL112M State
DCS UNIT DEPRESSURE TRIP
23XL112N State
LOCAL UNIT DEPRESSURE TRIP
23XL112K State
RGC SUCTION VALVE CLOSED
23XL112L State
RGC DISCHARGE VALVE CLOSED
23XL112J State
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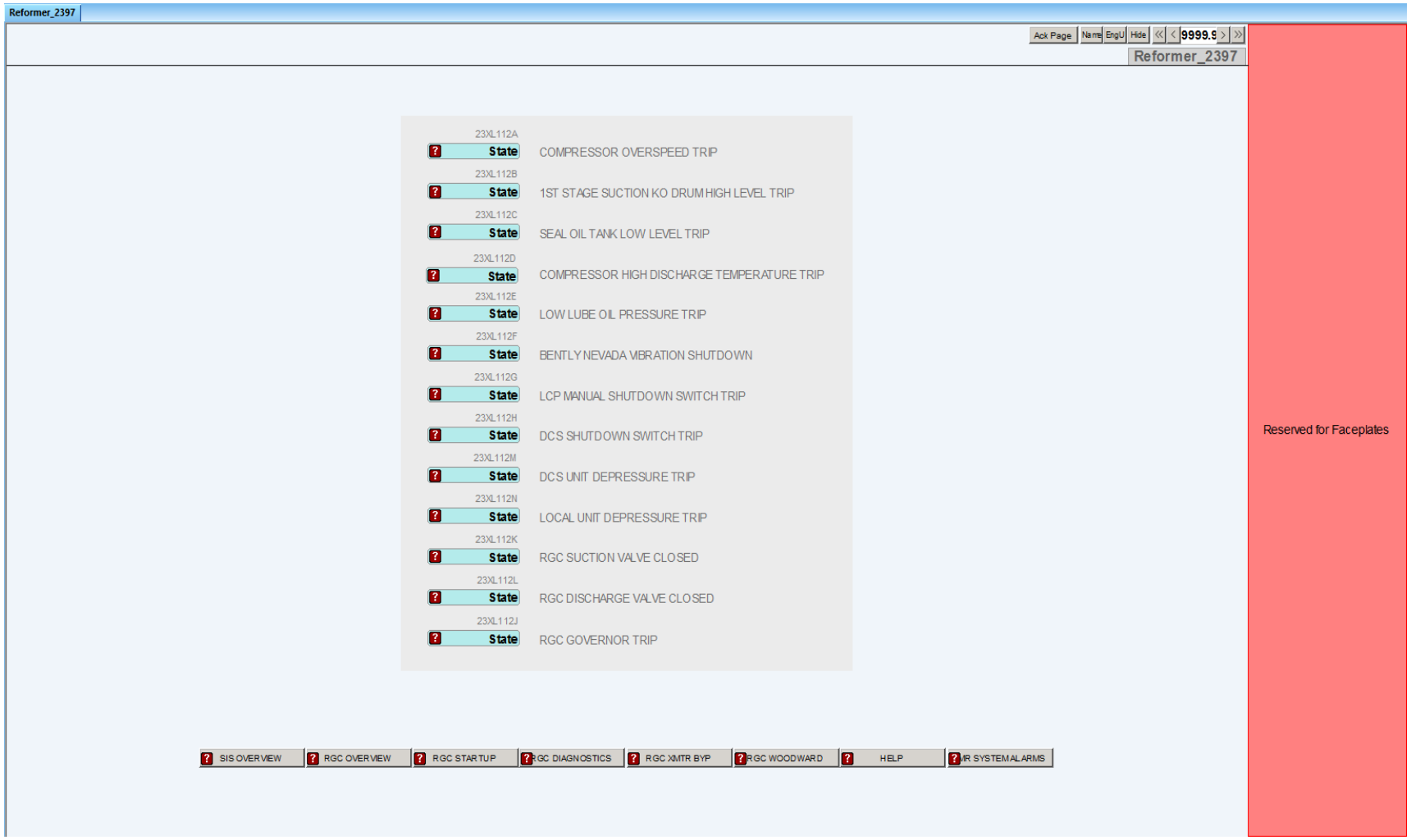
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23XL112A
State
COMPRESSOR OVERSPEED TRIP
23XL112B
State
1ST STAGE SUCTION KO DRUM HIGH LEVEL TRIP
23XL112C
State
SEAL OIL TANK LOW LEVEL TRIP
23XL112D
State
COMPRESSOR HIGH DISCHARGE TEMPERATURE TRIP
23XL112E
State
LOW LUBE OIL PRESSURE TRIP
23XL112F
State
BENTLY NEVADA VIBRATION SHUTDOWN
23XL112G
State
LCP MANUAL SHUTDOWN SWITCH TRIP
23XL112H
State
DCS SHUTDOWN SWITCH TRIP
23XL112M
State
DCS UNIT DEPRESSURE TRIP
23XL112N
State
LOCAL UNIT DEPRESSURE TRIP
23XL112K
State
RGC SUCTION VALVE CLOSED
23XL112L
State
RGC DISCHARGE VALVE CLOSED
23XL112J
State
RGC GOVERNOR TRIP
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RGC OVERVIEW
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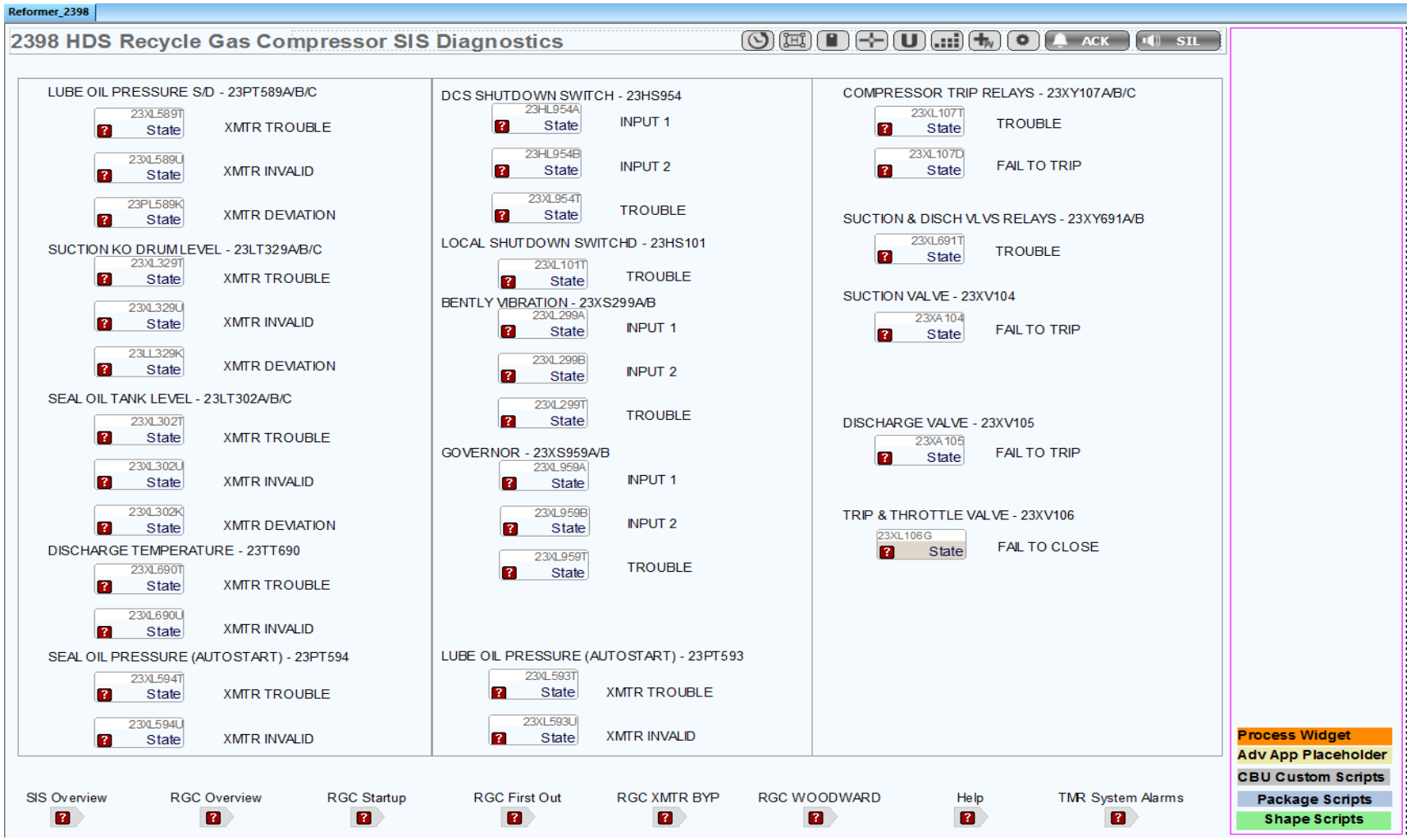
1.192 2398 HDS RECYCLE GAS COMPRESSOR SIS DIAGNOSTICS (Reformer_2398.htm)


Reformer_2398
2398 HDS Recycle Gas Compressor SIS Diagnostics
ACK
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LUBE OIL PRESSURE S/D - 23PT589A/B/C
23XL589T State XMTR TROUBLE
23XL589U State XMTR INVALID
23PL589K State XMTR DEVIATION
SUCTION KO DRUM LEVEL - 23LT329A/B/C
23XL329T State XMTR TROUBLE
23XL329U State XMTR INVALID
23LL329K State XMTR DEVIATION
SEAL OIL TANK LEVEL - 23LT302A/B/C
23XL302T State XMTR TROUBLE
23XL302U State XMTR INVALID
23XL302K State XMTR DEVIATION
DISCHARGE TEMPERATURE - 23TT690
23XL690T State XMTR TROUBLE
23XL690U State XMTR INVALID
SEAL OIL PRESSURE (AUTOSTART) - 23PT594
23XL594T State XMTR TROUBLE
23XL594U State XMTR INVALID
DCS SHUTDOWN SWITCH - 23HS954
23HL954A State INPUT 1
23HL954B State INPUT 2
23XL954T State TROUBLE
LOCAL SHUTDOWN SWITCHD - 23HS101
23XL101T State TROUBLE
BENTLY VIBRATION - 23XS299A/B
23XL299A State INPUT 1
23XL299B State INPUT 2
23XL299T State TROUBLE
GOVERNOR - 23XS959A/B
23XL959A State INPUT 1
23XL959B State INPUT 2
23XL959T State TROUBLE
LUBE OIL PRESSURE (AUTOSTART) - 23PT593
23XL593T State XMTR TROUBLE
23XL593U State XMTR INVALID
COMPRESSOR TRIP RELAYS - 23XY107A/B/C
23XL107T State TROUBLE
23XL107D State FAIL TO TRIP
SUCTION & DISCH VLVS RELAYS - 23XY691A/B
23XL691T State TROUBLE
SUCTION VALVE - 23XV104
23XA104 State FAIL TO TRIP
DISCHARGE VALVE - 23XV105
23XA105 State FAIL TO TRIP
TRIP & THROTTLE VALVE - 23XV106
23XL106G State FAIL TO CLOSE
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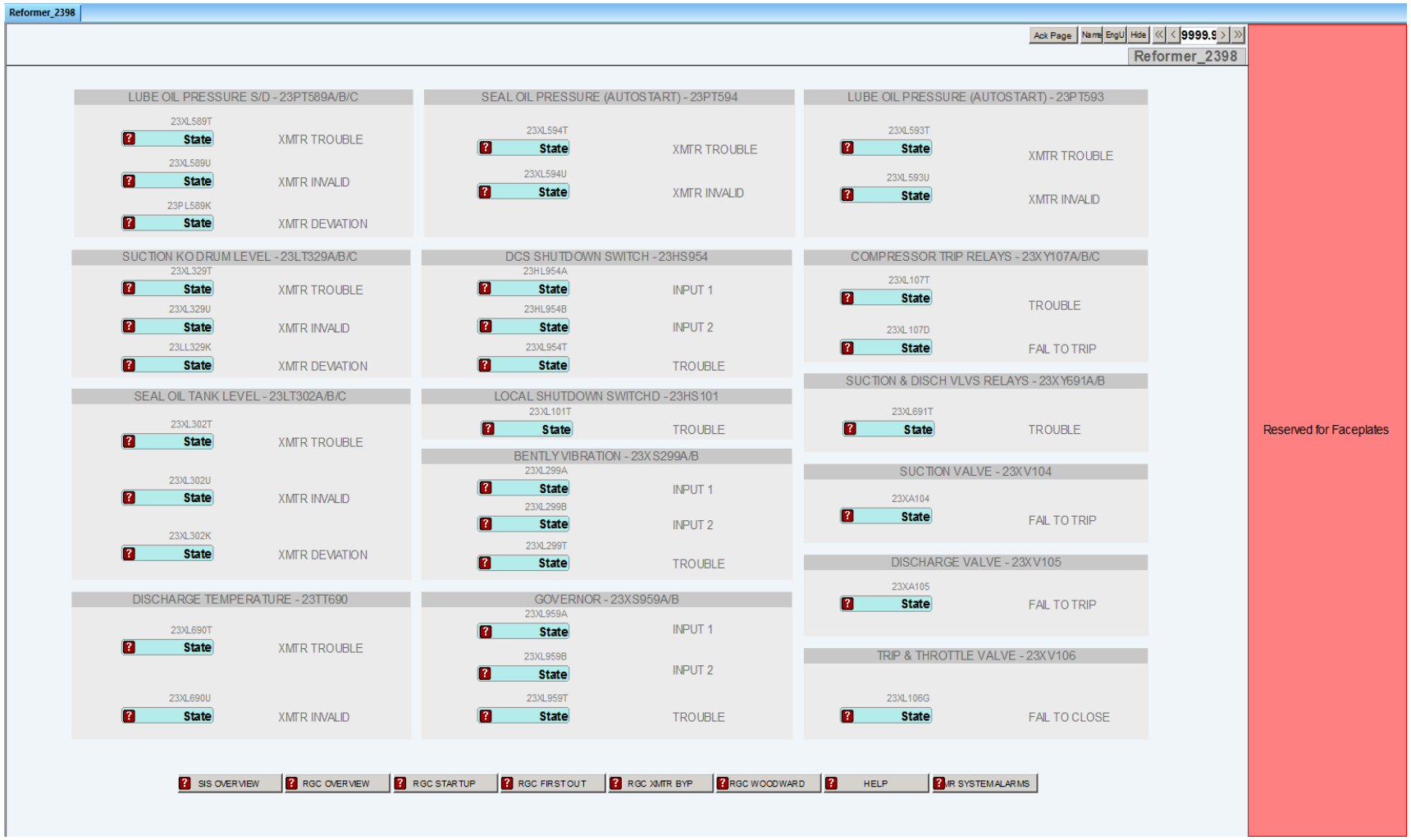
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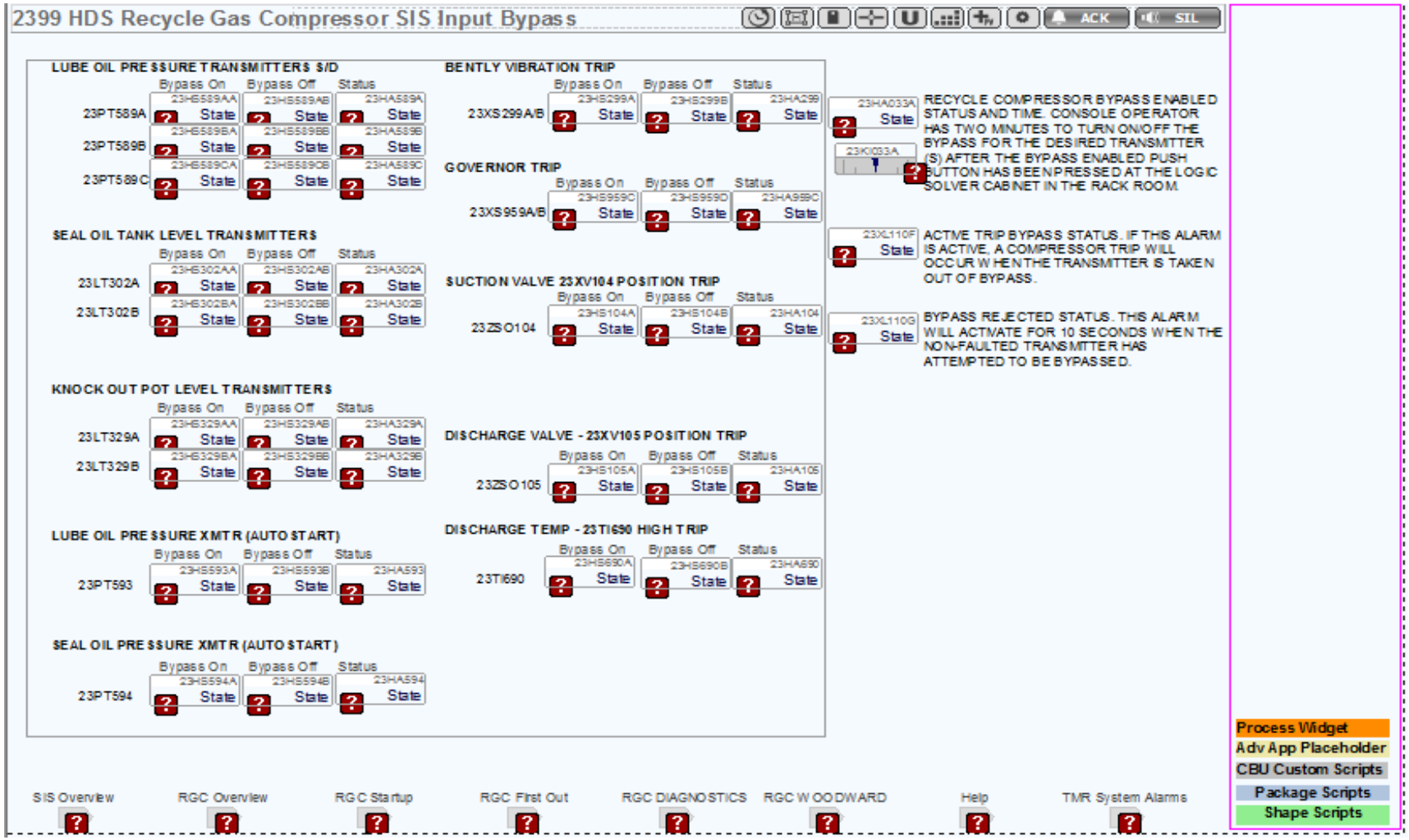
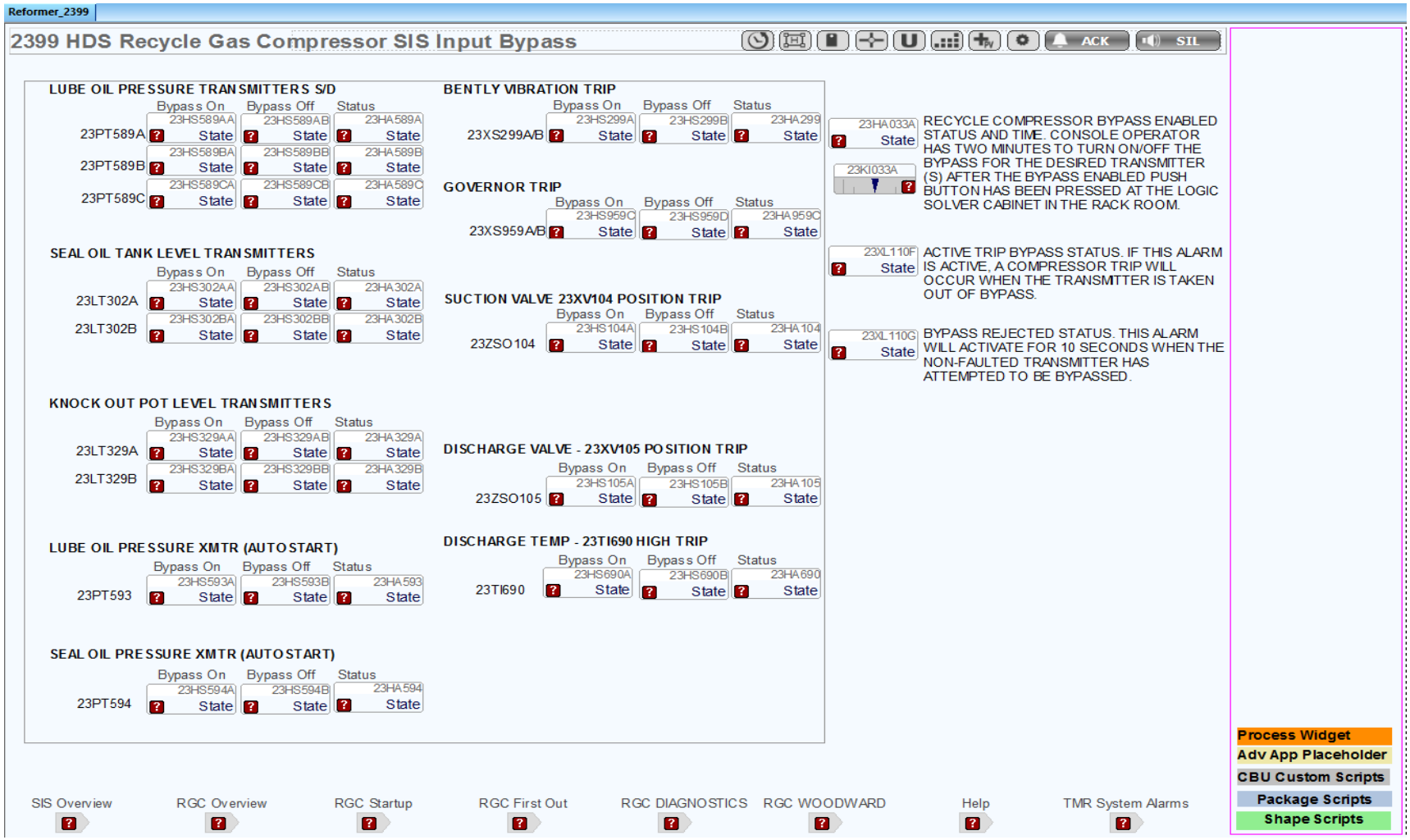
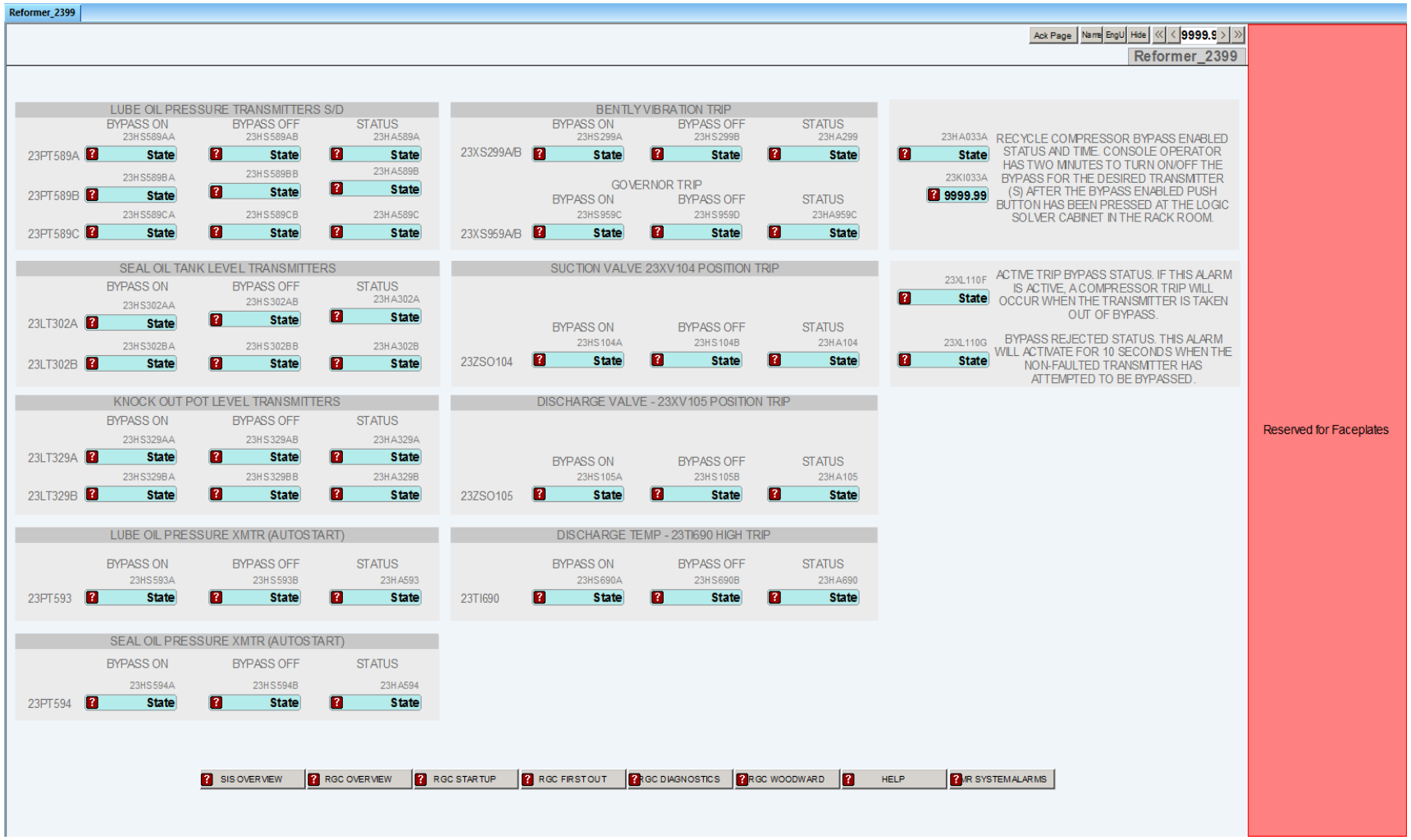
Reformer_2398
LUBE OIL PRESSURE S/D - 23PT589A/B/C
23XL589T
State
XMTR TROUBLE
23XL589U
State
XMTR INVALID
23PL589K
State
XMTR DEVIATION
SEAL OIL PRESSURE (AUTOSTART) - 23PT594
23XL594T
State
XMTR TROUBLE
23XL594U
State
XMTR INVALID
LUBE OIL PRESSURE (AUTOSTART) - 23PT593
23XL593T
State
XMTR TROUBLE
23XL593U
State
XMTR INVALID
SUCTION KO DRUM LEVEL - 23LT329A/B/C
23XL329T
State
XMTR TROUBLE
23XL329U
State
XMTR INVALID
23LL329K
State
XMTR DEVIATION
DCS SHUTDOWN SWITCH - 23HS954
23HL954A
State
INPUT 1
23HL954B
State
INPUT 2
23XL954T
State
TROUBLE
COMPRESSOR TRIP RELAYS - 23XY107A/B/C
23XL107T
State
TROUBLE
23XL107D
State
FAIL TO TRIP
SEAL OIL TANK LEVEL - 23LT302A/B/C
23XL302T
State
XMTR TROUBLE
23XL302U
State
XMTR INVALID
23XL302K
State
XMTR DEVIATION
LOCAL SHUTDOWN SWITCHD - 23HS101
23XL101T
State
TROUBLE
BENTLY VIBRATION - 23XS299A/B
23XL299A
State
INPUT 1
23XL299B
State
INPUT 2
23XL299T
State
TROUBLE
SUCTION & DISCH VLVS RELAYS - 23XY691A/B
23XL691T
State
TROUBLE
SUCTION VALVE - 23XV104
23XA104
State
FAIL TO TRIP
DISCHARGE TEMPERATURE - 23TT690
23XL690T
State
XMTR TROUBLE
23XL690U
State
XMTR INVALID
GOVERNOR - 23XS959A/B
23XL959A
State
INPUT 1
23XL959B
State
INPUT 2
23XL959T
State
TROUBLE
DISCHARGE VALVE - 23XV105
23XA105
State
FAIL TO TRIP
TRIP & THROTTLE VALVE - 23XV106
23XL106G
State
FAIL TO CLOSE
Reserved for Faceplates
SIS OVERVIEW
RGC OVERVIEW
RGC STARTUP
RGC FIRST OUT
RGC XMTR BYP
RGC WOODWARD
HELP
MR SYSTEMALARMS

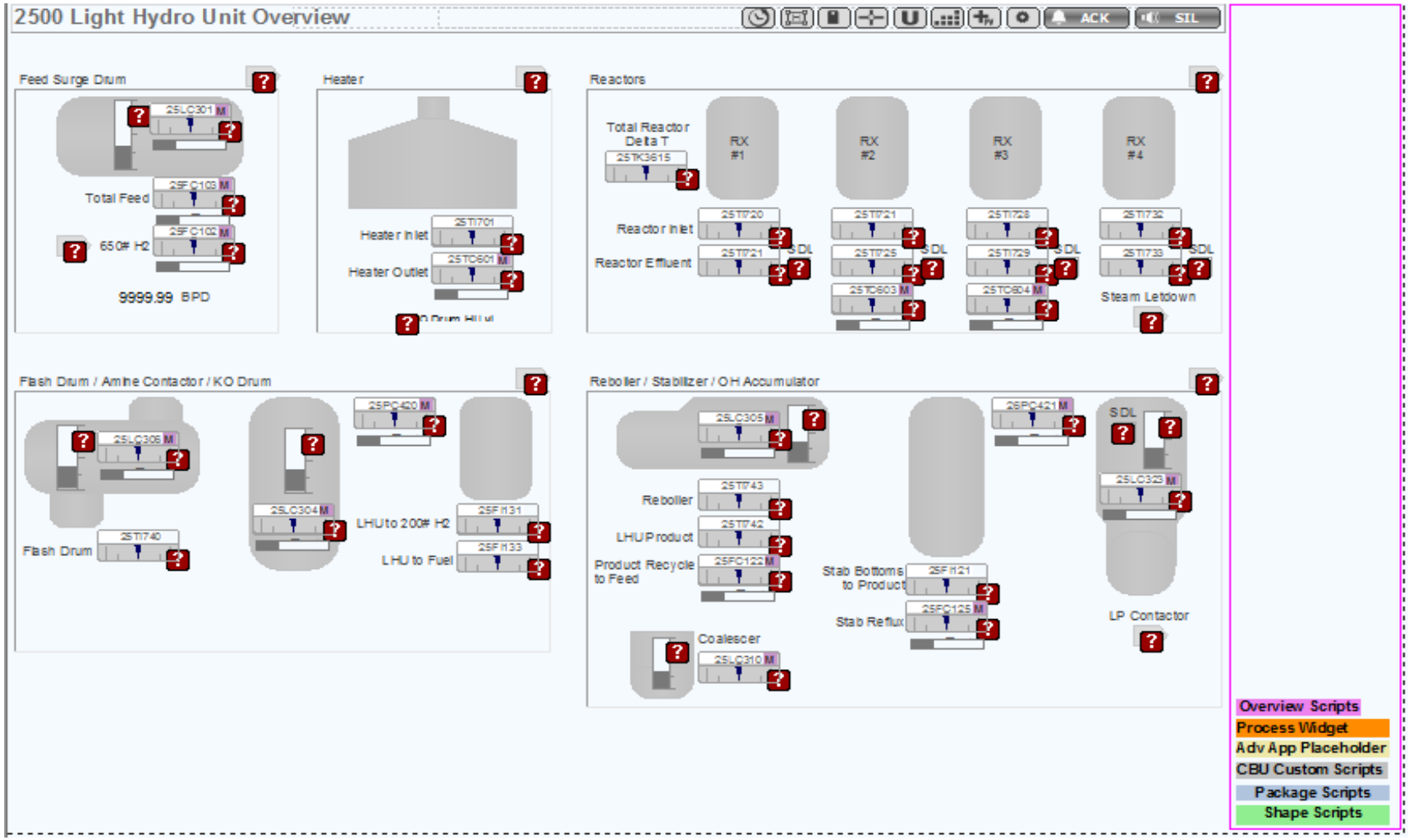
1.193 2399 HDS RECYCLE GAS COMPRESSOR SIS INPUT BYPASS (Reformer_2399.htm)

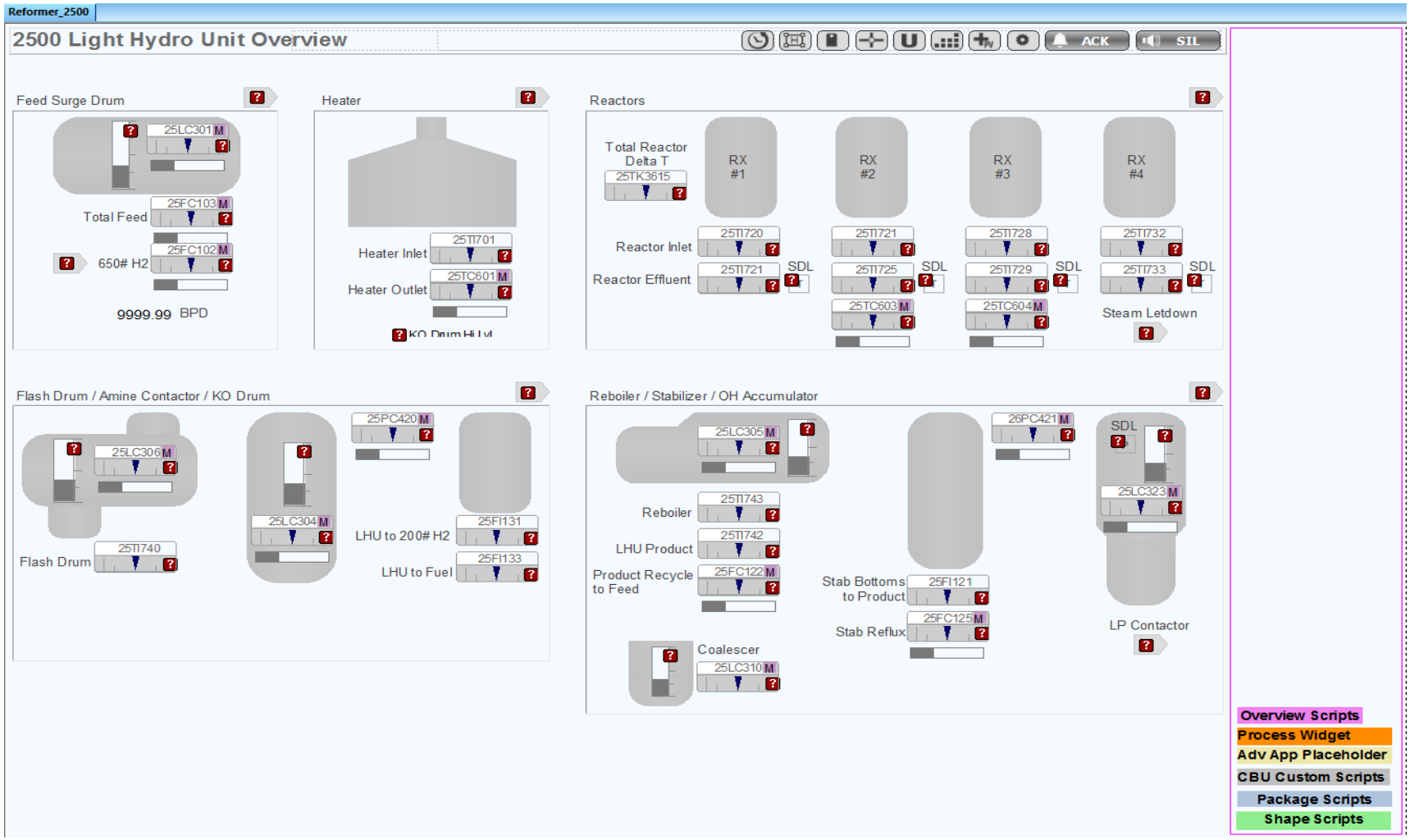


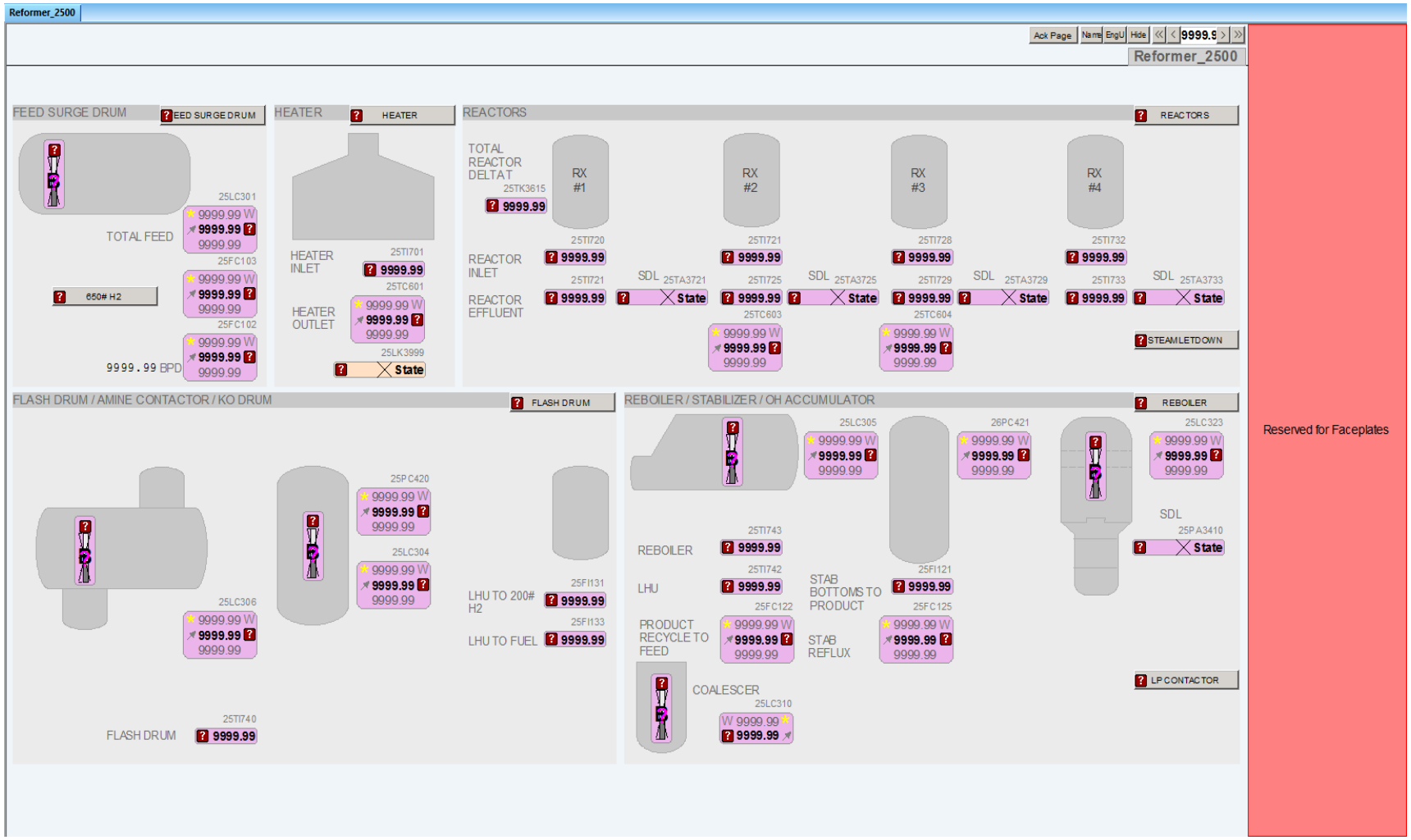

Reformer_2399
2399 HDS Recycle Gas Compressor SIS Input Bypass
ACK
SIL
LUBE OIL PRESSURE TRANSMITTERS S/D
Bypass On
Bypass Off
Status
23PT589A
23HS589AA State
23HS589AB State
23HA589A State
23PT589B
23HS589BA State
23HS589BB State
23HA589B State
23PT589C
23HS589CA State
23HS589CB State
23HA589C State
SEAL OIL TANK LEVEL TRANSMITTERS
23LT302A
23HS302AA State
23HS302AB State
23HA302A State
23LT302B
23HS302BA State
23HS302BB State
23HA302B State
KNOCK OUT POT LEVEL TRANSMITTERS
23LT329A
23HS329AA State
23HS329AB State
23HA329A State
23LT329B
23HS329BA State
23HS329BB State
23HA329B State
LUBE OIL PRESSURE XMTR (AUTOSTART)
23PT593
23HS593A State
23HS593B State
23HA593 State
SEAL OIL PRESSURE XMTR (AUTOSTART)
23PT594
23HS594A State
23HS594B State
23HA594 State
BENTLY VIBRATION TRIP
23XS299A/B
23HS299A State
23HS299B State
23HA299 State
GOVERNOR TRIP
23XS959A/B
23HS959C State
23HS959D State
23HA959C State
SUCTION VALVE 23XV104 POSITION TRIP
23ZSO104
23HS104A State
23HS104B State
23HA104 State
DISCHARGE VALVE - 23XV105 POSITION TRIP
23ZSO105
23HS105A State
23HS105B State
23HA105 State
DISCHARGE TEMP - 23TI690 HIGH TRIP
23TI690
23HS690A State
23HS690B State
23HA690 State
23HA033A State
RECYCLE COMPRESSOR BYPASS ENABLED STATUS AND TIME. CONSOLE OPERATOR HAS TWO MINUTES TO TURN ON/OFF THE BYPASS FOR THE DESIRED TRANSMITTER (S) AFTER THE BYPASS ENABLED PUSH BUTTON HAS BEEN PRESSED AT THE LOGIC SOLVER CABINET IN THE RACK ROOM.
23KI033A
23XL110F State
ACTIVE TRIP BYPASS STATUS. IF THIS ALARM IS ACTIVE, A COMPRESSOR TRIP WILL OCCUR WHEN THE TRANSMITTER IS TAKEN OUT OF BYPASS.
23XL110G State
BYPASS REJECTED STATUS. THIS ALARM WILL ACTIVATE FOR 10 SECONDS WHEN THE NON-FAULTED TRANSMITTER HAS ATTEMPTED TO BE BYPASSED.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
SIS Overview
RGC Overview
RGC Startup
RGC First Out
RGC DIAGNOSTICS
RGC WOODWARD
Help
TMR System Alarms


Reformer_2399
Ack Page
Name
EngU
Hide
9999.9
Reformer_2399
LUBE OIL PRESSURE TRANSMITTERS S/D
BYPASS ON
BYPASS OFF
STATUS
23PT589A
23HS589AA
23HS589AB
23HA589A
23PT589B
23HS589BA
23HS589BB
23HA589B
23PT589C
23HS589CA
23HS589CB
23HA589C
State
SEAL OIL TANK LEVEL TRANSMITTERS
23LT302A
23HS302AA
23HS302AB
23HA302A
23LT302B
23HS302BA
23HS302BB
23HA302B
KNOCK OUT POT LEVEL TRANSMITTERS
23LT329A
23HS329AA
23HS329AB
23HA329A
23LT329B
23HS329BA
23HS329BB
23HA329B
LUBE OIL PRESSURE XMTR (AUTOSTART)
23PT593
23HS593A
23HS593B
23HA593
SEAL OIL PRESSURE XMTR (AUTOSTART)
23PT594
23HS594A
23HS594B
23HA594
BENTLY VIBRATION TRIP
23XS299A/B
23HS299A
23HS299B
23HA299
GOVERNOR TRIP
23XS959A/B
23HS959C
23HS959D
23HA959C
SUCTION VALVE 23XV104 POSITION TRIP
23ZSO104
23HS104A
23HS104B
23HA104
DISCHARGE VALVE - 23XV105 POSITION TRIP
23ZSO105
23HS105A
23HS105B
23HA105
DISCHARGE TEMP - 23TI690 HIGH TRIP
23TI690
23HS690A
23HS690B
23HA690
23HA033A
RECYCLE COMPRESSOR BYPASS ENABLED STATUS AND TIME. CONSOLE OPERATOR HAS TWO MINUTES TO TURN ON/OFF THE BYPASS FOR THE DESIRED TRANSMITTER (S) AFTER THE BYPASS ENABLED PUSH BUTTON HAS BEEN PRESSED AT THE LOGIC SOLVER CABINET IN THE RACK ROOM.
23KI033A
9999.99
23XL110F
ACTIVE TRIP BYPASS STATUS. IF THIS ALARM IS ACTIVE, A COMPRESSOR TRIP WILL OCCUR WHEN THE TRANSMITTER IS TAKEN OUT OF BYPASS.
23XL110G
BYPASS REJECTED STATUS. THIS ALARM WILL ACTIVATE FOR 10 SECONDS WHEN THE NON-FAULTED TRANSMITTER HAS ATTEMPTED TO BE BYPASSED.
SIS OVERVIEW
RGC OVERVIEW
RGC STARTUP
RGC FIRST OUT
RGC DIAGNOSTICS
RGC WOODWARD
HELP
MR SYSTEM ALARMS
Reserved for Faceplates

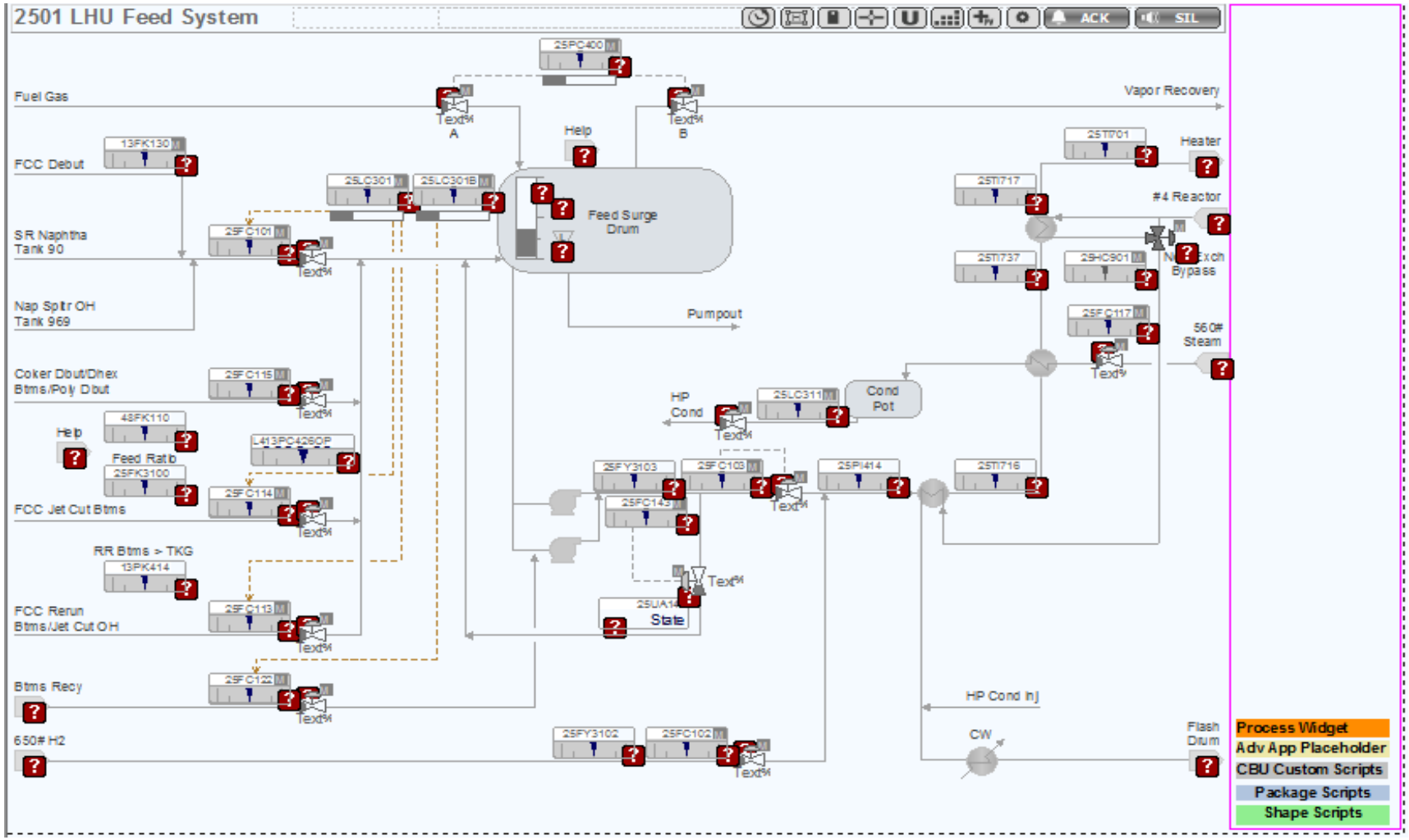
1.194 2500 LIGHT HYDRO UNIT OVERVIEW (Reformer_2500.htm)

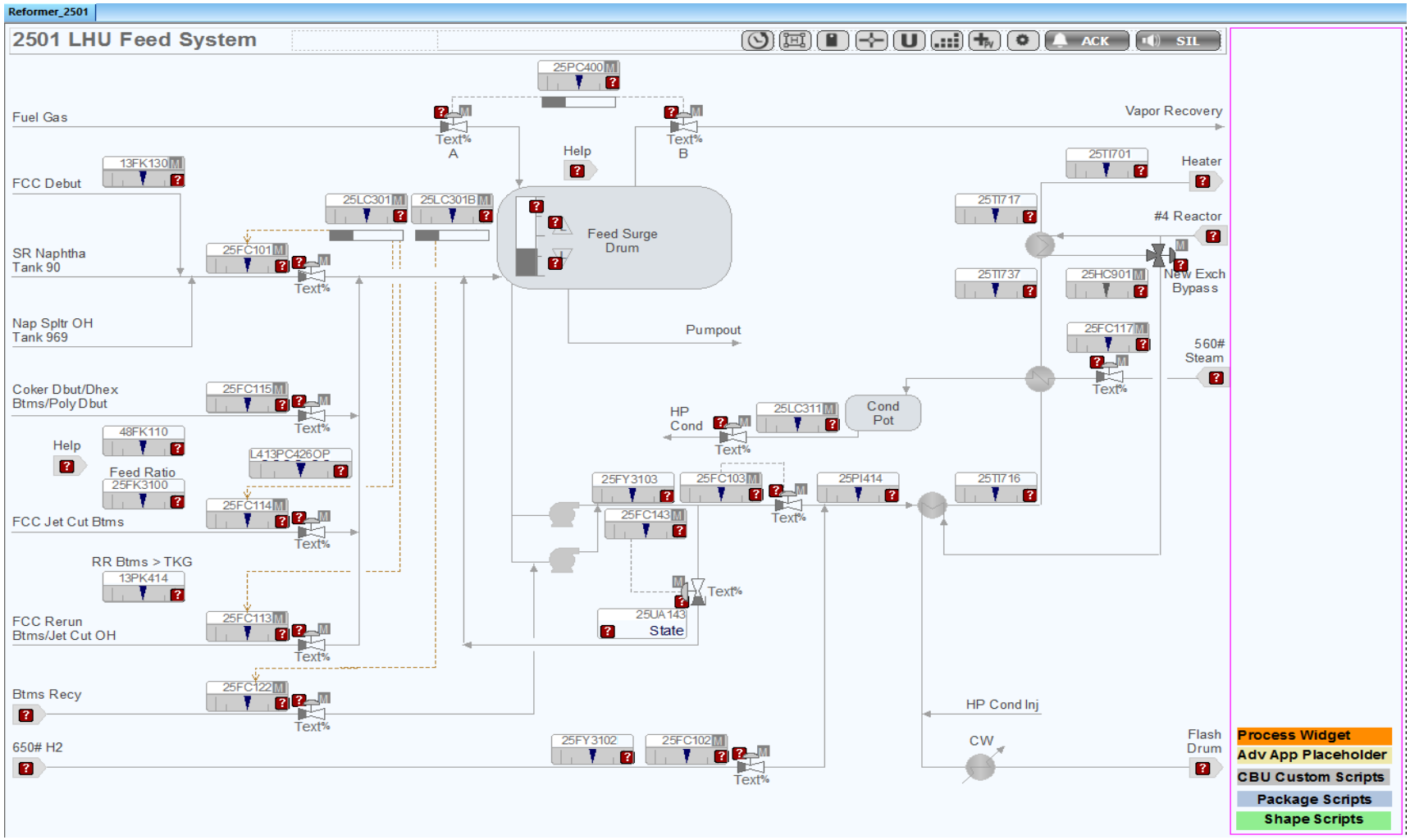


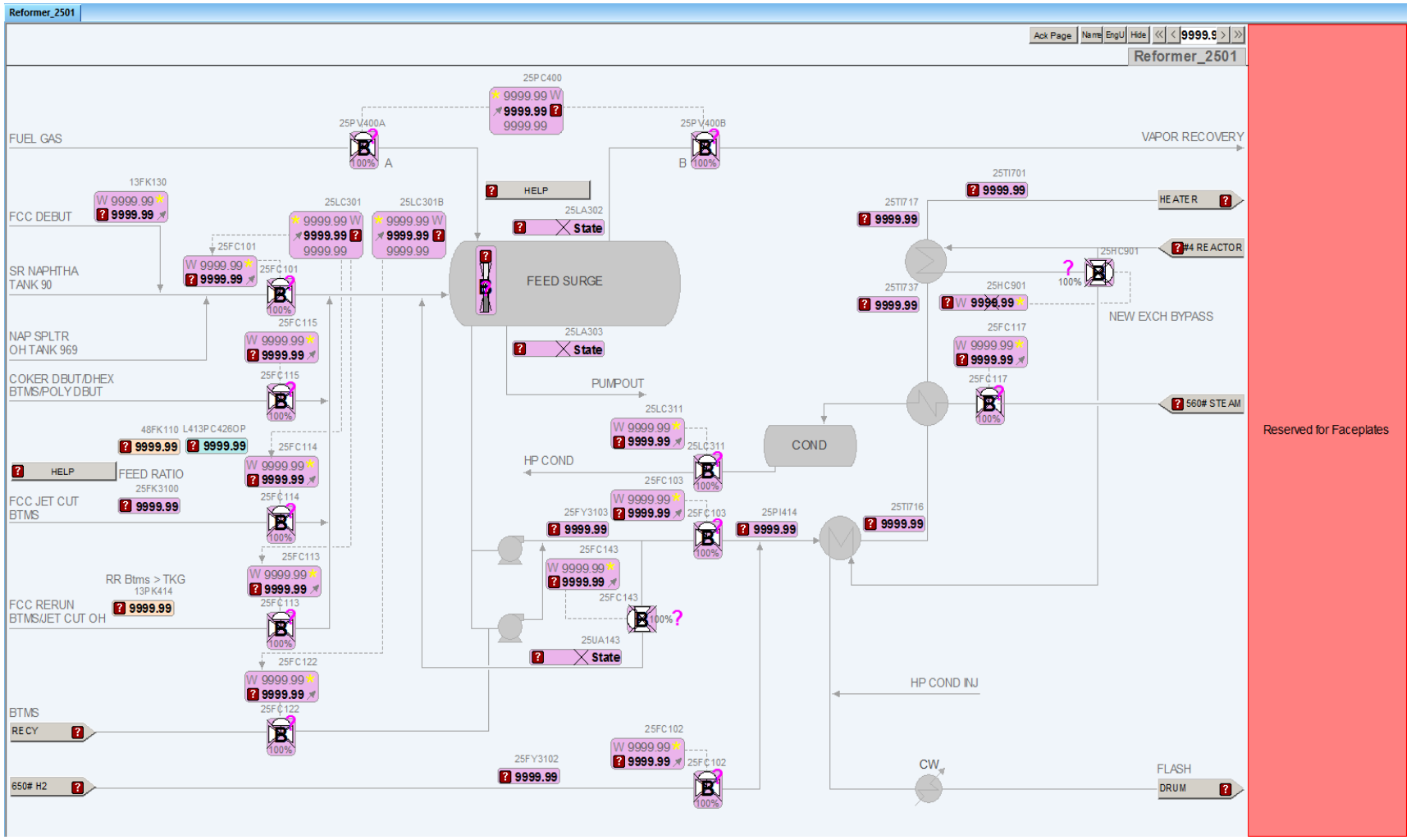

Reformer_2500
2500 Light Hydro Unit Overview
ACK
SIL
Feed Surge Drum
25LC301 M
Total Feed
25FC103 M
650# H2
25FC102 M
9999.99 BPD
Heater
Heater Inlet
25TI701
Heater Outlet
25TC601 M
Reactors
Total Reactor Delta T
25TK3615
RX #1
RX #2
RX #3
RX #4
Reactor Inlet
25TI720
25TI721
25TI728
25TI732
Reactor Effluent
25TI721
25TI725
25TI729
25TI733
SDL
25TC603 M
25TC604 M
Steam Letdown
Flash Drum / Amine Contactor / KO Drum
25LC306 M
Flash Drum
25TI740
25LC304 M
25PC420 M
LHU to 200# H2
25FI131
LHU to Fuel
25FI133
Reboiler / Stabilizer / OH Accumulator
25LC305 M
Reboiler
25TI743
LHU Product
25TI742
Product Recycle to Feed
25FC122 M
Coalescer
25LC310 M
26PC421 M
Stab Bottoms to Product
25FI121
Stab Reflux
25FC125 M
SDL
25LC323 M
LP Contactor
Overview Scripts
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2500
Ack Page
Name
EngU
Hide
9999.9
Reformer_2500
FEED SURGE DRUM
EED SURGE DRUM
25LC301
9999.99 W
9999.99
9999.99
TOTAL FEED
25FC103
9999.99 W
9999.99
9999.99
650# H2
25FC102
9999.99 W
9999.99
9999.99
9999.99 BPD
HEATER
HEATER
HEATER INLET
25TI701
9999.99
25TC601
9999.99 W
9999.99
9999.99
HEATER OUTLET
25LK3999
State
REACTORS
REACTORS
TOTAL REACTOR DELTAT
25TK3615
9999.99
RX #1
RX #2
RX #3
RX #4
25TI720
25TI721
25TI728
25TI732
REACTOR INLET
9999.99
SDL 25TA3721
State
SDL 25TA3725
State
SDL 25TA3729
State
SDL 25TA3733
State
25TI721
25TI725
25TI729
25TI733
REACTOR EFFLUENT
9999.99
25TC603
9999.99 W
9999.99
9999.99
25TC604
9999.99 W
9999.99
9999.99
STEAMLETDOWN
FLASH DRUM / AMINE CONTACTOR / KO DRUM
FLASH DRUM
25PC420
9999.99 W
9999.99
9999.99
25LC304
9999.99 W
9999.99
9999.99
25LC306
9999.99 W
9999.99
9999.99
25FI131
LHU TO 200# H2
9999.99
25FI133
LHU TO FUEL
9999.99
25TI740
FLASH DRUM
9999.99
REBOILER / STABILIZER / OH ACCUMULATOR
REBOILER
25LC305
9999.99 W
9999.99
9999.99
26PC421
9999.99 W
9999.99
9999.99
25LC323
9999.99 W
9999.99
9999.99
SDL
25PA3410
State
REBOILER
25TI743
9999.99
LHU
25TI742
9999.99
25FI121
9999.99
STAB BOTTOMS TO PRODUCT
PRODUCT RECYCLE TO FEED
25FC122
9999.99 W
9999.99
9999.99
STAB REFLUX
25FC125
9999.99 W
9999.99
9999.99
COALESCER
25LC310
W 9999.99
9999.99
LP CONTACTOR
Reserved for Faceplates

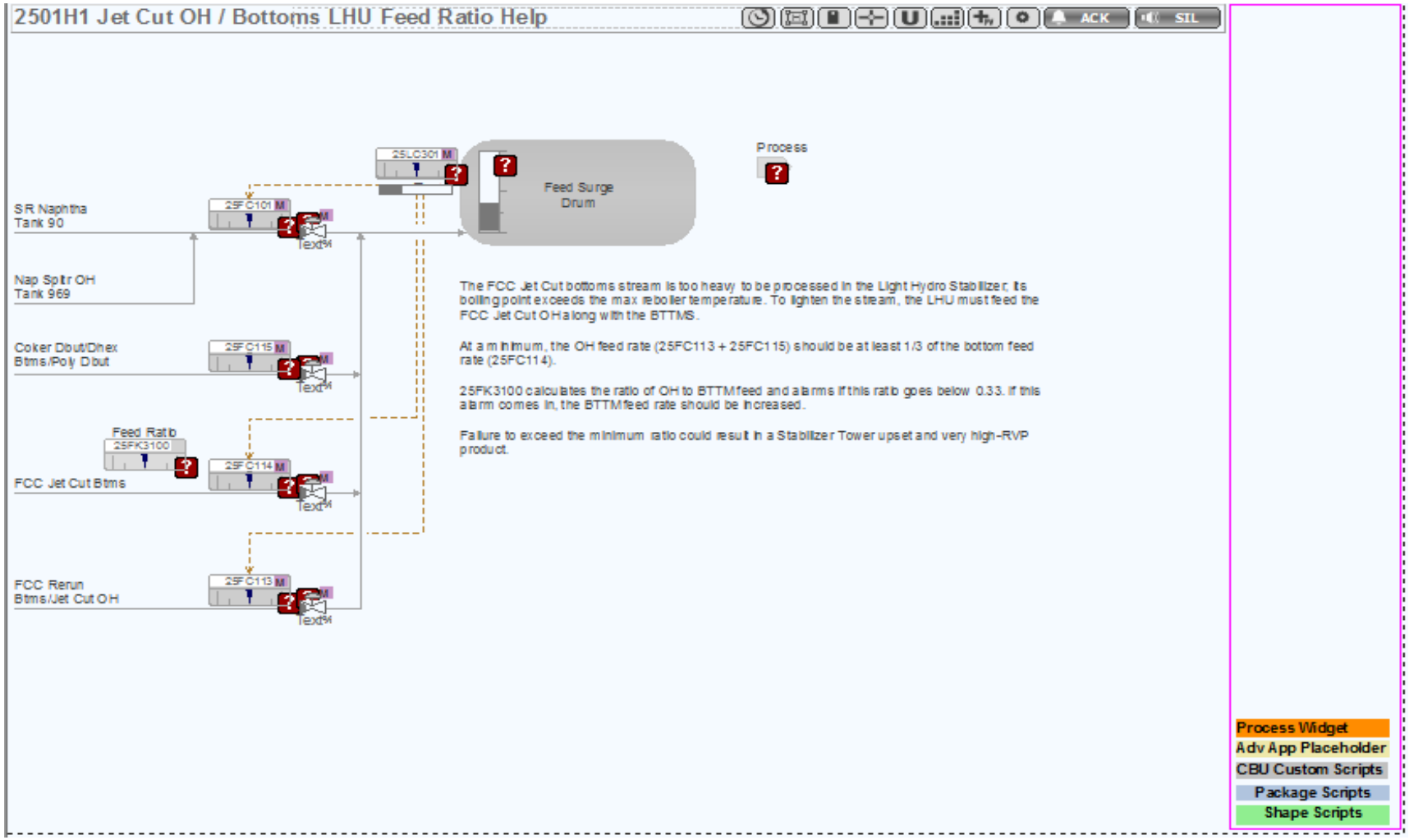
1.195 2501 LHU FEED SYSTEM (Reformer_2501.htm)

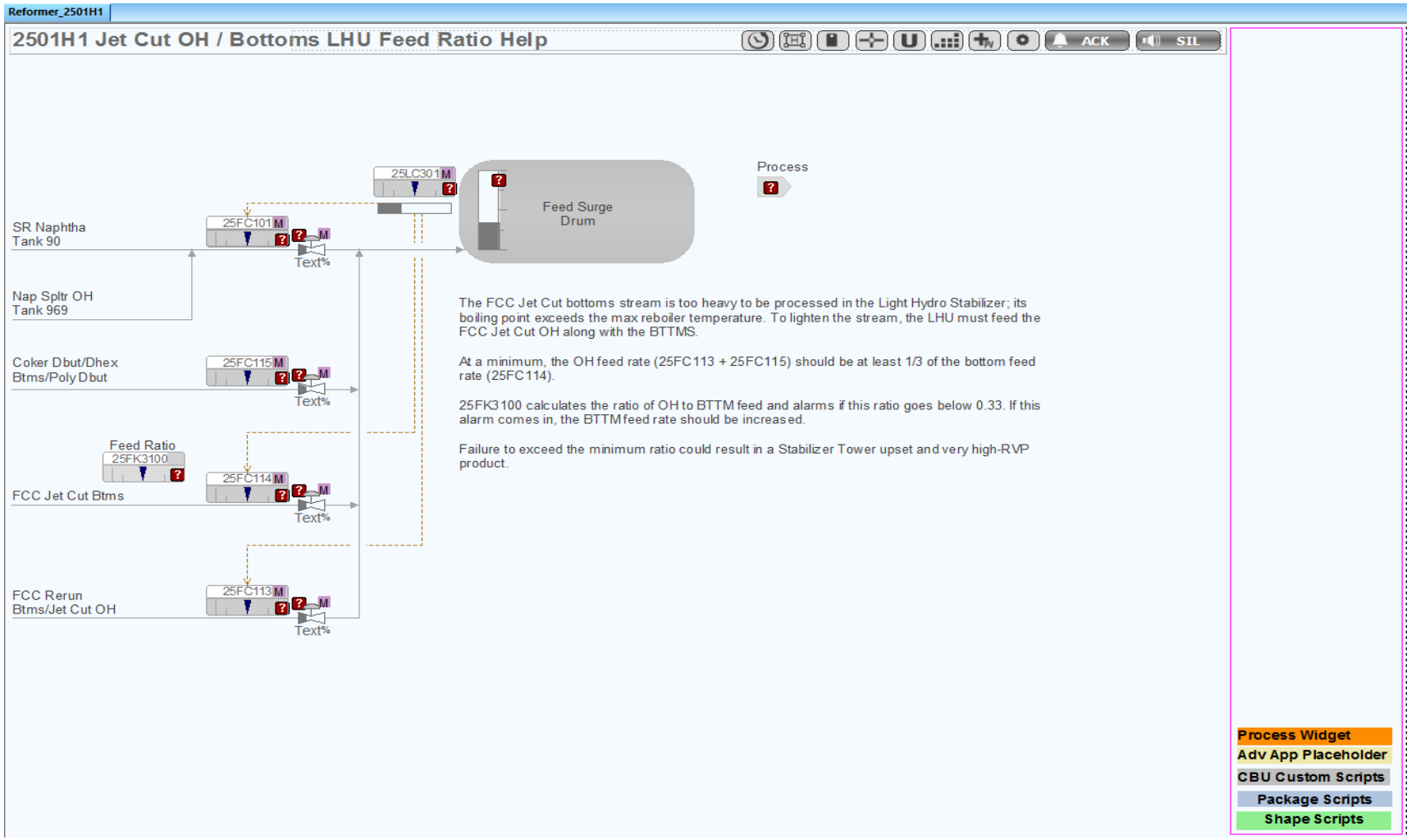


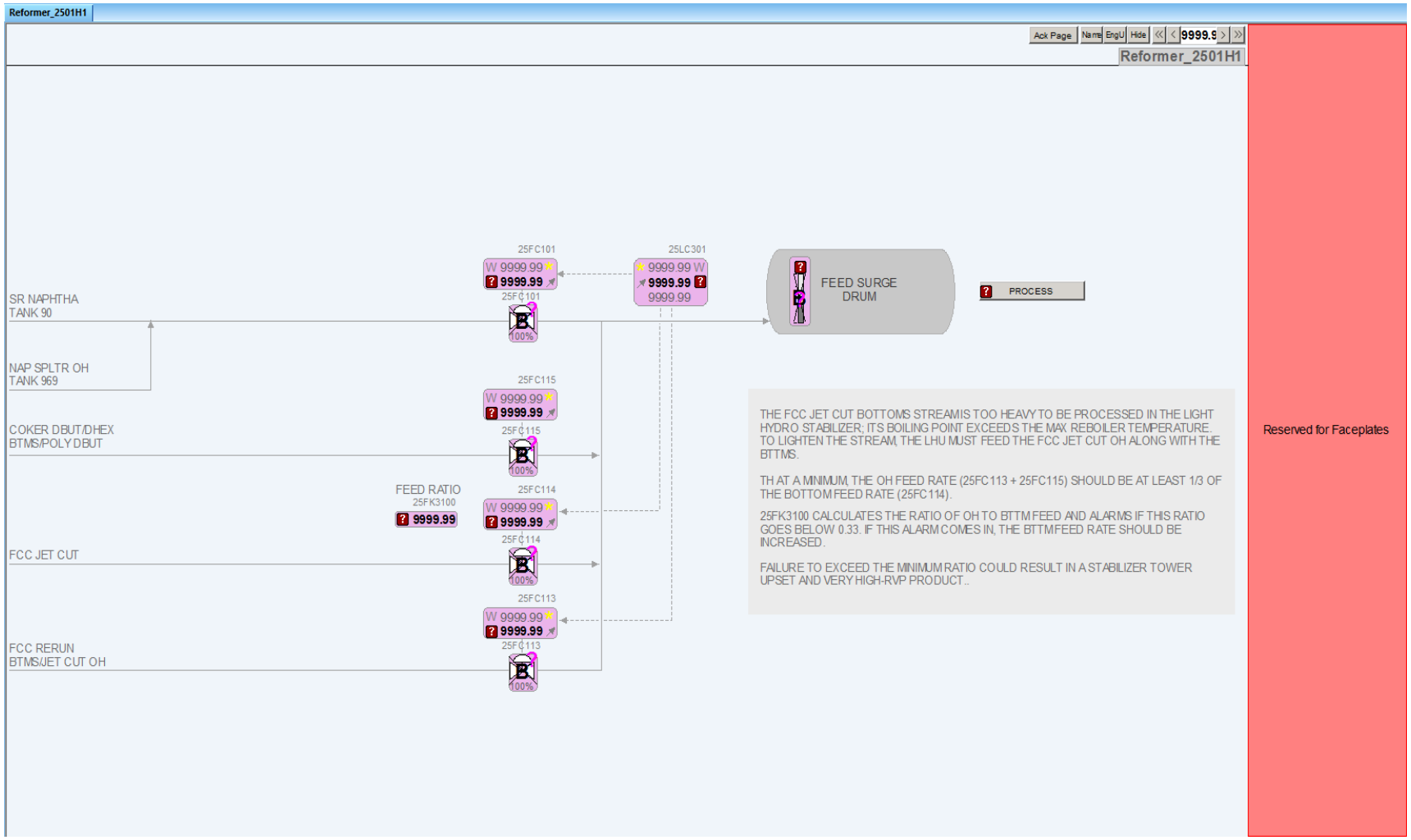

Reformer_2501
2501 LHU Feed System
ACK
SIL
25PC400
Fuel Gas
Text%
A
Text%
B
Vapor Recovery
Help
13FK130
FCC Debut
25LC301
25LC301B
Feed Surge
Drum
25TI701
Heater
25TI717
#4 Reactor
25FC101
SR Naphtha
Tank 90
Text%
25TI737
25HC901
New Exch
Bypass
Nap Spltr OH
Tank 969
Pumpout
25FC117
560#
Steam
Text%
Coker Dbut/Dhex
Btms/Poly Dbut
25FC115
Text%
HP
Cond
Text%
25LC311
Cond
Pot
48FK110
Help
L413PC426OP
Feed Ratio
25FK3100
25FY3103
25FC103
Text%
25PI414
25TI716
25FC114
FCC Jet Cut Btms
Text%
25FC143
RR Btms > TKG
13PK414
Text%
25UA143
State
FCC Rerun
Btms/Jet Cut OH
25FC113
Text%
HP Cond Inj
Btms Recy
25FC122
Text%
650# H2
25FY3102
25FC102
Text%
CW
Flash
Drum
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2501
Ack Page
Name
EngU
Hide
Reformer_2501
25PC400
25PV400A
25PV400B
FUEL GAS
A
B
VAPOR RECOVERY
13FK130
FCC DEBUT
HELP
25LA302
State
25LC301
25LC301B
25FC101
SR NAPHTHA
TANK 90
FEED SURGE
25LA303
State
NAP SPLTR
OH TANK 969
25FC115
COKER DBUT/DHEX
BTMS/POLY DBUT
PUMPOUT
48FK110
L413PC426OP
25FC114
HELP
FEED RATIO
25FK3100
FCC JET CUT
BTMS
25LC311
HP COND
COND
25FC103
25FY3103
25PI414
25TI716
25FC143
25UA143
State
RR Btms > TKG
13PK414
FCC RERUN
BTMS/JET CUT OH
25FC113
25FC122
BTMS
RECY
HP COND INJ
25FC102
25FY3102
650# H2
CW
FLASH
DRUM
25TI701
HEATER
25TI717
#4 REACTOR
25HC901
25TI737
NEW EXCH BYPASS
25FC117
560# STEAM
Reserved for Faceplates

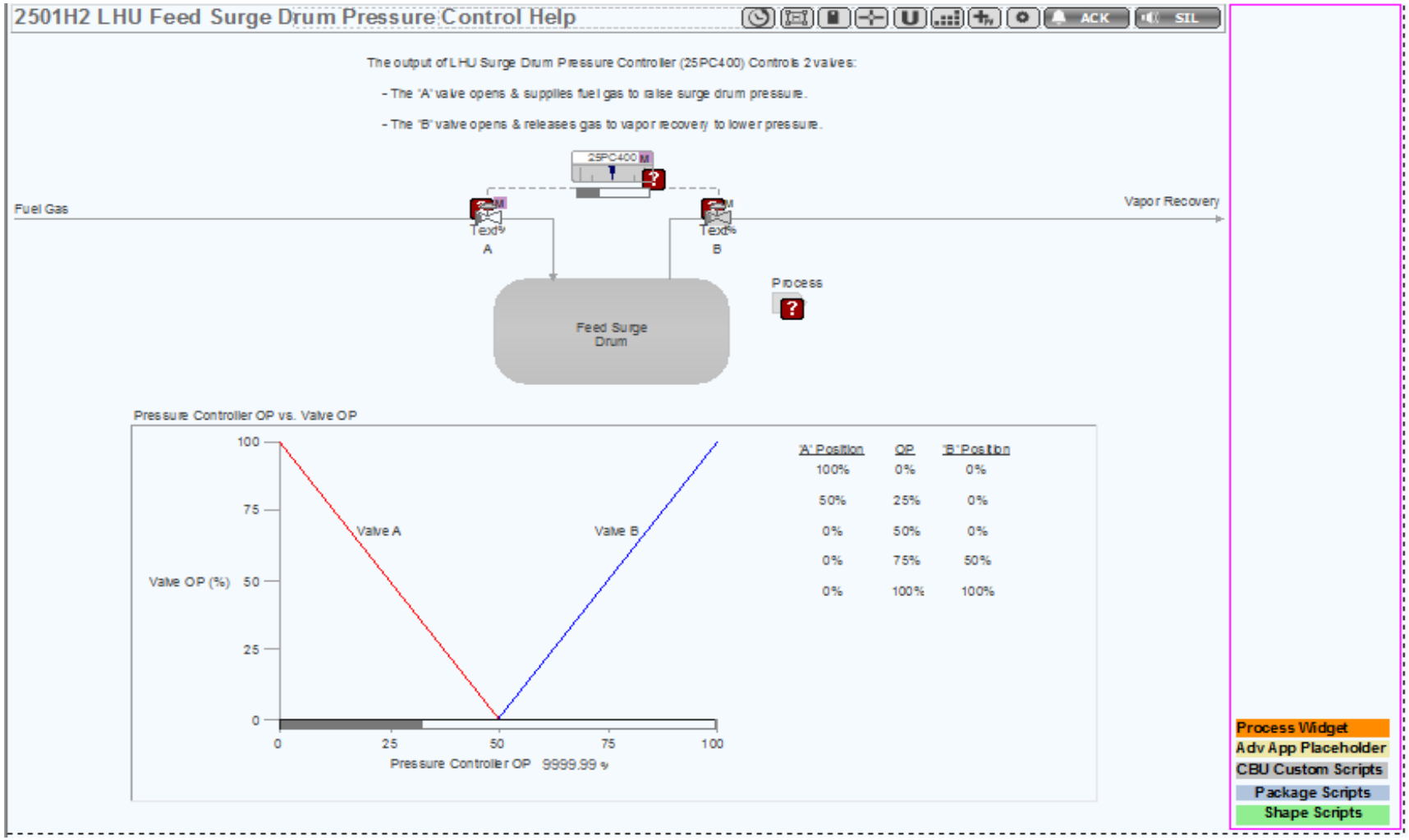
1.196 2501H1 JET CUT OH / BOTTOMS LHU FEED RATIO HELP (Reformer_2501H1.htm)

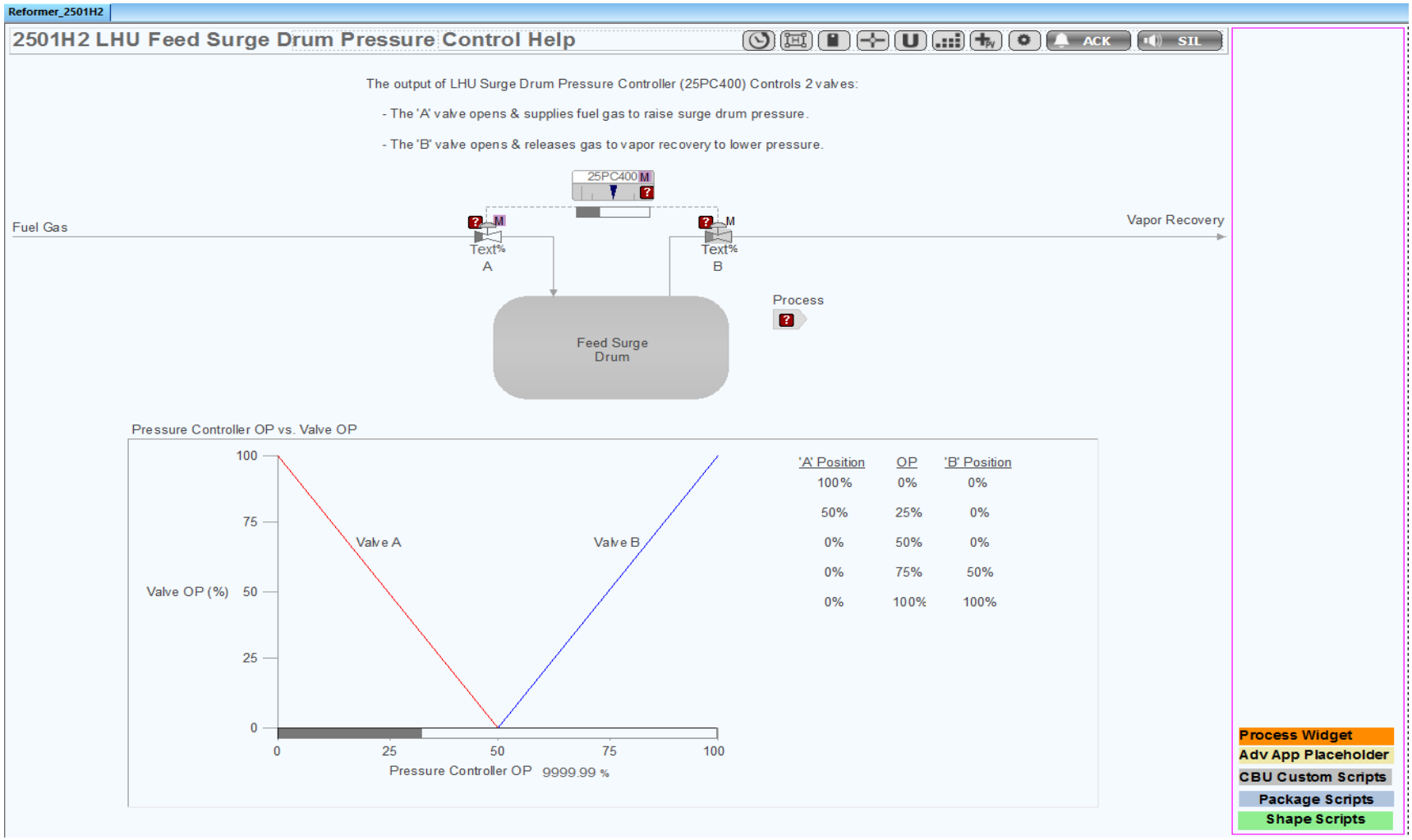


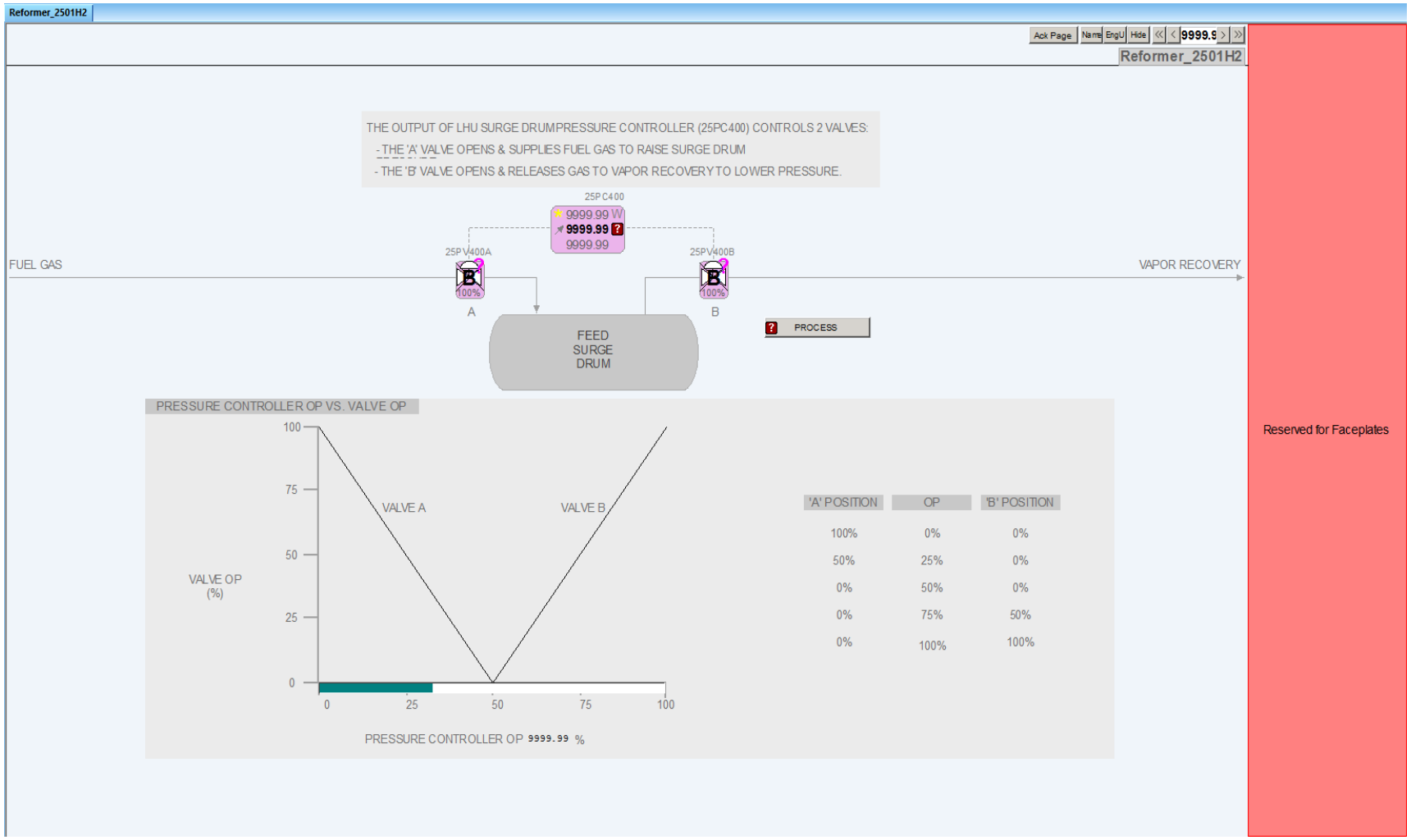

Reformer_2501H1
2501H1 Jet Cut OH / Bottoms LHU Feed Ratio Help
ACK
SIL
25LC301
Feed Surge Drum
Process
SR Naphtha Tank 90
25FC101
Text%
Nap Spltr OH Tank 969
Coker Dbut/Dhex Btms/Poly Dbut
25FC115
Text%
Feed Ratio
25FK3100
FCC Jet Cut Btms
25FC114
Text%
FCC Rerun Btms/Jet Cut OH
25FC113
Text%
The FCC Jet Cut bottoms stream is too heavy to be processed in the Light Hydro Stabilizer; its boiling point exceeds the max reboiler temperature. To lighten the stream, the LHU must feed the FCC Jet Cut OH along with the BTTMS.
At a minimum, the OH feed rate (25FC113 + 25FC115) should be at least 1/3 of the bottom feed rate (25FC114).
25FK3100 calculates the ratio of OH to BTTM feed and alarms if this ratio goes below 0.33. If this alarm comes in, the BTTM feed rate should be increased.
Failure to exceed the minimum ratio could result in a Stabilizer Tower upset and very high-RVP product.
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2501H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2501H1
25FC101
W 9999.99
9999.99
25FC101
100%
25LC301
9999.99 W
9999.99
9999.99
FEED SURGE DRUM
PROCESS
SR NAPHTHA TANK 90
NAP SPLTR OH TANK 969
25FC115
W 9999.99
9999.99
25FC115
100%
COKER DBUT/DHEX BTMS/POLY DBUT
FEED RATIO
25FK3100
9999.99
25FC114
W 9999.99
9999.99
25FC114
100%
FCC JET CUT
25FC113
W 9999.99
9999.99
25FC113
100%
FCC RERUN BTMS/JET CUT OH
THE FCC JET CUT BOTTOMS STREAMIS TOO HEAVY TO BE PROCESSED IN THE LIGHT HYDRO STABILIZER; ITS BOILING POINT EXCEEDS THE MAX REBOILER TEMPERATURE. TO LIGHTEN THE STREAM, THE LHU MUST FEED THE FCC JET CUT OH ALONG WITH THE BTTMS.
TH AT A MINIMUM, THE OH FEED RATE (25FC113 + 25FC115) SHOULD BE AT LEAST 1/3 OF THE BOTTOM FEED RATE (25FC114).
25FK3100 CALCULATES THE RATIO OF OH TO BTTM FEED AND ALARMS IF THIS RATIO GOES BELOW 0.33. IF THIS ALARM COMES IN, THE BTTM FEED RATE SHOULD BE INCREASED.
FAILURE TO EXCEED THE MINIMUM RATIO COULD RESULT IN A STABILIZER TOWER UPSET AND VERY HIGH-RVP PRODUCT..
Reserved for Faceplates

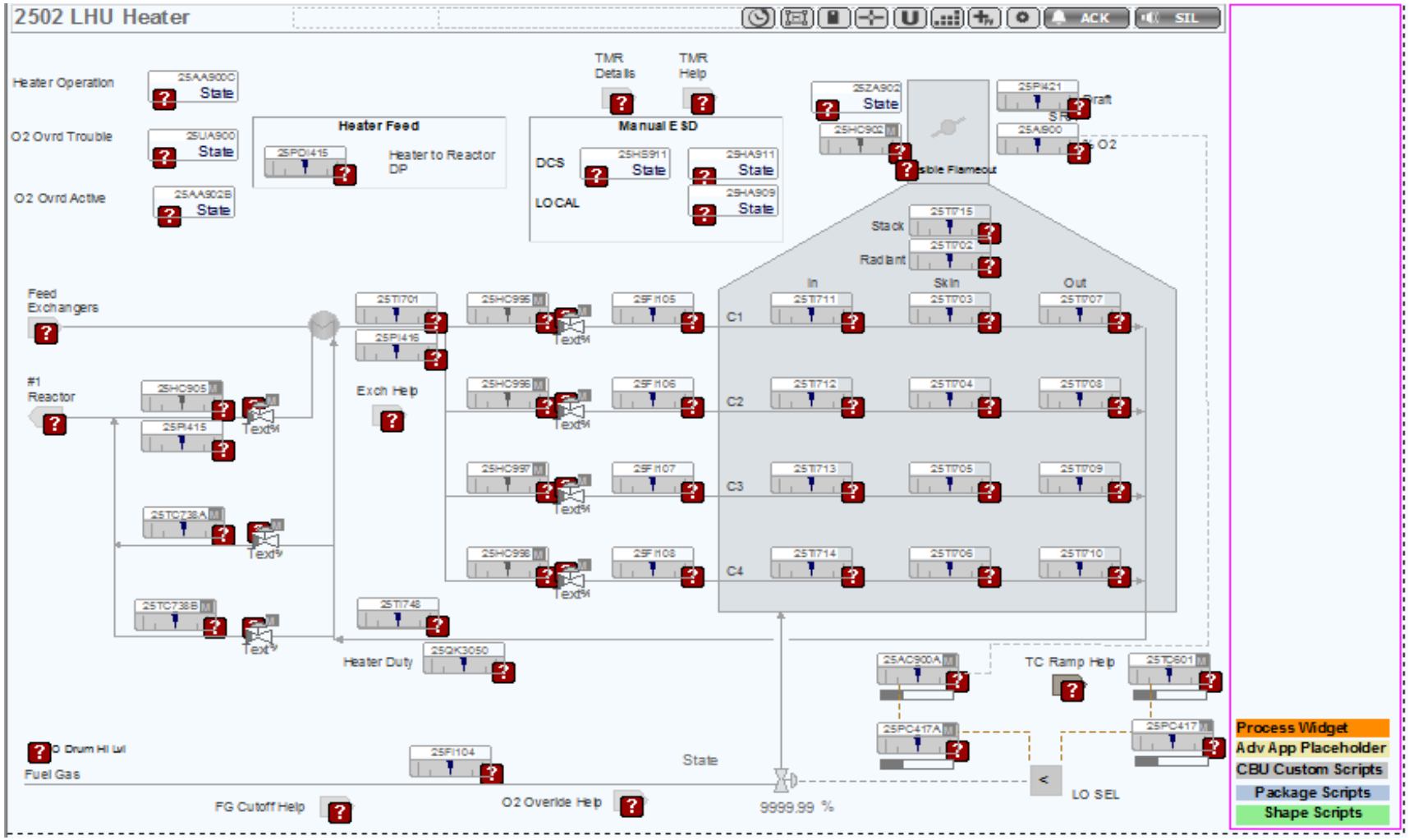
1.197 2501H2 LHU FEED SURGE DRUM PRESSURE CONTROL HELP (Reformer_2501H2.htm)

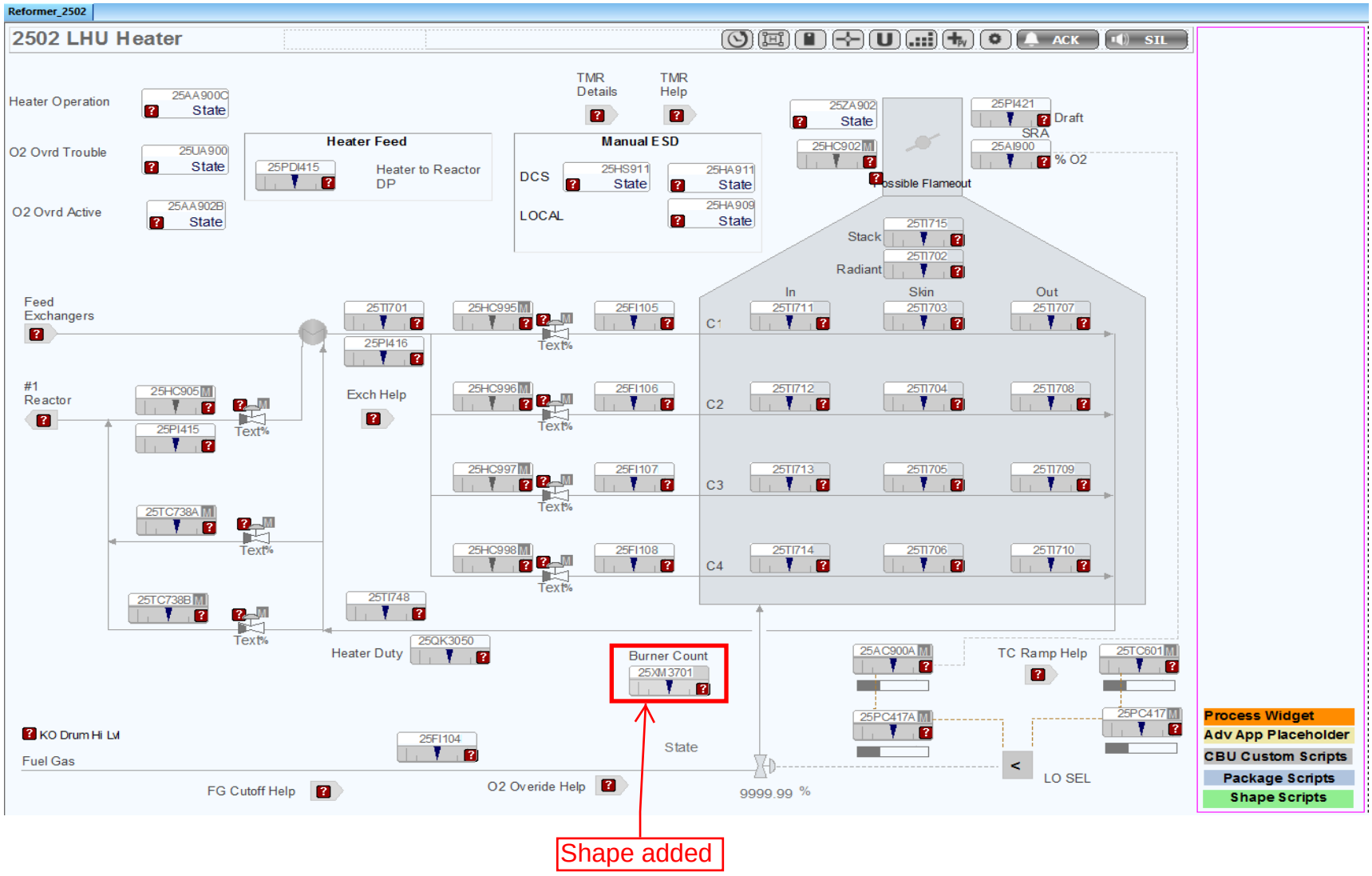


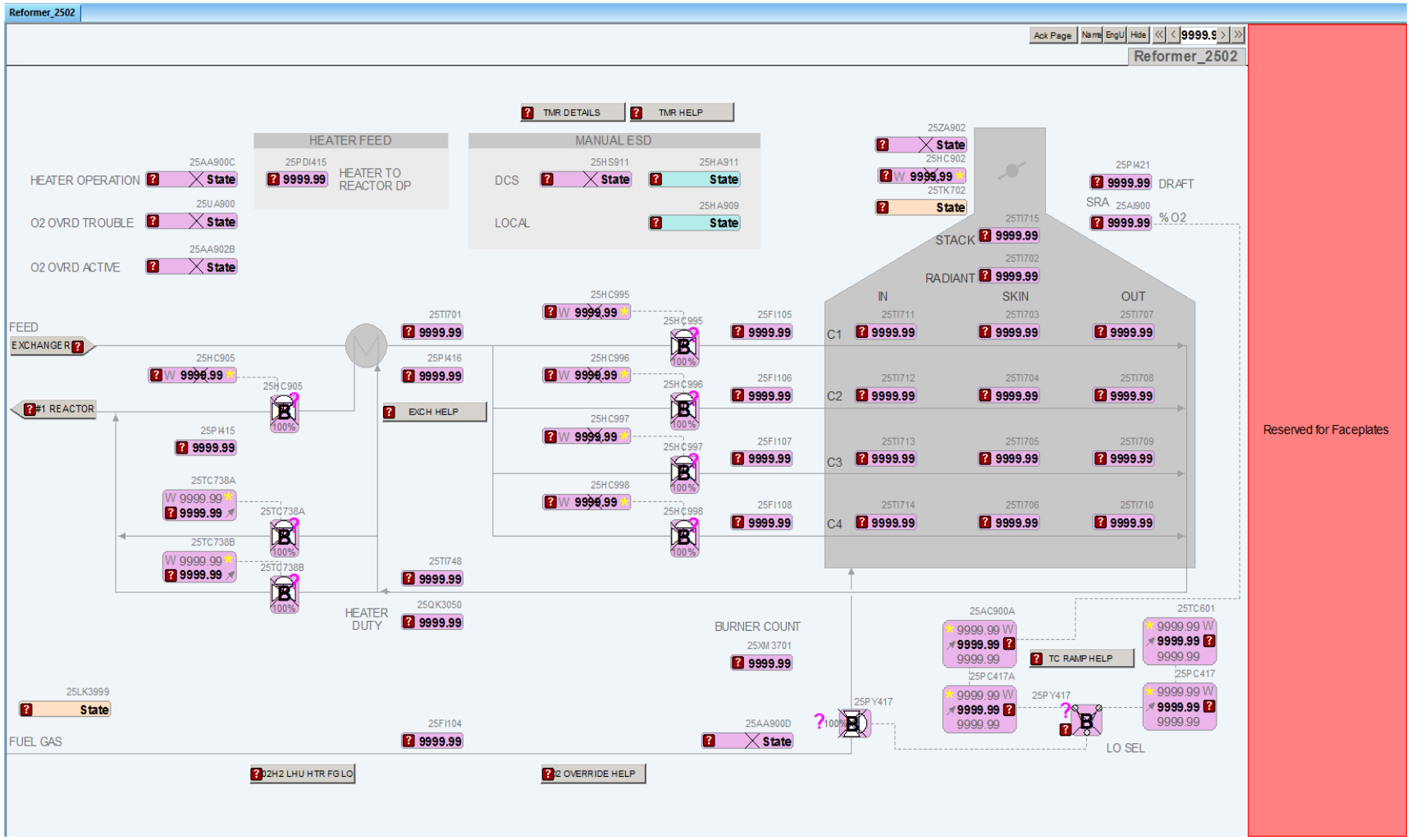

Reformer_2501H2
2501H2 LHU Feed Surge Drum Pressure Control Help
ACK
SIL
The output of LHU Surge Drum Pressure Controller (25PC400) Controls 2 valves:
- The 'A' valve opens & supplies fuel gas to raise surge drum pressure.
- The 'B' valve opens & releases gas to vapor recovery to lower pressure.
25PC400
Fuel Gas
Text%
A
Text%
B
Vapor Recovery
Process
Feed Surge Drum
Pressure Controller OP vs. Valve OP
Valve OP (%)
100
75
50
25
0
Valve A
Valve B
0
25
50
75
100
Pressure Controller OP 9999.99 %
'A' Position
OP
'B' Position
100% 0% 0%
50% 25% 0%
0% 50% 0%
0% 75% 50%
0% 100% 100%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2501H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2501H2
THE OUTPUT OF LHU SURGE DRUMPRESSURE CONTROLLER (25PC400) CONTROLS 2 VALVES:
- THE 'A' VALVE OPENS & SUPPLIES FUEL GAS TO RAISE SURGE DRUM
- THE 'B' VALVE OPENS & RELEASES GAS TO VAPOR RECOVERY TO LOWER PRESSURE.
25PC400
9999.99 W
9999.99
9999.99
FUEL GAS
25PV400A
100%
A
25PV400B
100%
B
VAPOR RECOVERY
PROCESS
FEED
SURGE
DRUM
PRESSURE CONTROLLER OP VS. VALVE OP
100
75
50
25
0
VALVE OP
(%)
VALVE A
VALVE B
0
25
50
75
100
PRESSURE CONTROLLER OP 9999.99 %
'A' POSITION
OP
'B' POSITION
100%
0%
0%
50%
25%
0%
0%
50%
0%
0%
75%
50%
0%
100%
100%
Reserved for Faceplates

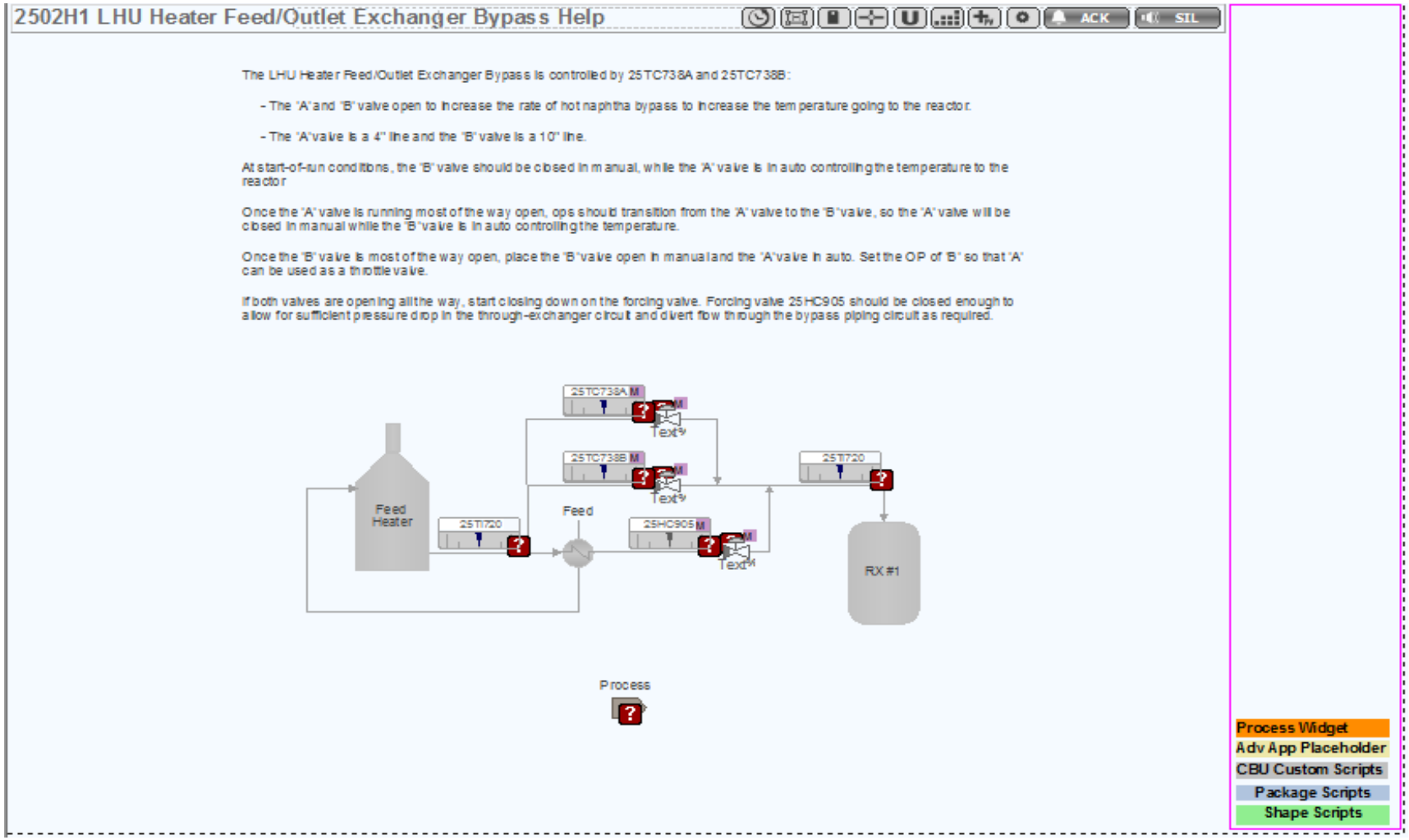
1.198 2502 LHU HEATER (Reformer_2502.htm)




Reformer_2502
2502 LHU Heater
ACK
SIL
Heater Operation
25AA900C
State
O2 Ovrd Trouble
25UA900
State
O2 Ovrd Active
25AA902B
State
Heater Feed
25PDI415
Heater to Reactor DP
TMR Details
TMR Help
Manual ESD
DCS
25HS911
State
25HA911
State
LOCAL
25HA909
State
25ZA902
State
25HC902
25PI421
Draft
SRA
25AI900
% O2
Possible Flameout
25TI715
Stack
25TI702
Radiant
In
Skin
Out
Feed Exchangers
25TI701
25HC995
25FI105
25PI416
Exch Help
C1
25TI711
25TI703
25TI707
#1 Reactor
25HC905
25PI415
Text%
25HC996
25FI106
C2
25TI712
25TI704
25TI708
25HC997
25FI107
C3
25TI713
25TI705
25TI709
25TC738A
25HC998
25FI108
C4
25TI714
25TI706
25TI710
25TC738B
25TI748
Heater Duty
25QK3050
Burner Count
25XM3701
25AC900A
TC Ramp Help
25TC601
25PC417A
25PC417
KO Drum Hi LvI
Fuel Gas
25FI104
State
FG Cutoff Help
O2 Overide Help
9999.99 %
LO SEL
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts
Shape added


Reformer_2502
Ack Page
Name
EngU
Hide
Reformer_2502
TMR DETAILS
TMR HELP
HEATER FEED
MANUAL ESD
HEATER OPERATION
25AA900C
State
25PDI415
9999.99
HEATER TO REACTOR DP
DCS
25HS911
25HA911
LOCAL
25HA909
O2 OVRD TROUBLE
25UA900
O2 OVRD ACTIVE
25AA902B
25ZA902
25HC902
25TK702
25PI421
DRAFT
SRA
25AI900
%O2
STACK
25TI715
RADIANT
25TI702
IN
SKIN
OUT
C1
C2
C3
C4
25TI711
25TI703
25TI707
25TI712
25TI704
25TI708
25TI713
25TI705
25TI709
25TI714
25TI706
25TI710
FEED
EXCHANGER
#1 REACTOR
25TI701
25PI416
EXCH HELP
25HC995
25HC996
25HC997
25HC998
25FI105
25FI106
25FI107
25FI108
25HC905
25PI415
25TC738A
25TC738B
25TI748
HEATER DUTY
25QK3050
BURNER COUNT
25XM3701
25AC900A
TC RAMP HELP
25TC601
25PC417A
25PC417
25PY417
LO SEL
25LK3999
FUEL GAS
25FI104
25AA900D
Reserved for Faceplates

1.199 2502H1 LHU HEATER FEED/OUTLET EXCHANGER BYPASS HELP (Reformer_2502H1.htm)



Reformer_2502H1

2502H1 LHU Heater Feed/Outlet Exchanger Bypass Help

ACK SIL

The LHU Heater Feed/Outlet Exchanger Bypass is controlled by 25TC738A and 25TC738B:

- The 'A' and 'B' valve open to increase the rate of hot naphtha bypass to increase the temperature going to the reactor.

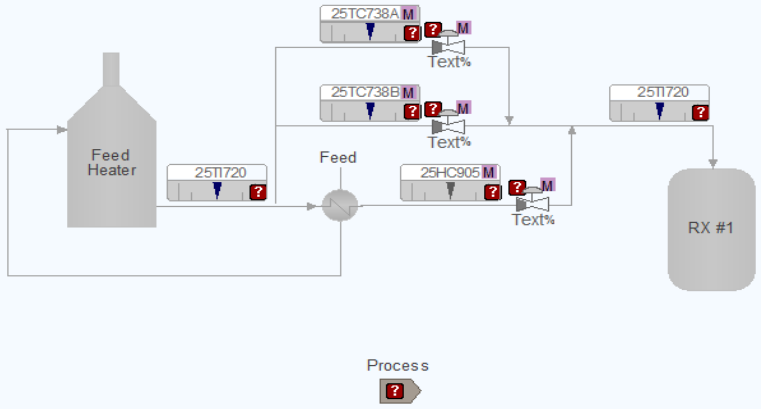
- The 'A' valve is a 4" line and the 'B' valve is a 10" line.

At start-of-run conditions, the 'B' valve should be closed in manual, while the 'A' valve is in auto controlling the temperature to the reactor

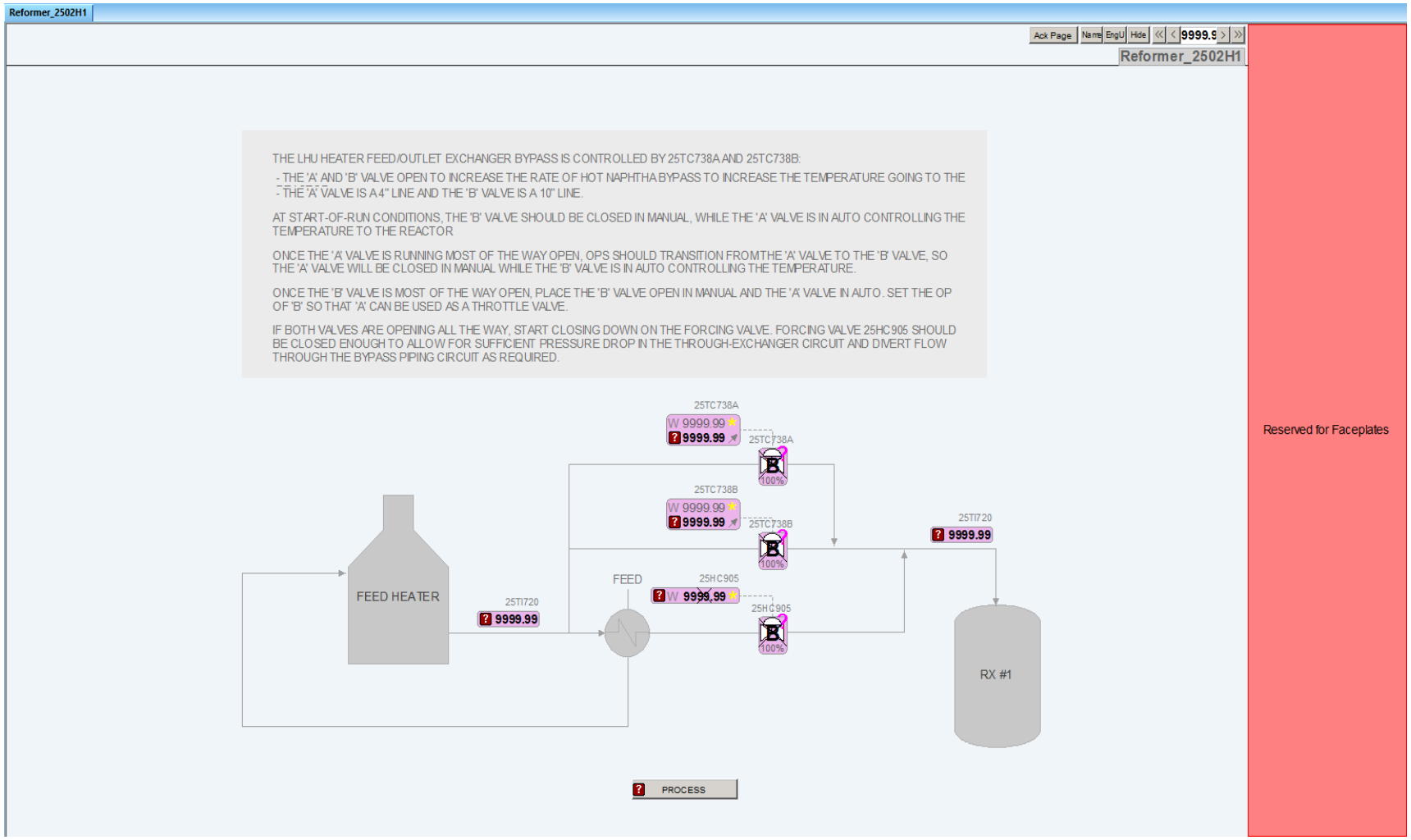
Once the 'A' valve is running most of the way open, ops should transition from the 'A' valve to the 'B' valve, so the 'A' valve will be closed in manual while the 'B' valve is in auto controlling the temperature.

Once the 'B' valve is most of the way open, place the 'B' valve open in manual and the 'A' valve in auto. Set the OP of 'B' so that 'A' can be used as a throttle valve.

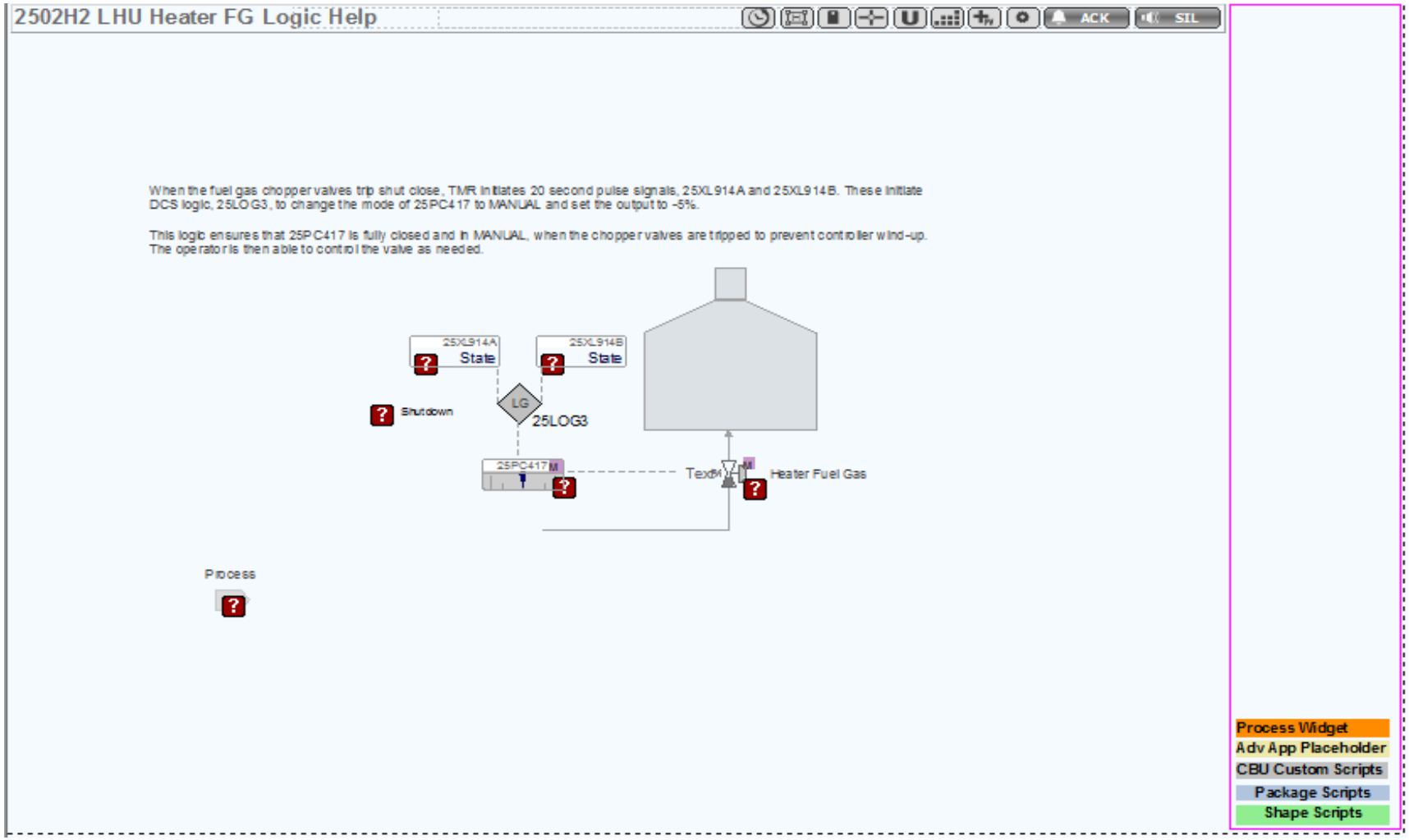
If both valves are opening all the way, start closing down on the forcing valve. Forcing valve 25HC905 should be closed enough to allow for sufficient pressure drop in the through-exchanger circuit and divert flow through the bypass piping circuit as required.

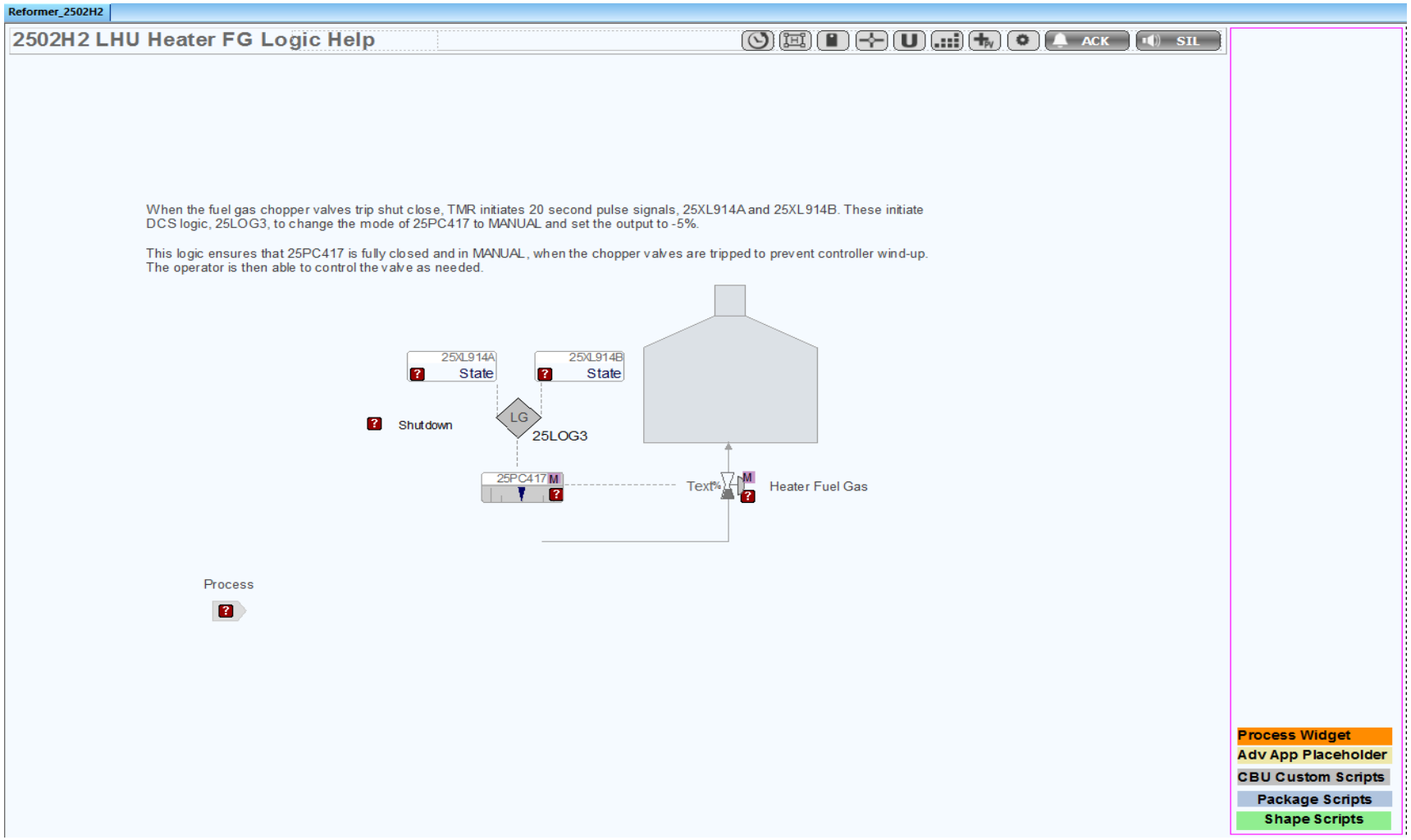


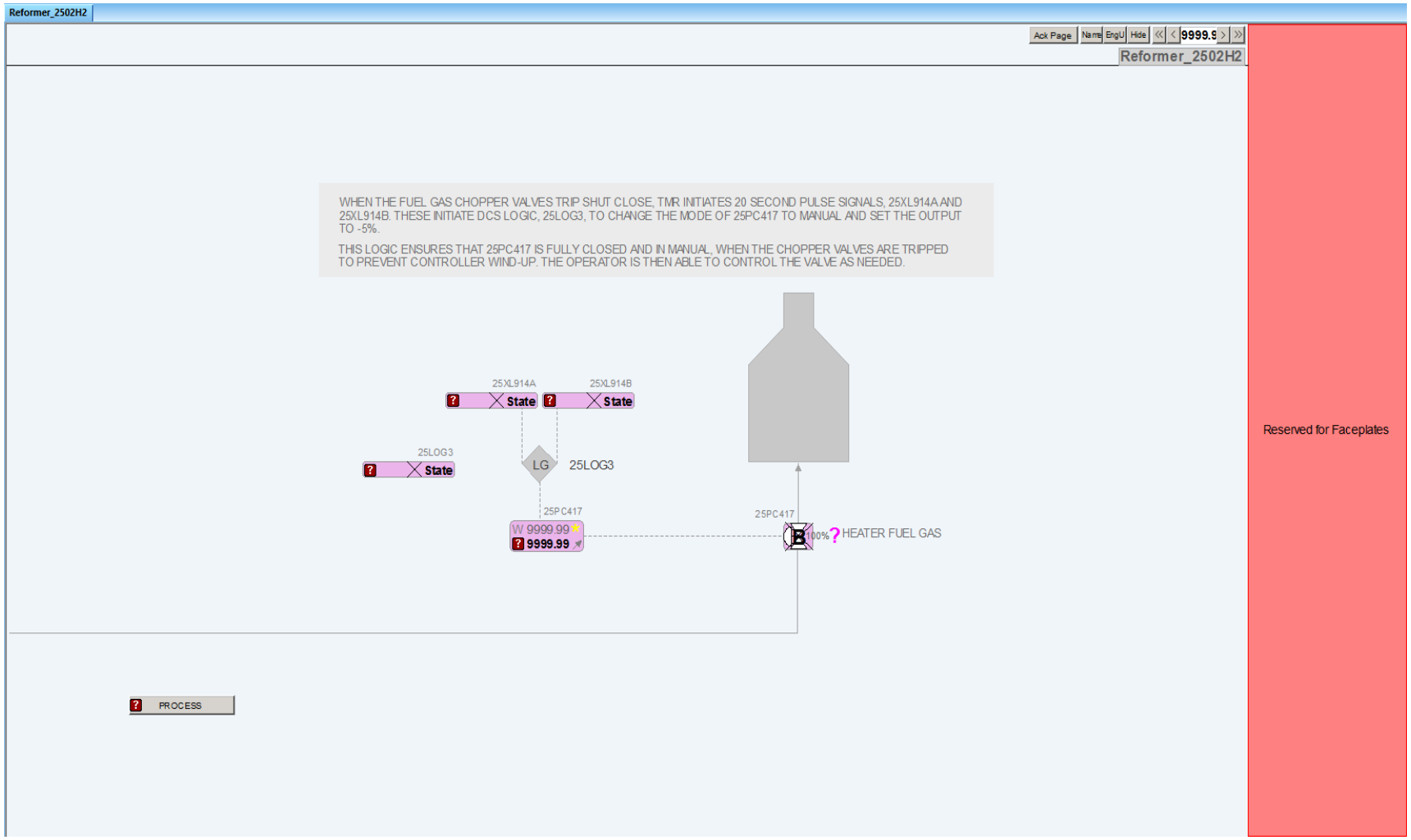
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2502H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2502H1
THE LHU HEATER FEED/OUTLET EXCHANGER BYPASS IS CONTROLLED BY 25TC738A AND 25TC738B:
- THE 'A' AND 'B' VALVE OPEN TO INCREASE THE RATE OF HOT NAPHTHA BYPASS TO INCREASE THE TEMPERATURE GOING TO THE
- THE 'A' VALVE IS A 4" LINE AND THE 'B' VALVE IS A 10" LINE.
AT START-OF-RUN CONDITIONS, THE 'B' VALVE SHOULD BE CLOSED IN MANUAL, WHILE THE 'A' VALVE IS IN AUTO CONTROLLING THE TEMPERATURE TO THE REACTOR
ONCE THE 'A' VALVE IS RUNNING MOST OF THE WAY OPEN, OPS SHOULD TRANSITION FROM THE 'A' VALVE TO THE 'B' VALVE, SO THE 'A' VALVE WILL BE CLOSED IN MANUAL WHILE THE 'B' VALVE IS IN AUTO CONTROLLING THE TEMPERATURE.
ONCE THE 'B' VALVE IS MOST OF THE WAY OPEN, PLACE THE 'B' VALVE OPEN IN MANUAL AND THE 'A' VALVE IN AUTO. SET THE OP OF 'B' SO THAT 'A' CAN BE USED AS A THROTTLE VALVE.
IF BOTH VALVES ARE OPENING ALL THE WAY, START CLOSING DOWN ON THE FORCING VALVE. FORCING VALVE 25HC905 SHOULD BE CLOSED ENOUGH TO ALLOW FOR SUFFICIENT PRESSURE DROP IN THE THROUGH-EXCHANGER CIRCUIT AND DIVERT FLOW THROUGH THE BYPASS PIPING CIRCUIT AS REQUIRED.
25TC738A
9999.99
9999.99
25TC738A
100%
25TC738B
9999.99
9999.99
25TC738B
100%
25TI720
9999.99
FEED HEATER
25TI720
9999.99
FEED
25HC905
9999.99
25HC905
100%
RX #1
PROCESS
Reserved for Faceplates

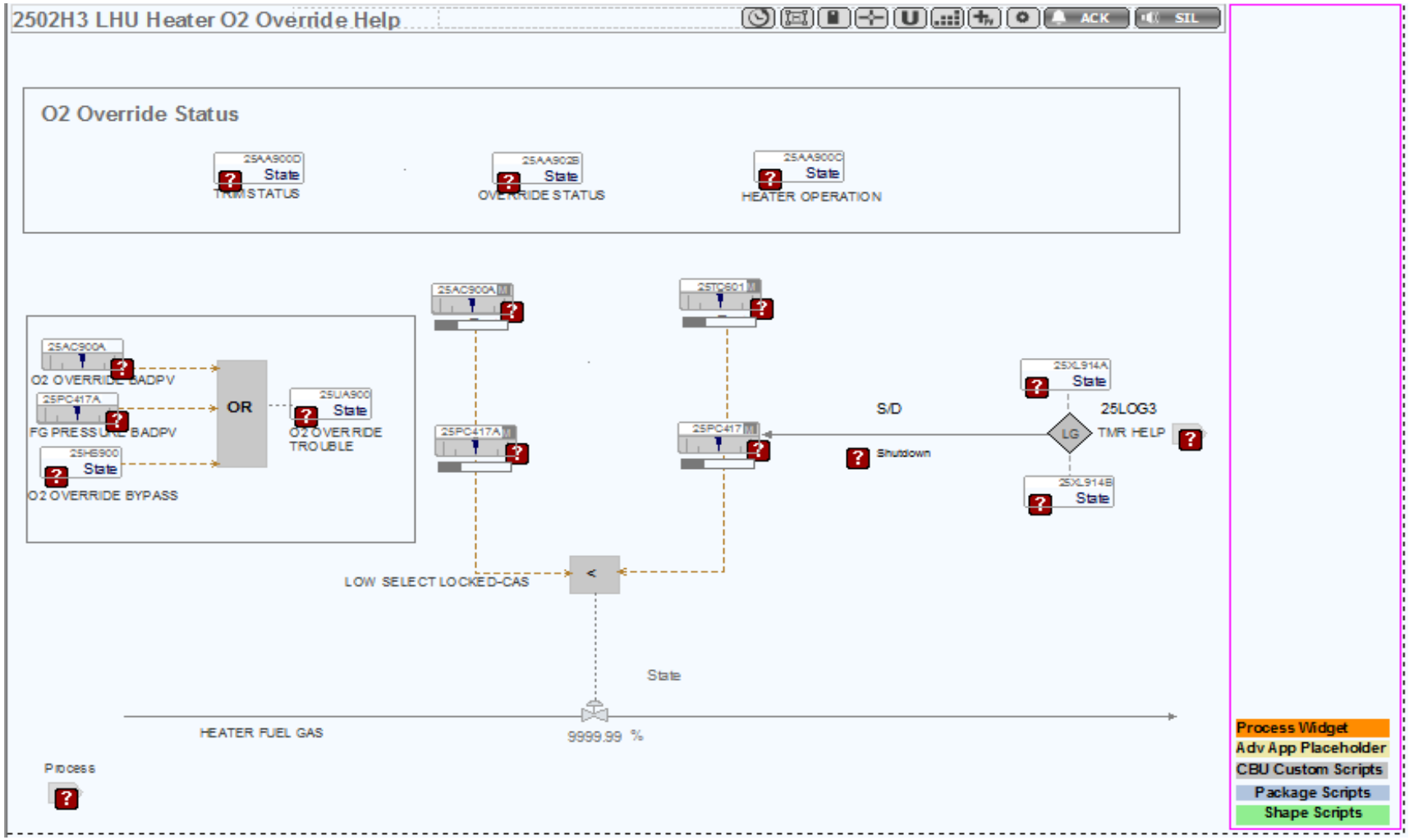
1.200 2502H2 LHU HEATER FG LOGIC HELP (Reformer_2502H2.htm)

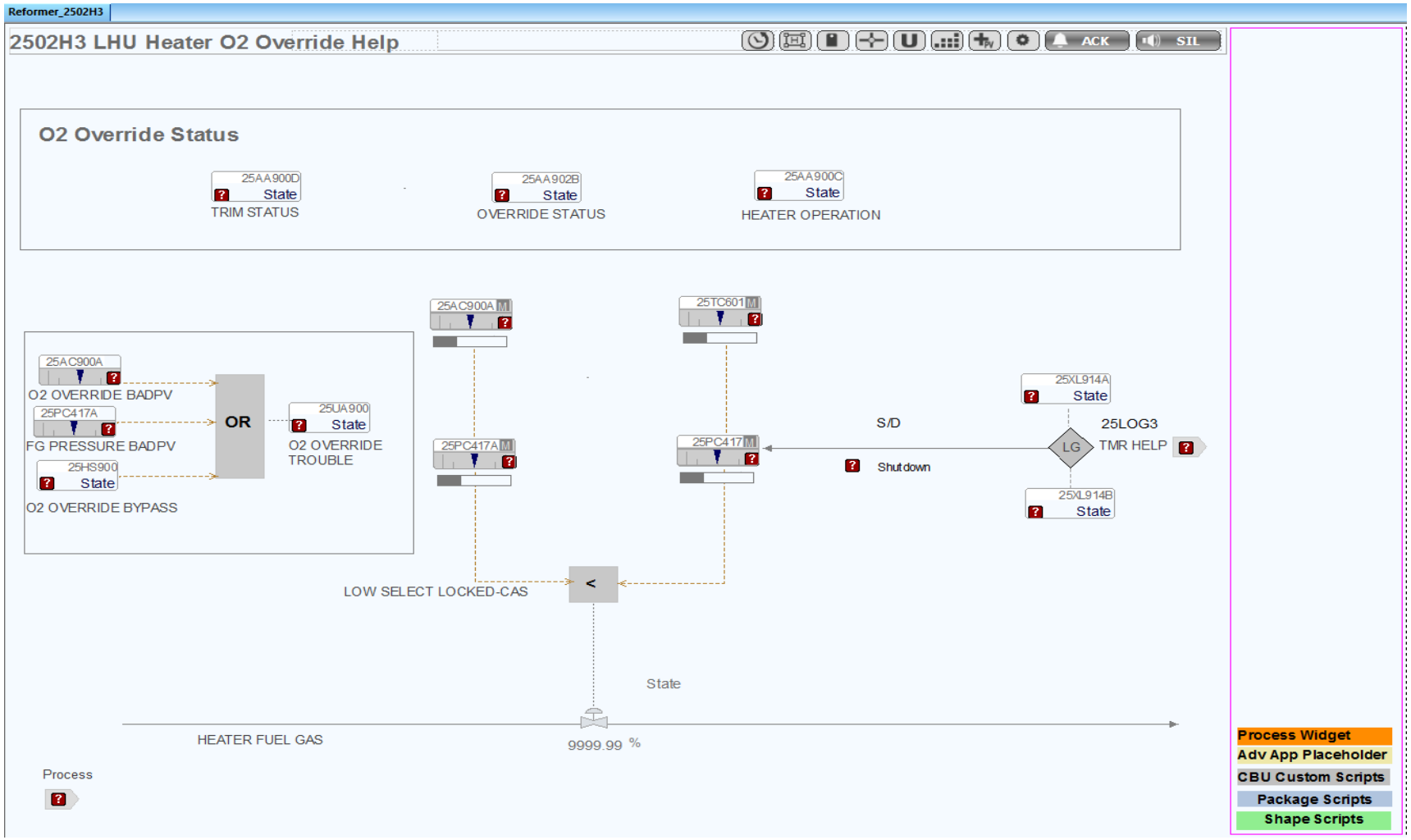


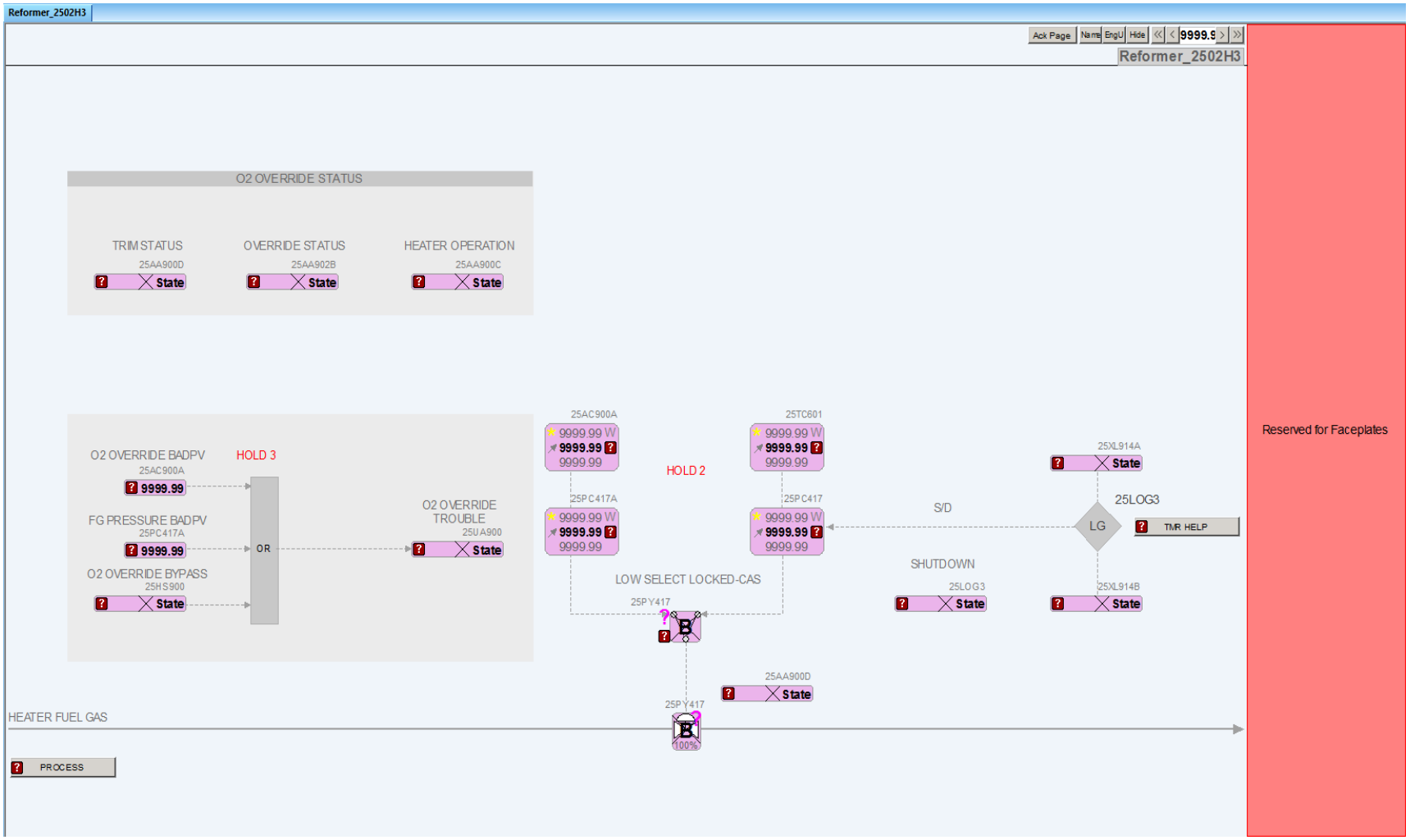

Reformer_2502H2
2502H2 LHU Heater FG Logic Help
ACK
SIL
When the fuel gas chopper valves trip shut close, TMR initiates 20 second pulse signals, 25XL914A and 25XL914B. These initiate DCS logic, 25LOG3, to change the mode of 25PC417 to MANUAL and set the output to -5%.
This logic ensures that 25PC417 is fully closed and in MANUAL, when the chopper valves are tripped to prevent controller wind-up. The operator is then able to control the valve as needed.
25XL914A
State
25XL914B
State
Shutdown
LG
25LOG3
25PC417
M
Text%
M
Heater Fuel Gas
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2502H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2502H2
WHEN THE FUEL GAS CHOPPER VALVES TRIP SHUT CLOSE, TMR INITIATES 20 SECOND PULSE SIGNALS, 25XL914A AND 25XL914B. THESE INITIATE DCS LOGIC, 25LOG3, TO CHANGE THE MODE OF 25PC417 TO MANUAL AND SET THE OUTPUT TO -5%.
THIS LOGIC ENSURES THAT 25PC417 IS FULLY CLOSED AND IN MANUAL, WHEN THE CHOPPER VALVES ARE TRIPPED TO PREVENT CONTROLLER WIND-UP. THE OPERATOR IS THEN ABLE TO CONTROL THE VALVE AS NEEDED.
25XL914A
State
25XL914B
State
25LOG3
State
LG
25LOG3
25PC417
W 9999.99
9999.99
25PC417
100%
HEATER FUEL GAS
PROCESS
Reserved for Faceplates

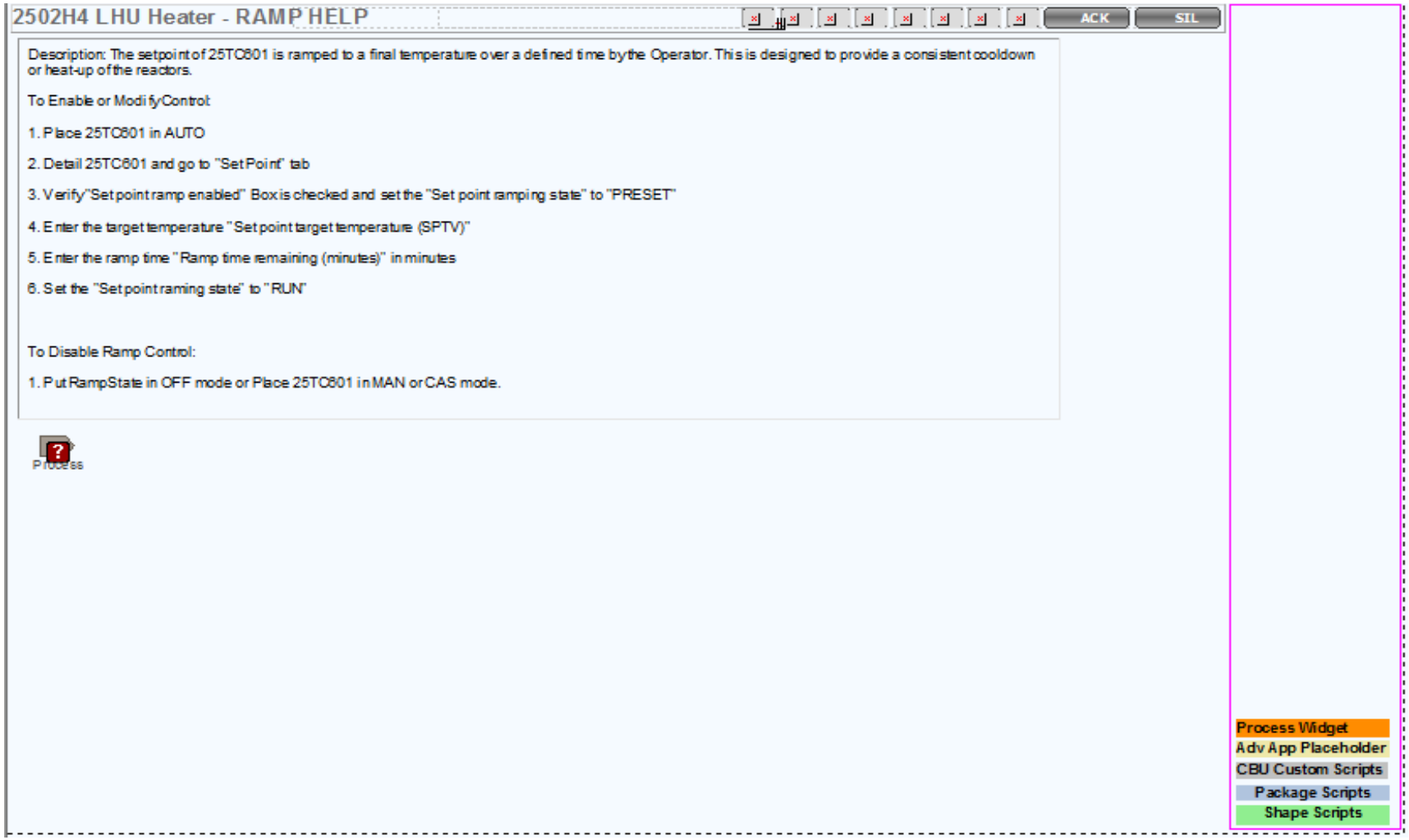
1.201 2502H3 LHU HEATER O2 OVERRIDE HELP (Reformer_2502H3.htm)

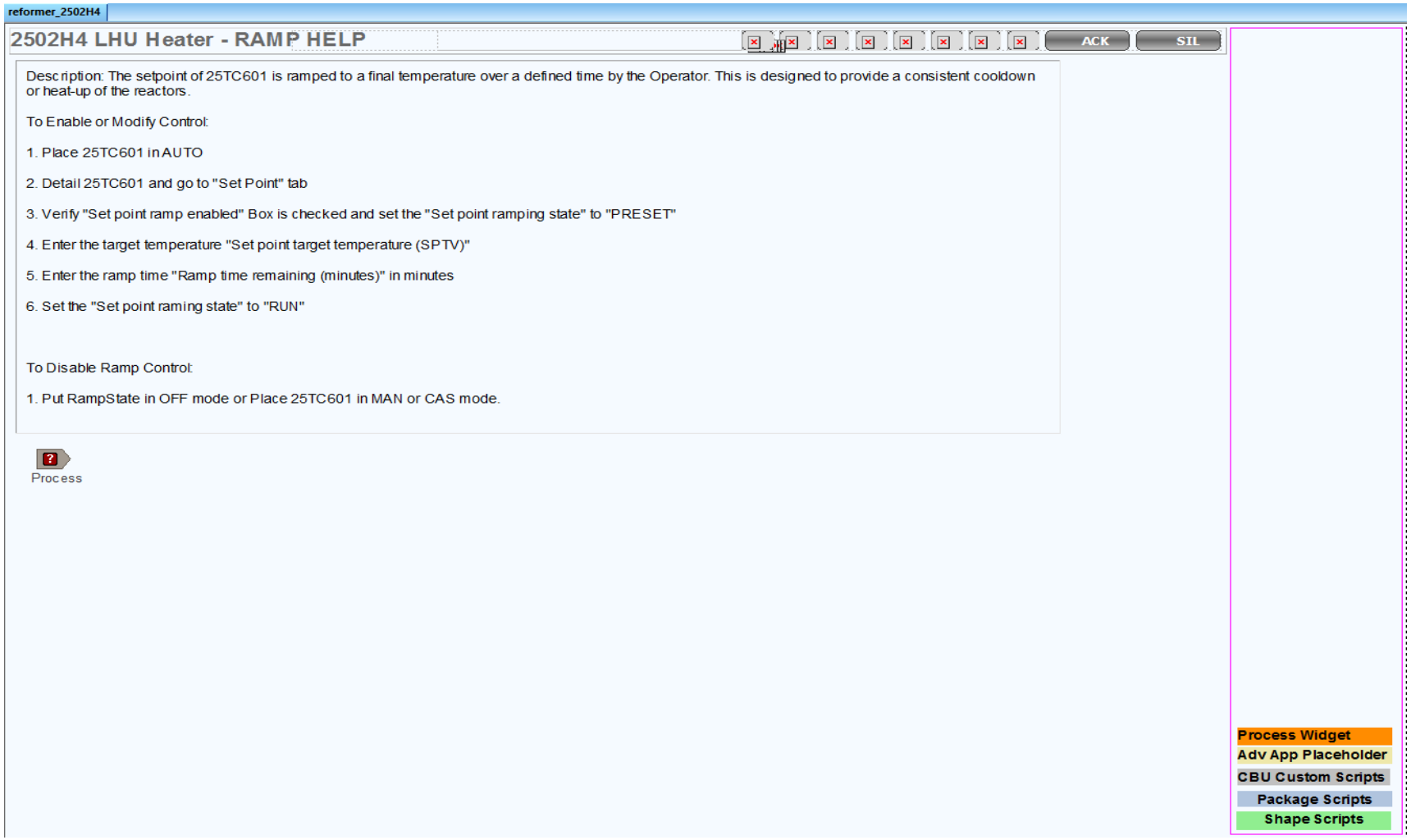


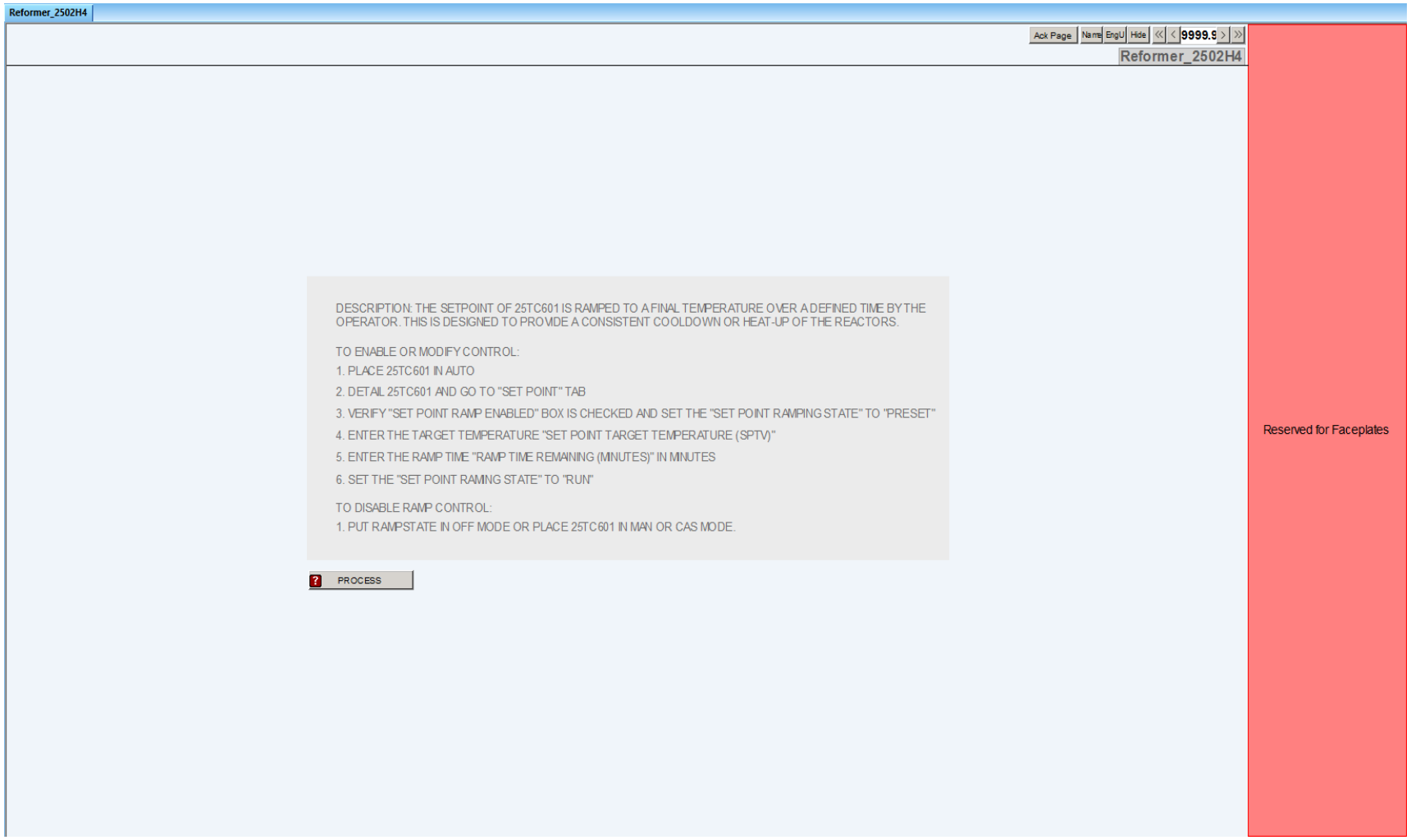

Reformer_2502H3
2502H3 LHU Heater O2 Override Help
ACK
SIL
O2 Override Status
25AA900D
State
TRIM STATUS
25AA902B
State
OVERRIDE STATUS
25AA900C
State
HEATER OPERATION
25AC900A
O2 OVERRIDE BADPV
25PC417A
FG PRESSURE BADPV
25HS900
State
O2 OVERRIDE BYPASS
OR
25UA900
State
O2 OVERRIDE TROUBLE
25AC900A
25PC417A
25TC601
25PC417M
S/D
Shutdown
25XL914A
State
25LOG3
LG
TMR HELP
25XL914B
State
LOW SELECT LOCKED-CAS
<
State
HEATER FUEL GAS
9999.99 %
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2502H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_2502H3
O2 OVERRIDE STATUS
TRIM STATUS
25AA900D
State
OVERRIDE STATUS
25AA902B
State
HEATER OPERATION
25AA900C
State
O2 OVERRIDE BADPV
25AC900A
9999.99
HOLD 3
FG PRESSURE BADPV
25PC417A
9999.99
O2 OVERRIDE BYPASS
25HS900
State
OR
O2 OVERRIDE TROUBLE
25UA900
State
25AC900A
9999.99 W
9999.99
9999.99
HOLD 2
25TC601
9999.99 W
9999.99
9999.99
25PC417A
9999.99 W
9999.99
9999.99
25PC417
9999.99 W
9999.99
9999.99
S/D
25XL914A
State
25LOG3
LG
TMR HELP
SHUTDOWN
25LOG3
State
25XL914B
State
LOW SELECT LOCKED-CAS
25PY417
25AA900D
State
25PY417
100%
HEATER FUEL GAS
PROCESS
Reserved for Faceplates

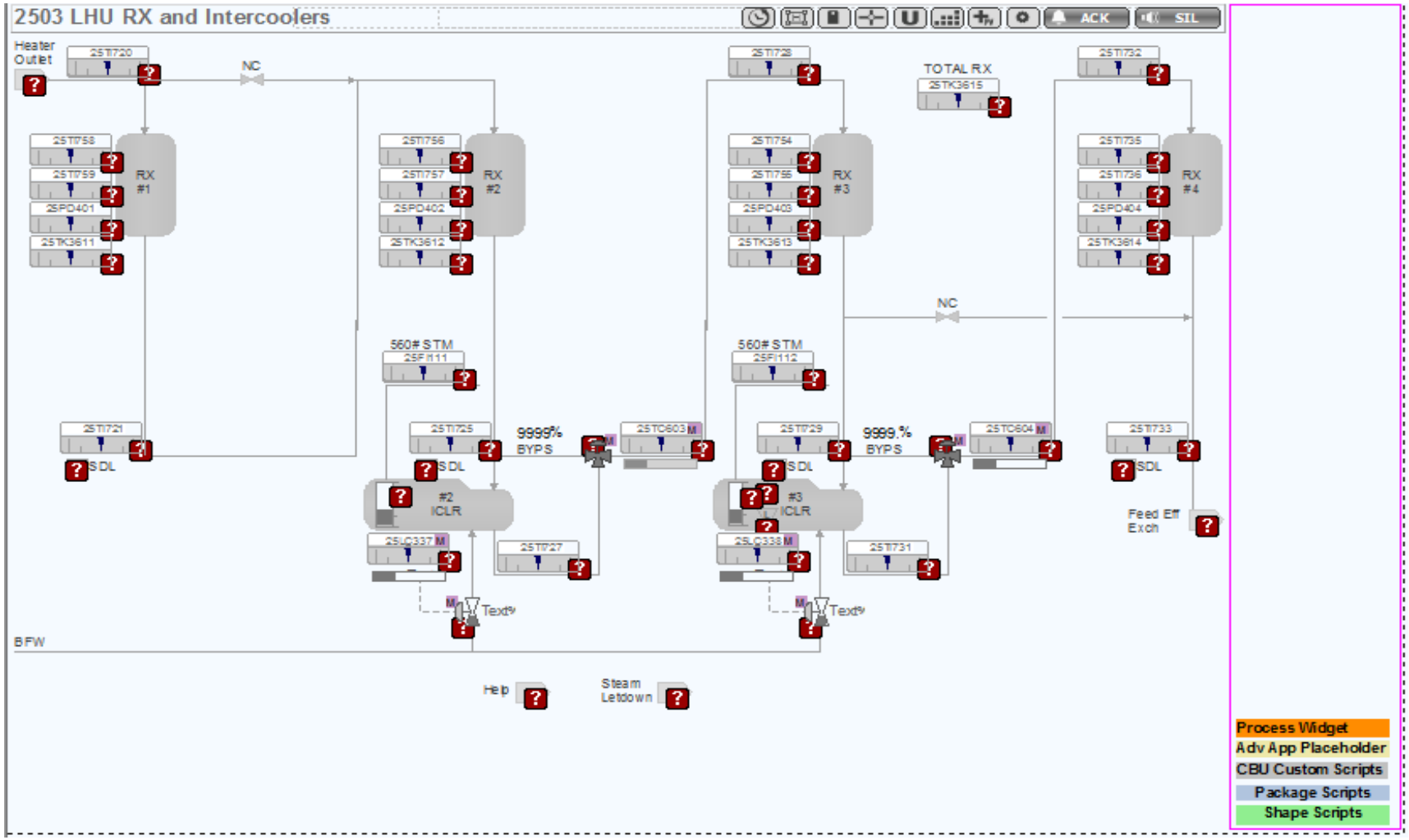
1.202 2502H4 LHU HEATER - RAMP HELP (reformer_2502H4.htm)

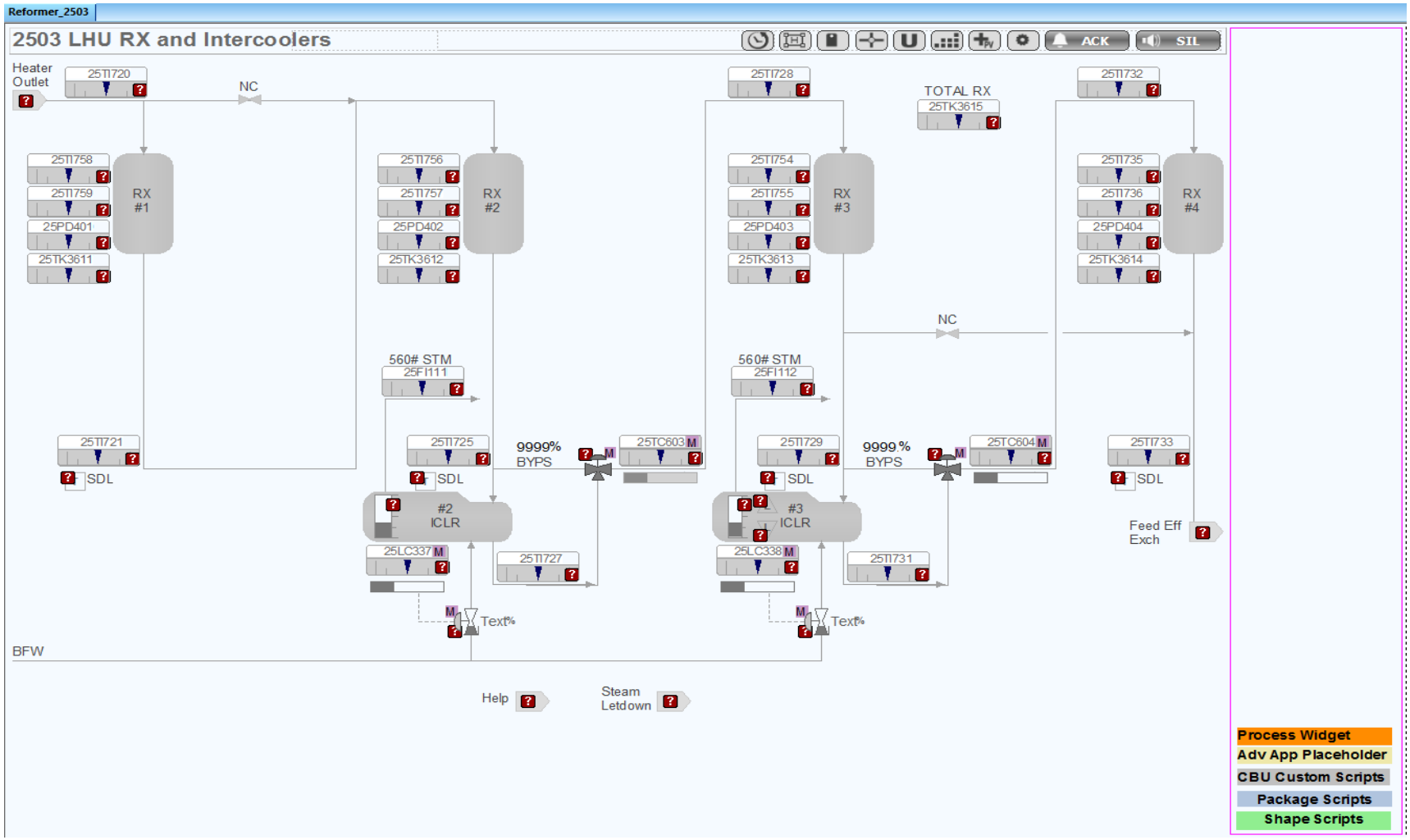


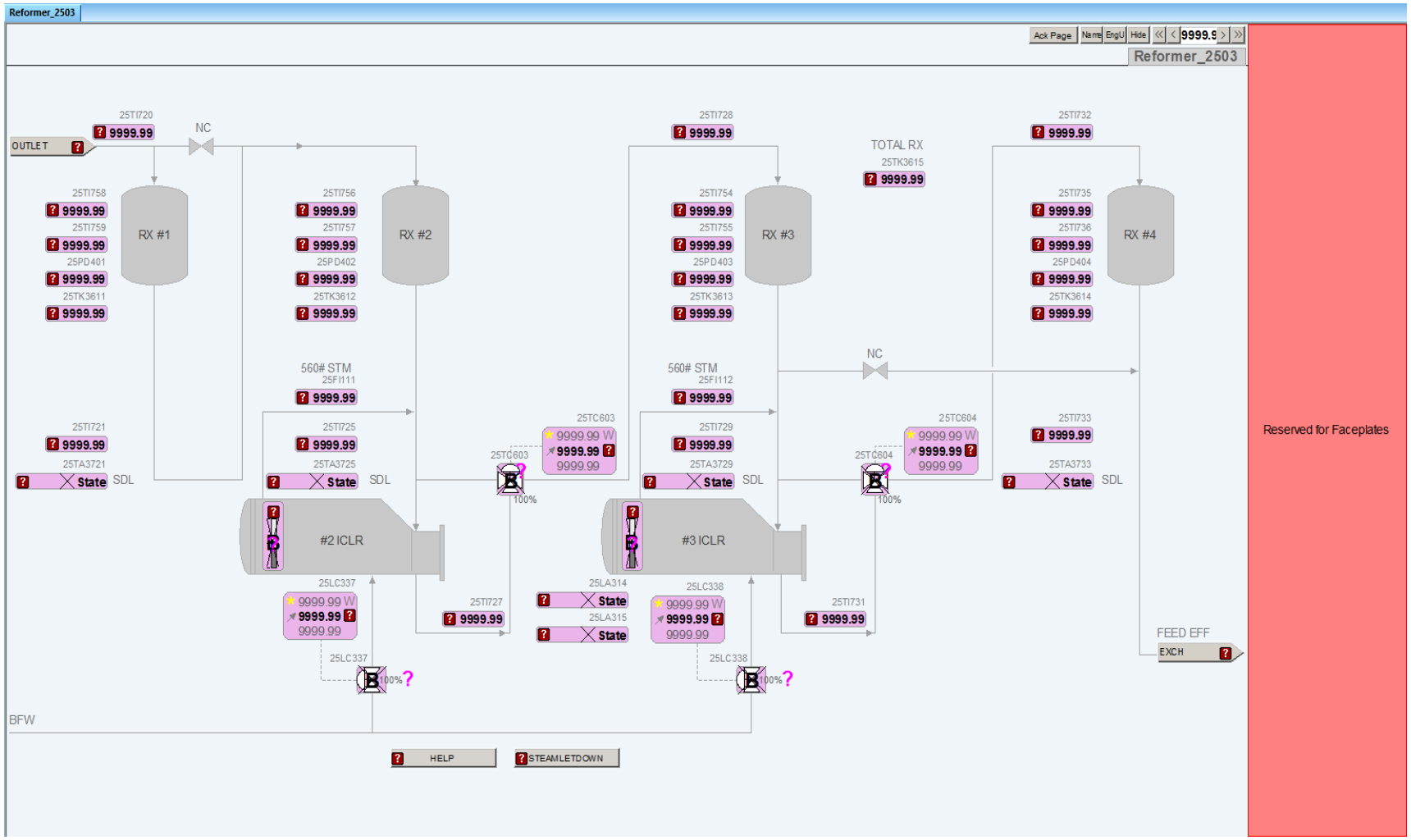

reformer_2502H4
2502H4 LHU Heater - RAMP HELP
ACK
SIL
Description: The setpoint of 25TC601 is ramped to a final temperature over a defined time by the Operator. This is designed to provide a consistent cooldown or heat-up of the reactors.
To Enable or Modify Control:
1. Place 25TC601 in AUTO
2. Detail 25TC601 and go to "Set Point" tab
3. Verify "Set point ramp enabled" Box is checked and set the "Set point ramping state" to "PRESET"
4. Enter the target temperature "Set point target temperature (SPTV)"
5. Enter the ramp time "Ramp time remaining (minutes)" in minutes
6. Set the "Set point raming state" to "RUN"
To Disable Ramp Control:
1. Put RampState in OFF mode or Place 25TC601 in MAN or CAS mode.
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2502H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_2502H4
DESCRIPTION: THE SETPOINT OF 25TC601 IS RAMPED TO A FINAL TEMPERATURE OVER A DEFINED TIME BY THE OPERATOR. THIS IS DESIGNED TO PROVIDE A CONSISTENT COOLDOWN OR HEAT-UP OF THE REACTORS.
TO ENABLE OR MODIFY CONTROL:
1. PLACE 25TC601 IN AUTO
2. DETAIL 25TC601 AND GO TO "SET POINT" TAB
3. VERIFY "SET POINT RAMP ENABLED" BOX IS CHECKED AND SET THE "SET POINT RAMPING STATE" TO "PRESET"
4. ENTER THE TARGET TEMPERATURE "SET POINT TARGET TEMPERATURE (SPTV)"
5. ENTER THE RAMP TIME "RAMP TIME REMAINING (MINUTES)" IN MINUTES
6. SET THE "SET POINT RAMING STATE" TO "RUN"
TO DISABLE RAMP CONTROL:
1. PUT RAMPSTATE IN OFF MODE OR PLACE 25TC601 IN MAN OR CAS MODE.
PROCESS
Reserved for Faceplates

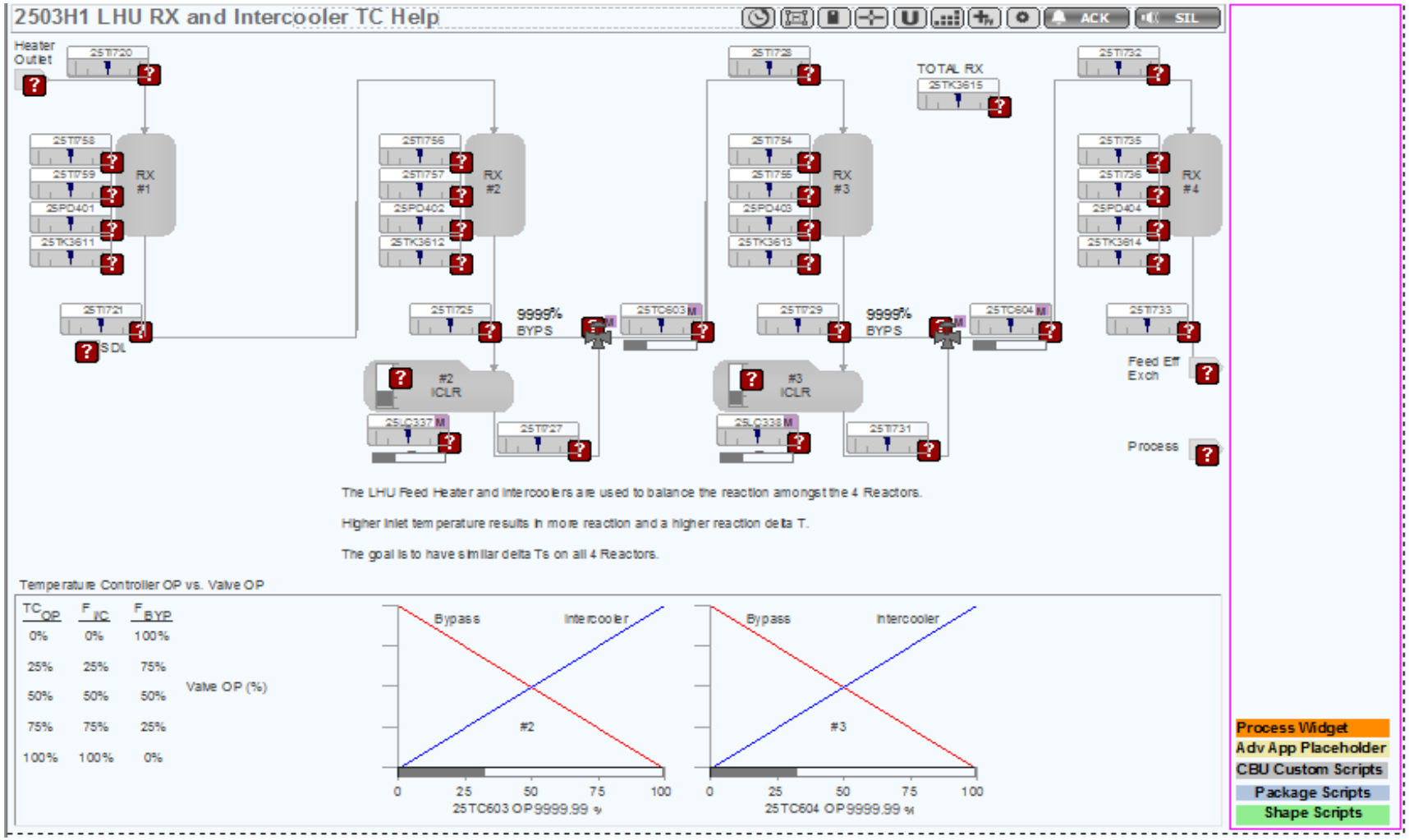
1.203 2503 LHU RX AND INTERCOOLERS (Reformer_2503.htm)

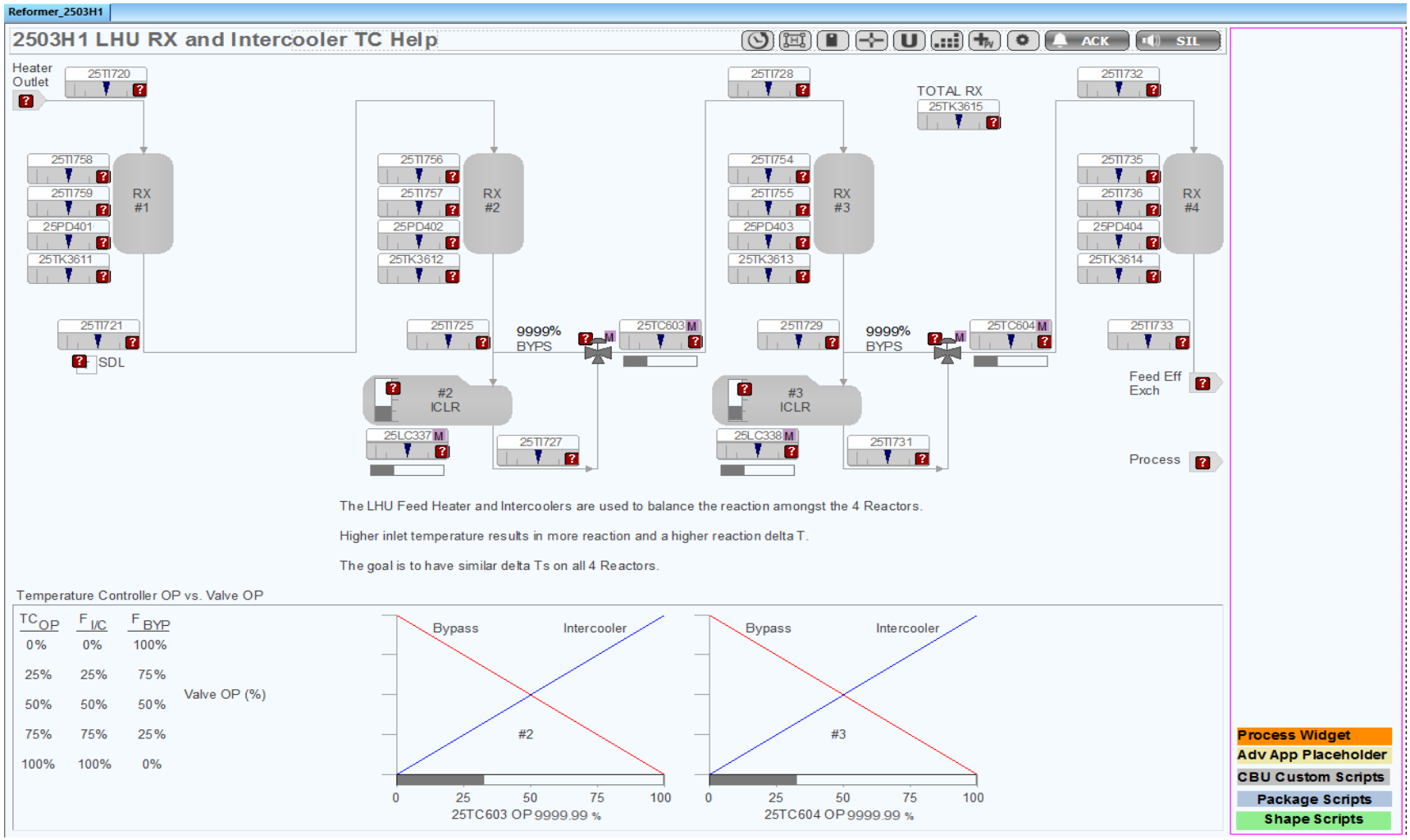


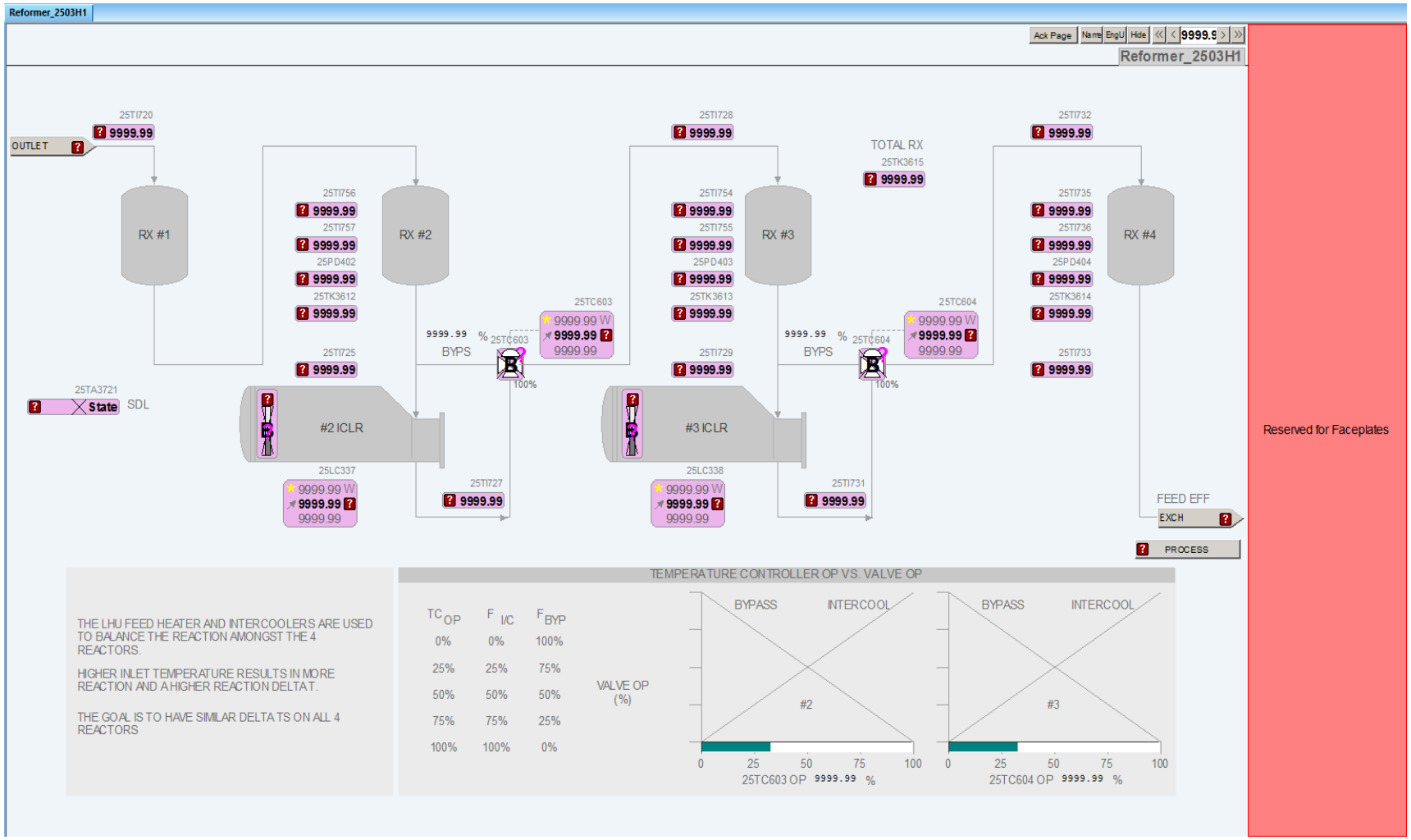

Reformer_2503
2503 LHU RX and Intercoolers
ACK
SIL
Heater Outlet
25TI720
NC
25TI728
TOTAL RX
25TK3615
25TI732
25TI758
25TI759
25PD401
25TK3611
RX #1
25TI756
25TI757
25PD402
25TK3612
RX #2
25TI754
25TI755
25PD403
25TK3613
RX #3
25TI735
25TI736
25PD404
25TK3614
RX #4
NC
560# STM
25FI111
560# STM
25FI112
25TI721
SDL
25TI725
SDL
9999% BYPS
25TC603
25TI729
SDL
9999 % BYPS
25TC604
25TI733
SDL
#2 ICLR
#3 ICLR
Feed Eff Exch
25LC337
25TI727
25LC338
25TI731
Text%
Text%
BFW
Help
Steam Letdown
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2503
Ack Page
Name
EngU
Hide
Reformer_2503
25TI720
9999.99
OUTLET
NC
25TI758
25TI759
25PD401
25TK3611
RX #1
25TI756
25TI757
25PD402
25TK3612
RX #2
25TI728
25TI754
25TI755
25PD403
25TK3613
RX #3
TOTAL RX
25TK3615
25TI732
25TI735
25TI736
25PD404
25TK3614
RX #4
560# STM
25FI111
25FI112
25TI721
25TA3721
State
SDL
25TI725
25TA3725
25TC603
9999.99 W
25TC603
100%
25TI729
25TA3729
25TC604
25TC604
25TI733
25TA3733
#2 ICLR
#3 ICLR
25LC337
25TI727
25LA314
25LA315
25LC338
25TI731
FEED EFF
EXCH
BFW
HELP
STEAMLETDOWN
Reserved for Faceplates

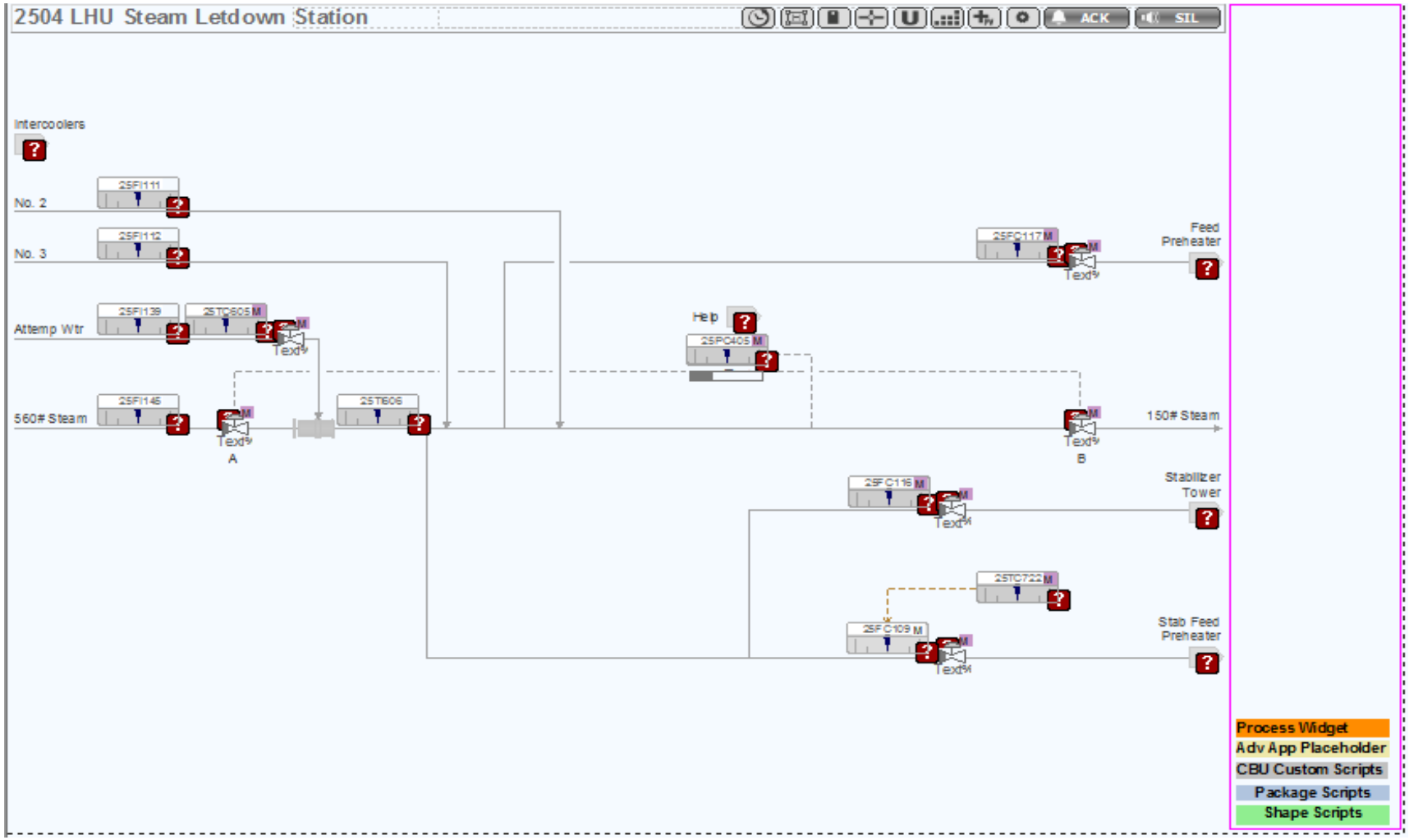
1.204 2503H1 LHU RX AND INTERCOOLER TC HELP (Reformer_2503H1.htm)

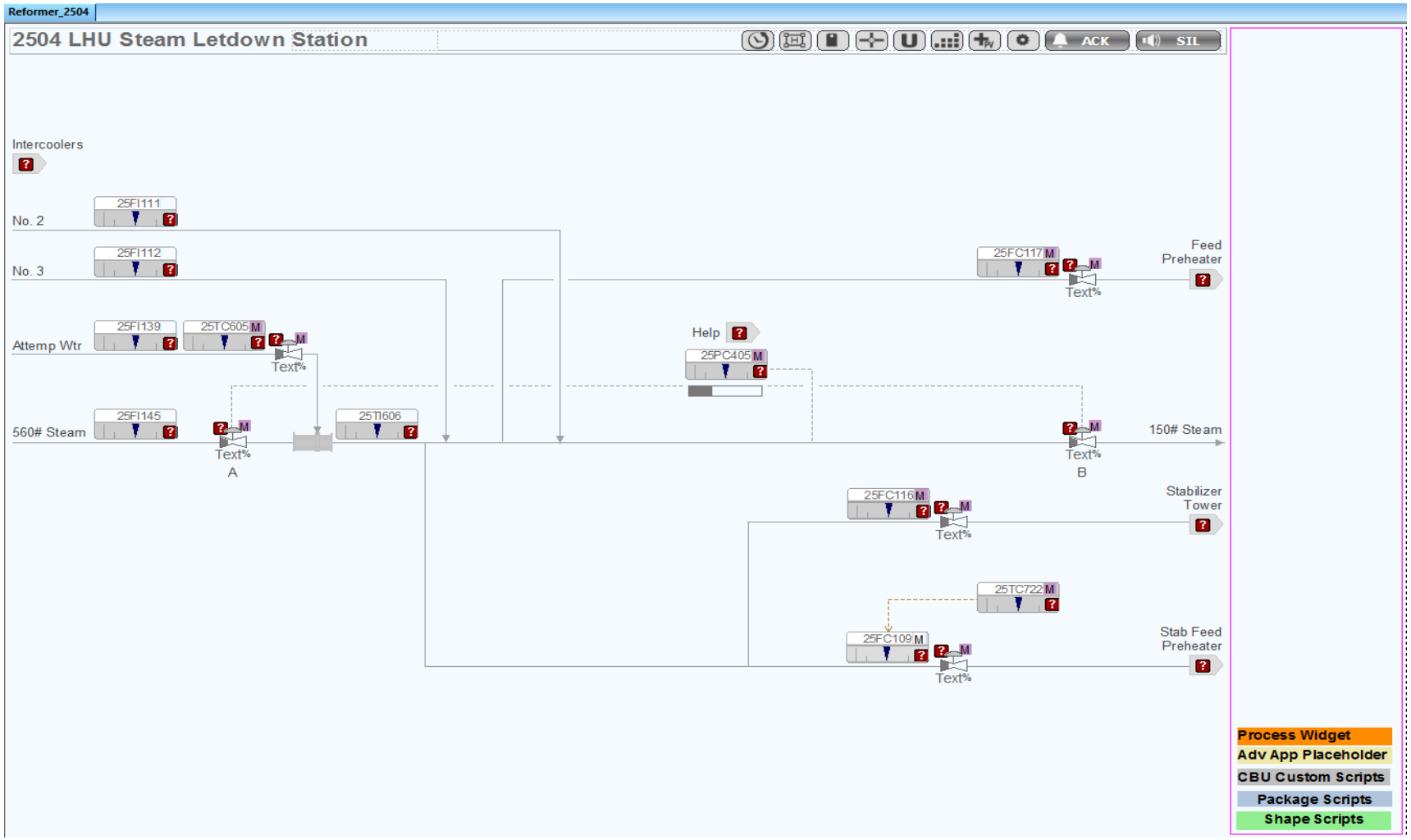


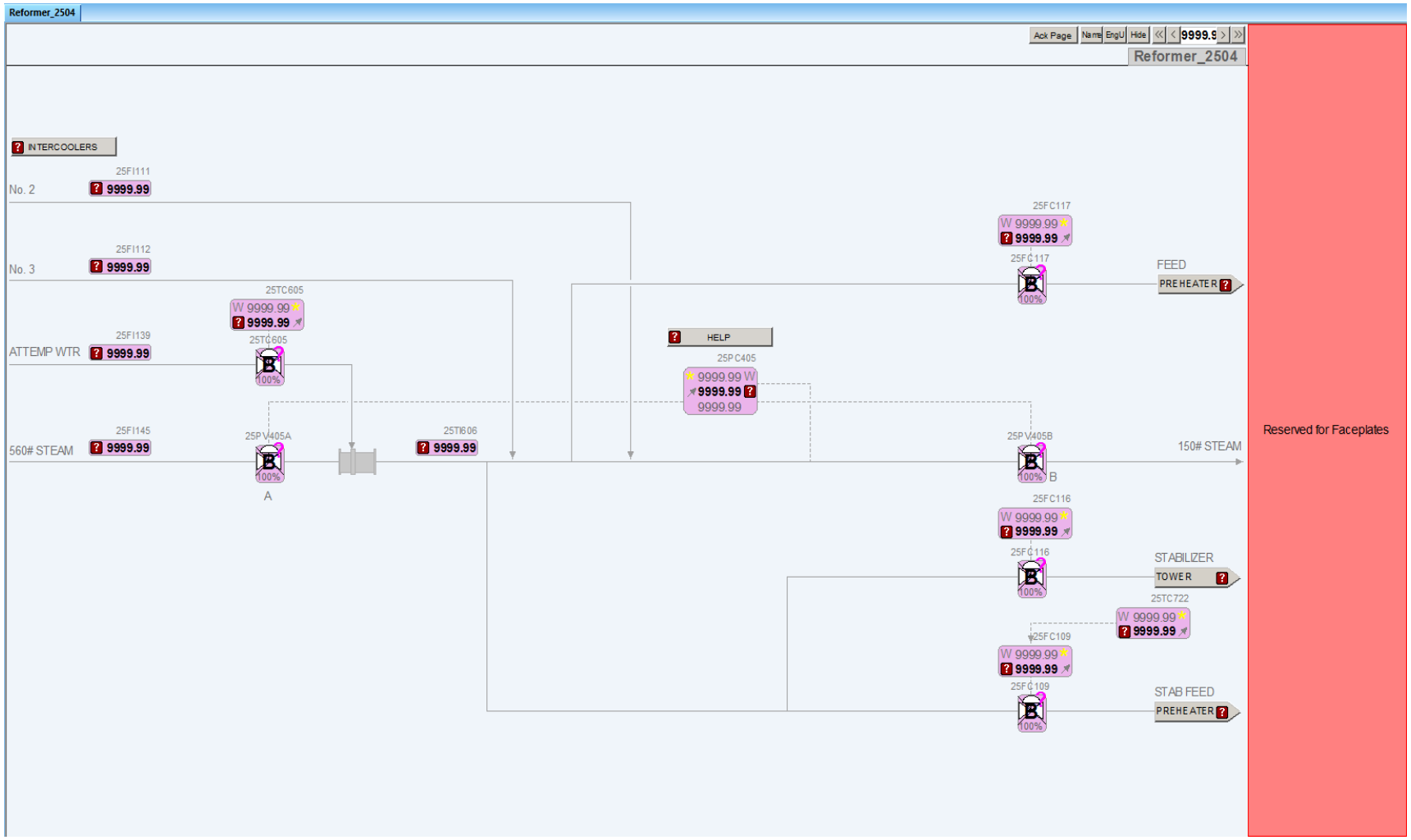

Reformer_2503H1
2503H1 LHU RX and Intercooler TC Help
ACK
SIL
Heater Outlet
25TI720
25TI758
25TI759
25PD401
25TK3611
RX #1
25TI721
SDL
25TI756
25TI757
25PD402
25TK3612
RX #2
25TI725
9999% BYPS
25TC603 M
#2 ICLR
25LC337 M
25TI727
25TI728
25TI754
25TI755
25PD403
25TK3613
RX #3
25TI729
9999% BYPS
25TC604 M
#3 ICLR
25LC338 M
25TI731
TOTAL RX
25TK3615
25TI732
25TI735
25TI736
25PD404
25TK3614
RX #4
25TI733
Feed Eff Exch
Process
The LHU Feed Heater and Intercoolers are used to balance the reaction amongst the 4 Reactors.
Higher inlet temperature results in more reaction and a higher reaction delta T.
The goal is to have similar delta Ts on all 4 Reactors.
Temperature Controller OP vs. Valve OP
TC OP
F I/C
F BYP
0% 0% 100%
25% 25% 75%
50% 50% 50%
75% 75% 25%
100% 100% 0%
Valve OP (%)
Bypass
Intercooler
#2
0 25 50 75 100
25TC603 OP 9999.99 %
Bypass
Intercooler
#3
0 25 50 75 100
25TC604 OP 9999.99 %
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2503H1
Ack Page
Name
EngU
Hide
Reformer_2503H1
25TI720
9999.99
OUTLET
RX #1
25TI756
9999.99
25TI757
9999.99
25PD402
9999.99
25TK3612
9999.99
RX #2
25TI728
9999.99
25TI754
9999.99
25TI755
9999.99
25PD403
9999.99
25TK3613
9999.99
RX #3
TOTAL RX
25TK3615
9999.99
25TI732
9999.99
25TI735
9999.99
25TI736
9999.99
25PD404
9999.99
25TK3614
9999.99
RX #4
9999.99 % BYPS
25TC603
9999.99 W
9999.99
9999.99
100%
9999.99 % BYPS
25TC604
9999.99 W
9999.99
9999.99
100%
25TI725
9999.99
25TI729
9999.99
25TI733
9999.99
25TA3721
State
SDL
#2 ICLR
#3 ICLR
25LC337
9999.99 W
9999.99
9999.99
25LC338
9999.99 W
9999.99
9999.99
25TI727
9999.99
25TI731
9999.99
FEED EFF
EXCH
PROCESS
Reserved for Faceplates
THE LHU FEED HEATER AND INTERCOOLERS ARE USED TO BALANCE THE REACTION AMONGST THE 4 REACTORS.
HIGHER INLET TEMPERATURE RESULTS IN MORE REACTION AND A HIGHER REACTION DELTAT.
THE GOAL IS TO HAVE SIMILAR DELTA TS ON ALL 4 REACTORS
TEMPERATURE CONTROLLER OP VS. VALVE OP
TC OP
F I/C
F BYP
0% 0% 100%
25% 25% 75%
50% 50% 50%
75% 75% 25%
100% 100% 0%
VALVE OP (%)
BYPASS
INTERCOOL
#2
0 25 50 75 100
25TC603 OP 9999.99 %
BYPASS
INTERCOOL
#3
0 25 50 75 100
25TC604 OP 9999.99 %

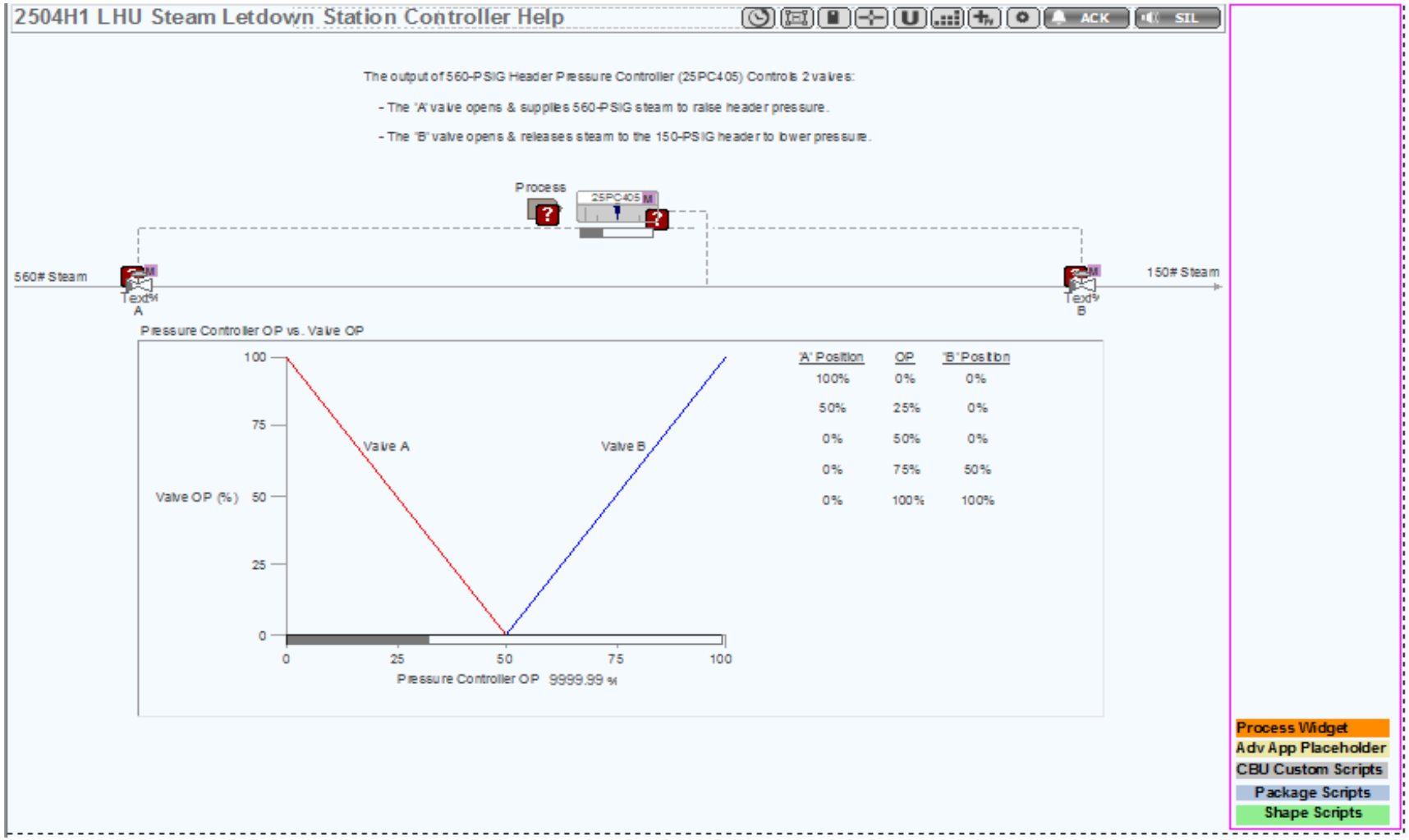
1.205 2504 LHU STEAM LETDOWN STATION (Reformer_2504.htm)

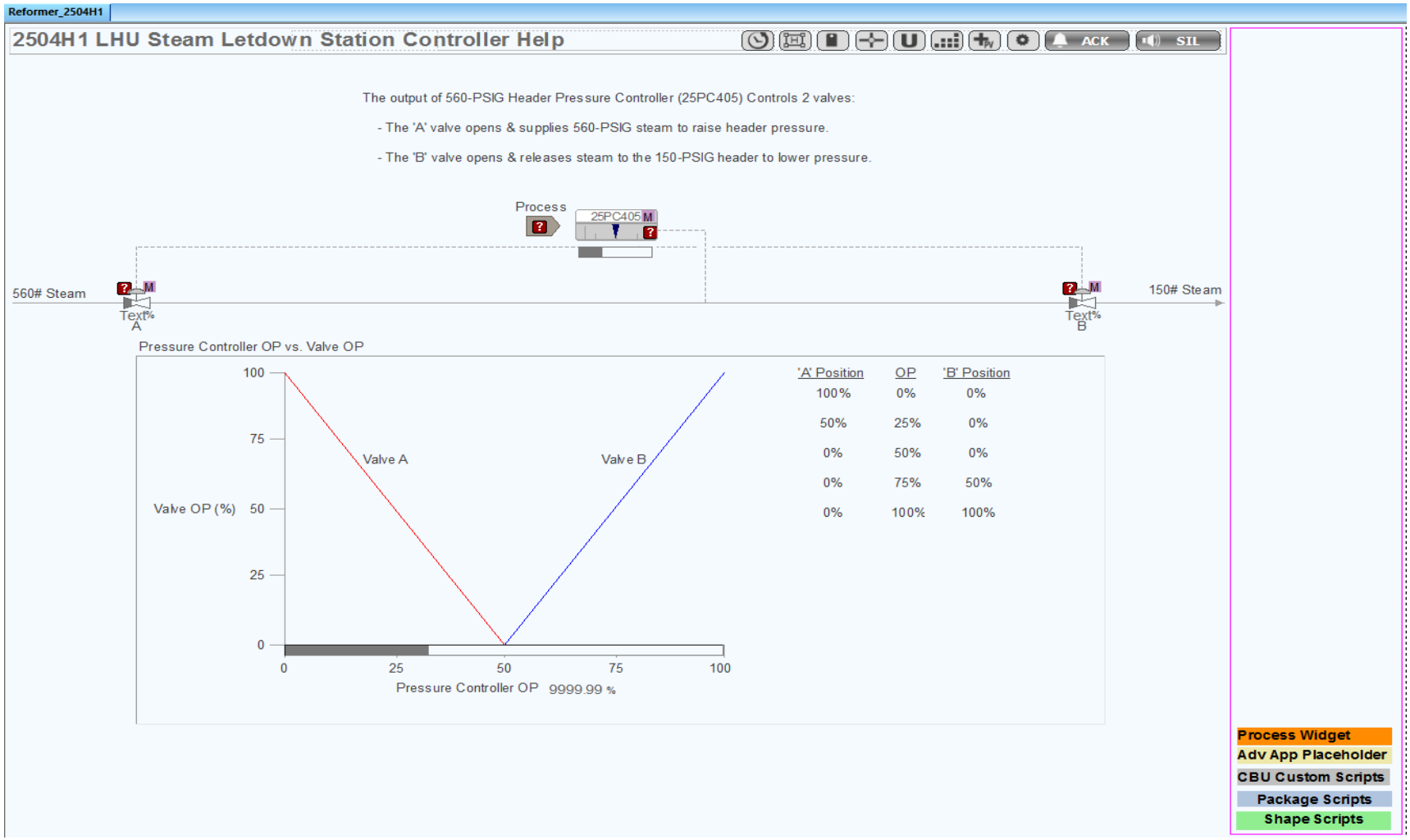


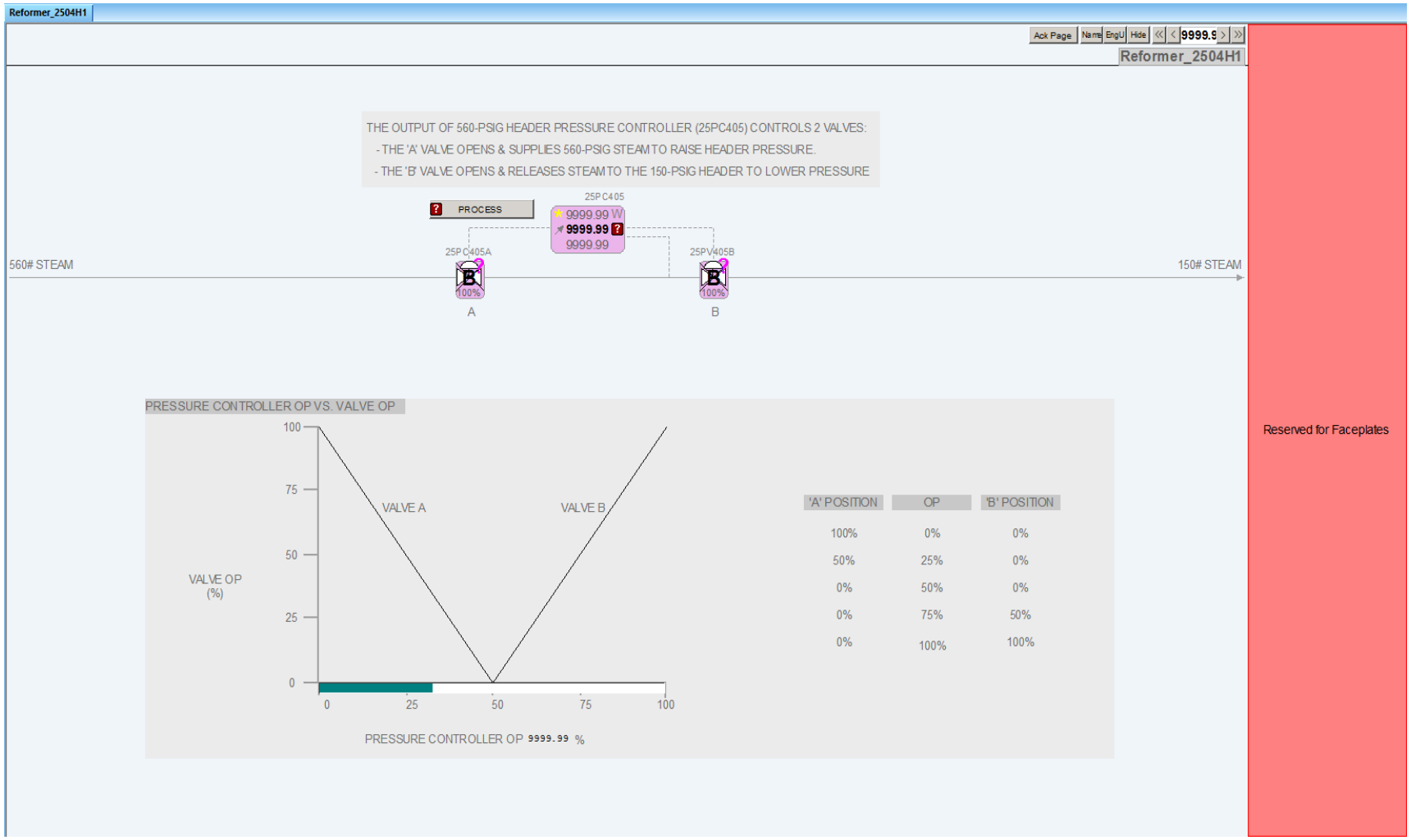

Reformer_2504
2504 LHU Steam Letdown Station
ACK
SIL
Intercoolers
No. 2
25FI111
No. 3
25FI112
Attemp Wtr
25FI139
25TC605
Text%
560# Steam
25FI145
Text%
A
25TI606
Help
25PC405
25FC117
Text%
Feed Preheater
150# Steam
Text%
B
25FC116
Text%
Stabilizer Tower
25TC722
25FC109
Text%
Stab Feed Preheater
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2504
Ack Page
Name
EngU
Hde
9999.9
Reformer_2504
INTERCOOLERS
25FI111
No. 2
9999.99
25FI112
No. 3
9999.99
25TC605
W 9999.99
9999.99
25FI139
ATTEMP WTR
9999.99
25TC605
100%
HELP
25PC405
9999.99 W
9999.99
9999.99
25FI145
560# STEAM
9999.99
25PV405A
100%
A
25TI606
9999.99
25FC117
W 9999.99
9999.99
25FC117
100%
FEED
PREHEATER
25PV405B
100%
B
150# STEAM
25FC116
W 9999.99
9999.99
25FC116
100%
STABILIZER
TOWER
25TC722
W 9999.99
9999.99
25FC109
W 9999.99
9999.99
25FC109
100%
STAB FEED
PREHEATER
Reserved for Faceplates

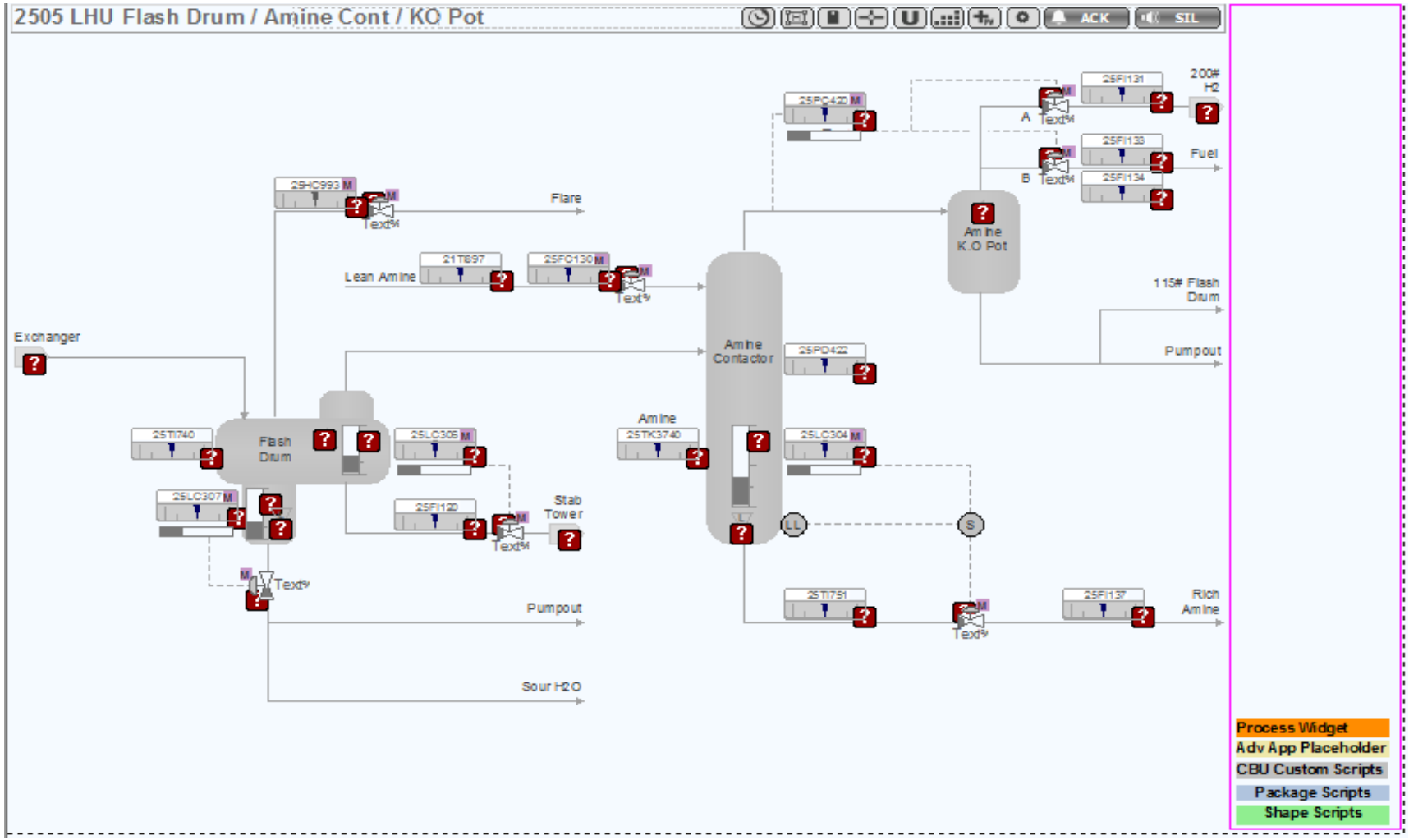
1.206 2504H1 LHU STEAM LETDOWN STATION CONTROLLER HELP (Reformer_2504H1.htm)

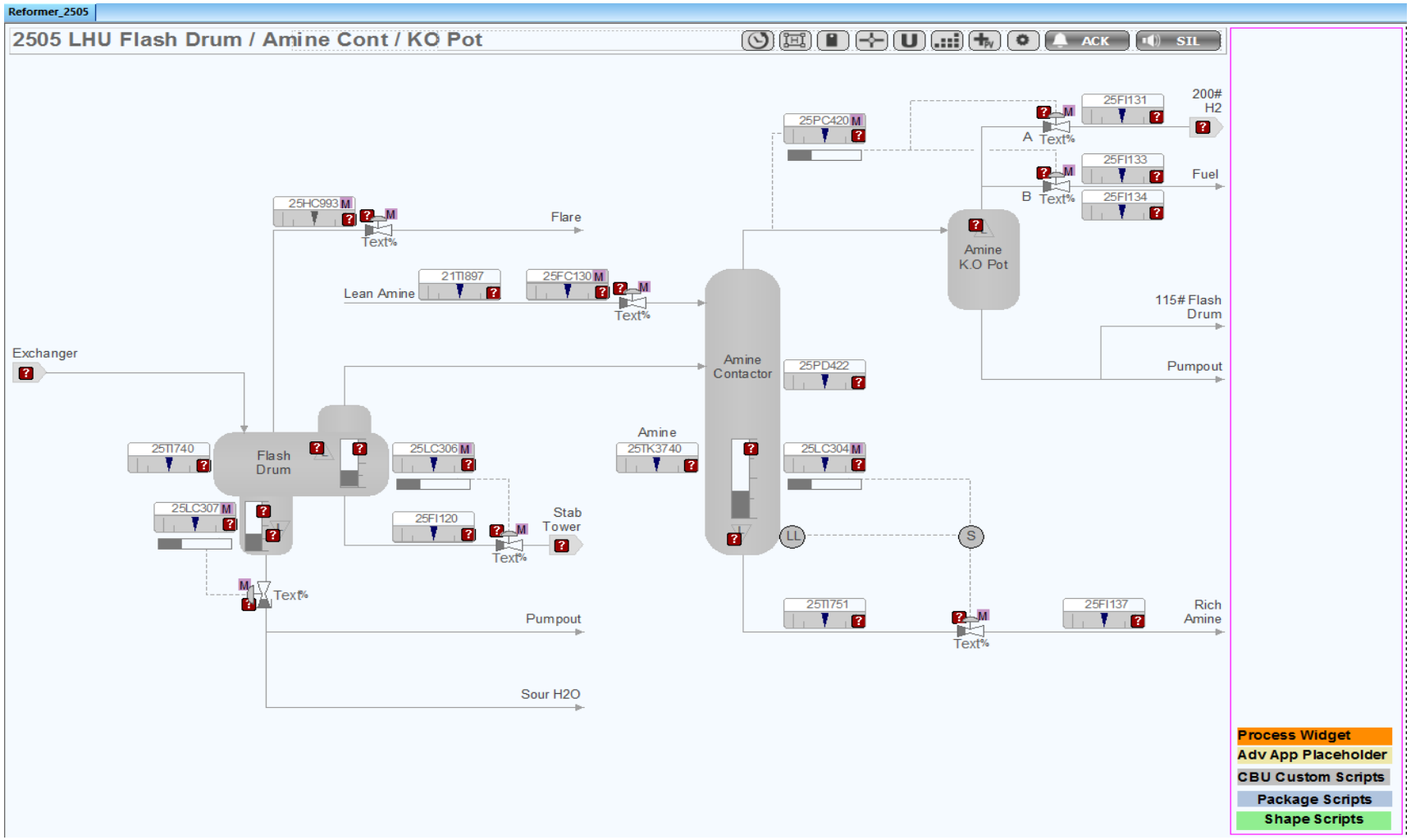


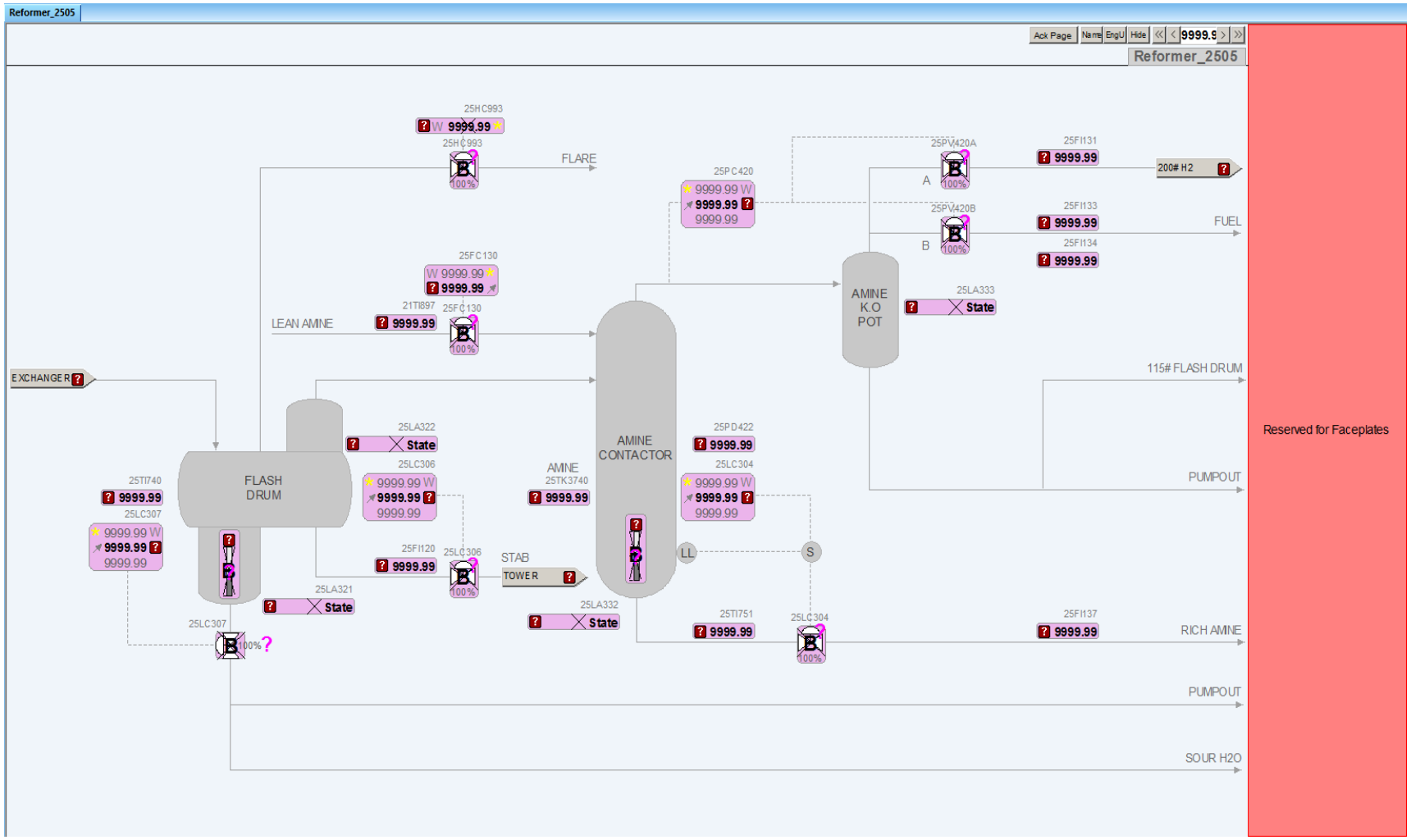

Reformer_2504H1
2504H1 LHU Steam Letdown Station Controller Help
ACK
SIL
The output of 560-PSIG Header Pressure Controller (25PC405) Controls 2 valves:
- The 'A' valve opens & supplies 560-PSIG steam to raise header pressure.
- The 'B' valve opens & releases steam to the 150-PSIG header to lower pressure.
Process
25PC405
560# Steam
Text%
A
Text%
B
150# Steam
Pressure Controller OP vs. Valve OP
100
75
50
25
0
Valve OP (%)
Valve A
Valve B
0
25
50
75
100
Pressure Controller OP 9999.99 %
'A' Position
OP
'B' Position
100%
0%
0%
50%
25%
0%
0%
50%
0%
0%
75%
50%
0%
100%
100%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2504H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2504H1
THE OUTPUT OF 560-PSIG HEADER PRESSURE CONTROLLER (25PC405) CONTROLS 2 VALVES:
- THE 'A' VALVE OPENS & SUPPLIES 560-PSIG STEAM TO RAISE HEADER PRESSURE.
- THE 'B' VALVE OPENS & RELEASES STEAM TO THE 150-PSIG HEADER TO LOWER PRESSURE
PROCESS
25PC405
9999.99 W
9999.99
9999.99
25PC405A
25PV405B
560# STEAM
150# STEAM
100%
100%
A
B
PRESSURE CONTROLLER OP VS. VALVE OP
100
75
50
25
0
VALVE A
VALVE B
VALVE OP (%)
0
25
50
75
100
PRESSURE CONTROLLER OP 9999.99 %
'A' POSITION
OP
'B' POSITION
100% 0% 0%
50% 25% 0%
0% 50% 0%
0% 75% 50%
0% 100% 100%
Reserved for Faceplates

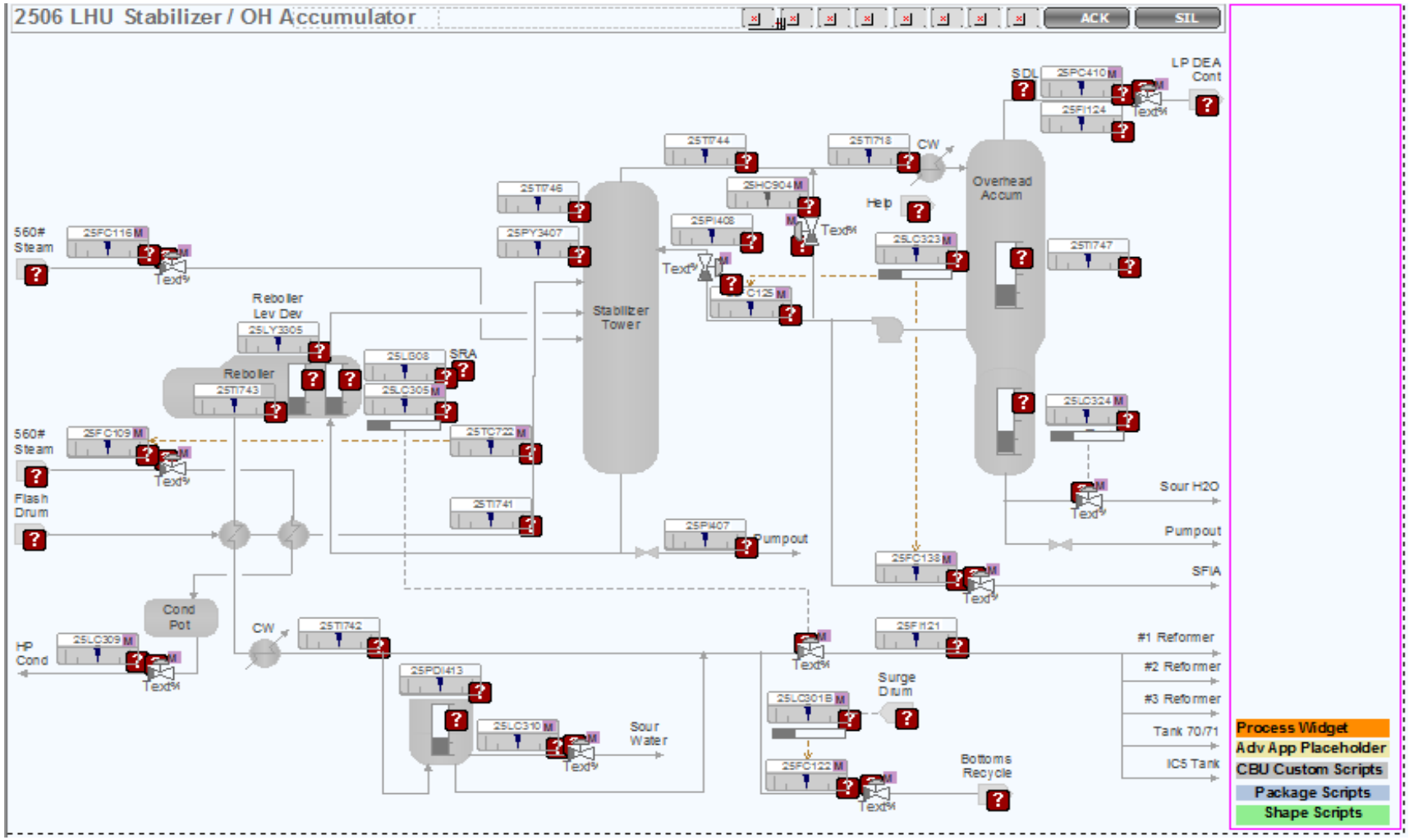
1.207 2505 LHU FLASH DRUM / AMINE CONT / KO POT (Reformer_2505.htm)

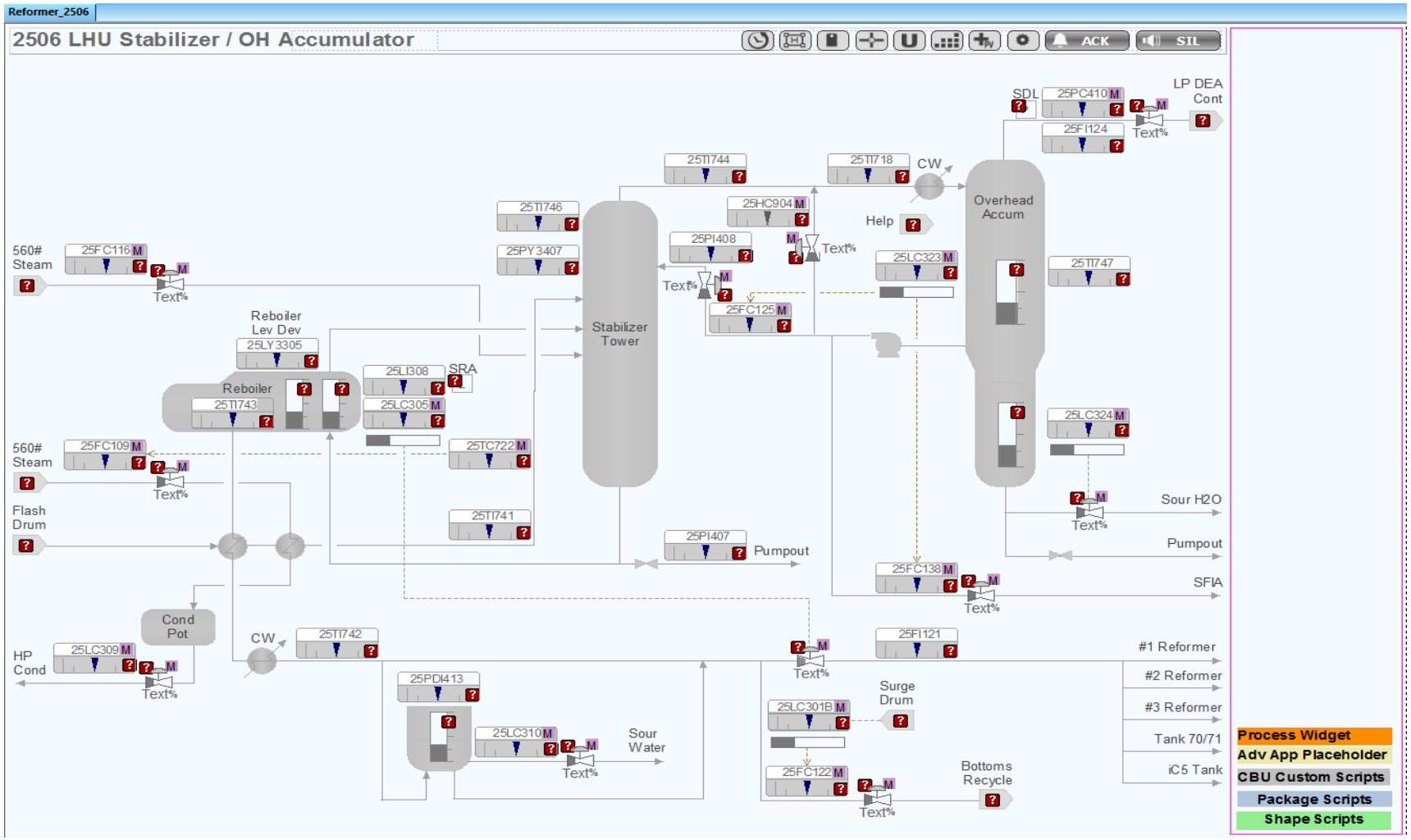


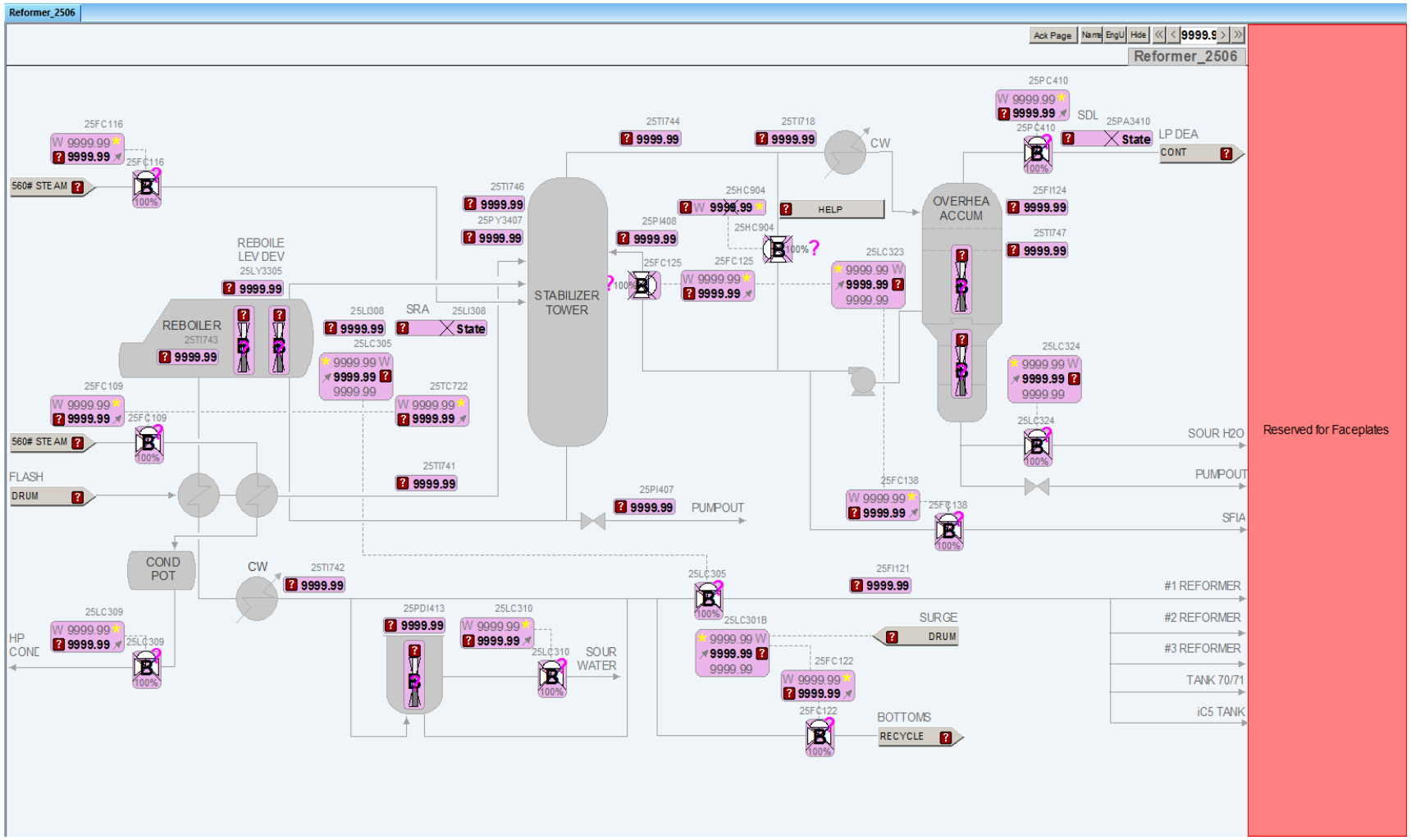

Reformer_2505
2505 LHU Flash Drum / Amine Cont / KO Pot
ACK
SIL
25PC420
25FI131
200# H2
A
Text%
25FI133
Fuel
B
Text%
25FI134
25HC993
Flare
Text%
Amine K.O Pot
21TI897
Lean Amine
25FC130
Text%
115# Flash Drum
Pumpout
Exchanger
Amine Contactor
25PD422
25TI740
Flash Drum
25LC306
Amine
25TK3740
25LC304
25LC307
25FI120
Stab Tower
Text%
LL
S
Text%
Pumpout
25TI751
25FI137
Rich Amine
Text%
Sour H2O
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2505
Ack Page
Name
EngU
Hide
Reformer_2505
25HC993
W 9999.99
FLARE
25PC420
9999.99 W
9999.99
9999.99
25PV420A
A
25FI131
9999.99
200# H2
25PV420B
B
25FI133
9999.99
FUEL
25FI134
9999.99
25FC130
W 9999.99
9999.99
21TI897
9999.99
LEAN AMINE
AMINE
K.O
POT
25LA333
State
EXCHANGER
115# FLASH DRUM
25LA322
State
FLASH
DRUM
25TI740
9999.99
25LC307
9999.99 W
9999.99
9999.99
25LC306
9999.99 W
9999.99
9999.99
AMINE
25TK3740
9999.99
AMINE
CONTACTOR
25PD422
9999.99
25LC304
9999.99 W
9999.99
9999.99
PUMPOUT
25FI120
9999.99
25LC306
STAB
TOWER
LL
S
25LA321
State
25LA332
State
25TI751
9999.99
25LC304
25FI137
9999.99
RICH AMINE
25LC307
PUMPOUT
SOUR H2O
Reserved for Faceplates

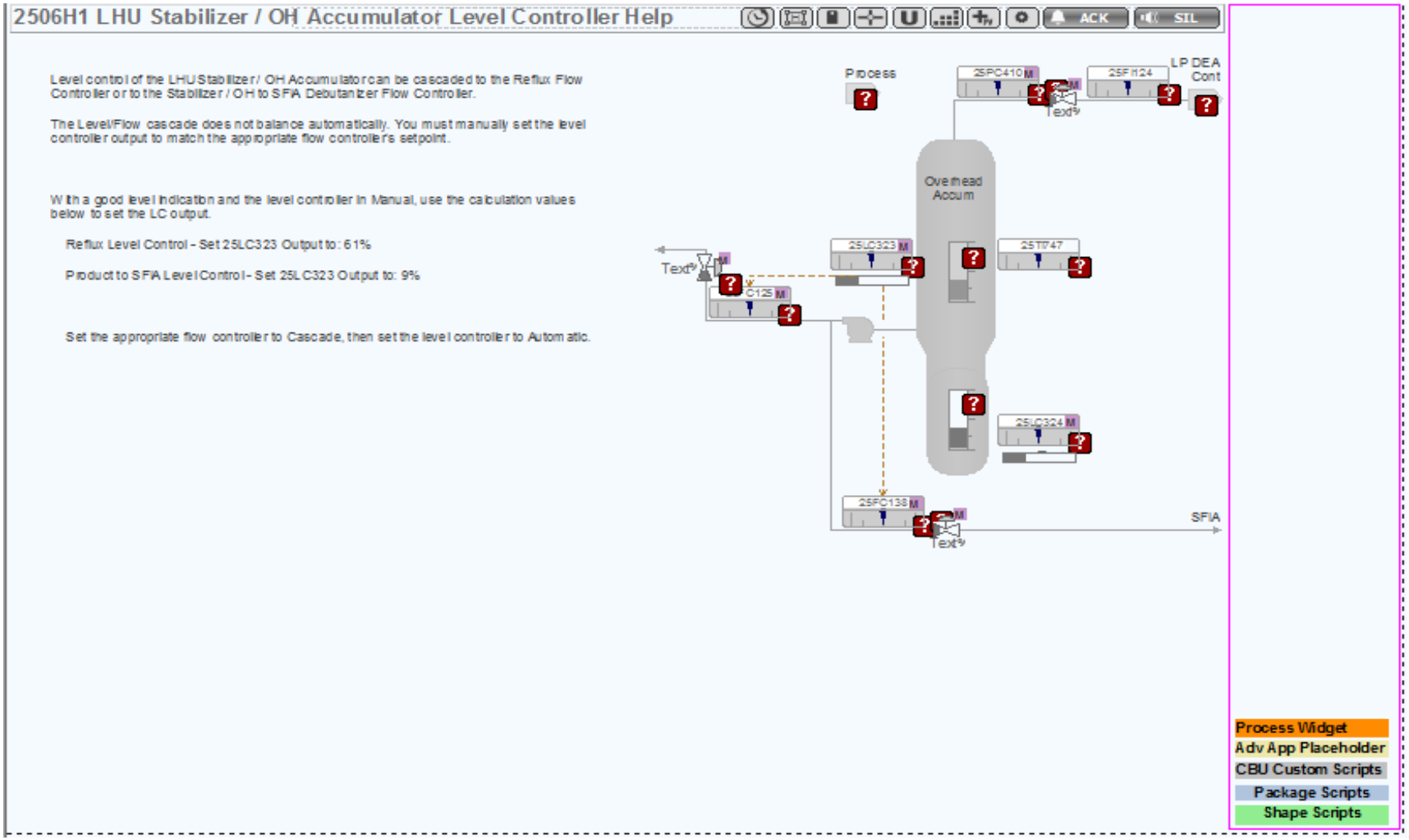
1.208 2506 LHU STABILIZER / OH ACCUMULATOR (Reformer_2506.htm)

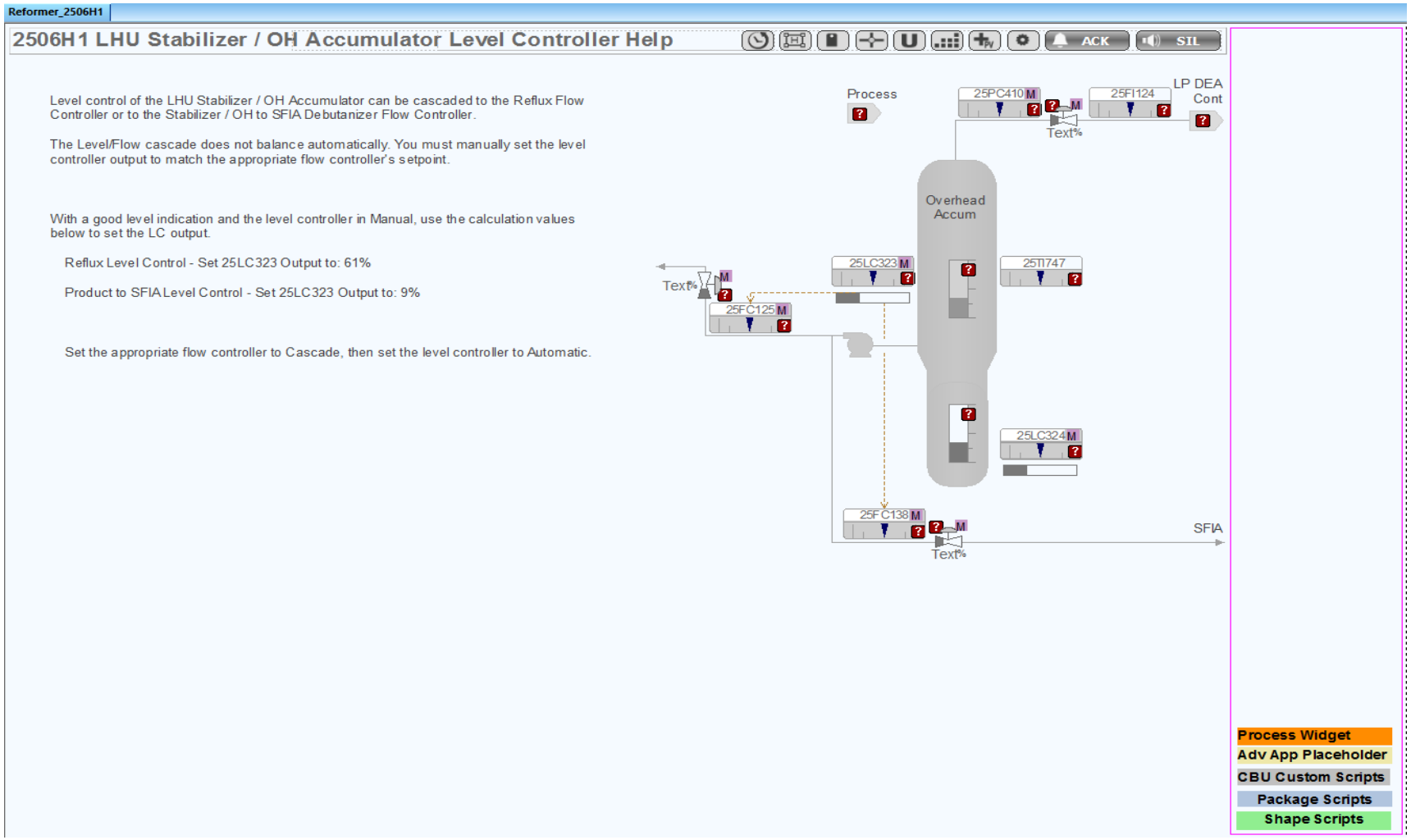


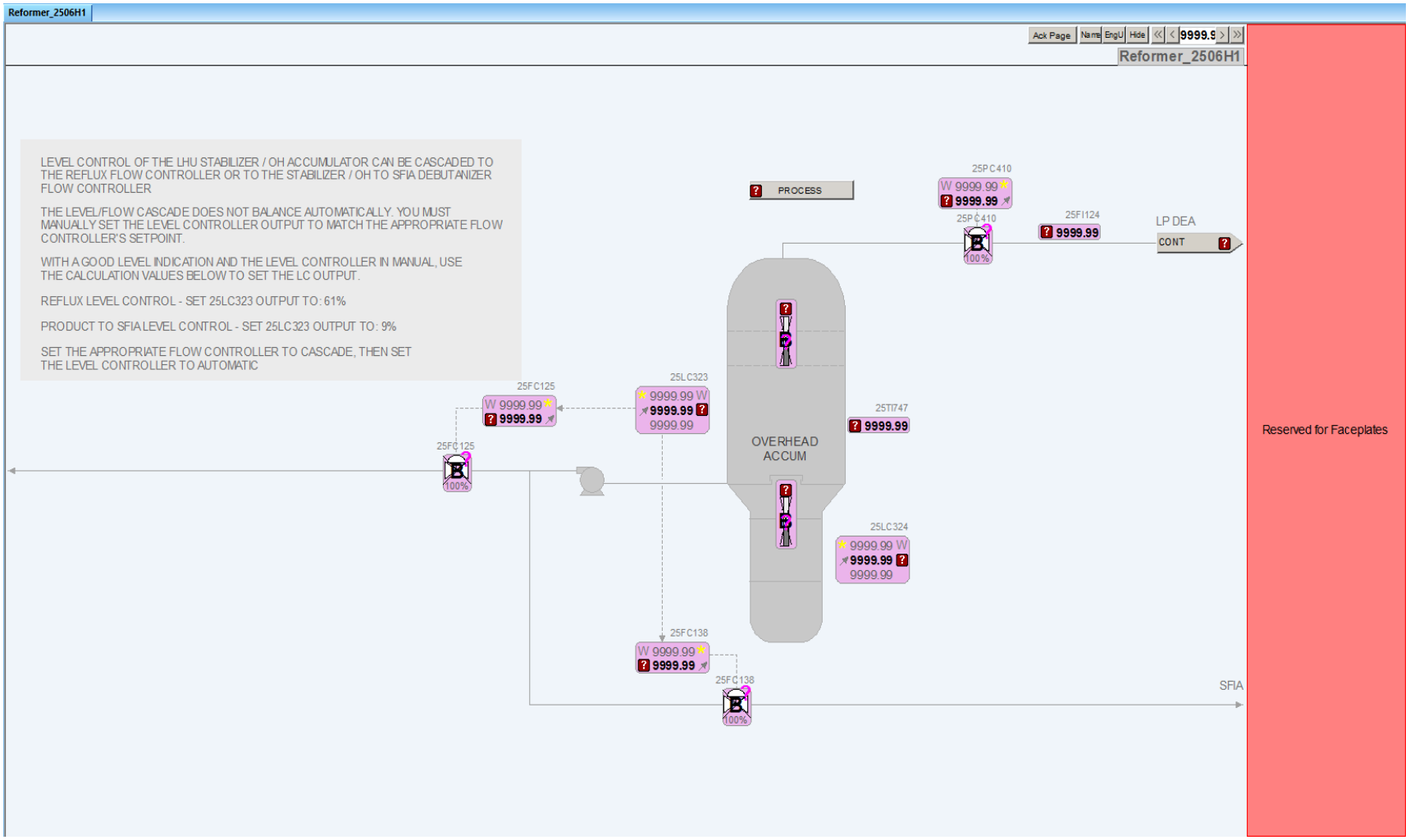

Reformer_2506
2506 LHU Stabilizer / OH Accumulator
ACK
SIL
SDL
25PC410 M
LP DEA Cont
25FI124
Text%
25TI744
25TI718
CW
25TI746
25HC904 M
Help
Overhead Accum
25PI408
25PY3407
Text%
25LC323 M
25TI747
560# Steam
25FC116 M
Text%
Reboiler Lev Dev
25LY3305
Stabilizer Tower
25FC125 M
Reboiler
25TI743
25LI308
SRA
25LC305 M
25LC324 M
560# Steam
25FC109 M
25TC722 M
Text%
Sour H2O
Flash Drum
25TI741
Pumpout
25PI407
25FC138 M
SFIA
Cond Pot
CW
25TI742
25FI121
#1 Reformer
HP Cond
25LC309 M
25PDI413
Surge Drum
#2 Reformer
25LC301B M
#3 Reformer
25LC310 M
Sour Water
Tank 70/71
25FC122 M
Bottoms Recycle
iC5 Tank
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2506
Ack Page
Name
EngU
Hide
Reformer_2506
25FC116
560# STEAM
25TI744
25TI718
CW
25PC410
SDL
25PA3410
LP DEA
CONT
25TI746
25PY3407
25HC904
HELP
25PI408
25FC125
25FI124
25TI747
OVERHEA ACCUM
REBOILE LEV DEV
25LY3305
REBOILER
25TI743
25LI308
SRA
STABILIZER TOWER
25LC323
25LC305
25LC324
25FC109
25TC722
FLASH DRUM
25TI741
25PI407
PUMPOUT
SOUR H2O
25FC138
SFIA
COND POT
25TI742
25LC309
HP COND
25PDI413
25LC310
SOUR WATER
25FI121
#1 REFORMER
#2 REFORMER
#3 REFORMER
TANK 70/71
iC5 TANK
25LC301B
SURGE
DRUM
25FC122
BOTTOMS
RECYCLE
Reserved for Faceplates

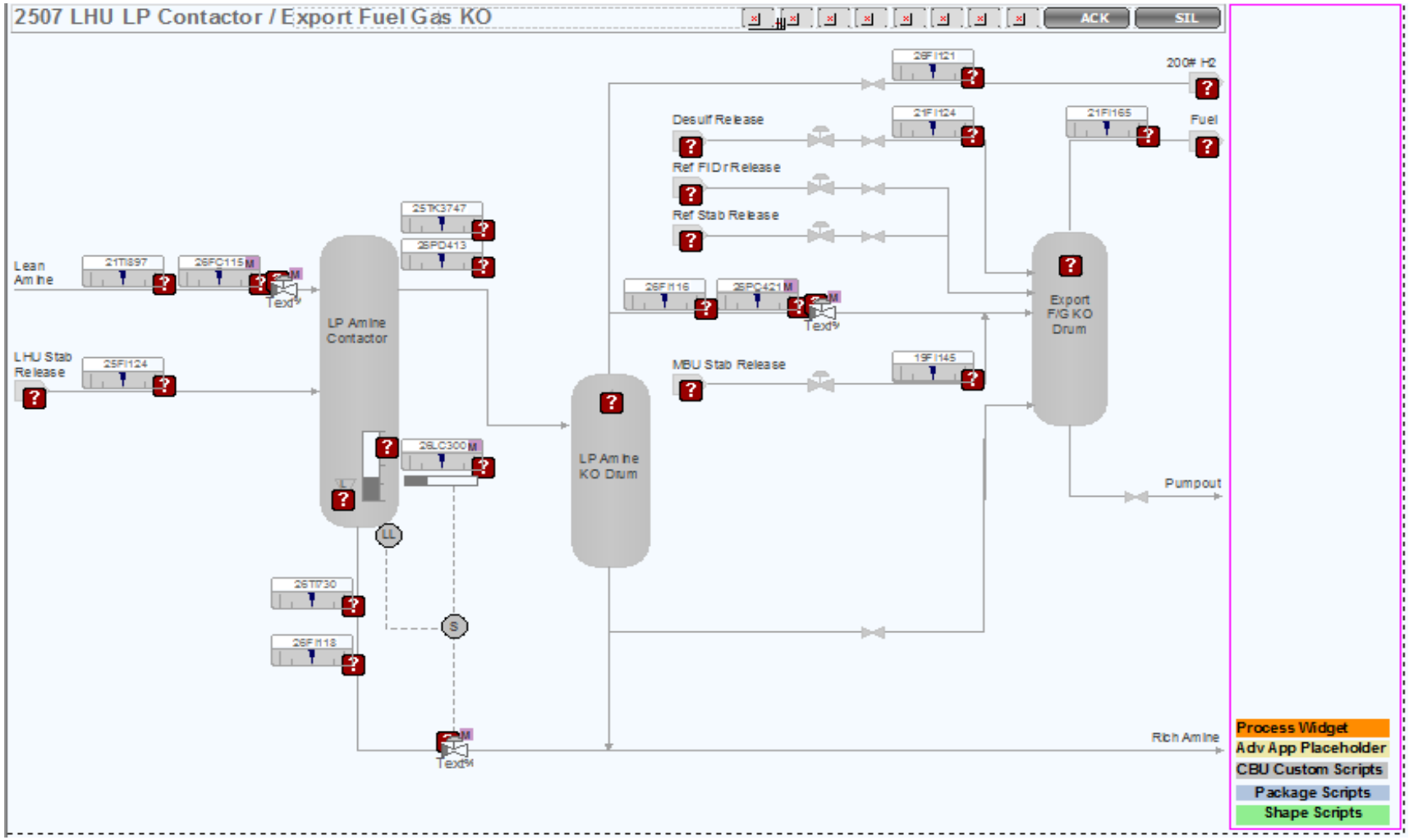
1.209 2506H1 LHU STABILIZER / OH ACCUMULATOR LEVEL CONTROLLER HELP (Reformer_2506H1.htm)

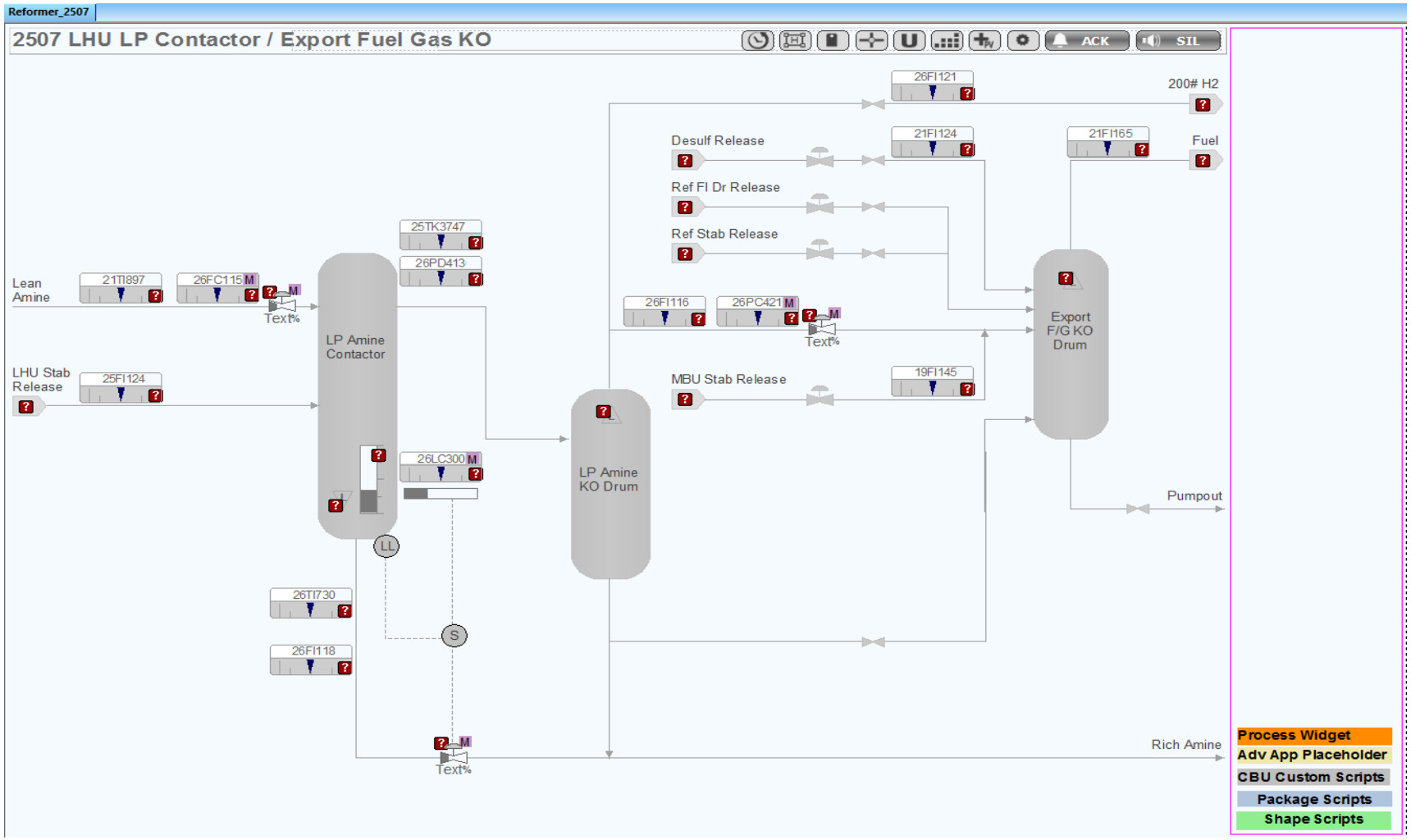


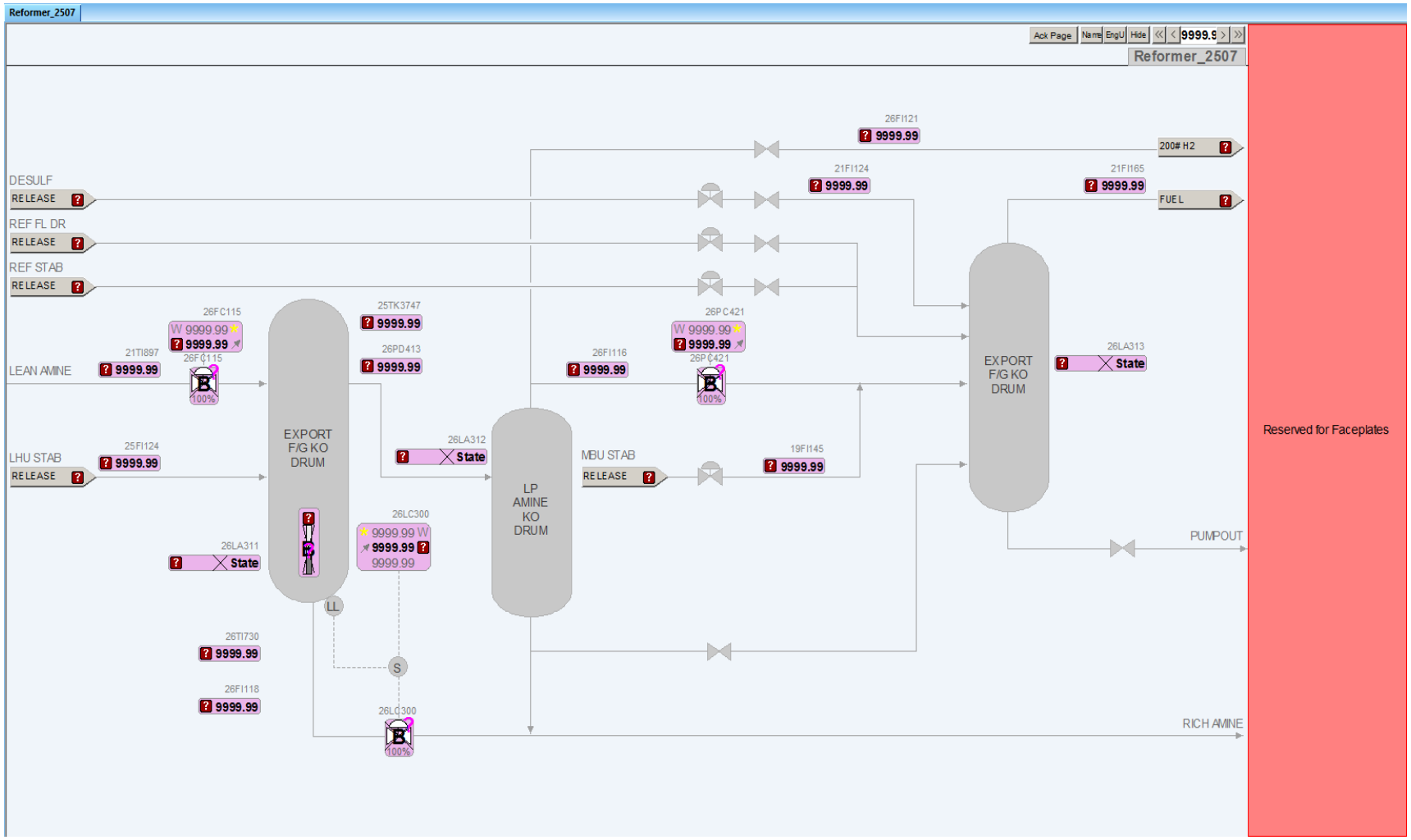

Reformer_2506H1
2506H1 LHU Stabilizer / OH Accumulator Level Controller Help
ACK
SIL
Level control of the LHU Stabilizer / OH Accumulator can be cascaded to the Reflux Flow Controller or to the Stabilizer / OH to SFIA Debutanizer Flow Controller.
The Level/Flow cascade does not balance automatically. You must manually set the level controller output to match the appropriate flow controller's setpoint.
With a good level indication and the level controller in Manual, use the calculation values below to set the LC output.
Reflux Level Control - Set 25LC323 Output to: 61%
Product to SFIA Level Control - Set 25LC323 Output to: 9%
Set the appropriate flow controller to Cascade, then set the level controller to Automatic.
Process
25PC410
25FI124
LP DEA Cont
Text%
Overhead Accum
25LC323
25LI747
Text%
25FC125
25LC324
25FC138
SFIA
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2506H1
Ack Page
Name
EngU
Hide
Reformer_2506H1
LEVEL CONTROL OF THE LHU STABILIZER / OH ACCUMULATOR CAN BE CASCADED TO THE REFLUX FLOW CONTROLLER OR TO THE STABILIZER / OH TO SFIA DEBUTANIZER FLOW CONTROLLER
THE LEVEL/FLOW CASCADE DOES NOT BALANCE AUTOMATICALLY. YOU MUST MANUALLY SET THE LEVEL CONTROLLER OUTPUT TO MATCH THE APPROPRIATE FLOW CONTROLLER'S SETPOINT.
WITH A GOOD LEVEL INDICATION AND THE LEVEL CONTROLLER IN MANUAL, USE THE CALCULATION VALUES BELOW TO SET THE LC OUTPUT.
REFLUX LEVEL CONTROL - SET 25LC323 OUTPUT TO: 61%
PRODUCT TO SFIA LEVEL CONTROL - SET 25LC323 OUTPUT TO: 9%
SET THE APPROPRIATE FLOW CONTROLLER TO CASCADE, THEN SET THE LEVEL CONTROLLER TO AUTOMATIC
PROCESS
25PC410
W 9999.99
9999.99
25PC410
100%
25FI124
9999.99
LP DEA
CONT
25LC323
9999.99 W
9999.99
9999.99
25FC125
W 9999.99
9999.99
25FC125
100%
OVERHEAD ACCUM
25TI747
9999.99
25LC324
9999.99 W
9999.99
9999.99
25FC138
W 9999.99
9999.99
25FC138
100%
SFIA
Reserved for Faceplates

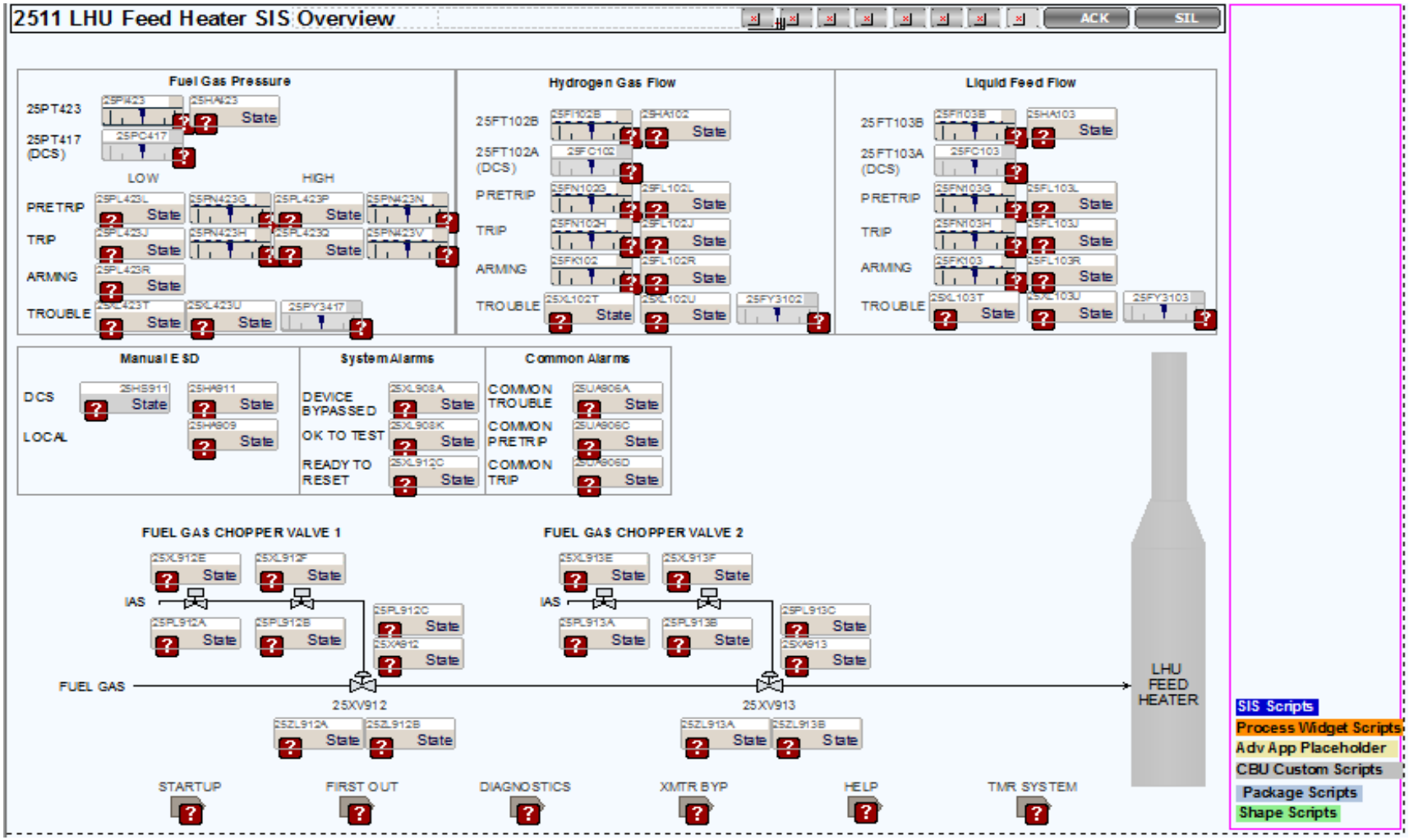
1.210 2507 LHU LP CONTACTOR / EXPORT FUEL GAS KO (Reformer_2507.htm)

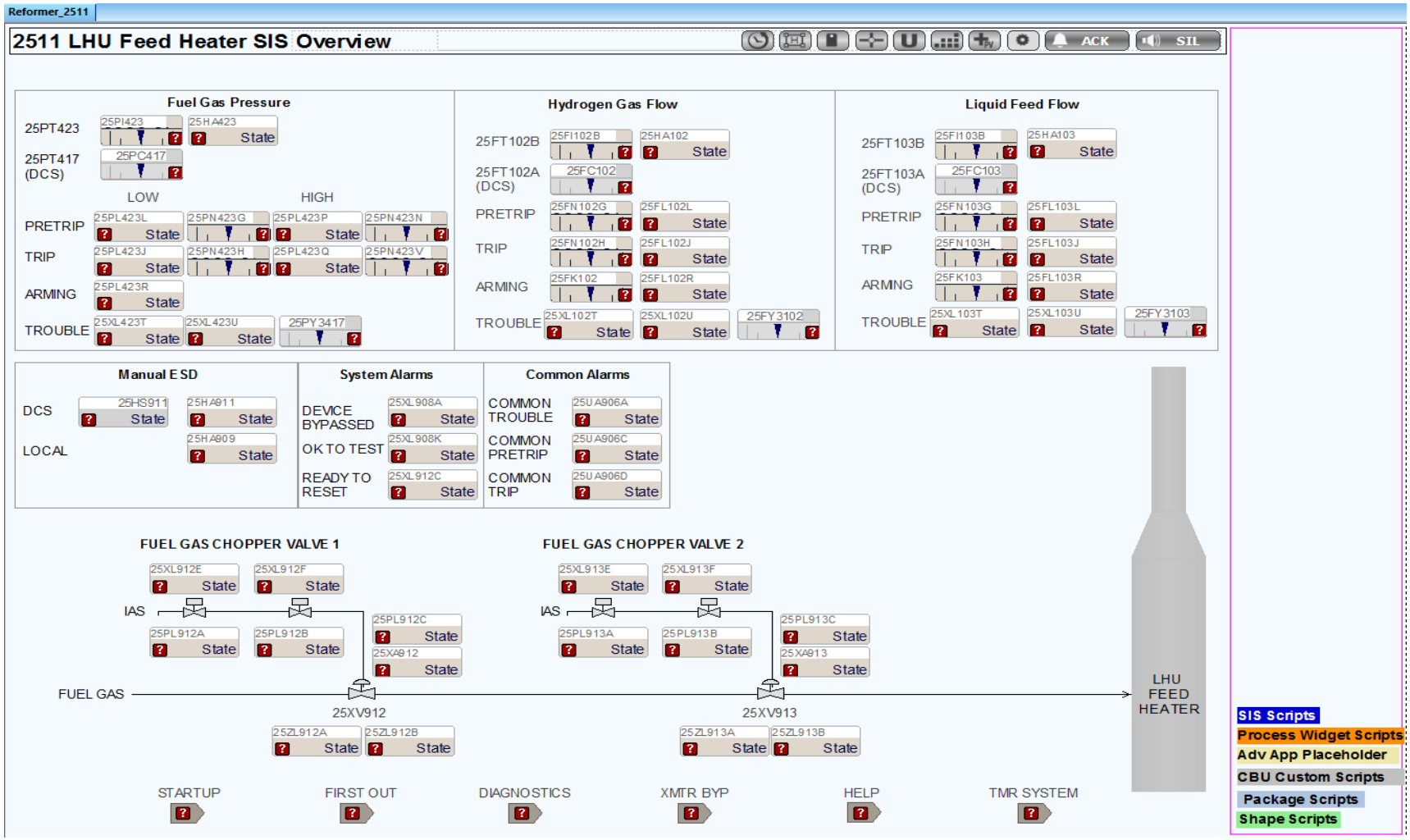


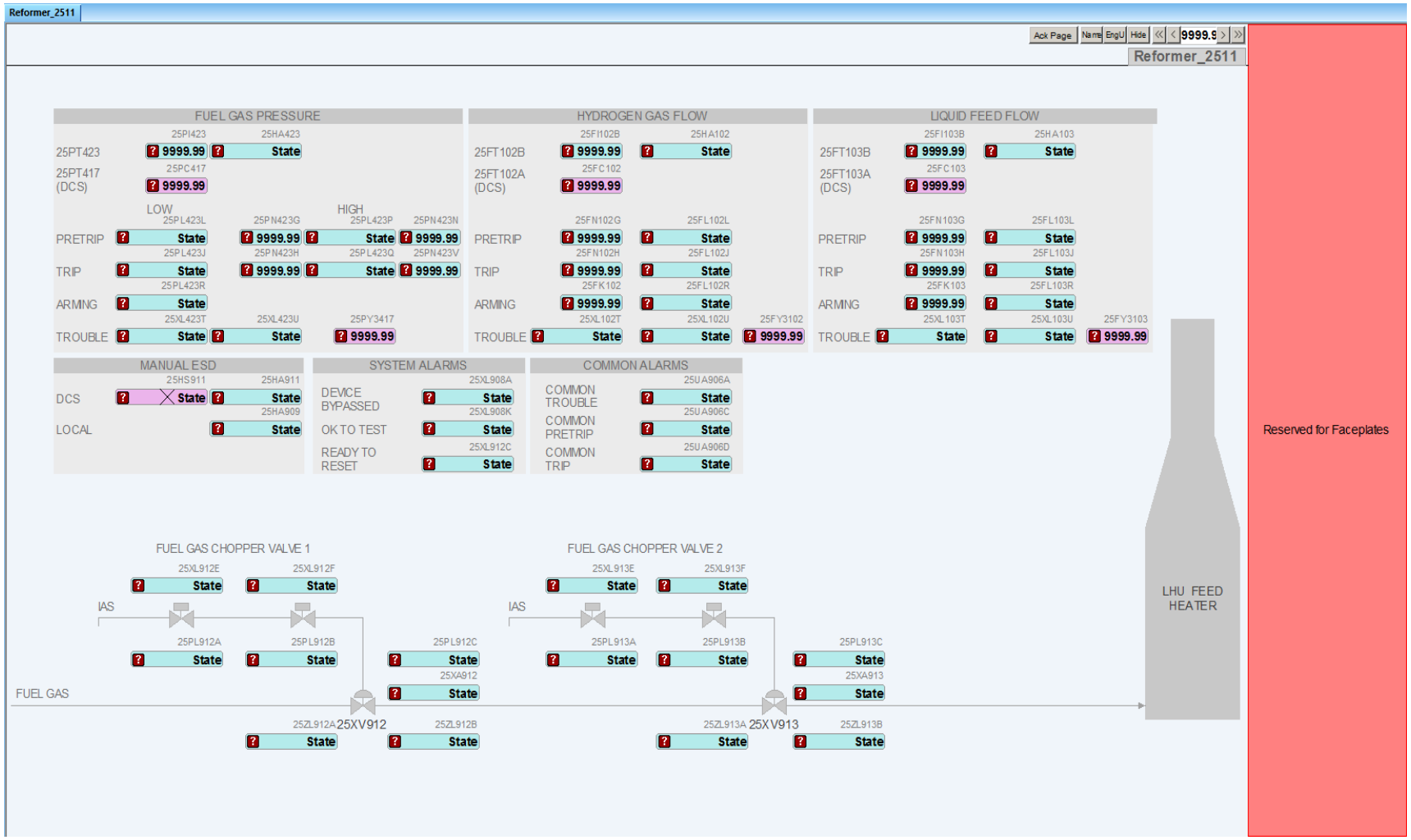

Reformer_2507
2507 LHU LP Contactor / Export Fuel Gas KO
ACK
SIL
26FI121
200# H2
Desulf Release
21FI124
21FI165
Fuel
Ref FI Dr Release
Ref Stab Release
25TK3747
26PD413
Lean Amine
21TI897
26FC115
M
Text%
LP Amine Contactor
26FI116
26PC421
M
Text%
Export F/G KO Drum
LHU Stab Release
25FI124
MBU Stab Release
19FI145
LP Amine KO Drum
26LC300
M
LL
Pumpout
26TI730
S
26FI118
M
Text%
Rich Amine
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2507
Ack Page
Name
EngU
Hide
Reformer_2507
26FI121
9999.99
200# H2
21FI124
9999.99
21FI165
9999.99
FUEL
DESULF
RELEASE
REF FL DR
RELEASE
REF STAB
RELEASE
26FC115
W 9999.99
9999.99
21TI897
9999.99
LEAN AMINE
26FC115
100%
25TK3747
9999.99
26PD413
9999.99
26PC421
W 9999.99
9999.99
26PC421
100%
26FI116
9999.99
EXPORT F/G KO DRUM
26LA313
State
LHU STAB
RELEASE
25FI124
9999.99
26LA312
State
LP AMINE KO DRUM
MBU STAB
RELEASE
19FI145
9999.99
EXPORT F/G KO DRUM
Reserved for Faceplates
26LA311
State
26LC300
9999.99 W
9999.99
9999.99
PUMPOUT
LL
26TI730
9999.99
S
26FI118
9999.99
26LC300
100%
RICH AMINE

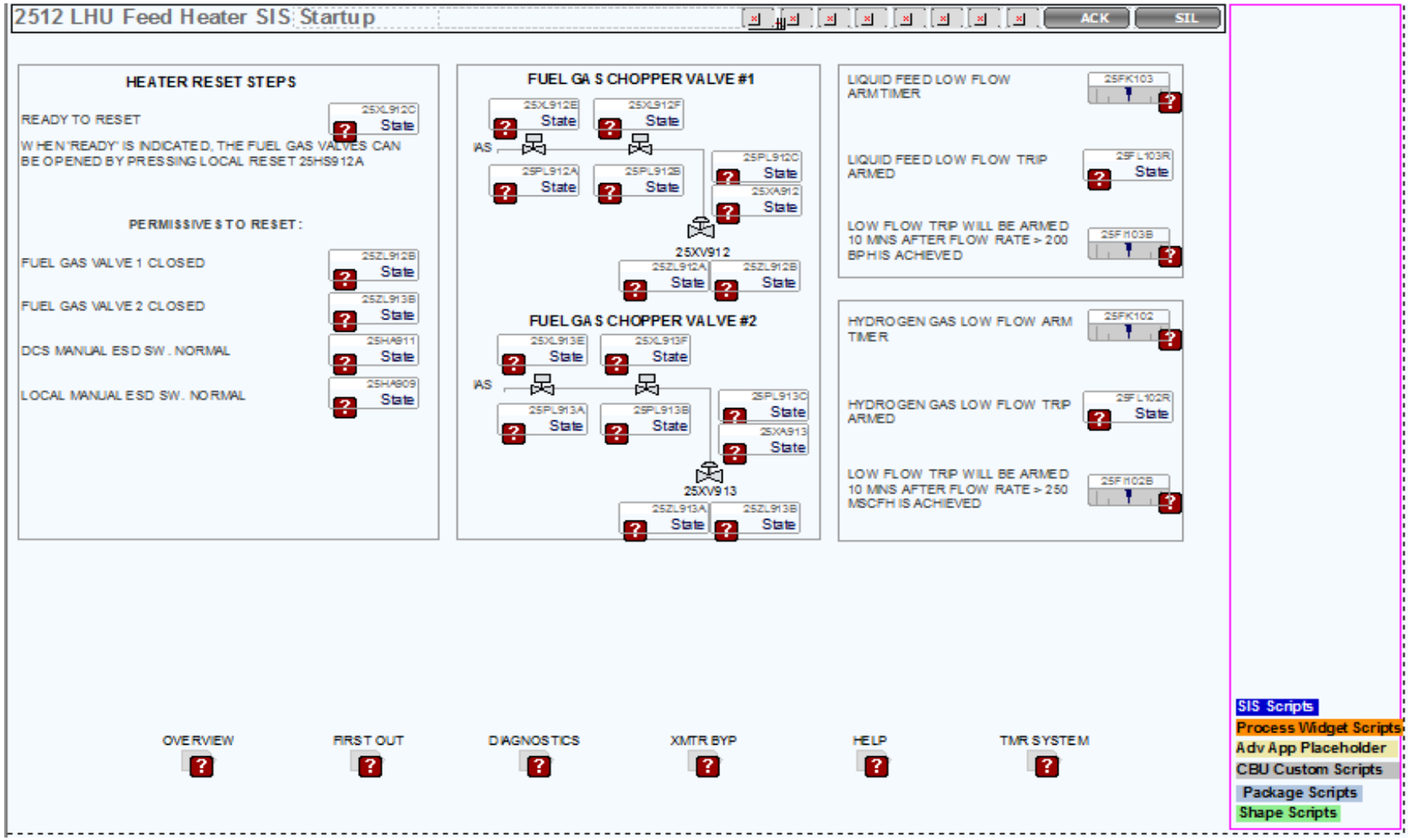
1.211 2511 LHU FEED HEATER SIS OVERVIEW (Reformer_2511.htm)

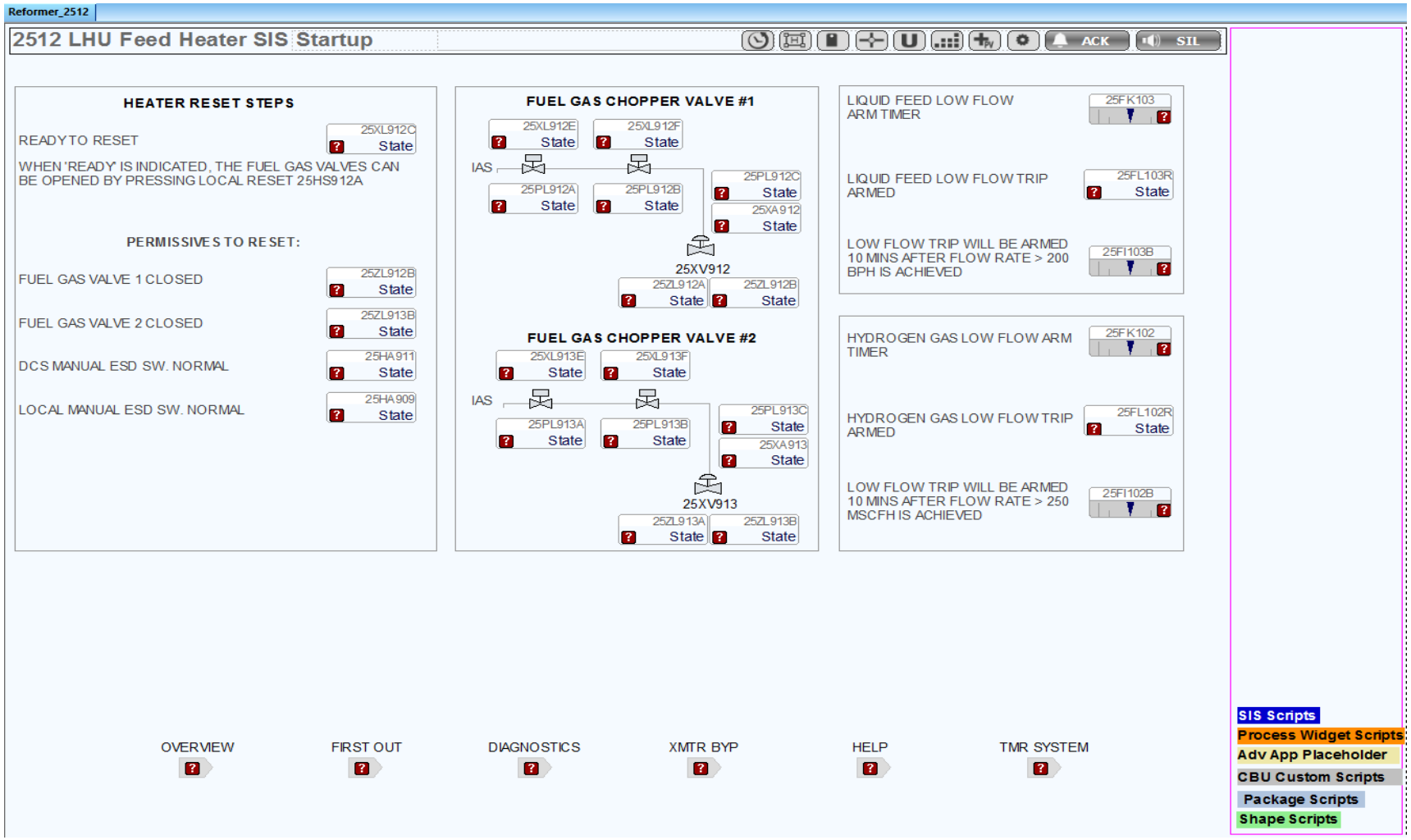


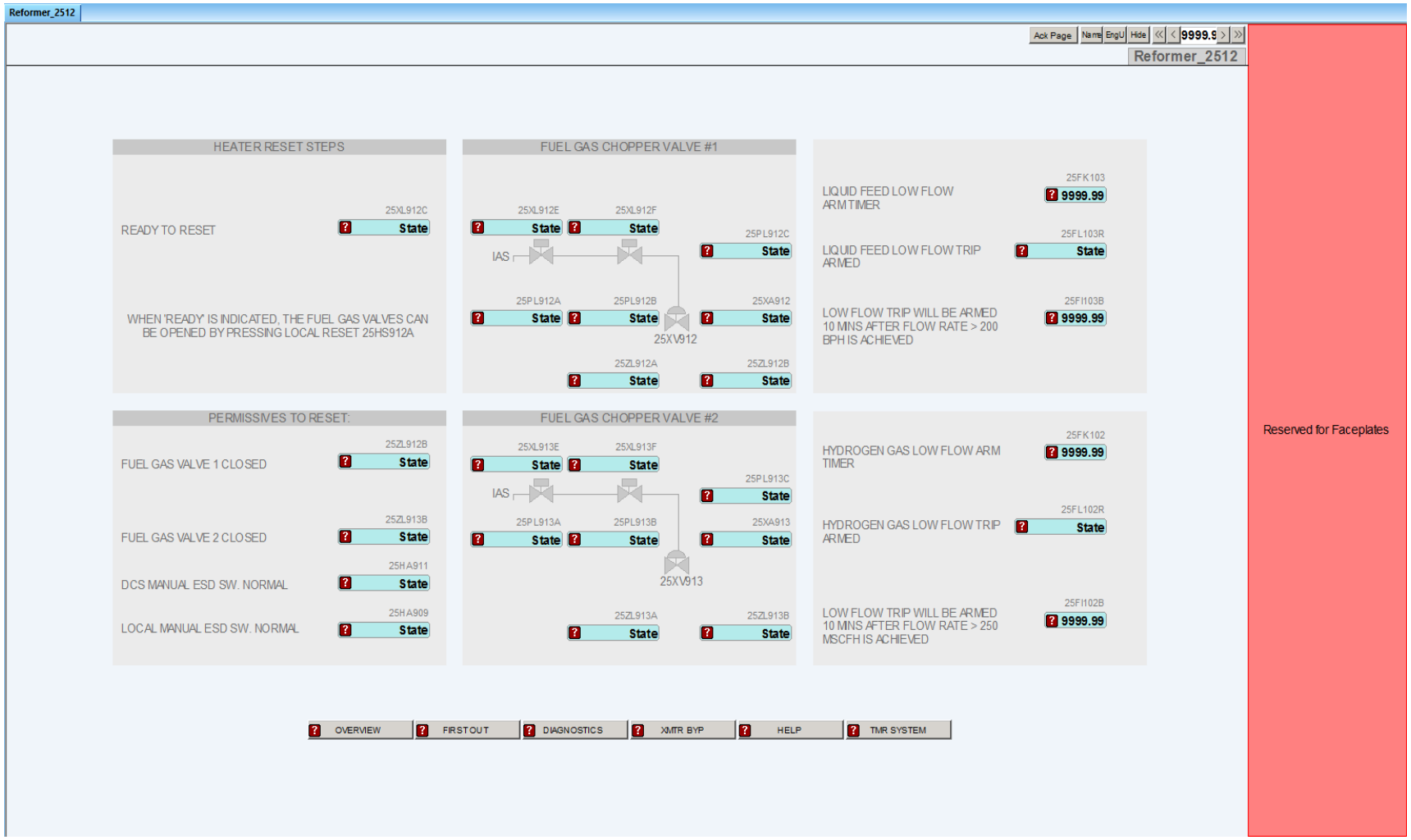

Reformer_2511
2511 LHU Feed Heater SIS Overview
ACK
SIL
Fuel Gas Pressure
25PT423
25PI423
25HA423
State
25PT417 (DCS)
25PC417
LOW
HIGH
PRETRIP
25PL423L
25PN423G
25PL423P
25PN423N
TRIP
25PL423J
25PN423H
25PL423Q
25PN423V
ARMING
25PL423R
TROUBLE
25XL423T
25XL423U
25PY3417
Hydrogen Gas Flow
25FT102B
25FI102B
25HA102
25FT102A (DCS)
25FC102
25FN102G
25FL102L
25FN102H
25FL102J
25FK102
25FL102R
25XL102T
25XL102U
25FY3102
Liquid Feed Flow
25FT103B
25FI103B
25HA103
25FT103A (DCS)
25FC103
25FN103G
25FL103L
25FN103H
25FL103J
25FK103
25FL103R
25XL103T
25XL103U
25FY3103
Manual ESD
DCS
25HS911
25HA911
LOCAL
25HA909
System Alarms
DEVICE BYPASSED
25XL908A
OK TO TEST
25XL908K
READY TO RESET
25XL912C
Common Alarms
COMMON TROUBLE
25UA906A
COMMON PRETRIP
25UA906C
COMMON TRIP
25UA906D
FUEL GAS CHOPPER VALVE 1
25XL912E
25XL912F
IAS
25PL912A
25PL912B
25PL912C
25XA912
FUEL GAS
25XV912
25ZL912A
25ZL912B
FUEL GAS CHOPPER VALVE 2
25XL913E
25XL913F
25PL913A
25PL913B
25PL913C
25XA913
25XV913
25ZL913A
25ZL913B
LHU FEED HEATER
STARTUP
FIRST OUT
DIAGNOSTICS
XMTR BYP
HELP
TMR SYSTEM
SIS Scripts
Process Widget Scripts
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2511
Ack Page
Name
EngU
Hide
9999.9
Reformer_2511
FUEL GAS PRESSURE
25PI423
25HA423
25PT423
9999.99
State
25PC417
25PT417 (DCS)
9999.99
LOW
HIGH
25PL423L
25PN423G
25PL423P
25PN423N
PRETRIP
25PL423J
25PN423H
25PL423Q
25PN423V
TRIP
25PL423R
ARMING
25XL423T
25XL423U
25PY3417
TROUBLE
HYDROGEN GAS FLOW
25FI102B
25HA102
25FT102B
25FC102
25FT102A (DCS)
25FN102G
25FL102L
25FN102H
25FL102J
25FK102
25FL102R
25XL102T
25XL102U
25FY3102
LIQUID FEED FLOW
25FI103B
25HA103
25FT103B
25FC103
25FT103A (DCS)
25FN103G
25FL103L
25FN103H
25FL103J
25FK103
25FL103R
25XL103T
25XL103U
25FY3103
MANUAL ESD
25HS911
25HA911
DCS
25HA909
LOCAL
SYSTEM ALARMS
25XL908A
DEVICE BYPASSED
25XL908K
OK TO TEST
25XL912C
READY TO RESET
COMMON ALARMS
25UA906A
COMMON TROUBLE
25UA906C
COMMON PRETRIP
25UA906D
COMMON TRIP
FUEL GAS CHOPPER VALVE 1
25XL912E
25XL912F
IAS
25PL912A
25PL912B
25PL912C
25XA912
FUEL GAS
25ZL912A
25XV912
25ZL912B
FUEL GAS CHOPPER VALVE 2
25XL913E
25XL913F
IAS
25PL913A
25PL913B
25PL913C
25XA913
25ZL913A
25XV913
25ZL913B
LHU FEED HEATER
Reserved for Faceplates

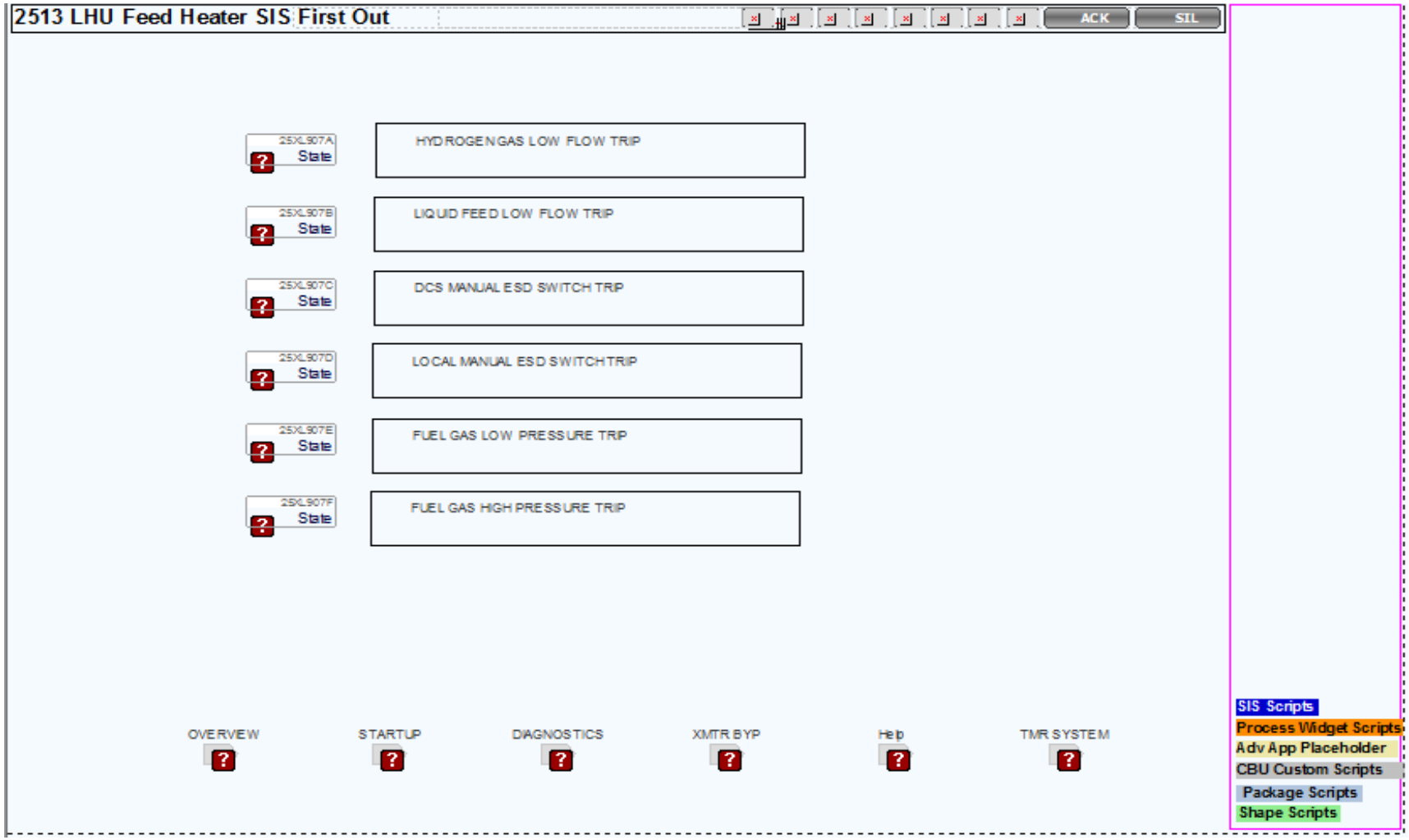
1.212 2512 LHU FEED HEATER SIS STARTUP (Reformer_2512.htm)

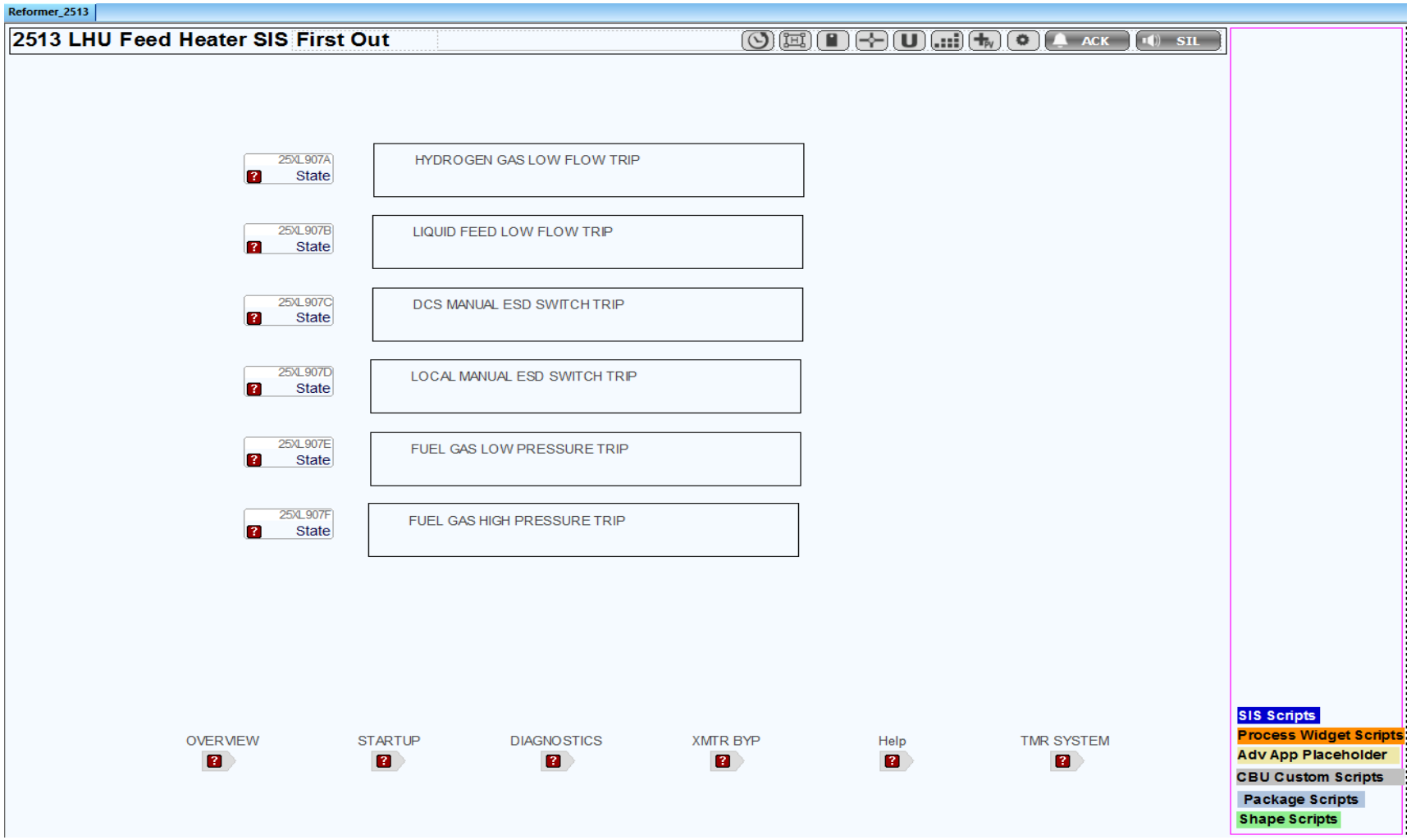


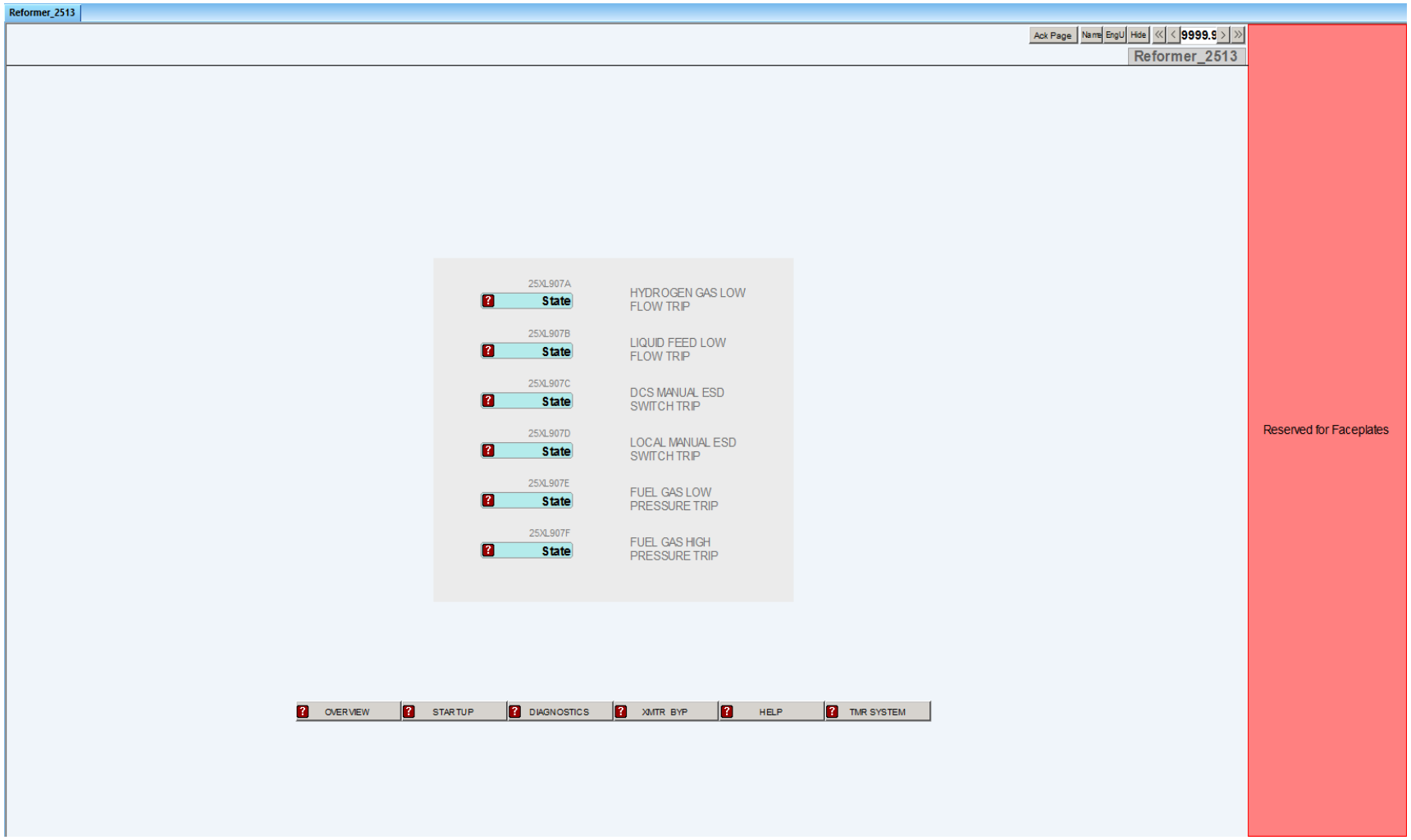

Reformer_2512
2512 LHU Feed Heater SIS Startup
ACK
SIL
HEATER RESET STEPS
READY TO RESET
25XL912C State
WHEN 'READY' IS INDICATED, THE FUEL GAS VALVES CAN BE OPENED BY PRESSING LOCAL RESET 25HS912A
PERMISSIVES TO RESET:
FUEL GAS VALVE 1 CLOSED
25ZL912B State
FUEL GAS VALVE 2 CLOSED
25ZL913B State
DCS MANUAL ESD SW. NORMAL
25HA911 State
LOCAL MANUAL ESD SW. NORMAL
25HA909 State
FUEL GAS CHOPPER VALVE #1
25XL912E State
25XL912F State
IAS
25PL912A State
25PL912B State
25PL912C State
25XA912 State
25XV912
25ZL912A State
25ZL912B State
FUEL GAS CHOPPER VALVE #2
25XL913E State
25XL913F State
IAS
25PL913A State
25PL913B State
25PL913C State
25XA913 State
25XV913
25ZL913A State
25ZL913B State
LIQUID FEED LOW FLOW ARM TIMER
25FK103
LIQUID FEED LOW FLOW TRIP ARMED
25FL103R State
LOW FLOW TRIP WILL BE ARMED 10 MINS AFTER FLOW RATE > 200 BPH IS ACHIEVED
25FI103B
HYDROGEN GAS LOW FLOW ARM TIMER
25FK102
HYDROGEN GAS LOW FLOW TRIP ARMED
25FL102R State
LOW FLOW TRIP WILL BE ARMED 10 MINS AFTER FLOW RATE > 250 MSCFH IS ACHIEVED
25FI102B
OVERVIEW
FIRST OUT
DIAGNOSTICS
XMTR BYP
HELP
TMR SYSTEM
SIS Scripts
Process Widget Scripts
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2512
Ack Page
Name
EngU
Hide
9999.9
Reformer_2512
HEATER RESET STEPS
READY TO RESET
25XL912C
State
WHEN 'READY' IS INDICATED, THE FUEL GAS VALVES CAN BE OPENED BY PRESSING LOCAL RESET 25HS912A
FUEL GAS CHOPPER VALVE #1
25XL912E
25XL912F
25PL912C
IAS
25PL912A
25PL912B
25XA912
25XV912
25ZL912A
25ZL912B
LIQUID FEED LOW FLOW ARM TIMER
25FK103
9999.99
LIQUID FEED LOW FLOW TRIP ARMED
25FL103R
LOW FLOW TRIP WILL BE ARMED 10 MINS AFTER FLOW RATE > 200 BPH IS ACHIEVED
25FI103B
PERMISSIVES TO RESET:
FUEL GAS VALVE 1 CLOSED
25ZL912B
FUEL GAS VALVE 2 CLOSED
25ZL913B
DCS MANUAL ESD SW. NORMAL
25HA911
LOCAL MANUAL ESD SW. NORMAL
25HA909
FUEL GAS CHOPPER VALVE #2
25XL913E
25XL913F
25PL913C
25PL913A
25PL913B
25XA913
25XV913
25ZL913A
25ZL913B
HYDROGEN GAS LOW FLOW ARM TIMER
25FK102
HYDROGEN GAS LOW FLOW TRIP ARMED
25FL102R
LOW FLOW TRIP WILL BE ARMED 10 MINS AFTER FLOW RATE > 250 MSCFH IS ACHIEVED
25FI102B
OVERVIEW
FIRST OUT
DIAGNOSTICS
XMTR BYP
HELP
TMR SYSTEM
Reserved for Faceplates

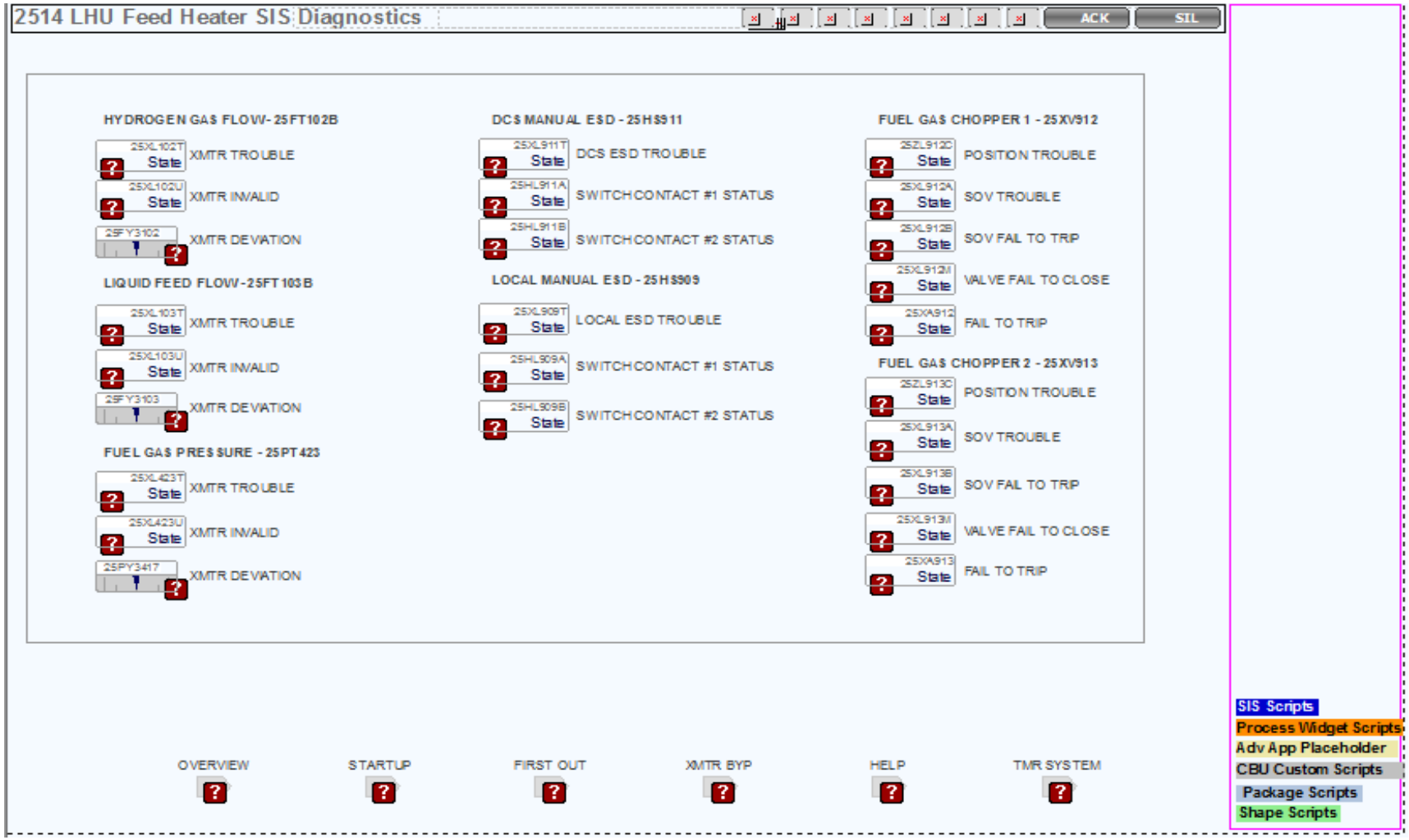
1.213 2513 LHU FEED HEATER SIS FIRST OUT (Reformer_2513.htm)

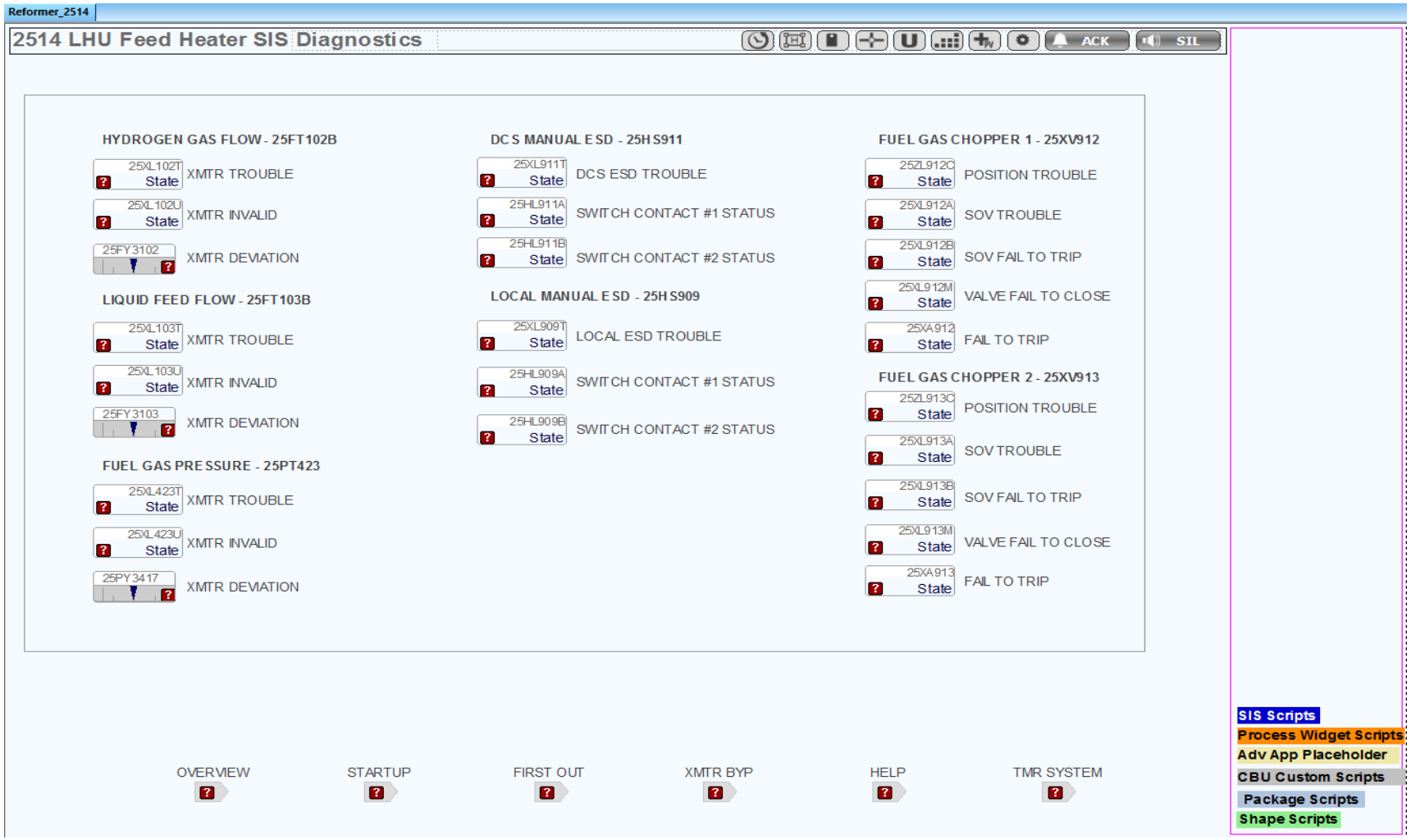


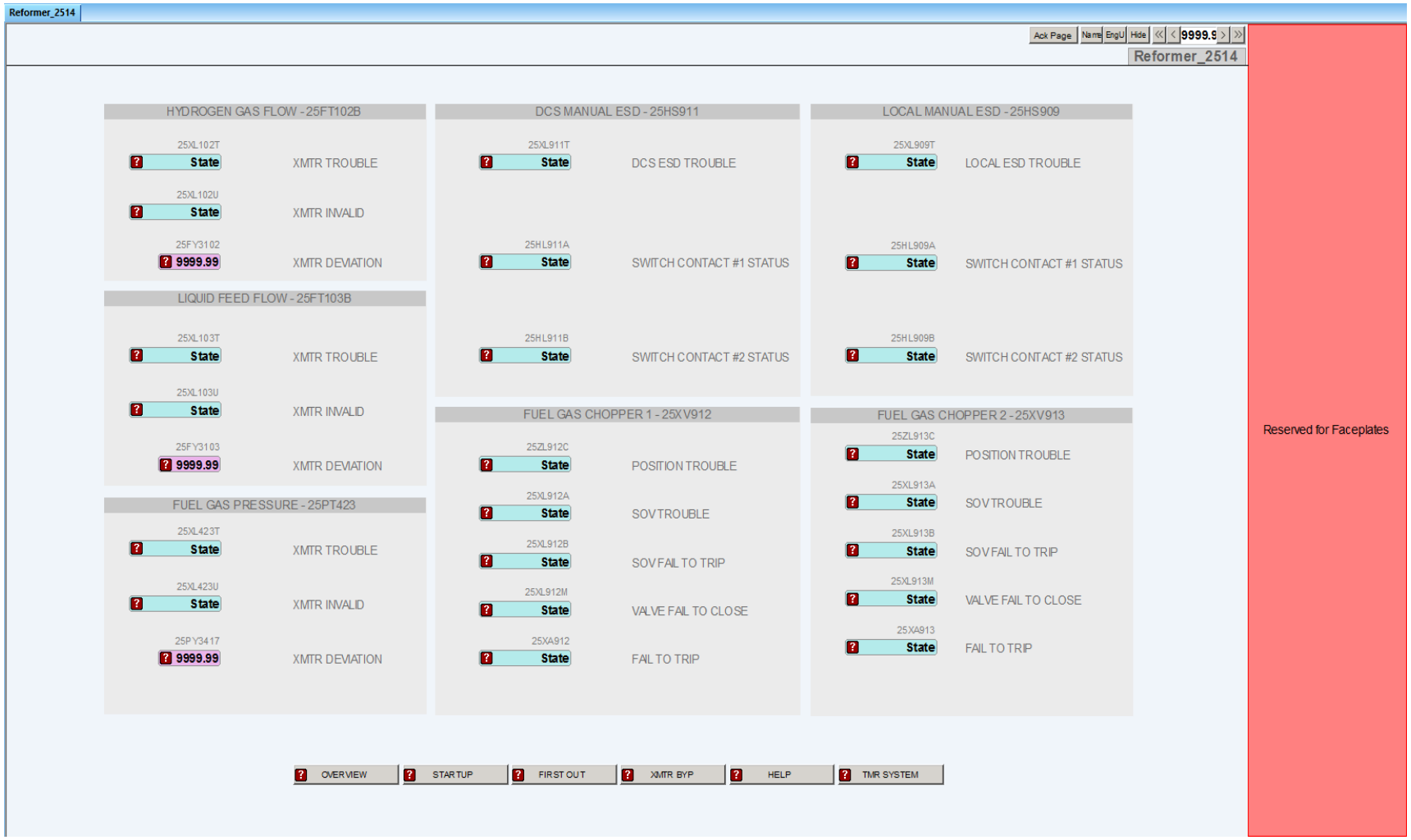

Reformer_2513
2513 LHU Feed Heater SIS First Out
ACK
SIL
25XL907A State
HYDROGEN GAS LOW FLOW TRIP
25XL907B State
LIQUID FEED LOW FLOW TRIP
25XL907C State
DCS MANUAL ESD SWITCH TRIP
25XL907D State
LOCAL MANUAL ESD SWITCH TRIP
25XL907E State
FUEL GAS LOW PRESSURE TRIP
25XL907F State
FUEL GAS HIGH PRESSURE TRIP
OVERVIEW
STARTUP
DIAGNOSTICS
XMTR BYP
Help
TMR SYSTEM
SIS Scripts
Process Widget Scripts
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2513
Ack Page
Name
EngU
Hide
9999.9
Reformer_2513
25XL907A
State
HYDROGEN GAS LOW FLOW TRIP
25XL907B
State
LIQUID FEED LOW FLOW TRIP
25XL907C
State
DCS MANUAL ESD SWITCH TRIP
25XL907D
State
LOCAL MANUAL ESD SWITCH TRIP
25XL907E
State
FUEL GAS LOW PRESSURE TRIP
25XL907F
State
FUEL GAS HIGH PRESSURE TRIP
OVERVIEW
STARTUP
DIAGNOSTICS
XMTR BYP
HELP
TMR SYSTEM
Reserved for Faceplates

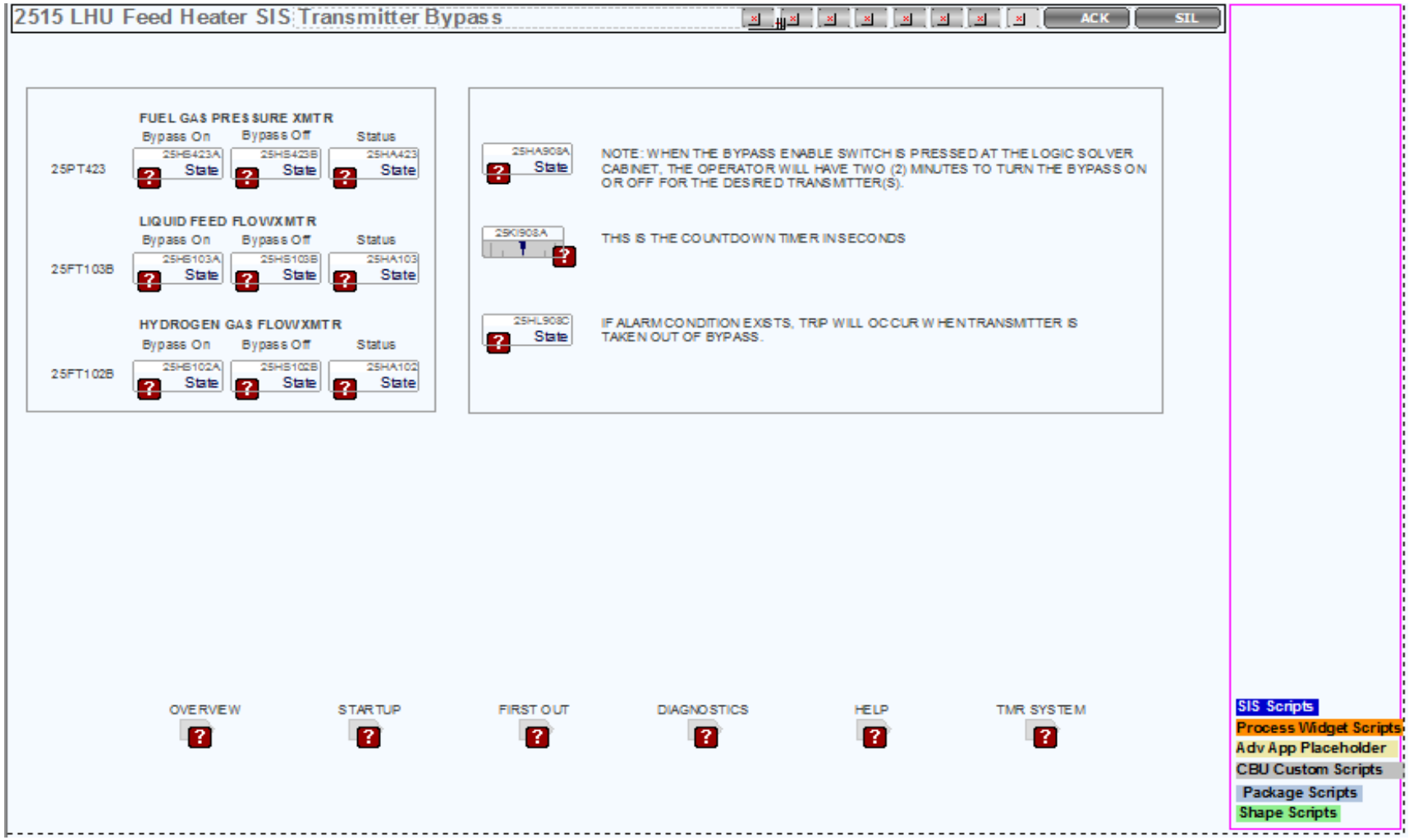
1.214 2514 LHU FEED HEATER SIS DIAGNOSTICS (Reformer_2514.htm)

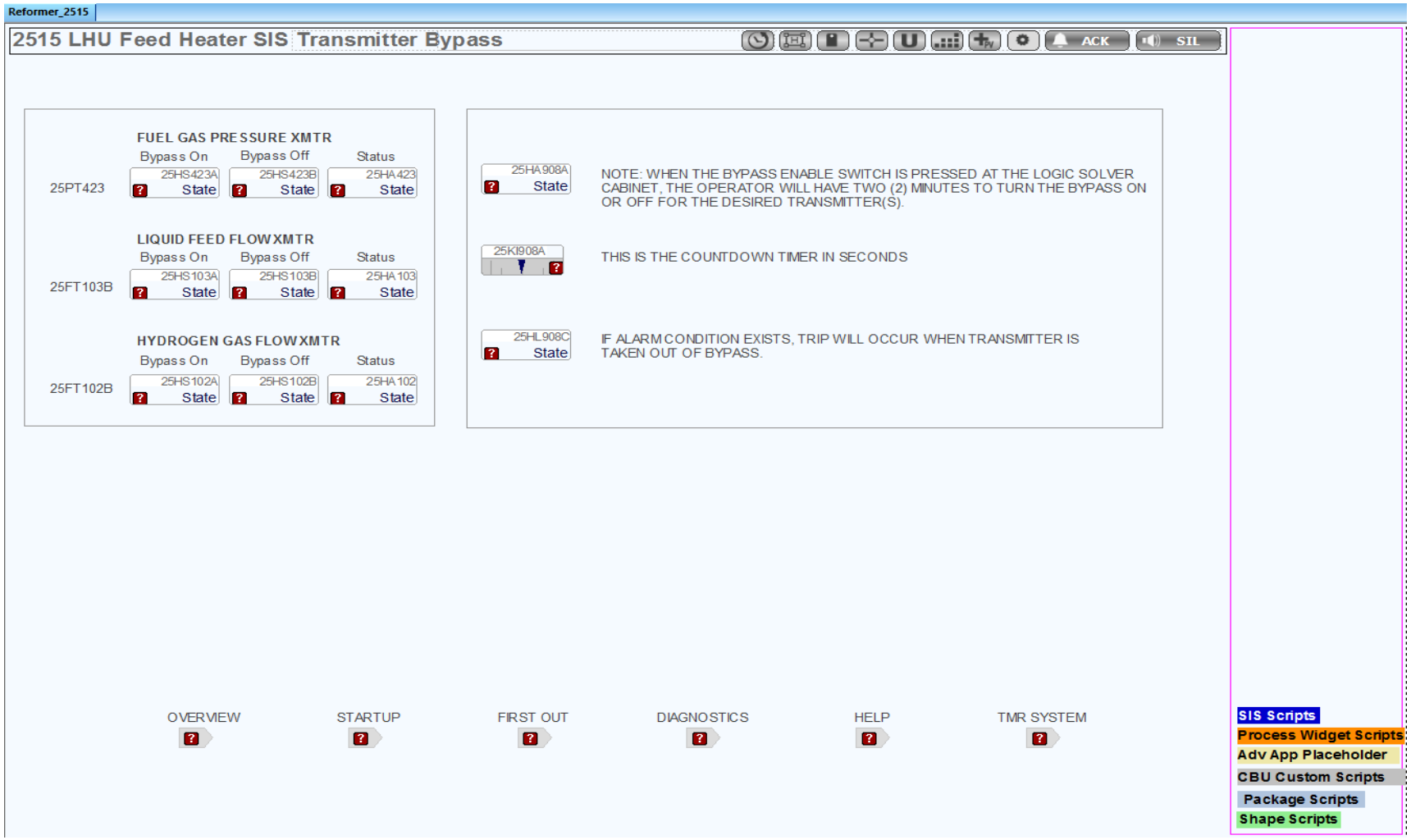


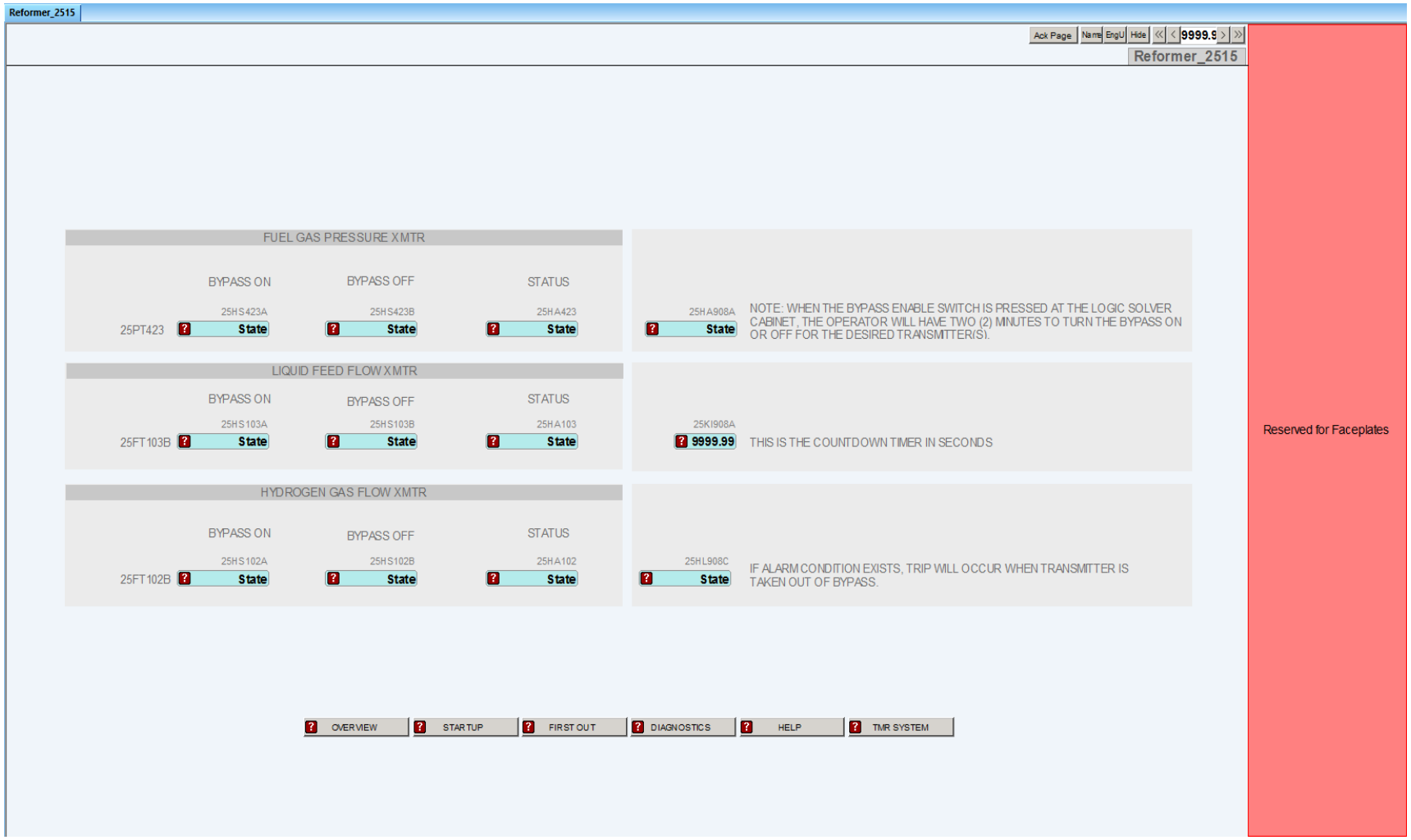

Reformer_2514
2514 LHU Feed Heater SIS Diagnostics
ACK
SIL
HYDROGEN GAS FLOW - 25FT102B
25XL102T State XMTR TROUBLE
25XL102U State XMTR INVALID
25FY3102 XMTR DEVIATION
LIQUID FEED FLOW - 25FT103B
25XL103T State XMTR TROUBLE
25XL103U State XMTR INVALID
25FY3103 XMTR DEVIATION
FUEL GAS PRESSURE - 25PT423
25XL423T State XMTR TROUBLE
25XL423U State XMTR INVALID
25PY3417 XMTR DEVIATION
DCS MANUAL ESD - 25HS911
25XL911T State DCS ESD TROUBLE
25HL911A State SWITCH CONTACT #1 STATUS
25HL911B State SWITCH CONTACT #2 STATUS
LOCAL MANUAL ESD - 25HS909
25XL909T State LOCAL ESD TROUBLE
25HL909A State SWITCH CONTACT #1 STATUS
25HL909B State SWITCH CONTACT #2 STATUS
FUEL GAS CHOPPER 1 - 25XV912
25ZL912C State POSITION TROUBLE
25XL912A State SOV TROUBLE
25XL912B State SOV FAIL TO TRIP
25XL912M State VALVE FAIL TO CLOSE
25XA912 State FAIL TO TRIP
FUEL GAS CHOPPER 2 - 25XV913
25ZL913C State POSITION TROUBLE
25XL913A State SOV TROUBLE
25XL913B State SOV FAIL TO TRIP
25XL913M State VALVE FAIL TO CLOSE
25XA913 State FAIL TO TRIP
OVERVIEW
STARTUP
FIRST OUT
XMTR BYP
HELP
TMR SYSTEM
SIS Scripts
Process Widget Scripts
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2514
Ack Page
Name
EngU
Hide
9999.9
Reformer_2514
HYDROGEN GAS FLOW - 25FT102B
25XL102T
State
XMTR TROUBLE
25XL102U
State
XMTR INVALID
25FY3102
9999.99
XMTR DEVIATION
LIQUID FEED FLOW - 25FT103B
25XL103T
State
XMTR TROUBLE
25XL103U
State
XMTR INVALID
25FY3103
9999.99
XMTR DEVIATION
FUEL GAS PRESSURE - 25PT423
25XL423T
State
XMTR TROUBLE
25XL423U
State
XMTR INVALID
25PY3417
9999.99
XMTR DEVIATION
DCS MANUAL ESD - 25HS911
25XL911T
State
DCS ESD TROUBLE
25HL911A
State
SWITCH CONTACT #1 STATUS
25HL911B
State
SWITCH CONTACT #2 STATUS
FUEL GAS CHOPPER 1 - 25XV912
25ZL912C
State
POSITION TROUBLE
25XL912A
State
SOV TROUBLE
25XL912B
State
SOV FAIL TO TRIP
25XL912M
State
VALVE FAIL TO CLOSE
25XA912
State
FAIL TO TRIP
LOCAL MANUAL ESD - 25HS909
25XL909T
State
LOCAL ESD TROUBLE
25HL909A
State
SWITCH CONTACT #1 STATUS
25HL909B
State
SWITCH CONTACT #2 STATUS
FUEL GAS CHOPPER 2 - 25XV913
25ZL913C
State
POSITION TROUBLE
25XL913A
State
SOV TROUBLE
25XL913B
State
SOV FAIL TO TRIP
25XL913M
State
VALVE FAIL TO CLOSE
25XA913
State
FAIL TO TRIP
OVERVIEW
STARTUP
FIRST OUT
XMTR BYP
HELP
TMR SYSTEM
Reserved for Faceplates

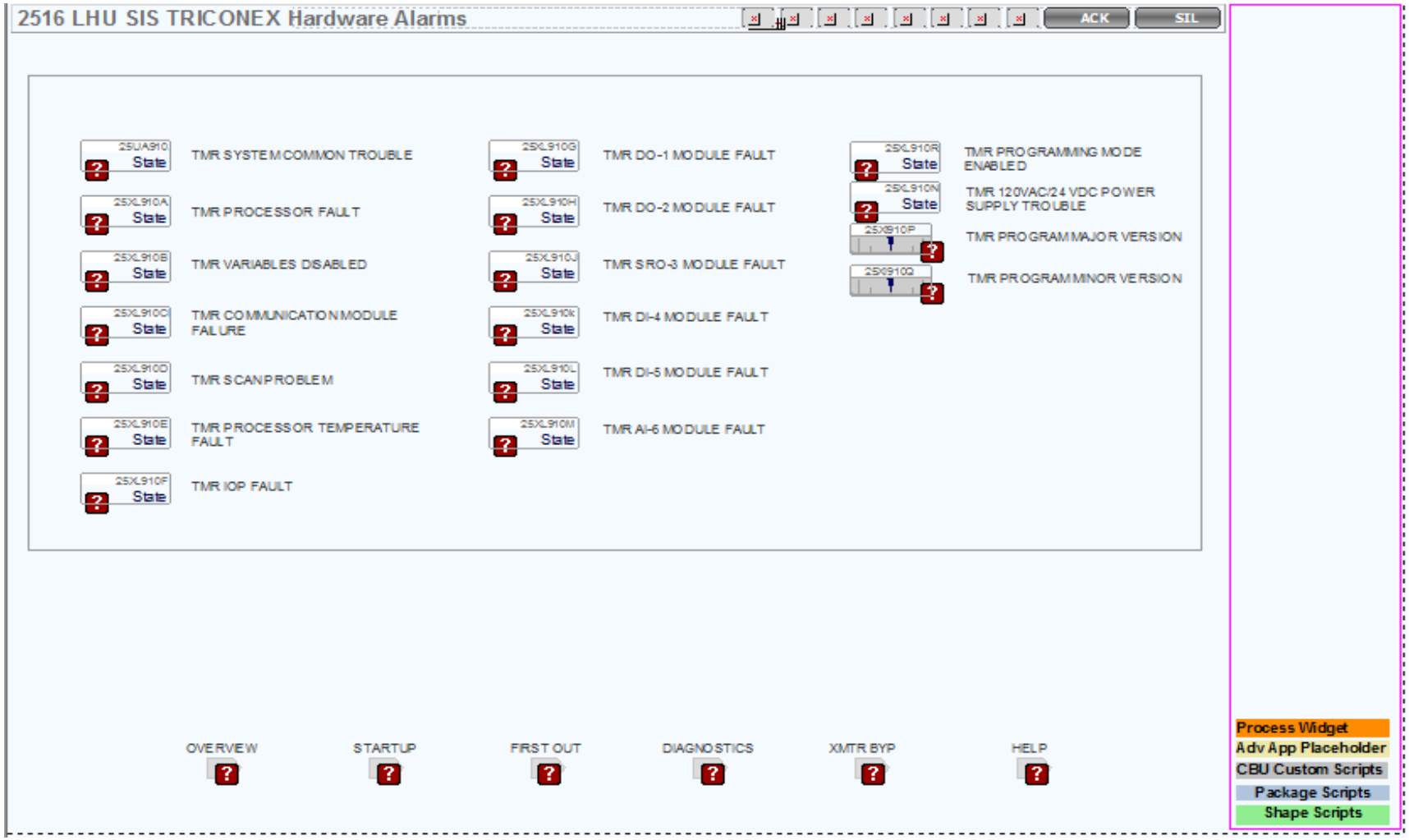
1.215 2515 LHU FEED HEATER SIS TRANSMITTER BYPASS (Reformer_2515.htm)

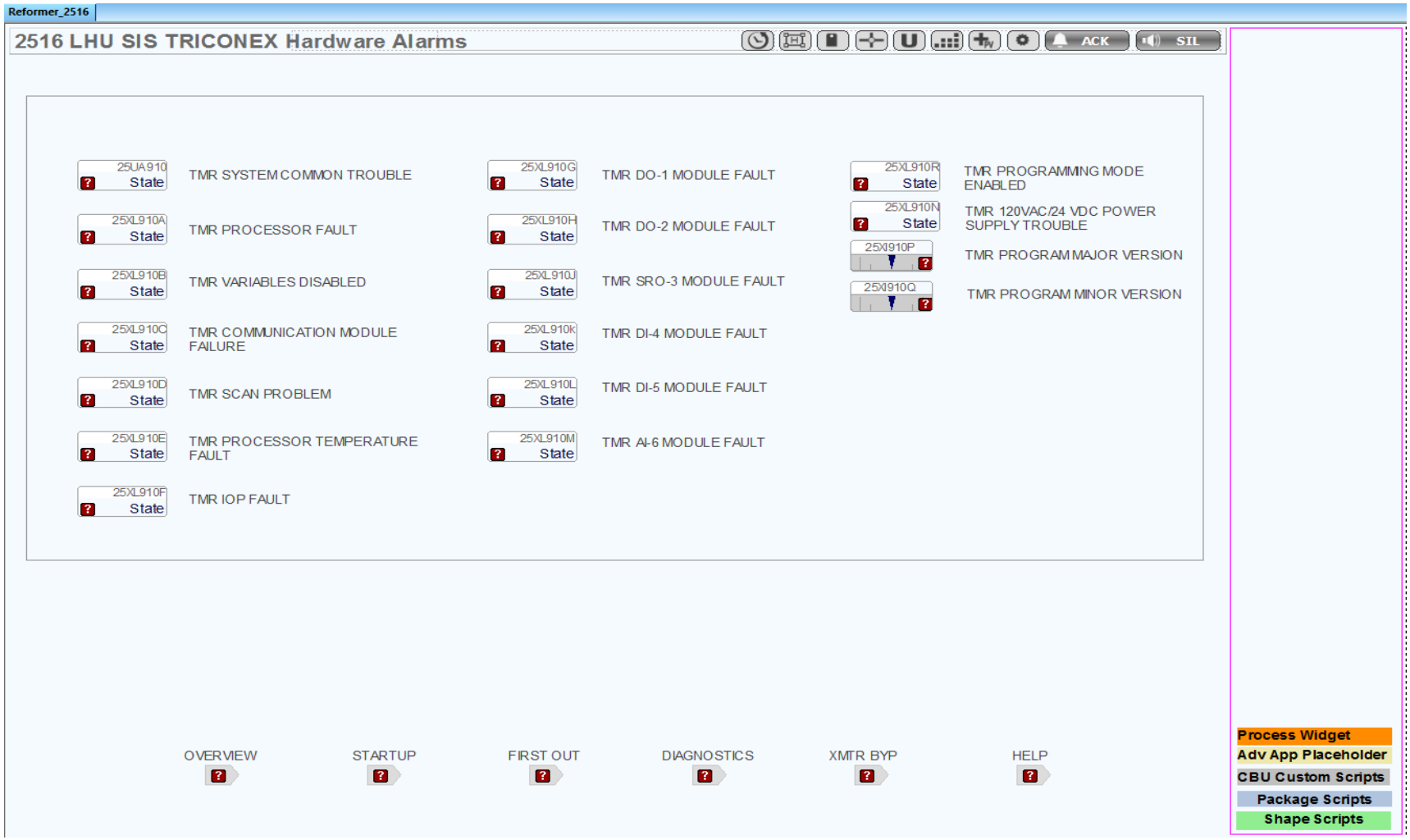


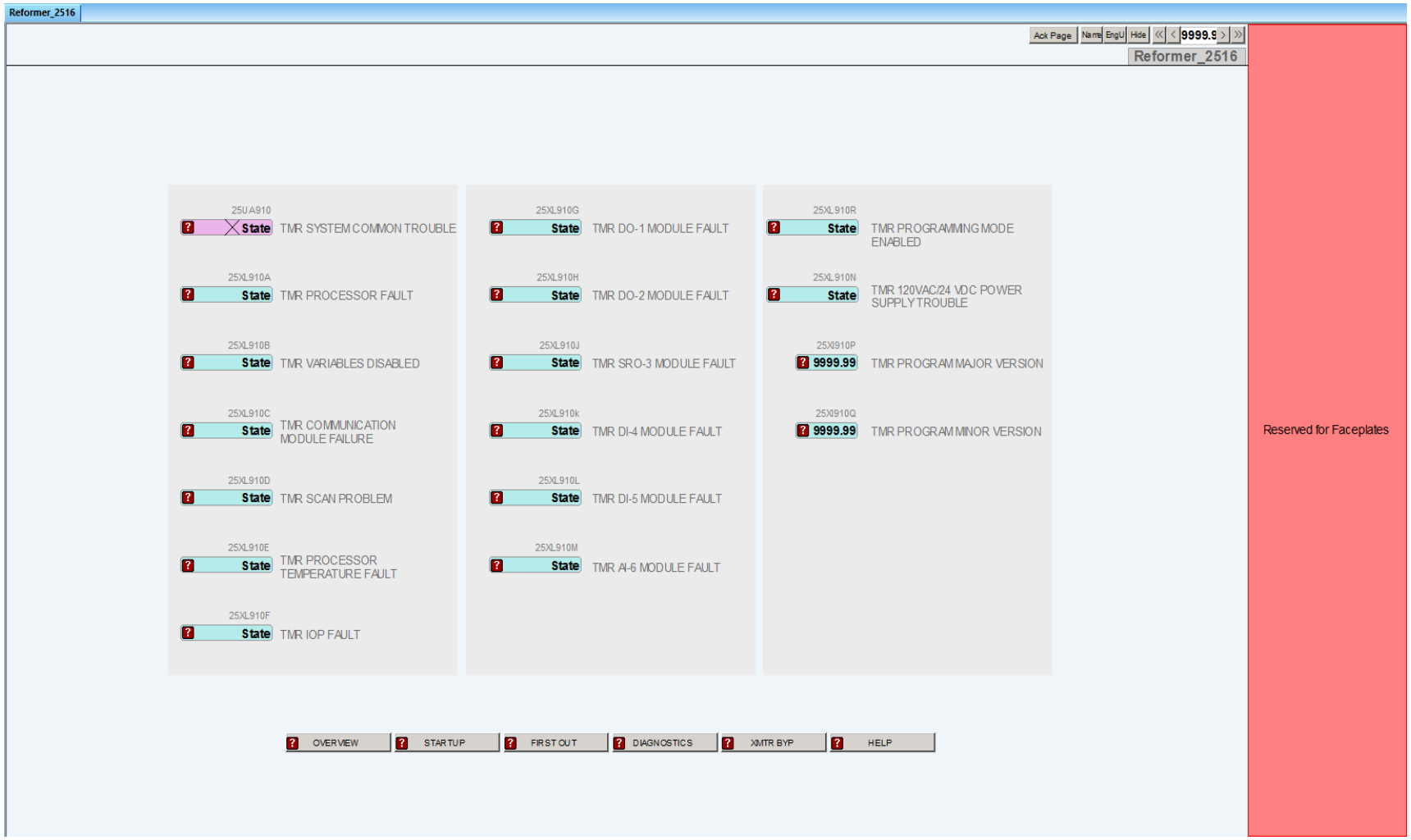

Reformer_2515
2515 LHU Feed Heater SIS Transmitter Bypass
ACK
SIL
FUEL GAS PRESSURE XMTR
Bypass On
Bypass Off
Status
25PT423
25HS423A State
25HS423B State
25HA423 State
LIQUID FEED FLOW XMTR
Bypass On
Bypass Off
Status
25FT103B
25HS103A State
25HS103B State
25HA103 State
HYDROGEN GAS FLOW XMTR
Bypass On
Bypass Off
Status
25FT102B
25HS102A State
25HS102B State
25HA102 State
25HA908A State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
25KI908A
THIS IS THE COUNTDOWN TIMER IN SECONDS
25HL908C State
IF ALARM CONDITION EXISTS, TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTICS
HELP
TMR SYSTEM
SIS Scripts
Process Widget Scripts
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2515
Ack Page
Name
EngU
Hide
9999.9
Reformer_2515
FUEL GAS PRESSURE XMTR
BYPASS ON
BYPASS OFF
STATUS
25PT423
25HS423A
State
25HS423B
State
25HA423
State
25HA908A
State
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE LOGIC SOLVER CABINET, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF FOR THE DESIRED TRANSMITTER(S).
LIQUID FEED FLOW XMTR
BYPASS ON
BYPASS OFF
STATUS
25FT103B
25HS103A
State
25HS103B
State
25HA103
State
25KI908A
9999.99
THIS IS THE COUNTDOWN TIMER IN SECONDS
HYDROGEN GAS FLOW XMTR
BYPASS ON
BYPASS OFF
STATUS
25FT102B
25HS102A
State
25HS102B
State
25HA102
State
25HL908C
State
IF ALARM CONDITION EXISTS, TRIP WILL OCCUR WHEN TRANSMITTER IS TAKEN OUT OF BYPASS.
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTICS
HELP
TMR SYSTEM
Reserved for Faceplates

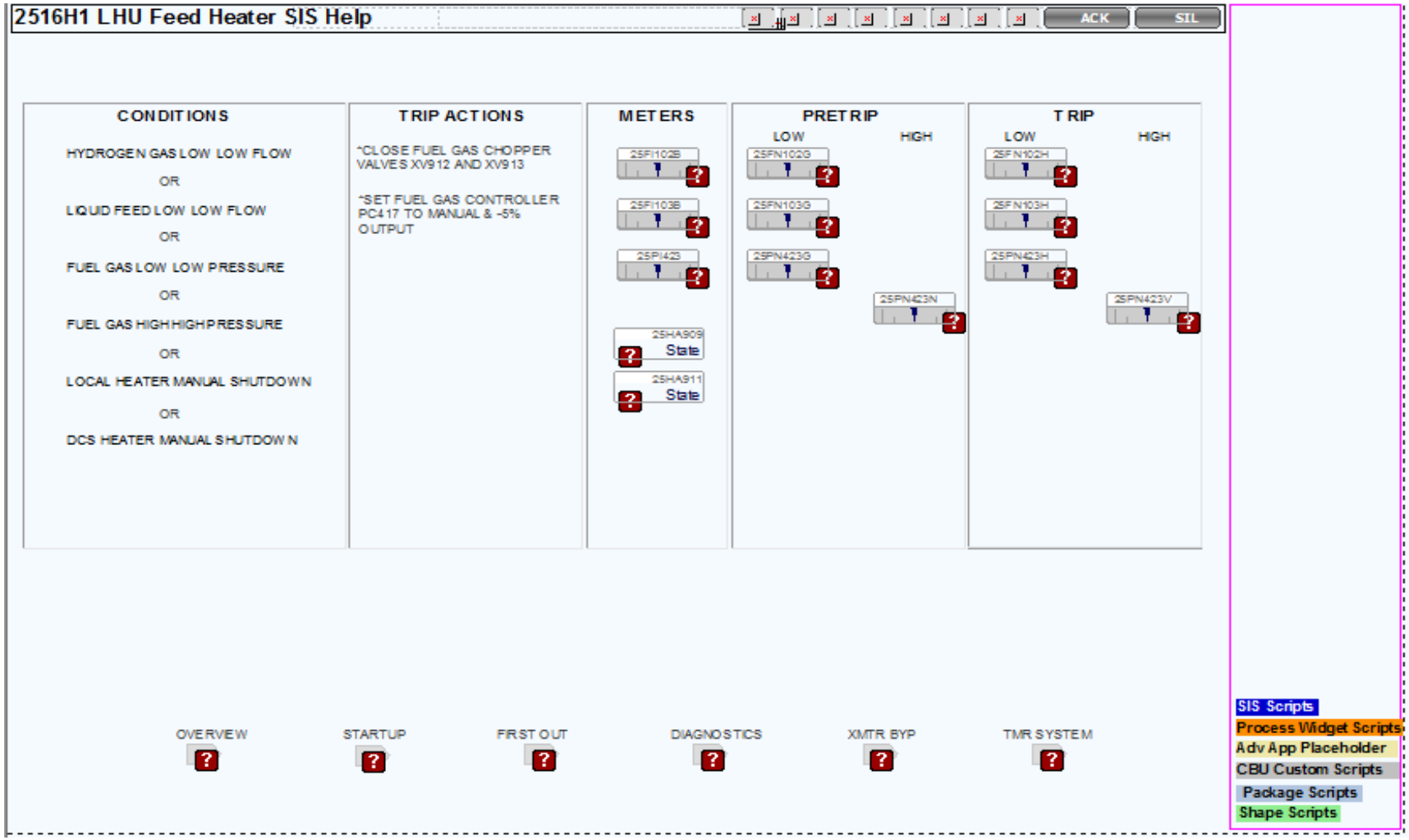
1.216 2516 LHU SIS TRICONEX HARDWARE ALARMS (Reformer_2516.htm)

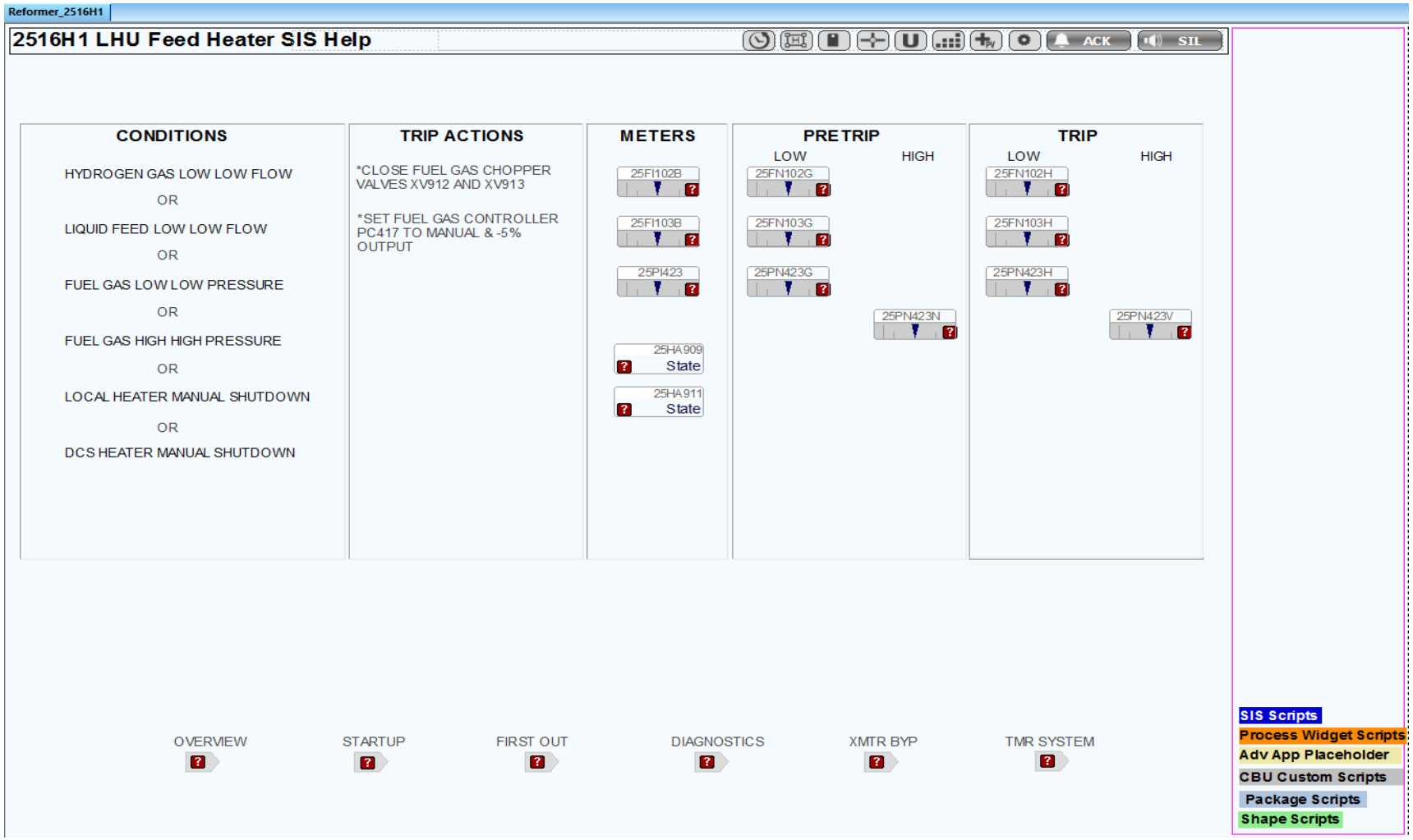


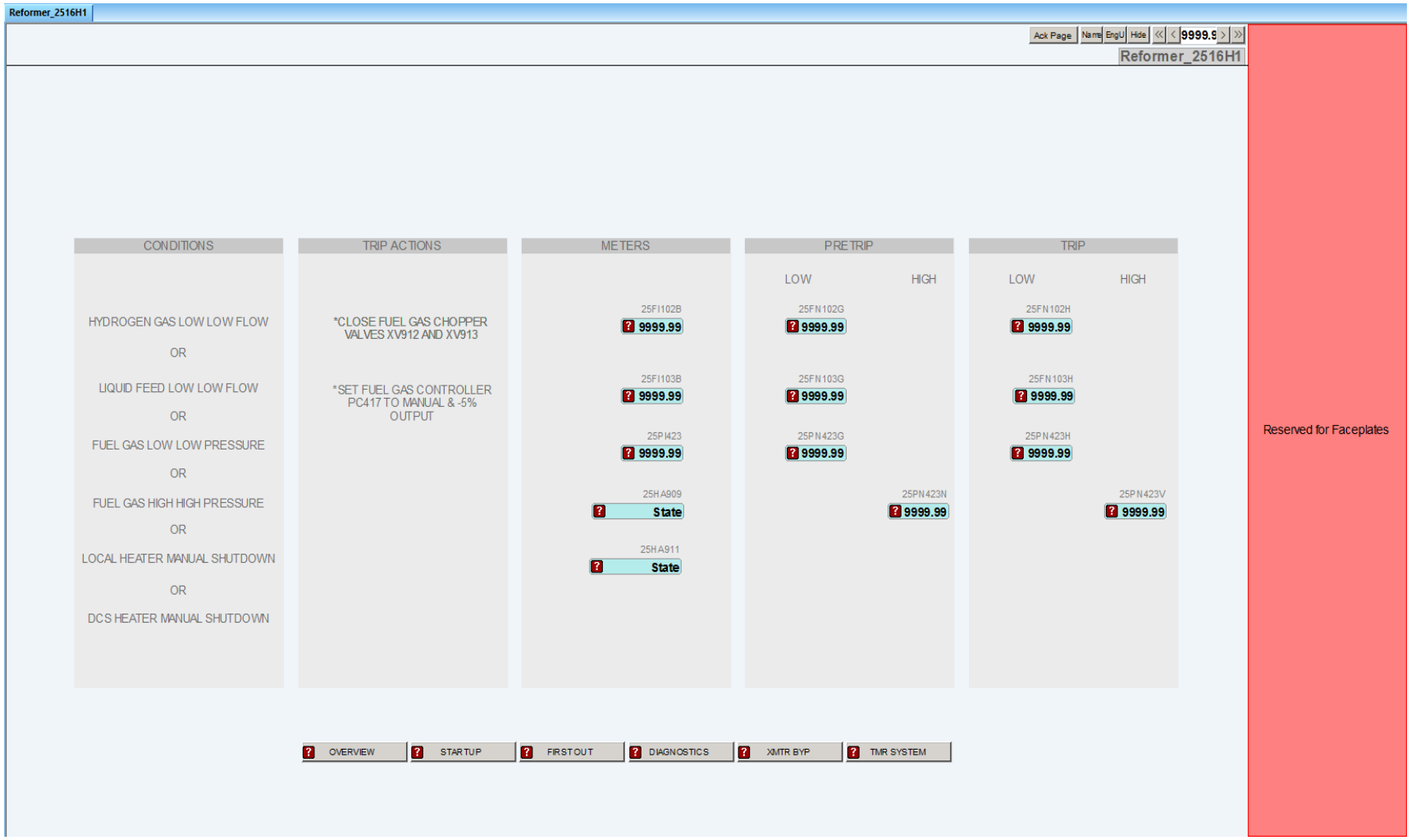

Reformer_2516
2516 LHU SIS TRICONEX Hardware Alarms
ACK
SIL
25UA910 State
TMR SYSTEM COMMON TROUBLE
25XL910A State
TMR PROCESSOR FAULT
25XL910B State
TMR VARIABLES DISABLED
25XL910C State
TMR COMMUNICATION MODULE FAILURE
25XL910D State
TMR SCAN PROBLEM
25XL910E State
TMR PROCESSOR TEMPERATURE FAULT
25XL910F State
TMR IOP FAULT
25XL910G State
TMR DO-1 MODULE FAULT
25XL910H State
TMR DO-2 MODULE FAULT
25XL910J State
TMR SRO-3 MODULE FAULT
25XL910k State
TMR DI-4 MODULE FAULT
25XL910L State
TMR DI-5 MODULE FAULT
25XL910M State
TMR AI-6 MODULE FAULT
25XL910R State
TMR PROGRAMMING MODE ENABLED
25XL910N State
TMR 120VAC/24 VDC POWER SUPPLY TROUBLE
25XI910P
TMR PROGRAM MAJOR VERSION
25XI910Q
TMR PROGRAM MINOR VERSION
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTICS
XMTR BYP
HELP
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2516
Ack Page
Name
EngU
Hide
9999.9
Reformer_2516
25UA910
State
TMR SYSTEM COMMON TROUBLE
25XL910A
State
TMR PROCESSOR FAULT
25XL910B
State
TMR VARIABLES DISABLED
25XL910C
State
TMR COMMUNICATION MODULE FAILURE
25XL910D
State
TMR SCAN PROBLEM
25XL910E
State
TMR PROCESSOR TEMPERATURE FAULT
25XL910F
State
TMR IOP FAULT
25XL910G
State
TMR DO-1 MODULE FAULT
25XL910H
State
TMR DO-2 MODULE FAULT
25XL910J
State
TMR SRO-3 MODULE FAULT
25XL910k
State
TMR DI-4 MODULE FAULT
25XL910L
State
TMR DI-5 MODULE FAULT
25XL910M
State
TMR AI-6 MODULE FAULT
25XL910R
State
TMR PROGRAMMING MODE ENABLED
25XL910N
State
TMR 120VAC/24 VDC POWER SUPPLY TROUBLE
25XI910P
9999.99
TMR PROGRAM MAJOR VERSION
25XI910Q
9999.99
TMR PROGRAM MINOR VERSION
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTICS
XMTR BYP
HELP
Reserved for Faceplates

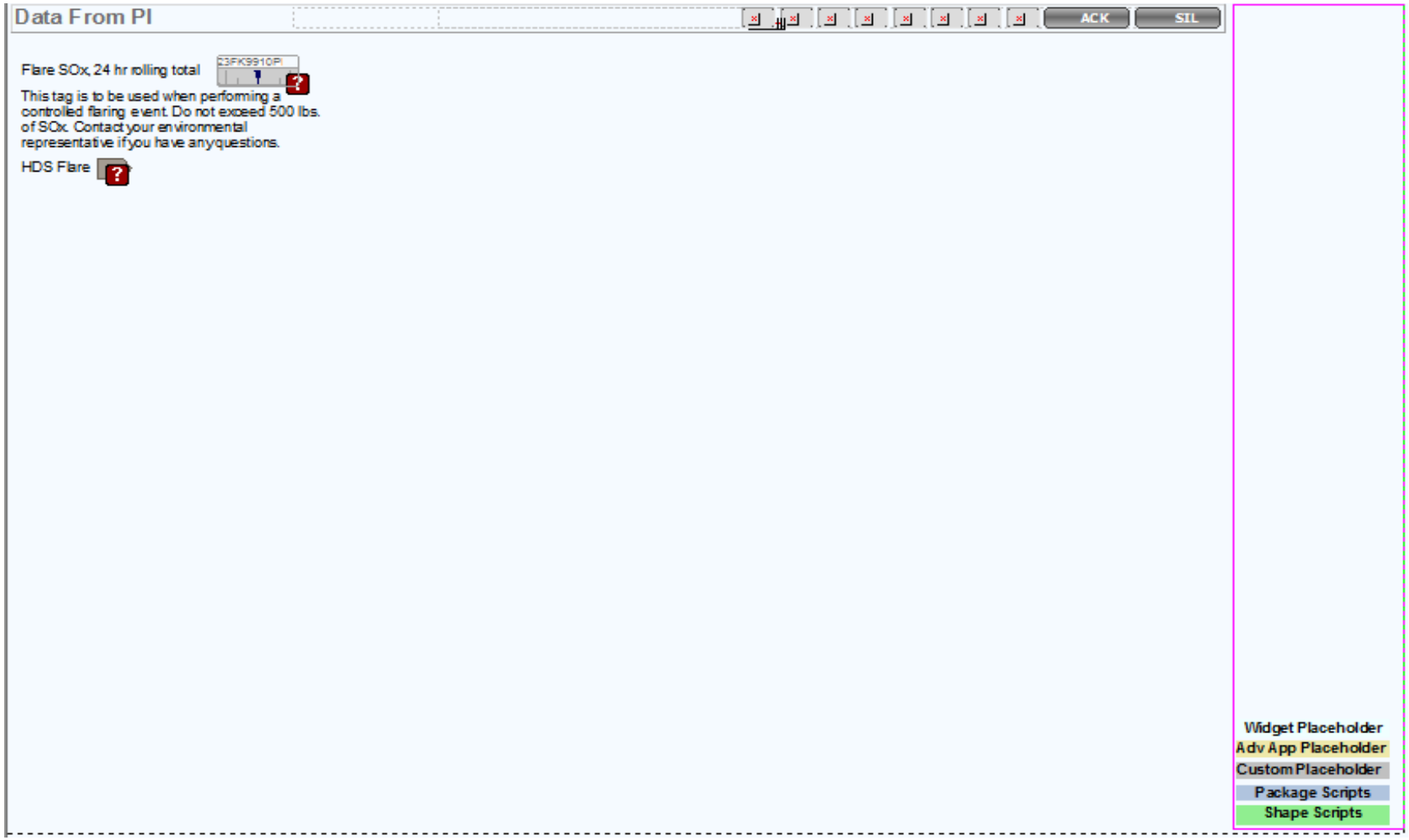
1.217 2516H1 LHU FEED HEATER SIS HELP (Reformer_2516H1.htm)

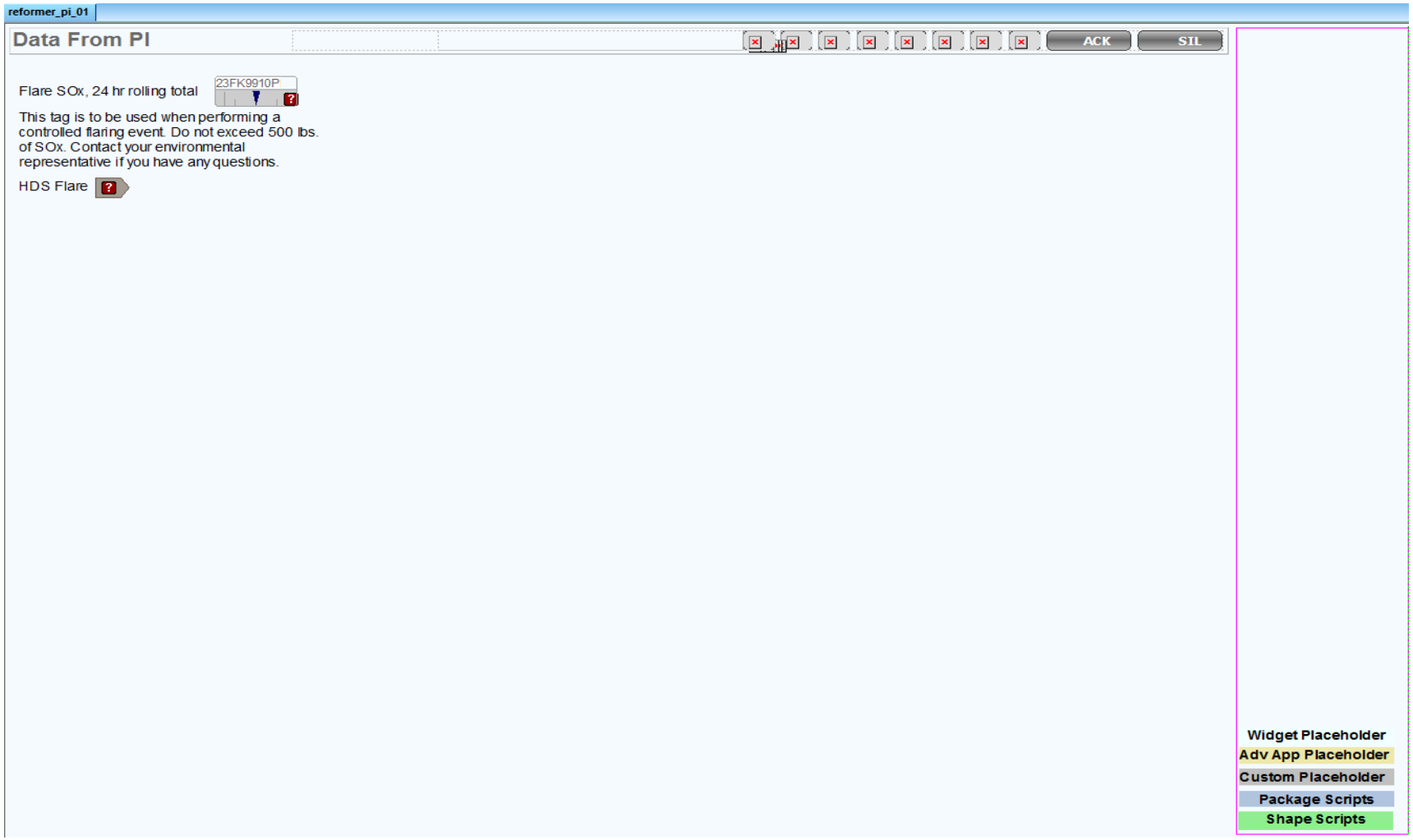


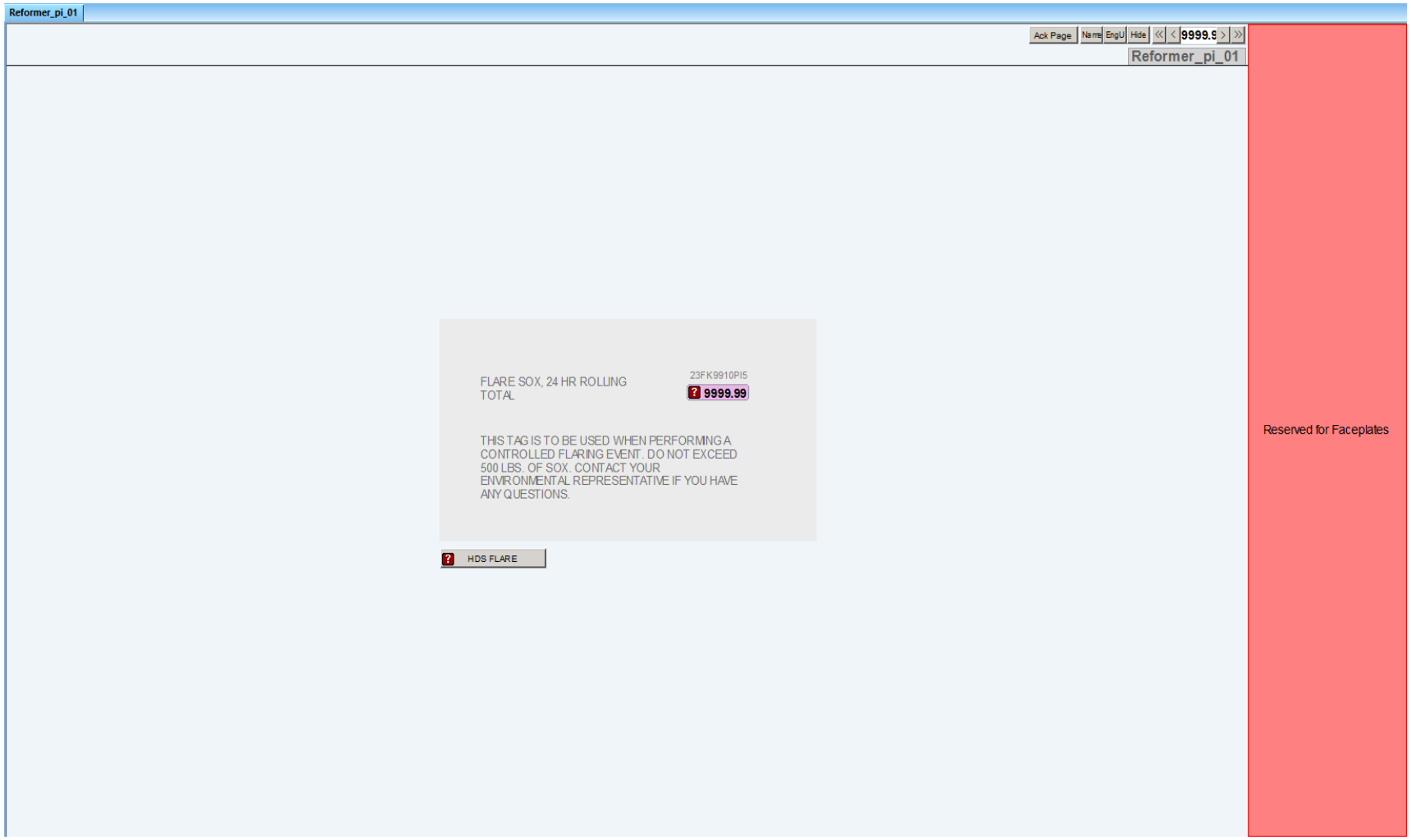

Reformer_2516H1
2516H1 LHU Feed Heater SIS Help
ACK
SIL
CONDITIONS
HYDROGEN GAS LOW LOW FLOW
OR
LIQUID FEED LOW LOW FLOW
OR
FUEL GAS LOW LOW PRESSURE
OR
FUEL GAS HIGH HIGH PRESSURE
OR
LOCAL HEATER MANUAL SHUTDOWN
OR
DCS HEATER MANUAL SHUTDOWN
TRIP ACTIONS
*CLOSE FUEL GAS CHOPPER VALVES XV912 AND XV913
*SET FUEL GAS CONTROLLER PC417 TO MANUAL & -5% OUTPUT
METERS
25FI102B
25FI103B
25PI423
25HA909
State
25HA911
State
PRETRIP
LOW
HIGH
25FN102G
25FN103G
25PN423G
25PN423N
TRIP
LOW
HIGH
25FN102H
25FN103H
25PN423H
25PN423V
OVERVIEW
STARTUP
FIRST OUT
DIAGNOSTICS
XMTR BYP
TMR SYSTEM
SIS Scripts
Process Widget Scripts
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2516H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2516H1
CONDITIONS
HYDROGEN GAS LOW LOW FLOW
OR
LIQUID FEED LOW LOW FLOW
OR
FUEL GAS LOW LOW PRESSURE
OR
FUEL GAS HIGH HIGH PRESSURE
OR
LOCAL HEATER MANUAL SHUTDOWN
OR
DCS HEATER MANUAL SHUTDOWN
TRIP ACTIONS
*CLOSE FUEL GAS CHOPPER VALVES XV912 AND XV913
*SET FUEL GAS CONTROLLER PC417 TO MANUAL & -5% OUTPUT
METERS
25FI102B
9999.99
25FI103B
9999.99
25PI423
9999.99
25HA909
State
25HA911
State
PRETRIP
LOW
HIGH
25FN102G
9999.99
25FN103G
9999.99
25PN423G
9999.99
25PN423N
9999.99
TRIP
LOW
HIGH
25FN102H
9999.99
25FN103H
9999.99
25PN423H
9999.99
25PN423V
9999.99
OVERVIEW
STARTUP
FIRSTOUT
DIAGNOSTICS
XMTR BYP
TMR SYSTEM
Reserved for Faceplates

1.218 DATA FROM PI (Reformer_pi_01.htm)

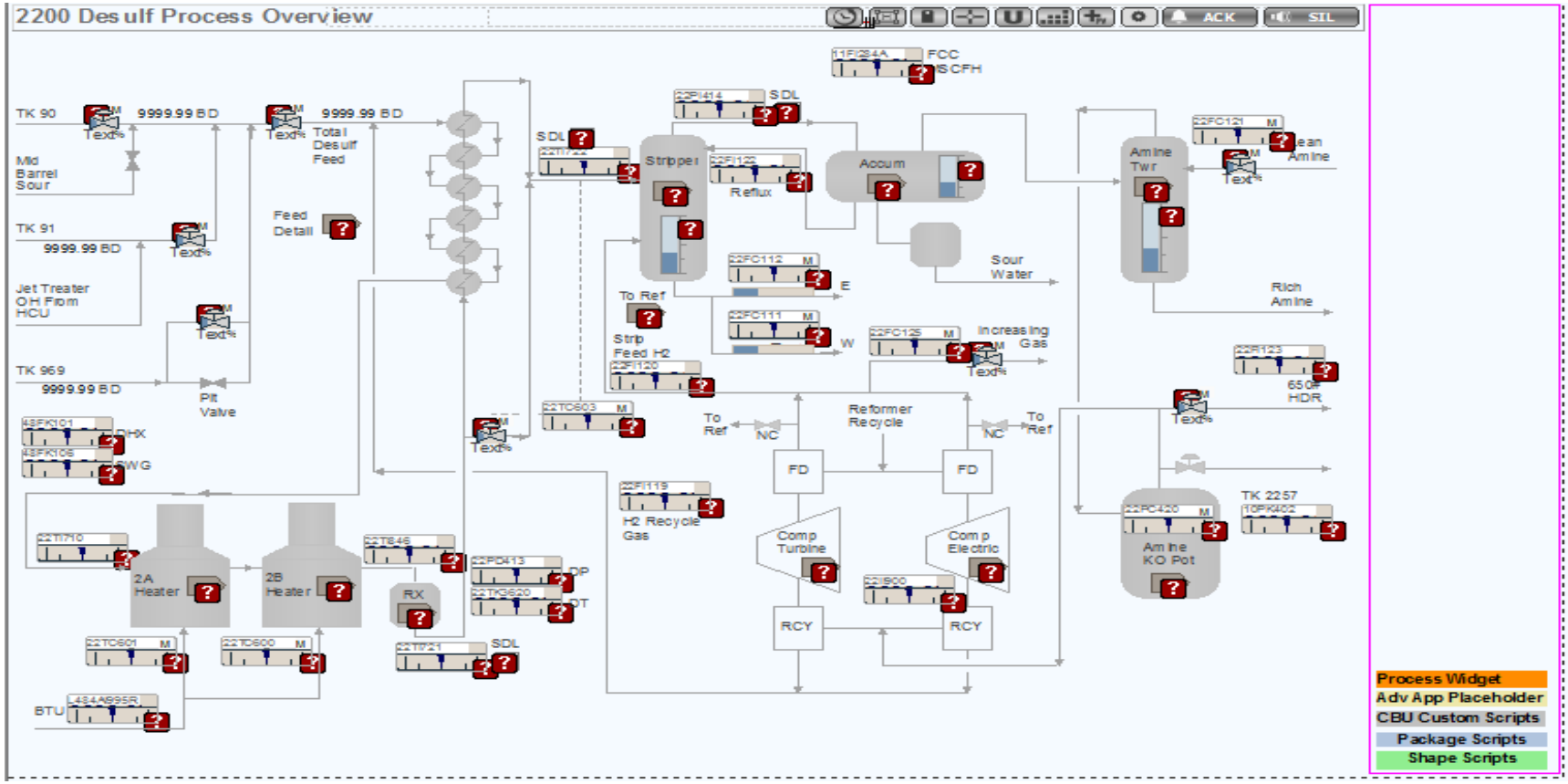


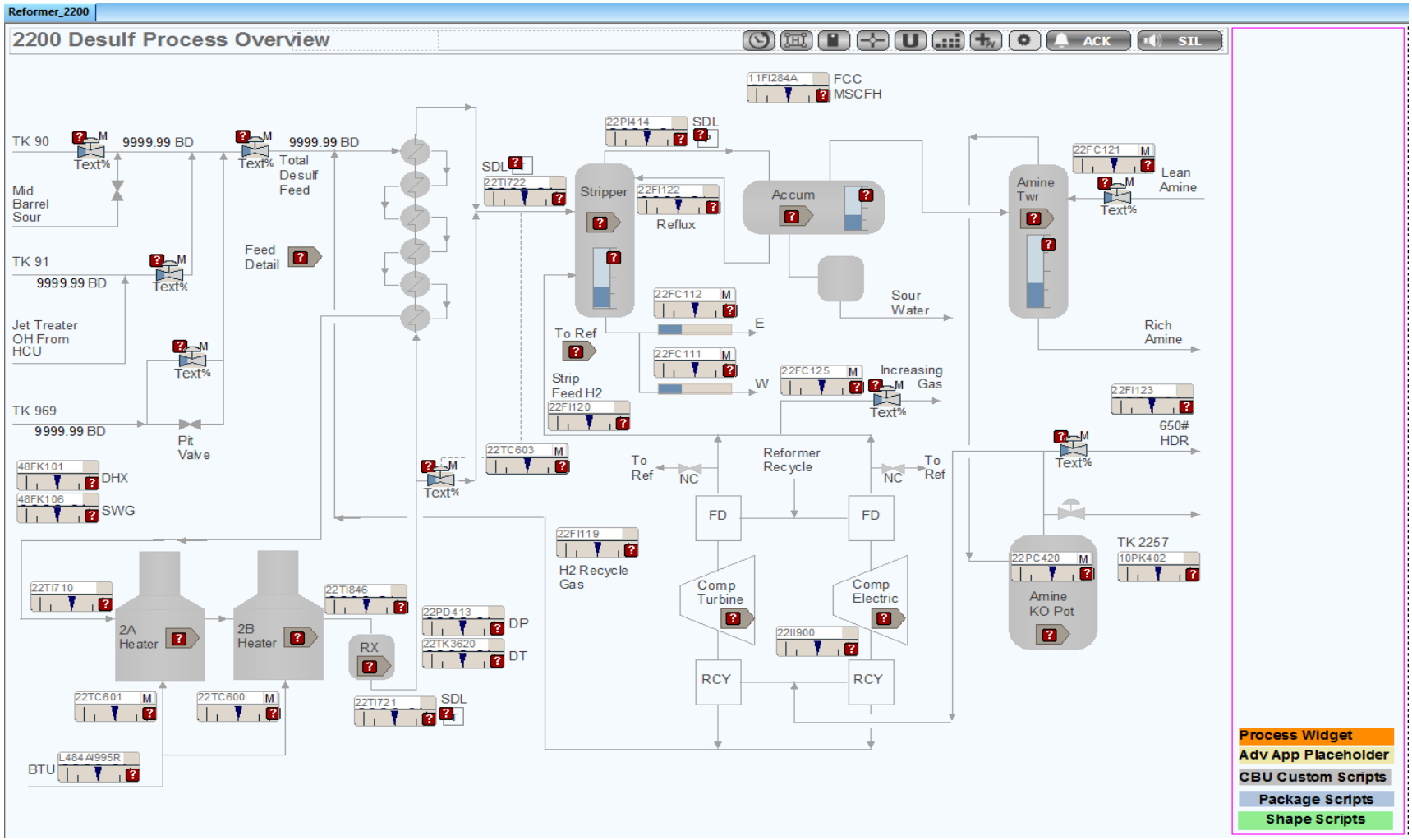

reformer_pi_01
Data From PI
ACK
SIL
Flare SOx, 24 hr rolling total
23FK9910P
This tag is to be used when performing a controlled flaring event. Do not exceed 500 lbs. of SOx. Contact your environmental representative if you have any questions.
HDS Flare
Widget Placeholder
Adv App Placeholder
Custom Placeholder
Package Scripts
Shape Scripts

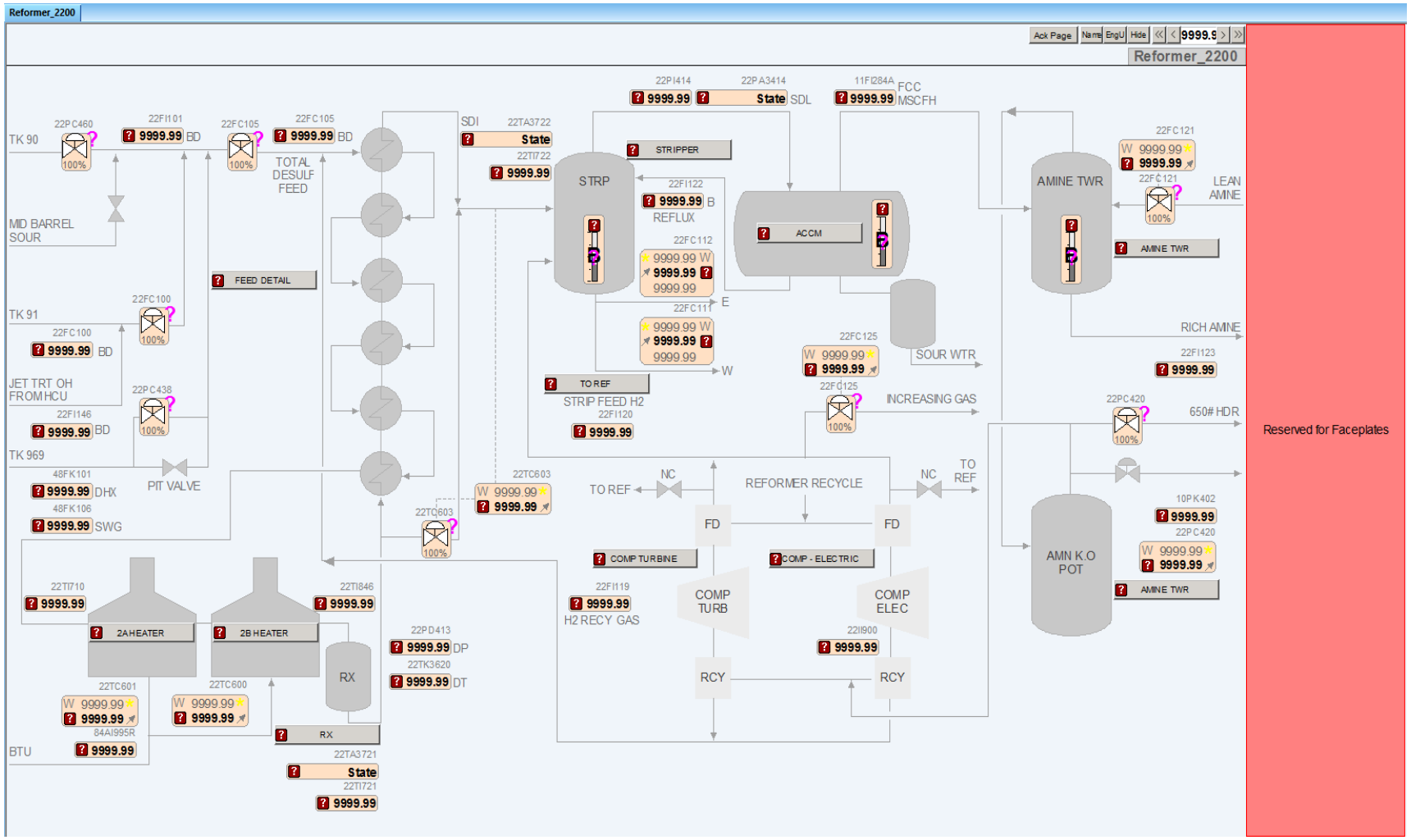

Reformer_pi_01
Ack Page
Name
EngU
Hide
9999.9
Reformer_pi_01
FLARE SOX, 24 HR ROLLING TOTAL
23FK9910PI5
9999.99
THIS TAG IS TO BE USED WHEN PERFORMING A CONTROLLED FLARING EVENT. DO NOT EXCEED 500 LBS. OF SOX. CONTACT YOUR ENVIRONMENTAL REPRESENTATIVE IF YOU HAVE ANY QUESTIONS.
HDS FLARE
Reserved for Faceplates

2. Reformer 2

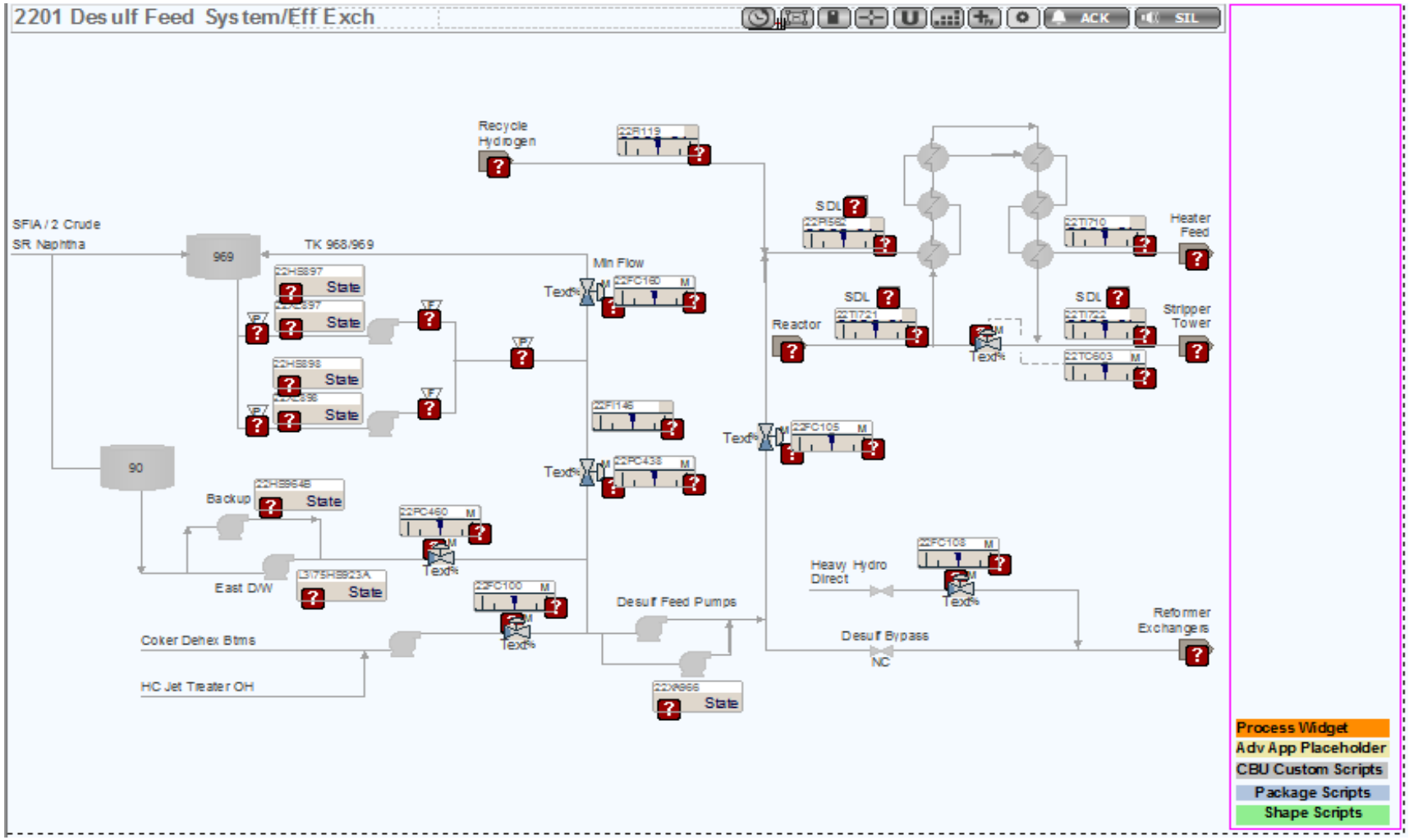
2.1 2200 Desulf Process Overview (Reformer_2200.htm)

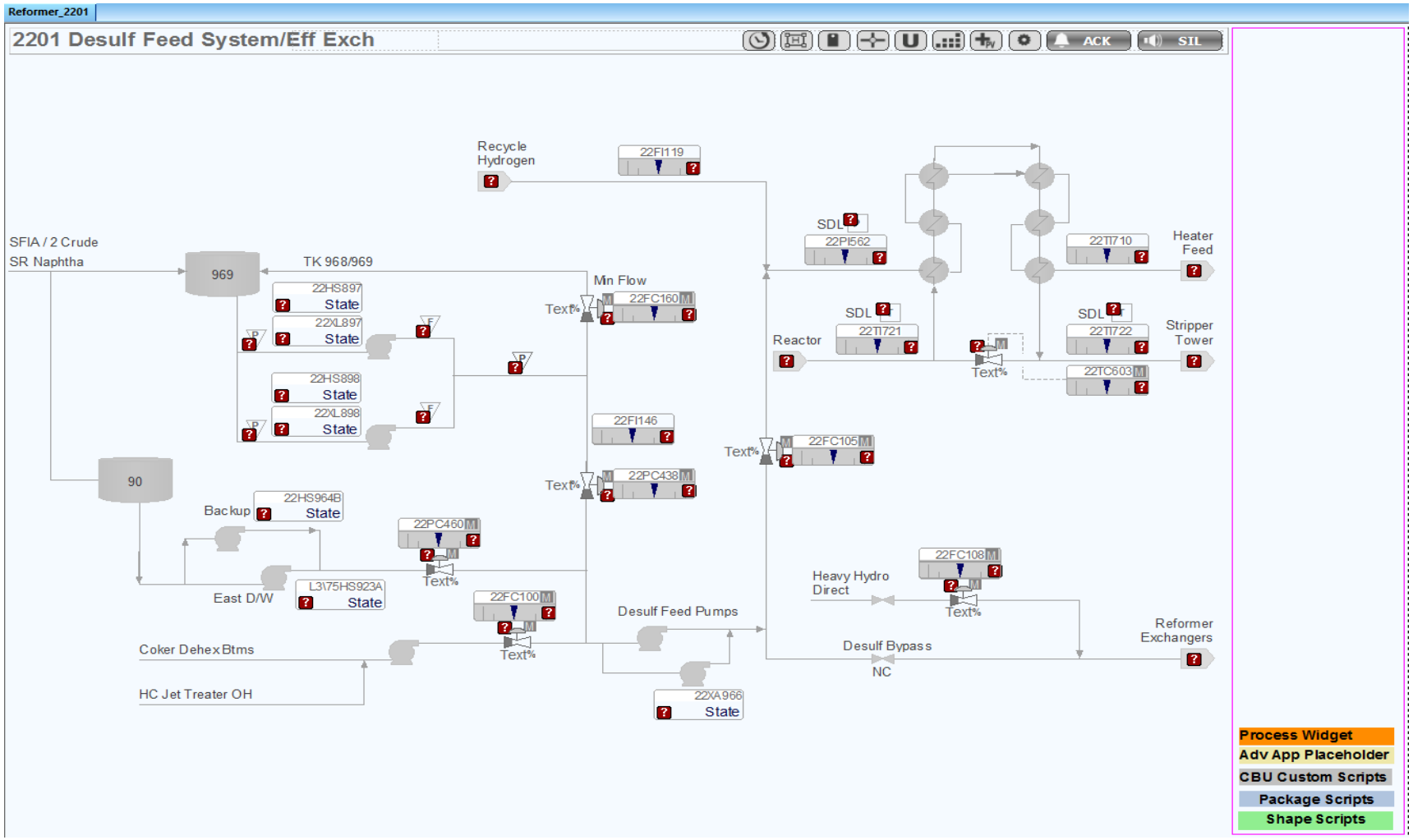


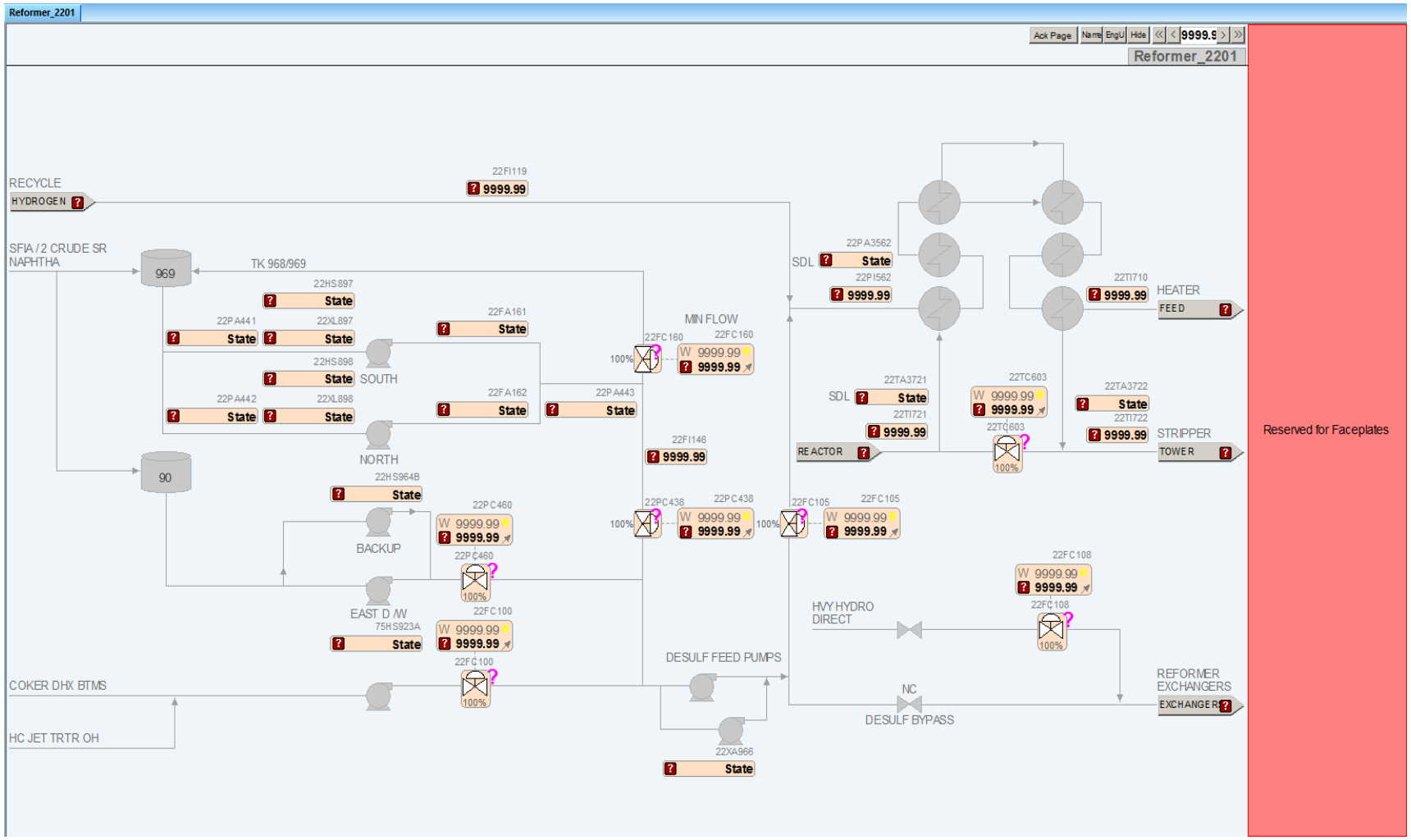

Reformer_2200
2200 Desulf Process Overview
ACK
SIL
11FI284A
FCC
MSCFH
TK 90
9999.99 BD
Text%
Mid
Barrel
Sour
TK 91
9999.99 BD
Jet Treater
OH From
HCU
TK 969
9999.99 BD
Pit
Valve
48FK101
DHX
48FK106
SWG
Total
Desulf
Feed
Feed
Detail
22PI414
SDL
22TI722
Stripper
22FI122
Reflux
Accum
Sour
Water
22FC112
E
22FC111
W
To Ref
Strip
Feed H2
22FI120
22TC603
To
Ref
NC
Reformer
Recycle
NC
To
Ref
22FC125
Increasing
Gas
Amine
Twr
22FC121
Lean
Amine
Rich
Amine
22FI123
650#
HDR
22TI710
2A
Heater
2B
Heater
22TI846
RX
22PD413
DP
22TK3620
DT
22TC601
22TC600
22TI721
SDL
BTU
L484AI995R
22FI119
H2 Recycle
Gas
FD
FD
Comp
Turbine
Comp
Electric
22II900
RCY
RCY
22PC420
Amine
KO Pot
TK 2257
10PK402
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2200
Ack Page
Name
EngU
Hide
Reformer_2200
22PI414
9999.99
22PA3414
State
SDL
11FI284A
9999.99
FCC
MSCFH
TK 90
22PC460
100%
22FI101
9999.99
BD
22FC105
100%
22FC105
9999.99
BD
TOTAL
DESULF
FEED
SDI
22TA3722
State
22TI722
9999.99
STRIPPER
STRP
22FI122
9999.99
B
REFLUX
ACCM
AMINE TWR
22FC121
W 9999.99
9999.99
22FC121
100%
LEAN
AMINE
AMINE TWR
MID BARREL
SOUR
FEED DETAIL
22FC112
9999.99 W
9999.99
9999.99
E
22FC111
9999.99 W
9999.99
9999.99
W
TK 91
22FC100
100%
22FC100
9999.99
BD
22FC125
W 9999.99
9999.99
SOUR WTR
RICH AMINE
22FI123
9999.99
JET TRT OH
FROM HCU
22PC438
100%
22FI146
9999.99
BD
TO REF
STRIP FEED H2
22FI120
9999.99
22FC125
100%
INCREASING GAS
22PC420
100%
650# HDR
TK 969
48FK101
9999.99
DHX
PIT VALVE
48FK106
9999.99
SWG
22TC603
W 9999.99
9999.99
22TC603
100%
TO REF
NC
REFORMER RECYCLE
NC
TO
REF
FD
FD
10PK402
9999.99
22PC420
W 9999.99
9999.99
AMINE TWR
AMN K.O
POT
COMP TURBINE
COMP - ELECTRIC
22FI119
9999.99
H2 RECY GAS
COMP
TURB
COMP
ELEC
22II900
9999.99
22TI710
9999.99
22TI846
9999.99
2A HEATER
2B HEATER
RX
22PD413
9999.99
DP
22TK3620
9999.99
DT
RCY
RCY
22TC601
W 9999.99
9999.99
22TC600
W 9999.99
9999.99
84AI995R
9999.99
BTU
RX
22TA3721
State
22TI721
9999.99
Reserved for Faceplates

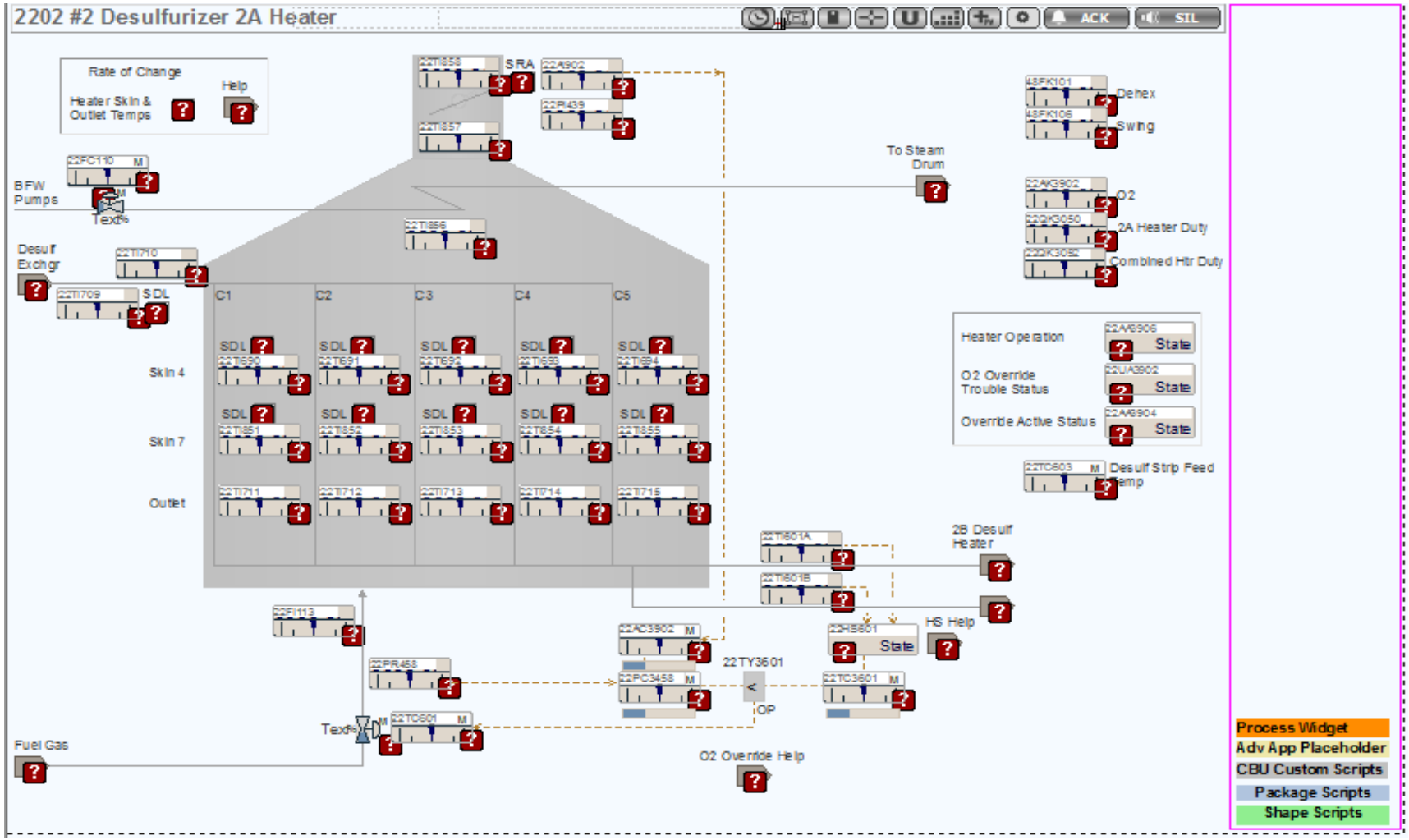
2.2 2201 Desulf Feed System/Eff Exch (Reformer_2201.htm)



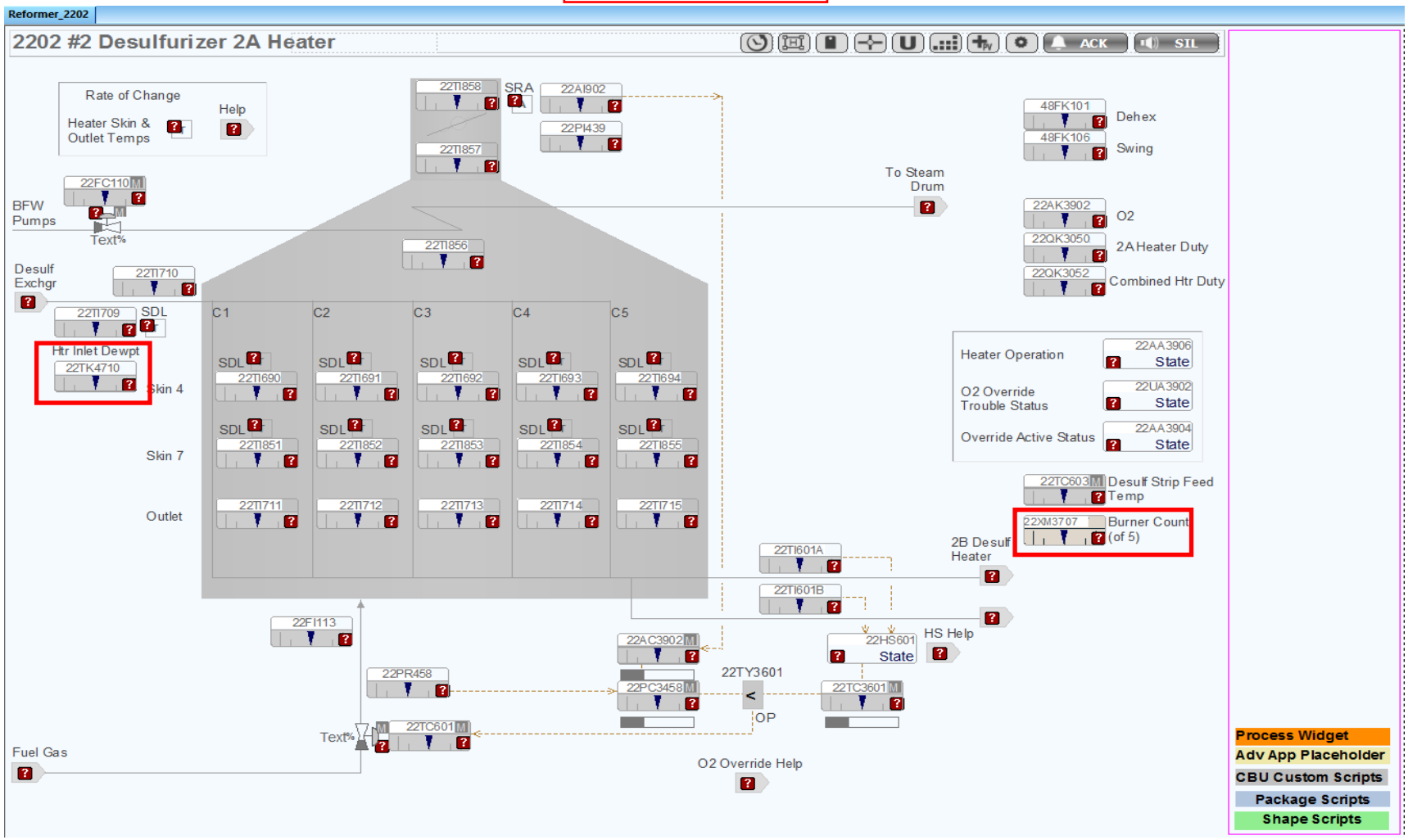

Reformer_2201
2201 Desulf Feed System/Eff Exch
ACK
SIL
Recycle Hydrogen
22FI119
SFIA / 2 Crude
SR Naphtha
969
TK 968/969
22HS897
State
22XL897
State
22HS898
State
22XL898
State
Min Flow
Text%
22FC160
22FI146
22PC438
90
Backup
22HS964B
State
22PC460
East D/W
L3\75HS923A
State
22FC100
Coker Dehex Btms
HC Jet Treater OH
Desulf Feed Pumps
22XA966
State
SDL
22PI562
22TI710
Heater Feed
Reactor
22TI721
22TI722
Stripper Tower
22TC603
22FC105
22FC108
Heavy Hydro Direct
Desulf Bypass
NC
Reformer Exchangers
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts

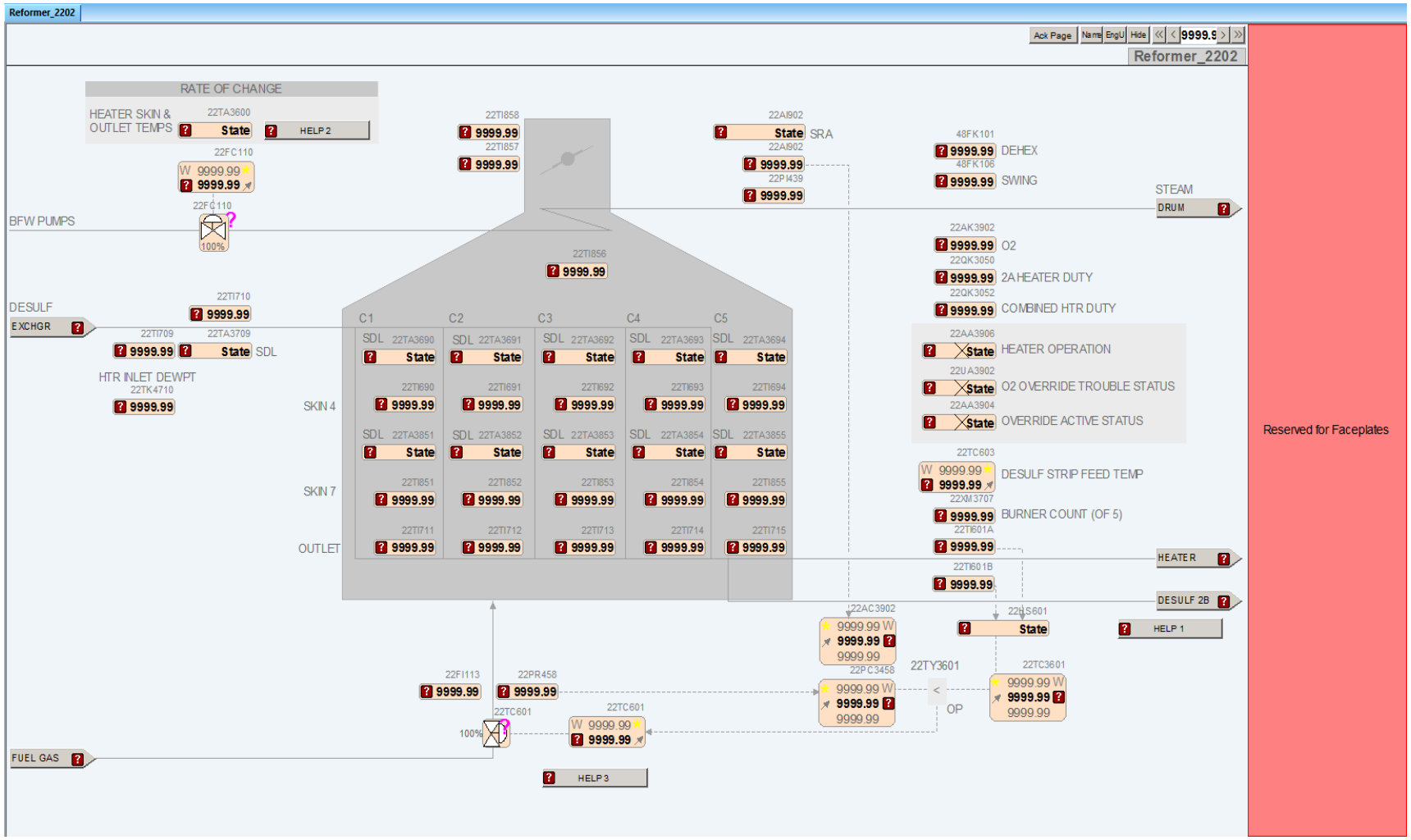

Reformer_2201
Ack Page
Name
EngU
Hide
Reformer_2201
RECYCLE
HYDROGEN
22FI119
9999.99
SFIA / 2 CRUDE SR
NAPHTHA
969
TK 968/969
22HS897
State
22PA441
State
22XL897
State
22FA161
State
MIN FLOW
22FC160
22FC160
W 9999.99
9999.99
100%
22HS898
State
SOUTH
22PA442
State
22XL898
State
22FA162
State
22PA443
State
NORTH
22FI146
9999.99
90
22HS964B
State
BACKUP
22PC460
W 9999.99
9999.99
22PC460
100%
22PC438
22PC438
W 9999.99
9999.99
100%
22FC105
22FC105
W 9999.99
9999.99
100%
EAST D /W
75HS923A
State
22FC100
W 9999.99
9999.99
22FC100
100%
COKER DHX BTMS
HC JET TRTR OH
DESULF FEED PUMPS
22XA966
State
SDL
State
22PA3562
22PI562
9999.99
22TI710
9999.99
HEATER
FEED
SDL
State
22TA3721
22TI721
9999.99
REACTOR
22TC603
W 9999.99
9999.99
22TC603
100%
22TA3722
State
22TI722
9999.99
STRIPPER
TOWER
22FC108
W 9999.99
9999.99
HVY HYDRO
DIRECT
22FC108
100%
NC
DESULF BYPASS
REFORMER
EXCHANGERS
EXCHANGER
Reserved for Faceplates

2.3 2202 #2 Desulfurizer 2A Heater (Reformer_2202.htm)

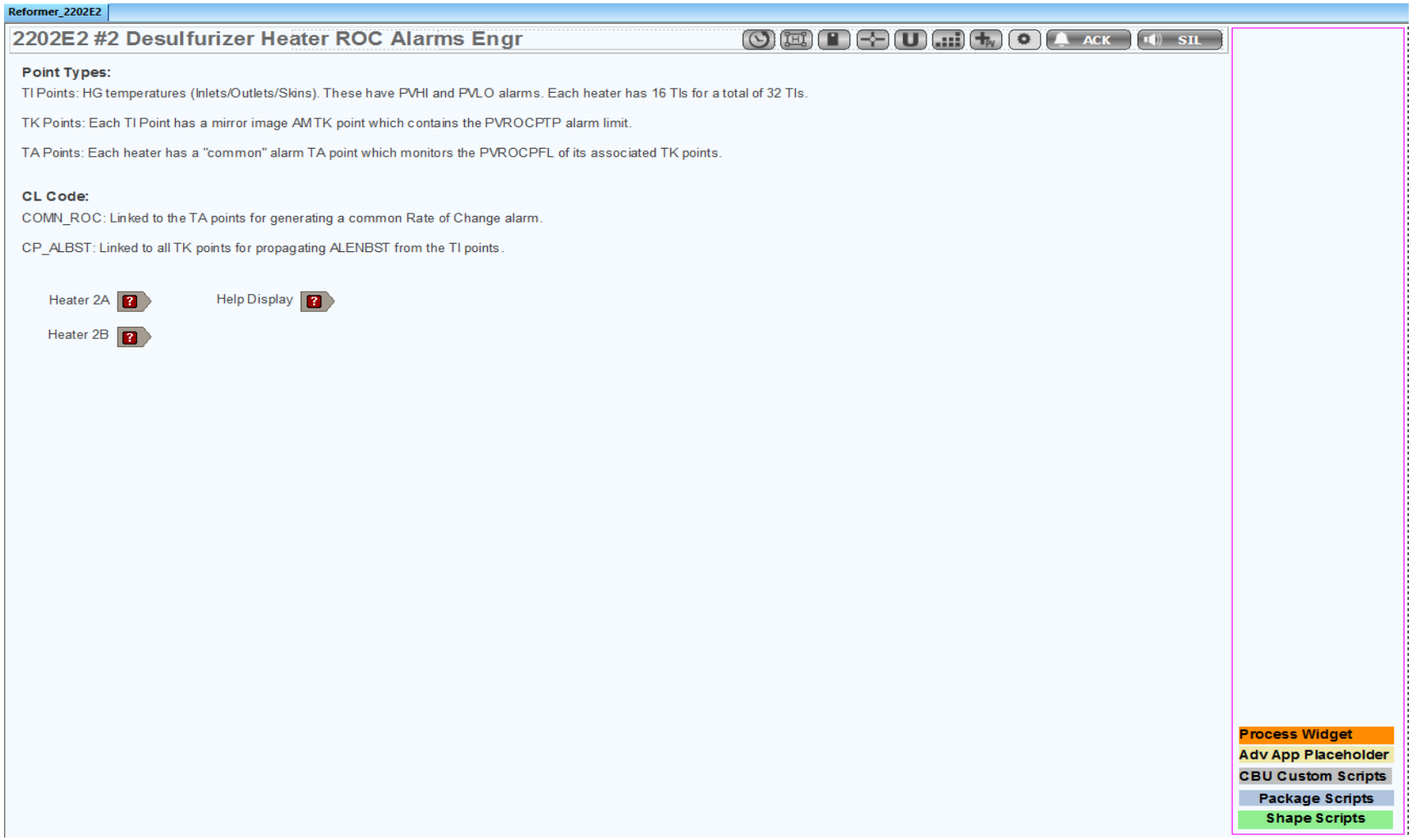


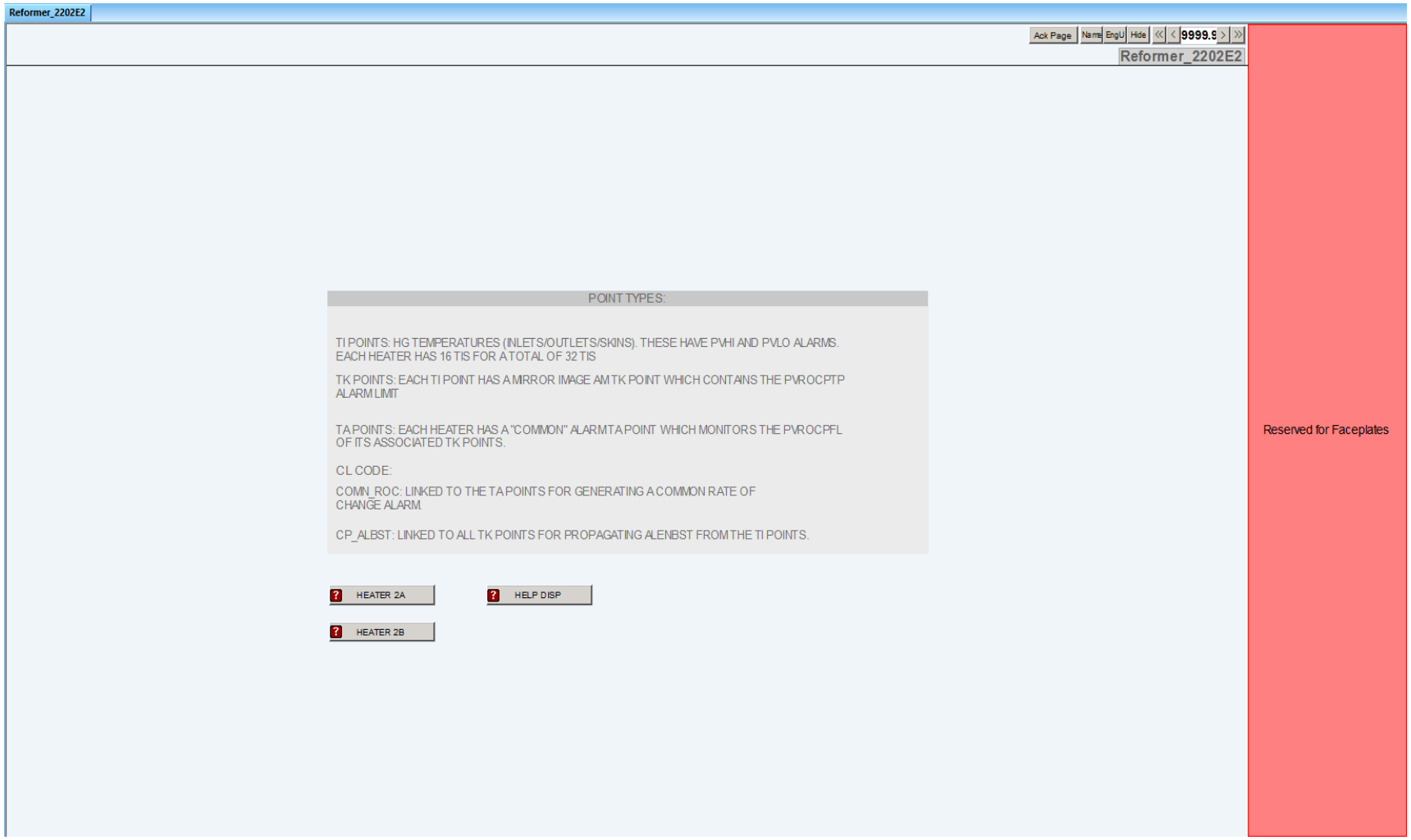
Shaped & text added



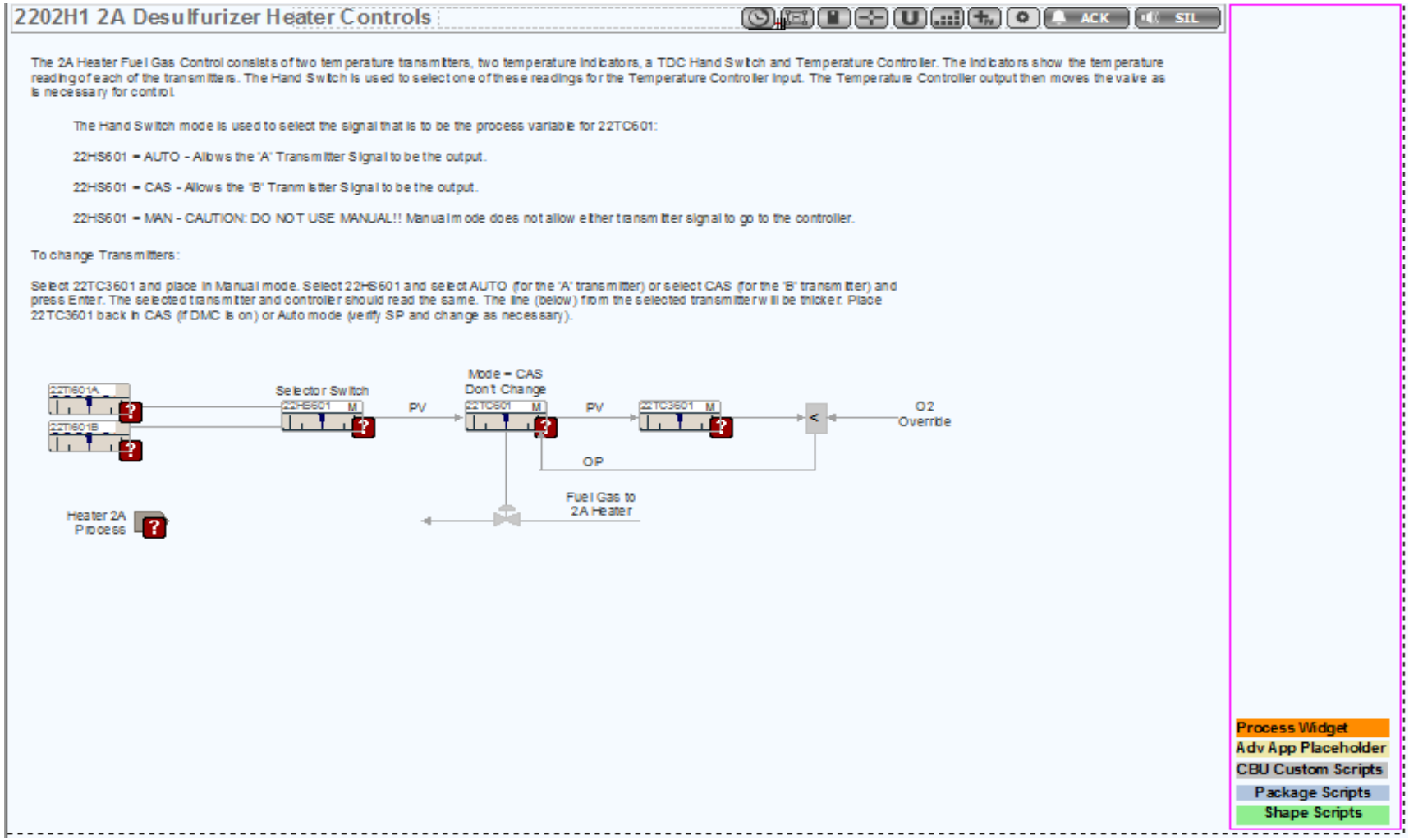

Reformer_2202
Ack Page
Name
EngU
Hide
Reformer_2202
RATE OF CHANGE
HEATER SKIN & OUTLET TEMPS
22TA3600
State
HELP 2
22FC110
9999.99
9999.99
22FC110
100%
BFW PUMPS
DESULF EXCHGR
22TI710
9999.99
22TI709
9999.99
22TA3709
State
SDL
HTR INLET DEWPT
22TK4710
9999.99
22TI858
9999.99
22TI857
9999.99
22TI856
9999.99
22AI902
State
SRA
22AI902
9999.99
22PI439
9999.99
48FK101
9999.99
DEHEX
48FK106
9999.99
SWING
STEAM DRUM
22AK3902
9999.99
O2
22QK3050
9999.99
2A HEATER DUTY
22QK3052
9999.99
COMBINED HTR DUTY
22AA3906
State
HEATER OPERATION
22UA3902
State
O2 OVERRIDE TROUBLE STATUS
22AA3904
State
OVERRIDE ACTIVE STATUS
C1
C2
C3
C4
C5
SDL
22TA3690
22TA3691
22TA3692
22TA3693
22TA3694
SKIN 4
22TI690
22TI691
22TI692
22TI693
22TI694
22TA3851
22TA3852
22TA3853
22TA3854
22TA3855
SKIN 7
22TI851
22TI852
22TI853
22TI854
22TI855
OUTLET
22TI711
22TI712
22TI713
22TI714
22TI715
22TC603
9999.99
9999.99
DESULF STRIP FEED TEMP
22XM3707
9999.99
BURNER COUNT (OF 5)
22TI601A
9999.99
22TI601B
9999.99
HEATER
DESULF 2B
22AC3902
9999.99
9999.99
9999.99
22HS601
State
HELP 1
22FI113
9999.99
22PR458
9999.99
22PC3458
9999.99
9999.99
9999.99
22TY3601
OP
22TC3601
9999.99
9999.99
9999.99
22TC601
100%
22TC601
9999.99
9999.99
FUEL GAS
HELP 3
Reserved for Faceplates

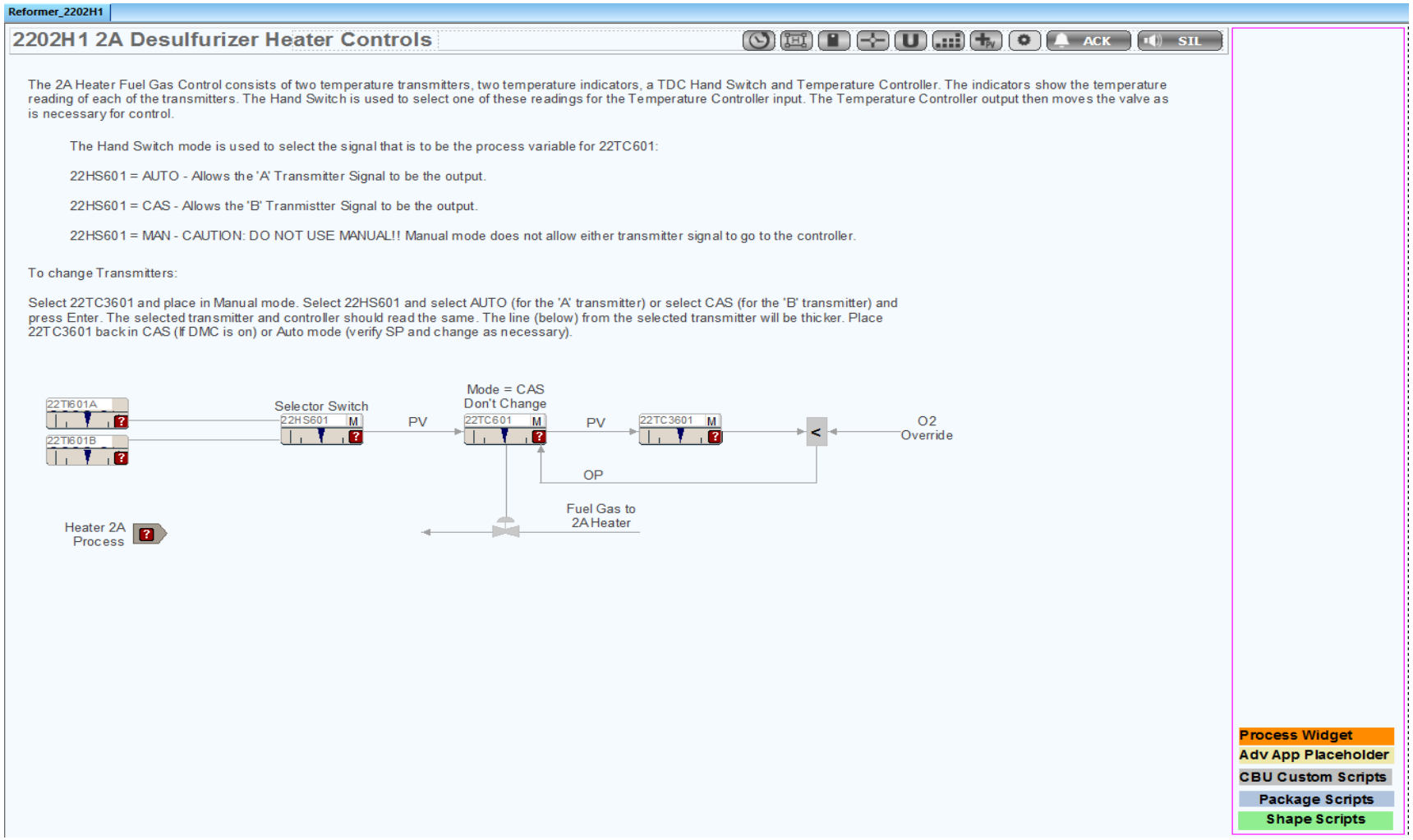
2.4 2202E2 #2 Desulfurizer Heater ROC Alarms Engr (Reformer_2202E2.htm)

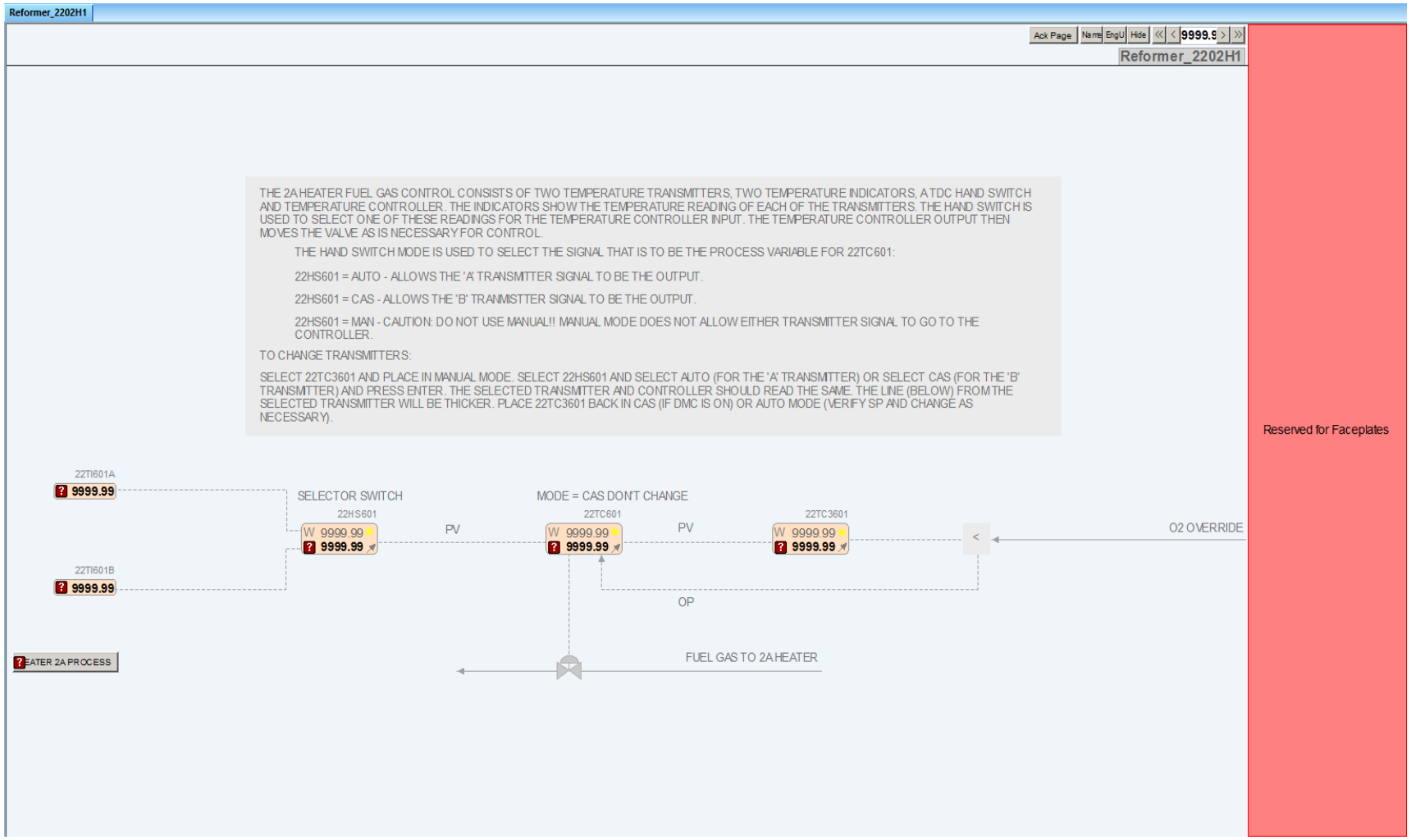

Reformer_2202E2
2202E2 #2 Desulfurizer Heater ROC Alarms Engr
ACK
SIL
Point Types:
TI Points: HG temperatures (Inlets/Outlets/Skins). These have PVHI and PVLO alarms. Each heater has 16 TIs for a total of 32 TIs.
TK Points: Each TI Point has a mirror image AMTK point which contains the PVROCPTP alarm limit.
TA Points: Each heater has a "common" alarm TA point which monitors the PVROCPFL of its associated TK points.
CL Code:
COMN_ROC: Linked to the TA points for generating a common Rate of Change alarm.
CP_ALBST: Linked to all TK points for propagating ALENBST from the TI points.
Heater 2A
Help Display
Heater 2B
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2202E2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2202E2
POINT TYPES:
TI POINTS: HG TEMPERATURES (INLETS/OUTLETS/SKINS). THESE HAVE PVHI AND PVLO ALARMS. EACH HEATER HAS 16 TIS FOR A TOTAL OF 32 TIS
TK POINTS: EACH TI POINT HAS A MIRROR IMAGE AM TK POINT WHICH CONTAINS THE PVROCPTP ALARM LIMIT
TA POINTS: EACH HEATER HAS A "COMMON" ALARM TA POINT WHICH MONITORS THE PVROCPFL OF ITS ASSOCIATED TK POINTS.
CL CODE:
COMN_ROC: LINKED TO THE TA POINTS FOR GENERATING A COMMON RATE OF CHANGE ALARM.
CP_ALBST: LINKED TO ALL TK POINTS FOR PROPAGATING ALENBST FROM THE TI POINTS.
HEATER 2A
HELP DISP
HEATER 2B
Reserved for Faceplates

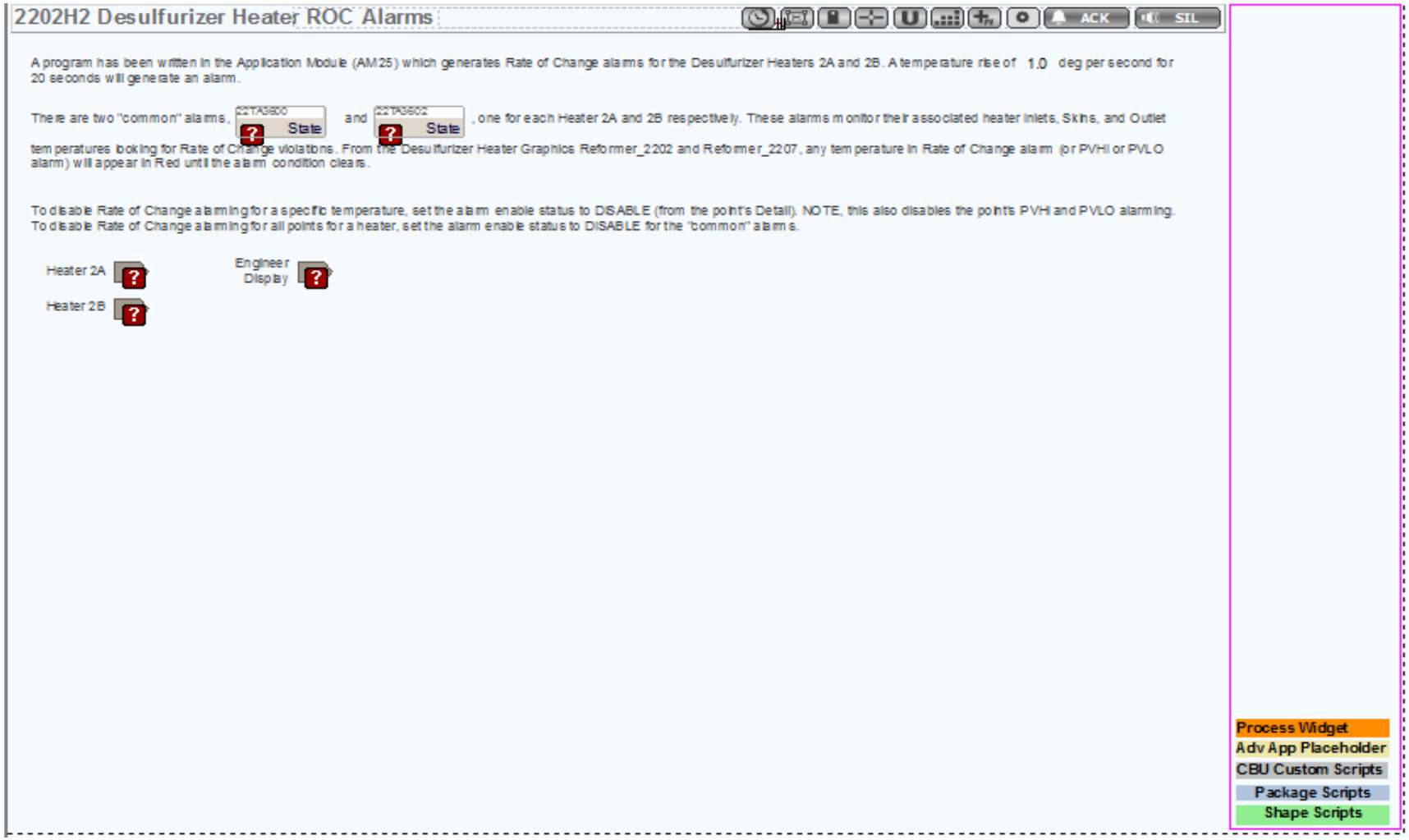
2.5 2202H1 2A Desulfurizer Heater Controls (Reformer_2202H1.htm)

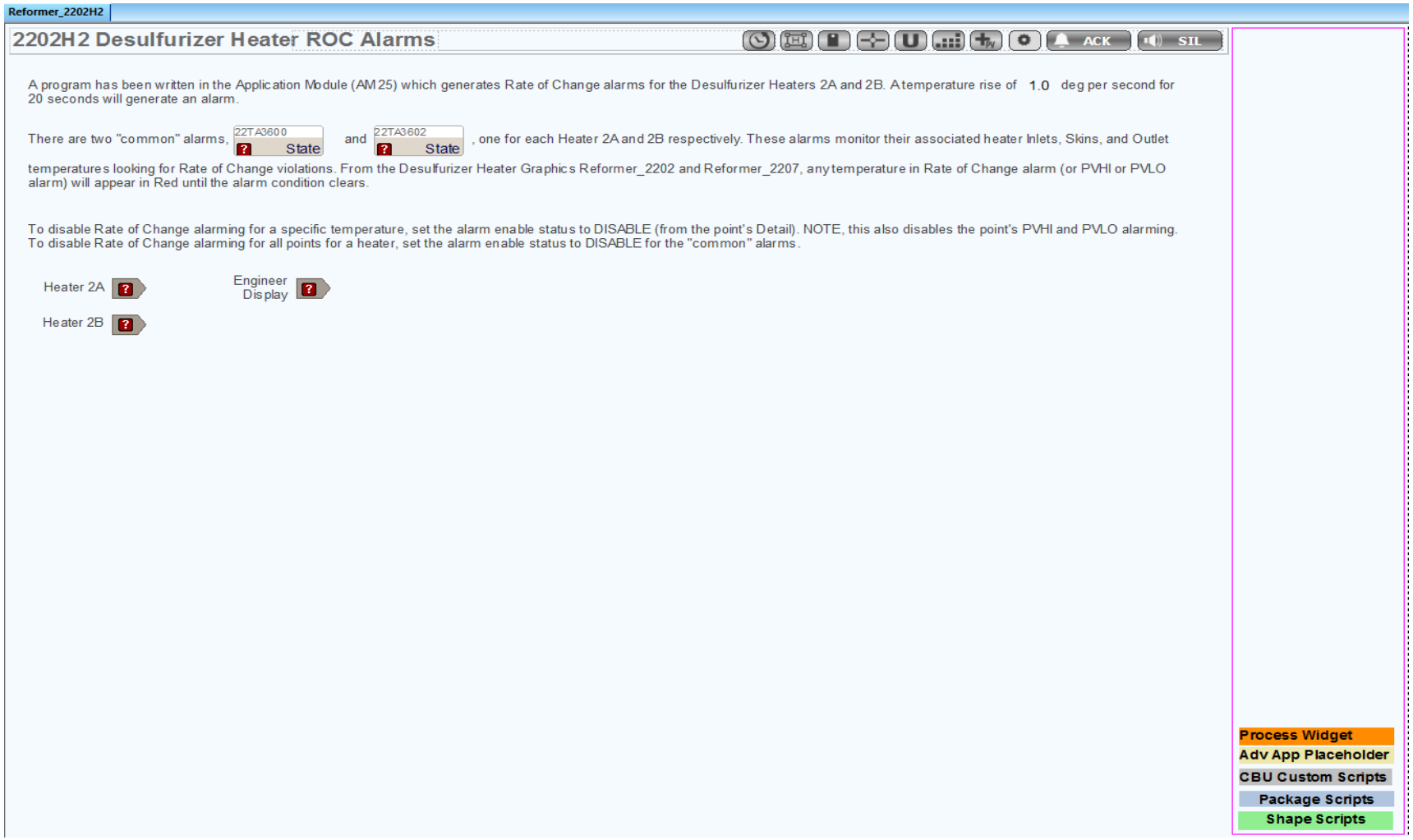


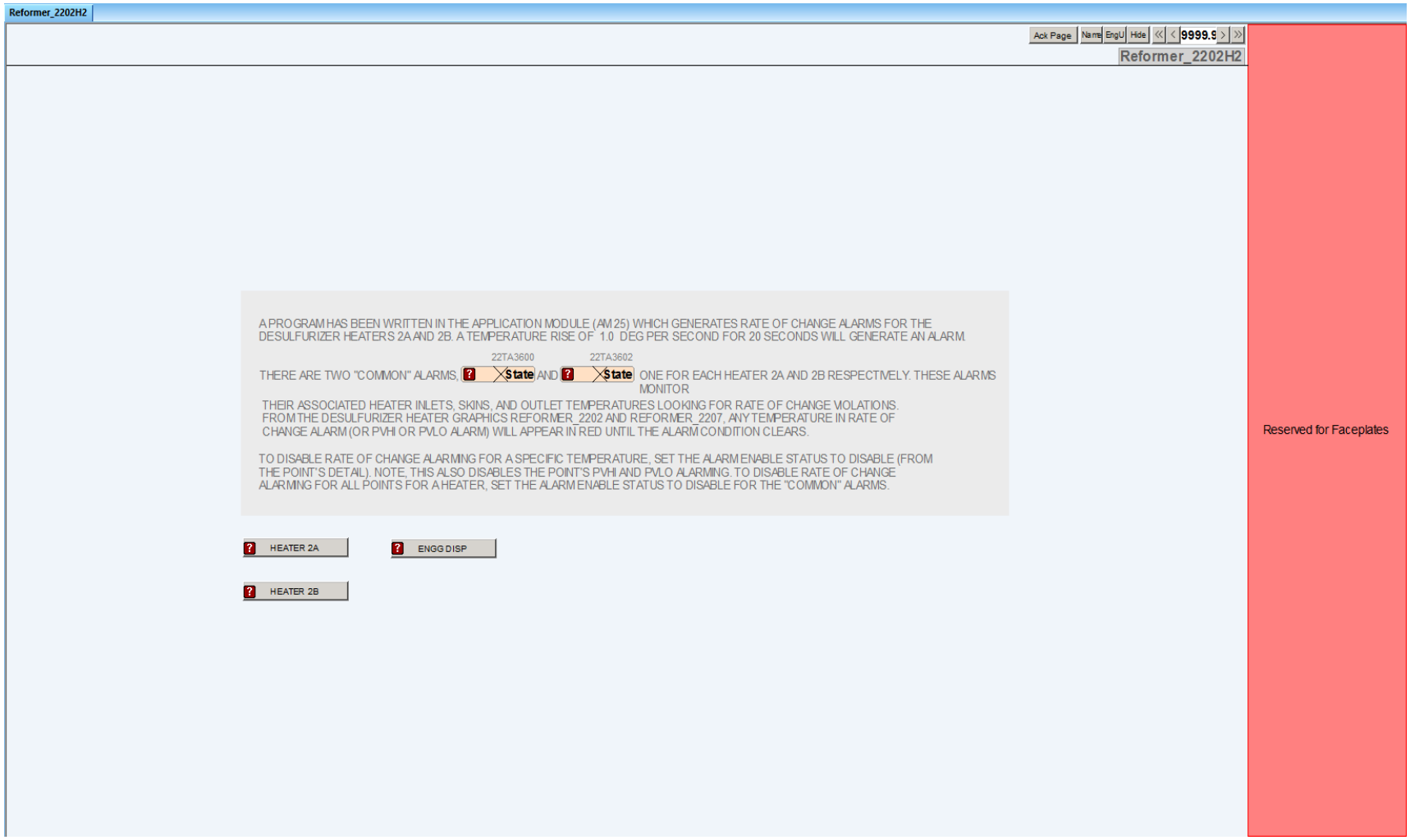

Reformer_2202H1
2202H1 2A Desulfurizer Heater Controls
ACK
SIL
The 2A Heater Fuel Gas Control consists of two temperature transmitters, two temperature indicators, a TDC Hand Switch and Temperature Controller. The indicators show the temperature reading of each of the transmitters. The Hand Switch is used to select one of these readings for the Temperature Controller input. The Temperature Controller output then moves the valve as is necessary for control.
The Hand Switch mode is used to select the signal that is to be the process variable for 22TC601:
22HS601 = AUTO - Allows the 'A' Transmitter Signal to be the output.
22HS601 = CAS - Allows the 'B' Tranmistter Signal to be the output.
22HS601 = MAN - CAUTION: DO NOT USE MANUAL!! Manual mode does not allow either transmitter signal to go to the controller.
To change Transmitters:
Select 22TC3601 and place in Manual mode. Select 22HS601 and select AUTO (for the 'A' transmitter) or select CAS (for the 'B' transmitter) and press Enter. The selected transmitter and controller should read the same. The line (below) from the selected transmitter will be thicker. Place 22TC3601 back in CAS (If DMC is on) or Auto mode (verify SP and change as necessary).
22TI601A
22TI601B
Selector Switch
22HS601
M
PV
Mode = CAS
Don't Change
22TC601
M
PV
22TC3601
M
<
O2
Override
OP
Fuel Gas to
2A Heater
Heater 2A
Process
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2202H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2202H1
THE 2A HEATER FUEL GAS CONTROL CONSISTS OF TWO TEMPERATURE TRANSMITTERS, TWO TEMPERATURE INDICATORS, A TDC HAND SWITCH AND TEMPERATURE CONTROLLER. THE INDICATORS SHOW THE TEMPERATURE READING OF EACH OF THE TRANSMITTERS. THE HAND SWITCH IS USED TO SELECT ONE OF THESE READINGS FOR THE TEMPERATURE CONTROLLER INPUT. THE TEMPERATURE CONTROLLER OUTPUT THEN MOVES THE VALVE AS IS NECESSARY FOR CONTROL.
THE HAND SWITCH MODE IS USED TO SELECT THE SIGNAL THAT IS TO BE THE PROCESS VARIABLE FOR 22TC601:
22HS601 = AUTO - ALLOWS THE 'A' TRANSMITTER SIGNAL TO BE THE OUTPUT.
22HS601 = CAS - ALLOWS THE 'B' TRANMISTTER SIGNAL TO BE THE OUTPUT.
22HS601 = MAN - CAUTION: DO NOT USE MANUAL!! MANUAL MODE DOES NOT ALLOW EITHER TRANSMITTER SIGNAL TO GO TO THE CONTROLLER.
TO CHANGE TRANSMITTERS:
SELECT 22TC3601 AND PLACE IN MANUAL MODE. SELECT 22HS601 AND SELECT AUTO (FOR THE 'A' TRANSMITTER) OR SELECT CAS (FOR THE 'B' TRANSMITTER) AND PRESS ENTER. THE SELECTED TRANSMITTER AND CONTROLLER SHOULD READ THE SAME. THE LINE (BELOW) FROM THE SELECTED TRANSMITTER WILL BE THICKER. PLACE 22TC3601 BACK IN CAS (IF DMC IS ON) OR AUTO MODE (VERIFY SP AND CHANGE AS NECESSARY).
Reserved for Faceplates
22TI601A
9999.99
SELECTOR SWITCH
22HS601
W 9999.99
9999.99
PV
MODE = CAS DON'T CHANGE
22TC601
W 9999.99
9999.99
PV
22TC3601
W 9999.99
9999.99
O2 OVERRIDE
22TI601B
9999.99
OP
EATER 2A PROCESS
FUEL GAS TO 2A HEATER

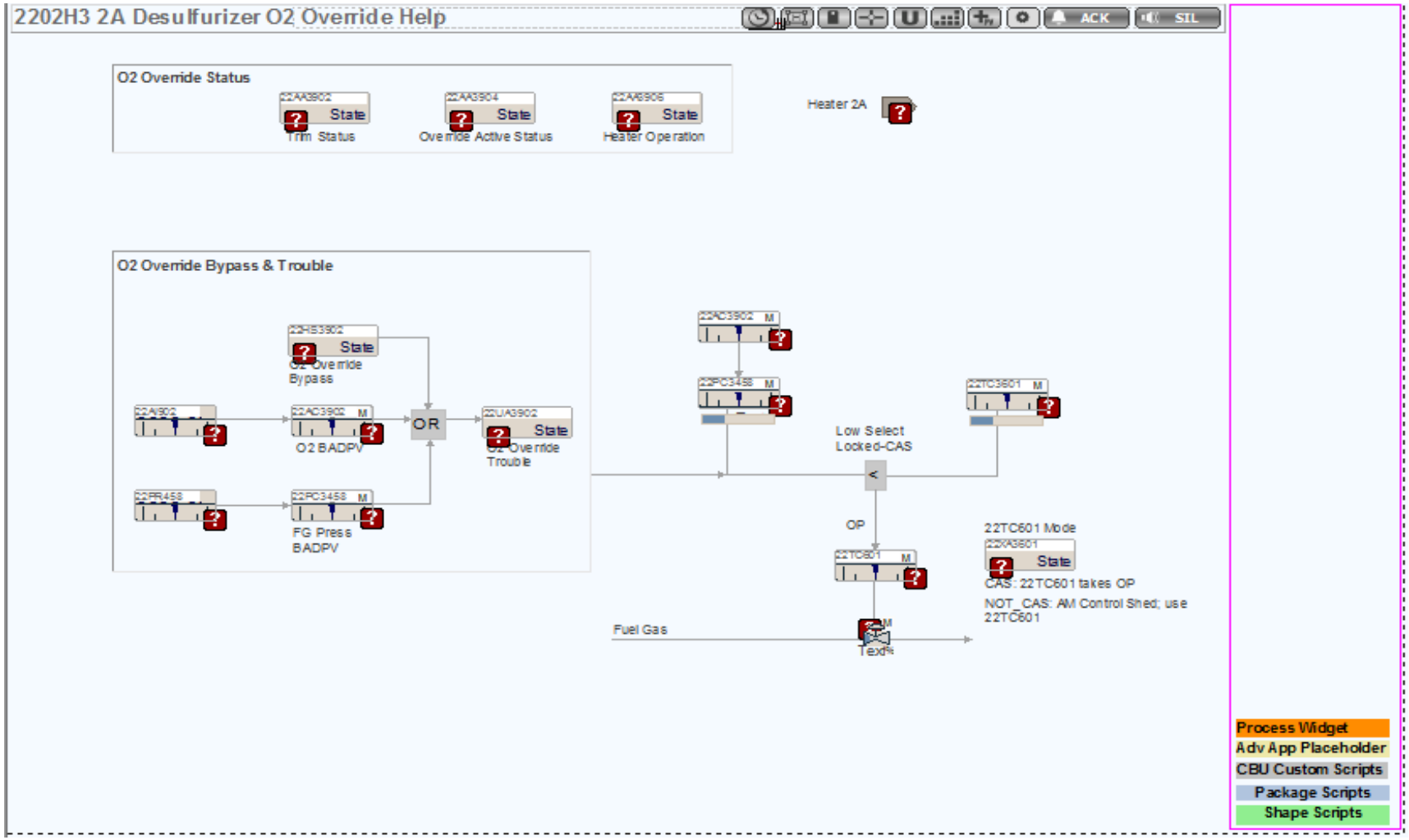
2.6 2202H2 Desulfurizer Heater ROC Alarms (Reformer_2202H2.htm)

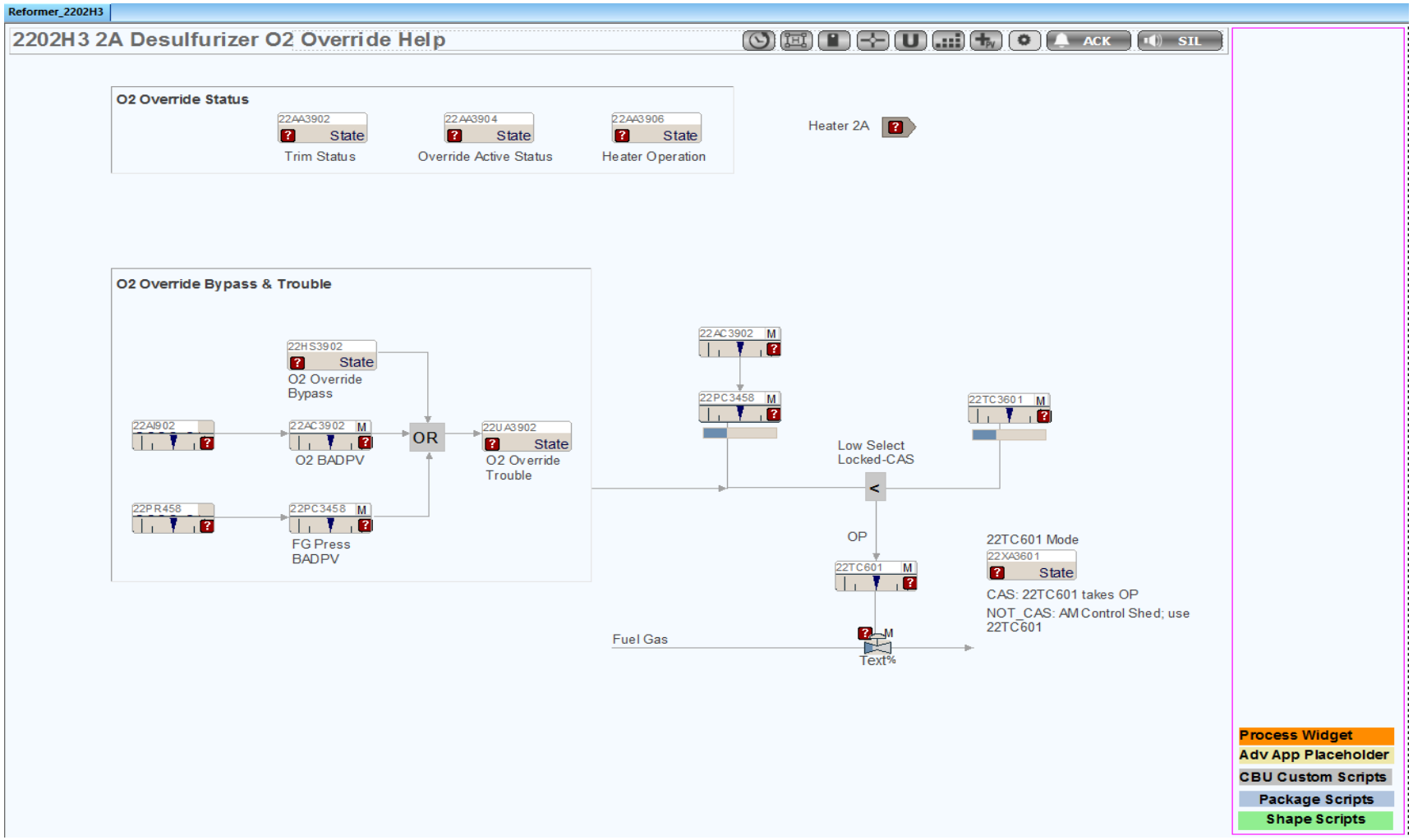


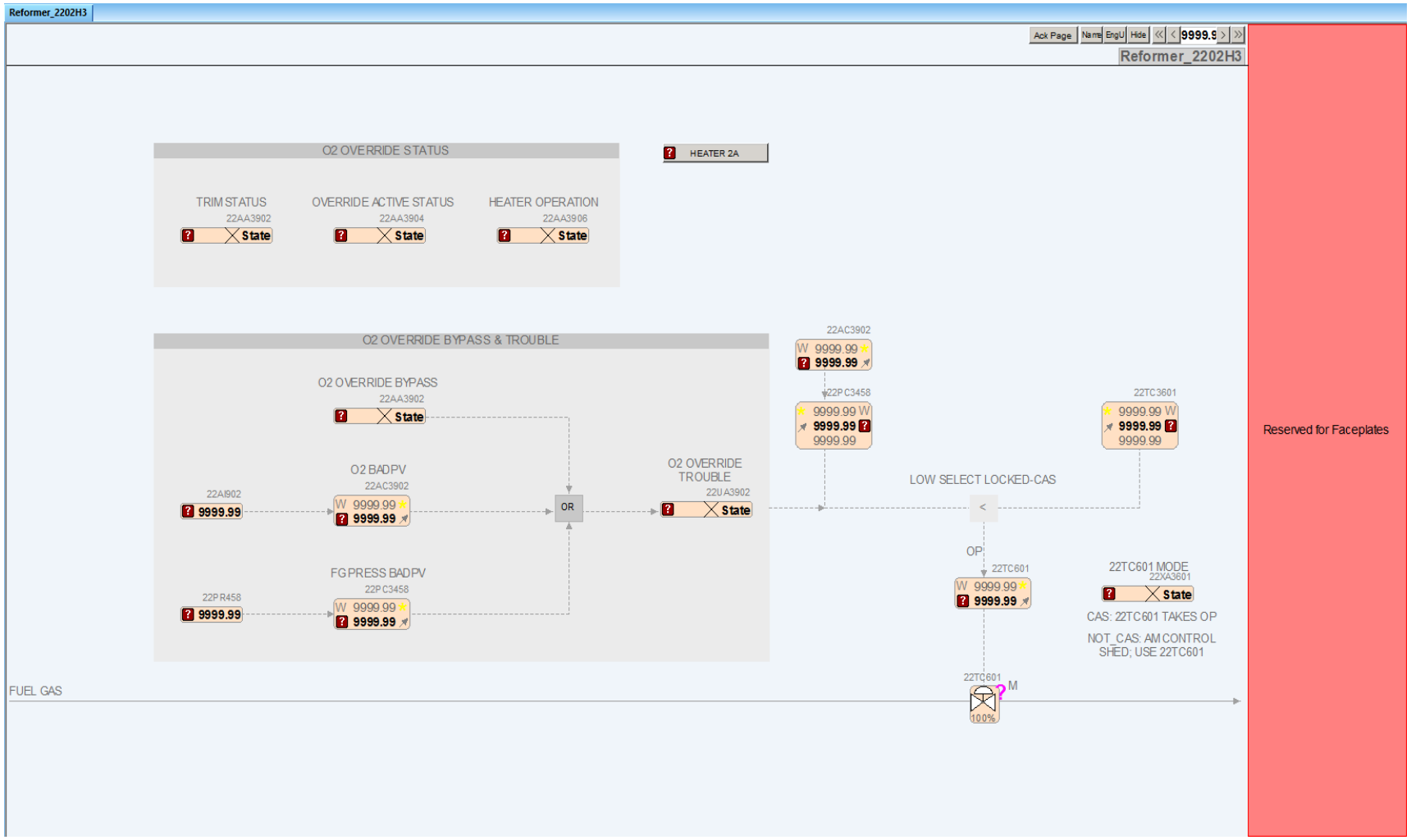

Reformer_2202H2
2202H2 Desulfurizer Heater ROC Alarms
ACK
SIL
A program has been written in the Application Module (AM25) which generates Rate of Change alarms for the Desulfurizer Heaters 2A and 2B. A temperature rise of 1.0 deg per second for 20 seconds will generate an alarm.
There are two "common" alarms, 22TA3600 State and 22TA3602 State, one for each Heater 2A and 2B respectively. These alarms monitor their associated heater Inlets, Skins, and Outlet temperatures looking for Rate of Change violations. From the Desulfurizer Heater Graphics Reformer_2202 and Reformer_2207, any temperature in Rate of Change alarm (or PVHI or PVLO alarm) will appear in Red until the alarm condition clears.
To disable Rate of Change alarming for a specific temperature, set the alarm enable status to DISABLE (from the point's Detail). NOTE, this also disables the point's PVHI and PVLO alarming.
To disable Rate of Change alarming for all points for a heater, set the alarm enable status to DISABLE for the "common" alarms.
Heater 2A
Engineer Display
Heater 2B
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2202H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2202H2
A PROGRAM HAS BEEN WRITTEN IN THE APPLICATION MODULE (AM 25) WHICH GENERATES RATE OF CHANGE ALARMS FOR THE DESULFURIZER HEATERS 2A AND 2B. A TEMPERATURE RISE OF 1.0 DEG PER SECOND FOR 20 SECONDS WILL GENERATE AN ALARM.
22TA3600
22TA3602
THERE ARE TWO "COMMON" ALARMS, State AND State ONE FOR EACH HEATER 2A AND 2B RESPECTIVELY. THESE ALARMS MONITOR
THEIR ASSOCIATED HEATER INLETS, SKINS, AND OUTLET TEMPERATURES LOOKING FOR RATE OF CHANGE VIOLATIONS. FROM THE DESULFURIZER HEATER GRAPHICS REFORMER_2202 AND REFORMER_2207, ANY TEMPERATURE IN RATE OF CHANGE ALARM (OR PVHI OR PVLO ALARM) WILL APPEAR IN RED UNTIL THE ALARM CONDITION CLEARS.
TO DISABLE RATE OF CHANGE ALARMING FOR A SPECIFIC TEMPERATURE, SET THE ALARM ENABLE STATUS TO DISABLE (FROM THE POINT'S DETAIL). NOTE, THIS ALSO DISABLES THE POINT'S PVHI AND PVLO ALARMING. TO DISABLE RATE OF CHANGE ALARMING FOR ALL POINTS FOR A HEATER, SET THE ALARM ENABLE STATUS TO DISABLE FOR THE "COMMON" ALARMS.
HEATER 2A
ENGG DISP
HEATER 2B
Reserved for Faceplates

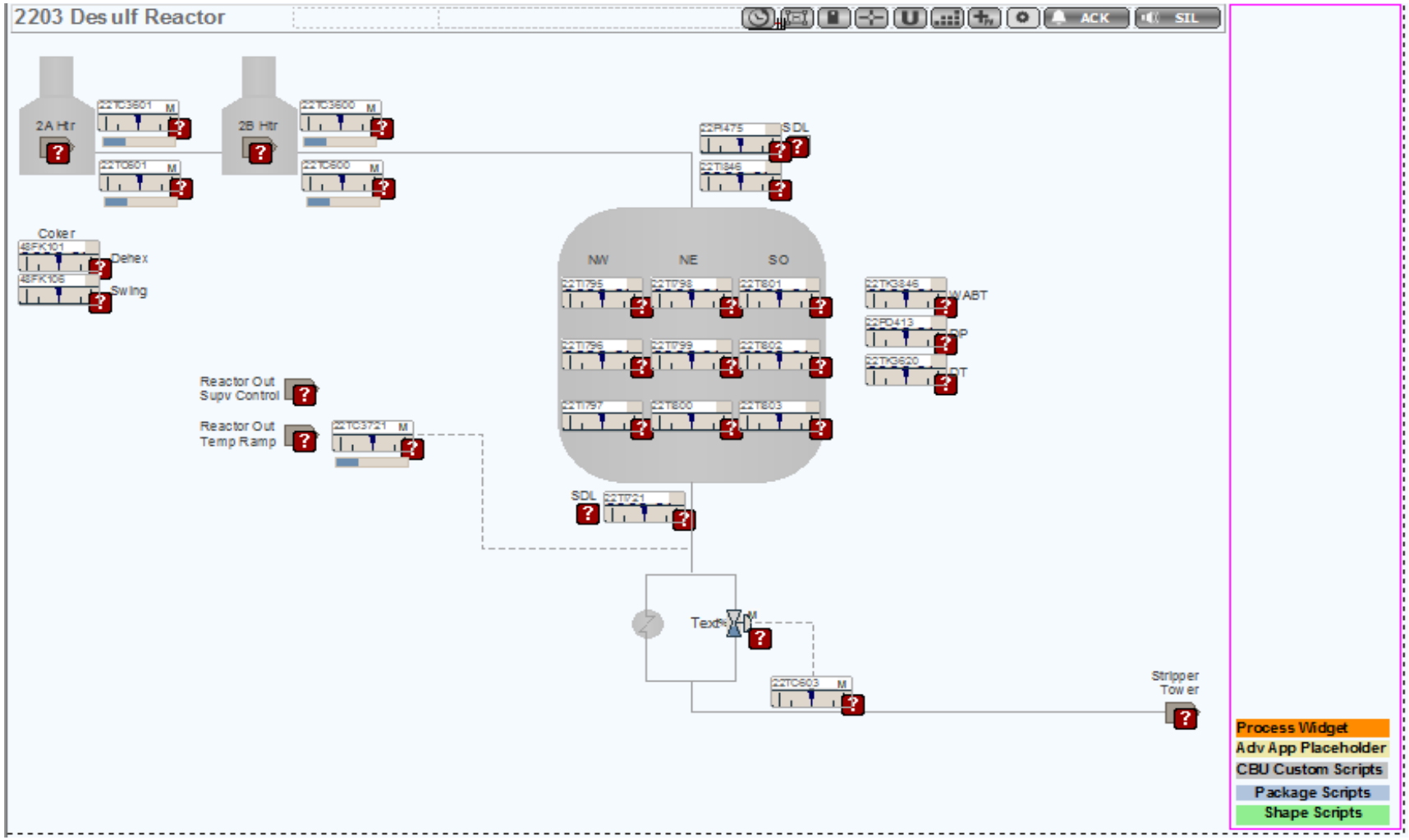
2.7 2202H3 2A Desulfurizer O2 Override Help (Reformer_2202H3.htm)

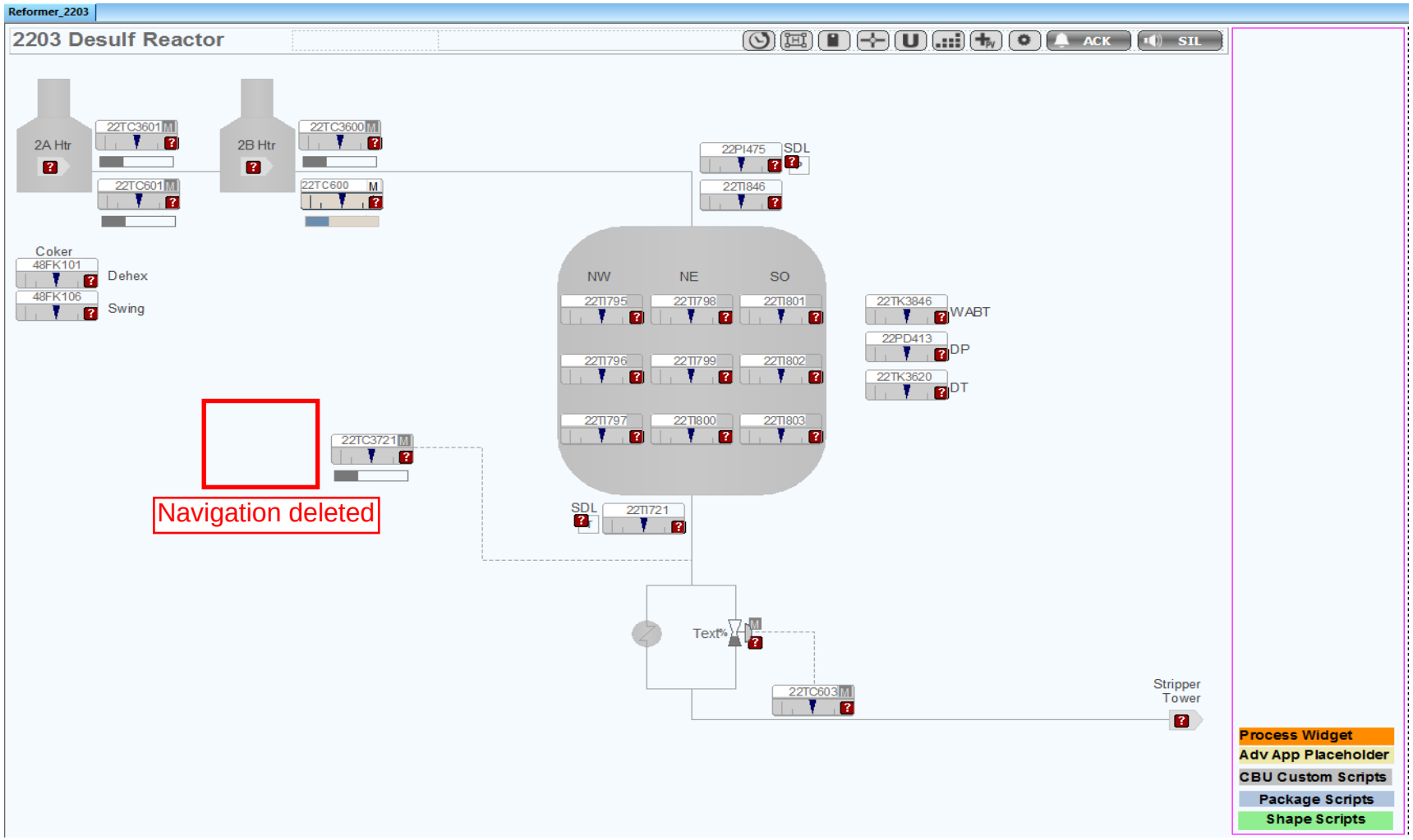


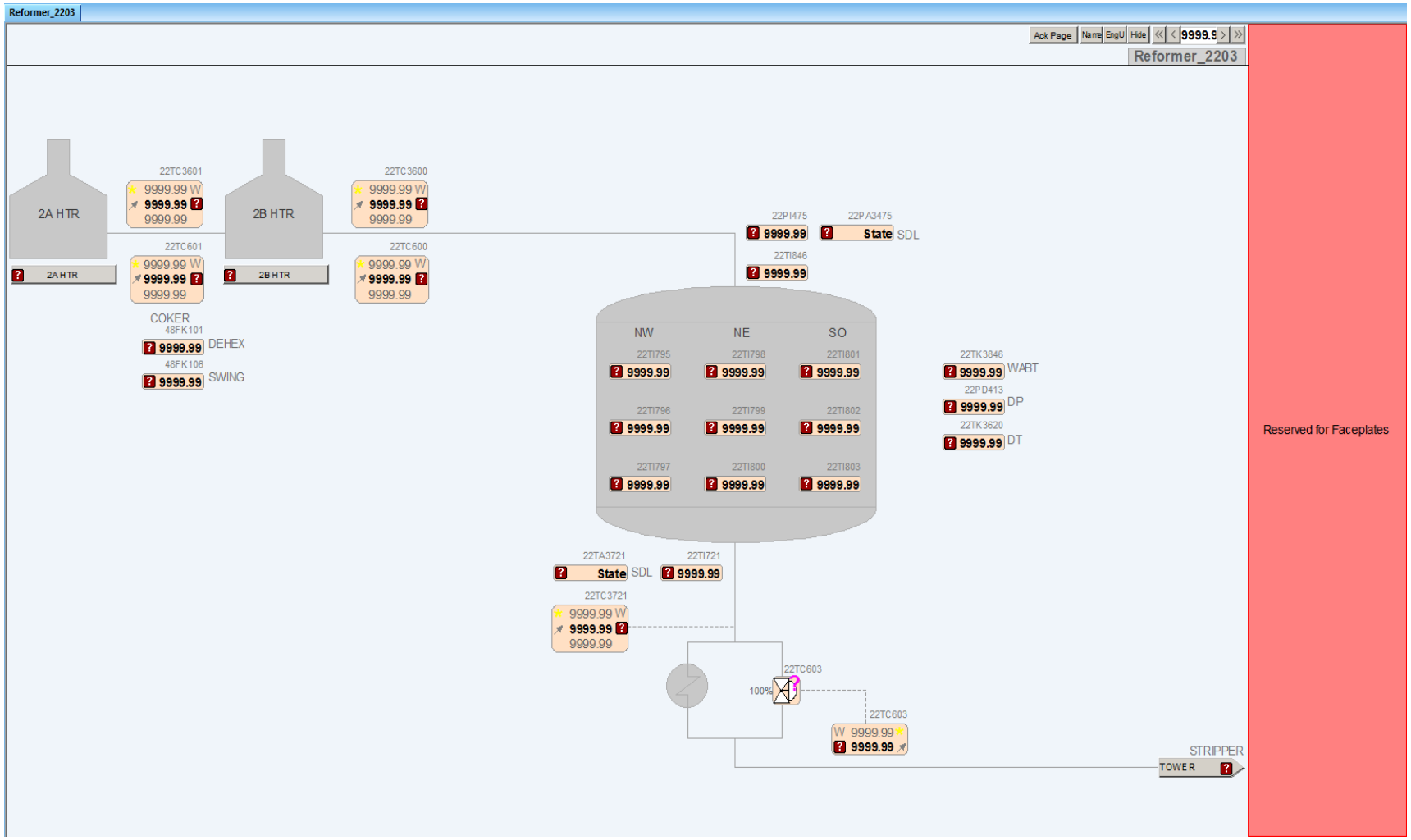

Reformer_2202H3
2202H3 2A Desulfurizer O2 Override Help
ACK
SIL
O2 Override Status
22AA3902
State
Trim Status
22AA3904
State
Override Active Status
22AA3906
State
Heater Operation
Heater 2A
O2 Override Bypass & Trouble
22HS3902
State
O2 Override Bypass
22AI902
22AC3902
M
O2 BADPV
OR
22UA3902
State
O2 Override Trouble
22PR458
22PC3458
M
FG Press BADPV
22AC3902
M
22PC3458
M
22TC3601
M
Low Select Locked-CAS
<
OP
22TC601
M
22TC601 Mode
22XA3601
State
CAS: 22TC601 takes OP
NOT_CAS: AM Control Shed; use 22TC601
Fuel Gas
M
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2202H3
Ack Page
Name
EngU
Hide
9999.9
Reformer_2202H3
O2 OVERRIDE STATUS
HEATER 2A
TRIM STATUS
22AA3902
State
OVERRIDE ACTIVE STATUS
22AA3904
State
HEATER OPERATION
22AA3906
State
O2 OVERRIDE BYPASS & TROUBLE
O2 OVERRIDE BYPASS
22AA3902
State
O2 BADPV
22AC3902
22AI902
9999.99
W 9999.99
9999.99
OR
O2 OVERRIDE TROUBLE
22UA3902
State
FG PRESS BADPV
22PC3458
22PR458
9999.99
W 9999.99
9999.99
22AC3902
W 9999.99
9999.99
22PC3458
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
<
22TC3601
9999.99 W
9999.99
9999.99
OP
22TC601
W 9999.99
9999.99
22TC601 MODE
22XA3601
State
CAS: 22TC601 TAKES OP
NOT_CAS: AM CONTROL SHED; USE 22TC601
22TC601
M
100%
FUEL GAS
Reserved for Faceplates

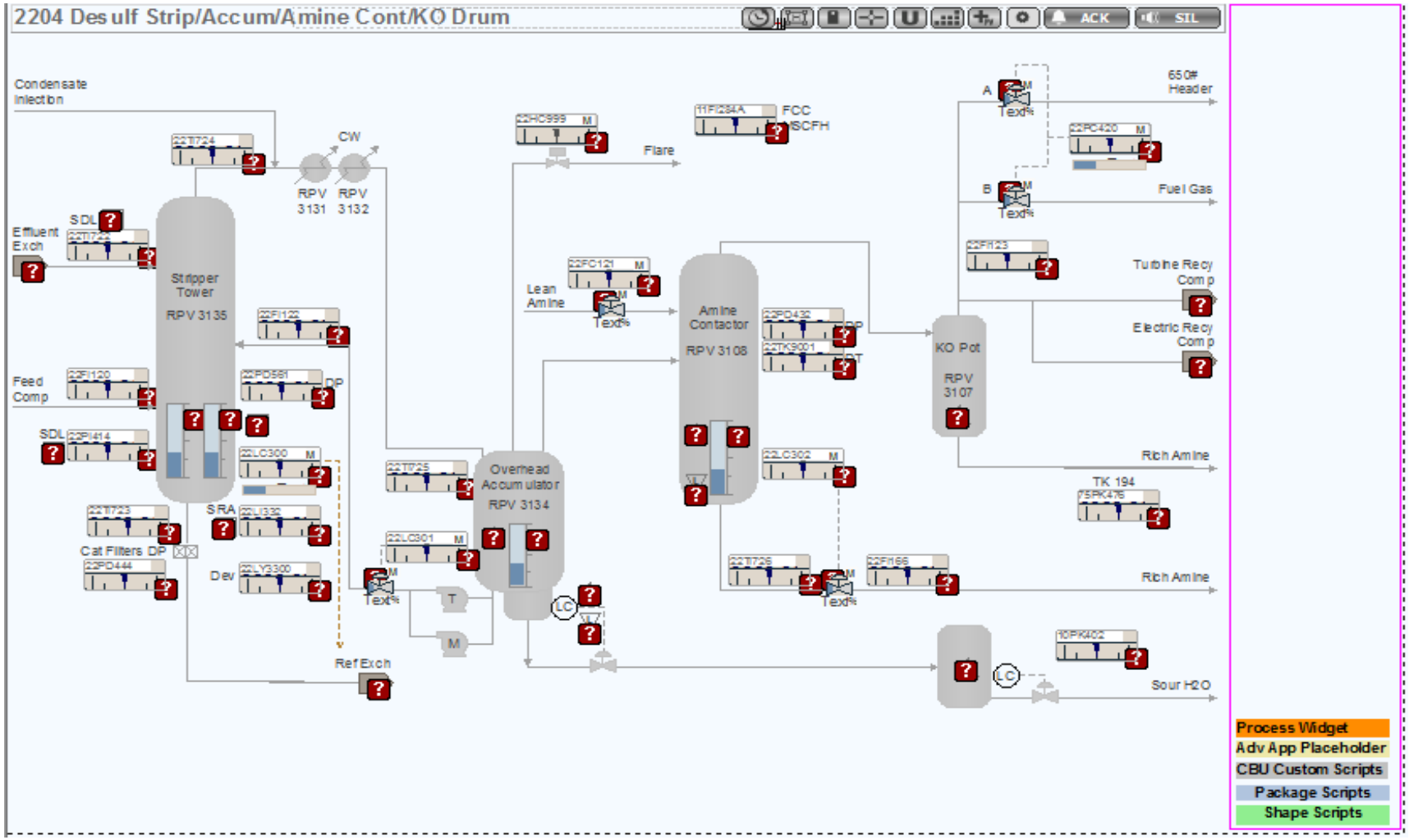
2.8 2203 Desulf Reactor (Reformer_2203.htm)

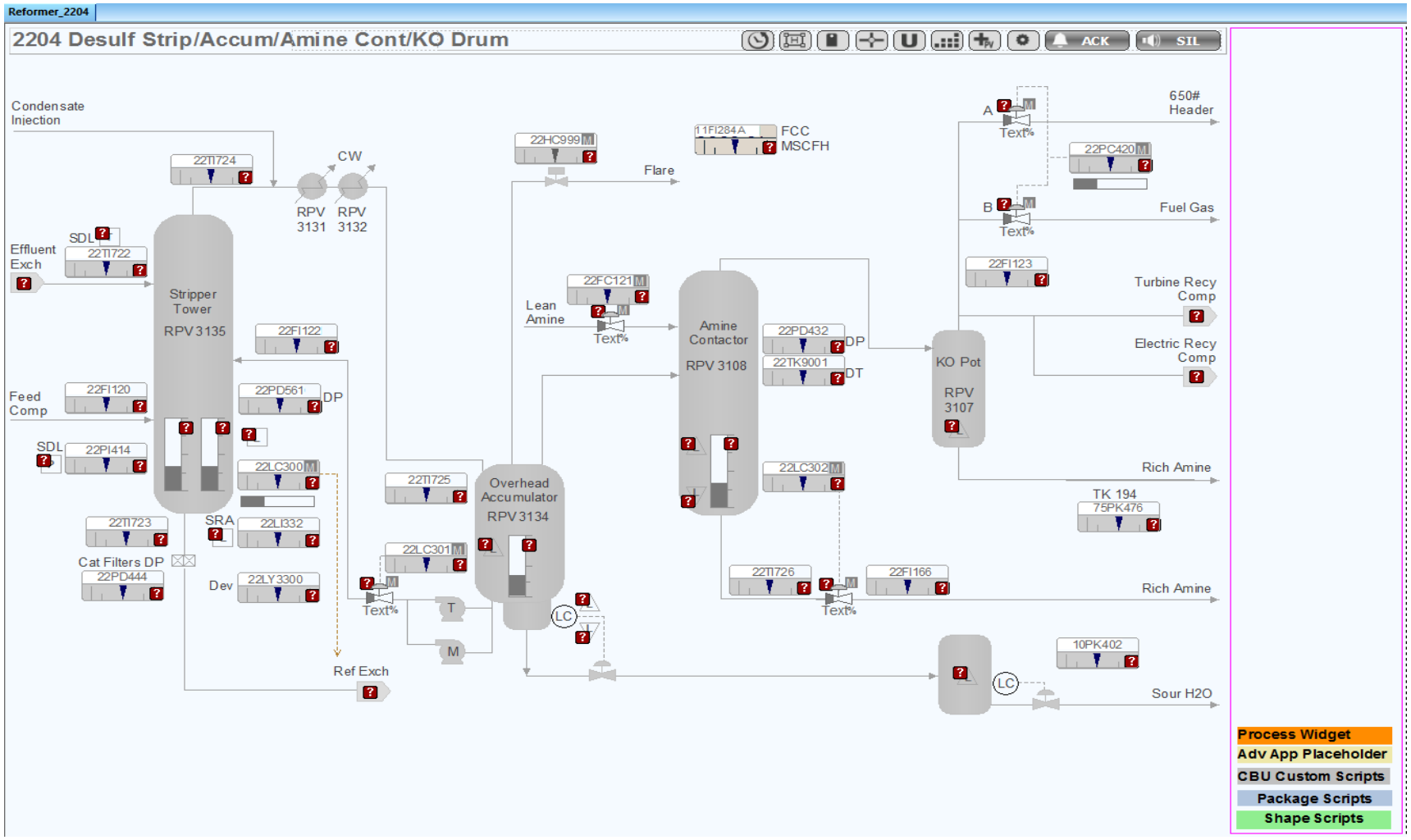


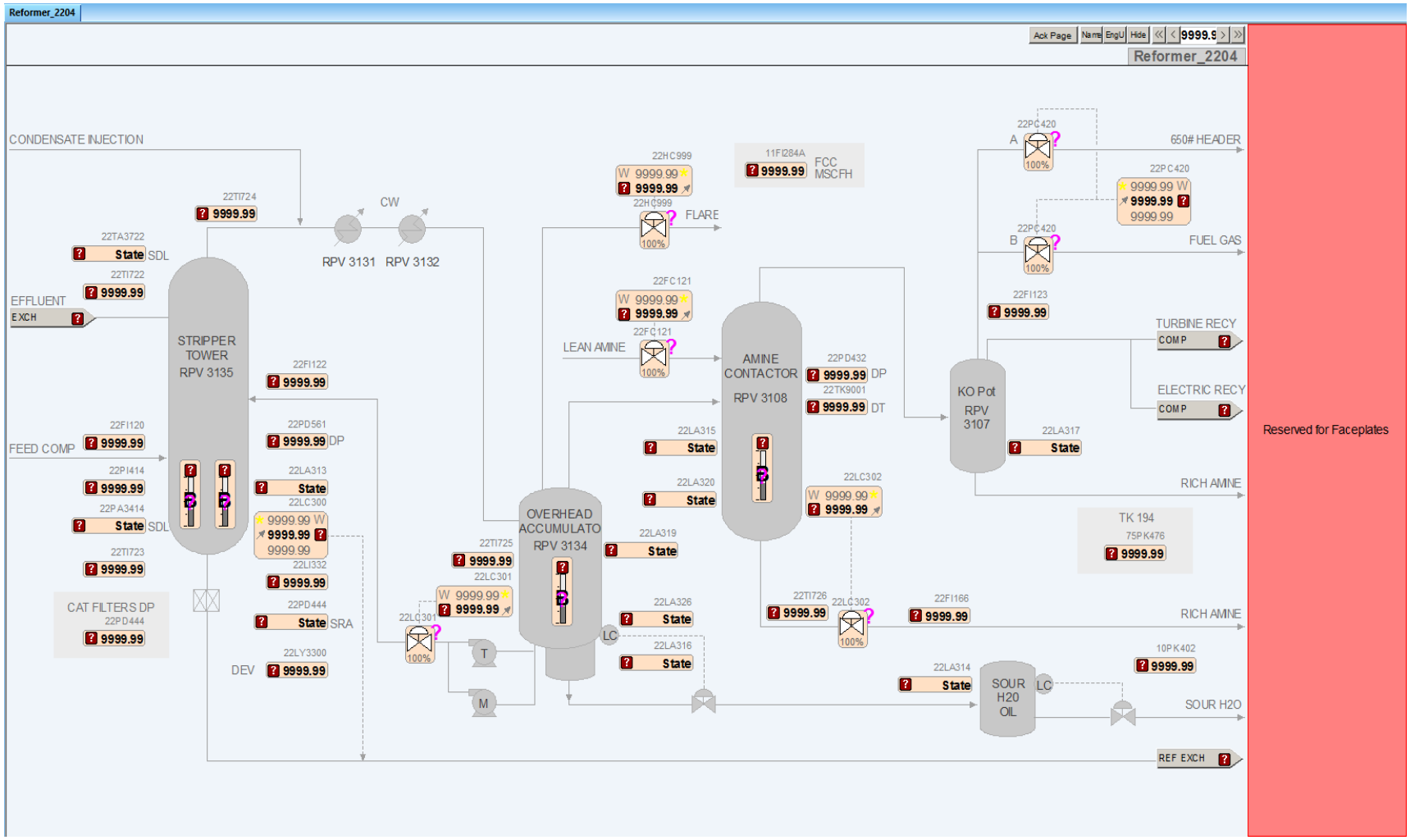

Reformer_2203
2203 Desulf Reactor
ACK
SIL
2A Htr
22TC3601
22TC601
2B Htr
22TC3600
22TC600
22PI475
SDL
22TI846
Coker
48FK101
Dehex
48FK106
Swing
NW
NE
SO
22TI795
22TI798
22TI801
22TI796
22TI799
22TI802
22TI797
22TI800
22TI803
22TK3846
WABT
22PD413
DP
22TK3620
DT
22TC3721
Navigation deleted
SDL
22TI721
Text%
22TC603
Stripper
Tower
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2203
Ack Page
Name
EngU
Hide
Reformer_2203
2A HTR
2B HTR
22TC3601
22TC3600
22TC601
22TC600
COKER
48FK101
DEHEX
48FK106
SWING
22PI475
22PA3475
State
SDL
22TI846
NW
NE
SO
22TI795
22TI798
22TI801
22TI796
22TI799
22TI802
22TI797
22TI800
22TI803
22TK3846
WABT
22PD413
DP
22TK3620
DT
22TA3721
22TI721
22TC3721
22TC603
100%
STRIPPER
TOWER
Reserved for Faceplates

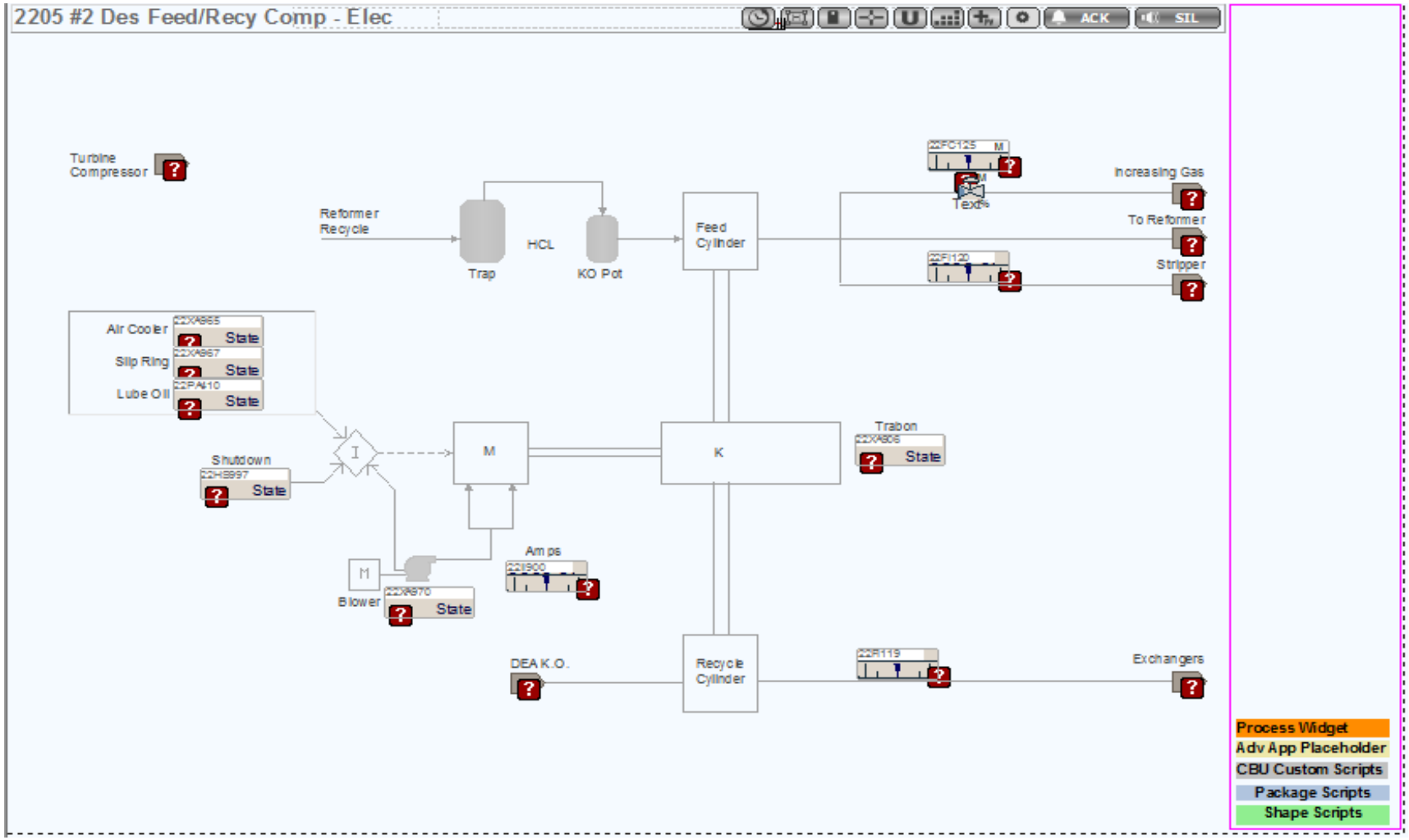
2.9 2204 Desulf Strip/Accum/Amine Cont/KO Drum (Reformer_2204.htm)

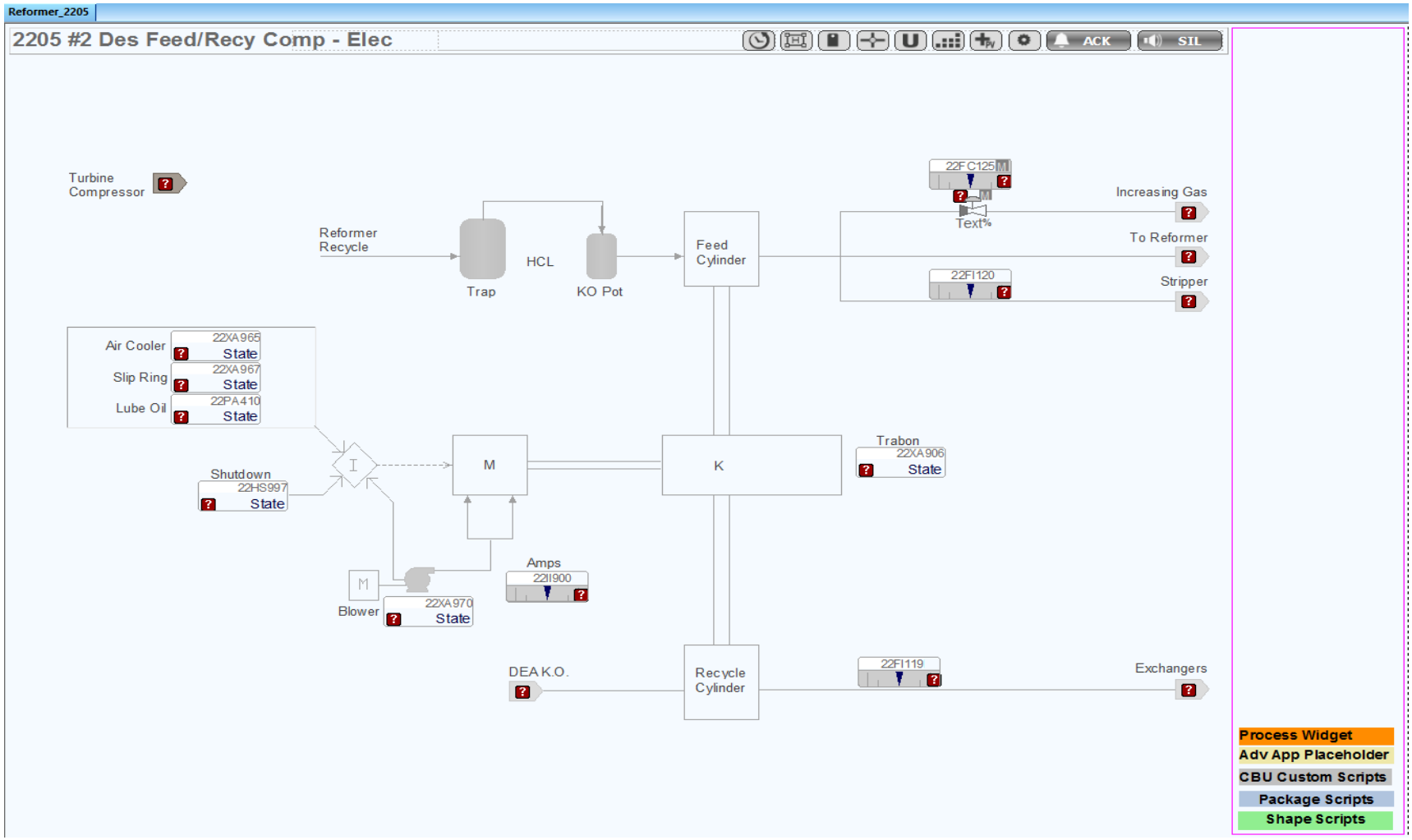


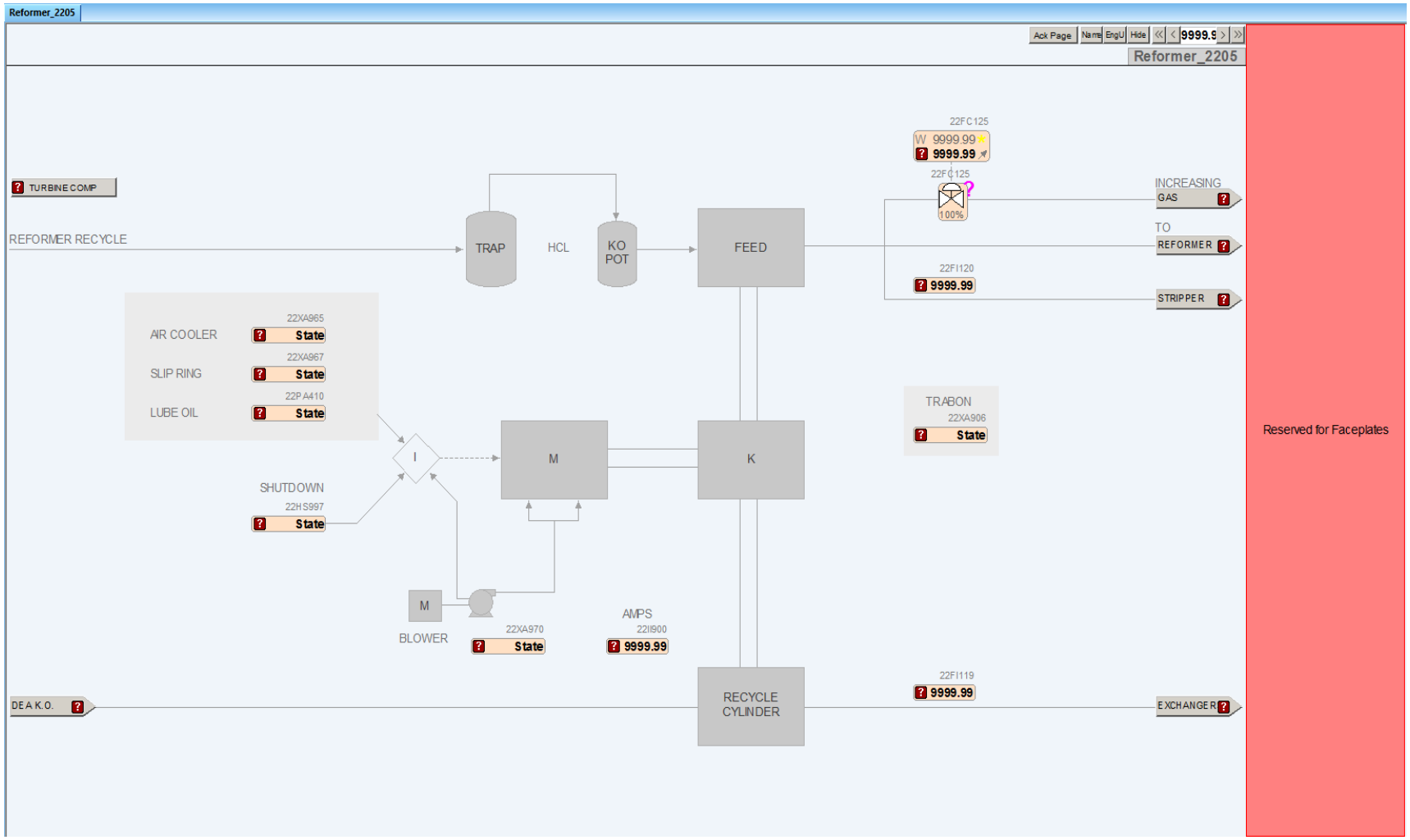

Reformer_2204
2204 Desulf Strip/Accum/Amine Cont/KO Drum
ACK
SIL
Condensate Injection
22TI724
CW
RPV 3131
RPV 3132
22HC999
Flare
11FI284A
FCC MSCFH
650# Header
A
Text%
22PC420
B
Text%
Fuel Gas
SDL
Effluent Exch
22TI722
Stripper Tower
RPV 3135
22FI122
22FC121
Lean Amine
Text%
Amine Contactor
RPV 3108
22PD432
DP
22TK9001
DT
22FI123
Turbine Recy Comp
Electric Recy Comp
KO Pot
RPV 3107
Feed Comp
22FI120
22PD561
DP
SDL
22PI414
22LC300
22TI725
Overhead Accumulator
RPV 3134
22LC302
Rich Amine
TK 194
75PK476
22TI723
SRA
22LI332
Cat Filters DP
22PD444
Dev
22LY3300
22LC301
Text%
T
M
LC
22TI726
Text%
22FI166
Rich Amine
Ref Exch
10PK402
LC
Sour H2O
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2204
Ack Page
Name
EngU
Hide
Reformer_2204
CONDENSATE INJECTION
22TI724
9999.99
CW
RPV 3131
RPV 3132
22TA3722
State
SDL
22TI722
9999.99
EFFLUENT
EXCH
STRIPPER TOWER RPV 3135
22FI122
9999.99
22PD561
9999.99
DP
FEED COMP
22FI120
9999.99
22PI414
9999.99
22LA313
State
22LC300
9999.99 W
9999.99
9999.99
22PA3414
State
SDL
22TI723
9999.99
22LI332
9999.99
CAT FILTERS DP
22PD444
9999.99
22PD444
State
SRA
22LY3300
DEV
9999.99
22HC999
W 9999.99
9999.99
FLARE
100%
11FI284A
9999.99
FCC MSCFH
22FC121
W 9999.99
9999.99
LEAN AMINE
22FC121
100%
OVERHEAD ACCUMULATO RPV 3134
22TI725
9999.99
22LC301
W 9999.99
9999.99
22LC301
100%
T
M
LC
22LA319
State
22LA326
State
22LA316
State
AMINE CONTACTOR RPV 3108
22LA315
State
22LA320
State
22PD432
9999.99
DP
22TK9001
9999.99
DT
22LC302
W 9999.99
9999.99
22TI726
9999.99
22LC302
100%
22FI166
9999.99
22LA314
State
SOUR H20 OIL
LC
22PC420
A
100%
650# HEADER
22PC420
9999.99 W
9999.99
9999.99
22PC420
B
100%
FUEL GAS
22FI123
9999.99
KO Pot RPV 3107
TURBINE RECY
COMP
ELECTRIC RECY
COMP
22LA317
State
RICH AMINE
TK 194
75PK476
9999.99
RICH AMINE
10PK402
9999.99
SOUR H2O
REF EXCH
Reserved for Faceplates

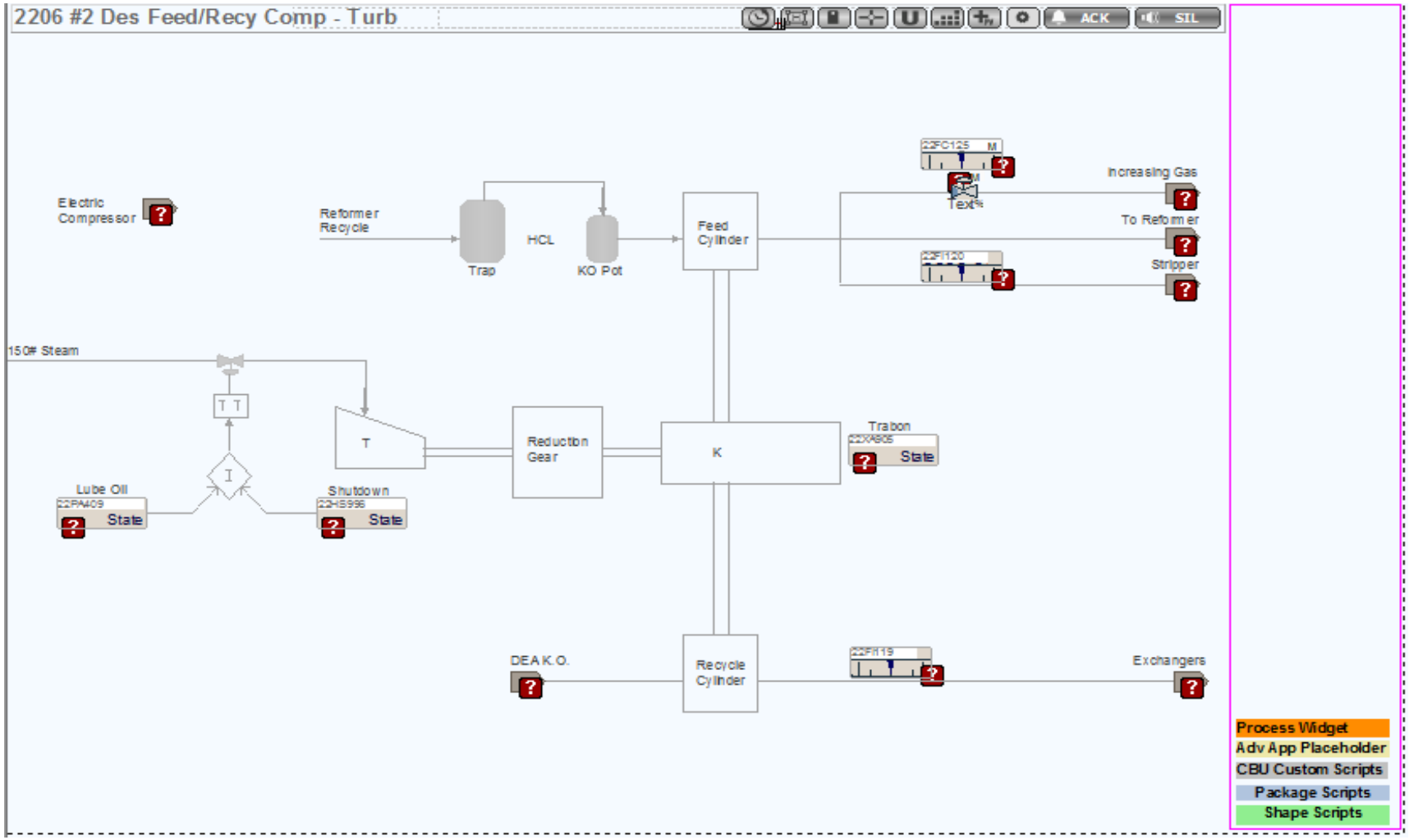
2.10 2205 #2 Des Feed/Recy Comp - Elec (Reformer_2205.htm)

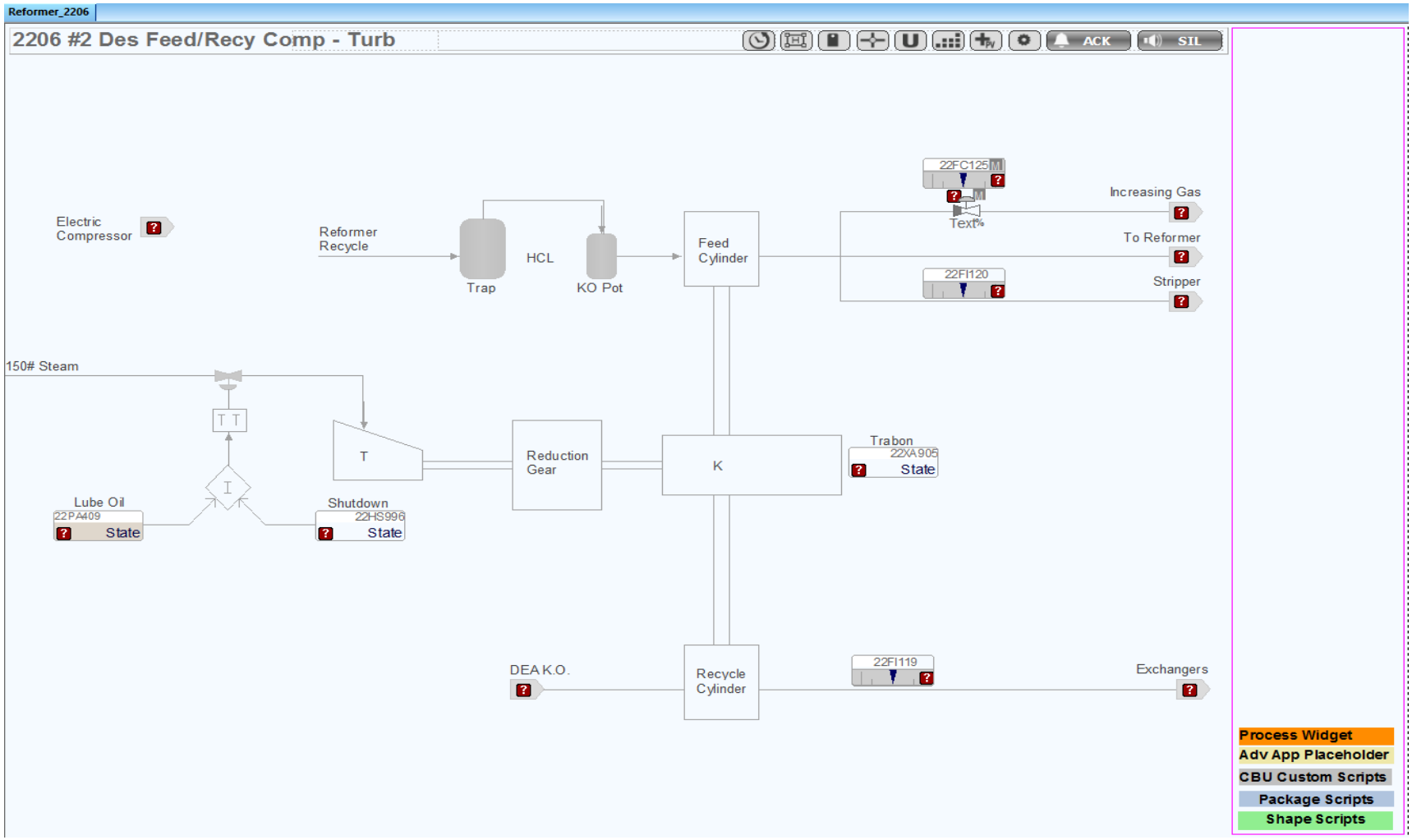


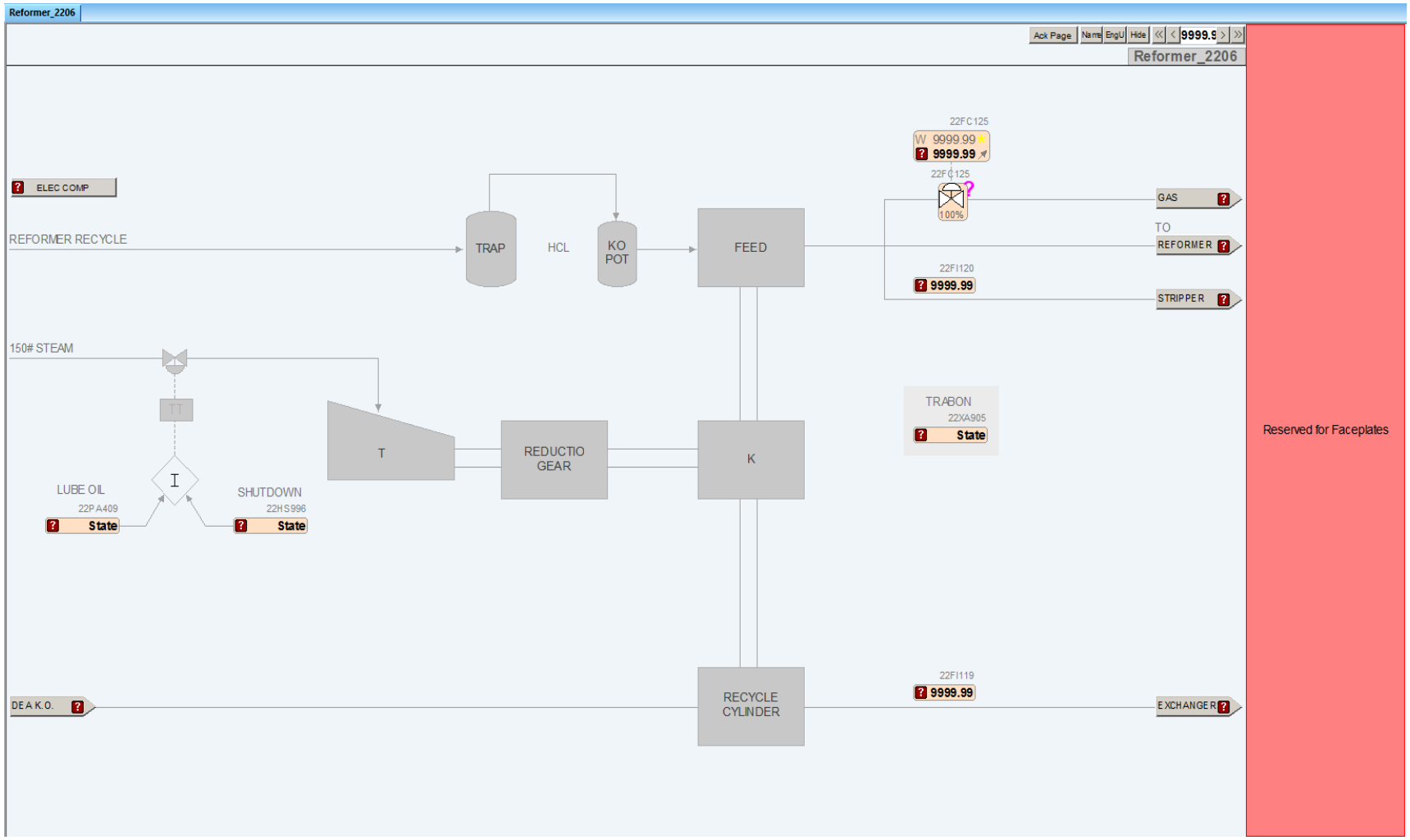

Reformer_2205
2205 #2 Des Feed/Recy Comp - Elec
ACK
SIL
Turbine Compressor
Reformer Recycle
Trap
HCL
KO Pot
Feed Cylinder
22FC125
Text%
Increasing Gas
To Reformer
22FI120
Stripper
Air Cooler
22XA965
State
Slip Ring
22XA967
State
Lube Oil
22PA410
State
Shutdown
22HS997
State
I
M
K
Trabon
22XA906
State
Amps
22II900
Blower
22XA970
State
DEA K.O.
Recycle Cylinder
22FI119
Exchangers
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2205
Ack Page
Name
EngU
Hide
9999.9
Reformer_2205
TURBINE COMP
REFORMER RECYCLE
TRAP
HCL
KO POT
FEED
22FC125
W 9999.99
9999.99
22FC125
100%
INCREASING GAS
TO REFORMER
22FI120
9999.99
STRIPPER
AIR COOLER
22XA965
State
SLIP RING
22XA967
State
LUBE OIL
22P A410
State
I
M
K
TRABON
22XA906
State
SHUTDOWN
22HS997
State
M
BLOWER
22XA970
State
AMPS
22II900
9999.99
RECYCLE CYLINDER
22FI119
9999.99
DE A K.O.
EXCHANGER
Reserved for Faceplates

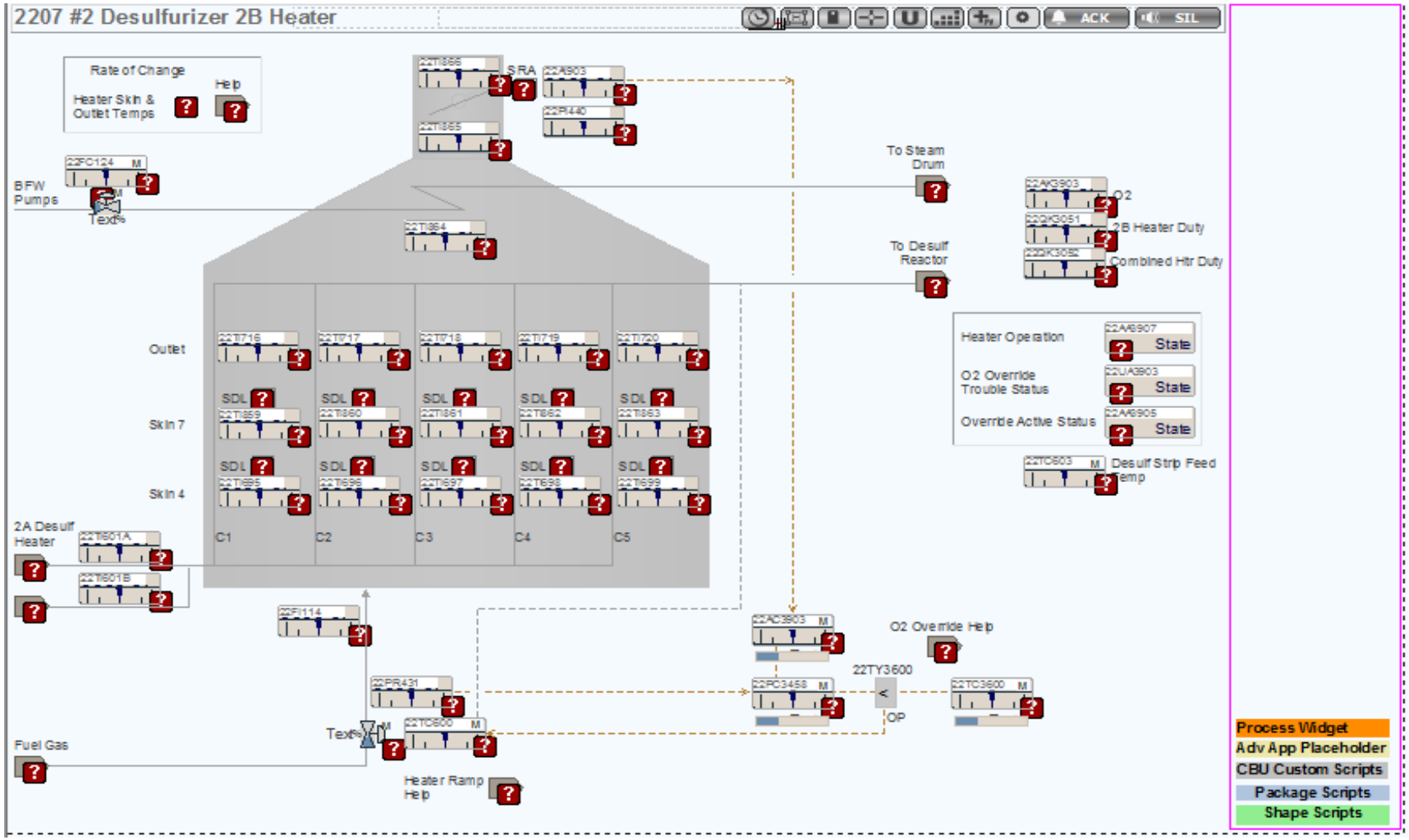
2.11 2206 #2 Des Feed/Recy Comp - Turb (Reformer_2206.htm)

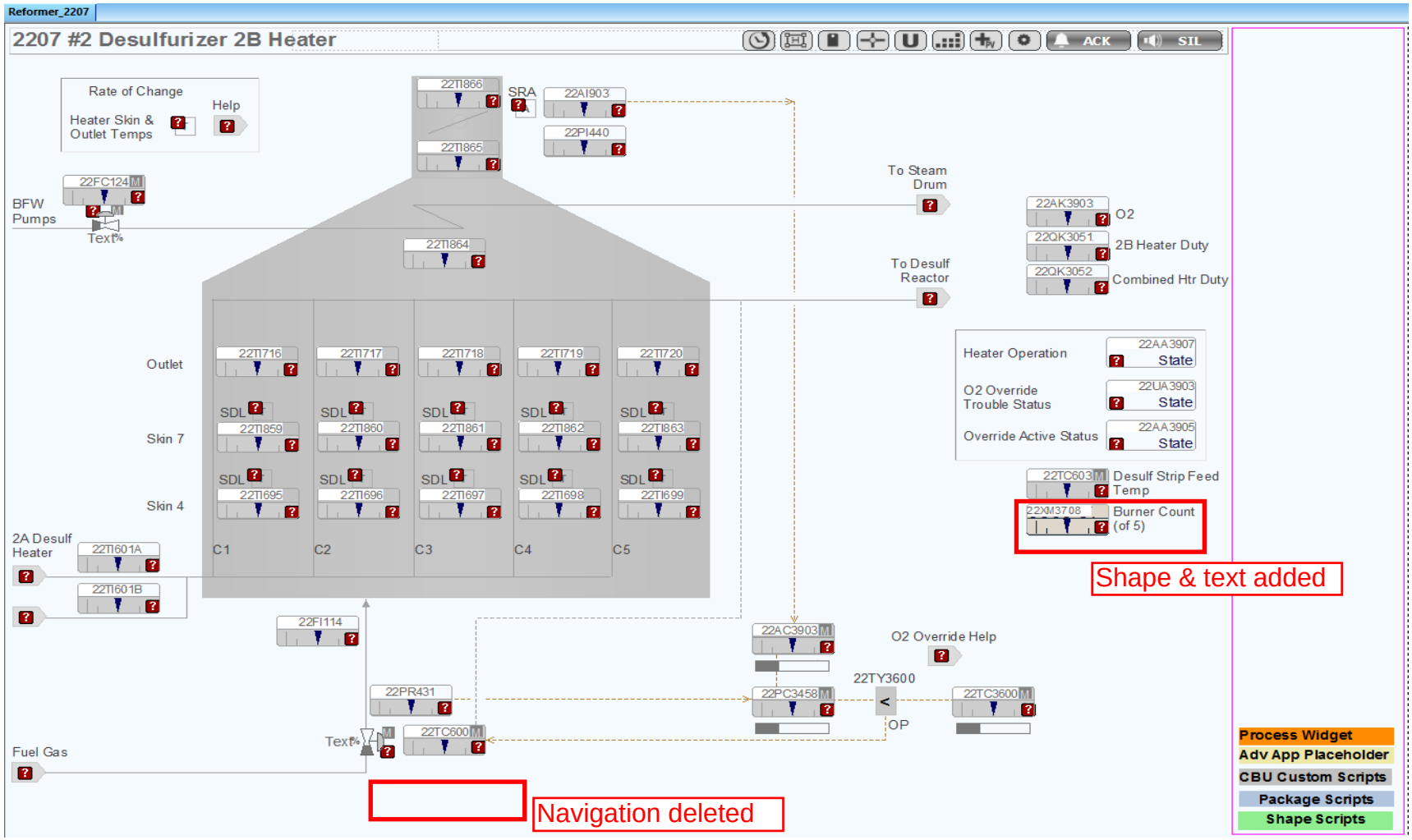


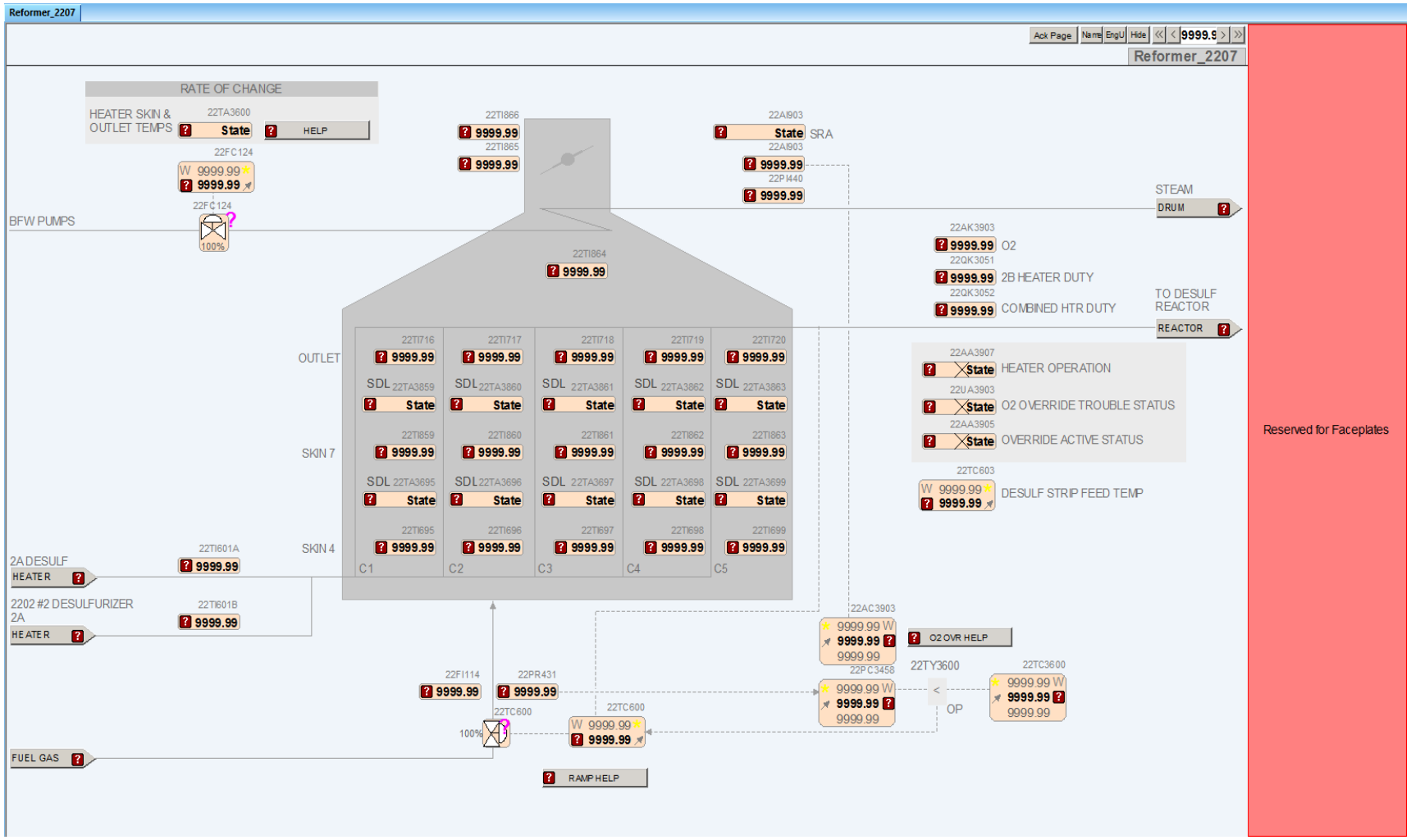

Reformer_2206
2206 #2 Des Feed/Recy Comp - Turb
ACK
SIL
Electric Compressor
Reformer Recycle
Trap
HCL
KO Pot
Feed Cylinder
22FC125
Text%
Increasing Gas
To Reformer
22FI120
Stripper
150# Steam
T T
T
Reduction Gear
K
Trabon
22XA905
State
Lube Oil
22PA409
State
I
Shutdown
22HS996
State
DEA K.O.
Recycle Cylinder
22FI119
Exchangers
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2206
Ack Page
Name
EngU
Hide
9999.9
Reformer_2206
ELEC COMP
REFORMER RECYCLE
TRAP
HCL
KO POT
FEED
22FC125
W 9999.99
9999.99
22FC125
100%
GAS
TO
REFORMER
22FI120
9999.99
STRIPPER
150# STEAM
TT
T
REDUCTIO GEAR
K
TRABON
22XA905
State
LUBE OIL
22PA409
State
SHUTDOWN
22HS996
State
Reserved for Faceplates
DEA K.O.
RECYCLE CYLINDER
22FI119
9999.99
EXCHANGER

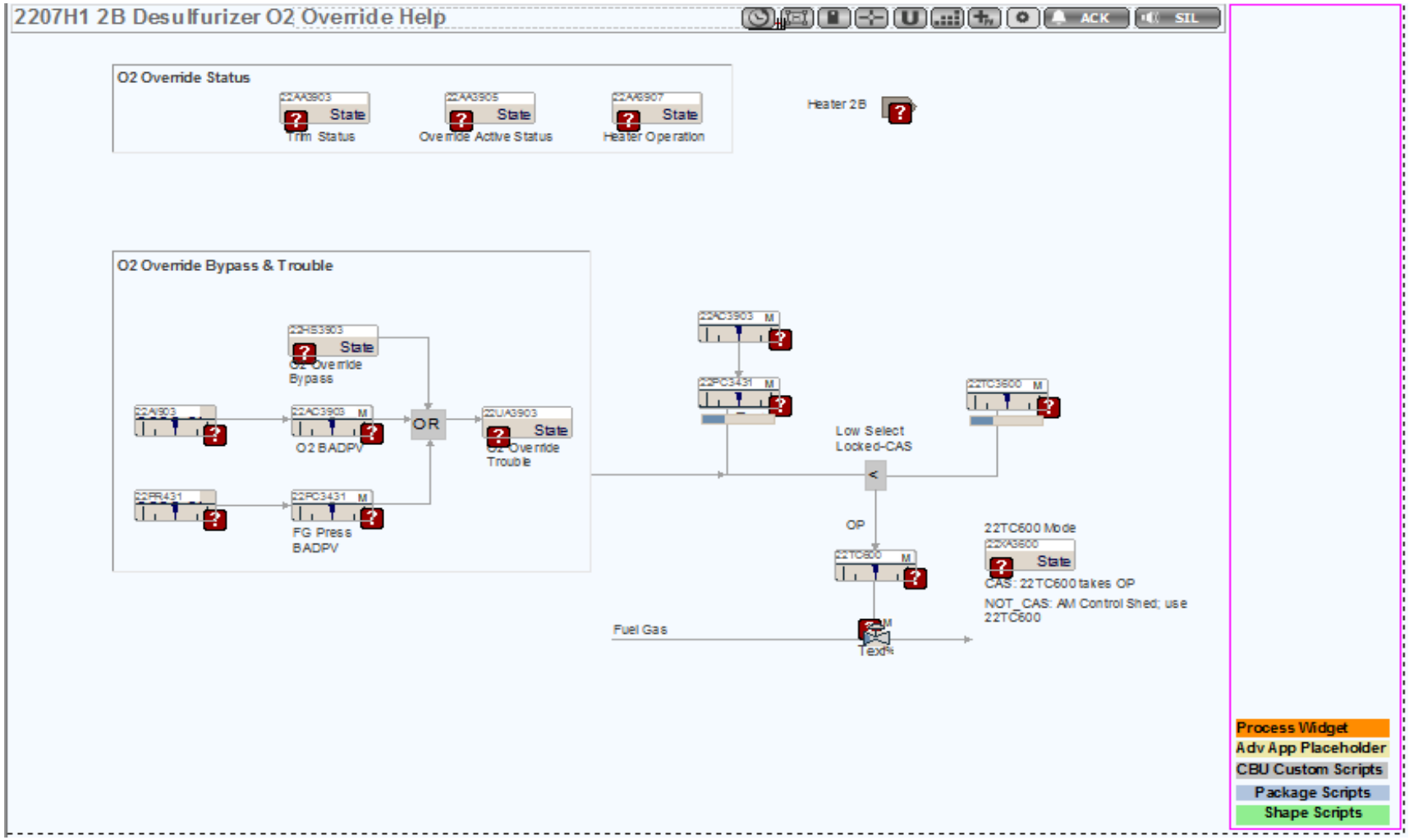
2.12 2207 #2 Desulfurizer 2B Heater (Reformer_2207.htm)

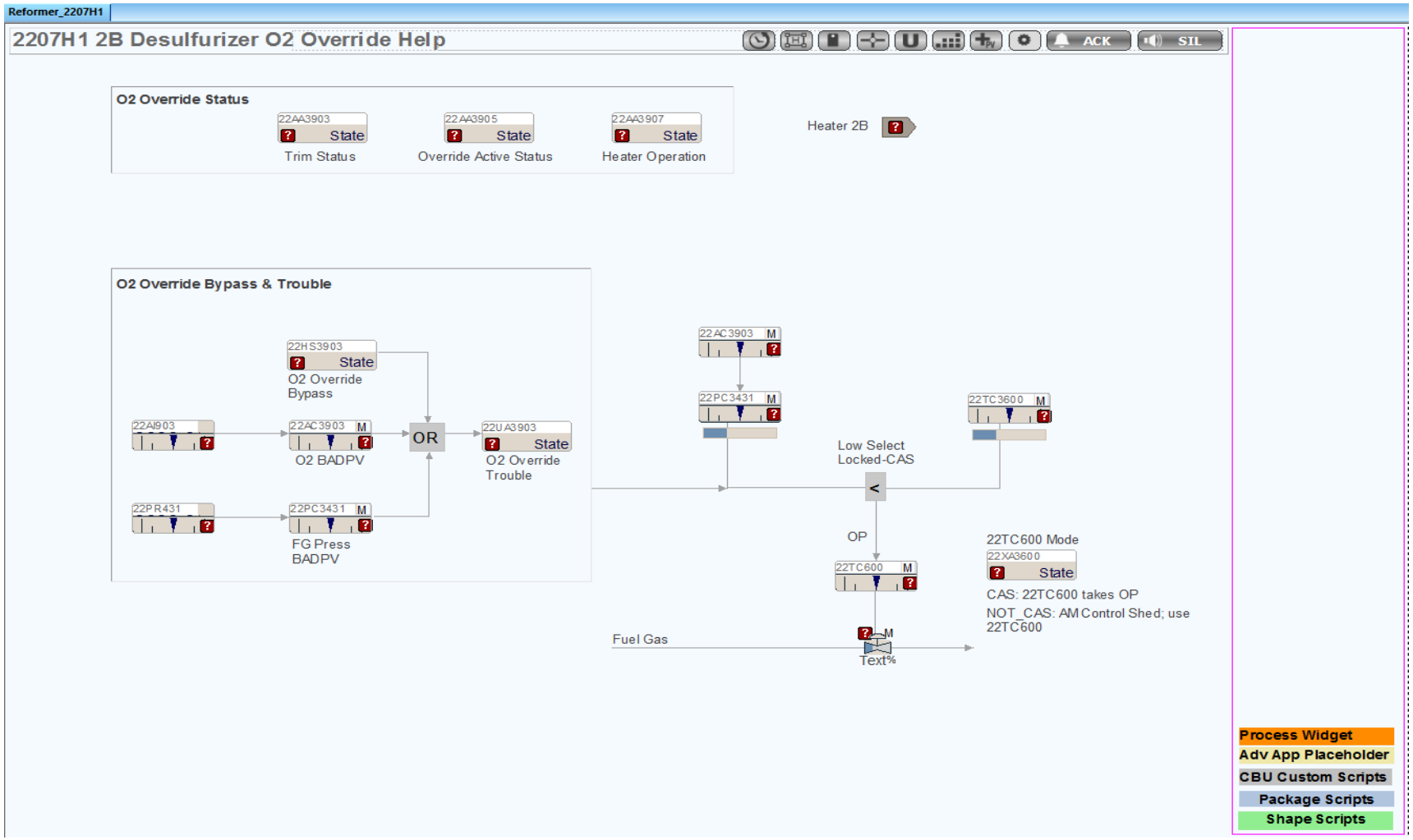


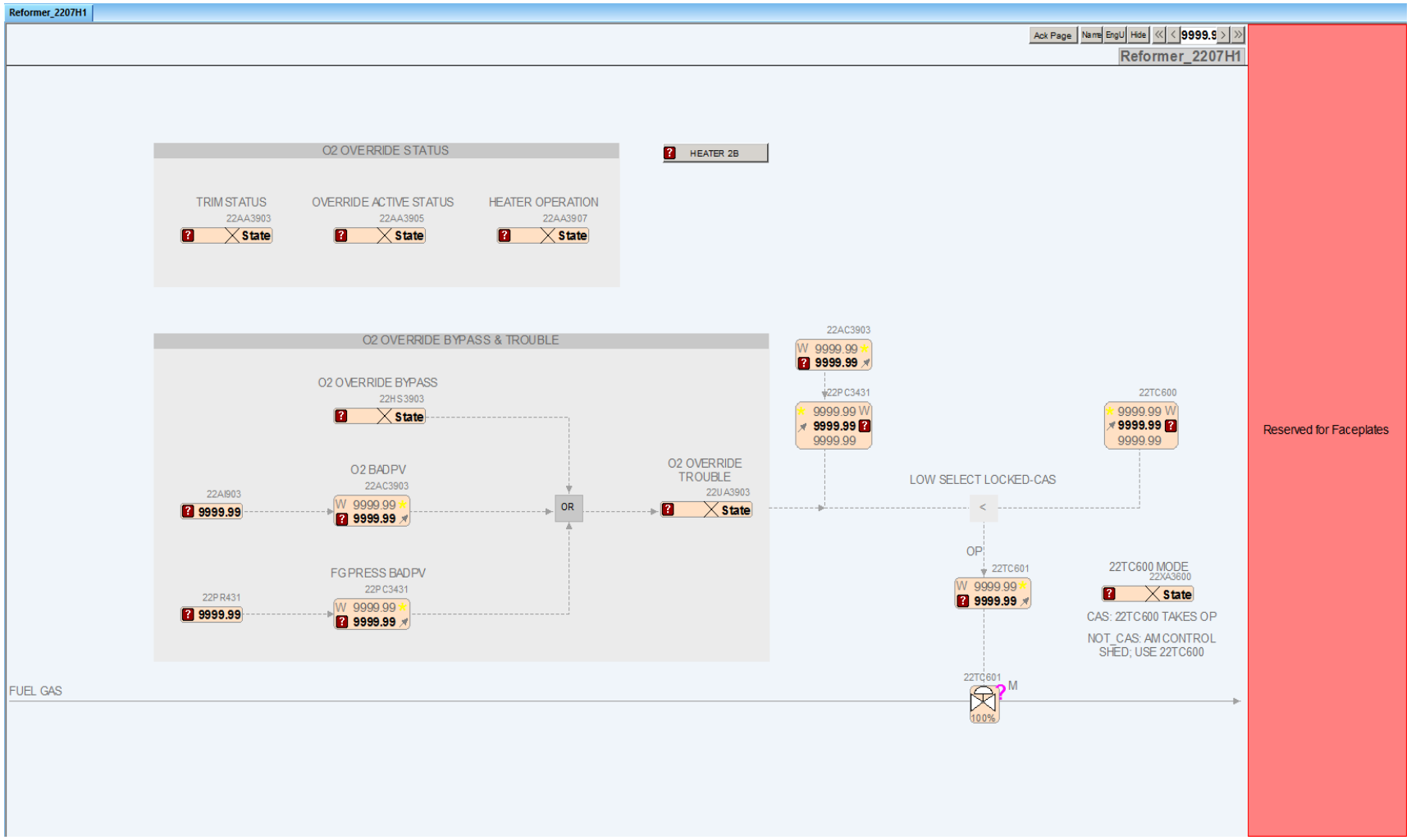

Reformer_2207
2207 #2 Desulfurizer 2B Heater
ACK
SIL
Rate of Change
Heater Skin & Outlet Temps
Help
22TI866
SRA
22AI903
22PI440
22TI865
22FC124
BFW Pumps
Text%
22TI864
To Steam Drum
To Desulf Reactor
22AK3903
O2
22QK3051
2B Heater Duty
22QK3052
Combined Htr Duty
Outlet
Skin 7
Skin 4
22TI716
22TI717
22TI718
22TI719
22TI720
SDL
22TI859
22TI860
22TI861
22TI862
22TI863
22TI695
22TI696
22TI697
22TI698
22TI699
C1
C2
C3
C4
C5
Heater Operation
22AA3907
State
O2 Override Trouble Status
22UA3903
Override Active Status
22AA3905
22TC603
Desulf Strip Feed Temp
22XM3708
Burner Count (of 5)
Shape & text added
2A Desulf Heater
22TI601A
22TI601B
22FI114
22AC3903
O2 Override Help
22TY3600
22PR431
22PC3458
22TC3600
OP
Text%
22TC600
Fuel Gas
Navigation deleted
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2207
Ack Page
Name
EngU
Hide
Reformer_2207
RATE OF CHANGE
HEATER SKIN & OUTLET TEMPS
22TA3600
State
HELP
22FC124
9999.99
9999.99
BFW PUMPS
22FC124
100%
22TI866
9999.99
22TI865
9999.99
22TI864
9999.99
22AI903
State
SRA
22AI903
9999.99
22PI440
9999.99
STEAM
DRUM
22AK3903
9999.99
O2
22QK3051
9999.99
2B HEATER DUTY
22QK3052
9999.99
COMBINED HTR DUTY
TO DESULF REACTOR
REACTOR
22AA3907
State
HEATER OPERATION
22UA3903
State
O2 OVERRIDE TROUBLE STATUS
22AA3905
State
OVERRIDE ACTIVE STATUS
22TC603
9999.99
9999.99
DESULF STRIP FEED TEMP
OUTLET
SKIN 7
SKIN 4
22TI716
22TI717
22TI718
22TI719
22TI720
SDL 22TA3859
SDL 22TA3860
SDL 22TA3861
SDL 22TA3862
SDL 22TA3863
22TI859
22TI860
22TI861
22TI862
22TI863
SDL 22TA3695
SDL 22TA3696
SDL 22TA3697
SDL 22TA3698
SDL 22TA3699
22TI695
22TI696
22TI697
22TI698
22TI699
C1
C2
C3
C4
C5
2A DESULF HEATER
22TI601A
9999.99
2202 #2 DESULFURIZER 2A HEATER
22TI601B
9999.99
22AC3903
9999.99
9999.99
9999.99
O2 OVR HELP
22PC3458
9999.99
9999.99
9999.99
22TY3600
OP
22TC3600
9999.99
9999.99
9999.99
22FI114
9999.99
22PR431
9999.99
22TC600
100%
22TC600
9999.99
9999.99
FUEL GAS
RAMP HELP
Reserved for Faceplates

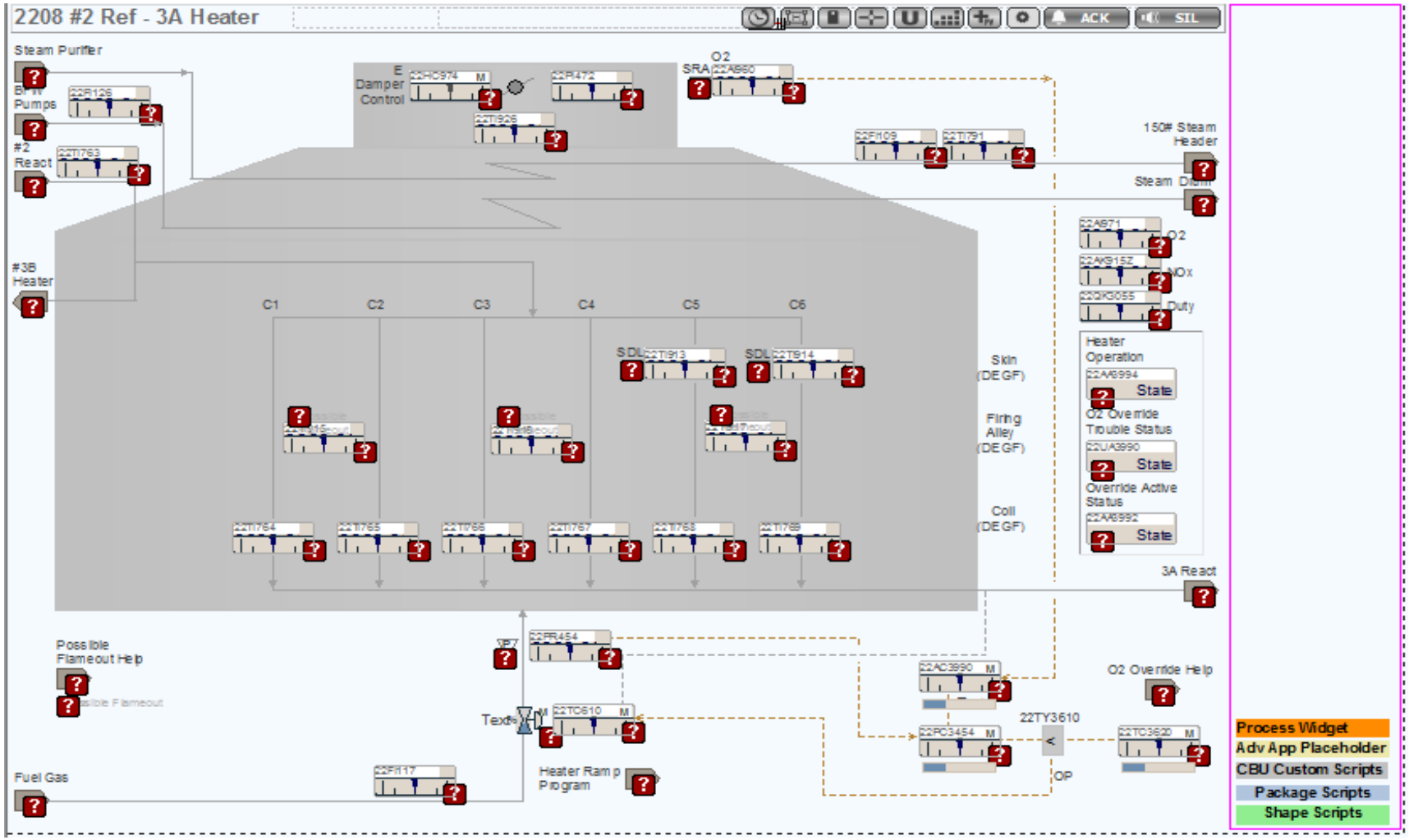
2.13 2207H1 2B Desulfurizer O2 Override Help (Reformer_2207H1.htm)

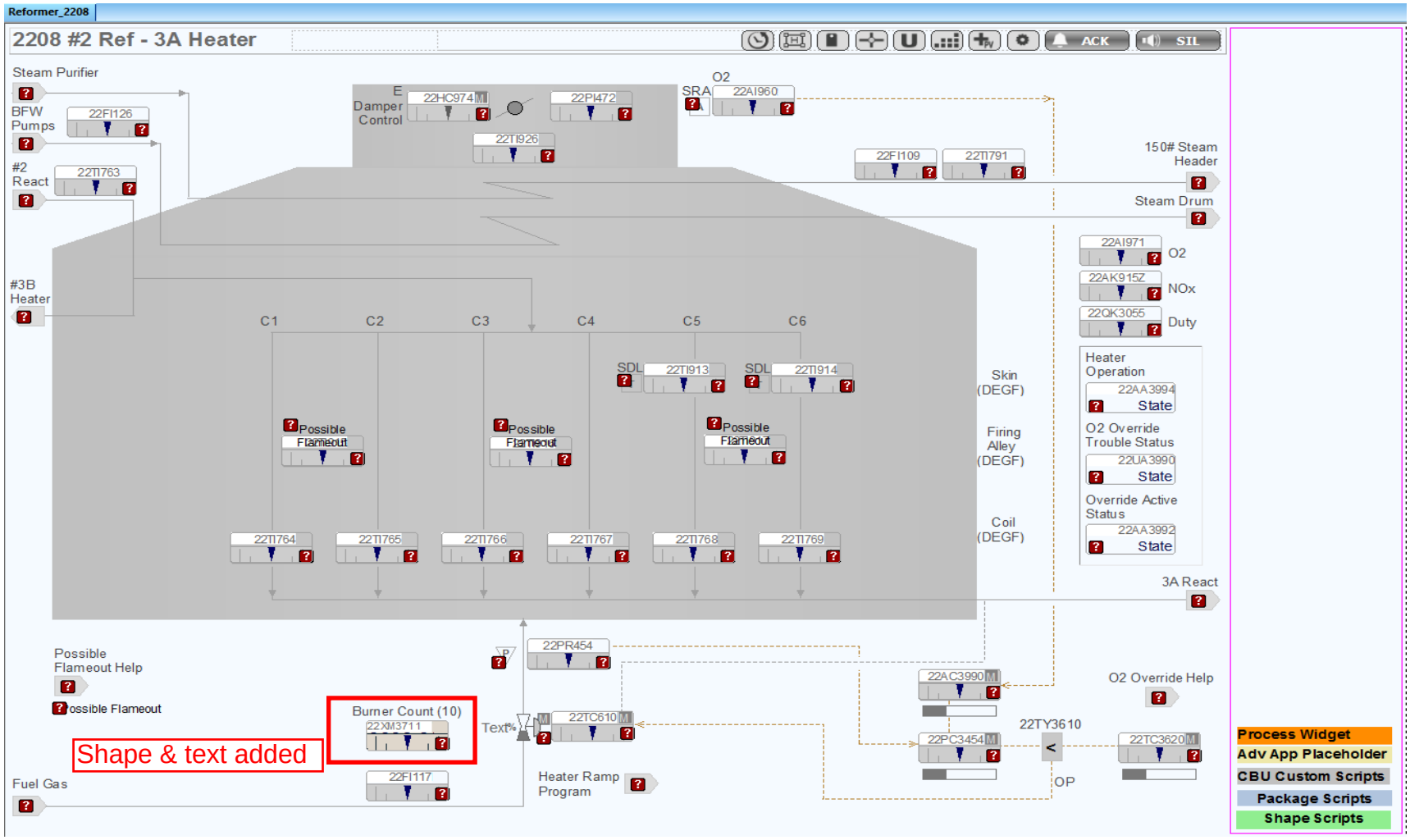


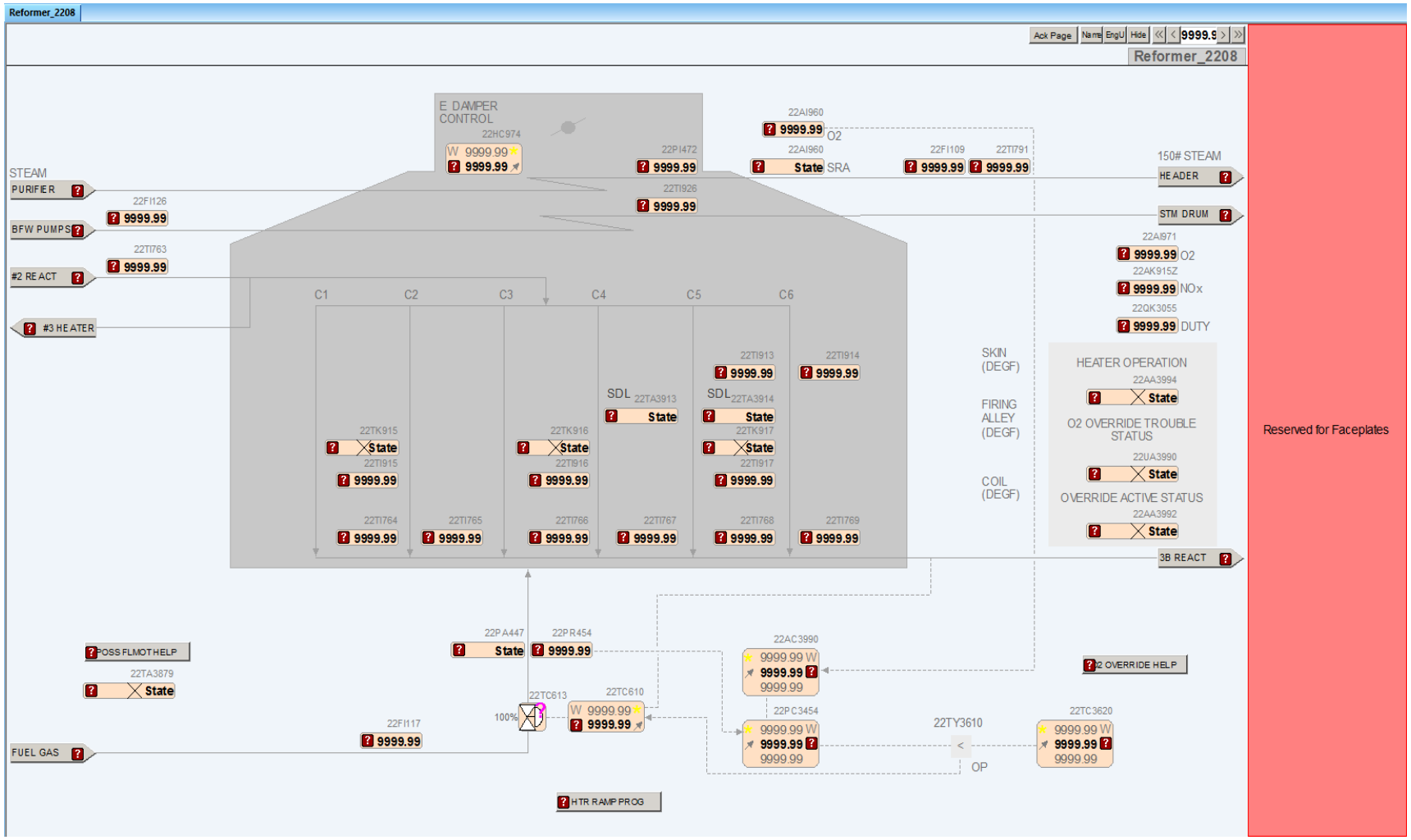

Reformer_2207H1
2207H1 2B Desulfurizer O2 Override Help
ACK
SIL
O2 Override Status
22AA3903
State
Trim Status
22AA3905
State
Override Active Status
22AA3907
State
Heater Operation
Heater 2B
O2 Override Bypass & Trouble
22HS3903
State
O2 Override Bypass
22AI903
22AC3903
M
O2 BADPV
OR
22UA3903
State
O2 Override Trouble
22PR431
22PC3431
M
FG Press BADPV
22AC3903
M
22PC3431
M
22TC3600
M
Low Select Locked-CAS
<
OP
22TC600
M
22TC600 Mode
22XA3600
State
CAS: 22TC600 takes OP
NOT_CAS: AM Control Shed; use 22TC600
Fuel Gas
M
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2207H1
Ack Page
Name
EngU
Hide
Reformer_2207H1
O2 OVERRIDE STATUS
HEATER 2B
TRIM STATUS
22AA3903
State
OVERRIDE ACTIVE STATUS
22AA3905
State
HEATER OPERATION
22AA3907
State
O2 OVERRIDE BYPASS & TROUBLE
O2 OVERRIDE BYPASS
22HS3903
State
O2 BADPV
22AC3903
W 9999.99
9999.99
22AI903
9999.99
OR
O2 OVERRIDE TROUBLE
22UA3903
State
FG PRESS BADPV
22PC3431
W 9999.99
9999.99
22PR431
9999.99
22AC3903
W 9999.99
9999.99
22PC3431
9999.99 W
9999.99
9999.99
22TC600
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
<
OP
22TC601
W 9999.99
9999.99
22TC600 MODE
22XA3600
State
CAS: 22TC600 TAKES OP
NOT_CAS: AM CONTROL SHED; USE 22TC600
22TC601
M
100%
FUEL GAS
Reserved for Faceplates

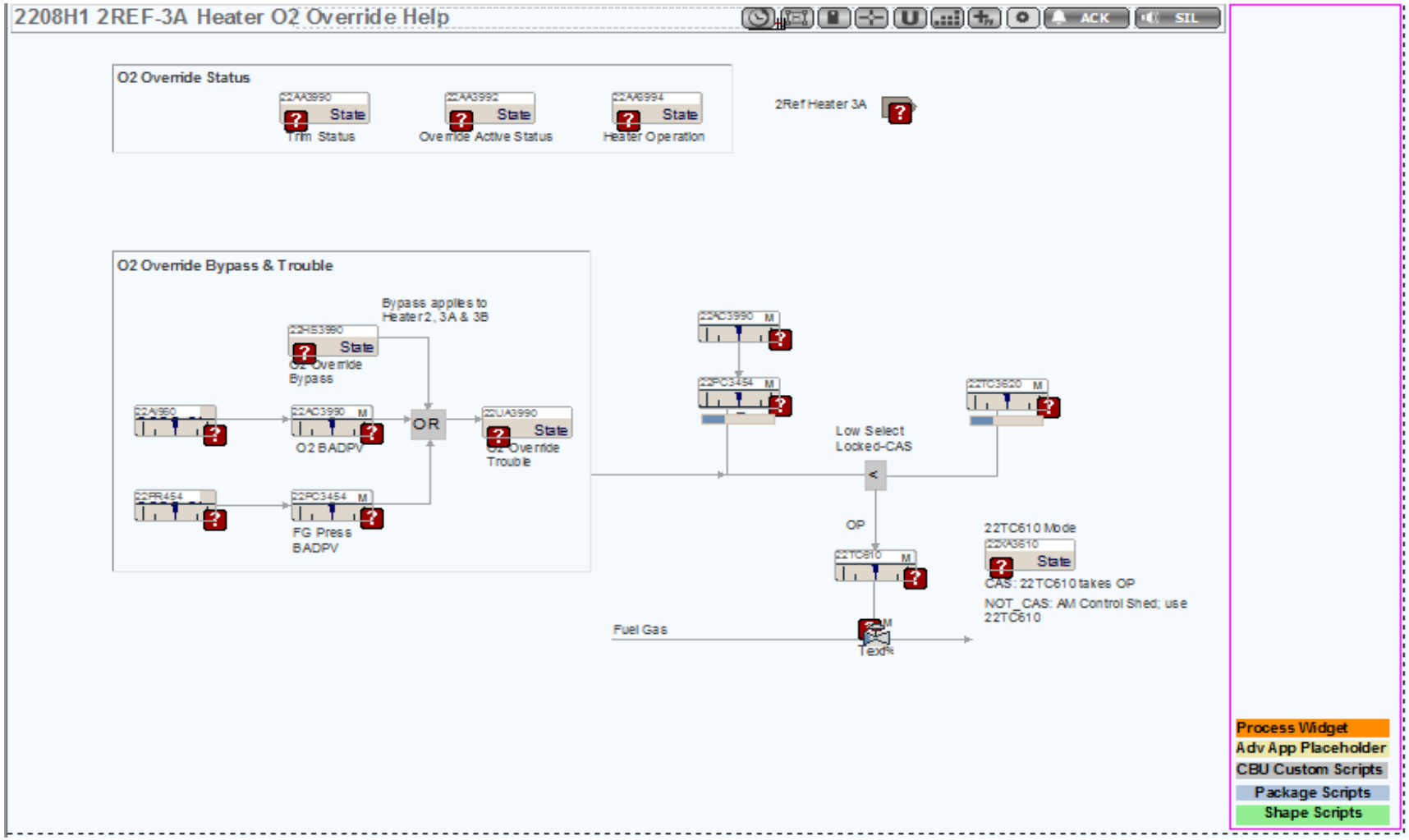
2.14 2208 #2 Ref - 3A Heater (Reformer_2208.htm)

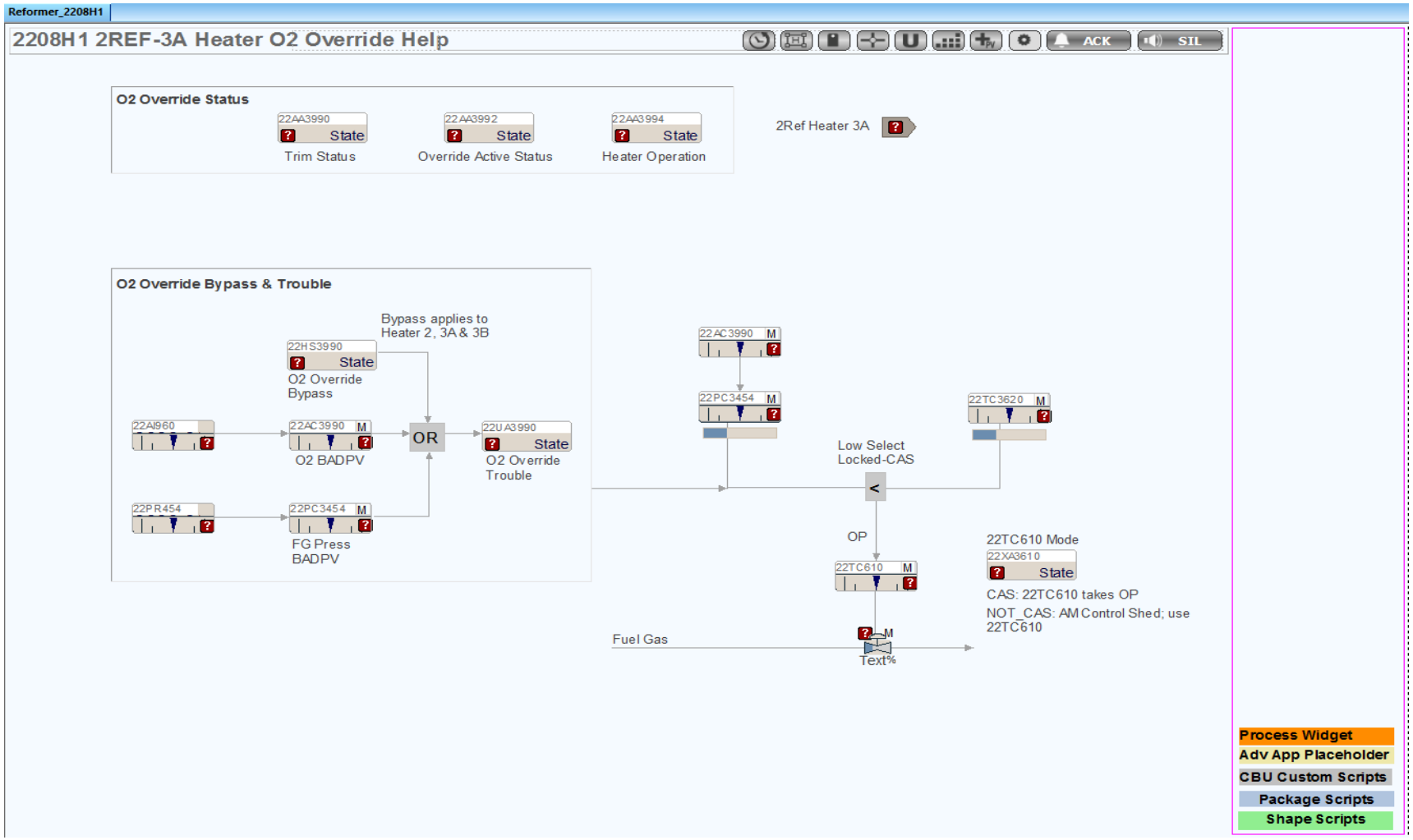


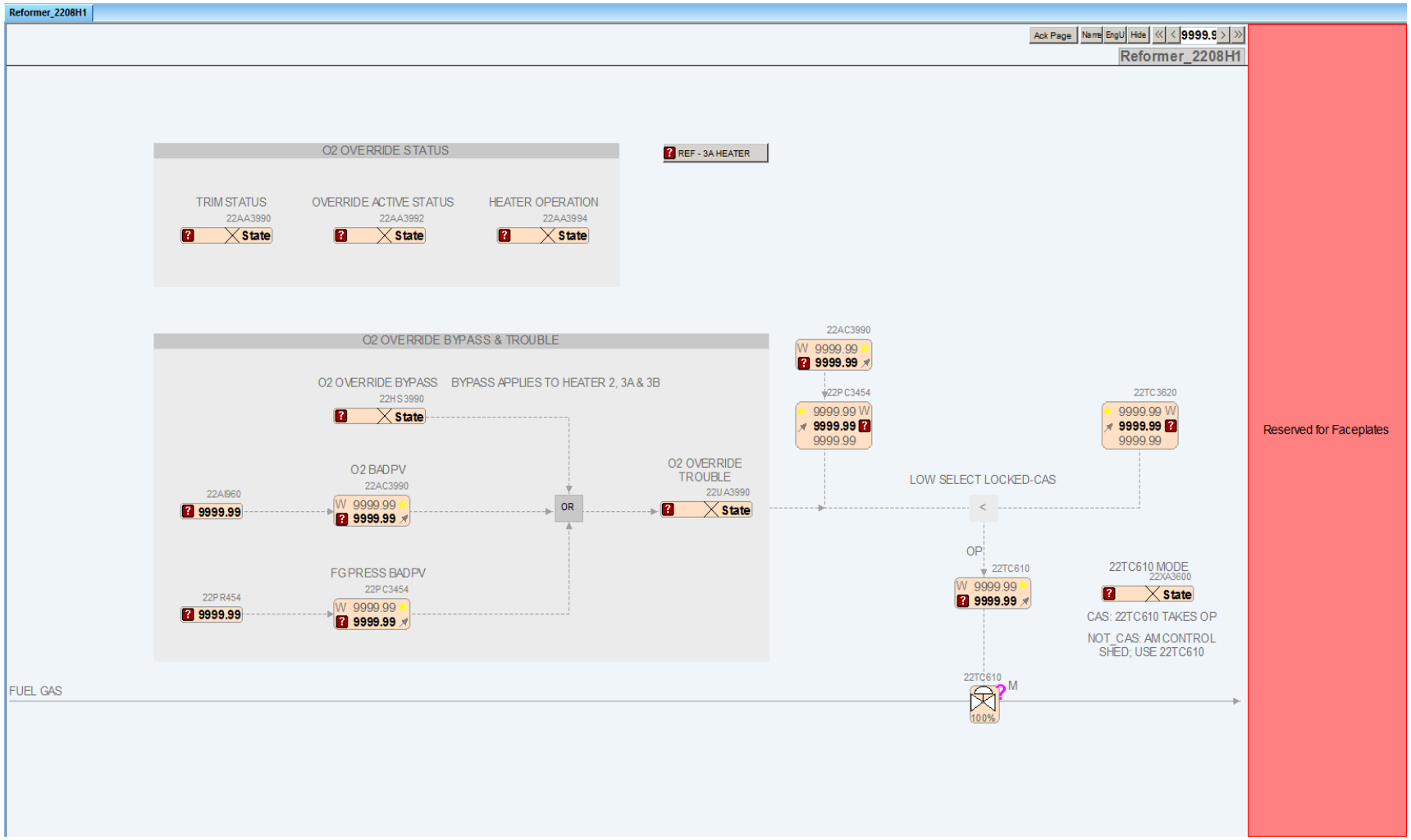

Reformer_2208
2208 #2 Ref - 3A Heater
ACK
SIL
Steam Purifier
BFW Pumps
22FI126
#2 React
22TI763
#3B Heater
E Damper Control
22HC974
22PI472
22TI926
O2 SRA
22AI960
22FI109
22TI791
150# Steam Header
Steam Drum
22AI971
O2
22AK915Z
NOx
22QK3055
Duty
Heater Operation
22AA3994
State
O2 Override Trouble Status
22UA3990
State
Override Active Status
22AA3992
State
C1
C2
C3
C4
C5
C6
SDL
22TI913
SDL
22TI914
Possible Flameout
Possible Flameout
Possible Flameout
Skin (DEGF)
Firing Alley (DEGF)
Coil (DEGF)
22TI764
22TI765
22TI766
22TI767
22TI768
22TI769
3A React
Possible Flameout Help
ossible Flameout
Burner Count (10)
22XM3711
Shape & text added
22FI117
Fuel Gas
22PR454
Text%
22TC610
Heater Ramp Program
22AC3990
O2 Override Help
22PC3454
22TY3610
<
OP
22TC3620
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2208
Ack Page
Name
EngU
Hide
Reformer_2208
E DAMPER CONTROL
22HC974
W 9999.99
9999.99
22PI472
9999.99
22AI960
9999.99
O2
22AI960
State
SRA
22FI109
9999.99
22TI791
9999.99
150# STEAM HEADER
STEAM PURIFIER
22FI126
9999.99
BFW PUMPS
22TI926
9999.99
STM DRUM
22TI763
9999.99
#2 REACT
#3 HEATER
C1
C2
C3
C4
C5
C6
22AI971
9999.99
O2
22AK915Z
9999.99
NOx
22QK3055
9999.99
DUTY
22TI913
9999.99
22TI914
9999.99
SDL 22TA3913
State
SDL 22TA3914
State
SKIN (DEGF)
FIRING ALLEY (DEGF)
COIL (DEGF)
HEATER OPERATION
22AA3994
State
O2 OVERRIDE TROUBLE STATUS
22UA3990
State
OVERRIDE ACTIVE STATUS
22AA3992
State
22TK915
State
22TK916
State
22TK917
State
22TI915
9999.99
22TI916
9999.99
22TI917
9999.99
22TI764
9999.99
22TI765
9999.99
22TI766
9999.99
22TI767
9999.99
22TI768
9999.99
22TI769
9999.99
3B REACT
Reserved for Faceplates
POSS FLMOT HELP
22TA3879
State
22PA447
State
22PR454
9999.99
22AC3990
9999.99 W
9999.99
9999.99
O2 OVERRIDE HELP
22TC613
100%
22TC610
W 9999.99
9999.99
22PC3454
9999.99 W
9999.99
9999.99
22TY3610
OP
22TC3620
9999.99 W
9999.99
9999.99
22FI117
9999.99
FUEL GAS
HTR RAMP PROG

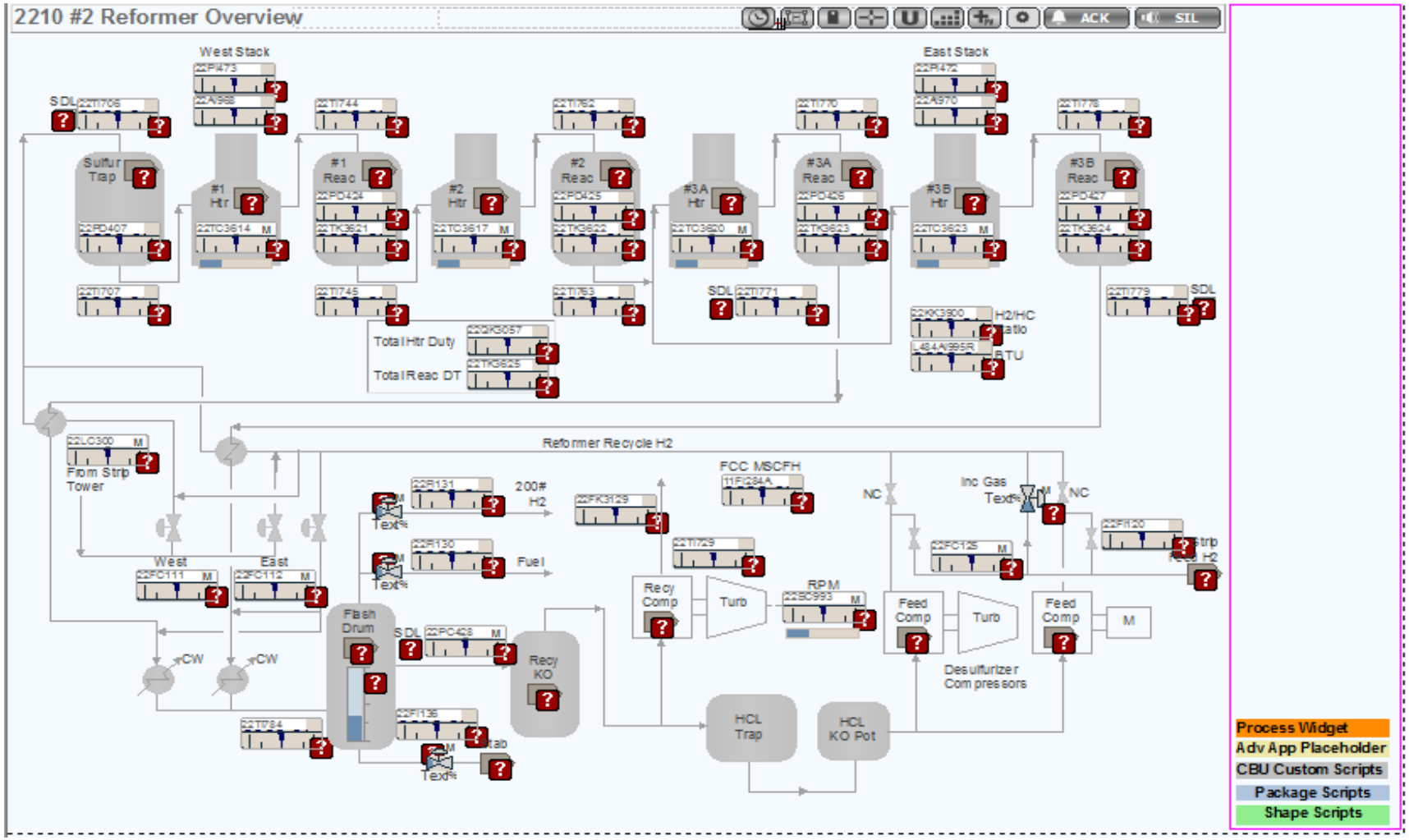
2.15 2208H1 2REF-3A Heater O2 Override Help (Reformer_2208H1.htm)

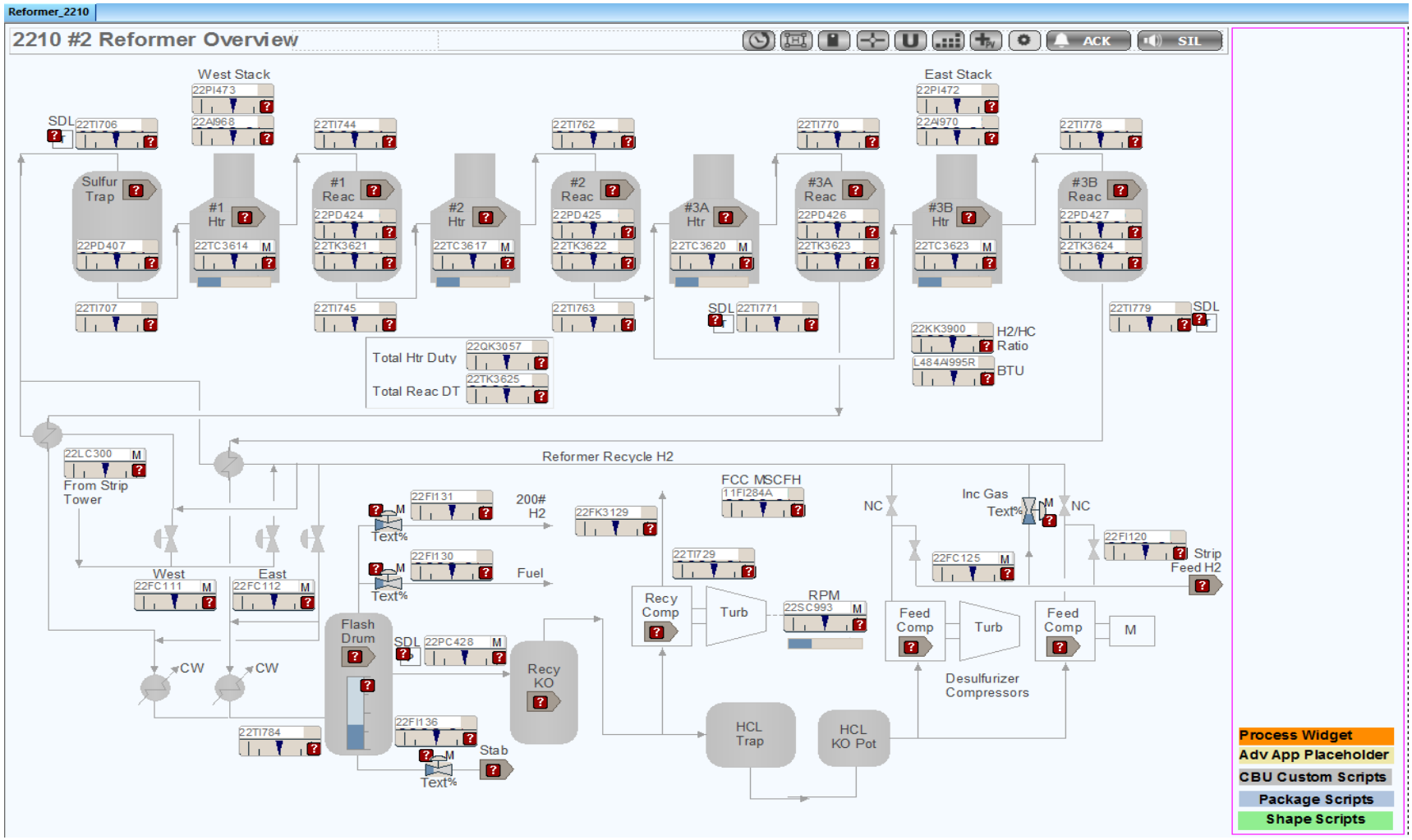


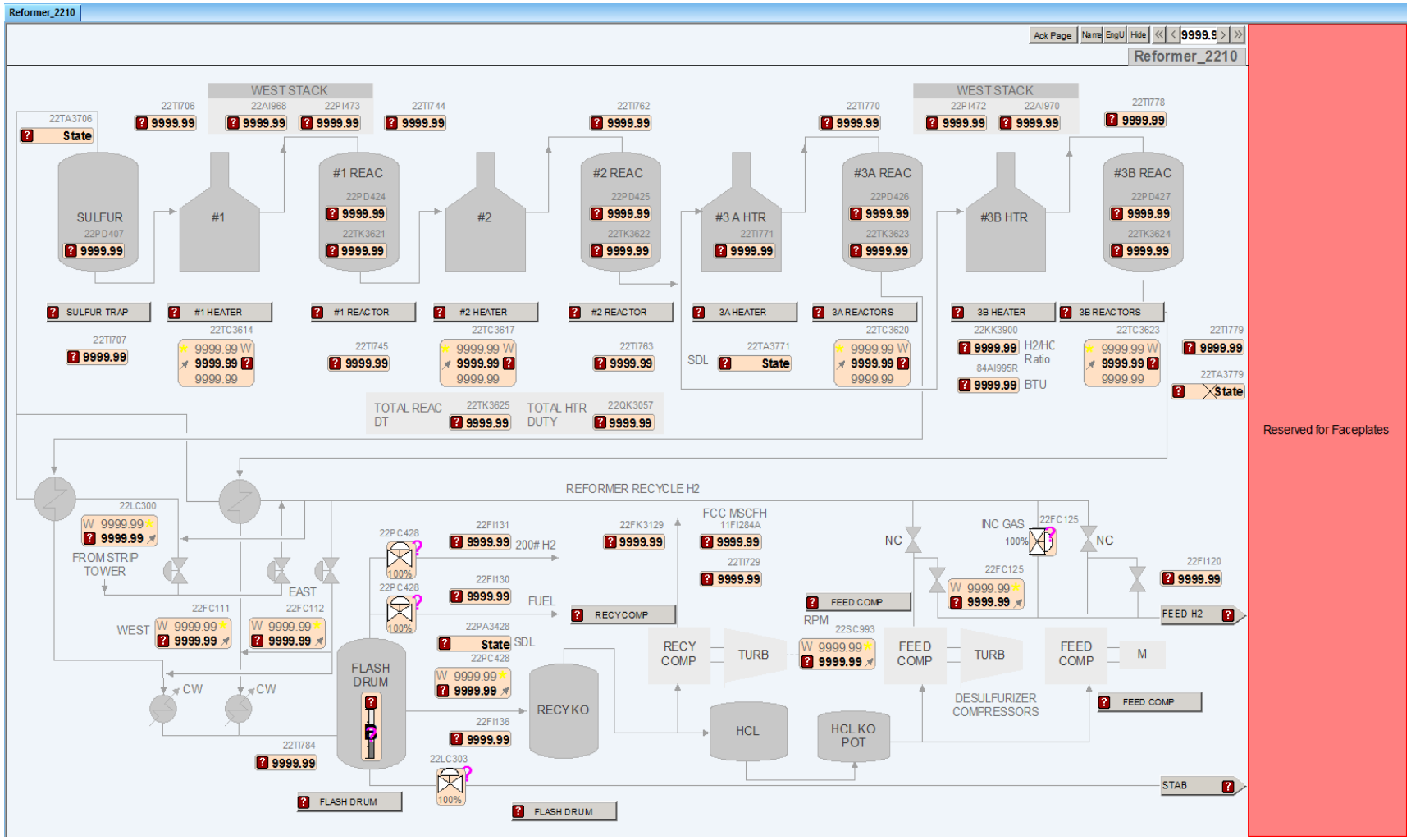

Reformer_2208H1
2208H1 2REF-3A Heater O2 Override Help
ACK
SIL
O2 Override Status
22AA3990
State
Trim Status
22AA3992
State
Override Active Status
22AA3994
State
Heater Operation
2Ref Heater 3A
O2 Override Bypass & Trouble
Bypass applies to Heater 2, 3A & 3B
22HS3990
State
O2 Override Bypass
22AI960
22AC3990 M
O2 BADPV
OR
22UA3990
State
O2 Override Trouble
22PR454
22PC3454 M
FG Press BADPV
22AC3990 M
22PC3454 M
22TC3620 M
Low Select Locked-CAS
<
OP
22TC610 M
22TC610 Mode
22XA3610
State
CAS: 22TC610 takes OP
NOT_CAS: AM Control Shed; use 22TC610
Fuel Gas
M
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2208H1
Ack Page
Name
EngU
Hide
Reformer_2208H1
O2 OVERRIDE STATUS
REF - 3A HEATER
TRIM STATUS
22AA3990
State
OVERRIDE ACTIVE STATUS
22AA3992
State
HEATER OPERATION
22AA3994
State
O2 OVERRIDE BYPASS & TROUBLE
O2 OVERRIDE BYPASS
BYPASS APPLIES TO HEATER 2, 3A & 3B
22HS3990
State
O2 BADPV
22AC3990
W 9999.99
9999.99
22AI960
9999.99
OR
O2 OVERRIDE TROUBLE
22UA3990
State
FG PRESS BADPV
22PC3454
W 9999.99
9999.99
22PR454
9999.99
22AC3990
W 9999.99
9999.99
22PC3454
9999.99 W
9999.99
9999.99
22TC3620
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
<
OP
22TC610
W 9999.99
9999.99
22TC610 MODE
22XA3600
State
CAS: 22TC610 TAKES OP
NOT_CAS: AM CONTROL SHED; USE 22TC610
22TC610
M
100%
FUEL GAS
Reserved for Faceplates

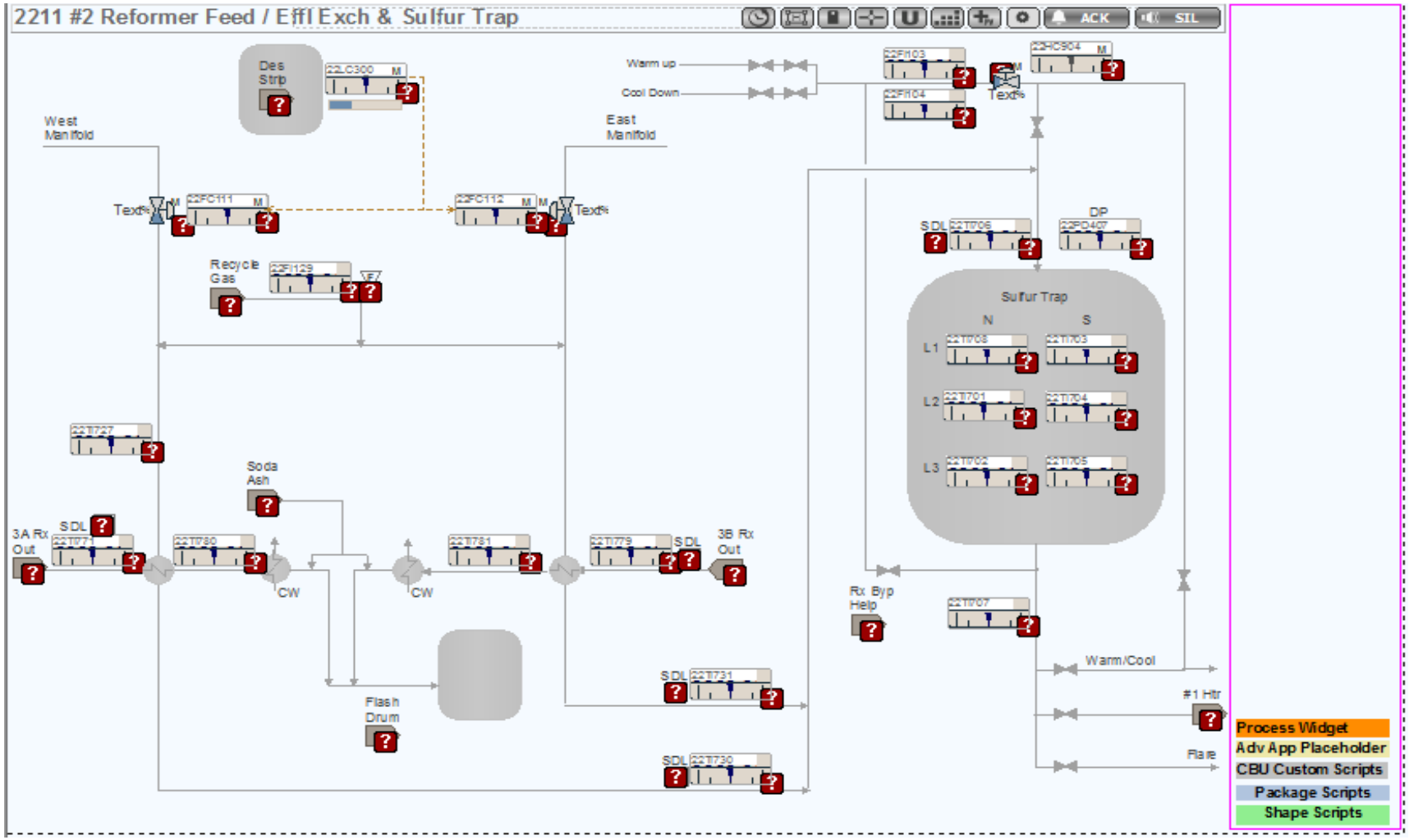
2.16 2210 #2 Reformer Overview (Reformer_2210.htm)

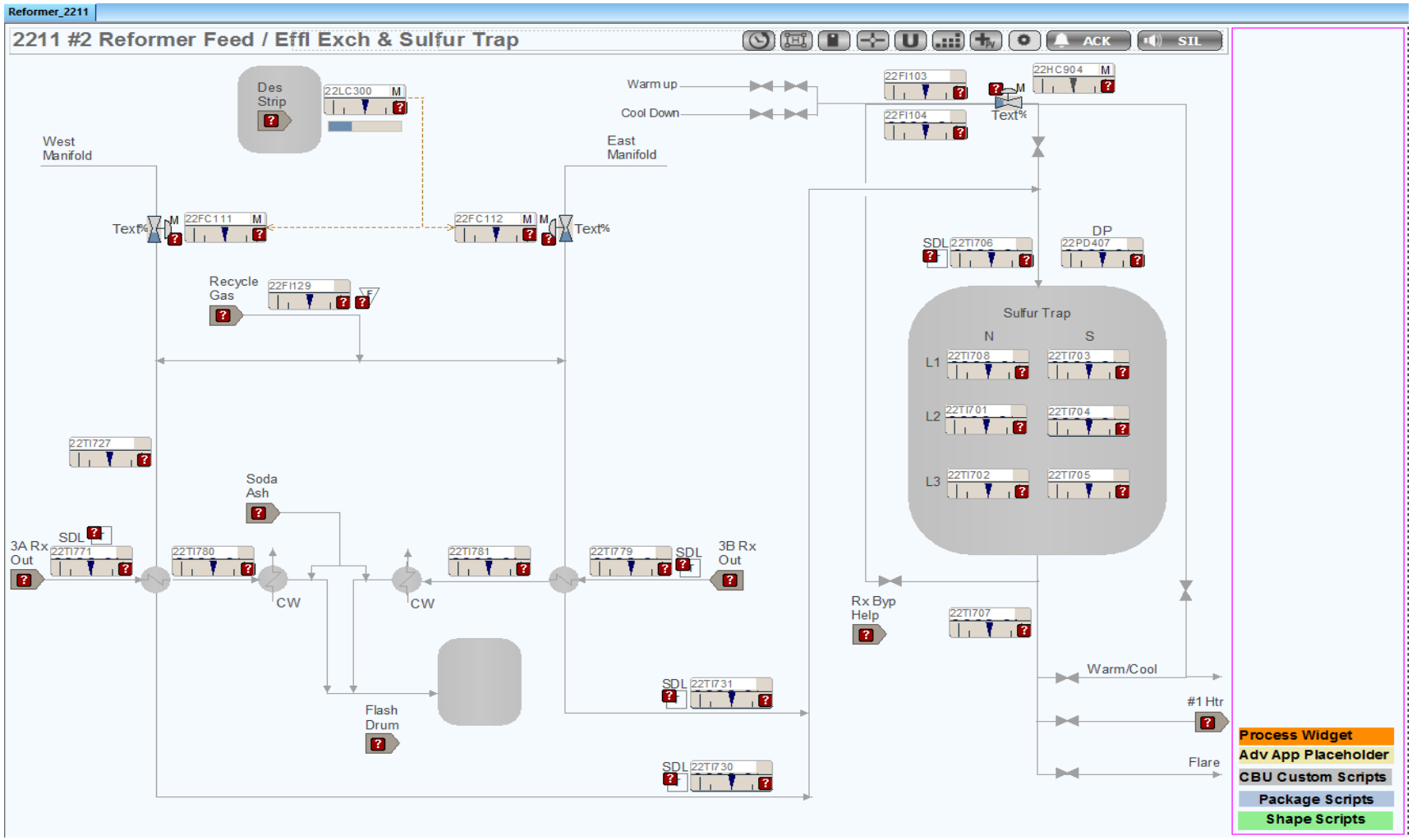


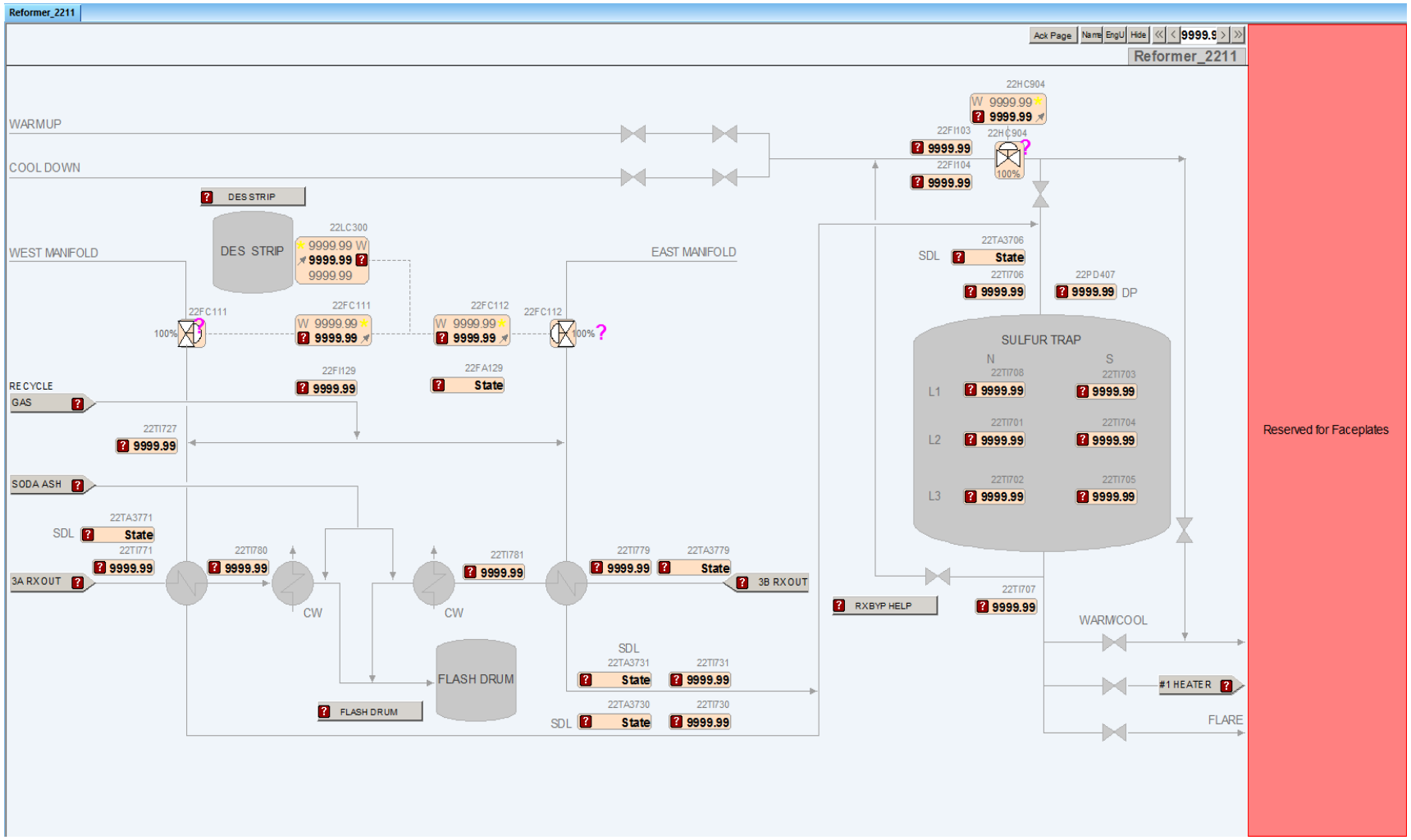

Reformer_2210
2210 #2 Reformer Overview
ACK
SIL
West Stack
East Stack
Sulfur Trap
#1 Htr
#1 Reac
#2 Htr
#2 Reac
#3A Htr
#3A Reac
#3B Htr
#3B Reac
Total Htr Duty
Total Reac DT
H2/HC Ratio
BTU
Reformer Recycle H2
From Strip Tower
200# H2
Fuel
FCC MSCFH
Inc Gas
Strip Feed H2
Flash Drum
Recy KO
Recy Comp
Turb
RPM
Feed Comp
Desulfurizer Compressors
HCL Trap
HCL KO Pot
CW
Stab
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2210
Ack Page
Name
EngU
Hide
Reformer_2210
WEST STACK
WEST STACK
22TA3706
State
22TI706
22AI968
22PI473
22TI744
22TI762
22TI770
22PI472
22AI970
22TI778
SULFUR
22PD407
#1
#1 REAC
22PD424
22TK3621
#2
#2 REAC
22PD425
22TK3622
#3 A HTR
22TI771
#3A REAC
22PD426
22TK3623
#3B HTR
#3B REAC
22PD427
22TK3624
SULFUR TRAP
#1 HEATER
#1 REACTOR
#2 HEATER
#2 REACTOR
3A HEATER
3A REACTORS
3B HEATER
3B REACTORS
22TI707
22TC3614
22TI745
22TC3617
22TI763
SDL
22TA3771
22TC3620
22KK3900
H2/HC Ratio
84AI995R
BTU
22TC3623
22TI779
22TA3779
TOTAL REAC DT
22TK3625
TOTAL HTR DUTY
22QK3057
Reserved for Faceplates
REFORMER RECYCLE H2
22LC300
FROM STRIP TOWER
EAST
WEST
22FC111
22FC112
CW
CW
22TI784
FLASH DRUM
22PC428
22FI131
200# H2
22FI130
FUEL
22PA3428
SDL
22FI136
RECY KO
22LC303
FLASH DRUM
FLASH DRUM
22FK3129
RECY COMP
FCC MSCFH
11FI284A
22TI729
RECY COMP
TURB
HCL
HCL KO POT
NC
INC GAS
22FC125
NC
22FI120
FEED H2
FEED COMP
RPM
22SC993
FEED COMP
TURB
FEED COMP
M
DESULFURIZER COMPRESSORS
FEED COMP
STAB

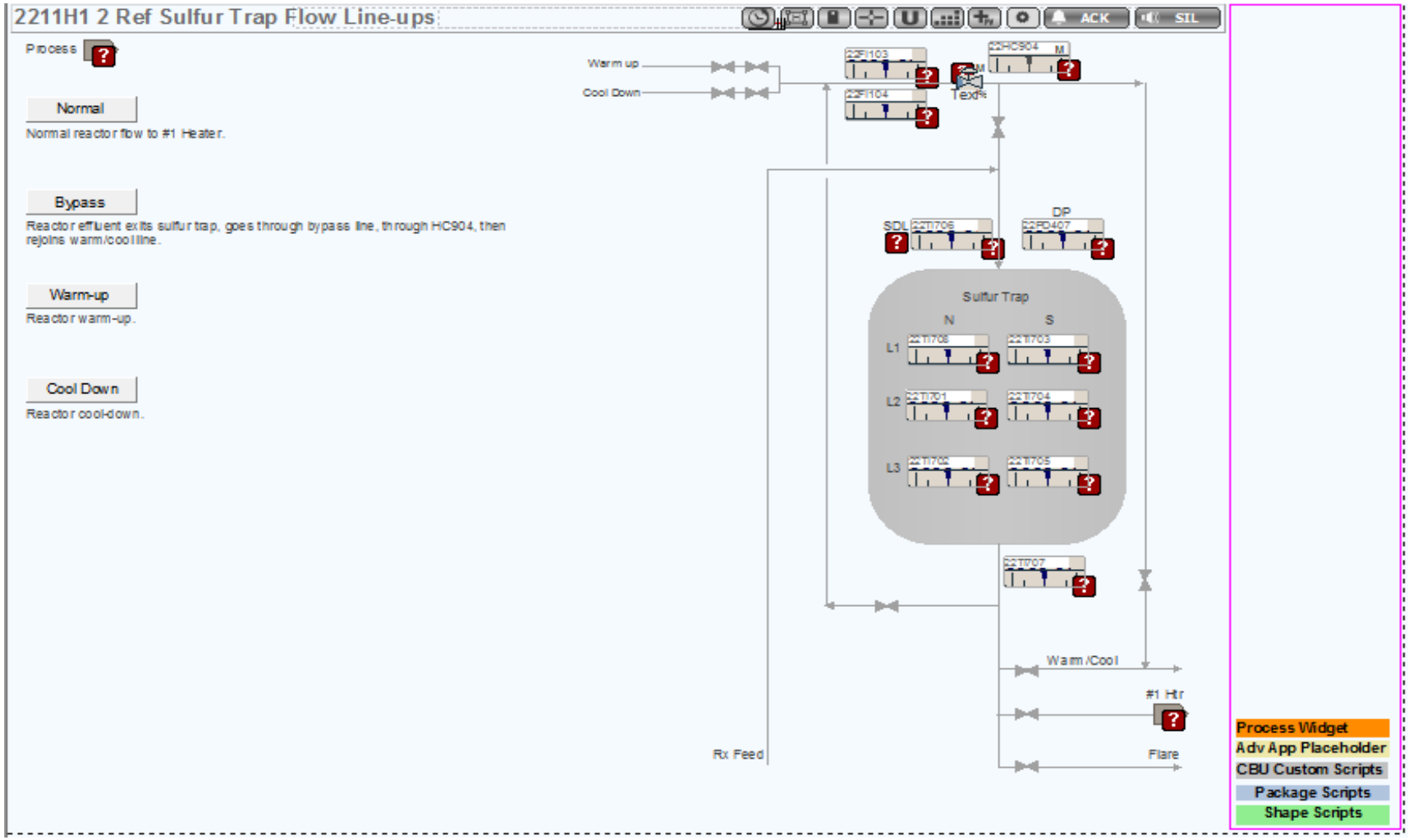
2.17 2211 #2 Reformer Feed / Effl Exch & Sulfur Trap (Reformer_2211.htm)

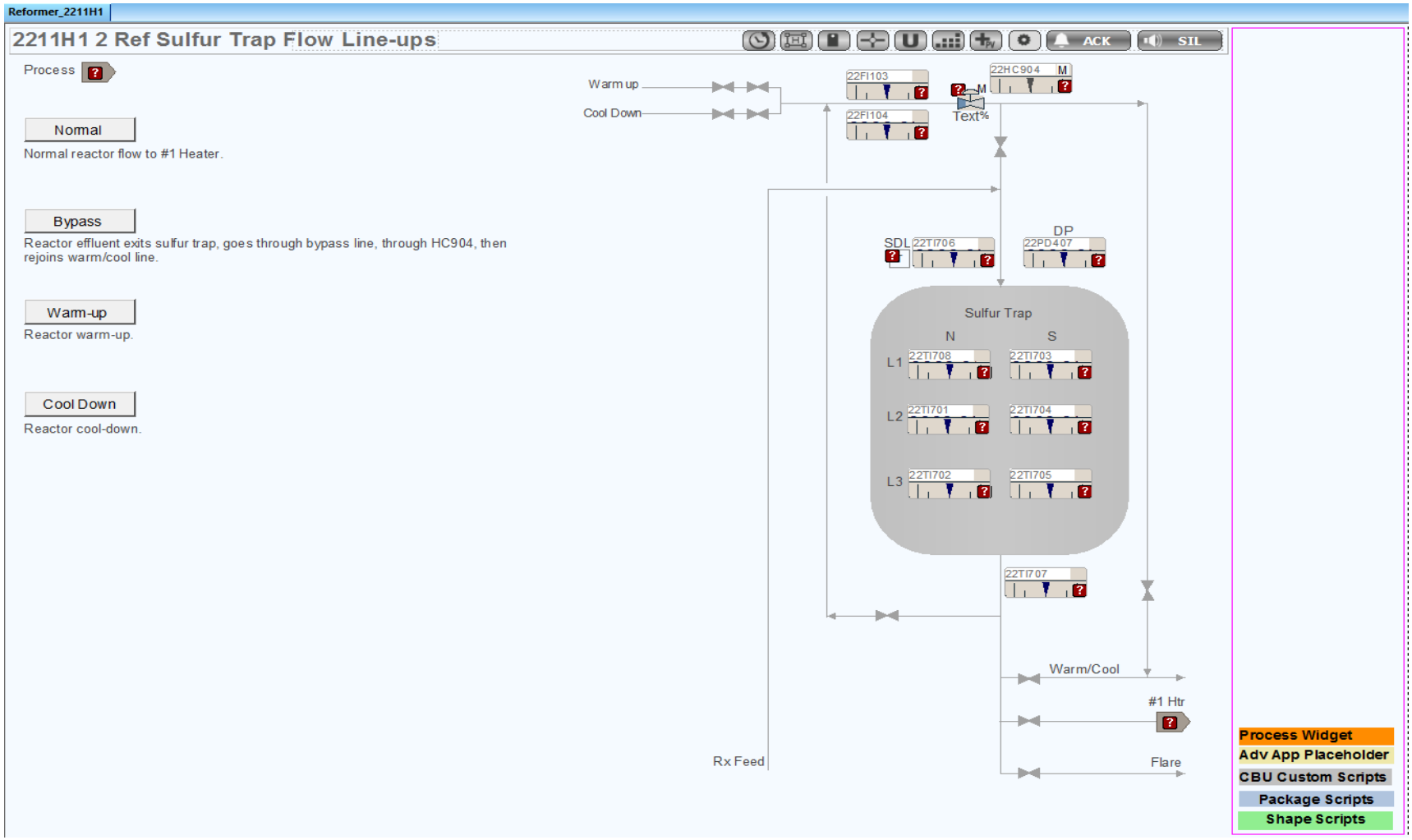


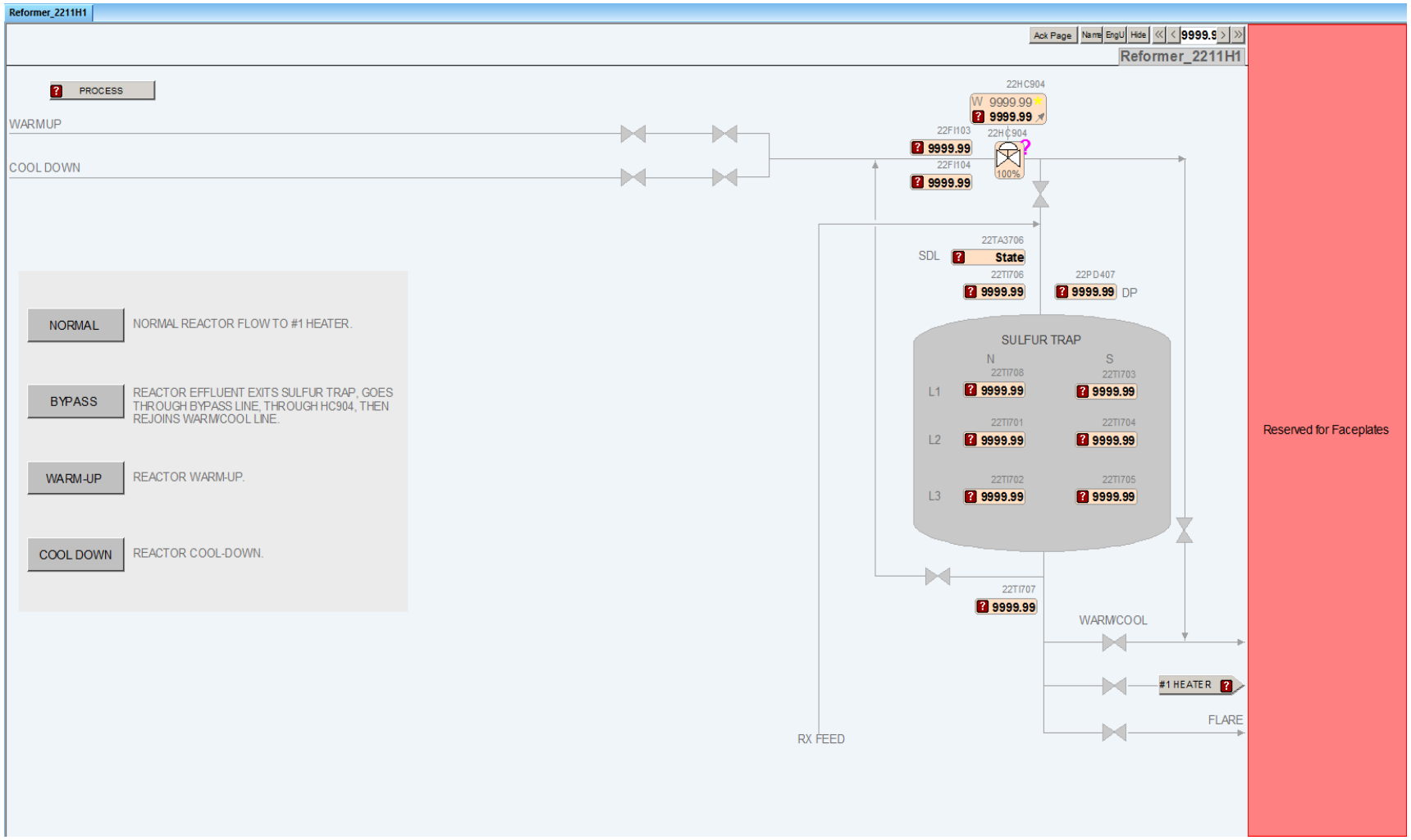

Reformer_2211
2211 #2 Reformer Feed / Effl Exch & Sulfur Trap
ACK
SIL
Des Strip
22LC300
Warm up
Cool Down
22FI103
22FI104
22HC904
Text%
West Manifold
East Manifold
Text%
22FC111
22FC112
Text%
Recycle Gas
22FI129
SDL
22TI706
DP
22PD407
Sulfur Trap
N
S
L1
22TI708
22TI703
L2
22TI701
22TI704
L3
22TI702
22TI705
22TI727
Soda Ash
3A Rx Out
SDL
22TI771
22TI780
CW
CW
22TI781
22TI779
SDL
3B Rx Out
Rx Byp Help
22TI707
Warm/Cool
#1 Htr
Flare
Flash Drum
SDL
22TI731
SDL
22TI730
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2211
Ack Page
Name
EngU
Hide
Reformer_2211
WARMUP
COOL DOWN
DES STRIP
22LC300
WEST MANIFOLD
EAST MANIFOLD
22FC111
22FC112
22FI129
22FA129
RECYCLE
GAS
22TI727
SODA ASH
22TA3771
SDL
State
22TI771
22TI780
22TI781
22TI779
22TA3779
3A RXOUT
3B RXOUT
CW
FLASH DRUM
22TA3731
22TI731
22TA3730
22TI730
22HC904
22FI103
22FI104
22TA3706
22TI706
22PD407
DP
SULFUR TRAP
N
S
L1
L2
L3
22TI708
22TI703
22TI701
22TI704
22TI702
22TI705
RXBYP HELP
22TI707
WARM/COOL
#1 HEATER
FLARE
Reserved for Faceplates

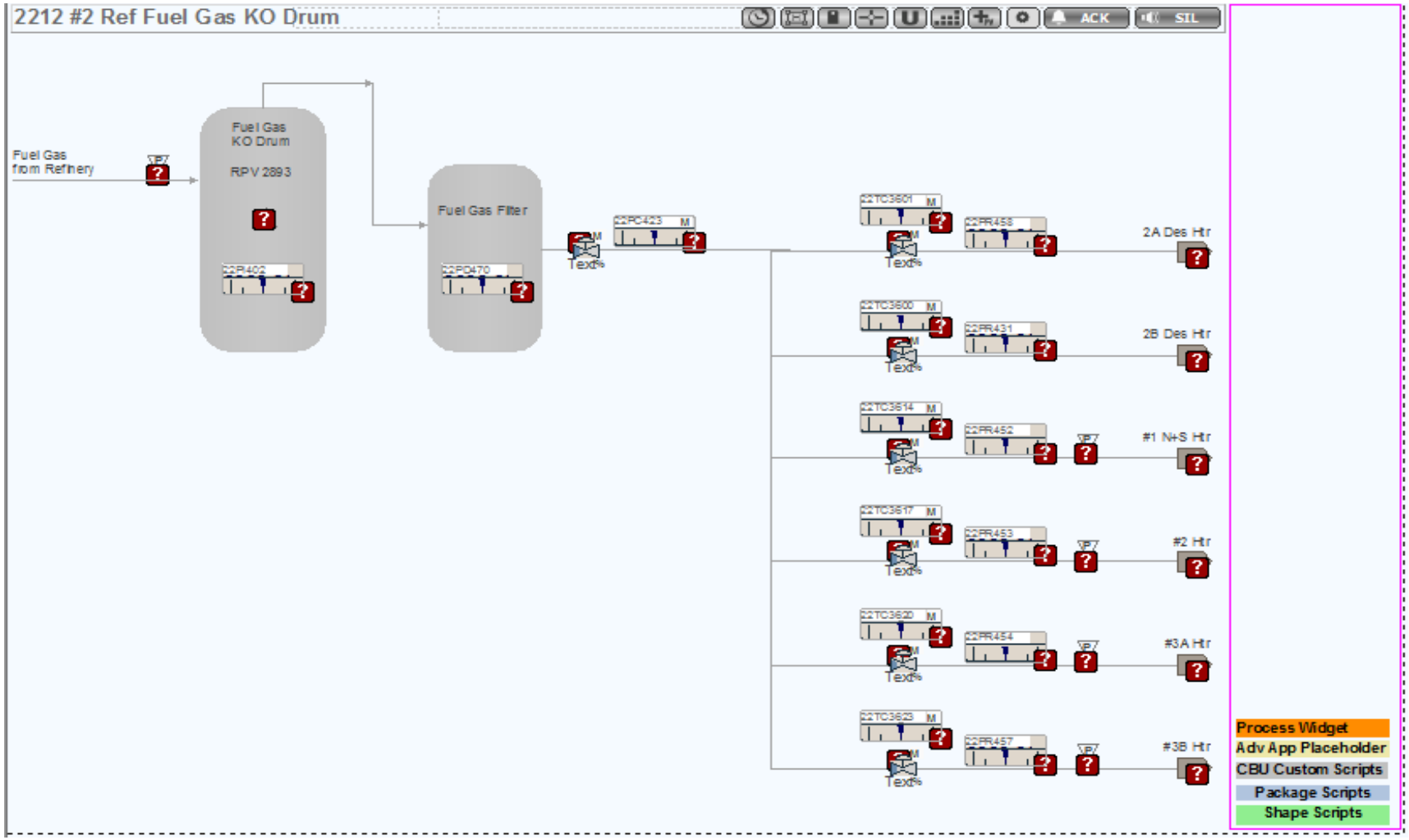
2.18 2211H1 2 Ref Sulfur Trap Flow Line-ups (Reformer_2211H1.htm)

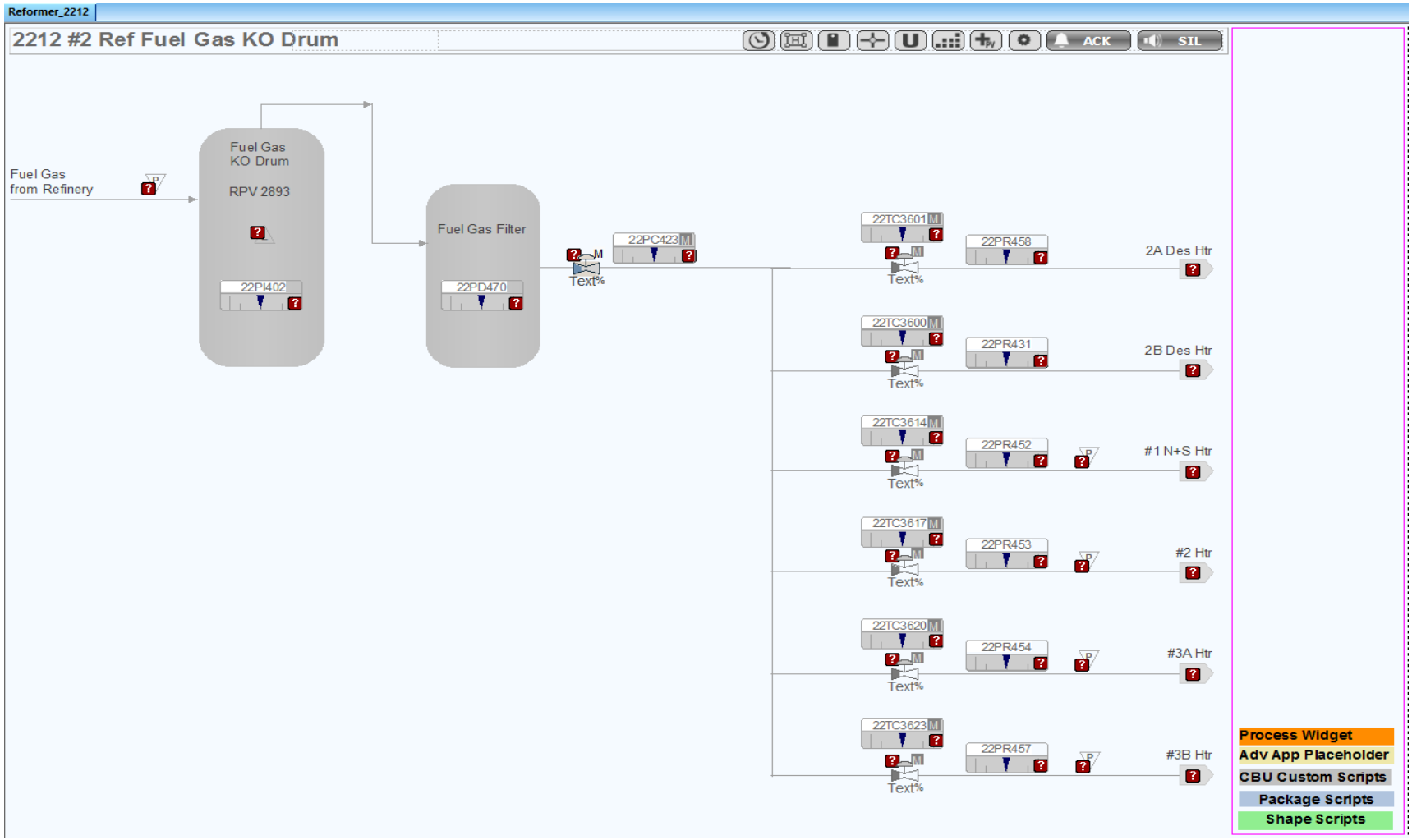


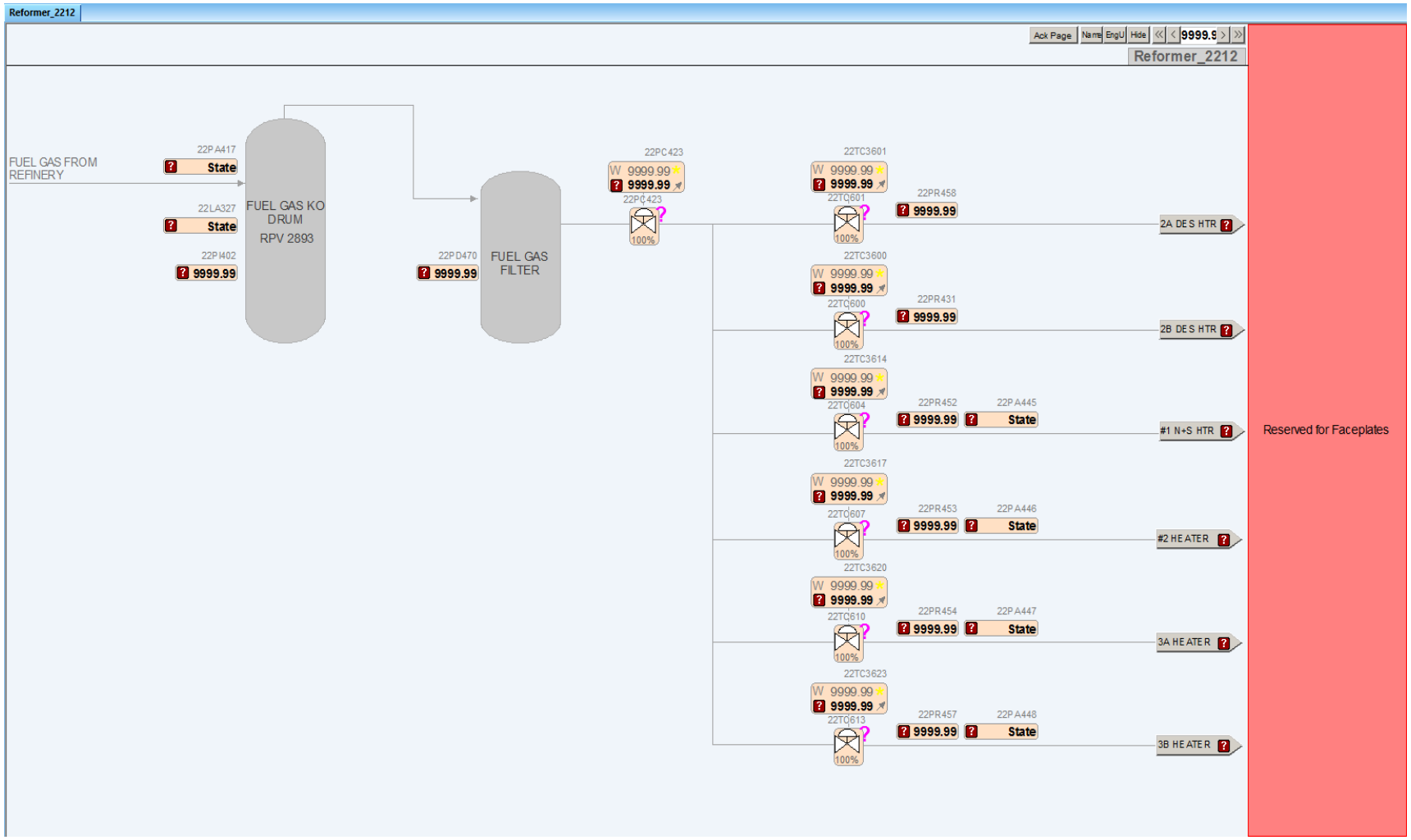

Reformer_2211H1
2211H1 2 Ref Sulfur Trap Flow Line-ups
ACK
SIL
Process
Normal
Normal reactor flow to #1 Heater.
Bypass
Reactor effluent exits sulfur trap, goes through bypass line, through HC904, then rejoins warm/cool line.
Warm-up
Reactor warm-up.
Cool Down
Reactor cool-down.
Warm up
Cool Down
22FI103
22FI104
22HC904
M
Text%
SDL
22TI706
DP
22PD407
Sulfur Trap
N
S
L1
22TI708
22TI703
L2
22TI701
22TI704
L3
22TI702
22TI705
22TI707
Warm/Cool
#1 Htr
Rx Feed
Flare
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2211H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2211H1
PROCESS
WARMUP
COOL DOWN
22HC904
W 9999.99
9999.99
22FI103
9999.99
22HC904
100%
22FI104
9999.99
22TA3706
SDL
State
22TI706
9999.99
22PD407
9999.99
DP
SULFUR TRAP
N
S
22TI708
22TI703
L1
9999.99
9999.99
22TI701
22TI704
L2
9999.99
9999.99
22TI702
22TI705
L3
9999.99
9999.99
22TI707
9999.99
WARM/COOL
#1 HEATER
FLARE
RX FEED
NORMAL
NORMAL REACTOR FLOW TO #1 HEATER.
BYPASS
REACTOR EFFLUENT EXITS SULFUR TRAP, GOES THROUGH BYPASS LINE, THROUGH HC904, THEN REJOINS WARM/COOL LINE.
WARM-UP
REACTOR WARM-UP.
COOL DOWN
REACTOR COOL-DOWN.
Reserved for Faceplates

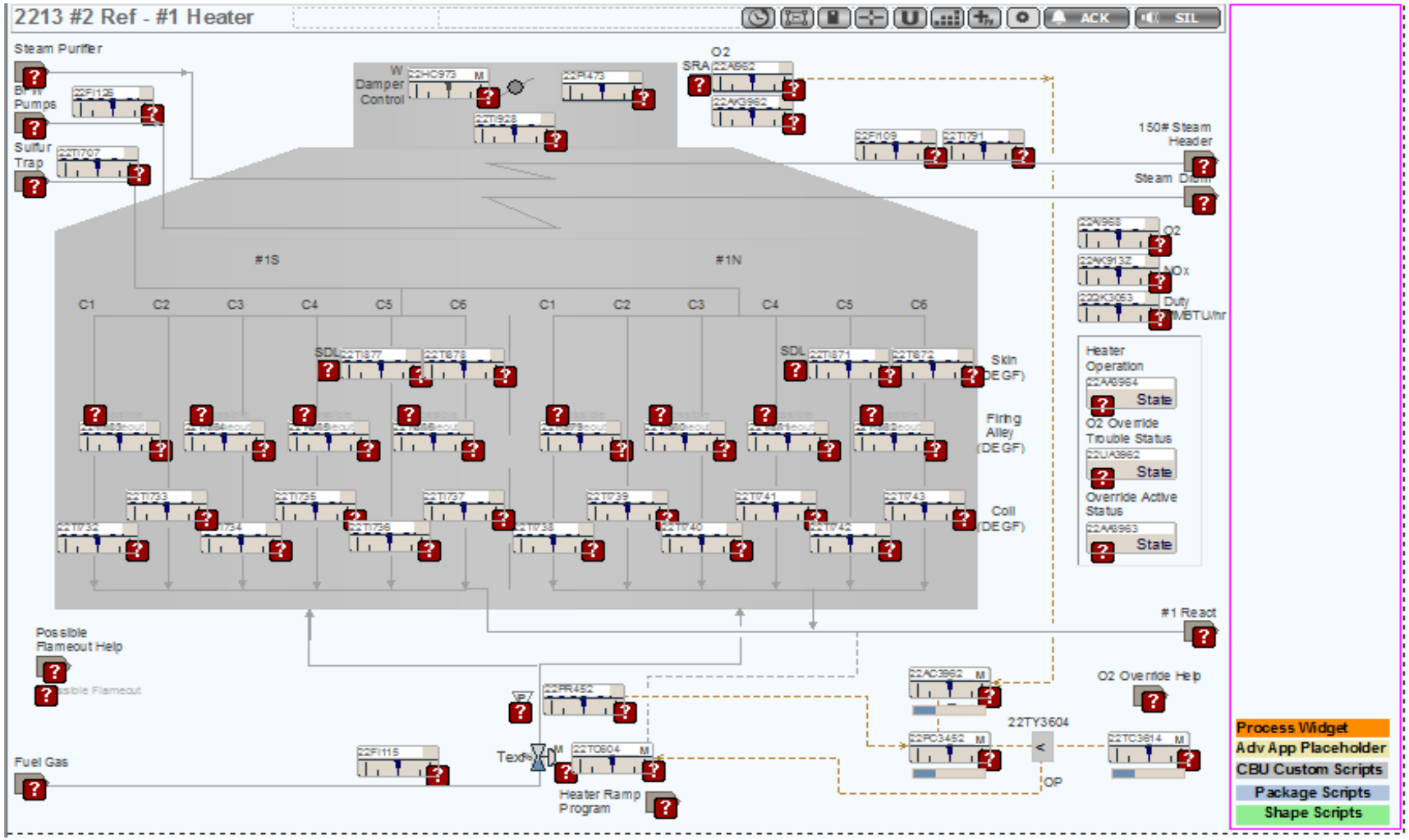
2.19 2212 #2 Ref Fuel Gas KO Drum (Reformer_2212.htm)

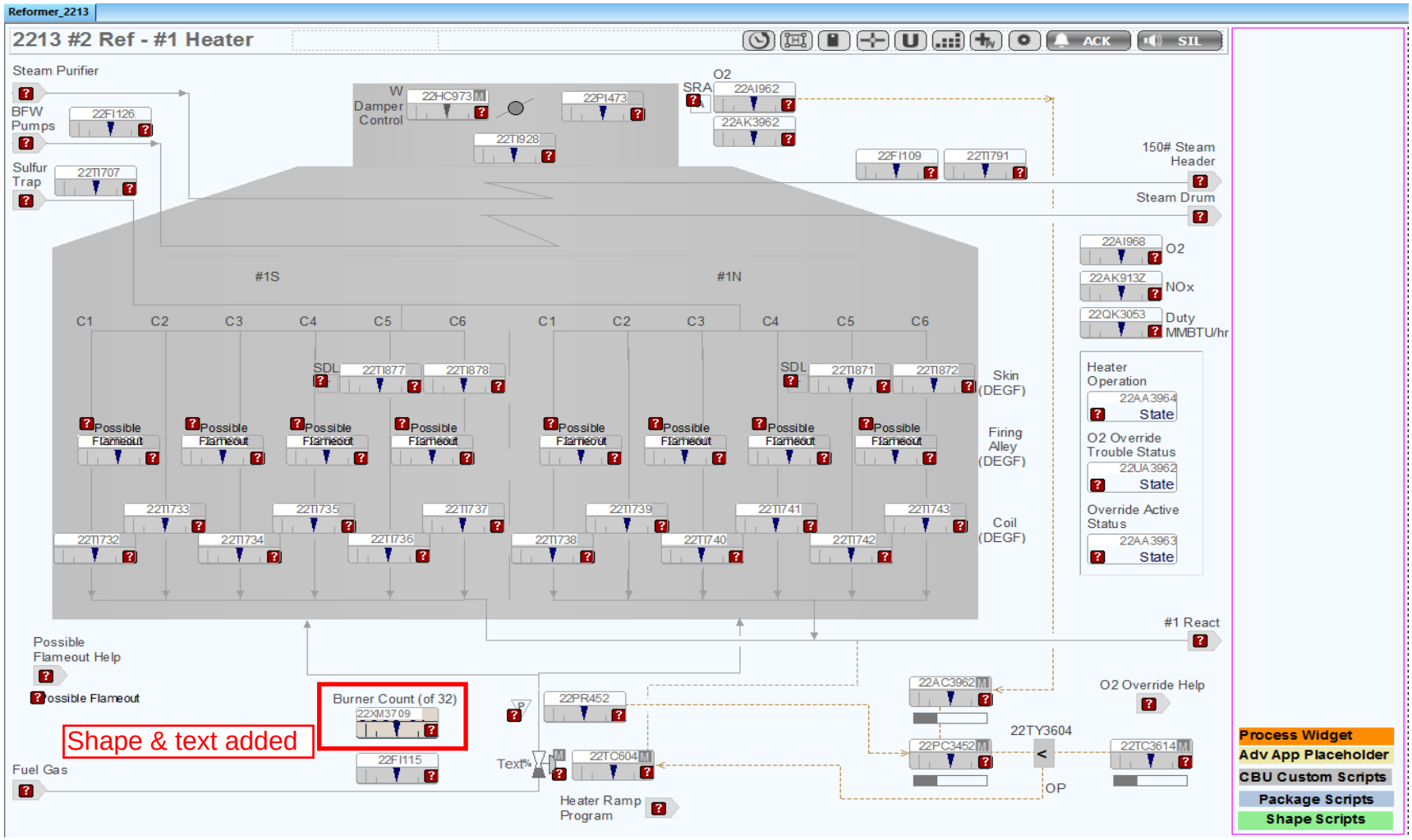


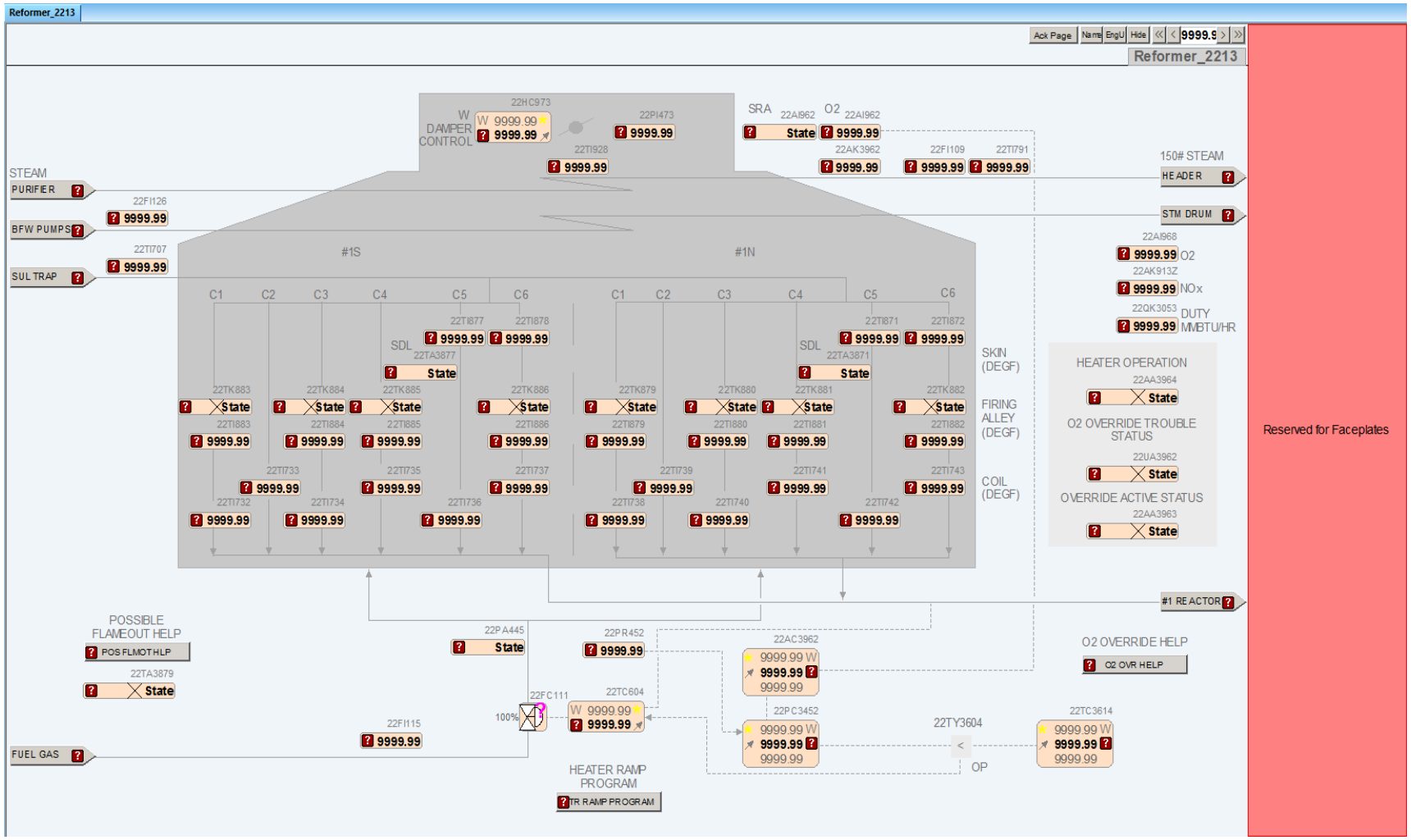

Reformer_2212
2212 #2 Ref Fuel Gas KO Drum
ACK
SIL
Fuel Gas from Refinery
Fuel Gas KO Drum
RPV 2893
22PI402
Fuel Gas Filter
22PD470
22PC423
Text%
22TC3601
22PR458
2A Des Htr
22TC3600
22PR431
2B Des Htr
22TC3614
22PR452
#1 N+S Htr
22TC3617
22PR453
#2 Htr
22TC3620
22PR454
#3A Htr
22TC3623
22PR457
#3B Htr
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2212
Ack Page
Name
EngU
Hide
9999.9
Reformer_2212
FUEL GAS FROM REFINERY
22PA417
State
22LA327
State
22PI402
9999.99
FUEL GAS KO DRUM
RPV 2893
22PD470
9999.99
FUEL GAS FILTER
22PC423
W 9999.99
9999.99
22PC423
100%
22TC3601
W 9999.99
9999.99
22TC601
100%
22PR458
9999.99
2A DES HTR
22TC3600
W 9999.99
9999.99
22TC600
100%
22PR431
9999.99
2B DES HTR
22TC3614
W 9999.99
9999.99
22TC604
100%
22PR452
9999.99
22PA445
State
#1 N+S HTR
22TC3617
W 9999.99
9999.99
22TC607
100%
22PR453
9999.99
22PA446
State
#2 HEATER
22TC3620
W 9999.99
9999.99
22TC610
100%
22PR454
9999.99
22PA447
State
3A HEATER
22TC3623
W 9999.99
9999.99
22TC613
100%
22PR457
9999.99
22PA448
State
3B HEATER
Reserved for Faceplates

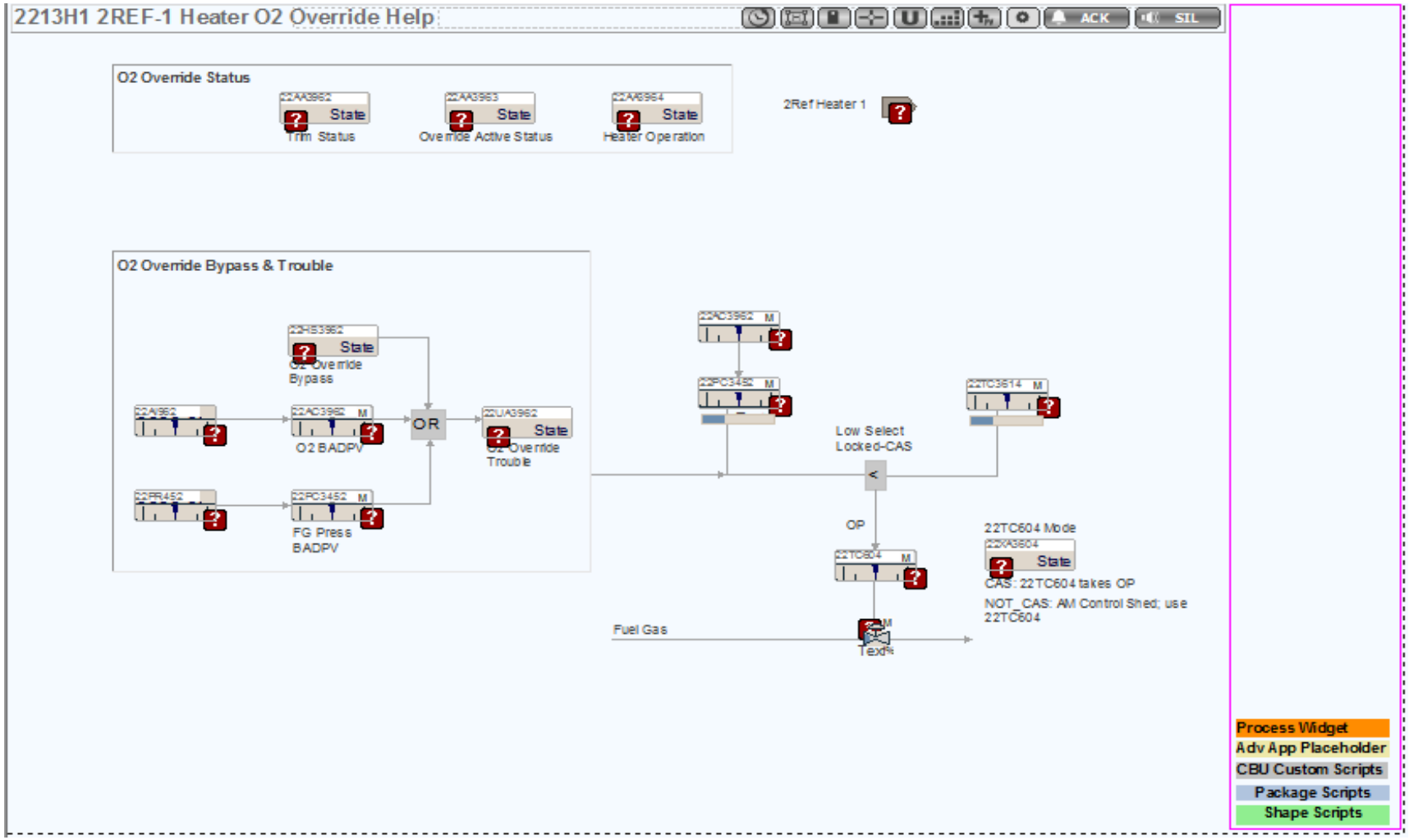
2.20 2213 #2 Ref - #1 Heater (Reformer_2213.htm)

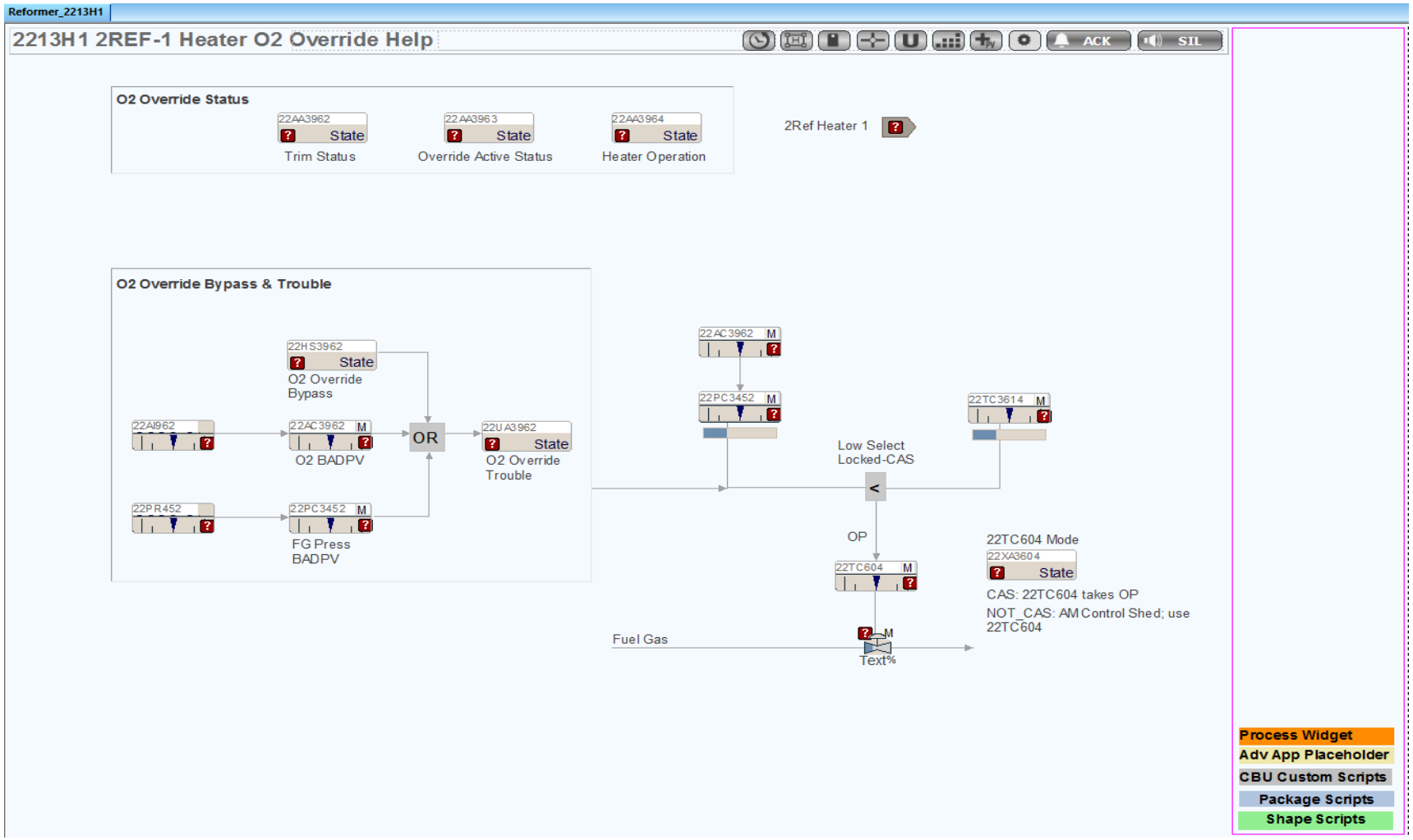


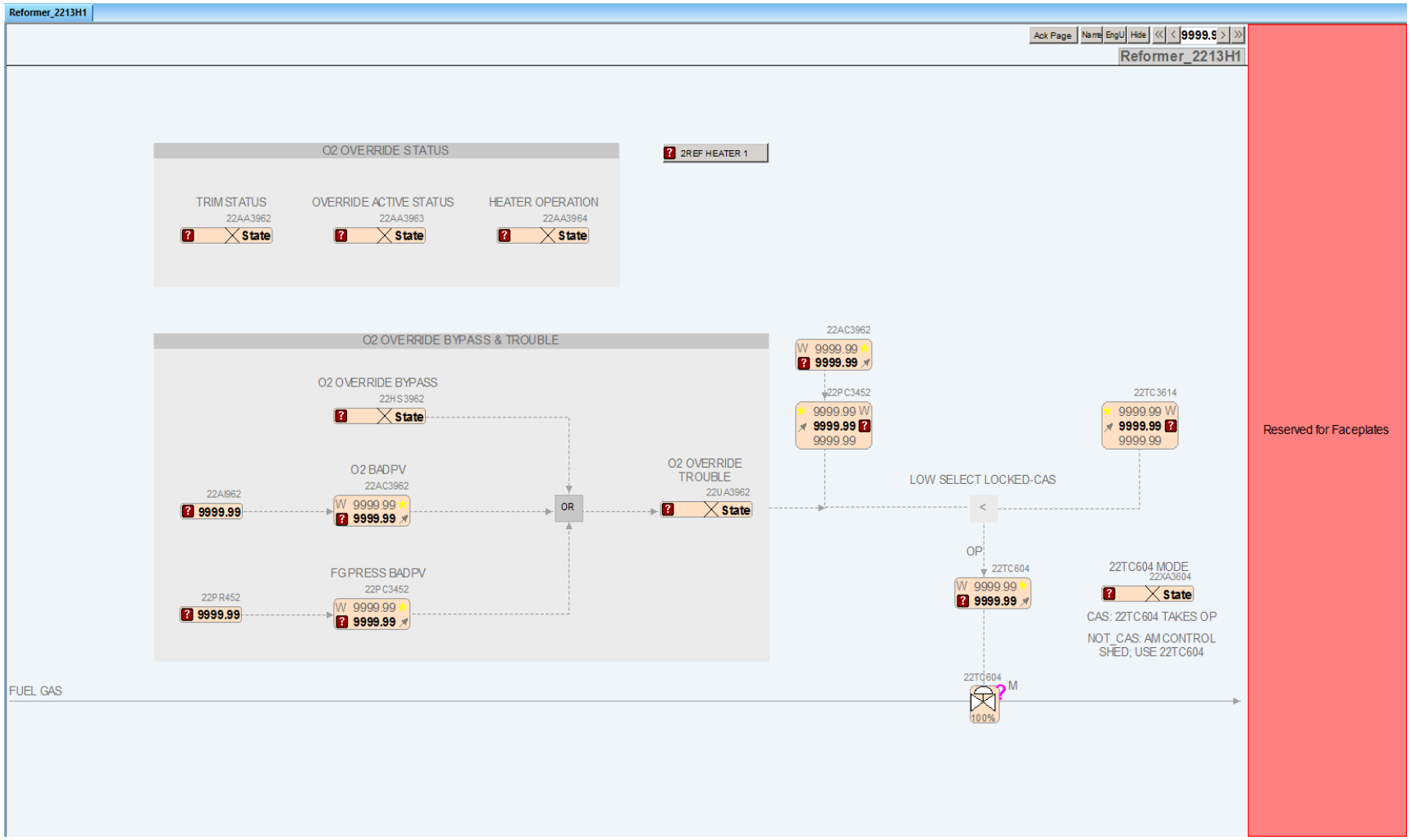

Reformer_2213
2213 #2 Ref - #1 Heater
ACK
SIL
Steam Purifier
BFW Pumps
22FI126
Sulfur Trap
22TI707
W Damper Control
22HC973M
22PI473
22TI928
O2
SRA
22AI962
22AK3962
22FI109
22TI791
150# Steam Header
Steam Drum
22AI968
O2
22AK913Z
NOx
22QK3053
Duty MMBTU/hr
#1S
#1N
C1
C2
C3
C4
C5
C6
SDL
22TI877
22TI878
22TI871
22TI872
Skin (DEGF)
Possible Flameout
Firing Alley (DEGF)
22TI733
22TI735
22TI737
22TI739
22TI741
22TI743
22TI732
22TI734
22TI736
22TI738
22TI740
22TI742
Coil (DEGF)
Heater Operation
22AA3964
State
O2 Override Trouble Status
22UA3962
Override Active Status
22AA3963
#1 React
Possible Flameout Help
Burner Count (of 32)
22XM3709
22PR452
22AC3962M
O2 Override Help
22PC3452M
22TY3604
22TC3614M
OP
22FI115
Fuel Gas
Text%
22TC604M
Heater Ramp Program
Shape & text added
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2213
Ack Page
Name
EngU
Hide
Reformer_2213
22HC973
W
DAMPER CONTROL
W 9999.99
9999.99
22PI473
9999.99
22TI928
9999.99
SRA
22AI962
State
O2
22AI962
9999.99
22AK3962
9999.99
22FI109
9999.99
22TI791
9999.99
150# STEAM
HEADER
STEAM
PURIFIER
22FI126
9999.99
BFW PUMPS
STM DRUM
22TI707
9999.99
SUL TRAP
#1S
#1N
C1
C2
C3
C4
C5
C6
22TI877
22TI878
9999.99
SDL
22TA3877
State
22TI871
22TI872
9999.99
SDL
22TA3871
State
SKIN (DEGF)
FIRING ALLEY (DEGF)
COIL (DEGF)
22TK883
22TK884
22TK885
22TK886
22TK879
22TK880
22TK881
22TK882
State
22TI883
22TI884
22TI885
22TI886
22TI879
22TI880
22TI881
22TI882
9999.99
22TI733
22TI735
22TI737
22TI739
22TI741
22TI743
22TI732
22TI734
22TI736
22TI738
22TI740
22TI742
22AI968
9999.99
O2
22AK913Z
9999.99
NOx
22QK3053
9999.99
DUTY MMBTU/HR
HEATER OPERATION
22AA3964
State
O2 OVERRIDE TROUBLE STATUS
22UA3962
State
OVERRIDE ACTIVE STATUS
22AA3963
State
Reserved for Faceplates
#1 REACTOR
POSSIBLE FLAMEOUT HELP
POS FLMOT HLP
22TA3879
State
22PA445
State
22PR452
9999.99
22AC3962
9999.99 W
9999.99
9999.99
O2 OVERRIDE HELP
O2 OVR HELP
22FC111
100%
22TC604
W 9999.99
9999.99
22PC3452
9999.99 W
9999.99
9999.99
22TY3604
OP
22TC3614
9999.99 W
9999.99
9999.99
22FI115
9999.99
FUEL GAS
HEATER RAMP PROGRAM
TR RAMP PROGRAM

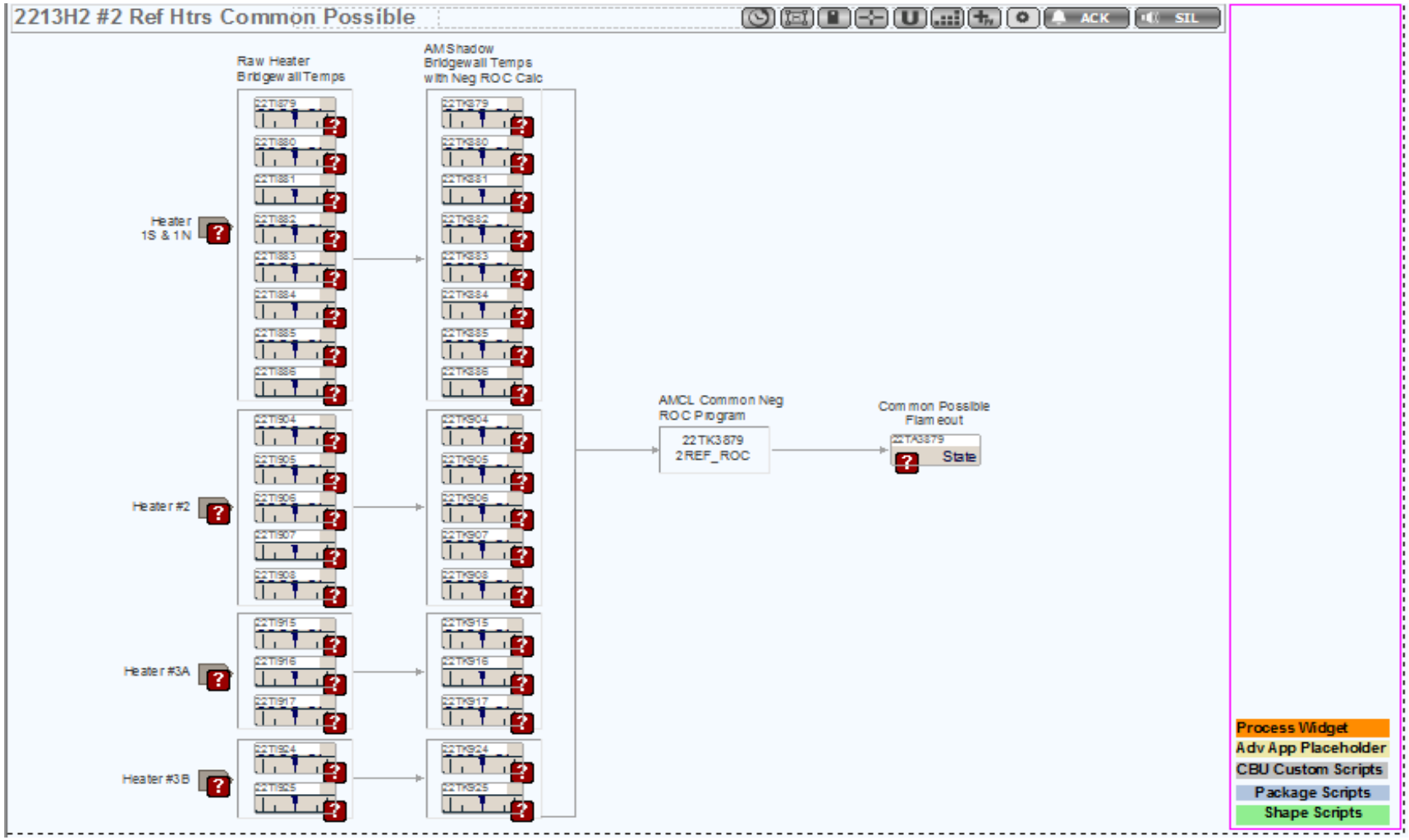
2.21 2213H1 2REF-1 Heater O2 Override Help (Reformer_2213H1.htm)

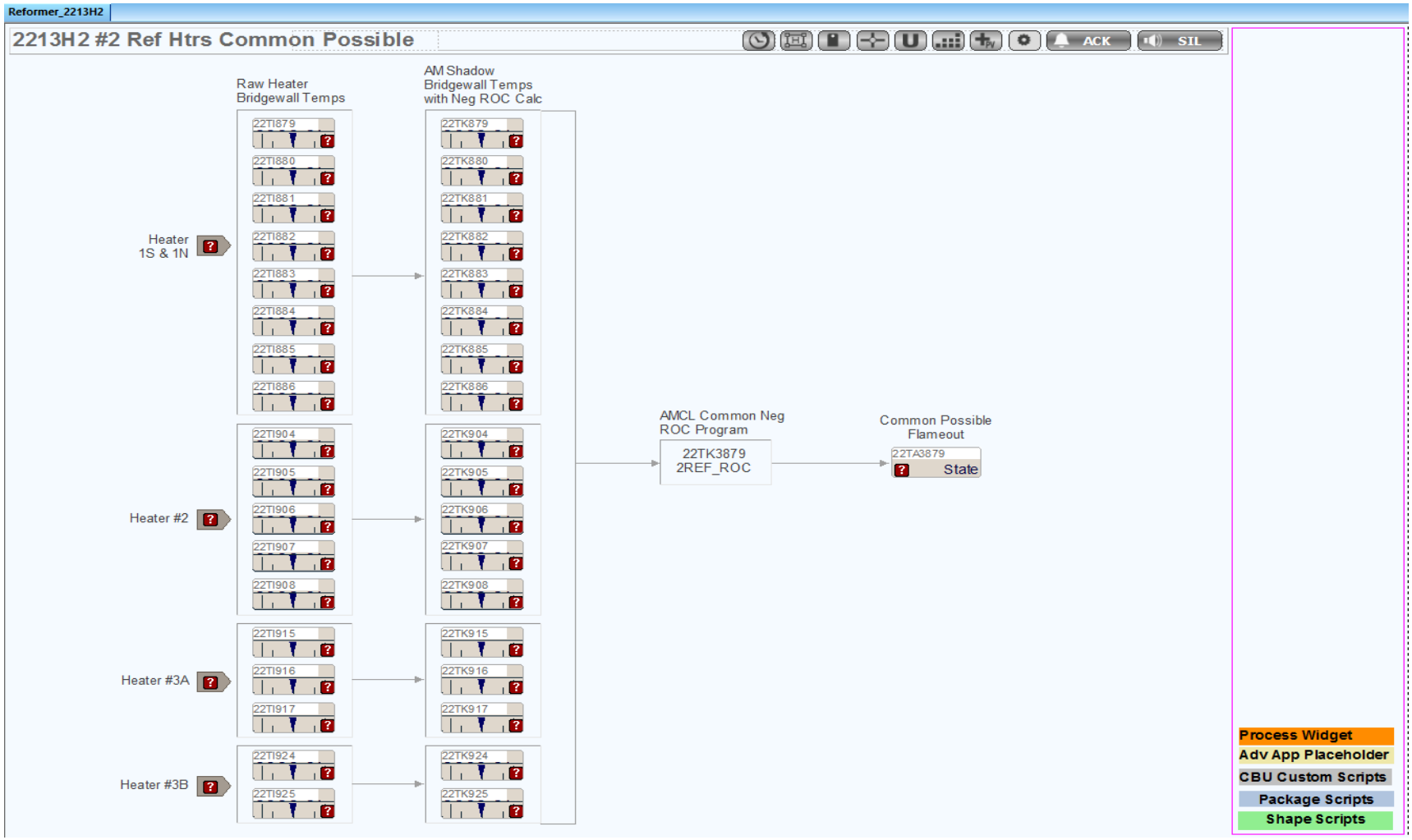


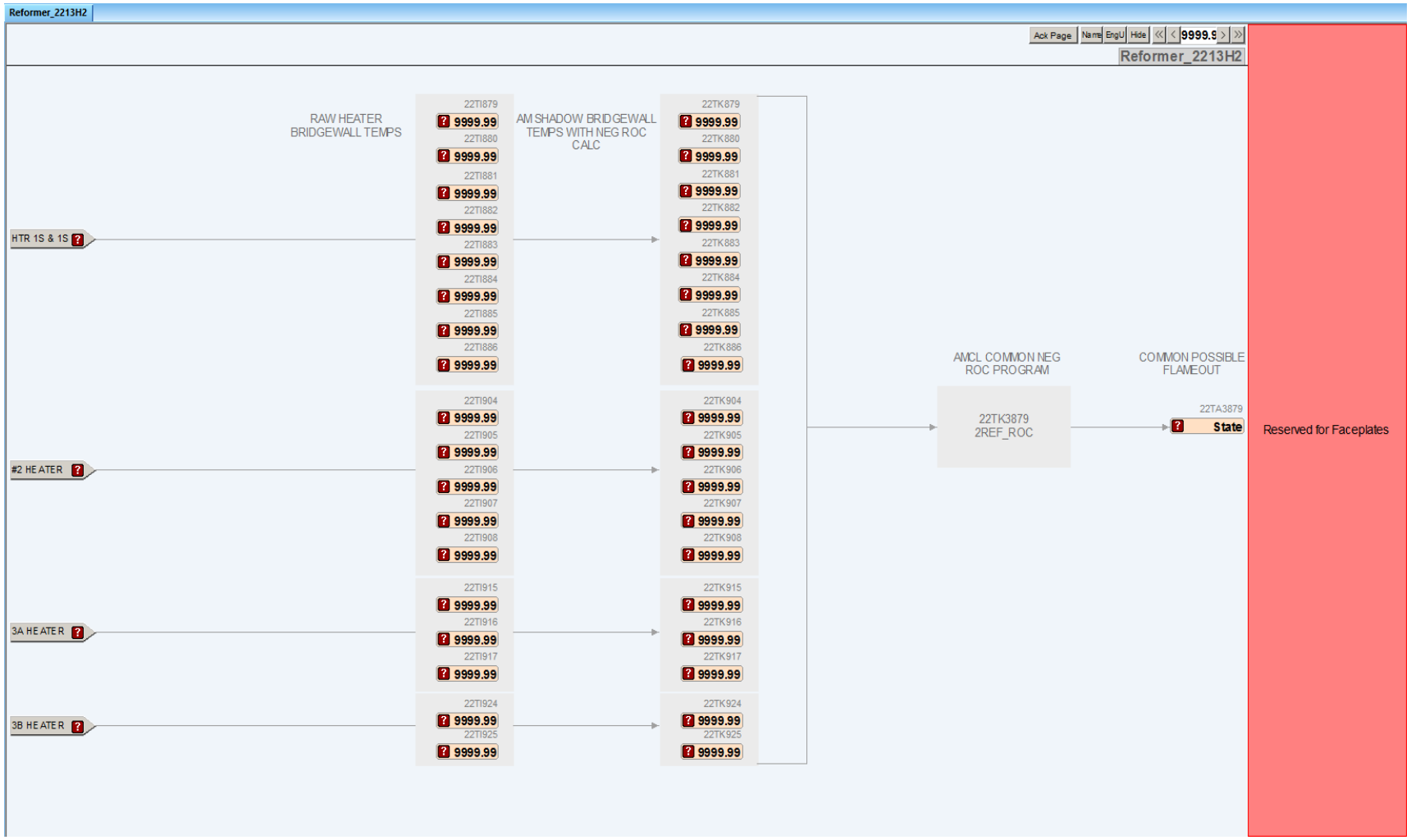

Reformer_2213H1
2213H1 2REF-1 Heater O2 Override Help
ACK
SIL
O2 Override Status
22AA3962
State
Trim Status
22AA3963
State
Override Active Status
22AA3964
State
Heater Operation
2Ref Heater 1
O2 Override Bypass & Trouble
22HS3962
State
O2 Override Bypass
22AI962
22AC3962
M
O2 BADPV
OR
22UA3962
State
O2 Override Trouble
22PR452
22PC3452
M
FG Press BADPV
22AC3962
M
22PC3452
M
22TC3614
M
Low Select Locked-CAS
<
OP
22TC604
M
22TC604 Mode
22XA3604
State
CAS: 22TC604 takes OP
NOT_CAS: AM Control Shed; use 22TC604
Fuel Gas
M
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2213H1
Ack Page
Name
EngU
Hide
Reformer_2213H1
O2 OVERRIDE STATUS
2REF HEATER 1
TRIM STATUS
22AA3962
State
OVERRIDE ACTIVE STATUS
22AA3963
State
HEATER OPERATION
22AA3964
State
O2 OVERRIDE BYPASS & TROUBLE
O2 OVERRIDE BYPASS
22HS3962
State
O2 BADPV
22AC3962
22AI962
9999.99
W 9999.99
9999.99
OR
O2 OVERRIDE TROUBLE
22UA3962
State
FG PRESS BADPV
22PC3452
22PR452
9999.99
W 9999.99
9999.99
22AC3962
W 9999.99
9999.99
22PC3452
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
<
22TC3614
9999.99 W
9999.99
9999.99
OP
22TC604
W 9999.99
9999.99
22TC604 MODE
22XA3604
State
CAS: 22TC604 TAKES OP
NOT_CAS: AM CONTROL SHED; USE 22TC604
22TC604
M
100%
FUEL GAS
Reserved for Faceplates

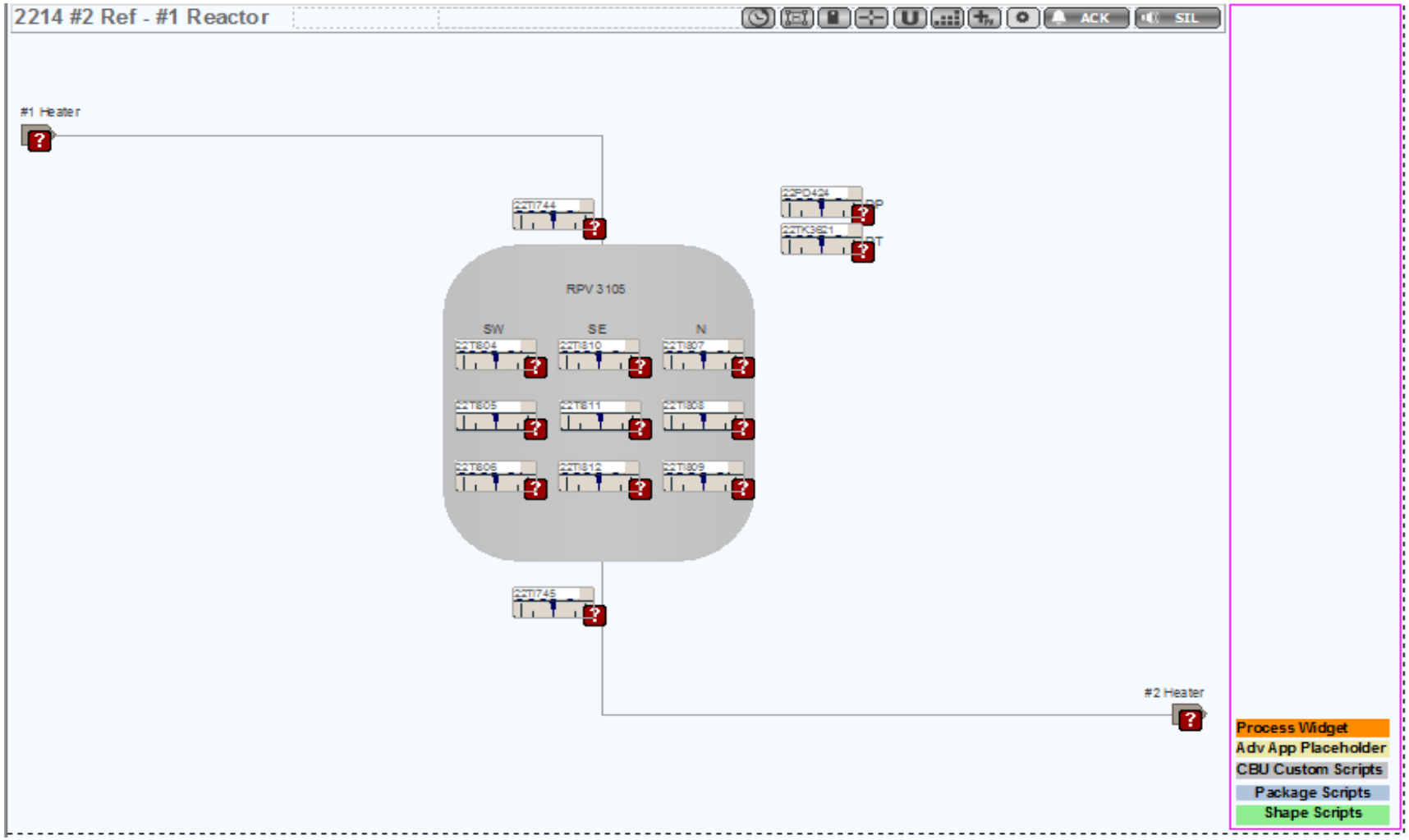
2.22 2213H2 #2 Ref Htrs Common Possible Flameout Help (Reformer_2213H2.htm)

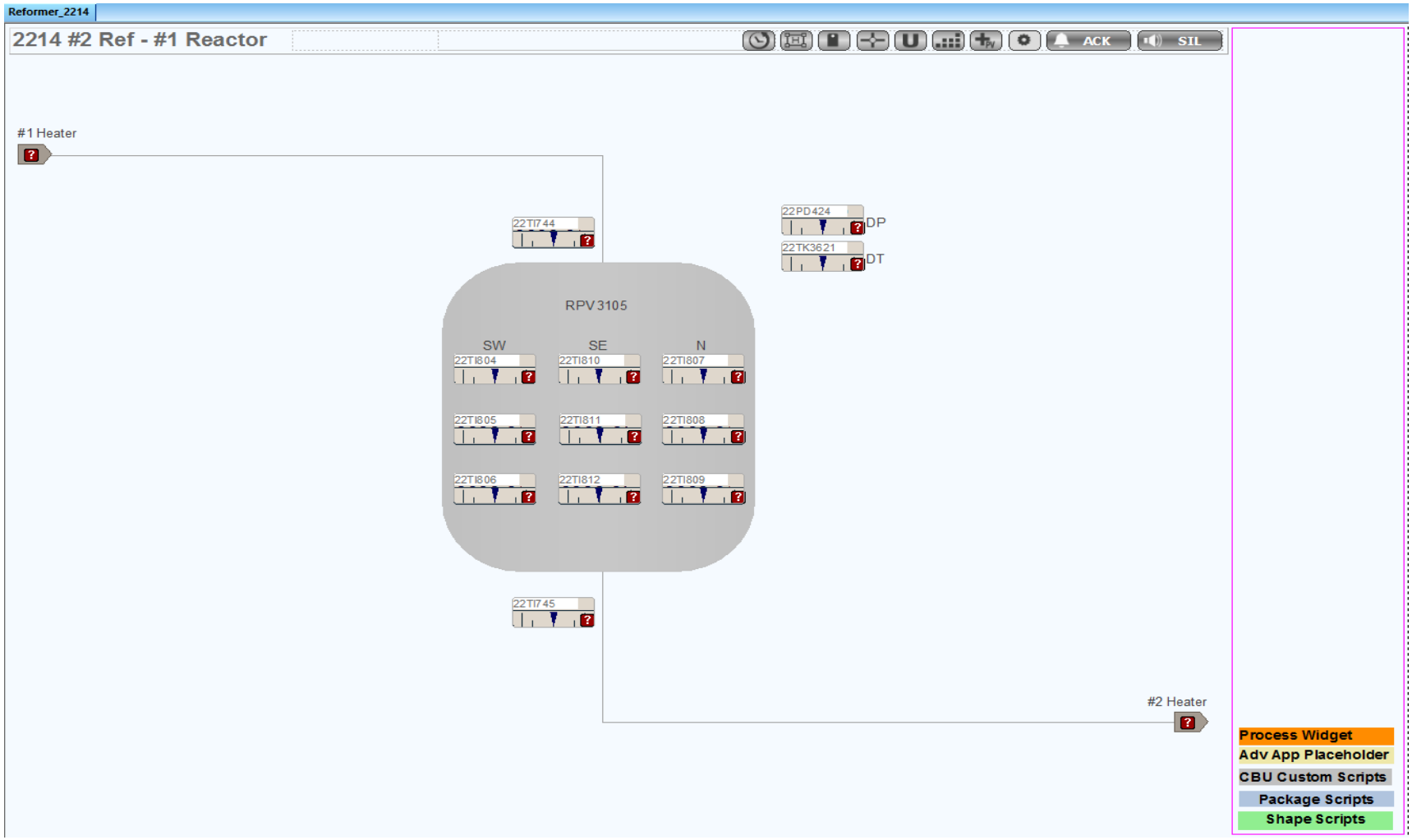


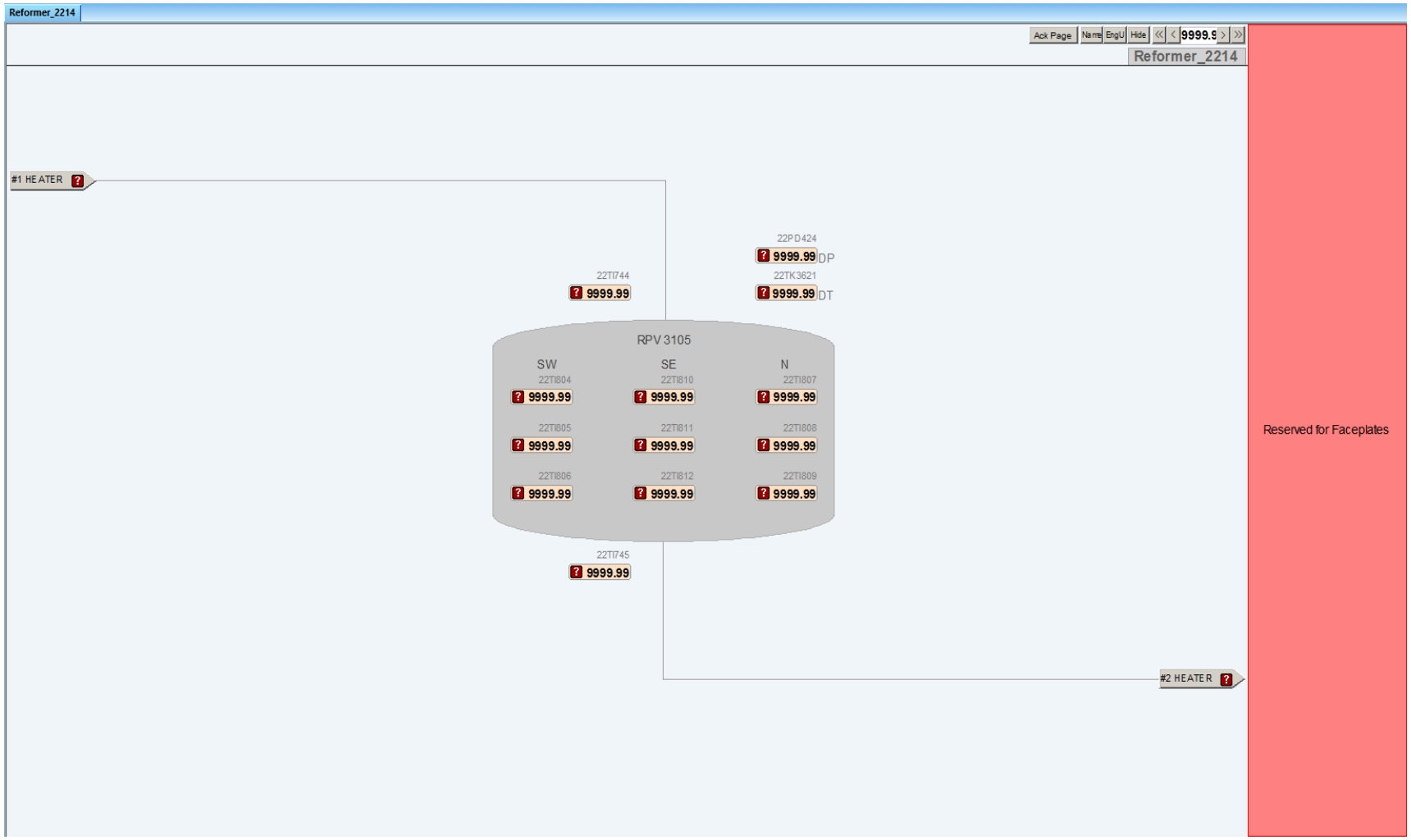

Reformer_2213H2
2213H2 #2 Ref Htrs Common Possible
ACK
SIL
Raw Heater Bridgewall Temps
AM Shadow Bridgewall Temps with Neg ROC Calc
Heater 1S & 1N
22TI879
22TI880
22TI881
22TI882
22TI883
22TI884
22TI885
22TI886
22TK879
22TK880
22TK881
22TK882
22TK883
22TK884
22TK885
22TK886
Heater #2
22TI904
22TI905
22TI906
22TI907
22TI908
22TK904
22TK905
22TK906
22TK907
22TK908
Heater #3A
22TI915
22TI916
22TI917
22TK915
22TK916
22TK917
Heater #3B
22TI924
22TI925
22TK924
22TK925
AMCL Common Neg ROC Program
22TK3879
2REF_ROC
Common Possible Flameout
22TA3879
State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2213H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2213H2
RAW HEATER BRIDGEWALL TEMPS
AM SHADOW BRIDGEWALL TEMPS WITH NEG ROC CALC
HTR 1S & 1S
#2 HEATER
3A HEATER
3B HEATER
22TI879
22TI880
22TI881
22TI882
22TI883
22TI884
22TI885
22TI886
22TI904
22TI905
22TI906
22TI907
22TI908
22TI915
22TI916
22TI917
22TI924
22TI925
22TK879
22TK880
22TK881
22TK882
22TK883
22TK884
22TK885
22TK886
22TK904
22TK905
22TK906
22TK907
22TK908
22TK915
22TK916
22TK917
22TK924
22TK925
9999.99
AMCL COMMON NEG ROC PROGRAM
22TK3879
2REF_ROC
COMMON POSSIBLE FLAMEOUT
22TA3879
State
Reserved for Faceplates

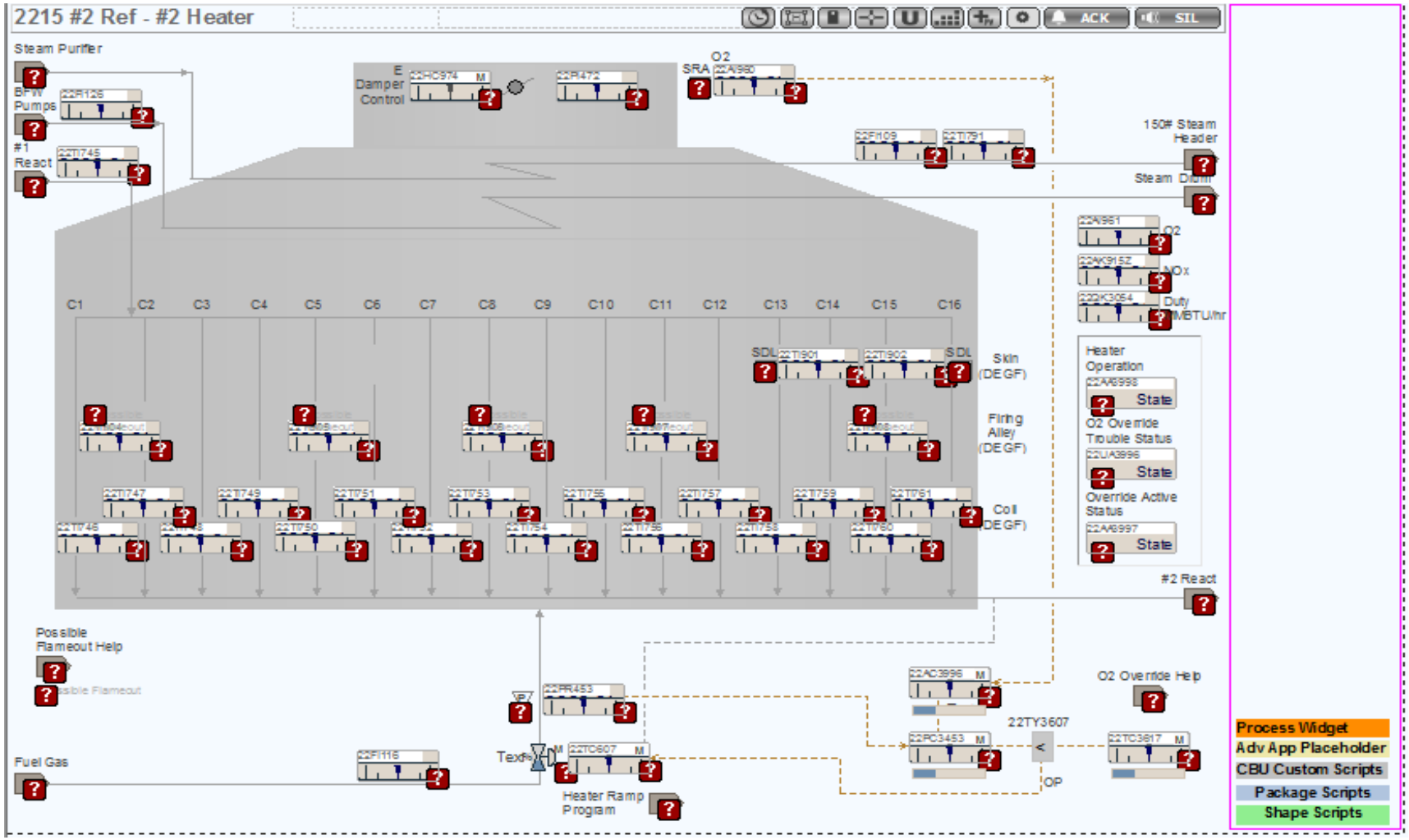
2.23 2214 #2 Ref - #1 Reactor (Reformer_2214.htm)

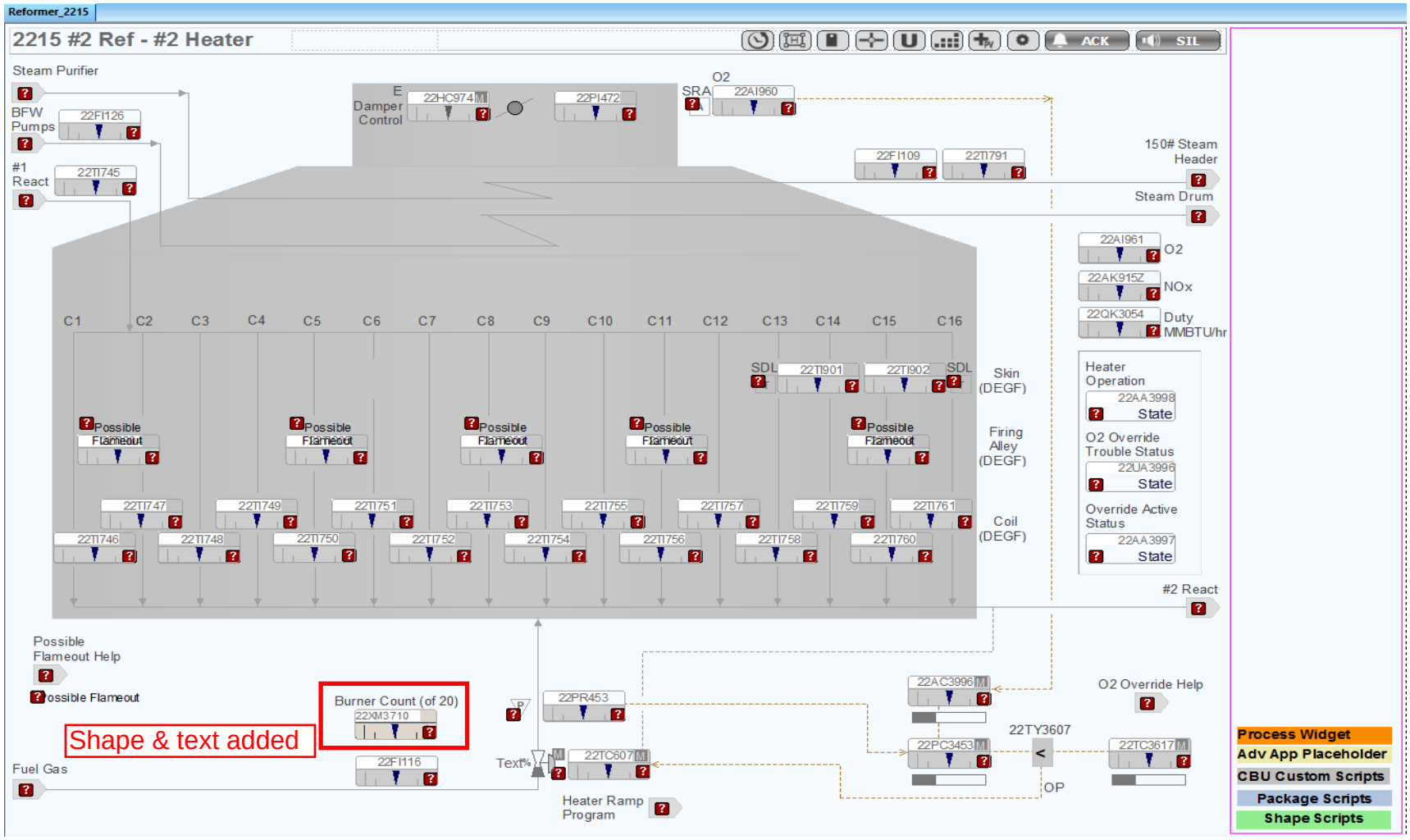


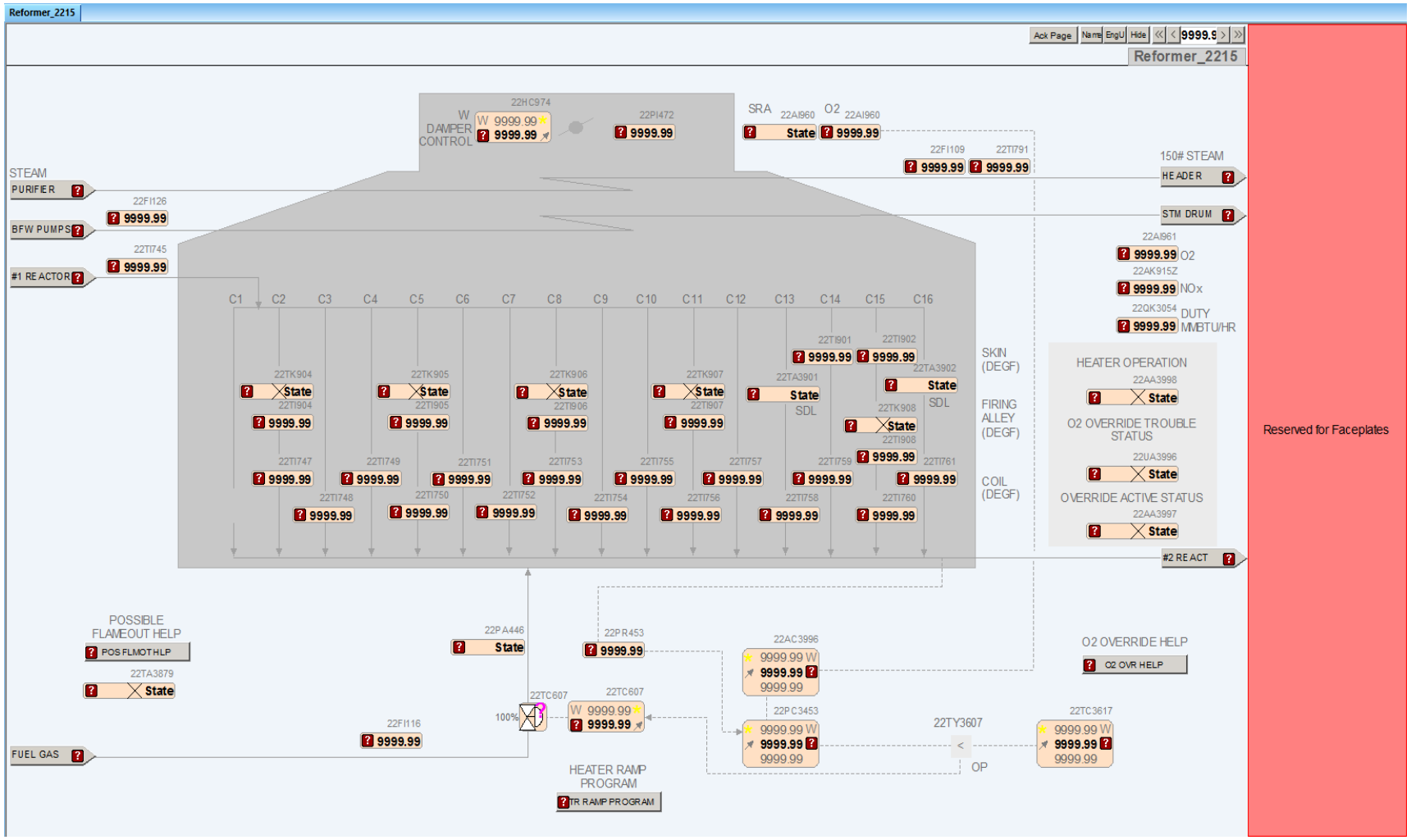

Reformer_2214
2214 #2 Ref - #1 Reactor
ACK
SIL
#1 Heater
22TI744
22PD424
DP
22TK3621
DT
RPV 3105
SW
SE
N
22TI804
22TI810
22TI807
22TI805
22TI811
22TI808
22TI806
22TI812
22TI809
22TI745
#2 Heater
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2214
Ack Page
Name
EngU
Hide
9999.9
Reformer_2214
#1 HEATER
22PD424
9999.99 DP
22TI744
9999.99
22TK3621
9999.99 DT
RPV 3105
SW
SE
N
22TI804
9999.99
22TI810
9999.99
22TI807
9999.99
22TI805
9999.99
22TI811
9999.99
22TI808
9999.99
22TI806
9999.99
22TI812
9999.99
22TI809
9999.99
22TI745
9999.99
#2 HEATER
Reserved for Faceplates

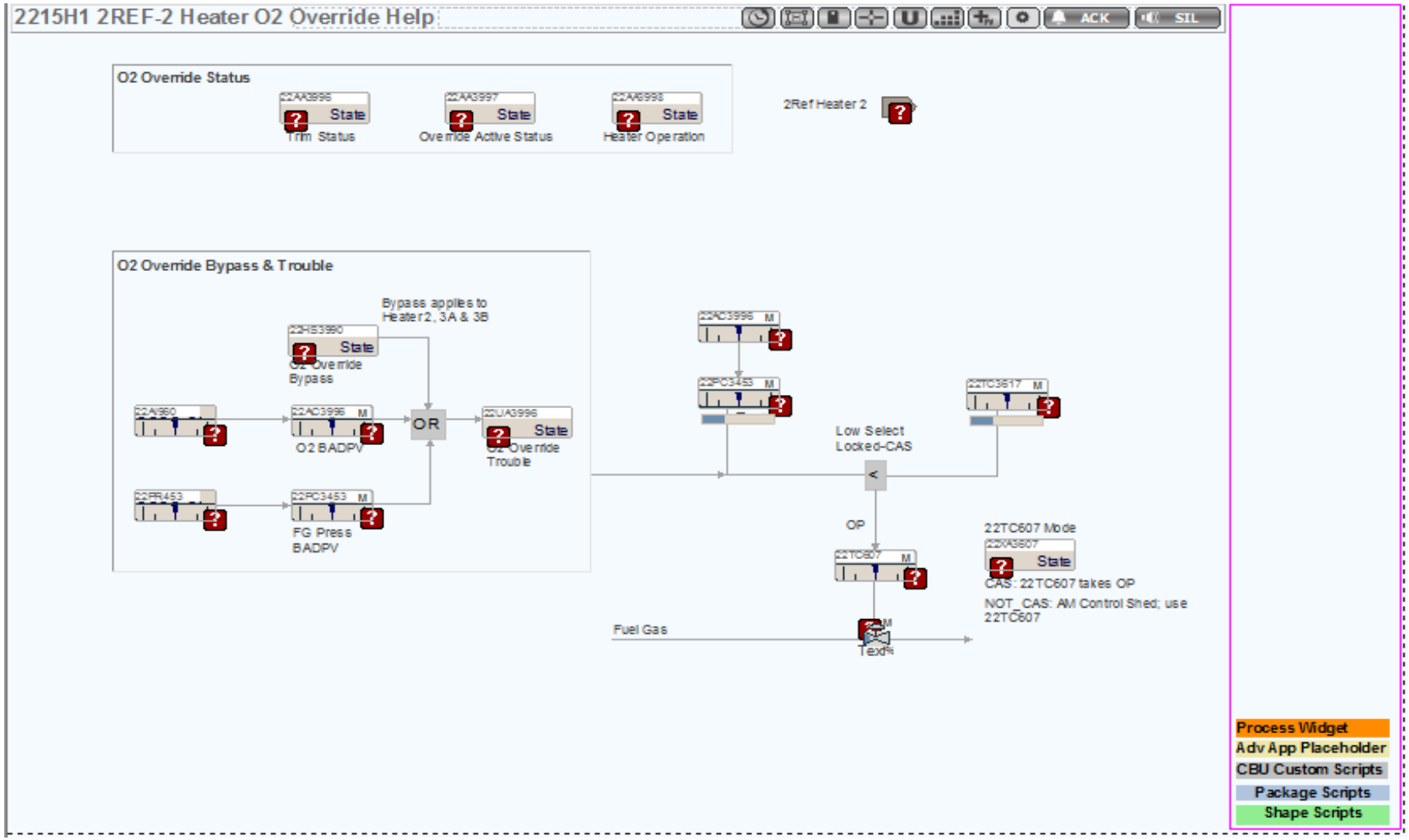
2.24 2215 #2 Ref - #2 Heater (Reformer_2215.htm)

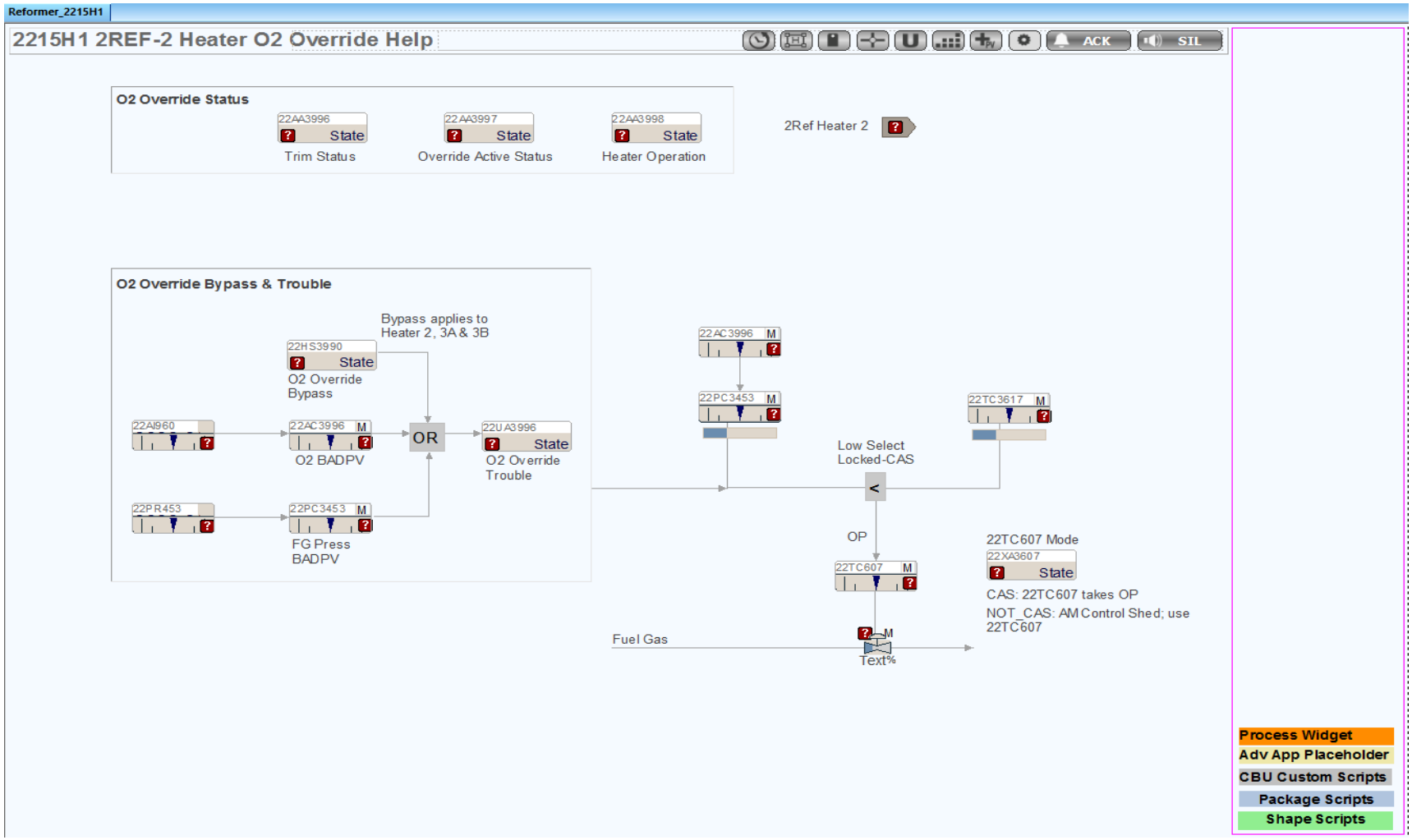


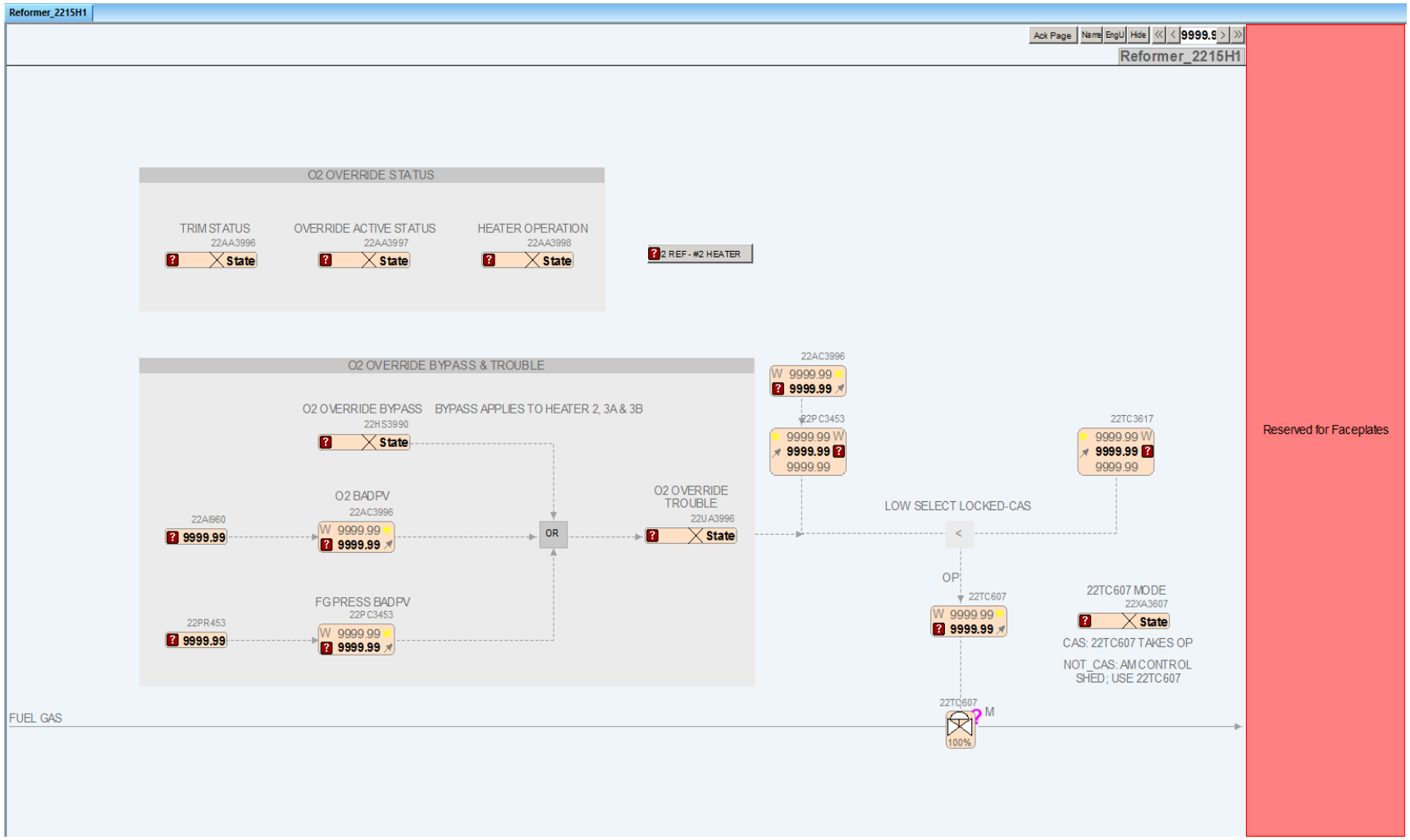

Reformer_2215
2215 #2 Ref - #2 Heater
ACK
SIL
Steam Purifier
BFW Pumps
22FI126
#1 React
22TI745
E Damper Control
22HC974
22PI472
O2 SRA
22AI960
22FI109
22TI791
150# Steam Header
Steam Drum
22AI961
O2
22AK915Z
NOx
22QK3054
Duty MMBTU/hr
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16
SDL
22TI901
22TI902
SDL
Skin (DEGF)
Possible Flameout
Firing Alley (DEGF)
22TI747 22TI749 22TI751 22TI753 22TI755 22TI757 22TI759 22TI761
22TI746 22TI748 22TI750 22TI752 22TI754 22TI756 22TI758 22TI760
Coil (DEGF)
Heater Operation
22AA3998
State
O2 Override Trouble Status
22UA3996
State
Override Active Status
22AA3997
State
#2 React
Possible Flameout Help
Possible Flameout
Burner Count (of 20)
22XM3710
Shape & text added
22FI116
Fuel Gas
22PR453
22TC607
Text%
Heater Ramp Program
22AC3996
22PC3453
22TY3607
OP
O2 Override Help
22TC3617
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2215
Ack Page
Name
EngU
Hide
Reformer_2215
22HC974
W
DAMPER CONTROL
W 9999.99
9999.99
22PI472
9999.99
SRA
22AI960
O2
22AI960
State
9999.99
22FI109
22TI791
9999.99
9999.99
150# STEAM
HEADER
STEAM
PURIFIER
22FI126
9999.99
BFW PUMPS
STM DRUM
22TI745
9999.99
#1 REACTOR
22AI961
9999.99
O2
22AK915Z
9999.99
NOx
22QK3054
9999.99
DUTY
MMBTU/HR
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
22TI901
22TI902
9999.99
9999.99
22TK904
22TK905
22TK906
22TK907
22TA3901
22TA3902
State
State
State
State
State
State
SDL
SDL
22TI904
22TI905
22TI906
22TI907
22TK908
22TI908
9999.99
9999.99
9999.99
9999.99
State
9999.99
SKIN
(DEGF)
FIRING
ALLEY
(DEGF)
COIL
(DEGF)
HEATER OPERATION
22AA3998
State
O2 OVERRIDE TROUBLE STATUS
22UA3996
State
OVERRIDE ACTIVE STATUS
22AA3997
State
22TI747
22TI749
22TI751
22TI753
22TI755
22TI757
22TI759
22TI761
9999.99
9999.99
9999.99
9999.99
9999.99
9999.99
9999.99
9999.99
22TI748
22TI750
22TI752
22TI754
22TI756
22TI758
22TI760
9999.99
9999.99
9999.99
9999.99
9999.99
9999.99
9999.99
#2 REACT
Reserved for Faceplates
POSSIBLE FLAMEOUT HELP
POS FLMOT HLP
22TA3879
State
22PA446
State
22PR453
9999.99
22AC3996
9999.99 W
9999.99
9999.99
O2 OVERRIDE HELP
O2 OVR HELP
22TC607
22TC607
100%
W 9999.99
9999.99
22FI116
9999.99
22PC3453
9999.99 W
9999.99
9999.99
22TY3607
OP
22TC3617
9999.99 W
9999.99
9999.99
FUEL GAS
HEATER RAMP PROGRAM
TR RAMP PROGRAM

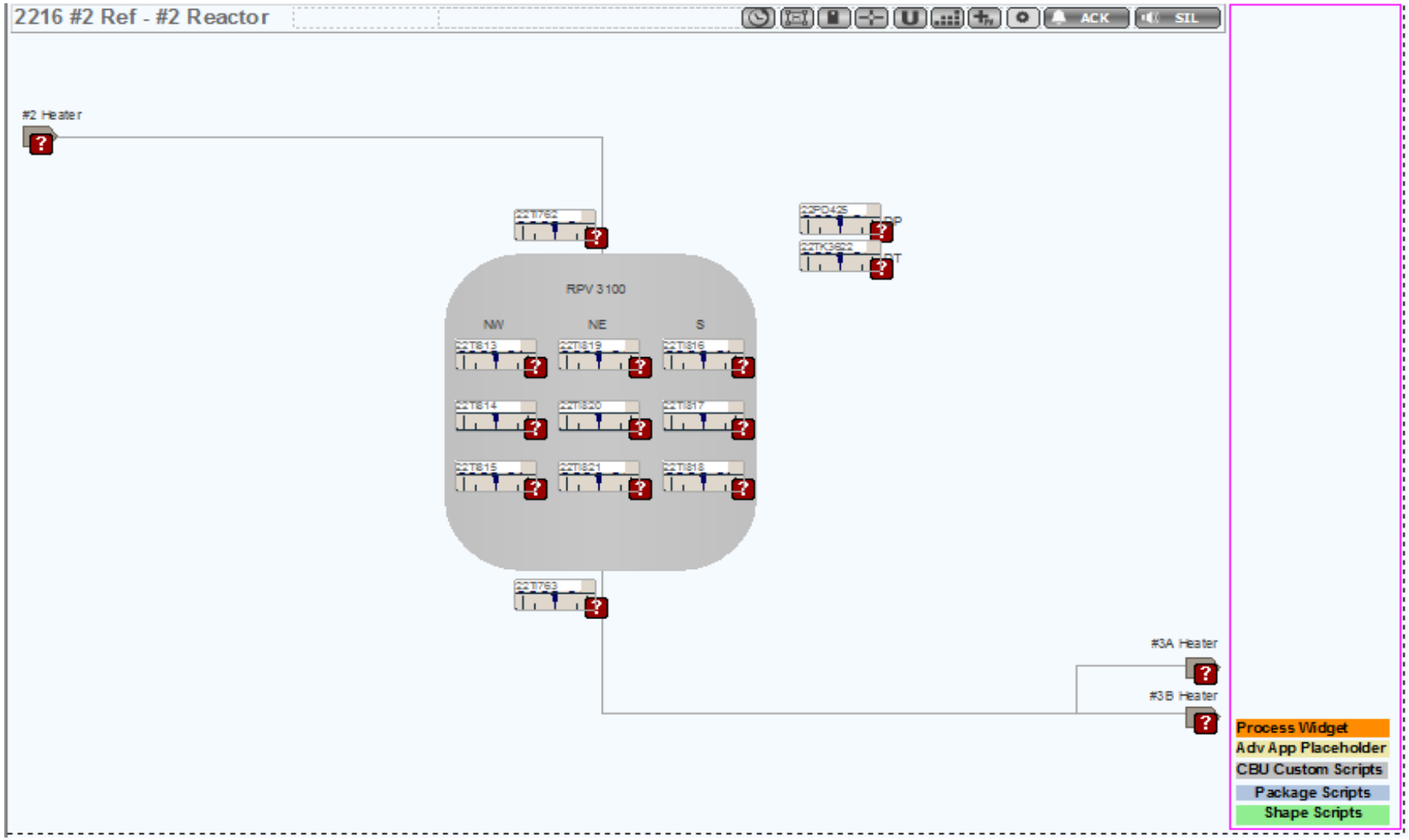
2.25 2215H1 2REF-2 Heater O2 Override Help (Reformer_2215H1.htm)

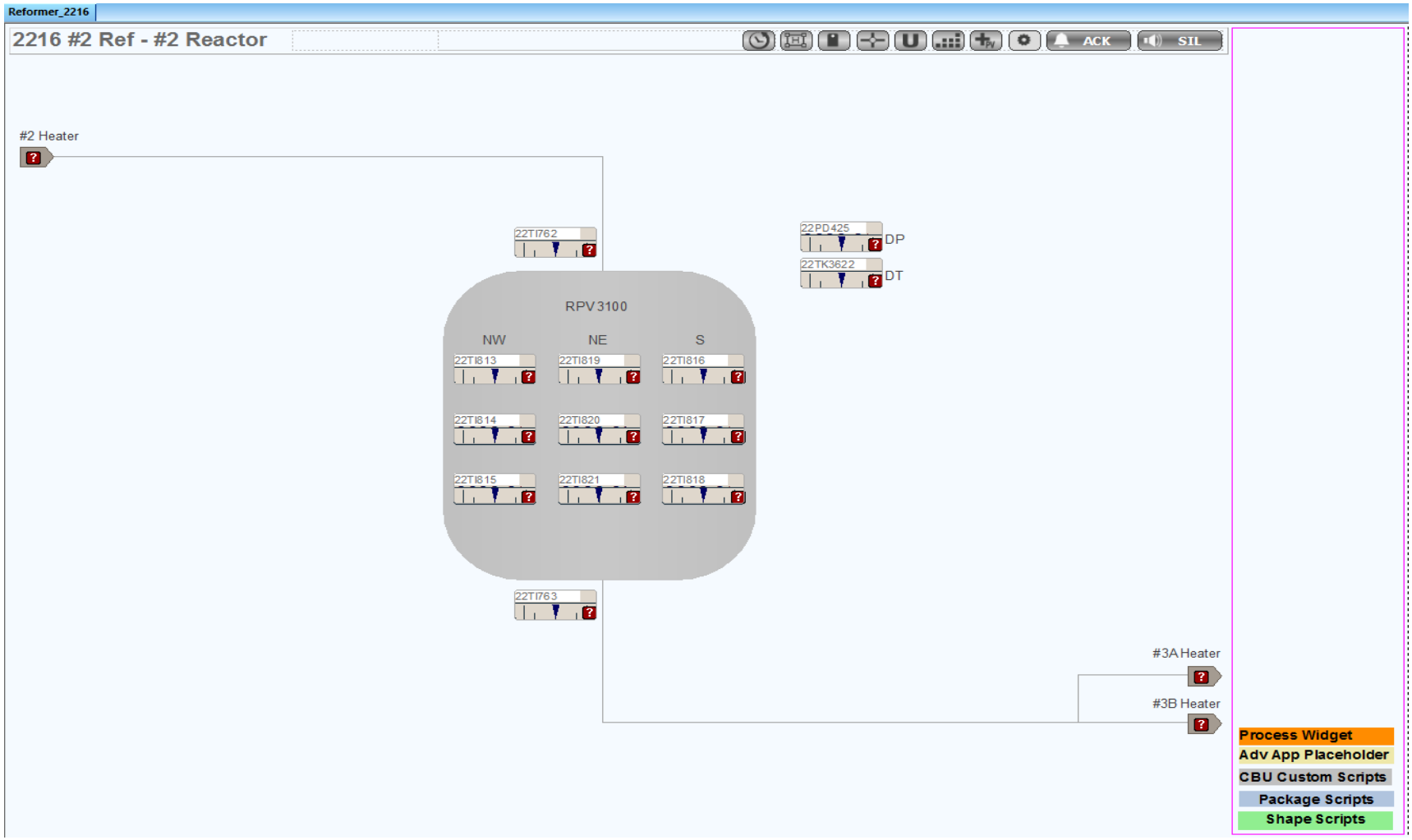


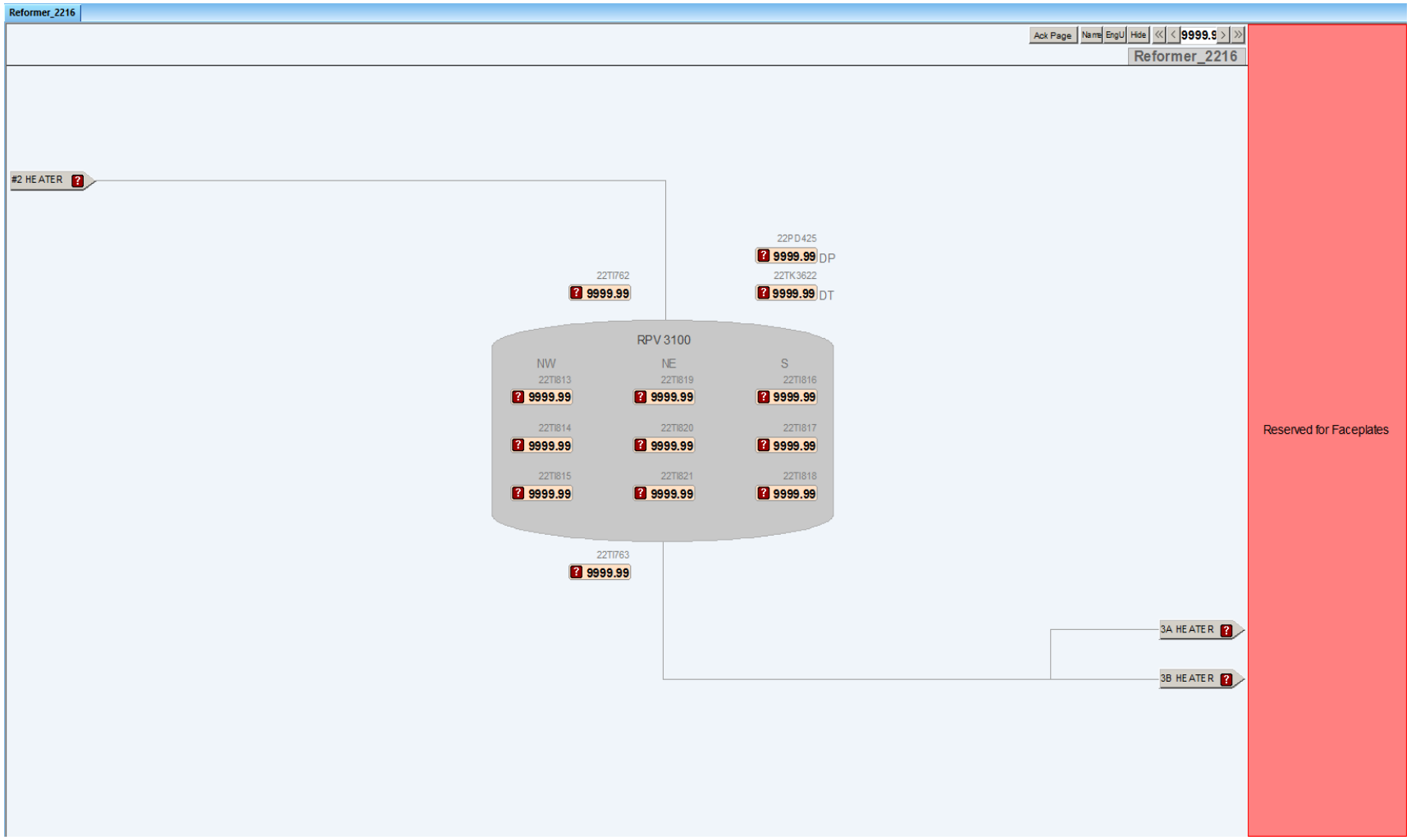

Reformer_2215H1
2215H1 2REF-2 Heater O2 Override Help
ACK
SIL
O2 Override Status
22AA3996
State
Trim Status
22AA3997
State
Override Active Status
22AA3998
State
Heater Operation
2Ref Heater 2
O2 Override Bypass & Trouble
Bypass applies to Heater 2, 3A & 3B
22HS3990
State
O2 Override Bypass
22AI960
22AC3996
M
O2 BADPV
OR
22UA3996
State
O2 Override Trouble
22PR453
22PC3453
M
FG Press BADPV
22AC3996
M
22PC3453
M
22TC3617
M
Low Select Locked-CAS
<
OP
22TC607
M
22TC607 Mode
22XA3607
State
CAS: 22TC607 takes OP
NOT_CAS: AM Control Shed; use 22TC607
Fuel Gas
M
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2215H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2215H1
O2 OVERRIDE STATUS
TRIM STATUS
22AA3996
State
OVERRIDE ACTIVE STATUS
22AA3997
State
HEATER OPERATION
22AA3998
State
2 REF - #2 HEATER
O2 OVERRIDE BYPASS & TROUBLE
O2 OVERRIDE BYPASS
22HS3990
State
BYPASS APPLIES TO HEATER 2, 3A & 3B
O2 BADPV
22AC3996
22AI960
9999.99
W 9999.99
9999.99
OR
O2 OVERRIDE TROUBLE
22UA3996
State
FG PRESS BADPV
22PC3453
22PR453
9999.99
W 9999.99
9999.99
22AC3996
W 9999.99
9999.99
22PC3453
9999.99 W
9999.99
9999.99
22TC3617
9999.99 W
9999.99
9999.99
LOW SELECT LOCKED-CAS
<
OP
22TC607
W 9999.99
9999.99
22TC607 MODE
22XA3607
State
CAS: 22TC607 TAKES OP
NOT_CAS: AM CONTROL SHED; USE 22TC607
FUEL GAS
22TC607
M
100%
Reserved for Faceplates

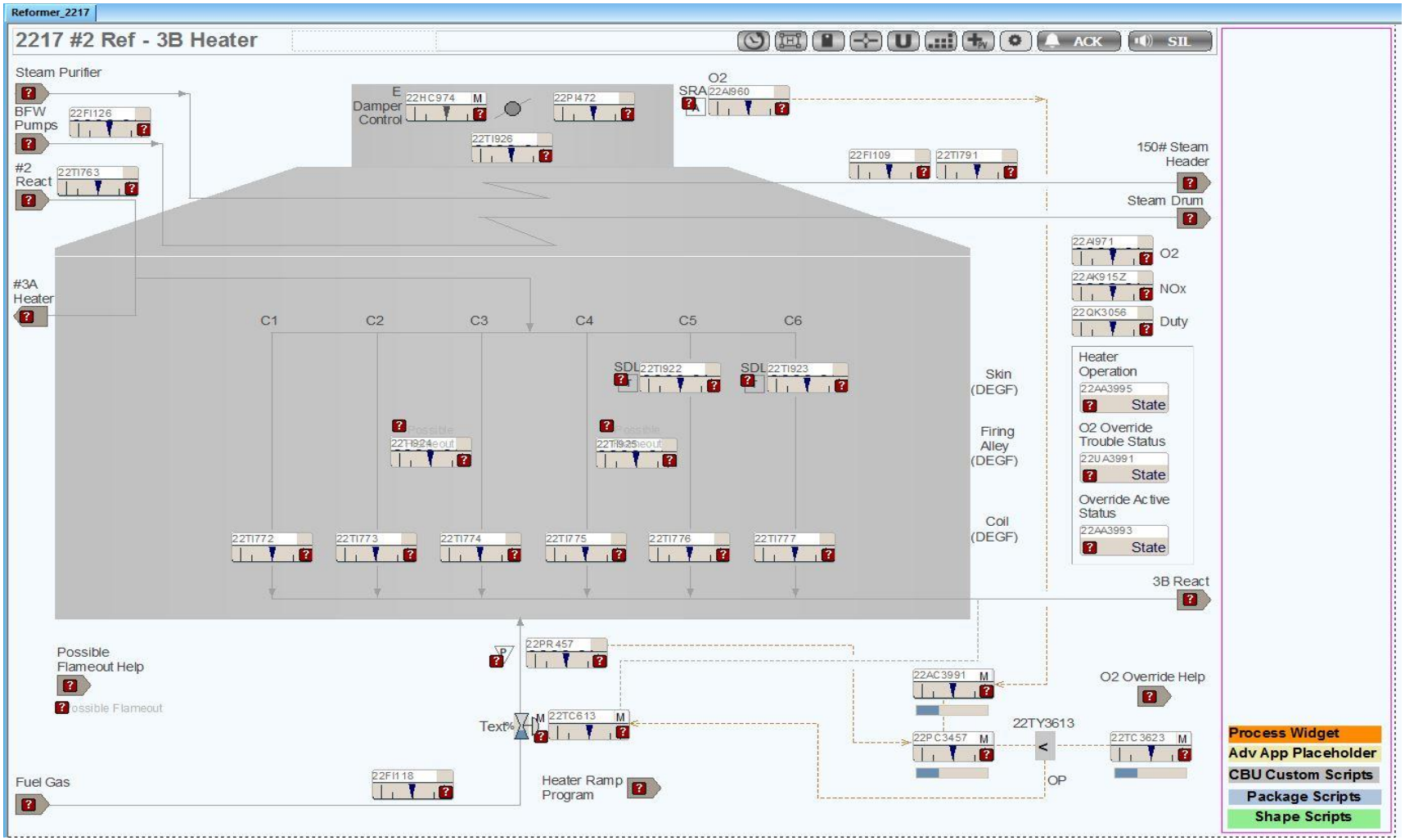
2.26 2216 #2 Ref - #2 Reactor (Reformer_2216.htm)

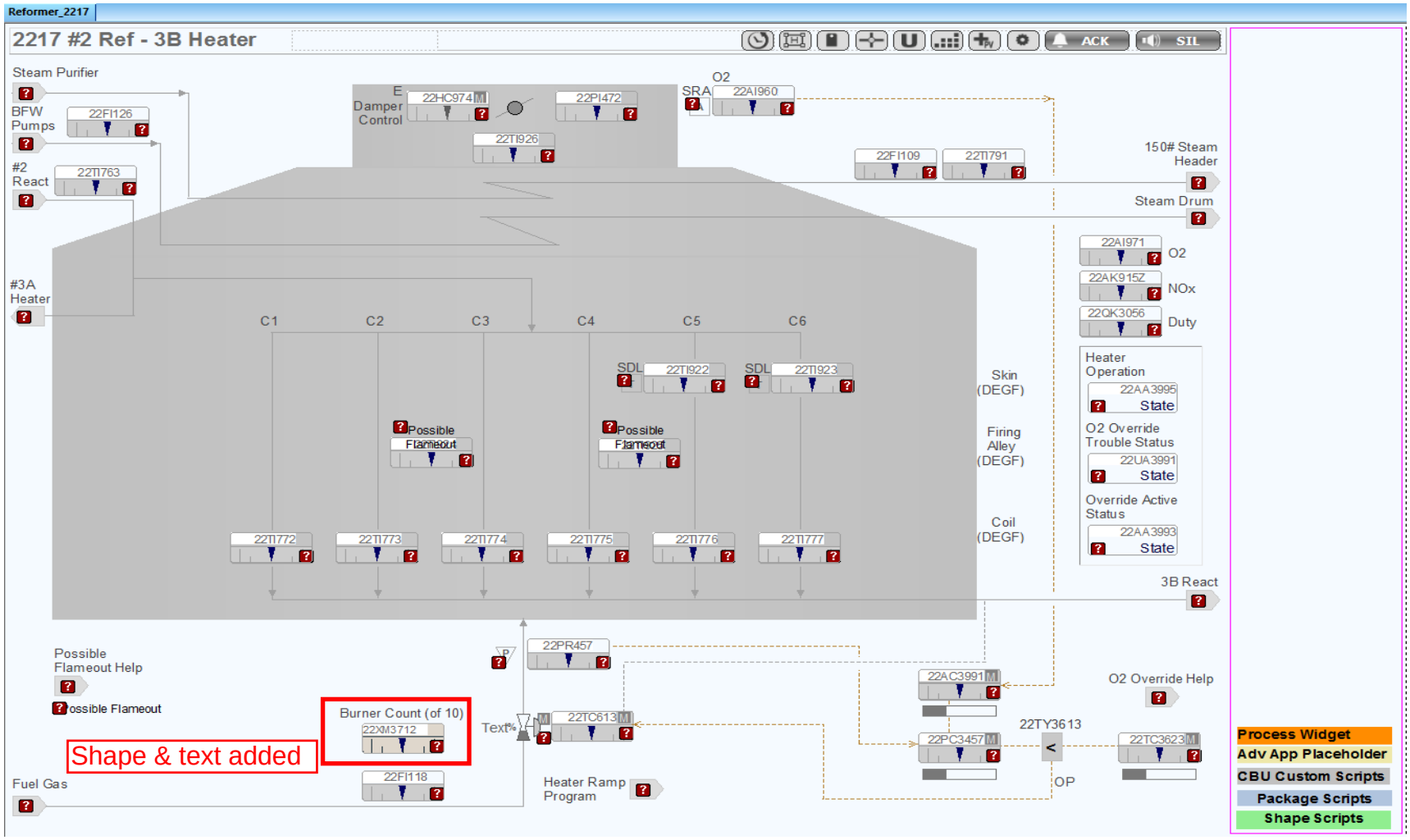


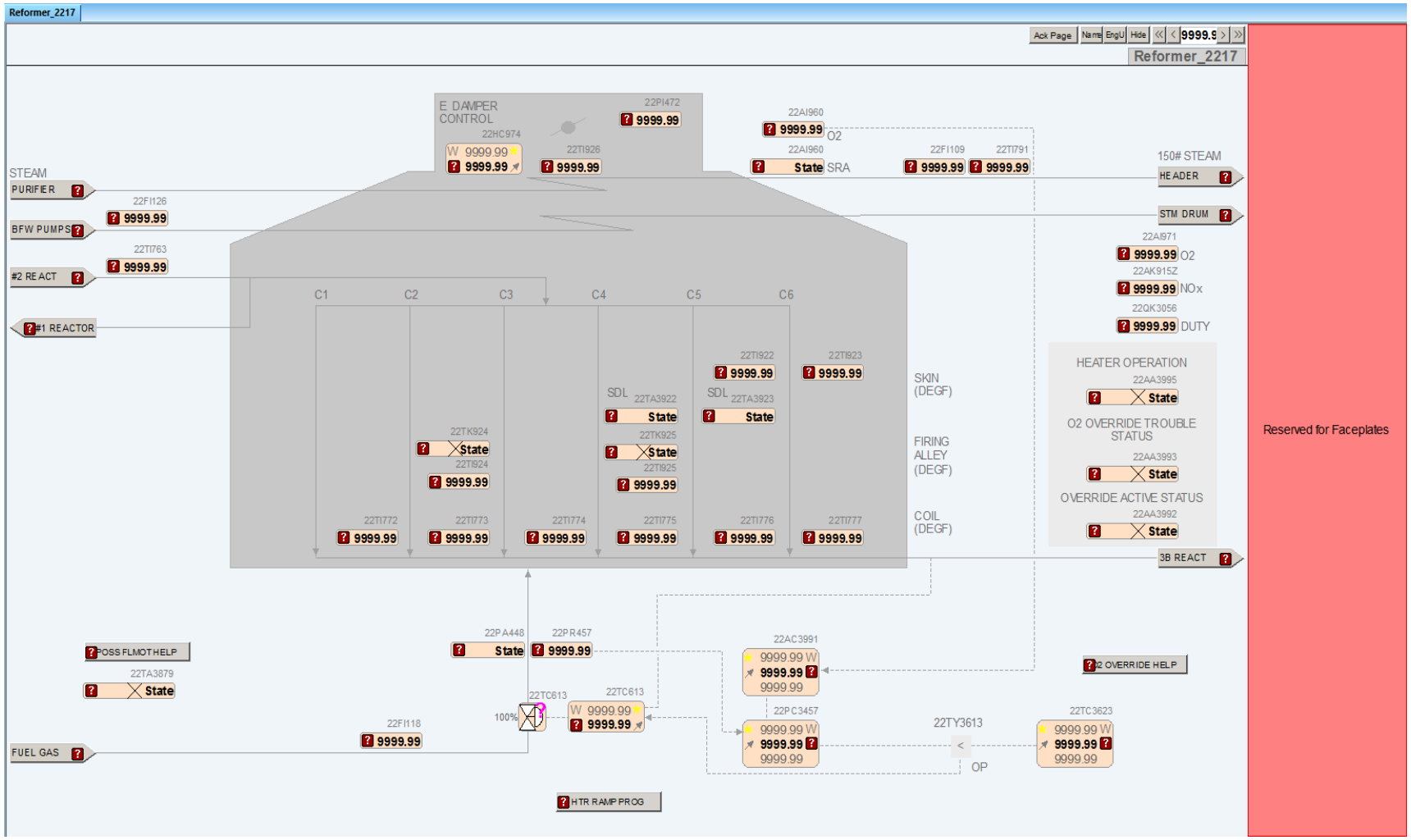

Reformer_2216
2216 #2 Ref - #2 Reactor
ACK
SIL
#2 Heater
22TI762
22PD425
DP
22TK3622
DT
RPV 3100
NW
NE
S
22TI813
22TI819
22TI816
22TI814
22TI820
22TI817
22TI815
22TI821
22TI818
22TI763
#3A Heater
#3B Heater
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2216
Ack Page
Name
EngU
Hide
9999.9
Reformer_2216
#2 HEATER
22PD425
9999.99 DP
22TI762
9999.99
22TK3622
9999.99 DT
RPV 3100
NW
NE
S
22TI813
9999.99
22TI819
9999.99
22TI816
9999.99
22TI814
9999.99
22TI820
9999.99
22TI817
9999.99
22TI815
9999.99
22TI821
9999.99
22TI818
9999.99
22TI763
9999.99
3A HEATER
3B HEATER
Reserved for Faceplates

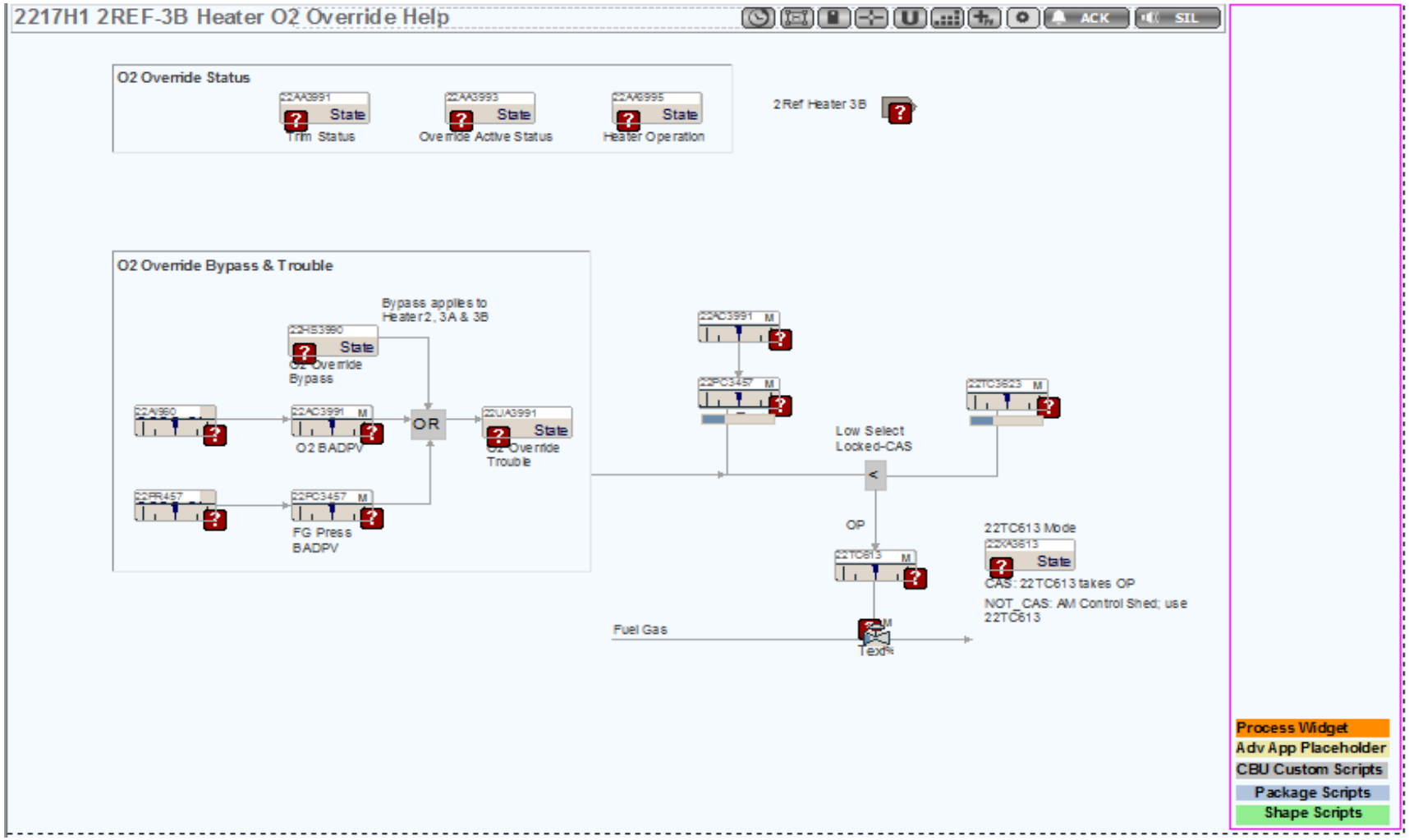
2.27 2217 #2 Ref - 3B Heater (Reformer_2217.htm)

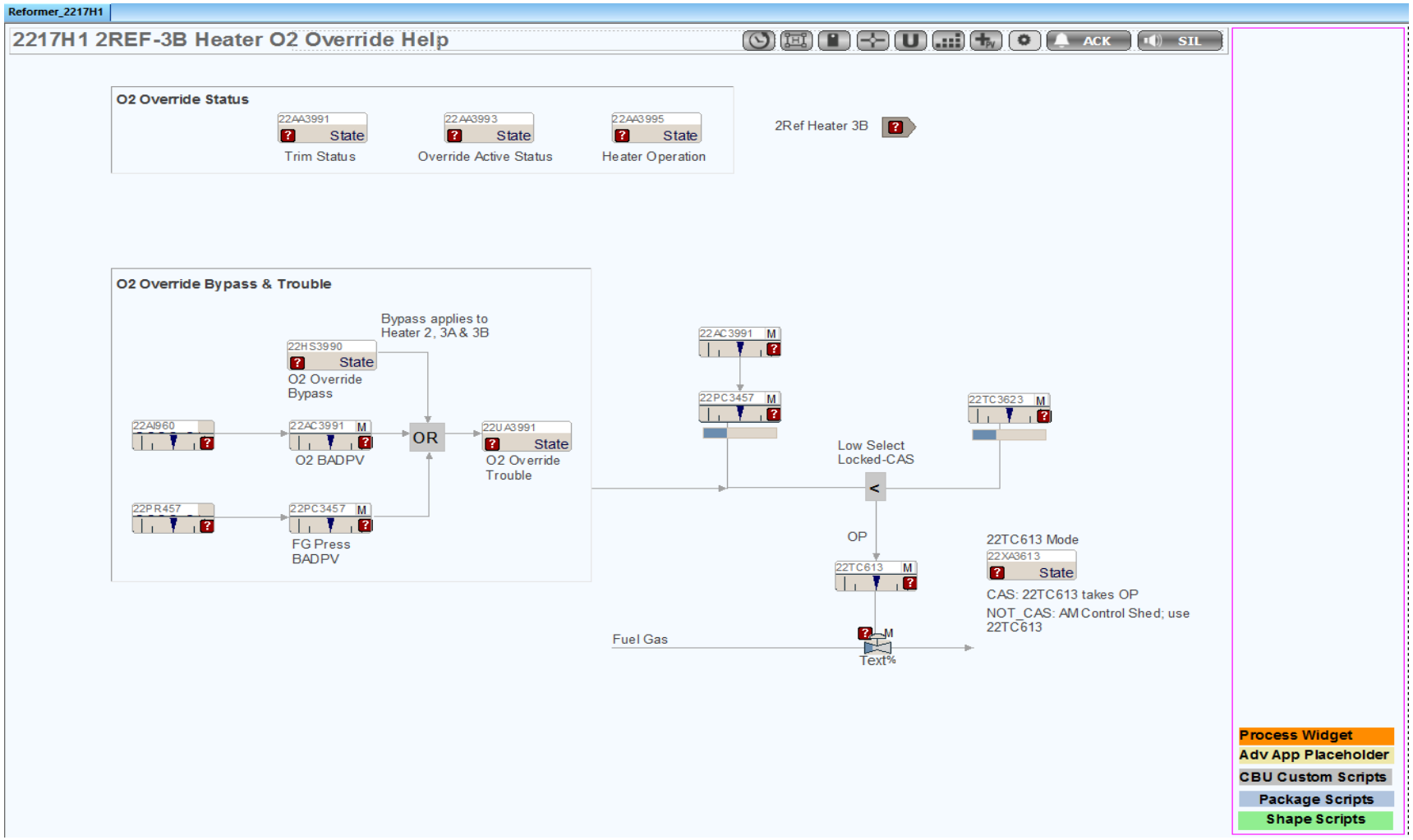


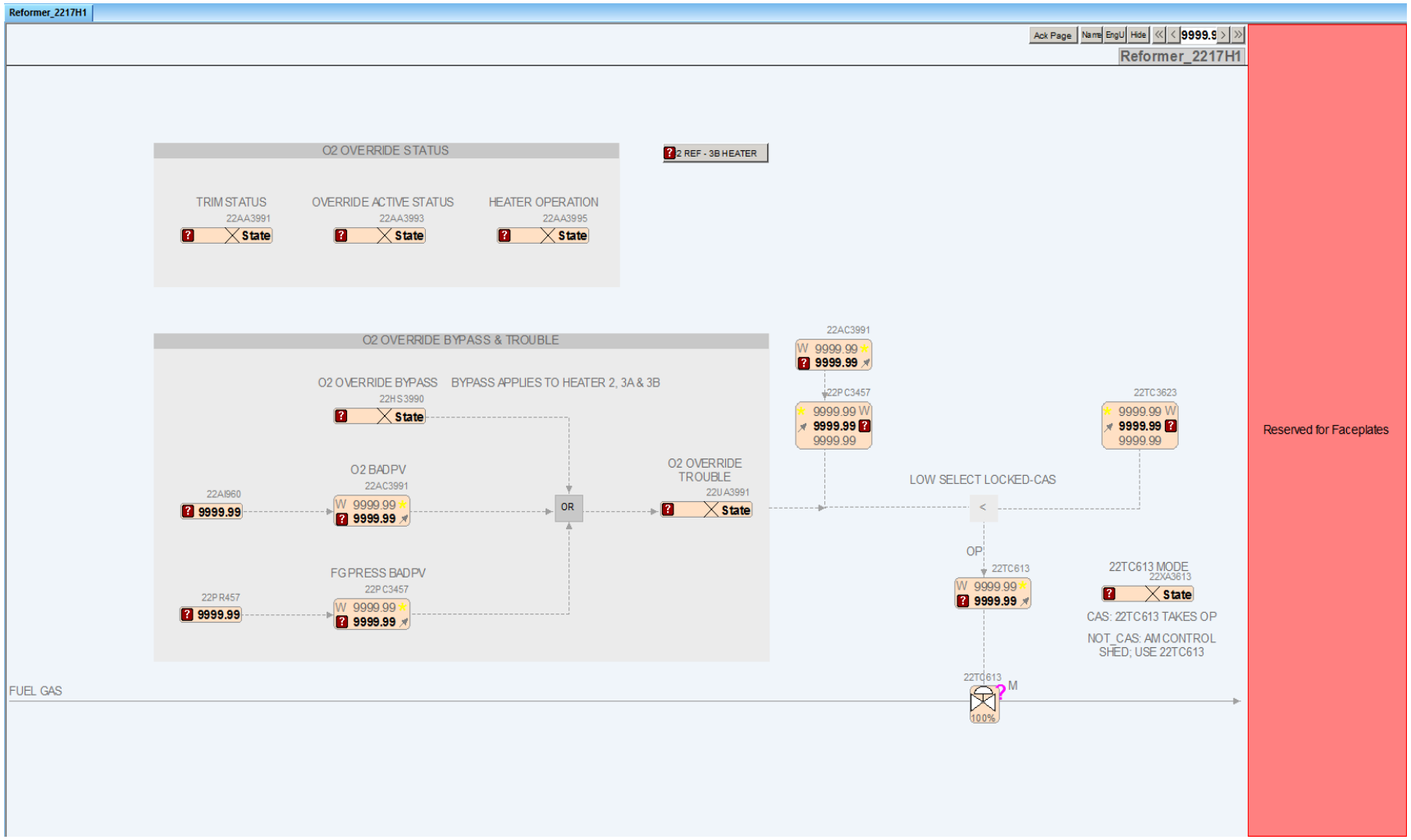

Reformer_2217
2217 #2 Ref - 3B Heater
ACK
SIL
Steam Purifier
BFW Pumps
22FI126
#2 React
22TI763
#3A Heater
E Damper Control
22HC974
22PI472
22TI926
O2 SRA
22AI960
22FI109
22TI791
150# Steam Header
Steam Drum
22AI971
O2
22AK915Z
NOx
22QK3056
Duty
Heater Operation
22AA3995
State
O2 Override Trouble Status
22UA3991
State
Override Active Status
22AA3993
State
C1
C2
C3
C4
C5
C6
SDL
22TI922
SDL
22TI923
Possible Flameout
Possible Flameout
Skin (DEGF)
Firing Alley (DEGF)
Coil (DEGF)
22TI772
22TI773
22TI774
22TI775
22TI776
22TI777
3B React
Possible Flameout Help
Possible Flameout
22PR457
22AC3991
O2 Override Help
Burner Count (of 10)
22XM3712
Text%
22TC613
22PC3457
22TY3613
<
22TC3623
OP
Shape & text added
22FI118
Fuel Gas
Heater Ramp Program
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2217
Ack Page
Name
EngU
Hide
Reformer_2217
E DAMPER CONTROL
22PI472
9999.99
22HC974
W 9999.99
9999.99
22TI926
9999.99
22AI960
9999.99
O2
22AI960
State
SRA
22FI109
9999.99
22TI791
9999.99
150# STEAM HEADER
STEAM PURIFIER
22FI126
9999.99
BFW PUMPS
STM DRUM
22TI763
9999.99
#2 REACT
#1 REACTOR
C1
C2
C3
C4
C5
C6
22TI922
9999.99
22TI923
9999.99
SDL
22TA3922
State
SDL
22TA3923
State
22TK924
State
22TI924
9999.99
22TK925
State
22TI925
9999.99
SKIN (DEGF)
FIRING ALLEY (DEGF)
COIL (DEGF)
22TI772
9999.99
22TI773
9999.99
22TI774
9999.99
22TI775
9999.99
22TI776
9999.99
22TI777
9999.99
22AI971
9999.99
O2
22AK915Z
9999.99
NOx
22QK3056
9999.99
DUTY
HEATER OPERATION
22AA3995
State
O2 OVERRIDE TROUBLE STATUS
22AA3993
State
OVERRIDE ACTIVE STATUS
22AA3992
State
3B REACT
Reserved for Faceplates
POSS FLMOT HELP
22TA3879
State
22PA448
State
22PR457
9999.99
22AC3991
9999.99 W
9999.99
9999.99
O2 OVERRIDE HELP
22TC613
100%
22TC613
W 9999.99
9999.99
22PC3457
9999.99 W
9999.99
9999.99
22TY3613
OP
22TC3623
9999.99 W
9999.99
9999.99
22FI118
9999.99
FUEL GAS
HTR RAMP PROG

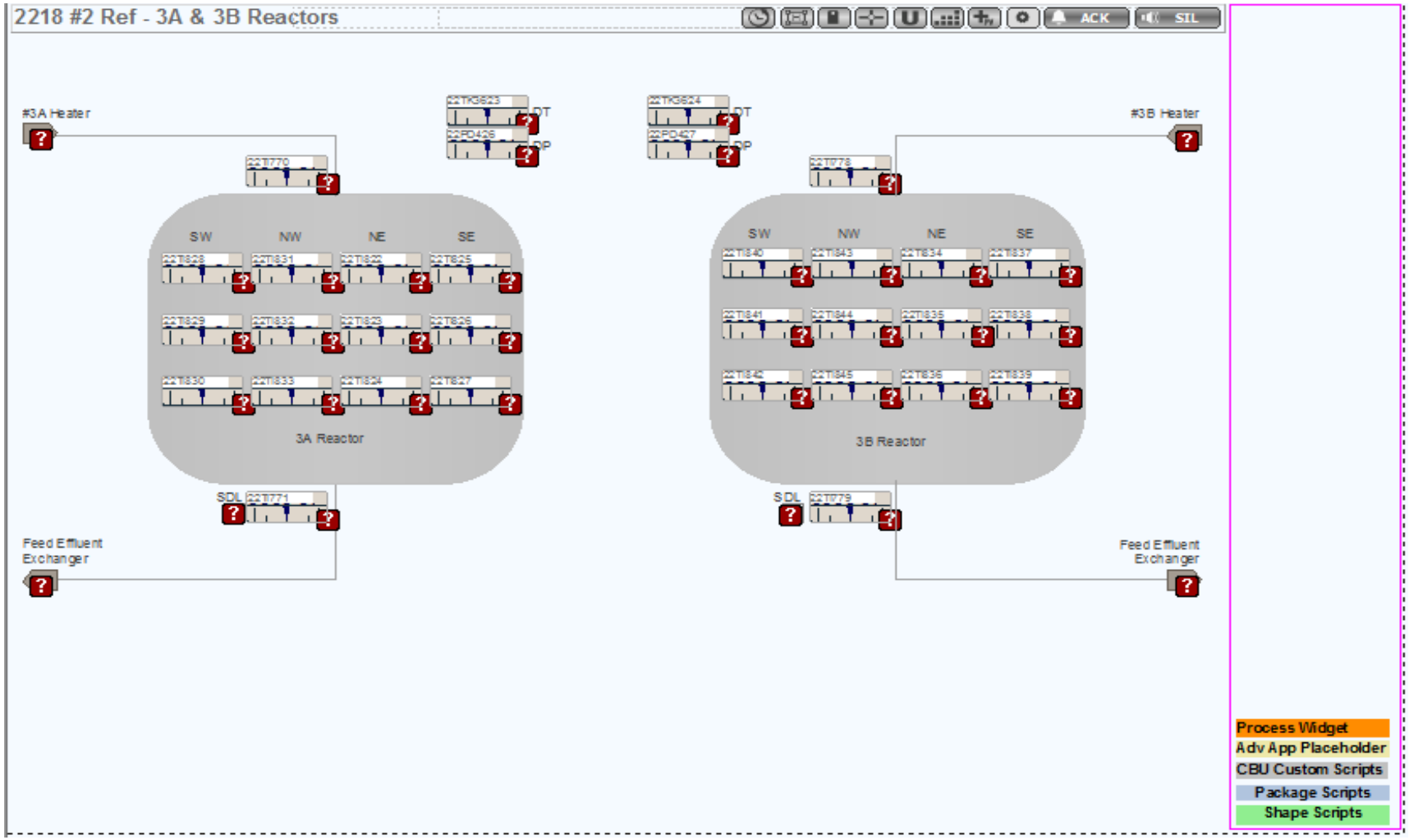
2.28 2217H1 2REF-3B Heater O2 Override Help (Reformer_2217H1.htm)

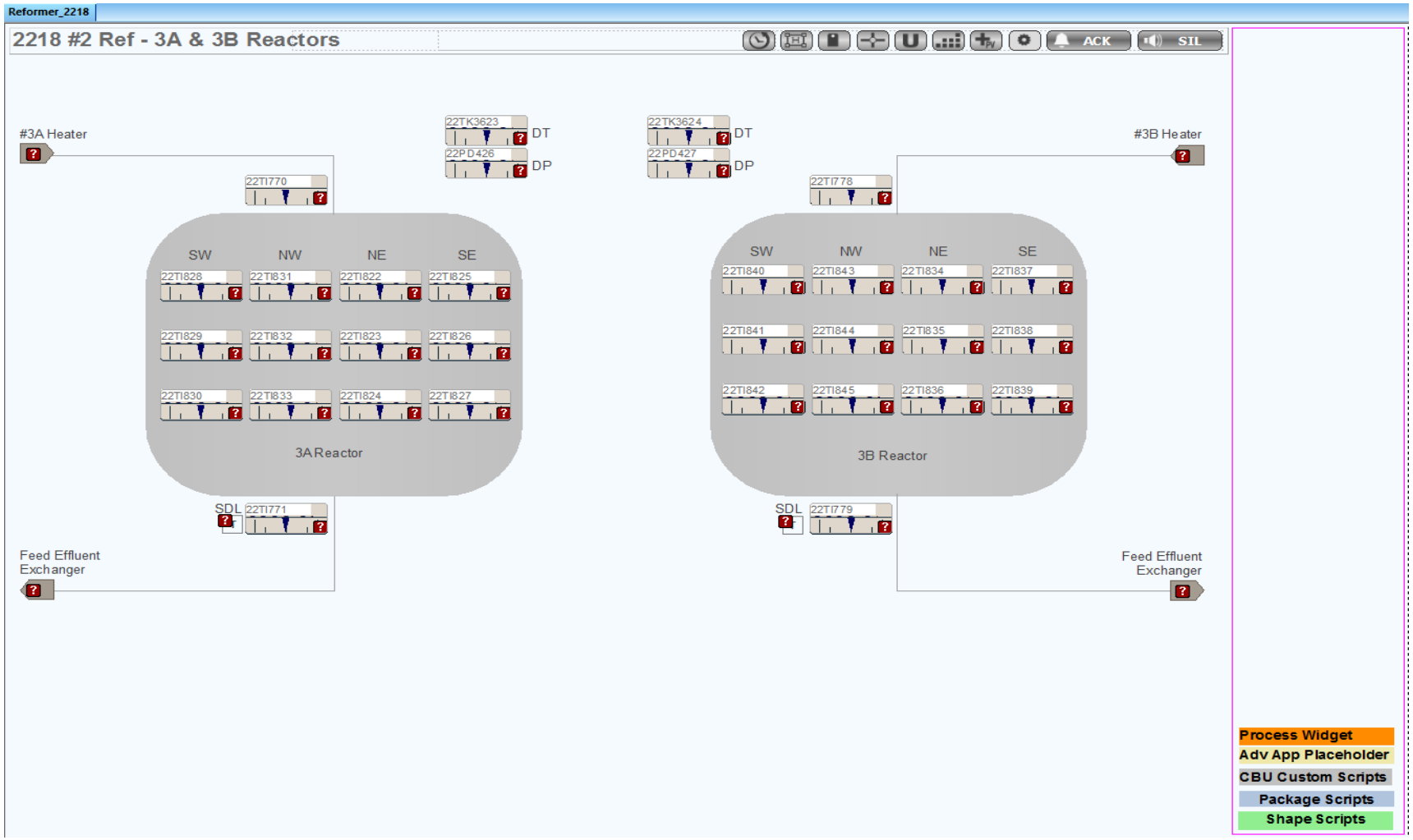


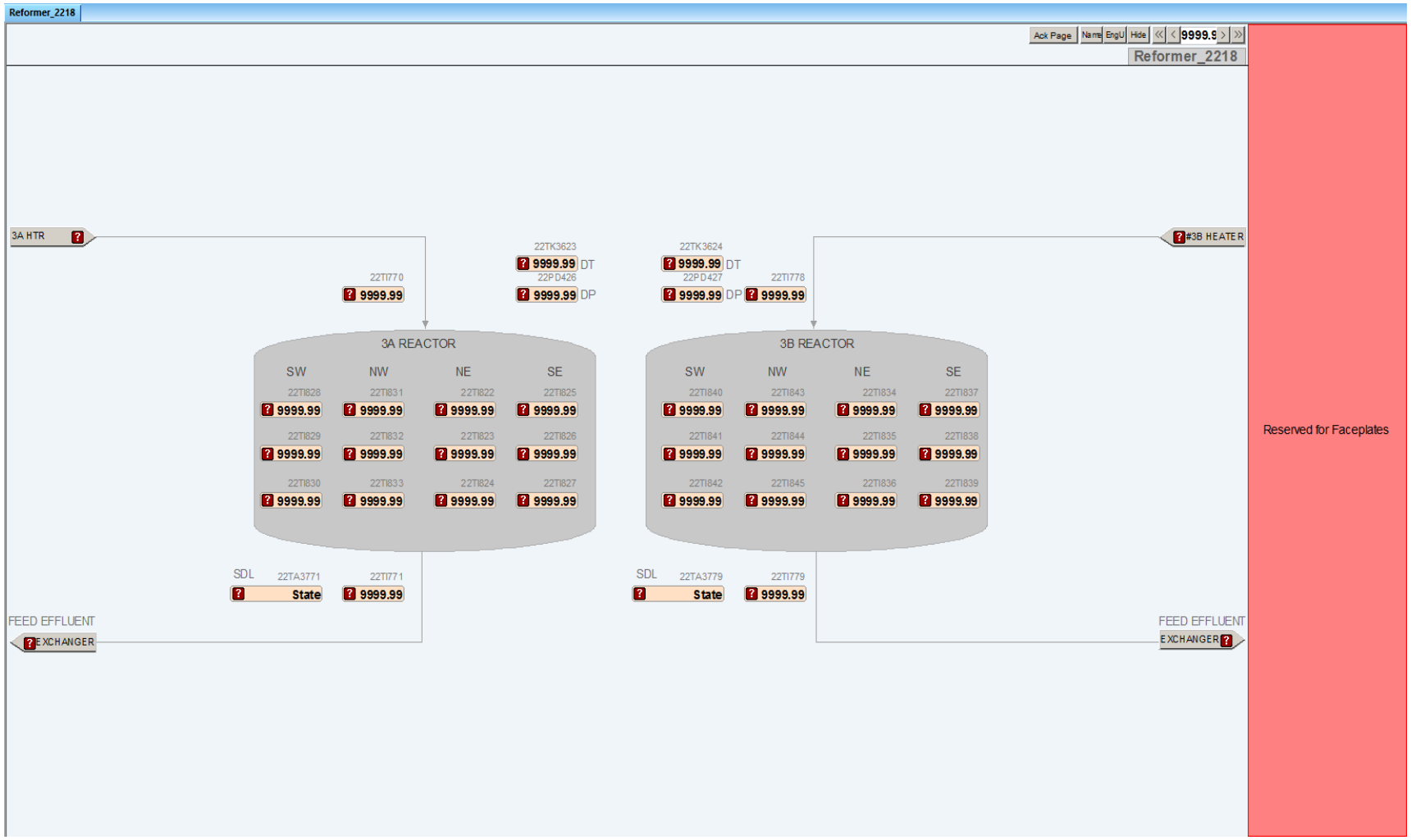

Reformer_2217H1
2217H1 2REF-3B Heater O2 Override Help
ACK
SIL
O2 Override Status
22AA3991
State
Trim Status
22AA3993
State
Override Active Status
22AA3995
State
Heater Operation
2Ref Heater 3B
O2 Override Bypass & Trouble
Bypass applies to Heater 2, 3A & 3B
22HS3990
State
O2 Override Bypass
22AI960
22AC3991
M
O2 BADPV
OR
22UA3991
State
O2 Override Trouble
22PR457
22PC3457
M
FG Press BADPV
22AC3991
M
22PC3457
M
22TC3623
M
Low Select Locked-CAS
<
OP
22TC613
M
22TC613 Mode
22XA3613
State
CAS: 22TC613 takes OP
NOT_CAS: AM Control Shed; use 22TC613
Fuel Gas
M
Text%
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2217H1
Ack Page
Name
EngU
Hide
Reformer_2217H1
O2 OVERRIDE STATUS
2 REF - 3B HEATER
TRIM STATUS
22AA3991
State
OVERRIDE ACTIVE STATUS
22AA3993
State
HEATER OPERATION
22AA3995
State
O2 OVERRIDE BYPASS & TROUBLE
O2 OVERRIDE BYPASS
BYPASS APPLIES TO HEATER 2, 3A & 3B
22HS3990
State
O2 BADPV
22AC3991
22AI960
9999.99
9999.99
9999.99
OR
O2 OVERRIDE TROUBLE
22UA3991
State
FG PRESS BADPV
22PC3457
22PR457
9999.99
9999.99
9999.99
22AC3991
9999.99
9999.99
22PC3457
9999.99
9999.99
9999.99
LOW SELECT LOCKED-CAS
22TC3623
9999.99
9999.99
9999.99
OP
22TC613
9999.99
9999.99
22TC613 MODE
22XA3613
State
CAS: 22TC613 TAKES OP
NOT_CAS: AM CONTROL SHED; USE 22TC613
22TC613
100%
M
FUEL GAS
Reserved for Faceplates

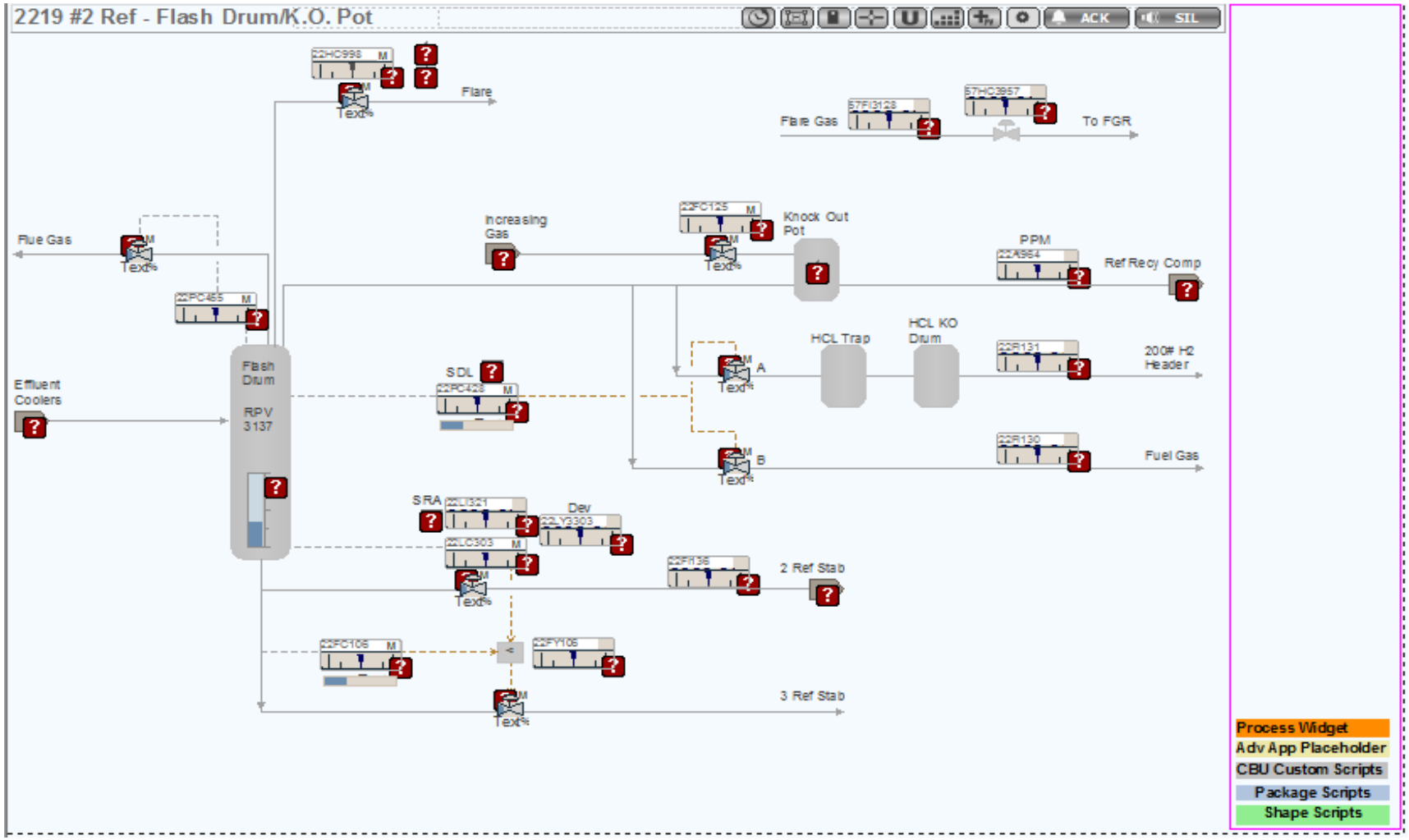
2.29 2218 #2 Ref - 3A & 3B Reactors (Reformer_2218.htm)

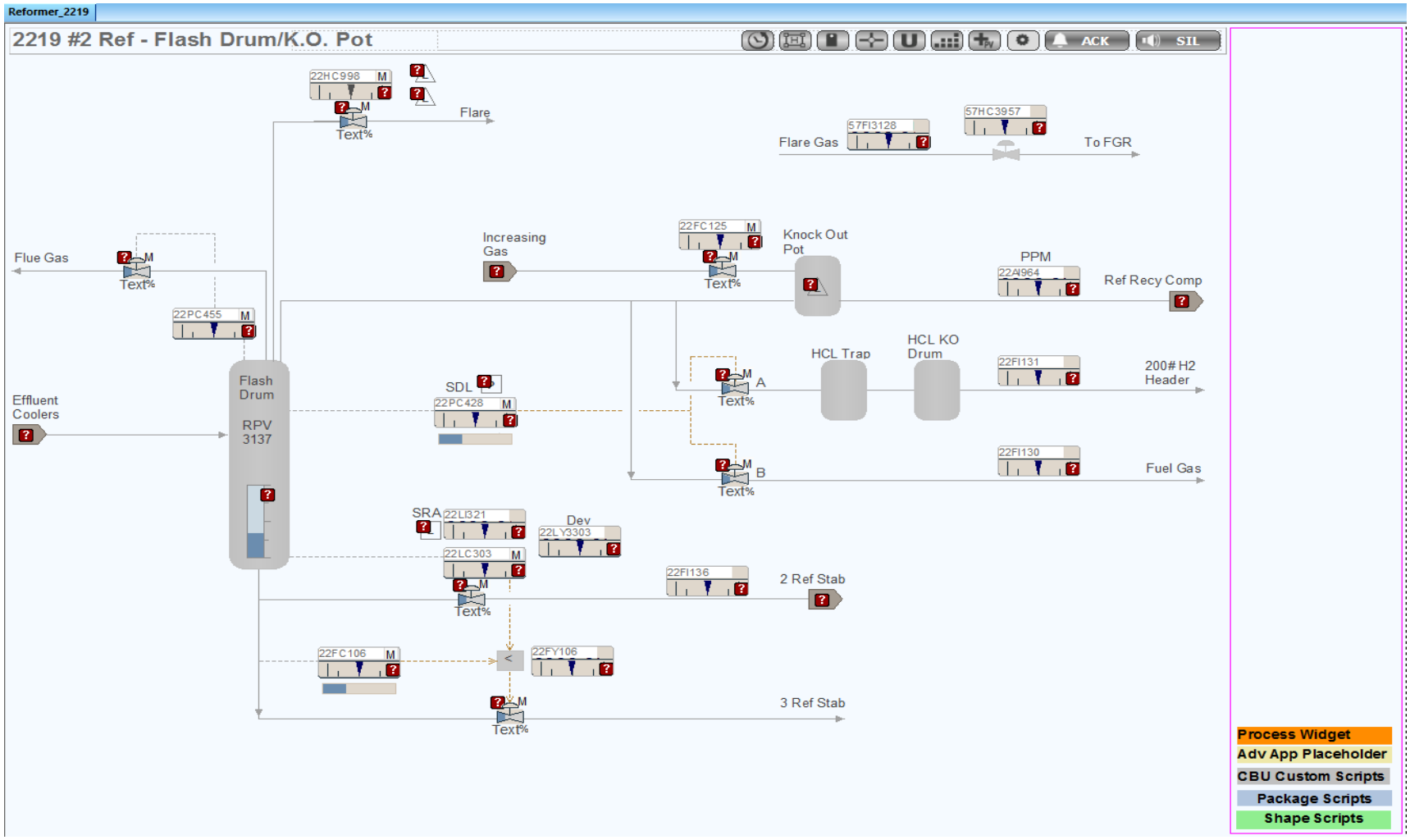


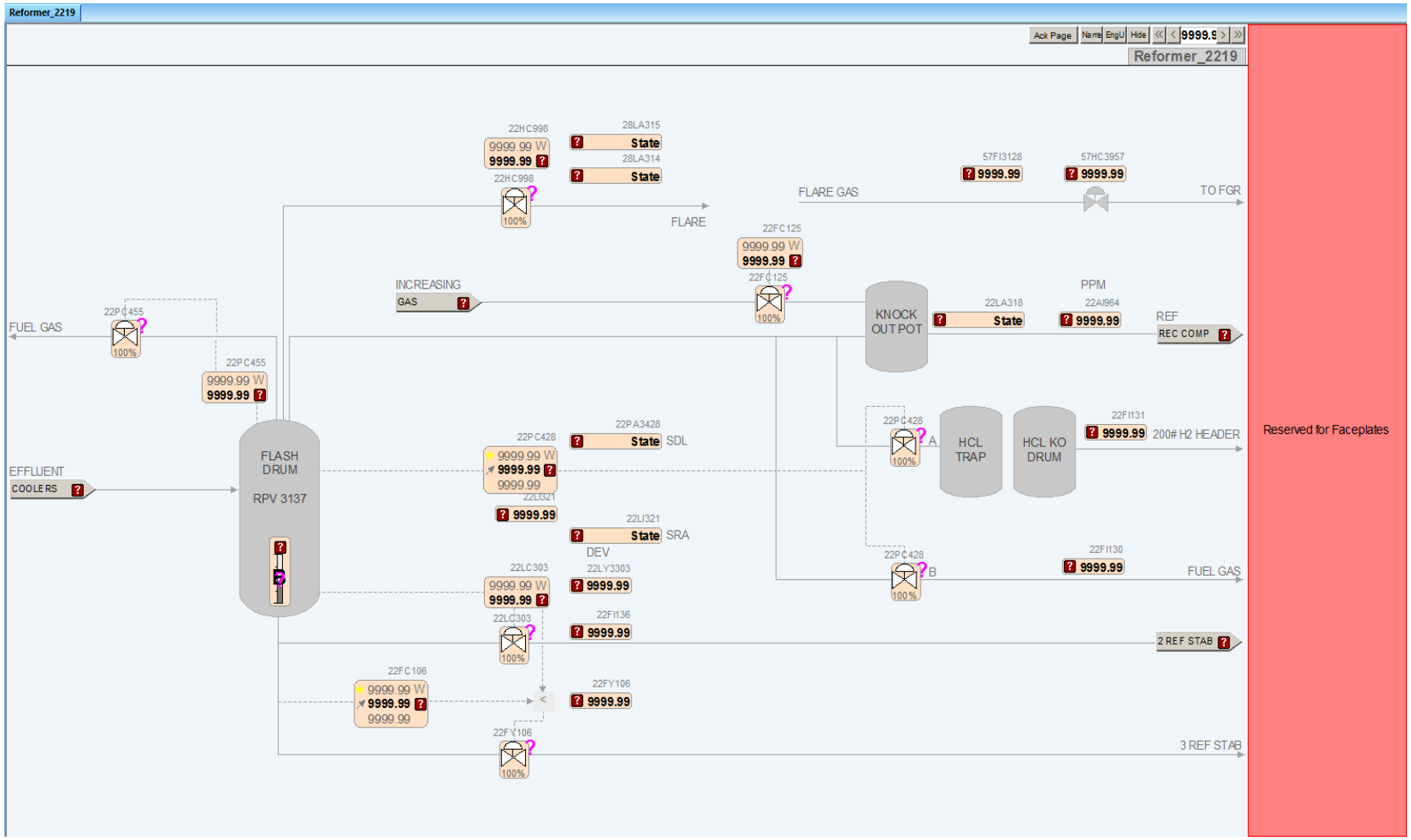

Reformer_2218
2218 #2 Ref - 3A & 3B Reactors
ACK
SIL
#3A Heater
22TK3623
DT
22PD426
DP
22TK3624
DT
22PD427
DP
#3B Heater
22TI770
22TI778
SW
NW
NE
SE
22TI828
22TI831
22TI822
22TI825
22TI829
22TI832
22TI823
22TI826
22TI830
22TI833
22TI824
22TI827
3A Reactor
22TI840
22TI843
22TI834
22TI837
22TI841
22TI844
22TI835
22TI838
22TI842
22TI845
22TI836
22TI839
3B Reactor
SDL
22TI771
SDL
22TI779
Feed Effluent Exchanger
Feed Effluent Exchanger
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2218
Ack Page
Name
EngU
Hide
9999.9
Reformer_2218
3A HTR
22TI770
9999.99
22TK3623
9999.99 DT
22PD426
9999.99 DP
22TK3624
9999.99 DT
22PD427
9999.99 DP
22TI778
9999.99
#3B HEATER
3A REACTOR
SW
NW
NE
SE
22TI828
22TI831
22TI822
22TI825
22TI829
22TI832
22TI823
22TI826
22TI830
22TI833
22TI824
22TI827
9999.99
3B REACTOR
22TI840
22TI843
22TI834
22TI837
22TI841
22TI844
22TI835
22TI838
22TI842
22TI845
22TI836
22TI839
SDL
22TA3771
State
22TI771
9999.99
SDL
22TA3779
State
22TI779
9999.99
FEED EFFLUENT
EXCHANGER
FEED EFFLUENT
EXCHANGER
Reserved for Faceplates

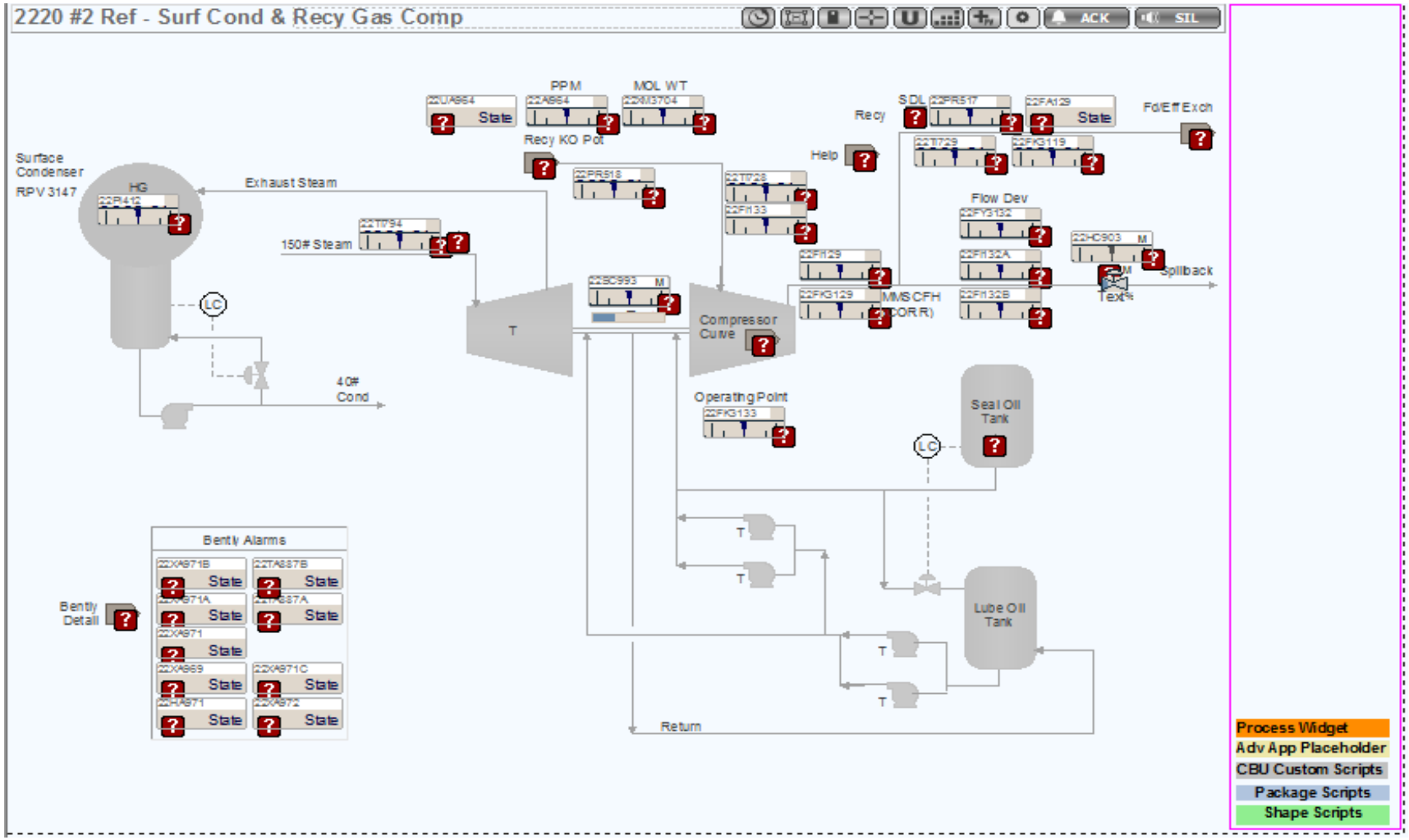
2.30 2219 #2 Ref - Flash Drum/K.O. Pot (Reformer_2219.htm)

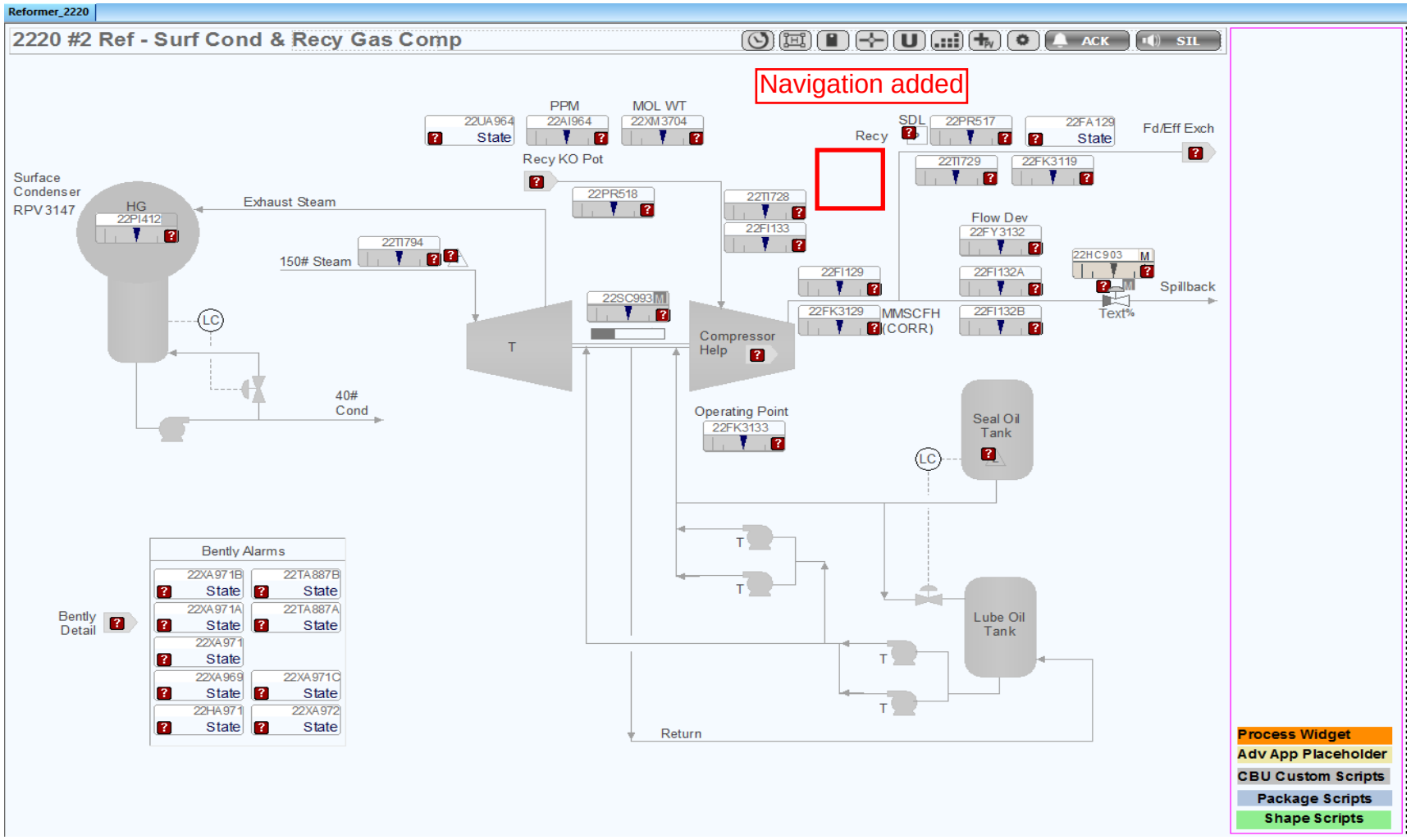


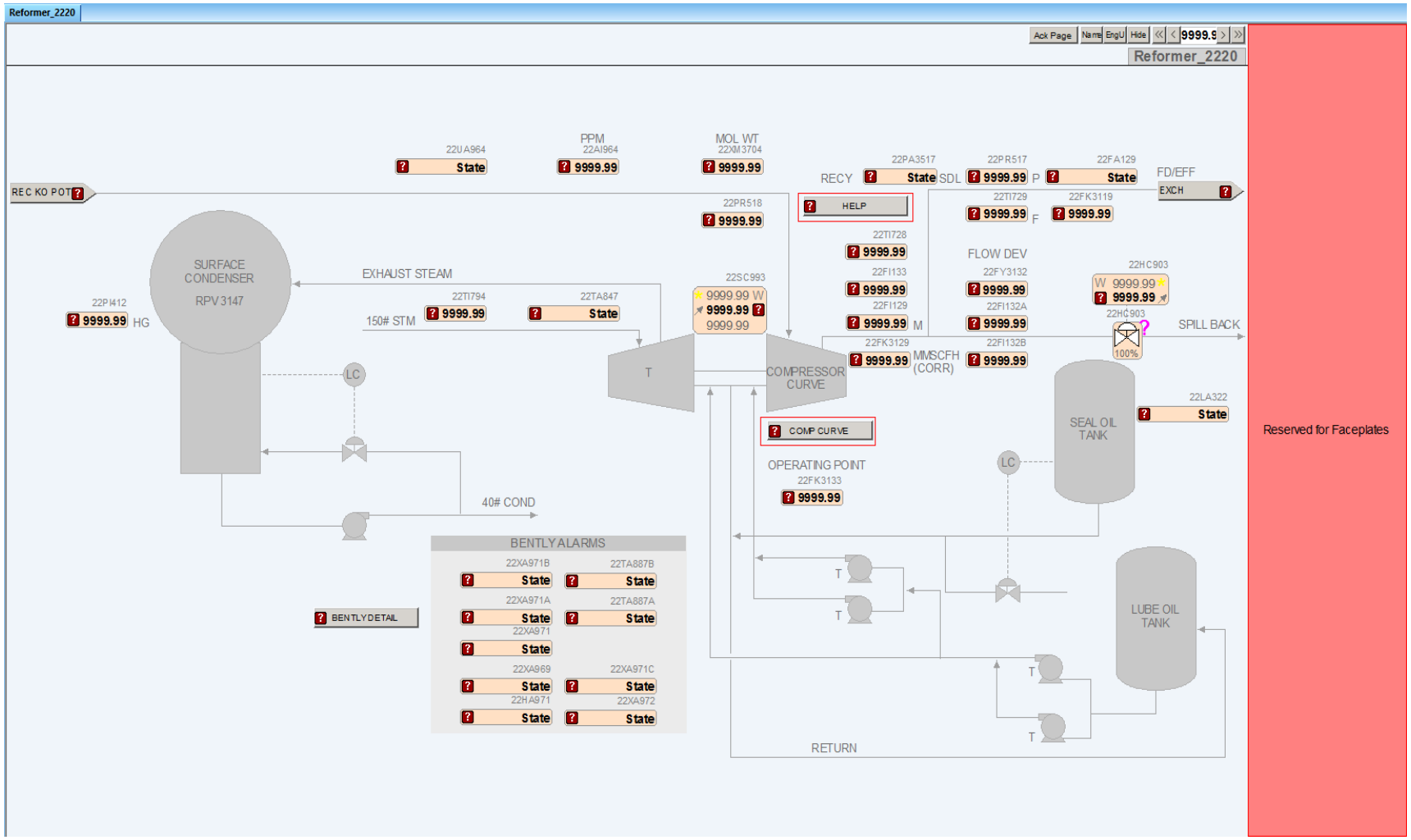

Reformer_2219
2219 #2 Ref - Flash Drum/K.O. Pot
ACK
SIL
22HC998
M
Text%
Flare
Flare Gas
57FI3128
57HC3957
To FGR
Flue Gas
Increasing Gas
22FC125
Knock Out Pot
PPM
22AI964
Ref Recy Comp
22PC455
HCL Trap
HCL KO Drum
22FI131
200# H2 Header
Effluent Coolers
Flash Drum
RPV 3137
SDL
22PC428
A
B
22FI130
Fuel Gas
SRA
22LI321
Dev
22LY3303
22LC303
22FI136
2 Ref Stab
22FC106
22FY106
3 Ref Stab
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2219
Ack Page
Name
EngU
Hide
9999.9
Reformer_2219
22HC998
9999.99 W
9999.99
28LA315
State
28LA314
State
22HC998
100%
FLARE
FLARE GAS
57FI3128
9999.99
57HC3957
9999.99
TO FGR
22FC125
9999.99 W
9999.99
22FC125
100%
INCREASING
GAS
KNOCK
OUT POT
22LA318
State
PPM
22AI964
9999.99
REF
REC COMP
FUEL GAS
22PC455
100%
22PC455
9999.99 W
9999.99
22PA3428
State
SDL
22PC428
9999.99 W
9999.99
9999.99
22LI321
9999.99
22LI321
State
SRA
DEV
FLASH
DRUM
RPV 3137
EFFLUENT
COOLERS
22PC428
100%
A
HCL
TRAP
HCL KO
DRUM
22FI131
9999.99
200# H2 HEADER
22PC428
100%
B
22FI130
9999.99
FUEL GAS
22LC303
9999.99 W
9999.99
22LY3303
9999.99
22LC303
100%
22FI136
9999.99
2 REF STAB
22FC106
9999.99 W
9999.99
9999.99
22FY106
9999.99
22FY106
100%
3 REF STAB
Reserved for Faceplates

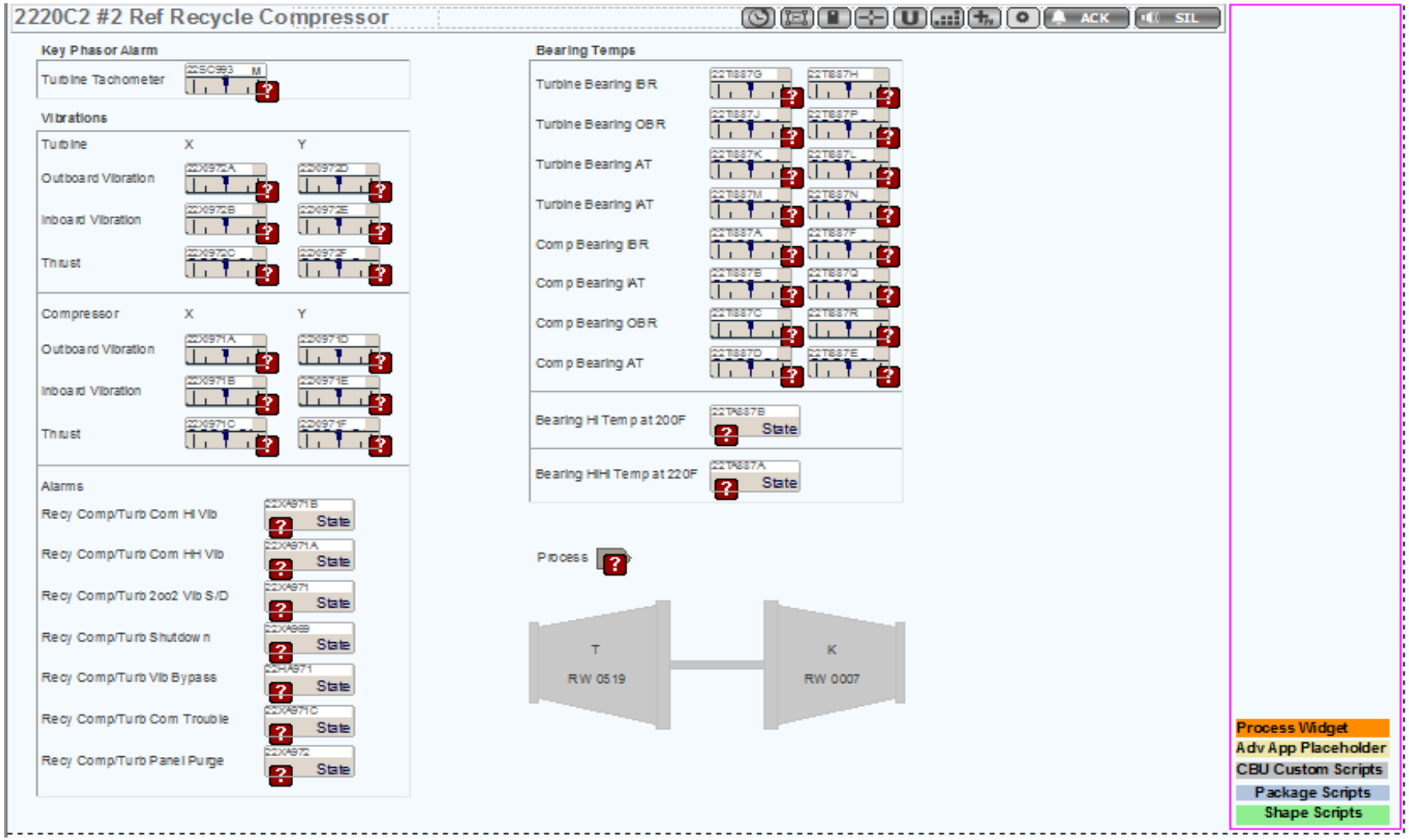
2.31 2220 #2 Ref - Surf Cond & Recy Gas Comp (Reformer_2220.htm)

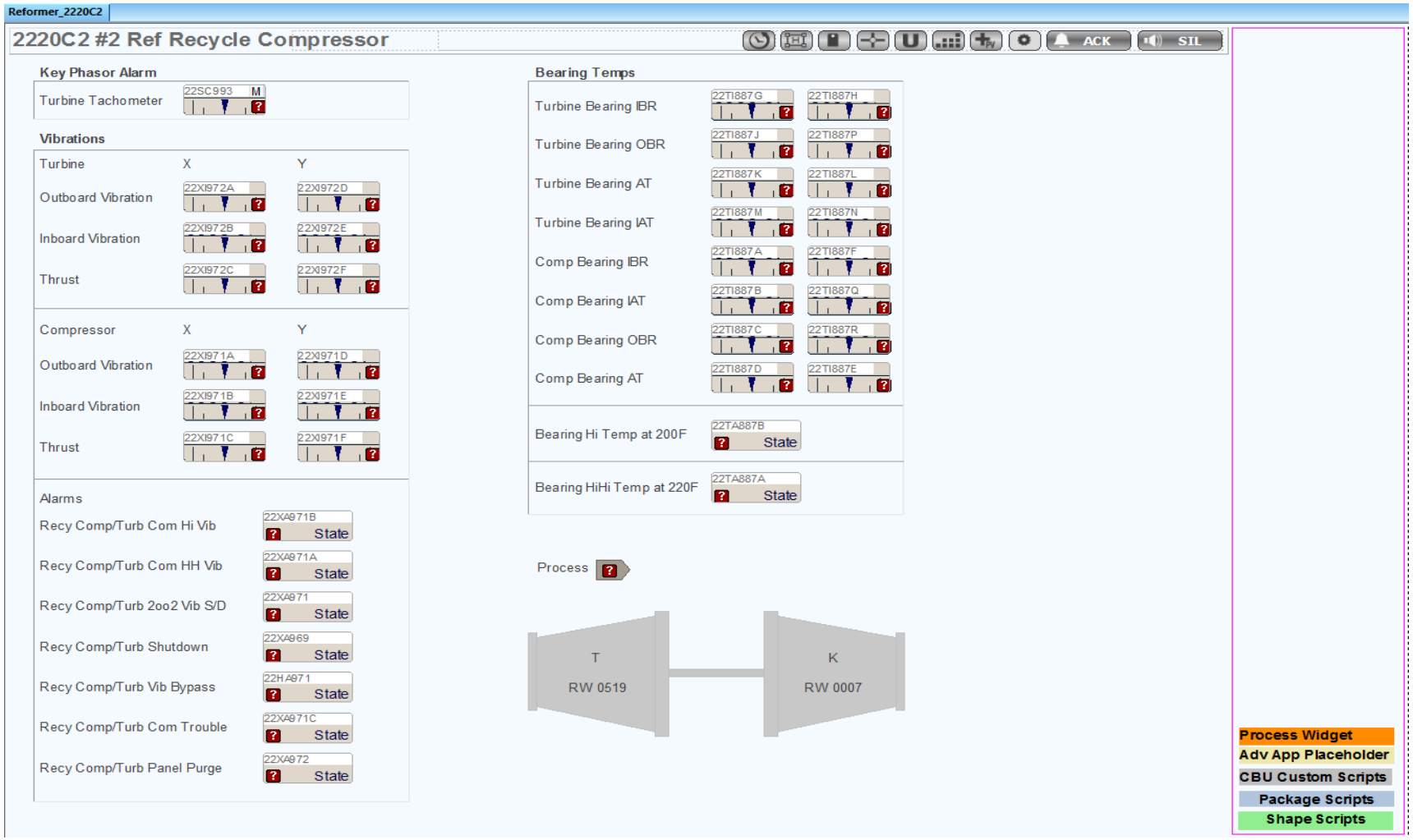


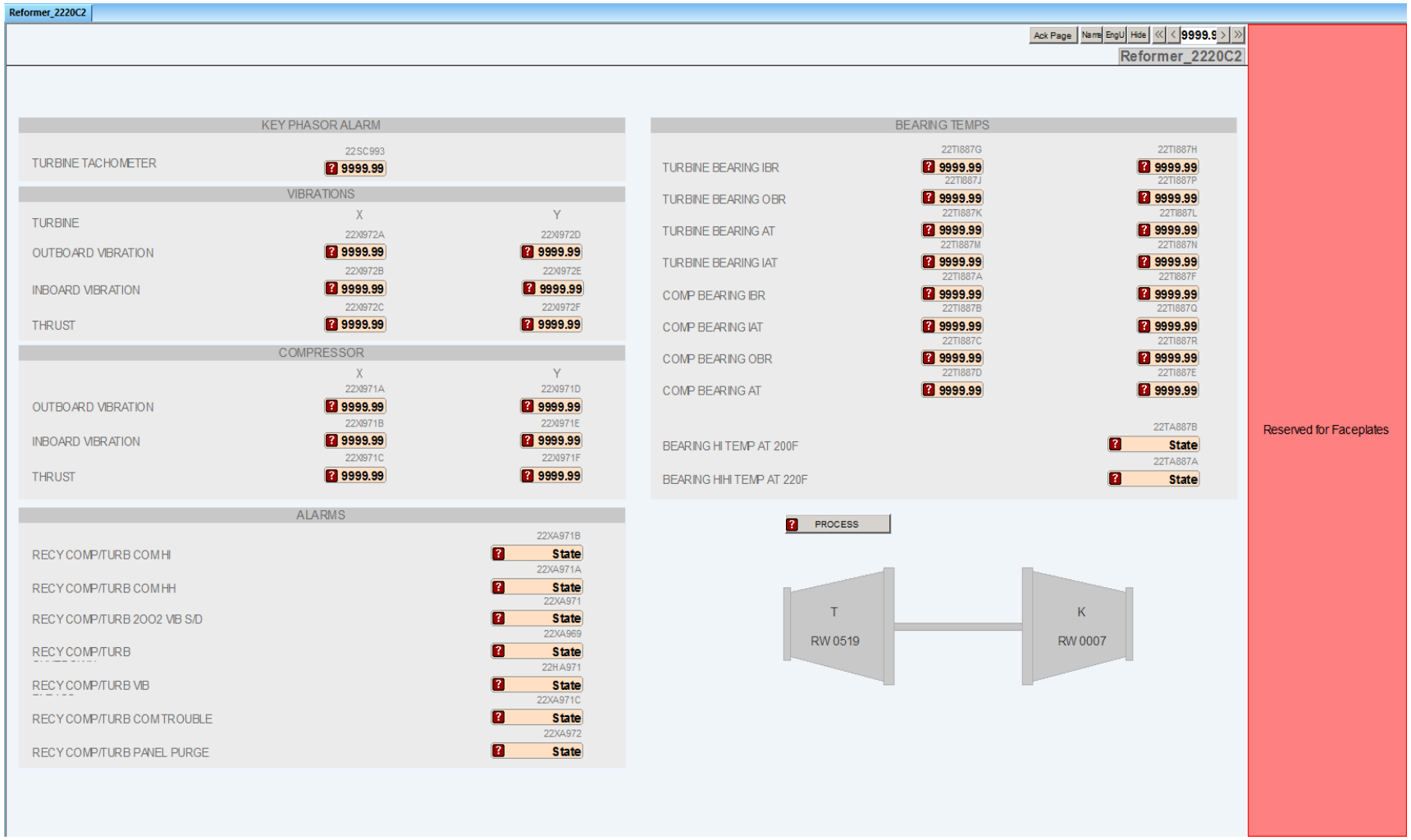

Reformer_2220
2220 #2 Ref - Surf Cond & Recy Gas Comp
ACK
SIL
Navigation added
22UA964
State
PPM
22AI964
MOL WT
22XM3704
Recy KO Pot
22PR518
Recy
SDL
22PR517
22FA129
State
Fd/Eff Exch
22FI729
22FK3119
22FI728
22FI133
Surface
Condenser
RPV 3147
HG
22PI412
Exhaust Steam
150# Steam
22FI794
Flow Dev
22FY3132
22HC903
M
22FI129
22FI132A
Spillback
Text%
22SC993
M
22FK3129
MMSCFH
(CORR)
22FI132B
LC
T
Compressor
Help
40#
Cond
Operating Point
22FK3133
Seal Oil
Tank
LC
T
T
Lube Oil
Tank
T
T
Return
Bently Alarms
22XA971B
State
22TA887B
State
22XA971A
State
22TA887A
State
22XA971
State
22XA969
State
22XA971C
State
22HA971
State
22XA972
State
Bently
Detail
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2220
Ack Page
Name
EngU
Hide
Reformer_2220
22UA964
State
PPM
22AI964
9999.99
MOL WT
22XM3704
9999.99
22PA3517
RECY
State
SDL
22PR517
9999.99
P
22FA129
State
FD/EFF
EXCH
REC KO POT
22PR518
9999.99
HELP
22TI729
9999.99
F
22FK3119
9999.99
22TI728
9999.99
FLOW DEV
SURFACE CONDENSER
RPV 3147
EXHAUST STEAM
22PI412
9999.99
HG
22TI794
9999.99
150# STM
22TA847
State
22SC993
9999.99 W
9999.99
9999.99
22FI133
9999.99
22FY3132
9999.99
22HC903
W 9999.99
9999.99
22FI129
9999.99
M
22FI132A
9999.99
22HC903
100%
SPILL BACK
22FK3129
9999.99
MMSCFH (CORR)
22FI132B
9999.99
T
COMPRESSOR CURVE
LC
COMP CURVE
OPERATING POINT
22FK3133
9999.99
SEAL OIL TANK
22LA322
State
40# COND
BENTLY ALARMS
22XA971B
State
22TA887B
State
22XA971A
State
22TA887A
State
22XA971
State
BENTLY DETAIL
22XA969
State
22XA971C
State
22HA971
State
22XA972
State
T
T
T
T
LUBE OIL TANK
RETURN
Reserved for Faceplates

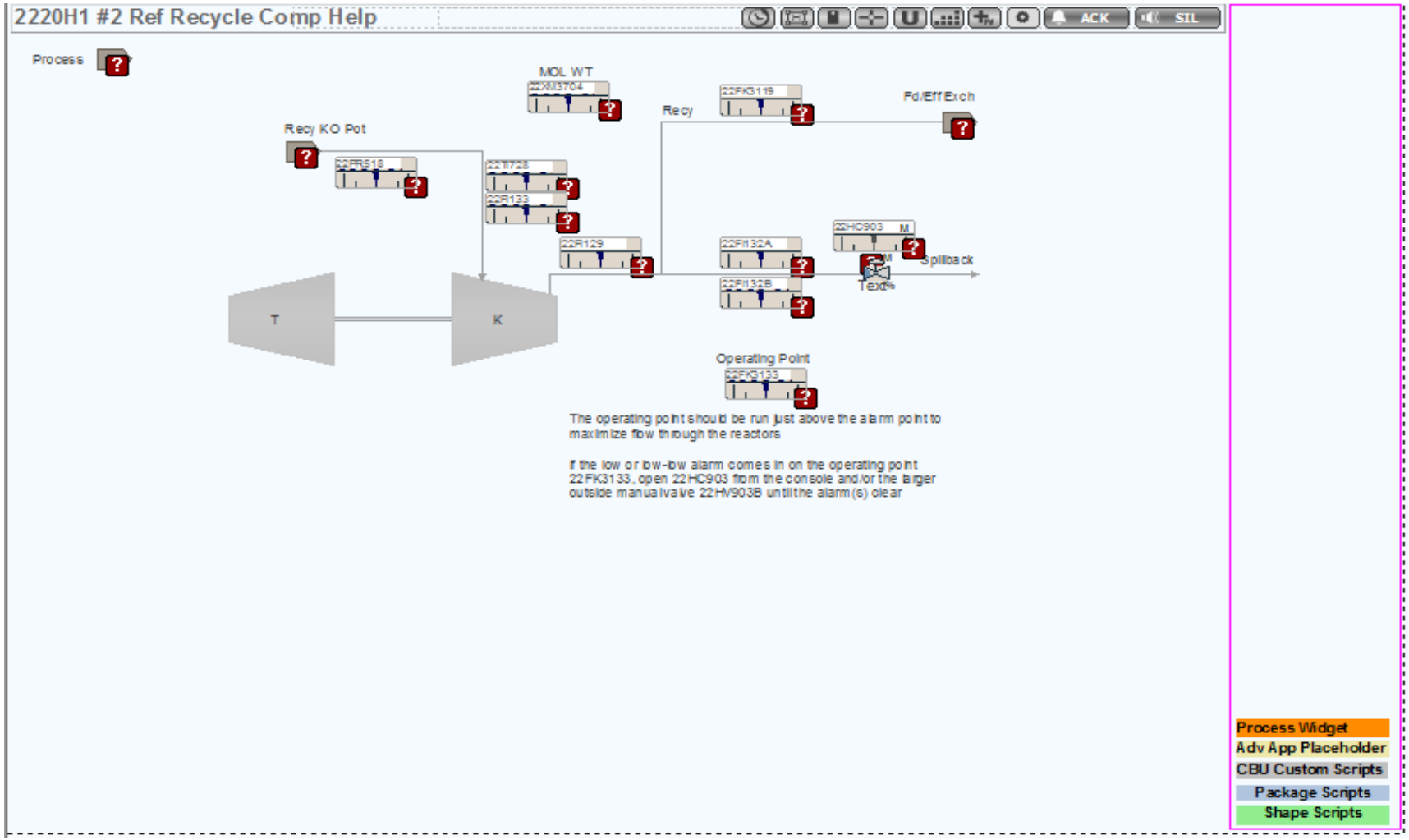
2.32 2220C2 #2 Ref Recycle Compressor (Reformer_2220C2.htm)

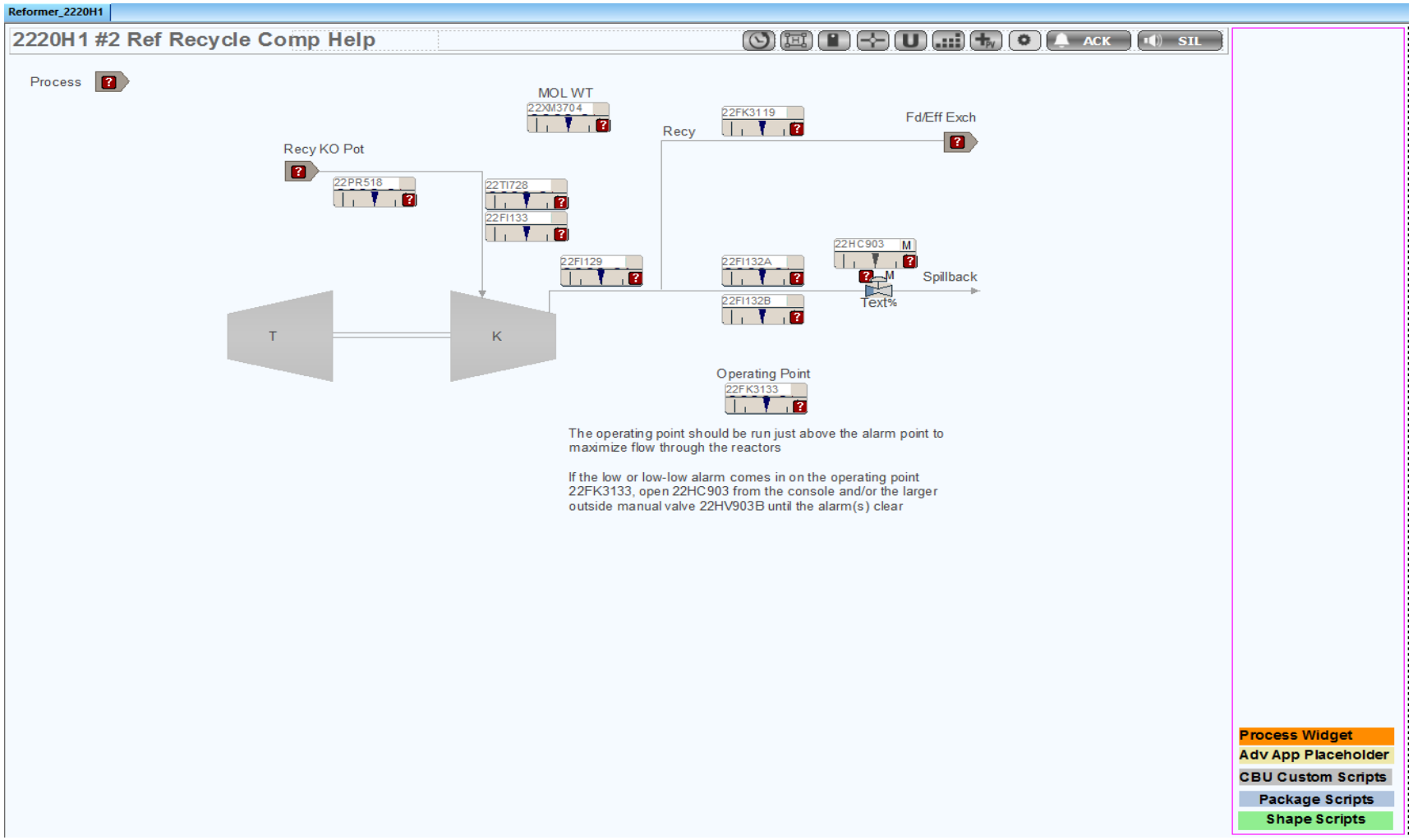


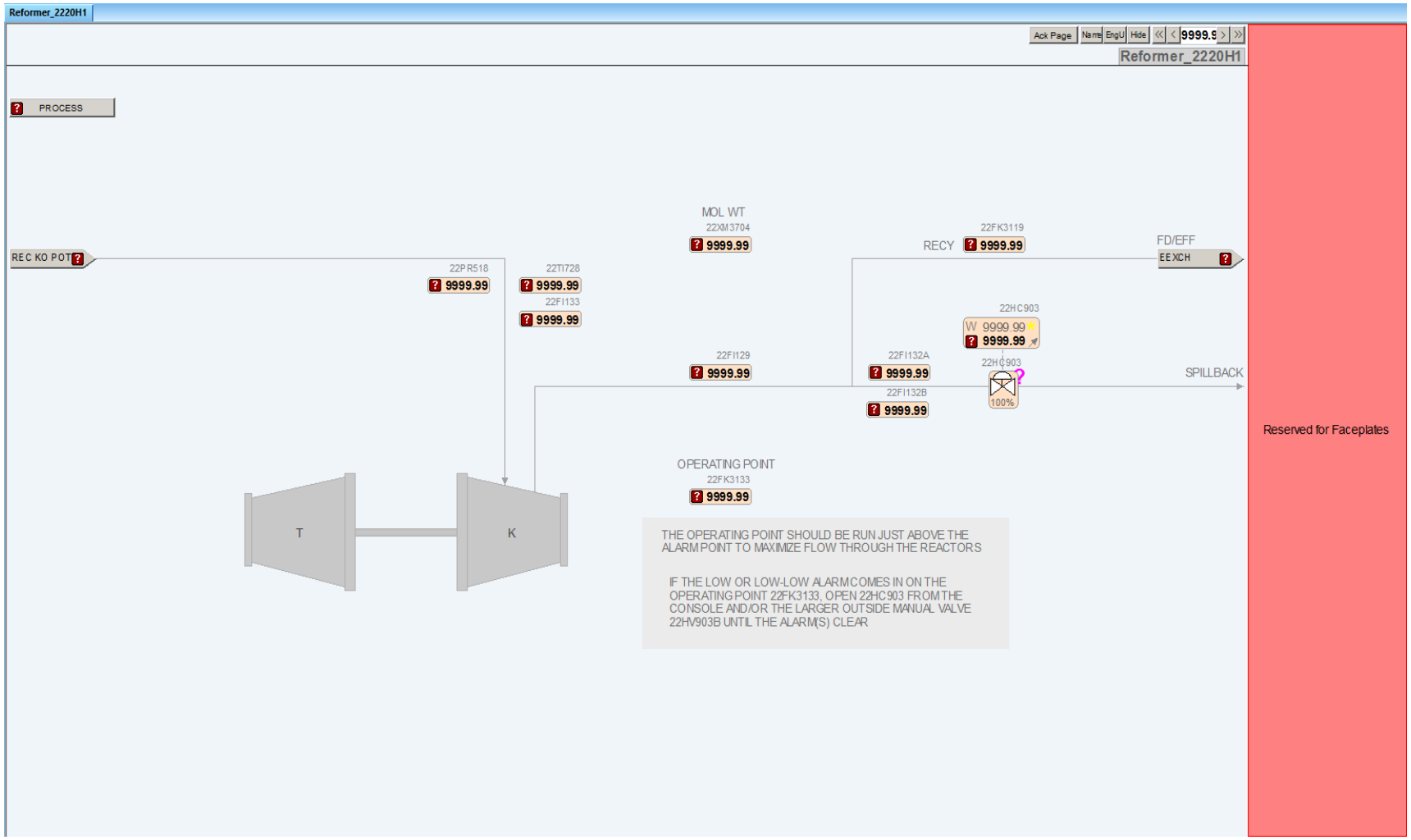

Reformer_2220C2
2220C2 #2 Ref Recycle Compressor
ACK
SIL
Key Phasor Alarm
Turbine Tachometer
22SC993
M
Vibrations
Turbine
X
Y
Outboard Vibration
22XI972A
22XI972D
Inboard Vibration
22XI972B
22XI972E
Thrust
22XI972C
22XI972F
Compressor
X
Y
Outboard Vibration
22XI971A
22XI971D
Inboard Vibration
22XI971B
22XI971E
Thrust
22XI971C
22XI971F
Alarms
Recy Comp/Turb Com Hi Vib
22XA971B
State
Recy Comp/Turb Com HH Vib
22XA971A
State
Recy Comp/Turb 2oo2 Vib S/D
22XA971
State
Recy Comp/Turb Shutdown
22XA969
State
Recy Comp/Turb Vib Bypass
22HA971
State
Recy Comp/Turb Com Trouble
22XA971C
State
Recy Comp/Turb Panel Purge
22XA972
State
Bearing Temps
Turbine Bearing IBR
22TI887G
22TI887H
Turbine Bearing OBR
22TI887J
22TI887P
Turbine Bearing AT
22TI887K
22TI887L
Turbine Bearing IAT
22TI887M
22TI887N
Comp Bearing IBR
22TI887A
22TI887F
Comp Bearing IAT
22TI887B
22TI887Q
Comp Bearing OBR
22TI887C
22TI887R
Comp Bearing AT
22TI887D
22TI887E
Bearing Hi Temp at 200F
22TA887B
State
Bearing HiHi Temp at 220F
22TA887A
State
Process
T
RW 0519
K
RW 0007
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2220C2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2220C2
KEY PHASOR ALARM
TURBINE TACHOMETER
22SC993
9999.99
VIBRATIONS
X
Y
TURBINE
OUTBOARD VIBRATION
22XI972A
9999.99
22XI972D
9999.99
INBOARD VIBRATION
22XI972B
9999.99
22XI972E
9999.99
THRUST
22XI972C
9999.99
22XI972F
9999.99
COMPRESSOR
X
Y
OUTBOARD VIBRATION
22XI971A
9999.99
22XI971D
9999.99
INBOARD VIBRATION
22XI971B
9999.99
22XI971E
9999.99
THRUST
22XI971C
9999.99
22XI971F
9999.99
ALARMS
RECY COMP/TURB COM HI
22XA971B
State
RECY COMP/TURB COM HH
22XA971A
State
RECY COMP/TURB 2OO2 VIB S/D
22XA971
State
RECY COMP/TURB
22XA969
State
RECY COMP/TURB VIB
22HA971
State
RECY COMP/TURB COM TROUBLE
22XA971C
State
RECY COMP/TURB PANEL PURGE
22XA972
State
BEARING TEMPS
TURBINE BEARING IBR
22TI887G
9999.99
22TI887H
9999.99
TURBINE BEARING OBR
22TI887J
9999.99
22TI887P
9999.99
TURBINE BEARING AT
22TI887K
9999.99
22TI887L
9999.99
TURBINE BEARING IAT
22TI887M
9999.99
22TI887N
9999.99
COMP BEARING IBR
22TI887A
9999.99
22TI887F
9999.99
COMP BEARING IAT
22TI887B
9999.99
22TI887Q
9999.99
COMP BEARING OBR
22TI887C
9999.99
22TI887R
9999.99
COMP BEARING AT
22TI887D
9999.99
22TI887E
9999.99
BEARING HI TEMP AT 200F
22TA887B
State
BEARING HIHI TEMP AT 220F
22TA887A
State
PROCESS
T
RW 0519
K
RW 0007
Reserved for Faceplates

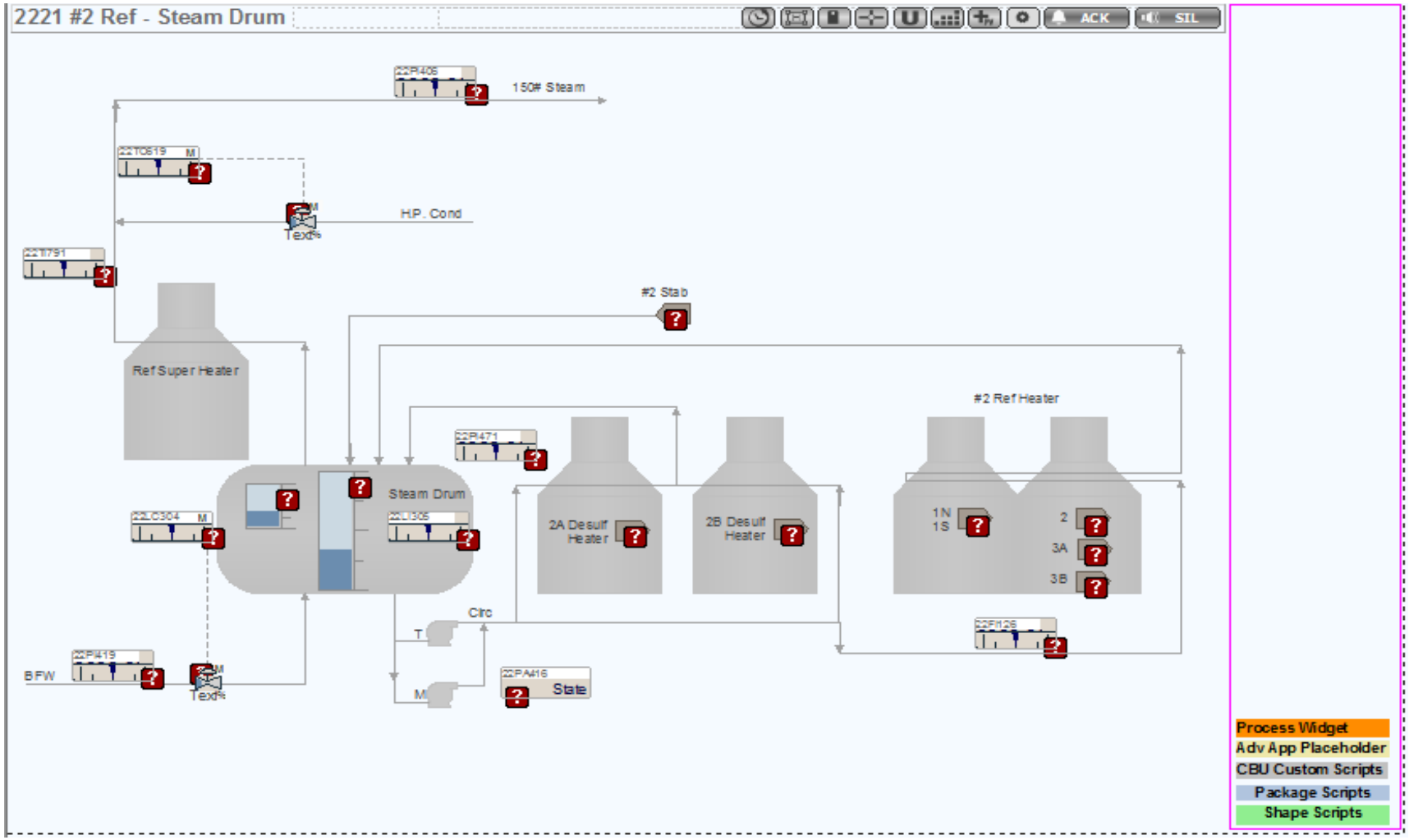
2.33 2220H1 #2 Ref Recycle Comp Help (Reformer_2220H1.htm)

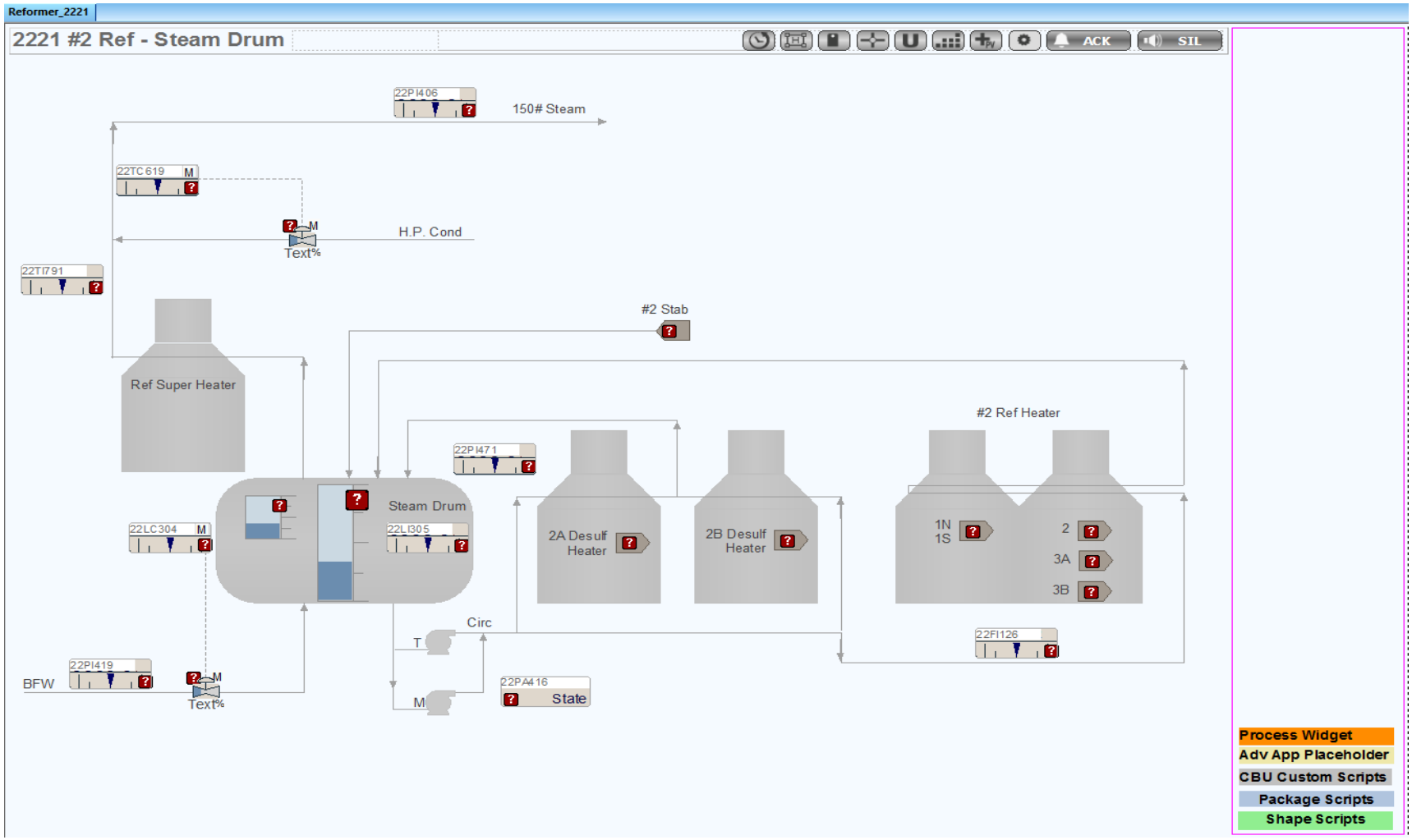


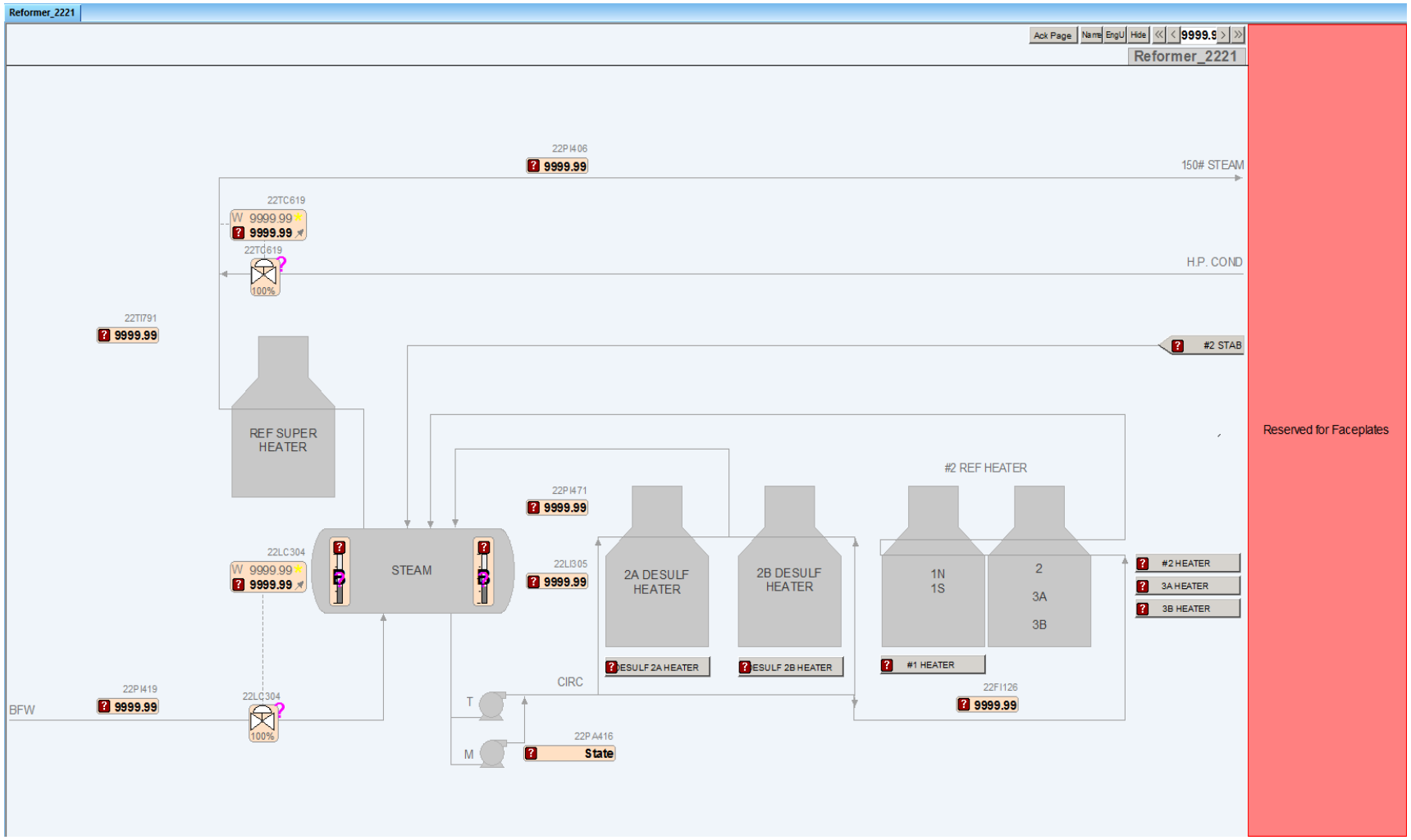

Reformer_2220H1
2220H1 #2 Ref Recycle Comp Help
ACK
SIL
Process
MOL WT
22XM3704
Recy
22FK3119
Fd/Eff Exch
Recy KO Pot
22PR518
22TI728
22FI133
22FI129
22FI132A
22FI132B
22HC903
M
Spillback
Text%
T
K
Operating Point
22FK3133
The operating point should be run just above the alarm point to maximize flow through the reactors
If the low or low-low alarm comes in on the operating point 22FK3133, open 22HC903 from the console and/or the larger outside manual valve 22HV903B until the alarm(s) clear
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2220H1
Ack Page
Name
EngU
Hide
Reformer_2220H1
PROCESS
REC KO POT
22PR518
9999.99
22TI728
9999.99
22FI133
9999.99
MOL WT
22XM3704
9999.99
22FK3119
RECY
9999.99
FD/EFF
EEXCH
22HC903
W 9999.99
9999.99
22FI129
9999.99
22FI132A
9999.99
22HC903
100%
SPILLBACK
22FI132B
9999.99
OPERATING POINT
22FK3133
9999.99
T
K
THE OPERATING POINT SHOULD BE RUN JUST ABOVE THE ALARM POINT TO MAXIMIZE FLOW THROUGH THE REACTORS
IF THE LOW OR LOW-LOW ALARM COMES IN ON THE OPERATING POINT 22FK3133, OPEN 22HC903 FROM THE CONSOLE AND/OR THE LARGER OUTSIDE MANUAL VALVE 22HV903B UNTIL THE ALARM(S) CLEAR
Reserved for Faceplates

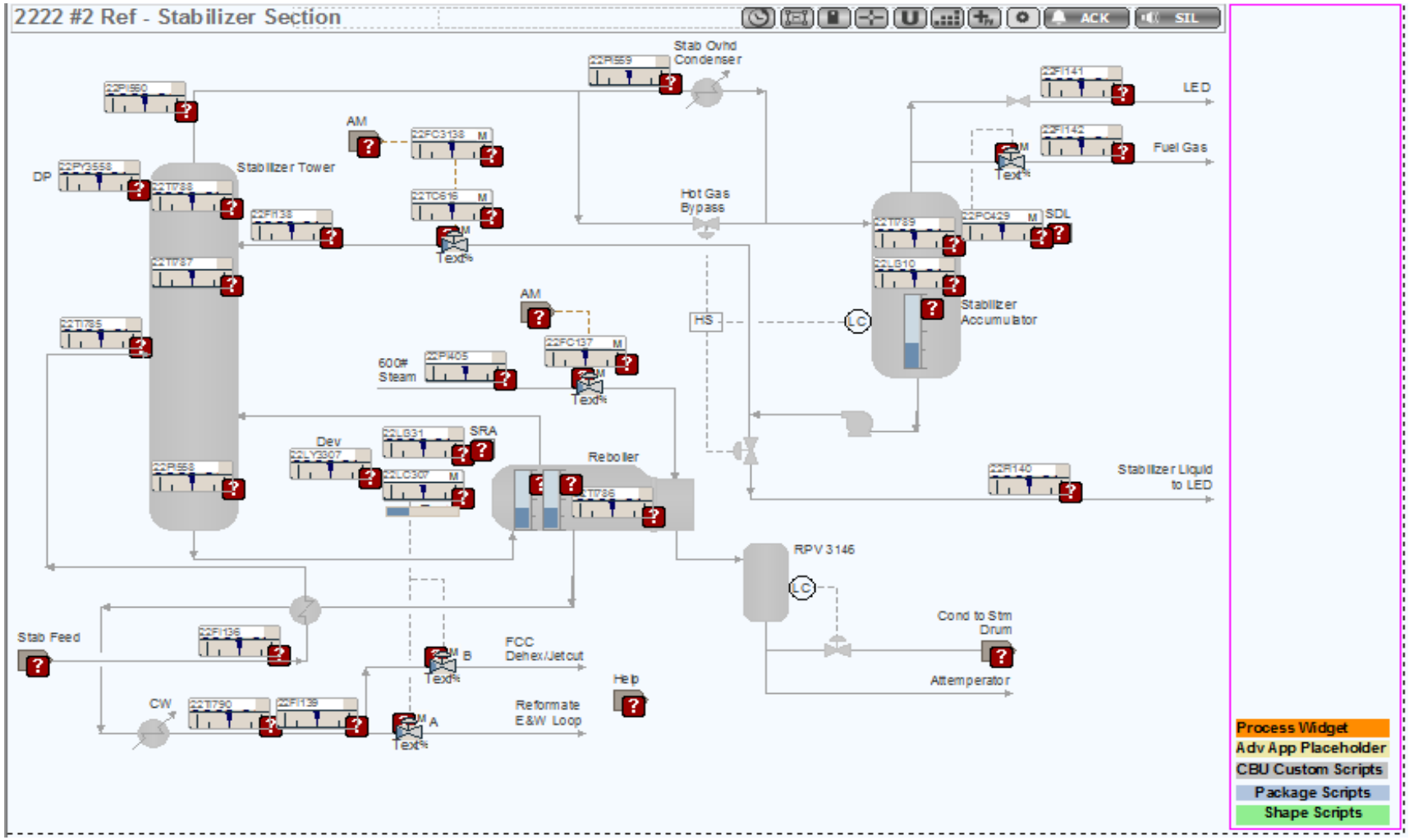
2.34 2221 #2 Ref - Steam Drum (Reformer_2221.htm)

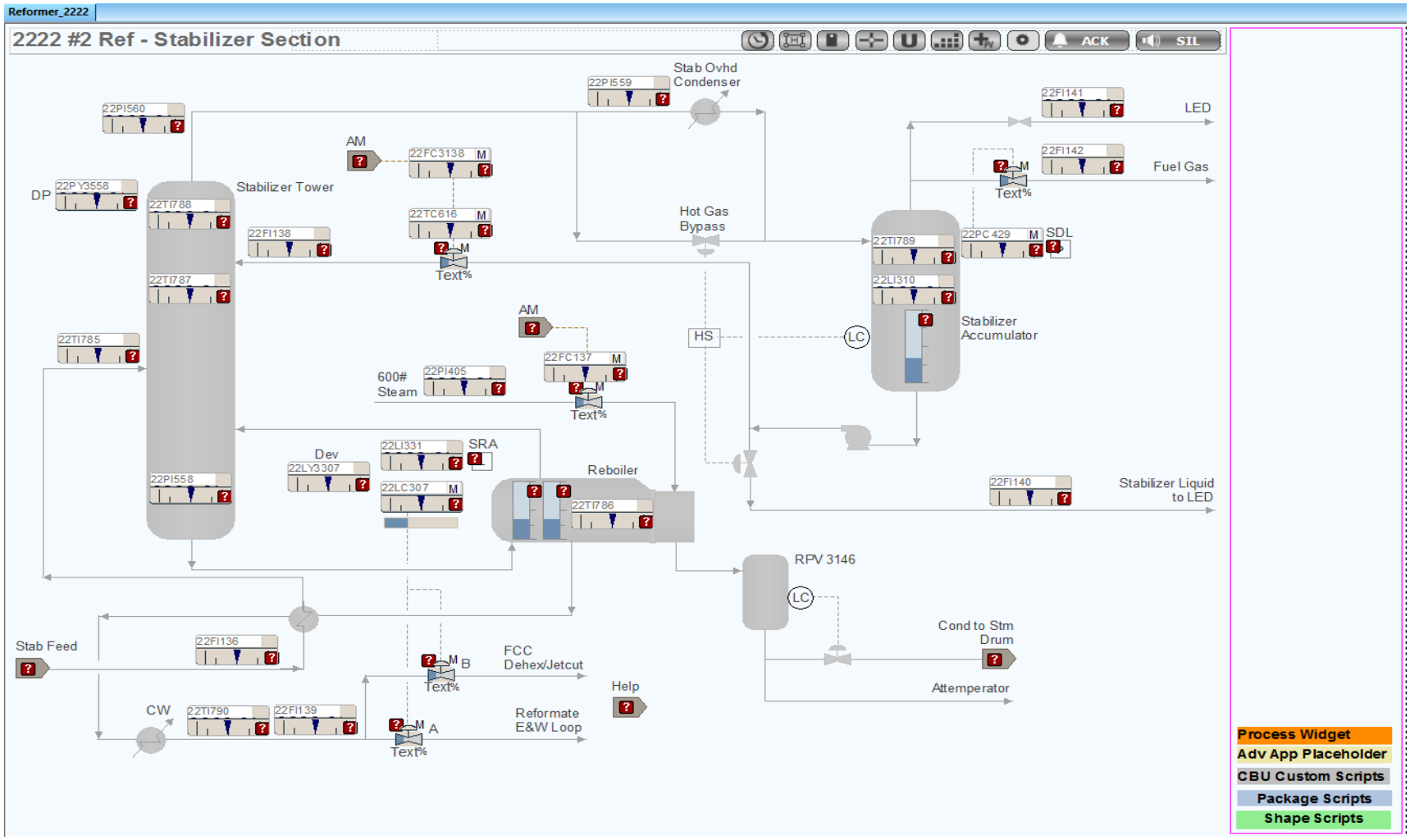


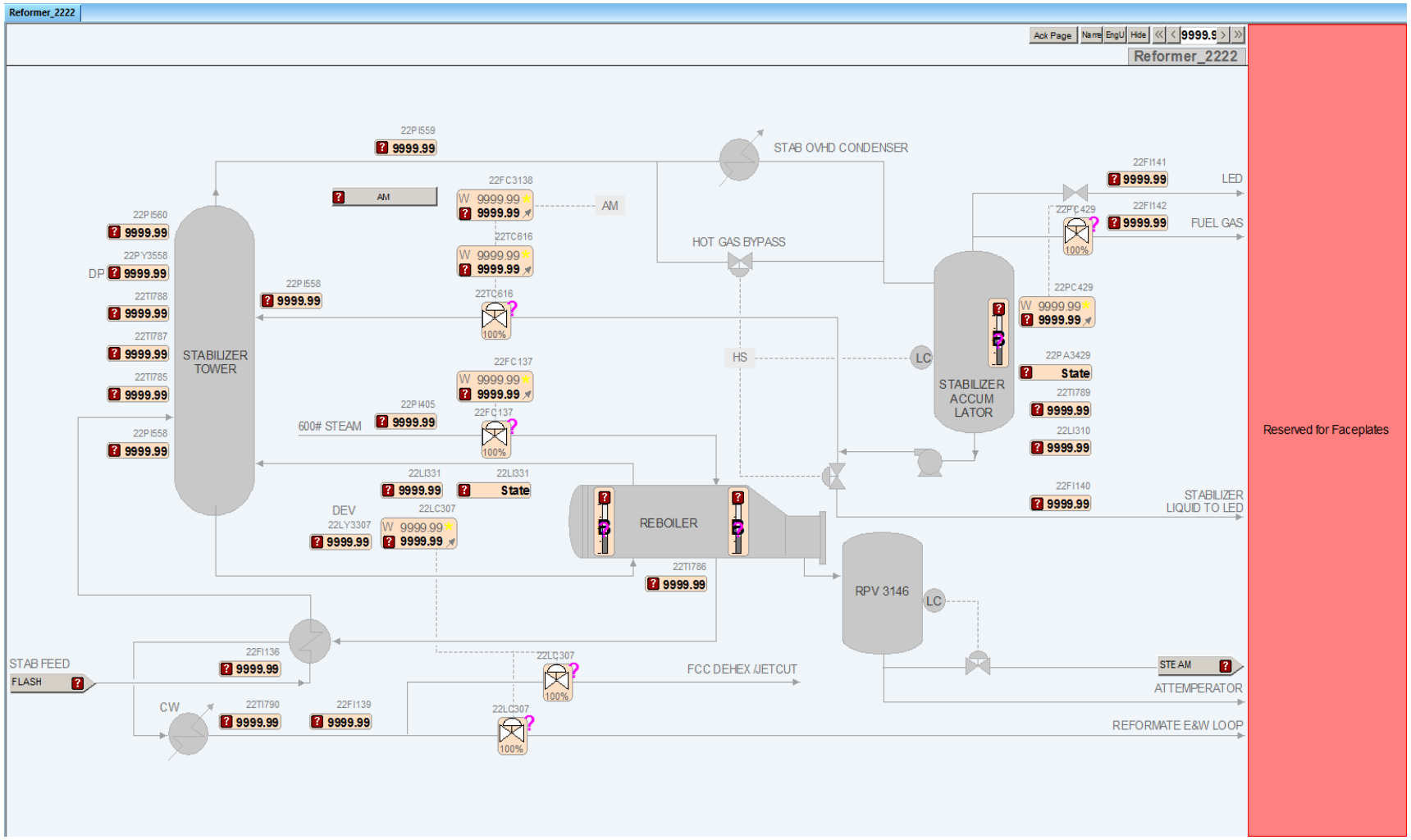

Reformer_2221
2221 #2 Ref - Steam Drum
ACK
SIL
22PI406
150# Steam
22TC619
M
H.P. Cond
Text%
22TI791
#2 Stab
Ref Super Heater
#2 Ref Heater
22PI471
Steam Drum
22LC304
M
22LI305
2A Desulf Heater
2B Desulf Heater
1N
1S
2
3A
3B
Circ
T
M
22FI126
BFW
22PI419
M
Text%
22PA416
State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2221
Ack Page
Name
EngU
Hide
Reformer_2221
22PI406
9999.99
150# STEAM
22TC619
W 9999.99
9999.99
22TC619
100%
H.P. COND
22TI791
9999.99
#2 STAB
REF SUPER HEATER
#2 REF HEATER
22PI471
9999.99
22LC304
W 9999.99
9999.99
STEAM
22LI305
9999.99
2A DESULF HEATER
2B DESULF HEATER
1N
1S
2
3A
3B
#2 HEATER
3A HEATER
3B HEATER
ESULF 2A HEATER
ESULF 2B HEATER
#1 HEATER
CIRC
22FI126
9999.99
BFW
22PI419
9999.99
22LC304
100%
T
M
22PA416
State
Reserved for Faceplates

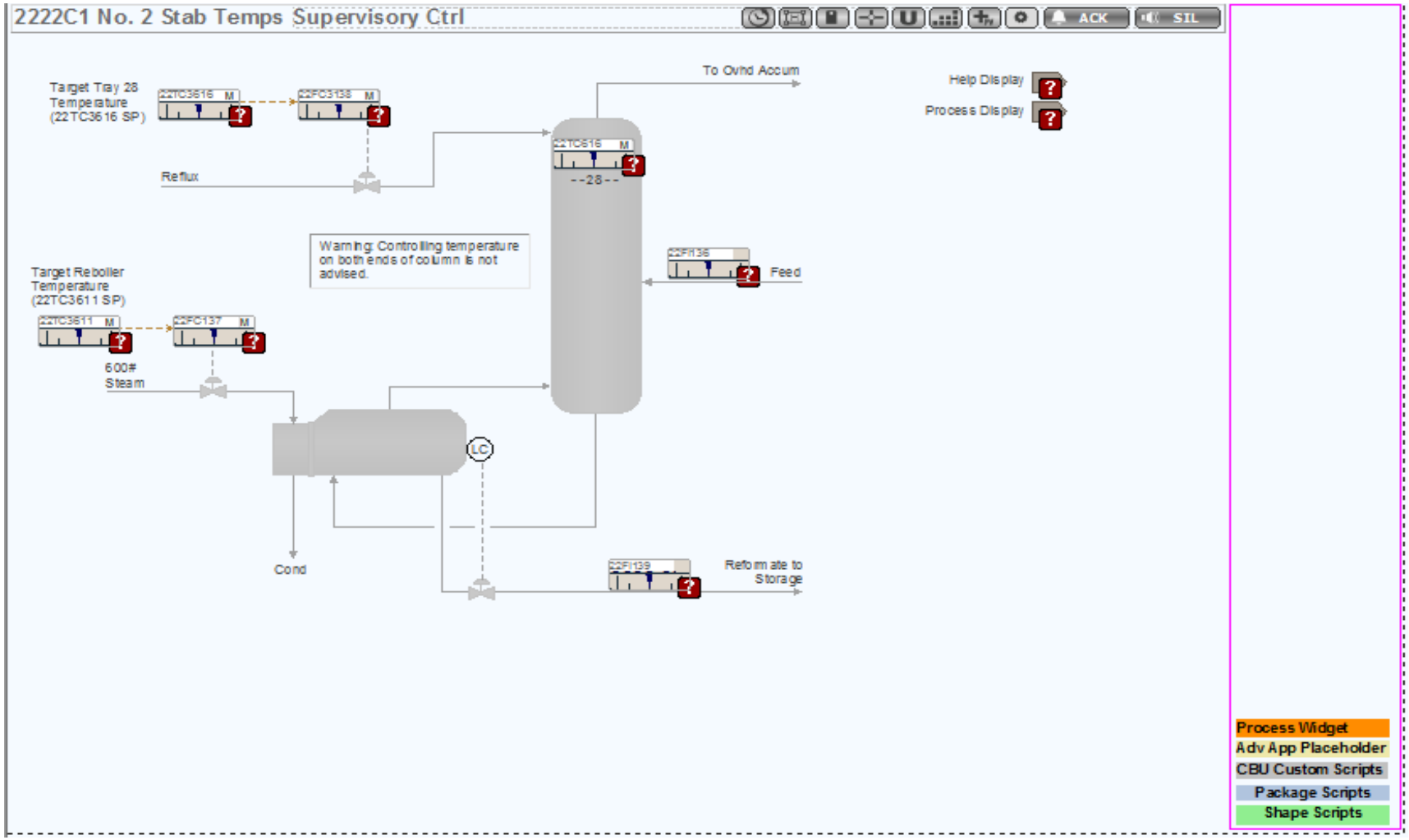
2.35 2222 #2 Ref - Stabilizer Section (Reformer_2222.htm)

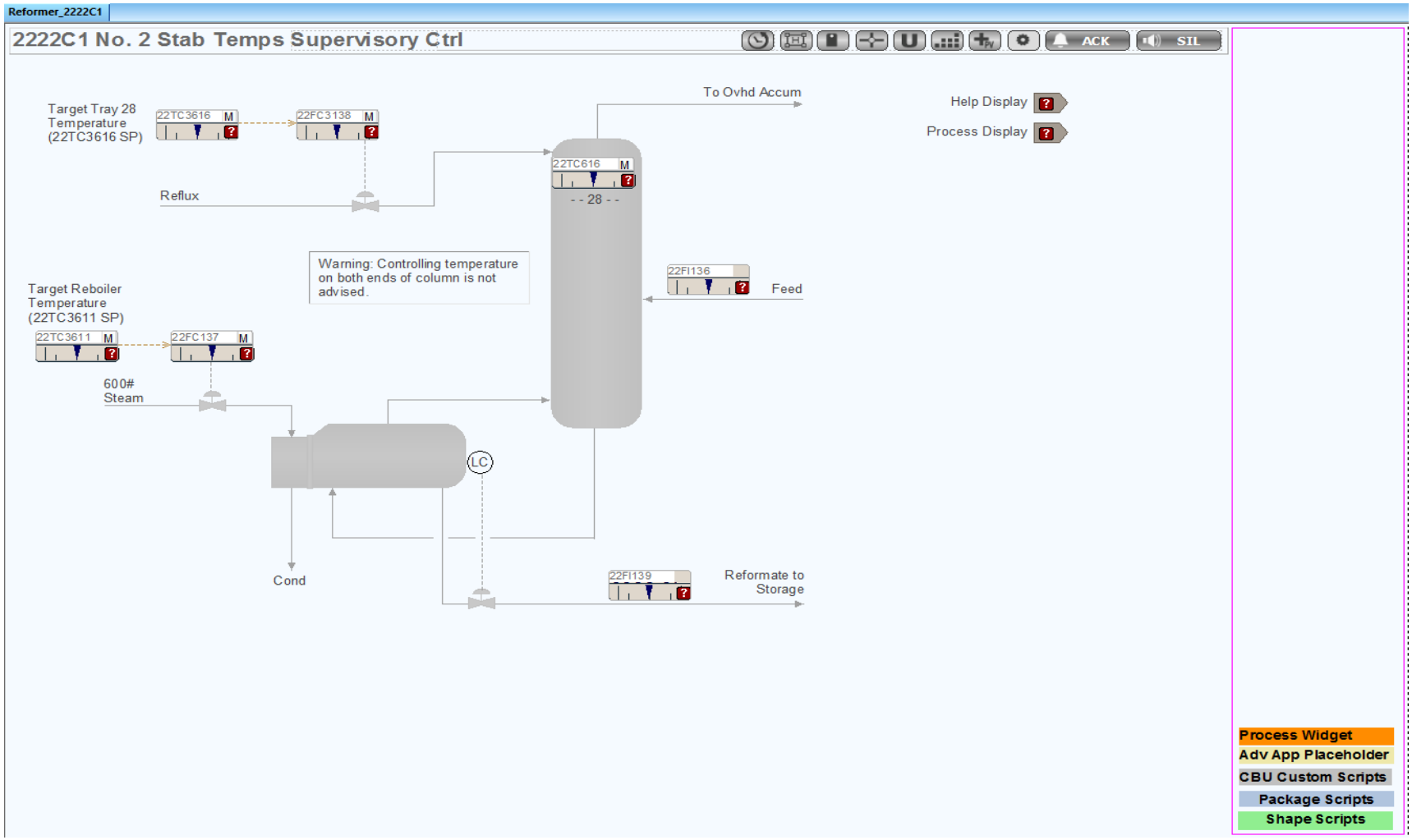


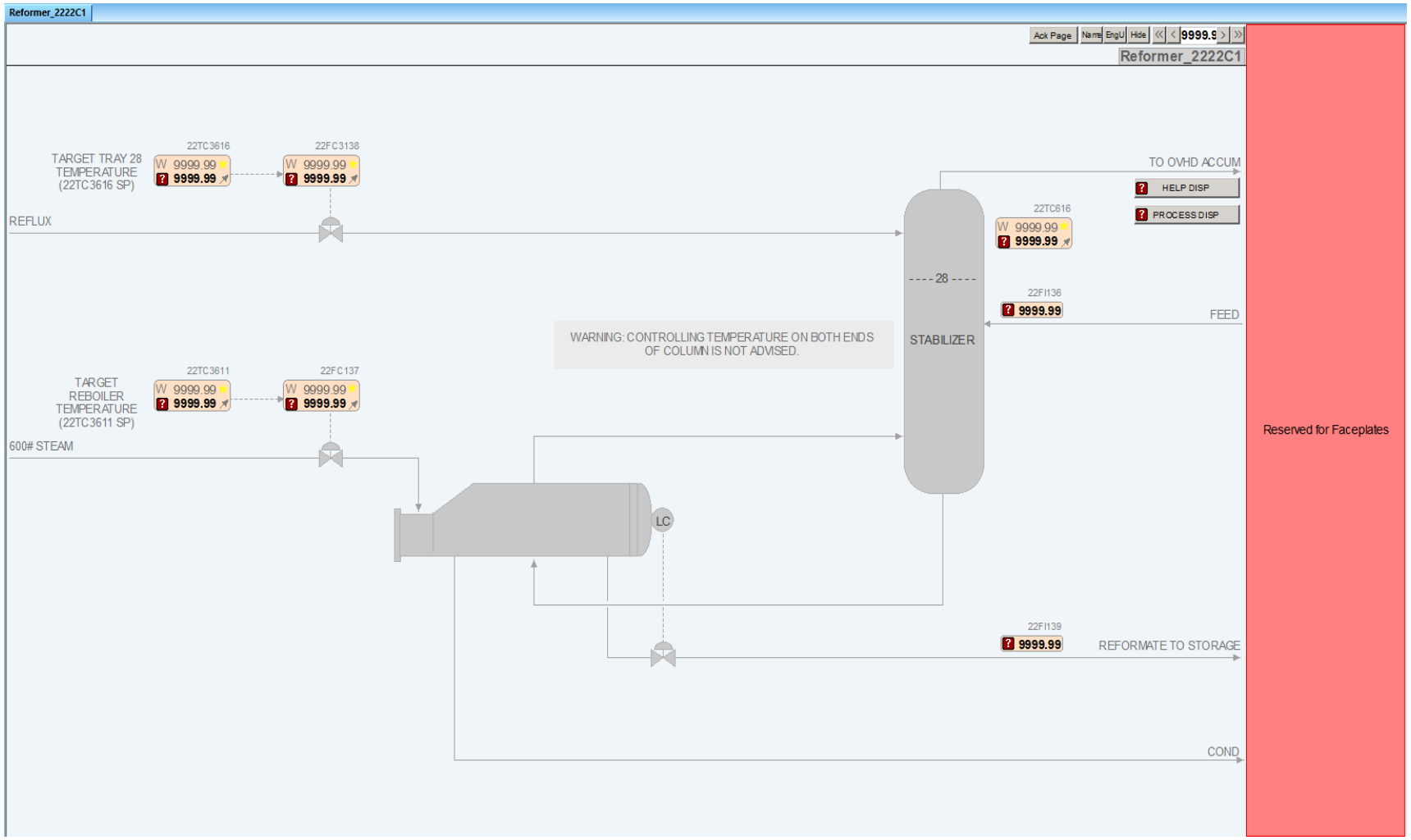

Reformer_2222
2222 #2 Ref - Stabilizer Section
ACK
SIL
Stab Ovhd Condenser
22PI559
22PI560
AM
22FC3138
M
LED
22FI141
22FI142
Fuel Gas
Text%
DP
22PY3558
Stabilizer Tower
22TI788
22TC616
22FI138
Hot Gas Bypass
22TI789
22PC429
SDL
22LI310
22TI787
22TI785
Stabilizer Accumulator
HS
LC
600# Steam
22PI405
22FC137
Dev
22LY3307
22LI331
SRA
22LC307
Reboiler
22TI786
22PI558
22FI140
Stabilizer Liquid to LED
RPV 3146
Cond to Stm Drum
Attemperator
Stab Feed
22FI136
B
FCC Dehex/Jetcut
Help
CW
22TI790
22FI139
A
Reformate E&W Loop
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2222
Ack Page
Name
EngU
Hide
Reformer_2222
22PI559
9999.99
STAB OVHD CONDENSER
22FI141
9999.99
LED
22FC3138
AM
22PI560
9999.99
22PY3558
DP
9999.99
22TI788
9999.99
22TI787
9999.99
22TI785
9999.99
22PI558
9999.99
STABILIZER TOWER
22TC616
100%
HOT GAS BYPASS
22FI142
9999.99
FUEL GAS
22PC429
100%
22FC137
600# STEAM
22PI405
9999.99
HS
LC
STABILIZER ACCUM LATOR
22PA3429
State
22TI789
9999.99
22LI310
9999.99
22LI331
State
DEV
22LY3307
9999.99
22LC307
REBOILER
22FI140
9999.99
STABILIZER LIQUID TO LED
22TI786
9999.99
RPV 3146
LC
STAB FEED
FLASH
22FI136
9999.99
CW
22TI790
9999.99
22FI139
9999.99
FCC DEHEX /JETCUT
STEAM
ATTEMPERATOR
REFORMATE E&W LOOP
Reserved for Faceplates

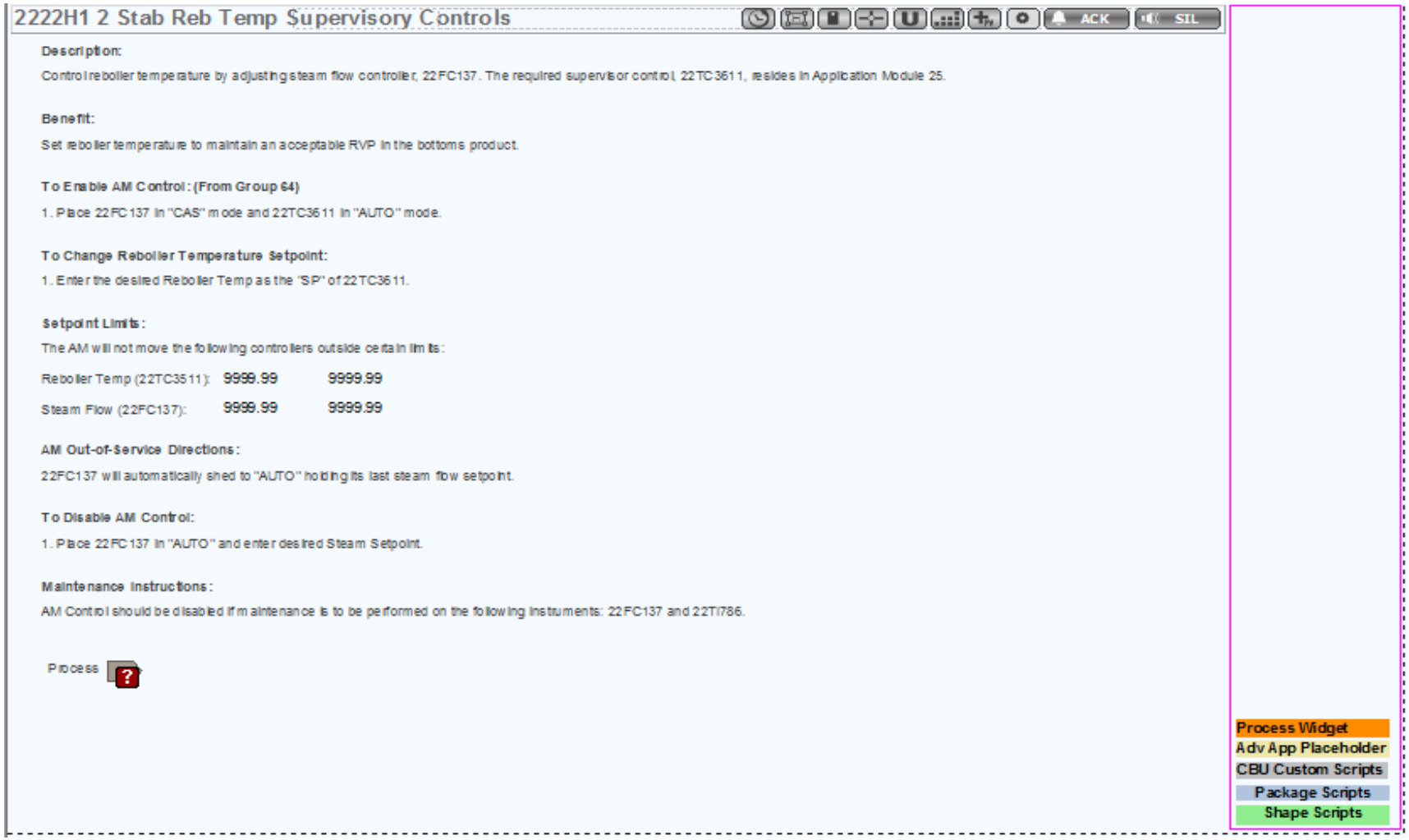
2.36 2222C1 No. 2 Stab Temps Supervisory Ctrl (Reformer_2222C1.htm)

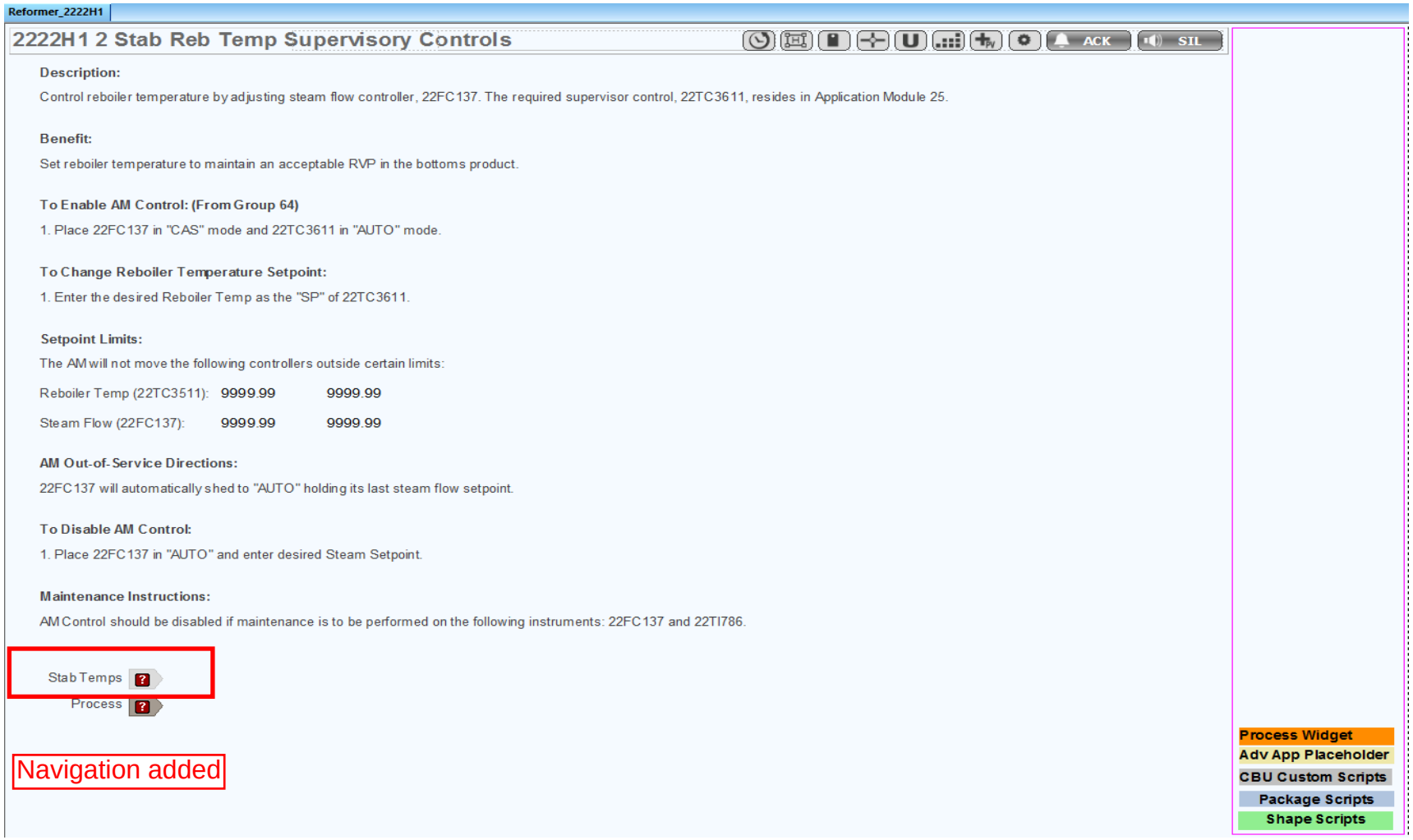


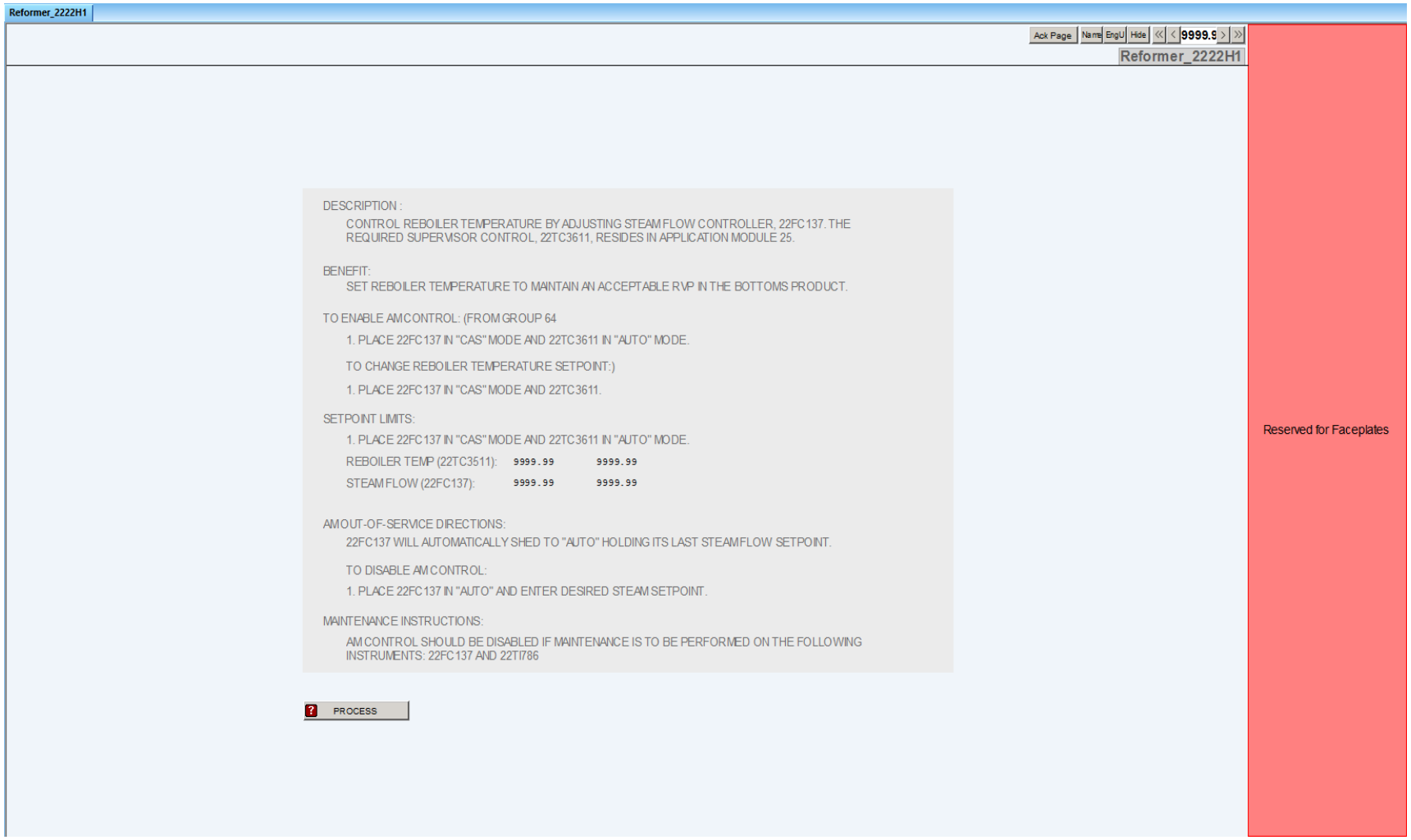

Reformer_2222C1
2222C1 No. 2 Stab Temps Supervisory Ctrl
ACK
SIL
Target Tray 28 Temperature (22TC3616 SP)
22TC3616
M
22FC3138
M
To Ovhd Accum
Help Display
Process Display
22TC616
M
- - 28 - -
Reflux
Warning: Controlling temperature on both ends of column is not advised.
22FI136
Feed
Target Reboiler Temperature (22TC3611 SP)
22TC3611
M
22FC137
M
600# Steam
LC
Cond
22FI139
Reformate to Storage
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2222C1
Ack Page
Name
EngU
Hide
Reformer_2222C1
TARGET TRAY 28 TEMPERATURE (22TC3616 SP)
22TC3616
22FC3138
W 9999.99
9999.99
REFLUX
TO OVHD ACCUM
HELP DISP
PROCESS DISP
22TC616
W 9999.99
9999.99
28
STABILIZER
22FI136
9999.99
FEED
WARNING: CONTROLLING TEMPERATURE ON BOTH ENDS OF COLUMN IS NOT ADVISED.
TARGET REBOILER TEMPERATURE (22TC3611 SP)
22TC3611
22FC137
600# STEAM
LC
22FI139
REFORMATE TO STORAGE
COND
Reserved for Faceplates

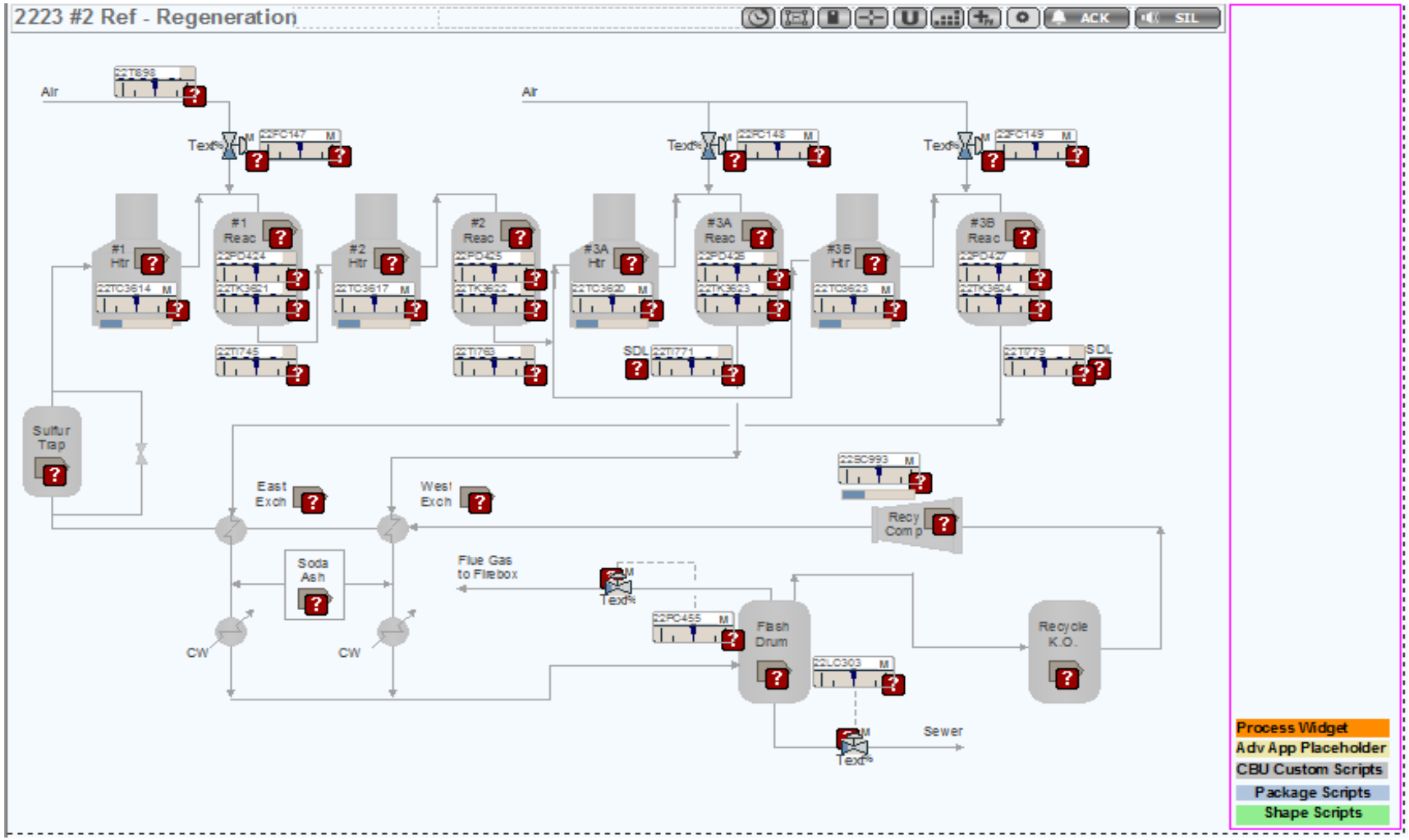
2.37 2222H1 2 Stab Reb Temp Supervisory Controls (Reformer_2222H1.htm)

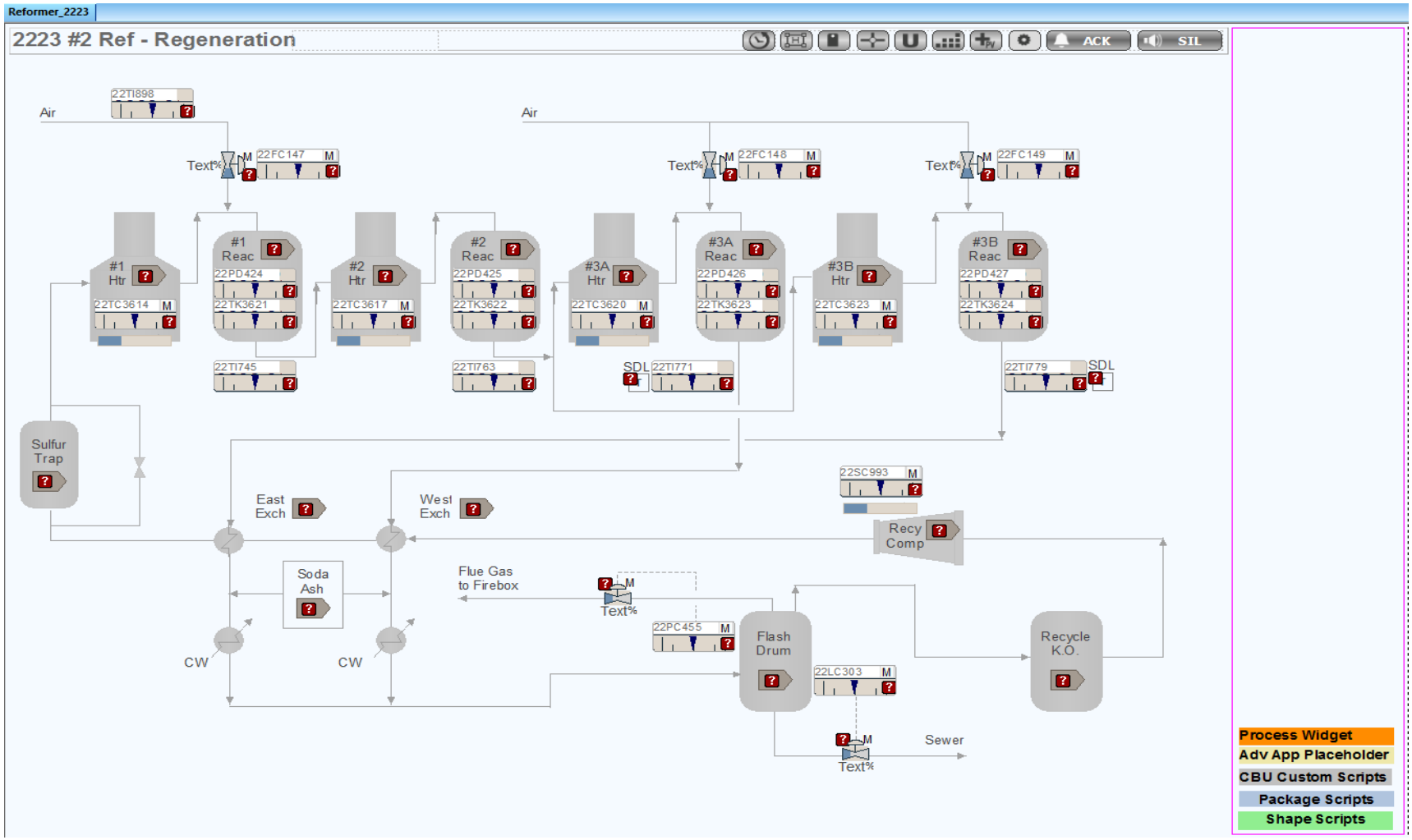


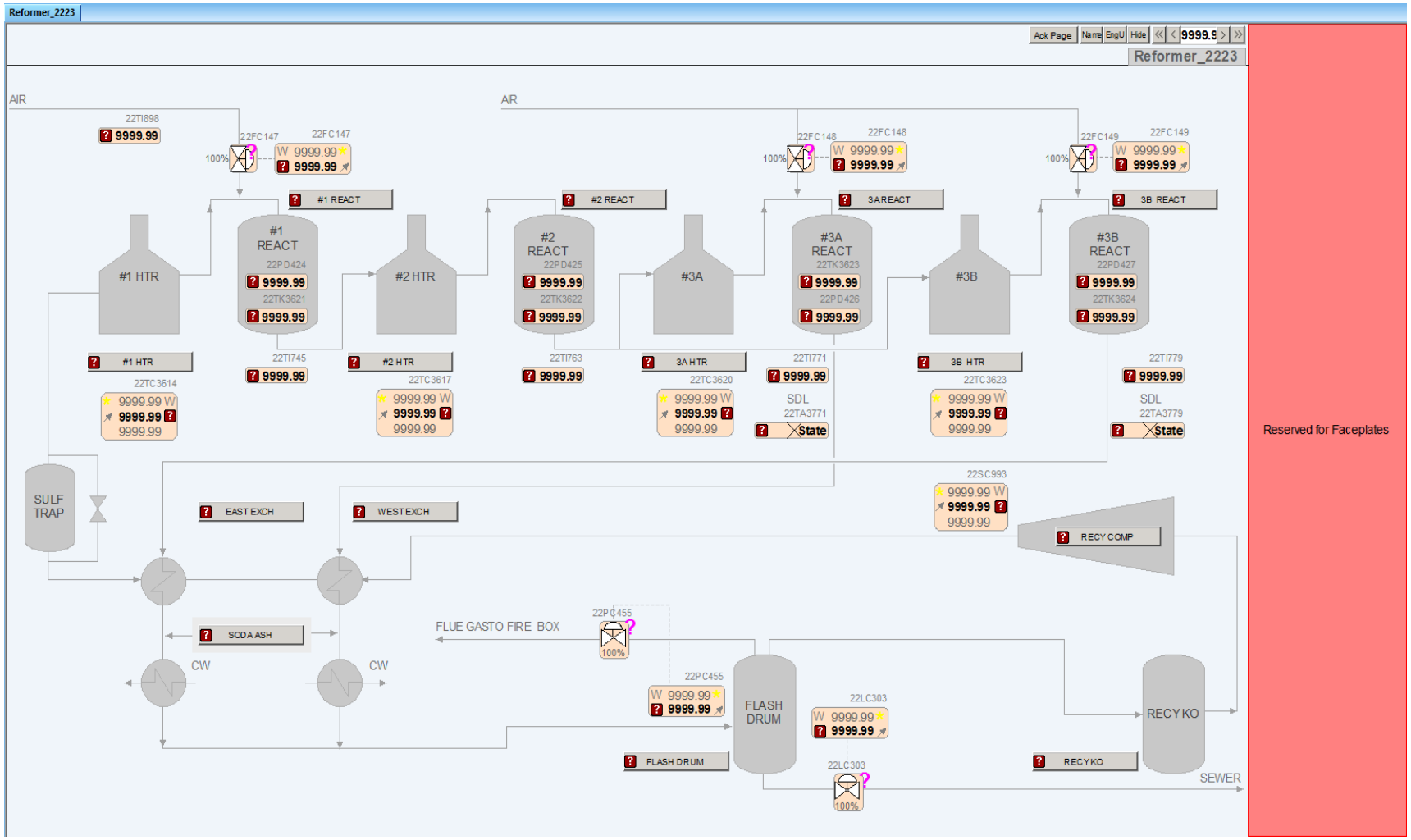

Reformer_2222H1
2222H1 2 Stab Reb Temp Supervisory Controls
ACK
SIL
Description:
Control reboiler temperature by adjusting steam flow controller, 22FC137. The required supervisor control, 22TC3611, resides in Application Module 25.
Benefit:
Set reboiler temperature to maintain an acceptable RVP in the bottoms product.
To Enable AM Control: (From Group 64)
1. Place 22FC137 in "CAS" mode and 22TC3611 in "AUTO" mode.
To Change Reboiler Temperature Setpoint:
1. Enter the desired Reboiler Temp as the "SP" of 22TC3611.
Setpoint Limits:
The AM will not move the following controllers outside certain limits:
Reboiler Temp (22TC3511): 9999.99 9999.99
Steam Flow (22FC137): 9999.99 9999.99
AM Out-of-Service Directions:
22FC137 will automatically shed to "AUTO" holding its last steam flow setpoint.
To Disable AM Control:
1. Place 22FC137 in "AUTO" and enter desired Steam Setpoint.
Maintenance Instructions:
AM Control should be disabled if maintenance is to be performed on the following instruments: 22FC137 and 22TI786.
Stab Temps
Process
Navigation added
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2222H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2222H1
DESCRIPTION :
CONTROL REBOILER TEMPERATURE BY ADJUSTING STEAM FLOW CONTROLLER, 22FC137. THE REQUIRED SUPERVISOR CONTROL, 22TC3611, RESIDES IN APPLICATION MODULE 25.
BENEFIT:
SET REBOILER TEMPERATURE TO MAINTAIN AN ACCEPTABLE RVP IN THE BOTTOMS PRODUCT.
TO ENABLE AM CONTROL: (FROM GROUP 64
1. PLACE 22FC137 IN "CAS" MODE AND 22TC3611 IN "AUTO" MODE.
TO CHANGE REBOILER TEMPERATURE SETPOINT:)
1. PLACE 22FC137 IN "CAS" MODE AND 22TC3611.
SETPOINT LIMITS:
1. PLACE 22FC137 IN "CAS" MODE AND 22TC3611 IN "AUTO" MODE.
REBOILER TEMP (22TC3511): 9999.99 9999.99
STEAM FLOW (22FC137): 9999.99 9999.99
AM OUT-OF-SERVICE DIRECTIONS:
22FC137 WILL AUTOMATICALLY SHED TO "AUTO" HOLDING ITS LAST STEAM FLOW SETPOINT.
TO DISABLE AM CONTROL:
1. PLACE 22FC137 IN "AUTO" AND ENTER DESIRED STEAM SETPOINT.
MAINTENANCE INSTRUCTIONS:
AM CONTROL SHOULD BE DISABLED IF MAINTENANCE IS TO BE PERFORMED ON THE FOLLOWING INSTRUMENTS: 22FC137 AND 22TI786
PROCESS
Reserved for Faceplates

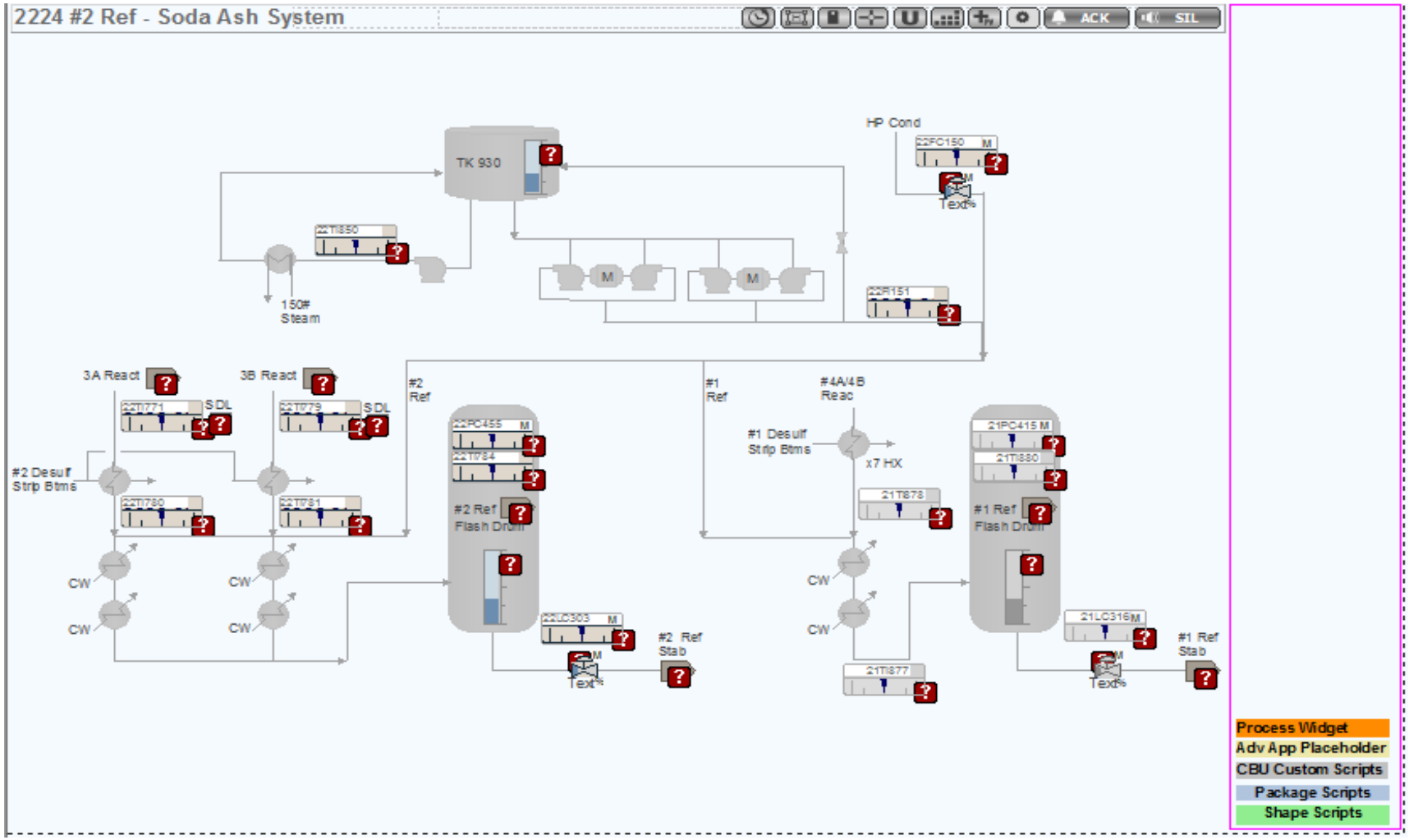
2.38 2223 #2 Ref - Regeneration (Reformer_2223.htm)

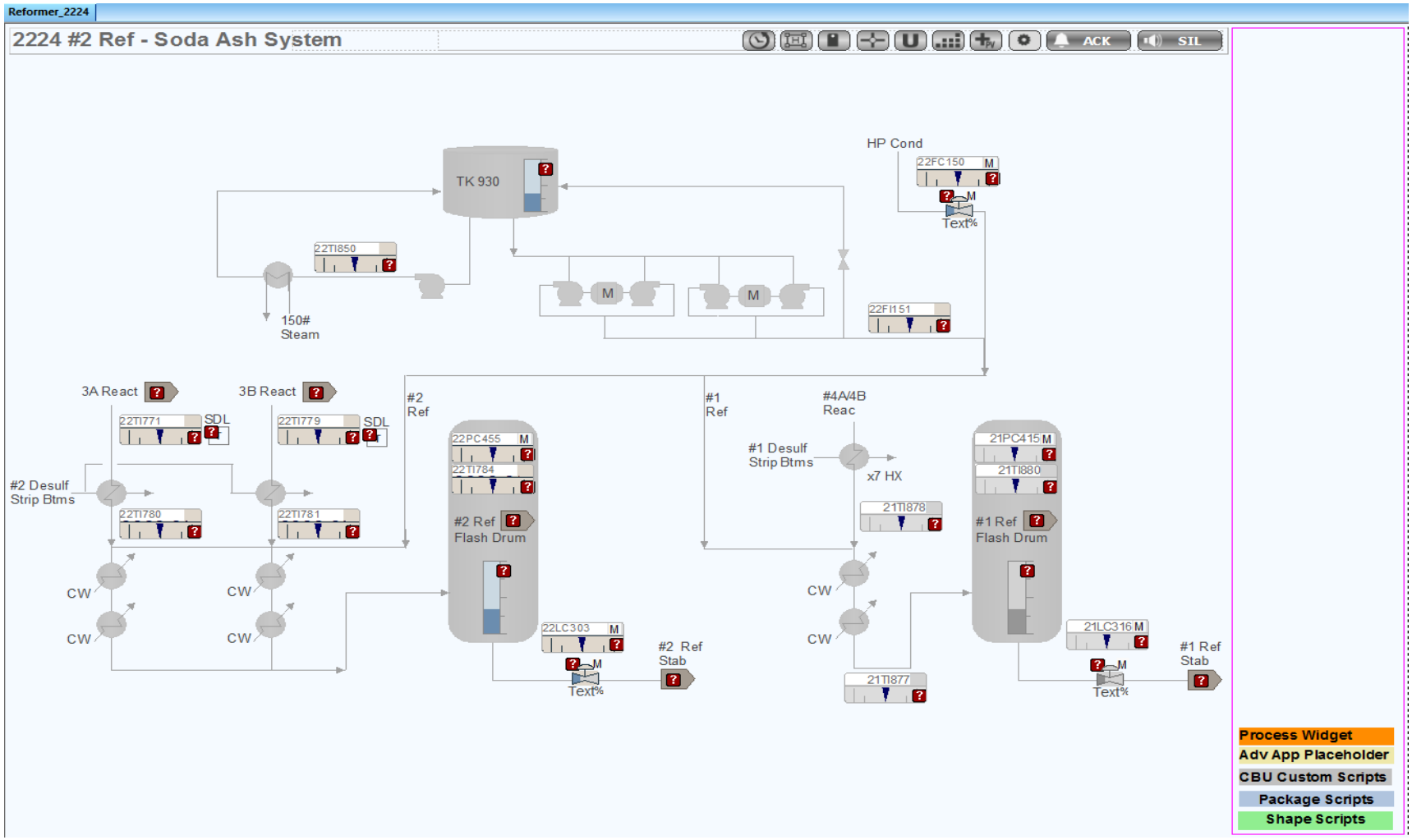


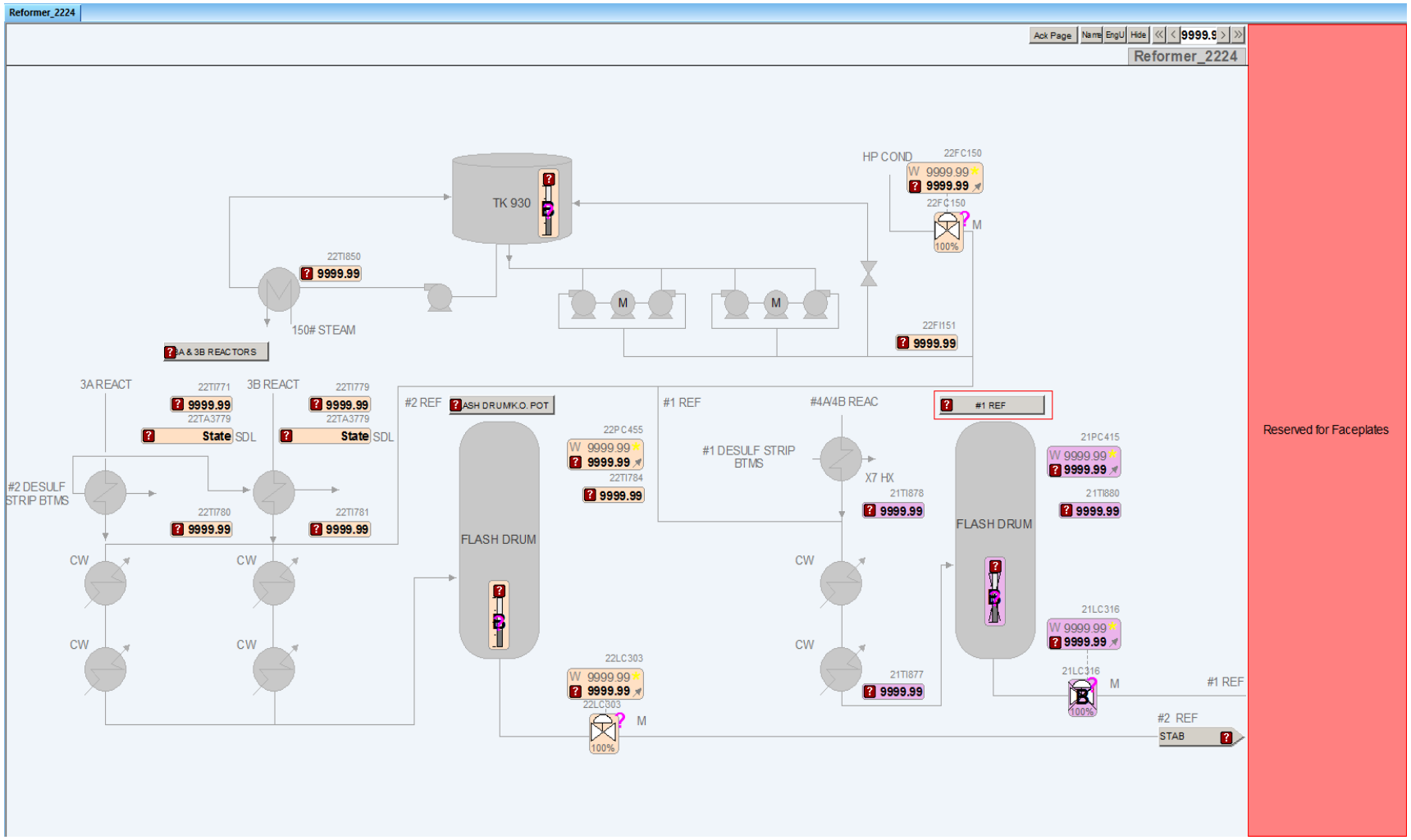

Reformer_2223
2223 #2 Ref - Regeneration
ACK
SIL
Air
22TI898
Text%
22FC147
M
Air
Text%
22FC148
M
Text%
22FC149
M
#1 Htr
22TC3614
M
#1 Reac
22PD424
22TK3621
#2 Htr
22TC3617
M
#2 Reac
22PD425
22TK3622
#3A Htr
22TC3620
M
#3A Reac
22PD426
22TK3623
#3B Htr
22TC3623
M
#3B Reac
22PD427
22TK3624
22TI745
22TI763
SDL
22TI771
22TI779
SDL
Sulfur Trap
East Exch
West Exch
22SC993
M
Recy Comp
Soda Ash
Flue Gas to Firebox
Text%
22PC455
M
Flash Drum
22LC303
M
Recycle K.O.
CW
CW
Text%
Sewer
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2223
Ack Page
Name
EngU
Hide
Reformer_2223
AIR
22TI898
9999.99
22FC147
100%
W 9999.99
9999.99
#1 REACT
#1 HTR
#1 REACT
22PD424
22TK3621
#2 HTR
#2 REACT
22PD425
22TK3622
#3A
#3A REACT
22TK3623
22PD426
#3B
#3B REACT
22PD427
22TK3624
22FC148
22FC149
3A REACT
3B REACT
22TI745
22TI763
22TI771
22TI779
22TC3614
22TC3617
22TC3620
22TC3623
SDL
22TA3771
22TA3779
State
SULF TRAP
EAST EXCH
WEST EXCH
22SC993
RECY COMP
SODA ASH
CW
FLUE GAS TO FIRE BOX
22PC455
FLASH DRUM
22LC303
RECY KO
SEWER
Reserved for Faceplates

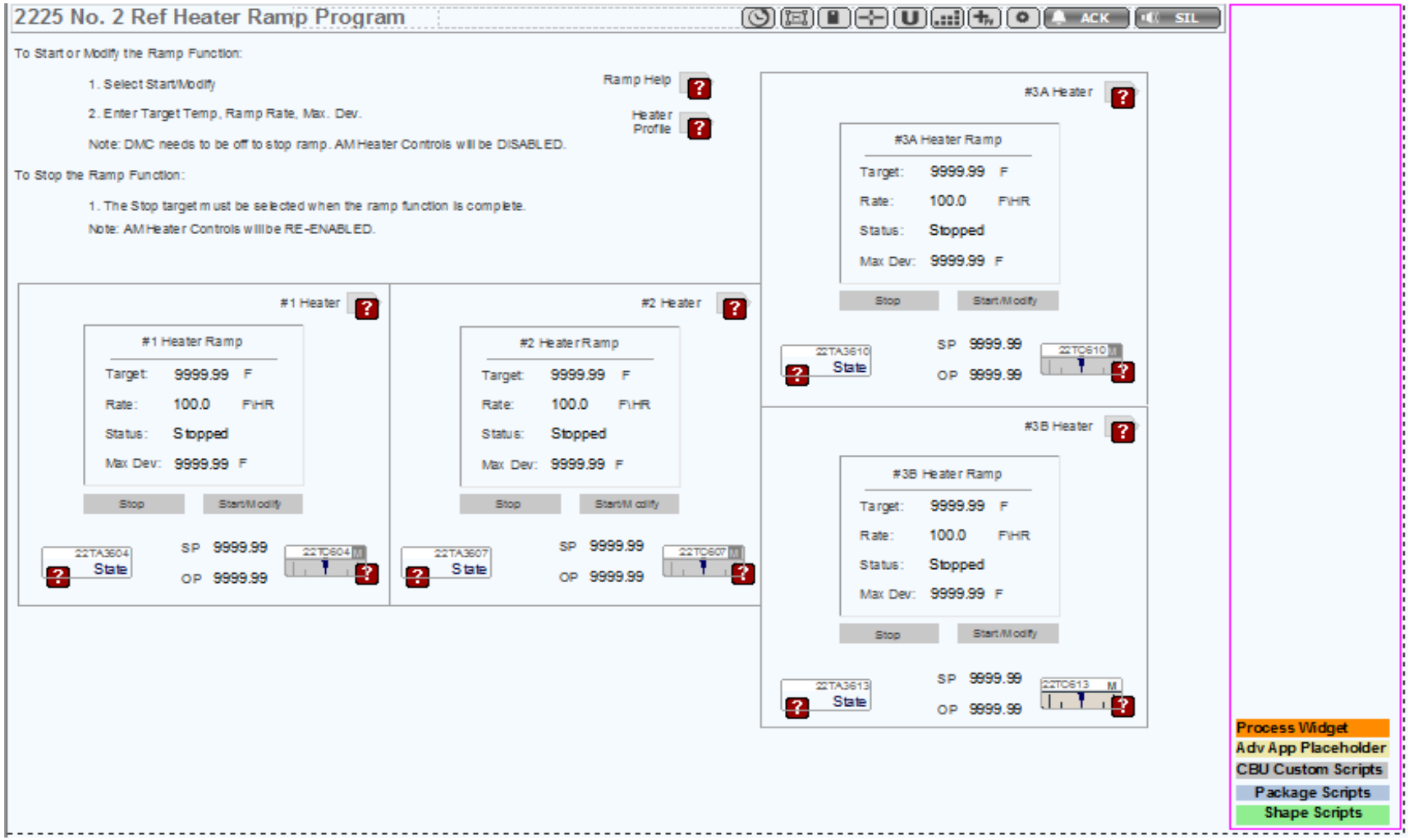
2.39 2224 #2 Ref - Soda Ash System (Reformer_2224.htm)

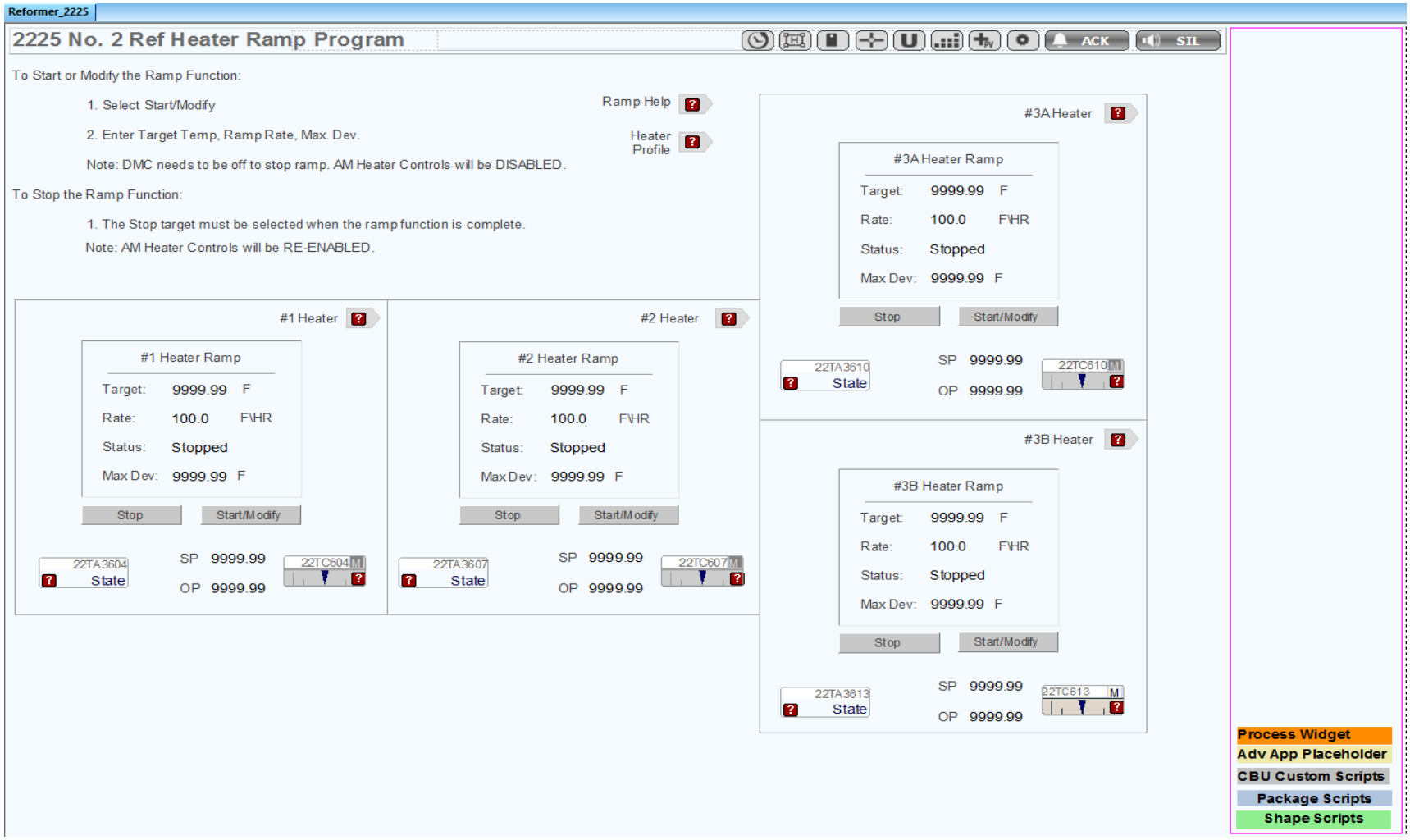


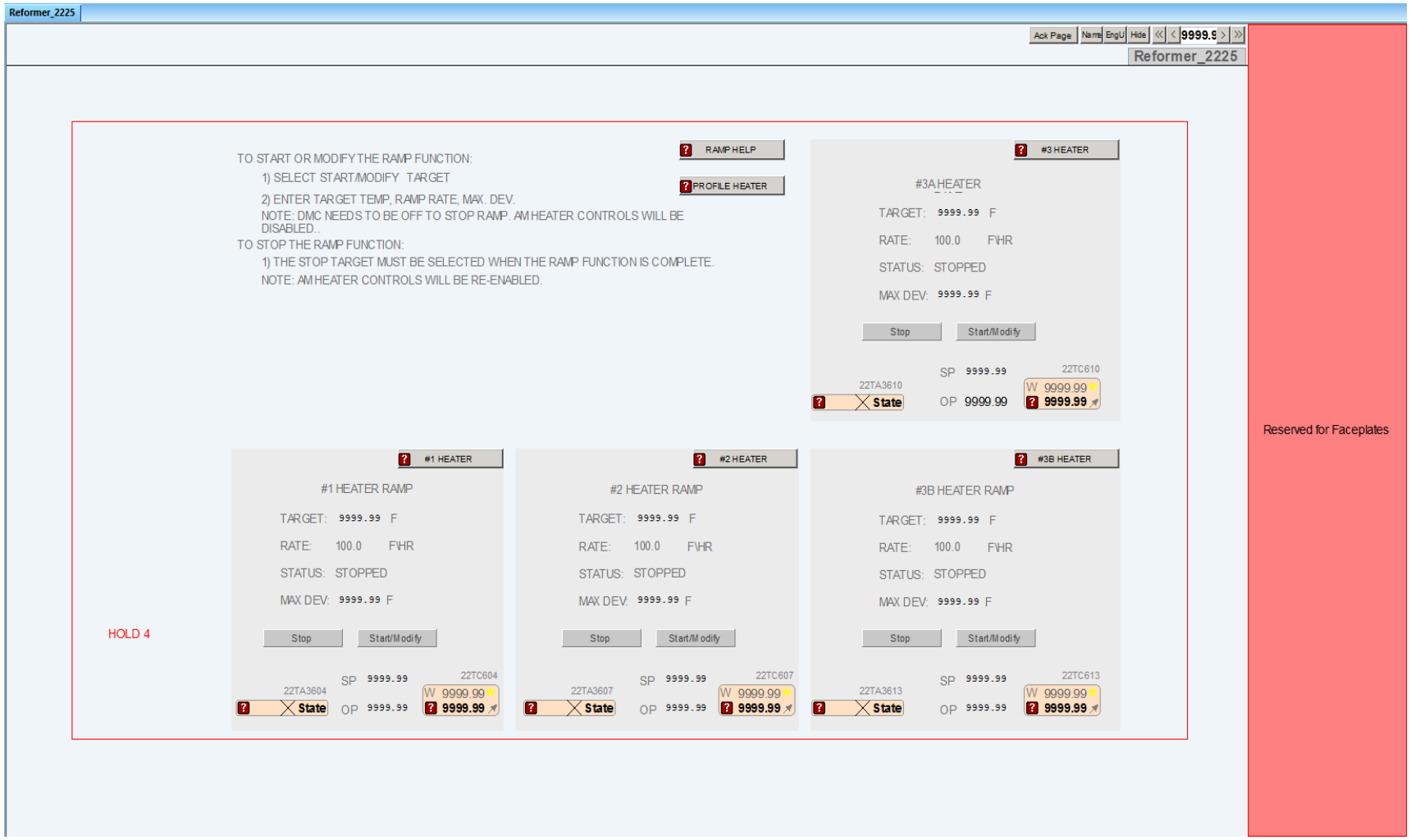

Reformer_2224
2224 #2 Ref - Soda Ash System
ACK
SIL
TK 930
HP Cond
22FC150
M
Text%
22TI850
150#
Steam
M
M
22FI151
3A React
3B React
22TI771
SDL
22TI779
SDL
#2
Ref
#1
Ref
#4A/4B
Reac
#2 Desulf
Strip Btms
22TI780
22TI781
22PC455
M
22TI784
#2 Ref
Flash Drum
#1 Desulf
Strip Btms
x7 HX
21TI878
21PC415
M
21TI880
#1 Ref
Flash Drum
CW
CW
CW
CW
CW
CW
22LC303
M
Text%
#2 Ref
Stab
21TI877
21LC316
M
Text%
#1 Ref
Stab
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2224
Ack Page
Name
EngU
Hide
Reformer_2224
TK 930
HP COND
22FC150
W 9999.99
9999.99
22FC150
100%
M
22TI850
9999.99
150# STEAM
22FI151
9999.99
3A & 3B REACTORS
3A REACT
3B REACT
22TI771
9999.99
22TI779
9999.99
22TA3779
State
SDL
22TA3779
State
SDL
#2 DESULF STRIP BTMS
22TI780
9999.99
22TI781
9999.99
CW
CW
CW
CW
#2 REF
FLASH DRUM K.O. POT
FLASH DRUM
22PC455
W 9999.99
9999.99
22TI784
9999.99
22LC303
W 9999.99
9999.99
22LC303
100%
M
#1 REF
#1 DESULF STRIP BTMS
#4A/4B REAC
X7 HX
21TI878
9999.99
CW
CW
21TI877
9999.99
#1 REF
FLASH DRUM
21PC415
W 9999.99
9999.99
21TI880
9999.99
21LC316
W 9999.99
9999.99
21LC316
100%
M
#1 REF
#2 REF
STAB
Reserved for Faceplates

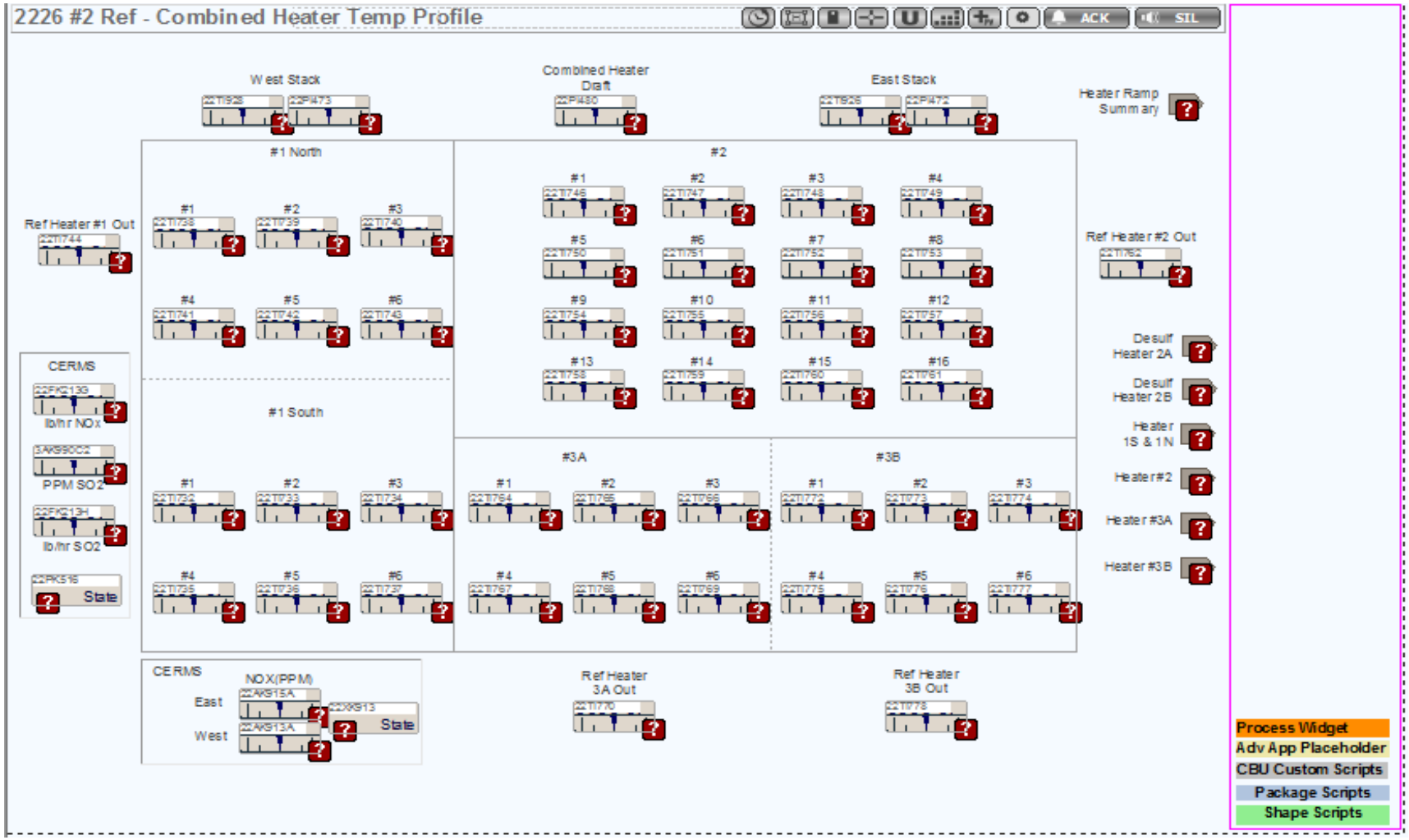
2.40 2225 No. 2 Ref Heater Ramp Program (Reformer_2225.htm)

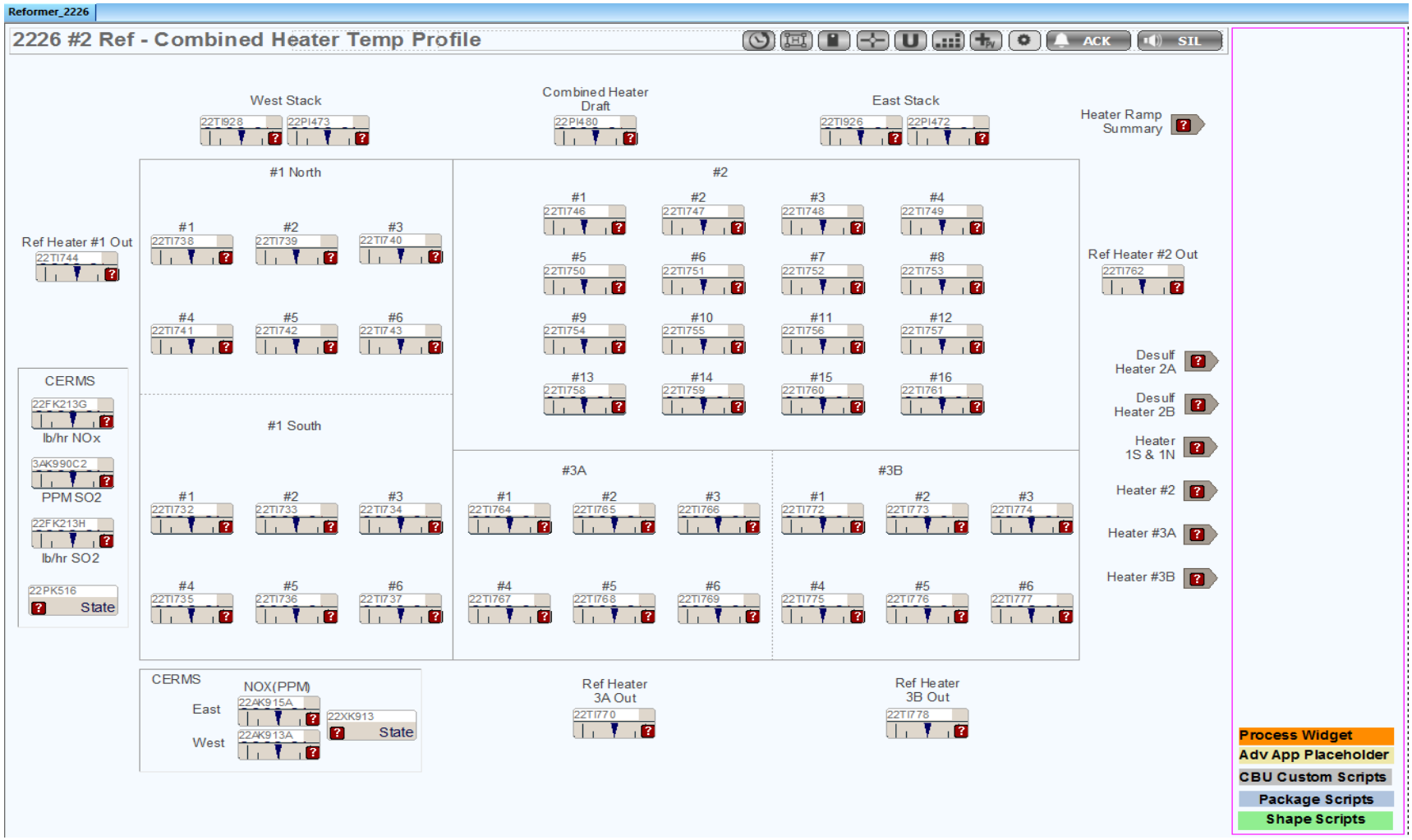


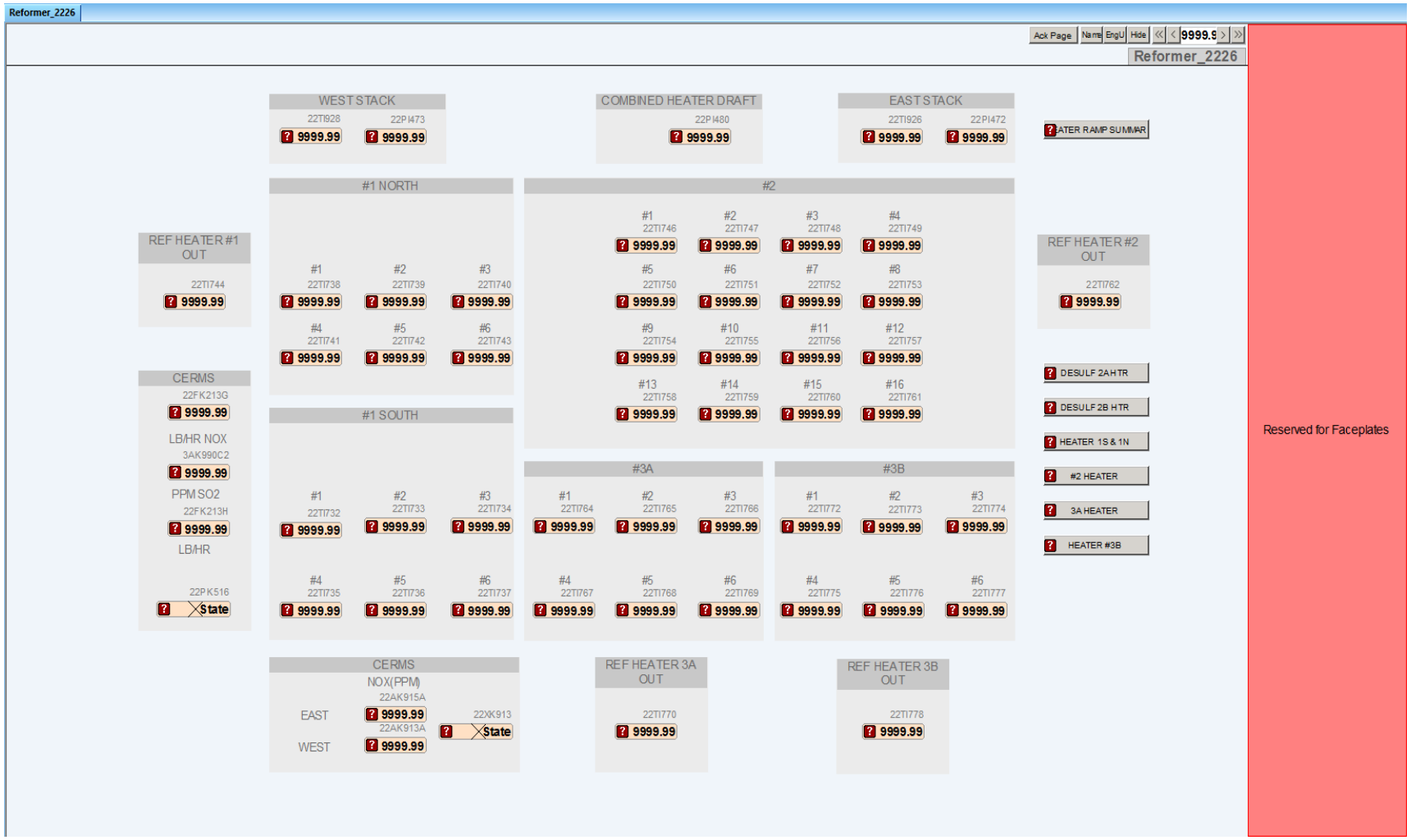

Reformer_2225
2225 No. 2 Ref Heater Ramp Program
ACK
SIL
To Start or Modify the Ramp Function:
1. Select Start/Modify
2. Enter Target Temp, Ramp Rate, Max. Dev.
Note: DMC needs to be off to stop ramp. AM Heater Controls will be DISABLED.
Ramp Help
Heater Profile
To Stop the Ramp Function:
1. The Stop target must be selected when the ramp function is complete.
Note: AM Heater Controls will be RE-ENABLED.
#1 Heater
#1 Heater Ramp
Target: 9999.99 F
Rate: 100.0 F\HR
Status: Stopped
Max Dev: 9999.99 F
Stop
Start/Modify
22TA3604
State
SP 9999.99
OP 9999.99
22TC604
#2 Heater
#2 Heater Ramp
Target: 9999.99 F
Rate: 100.0 F\HR
Status: Stopped
Max Dev: 9999.99 F
Stop
Start/Modify
22TA3607
State
SP 9999.99
OP 9999.99
22TC607
#3A Heater
#3A Heater Ramp
Target: 9999.99 F
Rate: 100.0 F\HR
Status: Stopped
Max Dev: 9999.99 F
Stop
Start/Modify
22TA3610
State
SP 9999.99
OP 9999.99
22TC610
#3B Heater
#3B Heater Ramp
Target: 9999.99 F
Rate: 100.0 F\HR
Status: Stopped
Max Dev: 9999.99 F
Stop
Start/Modify
22TA3613
State
SP 9999.99
OP 9999.99
22TC613
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2225
Ack Page
Name
EngU
Hide
9999.9
Reformer_2225
RAMP HELP
PROFILE HEATER
TO START OR MODIFY THE RAMP FUNCTION:
1) SELECT START/MODIFY TARGET
2) ENTER TARGET TEMP, RAMP RATE, MAX. DEV.
NOTE: DMC NEEDS TO BE OFF TO STOP RAMP. AM HEATER CONTROLS WILL BE DISABLED..
TO STOP THE RAMP FUNCTION:
1) THE STOP TARGET MUST BE SELECTED WHEN THE RAMP FUNCTION IS COMPLETE.
NOTE: AM HEATER CONTROLS WILL BE RE-ENABLED.
#3 HEATER
#3A HEATER
TARGET: 9999.99 F
RATE: 100.0 F\HR
STATUS: STOPPED
MAX DEV: 9999.99 F
Stop
Start/Modify
22TA3610
State
SP 9999.99
OP 9999.99
22TC610
W 9999.99
9999.99
#1 HEATER
#1 HEATER RAMP
TARGET: 9999.99 F
RATE: 100.0 F\HR
STATUS: STOPPED
MAX DEV: 9999.99 F
Stop
Start/Modify
22TA3604
State
SP 9999.99
OP 9999.99
22TC604
W 9999.99
9999.99
#2 HEATER
#2 HEATER RAMP
TARGET: 9999.99 F
RATE: 100.0 F\HR
STATUS: STOPPED
MAX DEV: 9999.99 F
Stop
Start/Modify
22TA3607
State
SP 9999.99
OP 9999.99
22TC607
W 9999.99
9999.99
#3B HEATER
#3B HEATER RAMP
TARGET: 9999.99 F
RATE: 100.0 F\HR
STATUS: STOPPED
MAX DEV: 9999.99 F
Stop
Start/Modify
22TA3613
State
SP 9999.99
OP 9999.99
22TC613
W 9999.99
9999.99
HOLD 4
Reserved for Faceplates

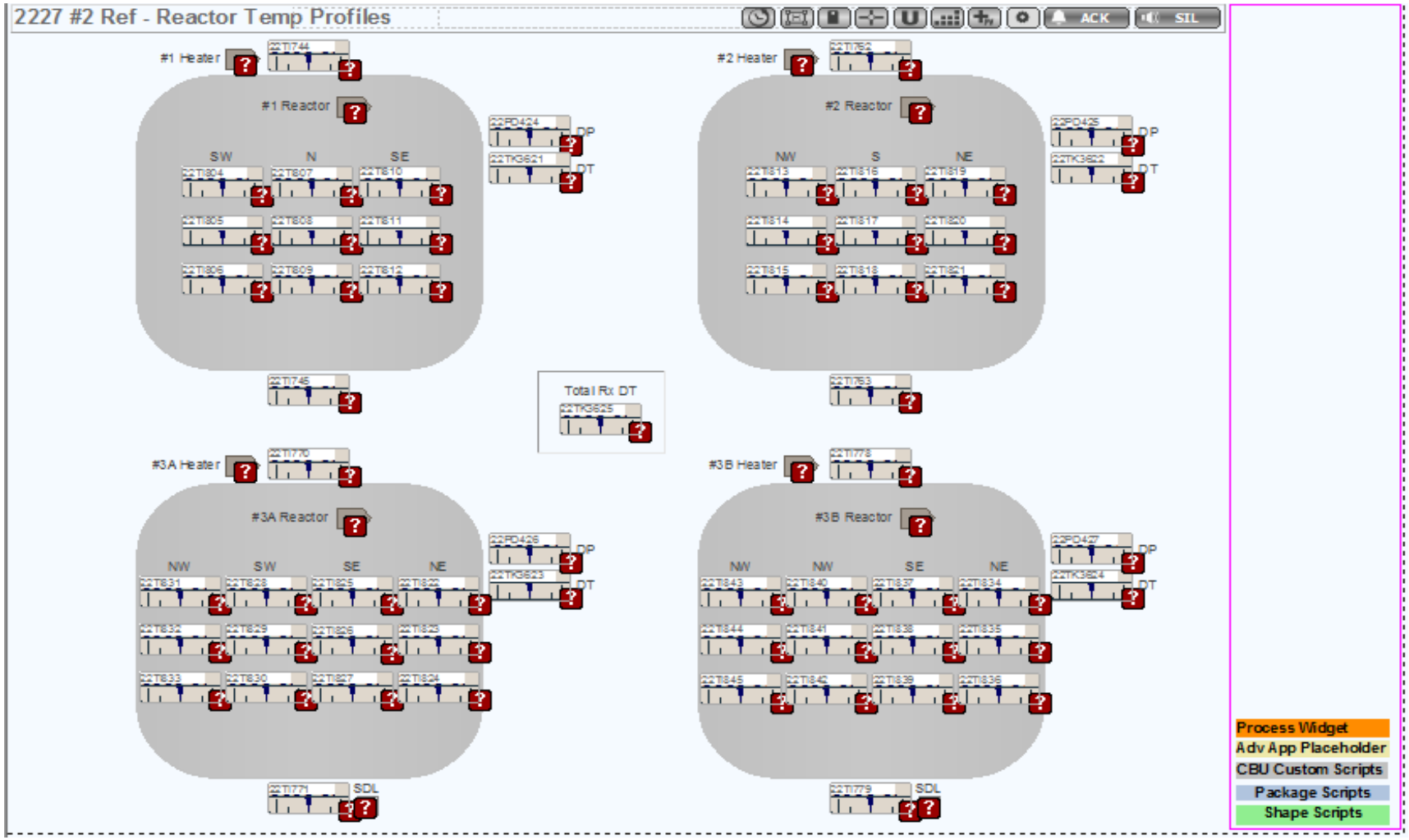
2.41 2226 #2 Ref - Combined Heater Temp Profile (Reformer_2226.htm)

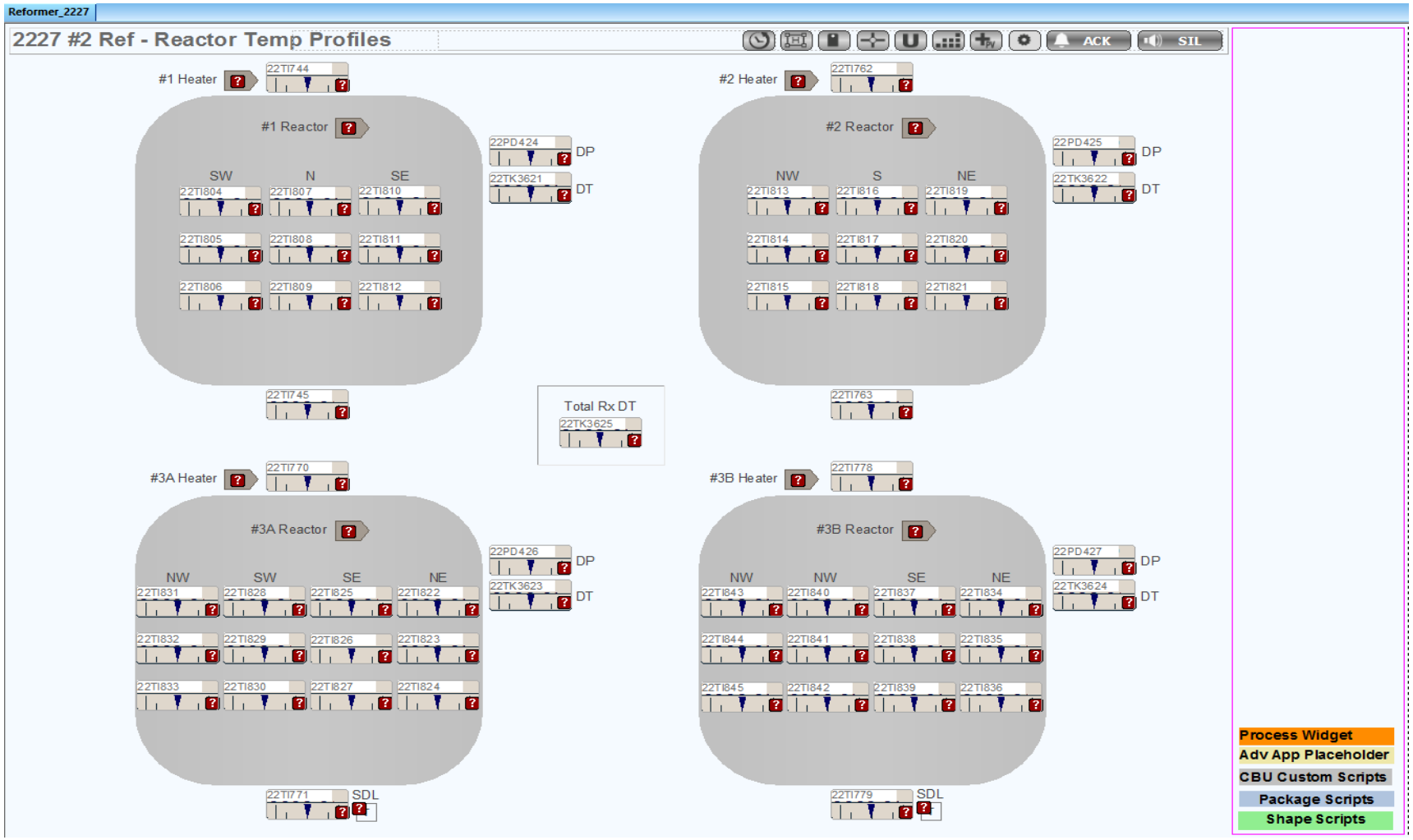


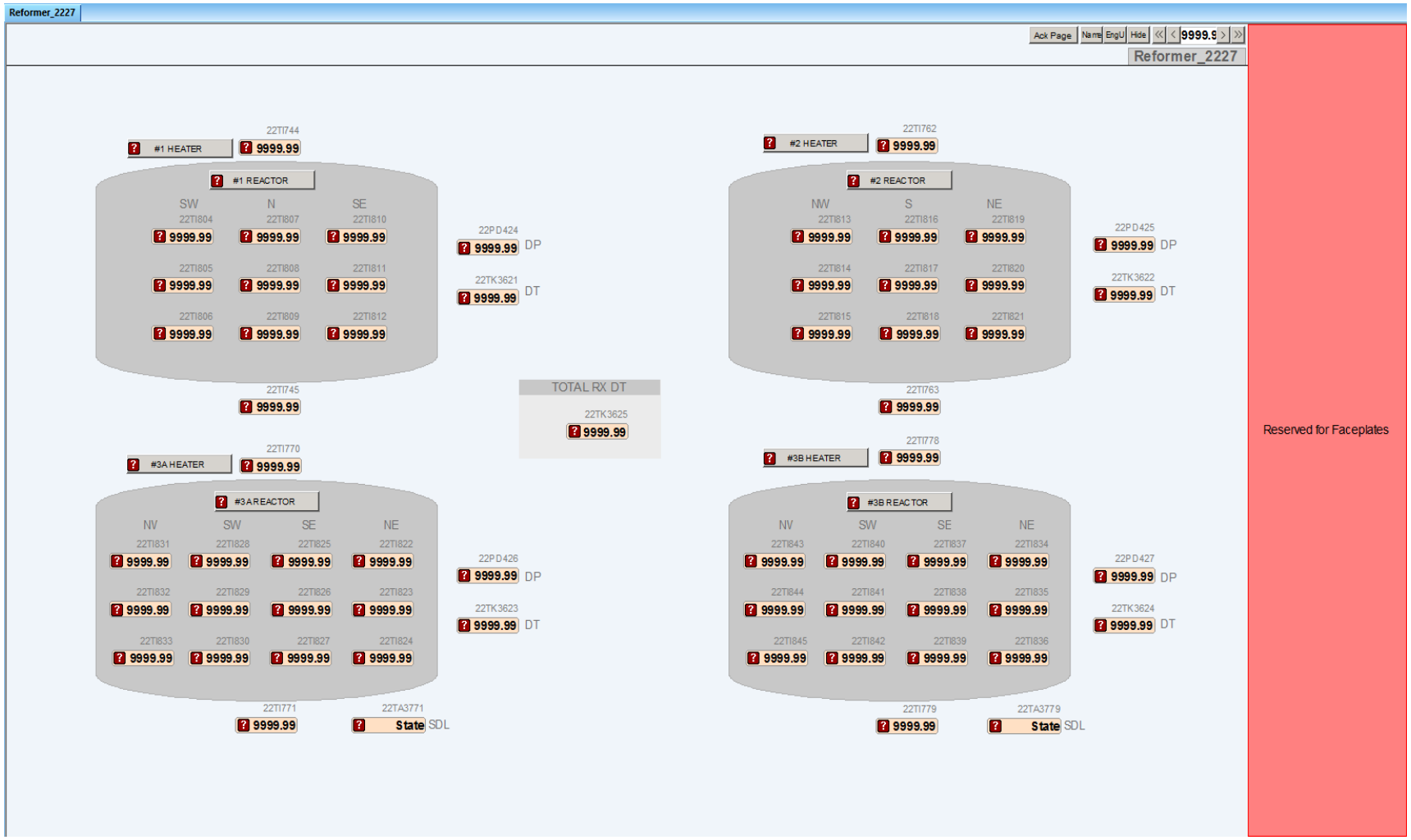

Reformer_2226
2226 #2 Ref - Combined Heater Temp Profile
ACK
SIL
West Stack
22TI928
22PI473
Combined Heater Draft
22PI480
East Stack
22TI926
22PI472
Heater Ramp Summary
#1 North
#1 22TI738
#2 22TI739
#3 22TI740
#4 22TI741
#5 22TI742
#6 22TI743
#1 South
#1 22TI732
#2 22TI733
#3 22TI734
#4 22TI735
#5 22TI736
#6 22TI737
#2
#1 22TI746
#2 22TI747
#3 22TI748
#4 22TI749
#5 22TI750
#6 22TI751
#7 22TI752
#8 22TI753
#9 22TI754
#10 22TI755
#11 22TI756
#12 22TI757
#13 22TI758
#14 22TI759
#15 22TI760
#16 22TI761
#3A
#1 22TI764
#2 22TI765
#3 22TI766
#4 22TI767
#5 22TI768
#6 22TI769
#3B
#1 22TI772
#2 22TI773
#3 22TI774
#4 22TI775
#5 22TI776
#6 22TI777
Ref Heater #1 Out
22TI744
Ref Heater #2 Out
22TI762
Desulf Heater 2A
Desulf Heater 2B
Heater 1S & 1N
Heater #2
Heater #3A
Heater #3B
CERMS
22FK213G
lb/hr NOx
3AK990C2
PPM SO2
22FK213H
lb/hr SO2
22PK516
State
CERMS
NOX(PPM)
East 22AK915A
West 22AK913A
22XK913
State
Ref Heater 3A Out
22TI770
Ref Heater 3B Out
22TI778
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2226
Ack Page
Name
EngU
Hide
9999.9
Reformer_2226
WEST STACK
22TI928
9999.99
22PI473
9999.99
COMBINED HEATER DRAFT
22PI480
9999.99
EAST STACK
22TI926
9999.99
22PI472
9999.99
ATER RAMP SUMMAR
#1 NORTH
#1
22TI738
9999.99
#2
22TI739
9999.99
#3
22TI740
9999.99
#4
22TI741
9999.99
#5
22TI742
9999.99
#6
22TI743
9999.99
#2
#1
22TI746
9999.99
#2
22TI747
9999.99
#3
22TI748
9999.99
#4
22TI749
9999.99
#5
22TI750
9999.99
#6
22TI751
9999.99
#7
22TI752
9999.99
#8
22TI753
9999.99
#9
22TI754
9999.99
#10
22TI755
9999.99
#11
22TI756
9999.99
#12
22TI757
9999.99
#13
22TI758
9999.99
#14
22TI759
9999.99
#15
22TI760
9999.99
#16
22TI761
9999.99
REF HEATER #1 OUT
22TI744
9999.99
REF HEATER #2 OUT
22TI762
9999.99
CERMS
22FK213G
9999.99
LB/HR NOX
3AK990C2
9999.99
PPM SO2
22FK213H
9999.99
LB/HR
22PK516
State
#1 SOUTH
#1
22TI732
9999.99
#2
22TI733
9999.99
#3
22TI734
9999.99
#4
22TI735
9999.99
#5
22TI736
9999.99
#6
22TI737
9999.99
#3A
#1
22TI764
9999.99
#2
22TI765
9999.99
#3
22TI766
9999.99
#4
22TI767
9999.99
#5
22TI768
9999.99
#6
22TI769
9999.99
#3B
#1
22TI772
9999.99
#2
22TI773
9999.99
#3
22TI774
9999.99
#4
22TI775
9999.99
#5
22TI776
9999.99
#6
22TI777
9999.99
DESULF 2A HTR
DESULF 2B HTR
HEATER 1S & 1N
#2 HEATER
3A HEATER
HEATER #3B
Reserved for Faceplates
CERMS
NOX(PPM)
EAST
22AK915A
9999.99
22XK913
State
WEST
22AK913A
9999.99
REF HEATER 3A OUT
22TI770
9999.99
REF HEATER 3B OUT
22TI778
9999.99

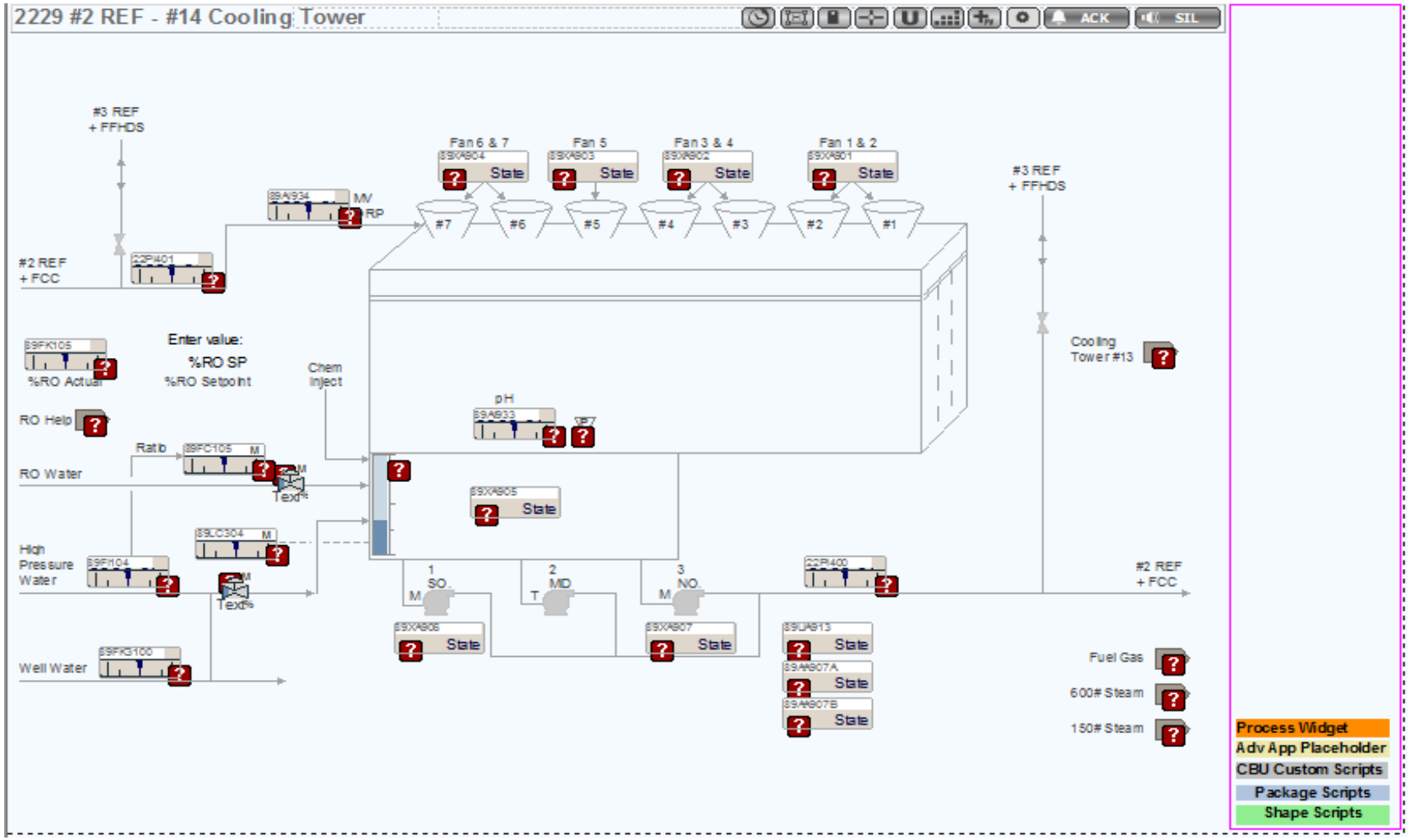
2.42 2227 #2 Ref - Reactor Temp Profiles (Reformer_2227.htm)

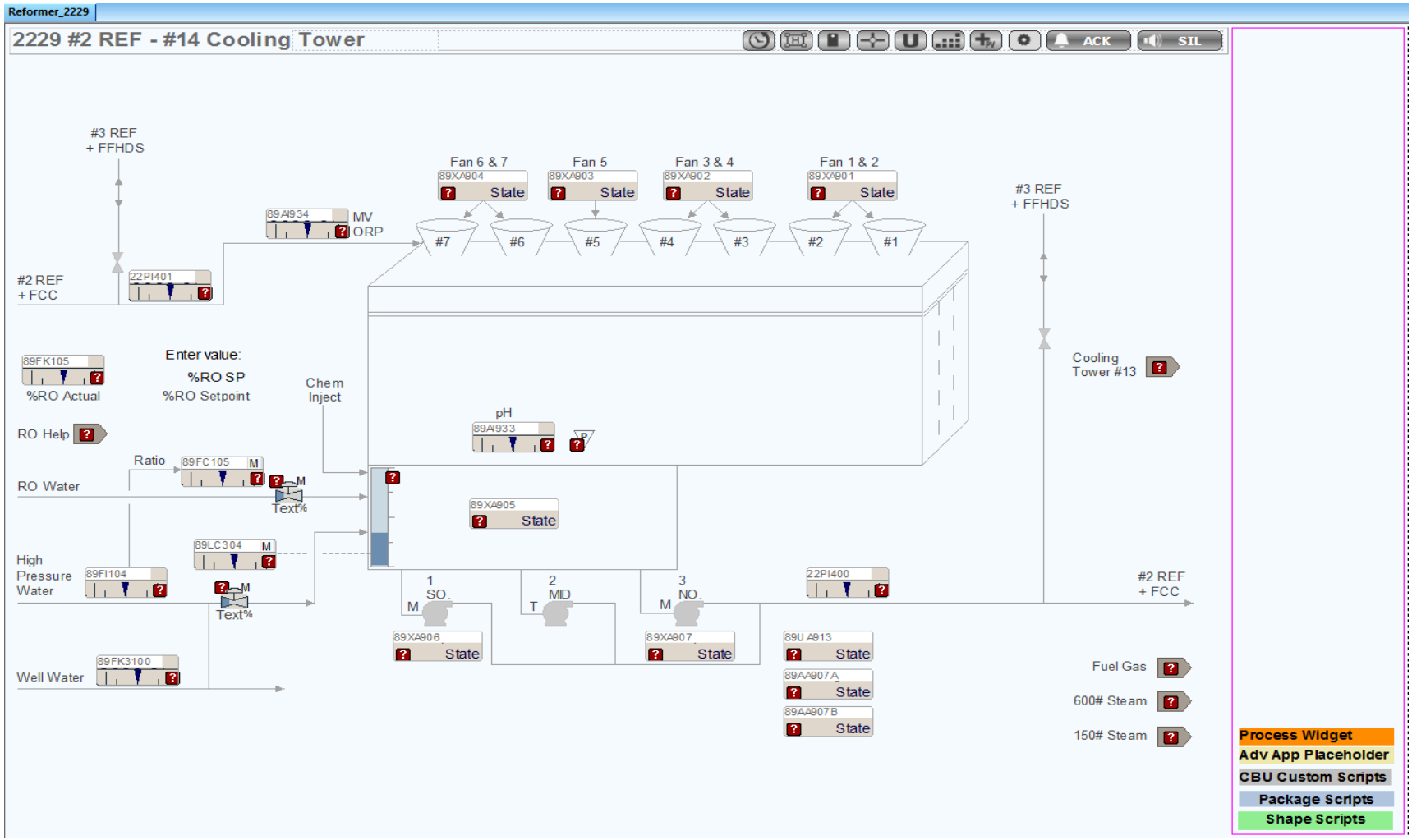


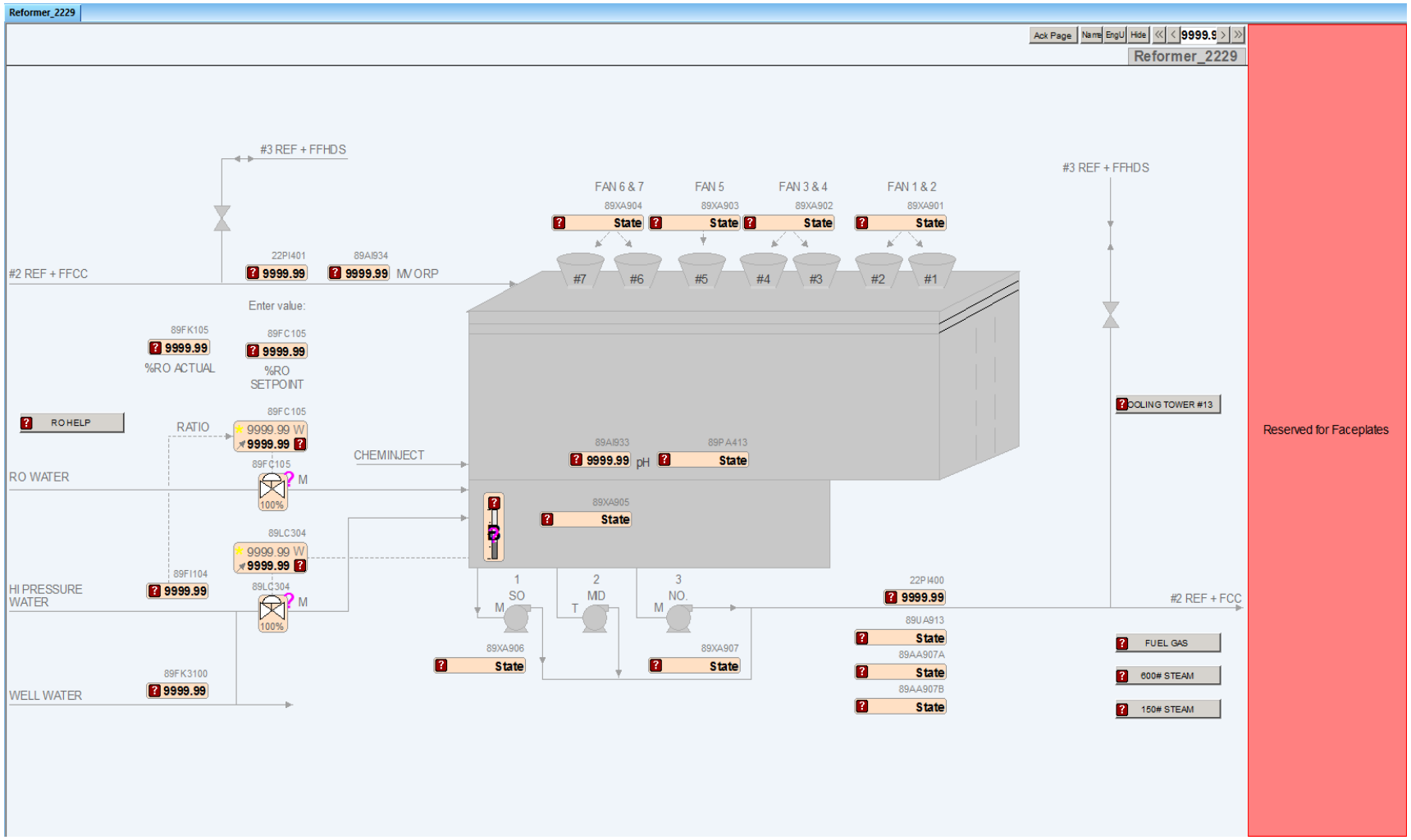

Reformer_2227
2227 #2 Ref - Reactor Temp Profiles
ACK
SIL
#1 Heater
22TI744
#1 Reactor
SW
N
SE
22TI804
22TI807
22TI810
22TI805
22TI808
22TI811
22TI806
22TI809
22TI812
22PD424
DP
22TK3621
DT
22TI745
#2 Heater
22TI762
#2 Reactor
NW
S
NE
22TI813
22TI816
22TI819
22TI814
22TI817
22TI820
22TI815
22TI818
22TI821
22PD425
DP
22TK3622
DT
22TI763
Total Rx DT
22TK3625
#3A Heater
22TI770
#3A Reactor
NW
SW
SE
NE
22TI831
22TI828
22TI825
22TI822
22TI832
22TI829
22TI826
22TI823
22TI833
22TI830
22TI827
22TI824
22PD426
DP
22TK3623
DT
22TI771
SDL
#3B Heater
22TI778
#3B Reactor
NW
NW
SE
NE
22TI843
22TI840
22TI837
22TI834
22TI844
22TI841
22TI838
22TI835
22TI845
22TI842
22TI839
22TI836
22PD427
DP
22TK3624
DT
22TI779
SDL
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2227
Ack Page
Name
EngU
Hide
9999.9
Reformer_2227
#1 HEATER
22TI744
9999.99
#1 REACTOR
SW
N
SE
22TI804
22TI807
22TI810
22TI805
22TI808
22TI811
22TI806
22TI809
22TI812
9999.99
22PD424
DP
22TK3621
DT
22TI745
#2 HEATER
22TI762
#2 REACTOR
NW
S
NE
22TI813
22TI816
22TI819
22TI814
22TI817
22TI820
22TI815
22TI818
22TI821
22PD425
22TK3622
22TI763
TOTAL RX DT
22TK3625
#3A HEATER
22TI770
#3A REACTOR
NV
SW
SE
NE
22TI831
22TI828
22TI825
22TI822
22TI832
22TI829
22TI826
22TI823
22TI833
22TI830
22TI827
22TI824
22PD426
22TK3623
22TI771
22TA3771
State
SDL
#3B HEATER
22TI778
#3B REACTOR
22TI843
22TI840
22TI837
22TI834
22TI844
22TI841
22TI838
22TI835
22TI845
22TI842
22TI839
22TI836
22PD427
22TK3624
22TI779
22TA3779
Reserved for Faceplates

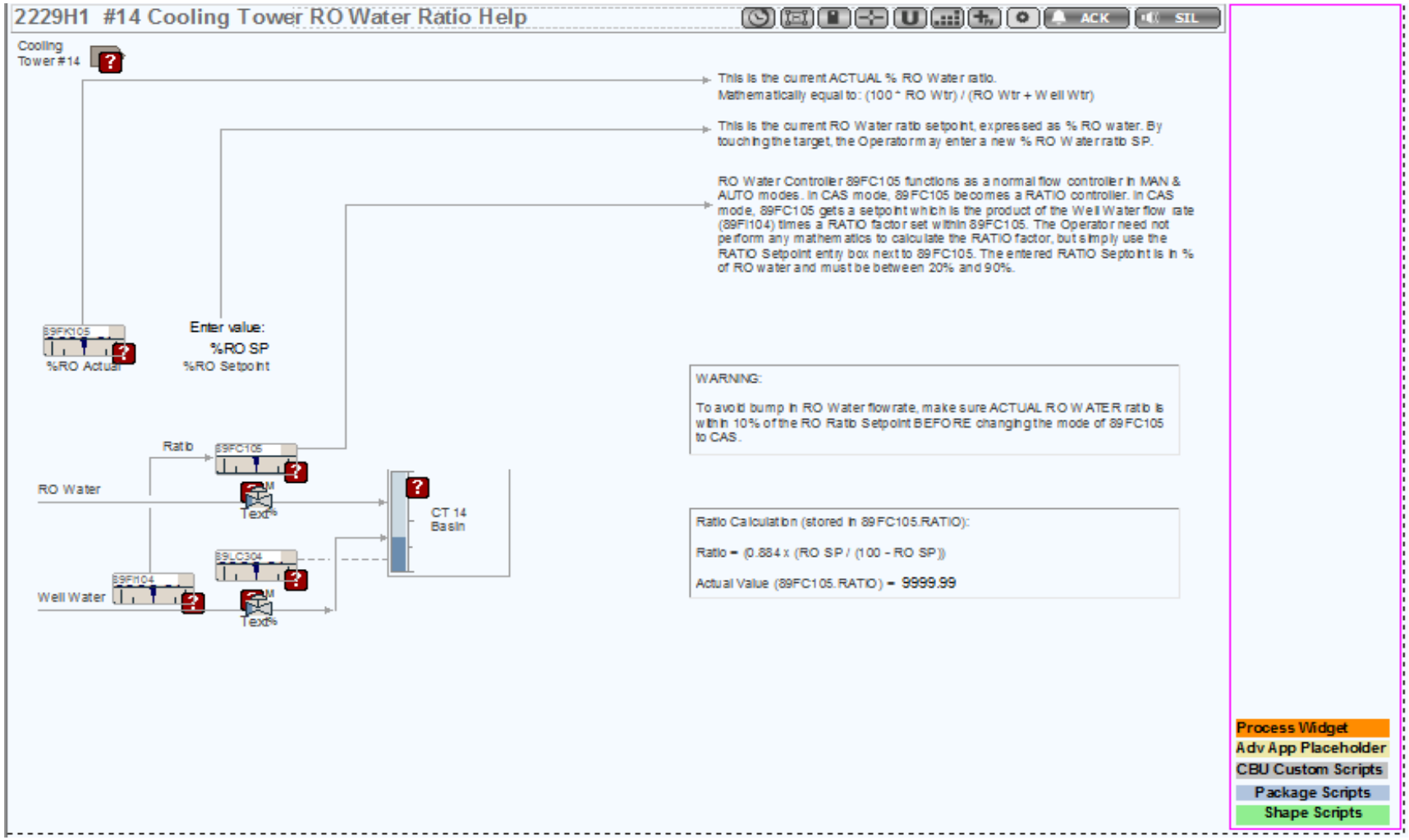
2.43 2229 #2 REF - #14 Cooling Tower (Reformer_2229.htm)

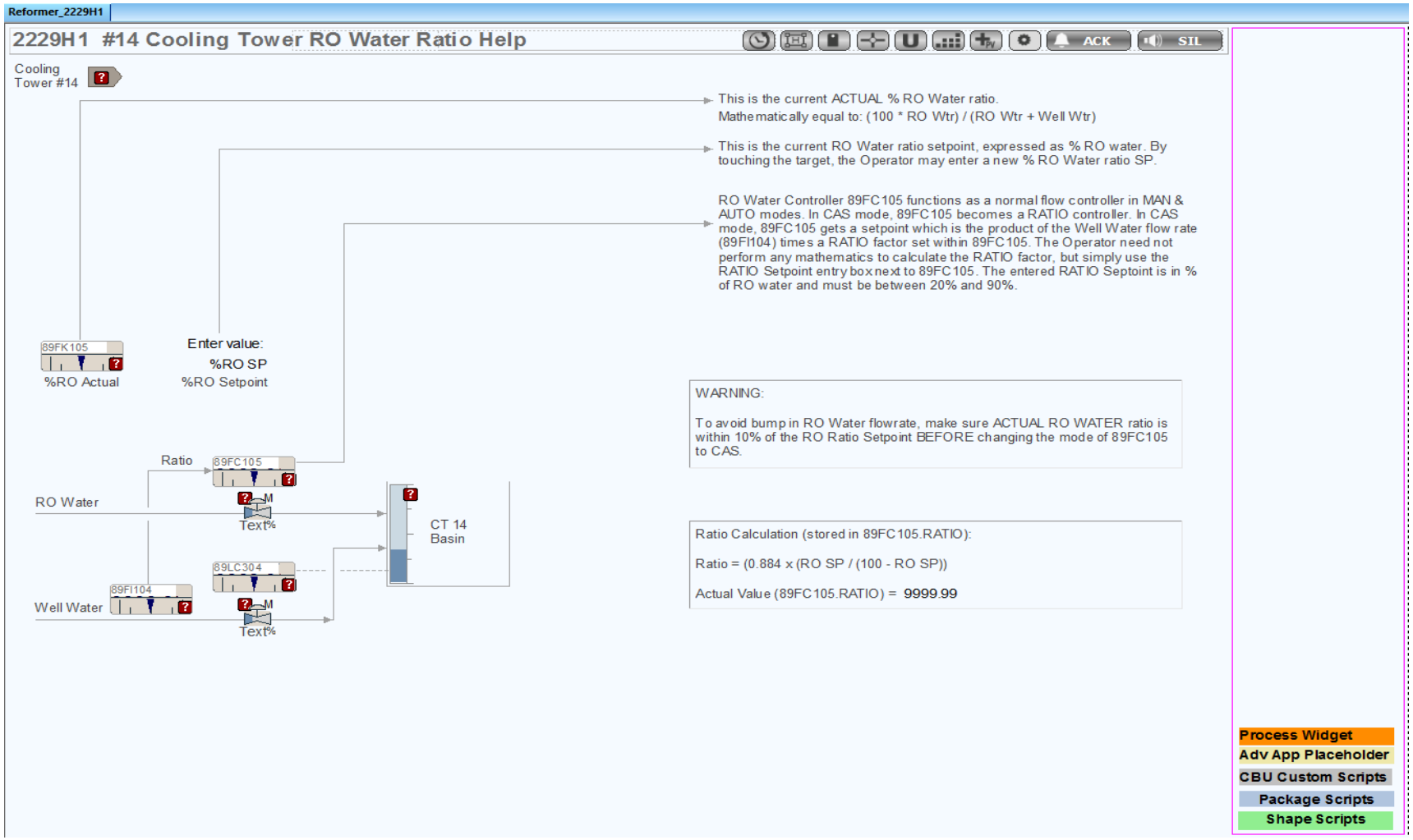


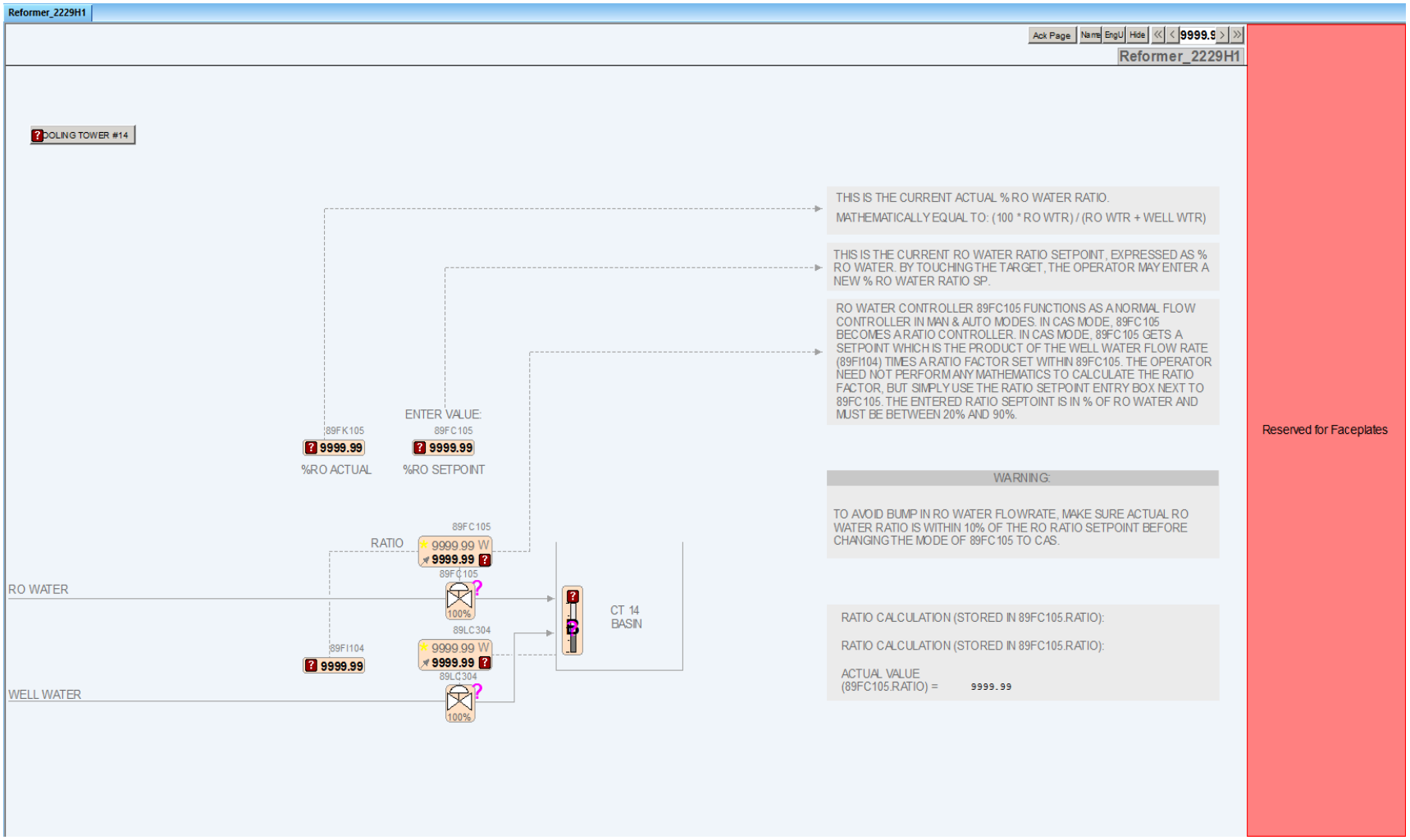

Reformer_2229
2229 #2 REF - #14 Cooling Tower
ACK
SIL
#3 REF
+ FFHDS
Fan 6 & 7
89XA804
State
Fan 5
89XA803
State
Fan 3 & 4
89XA802
State
Fan 1 & 2
89XA801
State
89AI934
MV
ORP
#7
#6
#5
#4
#3
#2
#1
#2 REF
+ FCC
22PI401
89FK105
%RO Actual
Enter value:
%RO SP
%RO Setpoint
Chem
Inject
RO Help
pH
89AI933
Ratio
89FC105
M
RO Water
Text%
89XA905
State
89LC304
M
High
Pressure
Water
89FI104
Text%
1
SO
2
MID
3
NO
22PI400
#2 REF
+ FCC
89XA806
State
89XA807
State
89U A913
State
89AA807A
State
89AA807B
State
89FK3100
Well Water
Fuel Gas
600# Steam
150# Steam
#3 REF
+ FFHDS
Cooling
Tower #13
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2229
Ack Page
Name
EngU
Hide
Reformer_2229
#3 REF + FFHDS
FAN 6 & 7
FAN 5
FAN 3 & 4
FAN 1 & 2
89XA904
89XA903
89XA902
89XA901
State
#7
#6
#5
#4
#3
#2
#1
#2 REF + FFCC
22PI401
9999.99
89AI934
MV ORP
Enter value:
89FK105
%RO ACTUAL
89FC105
%RO SETPOINT
RO HELP
RATIO
CHEMINJECT
RO WATER
HI PRESSURE WATER
WELL WATER
89FI104
89LC304
89FK3100
89AI933
pH
89PA413
89XA905
89XA906
89XA907
1 SO M
2 MD T
3 NO. M
22PI400
#2 REF + FCC
89UA913
89AA907A
89AA907B
COOLING TOWER #13
FUEL GAS
600# STEAM
150# STEAM
Reserved for Faceplates

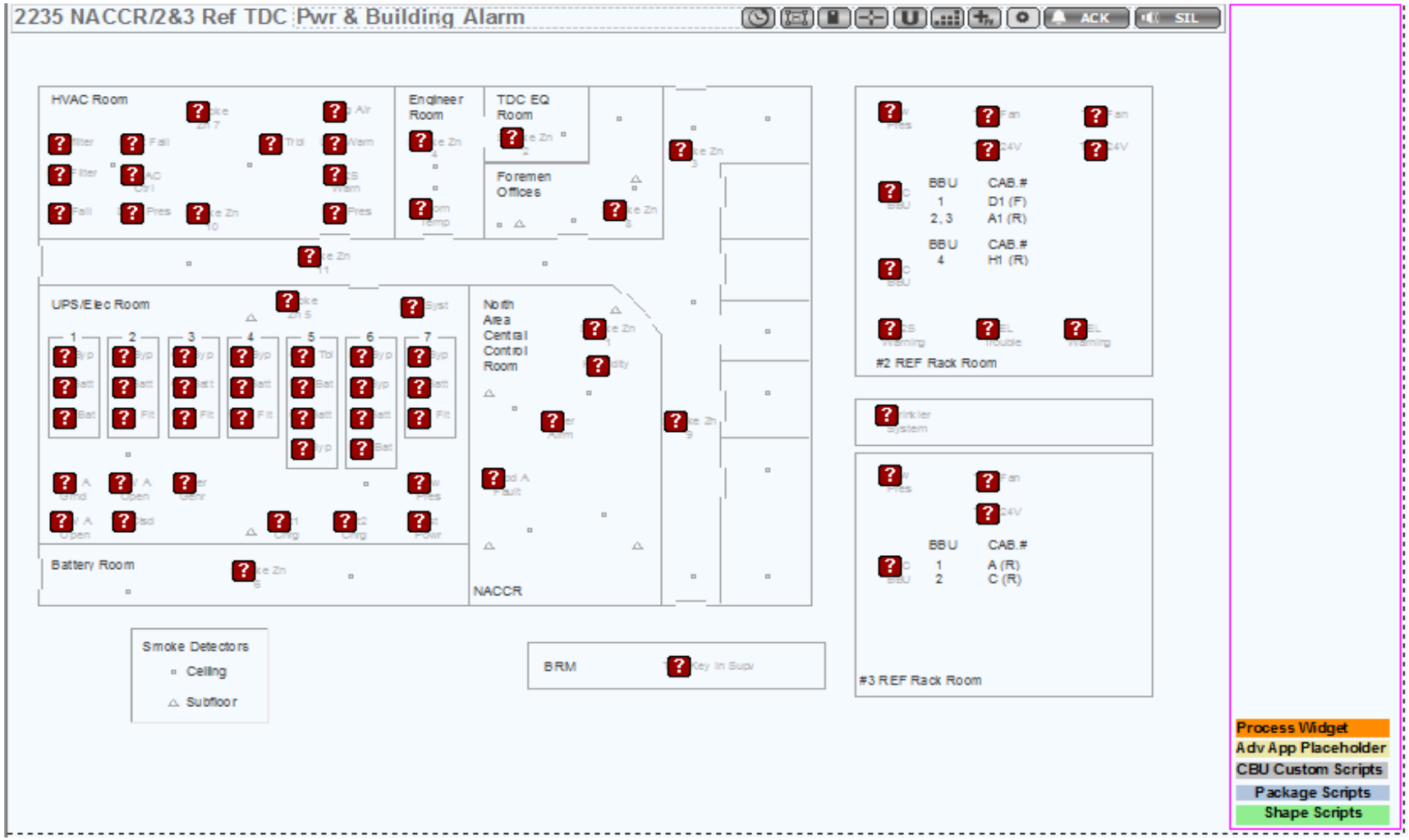
2.44 2229H1 #14 Cooling Tower RO Water Ratio Help (Reformer_2229H1.htm)

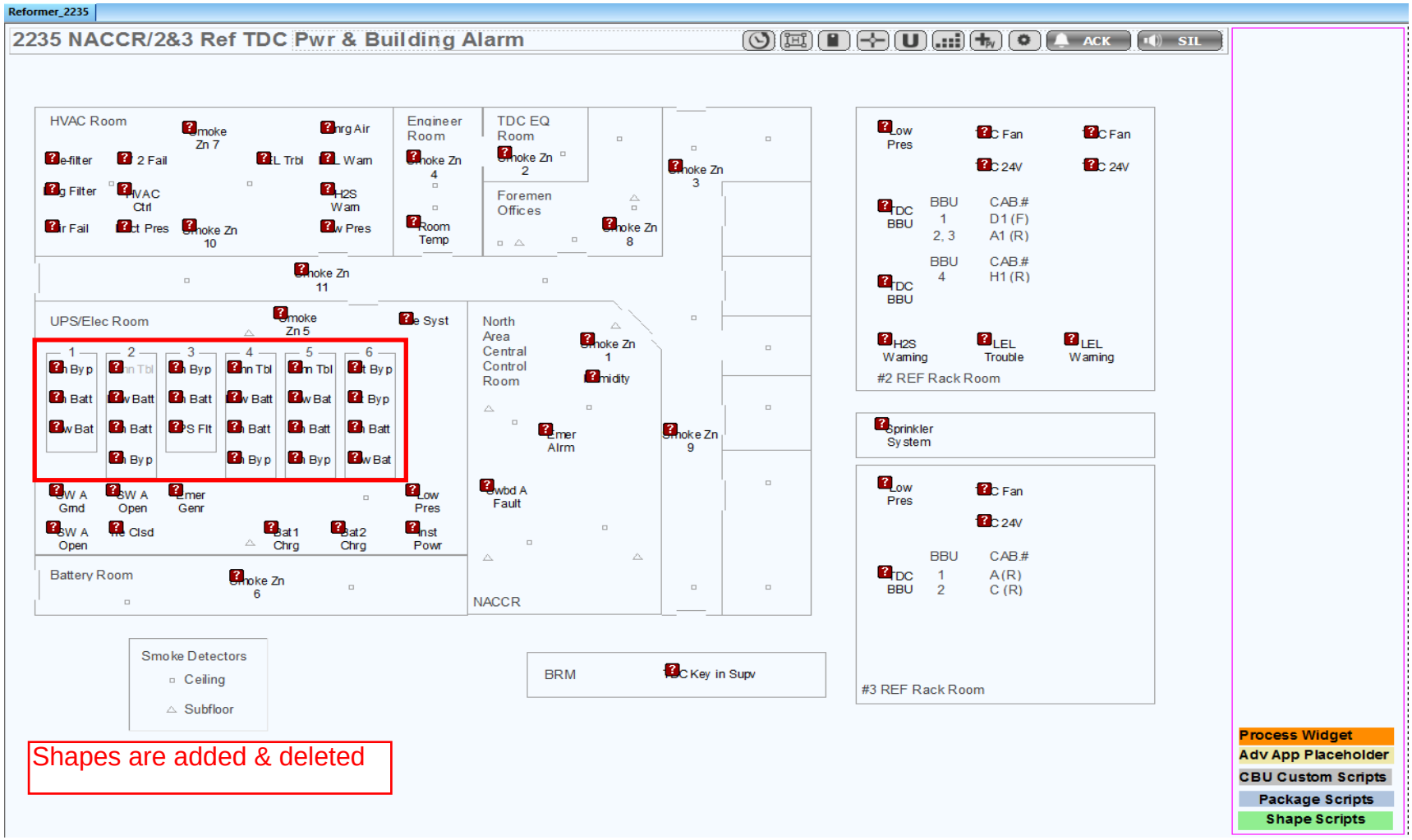


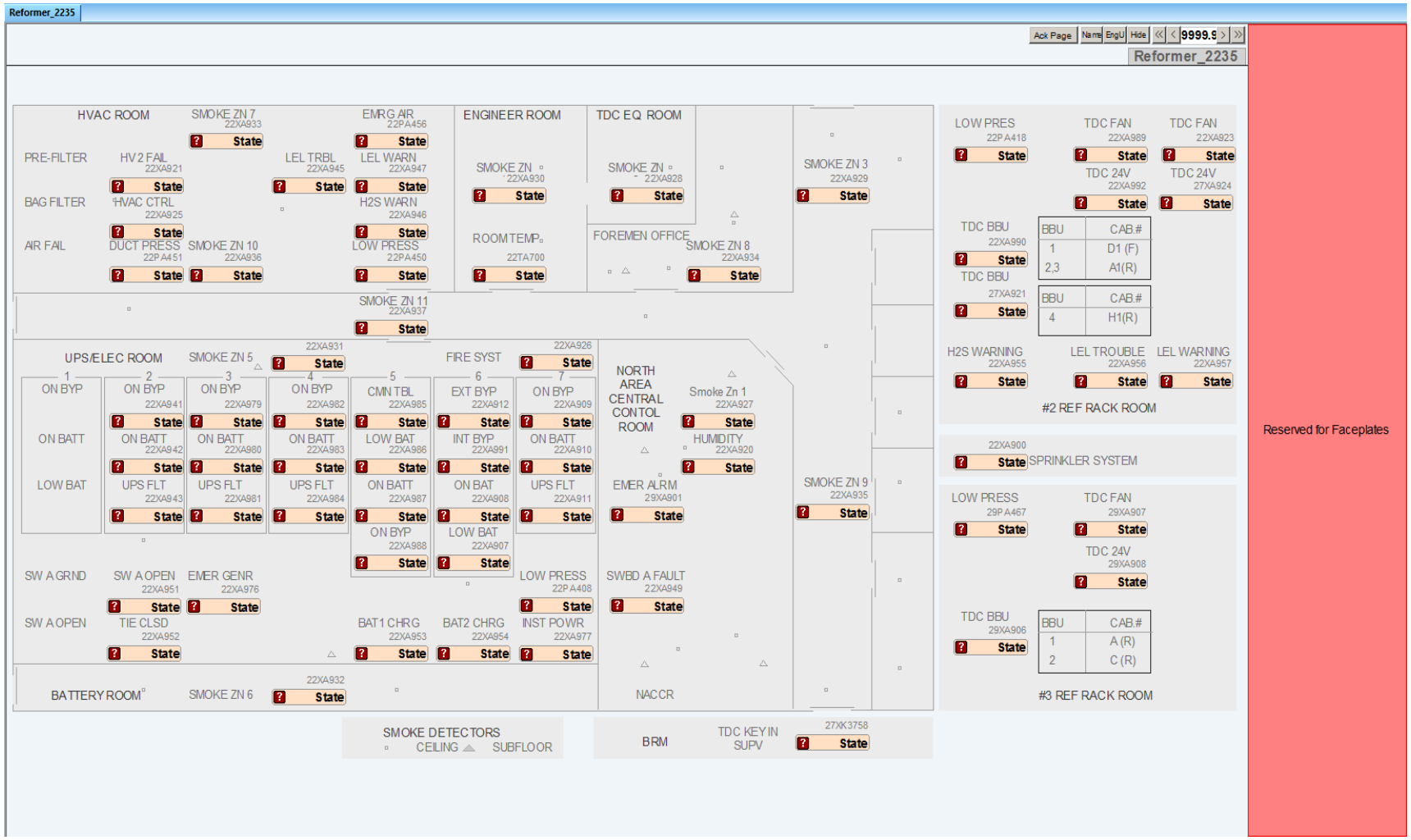

Reformer_2229H1
2229H1 #14 Cooling Tower RO Water Ratio Help
ACK
SIL
Cooling Tower #14
This is the current ACTUAL % RO Water ratio.
Mathematically equal to: (100 * RO Wtr) / (RO Wtr + Well Wtr)
This is the current RO Water ratio setpoint, expressed as % RO water. By touching the target, the Operator may enter a new % RO Water ratio SP.
RO Water Controller 89FC105 functions as a normal flow controller in MAN & AUTO modes. In CAS mode, 89FC105 becomes a RATIO controller. In CAS mode, 89FC105 gets a setpoint which is the product of the Well Water flow rate (89FI104) times a RATIO factor set within 89FC105. The Operator need not perform any mathematics to calculate the RATIO factor, but simply use the RATIO Setpoint entry box next to 89FC105. The entered RATIO Septoint is in % of RO water and must be between 20% and 90%.
89FK105
%RO Actual
Enter value:
%RO SP
%RO Setpoint
WARNING:
To avoid bump in RO Water flowrate, make sure ACTUAL RO WATER ratio is within 10% of the RO Ratio Setpoint BEFORE changing the mode of 89FC105 to CAS.
Ratio
89FC105
RO Water
M
Text%
CT 14 Basin
89LC304
89FI104
Well Water
M
Text%
Ratio Calculation (stored in 89FC105.RATIO):
Ratio = (0.884 x (RO SP / (100 - RO SP))
Actual Value (89FC105.RATIO) = 9999.99
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2229H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2229H1
COOLING TOWER #14
THIS IS THE CURRENT ACTUAL % RO WATER RATIO.
MATHEMATICALLY EQUAL TO: (100 * RO WTR) / (RO WTR + WELL WTR)
THIS IS THE CURRENT RO WATER RATIO SETPOINT, EXPRESSED AS % RO WATER. BY TOUCHING THE TARGET, THE OPERATOR MAY ENTER A NEW % RO WATER RATIO SP.
RO WATER CONTROLLER 89FC105 FUNCTIONS AS A NORMAL FLOW CONTROLLER IN MAN & AUTO MODES. IN CAS MODE, 89FC105 BECOMES A RATIO CONTROLLER. IN CAS MODE, 89FC105 GETS A SETPOINT WHICH IS THE PRODUCT OF THE WELL WATER FLOW RATE (89FI104) TIMES A RATIO FACTOR SET WITHIN 89FC105. THE OPERATOR NEED NOT PERFORM ANY MATHEMATICS TO CALCULATE THE RATIO FACTOR, BUT SIMPLY USE THE RATIO SETPOINT ENTRY BOX NEXT TO 89FC105. THE ENTERED RATIO SEPTOINT IS IN % OF RO WATER AND MUST BE BETWEEN 20% AND 90%.
ENTER VALUE:
89FK105
9999.99
%RO ACTUAL
89FC105
9999.99
%RO SETPOINT
WARNING:
TO AVOID BUMP IN RO WATER FLOWRATE, MAKE SURE ACTUAL RO WATER RATIO IS WITHIN 10% OF THE RO RATIO SETPOINT BEFORE CHANGING THE MODE OF 89FC105 TO CAS.
89FC105
RATIO
9999.99 W
9999.99
89FC105
100%
RO WATER
89LC304
9999.99 W
9999.99
89LC304
89FI104
9999.99
100%
WELL WATER
CT 14
BASIN
RATIO CALCULATION (STORED IN 89FC105.RATIO):
RATIO CALCULATION (STORED IN 89FC105.RATIO):
ACTUAL VALUE (89FC105.RATIO) = 9999.99
Reserved for Faceplates

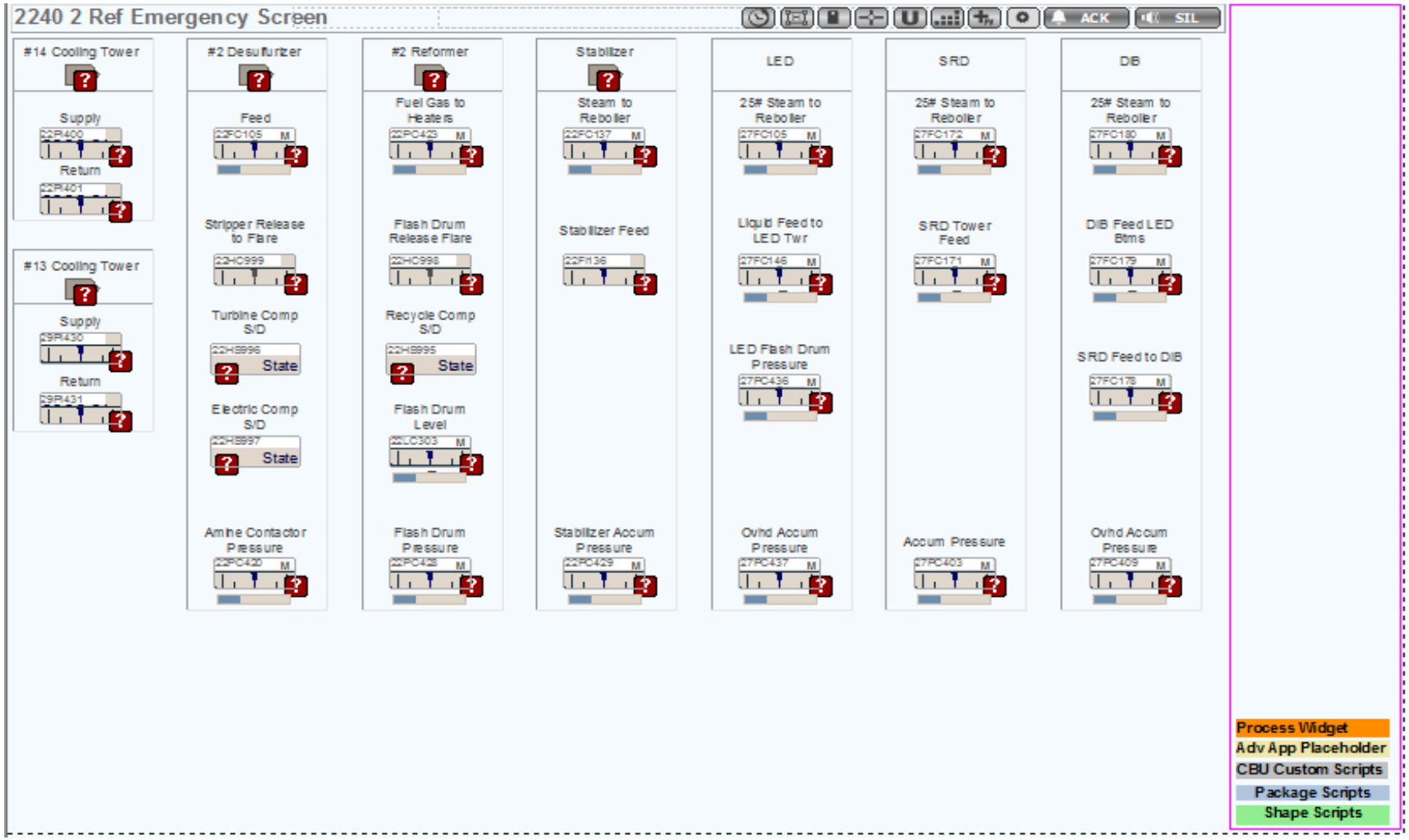
2.45 2235 NACCR/2&3 Ref TDC Pwr & Building Alarm (Reformer_2235.htm)

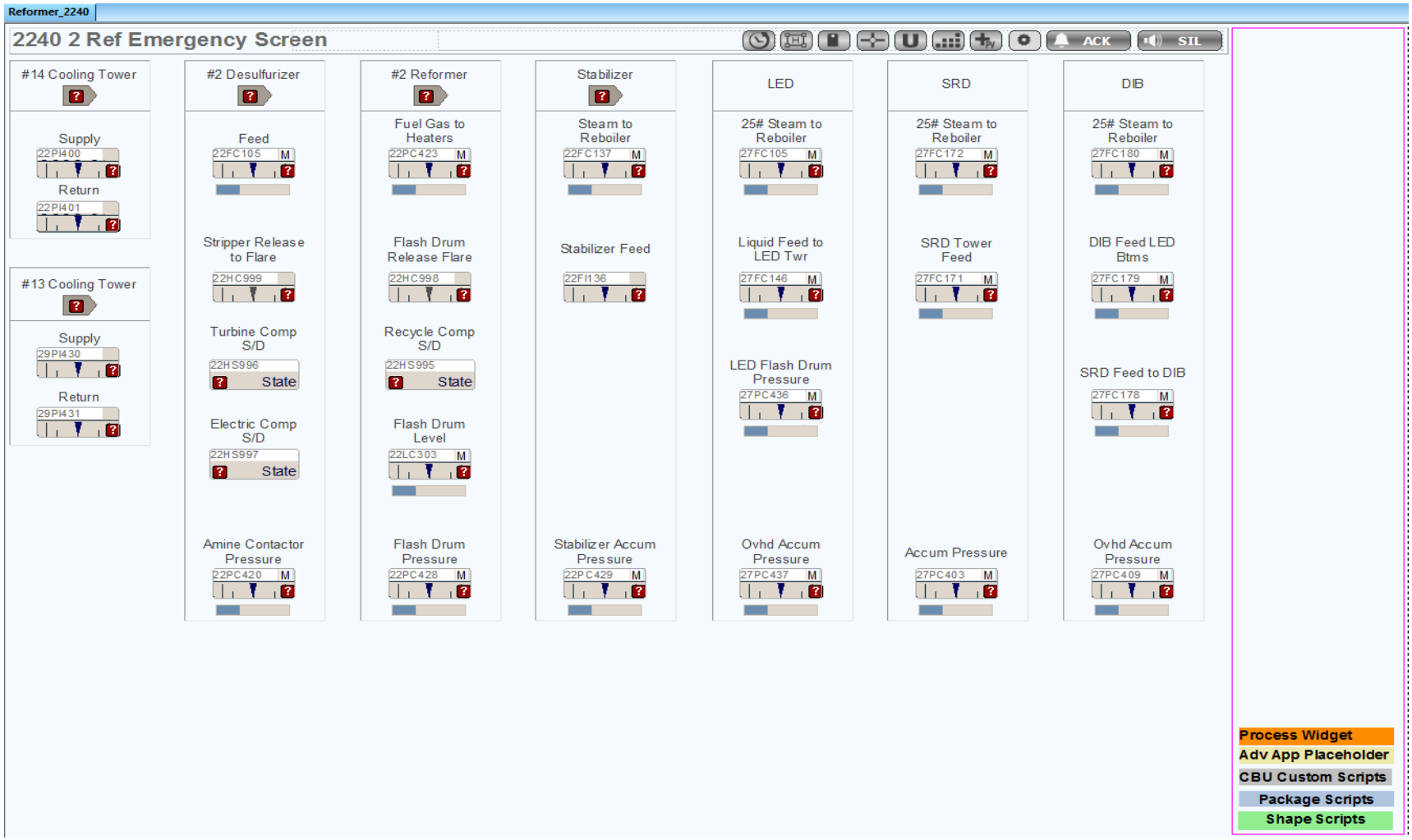


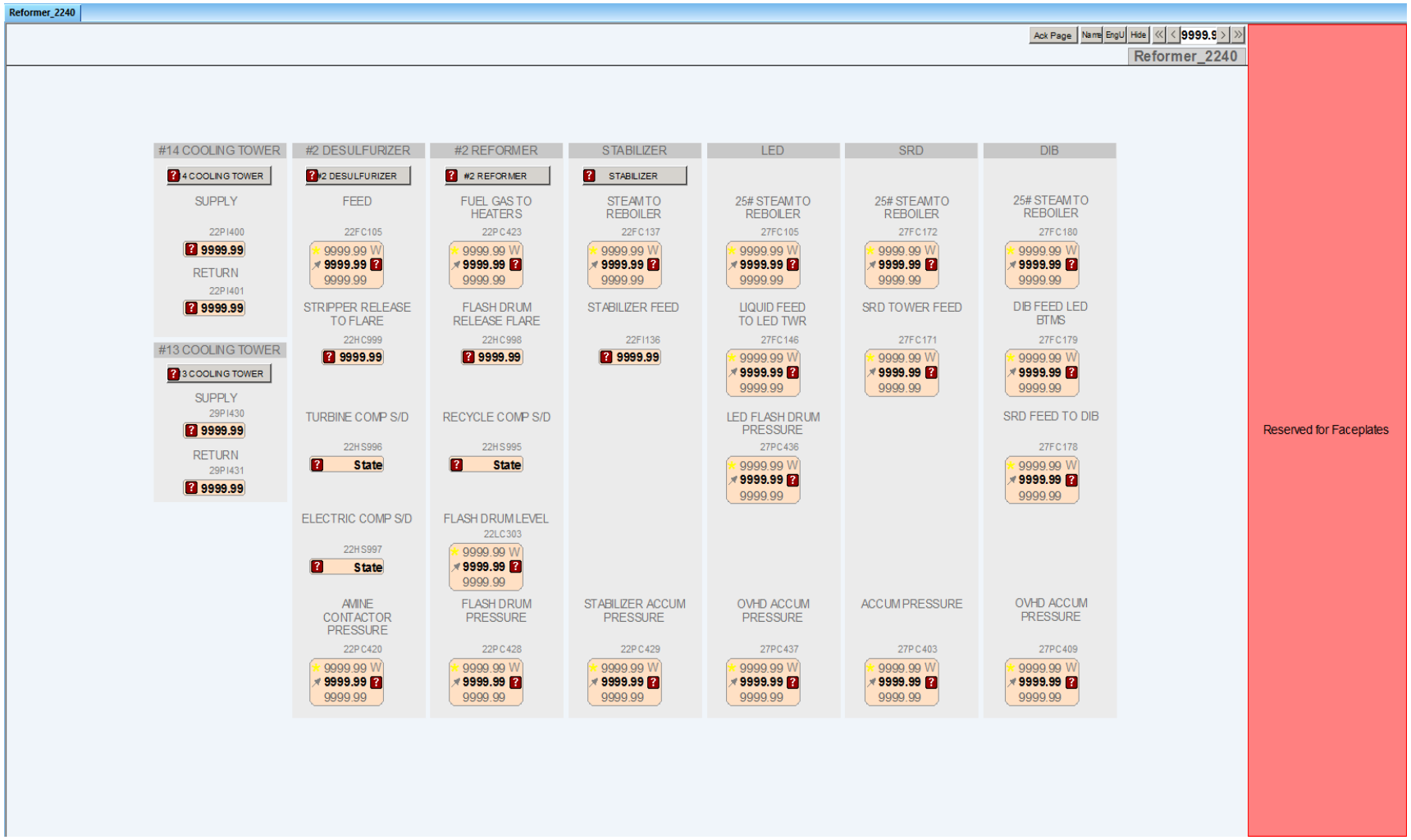

Reformer_2235
2235 NACCR/2&3 Ref TDC Pwr & Building Alarm
ACK
SIL
HVAC Room
Engineer Room
TDC EQ Room
Foremen Offices
UPS/Elec Room
North Area Central Control Room
Battery Room
NACCR
BRM
#2 REF Rack Room
#3 REF Rack Room
Sprinkler System
Smoke Detectors
Ceiling
Subfloor
Shapes are added & deleted
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2235
Ack Page
Name
EngU
Hide
9999.9
Reformer_2235
HVAC ROOM
SMOKE ZN 7
22XA933
EMRG AIR
22PA456
PRE-FILTER
HV 2 FAIL
22XA921
LEL TRBL
22XA945
LEL WARN
22XA947
BAG FILTER
HVAC CTRL
22XA925
H2S WARN
22XA946
AIR FAIL
DUCT PRESS
22PA451
SMOKE ZN 10
22XA936
LOW PRESS
22PA450
ENGINEER ROOM
SMOKE ZN
22XA930
ROOM TEMP
22TA700
TDC EQ ROOM
SMOKE ZN
22XA928
FOREMEN OFFICE
SMOKE ZN 8
22XA934
SMOKE ZN 3
22XA929
SMOKE ZN 11
22XA937
UPS/ELEC ROOM
SMOKE ZN 5
22XA931
FIRE SYST
22XA926
1
2
3
4
5
6
7
ON BYP
ON BATT
LOW BAT
UPS FLT
CMN TBL
EXT BYP
INT BYP
NORTH AREA CENTRAL CONTOL ROOM
Smoke Zn 1
22XA927
HUMIDITY
22XA920
EMER ALRM
29XA901
SMOKE ZN 9
22XA935
SW A GRND
SW A OPEN
EMER GENR
22XA951
22XA976
TIE CLSD
22XA952
BAT1 CHRG
22XA953
BAT2 CHRG
22XA954
INST POWR
22XA977
LOW PRESS
22PA408
SWBD A FAULT
22XA949
BATTERY ROOM
SMOKE ZN 6
22XA932
NACCR
SMOKE DETECTORS
CEILING
SUBFLOOR
BRM
TDC KEY IN SUPV
27XK3758
LOW PRES
22PA418
TDC FAN
22XA989
TDC FAN
22XA923
TDC 24V
22XA992
TDC 24V
27XA924
TDC BBU
22XA990
BBU
CAB.#
1
D1 (F)
2,3
A1(R)
TDC BBU
27XA921
BBU
CAB.#
4
H1(R)
H2S WARNING
22XA955
LEL TROUBLE
22XA956
LEL WARNING
22XA957
#2 REF RACK ROOM
22XA900
SPRINKLER SYSTEM
LOW PRESS
29PA467
TDC FAN
29XA907
TDC 24V
29XA908
TDC BBU
29XA906
BBU
CAB.#
1
A (R)
2
C (R)
#3 REF RACK ROOM
Reserved for Faceplates

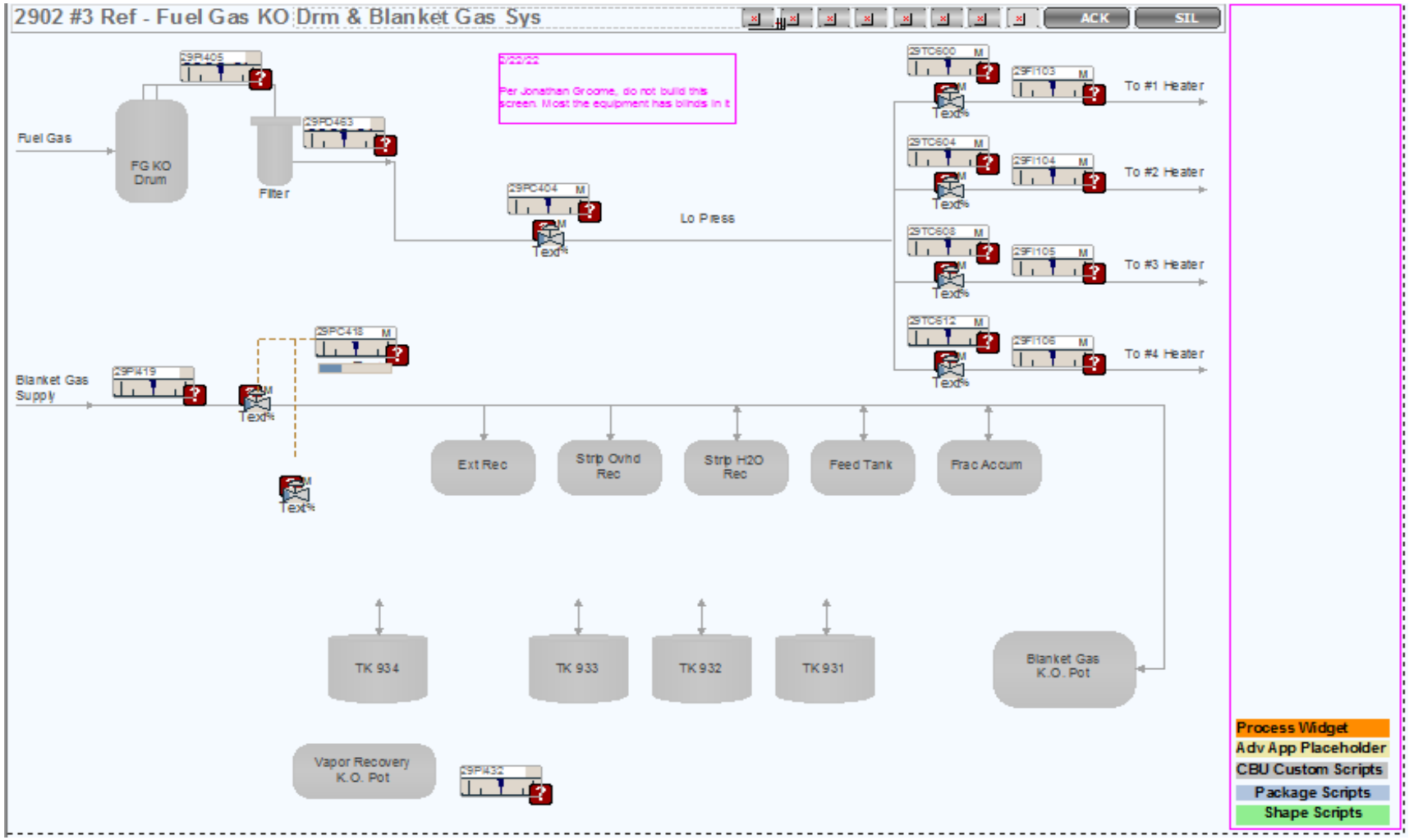
2.46 2240 2 Ref Emergency Screen (Reformer_2240.htm)

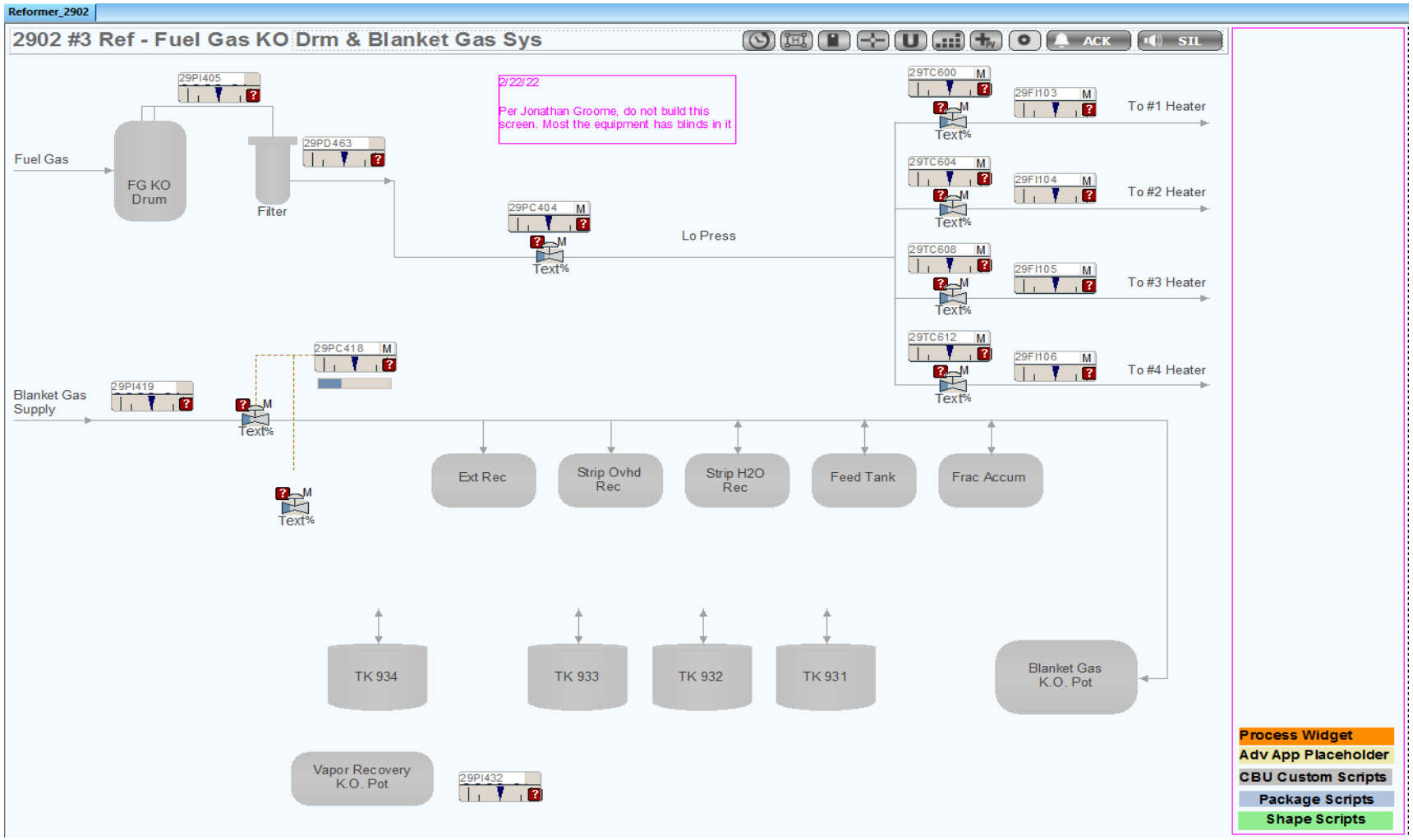


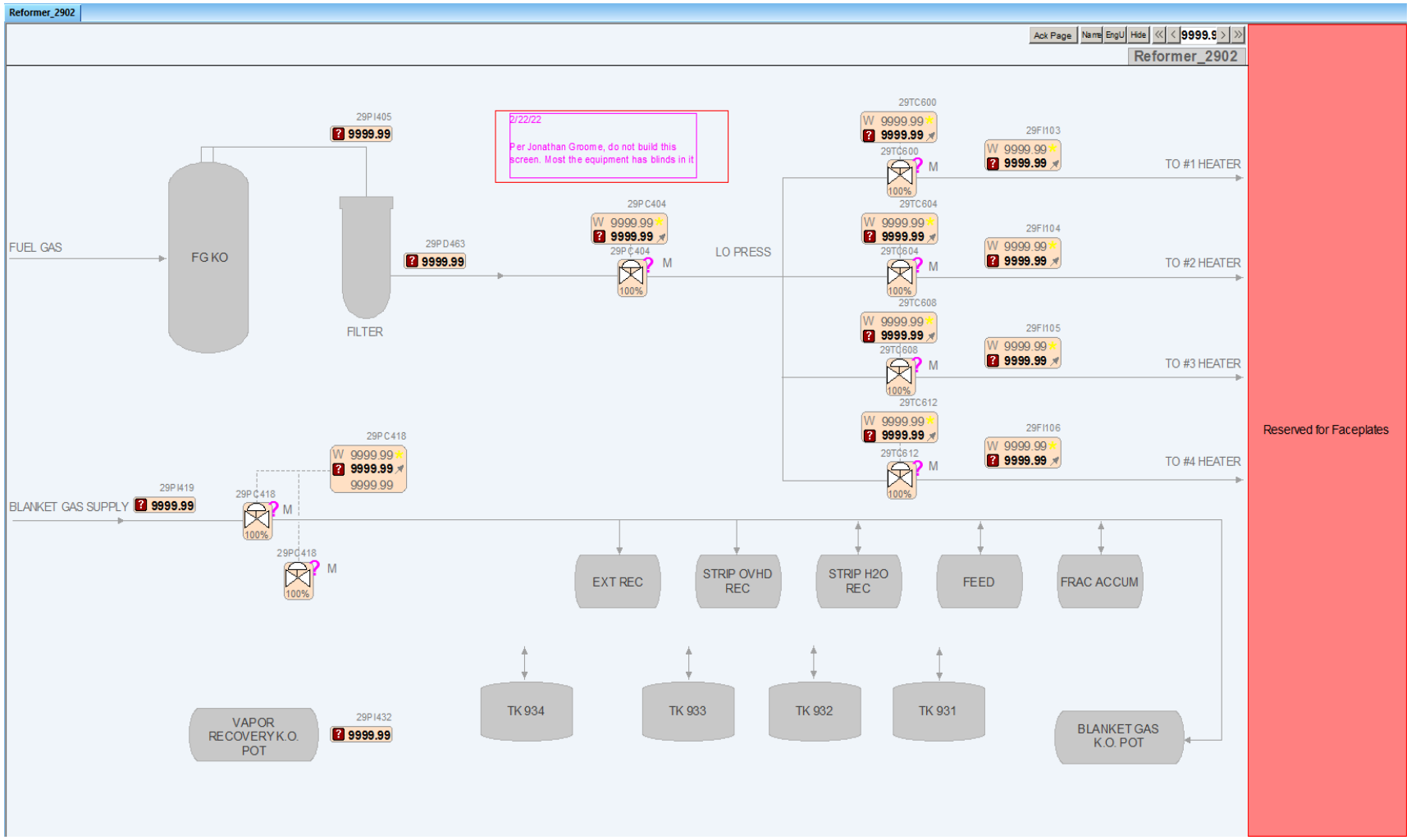

Reformer_2240
2240 2 Ref Emergency Screen
ACK
SIL
#14 Cooling Tower
Supply
22PI400
Return
22PI401
#13 Cooling Tower
Supply
29PI430
Return
29PI431
#2 Desulfurizer
Feed
22FC105 M
Stripper Release to Flare
22HC999
Turbine Comp S/D
22HS996 State
Electric Comp S/D
22HS997 State
Amine Contactor Pressure
22PC420 M
#2 Reformer
Fuel Gas to Heaters
22PC423 M
Flash Drum Release Flare
22HC998
Recycle Comp S/D
22HS995 State
Flash Drum Level
22LC303 M
Flash Drum Pressure
22PC428 M
Stabilizer
Steam to Reboiler
22FC137 M
Stabilizer Feed
22FI136
Stabilizer Accum Pressure
22PC429 M
LED
25# Steam to Reboiler
27FC105 M
Liquid Feed to LED Twr
27FC146 M
LED Flash Drum Pressure
27PC436 M
Ovhd Accum Pressure
27PC437 M
SRD
25# Steam to Reboiler
27FC172 M
SRD Tower Feed
27FC171 M
Accum Pressure
27PC403 M
DIB
25# Steam to Reboiler
27FC180 M
DIB Feed LED Btms
27FC179 M
SRD Feed to DIB
27FC178 M
Ovhd Accum Pressure
27PC409 M
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2240
Ack Page
Name
EngU
Hide
9999.9
Reformer_2240
#14 COOLING TOWER
4 COOLING TOWER
SUPPLY
22PI400
9999.99
RETURN
22PI401
9999.99
#13 COOLING TOWER
3 COOLING TOWER
SUPPLY
29PI430
9999.99
RETURN
29PI431
9999.99
#2 DESULFURIZER
#2 DESULFURIZER
FEED
22FC105
9999.99 W
9999.99
9999.99
STRIPPER RELEASE TO FLARE
22HC999
9999.99
TURBINE COMP S/D
22HS996
State
ELECTRIC COMP S/D
22HS997
State
AMINE CONTACTOR PRESSURE
22PC420
9999.99 W
9999.99
9999.99
#2 REFORMER
#2 REFORMER
FUEL GAS TO HEATERS
22PC423
9999.99 W
9999.99
9999.99
FLASH DRUM RELEASE FLARE
22HC998
9999.99
RECYCLE COMP S/D
22HS995
State
FLASH DRUM LEVEL
22LC303
9999.99 W
9999.99
9999.99
FLASH DRUM PRESSURE
22PC428
9999.99 W
9999.99
9999.99
STABILIZER
STABILIZER
STEAM TO REBOILER
22FC137
9999.99 W
9999.99
9999.99
STABILIZER FEED
22FI136
9999.99
STABILIZER ACCUM PRESSURE
22PC429
9999.99 W
9999.99
9999.99
LED
25# STEAM TO REBOILER
27FC105
9999.99 W
9999.99
9999.99
LIQUID FEED TO LED TWR
27FC146
9999.99 W
9999.99
9999.99
LED FLASH DRUM PRESSURE
27PC436
9999.99 W
9999.99
9999.99
OVHD ACCUM PRESSURE
27PC437
9999.99 W
9999.99
9999.99
SRD
25# STEAM TO REBOILER
27FC172
9999.99 W
9999.99
9999.99
SRD TOWER FEED
27FC171
9999.99 W
9999.99
9999.99
ACCUM PRESSURE
27PC403
9999.99 W
9999.99
9999.99
DIB
25# STEAM TO REBOILER
27FC180
9999.99 W
9999.99
9999.99
DIB FEED LED BTMS
27FC179
9999.99 W
9999.99
9999.99
SRD FEED TO DIB
27FC178
9999.99 W
9999.99
9999.99
OVHD ACCUM PRESSURE
27PC409
9999.99 W
9999.99
9999.99
Reserved for Faceplates

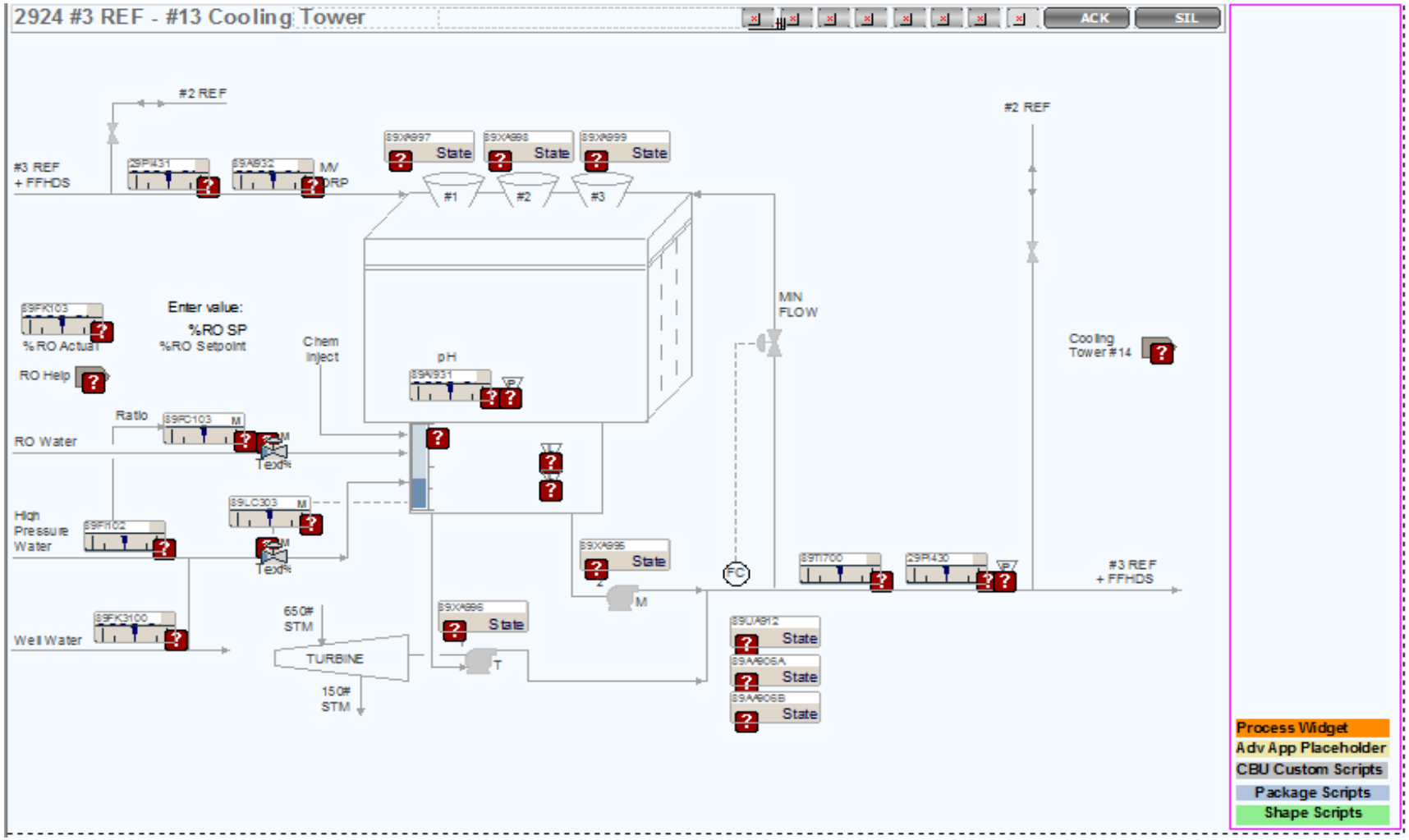
2.47 2240 2 Ref Emergency Screen (Reformer_2902.htm)

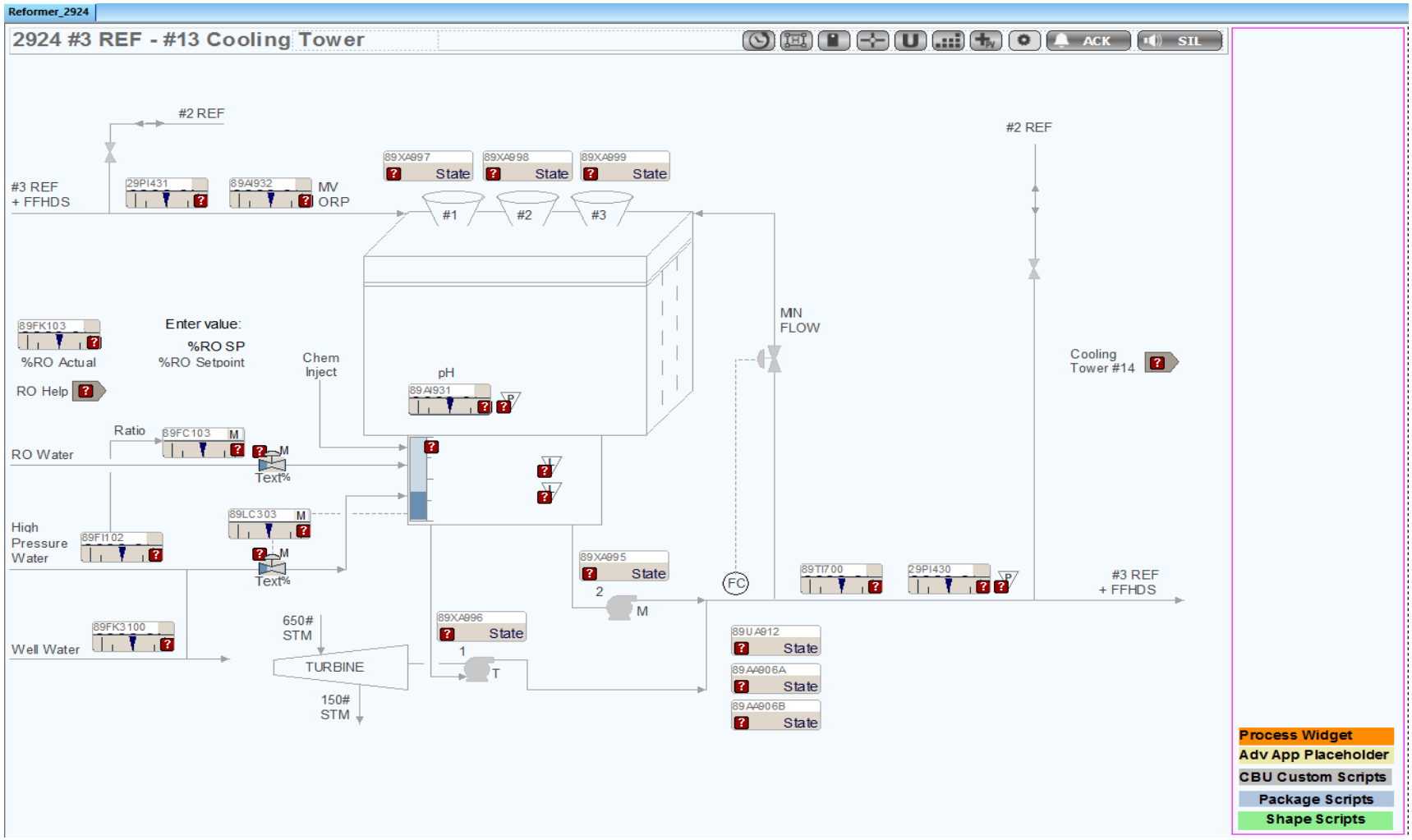


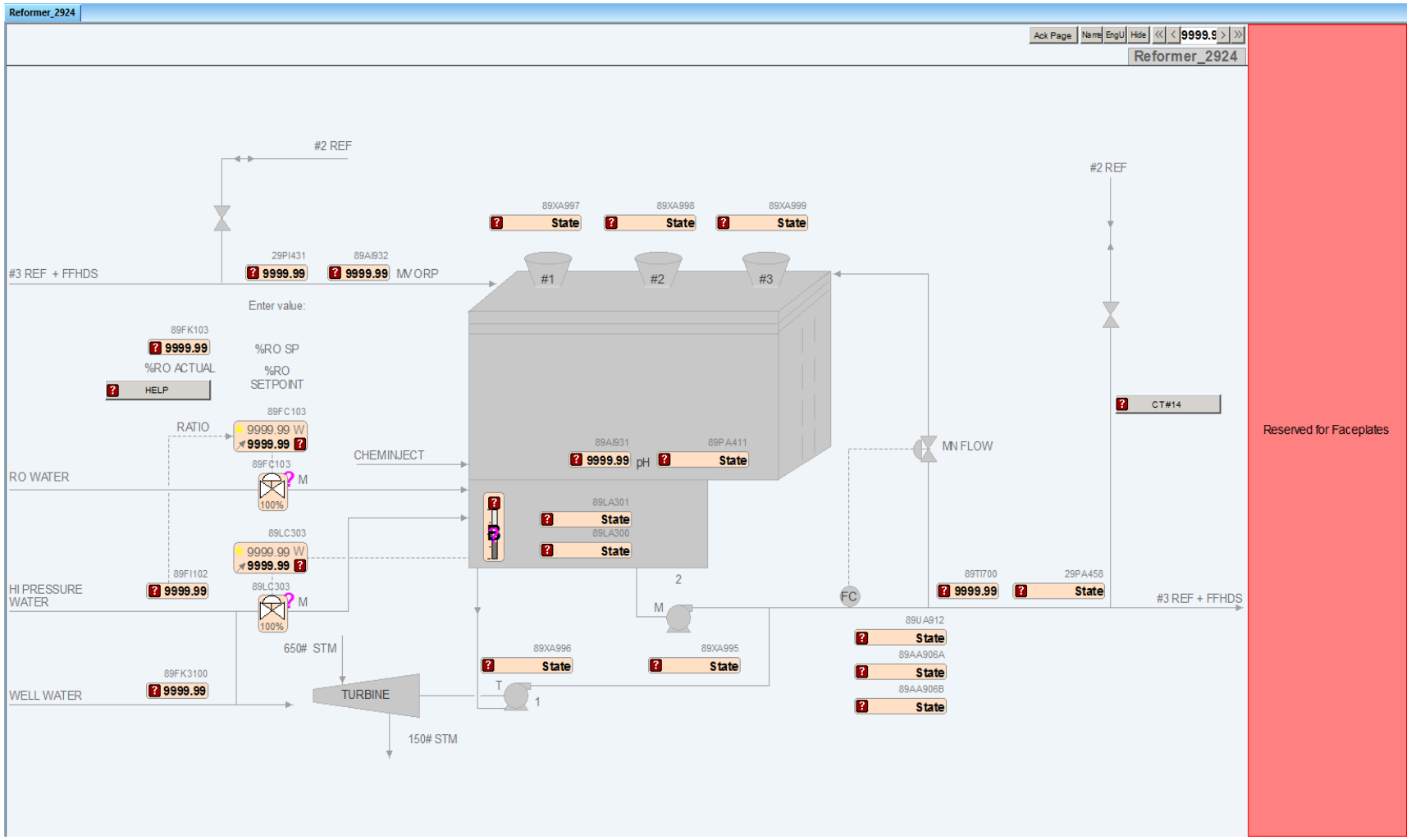

Reformer_2902
2902 #3 Ref - Fuel Gas KO Drm & Blanket Gas Sys
ACK
SIL
29PI405
2/22/22
Per Jonathan Groome, do not build this screen. Most the equipment has blinds in it
29TC600
29FI103
To #1 Heater
Text%
29PD463
Fuel Gas
FG KO Drum
Filter
29TC604
29FI104
To #2 Heater
29PC404
Lo Press
29TC608
29FI105
To #3 Heater
29TC612
29FI106
To #4 Heater
29PC418
29PI419
Blanket Gas Supply
Ext Rec
Strip Ovhd Rec
Strip H2O Rec
Feed Tank
Frac Accum
TK 934
TK 933
TK 932
TK 931
Blanket Gas K.O. Pot
Vapor Recovery K.O. Pot
29PI432
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2902
Ack Page
Name
EngU
Hide
Reformer_2902
29PI405
9999.99
2/22/22
Per Jonathan Groome, do not build this screen. Most the equipment has blinds in it
29TC600
29FI103
TO #1 HEATER
29TC604
29FI104
TO #2 HEATER
29TC608
29FI105
TO #3 HEATER
29TC612
29FI106
TO #4 HEATER
FUEL GAS
FG KO
FILTER
29PD463
29PC404
LO PRESS
29PC418
29PI419
BLANKET GAS SUPPLY
EXT REC
STRIP OVHD REC
STRIP H2O REC
FEED
FRAC ACCUM
TK 934
TK 933
TK 932
TK 931
VAPOR RECOVERY K.O. POT
29PI432
BLANKET GAS K.O. POT
Reserved for Faceplates

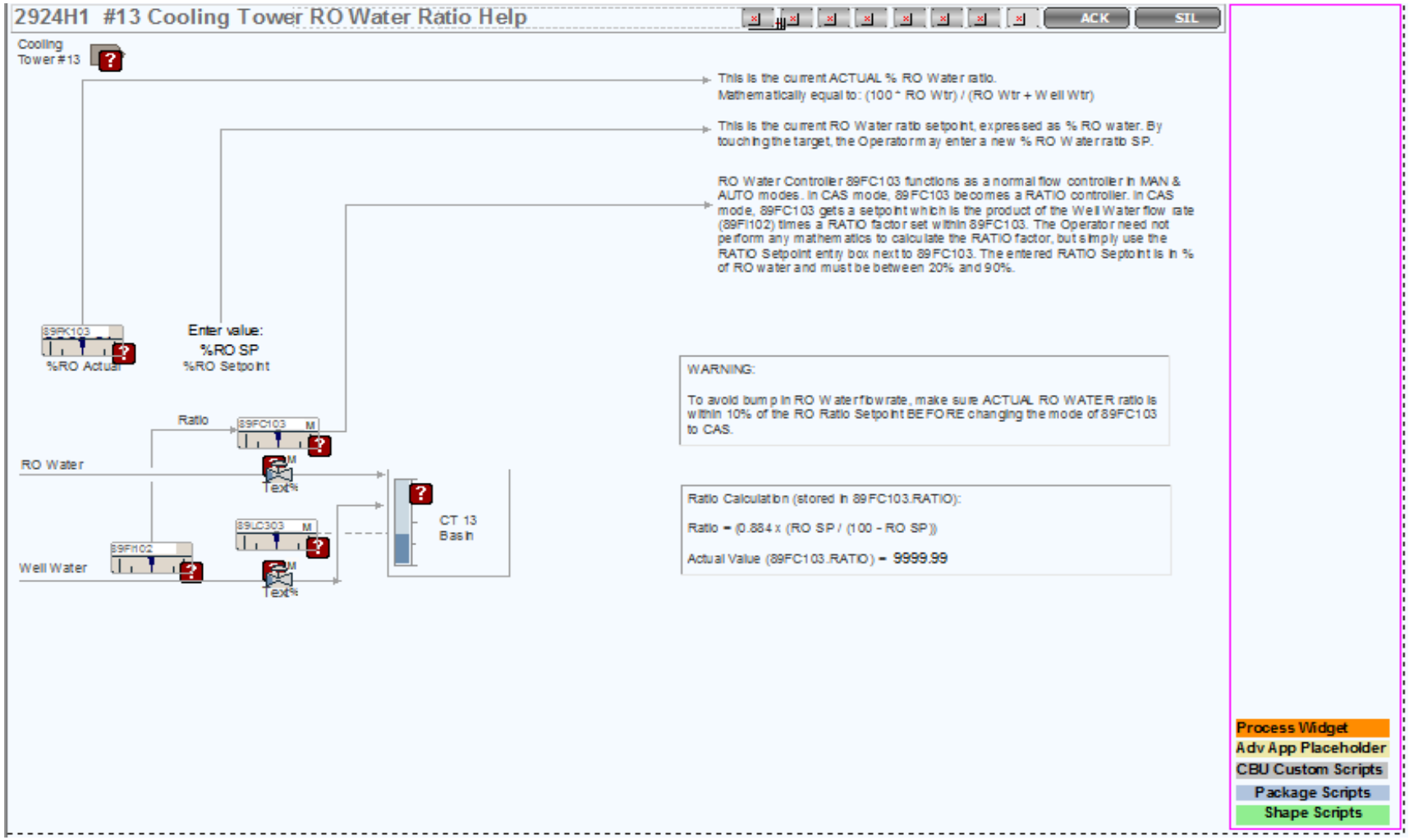
2.48 2240 2 Ref Emergency Screen (Reformer_2924.htm)

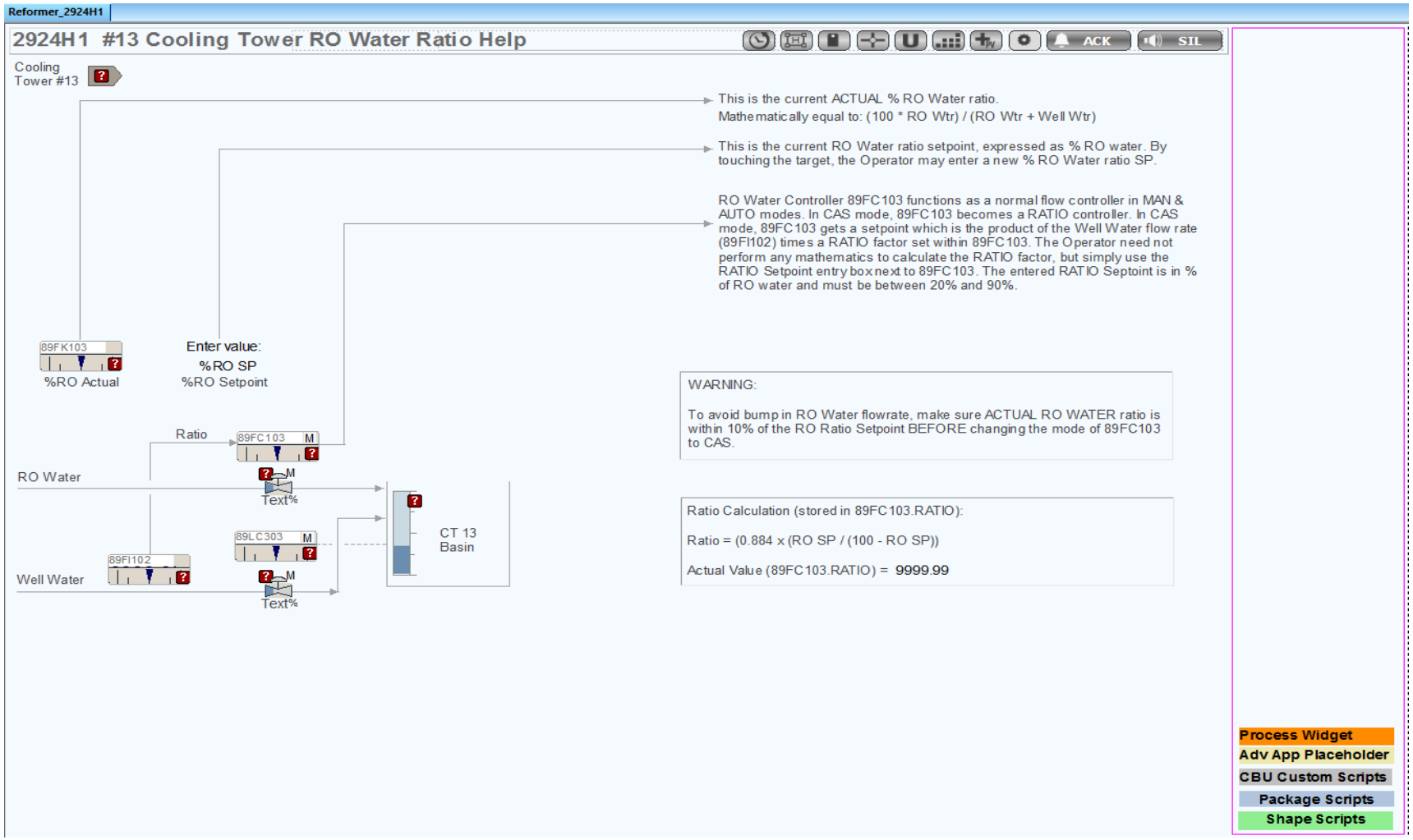


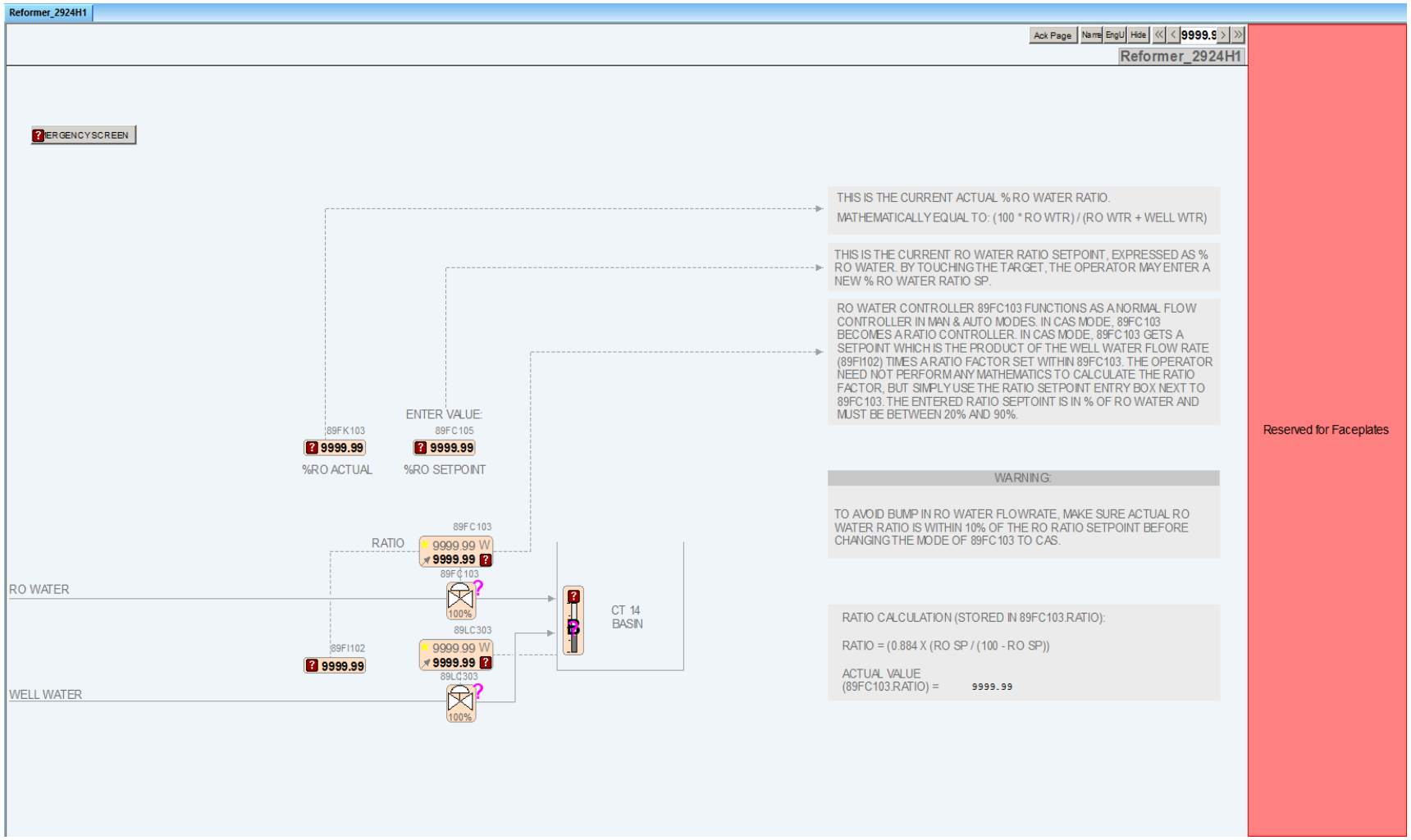

Reformer_2924
2924 #3 REF - #13 Cooling Tower
ACK
SIL
#2 REF
#3 REF
+ FFHDS
29PI431
89AI932
MV
ORP
89XA897
State
89XA898
State
89XA899
State
#1
#2
#3
#2 REF
MN
FLOW
89FK103
%RO Actual
Enter value:
%RO SP
%RO Setpoint
RO Help
Chem
Inject
pH
89AI931
Cooling
Tower #14
Ratio
89FC103
M
RO Water
Text%
High
Pressure
Water
89FI102
89LC303
M
Text%
89XA895
State
2
M
FC
89TI700
29PI430
#3 REF
+ FFHDS
Well Water
89FK3100
650#
STM
89XA896
State
1
TURBINE
T
150#
STM
89UA912
State
89AA906A
State
89AA906B
State
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2924
Ack Page
Name
EngU
Hide
Reformer_2924
#2 REF
#2 REF
89XA997
State
89XA998
State
89XA999
State
29PI431
9999.99
89AI932
9999.99
MV ORP
#3 REF + FFHDS
#1
#2
#3
Enter value:
89FK103
9999.99
%RO SP
%RO ACTUAL
%RO SETPOINT
HELP
89FC103
RATIO
9999.99 W
9999.99
CHEMINJECT
89AI931
9999.99
pH
89PA411
State
CT#14
MN FLOW
RO WATER
89FC103
M
100%
89LA301
State
89LA300
State
89LC303
9999.99 W
9999.99
89FI102
9999.99
HI PRESSURE WATER
89LC303
M
100%
2
M
FC
89TI700
9999.99
29PA458
State
#3 REF + FFHDS
89UA912
State
89AA906A
State
89AA906B
State
650# STM
89XA996
State
89XA995
State
89FK3100
9999.99
WELL WATER
TURBINE
T
1
150# STM
Reserved for Faceplates

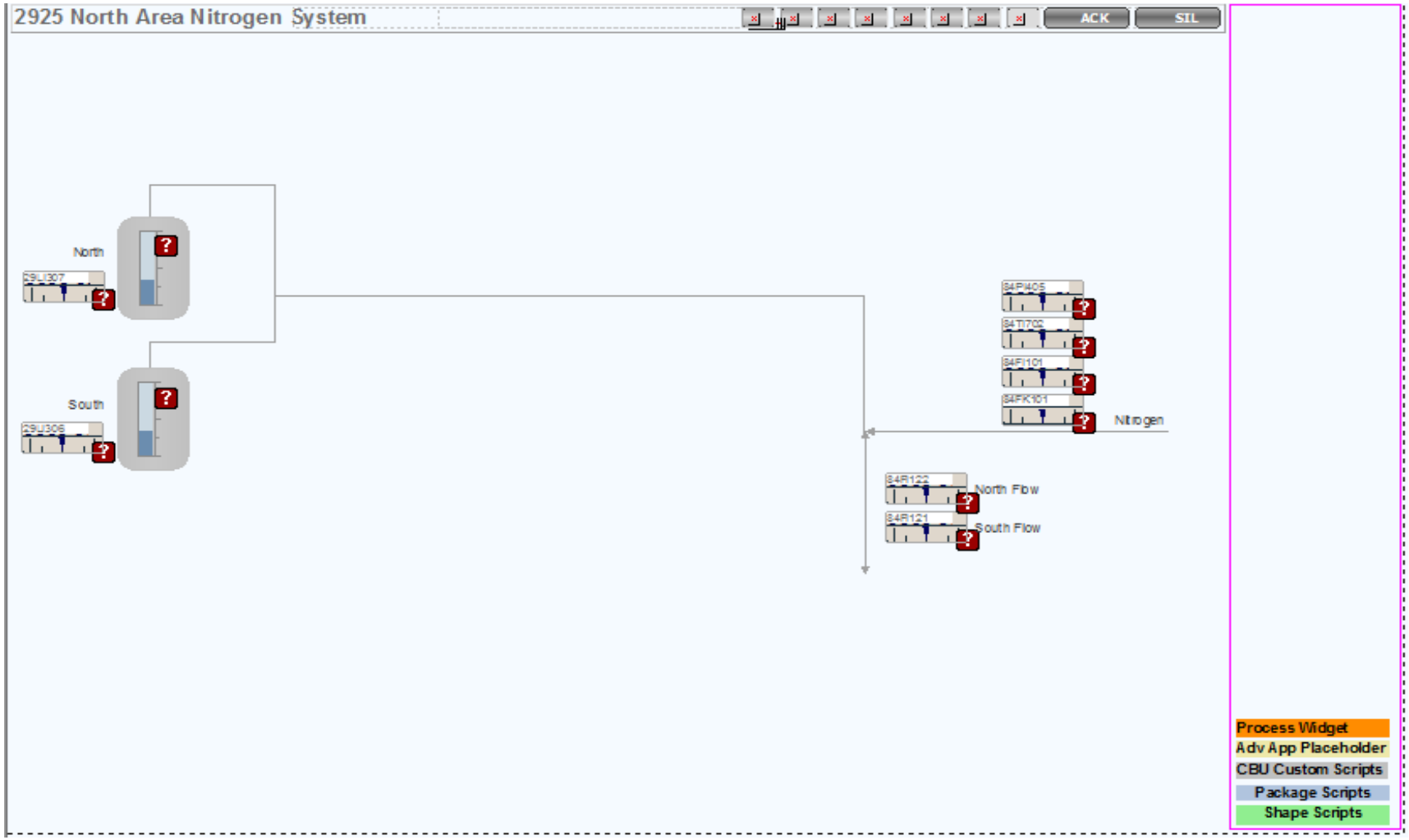
2.49 2240 2 Ref Emergency Screen (Reformer_2924H1.htm)

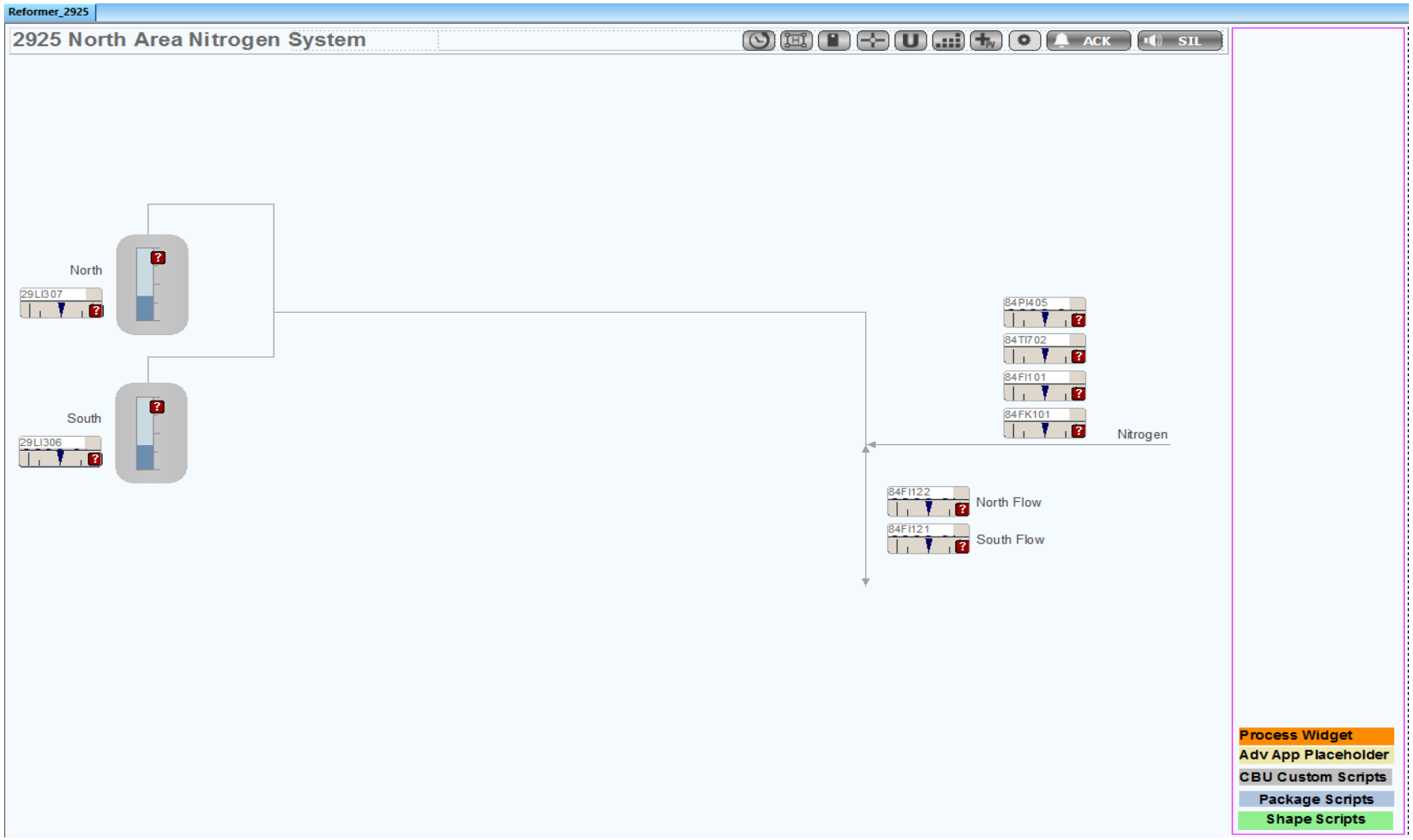


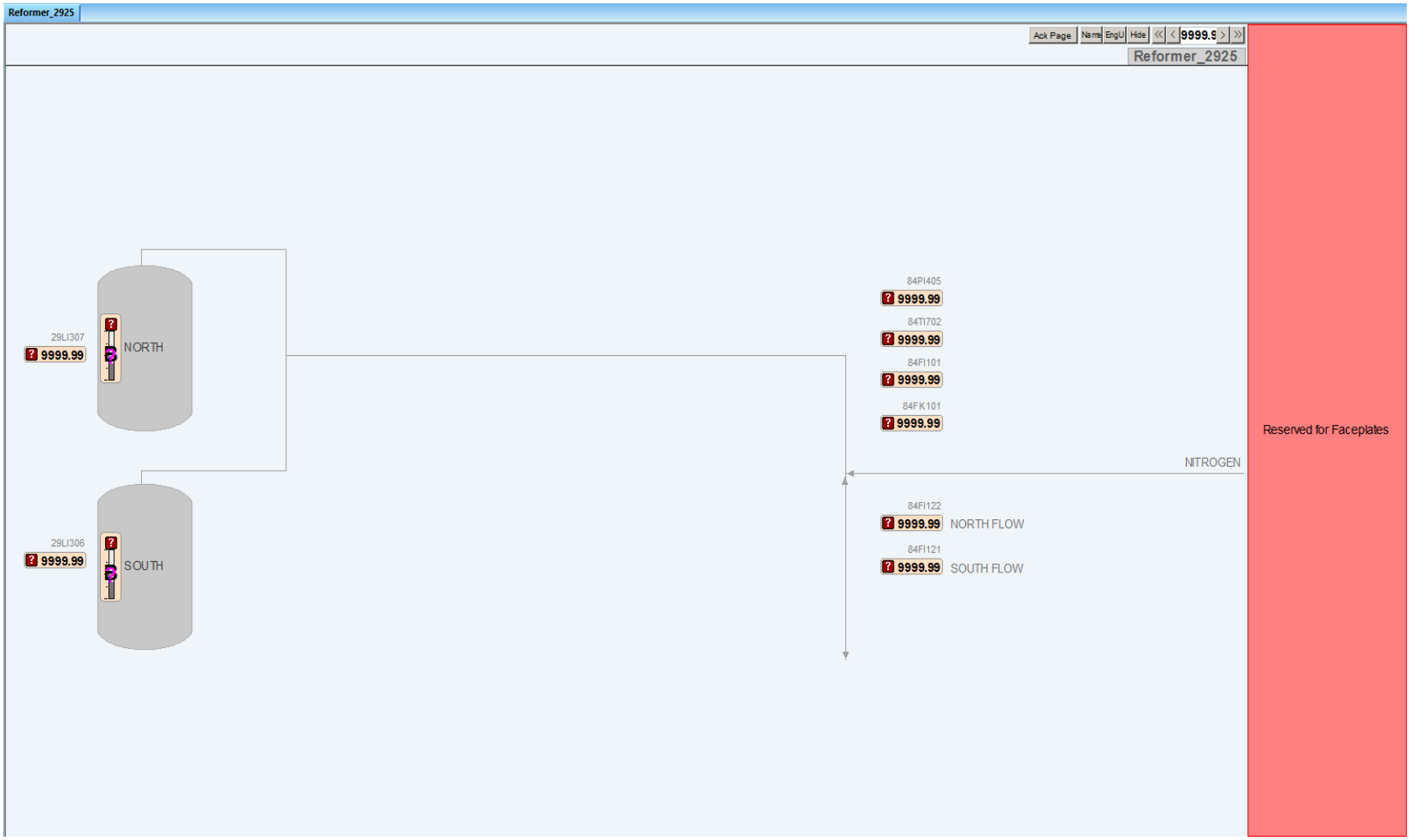

Reformer_2924H1
2924H1 #13 Cooling Tower RO Water Ratio Help
ACK
SIL
Cooling Tower #13
This is the current ACTUAL % RO Water ratio.
Mathematically equal to: (100 * RO Wtr) / (RO Wtr + Well Wtr)
This is the current RO Water ratio setpoint, expressed as % RO water. By touching the target, the Operator may enter a new % RO Water ratio SP.
RO Water Controller 89FC103 functions as a normal flow controller in MAN & AUTO modes. In CAS mode, 89FC103 becomes a RATIO controller. In CAS mode, 89FC103 gets a setpoint which is the product of the Well Water flow rate (89FI102) times a RATIO factor set within 89FC103. The Operator need not perform any mathematics to calculate the RATIO factor, but simply use the RATIO Setpoint entry box next to 89FC103. The entered RATIO Septoint is in % of RO water and must be between 20% and 90%.
89FK103
%RO Actual
Enter value:
%RO SP
%RO Setpoint
Ratio
89FC103
M
RO Water
Text%
89LC303
89FI102
Well Water
CT 13 Basin
WARNING:
To avoid bump in RO Water flowrate, make sure ACTUAL RO WATER ratio is within 10% of the RO Ratio Setpoint BEFORE changing the mode of 89FC103 to CAS.
Ratio Calculation (stored in 89FC103.RATIO):
Ratio = (0.884 x (RO SP / (100 - RO SP))
Actual Value (89FC103.RATIO) = 9999.99
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2924H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2924H1
ERGENCY SCREEN
THIS IS THE CURRENT ACTUAL % RO WATER RATIO.
MATHEMATICALLY EQUAL TO: (100 * RO WTR) / (RO WTR + WELL WTR)
THIS IS THE CURRENT RO WATER RATIO SETPOINT, EXPRESSED AS % RO WATER. BY TOUCHING THE TARGET, THE OPERATOR MAY ENTER A NEW % RO WATER RATIO SP.
RO WATER CONTROLLER 89FC103 FUNCTIONS AS A NORMAL FLOW CONTROLLER IN MAN & AUTO MODES. IN CAS MODE, 89FC103 BECOMES A RATIO CONTROLLER. IN CAS MODE, 89FC103 GETS A SETPOINT WHICH IS THE PRODUCT OF THE WELL WATER FLOW RATE (89FI102) TIMES A RATIO FACTOR SET WITHIN 89FC103. THE OPERATOR NEED NOT PERFORM ANY MATHEMATICS TO CALCULATE THE RATIO FACTOR, BUT SIMPLY USE THE RATIO SETPOINT ENTRY BOX NEXT TO 89FC103. THE ENTERED RATIO SEPTOINT IS IN % OF RO WATER AND MUST BE BETWEEN 20% AND 90%.
ENTER VALUE:
89FK103
9999.99
%RO ACTUAL
89FC105
9999.99
%RO SETPOINT
WARNING:
TO AVOID BUMP IN RO WATER FLOWRATE, MAKE SURE ACTUAL RO WATER RATIO IS WITHIN 10% OF THE RO RATIO SETPOINT BEFORE CHANGING THE MODE OF 89FC103 TO CAS.
89FC103
RATIO
9999.99 W
9999.99
89FC103
100%
RO WATER
89LC303
9999.99 W
9999.99
89LC303
89FI102
9999.99
100%
WELL WATER
CT 14
BASIN
RATIO CALCULATION (STORED IN 89FC103.RATIO):
RATIO = (0.884 X (RO SP / (100 - RO SP))
ACTUAL VALUE
(89FC103.RATIO) = 9999.99
Reserved for Faceplates

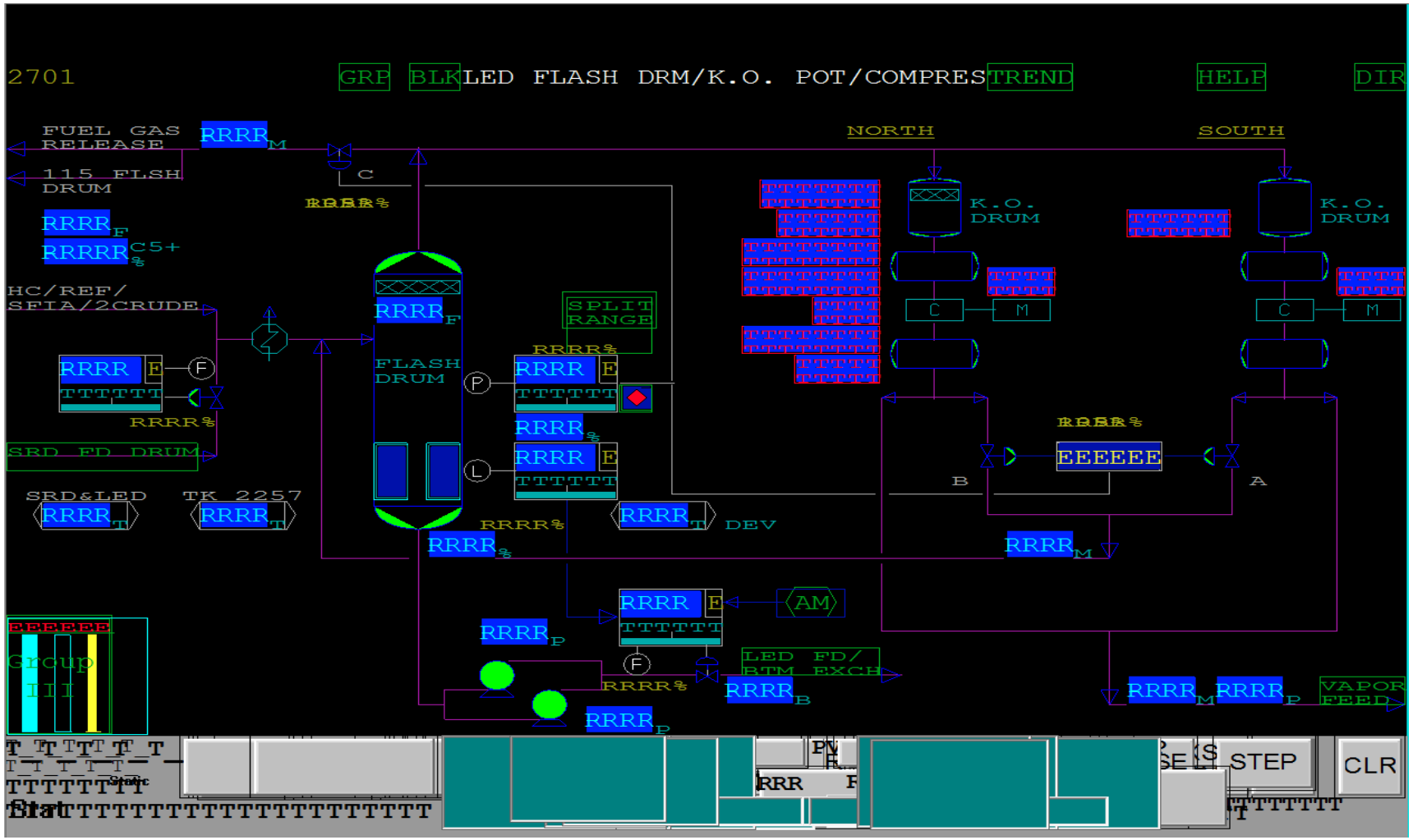
2.50 2240 2 Ref Emergency Screen (Reformer_2925.htm)

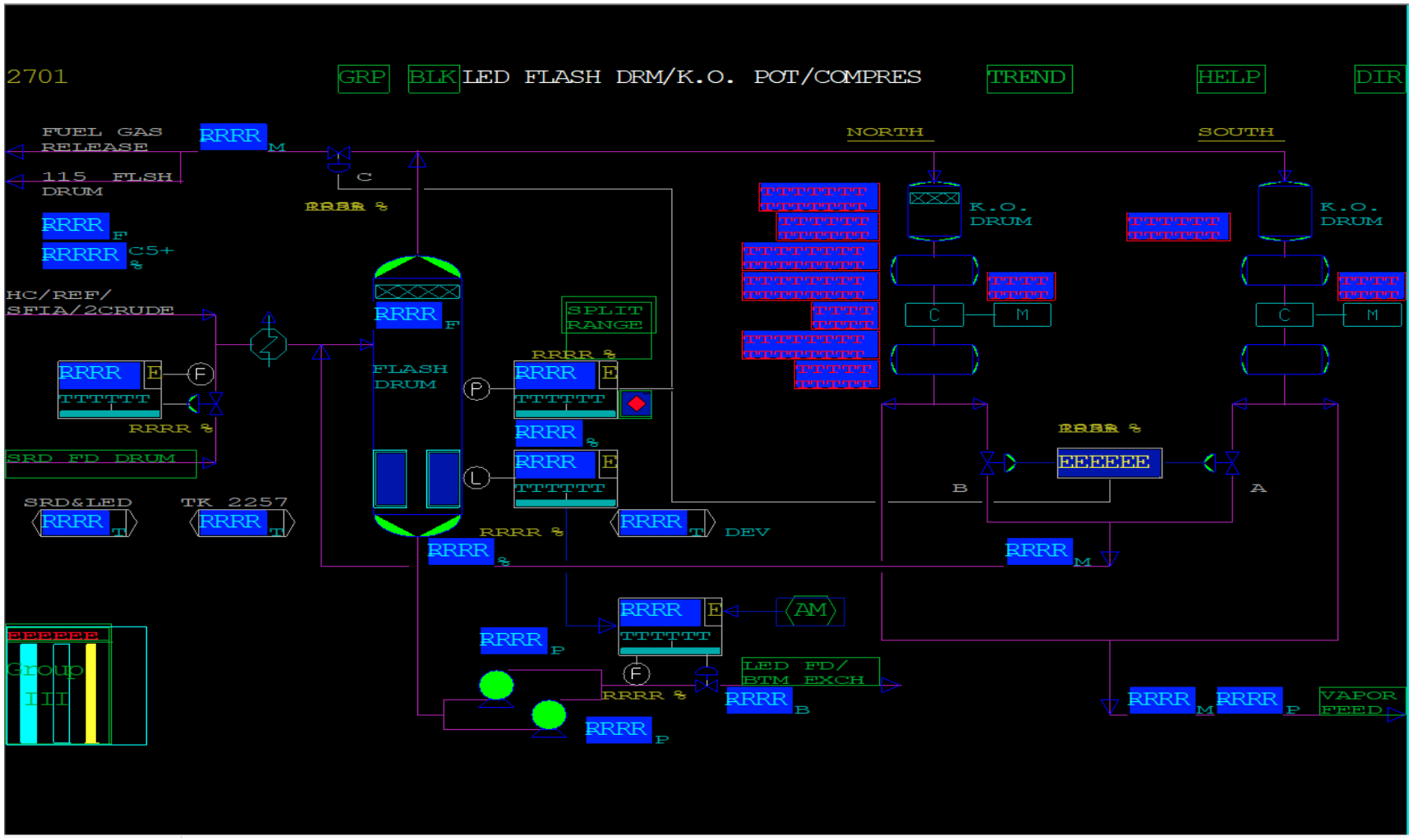


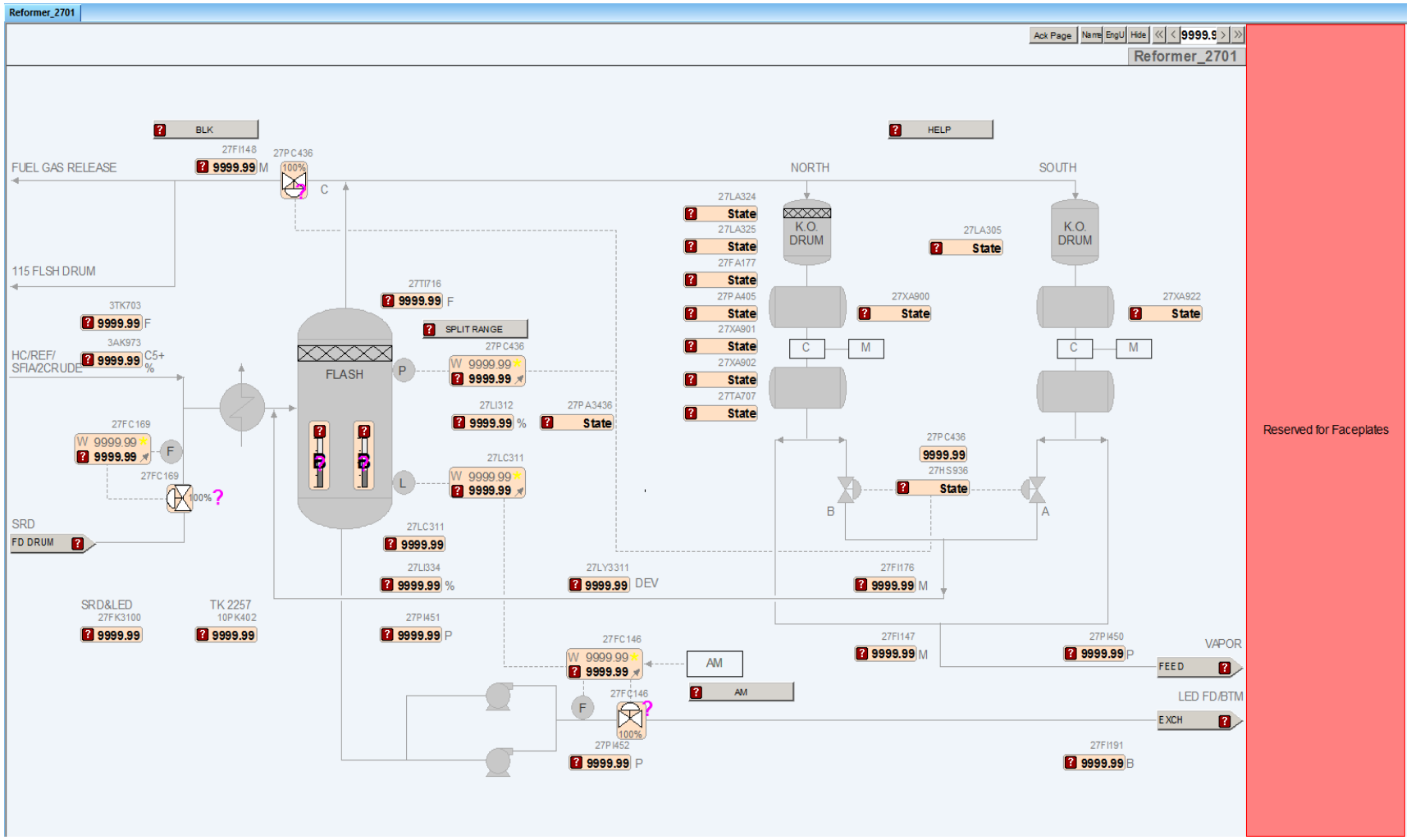

Reformer_2925
2925 North Area Nitrogen System
ACK
SIL
North
29LI307
South
29LI306
84PI405
84TI702
84FI101
84FK101
Nitrogen
84FI122
North Flow
84FI121
South Flow
Process Widget
Adv App Placeholder
CBU Custom Scripts
Package Scripts
Shape Scripts


Reformer_2925
Ack Page
Name
EngU
Hide
9999.9
Reformer_2925
29LI307
9999.99
NORTH
29LI306
9999.99
SOUTH
84PI405
9999.99
84TI702
9999.99
84FI101
9999.99
84FK101
9999.99
NITROGEN
84FI122
9999.99
NORTH FLOW
84FI121
9999.99
SOUTH FLOW
Reserved for Faceplates

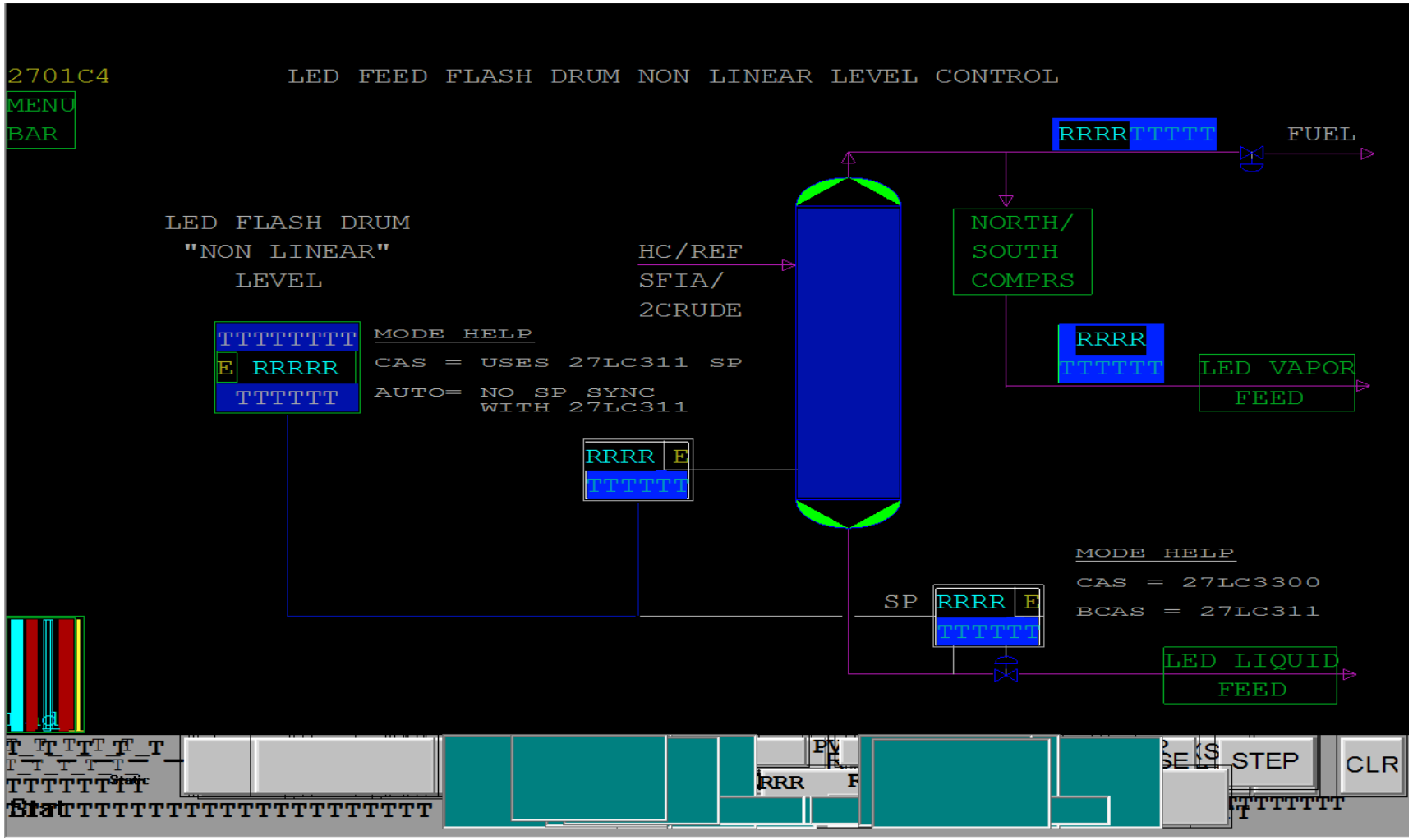
2.51 LED FLASH DRM/K.O. POT/COMPRES (2701.DS)

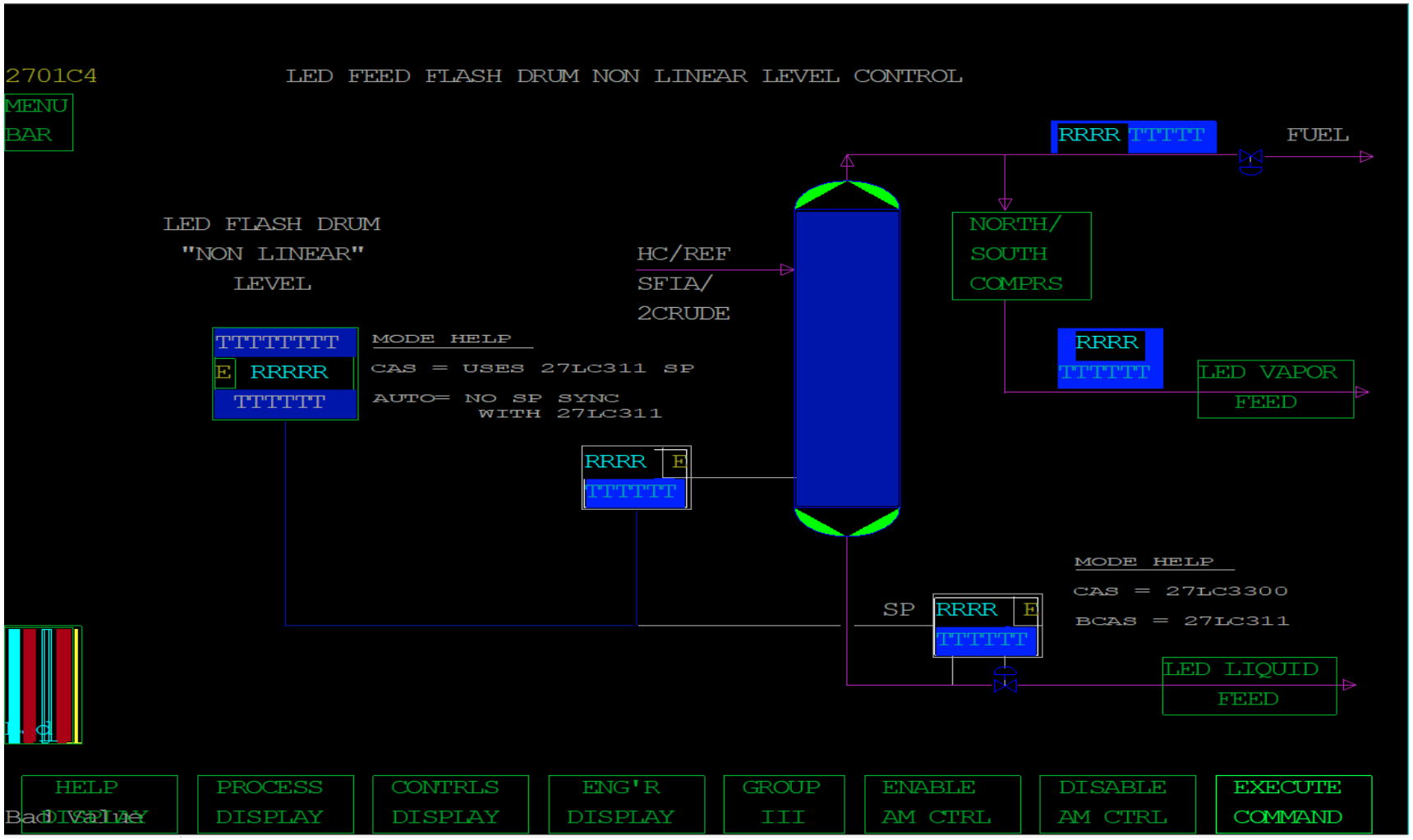


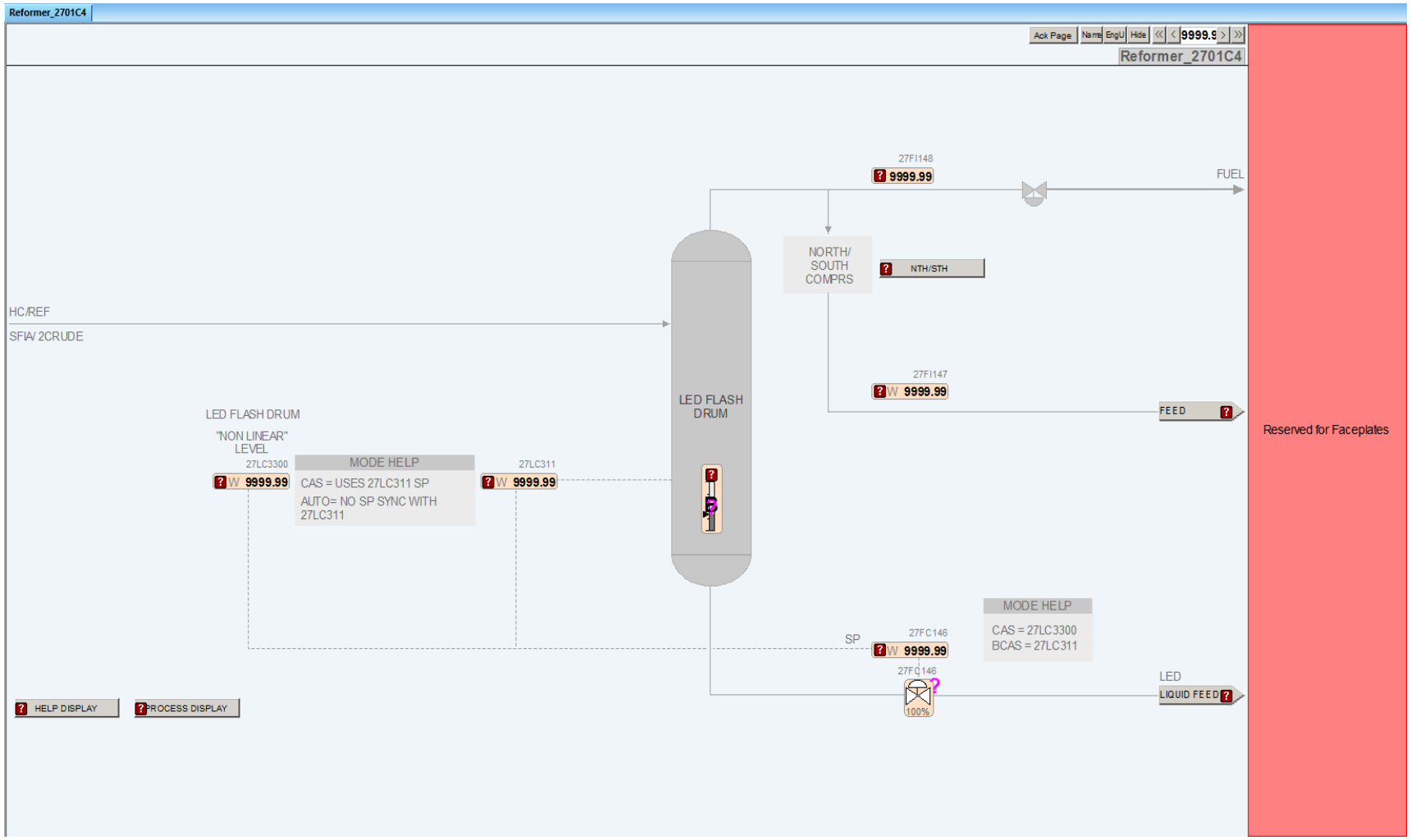

2701
GRP
BLK
LED FLASH DRM/K.O. POT/COMPRES
TREND
HELP
DIR
FUEL GAS RELEASE
115 FLSH DRUM
NORTH
SOUTH
K.O. DRUM
HC/REF/ SFIA/2CRUDE
SPLIT RANGE
FLASH DRUM
SRD FD DRUM
SRD&LED
TK 2257
DEV
AM
LED FD/ BTM EXCH
VAPOR FEED
Group III


Reformer_2701
Ack Page
Name
EngU
Hide
Reformer_2701
BLK
HELP
FUEL GAS RELEASE
27FI148
9999.99 M
27PC436
100%
C
NORTH
SOUTH
115 FLSH DRUM
27LA324
State
27LA325
State
27FA177
State
27PA405
State
27XA901
State
27XA902
State
27TA707
State
K.O. DRUM
27LA305
State
27XA900
State
27XA922
State
C
M
27TI716
9999.99 F
3TK703
9999.99 F
SPLIT RANGE
HC/REF/ SFIA/2CRUDE
3AK973
9999.99 C5+ %
FLASH
P
27PC436
W 9999.99
9999.99
27LI312
9999.99 %
27PA3436
State
27FC169
W 9999.99
9999.99
F
27LC311
W 9999.99
9999.99
L
27FC169
100%
27PC436
9999.99
27HS936
State
B
A
SRD
FD DRUM
27LC311
9999.99
27LI334
9999.99 %
27LY3311
9999.99 DEV
27FI176
9999.99 M
SRD&LED
27FK3100
9999.99
TK 2257
10PK402
9999.99
27PI451
9999.99 P
27FC146
W 9999.99
9999.99
AM
AM
27FI147
9999.99 M
27PI450
9999.99 P
VAPOR
FEED
F
27FC146
100%
LED FD/BTM
EXCH
27PI452
9999.99 P
27FI191
9999.99 B
Reserved for Faceplates

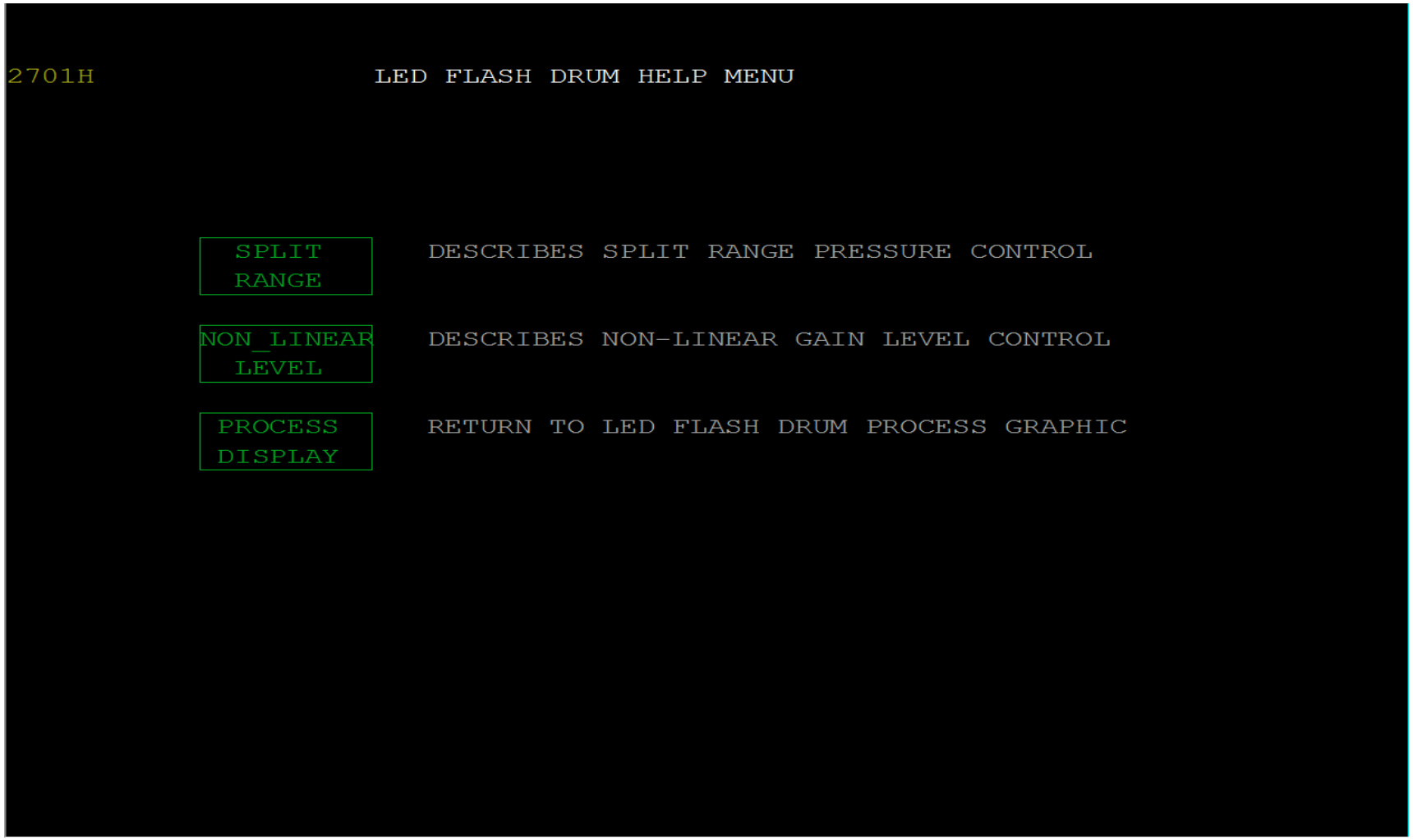
2.52 LED FEED FLASH DRUM NON LINEAR LEVEL CONTROL (2701C4.DS)

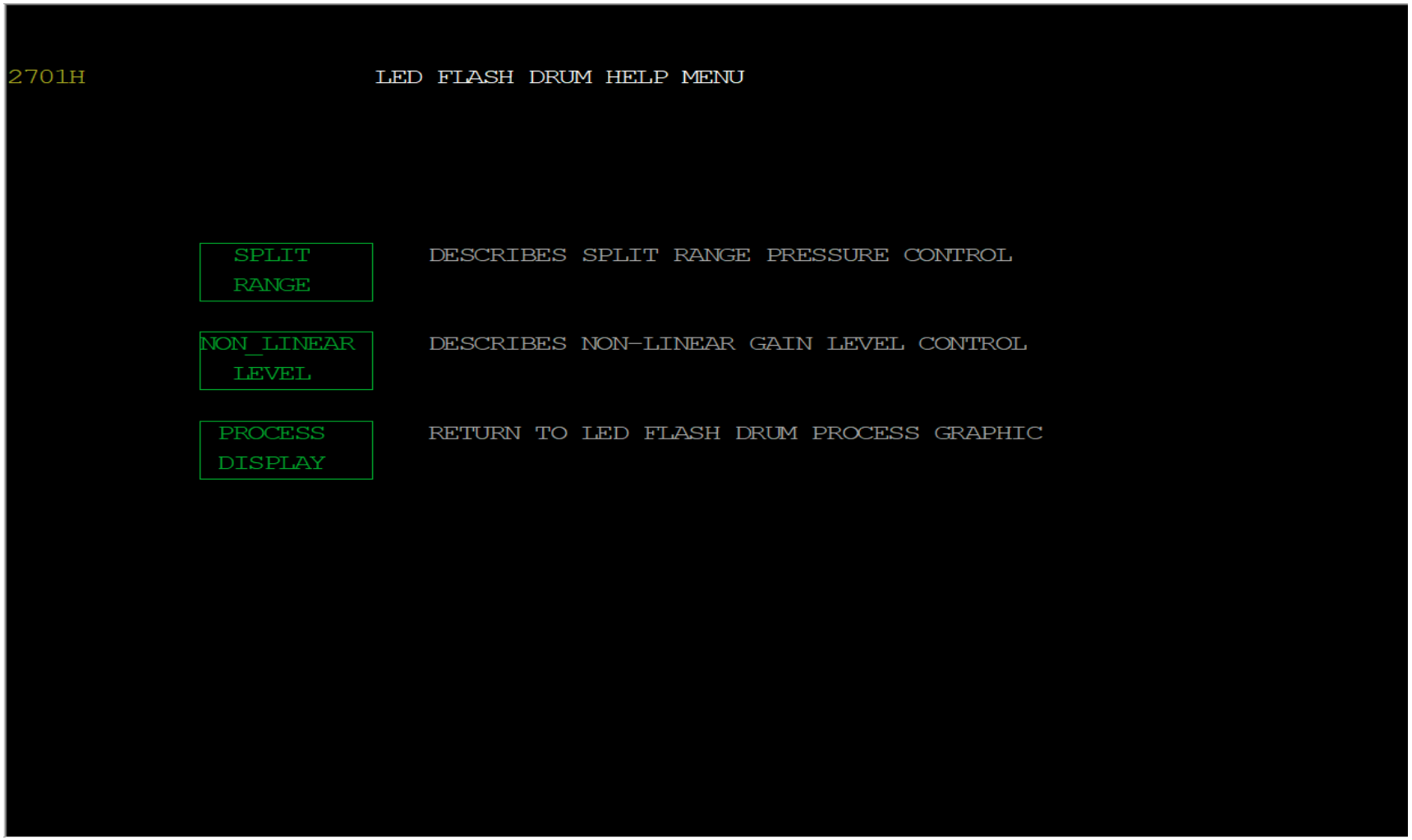


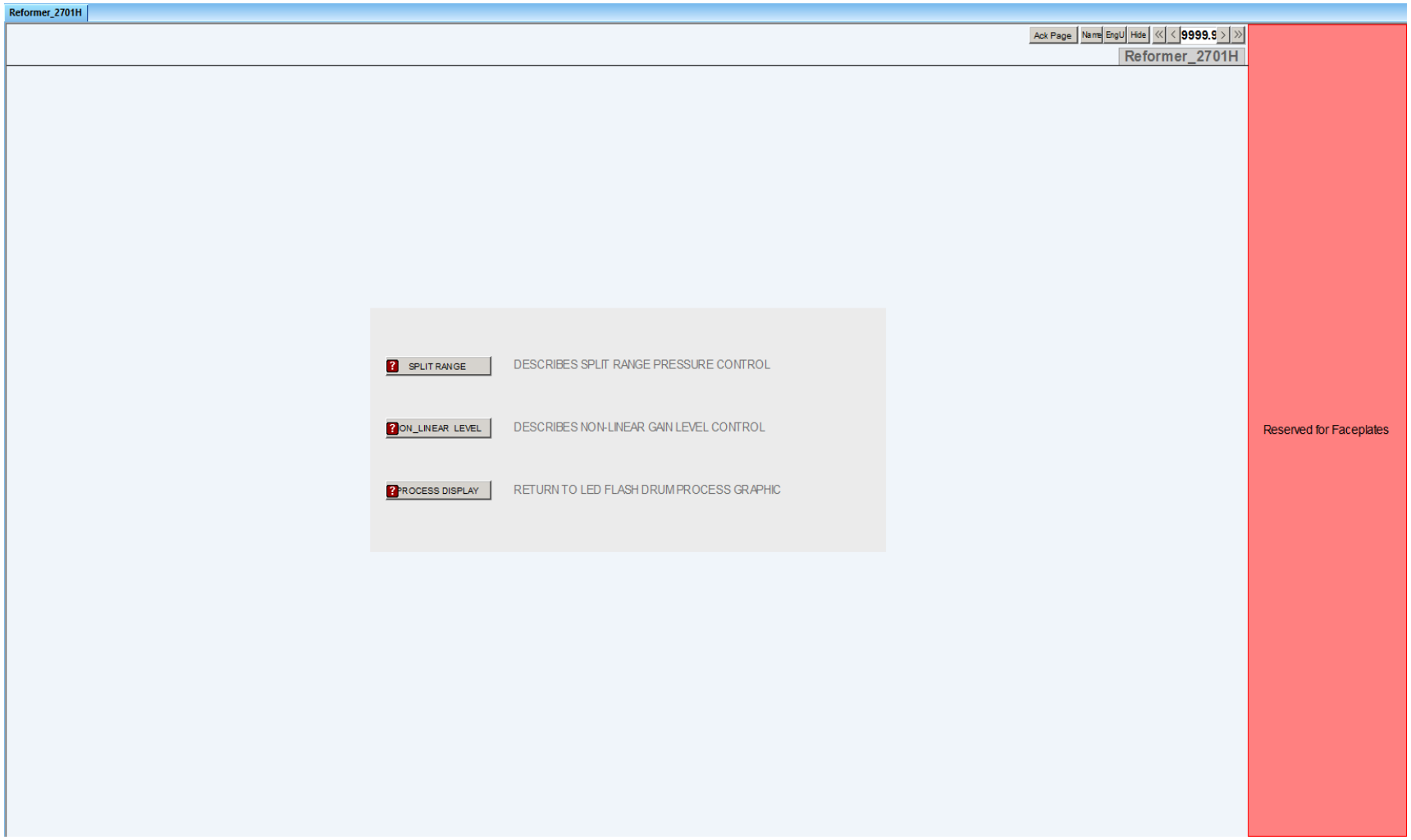

2701C4
LED FEED FLASH DRUM NON LINEAR LEVEL CONTROL
MENU BAR
RRRR TTTTT
FUEL
LED FLASH DRUM "NON LINEAR" LEVEL
HC/REF
SFIA/
2CRUDE
NORTH/ SOUTH COMPRS
RRRR TTTTT
LED VAPOR FEED
TTTTTTTT
E RRRRR
TTTTTT
MODE HELP
CAS = USES 27LC311 SP
AUTO= NO SP SYNC WITH 27LC311
RRRR E
TTTTTT
MODE HELP
CAS = 27LC3300
BCAS = 27LC311
SP
RRRR E
TTTTTT
LED LIQUID FEED
HELP DISPLAY
PROCESS DISPLAY
CONTRLS DISPLAY
ENG'R DISPLAY
GROUP III
ENABLE AM CTRL
DISABLE AM CTRL
EXECUTE COMMAND


Reformer_2701C4
Ack Page
Name
EngU
Hide
9999.9
Reformer_2701C4
27FI148
9999.99
FUEL
NORTH/
SOUTH
COMPRS
NTH/STH
HC/REF
SFIA/ 2CRUDE
27FI147
W 9999.99
FEED
LED FLASH DRUM
"NON LINEAR"
LEVEL
27LC3300
W 9999.99
MODE HELP
CAS = USES 27LC311 SP
AUTO= NO SP SYNC WITH
27LC311
27LC311
W 9999.99
LED FLASH
DRUM
MODE HELP
CAS = 27LC3300
BCAS = 27LC311
SP
27FC146
W 9999.99
27FC146
100%
LED
LIQUID FEED
HELP DISPLAY
PROCESS DISPLAY
Reserved for Faceplates

2.53 LED FLASH DRUM HELP MENU (2701H.DS)




2701H
LED FLASH DRUM HELP MENU
SPLIT RANGE
DESCRIBES SPLIT RANGE PRESSURE CONTROL
NON_LINEAR LEVEL
DESCRIBES NON-LINEAR GAIN LEVEL CONTROL
PROCESS DISPLAY
RETURN TO LED FLASH DRUM PROCESS GRAPHIC


Reformer_2701H
Ack Page
Name
EngU
Hide
9999.9
Reformer_2701H
SPLIT RANGE
DESCRIBES SPLIT RANGE PRESSURE CONTROL
ON_LINEAR LEVEL
DESCRIBES NON-LINEAR GAIN LEVEL CONTROL
PROCESS DISPLAY
RETURN TO LED FLASH DRUM PROCESS GRAPHIC
Reserved for Faceplates

2.54 LED FLASH DRUM SPLIT RANGE PRESSURE CONTROL (2701H1.DS)

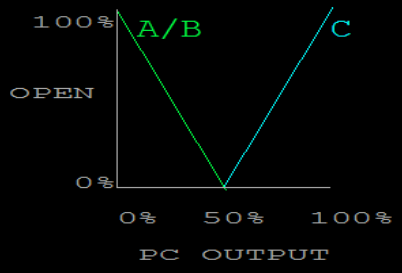
2701H1 LED FLASH DRUM SPLIT RANGE PRESSURE CONTROL PROCESS

The LED Feed Flash Drum pressure is controlled via 27PC436 by split ranging the output. When the Flash Drum pressure is above setpoint, the "C" valve will be releasing to fuel. The "C" valve will be closed when the output of of 27PC436 is 50% and open when the output of 27PC436 is 100%.
When the Flash Drum pressure is below setpoint, the "A" or "B" valve will be recycling gas from the South or North Compressor discharge to the Flash Drum. The use of the "A" or "B" valve is determined by the position of TDC handswitch 27HS936: NORTH = "B" valve and SOUTH = "A" valve. The non-selected valve ("A" or "B") will be closed at all times.
The selected valve ("A" or "B") will be closed when the output of 27PC436 is 50% and open when the output of 27PC436 is 0%.

RRRR%

PC OUTPUT= -5% 105%

	Pressure Controller Output 0%	50%	100%
Fuel Release Valve C	Close	Close	Open
Comp Recycle Valve A/B	Open	Close	Close

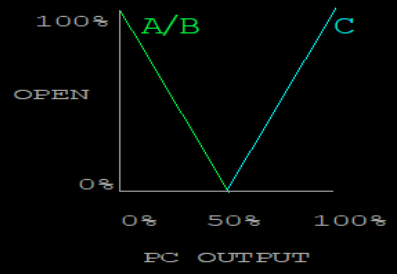


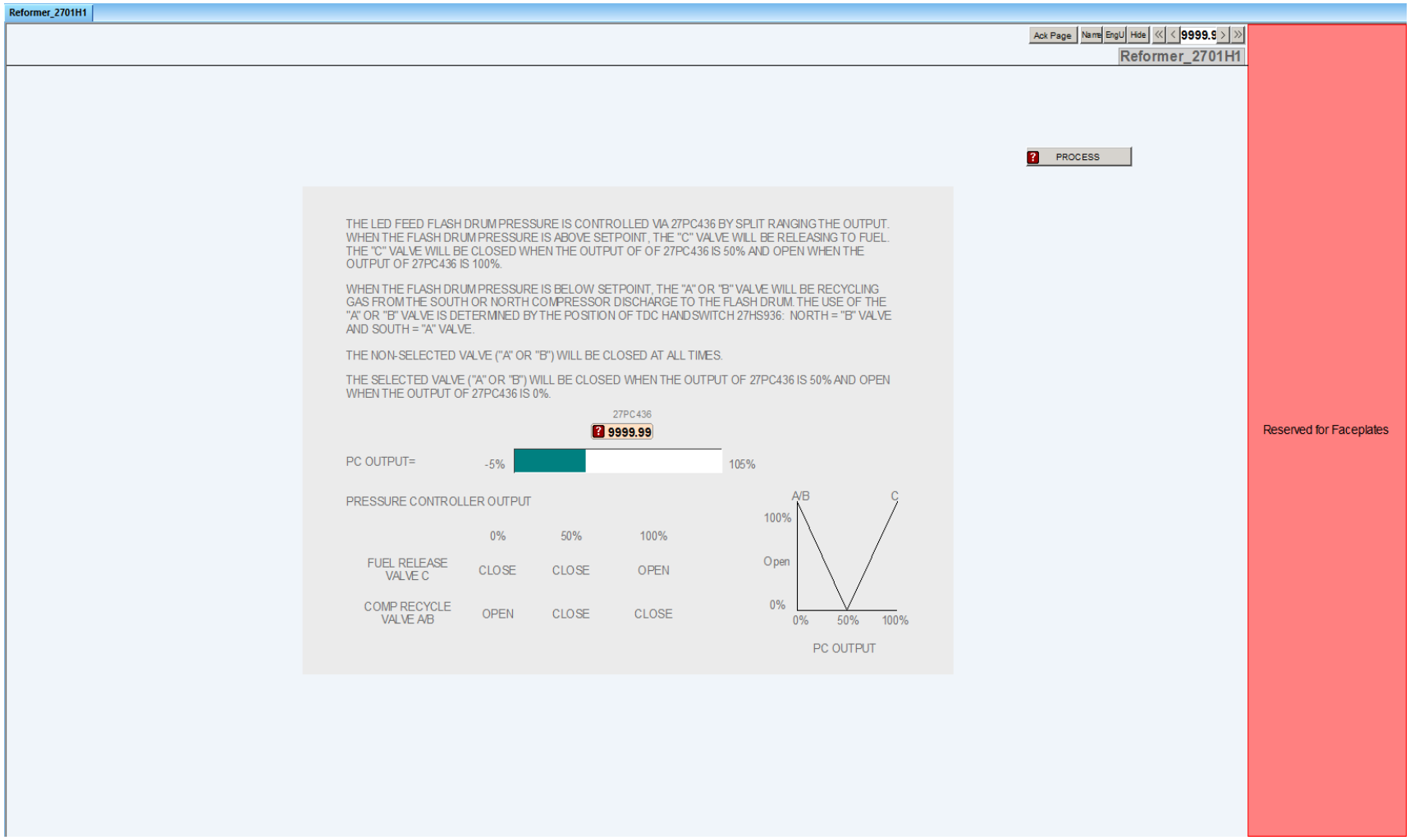
2701H1 LED FLASH DRUM SPLIT RANGE PRESSURE CONTROL PROCESS

The LED Feed Flash Drum pressure is controlled via 27PC436 by split ranging the output. When the Flash Drum pressure is above setpoint, the "C" valve will be releasing to fuel. The "C" valve will be closed when the output of of 27PC436 is 50% and open when the output of 27PC436 is 100%.
When the Flash Drum pressure is below setpoint, the "A" or "B" valve will be recycling gas from the South or North Compressor discharge to the Flash Drum. The use of the "A" or "B" valve is determined by the position of TDC handswitch 27HS936: NORTH = "B" valve and SOUTH = "A" valve.
The non-selected valve ("A" or "B") will be closed at all times.
The selected valve ("A" or "B") will be closed when the output of 27PC436 is 50% and open when the output of 27PC436 is 0%.

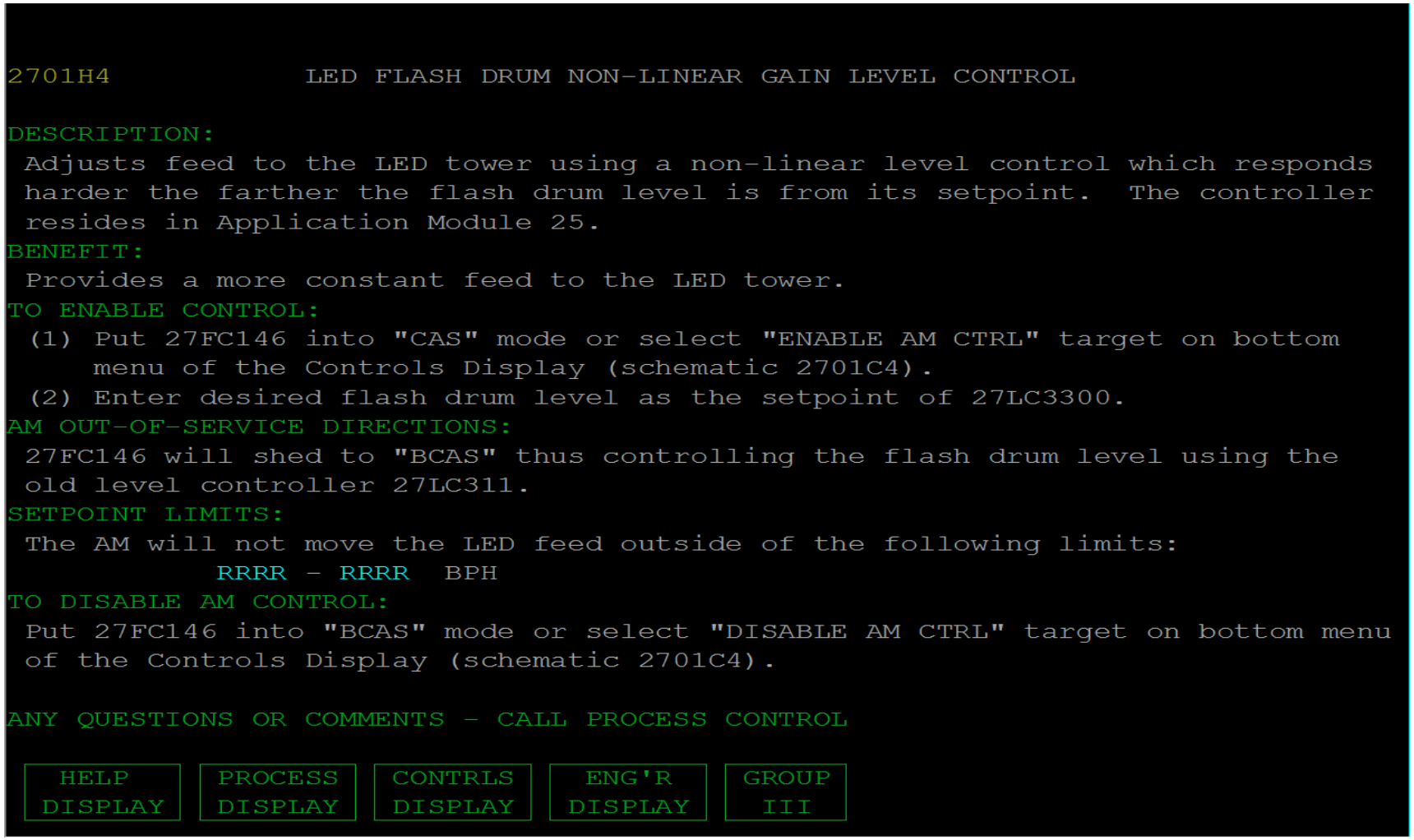
pressure Controller Output

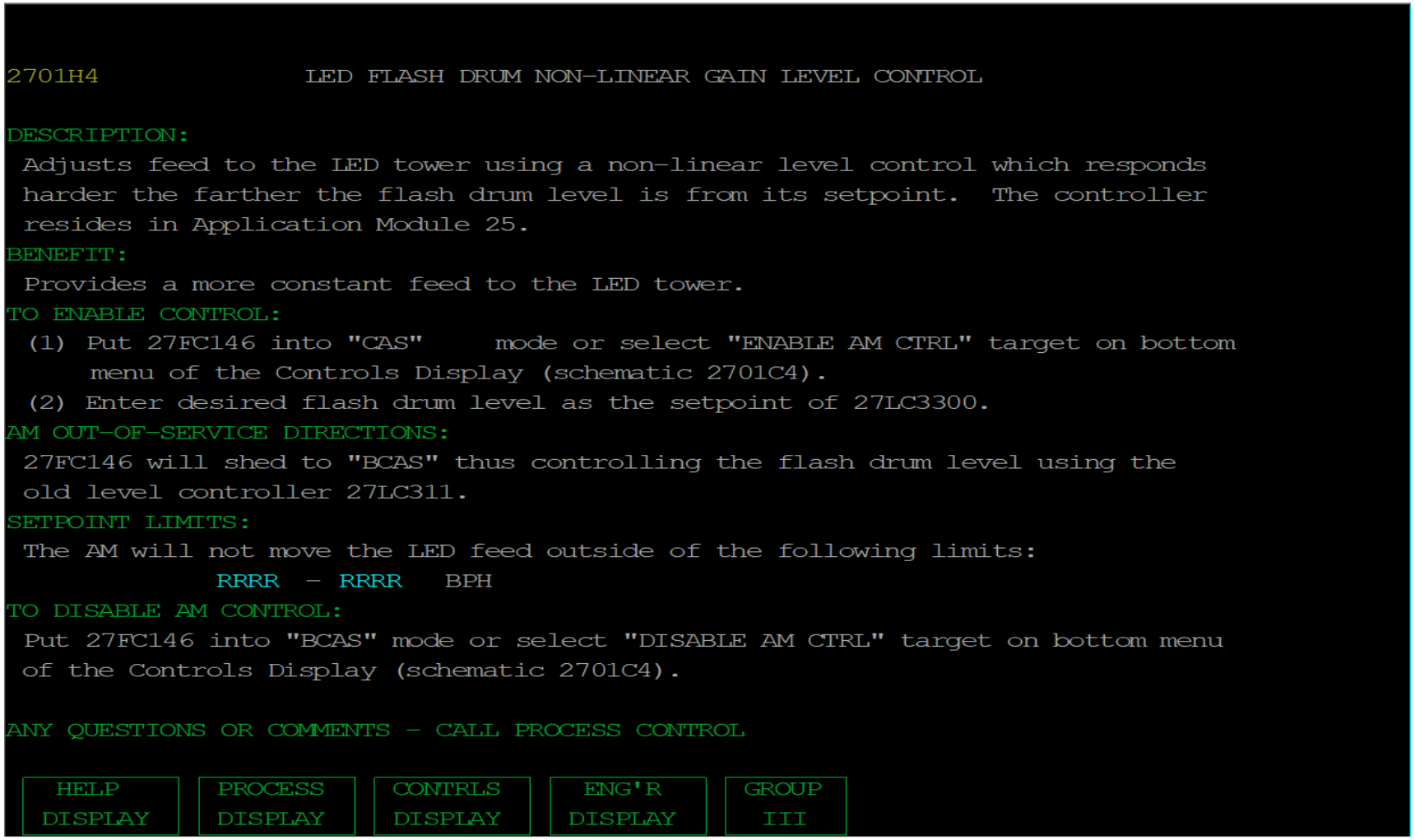
	0%	50%	100%
Fuel Release Valve C	Close	Close	Open
Comp Recycle Valve A/B	Open	Close	Close

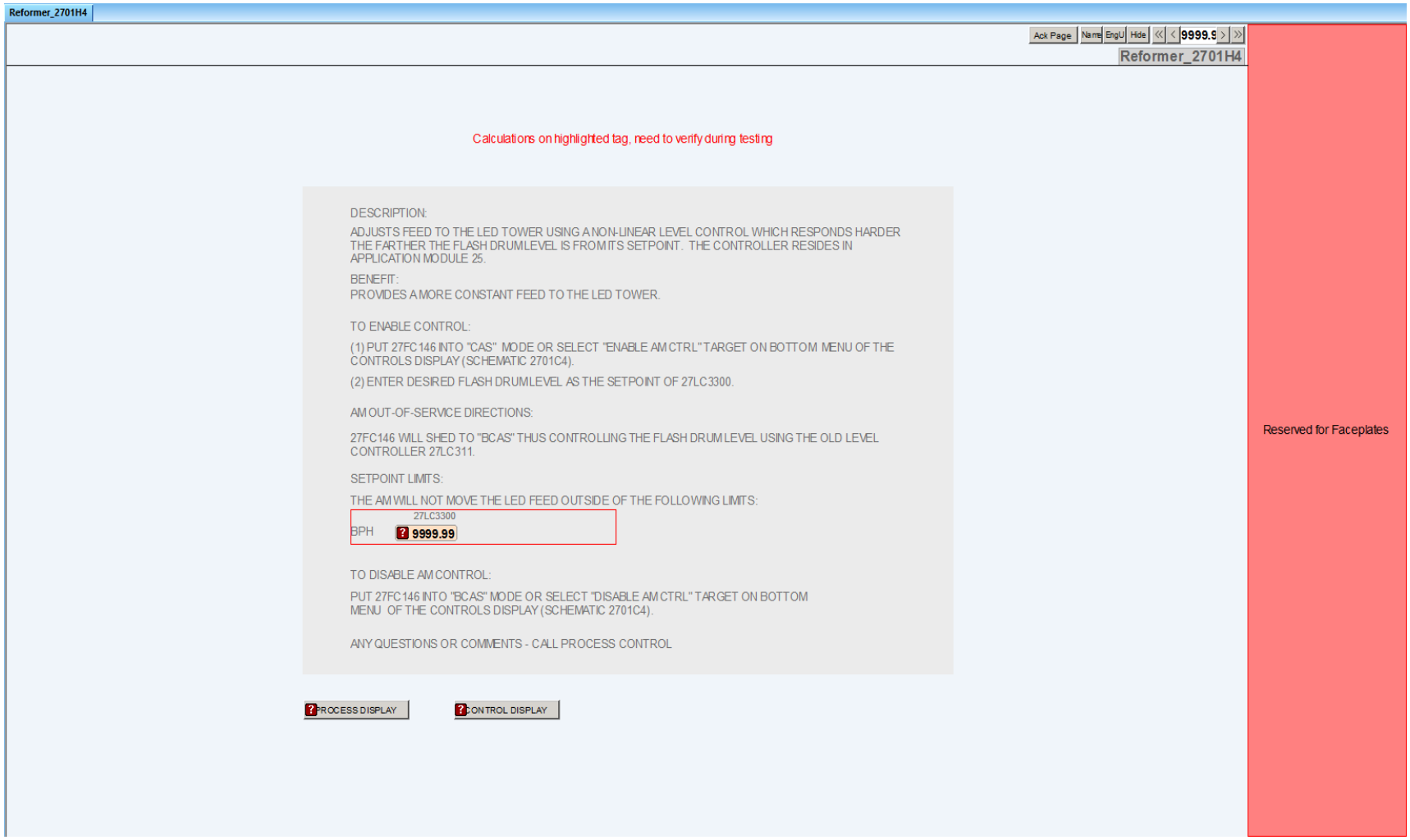



Reformer_2701H1
Ack Page
Name
EngU
Hide
9999.9
Reformer_2701H1
PROCESS
THE LED FEED FLASH DRUM PRESSURE IS CONTROLLED VIA 27PC436 BY SPLIT RANGING THE OUTPUT. WHEN THE FLASH DRUM PRESSURE IS ABOVE SETPOINT, THE "C" VALVE WILL BE RELEASING TO FUEL. THE "C" VALVE WILL BE CLOSED WHEN THE OUTPUT OF OF 27PC436 IS 50% AND OPEN WHEN THE OUTPUT OF 27PC436 IS 100%.
WHEN THE FLASH DRUM PRESSURE IS BELOW SETPOINT, THE "A" OR "B" VALVE WILL BE RECYCLING GAS FROM THE SOUTH OR NORTH COMPRESSOR DISCHARGE TO THE FLASH DRUM. THE USE OF THE "A" OR "B" VALVE IS DETERMINED BY THE POSITION OF TDC HAND SWITCH 27HS936: NORTH = "B" VALVE AND SOUTH = "A" VALVE.
THE NON-SELECTED VALVE ("A" OR "B") WILL BE CLOSED AT ALL TIMES.
THE SELECTED VALVE ("A" OR "B") WILL BE CLOSED WHEN THE OUTPUT OF 27PC436 IS 50% AND OPEN WHEN THE OUTPUT OF 27PC436 IS 0%.
27PC436
9999.99
PC OUTPUT=
-5%
105%
PRESSURE CONTROLLER OUTPUT
0%
50%
100%
FUEL RELEASE VALVE C
CLOSE
CLOSE
OPEN
COMP RECYCLE VALVE A/B
OPEN
CLOSE
CLOSE
A/B
C
100%
Open
0%
0%
50%
100%
PC OUTPUT
Reserved for Faceplates

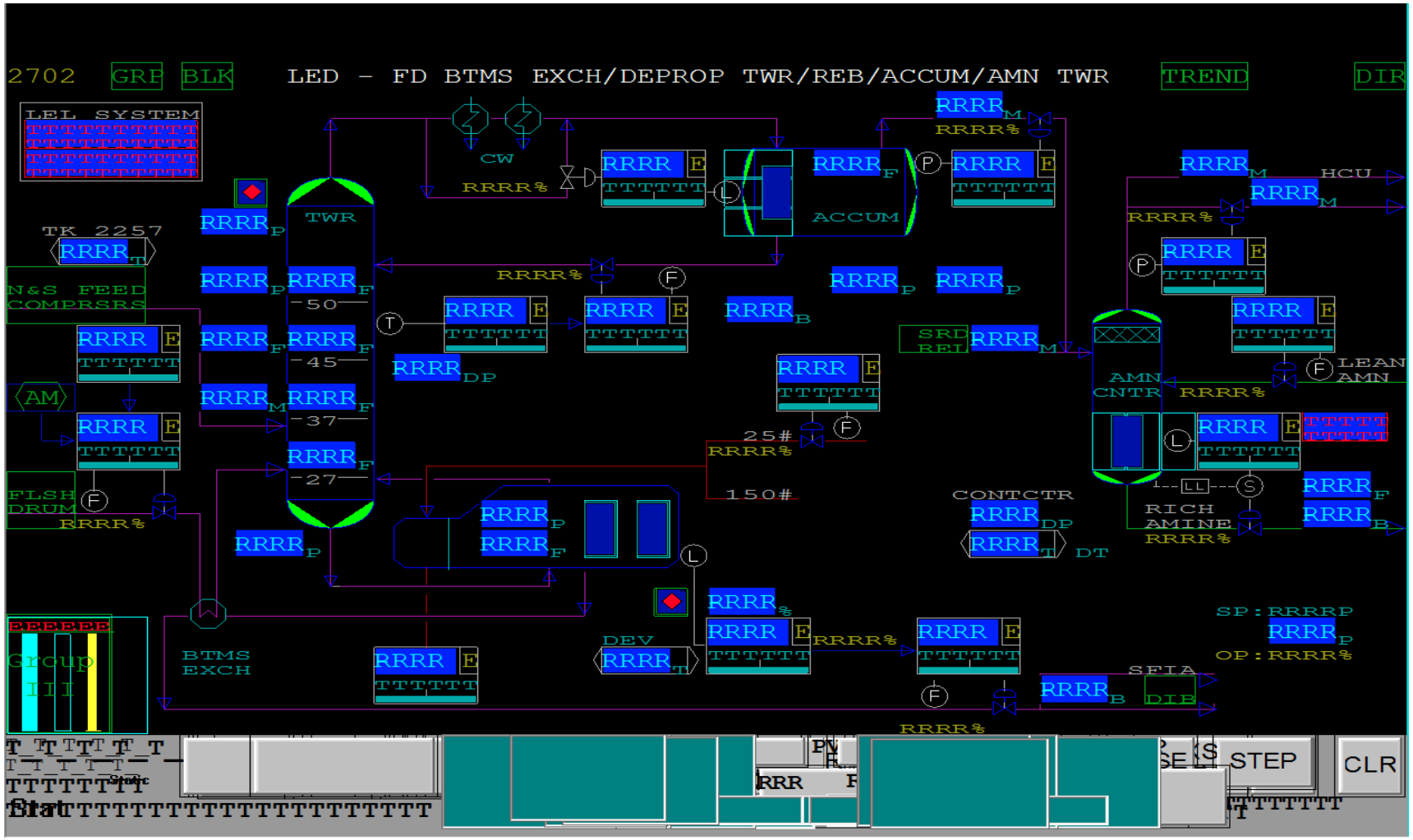
2.55 LED FLASH DRUM NON-LINEAR GAIN LEVEL CONTROL (2701H4.DS)

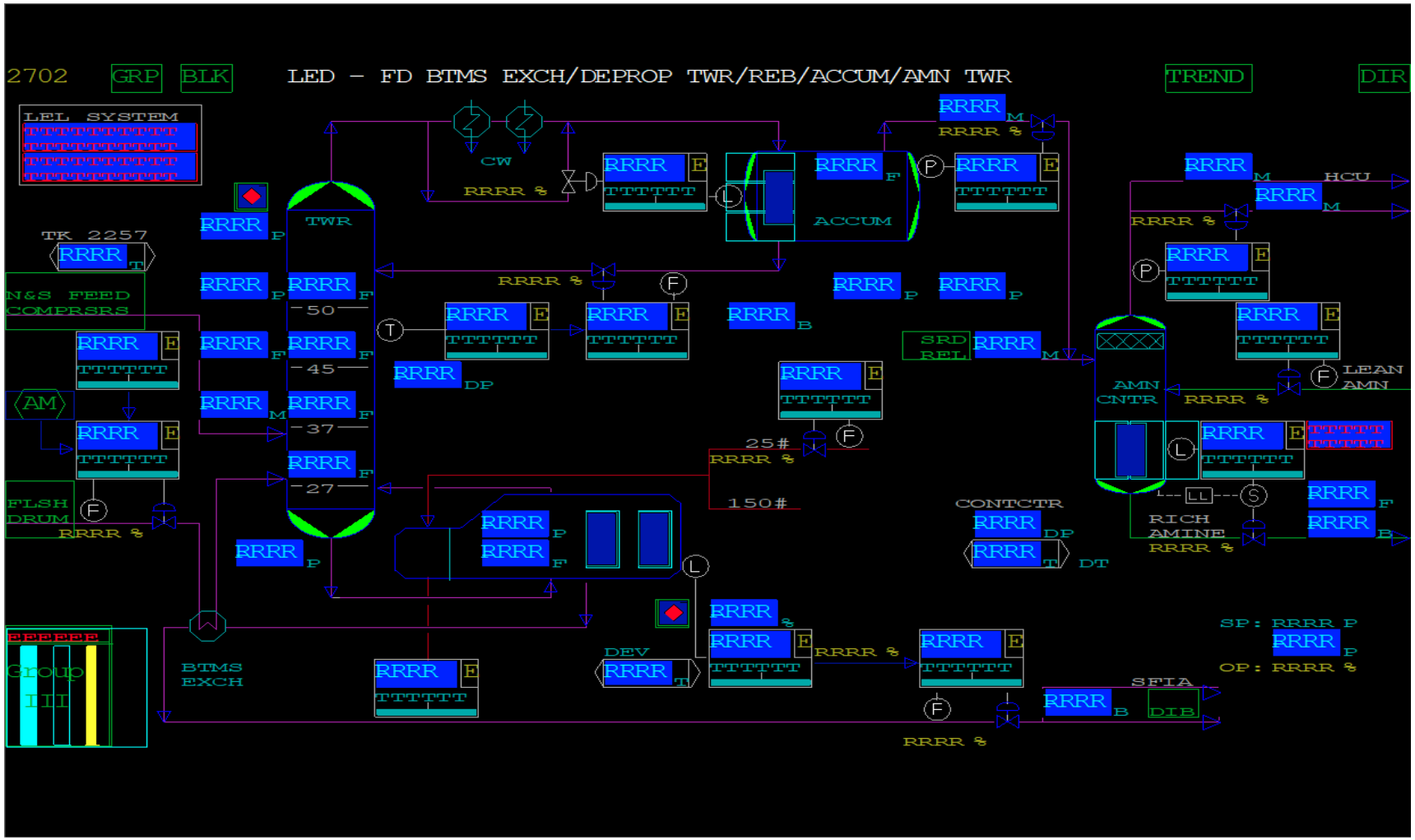


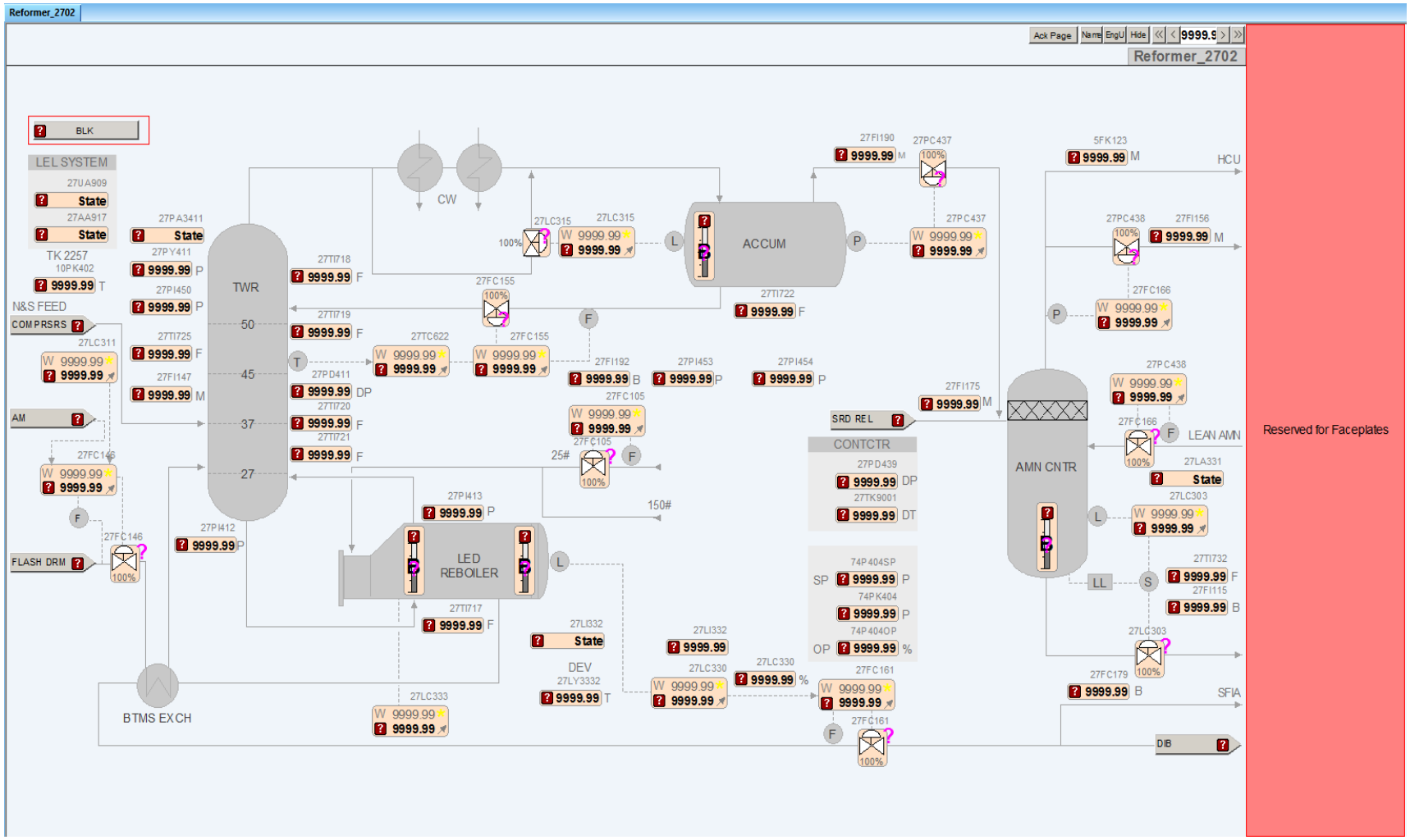

2701H4 LED FLASH DRUM NON-LINEAR GAIN LEVEL CONTROL
DESCRIPTION:
Adjusts feed to the LED tower using a non-linear level control which responds harder the farther the flash drum level is from its setpoint. The controller resides in Application Module 25.
BENEFIT:
Provides a more constant feed to the LED tower.
TO ENABLE CONTROL:
(1) Put 27FC146 into "CAS" mode or select "ENABLE AM CTRL" target on bottom menu of the Controls Display (schematic 2701C4).
(2) Enter desired flash drum level as the setpoint of 27LC3300.
AM OUT-OF-SERVICE DIRECTIONS:
27FC146 will shed to "BCAS" thus controlling the flash drum level using the old level controller 27LC311.
SETPOINT LIMITS:
The AM will not move the LED feed outside of the following limits:
RRRR - RRRR BPH
TO DISABLE AM CONTROL:
Put 27FC146 into "BCAS" mode or select "DISABLE AM CTRL" target on bottom menu of the Controls Display (schematic 2701C4).
ANY QUESTIONS OR COMMENTS - CALL PROCESS CONTROL
HELP DISPLAY
PROCESS DISPLAY
CONTRLS DISPLAY
ENG'R DISPLAY
GROUP III


Reformer_2701H4
Ack Page
Name
EngU
Hide
9999.9
Reformer_2701H4
Calculations on highlighted tag, need to verify during testing
DESCRIPTION:
ADJUSTS FEED TO THE LED TOWER USING A NON-LINEAR LEVEL CONTROL WHICH RESPONDS HARDER THE FARTHER THE FLASH DRUM LEVEL IS FROM ITS SETPOINT. THE CONTROLLER RESIDES IN APPLICATION MODULE 25.
BENEFIT:
PROVIDES A MORE CONSTANT FEED TO THE LED TOWER.
TO ENABLE CONTROL:
(1) PUT 27FC146 INTO "CAS" MODE OR SELECT "ENABLE AM CTRL" TARGET ON BOTTOM MENU OF THE CONTROLS DISPLAY (SCHEMATIC 2701C4).
(2) ENTER DESIRED FLASH DRUM LEVEL AS THE SETPOINT OF 27LC3300.
AM OUT-OF-SERVICE DIRECTIONS:
27FC146 WILL SHED TO "BCAS" THUS CONTROLLING THE FLASH DRUM LEVEL USING THE OLD LEVEL CONTROLLER 27LC311.
SETPOINT LIMITS:
THE AM WILL NOT MOVE THE LED FEED OUTSIDE OF THE FOLLOWING LIMITS:
27LC3300
BPH
9999.99
TO DISABLE AM CONTROL:
PUT 27FC146 INTO "BCAS" MODE OR SELECT "DISABLE AM CTRL" TARGET ON BOTTOM MENU OF THE CONTROLS DISPLAY (SCHEMATIC 2701C4).
ANY QUESTIONS OR COMMENTS - CALL PROCESS CONTROL
PROCESS DISPLAY
CONTROL DISPLAY
Reserved for Faceplates

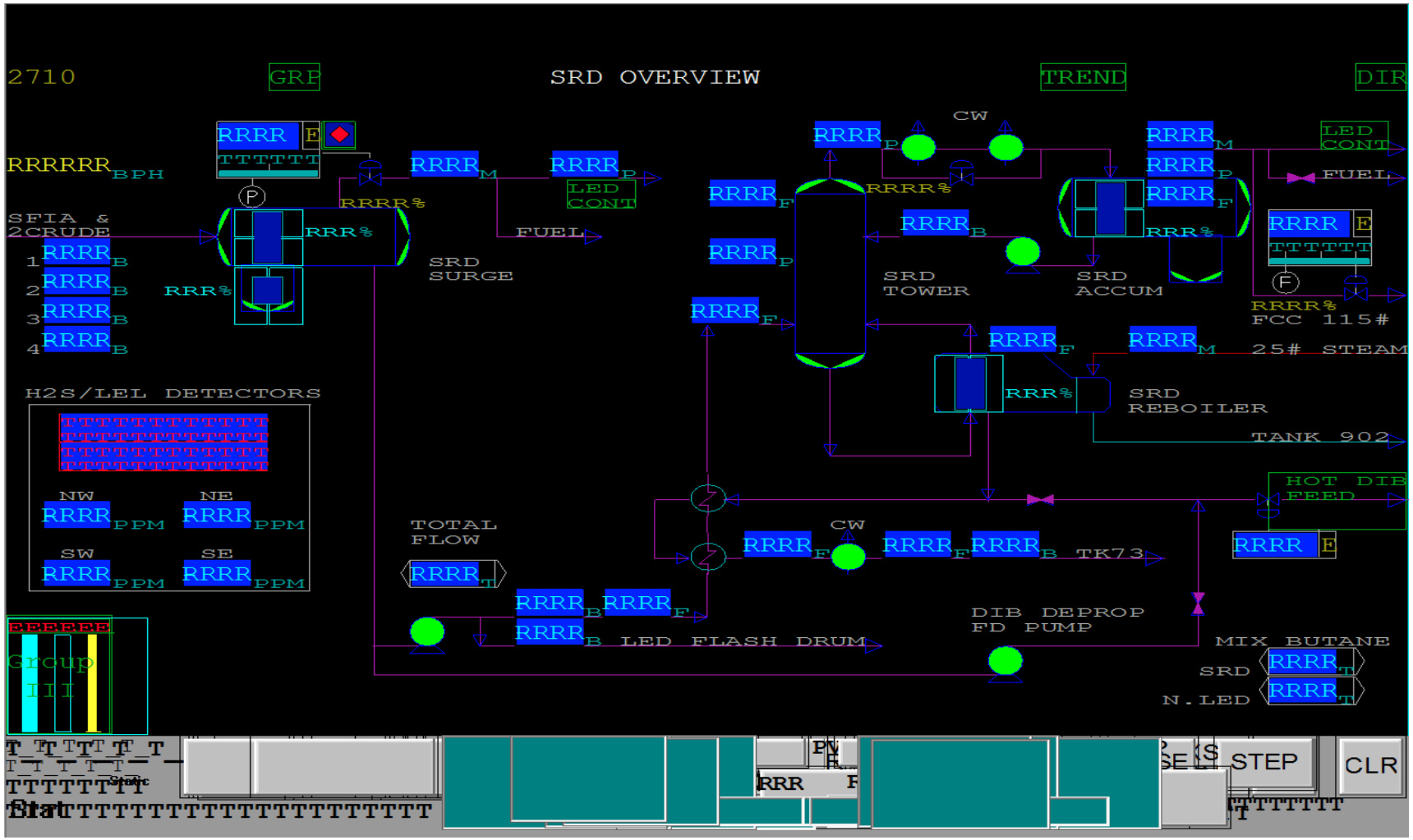
2.56 LED - FD BTMS EXCH/DEPROP TWR/REB/ACCUM/AMN TWR (2702.DS)

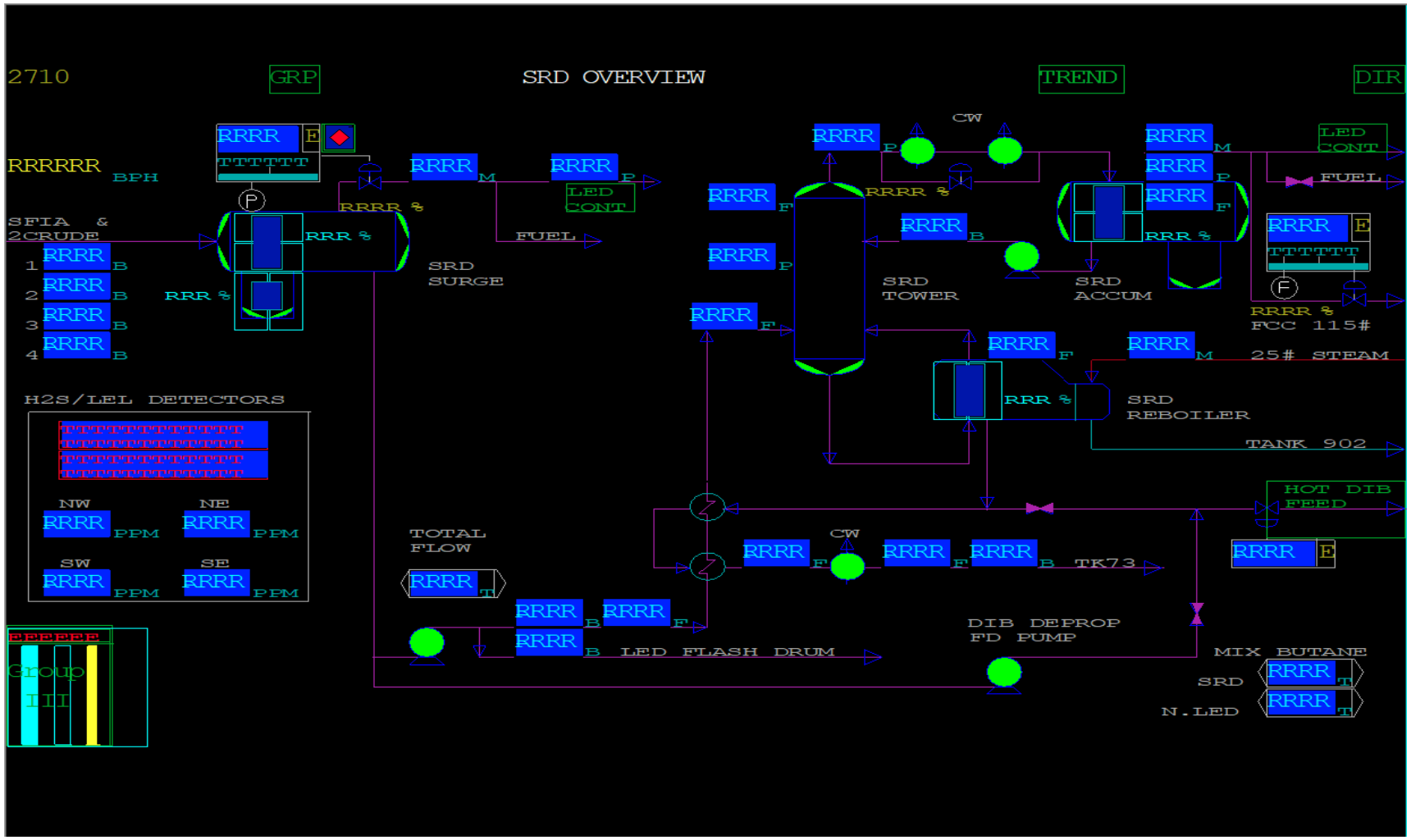


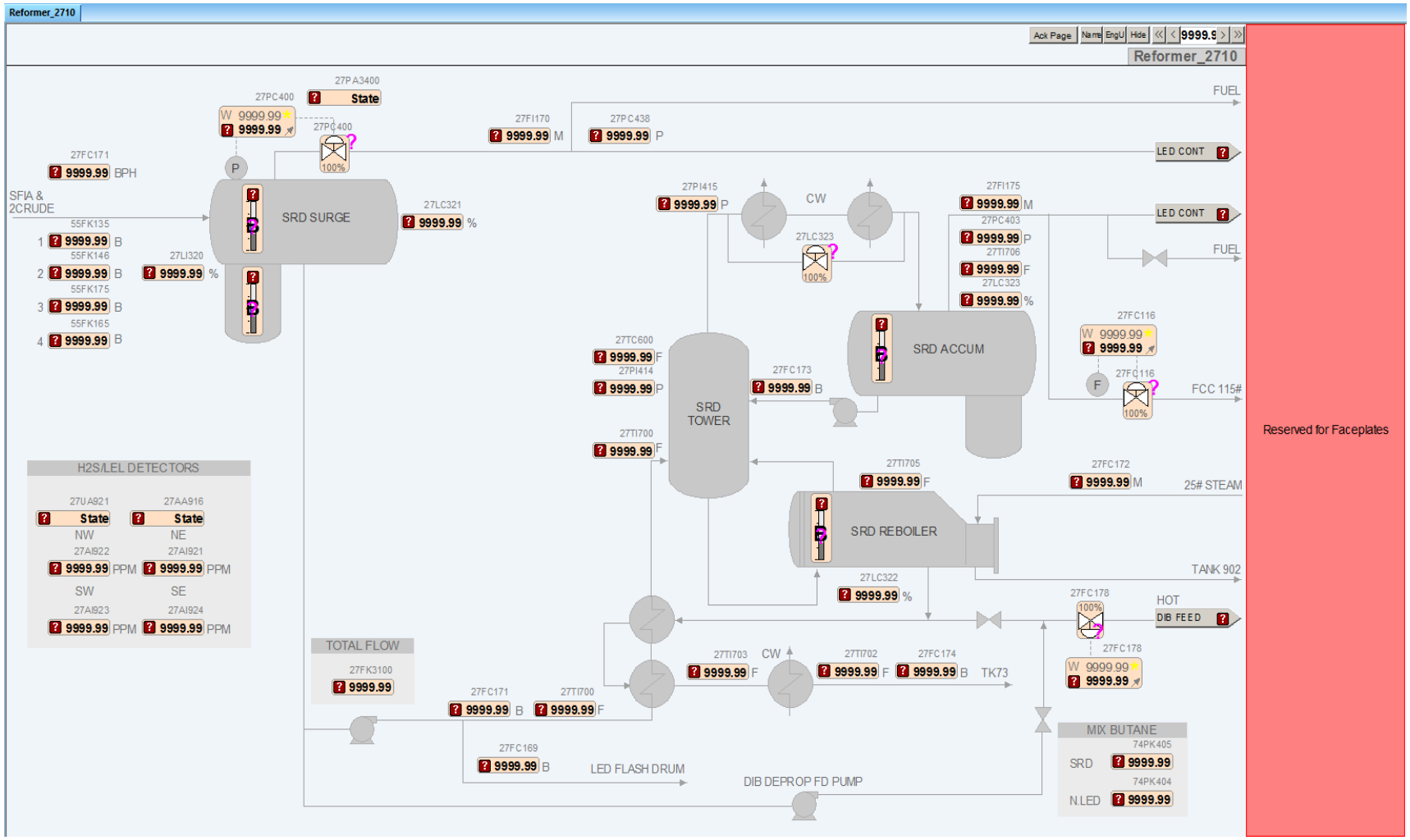

2702
GRP
BLK
LED – FD BTMS EXCH/DEPROP TWR/REB/ACCUM/AMN TWR
TREND
DIR
LEL SYSTEM
CW
RRRR %
TWR
ACCUM
TK 2257
N&S FEED COMPRSRS
AM
FLSH DRUM
BTMS EXCH
Group III
DEV
SRD REL
AMN CNTR
LEAN AMN
HCU
CONTCTR
RICH AMINE
SFIA
DIB
25#
150#
SP: RRRR P
OP: RRRR %


Reformer_2702
Ack Page
Name
EngU
Hide
Reformer_2702
BLK
LEL SYSTEM
27UA909
State
27AA917
State
TK 2257
10PK402
9999.99 T
N&S FEED
COMPRSRS
27LC311
AM
27FC146
FLASH DRM
27PA3411
State
27PY411
9999.99 P
27PI450
9999.99 P
27TI725
9999.99 F
27FI147
9999.99 M
TWR
50
45
37
27
27TI718
9999.99 F
27TI719
9999.99 F
27TC622
27FC155
27PD411
9999.99 DP
27TI720
9999.99 F
27TI721
9999.99 F
27PI412
9999.99 P
CW
27LC315
27LC315
ACCUM
27FC155
27TI722
9999.99 F
27FI192
9999.99 B
27PI453
9999.99 P
27PI454
9999.99 P
27FC105
25#
150#
27PI413
9999.99 P
LED
REBOILER
27TI717
9999.99 F
27LI332
State
DEV
27LY3332
9999.99 T
27LI332
9999.99
27LC330
27LC330
9999.99 %
27LC333
BTMS EXCH
27FI190
9999.99 M
27PC437
27PC437
SRD REL
CONTCTR
27PD439
9999.99 DP
27TK9001
9999.99 DT
74P404SP
SP 9999.99 P
74PK404
9999.99 P
74P404OP
OP 9999.99 %
27FC161
27FC161
27FI175
9999.99 M
AMN CNTR
5FK123
9999.99 M
HCU
27PC438
27FI156
9999.99 M
27FC166
27PC438
27FC166
LEAN AMN
27LA331
State
27LC303
27TI732
9999.99 F
27FI115
9999.99 B
27LC303
27FC179
9999.99 B
SFIA
DIB
Reserved for Faceplates

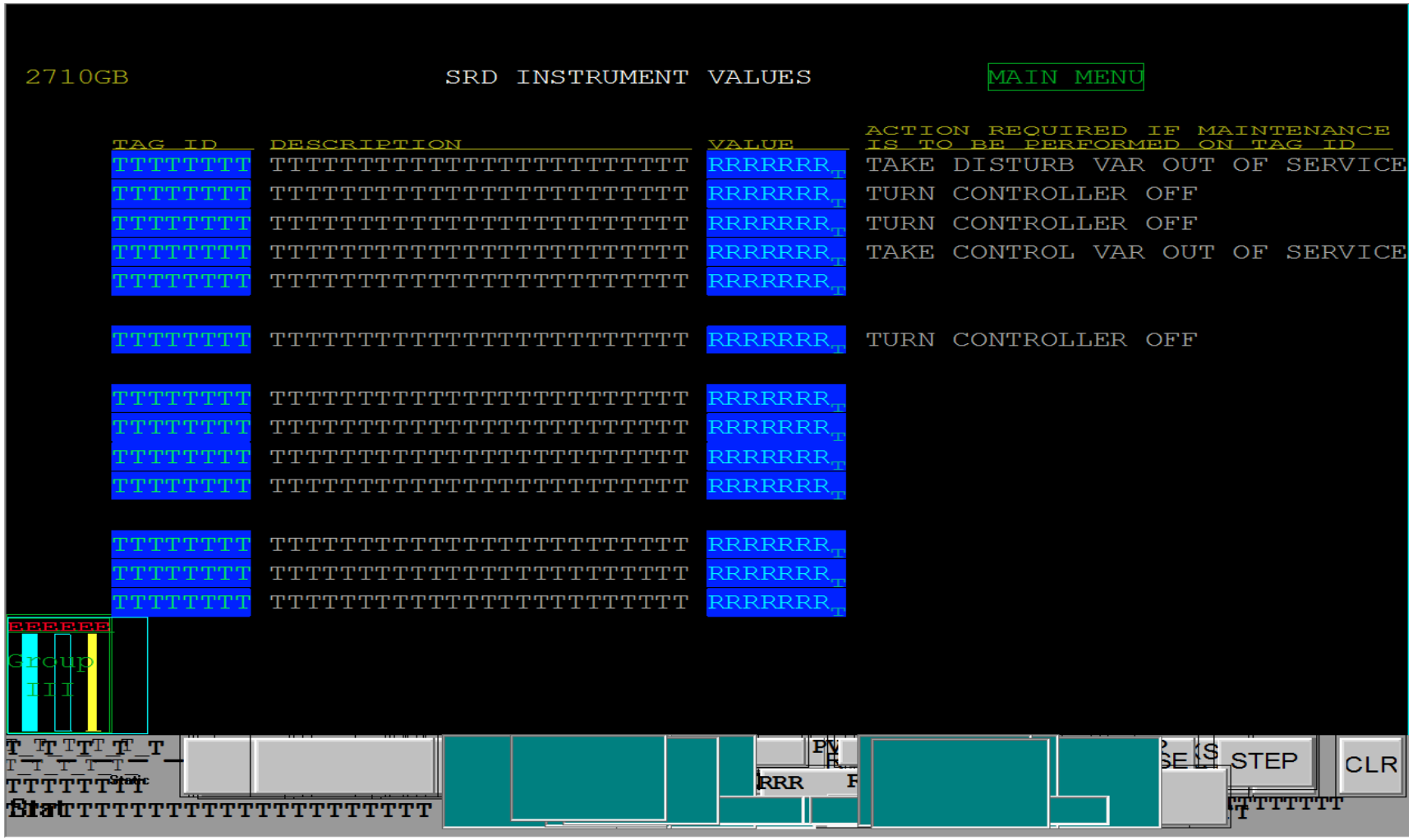
2.57 SRD OVERVIEW (2710.DS)

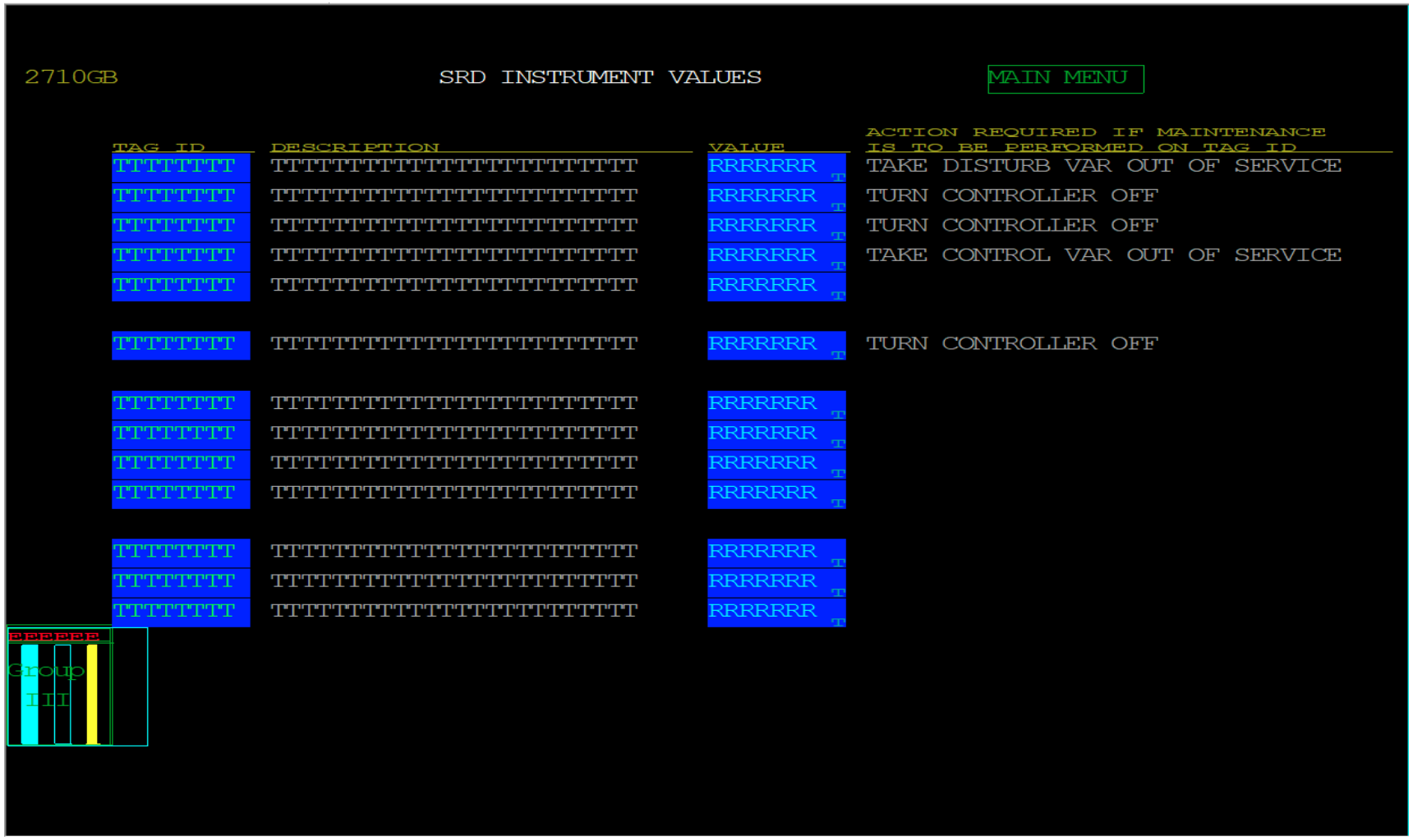


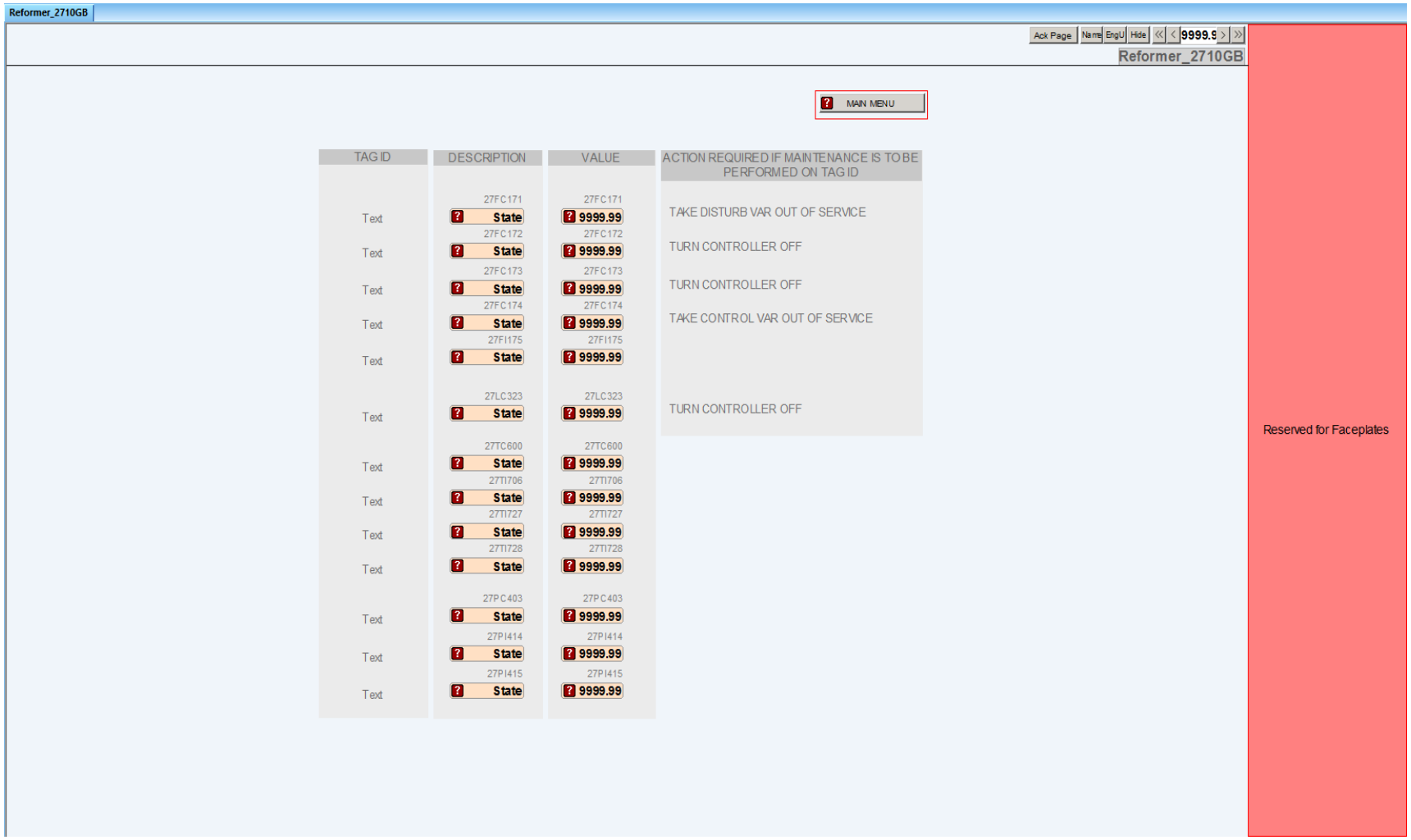

2710
GRP
SRD OVERVIEW
TREND
DIR
RRRRRR
BPH
SFIA &
2CRUDE
1
2
3
4
SRD
SURGE
FUEL
LED
CONT
CW
SRD
TOWER
SRD
ACCUM
FUEL
FCC 115#
25# STEAM
SRD
REBOILER
TANK 902
HOT DIB
FEED
H2S/LEL DETECTORS
NW
NE
SW
SE
PPM
TOTAL
FLOW
TK73
LED FLASH DRUM
DIB DEPROP
FD PUMP
MIX BUTANE
SRD
N.LED
Group
III


Reformer_2710
Ack Page
Name
EngU
Hide
Reformer_2710
27PA3400
State
27PC400
9999.99
9999.99
27PC400
100%
27FI170
9999.99 M
27PC438
9999.99 P
FUEL
LED CONT
27FC171
9999.99 BPH
SFIA &
2CRUDE
55FK135
1 9999.99 B
55FK146
2 9999.99 B
55FK175
3 9999.99 B
55FK165
4 9999.99 B
P
SRD SURGE
27LC321
9999.99 %
27LI320
9999.99 %
27PI415
9999.99 P
CW
27LC323
100%
27FI175
9999.99 M
27PC403
9999.99 P
27TI706
9999.99 F
27LC323
9999.99 %
LED CONT
FUEL
SRD ACCUM
27FC116
9999.99
9999.99
F
27FC116
100%
FCC 115#
27TC600
9999.99 F
27PI414
9999.99 P
SRD
TOWER
27FC173
9999.99 B
27TI700
9999.99 F
Reserved for Faceplates
H2S/LEL DETECTORS
27UA921
State
NW
27AA916
State
NE
27AI922
9999.99 PPM
SW
27AI921
9999.99 PPM
SE
27AI923
9999.99 PPM
27AI924
9999.99 PPM
27TI705
9999.99 F
27FC172
9999.99 M
25# STEAM
SRD REBOILER
TANK 902
27LC322
9999.99 %
27FC178
100%
HOT
DIB FEED
27FC178
9999.99
9999.99
TOTAL FLOW
27FK3100
9999.99
27TI703
9999.99 F
CW
27TI702
9999.99 F
27FC174
9999.99 B
TK73
27FC171
9999.99 B
27TI700
9999.99 F
MIX BUTANE
74PK405
SRD
9999.99
74PK404
N.LED
9999.99
27FC169
9999.99 B
LED FLASH DRUM
DIB DEPROP FD PUMP

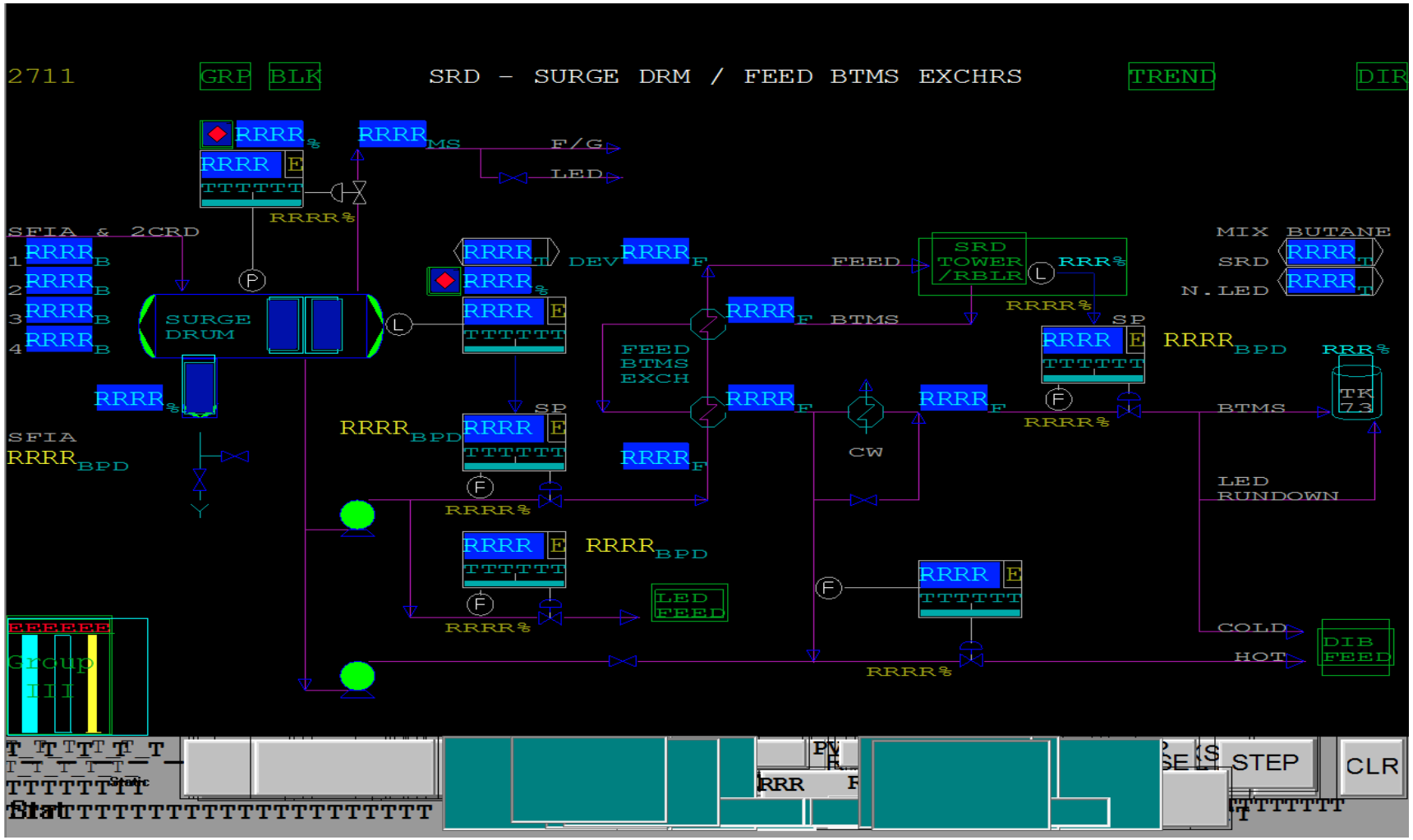
2.58 SRD INSTRUMENT VALUES (2710GB.DS)

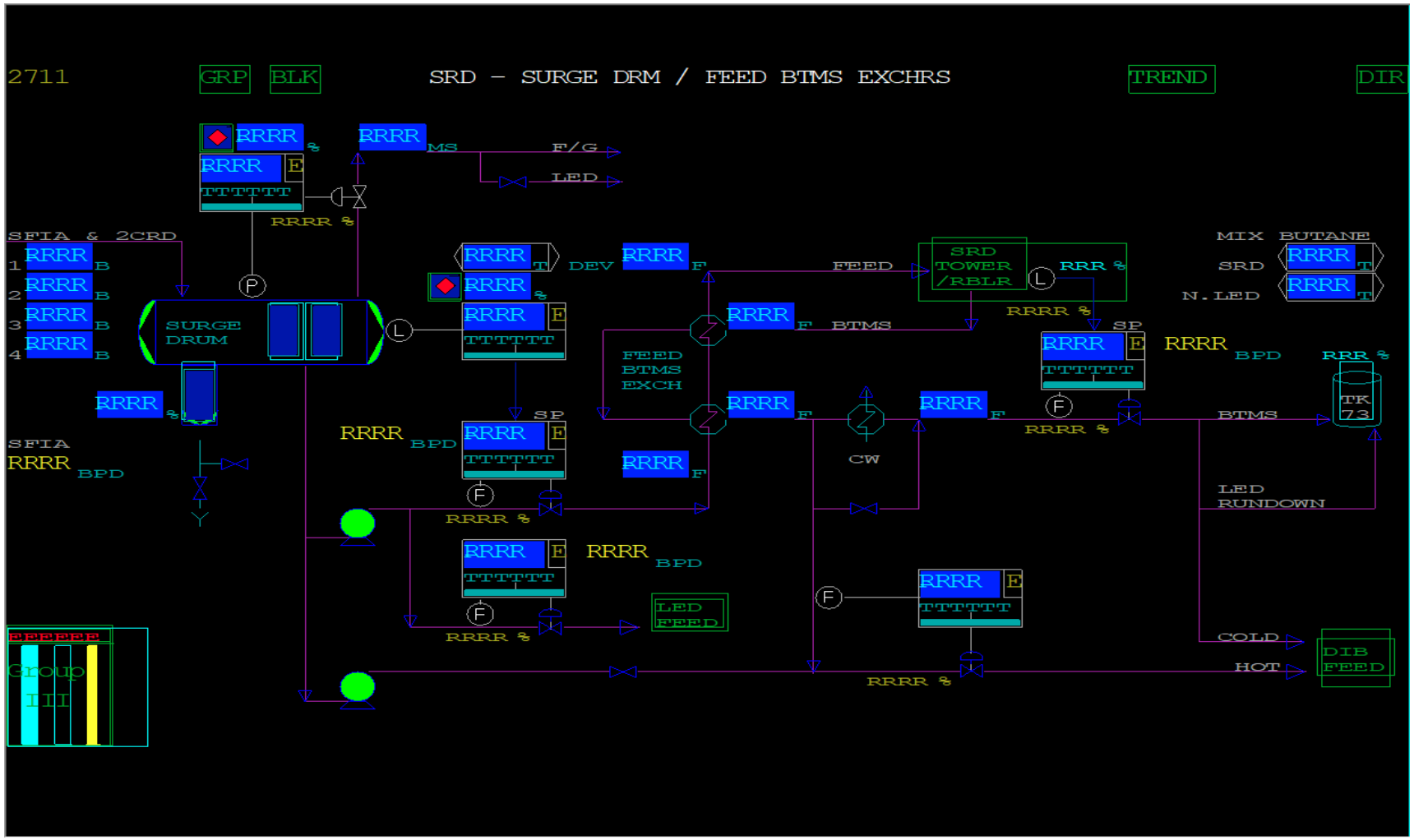


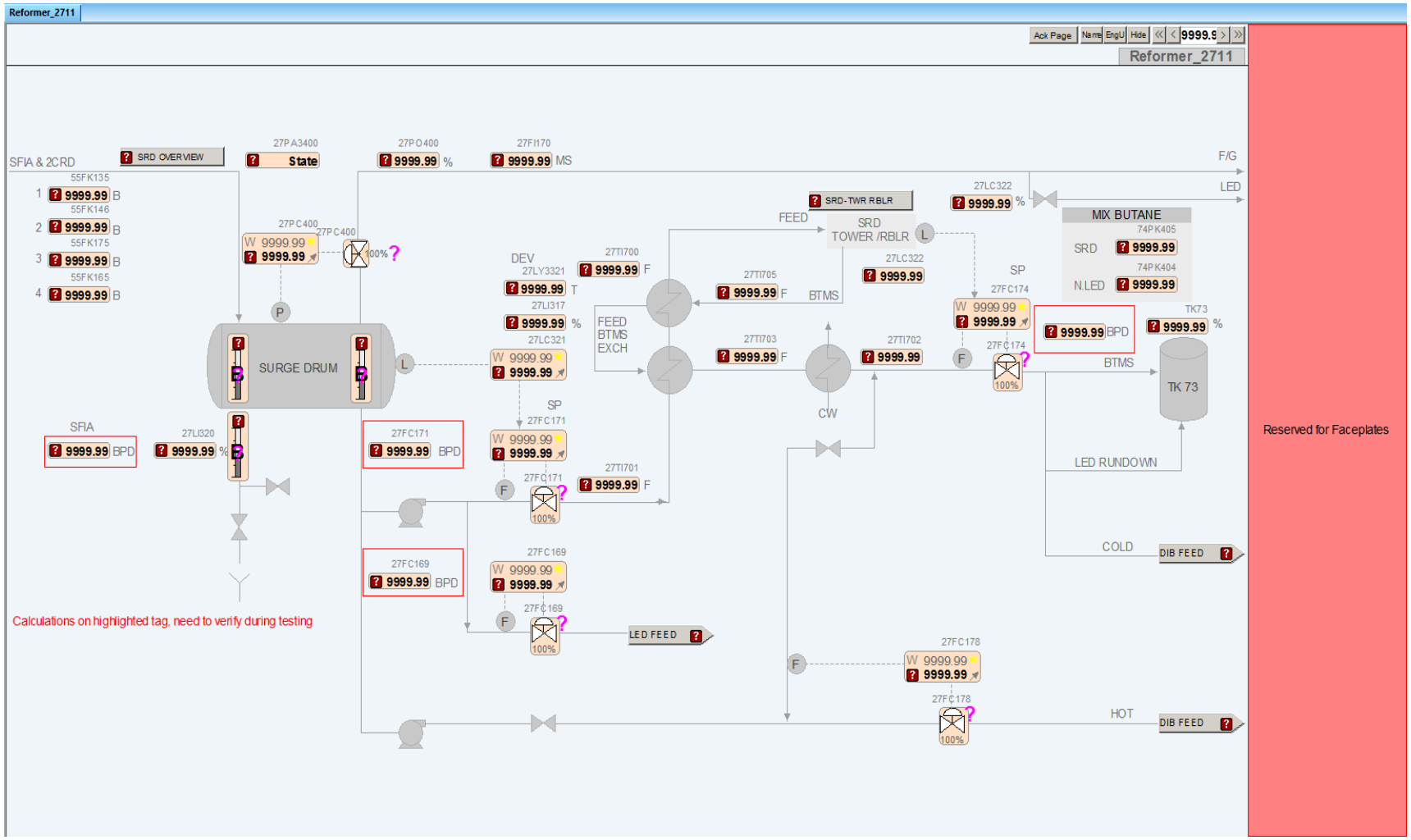

2710GB
SRD INSTRUMENT VALUES
MAIN MENU
TAG ID
DESCRIPTION
VALUE
ACTION REQUIRED IF MAINTENANCE IS TO BE PERFORMED ON TAG ID
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T TAKE DISTURB VAR OUT OF SERVICE
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T TURN CONTROLLER OFF
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T TURN CONTROLLER OFF
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T TAKE CONTROL VAR OUT OF SERVICE
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T TURN CONTROLLER OFF
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T
TTTTTTT TTTTTTTTTTTTTTTTTTTTTTT RRRRRRR T
eeeeee
Group
III


Reformer_2710GB
Ack Page
Name
EngU
Hide
9999.9
Reformer_2710GB
MAIN MENU
TAG ID
DESCRIPTION
VALUE
ACTION REQUIRED IF MAINTENANCE IS TO BE PERFORMED ON TAG ID
Text
27FC171
State
9999.99
TAKE DISTURB VAR OUT OF SERVICE
27FC172
TURN CONTROLLER OFF
27FC173
TURN CONTROLLER OFF
27FC174
TAKE CONTROL VAR OUT OF SERVICE
27FI175
27LC323
TURN CONTROLLER OFF
27TC600
27TI706
27TI727
27TI728
27PC403
27PI414
27PI415
Reserved for Faceplates

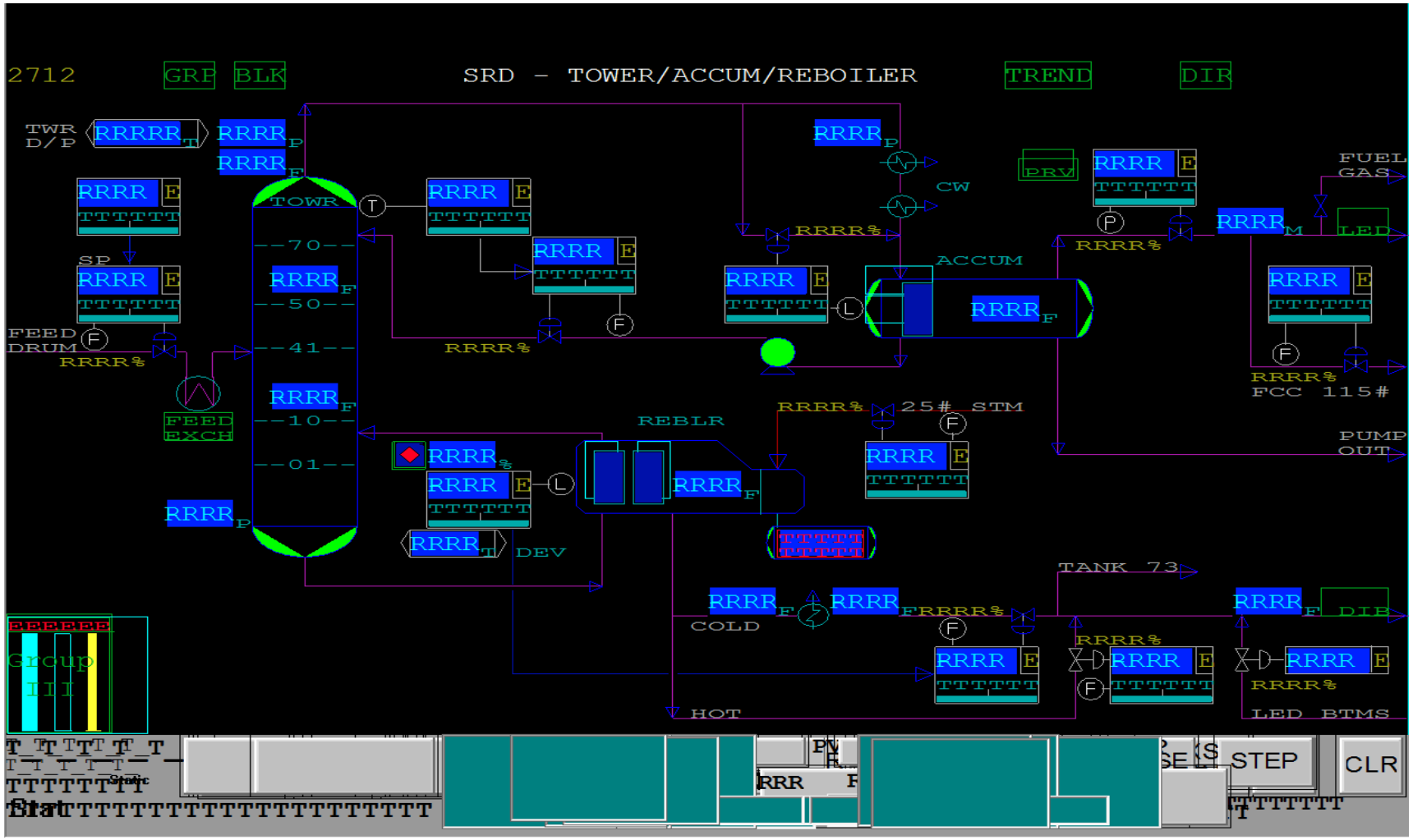
2.59 SRD - SURGE DRM / FEED BTMS EXCHRS (2711.DS)

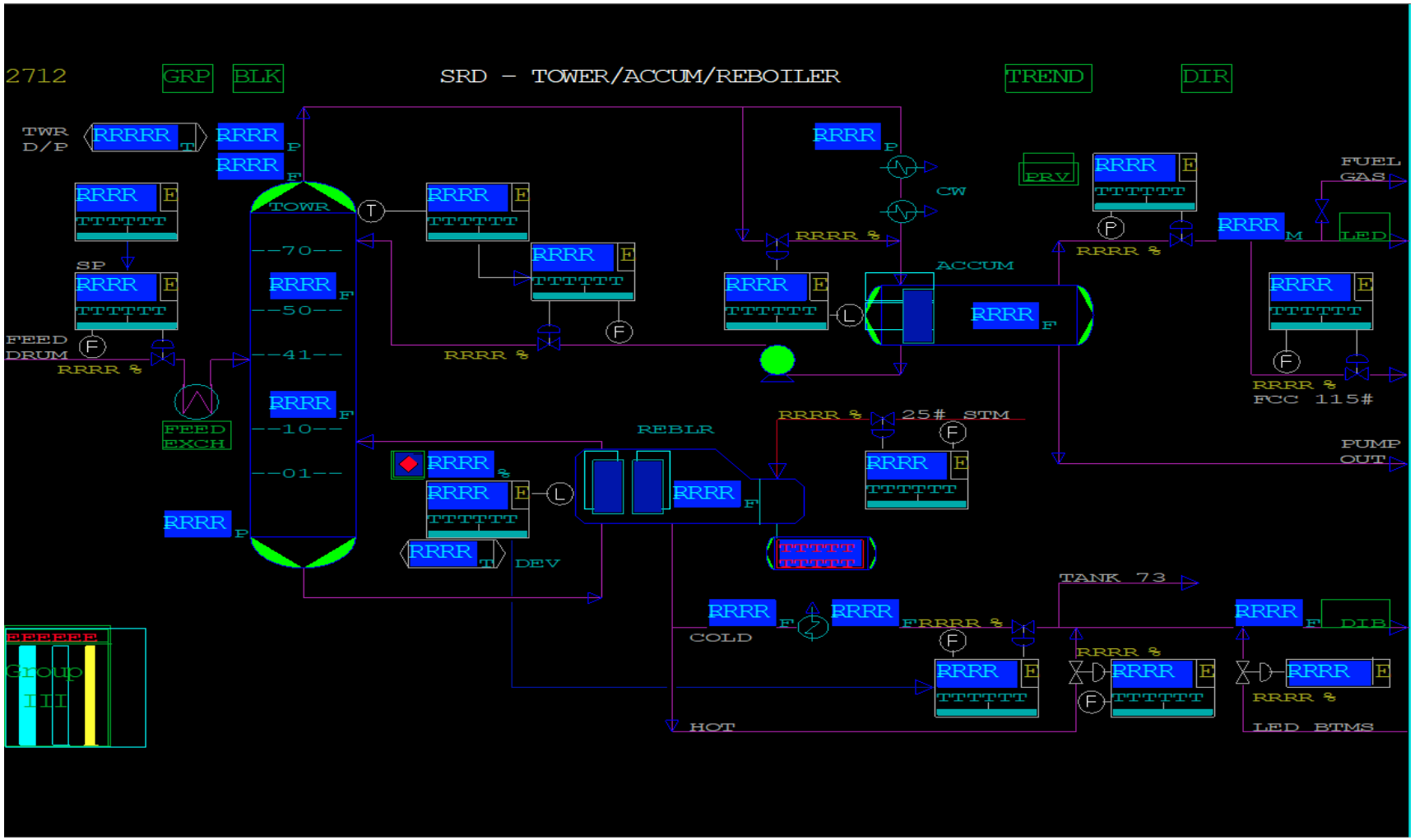


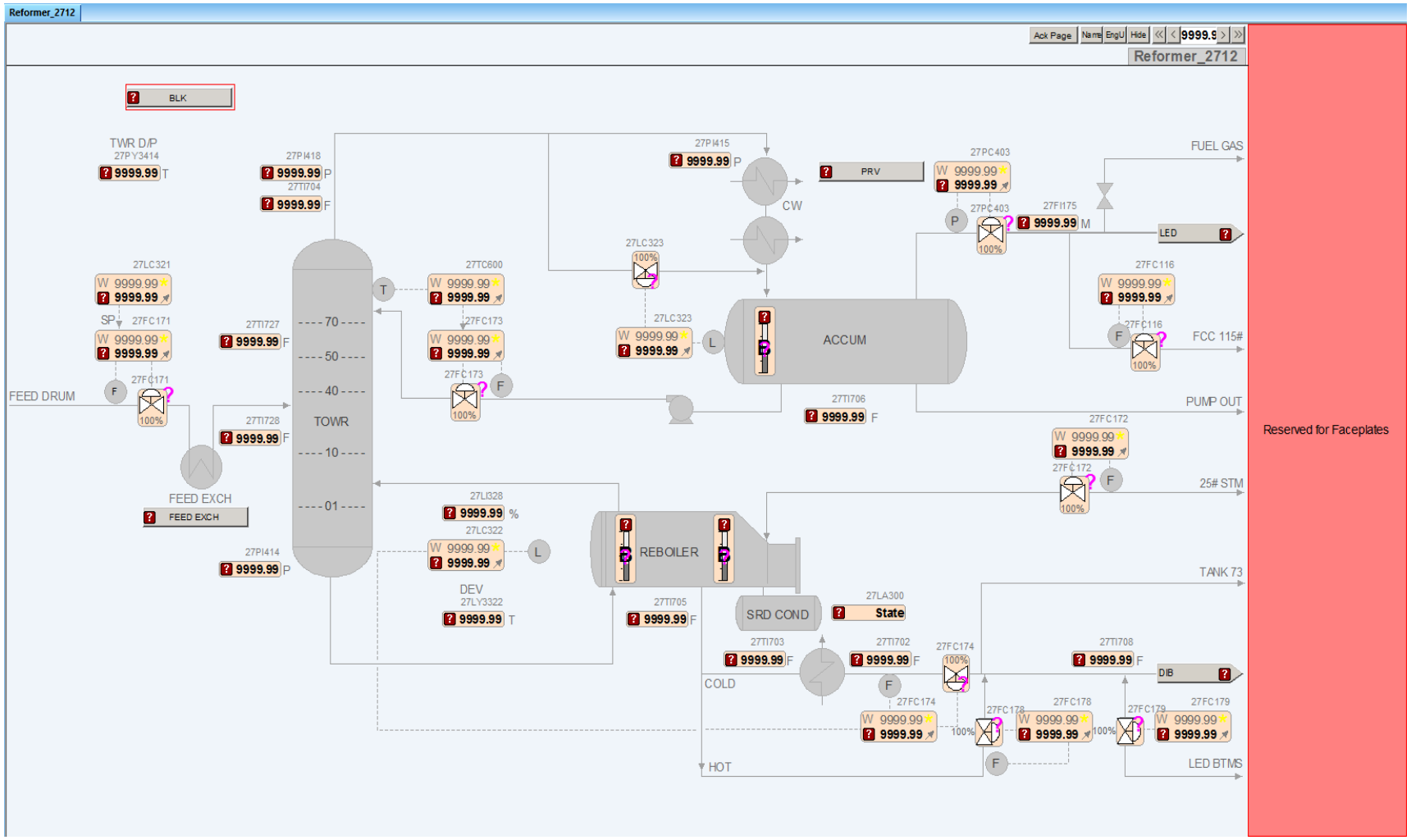

2711
GRP
BLK
SRD – SURGE DRM / FEED BTMS EXCHRS
TREND
DIR
RRRR
RRRR E
TTTTTT
MS
F/G
LED
SFIA & 2CRD
1 RRRR B
2 RRRR B
3 RRRR B
4 RRRR B
SURGE DRUM
RRRR T
DEV
RRRR F
FEED
SRD TOWER /RBLR
RRR %
MIX BUTANE
SRD
N.LED
BTMS
SP
BPD
FEED BTMS EXCH
CW
TK 73
SFIA
LED RUNDOWN
LED FEED
COLD
HOT
DIB FEED
Group III


Reformer_2711
Ack Page
Name
EngU
Hide
Reformer_2711
SFIA & 2CRD
SRD OVERVIEW
27PA3400
State
27PO400
9999.99 %
27FI170
9999.99 MS
F/G
LED
55FK135
1 9999.99 B
55FK146
2 9999.99 B
55FK175
3 9999.99 B
55FK165
4 9999.99 B
27PC400
W 9999.99
9999.99
100%
SURGE DRUM
SFIA
9999.99 BPD
27LI320
9999.99 %
27FC171
9999.99 BPD
27FC169
9999.99 BPD
DEV
27LY3321
9999.99 T
27LI317
9999.99 %
27LC321
W 9999.99
9999.99
SP
27FC171
W 9999.99
9999.99
27FC171
100%
27FC169
W 9999.99
9999.99
27FC169
100%
LED FEED
27TI700
9999.99 F
FEED
BTMS
EXCH
SRD-TWR RBLR
FEED
SRD
TOWER /RBLR
27TI705
9999.99 F
BTMS
27TI703
9999.99 F
27TI702
9999.99
CW
27TI701
9999.99 F
27LC322
9999.99 %
27LC322
9999.99
SP
27FC174
W 9999.99
9999.99
27FC174
100%
9999.99 BPD
TK73
9999.99 %
TK 73
BTMS
LED RUNDOWN
COLD
DIB FEED
MIX BUTANE
74PK405
SRD 9999.99
74PK404
N.LED 9999.99
27FC178
W 9999.99
9999.99
27FC178
100%
HOT
DIB FEED
Calculations on highlighted tag, need to verify during testing
Reserved for Faceplates

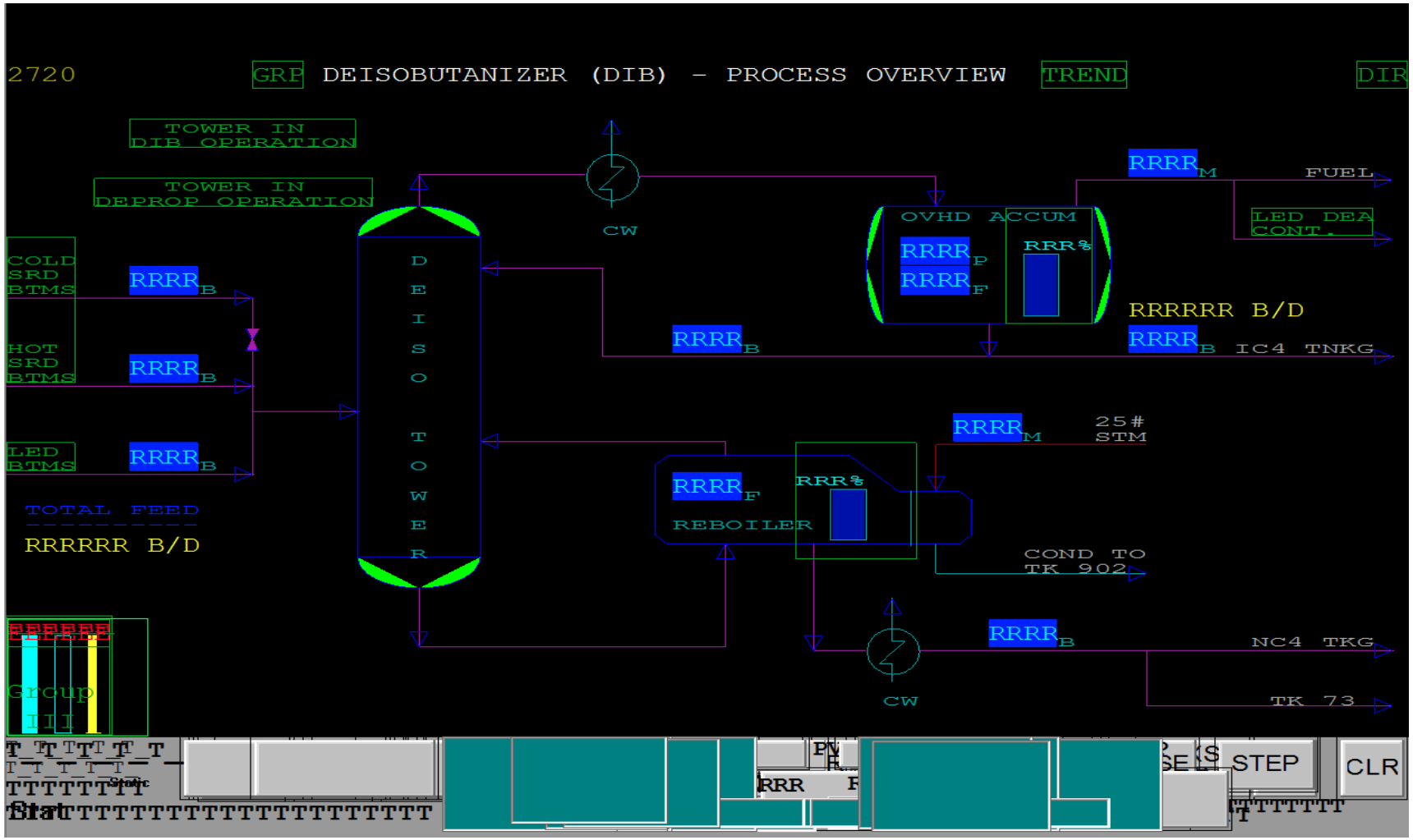
2.60 SRD - TOWER/ACCUM/REBOILER (2712.DS)

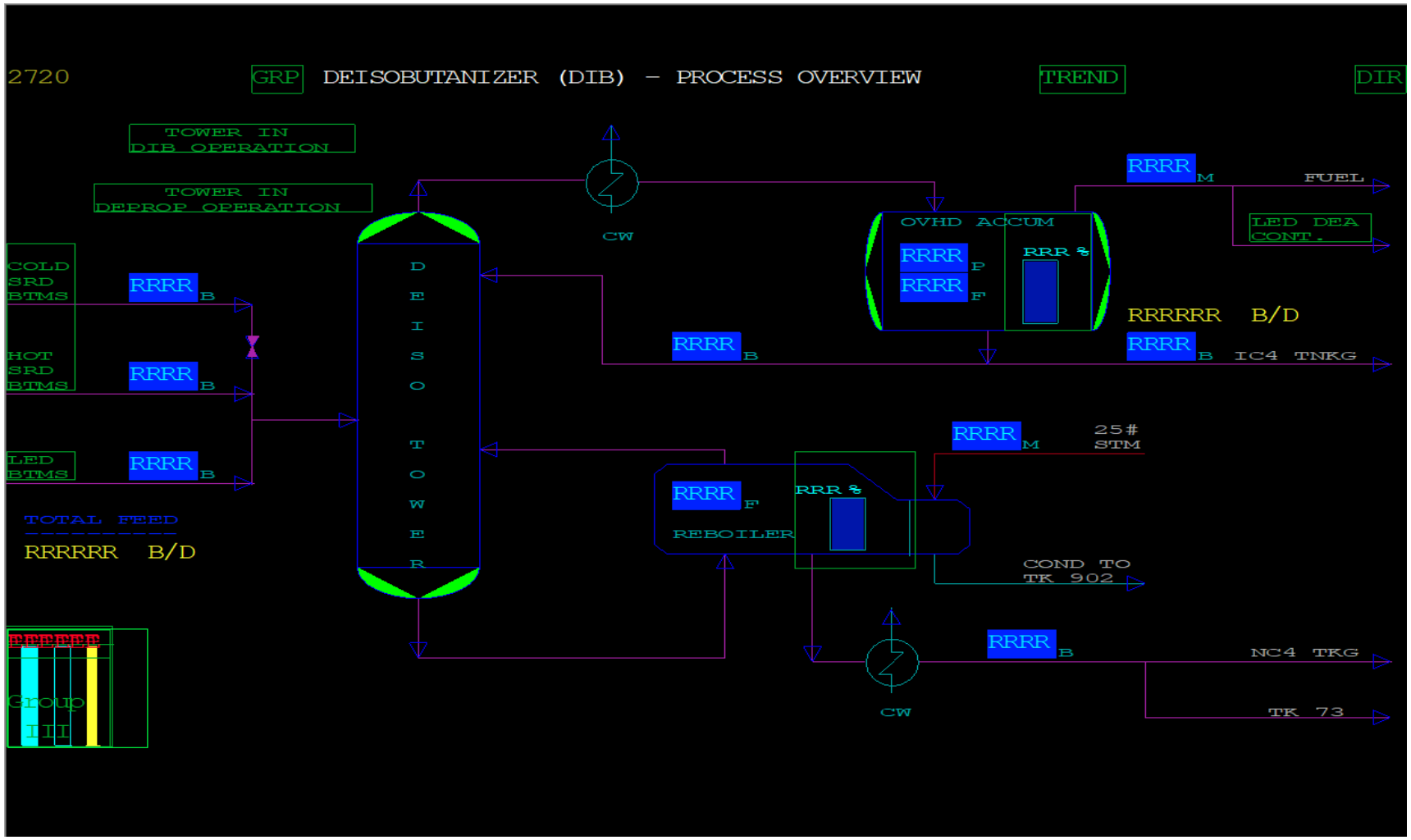


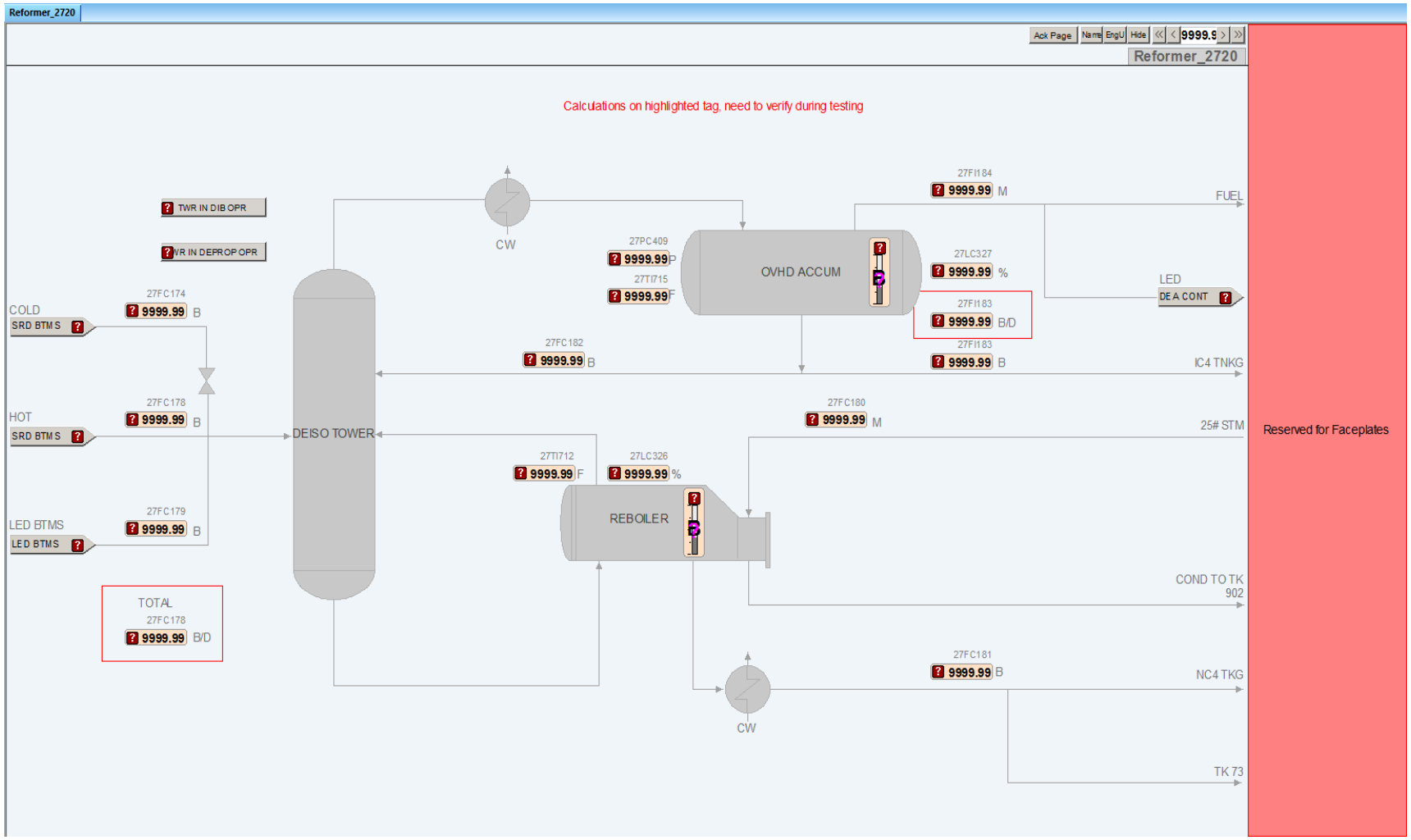

2712
GRP
BLK
SRD – TOWER/ACCUM/REBOILER
TREND
DIR
TWR D/P
RRRRR
RRRR
TTTTTT
TOWR
--70--
--50--
--41--
--10--
--01--
SP
FEED DRUM
RRRR %
FEED EXCH
ACCUM
PRV
CW
FUEL GAS
LED
FCC 115#
PUMP OUT
REBLR
25# STM
DEV
COLD
HOT
TANK 73
DIB
LED BTMS
Group III


Reformer_2712
Ack Page
Name
EngU
Hide
Reformer_2712
BLK
TWR D/P
27PY3414
9999.99 T
27PI418
9999.99 P
27TI704
9999.99 F
27PI415
9999.99 P
PRV
CW
27PC403
9999.99
27PC403
27FI175
9999.99 M
FUEL GAS
LED
27LC321
9999.99
SP
27FC171
9999.99
27FC171
100%
FEED DRUM
27TI727
9999.99 F
27TC600
9999.99
27FC173
9999.99
27FC173
100%
27LC323
100%
27LC323
9999.99
ACCUM
27FC116
9999.99
27FC116
100%
FCC 115#
27TI706
9999.99 F
PUMP OUT
27FC172
9999.99
27FC172
100%
25# STM
TOWR
70
50
40
10
01
27TI728
9999.99 F
FEED EXCH
FEED EXCH
27LI328
9999.99 %
27LC322
9999.99
27PI414
9999.99 P
DEV
27LY3322
9999.99 T
REBOILER
27TI705
9999.99 F
SRD COND
27LA300
State
TANK 73
27TI703
9999.99 F
27TI702
9999.99 F
27FC174
100%
27TI708
9999.99 F
DIB
COLD
27FC174
9999.99
27FC178
9999.99
27FC178
100%
27FC179
9999.99
27FC179
100%
HOT
LED BTMS
Reserved for Faceplates

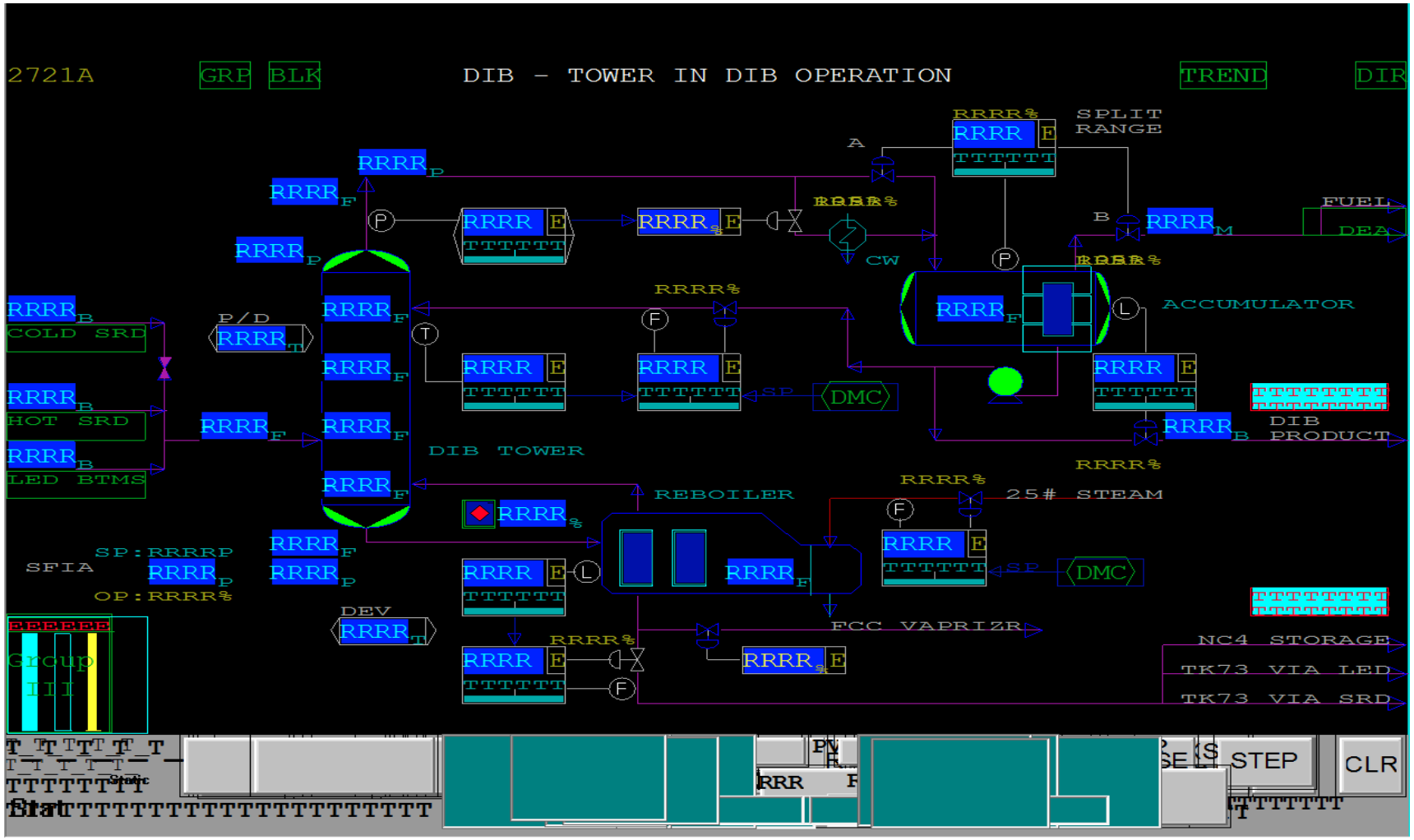
2.61 DEISOBUTANIZER (DIB) - PROCESS OVERVIEW (2720.DS)

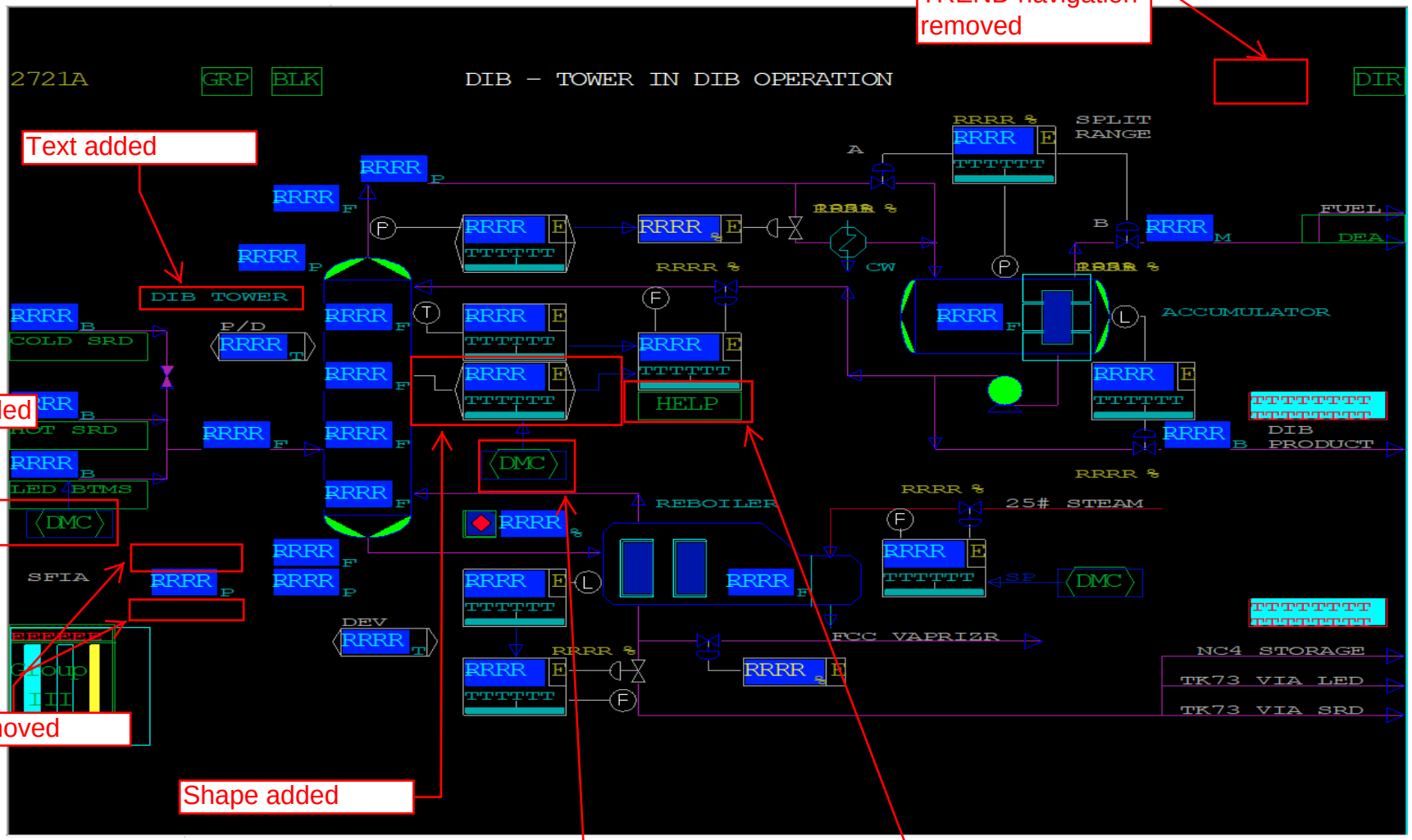


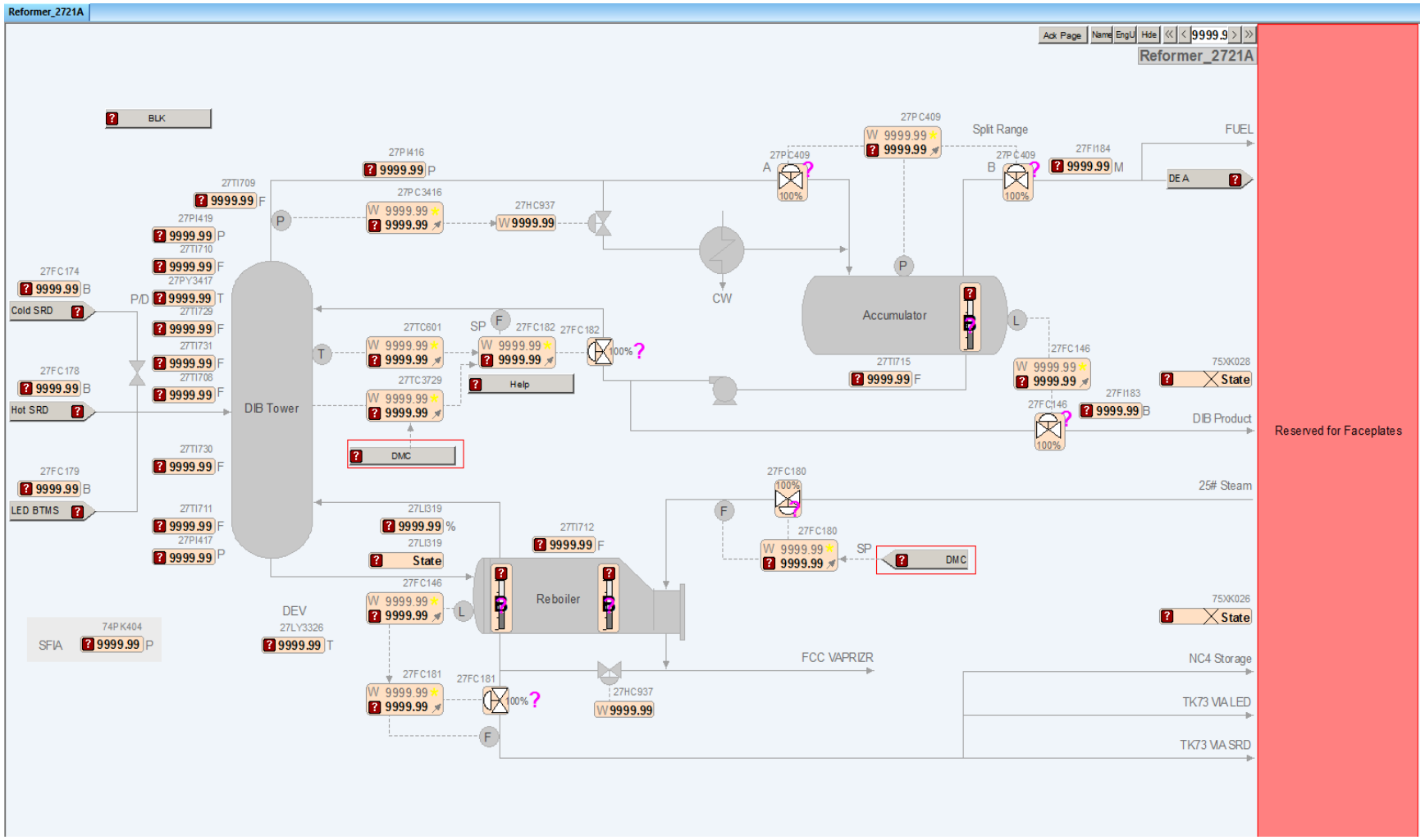

2720
GRP
DEISOBUTANIZER (DIB) – PROCESS OVERVIEW
TREND
DIR
TOWER IN DIB OPERATION
TOWER IN DEPROP OPERATION
CW
OVHD ACCUM
RRRR P
RRRR F
RRR %
RRRR M
FUEL
LED DEA CONT.
RRRRRR B/D
RRRR B
IC4 TNKG
COLD SRD BTMS
HOT SRD BTMS
LED BTMS
RRRR B
DEISO TOWER
TOTAL FEED
RRRRRR B/D
RRRR F
REBOILER
RRR %
RRRR M
25# STM
COND TO TK 902
CW
RRRR B
NC4 TKG
TK 73
Group III


Reformer_2720
Ack Page
Name
EngU
Hide
Reformer_2720
Calculations on highlighted tag, need to verify during testing
TWR IN DIB OPR
VR IN DEPROP OPR
CW
27FI184
9999.99 M
FUEL
27PC409
9999.99 P
27TI715
9999.99 F
OVHD ACCUM
27LC327
9999.99 %
LED
DEA CONT
27FI183
9999.99 B/D
COLD
SRD BTMS
27FC174
9999.99 B
27FC182
9999.99 B
27FI183
9999.99 B
IC4 TNKG
HOT
SRD BTMS
27FC178
9999.99 B
DEISO TOWER
27FC180
9999.99 M
25# STM
27TI712
9999.99 F
27LC326
9999.99 %
REBOILER
LED BTMS
LED BTMS
27FC179
9999.99 B
TOTAL
27FC178
9999.99 B/D
COND TO TK 902
27FC181
9999.99 B
NC4 TKG
CW
TK 73
Reserved for Faceplates

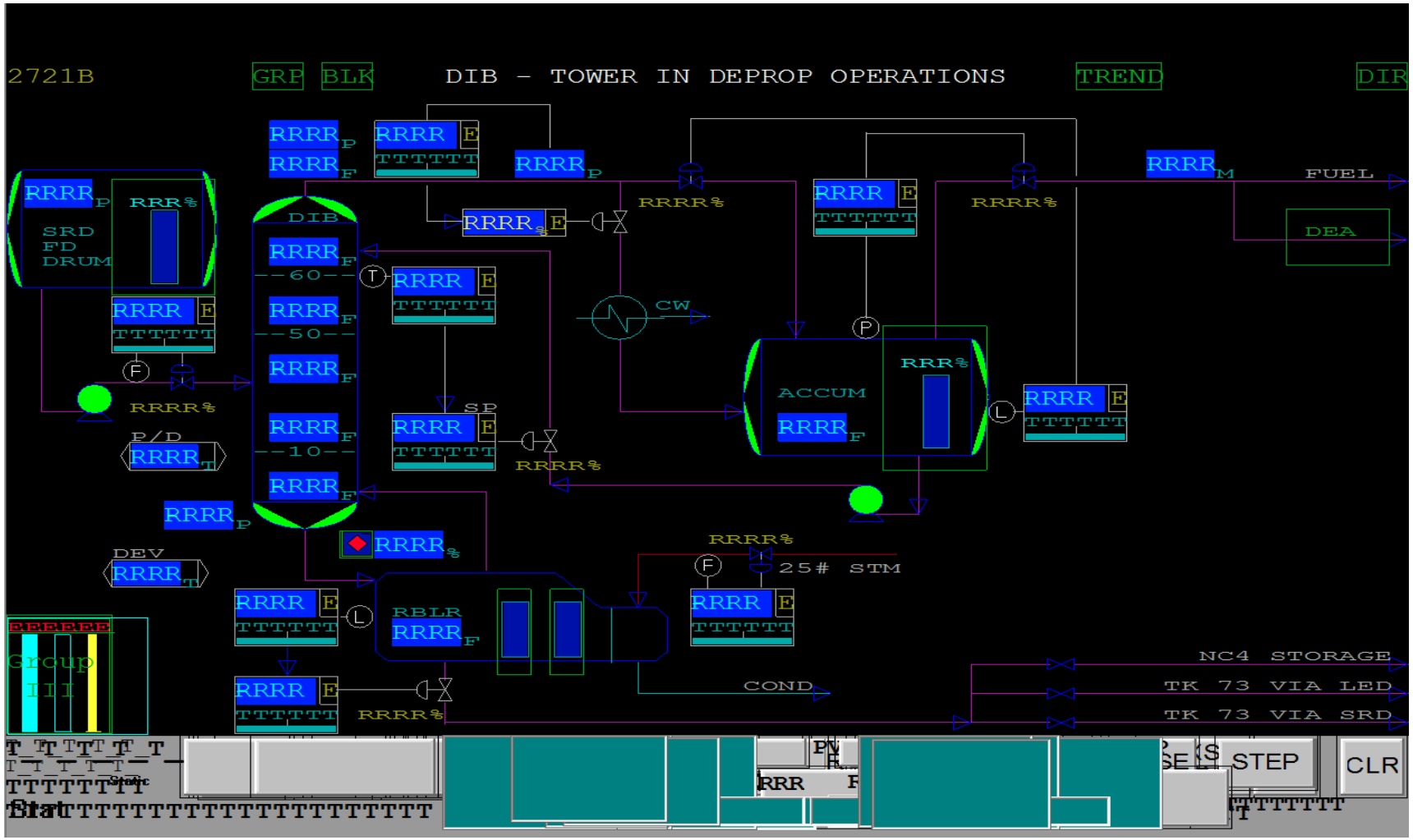
2.62 DIB - TOWER IN DIB OPERATION (2721A.DS)

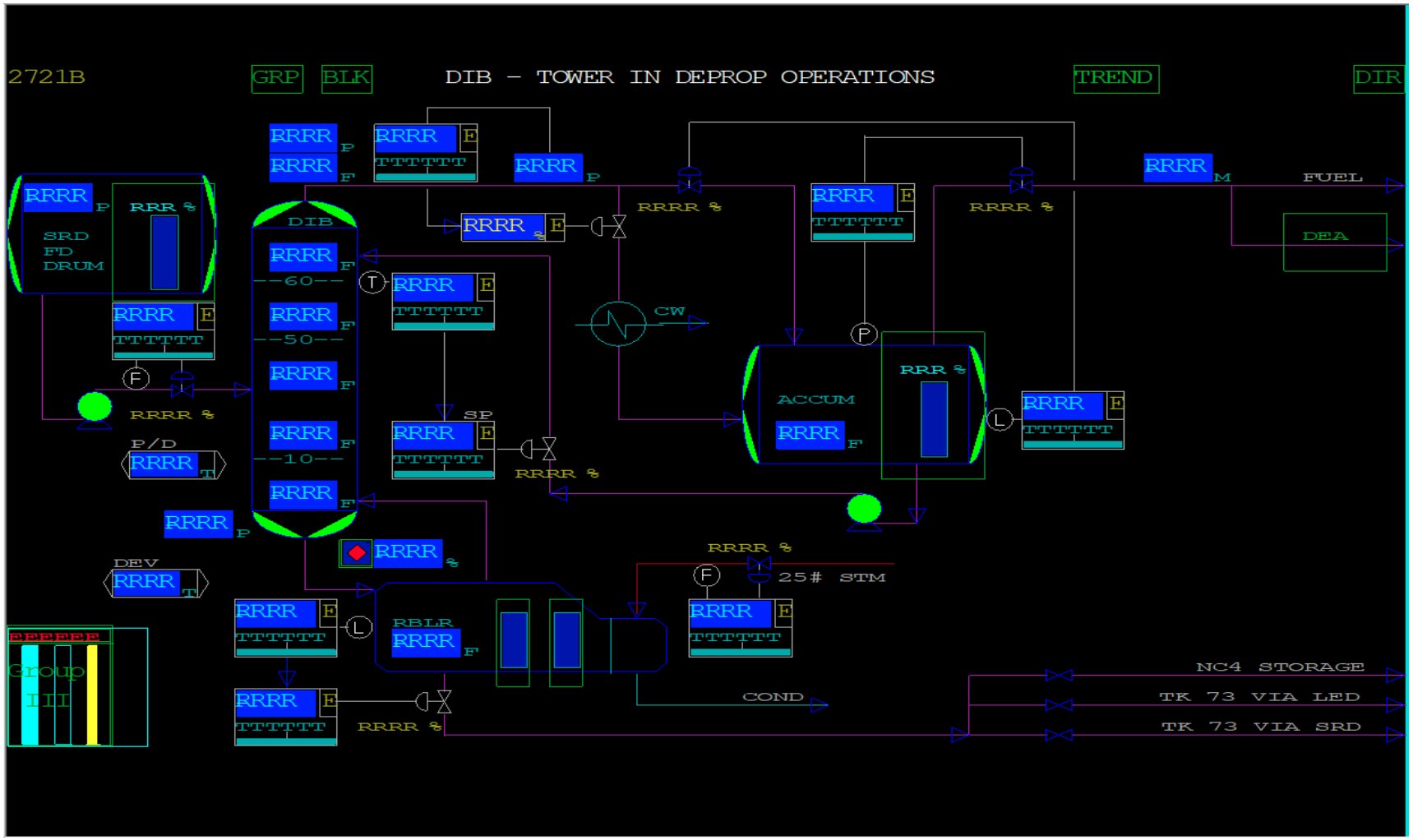


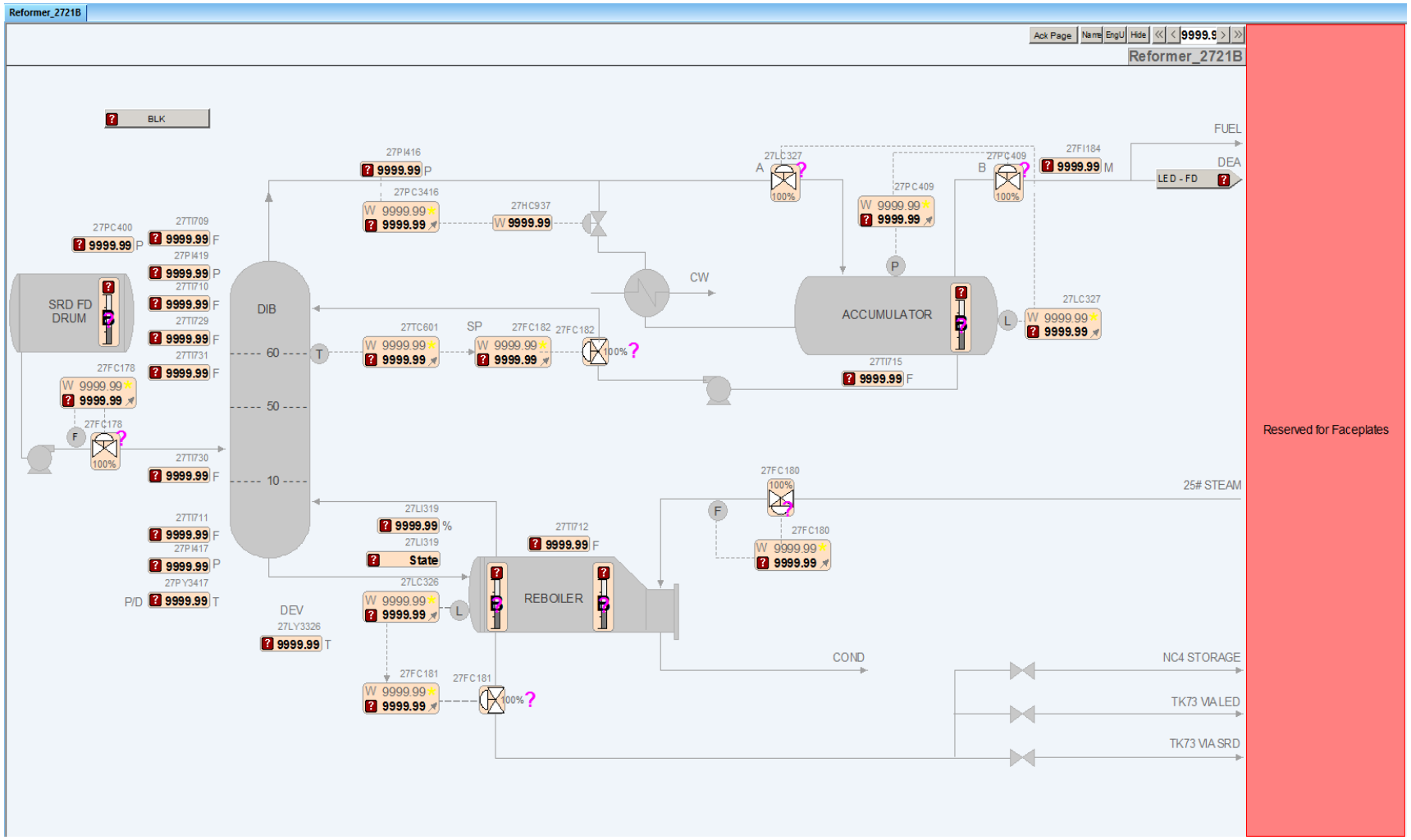

2721A
GRP
BLK
DIB – TOWER IN DIB OPERATION
DIR
TREND navigation removed
Text added
DIB TOWER
P/D
COLD SRD
HOT SRD
LED BTMS
DMC
SFIA
Callup added
Text removed
Shape added
HELP
REBOILER
SPLIT RANGE
ACCUMULATOR
FUEL
DEA
DIB PRODUCT
25# STEAM
FCC VAPRIZR
NC4 STORAGE
TK73 VIA LED
TK73 VIA SRD
Position changed
Callup added


Reformer_2721A
Ack Page
Name
EngU
Hide
9999.9
Reformer_2721A
BLK
27PC409
Split Range
FUEL
27PI416
27PC409
27FI184
DEA
27TI709
27PC3416
27HC937
27PI419
27TI710
27PY3417
27FC174
Cold SRD
27FC178
Hot SRD
27FC179
LED BTMS
DIB Tower
CW
Accumulator
27TC601
27FC182
Help
27TC3729
DMC
27TI715
27FC146
75XK028
State
27FI183
DIB Product
Reserved for Faceplates
27TI729
27TI731
27TI708
27TI730
27TI711
27PI417
27LI319
%
State
27FC180
25# Steam
27TI712
Reboiler
DEV
27LY3326
74PK404
SFIA
27FC181
FCC VAPRIZR
NC4 Storage
TK73 VIA LED
TK73 VIA SRD
75XK026
State

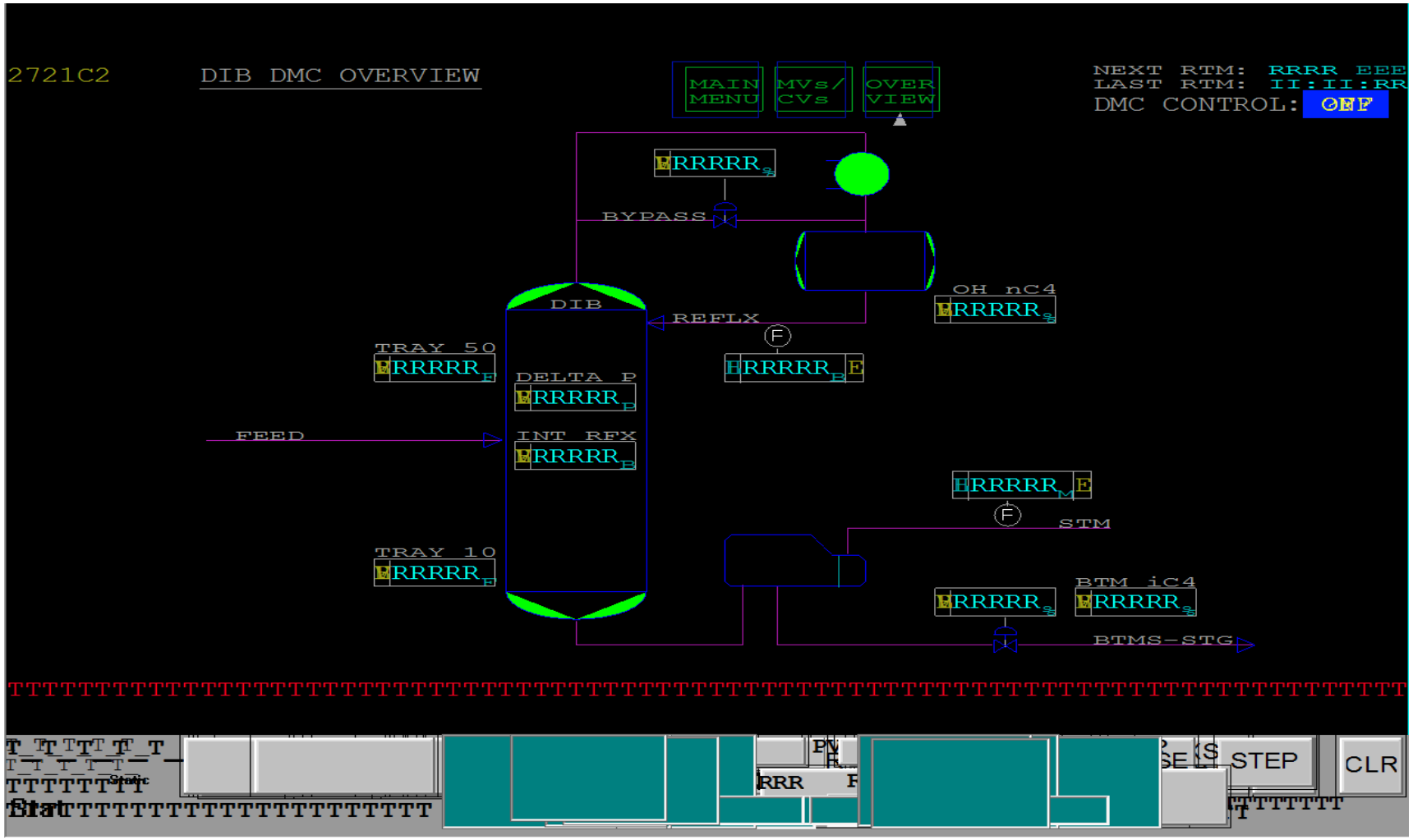
2.63 DIB - TOWER IN DEPROP OPERATIONS (2721B.DS)

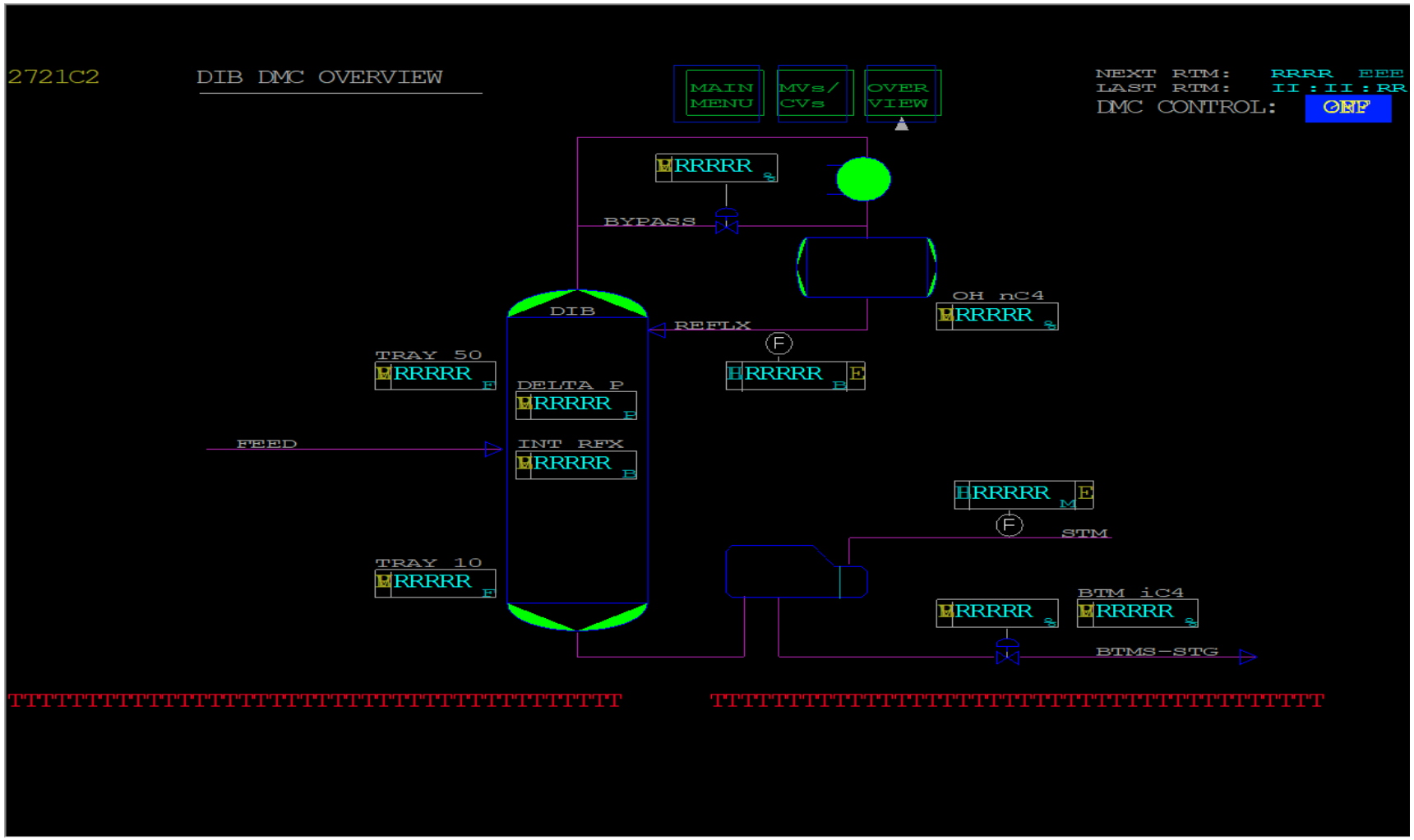


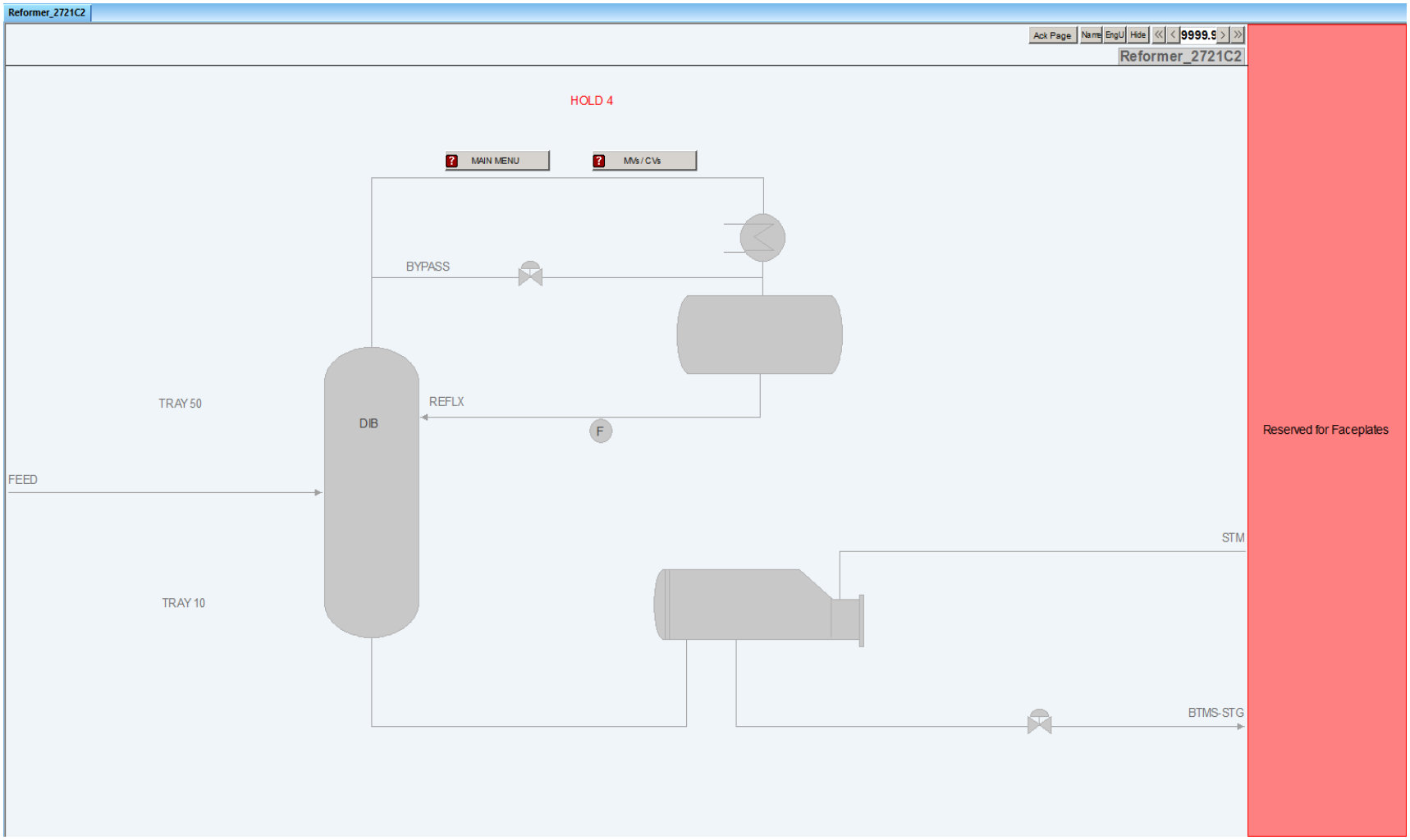

2721B
GRP
BLK
DIB – TOWER IN DEPROP OPERATIONS
TREND
DIR
RRRR
RRR %
SRD
FD
DRUM
DIB
--60--
--50--
--10--
TTTTTT
RRRR %
P/D
DEV
CW
SP
ACCUM
25# STM
RBLR
COND
FUEL
DEA
NC4 STORAGE
TK 73 VIA LED
TK 73 VIA SRD
Group
III


Reformer_2721B
Ack Page
Name
EngU
Hide
Reformer_2721B
BLK
FUEL
DEA
LED - FD
27FI184
9999.99 M
27LC327
A
100%
27PC409
B
100%
27PC409
W 9999.99
9999.99
27PI416
9999.99 P
27PC3416
W 9999.99
9999.99
27HC937
W 9999.99
CW
27PC400
9999.99 P
27TI709
9999.99 F
27PI419
9999.99 P
27TI710
9999.99 F
27TI729
9999.99 F
27TI731
9999.99 F
SRD FD DRUM
27FC178
W 9999.99
9999.99
27FC178
100%
27TI730
9999.99 F
DIB
60
50
10
27TC601
W 9999.99
9999.99
SP
27FC182
W 9999.99
9999.99
27FC182
100%
ACCUMULATOR
27TI715
9999.99 F
27LC327
W 9999.99
9999.99
27FC180
100%
25# STEAM
27FC180
W 9999.99
9999.99
27LI319
9999.99 %
27LI319
State
27TI712
9999.99 F
27TI711
9999.99 F
27PI417
9999.99 P
27PY3417
P/D 9999.99 T
27LC326
W 9999.99
9999.99
REBOILER
DEV
27LY3326
9999.99 T
COND
NC4 STORAGE
TK73 VIA LED
TK73 VIA SRD
27FC181
W 9999.99
9999.99
27FC181
100%
Reserved for Faceplates

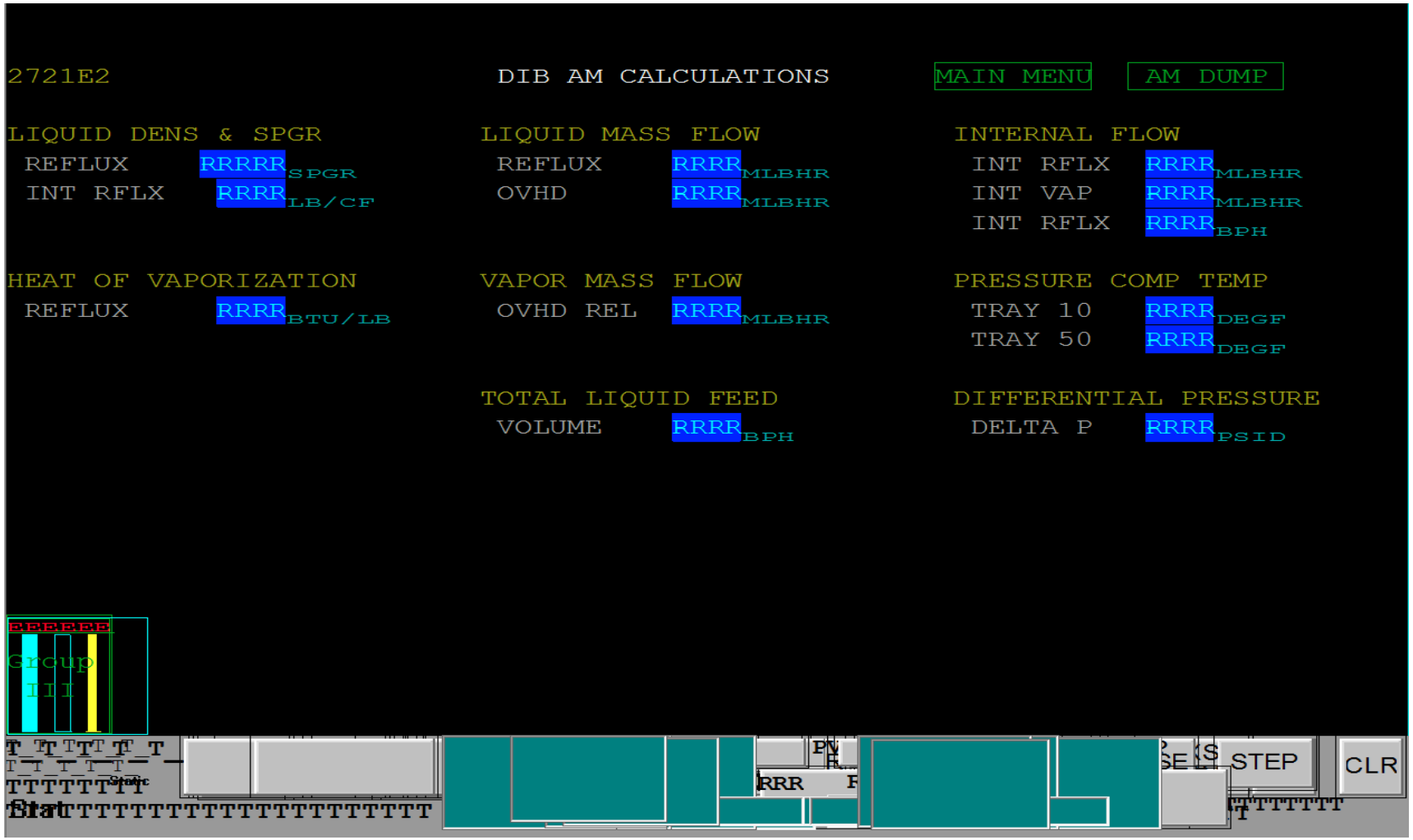
2.64 DIB DMC OVERVIEW (2721C2.DS)

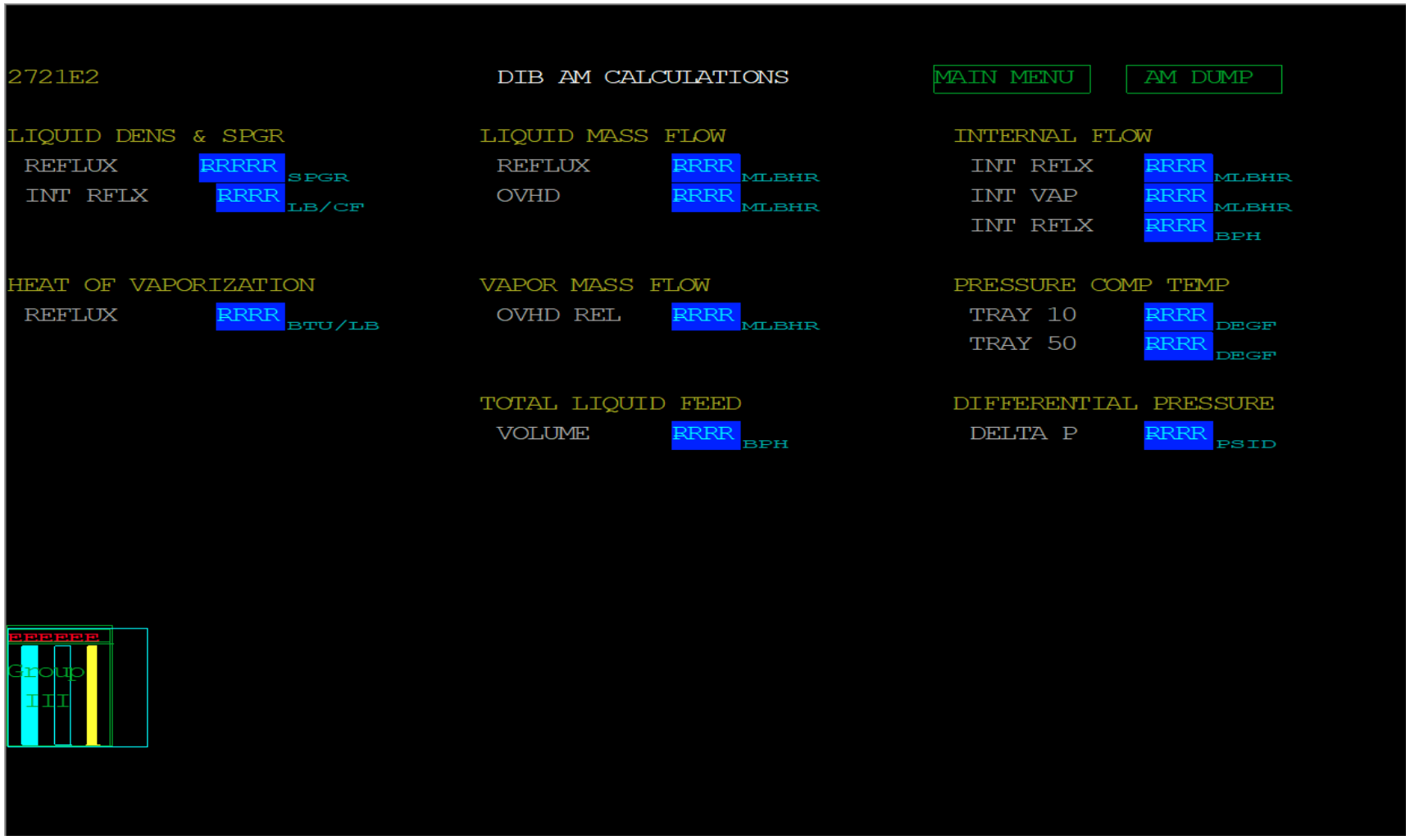


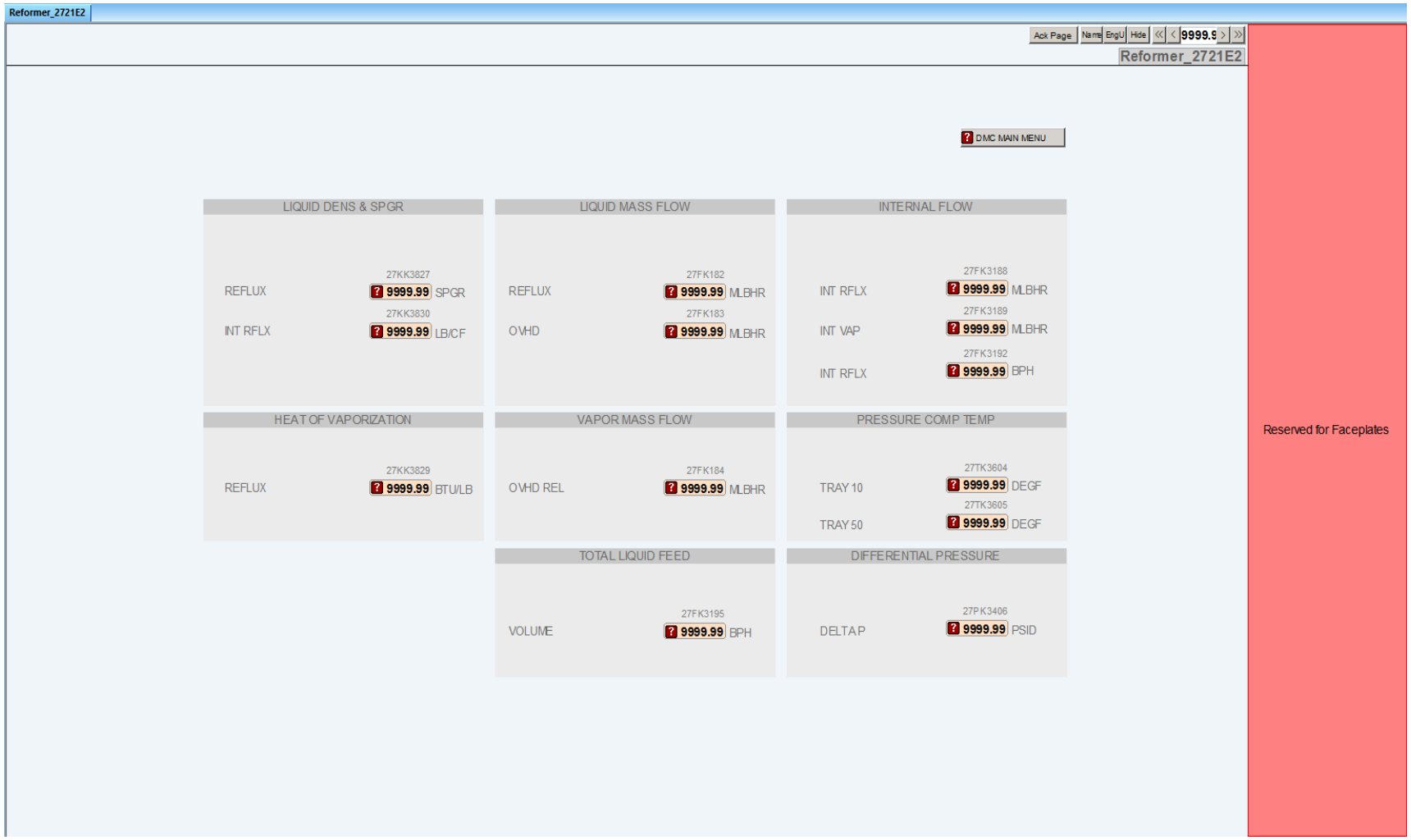

2721C2
DIB DMC OVERVIEW
MAIN MENU
MVs/ CVs
OVER VIEW
NEXT RTM: RRRR EEE
LAST RTM: II:II:RR
DMC CONTROL: OFF
RRRRRR
BYPASS
DIB
REFLX
OH nC4
RRRRRR
TRAY 50
RRRRRR
DELTA P
RRRRRR
RRRRRR
FEED
INT RFX
RRRRRR
RRRRRR
STM
TRAY 10
RRRRRR
BTM iC4
RRRRRR
RRRRRR
BTMS-STG
TTTT


Reformer_2721C2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2721C2
HOLD 4
MAIN MENU
MVs / CVs
BYPASS
TRAY 50
DIB
REFLX
F
FEED
TRAY 10
STM
BTMS-STG
Reserved for Faceplates

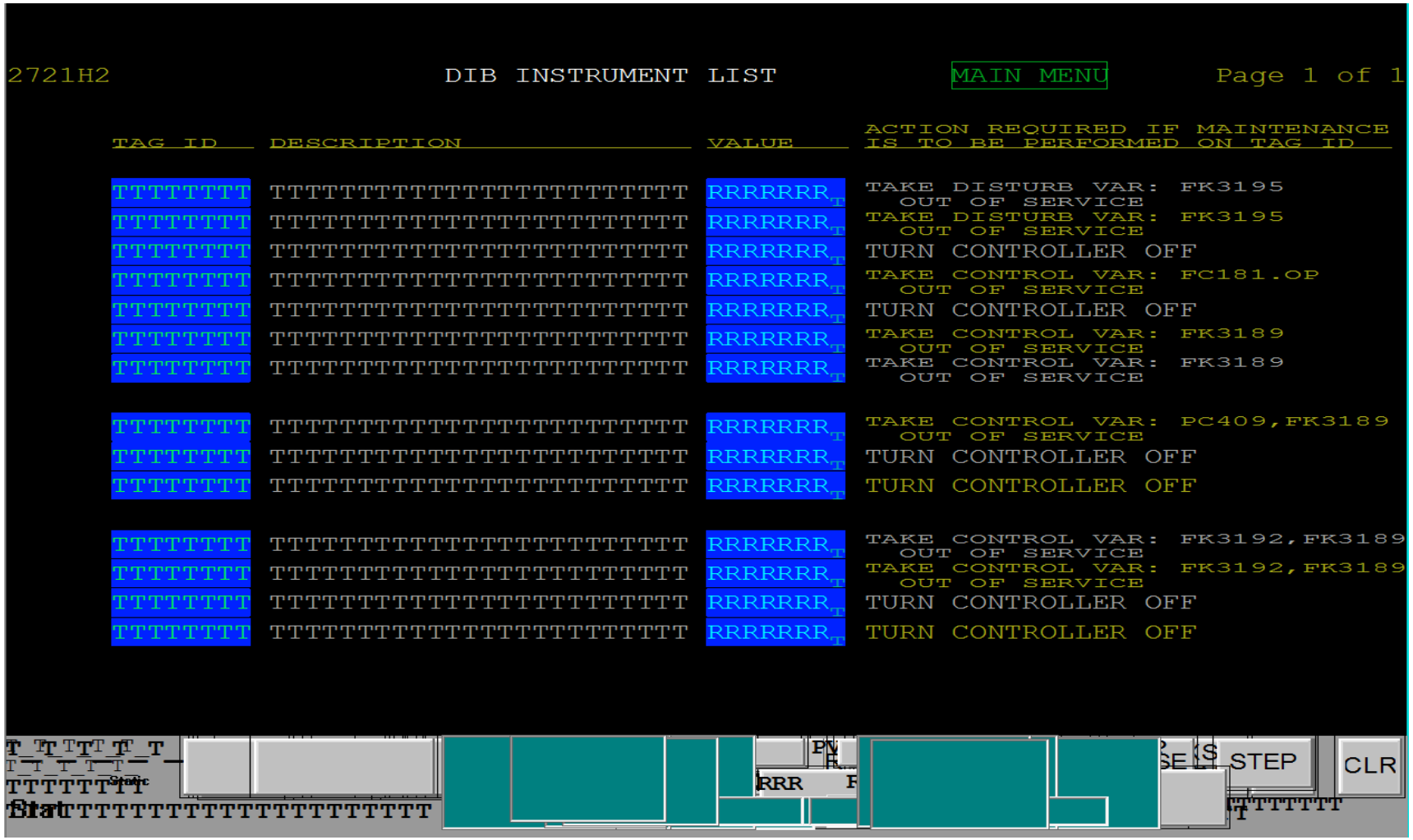
2.65 DIB AM CALCULATIONS (2721E2.DS)

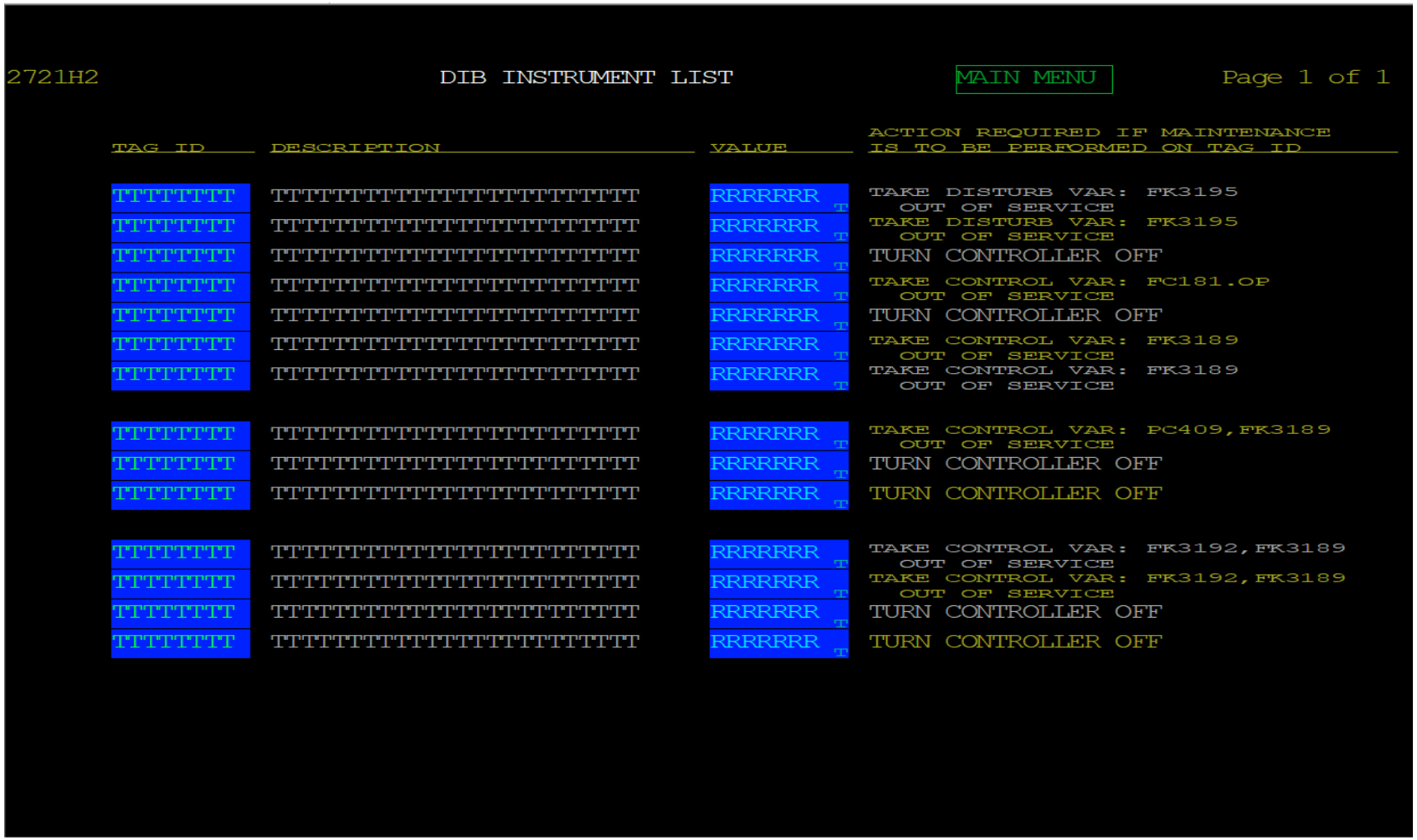


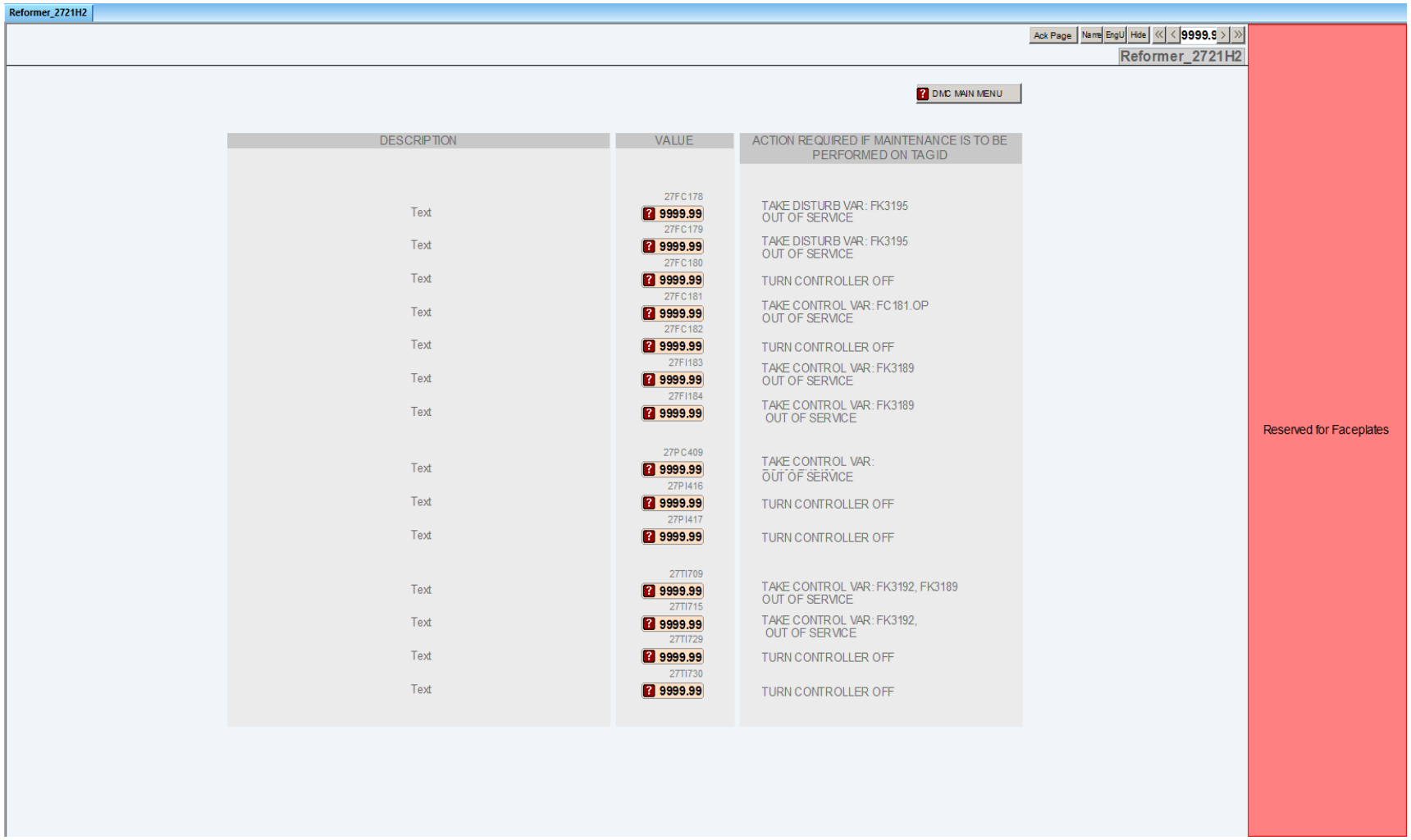

2721E2
DIB AM CALCULATIONS
MAIN MENU
AM DUMP
LIQUID DENS & SPGR
REFLUX RRRRR SPGR
INT RFLX RRRR LB/CF
LIQUID MASS FLOW
REFLUX RRRR MLBHR
OVHD RRRR MLBHR
INTERNAL FLOW
INT RFLX RRRR MLBHR
INT VAP RRRR MLBHR
INT RFLX RRRR BPH
HEAT OF VAPORIZATION
REFLUX RRRR BTU/LB
VAPOR MASS FLOW
OVHD REL RRRR MLBHR
PRESSURE COMP TEMP
TRAY 10 RRRR DEGF
TRAY 50 RRRR DEGF
TOTAL LIQUID FEED
VOLUME RRRR BPH
DIFFERENTIAL PRESSURE
DELTA P RRRR PSID
EEEEEE
Group
III


Reformer_2721E2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2721E2
DMC MAIN MENU
LIQUID DENS & SPGR
REFLUX
27KK3827
9999.99
SPGR
INT RFLX
27KK3830
9999.99
LB/CF
LIQUID MASS FLOW
REFLUX
27FK182
9999.99
MLBHR
OVHD
27FK183
9999.99
MLBHR
INTERNAL FLOW
INT RFLX
27FK3188
9999.99
MLBHR
INT VAP
27FK3189
9999.99
MLBHR
INT RFLX
27FK3192
9999.99
BPH
HEAT OF VAPORIZATION
REFLUX
27KK3829
9999.99
BTU/LB
VAPOR MASS FLOW
OVHD REL
27FK184
9999.99
MLBHR
PRESSURE COMP TEMP
TRAY 10
27TK3604
9999.99
DEGF
TRAY 50
27TK3605
9999.99
DEGF
TOTAL LIQUID FEED
VOLUME
27FK3195
9999.99
BPH
DIFFERENTIAL PRESSURE
DELTA P
27PK3406
9999.99
PSID
Reserved for Faceplates

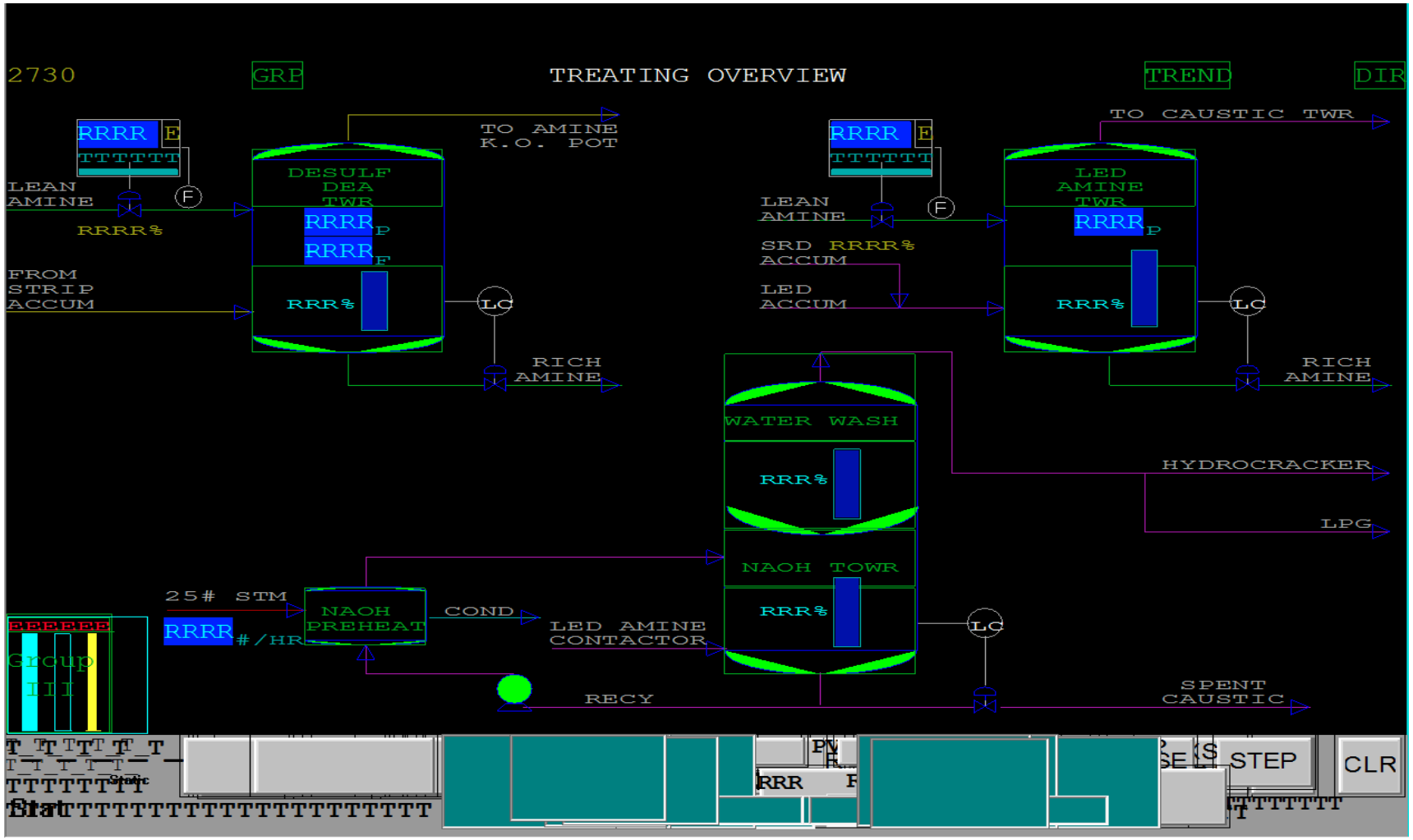
2.66 DIB INSTRUMENT LIST (2721H2.DS)

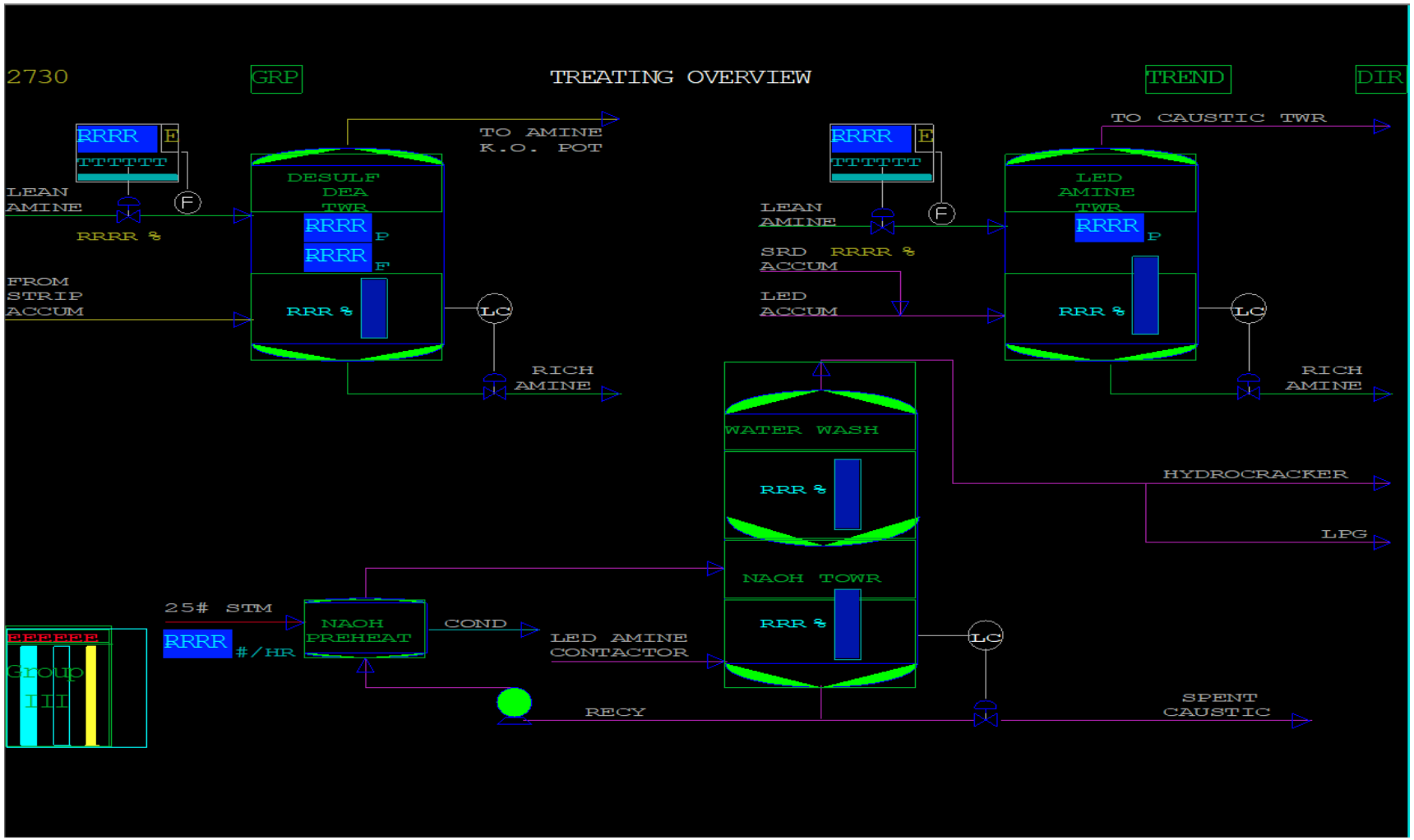


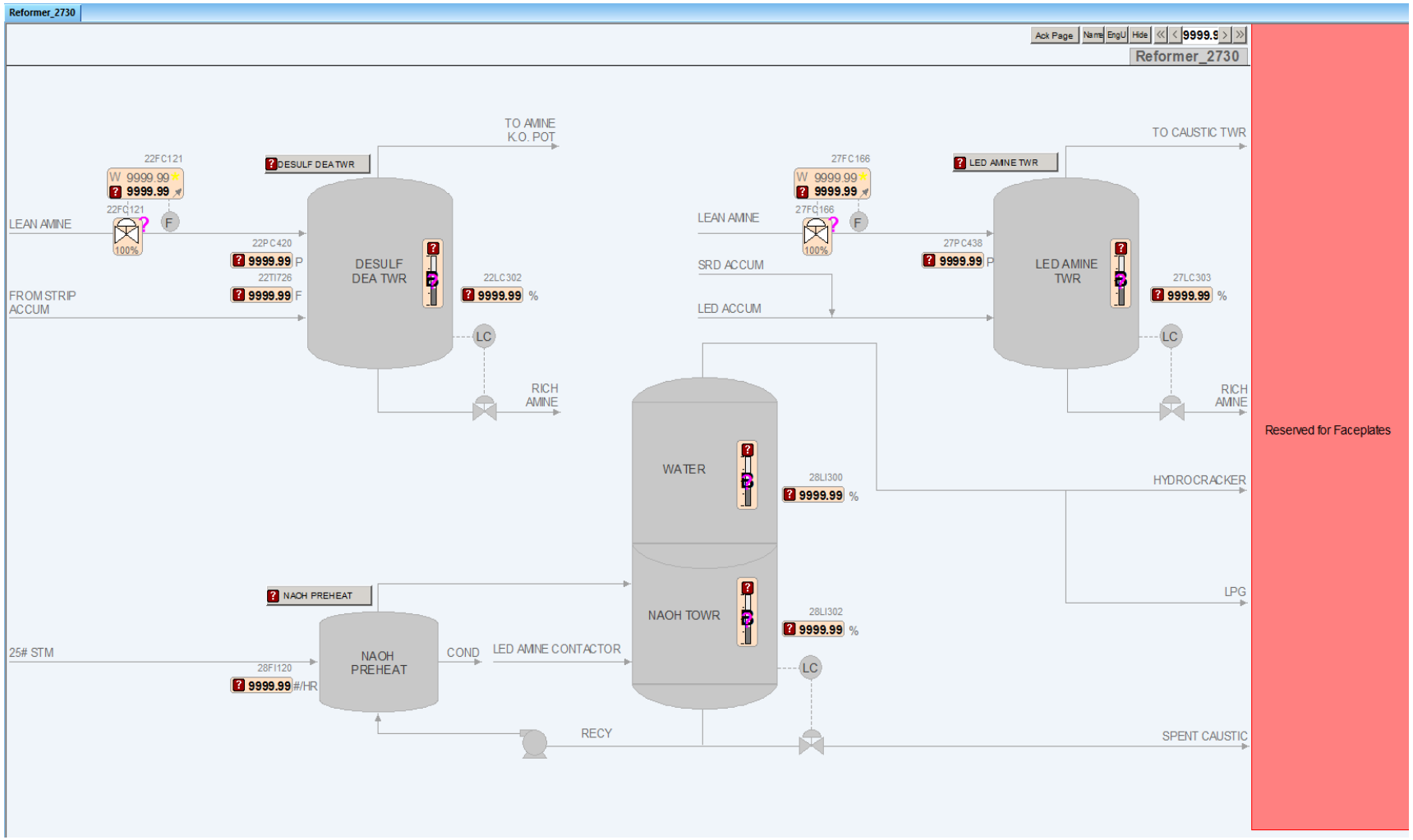

2721H2
DIB INSTRUMENT LIST
MAIN MENU
Page 1 of 1
TAG ID
DESCRIPTION
VALUE
ACTION REQUIRED IF MAINTENANCE IS TO BE PERFORMED ON TAG ID
TTTTTTTT
TTTTTTTTTTTTTTTTTTTTTTTT
RRRRRRR
TAKE DISTURB VAR: FK3195 OUT OF SERVICE
TAKE DISTURB VAR: FK3195 OUT OF SERVICE
TURN CONTROLLER OFF
TAKE CONTROL VAR: FC181.OP OUT OF SERVICE
TURN CONTROLLER OFF
TAKE CONTROL VAR: FK3189 OUT OF SERVICE
TAKE CONTROL VAR: FK3189 OUT OF SERVICE
TAKE CONTROL VAR: PC409,FK3189 OUT OF SERVICE
TURN CONTROLLER OFF
TURN CONTROLLER OFF
TAKE CONTROL VAR: FK3192,FK3189 OUT OF SERVICE
TAKE CONTROL VAR: FK3192,FK3189 OUT OF SERVICE
TURN CONTROLLER OFF
TURN CONTROLLER OFF


Reformer_2721H2
Ack Page
Name
EngU
Hide
9999.9
Reformer_2721H2
DMC MAIN MENU
DESCRIPTION
VALUE
ACTION REQUIRED IF MAINTENANCE IS TO BE PERFORMED ON TAG ID
27FC178
Text
9999.99
TAKE DISTURB VAR: FK3195 OUT OF SERVICE
27FC179
Text
9999.99
TAKE DISTURB VAR: FK3195 OUT OF SERVICE
27FC180
Text
9999.99
TURN CONTROLLER OFF
27FC181
Text
9999.99
TAKE CONTROL VAR: FC181.OP OUT OF SERVICE
27FC182
Text
9999.99
TURN CONTROLLER OFF
27FI183
Text
9999.99
TAKE CONTROL VAR: FK3189 OUT OF SERVICE
27FI184
Text
9999.99
TAKE CONTROL VAR: FK3189 OUT OF SERVICE
27PC409
Text
9999.99
TAKE CONTROL VAR: OUT OF SERVICE
27PI416
Text
9999.99
TURN CONTROLLER OFF
27PI417
Text
9999.99
TURN CONTROLLER OFF
27TI709
Text
9999.99
TAKE CONTROL VAR: FK3192, FK3189 OUT OF SERVICE
27TI715
Text
9999.99
TAKE CONTROL VAR: FK3192, OUT OF SERVICE
27TI729
Text
9999.99
TURN CONTROLLER OFF
27TI730
Text
9999.99
TURN CONTROLLER OFF
Reserved for Faceplates

2.67 TREATING OVERVIEW (2730.DS)




2730
GRP
TREATING OVERVIEW
TREND
DIR
RRRR
E
TTTTTT
LEAN AMINE
F
RRRR %
FROM STRIP ACCUM
DESULF DEA TWR
RRRR
P
RRRR
F
RRR %
LC
TO AMINE K.O. POT
RICH AMINE
RRRR
E
TTTTTT
LEAN AMINE
F
SRD ACCUM
RRRR %
LED ACCUM
LED AMINE TWR
RRRR
P
RRR %
LC
TO CAUSTIC TWR
RICH AMINE
WATER WASH
RRR %
HYDROCRACKER
LPG
NAOH TOWR
RRR %
LC
SPENT CAUSTIC
25# STM
RRRR
#/HR
NAOH PREHEAT
COND
LED AMINE CONTACTOR
RECY
EEEEEE
GROUP III

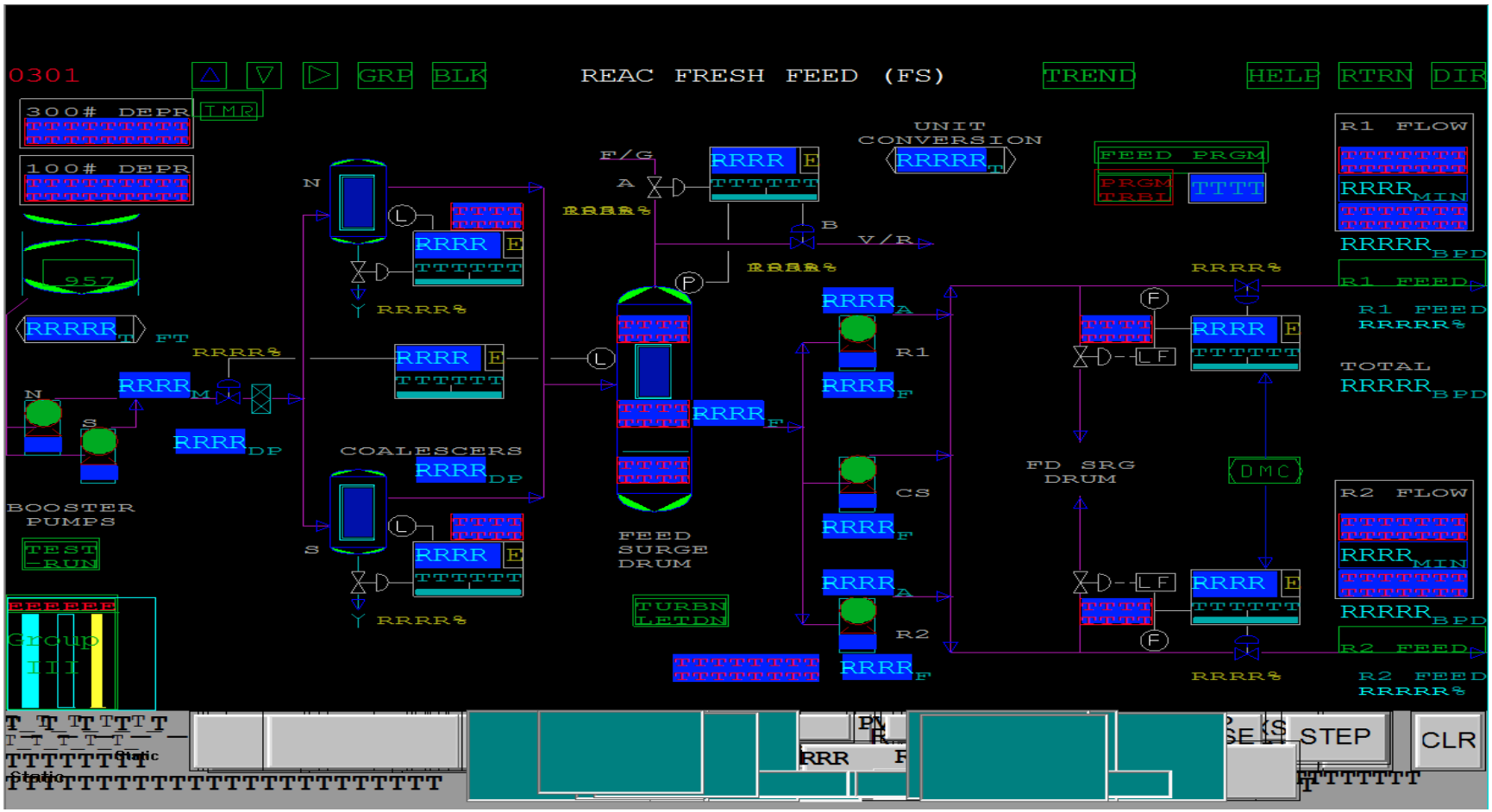

Reformer_2730
Ack Page
Name
EngU
Hide
Reformer_2730
TO AMINE K.O. POT
DESULF DEA TWR
22FC121
W 9999.99
9999.99
22FQ121
100%
F
LEAN AMINE
22PC420
9999.99 P
22TI726
9999.99 F
FROM STRIP ACCUM
DESULF DEA TWR
22LC302
9999.99 %
LC
RICH AMINE
TO CAUSTIC TWR
LED AMINE TWR
27FC166
W 9999.99
9999.99
27FQ166
100%
F
LEAN AMINE
SRD ACCUM
LED ACCUM
27PC438
9999.99 P
LED AMINE TWR
27LC303
9999.99 %
LC
RICH AMINE
WATER
28LI300
9999.99 %
HYDROCRACKER
LPG
NAOH TOWR
28LI302
9999.99 %
LC
NAOH PREHEAT
25# STM
28FI120
9999.99 #/HR
NAOH PREHEAT
COND
LED AMINE CONTACTOR
RECY
SPENT CAUSTIC
Reserved for Faceplates

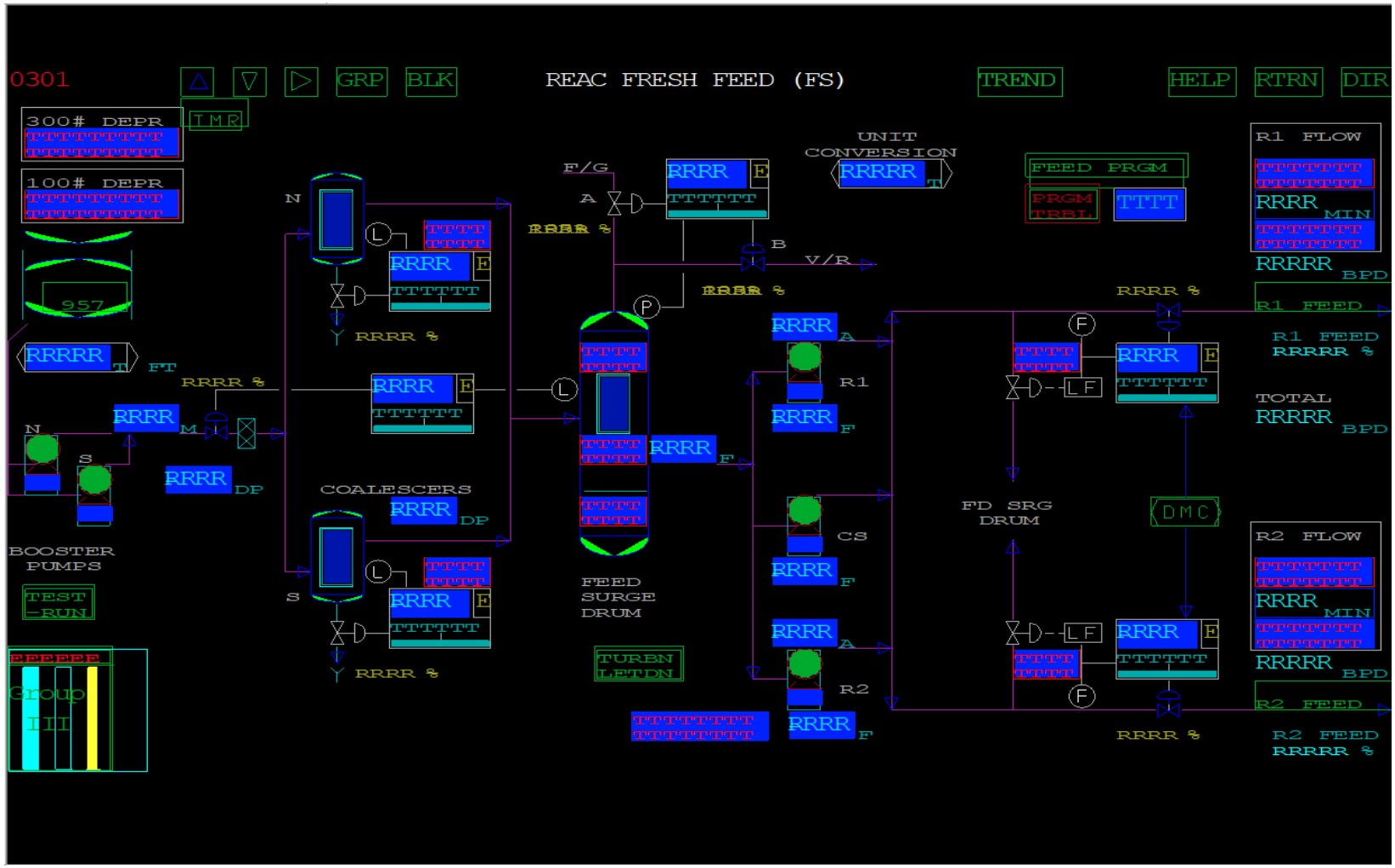
2.68 LED UNIT - PROCESS OVERVIEW (2700.DS)

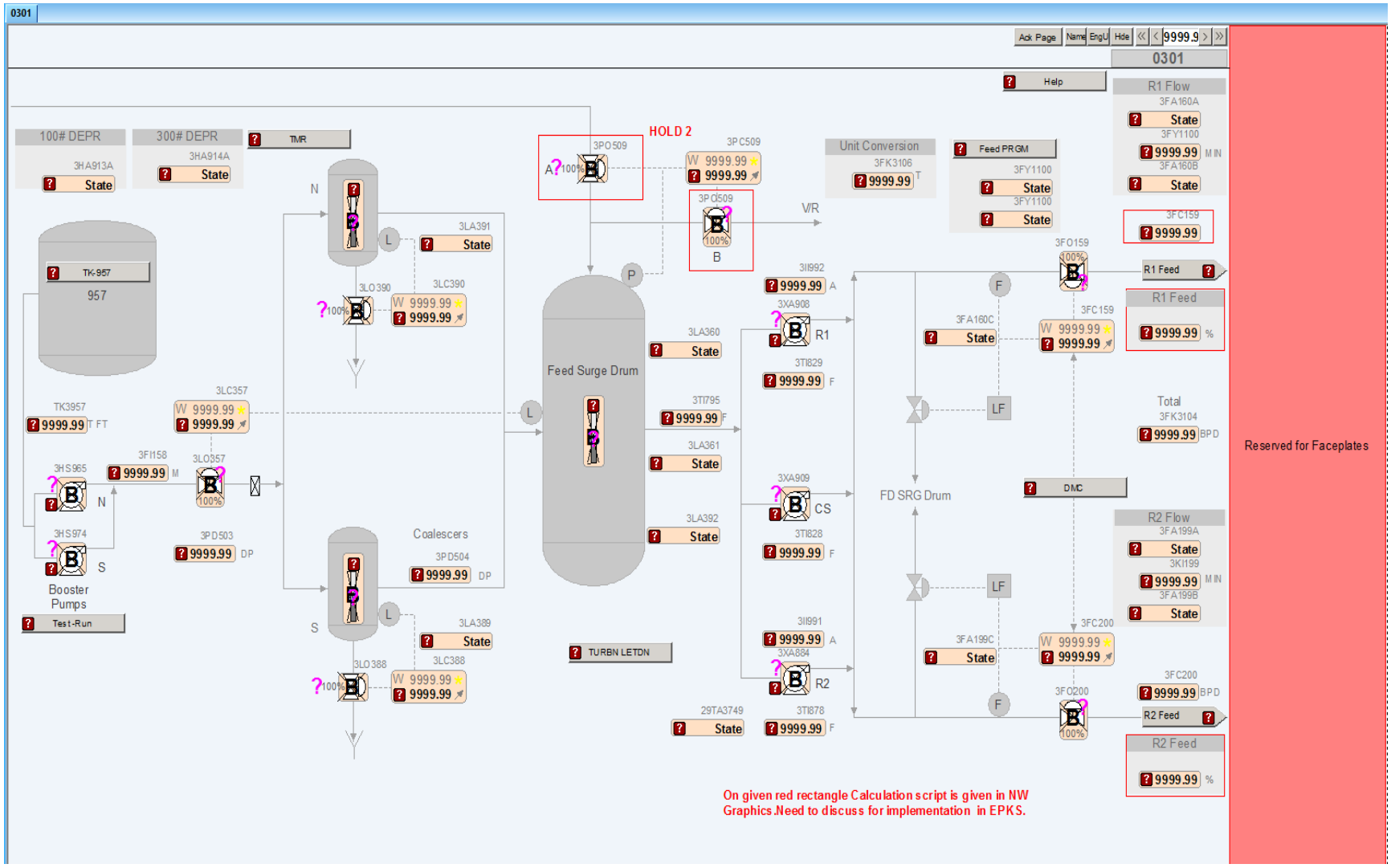
HOLD

3. HCU

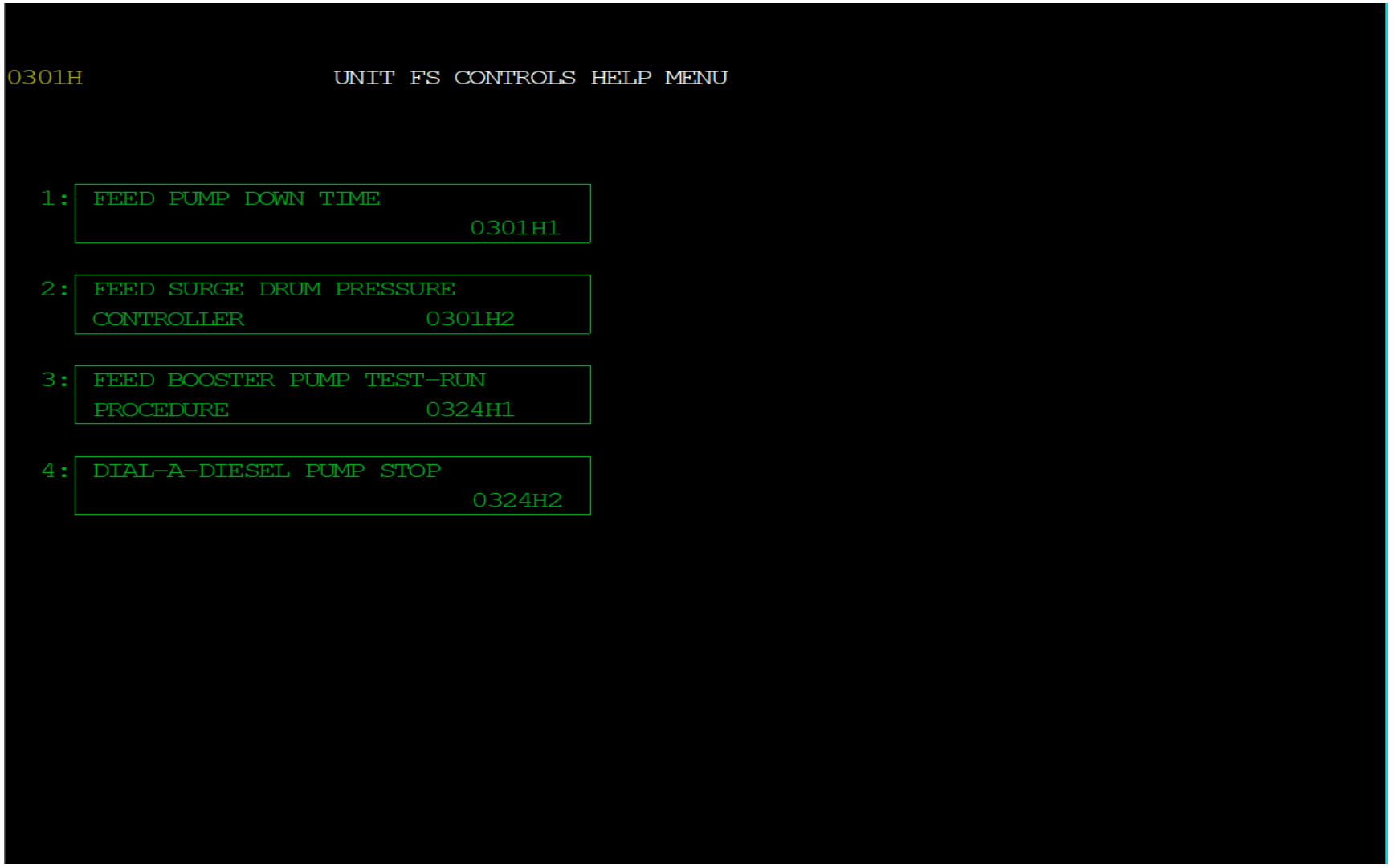
3.1 REAC FRESH FEED (FS) (0301.DS)

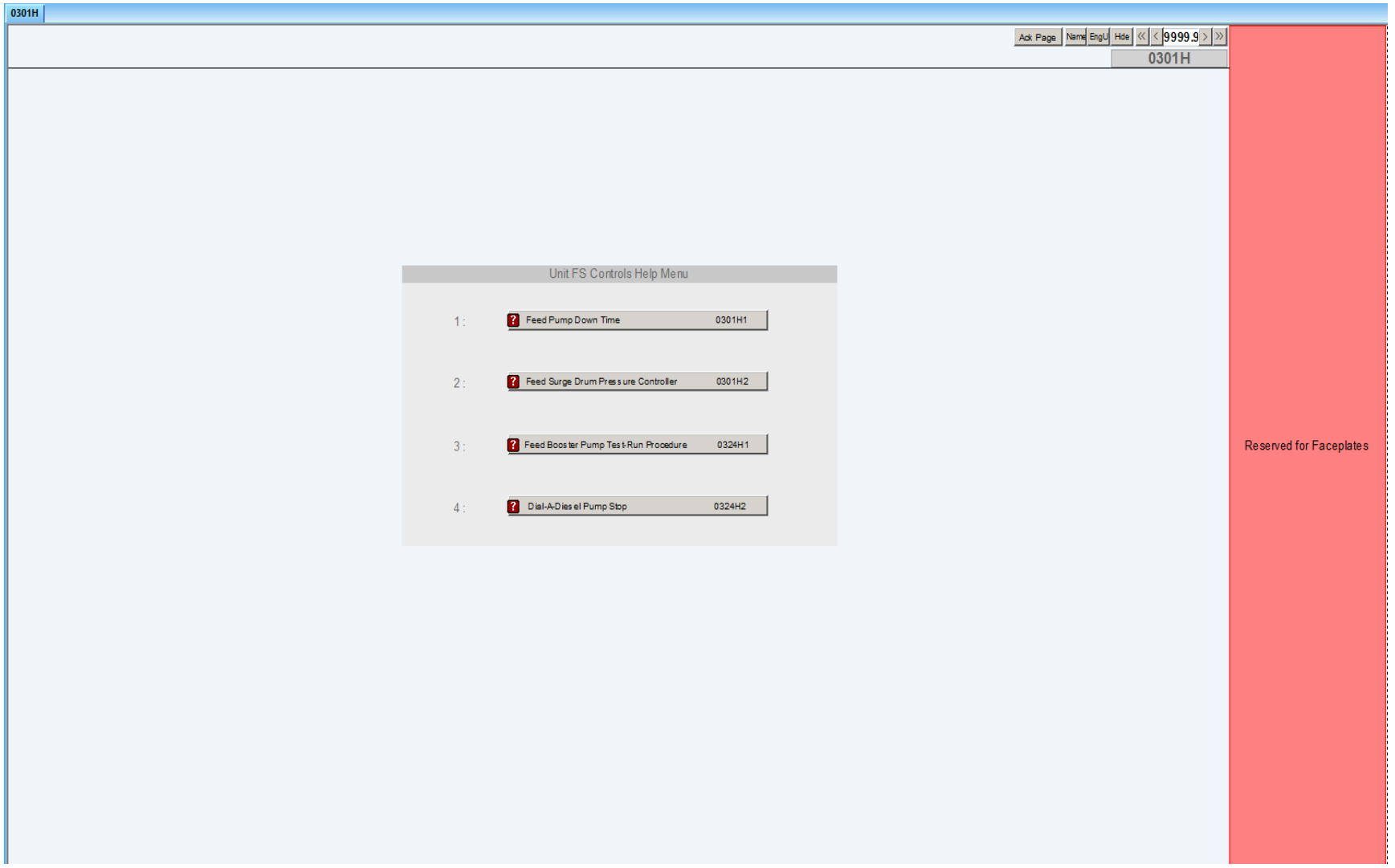



0301
GRP
BLK
REAC FRESH FEED (FS)
TREND
HELP
RTRN
DIR
300# DEPR
100# DEPR
TMR
957
UNIT CONVERSION
FEED PRGM
PRGM TRBL
R1 FLOW
RRRRR MIN
RRRRR BPD
R1 FEED
R1 FEED RRRRR %
TOTAL RRRRR BPD
F/G
A
B
V/R
RRRR %
FT
N
M
S
DP
BOOSTER PUMPS
TEST -RUN
COALESCERS
FEED SURGE DRUM
TURBN LETDN
R1
R2
CS
LF
FD SRG DRUM
DMC
R2 FLOW
R2 FEED
R2 FEED RRRRR %
GROUP III

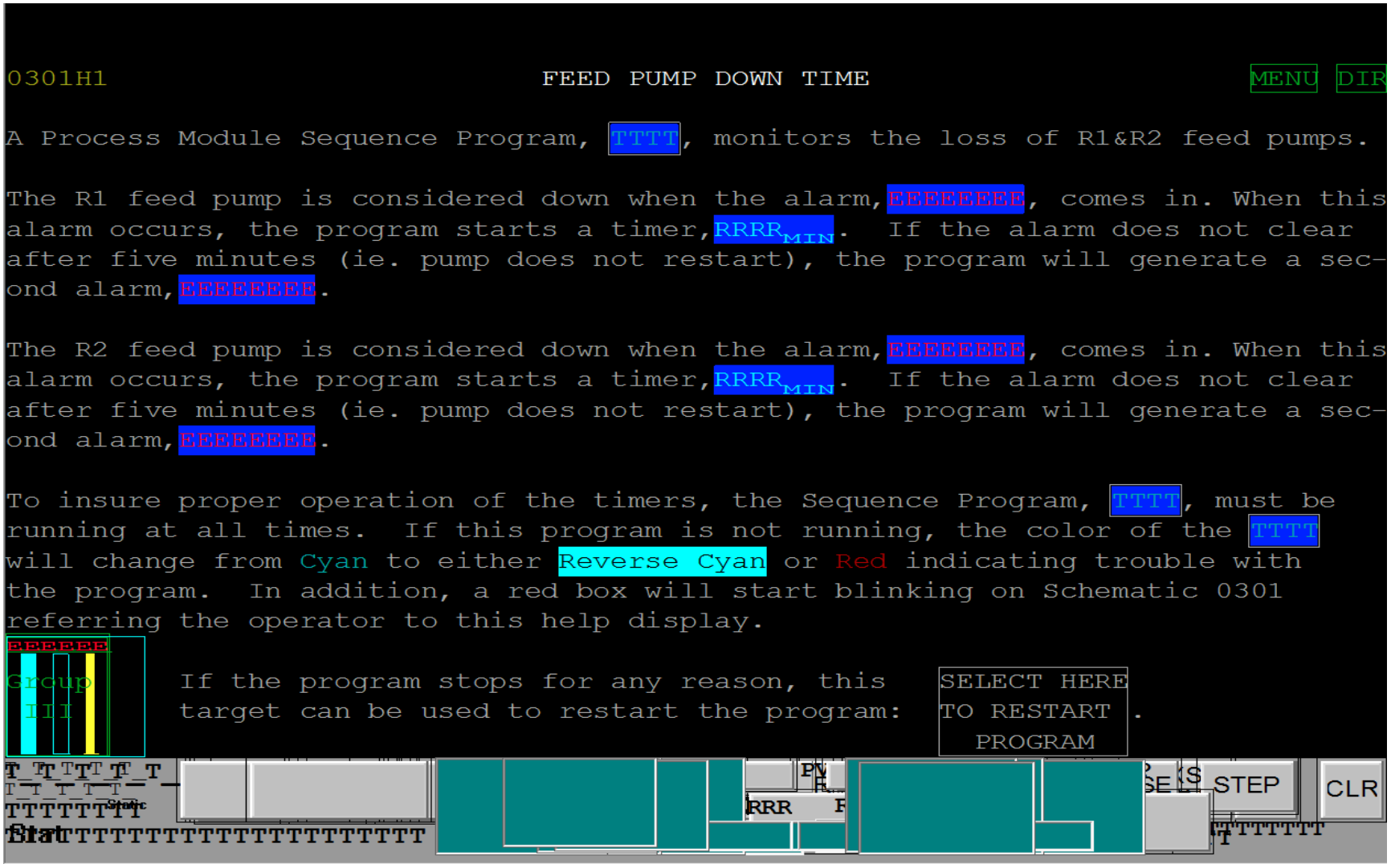

0301
Ack Page
Name
EngU
Hide
0301
Help
100# DEPR
3HA913A
State
300# DEPR
3HA914A
State
TMR
HOLD 2
3PO509
3PC509
W 9999.99
9999.99
Unit Conversion
3FK3106
9999.99
Feed PRGM
3FY1100
State
3FY1100
State
R1 Flow
3FA160A
State
3FY1100
9999.99 MIN
3FA160B
State
3FC159
9999.99
V/R
TK-957
957
3LA391
State
3LO390
3LC390
W 9999.99
9999.99
3LA360
State
3LA361
State
3LA392
State
3LA389
State
3LO388
3LC388
W 9999.99
9999.99
3LC357
W 9999.99
9999.99
TK3957
9999.99 T FT
3FI158
9999.99 M
3LO357
3HS965
3HS974
N
S
Booster Pumps
Test-Run
3PD503
9999.99 DP
Coalescers
3PD504
9999.99 DP
Feed Surge Drum
3TI795
9999.99 F
3TI829
9999.99 F
3TI828
9999.99 F
3TI878
9999.99 F
3II992
9999.99 A
3II991
9999.99 A
3XA908
R1
3XA909
CS
3XA884
R2
29TA3749
State
TURBN LETDN
3FO159
3FA160C
State
3FC159
W 9999.99
9999.99
3FA199C
State
3FC200
W 9999.99
9999.99
3FO200
F
LF
FD SRG Drum
DMC
Total
3FK3104
9999.99 BPD
R1 Feed
R1 Feed
9999.99 %
R2 Flow
3FA199A
State
3KI199
9999.99 MIN
3FA199B
State
3FC200
9999.99 BPD
R2 Feed
R2 Feed
9999.99 %
On given red rectangle Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS.
Reserved for Faceplates

3.2 UNIT FS CONTROLS HELP MENU (0301H.DS)


0301H
UNIT FS CONTROLS HELP MENU
1:
FEED PUMP DOWN TIME
0301H1
2:
FEED SURGE DRUM PRESSURE
CONTROLLER
0301H2
3:
FEED BOOSTER PUMP TEST-RUN
PROCEDURE
0324H1
4:
DIAL-A-DIESEL PUMP STOP
0324H2


0301H
Ack Page
Name
EngU
Hde
9999.9
0301H
Unit FS Controls Help Menu
1 :
Feed Pump Down Time
0301H1
2 :
Feed Surge Drum Pressure Controller
0301H2
3 :
Feed Booster Pump Test-Run Procedure
0324H1
4 :
Dial-A-Diesel Pump Stop
0324H2
Reserved for Faceplates

3.3 FEED PUMP DOWN TIME (0301H1.DS)



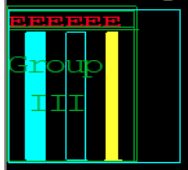
0301H1 FEED PUMP DOWN TIME MENU DIR

A Process Module Sequence Program, TTTT, monitors the loss of R1&R2 feed pumps.

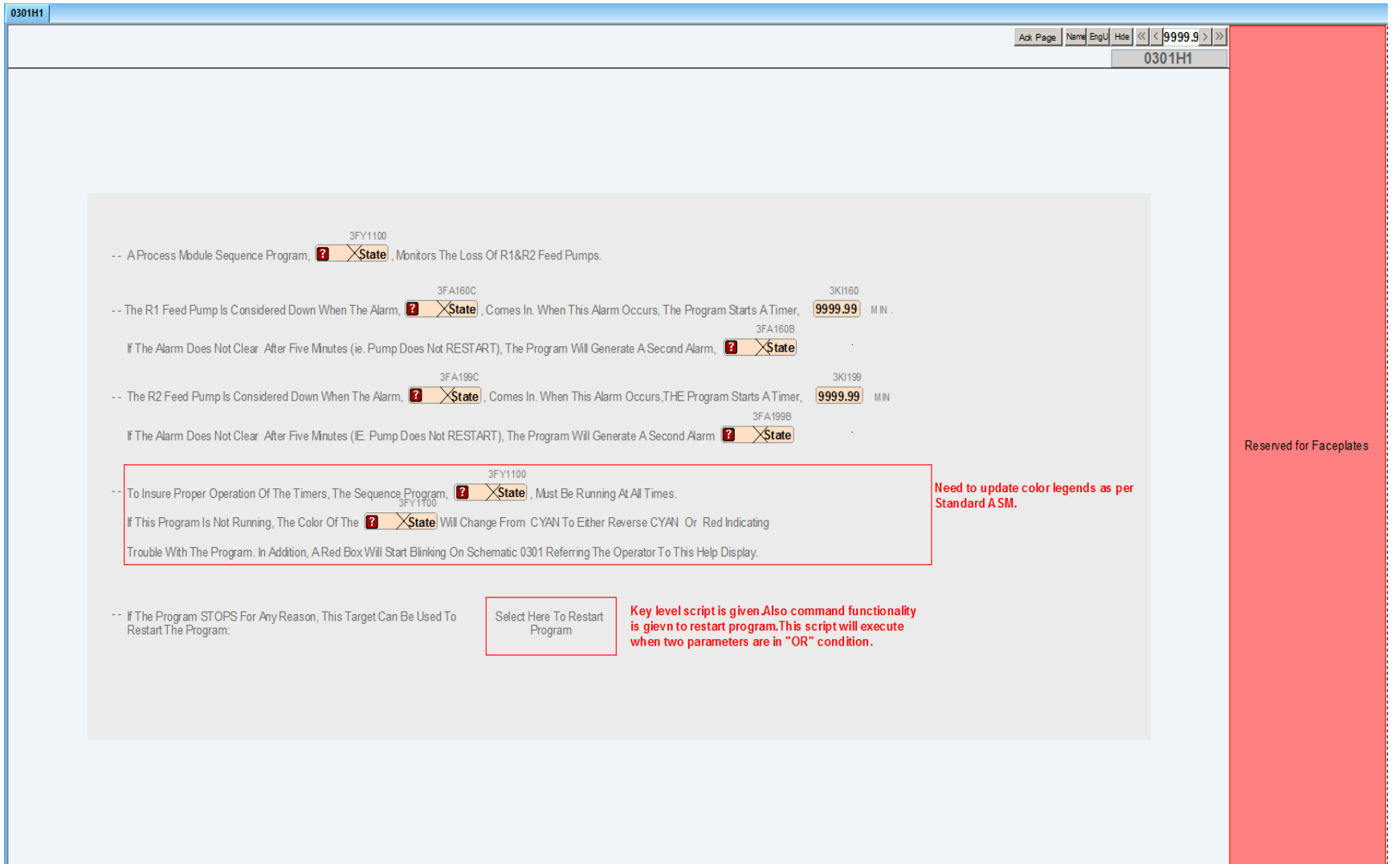
The R1 feed pump is considered down when the alarm, EEEEEEEE, comes in. When this alarm occurs, the program starts a timer, RRRR MIN. If the alarm does not clear after five minutes (ie. pump does not restart), the program will generate a sec-ond alarm, EEEEEEEE.

The R2 feed pump is considered down when the alarm, EEEEEEEE, comes in. When this alarm occurs, the program starts a timer, RRRR MIN. If the alarm does not clear after five minutes (ie. pump does not restart), the program will generate a sec-ond alarm, EEEEEEEE.

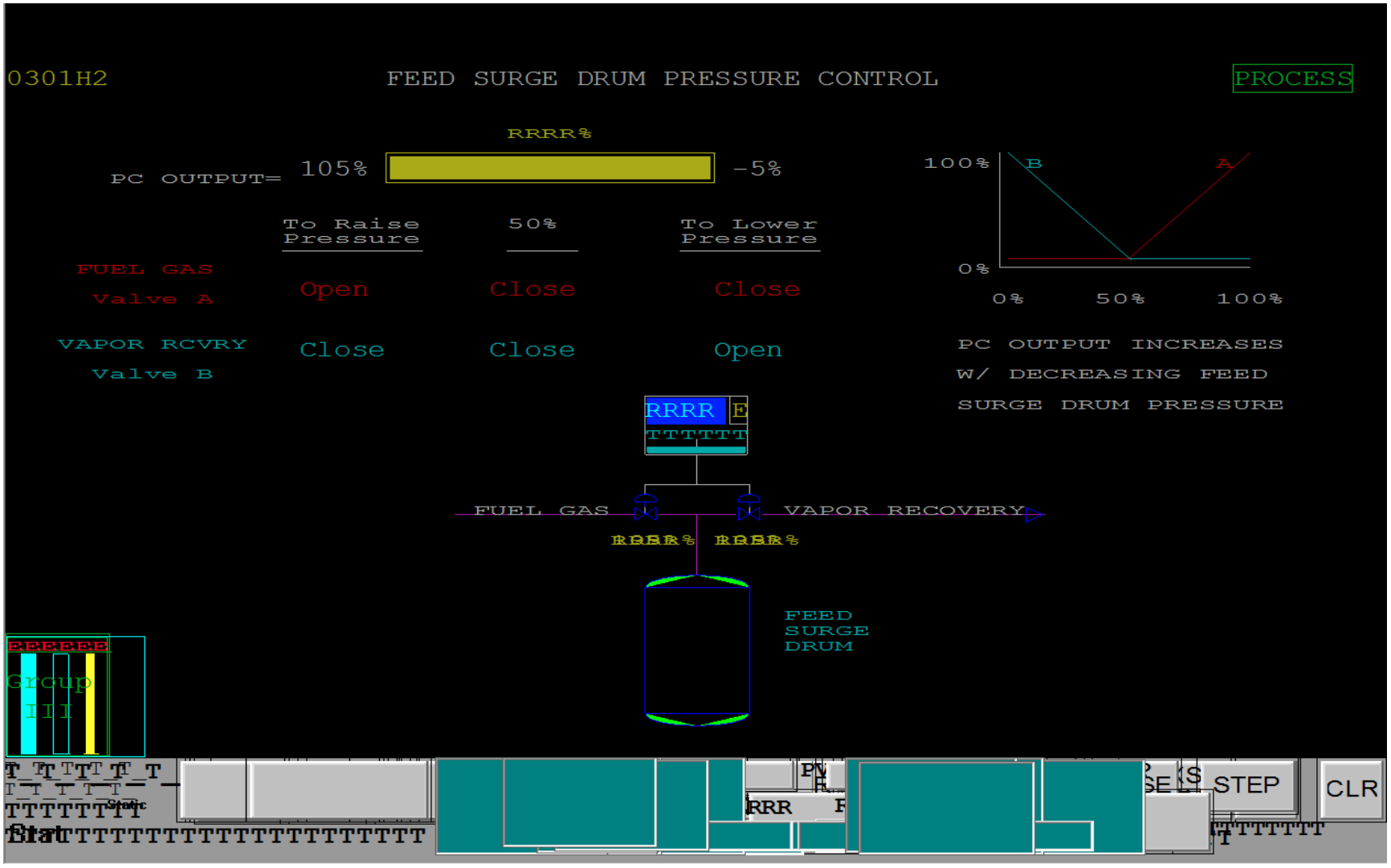
To insure proper operation of the timers, the Sequence Program, TTTT, must be running at all times. If this program is not running, the color of the TTTT will change from Cyan to either Reverse Cyan or Red indicating trouble with the program. In addition, a red box will start blinking on Schematic 0301 referring the operator to this help display.

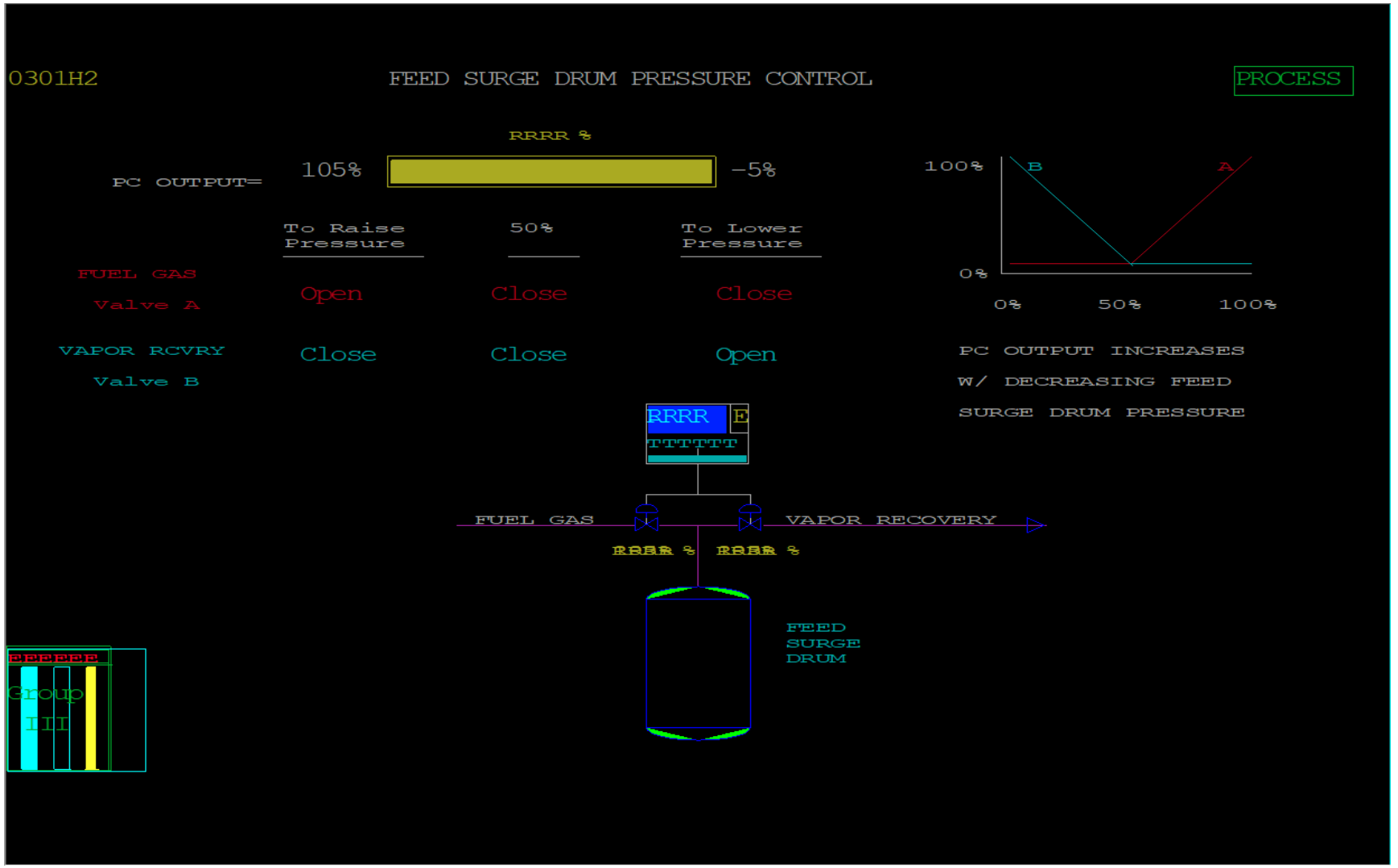


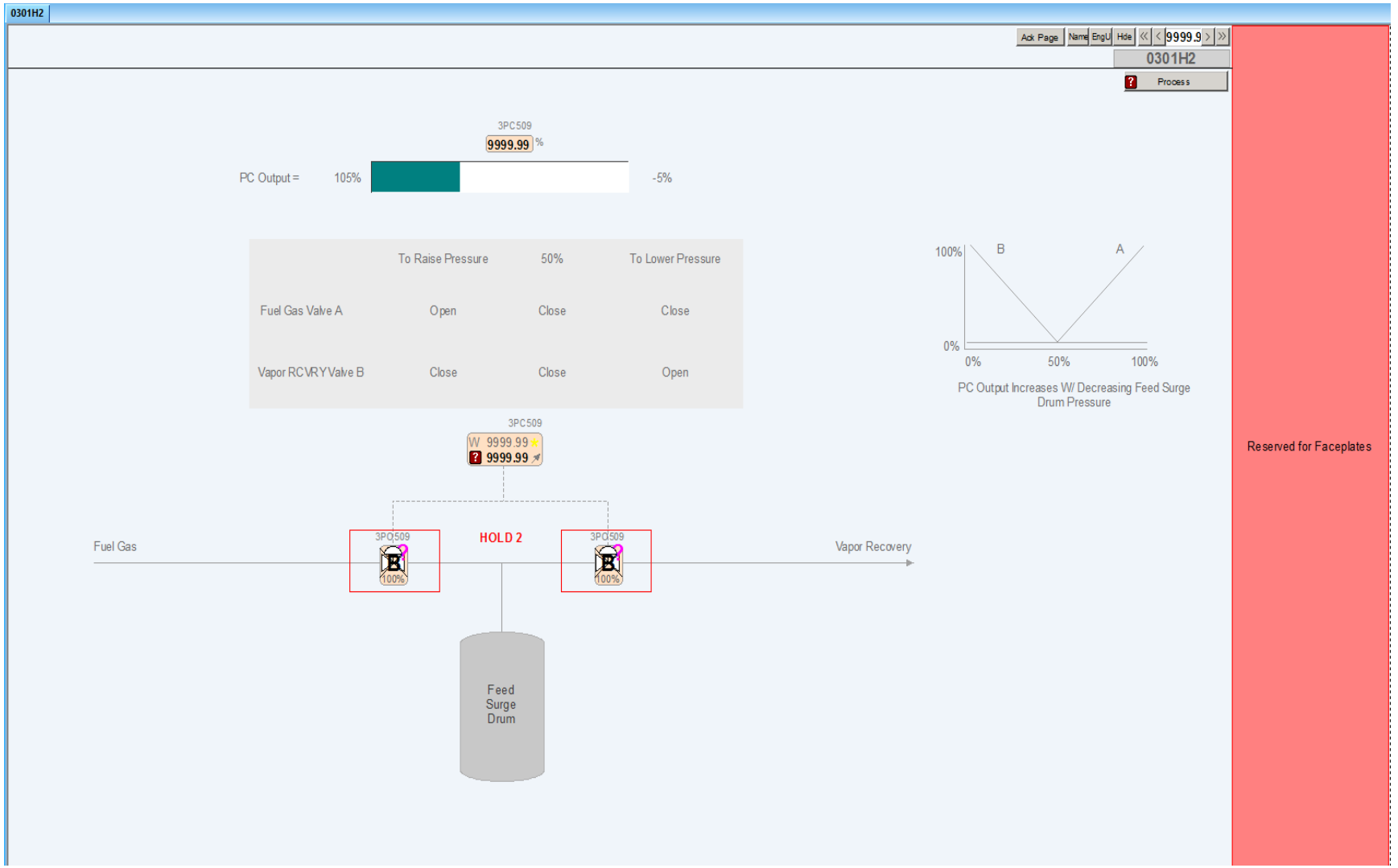
If the program stops for any reason, this target can be used to restart the program: SELECT HERE TO RESTART PROGRAM.


0301H1
Ack Page
Name
EngU
Hde
9999.9
0301H1
-- A Process Module Sequence Program, 3FY1100 ? State , Monitors The Loss Of R1&R2 Feed Pumps.
-- The R1 Feed Pump Is Considered Down When The Alarm, 3FA160C ? State , Comes In. When This Alarm Occurs, The Program Starts A Timer, 3KI160 9999.99 MIN .
If The Alarm Does Not Clear After Five Minutes (ie. Pump Does Not RESTART), The Program Will Generate A Second Alarm, 3FA160B ? State .
-- The R2 Feed Pump Is Considered Down When The Alarm, 3FA199C ? State , Comes In. When This Alarm Occurs,THE Program Starts A Timer, 3KI199 9999.99 MIN
If The Alarm Does Not Clear After Five Minutes (IE. Pump Does Not RESTART), The Program Will Generate A Second Alarm 3FA199B ? State .
-- To Insure Proper Operation Of The Timers, The Sequence Program, 3FY1100 ? State , Must Be Running At All Times.
If This Program Is Not Running, The Color Of The 3FY1100 ? State Will Change From CYAN To Either Reverse CYAN Or Red Indicating
Trouble With The Program. In Addition, A Red Box Will Start Blinking On Schematic 0301 Referring The Operator To This Help Display.
Need to update color legends as per Standard ASM.
-- If The Program STOPS For Any Reason, This Target Can Be Used To Restart The Program:
Select Here To Restart Program
Key level script is given.Also command functionality is gievn to restart program.This script will execute when two parameters are in "OR" condition.
Reserved for Faceplates

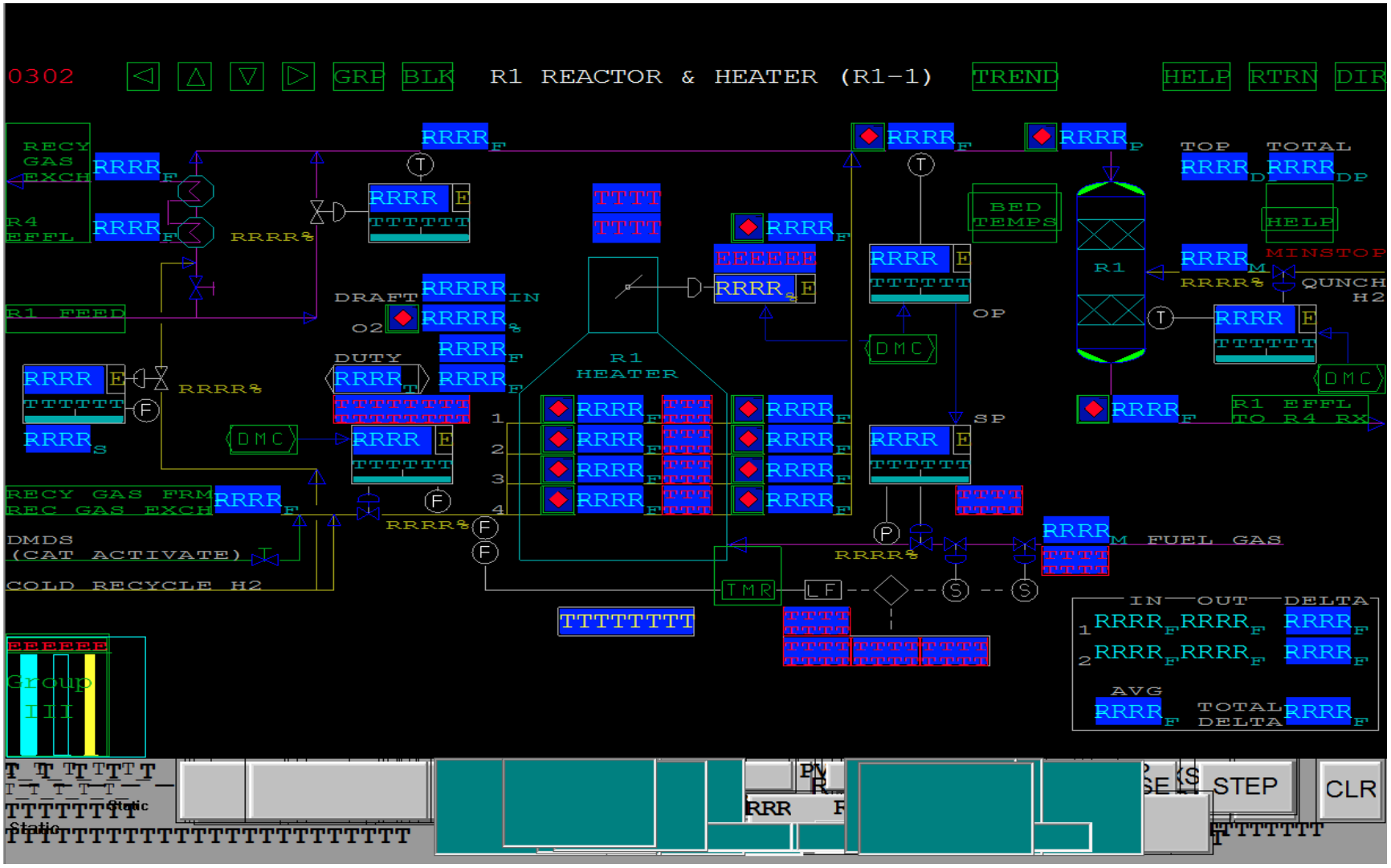
3.4 FEED SURGE DRUM PRESSURE CONTROL (0301H2.DS)

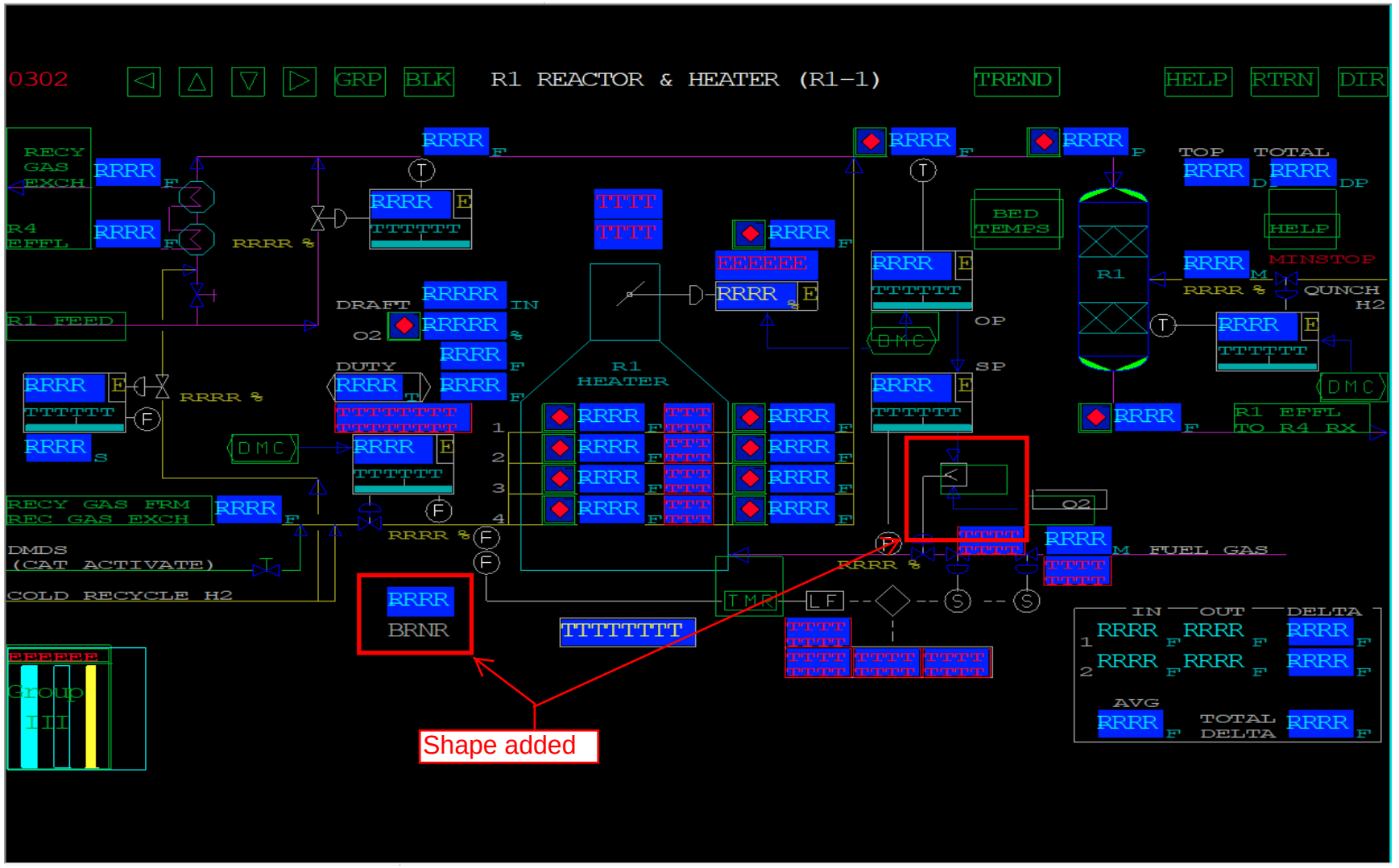


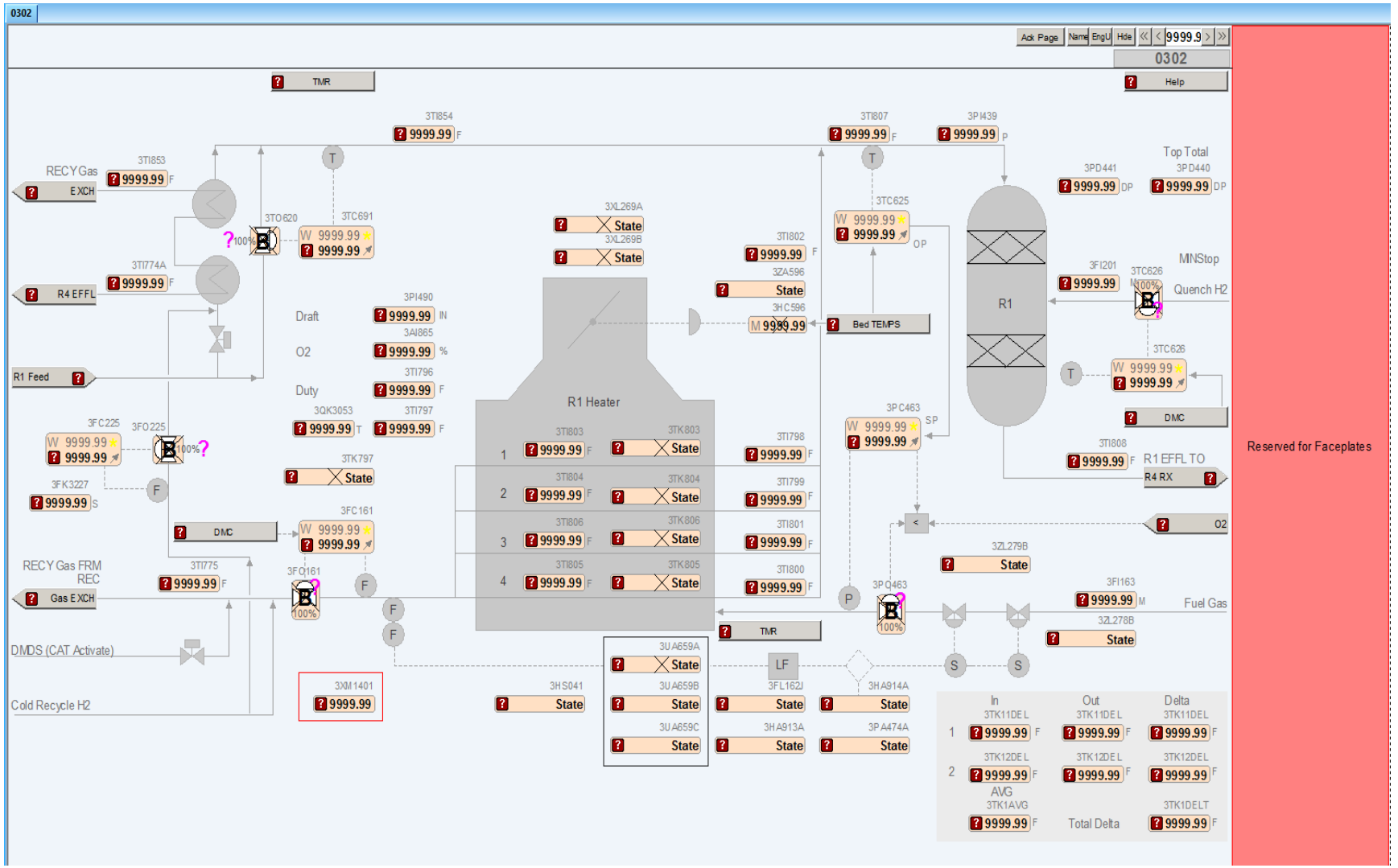

0301H2
FEED SURGE DRUM PRESSURE CONTROL
PROCESS
RRRR %
PC OUTPUT=
105%
-5%
To Raise Pressure
50%
To Lower Pressure
FUEL GAS Valve A
Open
Close
Close
VAPOR RCVRY Valve B
Close
Close
Open
100%
0%
B
A
0%
50%
100%
PC OUTPUT INCREASES W/ DECREASING FEED SURGE DRUM PRESSURE
RRRR
E
TTTTTT
FUEL GAS
VAPOR RECOVERY
RRRR %
RRRR %
FEED SURGE DRUM
EEEEEE
Group III


0301H2
Ack Page
Name
EngU
Hde
9999.9
0301H2
Process
3PC509
9999.99 %
PC Output =
105%
-5%
To Raise Pressure
50%
To Lower Pressure
Fuel Gas Valve A
Open
Close
Close
Vapor RCVRY Valve B
Close
Close
Open
100%
B
A
0%
0%
50%
100%
PC Output Increases W/ Decreasing Feed Surge Drum Pressure
3PC509
W 9999.99
9999.99
Fuel Gas
3PC509
100%
HOLD 2
3PC509
100%
Vapor Recovery
Feed Surge Drum
Reserved for Faceplates

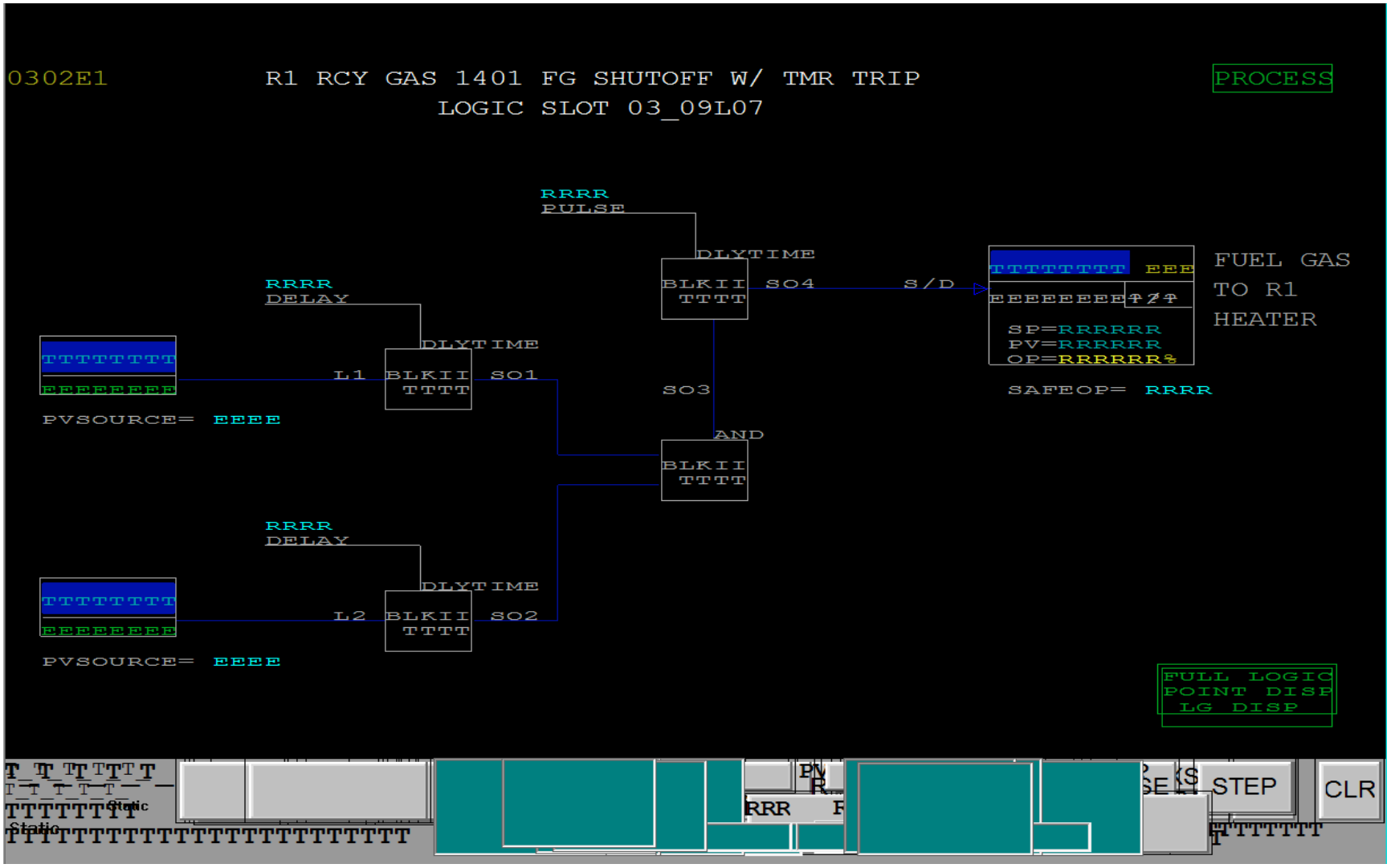
3.5 R1 REACTOR & HEATER (R1-1) (0302.DS)

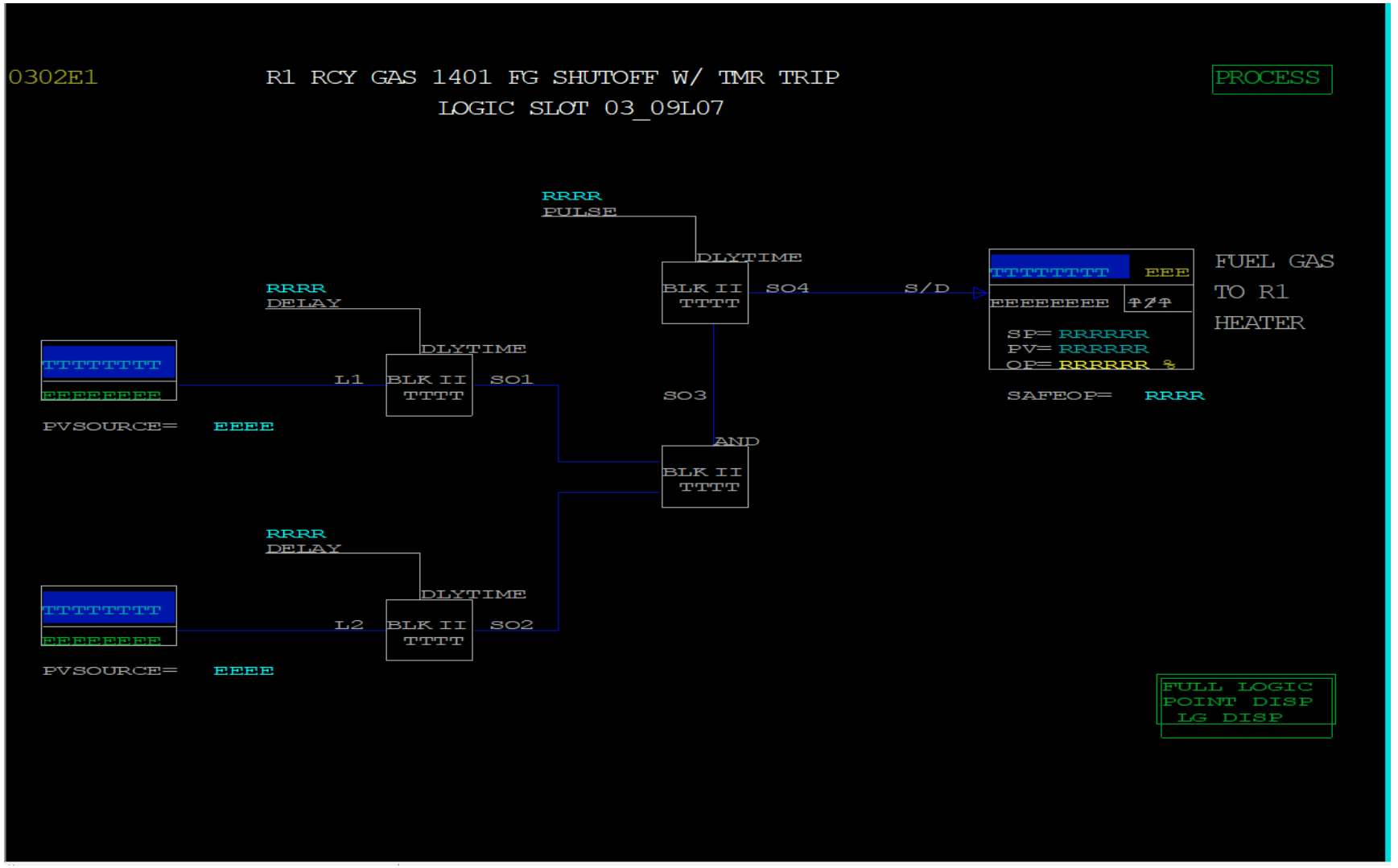


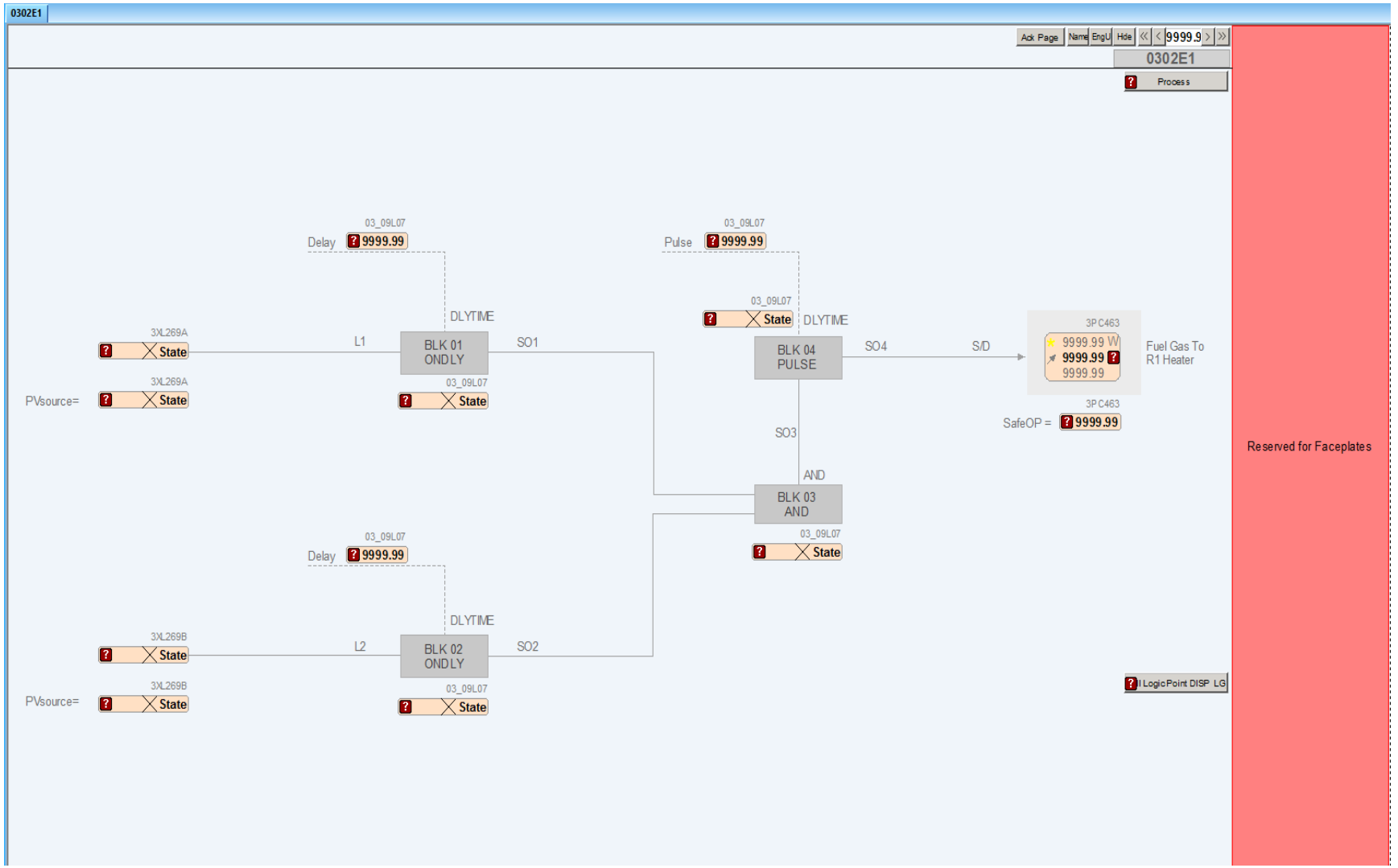

0302
GRP
BLK
R1 REACTOR & HEATER (R1-1)
TREND
HELP
RTRN
DIR
RECY GAS EXCH
R4 EFFL
R1 FEED
DRAFT
O2
DUTY
R1 HEATER
BED TEMPS
R1
TOP
TOTAL
MINSTOP
QUNCH H2
DMC
OP
SP
R1 EFFL TO R4 RX
RECY GAS FRM REC GAS EXCH
DMDS (CAT ACTIVATE)
COLD RECYCLE H2
FUEL GAS
BRNR
TMR
LF
IN
OUT
DELTA
AVG
TOTAL DELTA
Group III
Shape added


0302
Ack Page
Name
EngU
Hde
0302
Help
TMR
Reserved for Faceplates
RECY Gas
EXCH
R4 EFFL
R1 Feed
Draft
O2
Duty
R1 Heater
R1
Bed TEMPS
Top Total
MNStop
Quench H2
DMC
R1 EFFL TO
R4 RX
O2
Fuel Gas
RECY Gas FRM REC
Gas EXCH
DMDS (CAT Activate)
Cold Recycle H2
LF
In
Out
Delta
Total Delta
AVG

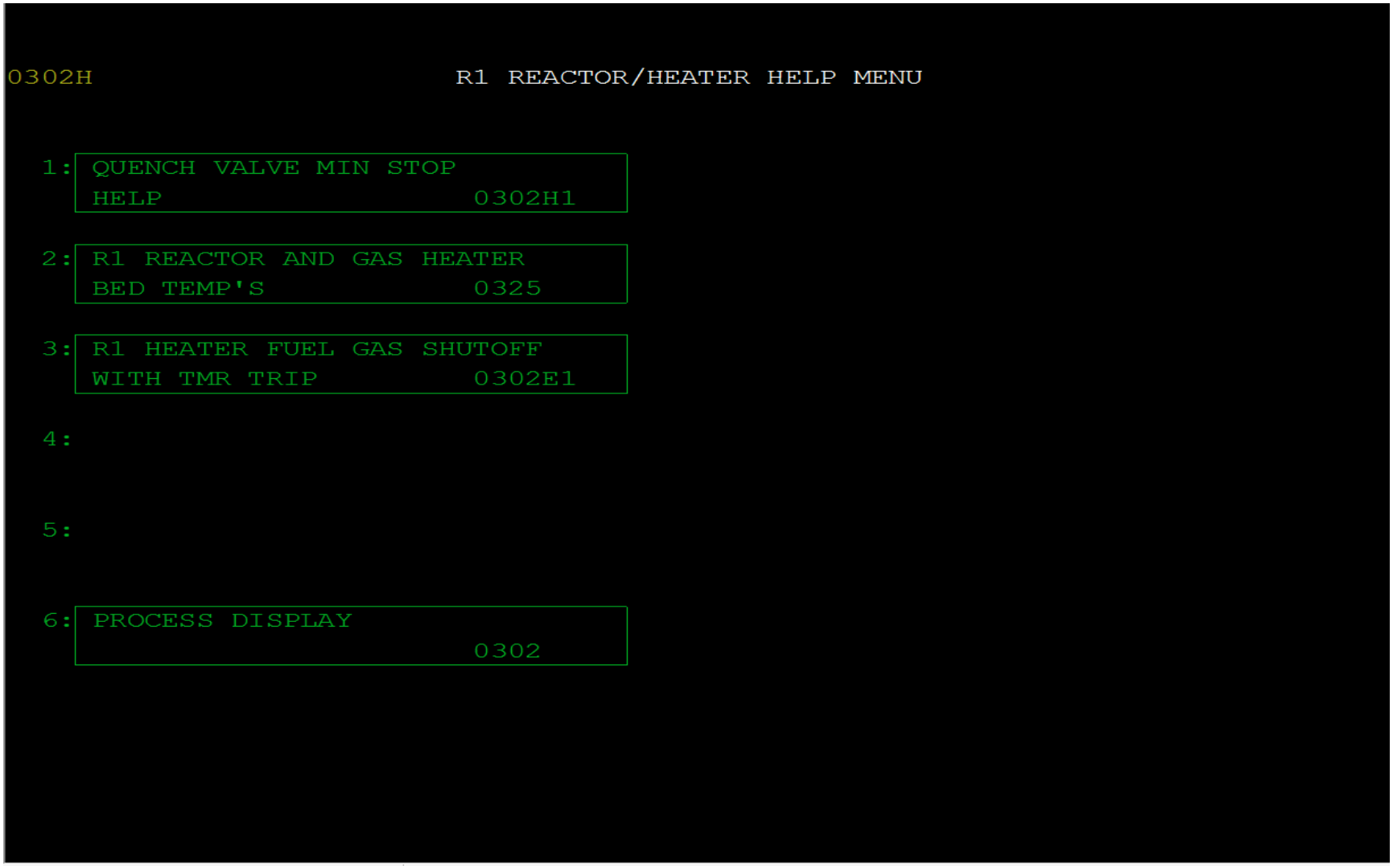
3.6 R1 RCY GAS 1401 FG SHUTOFF W/ TMR TRIP LOGIC SLOT 03_09L07 (0302E1.DS)

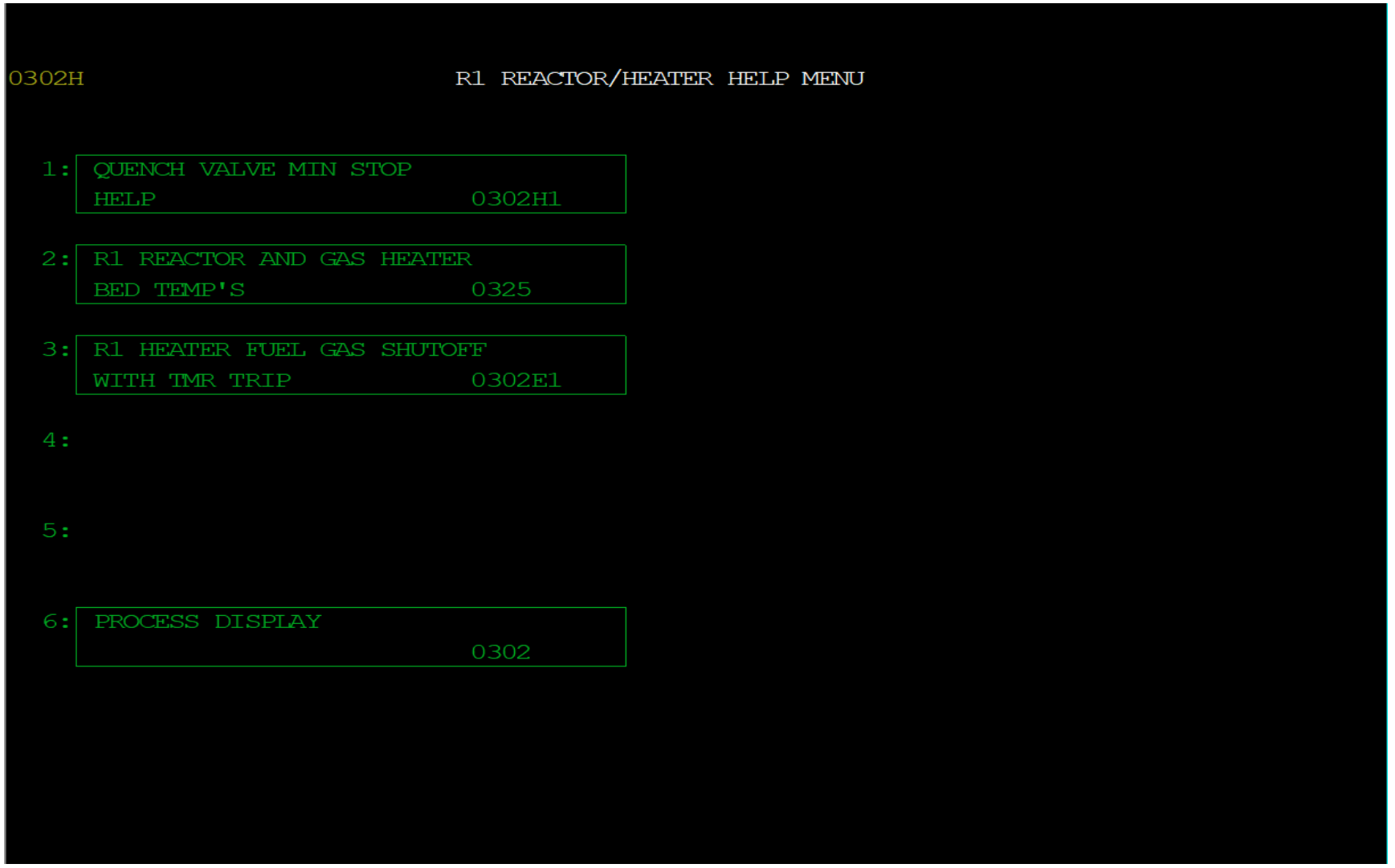


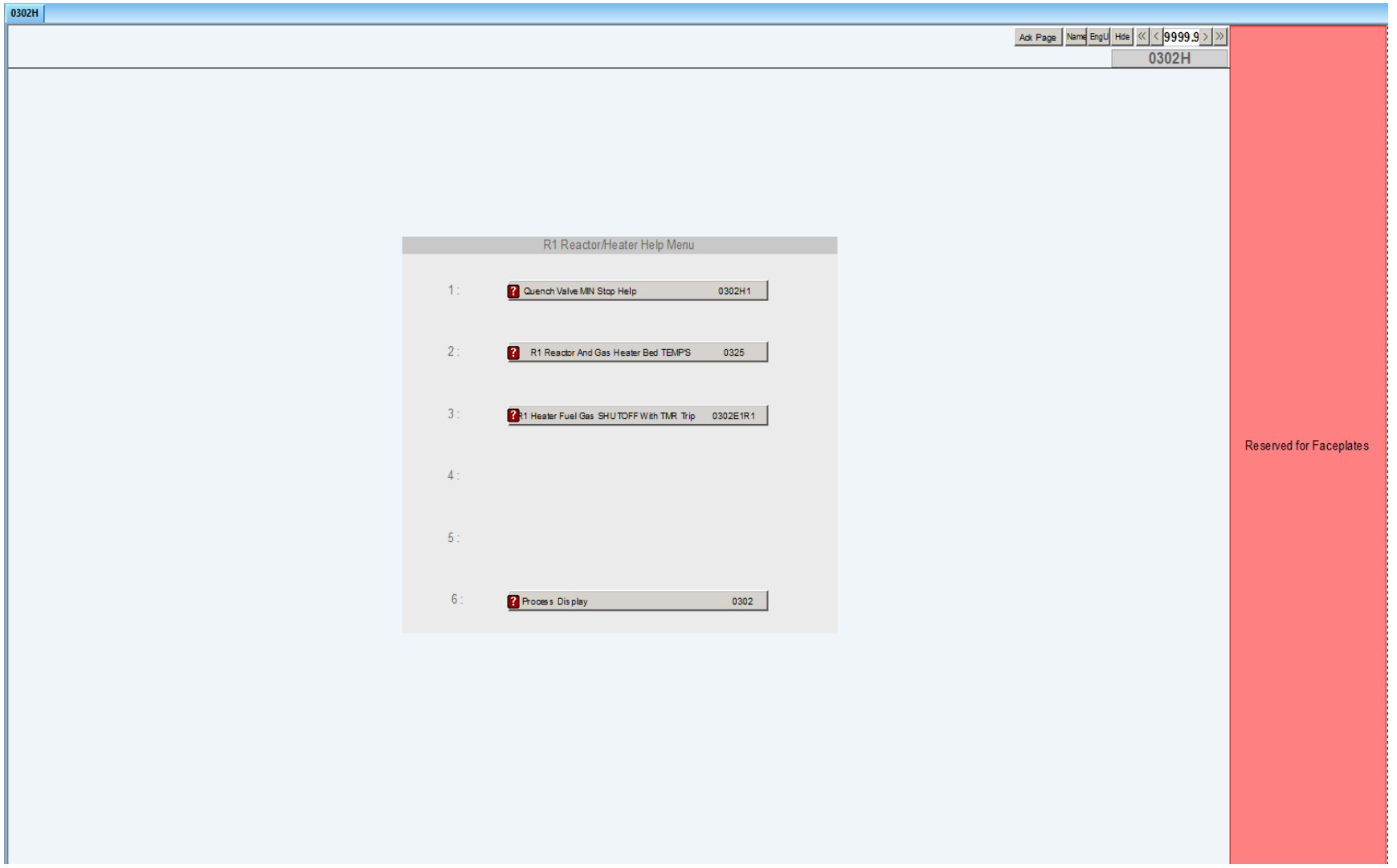

0302E1
R1 RCY GAS 1401 FG SHUTOFF W/ TMR TRIP
LOGIC SLOT 03_09L07
PROCESS
RRRR
PULSE
DLYTIME
BLK II
TTTT
SO4
S/D
TTTTTTTT
EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRRRR %
SAFEOP= RRRR
FUEL GAS
TO R1
HEATER
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L1
BLK II
TTTT
SO1
PVSOURCE=
EEEE
SO3
AND
BLK II
TTTT
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L2
BLK II
TTTT
SO2
PVSOURCE=
EEEE
FULL LOGIC
POINT DISP
LG DISP


0302E1
Ack Page
Name
Engl
Hde
9999.9
0302E1
Process
03_09L07
Delay
9999.99
03_09L07
Pulse
9999.99
03_09L07
State
DLYTIME
3XL269A
State
L1
BLK 01
ONDLY
SO1
BLK 04
PULSE
SO4
S/D
3PC463
9999.99 W
9999.99
9999.99
Fuel Gas To
R1 Heater
3XL269A
State
PVsource=
03_09L07
State
3PC463
SafeOP =
9999.99
SO3
AND
BLK 03
AND
03_09L07
State
03_09L07
Delay
9999.99
DLYTIME
3XL269B
State
L2
BLK 02
ONDLY
SO2
3XL269B
State
PVsource=
03_09L07
State
Reserved for Faceplates
I Logic Point DISP LG

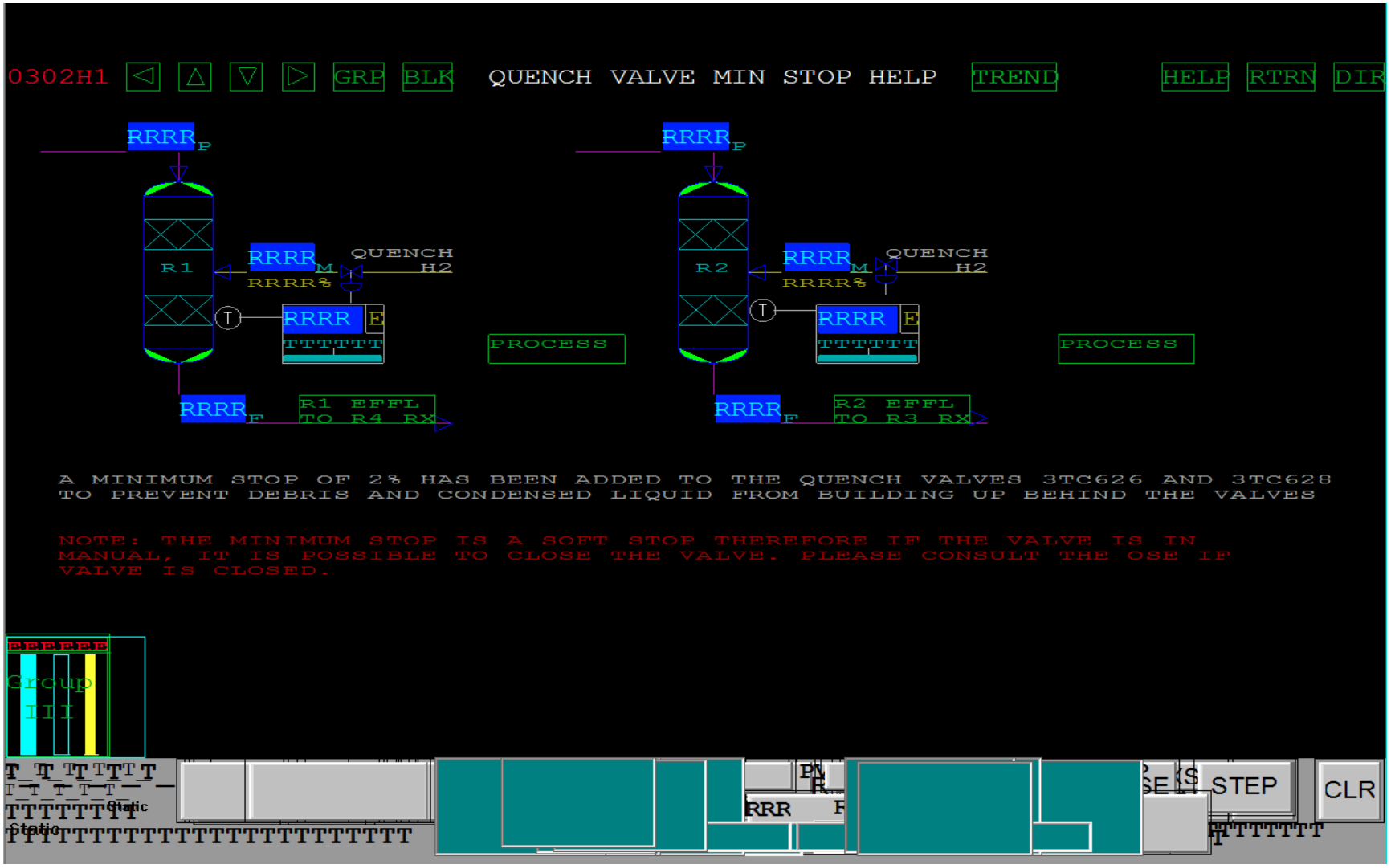
3.7 R1 REACTOR/HEATER HELP MENU (0302H.DS)

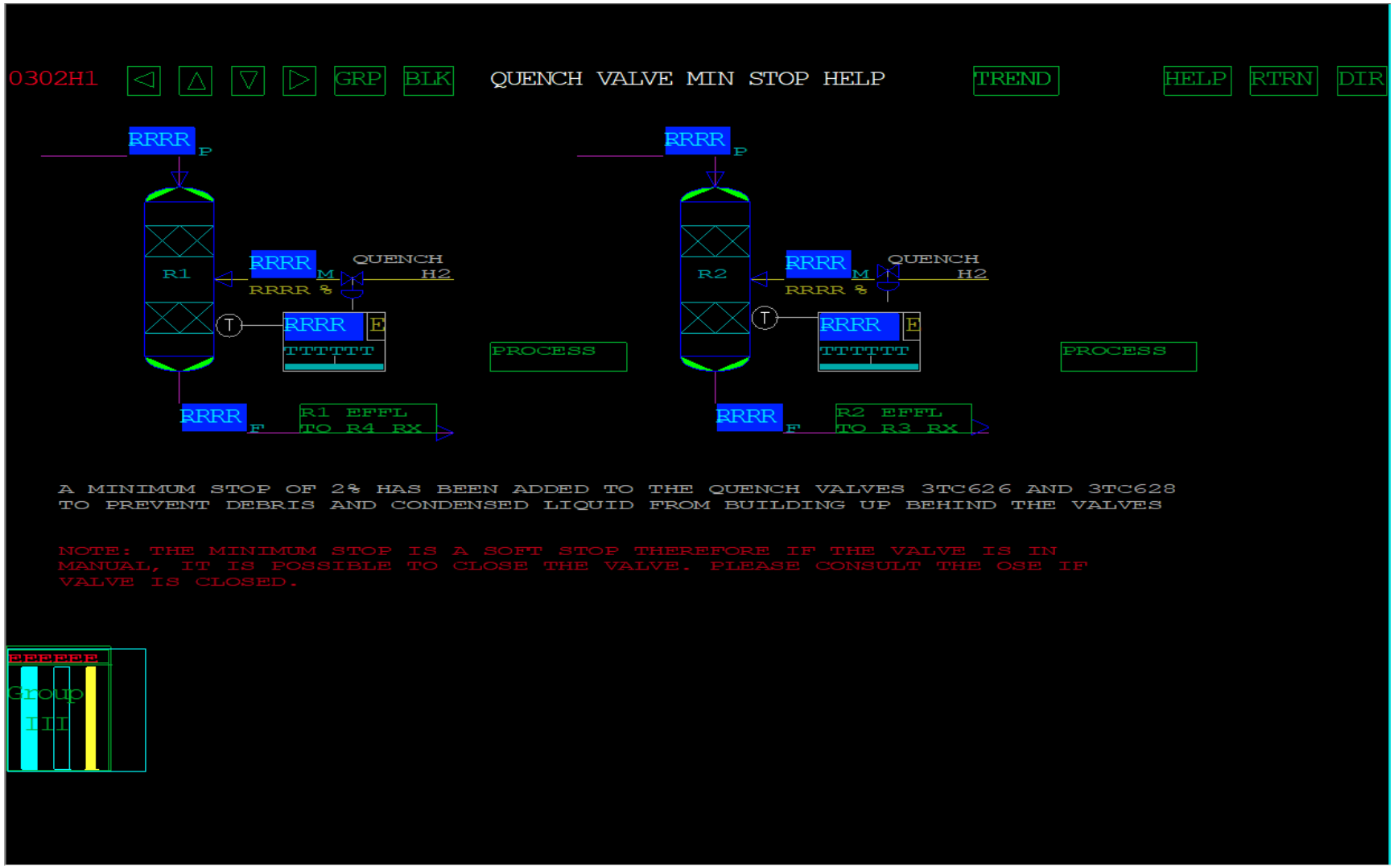


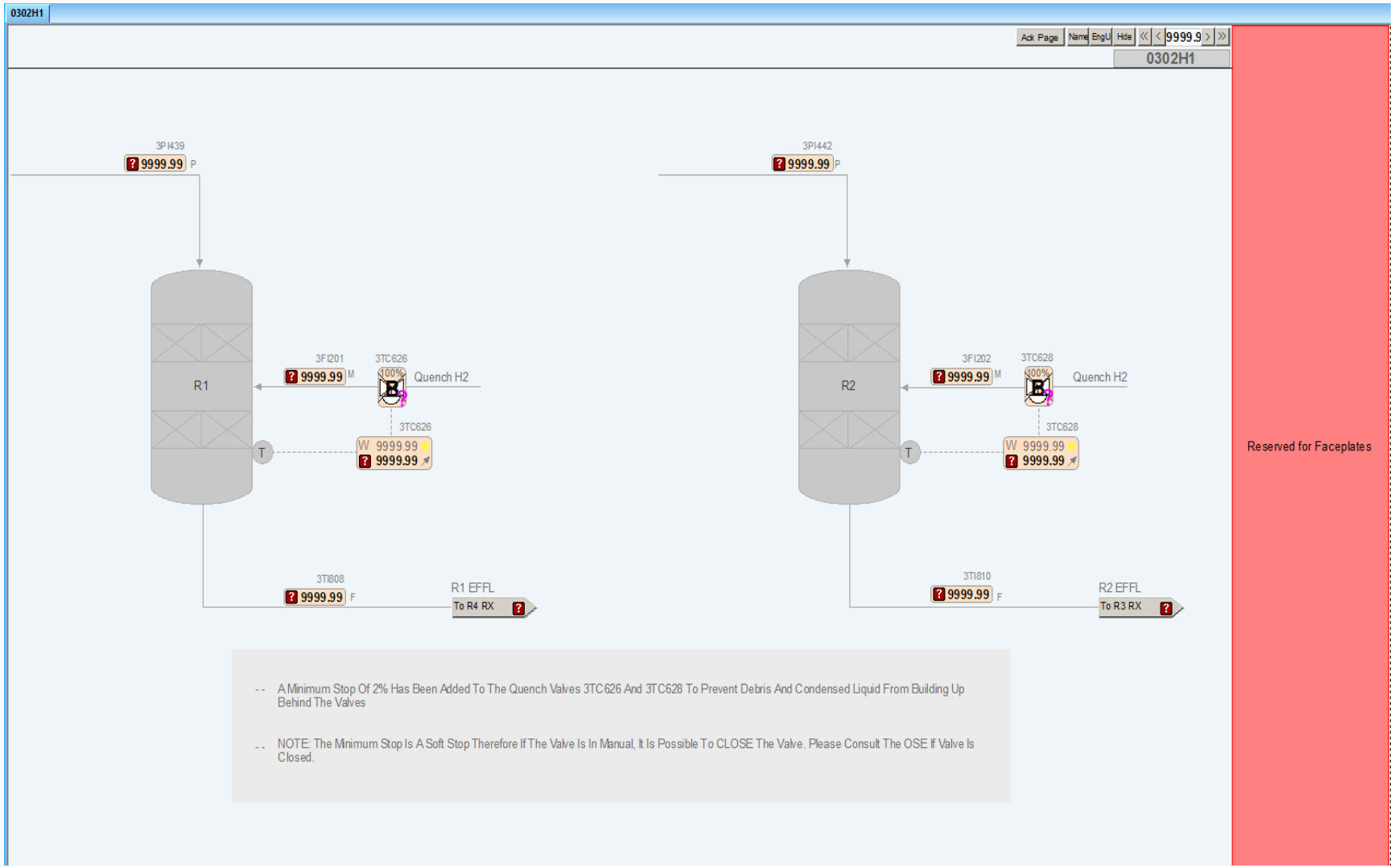

0302H
R1 REACTOR/HEATER HELP MENU
1:
QUENCH VALVE MIN STOP
HELP
0302H1
2:
R1 REACTOR AND GAS HEATER
BED TEMP'S
0325
3:
R1 HEATER FUEL GAS SHUTOFF
WITH TMR TRIP
0302E1
4:
5:
6:
PROCESS DISPLAY
0302


0302H
Ack Page
Name
EngU
Hde
9999.9
0302H
R1 Reactor/Heater Help Menu
1 :
Quench Valve MIN Stop Help
0302H1
2 :
R1 Reactor And Gas Heater Bed TEMP'S
0325
3 :
R1 Heater Fuel Gas SHUTOFF With TMR Trip
0302E1R1
4 :
5 :
6 :
Process Display
0302
Reserved for Faceplates

3.8 QUENCH VALVE MIN STOP HELP (0302H1.DS)



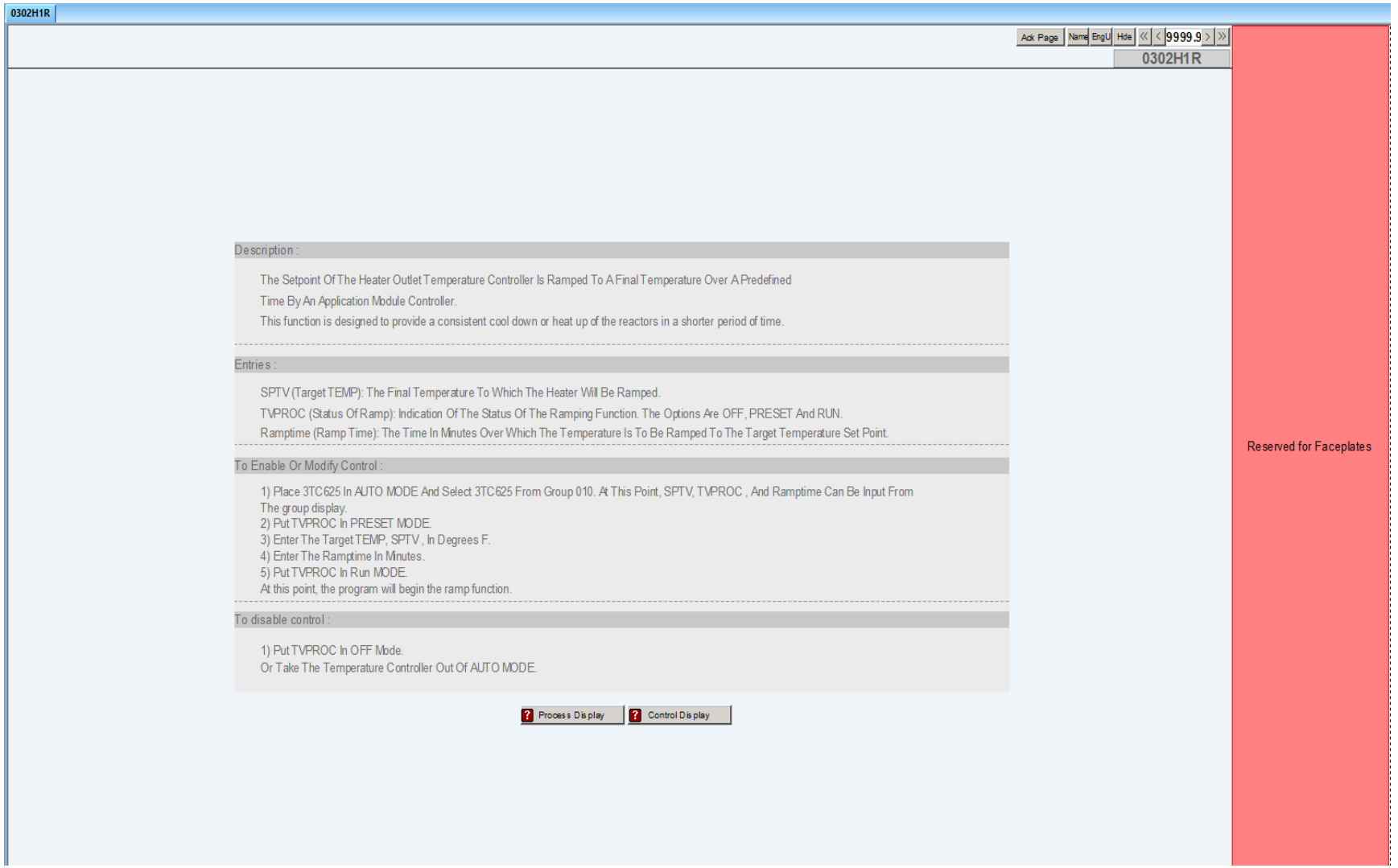

0302H1
GRP
BLK
QUENCH VALVE MIN STOP HELP
TREND
HELP
RTRN
DIR
RRRR
P
R1
RRRR
M
QUENCH
H2
RRRR %
RRRR
E
TTTTTT
PROCESS
RRRR
F
R1 EFFL
TO R4 RX
RRRR
P
R2
RRRR
M
QUENCH
H2
RRRR %
RRRR
E
TTTTTT
PROCESS
RRRR
F
R2 EFFL
TO R3 RX
A MINIMUM STOP OF 2% HAS BEEN ADDED TO THE QUENCH VALVES 3TC626 AND 3TC628
TO PREVENT DEBRIS AND CONDENSED LIQUID FROM BUILDING UP BEHIND THE VALVES
NOTE: THE MINIMUM STOP IS A SOFT STOP THEREFORE IF THE VALVE IS IN
MANUAL, IT IS POSSIBLE TO CLOSE THE VALVE. PLEASE CONSULT THE OSE IF
VALVE IS CLOSED.
EEEEEE
Group
III


0302H1
Ack Page
Name
Engl
Hde
9999.9
0302H1
3PI439
9999.99
P
3PI442
9999.99
P
R1
R2
3FI201
9999.99
M
3TC626
100%
Quench H2
3TC626
W 9999.99
9999.99
3FI202
9999.99
M
3TC628
100%
Quench H2
3TC628
W 9999.99
9999.99
T
3TI808
9999.99
F
R1 EFFL
To R4 RX
3TI810
9999.99
F
R2 EFFL
To R3 RX
Reserved for Faceplates
-- A Minimum Stop Of 2% Has Been Added To The Quench Valves 3TC626 And 3TC628 To Prevent Debris And Condensed Liquid From Building Up Behind The Valves
-- NOTE: The Minimum Stop Is A Soft Stop Therefore If The Valve Is In Manual, It Is Possible To CLOSE The Valve. Please Consult The OSE If Valve Is Closed.

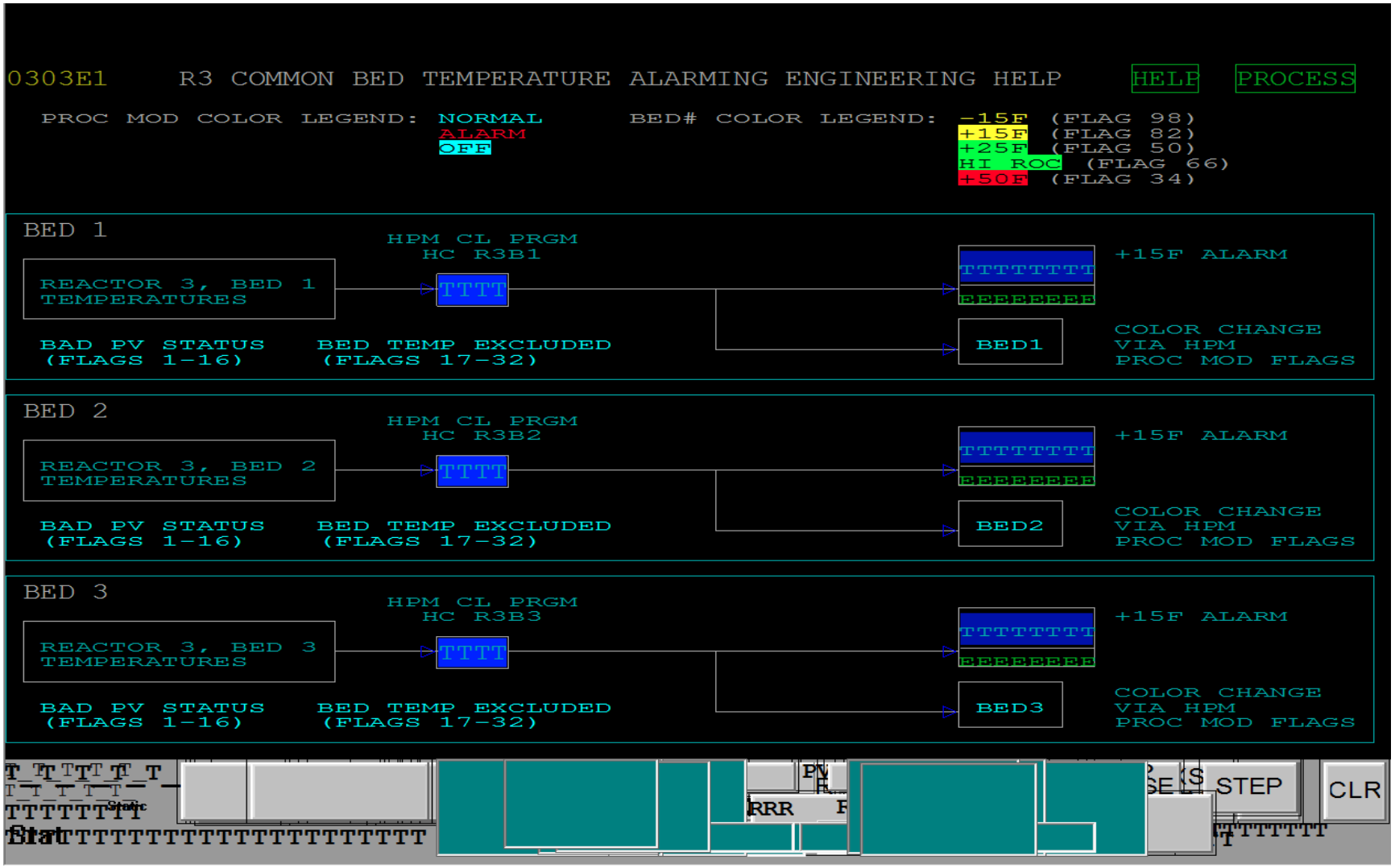
3.9 R-1 HEATER RAMP HELP (0302H1R.DS)

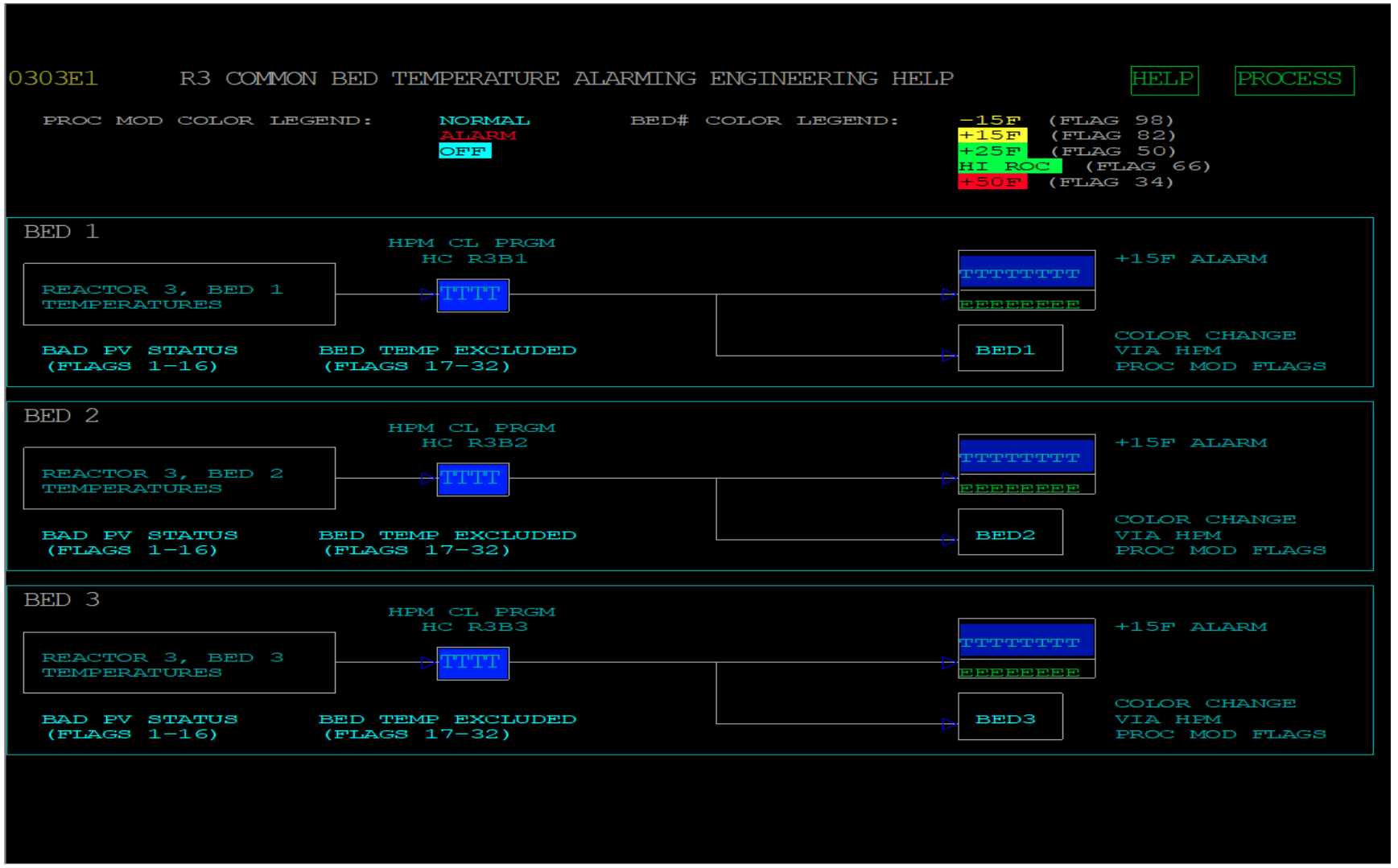
```
0302H1R                          R-1 HEATER RAMP HELP

DESCRIPTION:
 The setpoint of the heater outlet temperature controller is ramped to a final
 temperature over a predefined time by an Application Module controller. This
 function is designed to provide a consistent cool down or heat up of the
 reactors in a shorter period of time.
ENTRIES:
  SPTV (TARGET TEMP): The final temperature to which the heater will be ramped.

  TVPROC (STATUS OF RAMP): Indication of the status of the ramping function.
    The options are OFF, PRESET, and RUN.
  RAMPTIME (RAMP TIME): The time in minutes over which the temperature is to be
    ramped to the target temperature set point.
To Enable or Modify Control:
    1) Place 3TC625 in AUTO mode and select 3TC625 from GROUP 010.
 At this point, SPTV, TVPROC, and RAMPTIME can be input from the group display.
    2) Put TVPROC in PRESET mode.
    3) Enter the target temp, SPTV, in degrees F.
    4) Enter the RAMPTIME in minutes.
    5) Put TVPROC in RUN mode.
 At this point, the program will begin the ramp function.
To Disable Control:
    1) Put TVPROC in OFF mode.
       OR take the temperature controller out of AUTO mode.
                          PROCESS DISPLAY    CONTROL DISPLAY
```

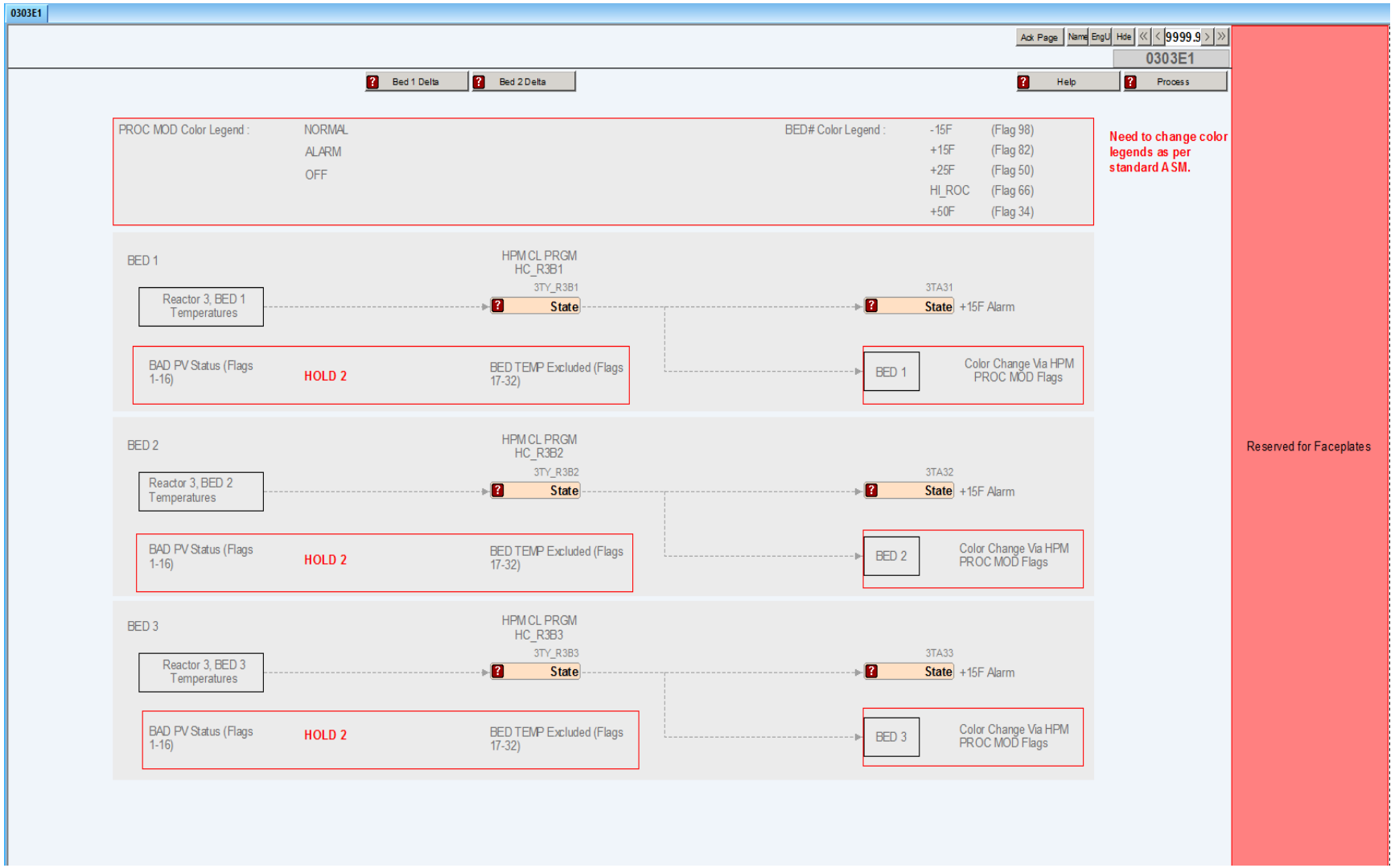
0302H1R
R-1 HEATER RAMP HELP
DESCRIPTION:
The setpoint of the heater outlet temperature controller is ramped to a final temperature over a predefined time by an Application Module controller. This function is designed to provide a consistent cool down or heat up of the reactors in a shorter period of time.
ENTRIES:
SPTV (TARGET TEMP): The final temperature to which the heater will be ramped.
TVPROC (STATUS OF RAMP): Indication of the status of the ramping function.
The options are OFF, PRESET, and RUN.
RAMPTIME (RAMP TIME): The time in minutes over which the temperature is to be ramped to the target temperature set point.
To Enable or Modify Control:
1) Place 3TC625 in AUTO mode and select 3TC625 from GROUP 010.
At this point, SPTV, TVPROC, and RAMPTIME can be input from the group display.
2) Put TVPROC in PRESET mode.
3) Enter the target temp, SPTV, in degrees F.
4) Enter the RAMPTIME in minutes.
5) Put TVPROC in RUN mode.
At this point, the program will begin the ramp function.
To Disable Control:
1) Put TVPROC in OFF mode.
OR take the temperature controller out of AUTO mode.
PROCESS DISPLAY
CONTROL DISPLAY


0302H1R
Ack Page
Name
Engu
Hde
9999.9
0302H1R
Description :
The Setpoint Of The Heater Outlet Temperature Controller Is Ramped To A Final Temperature Over A Predefined
Time By An Application Module Controller.
This function is designed to provide a consistent cool down or heat up of the reactors in a shorter period of time.
Entries :
SPTV (Target TEMP): The Final Temperature To Which The Heater Will Be Ramped.
TVPROC (Status Of Ramp): Indication Of The Status Of The Ramping Function. The Options Are OFF, PRESET And RUN.
Ramptime (Ramp Time): The Time In Minutes Over Which The Temperature Is To Be Ramped To The Target Temperature Set Point.
To Enable Or Modify Control :
1) Place 3TC625 In AUTO MODE And Select 3TC625 From Group 010. At This Point, SPTV, TVPROC , And Ramptime Can Be Input From
The group display.
2) Put TVPROC In PRESET MODE.
3) Enter The Target TEMP, SPTV , In Degrees F.
4) Enter The Ramptime In Minutes.
5) Put TVPROC In Run MODE.
At this point, the program will begin the ramp function.
To disable control :
1) Put TVPROC In OFF Mode.
Or Take The Temperature Controller Out Of AUTO MODE.
Process Display
Control Display
Reserved for Faceplates

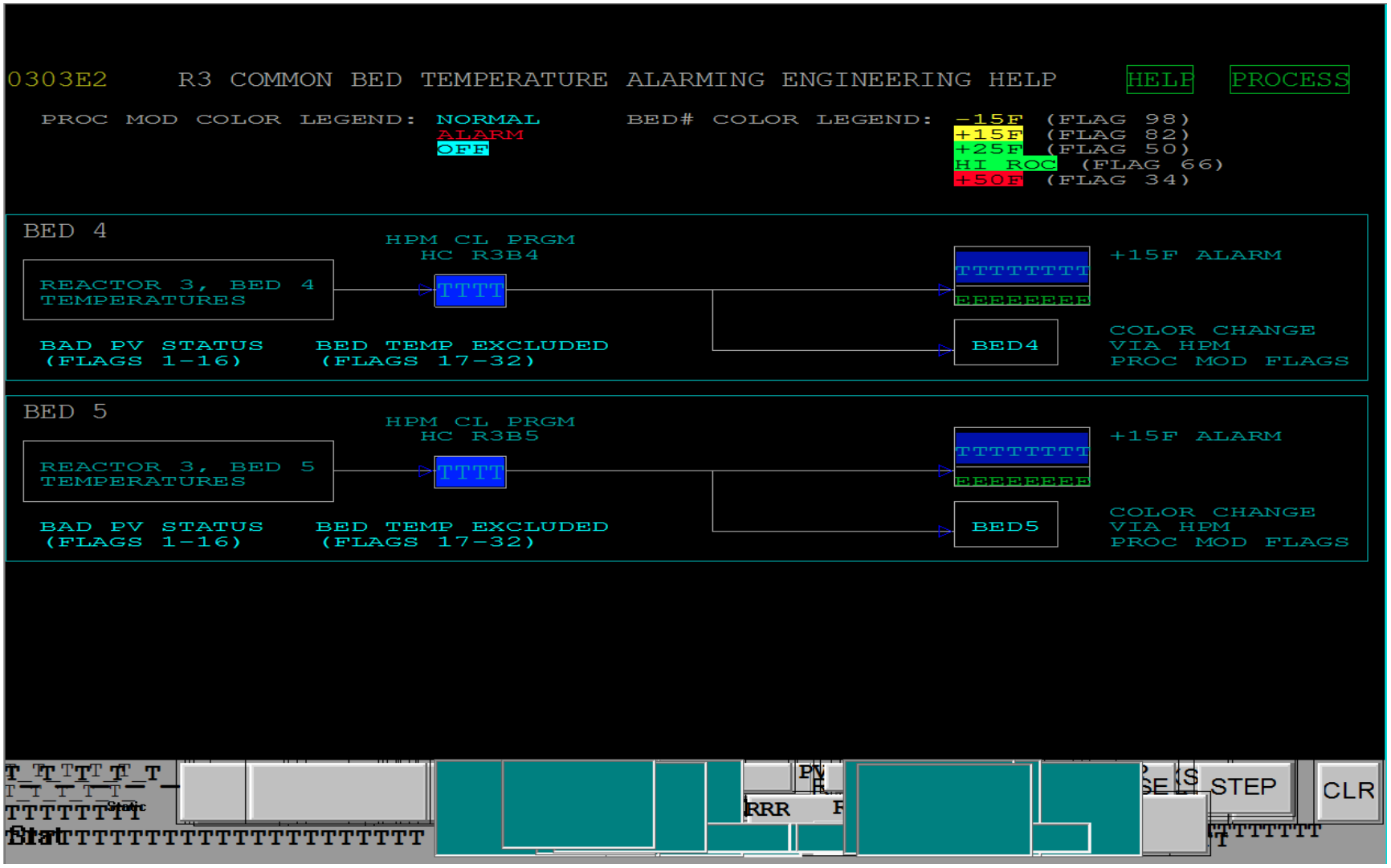
3.10 R3 COMMON BED TEMPERATURE ALARMING ENGINEERING HELP (0303E1.DS)

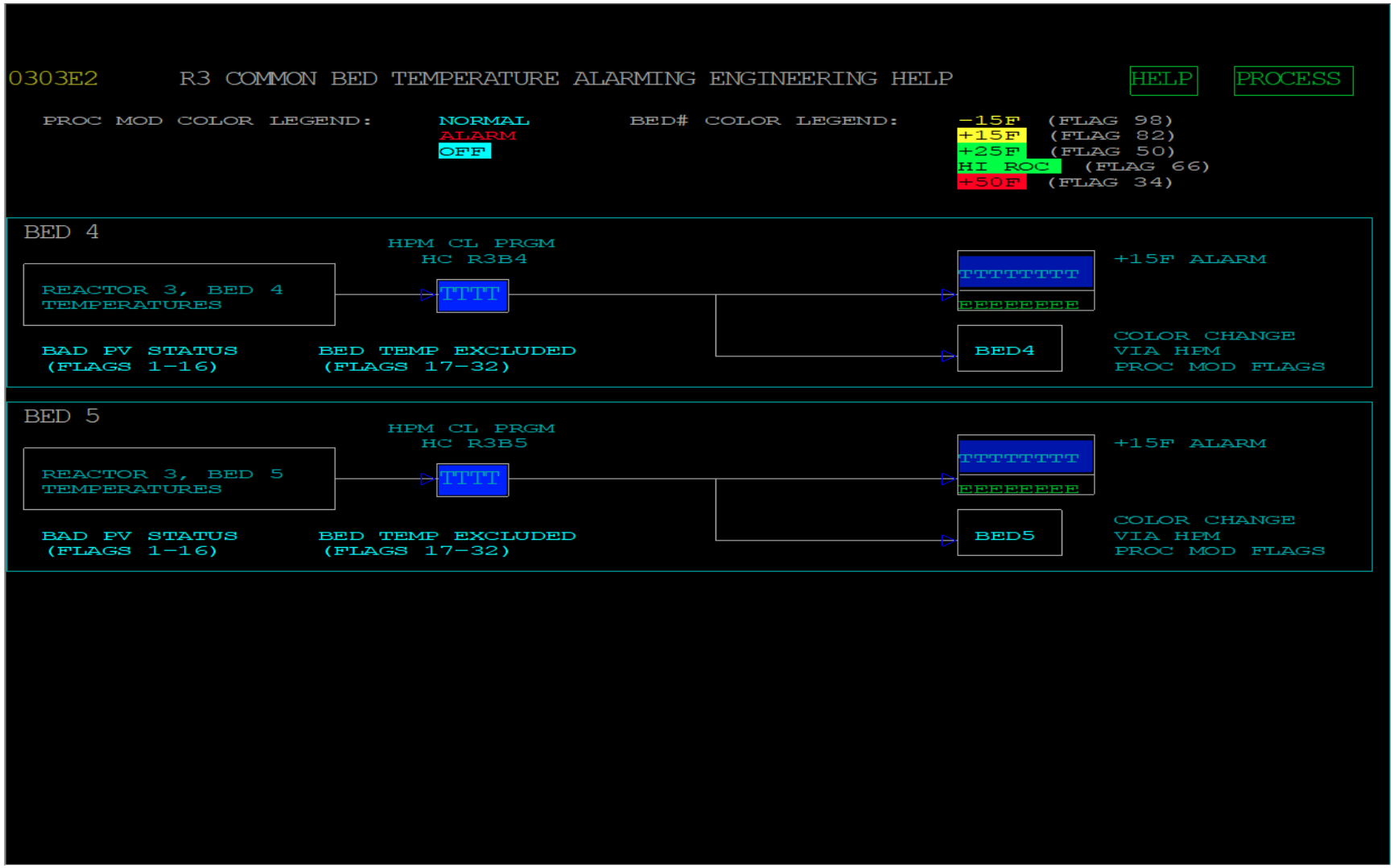


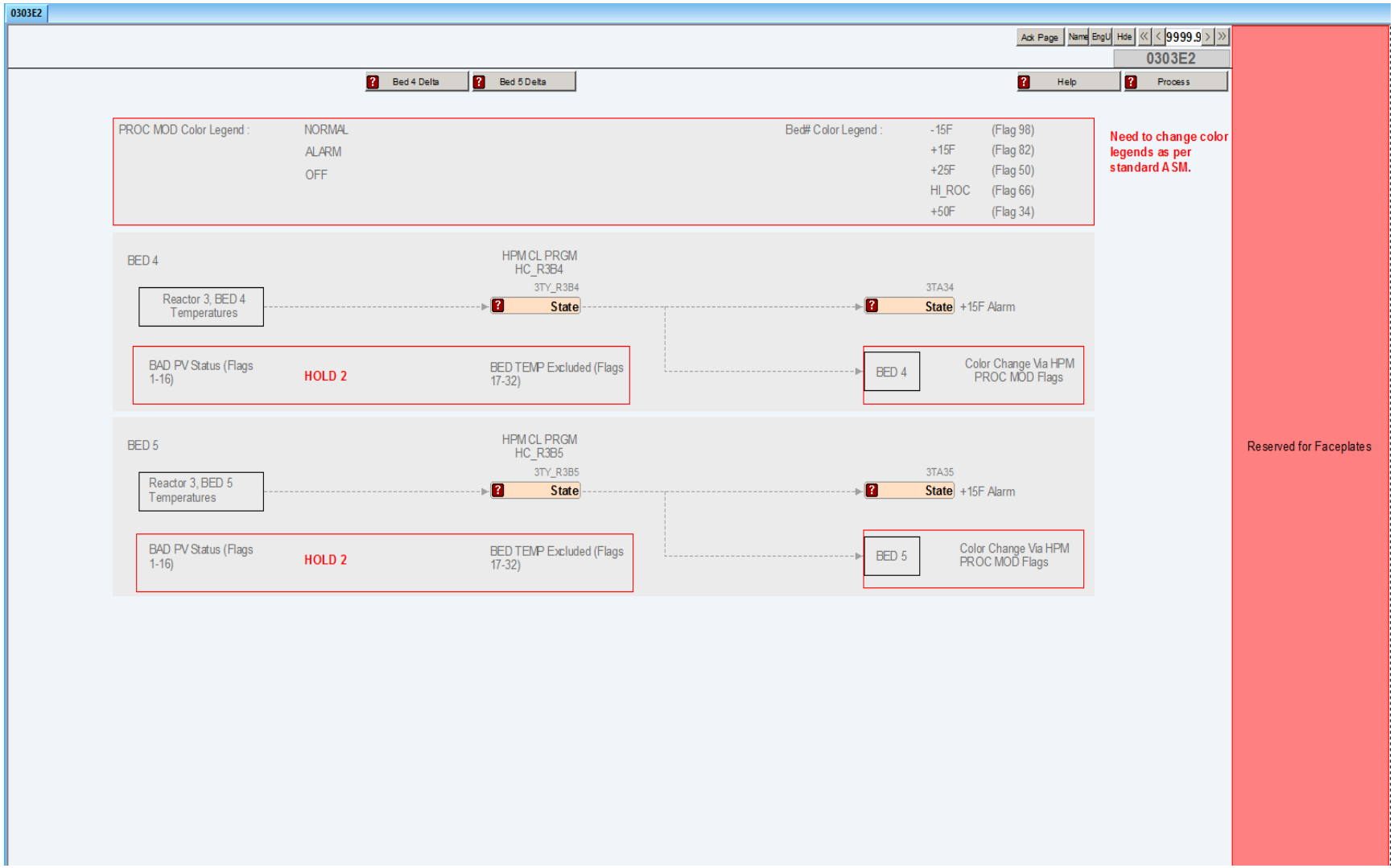

0303E1
R3 COMMON BED TEMPERATURE ALARMING ENGINEERING HELP
HELP
PROCESS
PROC MOD COLOR LEGEND:
NORMAL
ALARM
OFF
BED# COLOR LEGEND:
-15F (FLAG 98)
+15F (FLAG 82)
+25F (FLAG 50)
HI ROC (FLAG 66)
+50F (FLAG 34)
BED 1
HPM CL PRGM
HC R3B1
REACTOR 3, BED 1
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED1
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)
BED 2
HPM CL PRGM
HC R3B2
REACTOR 3, BED 2
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED2
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)
BED 3
HPM CL PRGM
HC R3B3
REACTOR 3, BED 3
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED3
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)


0303E1
Ack Page
Name
Eng'U
Hde
9999.9
0303E1
Bed 1 Delta
Bed 2 Delta
Help
Process
PROC MOD Color Legend :
NORMAL
ALARM
OFF
BED# Color Legend :
-15F (Flag 98)
+15F (Flag 82)
+25F (Flag 50)
HI_ROC (Flag 66)
+50F (Flag 34)
Need to change color legends as per standard ASM.
BED 1
HPM CL PRGM HC_R3B1
Reactor 3, BED 1 Temperatures
3TY_R3B1
State
3TA31
State
+15F Alarm
BAD PV Status (Flags 1-16)
HOLD 2
BED TEMP Excluded (Flags 17-32)
BED 1
Color Change Via HPM PROC MOD Flags
BED 2
HPM CL PRGM HC_R3B2
Reactor 3, BED 2 Temperatures
3TY_R3B2
State
3TA32
State
+15F Alarm
BAD PV Status (Flags 1-16)
HOLD 2
BED TEMP Excluded (Flags 17-32)
BED 2
Color Change Via HPM PROC MOD Flags
BED 3
HPM CL PRGM HC_R3B3
Reactor 3, BED 3 Temperatures
3TY_R3B3
State
3TA33
State
+15F Alarm
BAD PV Status (Flags 1-16)
HOLD 2
BED TEMP Excluded (Flags 17-32)
BED 3
Color Change Via HPM PROC MOD Flags
Reserved for Faceplates

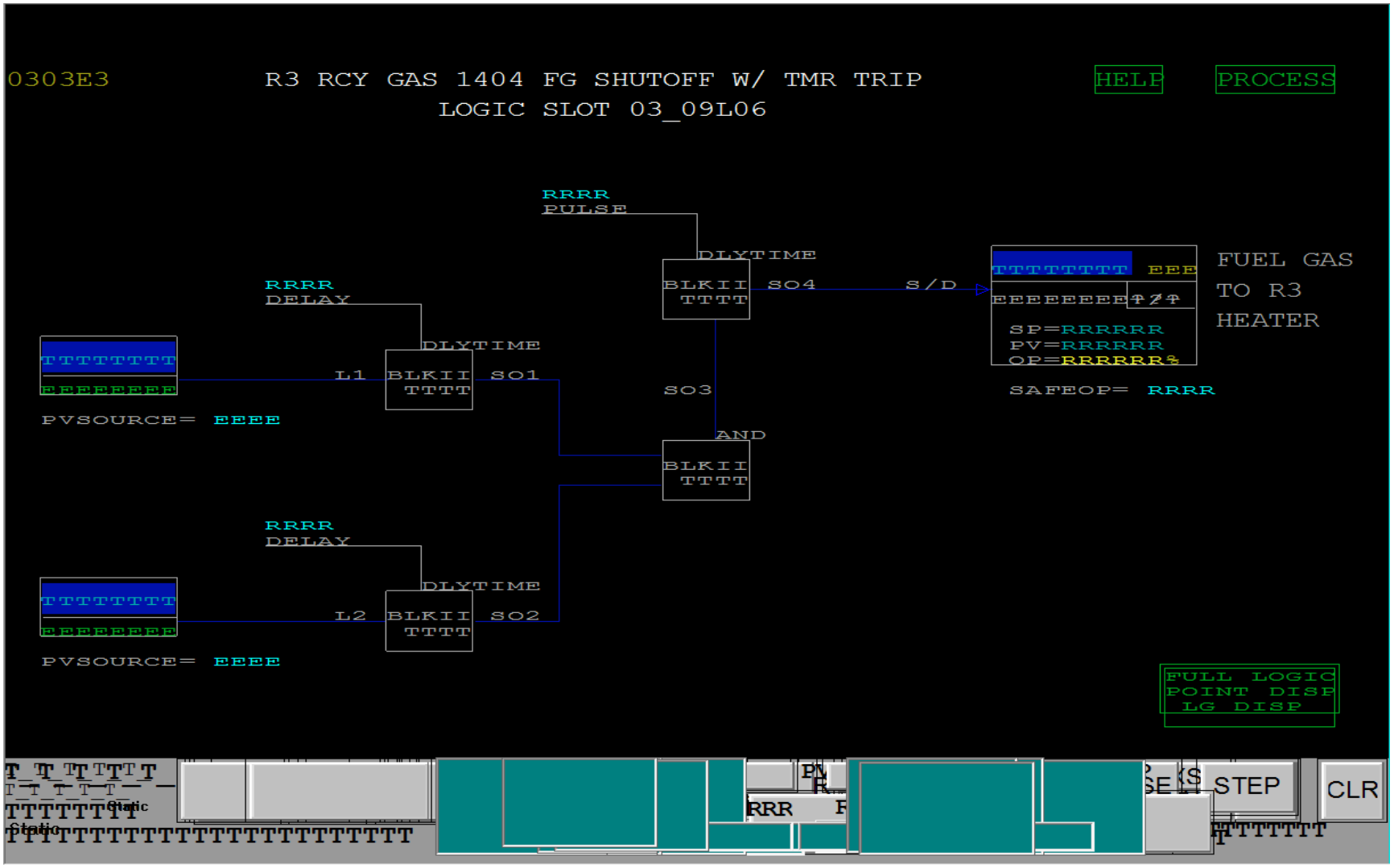
3.11 R3 COMMON BED TEMPERATURE ALARMING ENGINEERING HELP (0303E2.DS)

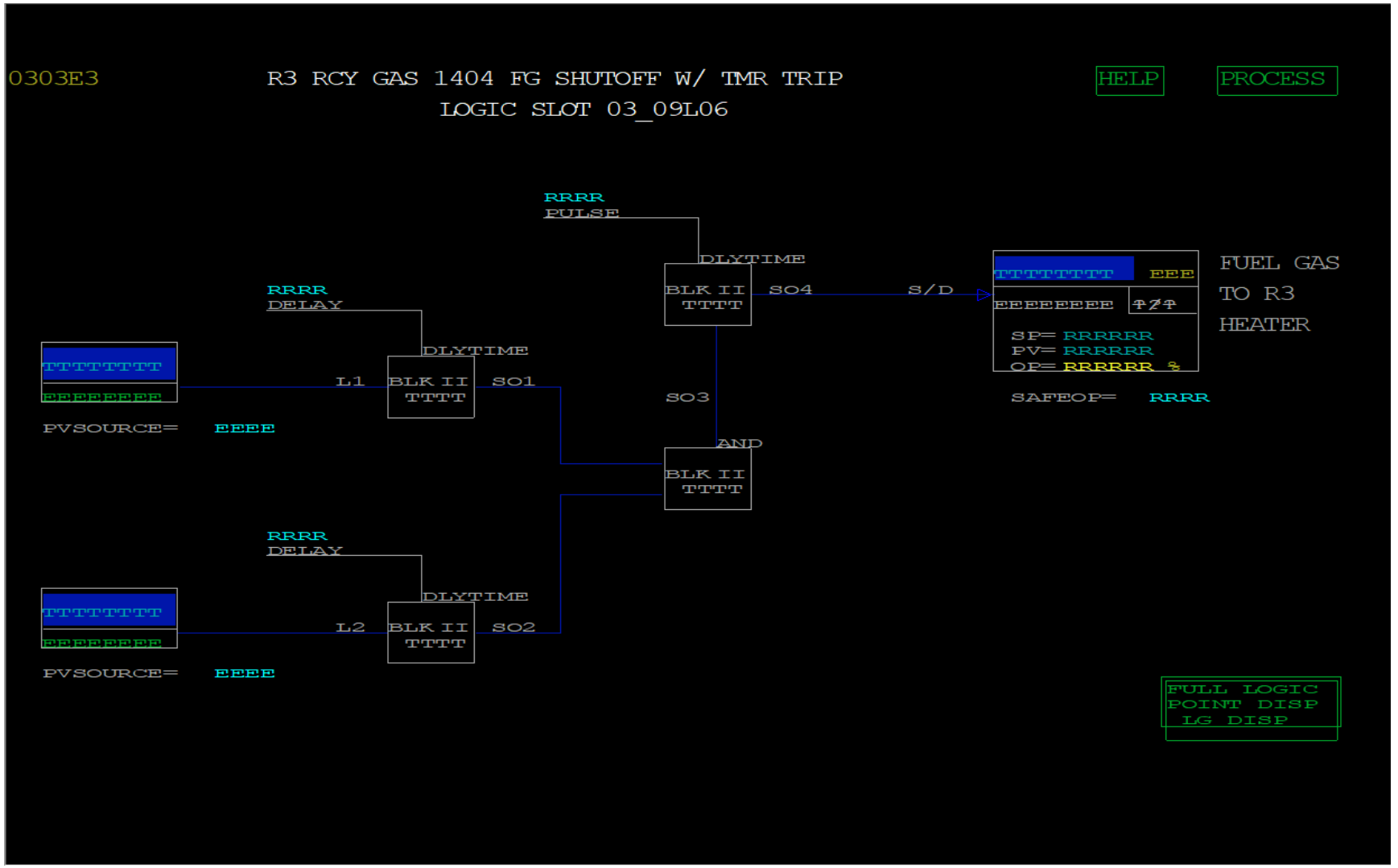


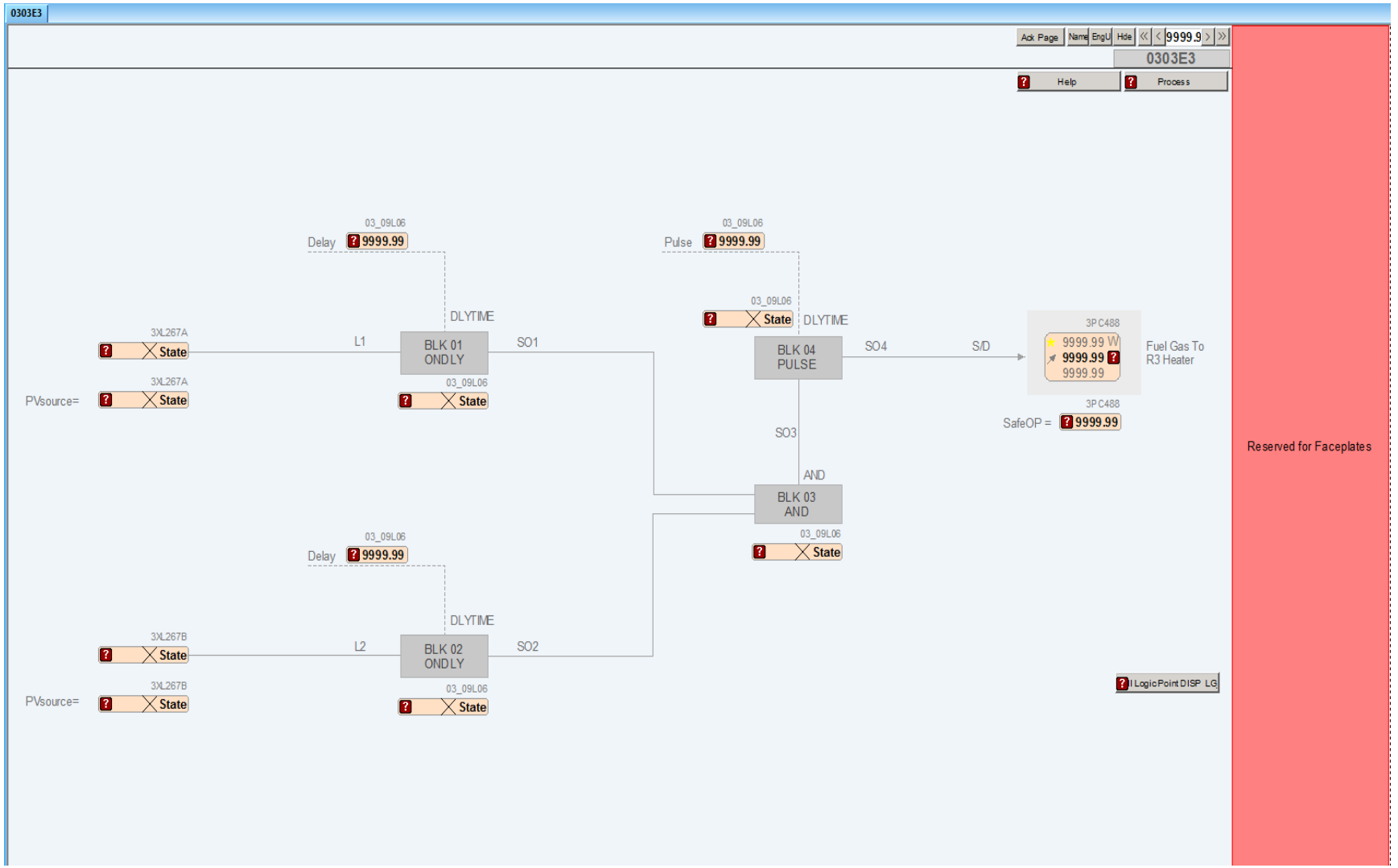

0303E2
R3 COMMON BED TEMPERATURE ALARMING ENGINEERING HELP
HELP
PROCESS
PROC MOD COLOR LEGEND:
NORMAL
ALARM
OFF
BED# COLOR LEGEND:
-15F (FLAG 98)
+15F (FLAG 82)
+25F (FLAG 50)
HI ROC (FLAG 66)
+50F (FLAG 34)
BED 4
HPM CL PRGM
HC R3B4
REACTOR 3, BED 4
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED4
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)
BED 5
HPM CL PRGM
HC R3B5
REACTOR 3, BED 5
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED5
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)


0303E2
Ack Page
Name
Engl
Hde
9999.9
0303E2
Bed 4 Delta
Bed 5 Delta
Help
Process
PROC MOD Color Legend :
NORMAL
ALARM
OFF
Bed# Color Legend :
-15F (Flag 98)
+15F (Flag 82)
+25F (Flag 50)
HI_ROC (Flag 66)
+50F (Flag 34)
Need to change color legends as per standard ASM.
BED 4
HPM CL PRGM HC_R3B4
Reactor 3, BED 4 Temperatures
3TY_R3B4
State
3TA34
State
+15F Alarm
BAD PV Status (Flags 1-16)
HOLD 2
BED TEMP Excluded (Flags 17-32)
BED 4
Color Change Via HPM PROC MOD Flags
BED 5
HPM CL PRGM HC_R3B5
Reactor 3, BED 5 Temperatures
3TY_R3B5
State
3TA35
State
+15F Alarm
BAD PV Status (Flags 1-16)
HOLD 2
BED TEMP Excluded (Flags 17-32)
BED 5
Color Change Via HPM PROC MOD Flags
Reserved for Faceplates

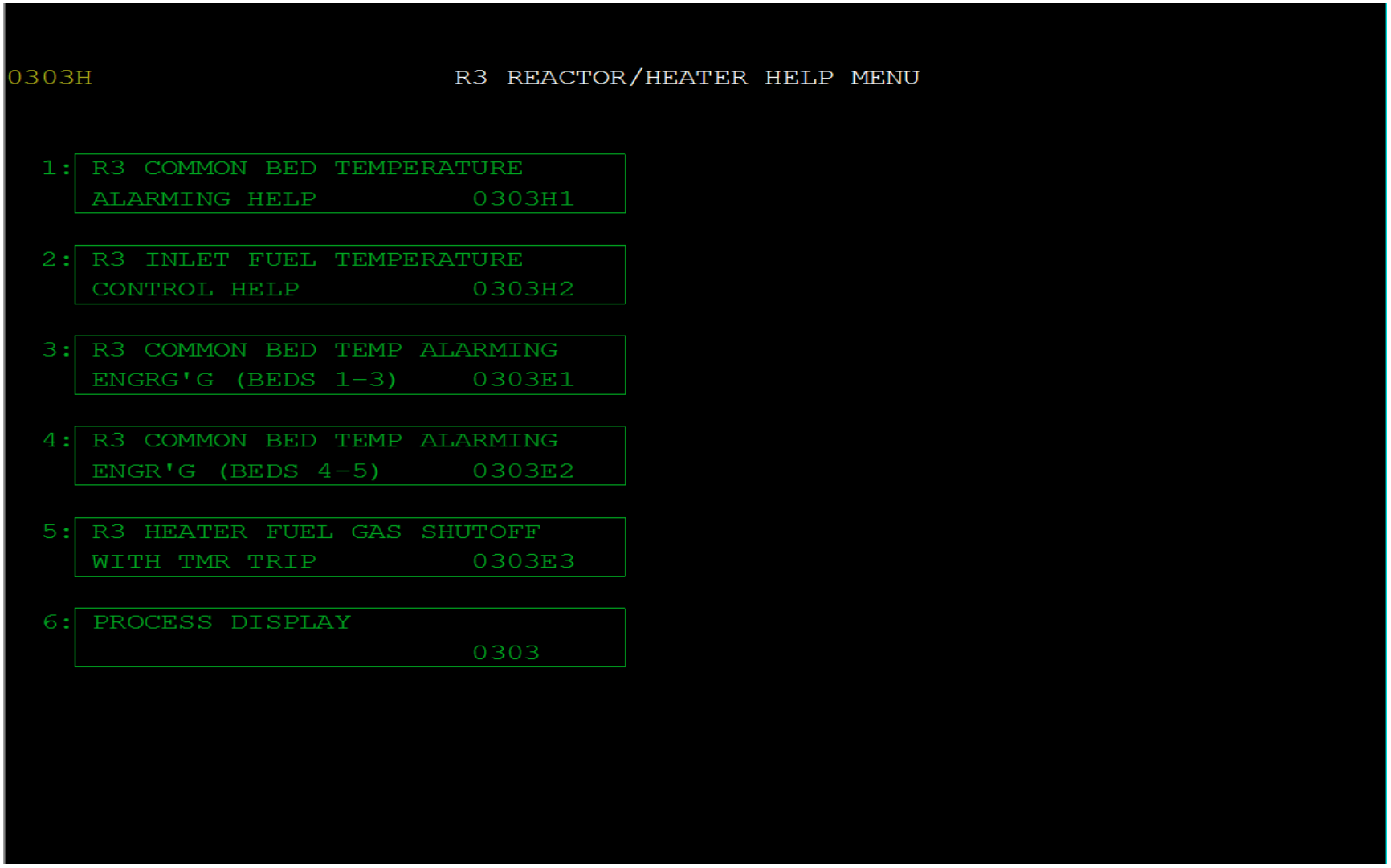
3.12 R3 RCY GAS 1404 FG SHUTOFF W/ TMR TRIP LOGIC SLOT 03_09L06 (0303E3.DS)

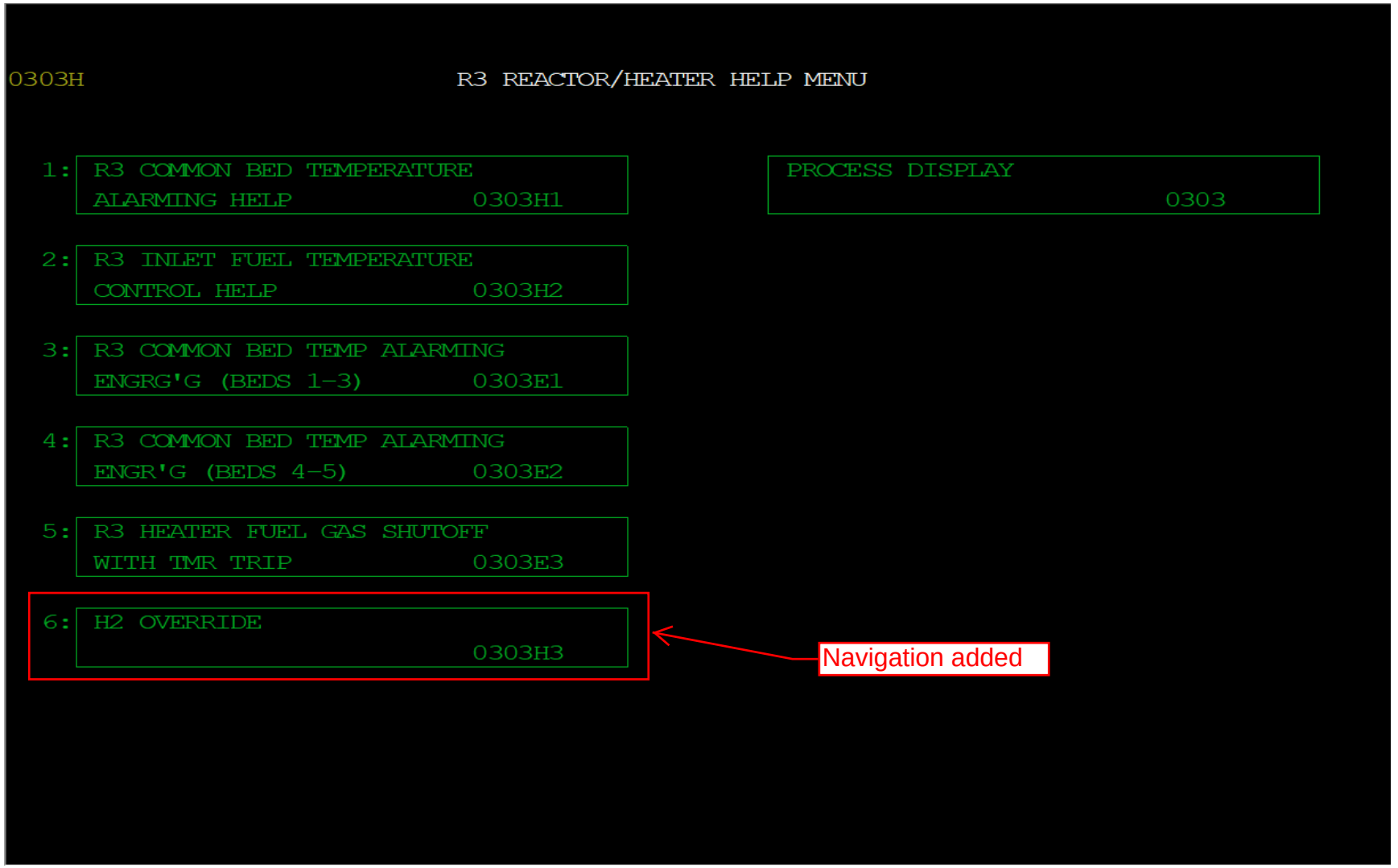


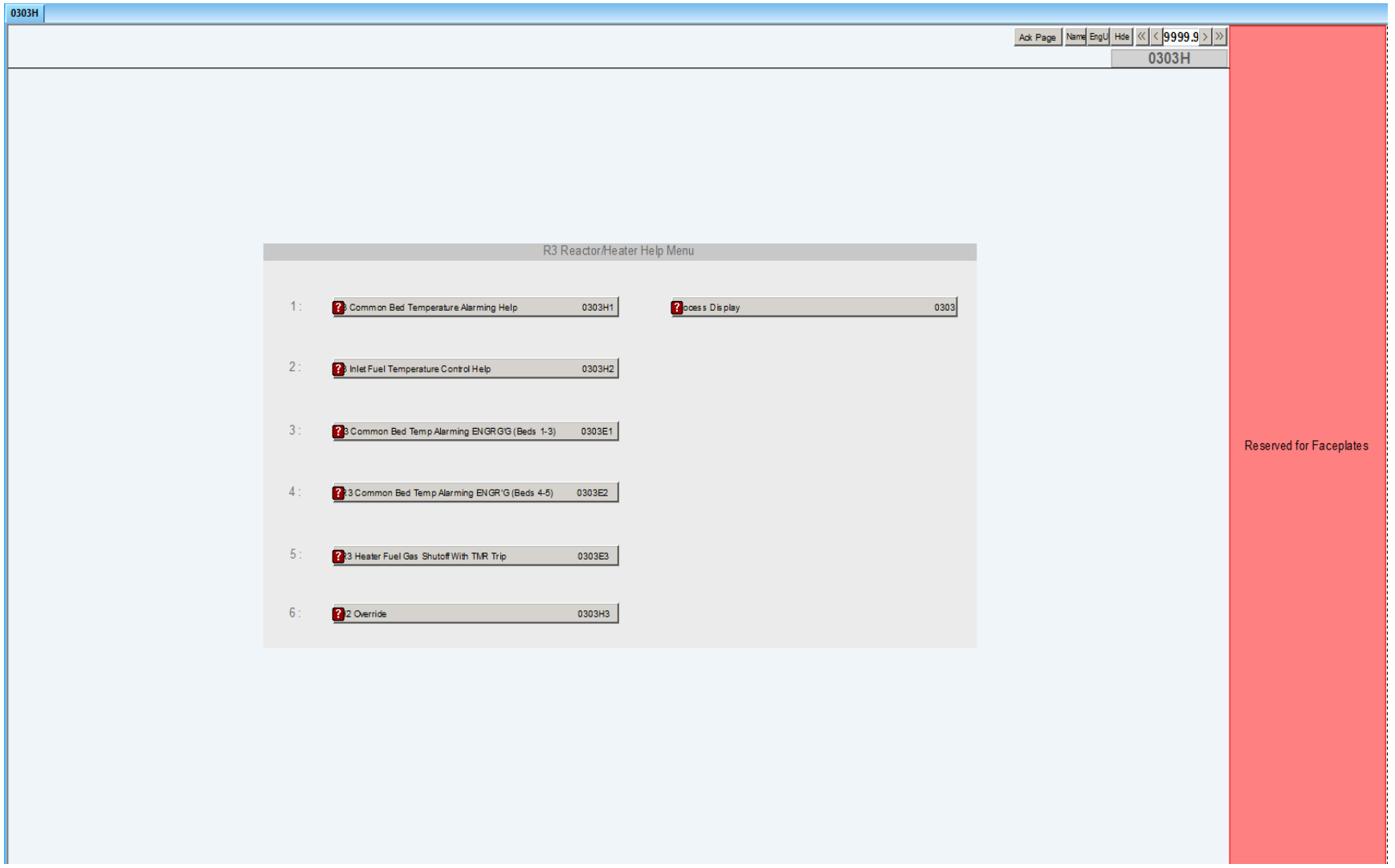

0303E3
R3 RCY GAS 1404 FG SHUTOFF W/ TMR TRIP
LOGIC SLOT 03_09L06
HELP
PROCESS
RRRR
PULSE
DLYTIME
BLK II
TTTT
SO4
S/D
TTTTTTTT
EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRRRR %
FUEL GAS
TO R3
HEATER
SAFEOP= RRRR
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L1
BLK II
TTTT
SO1
PVSOURCE= EEEE
SO3
AND
BLK II
TTTT
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L2
BLK II
TTTT
SO2
PVSOURCE= EEEE
FULL LOGIC
POINT DISP
LG DISP


0303E3
Ack Page
Name
EngU
Hde
9999.9
0303E3
Help
Process
03_09L06
Delay
9999.99
03_09L06
Pulse
9999.99
DLYTIME
03_09L06
State
DLYTIME
3XL267A
State
L1
BLK 01
ONDLY
SO1
BLK 04
PULSE
SO4
S/D
3P C488
9999.99 W
9999.99
9999.99
Fuel Gas To
R3 Heater
3XL267A
State
PVsource=
03_09L06
State
3P C488
SafeOP =
9999.99
SO3
AND
BLK 03
AND
03_09L06
State
03_09L06
Delay
9999.99
DLYTIME
3XL267B
State
L2
BLK 02
ONDLY
SO2
3XL267B
State
PVsource=
03_09L06
State
Logic Point DISP LG
Reserved for Faceplates

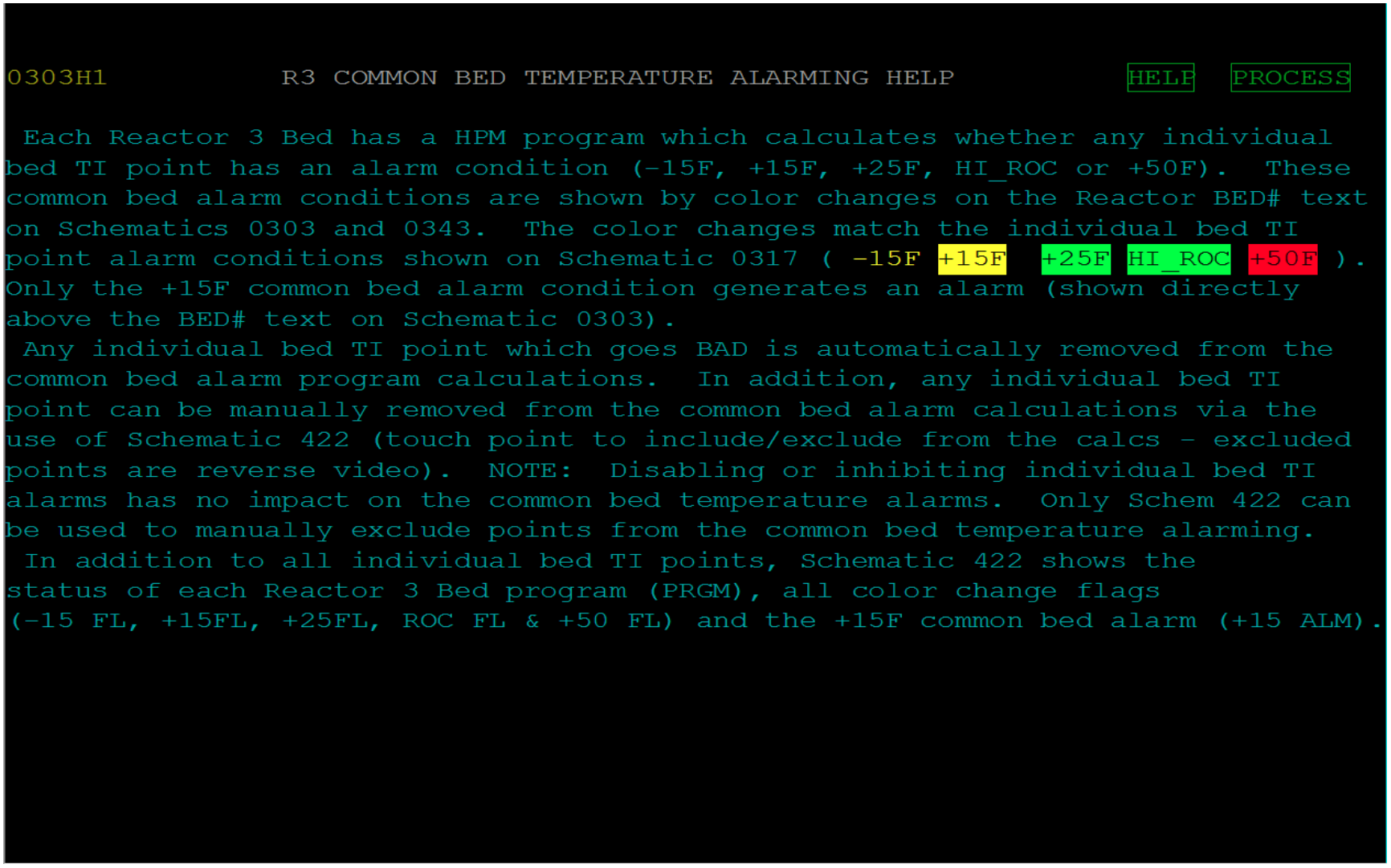
3.13 R3 REACTOR/HEATER HELP MENU (0303H.DS)

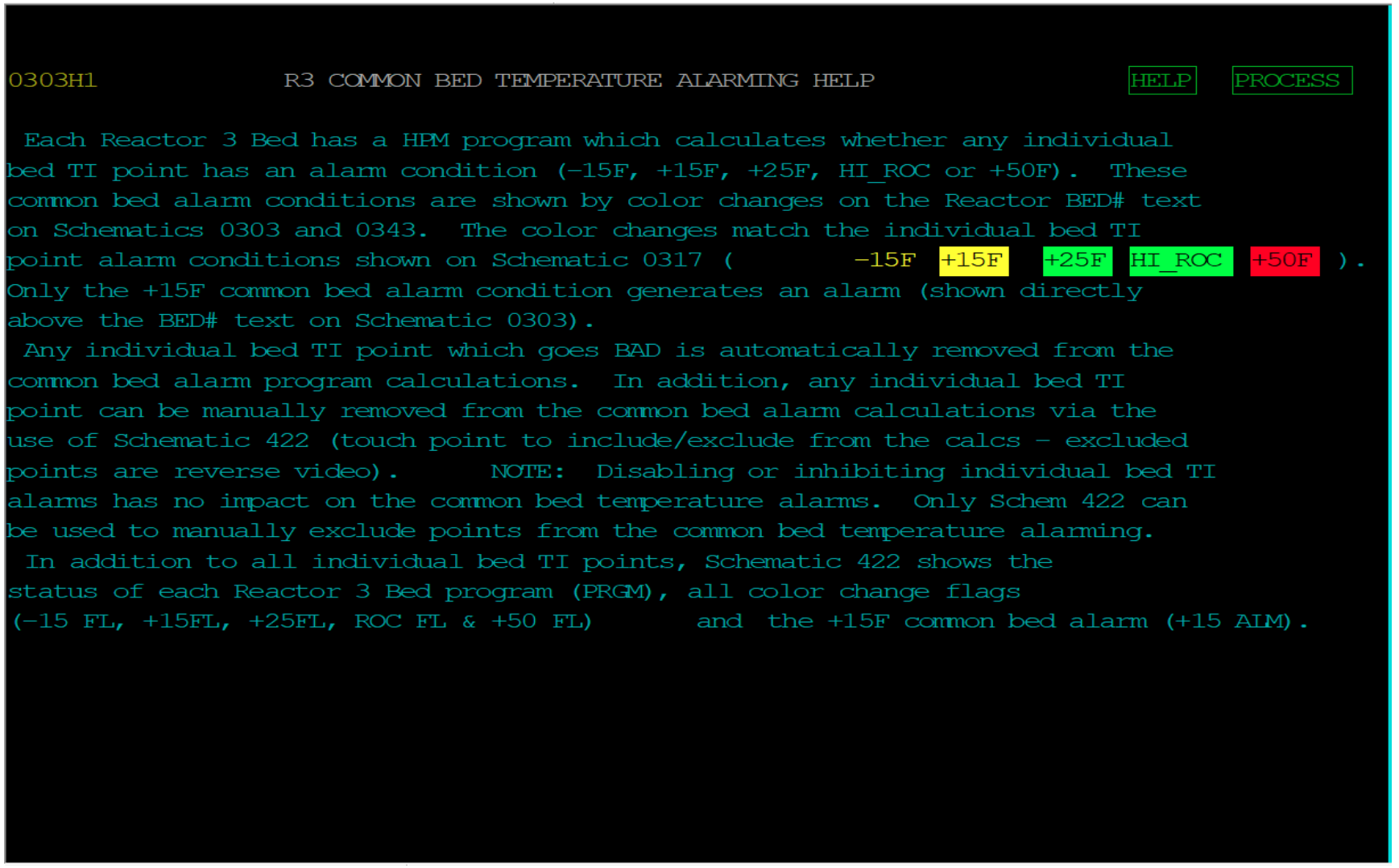


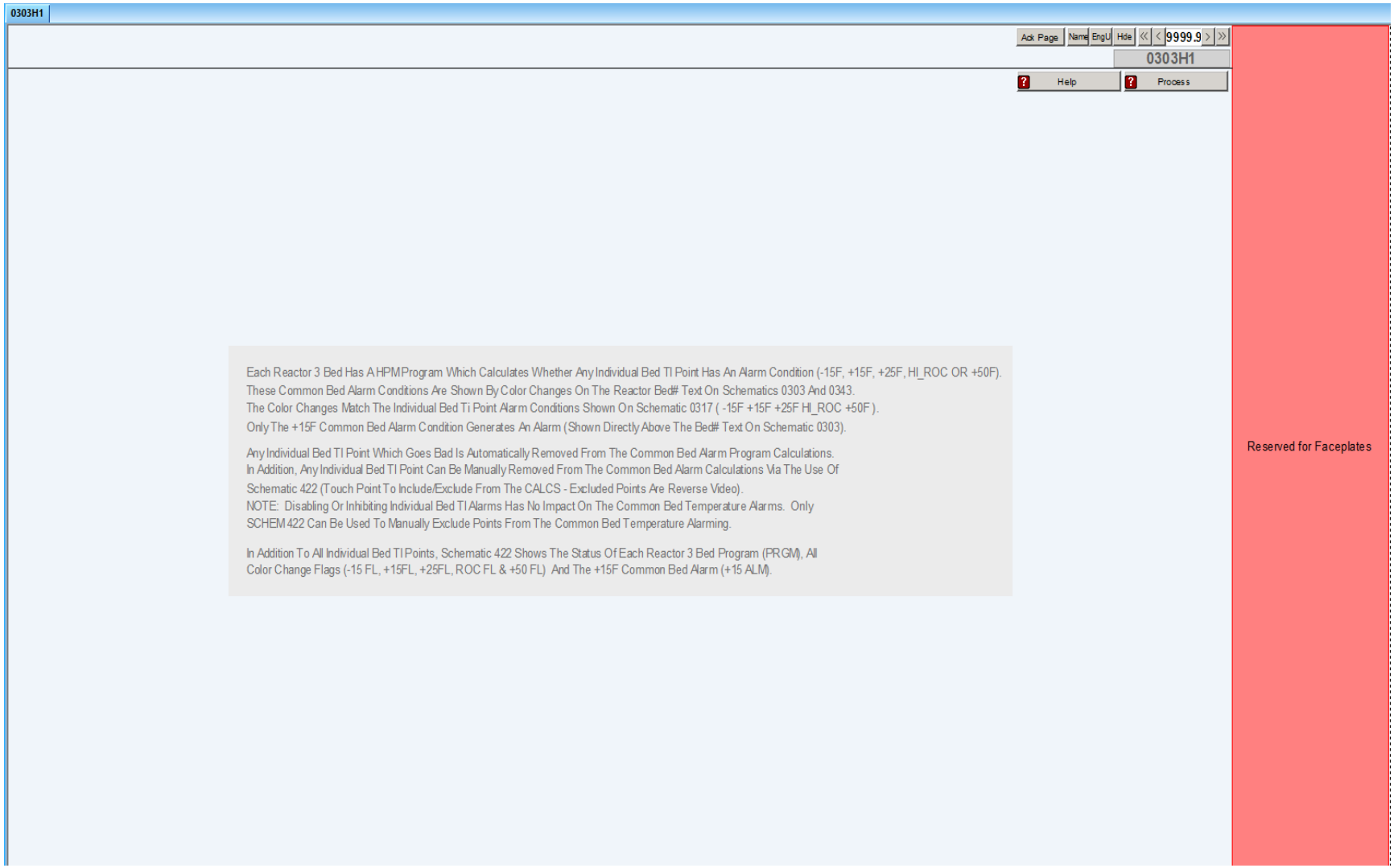

0303H
R3 REACTOR/HEATER HELP MENU
1: R3 COMMON BED TEMPERATURE ALARMING HELP 0303H1
2: R3 INLET FUEL TEMPERATURE CONTROL HELP 0303H2
3: R3 COMMON BED TEMP ALARMING ENGRG'G (BEDS 1-3) 0303E1
4: R3 COMMON BED TEMP ALARMING ENGR'G (BEDS 4-5) 0303E2
5: R3 HEATER FUEL GAS SHUTOFF WITH TMR TRIP 0303E3
6: H2 OVERRIDE 0303H3
PROCESS DISPLAY 0303
Navigation added


0303H
Ack Page
Name
EngU
Hde
9999.9
0303H
R3 Reactor/Heater Help Menu
1 :
3 Common Bed Temperature Alarming Help
0303H1
ocess Display
0303
2 :
3 Inlet Fuel Temperature Control Help
0303H2
3 :
3 Common Bed Temp Alarming ENGR'G'G (Beds 1-3)
0303E1
4 :
R3 Common Bed Temp Alarming ENGR'G (Beds 4-5)
0303E2
5 :
R3 Heater Fuel Gas Shutoff With TMR Trip
0303E3
6 :
2 Override
0303H3
Reserved for Faceplates

3.14 3 COMMON BED TEMPERATURE ALARMING HELP (0303H1.DS)



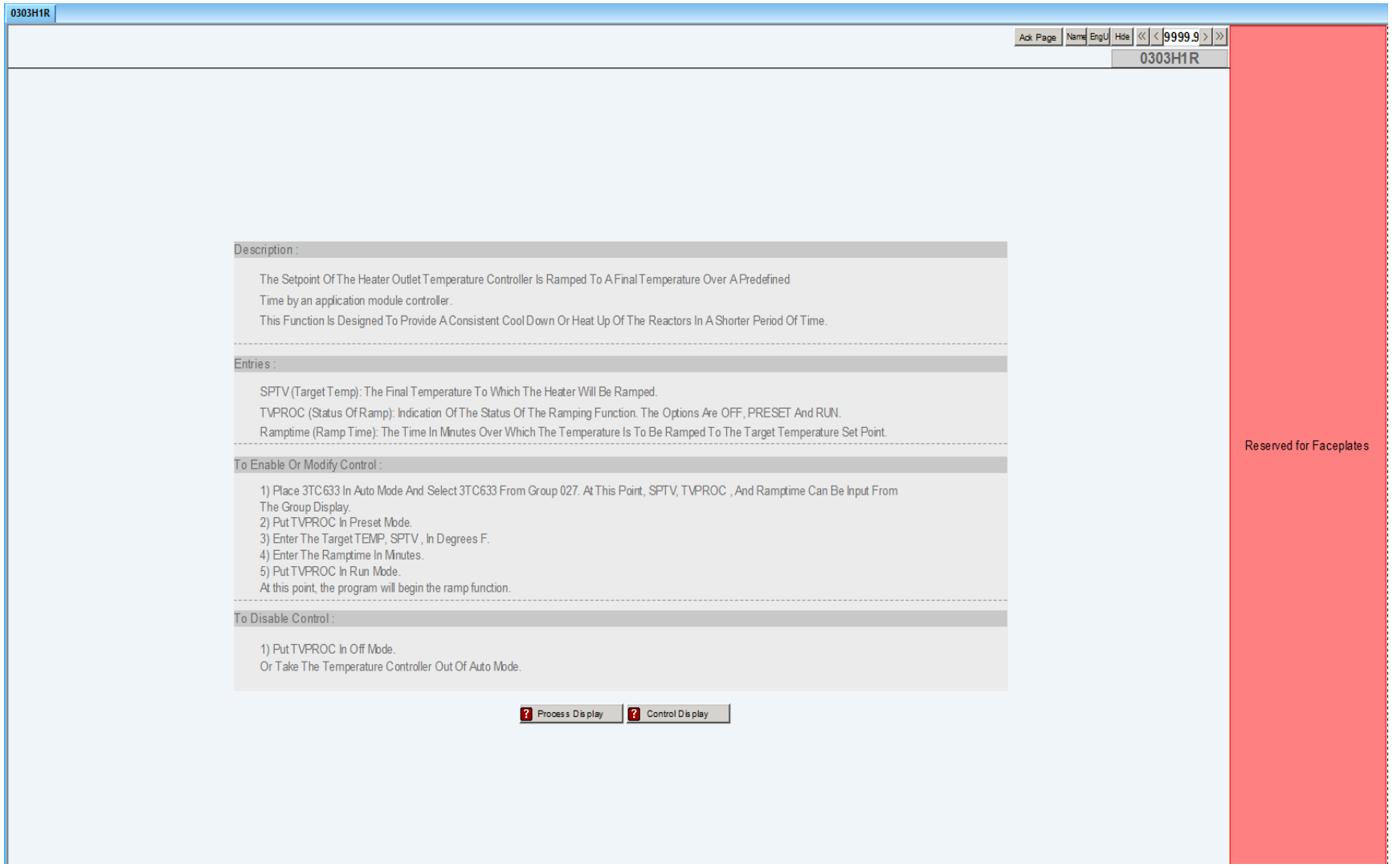

0303H1
R3 COMMON BED TEMPERATURE ALARMING HELP
HELP
PROCESS
Each Reactor 3 Bed has a HPM program which calculates whether any individual bed TI point has an alarm condition (-15F, +15F, +25F, HI_ROC or +50F). These common bed alarm conditions are shown by color changes on the Reactor BED# text on Schematics 0303 and 0343. The color changes match the individual bed TI point alarm conditions shown on Schematic 0317 (-15F +15F +25F HI_ROC +50F). Only the +15F common bed alarm condition generates an alarm (shown directly above the BED# text on Schematic 0303).
Any individual bed TI point which goes BAD is automatically removed from the common bed alarm program calculations. In addition, any individual bed TI point can be manually removed from the common bed alarm calculations via the use of Schematic 422 (touch point to include/exclude from the calcs - excluded points are reverse video). NOTE: Disabling or inhibiting individual bed TI alarms has no impact on the common bed temperature alarms. Only Schem 422 can be used to manually exclude points from the common bed temperature alarming.
In addition to all individual bed TI points, Schematic 422 shows the status of each Reactor 3 Bed program (PRGM), all color change flags (-15 FL, +15FL, +25FL, ROC FL & +50 FL) and the +15F common bed alarm (+15 ALM).


0303H1
Ack Page
Name
Engl
Hde
9999.9
0303H1
Help
Process
Each Reactor 3 Bed Has A HPM Program Which Calculates Whether Any Individual Bed TI Point Has An Alarm Condition (-15F, +15F, +25F, HI_ROC OR +50F).
These Common Bed Alarm Conditions Are Shown By Color Changes On The Reactor Bed# Text On Schematics 0303 And 0343.
The Color Changes Match The Individual Bed Ti Point Alarm Conditions Shown On Schematic 0317 (-15F +15F +25F HI_ROC +50F).
Only The +15F Common Bed Alarm Condition Generates An Alarm (Shown Directly Above The Bed# Text On Schematic 0303).
Any Individual Bed TI Point Which Goes Bad Is Automatically Removed From The Common Bed Alarm Program Calculations.
In Addition, Any Individual Bed TI Point Can Be Manually Removed From The Common Bed Alarm Calculations Via The Use Of
Schematic 422 (Touch Point To Include/Exclude From The CALCS - Excluded Points Are Reverse Video).
NOTE: Disabling Or Inhibiting Individual Bed TI Alarms Has No Impact On The Common Bed Temperature Alarms. Only
SCHEM 422 Can Be Used To Manually Exclude Points From The Common Bed Temperature Alarming.
In Addition To All Individual Bed TI Points, Schematic 422 Shows The Status Of Each Reactor 3 Bed Program (PRGM), All
Color Change Flags (-15 FL, +15FL, +25FL, ROC FL & +50 FL) And The +15F Common Bed Alarm (+15 ALM).
Reserved for Faceplates

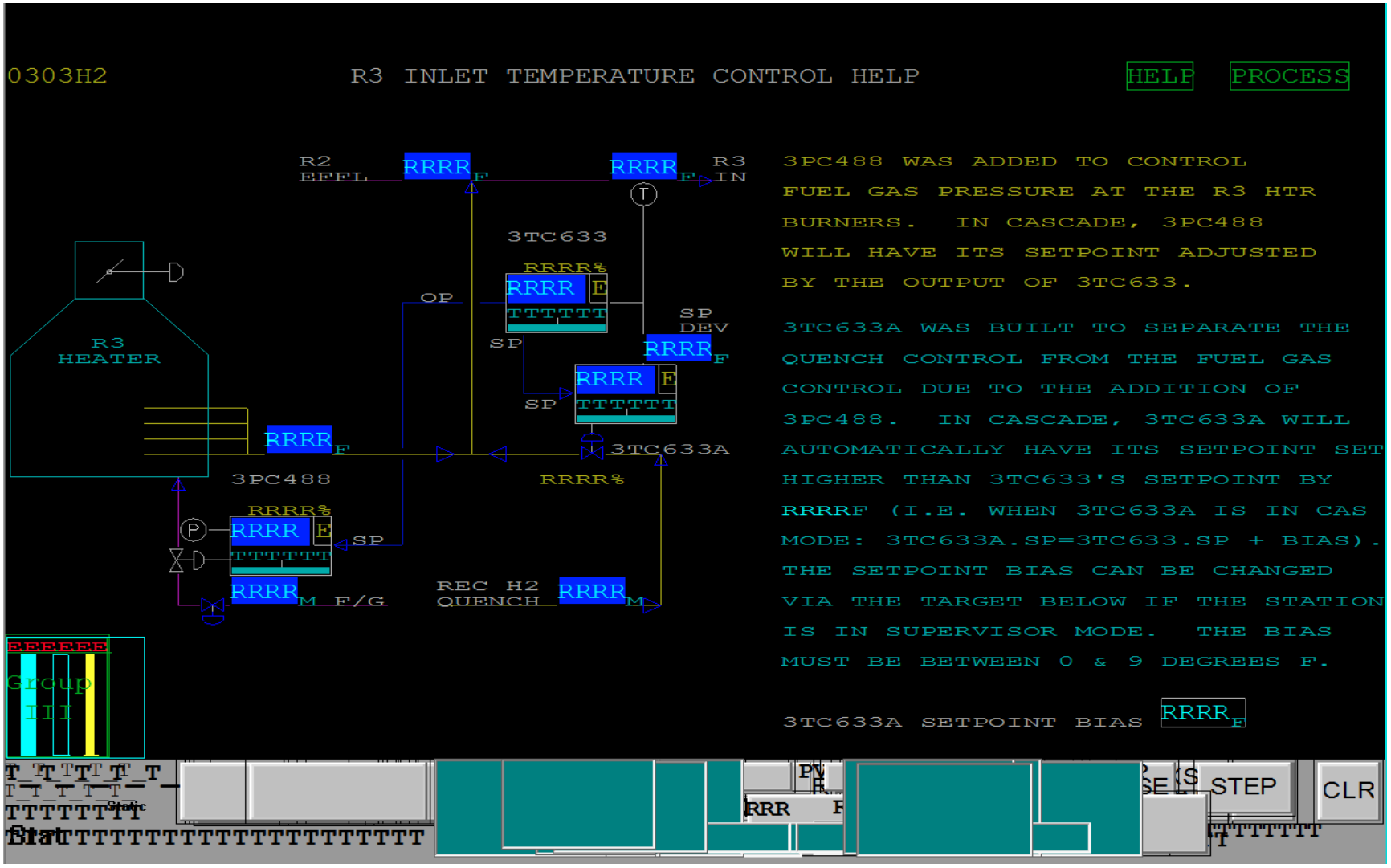
3.15 R-3 HEATER RAMP HELP (0303H1R.DS)

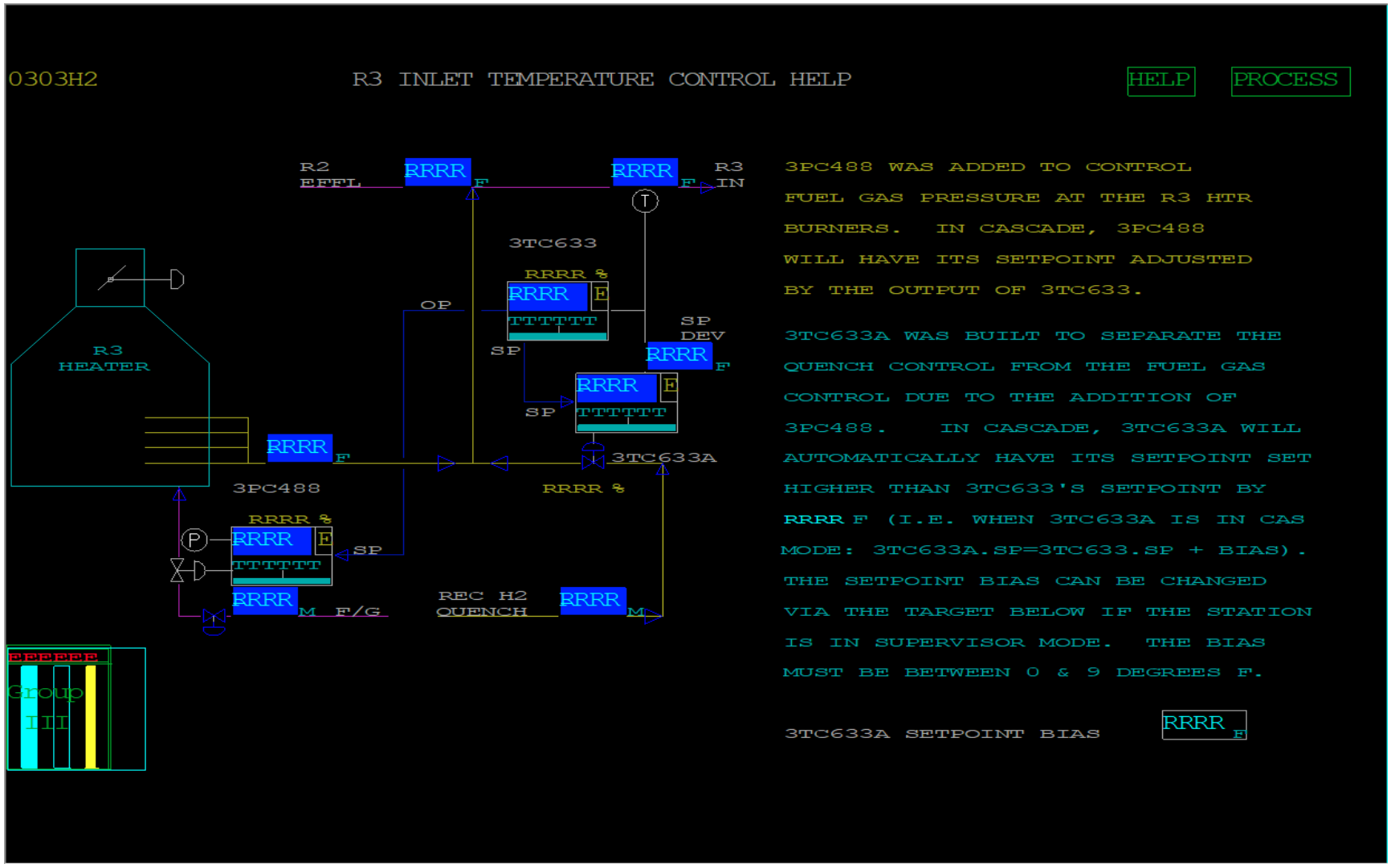
```
0303H1R                          R-3 HEATER RAMP HELP

DESCRIPTION:
 The setpoint of the heater outlet temperature controller is ramped to a final
 temperature over a predefined time by an Application Module controller. This
 function is designed to provide a consistent cool down or heat up of the
 reactors in a shorter period of time.
ENTRIES:
  SPTV (TARGET TEMP): The final temperature to which the heater will be ramped.

  TVPROC (STATUS OF RAMP): Indication of the status of the ramping function.
     The options are OFF, PRESET, and RUN.
  RAMPTIME (RAMP TIME): The time in minutes over which the temperature is to be
     ramped to the target temperature set point.
To Enable or Modify Control:
     1) Place 3TC633 in AUTO mode and select 3TC633 from GROUP 027.
 At this point, SPTV, TVPROC, and RAMPTIME can be input from the group display.
     2) Put TVPROC in PRESET mode.
     3) Enter the target temp, SPTV, in degrees F.
     4) Enter the RAMPTIME in minutes.
     5) Put TVPROC in RUN mode.
 At this point, the program will begin the ramp function.
To Disable Control:
     1) Put TVPROC in OFF mode.
        OR take the temperature controller out of AUTO mode.
                              PROCESS     CONTROL
                              DISPLAY     DISPLAY
```

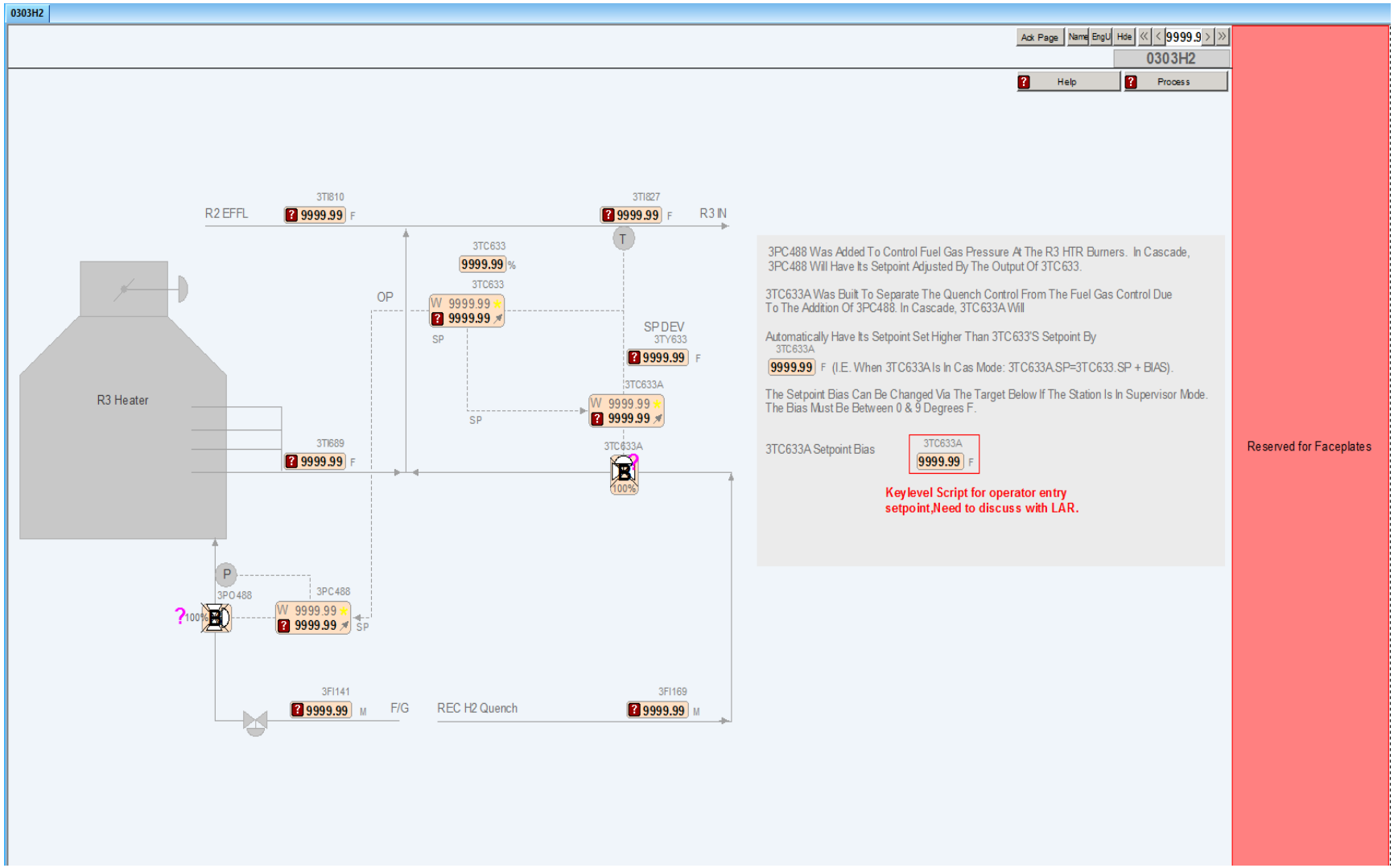
0303H1R
R-3 HEATER RAMP HELP
DESCRIPTION:
The setpoint of the heater outlet temperature controller is ramped to a final temperature over a predefined time by an Application Module controller. This function is designed to provide a consistent cool down or heat up of the reactors in a shorter period of time.
ENTRIES:
SPTV (TARGET TEMP): The final temperature to which the heater will be ramped.
TVPROC (STATUS OF RAMP): Indication of the status of the ramping function.
The options are OFF, PRESET, and RUN.
RAMPTIME (RAMP TIME): The time in minutes over which the temperature is to be ramped to the target temperature set point.
To Enable or Modify Control:
1) Place 3TC633 in AUTO mode and select 3TC633 from GROUP 027.
At this point, SPTV, TVPROC, and RAMPTIME can be input from the group display.
2) Put TVPROC in PRESET mode.
3) Enter the target temp, SPTV, in degrees F.
4) Enter the RAMPTIME in minutes.
5) Put TVPROC in RUN mode.
At this point, the program will begin the ramp function.
To Disable Control:
1) Put TVPROC in OFF mode.
OR take the temperature controller out of AUTO mode.
PROCESS DISPLAY
CONTROL DISPLAY


0303H1R
Ack Page
Name
Engu
Hde
9999.9
0303H1R
Description :
The Setpoint Of The Heater Outlet Temperature Controller Is Ramped To A Final Temperature Over A Predefined
Time by an application module controller.
This Function Is Designed To Provide A Consistent Cool Down Or Heat Up Of The Reactors In A Shorter Period Of Time.
Entries :
SPTV (Target Temp): The Final Temperature To Which The Heater Will Be Ramped.
TVPROC (Status Of Ramp): Indication Of The Status Of The Ramping Function. The Options Are OFF, PRESET And RUN.
Ramptime (Ramp Time): The Time In Minutes Over Which The Temperature Is To Be Ramped To The Target Temperature Set Point.
To Enable Or Modify Control :
1) Place 3TC633 In Auto Mode And Select 3TC633 From Group 027. At This Point, SPTV, TVPROC , And Ramptime Can Be Input From
The Group Display.
2) Put TVPROC In Preset Mode.
3) Enter The Target TEMP, SPTV , In Degrees F.
4) Enter The Ramptime In Minutes.
5) Put TVPROC In Run Mode.
At this point, the program will begin the ramp function.
To Disable Control :
1) Put TVPROC In Off Mode.
Or Take The Temperature Controller Out Of Auto Mode.
Process Display
Control Display
Reserved for Faceplates

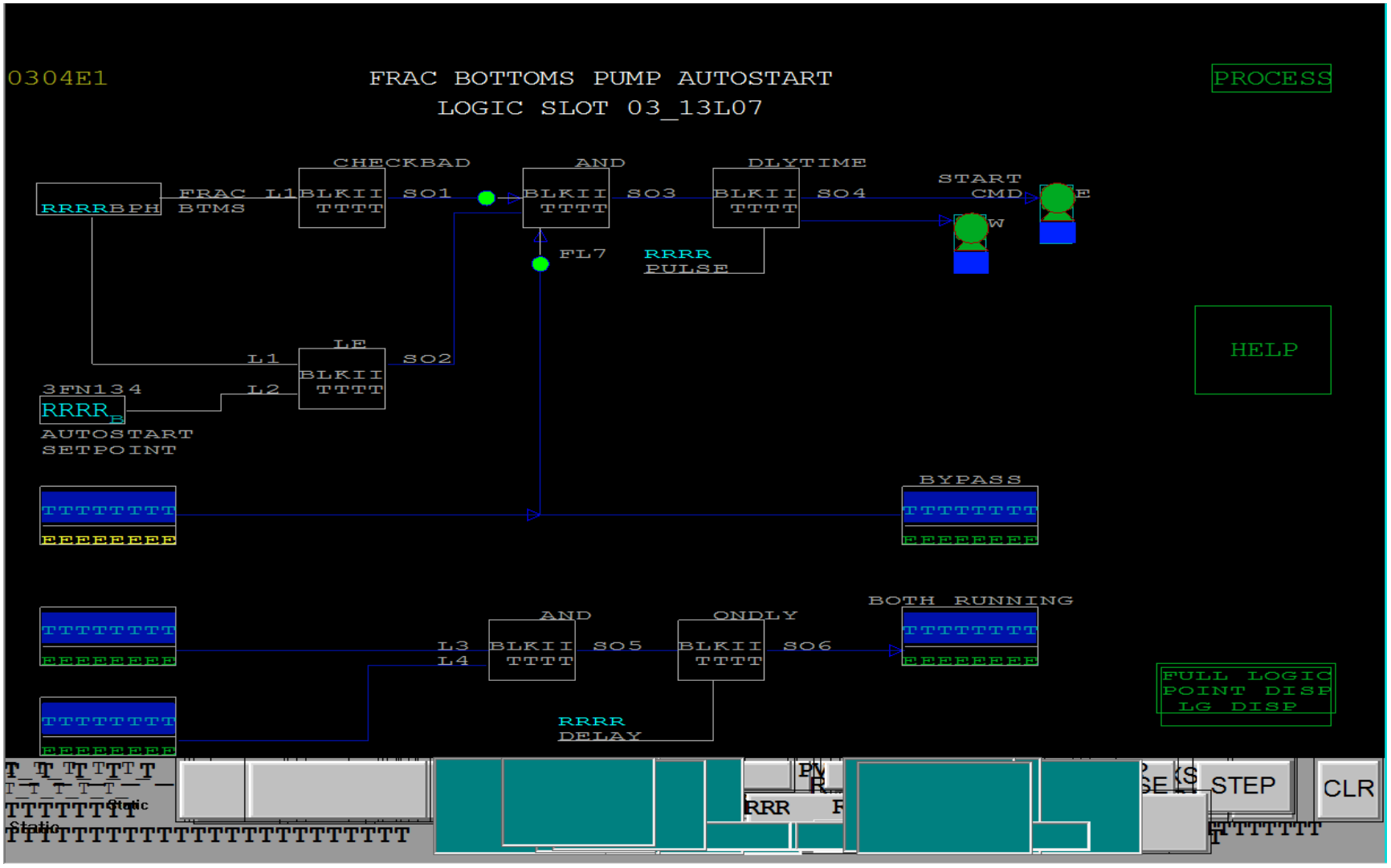
3.16 R3 INLET TEMPERATURE CONTROL HELP (0303H2.DS)

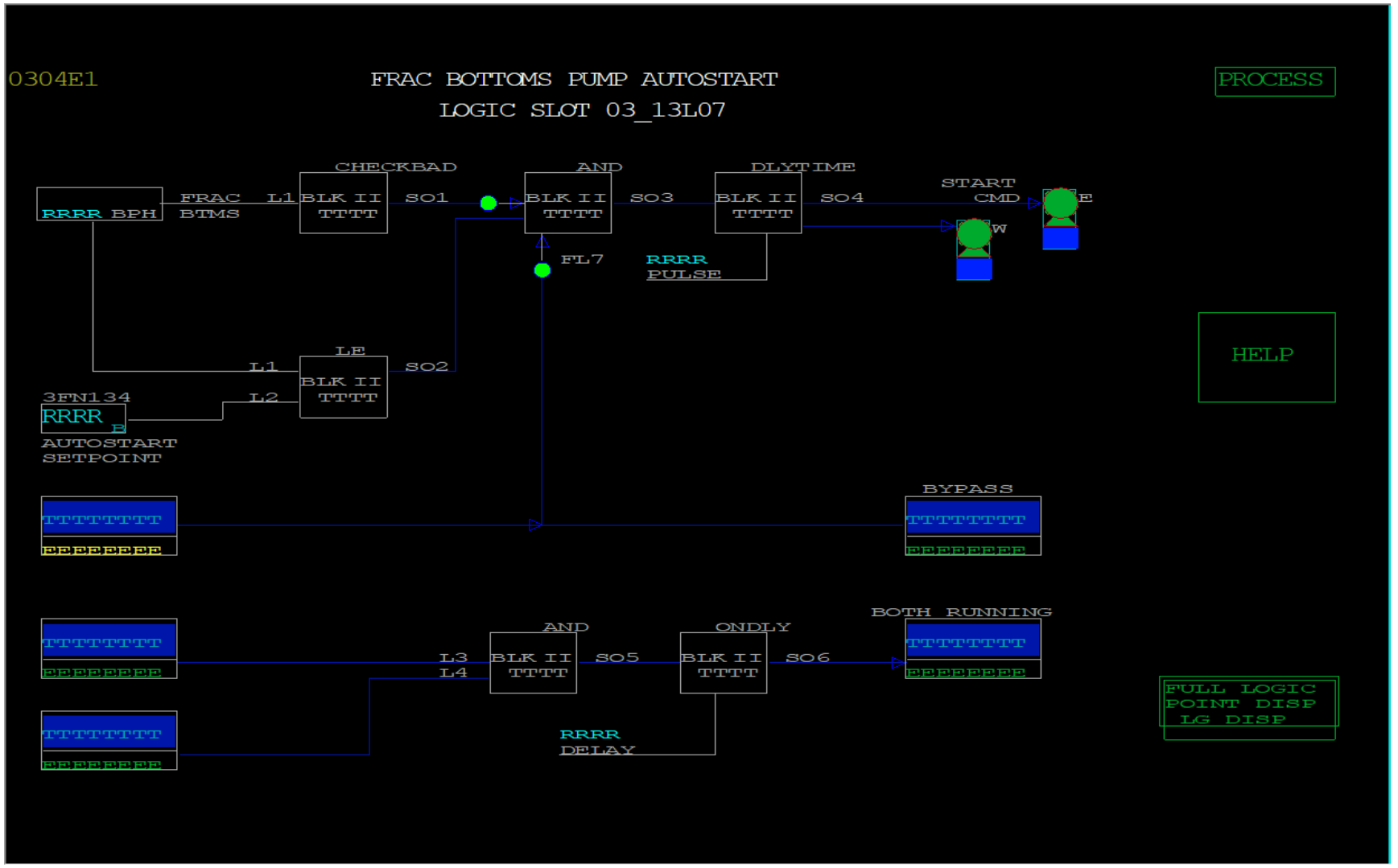


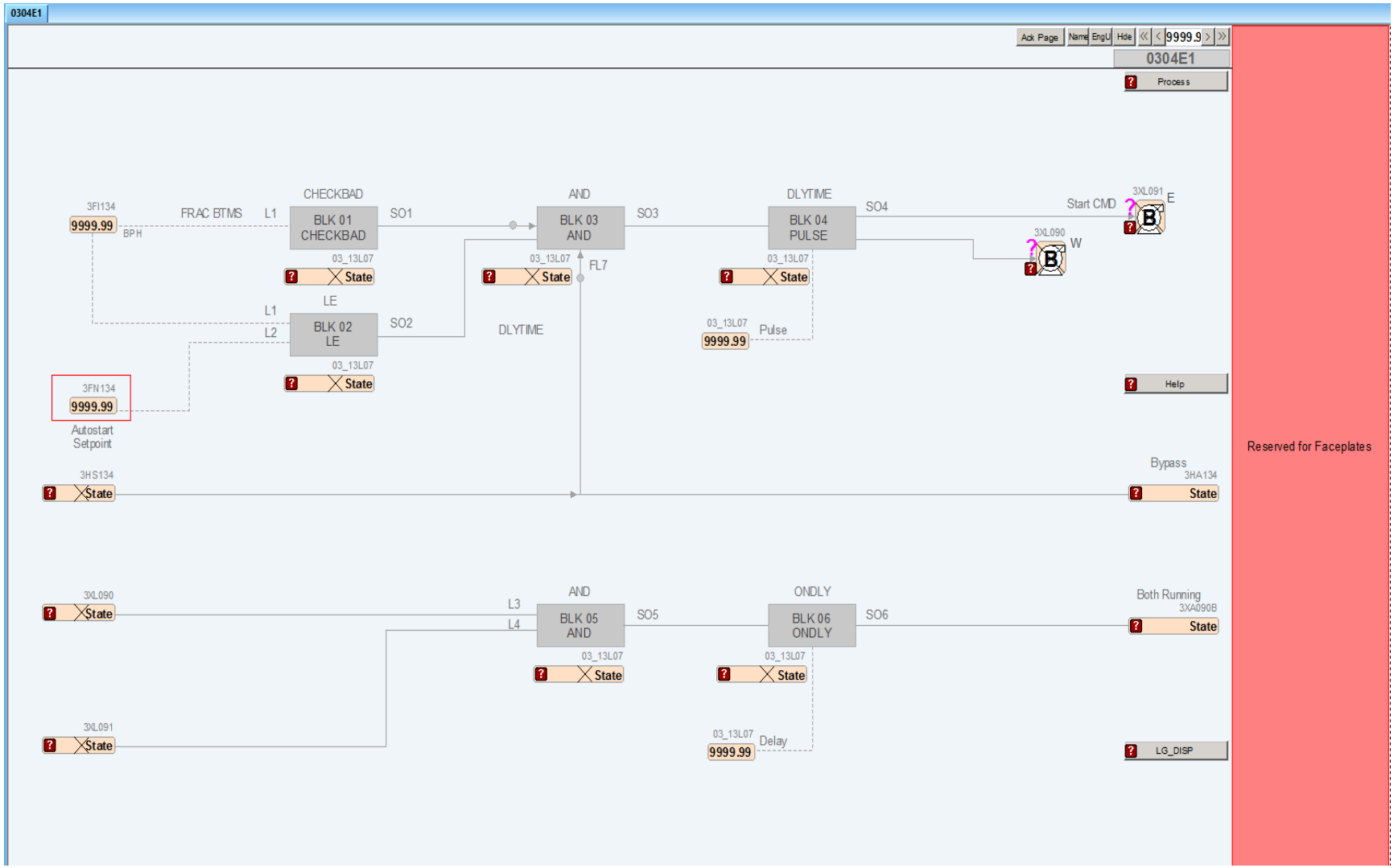

0303H2
R3 INLET TEMPERATURE CONTROL HELP
HELP
PROCESS
R2 EFFL
RRRR F
RRRR F
R3 IN
3TC633
RRRR %
RRRR E
TTTTTT
SP
OP
SP DEV
RRRR F
R3 HEATER
RRRR E
TTTTTT
SP
RRRR F
3TC633A
3PC488
RRRR %
RRRR %
RRRR E
TTTTTT
SP
RRRR M F/G
REC H2 QUENCH
RRRR M
EEEEEE
Group III
3PC488 WAS ADDED TO CONTROL FUEL GAS PRESSURE AT THE R3 HTR BURNERS. IN CASCADE, 3PC488 WILL HAVE ITS SETPOINT ADJUSTED BY THE OUTPUT OF 3TC633.
3TC633A WAS BUILT TO SEPARATE THE QUENCH CONTROL FROM THE FUEL GAS CONTROL DUE TO THE ADDITION OF 3PC488. IN CASCADE, 3TC633A WILL AUTOMATICALLY HAVE ITS SETPOINT SET HIGHER THAN 3TC633'S SETPOINT BY RRRR F (I.E. WHEN 3TC633A IS IN CAS MODE: 3TC633A.SP=3TC633.SP + BIAS). THE SETPOINT BIAS CAN BE CHANGED VIA THE TARGET BELOW IF THE STATION IS IN SUPERVISOR MODE. THE BIAS MUST BE BETWEEN 0 & 9 DEGREES F.
3TC633A SETPOINT BIAS
RRRR F


0303H2
Ack Page
Name
EngU
Hide
9999.9
0303H2
Help
Process
R2 EFFL
3TI810
9999.99 F
3TI827
9999.99 F
R3 IN
3TC633
9999.99 %
3TC633
W 9999.99
9999.99
SP
OP
SP DEV
3TY633
9999.99 F
3TC633A
W 9999.99
9999.99
SP
R3 Heater
3TI689
9999.99 F
3TC633A
100%
P
3PO488
3PC488
100%
W 9999.99
9999.99
SP
3FI141
9999.99 M
F/G
REC H2 Quench
3FI169
9999.99 M
3PC488 Was Added To Control Fuel Gas Pressure At The R3 HTR Burners. In Cascade, 3PC488 Will Have Its Setpoint Adjusted By The Output Of 3TC633.
3TC633A Was Built To Separate The Quench Control From The Fuel Gas Control Due To The Addition Of 3PC488. In Cascade, 3TC633A Will
Automatically Have Its Setpoint Set Higher Than 3TC633'S Setpoint By
3TC633A
9999.99 F (I.E. When 3TC633A Is In Cas Mode: 3TC633A.SP=3TC633.SP + BIAS).
The Setpoint Bias Can Be Changed Via The Target Below If The Station Is In Supervisor Mode. The Bias Must Be Between 0 & 9 Degrees F.
3TC633A Setpoint Bias
3TC633A
9999.99 F
Keylevel Script for operator entry setpoint,Need to discuss with LAR.
Reserved for Faceplates

3.17 FRAC BOTTOMS PUMP AUTOSTART LOGIC SLOT 03_13L07 (0304E1.DS)

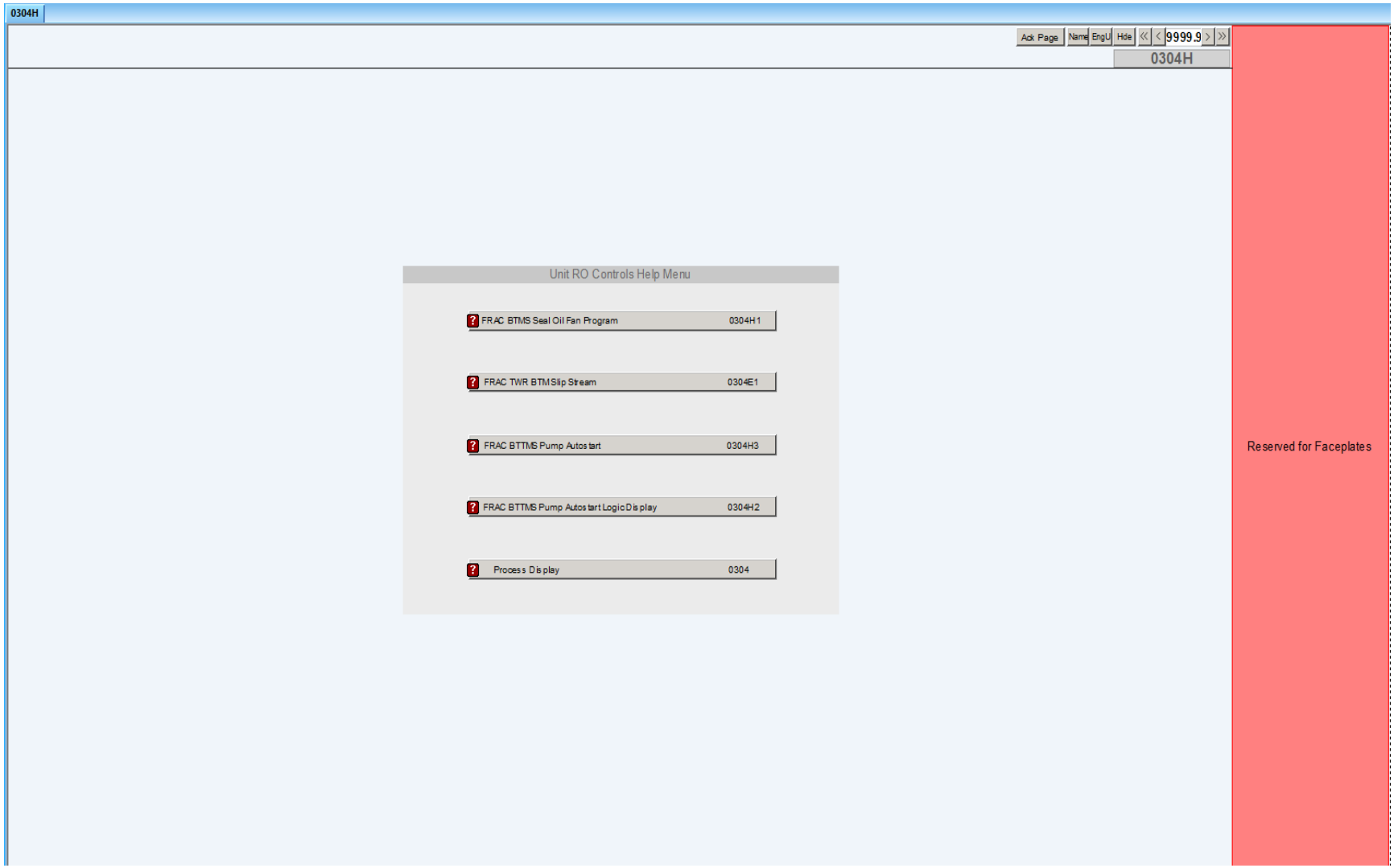



0304E1
FRAC BOTTOMS PUMP AUTOSTART
LOGIC SLOT 03_13L07
PROCESS
CHECKBAD
AND
DLYTIME
START CMD
RRRR BPH
FRAC BTMS
L1
BLK II TTTT
SO1
SO3
SO4
FL7
RRRR PULSE
LE
SO2
3FN134
RRRR
AUTOSTART SETPOINT
HELP
BYPASS
BOTH RUNNING
ONDLY
L3
L4
SO5
SO6
RRRR DELAY
FULL LOGIC POINT DISP
LG DISP


0304E1
Ack Page
Name
Eng'U
Hide
9999.9
0304E1
Process
3FI134
9999.99
BPH
FRAC BTMS
L1
CHECKBAD
BLK 01
CHECKBAD
SO1
03_13L07
State
AND
BLK 03
AND
SO3
FL7
DLYTIME
BLK 04
PULSE
SO4
Start CMD
3XL091
E
3XL090
W
LE
L1
L2
BLK 02
LE
SO2
DLYTIME
Pulse
9999.99
3FN134
Autostart
Setpoint
Help
Reserved for Faceplates
3HS134
Bypass
3HA134
3XL090
L3
L4
BLK 05
AND
SO5
ONDLY
BLK 06
ONDLY
SO6
Both Running
3XA090B
3XL091
Delay
LG_DISP

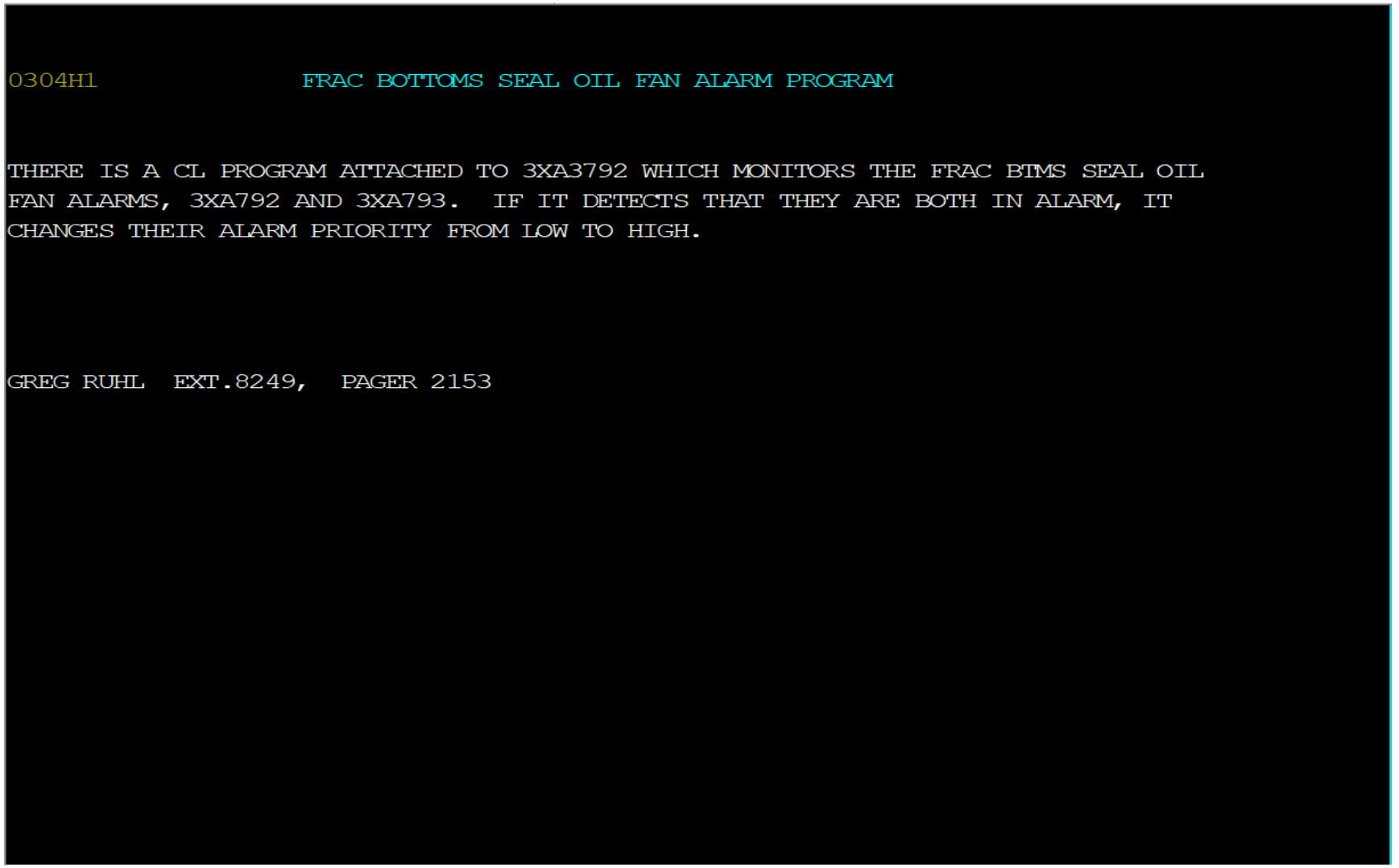
3.18 UNIT RO CONTROLS HELP MENU (0304H.DS)

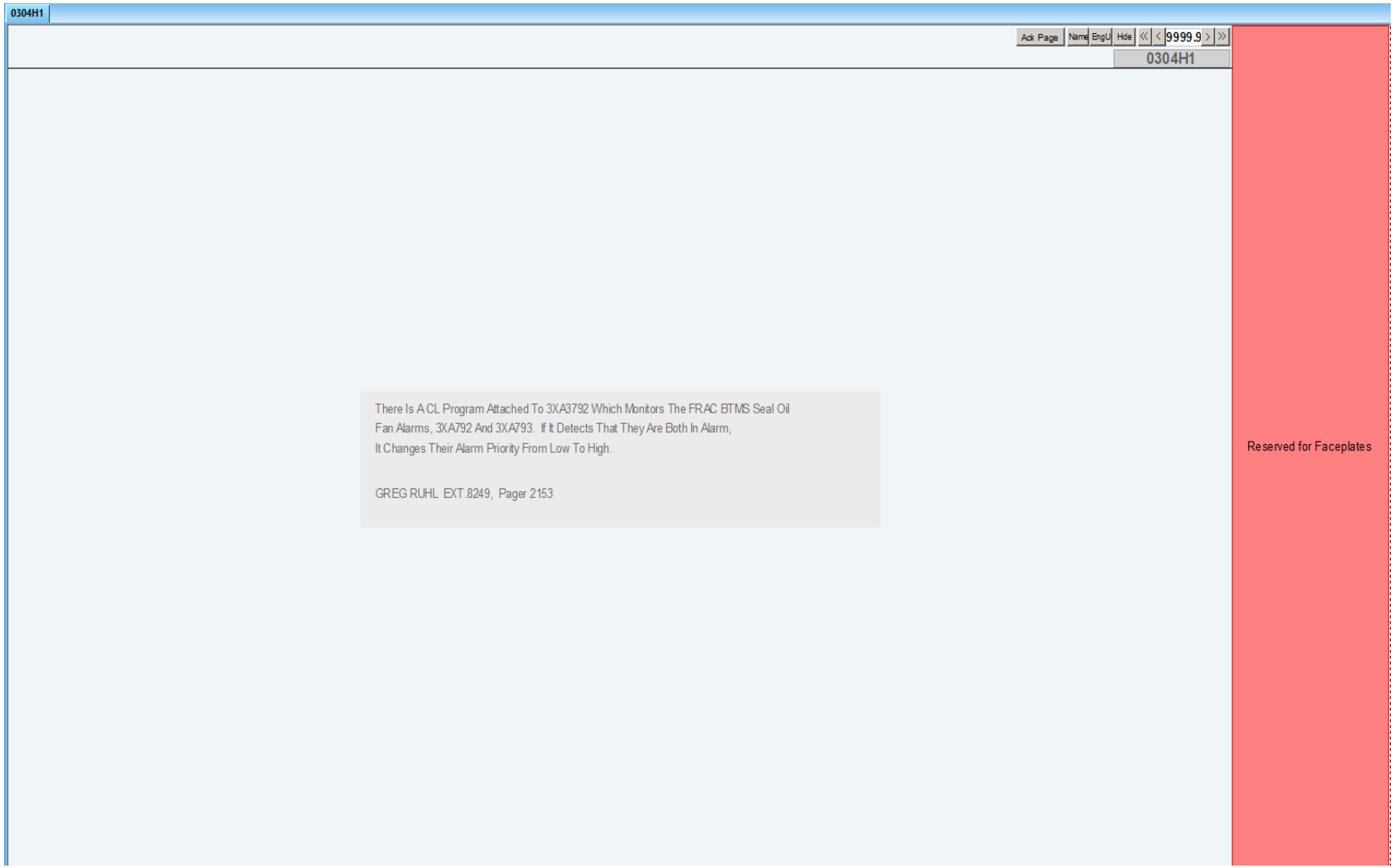
0304H
UNIT RO CONTROLS HELP MENU
FRAC BTMS SEAL OIL FAN PROGRAM 0304H1
FRAC TWR BTM SLIP STREAM 0304H2
FRAC BTTMS PUMP AUTOSTART 0304H3
FRAC BTTMS PUMP AUTOSTART LOGIC DISPLAY 0304E1
PROCESS DISPLAY 0304


0304H
Ack Page
Name
EngU
Hde
9999.9
0304H
Unit RO Controls Help Menu
FRAC BTMS Seal Oil Fan Program
0304H1
FRAC TWR BTM Slip Stream
0304E1
FRAC BTTMS Pump Autostart
0304H3
FRAC BTTMS Pump Autostart Logic Display
0304H2
Process Display
0304
Reserved for Faceplates

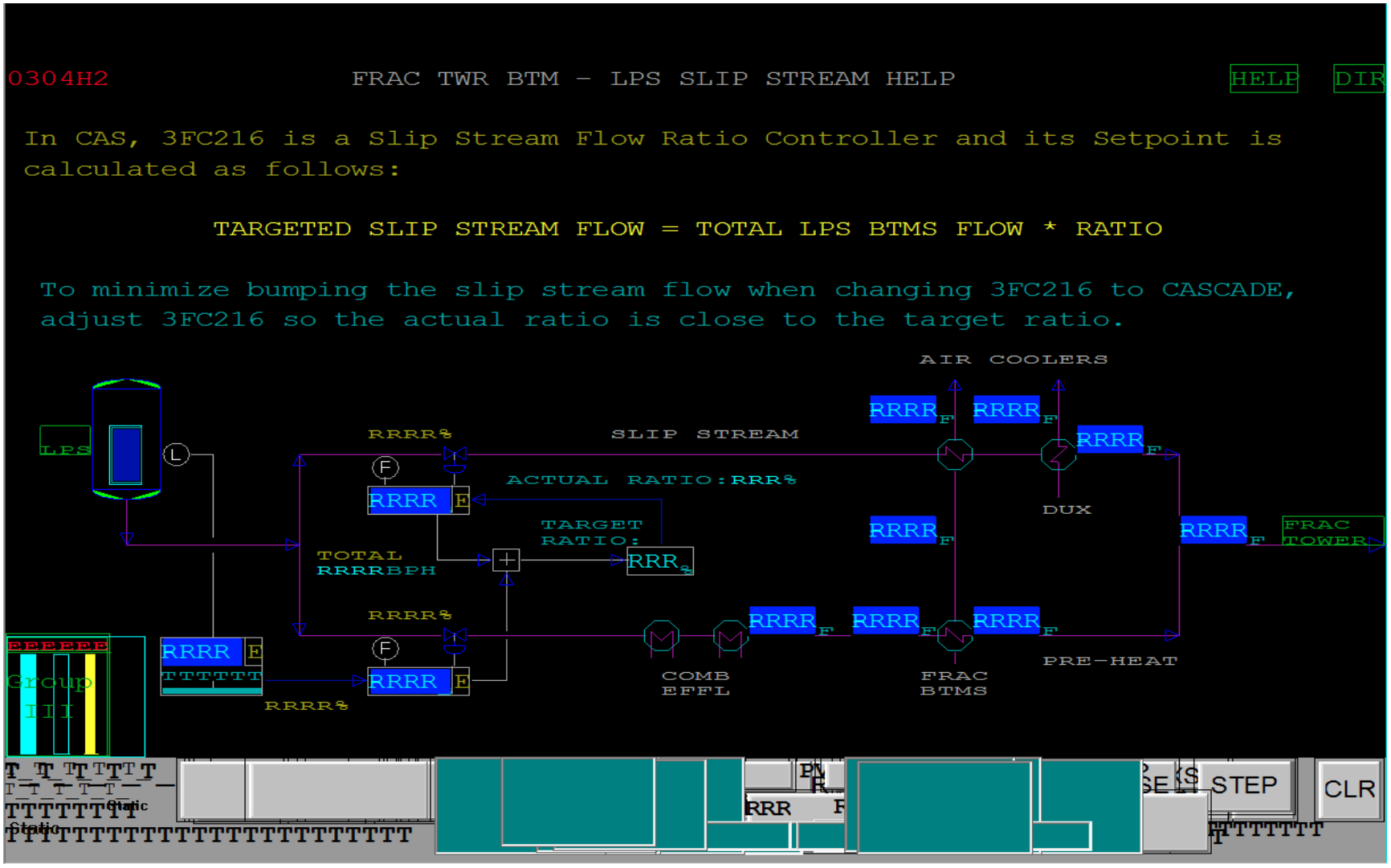
3.19 FRAC BOTTOMS SEAL OIL FAN ALARM PROGRAM (0304H1.DS)

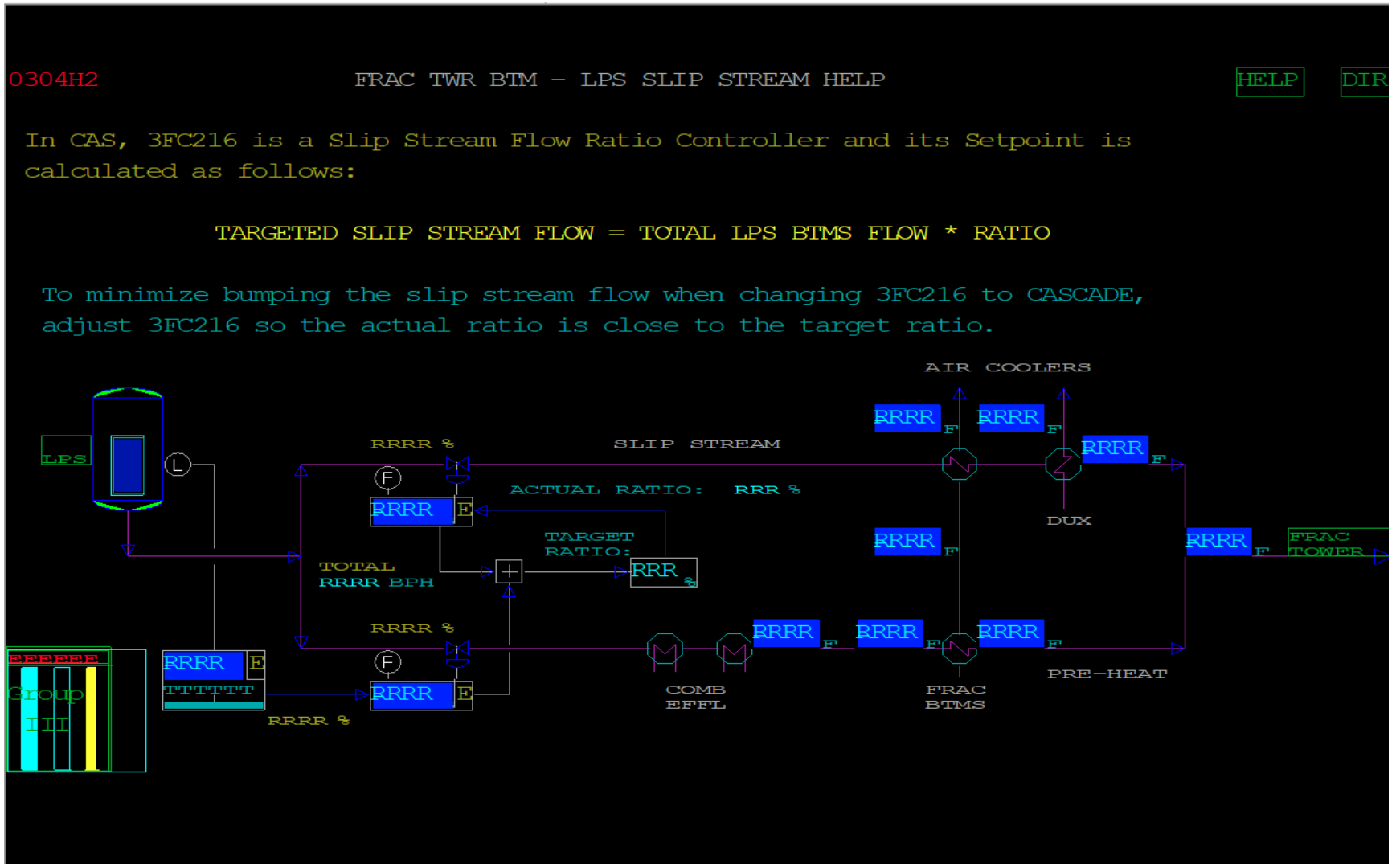
```
0304H1              FRAC BOTTOMS SEAL OIL FAN ALARM PROGRAM


THERE IS A CL PROGRAM ATTACHED TO 3XA3792 WHICH MONITORS THE FRAC BTMS SEAL OIL
FAN ALARMS, 3XA792 AND 3XA793.  IF IT DETECTS THAT THEY ARE BOTH IN ALARM, IT
CHANGES THEIR ALARM PRIORITY FROM LOW TO HIGH.



GREG RUHL  EXT.8249,  PAGER 2153
```

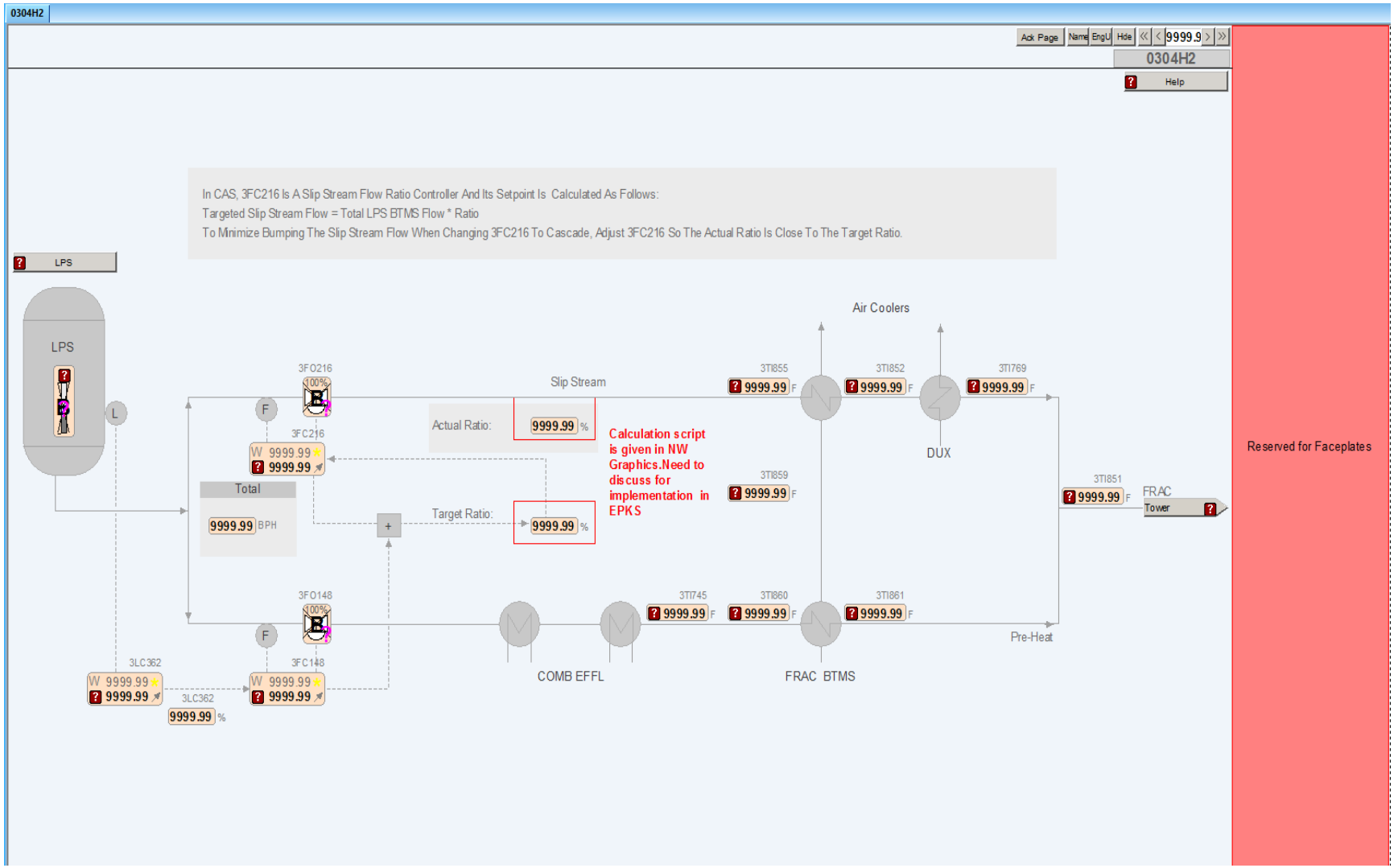

0304H1
FRAC BOTTOMS SEAL OIL FAN ALARM PROGRAM
THERE IS A CL PROGRAM ATTACHED TO 3XA3792 WHICH MONITORS THE FRAC BTMS SEAL OIL FAN ALARMS, 3XA792 AND 3XA793. IF IT DETECTS THAT THEY ARE BOTH IN ALARM, IT CHANGES THEIR ALARM PRIORITY FROM LOW TO HIGH.
GREG RUHL EXT.8249, PAGER 2153


0304H1
Ack Page
Name
EngU
Hde
9999.9
0304H1
There Is A CL Program Attached To 3XA3792 Which Monitors The FRAC BTMS Seal Oil
Fan Alarms, 3XA792 And 3XA793. If It Detects That They Are Both In Alarm,
It Changes Their Alarm Priority From Low To High.
GREG RUHL EXT.8249, Pager 2153
Reserved for Faceplates

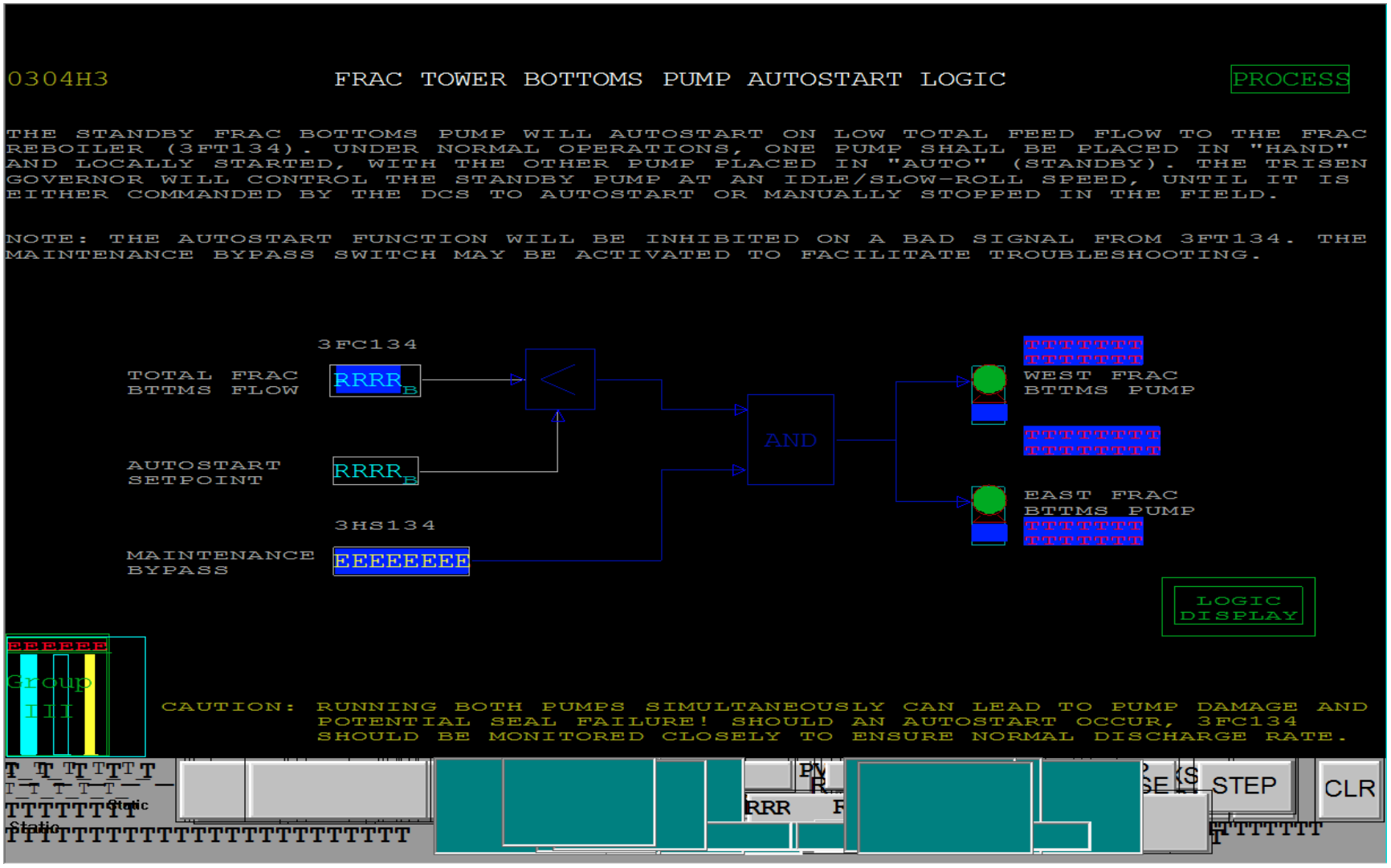
3.20 FRAC TWR BTM - LPS SLIP STREAM HELP (0304H2.DS)

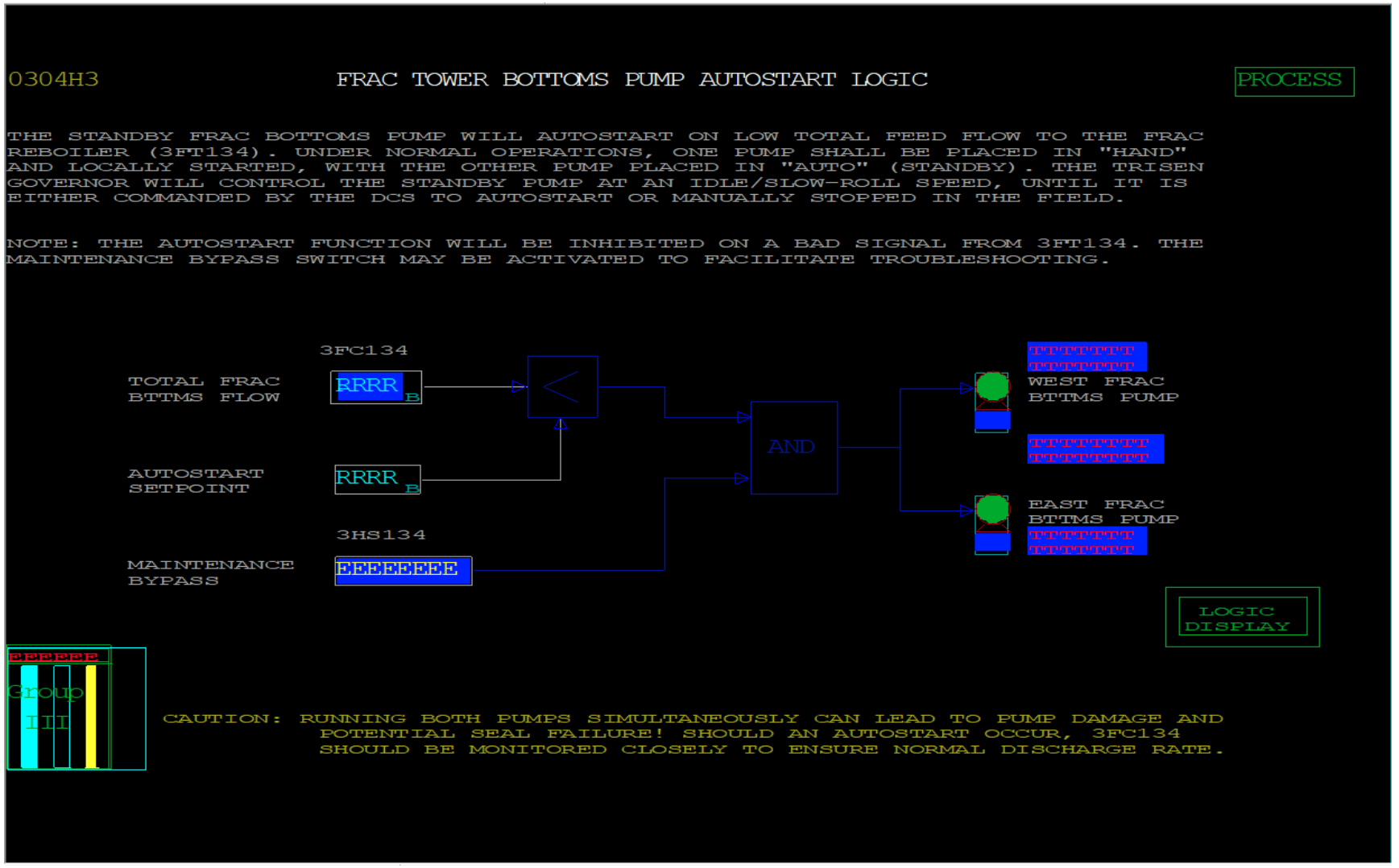


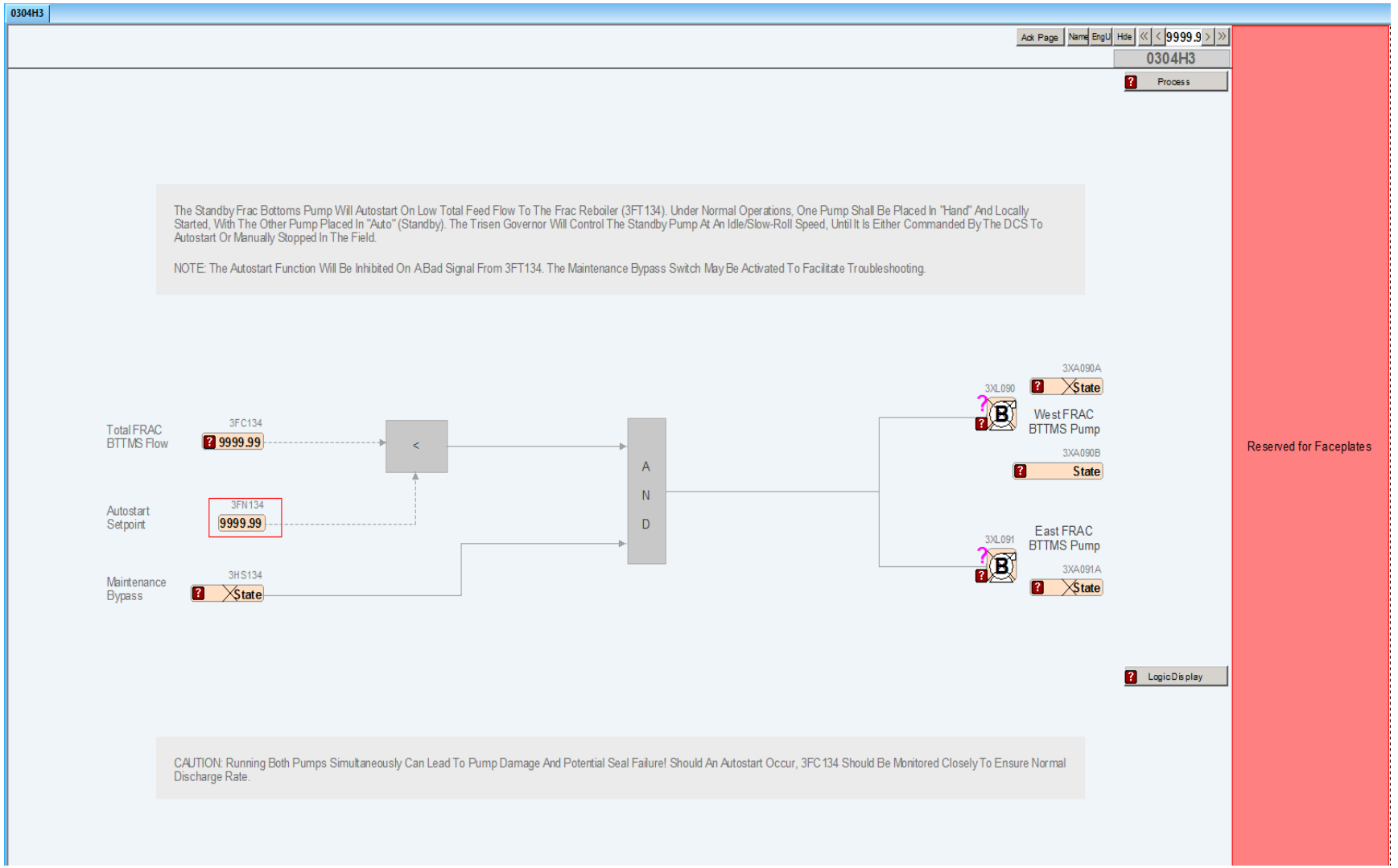

0304H2
FRAC TWR BTM – LPS SLIP STREAM HELP
HELP
DIR
In CAS, 3FC216 is a Slip Stream Flow Ratio Controller and its Setpoint is calculated as follows:
TARGETED SLIP STREAM FLOW = TOTAL LPS BTMS FLOW * RATIO
To minimize bumping the slip stream flow when changing 3FC216 to CASCADE, adjust 3FC216 so the actual ratio is close to the target ratio.
AIR COOLERS
LPS
RRRR %
SLIP STREAM
ACTUAL RATIO: RRR %
TARGET RATIO:
TOTAL RRRR BPH
DUX
FRAC TOWER
RRRR %
COMB EFFL
FRAC BTMS
PRE-HEAT
Group III
TTTTTT
RRRR %


0304H2
Ack Page
Name
EngU
Hde
9999.9
0304H2
Help
In CAS, 3FC216 Is A Slip Stream Flow Ratio Controller And Its Setpoint Is Calculated As Follows:
Targeted Slip Stream Flow = Total LPS BTMS Flow * Ratio
To Minimize Bumping The Slip Stream Flow When Changing 3FC216 To Cascade, Adjust 3FC216 So The Actual Ratio Is Close To The Target Ratio.
LPS
LPS
L
3FO216
100%
F
3FC216
W 9999.99
9999.99
Total
9999.99 BPH
+
Slip Stream
Actual Ratio:
9999.99 %
Target Ratio:
9999.99 %
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
Air Coolers
3TI855
9999.99 F
3TI852
9999.99 F
3TI769
9999.99 F
DUX
3TI859
9999.99 F
3TI851
9999.99 F
FRAC Tower
3FO148
100%
F
3FC148
W 9999.99
9999.99
3LC362
W 9999.99
9999.99
3LC362
9999.99 %
3TI745
9999.99 F
3TI860
9999.99 F
3TI861
9999.99 F
COMB EFFL
FRAC BTMS
Pre-Heat
Reserved for Faceplates

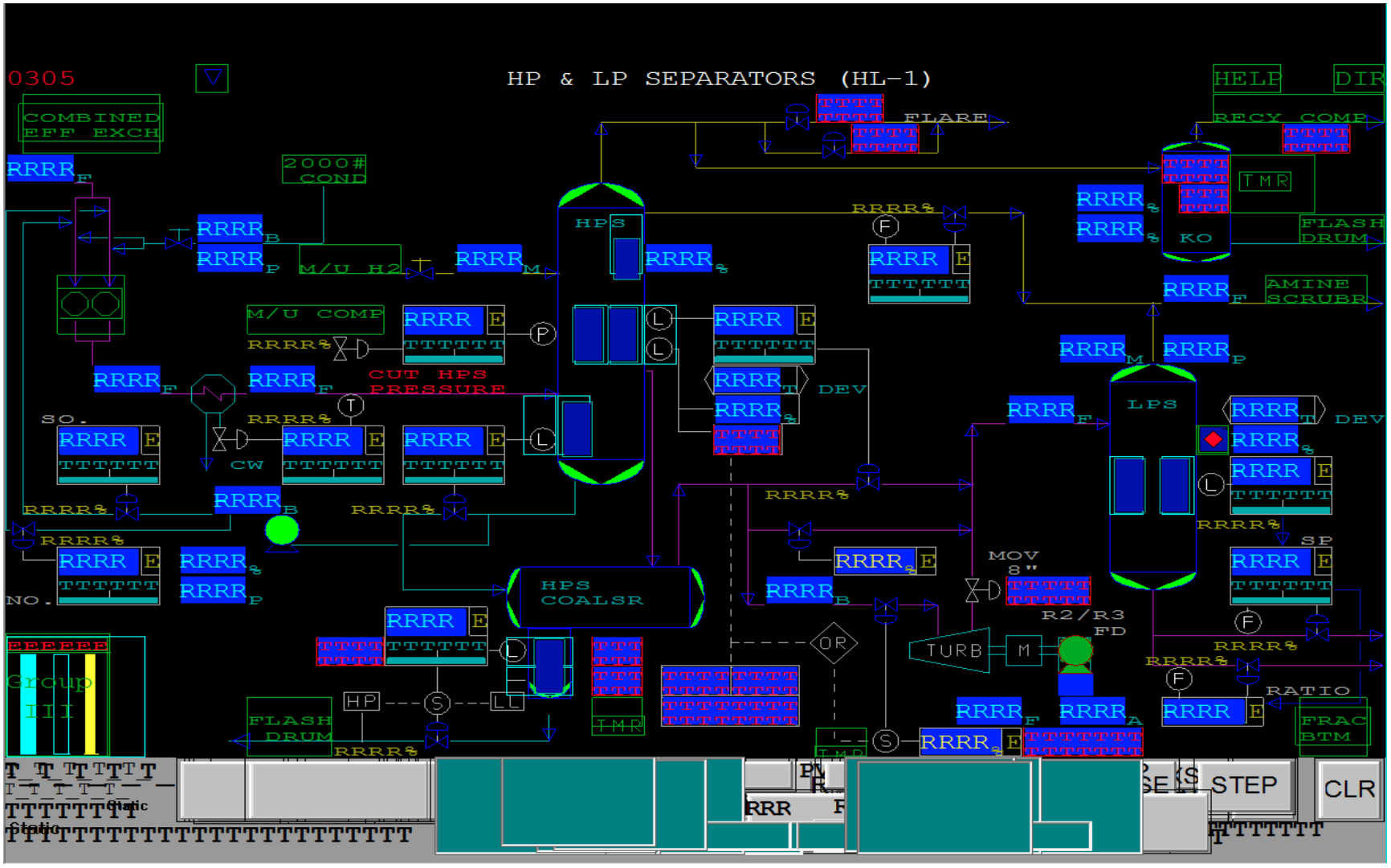
3.21 FRAC TOWER BOTTOMS PUMP AUTOSTART LOGIC (0304H3.DS)

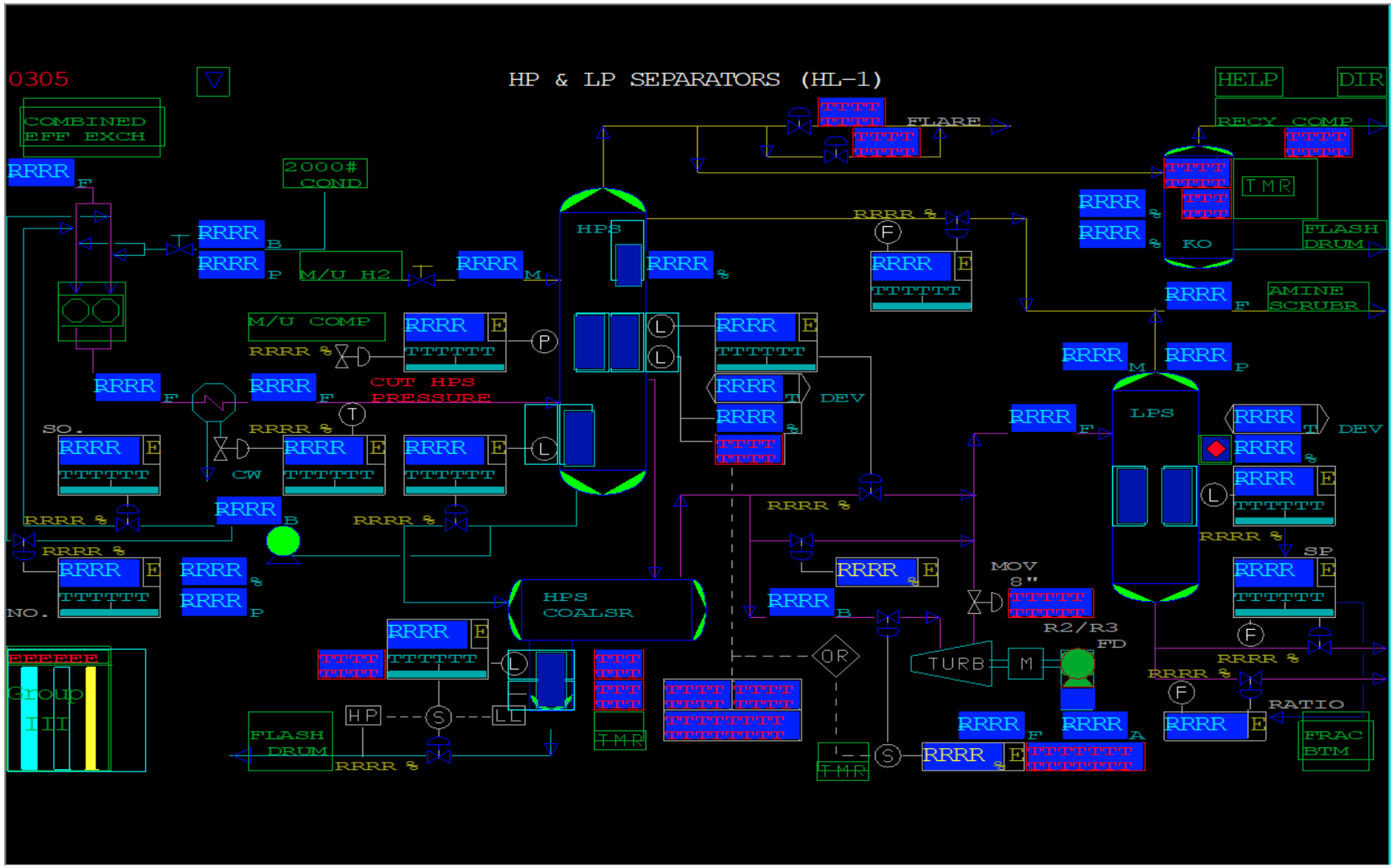


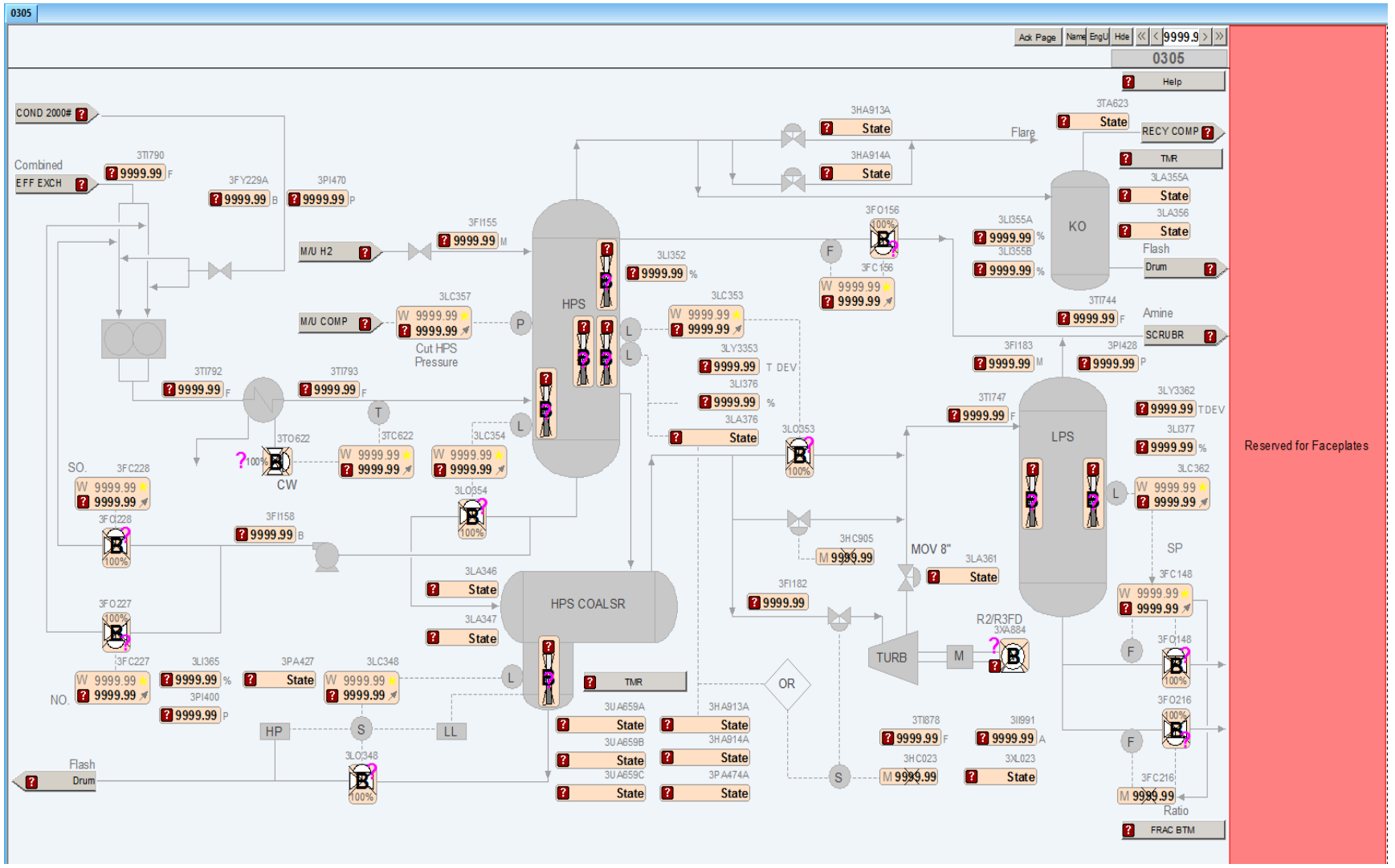

0304H3
FRAC TOWER BOTTOMS PUMP AUTOSTART LOGIC
PROCESS
THE STANDBY FRAC BOTTOMS PUMP WILL AUTOSTART ON LOW TOTAL FEED FLOW TO THE FRAC REBOILER (3FT134). UNDER NORMAL OPERATIONS, ONE PUMP SHALL BE PLACED IN "HAND" AND LOCALLY STARTED, WITH THE OTHER PUMP PLACED IN "AUTO" (STANDBY). THE TRISEN GOVERNOR WILL CONTROL THE STANDBY PUMP AT AN IDLE/SLOW-ROLL SPEED, UNTIL IT IS EITHER COMMANDED BY THE DCS TO AUTOSTART OR MANUALLY STOPPED IN THE FIELD.
NOTE: THE AUTOSTART FUNCTION WILL BE INHIBITED ON A BAD SIGNAL FROM 3FT134. THE MAINTENANCE BYPASS SWITCH MAY BE ACTIVATED TO FACILITATE TROUBLESHOOTING.
3FC134
TOTAL FRAC BTTMS FLOW
RRRR
B
AUTOSTART SETPOINT
RRRR
B
3HS134
MAINTENANCE BYPASS
EEEEEEE
AND
TTTTTTTT
TTTTTTTT
WEST FRAC BTTMS PUMP
TTTTTTTTT
TTTTTTTTT
EAST FRAC BTTMS PUMP
TTTTTTTT
TTTTTTTT
LOGIC DISPLAY
EEEEEE
Group
III
CAUTION: RUNNING BOTH PUMPS SIMULTANEOUSLY CAN LEAD TO PUMP DAMAGE AND POTENTIAL SEAL FAILURE! SHOULD AN AUTOSTART OCCUR, 3FC134 SHOULD BE MONITORED CLOSELY TO ENSURE NORMAL DISCHARGE RATE.


0304H3
Ack Page
Name
Engl
Hde
9999.9
0304H3
Process
The Standby Frac Bottoms Pump Will Autostart On Low Total Feed Flow To The Frac Reboiler (3FT134). Under Normal Operations, One Pump Shall Be Placed In "Hand" And Locally Started, With The Other Pump Placed In "Auto" (Standby). The Trisen Governor Will Control The Standby Pump At An Idle/Slow-Roll Speed, Until It Is Either Commanded By The DCS To Autostart Or Manually Stopped In The Field.
NOTE: The Autostart Function Will Be Inhibited On A Bad Signal From 3FT134. The Maintenance Bypass Switch May Be Activated To Facilitate Troubleshooting.
Total FRAC BTTMS Flow
3FC134
9999.99
<
Autostart Setpoint
3FN134
9999.99
Maintenance Bypass
3HS134
State
A
N
D
3XA090A
State
3XL090
West FRAC BTTMS Pump
3XA090B
State
3XL091
East FRAC BTTMS Pump
3XA091A
State
Logic Display
Reserved for Faceplates
CAUTION: Running Both Pumps Simultaneously Can Lead To Pump Damage And Potential Seal Failure! Should An Autostart Occur, 3FC134 Should Be Monitored Closely To Ensure Normal Discharge Rate.

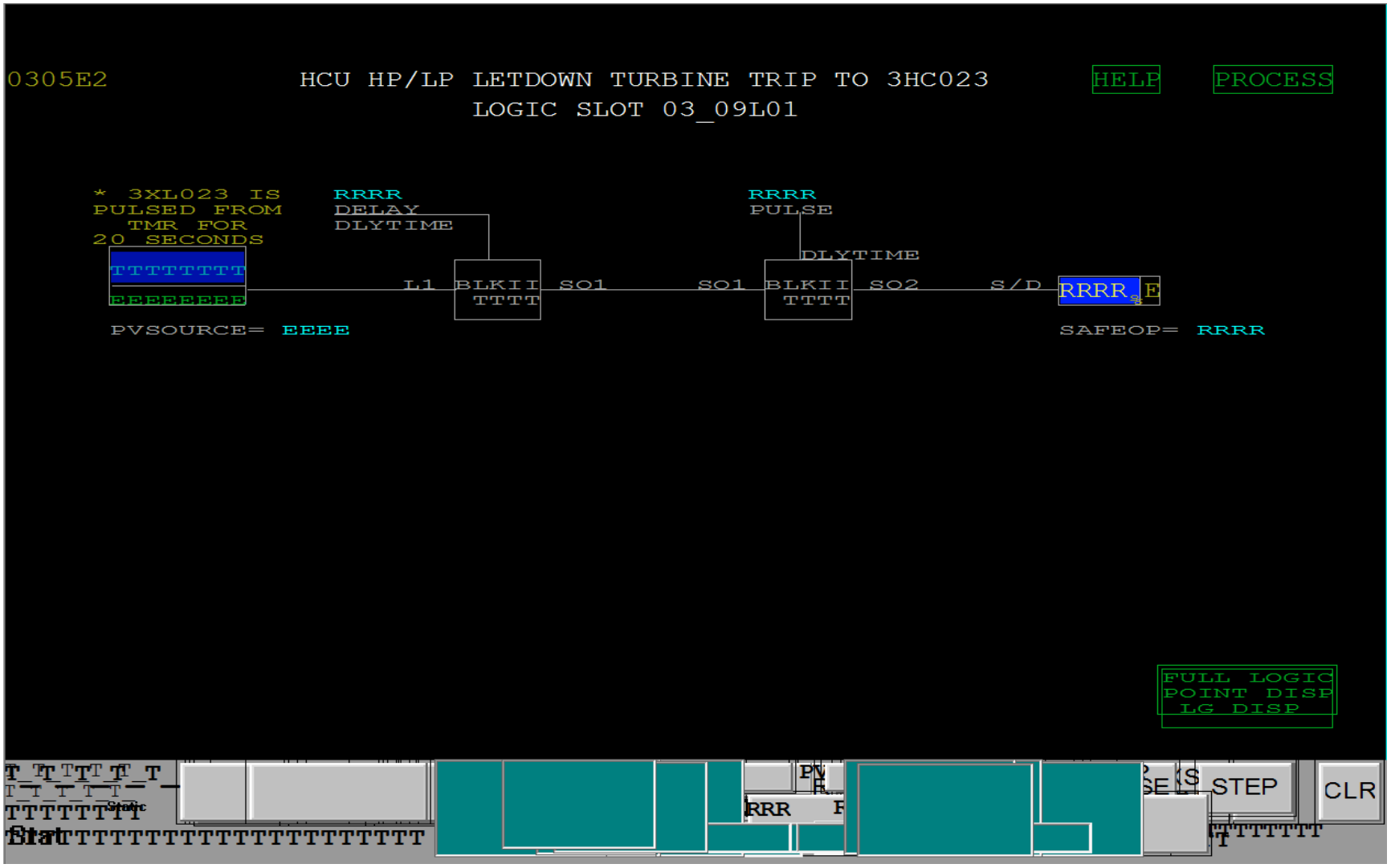
3.22 HP & LP SEPARATORS (HL-1) (0305.DS)

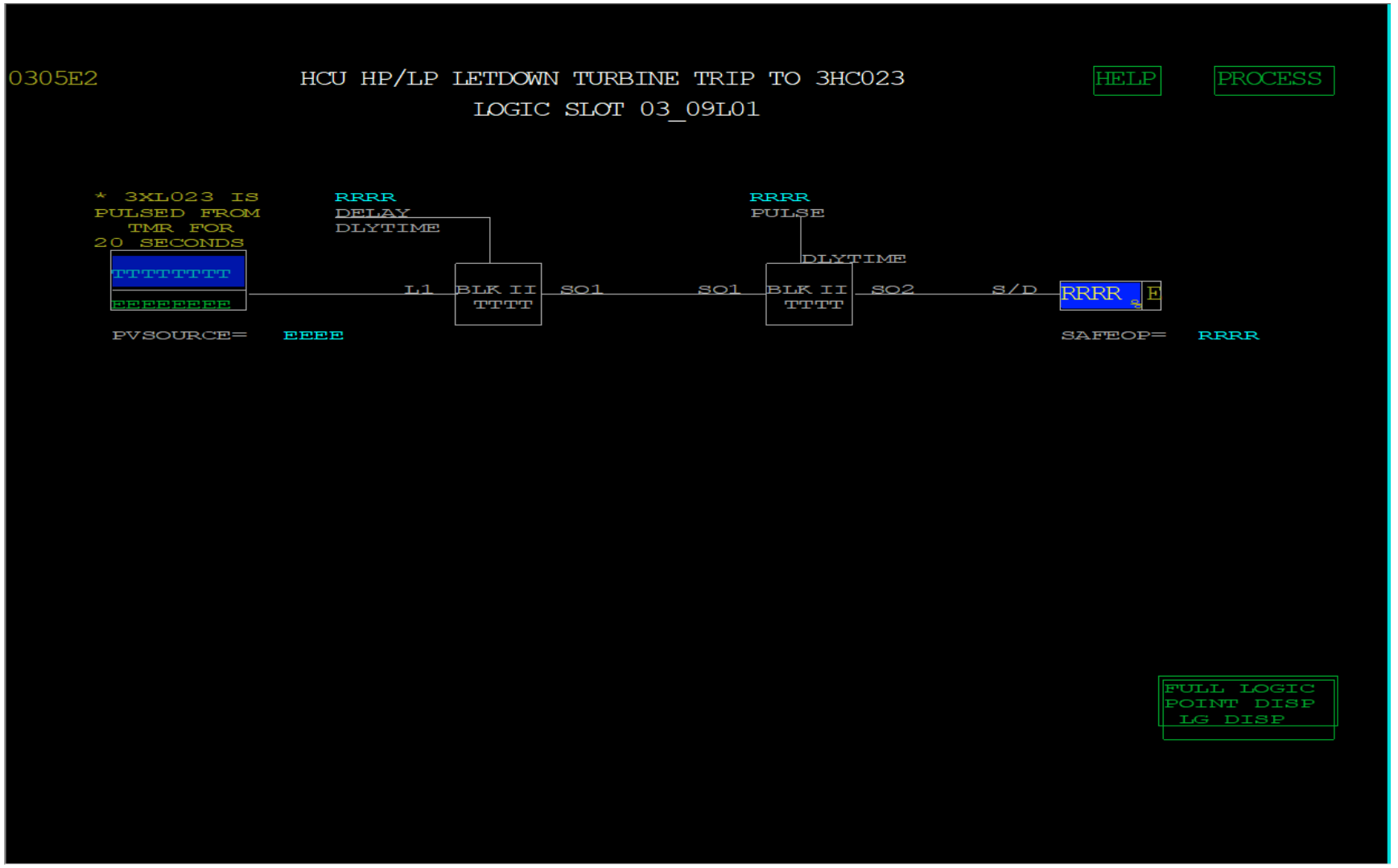


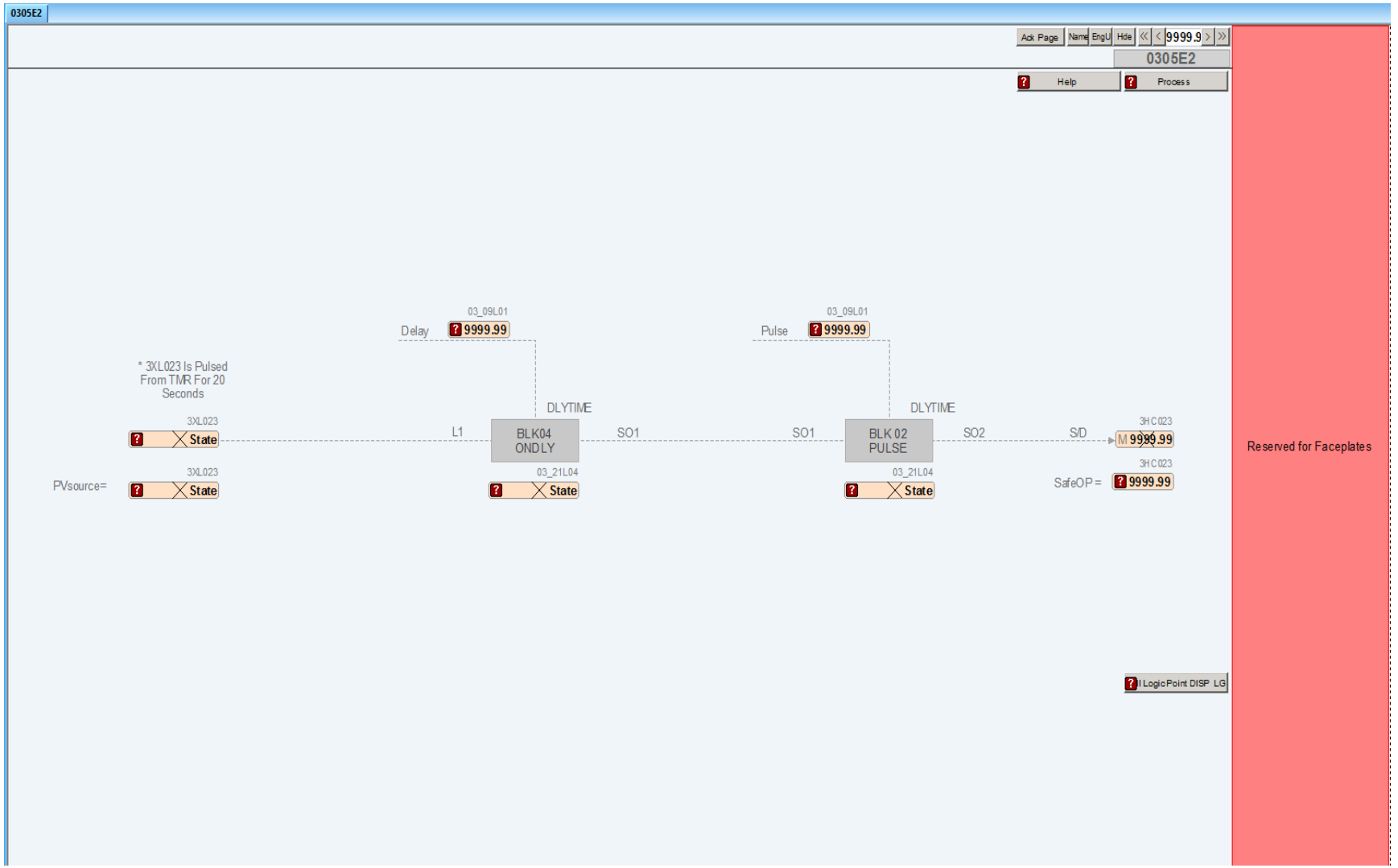

0305
HP & LP SEPARATORS (HL-1)
HELP
DIR
COMBINED EFF EXCH
2000# COND
FLARE
RECY COMP
TMR
FLASH DRUM
KO
M/U H2
M/U COMP
HPS
AMINE SCRUBR
CUT HPS PRESSURE
DEV
LPS
SO.
CW
NO.
HPS COALSR
MOV 8"
R2/R3
FD
TURB
SP
RATIO
FRAC BTM
OR
HP
LL
FLASH DRUM
Group III


0305
Ack Page
Name
EngU
Hde
0305
Help
COND 2000#
Combined
EFF EXCH
3TI790
9999.99 F
3FY229A
9999.99 B
3PI470
9999.99 P
M/U H2
3FI155
9999.99 M
M/U COMP
3LC357
W 9999.99
9999.99
Cut HPS
Pressure
HPS
3LI352
9999.99 %
3LC353
W 9999.99
9999.99
3LY3353
9999.99 T DEV
3LI376
9999.99 %
3LA376
State
3LO353
100%
3HA913A
State
3HA914A
State
Flare
3FO156
100%
3FC156
W 9999.99
9999.99
3TA623
State
RECY COMP
TMR
3LA355A
State
3LA356
State
Flash
Drum
3LI355A
9999.99 %
3LI355B
9999.99 %
KO
3TI744
9999.99 F
Amine
SCRUBR
3FI183
9999.99 M
3PI428
9999.99 P
3TI747
9999.99 F
LPS
3LY3362
9999.99 TDEV
3LI377
9999.99 %
3LC362
W 9999.99
9999.99
SP
3FC148
W 9999.99
9999.99
3FO148
100%
3FO216
100%
3FC216
M 9999.99
Ratio
FRAC BTM
3TI792
9999.99 F
3TI793
9999.99 F
3TO622
100%
CW
3TC622
W 9999.99
9999.99
3LC354
W 9999.99
9999.99
SO.
3FC228
W 9999.99
9999.99
3FO228
100%
3LO354
100%
3FI158
9999.99 B
3FO227
100%
3FC227
W 9999.99
9999.99
NO.
3LI365
9999.99 %
3PI400
9999.99 P
3PA427
State
3LC348
W 9999.99
9999.99
HP
S
LL
3LO348
100%
Flash
Drum
3LA346
State
3LA347
State
HPS COALSR
TMR
3U A659A
State
3U A659B
State
3U A659C
State
3HA913A
State
3HA914A
State
3PA474A
State
OR
3HC905
M 9999.99
3FI182
9999.99
MOV 8"
3LA361
State
TURB
M
R2/R3FD
3XA884
3TI878
9999.99 F
3HC023
M 9999.99
3II991
9999.99 A
3XL023
State
S
Reserved for Faceplates

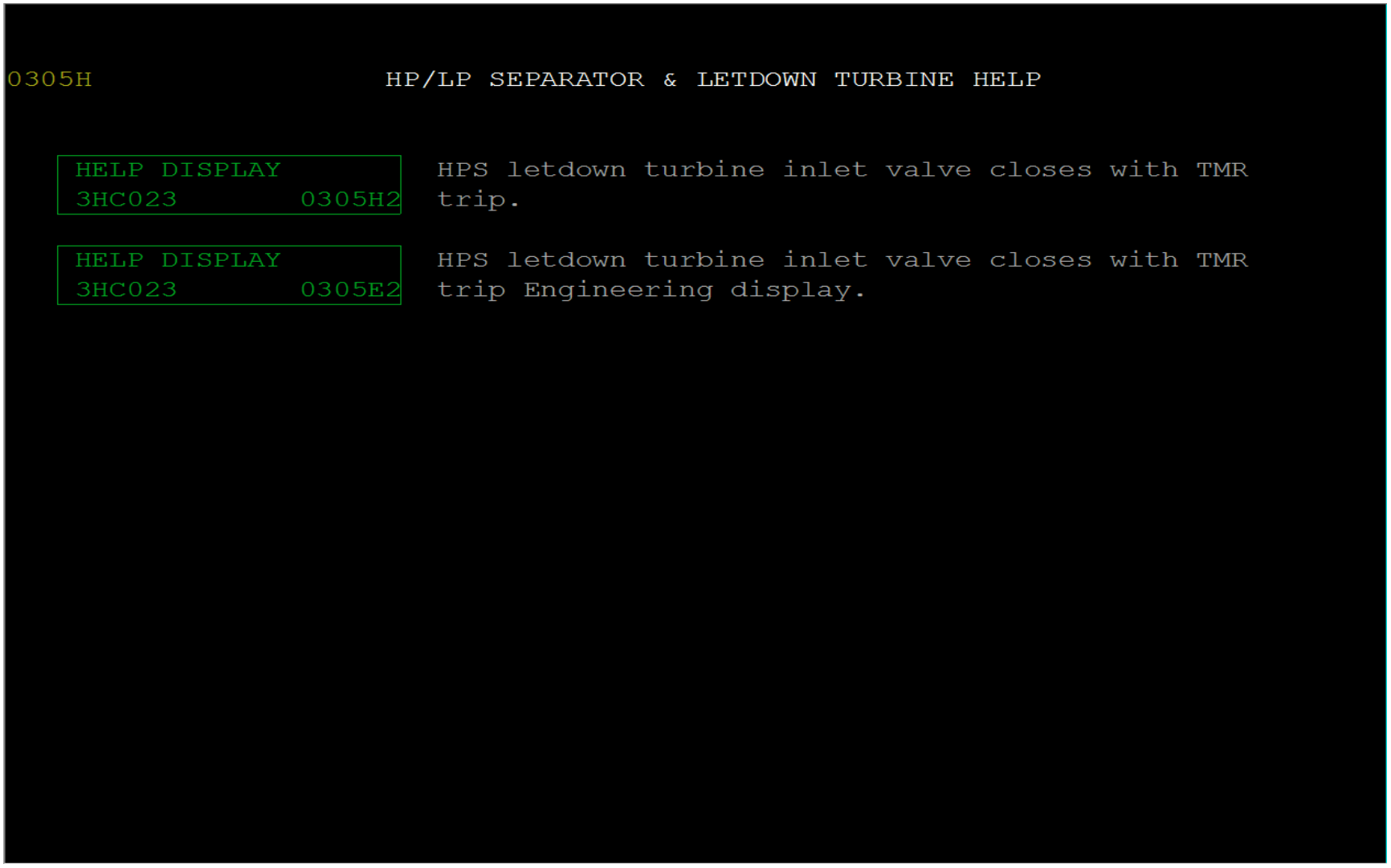
3.23 HCU HP/LP LETDOWN TURBINE TRIP TO 3HC023 LOGIC SLOT 03_09L01 (0305E2.DS)

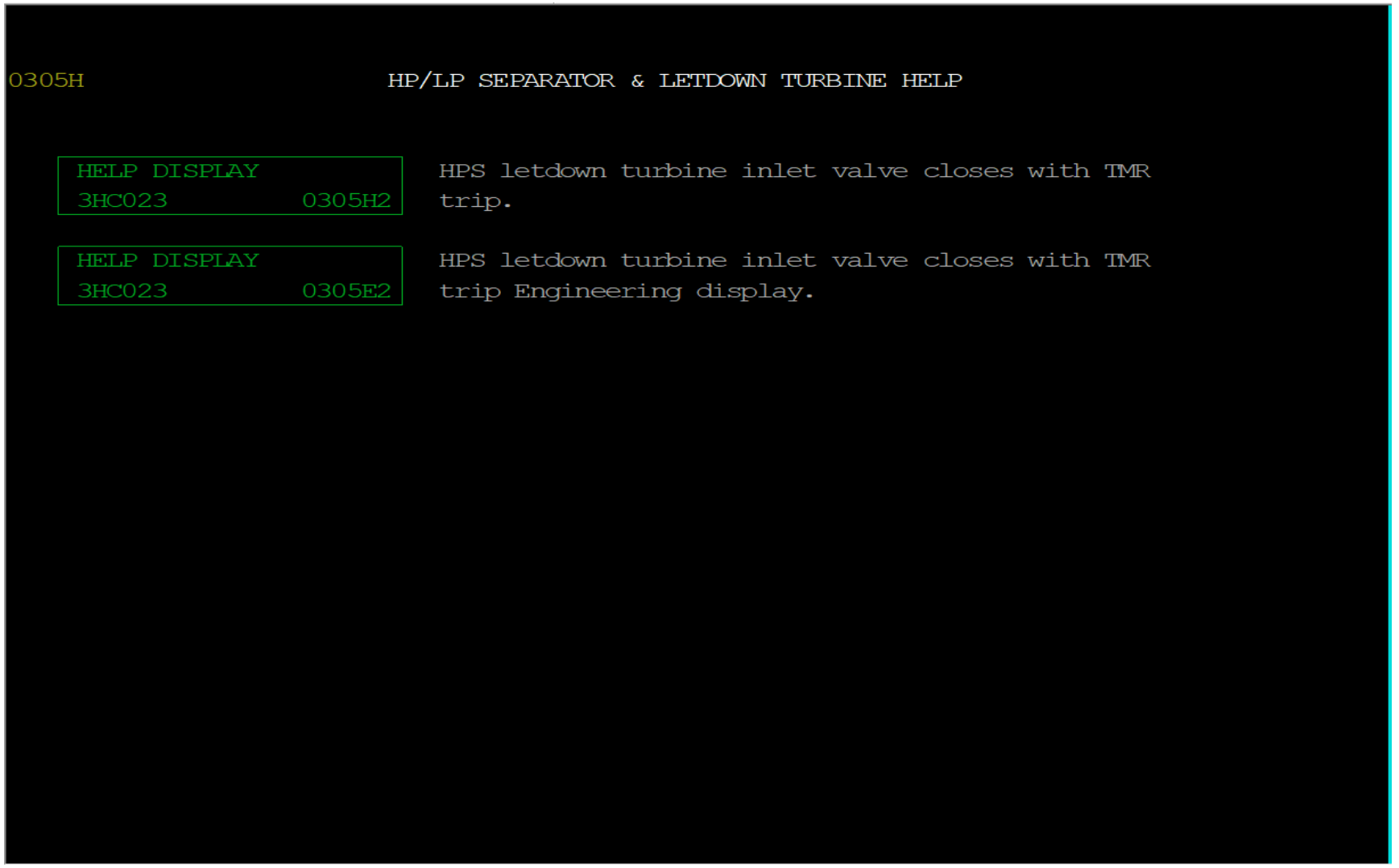


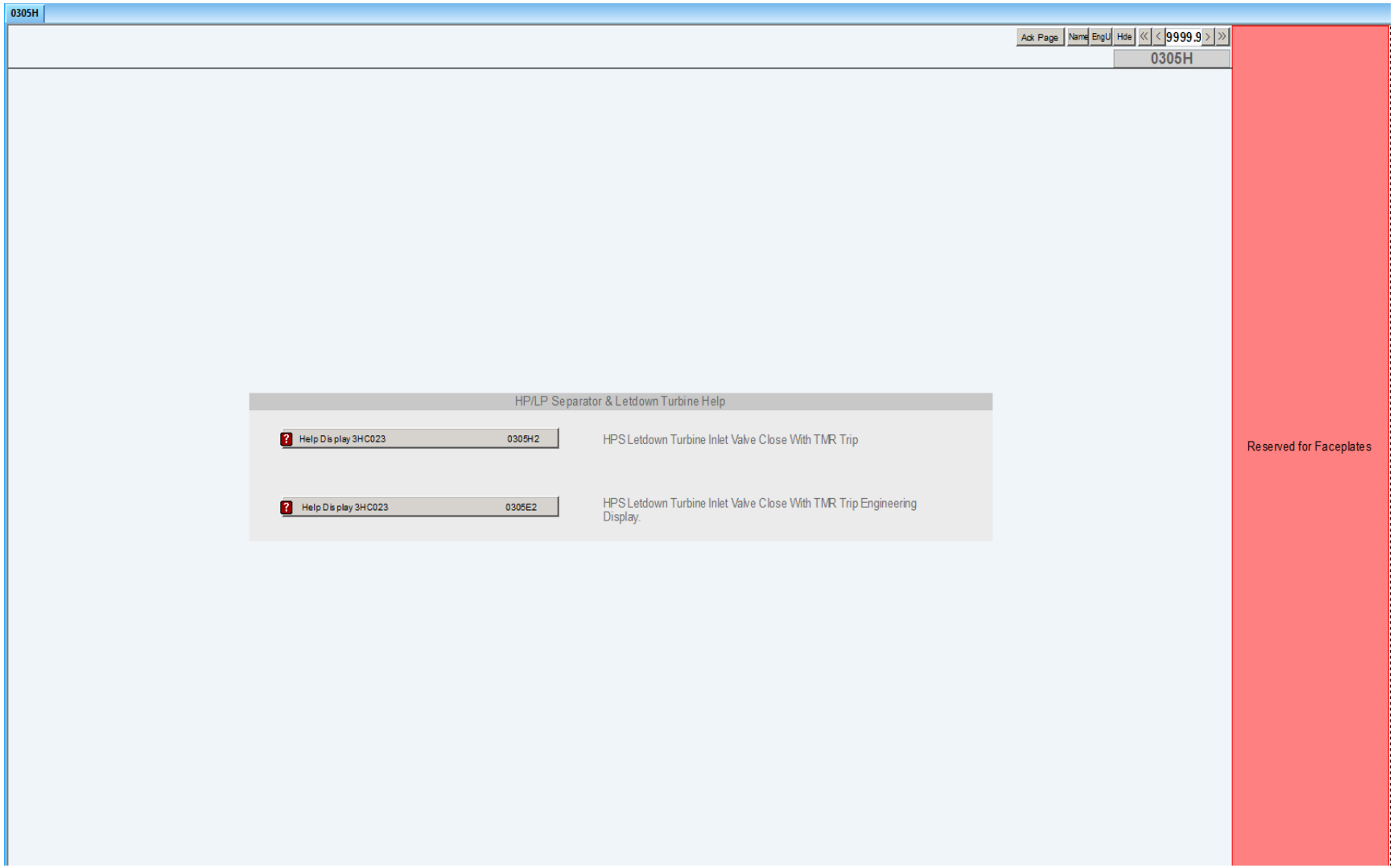

0305E2
HCU HP/LP LETDOWN TURBINE TRIP TO 3HC023
LOGIC SLOT 03_09L01
HELP
PROCESS
* 3XL023 IS PULSED FROM TMR FOR 20 SECONDS
TTTTTTTT
EEEEEEEE
RRRR
DELAY
DLYTIME
RRRR
PULSE
DLYTIME
L1
BLK II
TTTT
SO1
SO1
BLK II
TTTT
SO2
S/D
RRRR
E
PVSOURCE=
EEEE
SAFEOP=
RRRR
FULL LOGIC
POINT DISP
LG DISP


0305E2
Ack Page
Name
EngU
Hde
9999.9
0305E2
Help
Process
03_09L01
Delay
9999.99
03_09L01
Pulse
9999.99
* 3XL023 Is Pulsed From TMR For 20 Seconds
DLYTIME
DLYTIME
3XL023
State
L1
BLK04 ONDLY
SO1
SO1
BLK 02 PULSE
SO2
S/D
3HC023
9999.99
PVsource=
3XL023
State
03_21L04
State
03_21L04
State
SafeOP=
3HC023
9999.99
Reserved for Faceplates
I Logic Point DISP LG

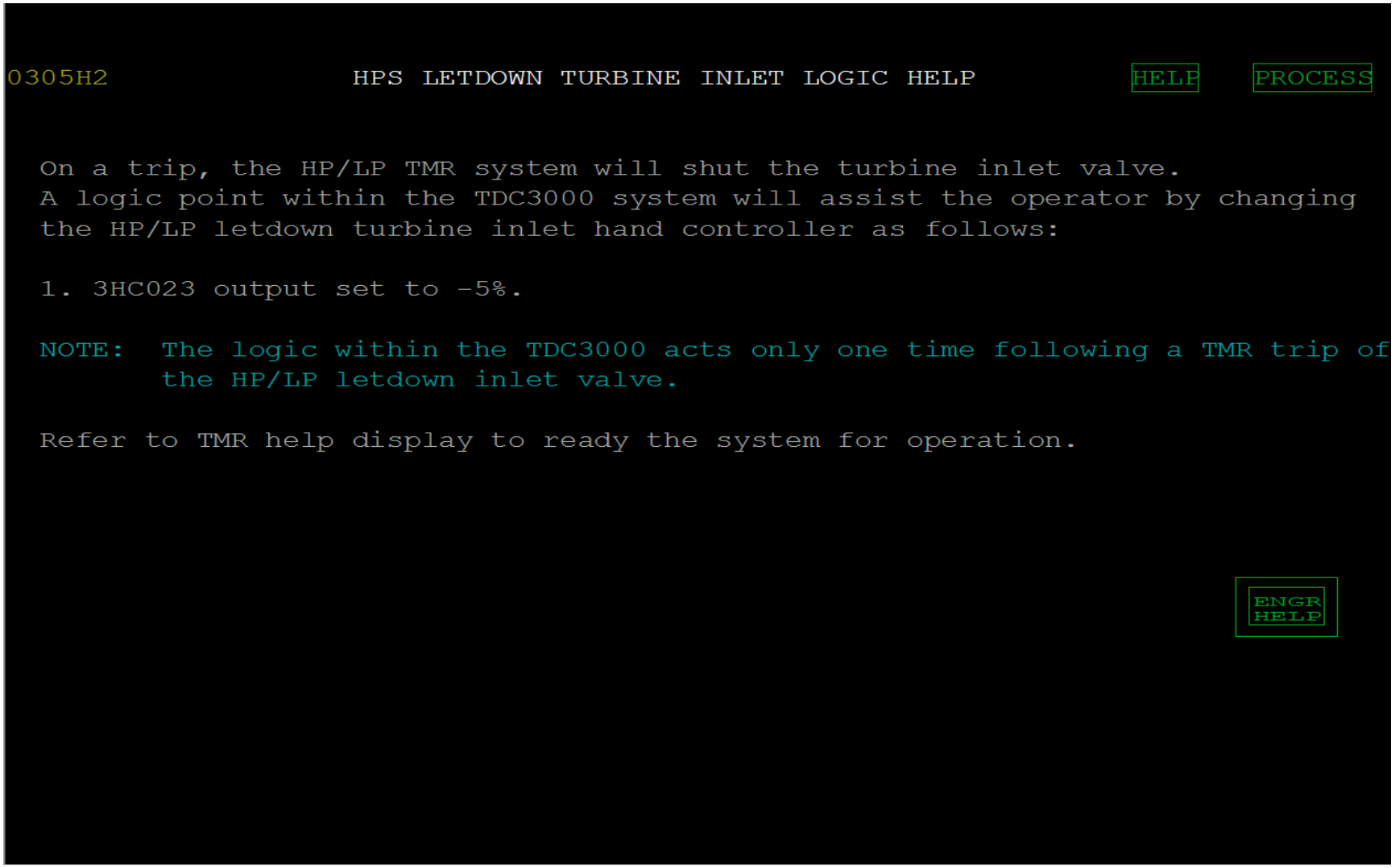
3.24 HP/LP SEPARATOR & LETDOWN TURBINE HELP (0305H.DS)

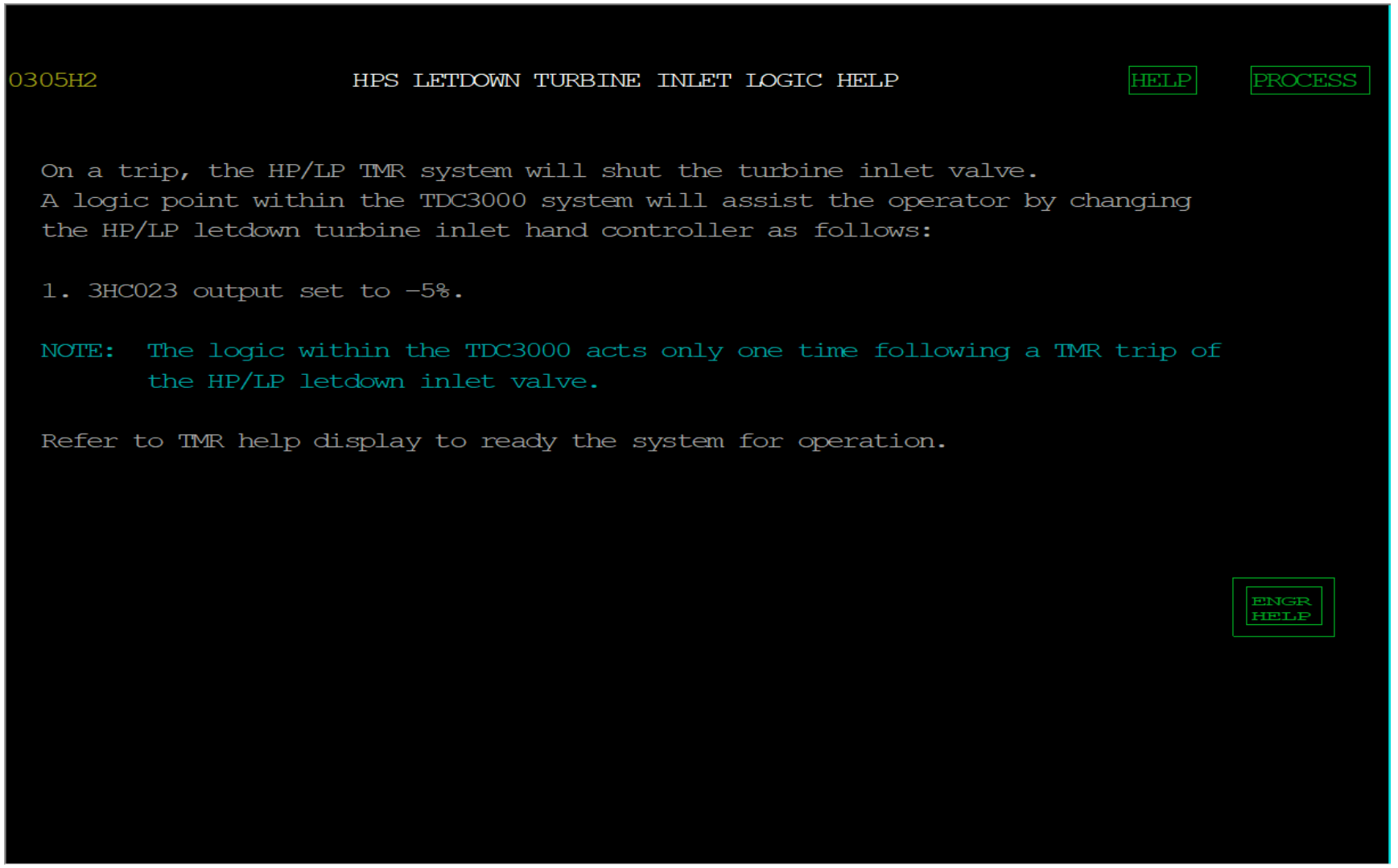


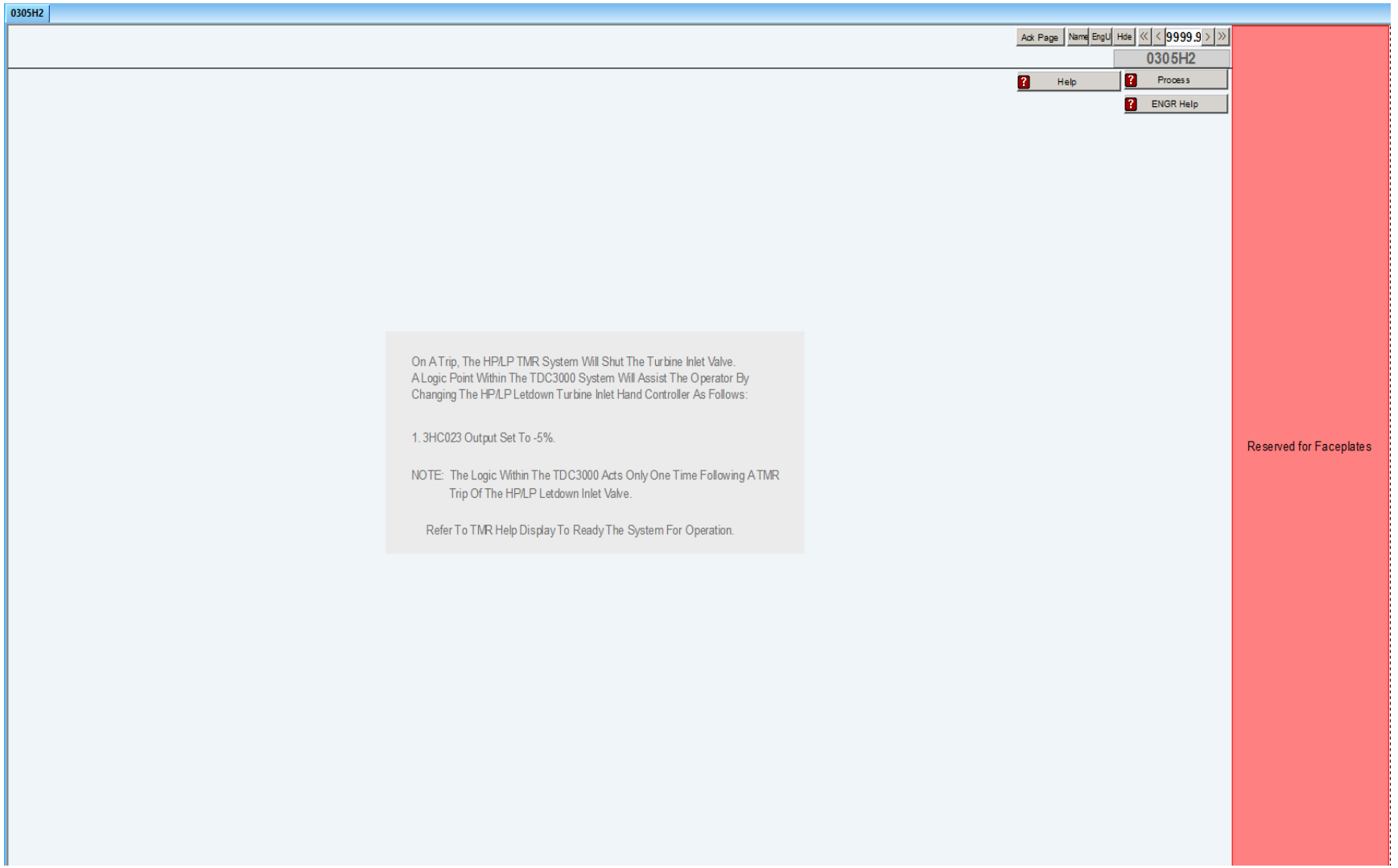

0305H
HP/LP SEPARATOR & LETDOWN TURBINE HELP
HELP DISPLAY
3HC023 0305H2
HPS letdown turbine inlet valve closes with TMR trip.
HELP DISPLAY
3HC023 0305E2
HPS letdown turbine inlet valve closes with TMR trip Engineering display.


0305H
Ack Page
Name
EngU
Hde
9999.9
0305H
HP/LP Separator & Letdown Turbine Help
Help Display 3HC023
0305H2
HPS Letdown Turbine Inlet Valve Close With TMR Trip
Help Display 3HC023
0305E2
HPS Letdown Turbine Inlet Valve Close With TMR Trip Engineering Display.
Reserved for Faceplates

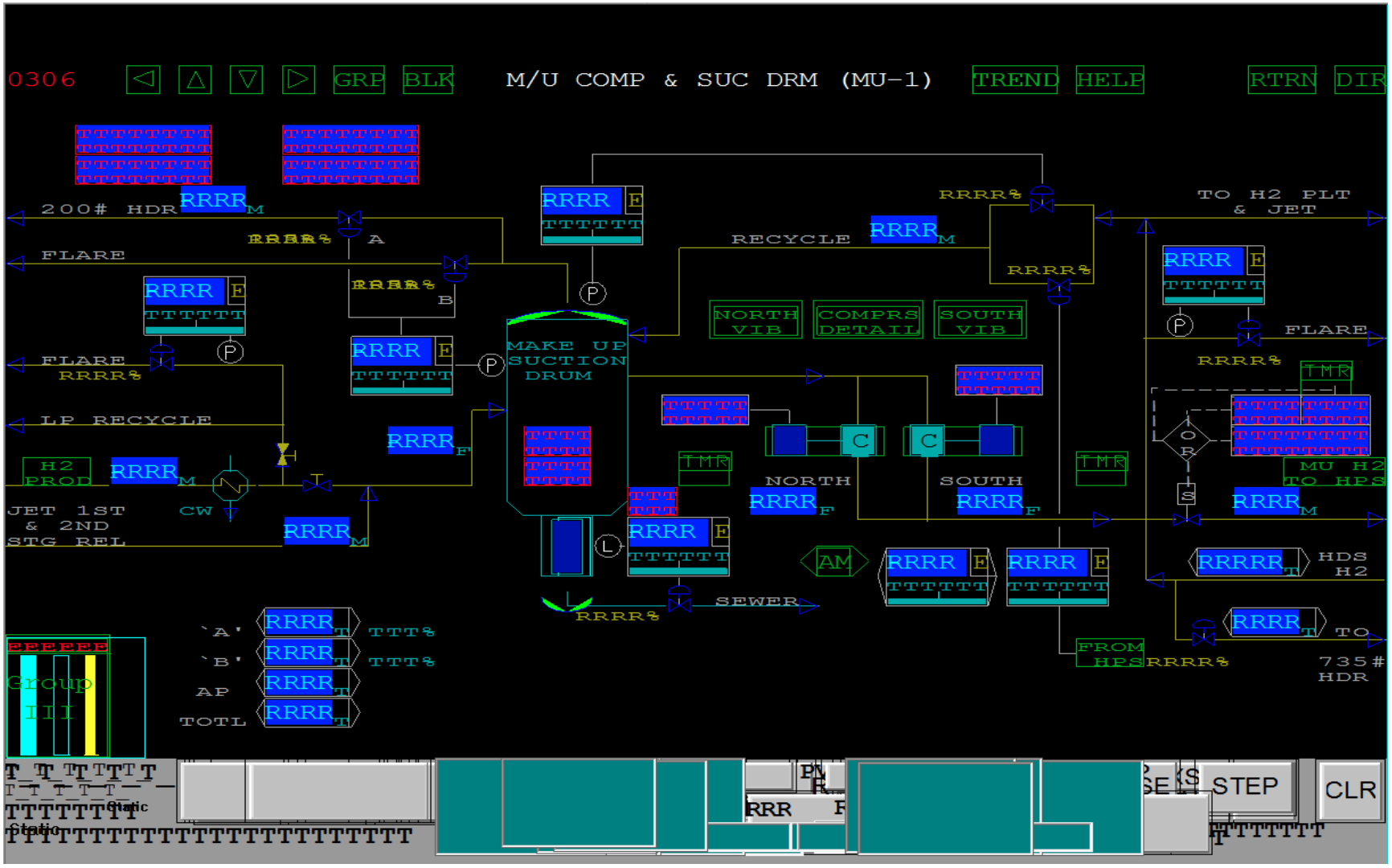
3.25 HPS LETDOWN TURBINE INLET LOGIC HELP (0305H2.DS)

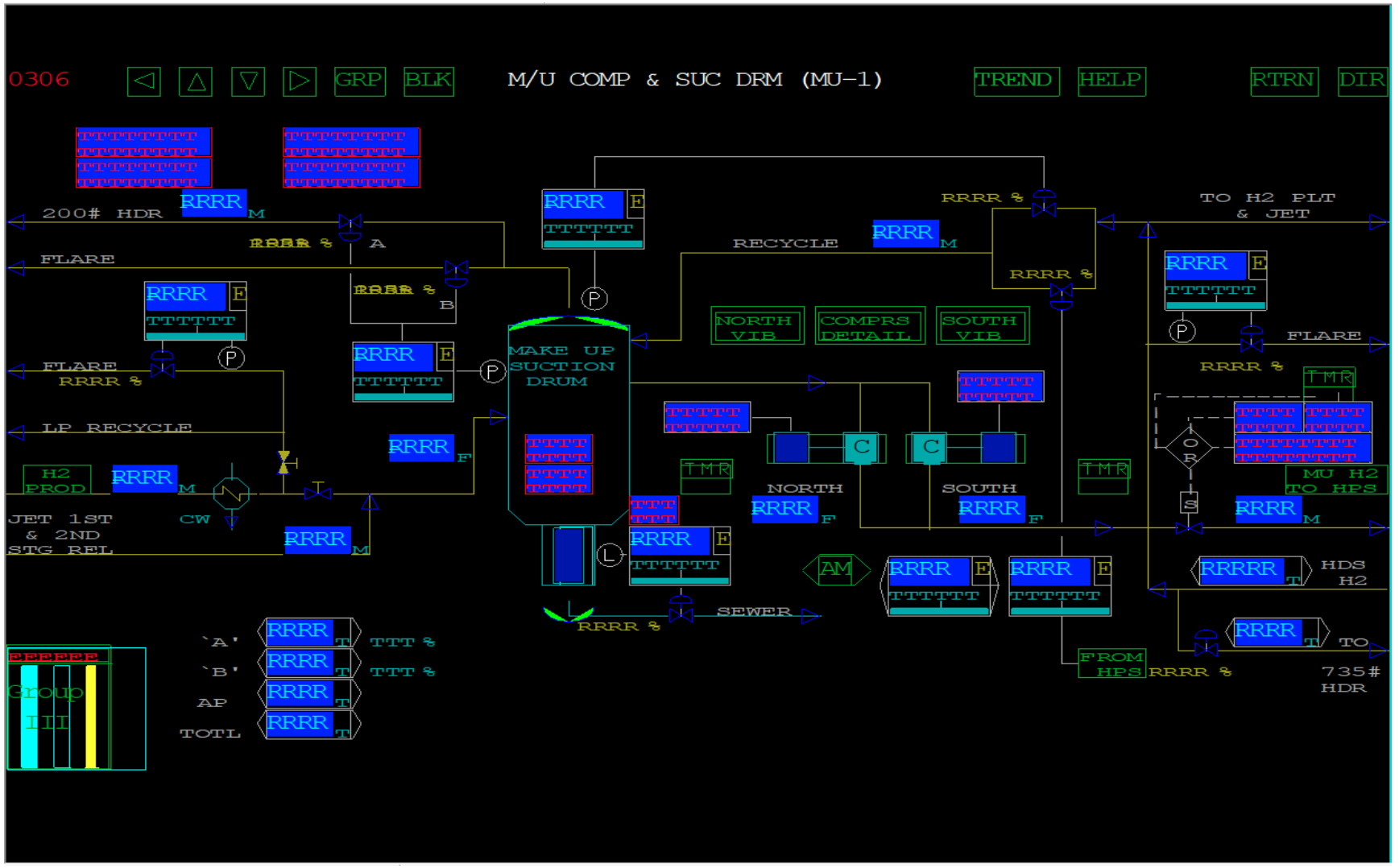


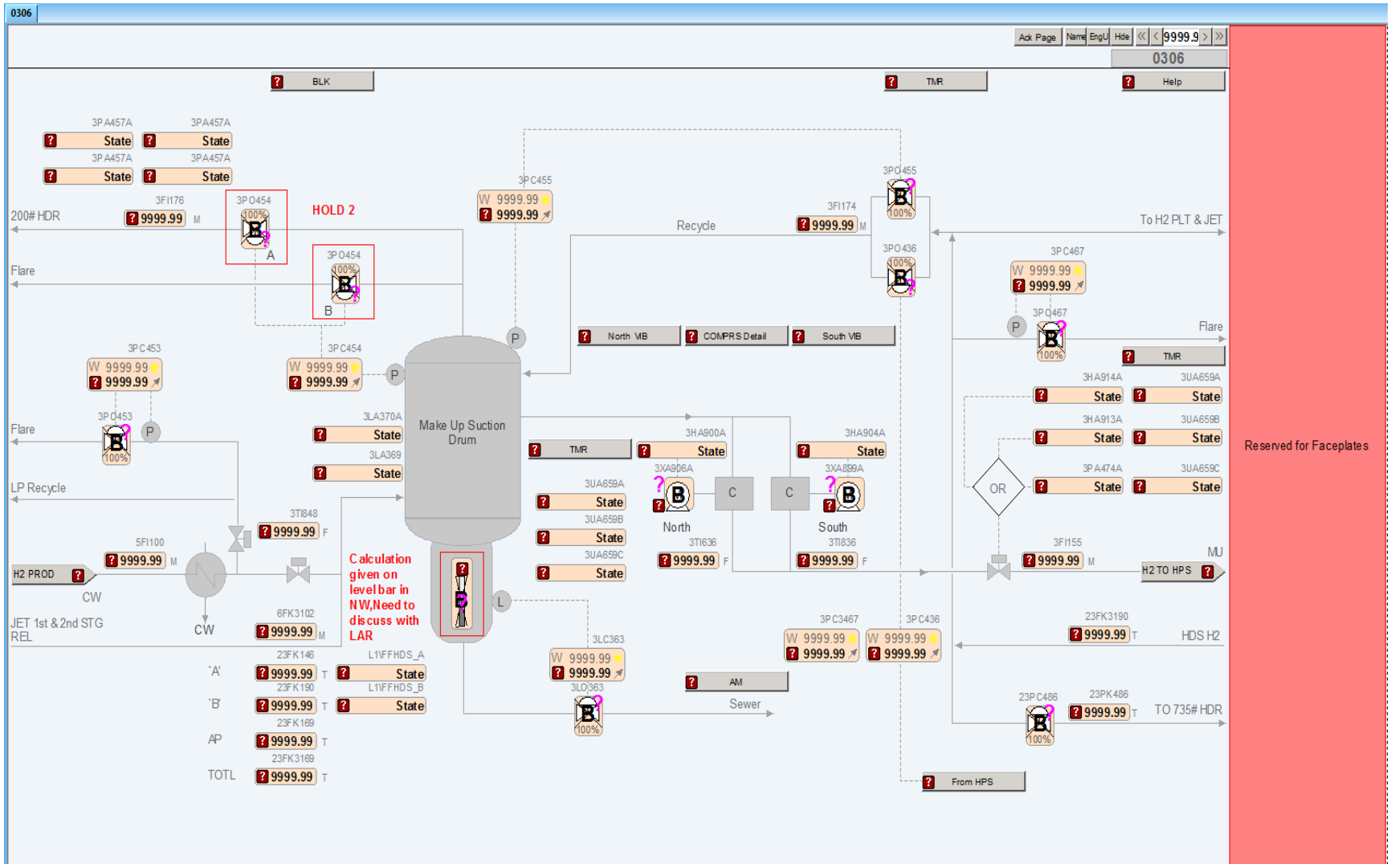

0305H2
HPS LETDOWN TURBINE INLET LOGIC HELP
HELP
PROCESS
On a trip, the HP/LP TMR system will shut the turbine inlet valve.
A logic point within the TDC3000 system will assist the operator by changing
the HP/LP letdown turbine inlet hand controller as follows:
1. 3HC023 output set to -5%.
NOTE: The logic within the TDC3000 acts only one time following a TMR trip of
the HP/LP letdown inlet valve.
Refer to TMR help display to ready the system for operation.
ENGR
HELP


0305H2
Ack Page
Name
EngU
Hde
9999.9
0305H2
Help
Process
ENGR Help
On A Trip, The HP/LP TMR System Will Shut The Turbine Inlet Valve.
A Logic Point Within The TDC3000 System Will Assist The Operator By
Changing The HP/LP Letdown Turbine Inlet Hand Controller As Follows:
1. 3HC023 Output Set To -5%.
NOTE: The Logic Within The TDC3000 Acts Only One Time Following A TMR
Trip Of The HP/LP Letdown Inlet Valve.
Refer To TMR Help Display To Ready The System For Operation.
Reserved for Faceplates

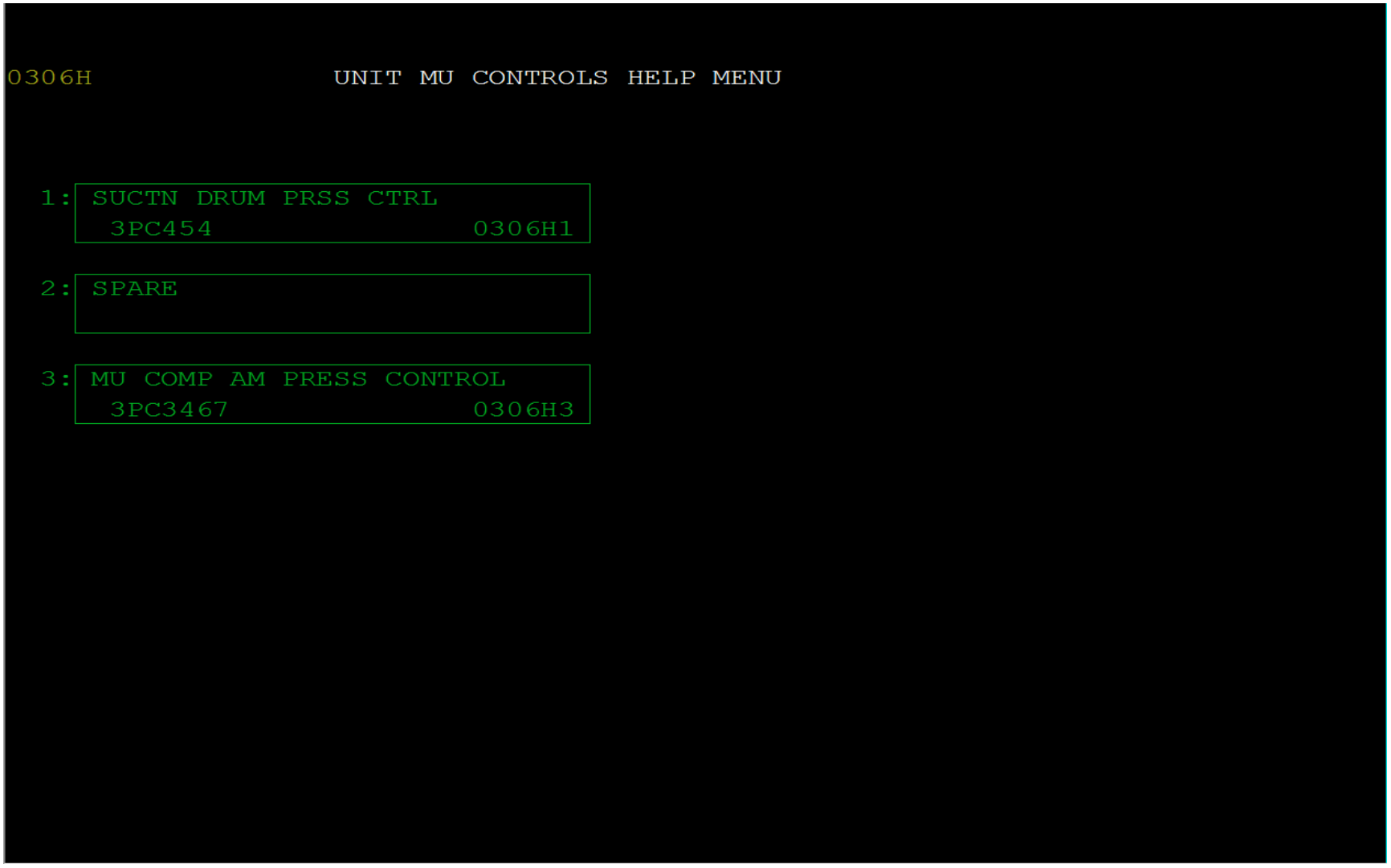
3.26 M/U COMP & SUC DRM (MU-1) (0306.DS)

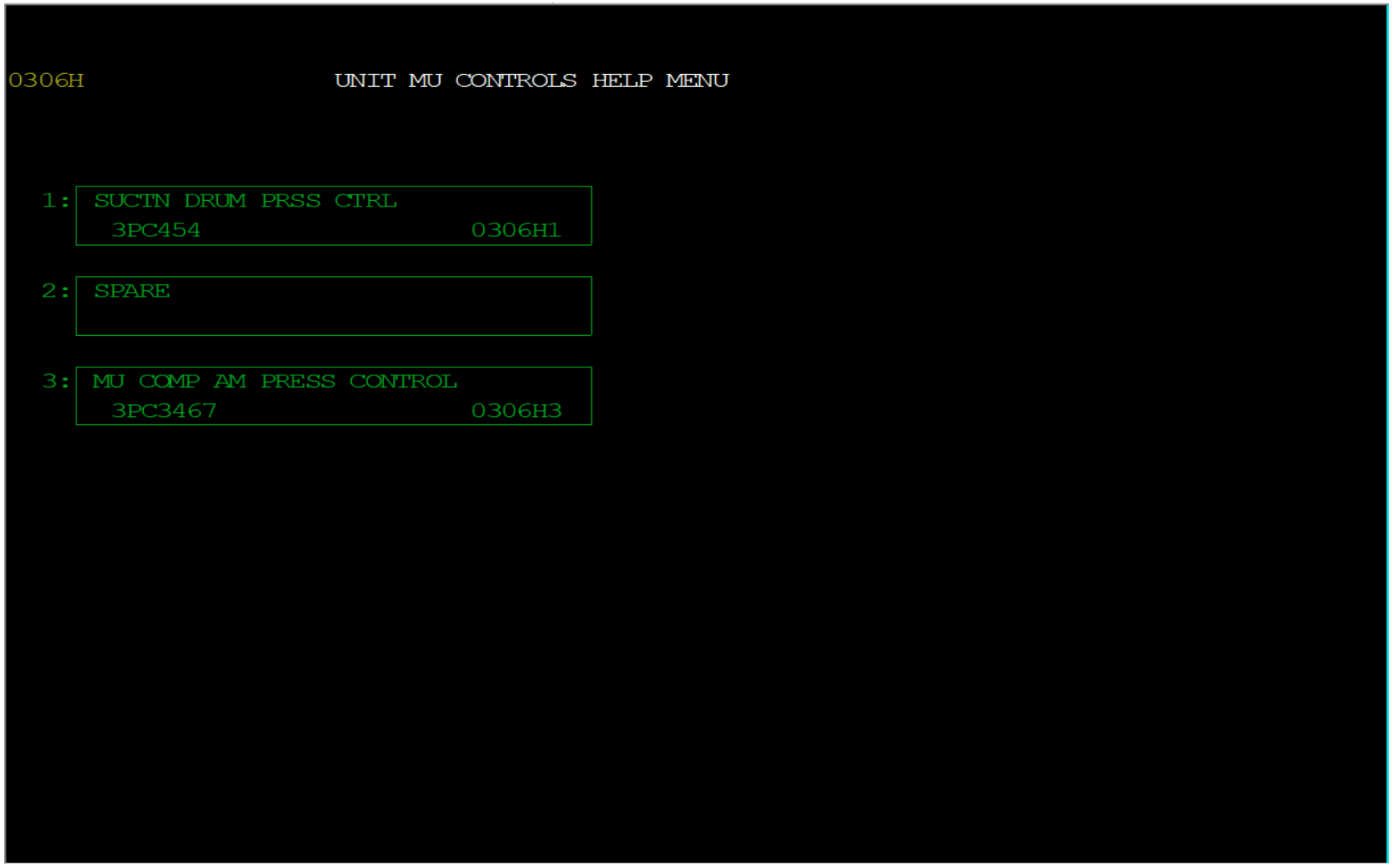


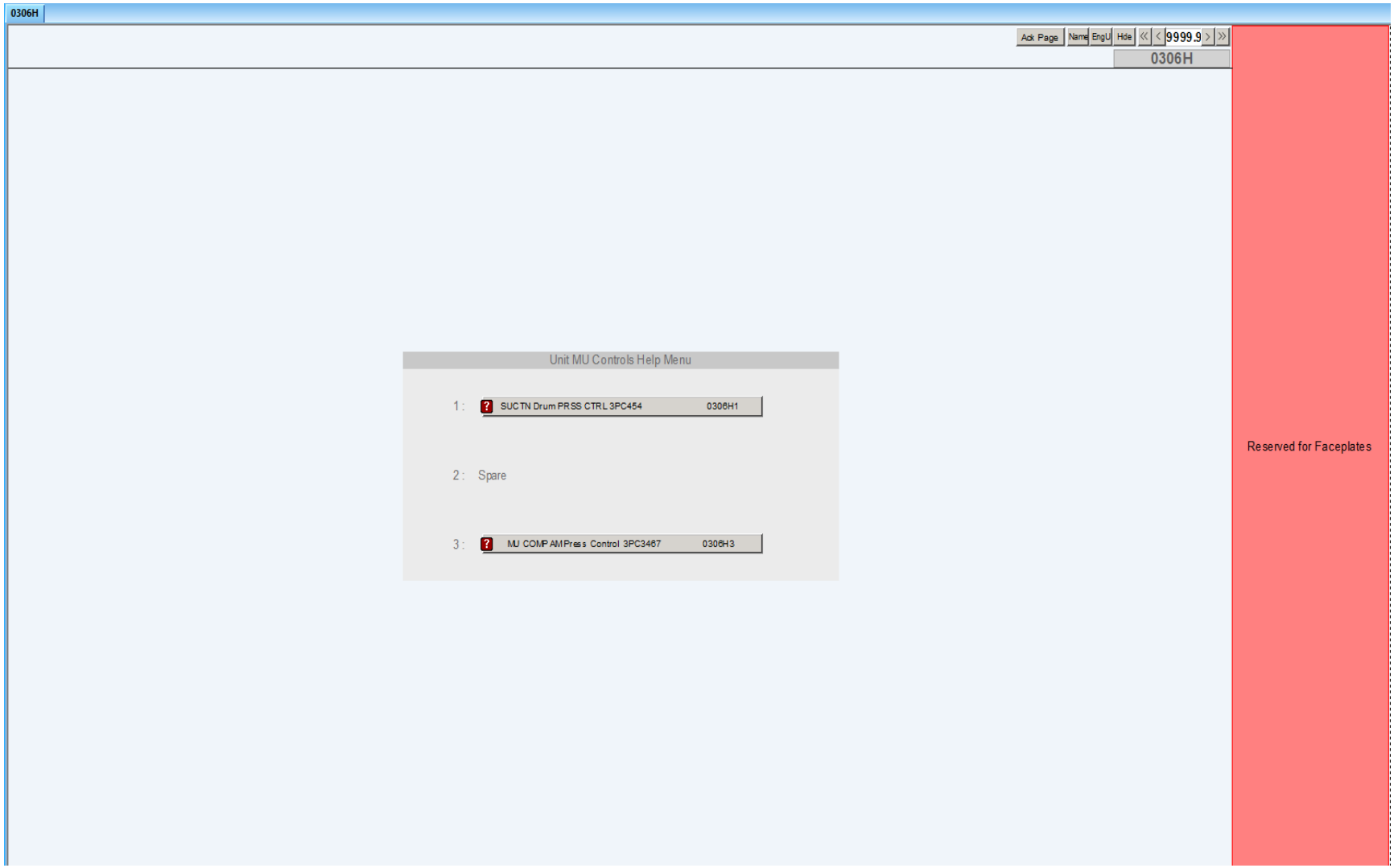

0306
GRP
BLK
M/U COMP & SUC DRM (MU-1)
TREND
HELP
RTRN
DIR
200# HDR
FLARE
RECYCLE
TO H2 PLT & JET
MAKE UP SUCTION DRUM
NORTH VIB
COMPRS DETAIL
SOUTH VIB
LP RECYCLE
H2 PROD
JET 1ST & 2ND STG REL
CW
NORTH
SOUTH
MU H2 TO HPS
HDS H2
SEWER
FROM HPS
TO 735# HDR
Group III
AP
TOTL


0306
Ack Page
Name
EngU
Hde
0306
BLK
TMR
Help
3PA457A
State
200# HDR
3FI176
9999.99
3PO454
HOLD 2
A
B
Flare
3PC455
Recycle
3FI174
3PO455
3PO436
To H2 PLT & JET
3PC467
3PO467
North VIB
COMPRS Detail
South VIB
3PC453
3PC454
3LA370A
3LA369
Make Up Suction Drum
LP Recycle
3TI848
5FI100
H2 PROD
CW
JET 1st & 2nd STG REL
6FK3102
23FK146
23FK190
23FK169
23FK3169
TOTL
Calculation given on level bar in NW,Need to discuss with LAR
L1\FFHDS_A
L1\FFHDS_B
3LC363
3LO363
3HA900A
3HA904A
3XA906A
3XA899A
North
South
3TI636
3TI836
3UA659A
3UA659B
3UA659C
3HA914A
3HA913A
3PA474A
OR
3FI155
MU
H2 TO HPS
23FK3190
HDS H2
23PC486
23PK486
TO 735# HDR
3PC3467
3PC436
AM
Sewer
From HPS
Reserved for Faceplates

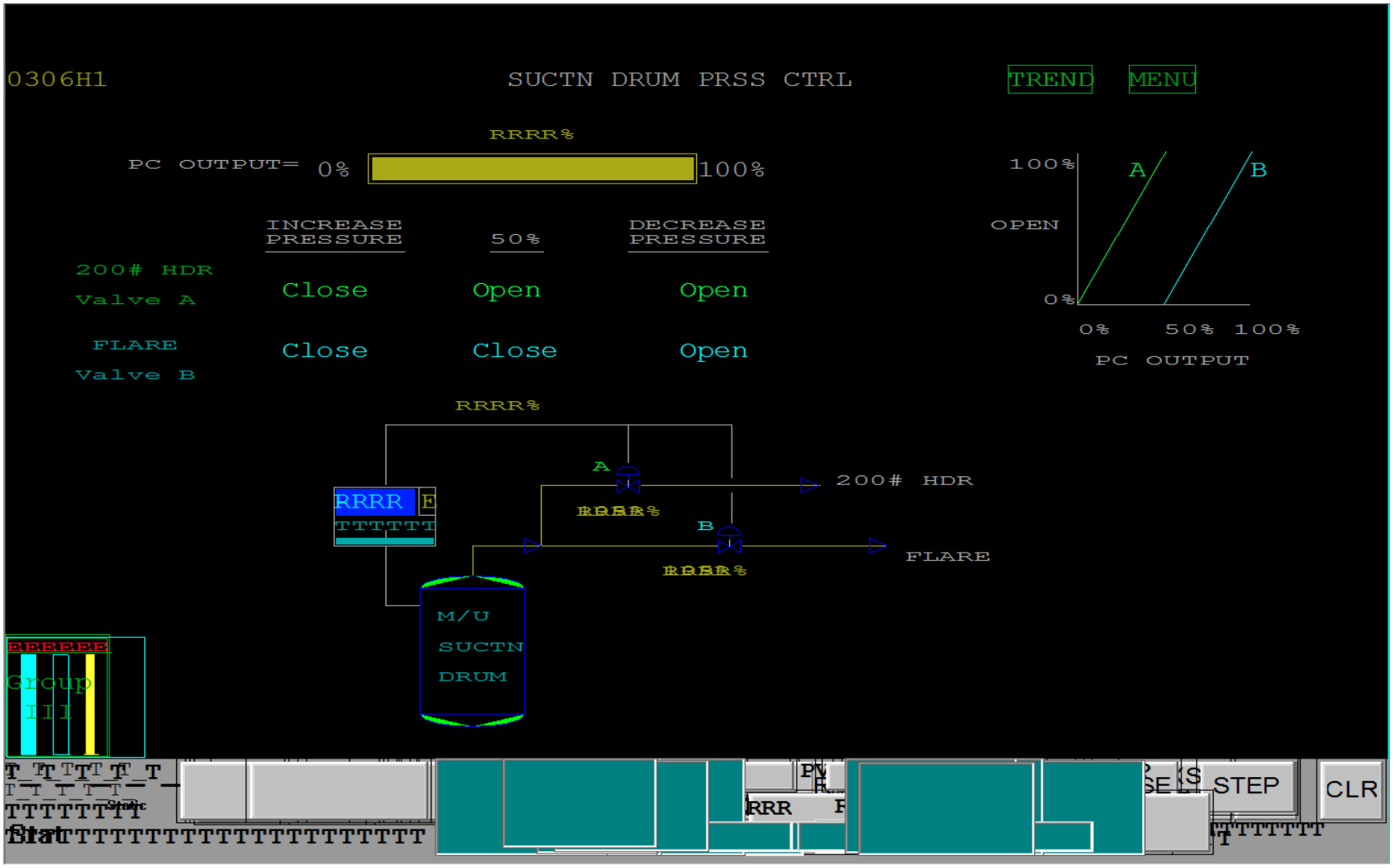
3.27 UNIT MU CONTROLS HELP MENU (0306H.DS)

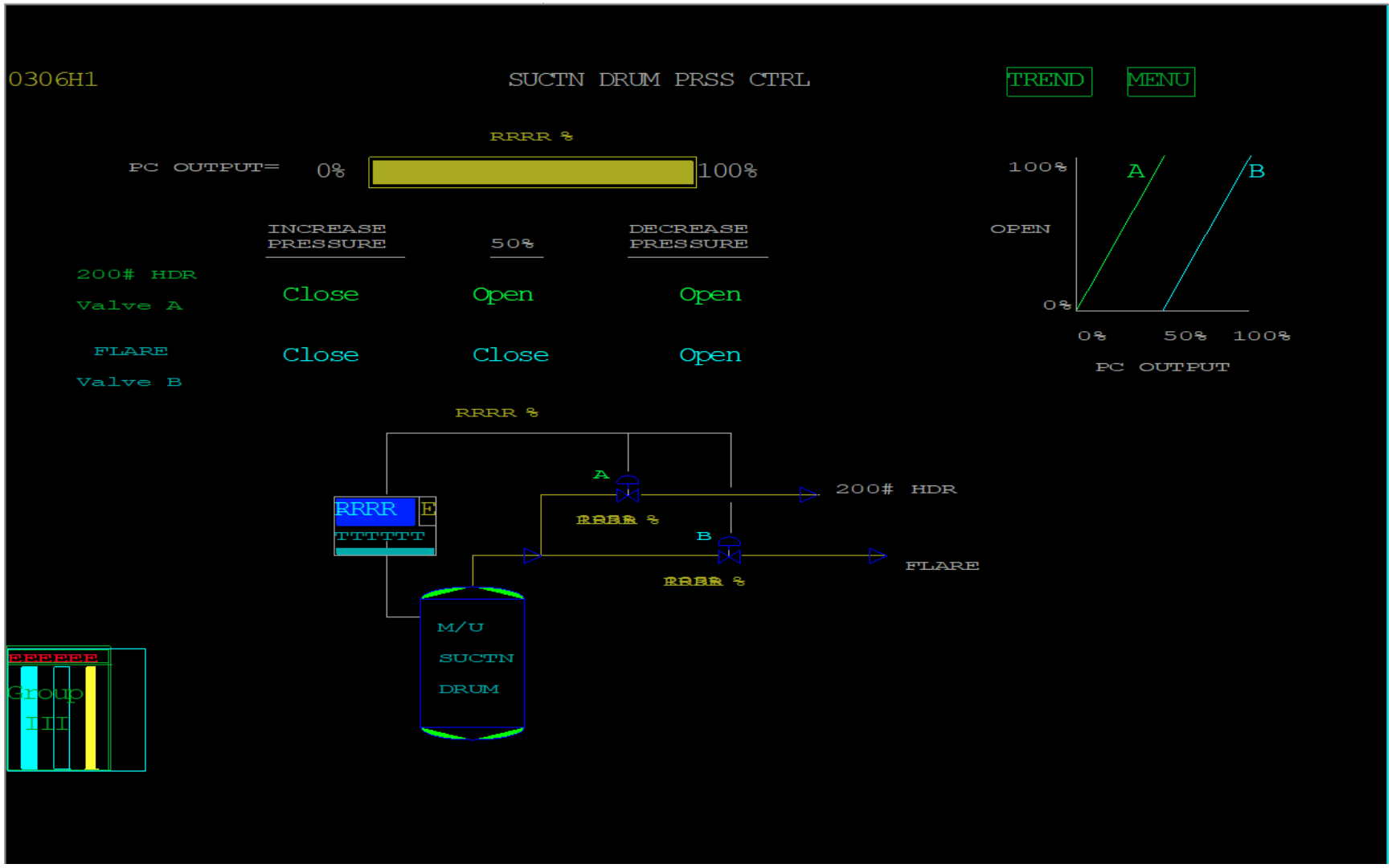


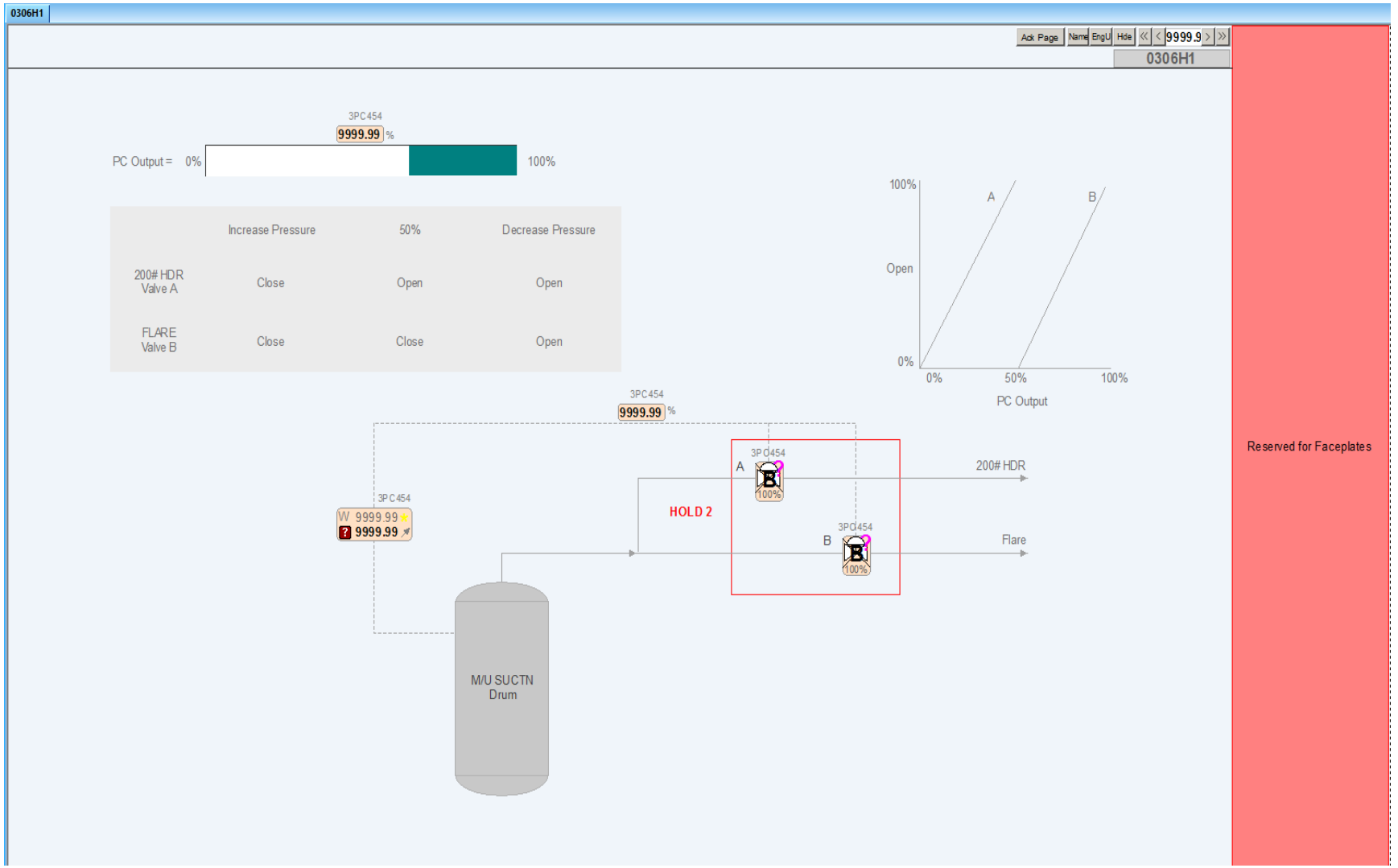

0306H
UNIT MU CONTROLS HELP MENU
1:
SUCTN DRUM PRSS CTRL
3PC454
0306H1
2:
SPARE
3:
MU COMP AM PRESS CONTROL
3PC3467
0306H3


0306H
Ack Page
Name
EngU
Hde
9999.9
0306H
Unit MU Controls Help Menu
1 :
SUCTN Drum PRSS CTRL 3PC454
0306H1
2 : Spare
3 :
MU COMP AM Press Control 3PC3467
0306H3
Reserved for Faceplates

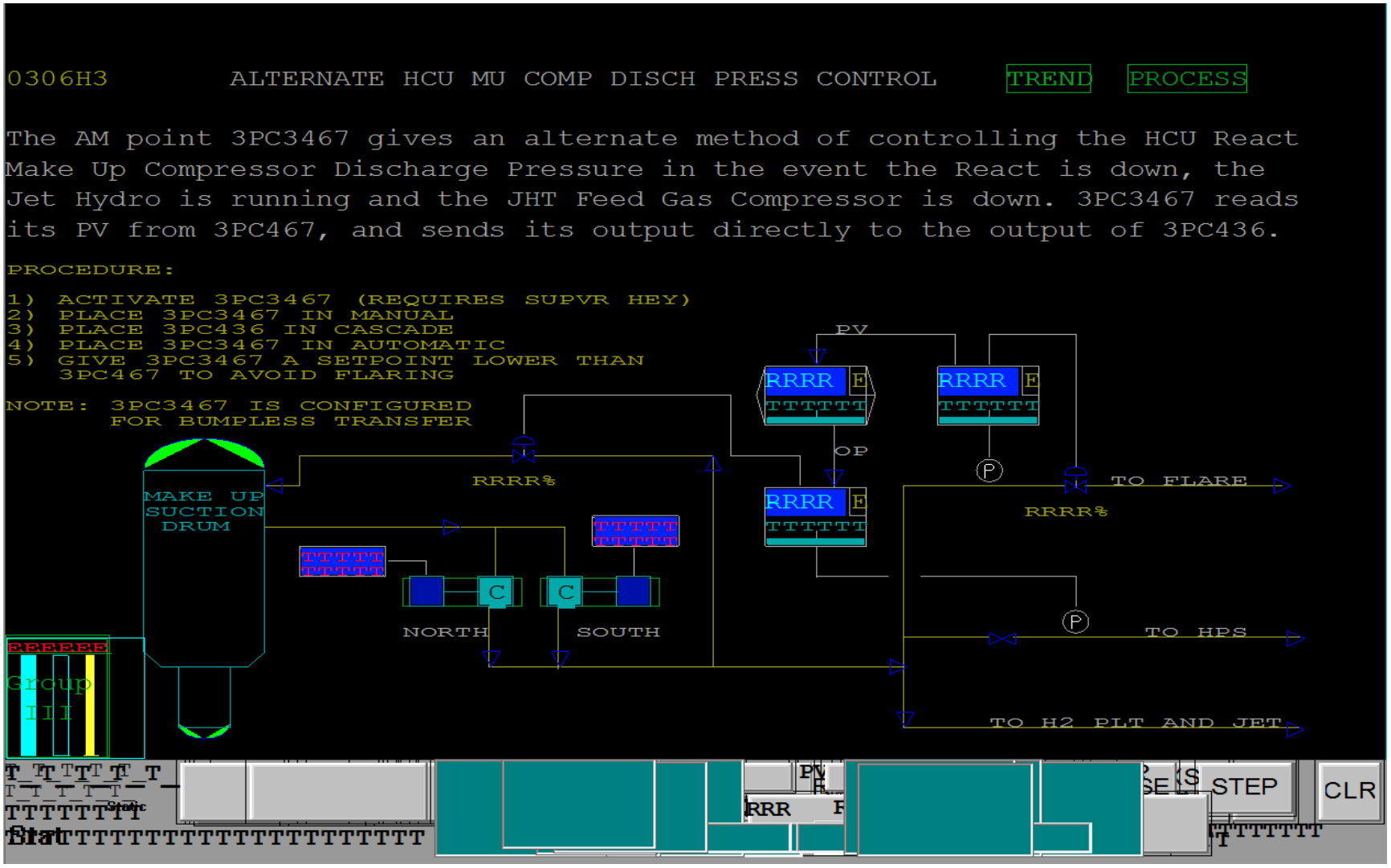
3.28 SUCTN DRUM PRSS CTRL (0306H1.DS)

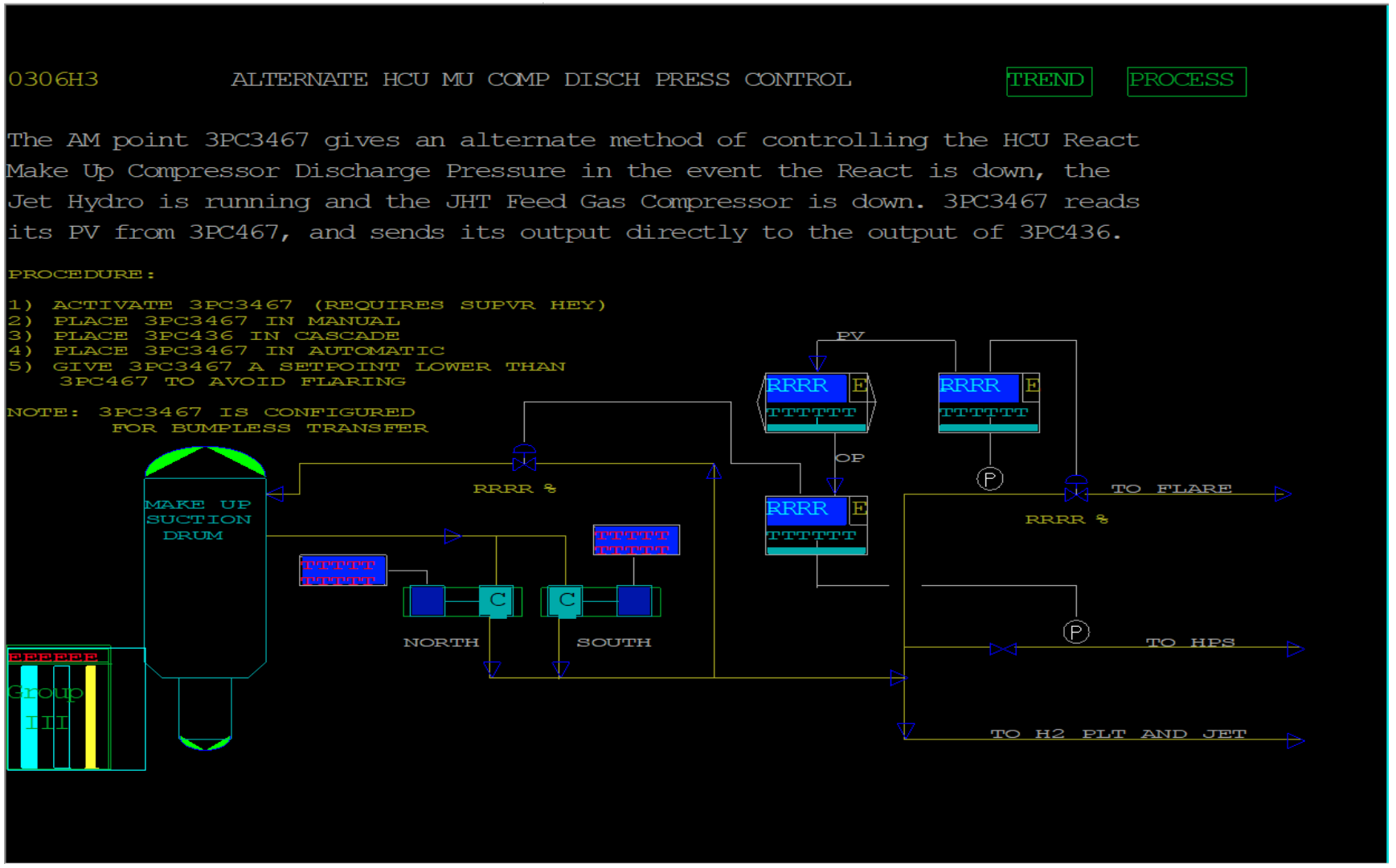


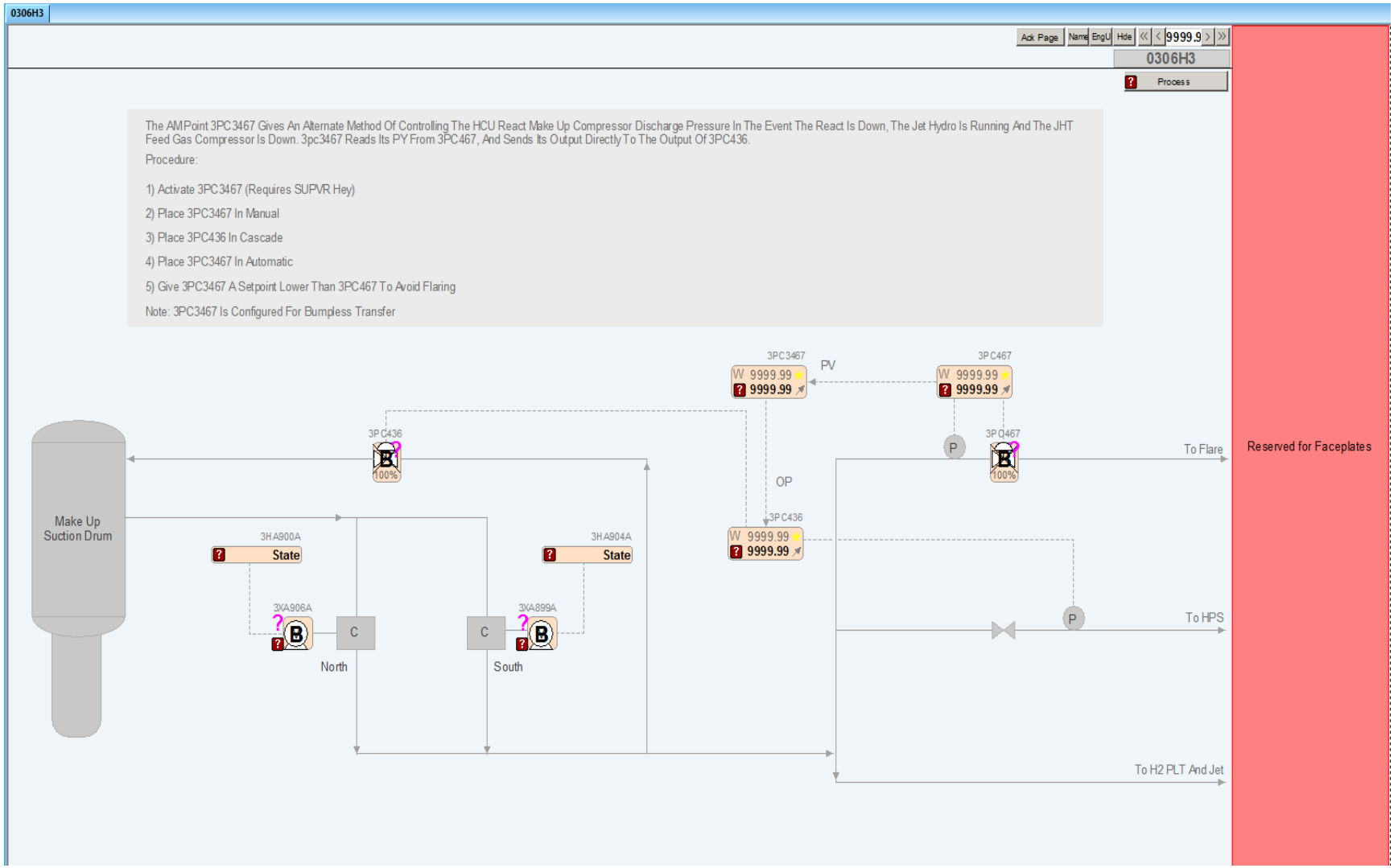

0306H1
SUCTN DRUM PRSS CTRL
TREND
MENU
RRRR %
PC OUTPUT=
0%
100%
INCREASE PRESSURE
50%
DECREASE PRESSURE
200# HDR
Valve A
Close
Open
Open
FLARE
Valve B
Close
Close
Open
100%
OPEN
0%
A
B
0%
50%
100%
PC OUTPUT
RRRR %
A
RRRR
E
TTTTTT
200# HDR
RRRR %
B
FLARE
RRRR %
M/U
SUCTN
DRUM
EEEEEE
Group
III


0306H1
Ack Page
Name
EngU
Hde
9999.9
0306H1
3PC454
9999.99 %
PC Output = 0%
100%
Increase Pressure
50%
Decrease Pressure
200# HDR Valve A
Close
Open
Open
FLARE Valve B
Close
Close
Open
100%
Open
0%
A
B
0%
50%
100%
PC Output
3PC454
9999.99 %
3PC454
W 9999.99
9999.99
HOLD 2
3PC454
A
100%
200# HDR
3PC454
B
100%
Flare
M/U SUCTN Drum
Reserved for Faceplates

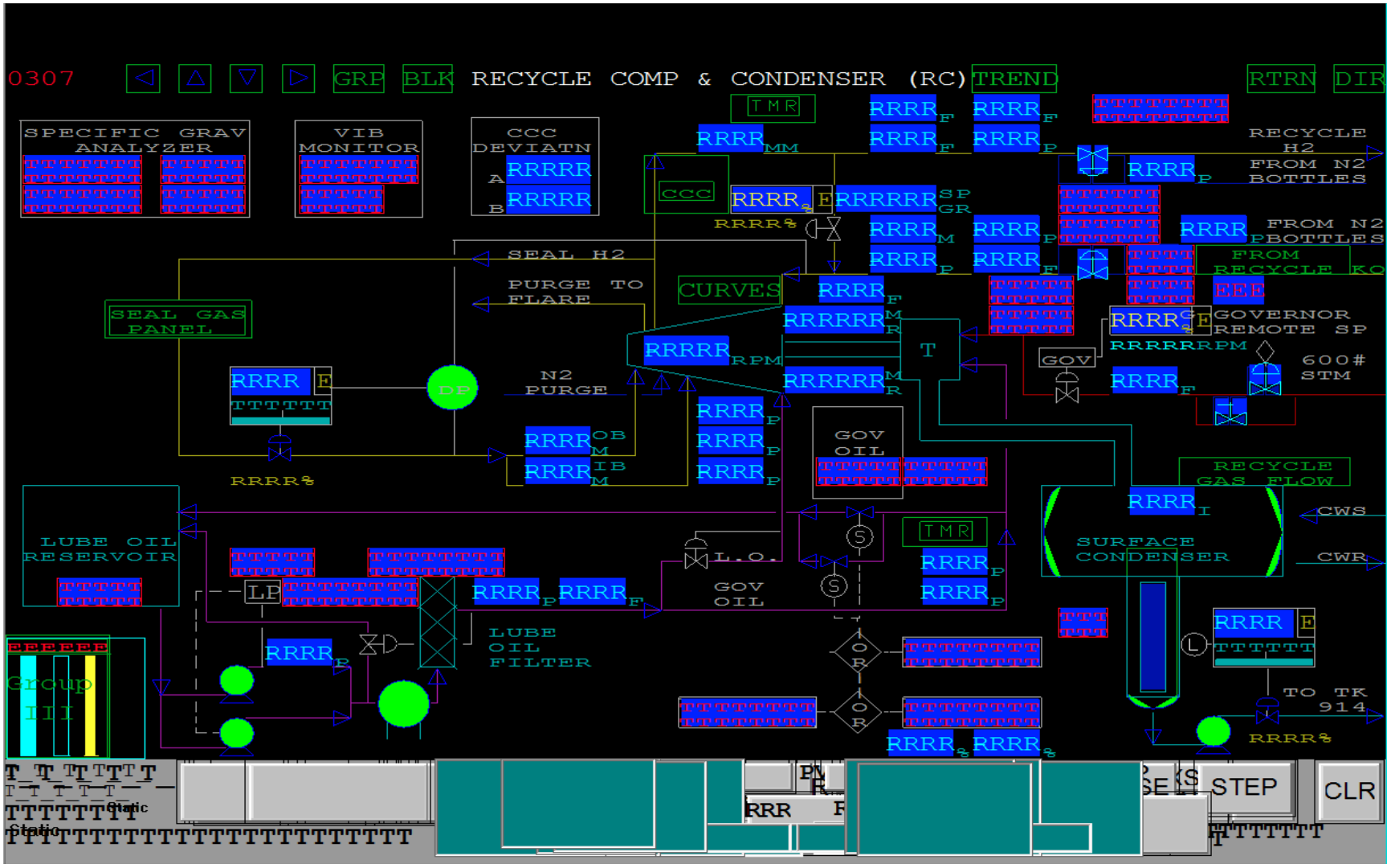
3.29 ALTERNATE HCU MU COMP DISCH PRESS CONTROL (0306H3.DS)

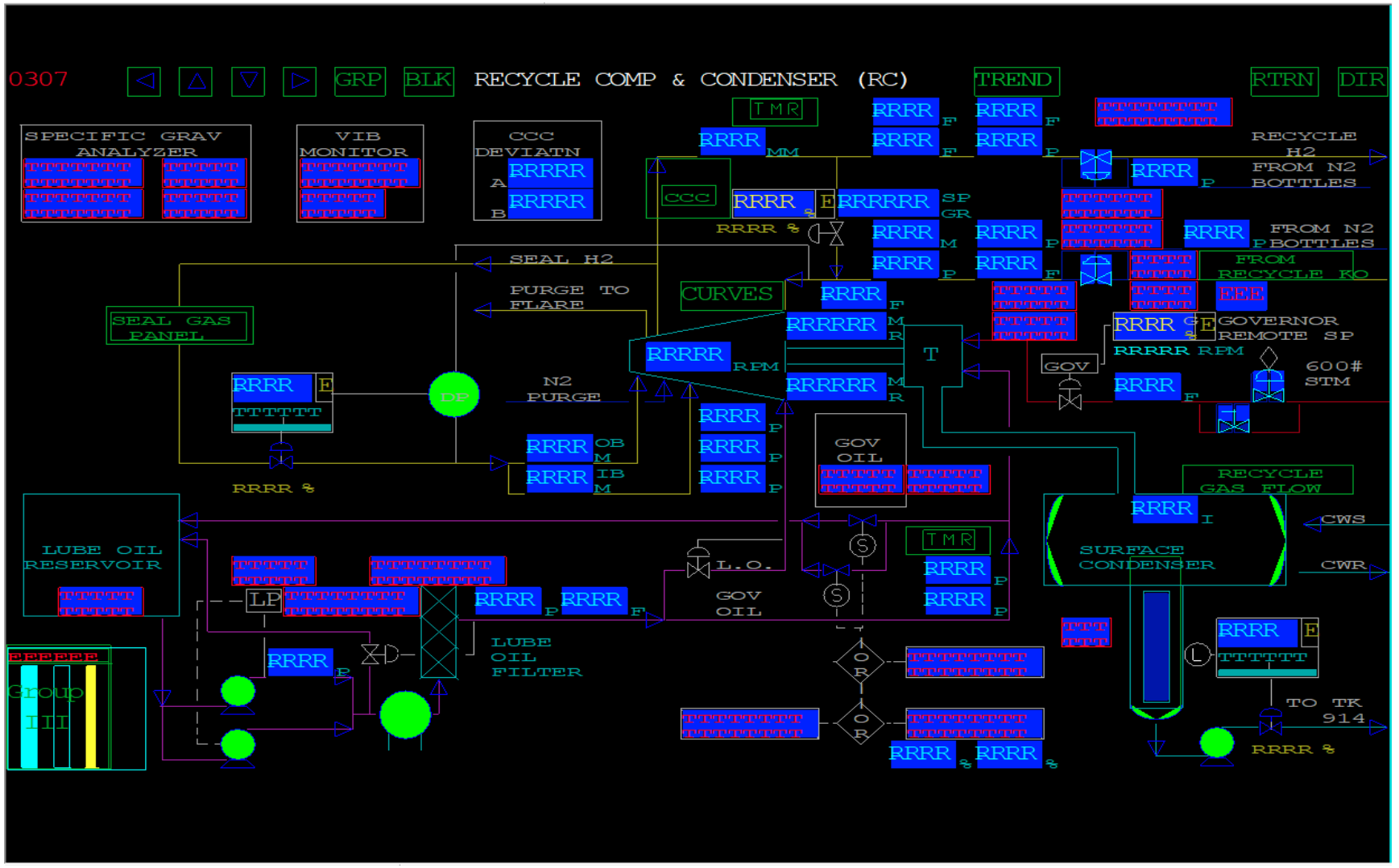


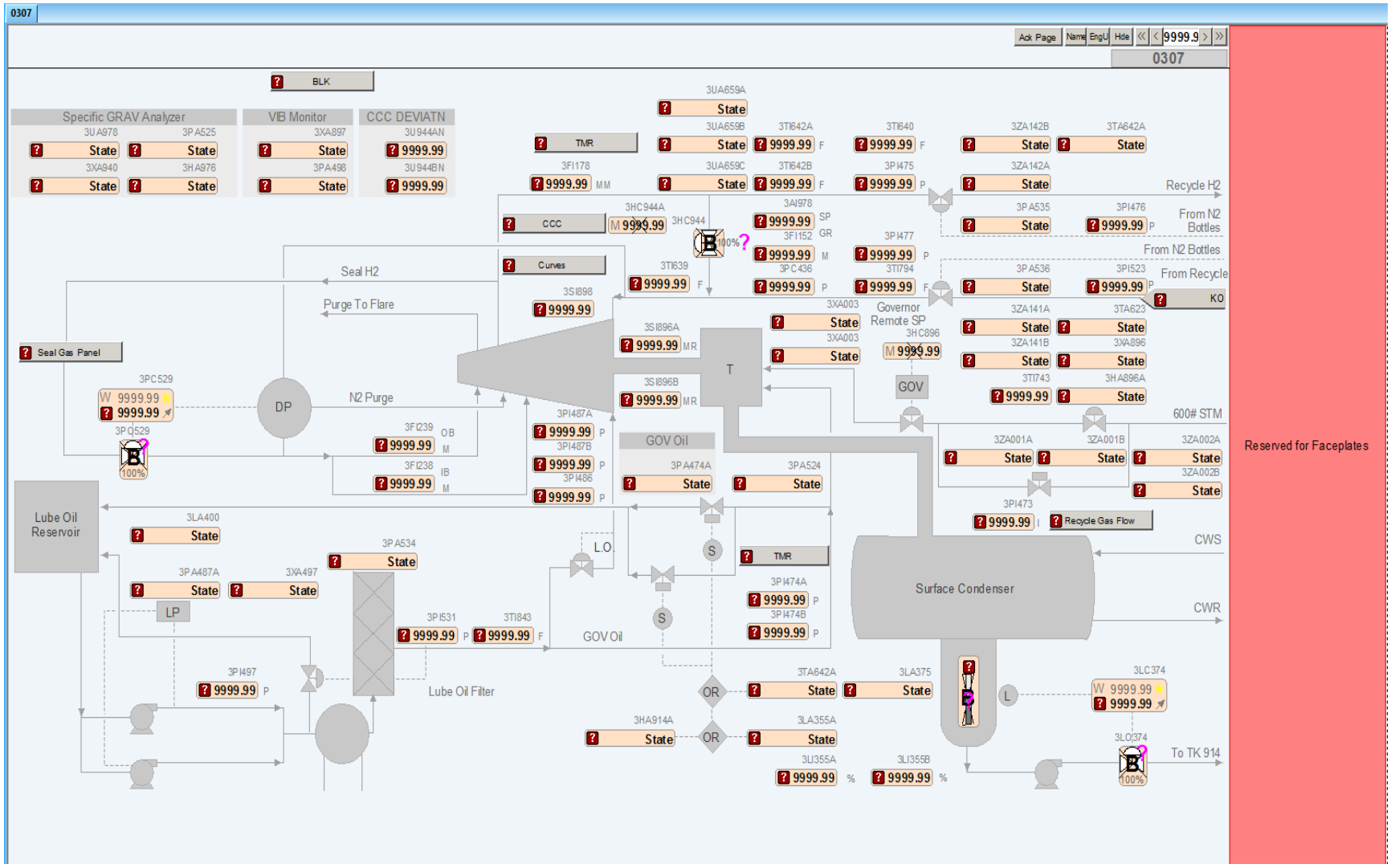

0306H3
ALTERNATE HCU MU COMP DISCH PRESS CONTROL
TREND
PROCESS
The AM point 3PC3467 gives an alternate method of controlling the HCU React Make Up Compressor Discharge Pressure in the event the React is down, the Jet Hydro is running and the JHT Feed Gas Compressor is down. 3PC3467 reads its PV from 3PC467, and sends its output directly to the output of 3PC436.
PROCEDURE:
1) ACTIVATE 3PC3467 (REQUIRES SUPVR HEY)
2) PLACE 3PC3467 IN MANUAL
3) PLACE 3PC436 IN CASCADE
4) PLACE 3PC3467 IN AUTOMATIC
5) GIVE 3PC3467 A SETPOINT LOWER THAN 3PC467 TO AVOID FLARING
NOTE: 3PC3467 IS CONFIGURED FOR BUMPLESS TRANSFER
PV
RRRR E
TTTTTT
RRRR F
TTTTTT
OP
RRRR %
RRRR E
TTTTTT
P
TO FLARE
RRRR %
MAKE UP SUCTION DRUM
TTTTTT
TTTTTT
TTTTTT
TTTTTT
C
C
NORTH
SOUTH
P
TO HPS
EEEEEE
Group III
TO H2 PLT AND JET


0306H3
Ack Page
Name
EngU
Hde
9999.9
0306H3
Process
The AMPoint 3PC3467 Gives An Alternate Method Of Controlling The HCU React Make Up Compressor Discharge Pressure In The Event The React Is Down, The Jet Hydro Is Running And The JHT Feed Gas Compressor Is Down. 3pc3467 Reads Its PY From 3PC467, And Sends Its Output Directly To The Output Of 3PC436.
Procedure:
1) Activate 3PC3467 (Requires SUPVR Hey)
2) Place 3PC3467 In Manual
3) Place 3PC436 In Cascade
4) Place 3PC3467 In Automatic
5) Give 3PC3467 A Setpoint Lower Than 3PC467 To Avoid Flaring
Note: 3PC3467 Is Configured For Bumpless Transfer
3PC3467
PV
9999.99
9999.99
3PC467
9999.99
9999.99
3PC436
100%
OP
3PC436
9999.99
9999.99
3PC467
100%
To Flare
Make Up Suction Drum
3HA900A
State
3HA904A
State
3XA906A
3XA899A
C
C
North
South
P
P
To HPS
To H2 PLT And Jet
Reserved for Faceplates

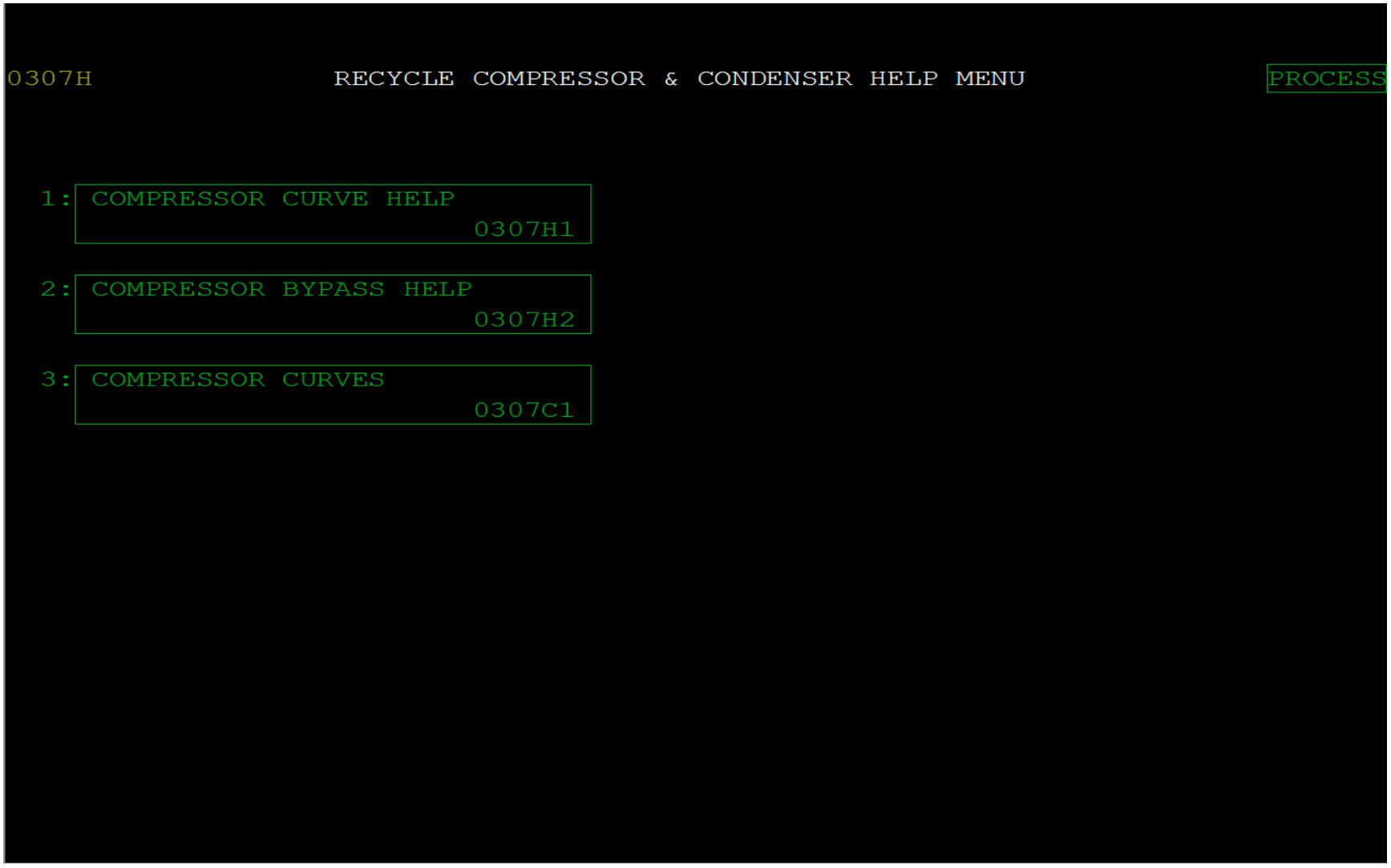
3.30 TERNATE HCU MU COMP DISCH PRESS CONTROL (0307.DS)

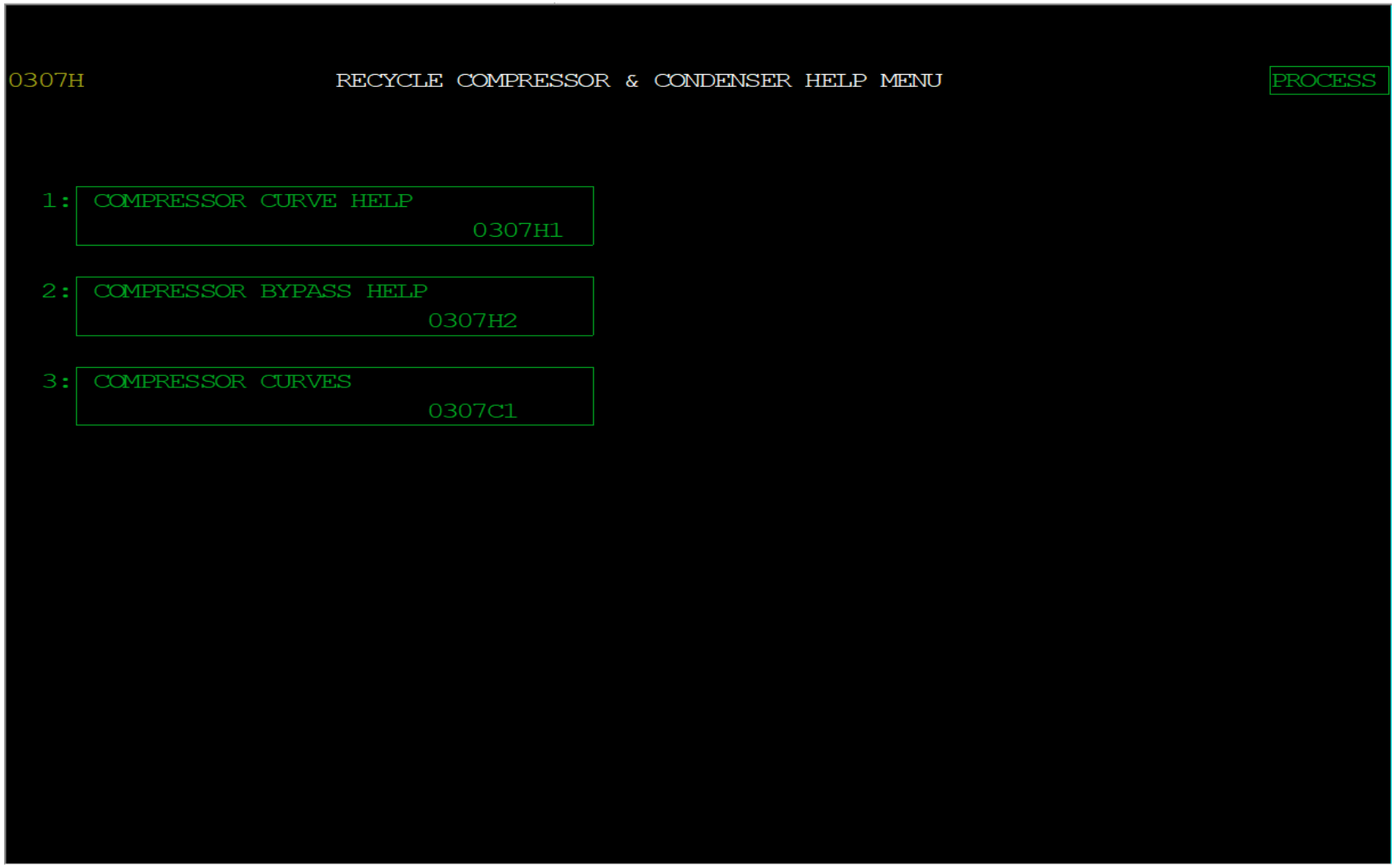


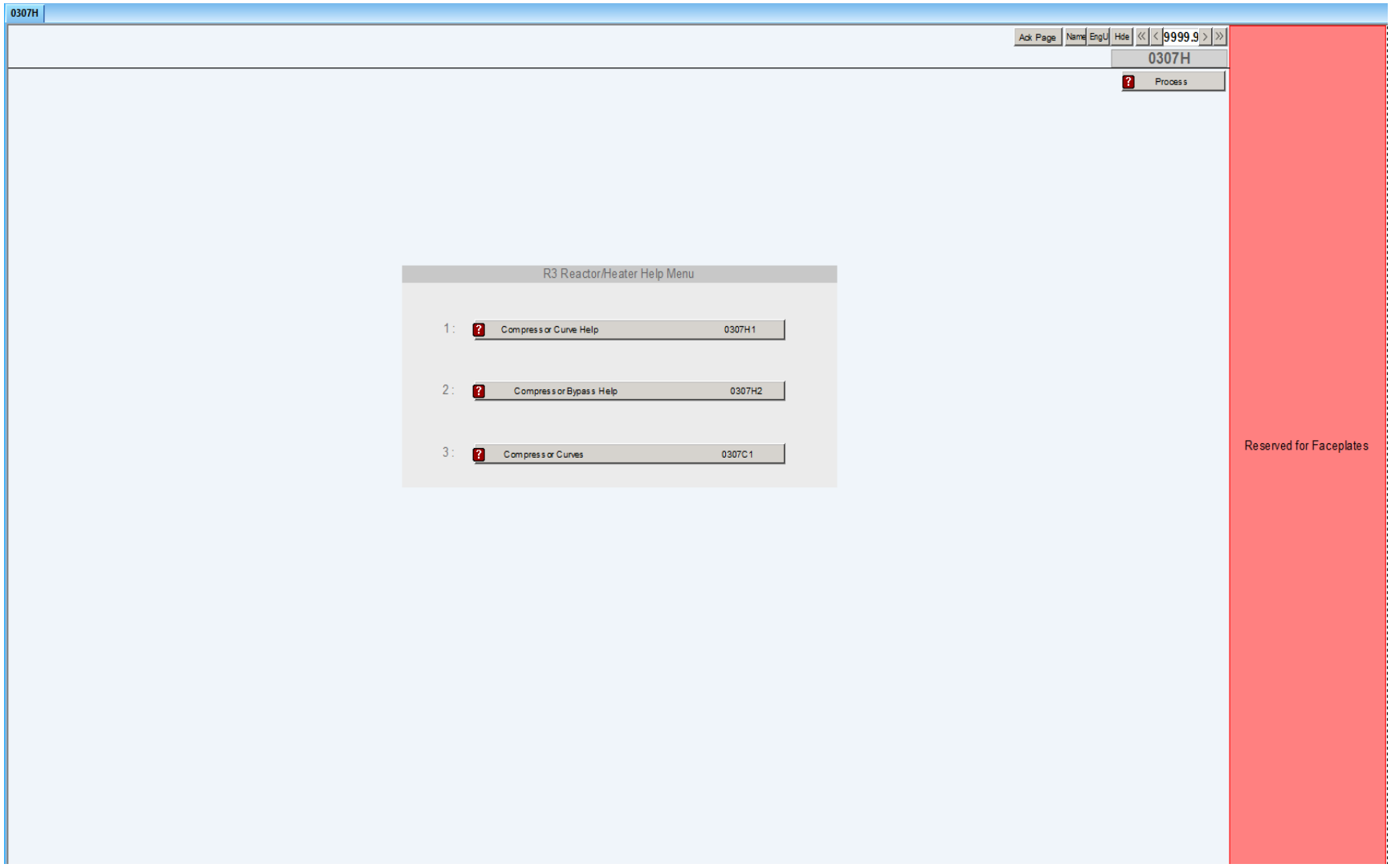

0307
GRP
BLK
RECYCLE COMP & CONDENSER (RC)
TREND
RTRN
DIR
SPECIFIC GRAV ANALYZER
VIB MONITOR
CCC DEVIATN
TMR
CCC
SEAL H2
PURGE TO FLARE
CURVES
SEAL GAS PANEL
N2 PURGE
RPM
GOV OIL
GOVERNOR REMOTE SP
600# STM
RECYCLE H2
FROM N2 BOTTLES
FROM RECYCLE KO
RECYCLE GAS FLOW
SURFACE CONDENSER
CWS
CWR
LUBE OIL RESERVOIR
LUBE OIL FILTER
L.O.
Group III
TO TK 914


0307
Ack Page
Name
EngU
Hde
0307
BLK
Specific GRAV Analyzer
3UA978
State
3PA525
State
3XA940
State
3HA976
State
VIB Monitor
3XA897
State
3PA498
State
CCC DEVIATN
3U944AN
9999.99
3U944BN
9999.99
TMR
CCC
Curves
Seal Gas Panel
Seal H2
Purge To Flare
N2 Purge
DP
3PC529
3PQ529
3FI178
3HC944A
3HC944
3TI639
3SI898
3SI896A
3SI896B
T
3FI239
3FI238
3PI487A
3PI487B
3PI486
GOV Oil
3PA474A
3PA524
3UA659A
3UA659B
3UA659C
3TI642A
3TI642B
3TI640
3AI978
3FI152
3PC436
3XA003
Governor
Remote SP
3HC896
GOV
3TI794
3PI475
3PI477
3ZA142B
3TA642A
3ZA142A
3PA535
3PI476
3PA536
3PI523
3ZA141A
3TA623
3ZA141B
3XA896
3TI743
3HA896A
3ZA001A
3ZA001B
3ZA002A
3ZA002B
3PI473
Recycle Gas Flow
Recycle H2
From N2 Bottles
From Recycle
KO
600# STM
Reserved for Faceplates
Lube Oil Reservoir
3LA400
3PA534
3PA487A
3XA497
LP
LO
S
3PI531
3TI843
GOV Oil
3PI474A
3PI474B
Surface Condenser
CWS
CWR
3PI497
Lube Oil Filter
OR
3TA642A
3LA375
3HA914A
3LA355A
3LI355A
3LI355B
3LC374
3LO374
To TK 914

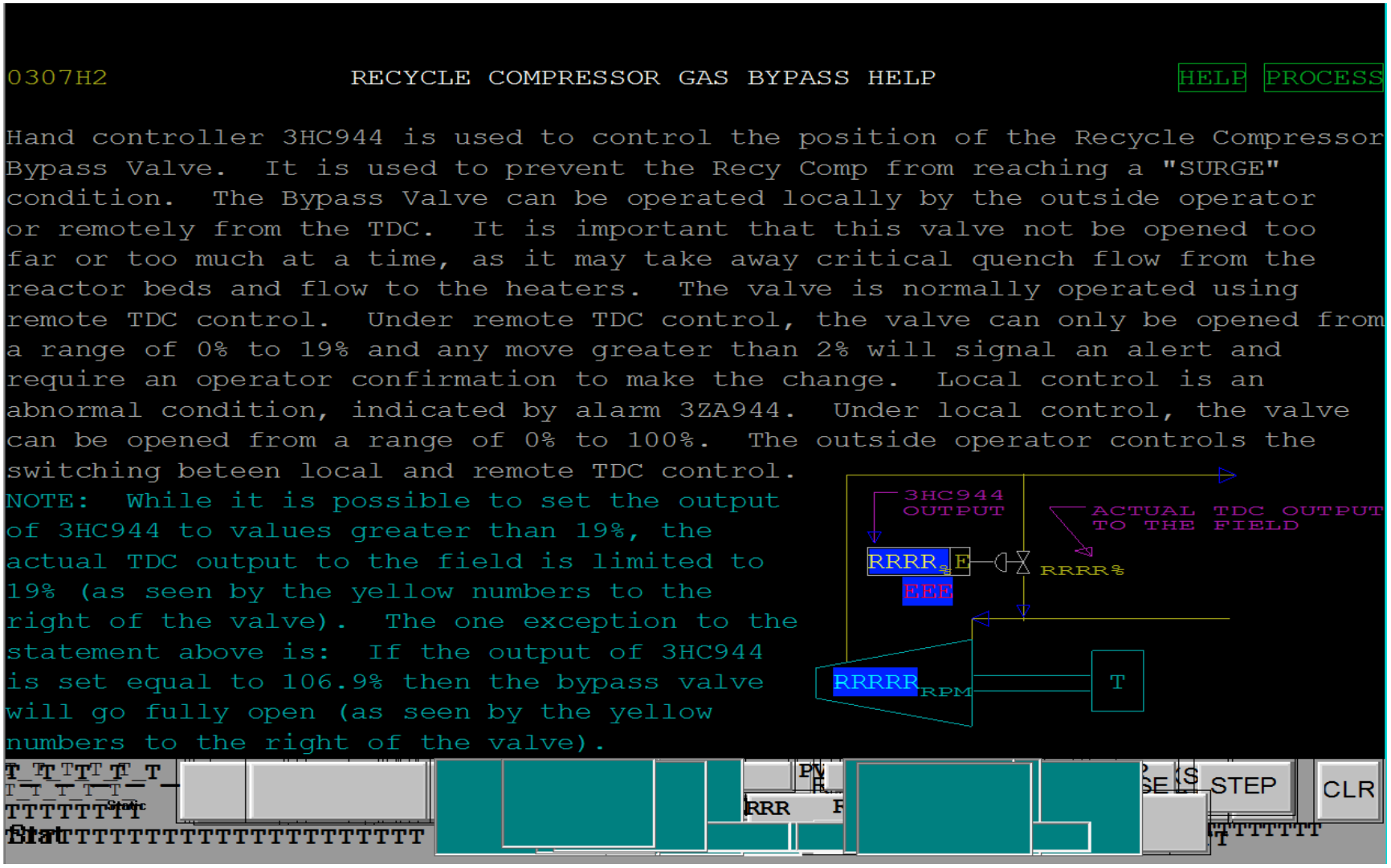
3.31 RECYCLE COMPRESSOR & CONDENSER HELP MENU (0307H.DS)




0307H
RECYCLE COMPRESSOR & CONDENSER HELP MENU
PROCESS
1:
COMPRESSOR CURVE HELP
0307H1
2:
COMPRESSOR BYPASS HELP
0307H2
3:
COMPRESSOR CURVES
0307C1


0307H
Ack Page
Name
EngU
Hde
9999.9
0307H
Process
R3 Reactor/Heater Help Menu
1 :
Compressor Curve Help
0307H1
2 :
Compressor Bypass Help
0307H2
3 :
Compressor Curves
0307C1
Reserved for Faceplates

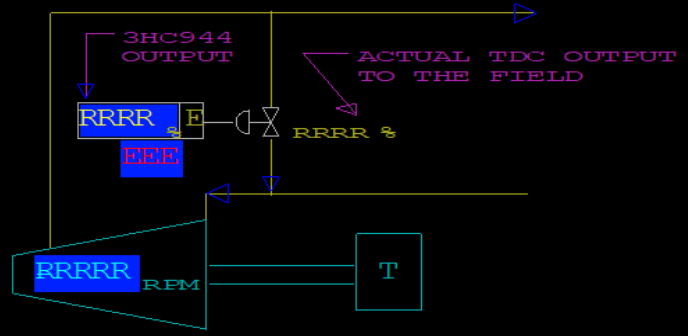
3.32 RECYCLE COMPRESSOR GAS BYPASS HELP (0307H2.DS)

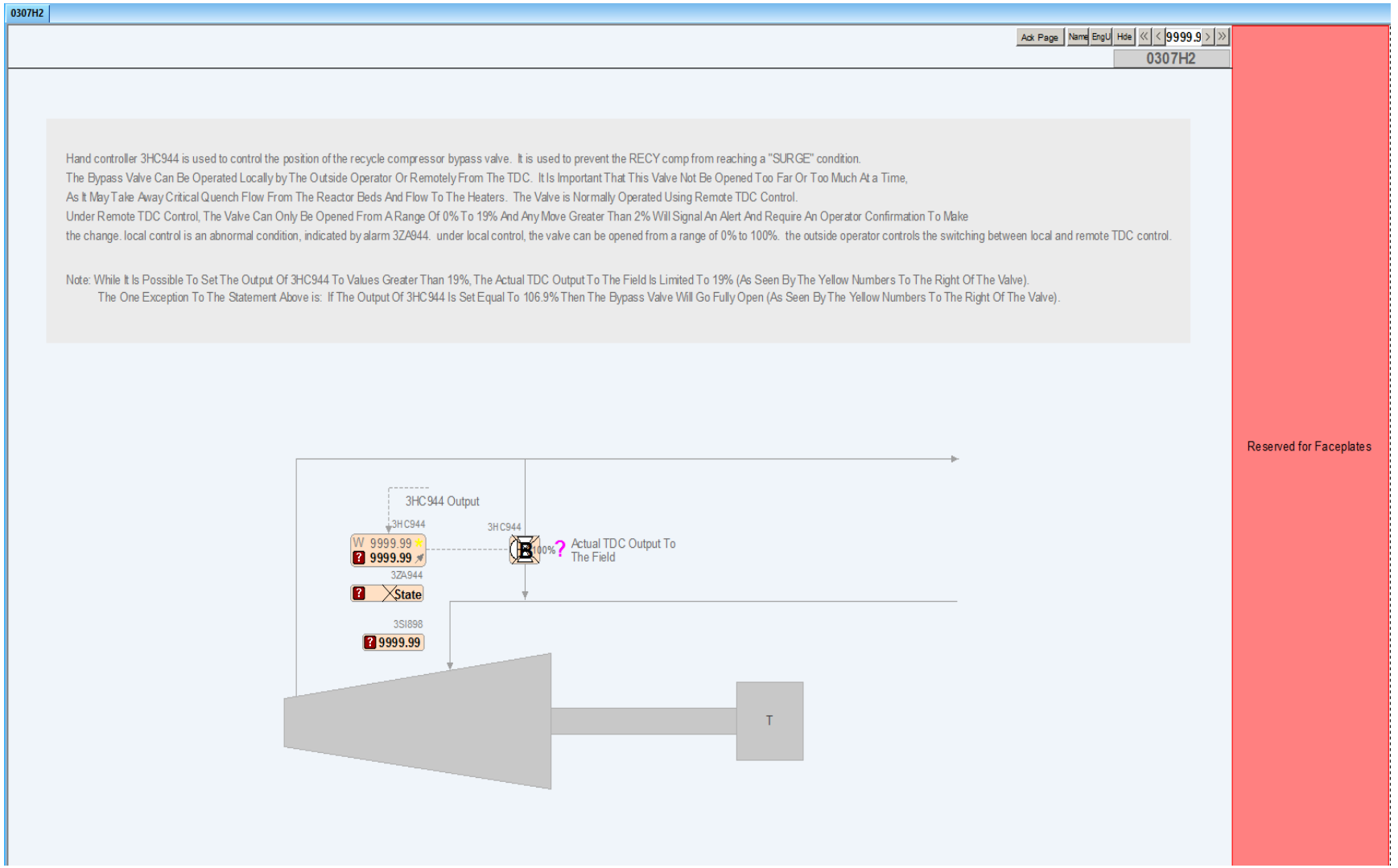


0307H2 RECYCLE COMPRESSOR GAS BYPASS HELP HELP PROCESS

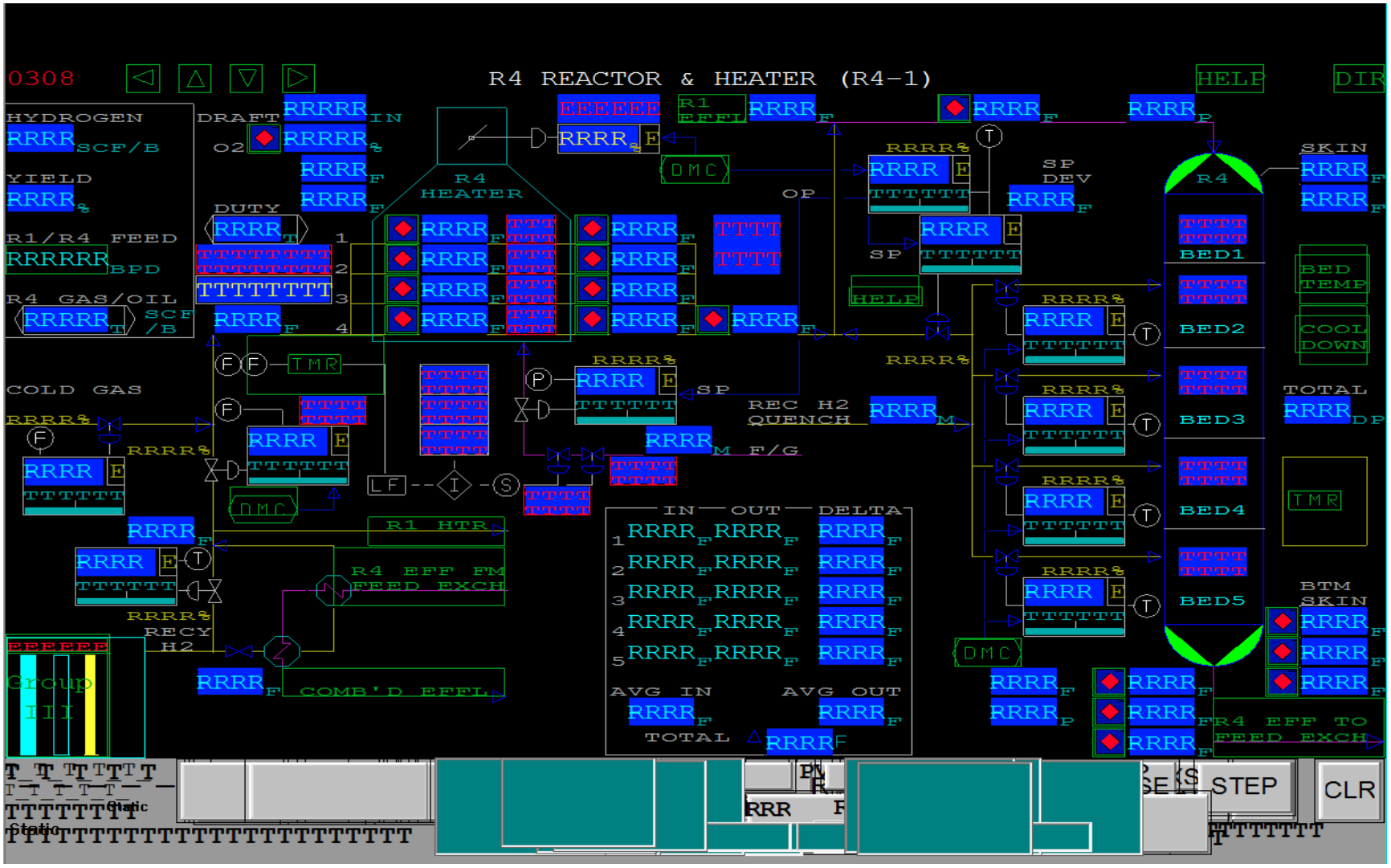
Hand controller 3HC944 is used to control the position of the Recycle Compressor Bypass Valve. It is used to prevent the Recy Comp from reaching a "SURGE" condition. The Bypass Valve can be operated locally by the outside operator or remotely from the TDC. It is important that this valve not be opened too far or too much at a time, as it may take away critical quench flow from the reactor beds and flow to the heaters. The valve is normally operated using remote TDC control. Under remote TDC control, the valve can only be opened from a range of 0% to 19% and any move greater than 2% will signal an alert and require an operator confirmation to make the change. Local control is an abnormal condition, indicated by alarm 3ZA944. Under local control, the valve can be opened from a range of 0% to 100%. The outside operator controls the switching beteen local and remote TDC control.

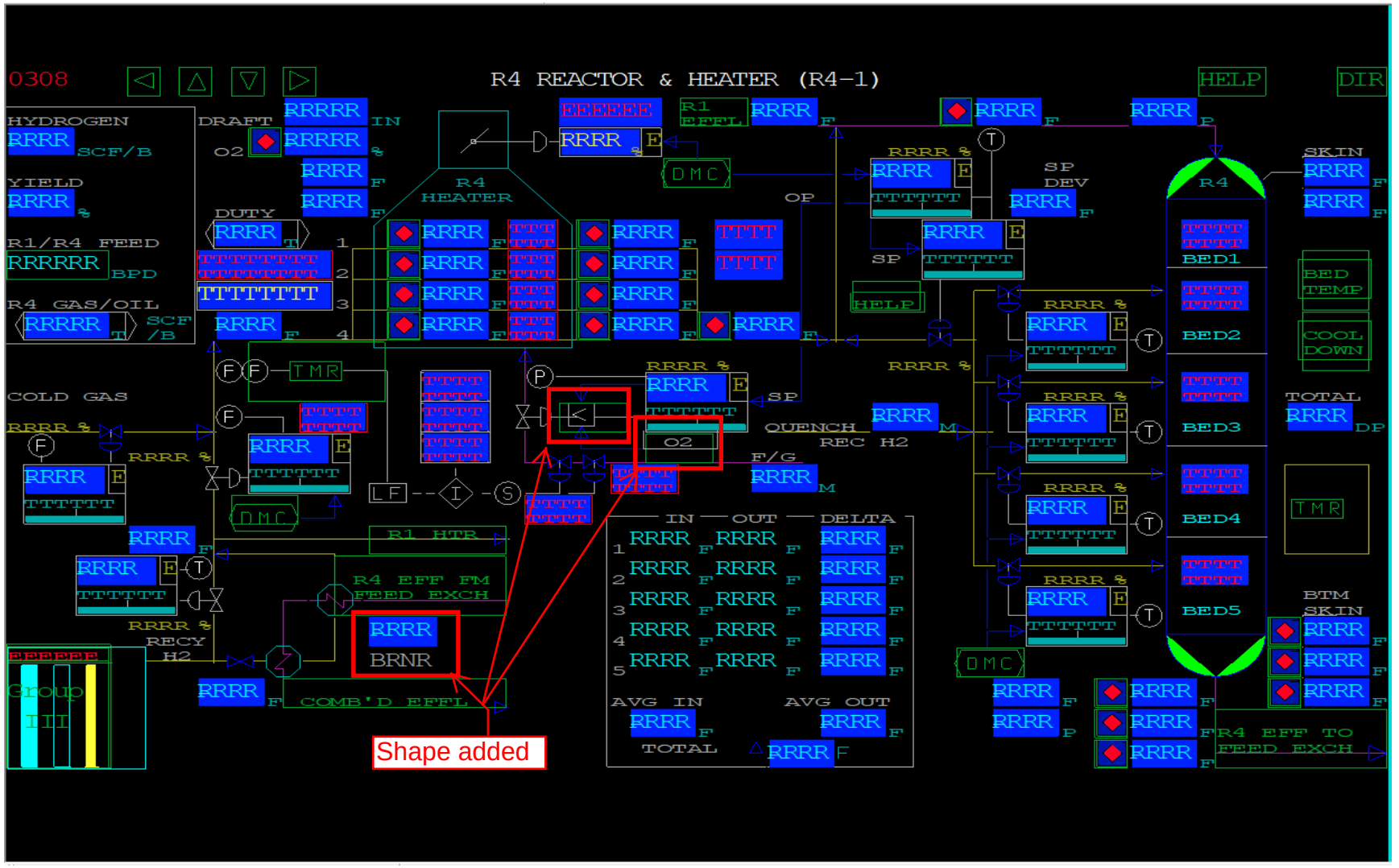
NOTE: While it is possible to set the output of 3HC944 to values greater than 19%, the actual TDC output to the field is limited to 19% (as seen by the yellow numbers to the right of the valve). The one exception to the statement above is: If the output of 3HC944 is set equal to 106.9% then the bypass valve will go fully open (as seen by the yellow numbers to the right of the valve).

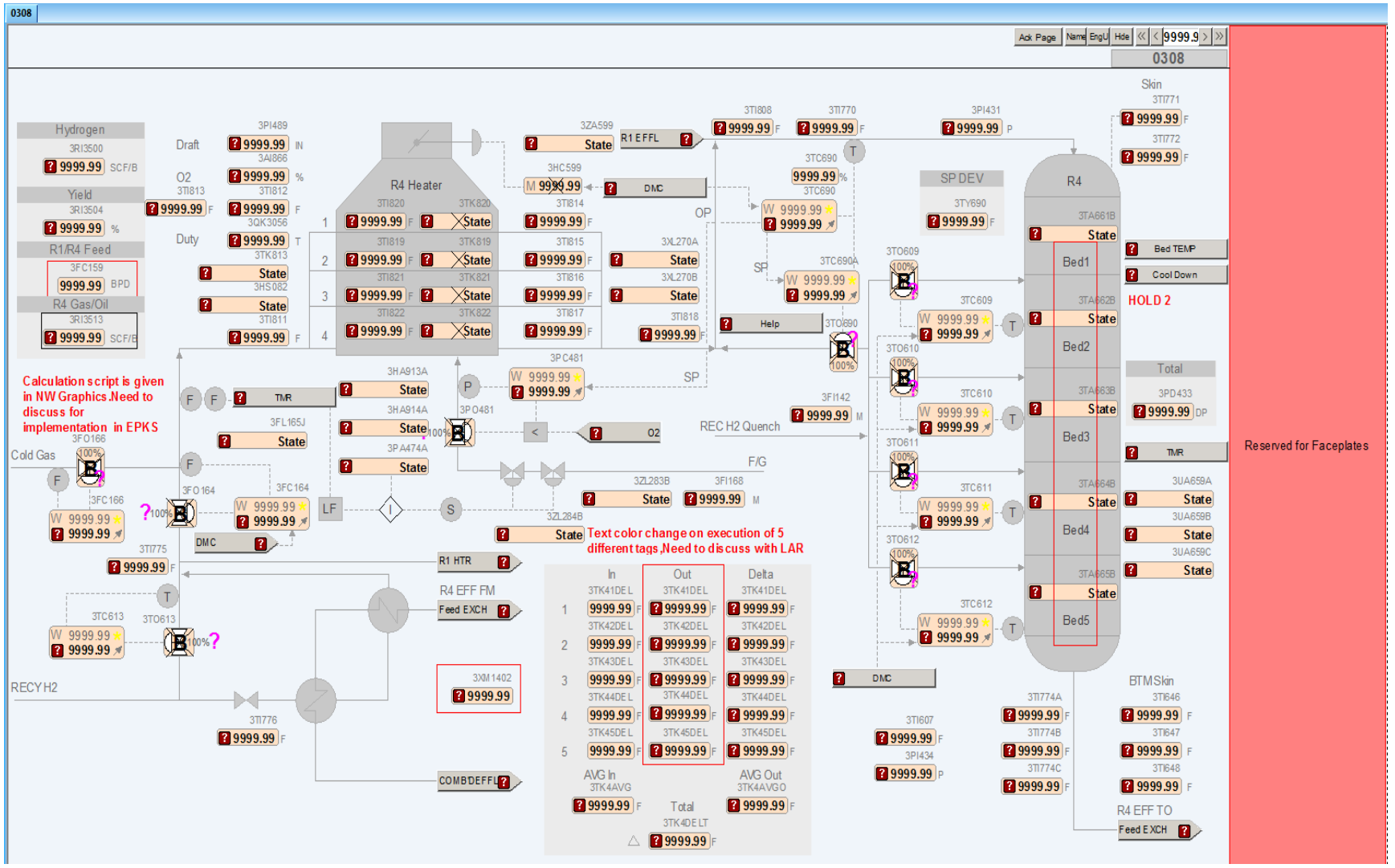



0307H2
Ack Page
Name
EngU
Hde
9999.9
0307H2
Hand controller 3HC944 is used to control the position of the recycle compressor bypass valve. It is used to prevent the RECY comp from reaching a "SURGE" condition.
The Bypass Valve Can Be Operated Locally by The Outside Operator Or Remotely From The TDC. It Is Important That This Valve Not Be Opened Too Far Or Too Much At a Time,
As It May Take Away Critical Quench Flow From The Reactor Beds And Flow To The Heaters. The Valve is Normally Operated Using Remote TDC Control.
Under Remote TDC Control, The Valve Can Only Be Opened From A Range Of 0% To 19% And Any Move Greater Than 2% Will Signal An Alert And Require An Operator Confirmation To Make
the change. local control is an abnormal condition, indicated by alarm 3ZA944. under local control, the valve can be opened from a range of 0% to 100%. the outside operator controls the switching between local and remote TDC control.
Note: While It Is Possible To Set The Output Of 3HC944 To Values Greater Than 19%, The Actual TDC Output To The Field Is Limited To 19% (As Seen By The Yellow Numbers To The Right Of The Valve).
The One Exception To The Statement Above is: If The Output Of 3HC944 Is Set Equal To 106.9% Then The Bypass Valve Will Go Fully Open (As Seen By The Yellow Numbers To The Right Of The Valve).
3HC944 Output
3HC944
W 9999.99
9999.99
3HC944
100%
Actual TDC Output To
The Field
3ZA944
State
3SI898
9999.99
T
Reserved for Faceplates

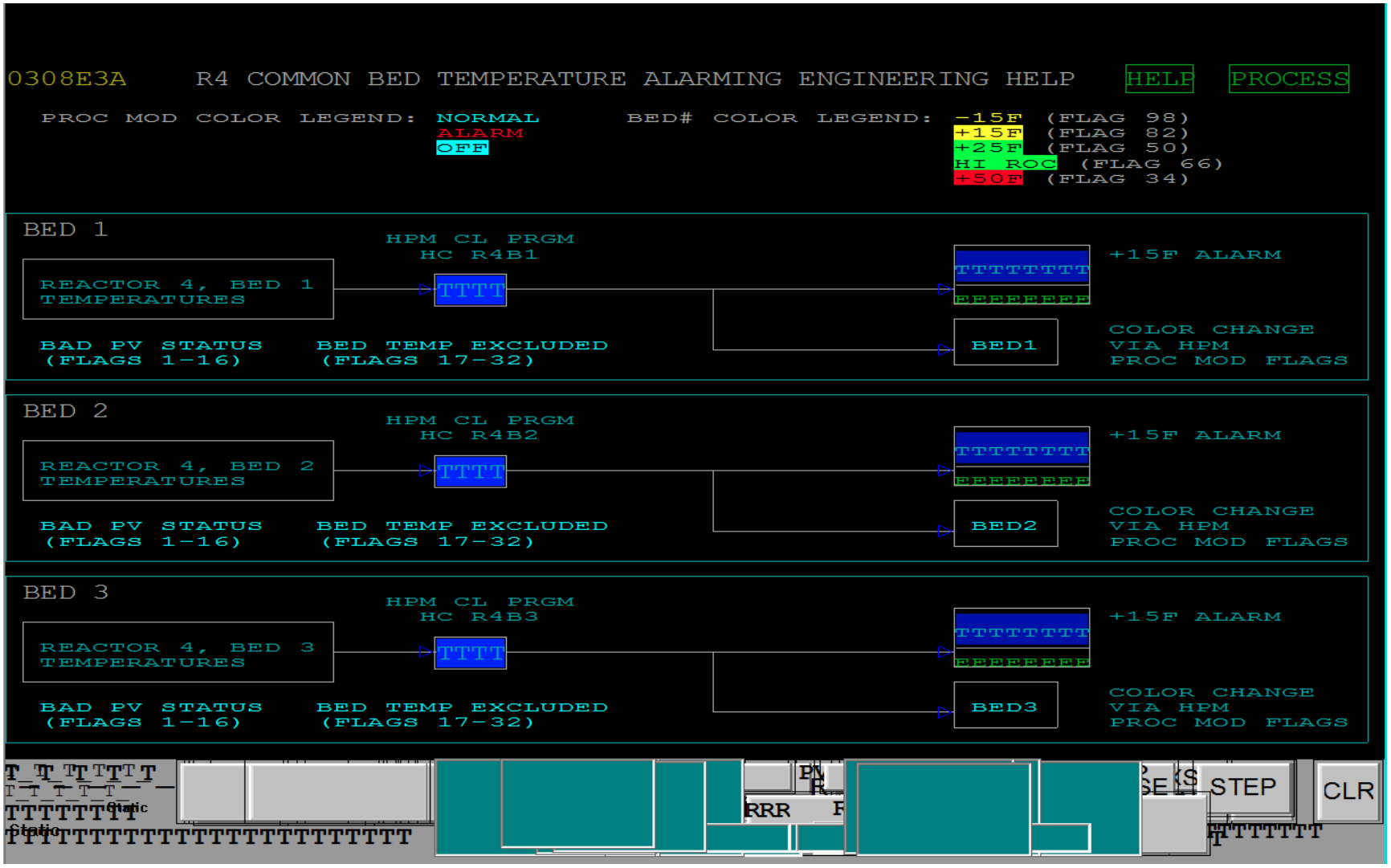
3.33 R4 REACTOR & HEATER (R4-1) (0308.DS)

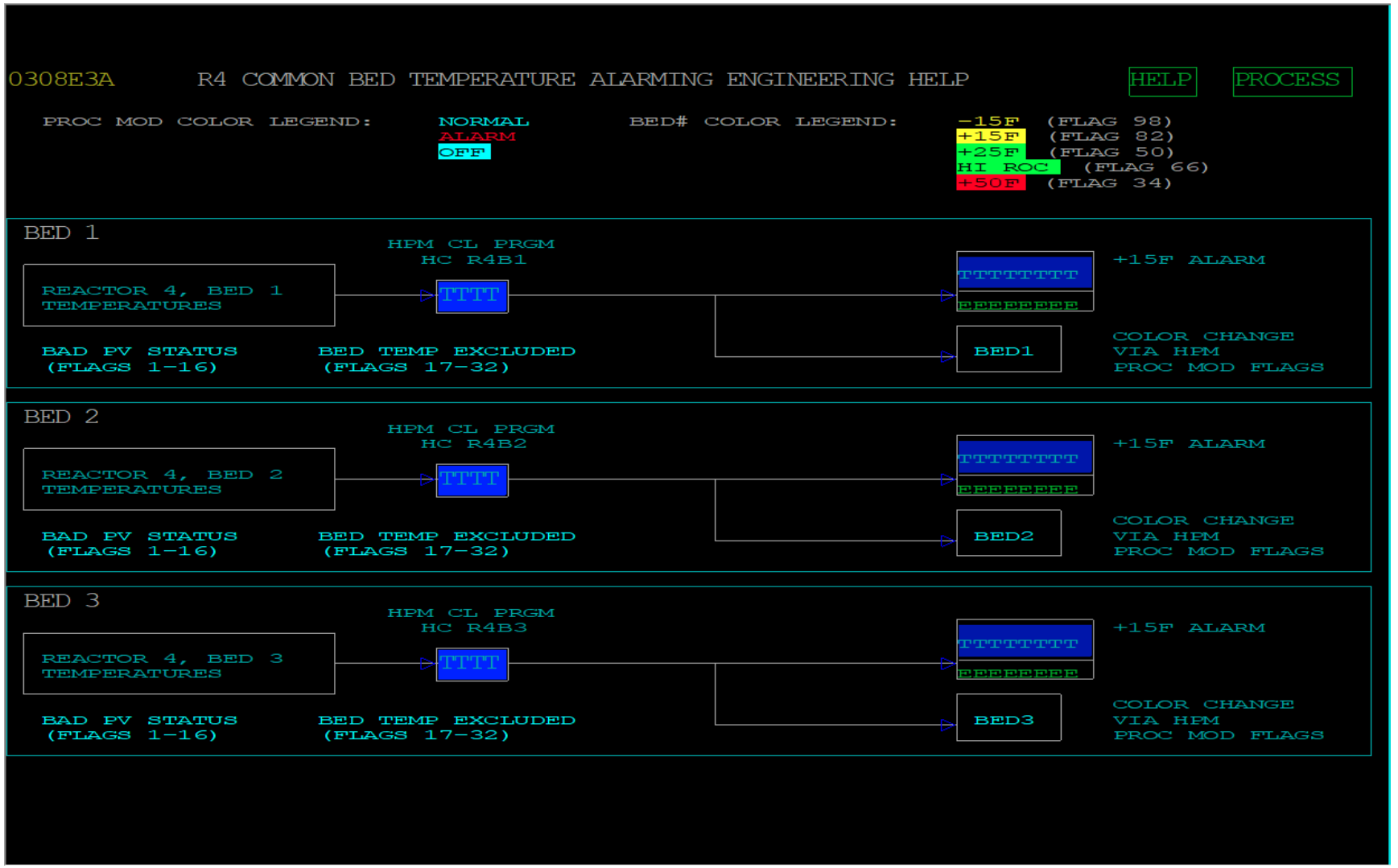


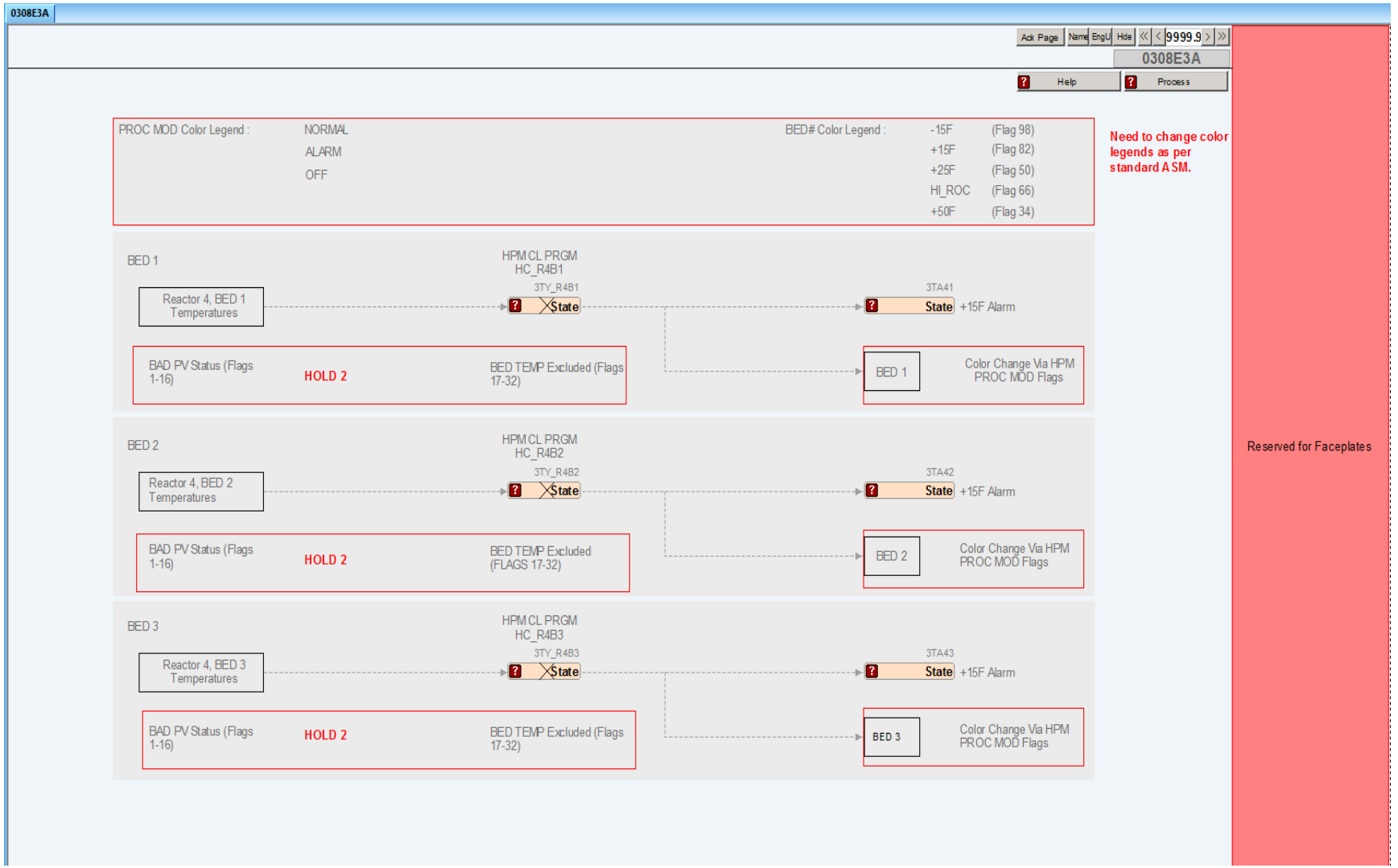

0308
R4 REACTOR & HEATER (R4-1)
HELP
DIR
HYDROGEN
SCF/B
YIELD
R1/R4 FEED
BPD
R4 GAS/OIL
SCF /B
DRAFT
O2
IN
R4 HEATER
DUTY
COLD GAS
TMR
DMC
R1 HTR
R4 EFF FM FEED EXCH
RECY H2
BRNR
COMB'D EFFL
Group III
R1 EFFL
OP
SP
DEV
HELP
R4
BED1
BED2
BED3
BED4
BED5
SKIN
BED TEMP
COOL DOWN
TOTAL
DP
BTM SKIN
QUENCH REC H2
F/G
IN
OUT
DELTA
AVG IN
AVG OUT
TOTAL
R4 EFF TO FEED EXCH
Shape added


0308
Ack Page
Name
EngU
Hide
0308
Hydrogen
3RI3500
9999.99
SCF/B
Yield
3RI3504
9999.99
%
R1/R4 Feed
3FC159
9999.99
BPD
R4 Gas/Oil
3RI3513
9999.99
SCF/B
Draft
3PI489
9999.99
IN
O2
3AI866
9999.99
%
Duty
3TK813
State
3HS082
State
3TI811
9999.99
R4 Heater
3TI820
3TK820
3TI819
3TK819
3TI821
3TK821
3TI822
3TK822
3TI815
3TI816
3TI817
3TI818
3ZA599
State
R1 EFFL
3HC599
DMC
3TI808
3TI770
3PI431
3TC690
SP DEV
3TY690
R4
3TA661B
Bed1
3TA662B
Bed2
3TA663B
Bed3
3TA664B
Bed4
3TA665B
Bed5
Skin
3TI771
3TI772
Bed TEMP
Cool Down
HOLD 2
Total
3PD433
TMR
3UA659A
3UA659B
3UA659C
Reserved for Faceplates
3XL270A
3XL270B
OP
SP
Help
3TO690
3TC690A
3TO609
3TC609
3TO610
3TC610
3TO611
3TC611
3TO612
3TC612
3FI142
REC H2 Quench
F/G
3ZL283B
3FI168
3ZL284B
Text color change on execution of 5 different tags ,Need to discuss with LAR
Calculation script is given in NW Graphics .Need to discuss for implementation in EPKS
3HA913A
3HA914A
3PA474A
3PC481
3PO481
3FL165J
TMR
O2
Cold Gas
3FO166
3FC166
3FO164
3FC164
DMC
3TI775
R1 HTR
R4 EFF FM
Feed EXCH
3TC613
3TO613
RECY H2
3TI776
3XM1402
COMBDEFFL
In
Out
Delta
3TK41DEL
3TK42DEL
3TK43DEL
3TK44DEL
3TK45DEL
AVG In
3TK4AVG
Total
3TK4DELT
AVG Out
3TK4AVGO
3TI607
3PI434
3TI774A
3TI774B
3TI774C
BTM Skin
3TI646
3TI647
3TI648
R4 EFF TO
Feed EXCH

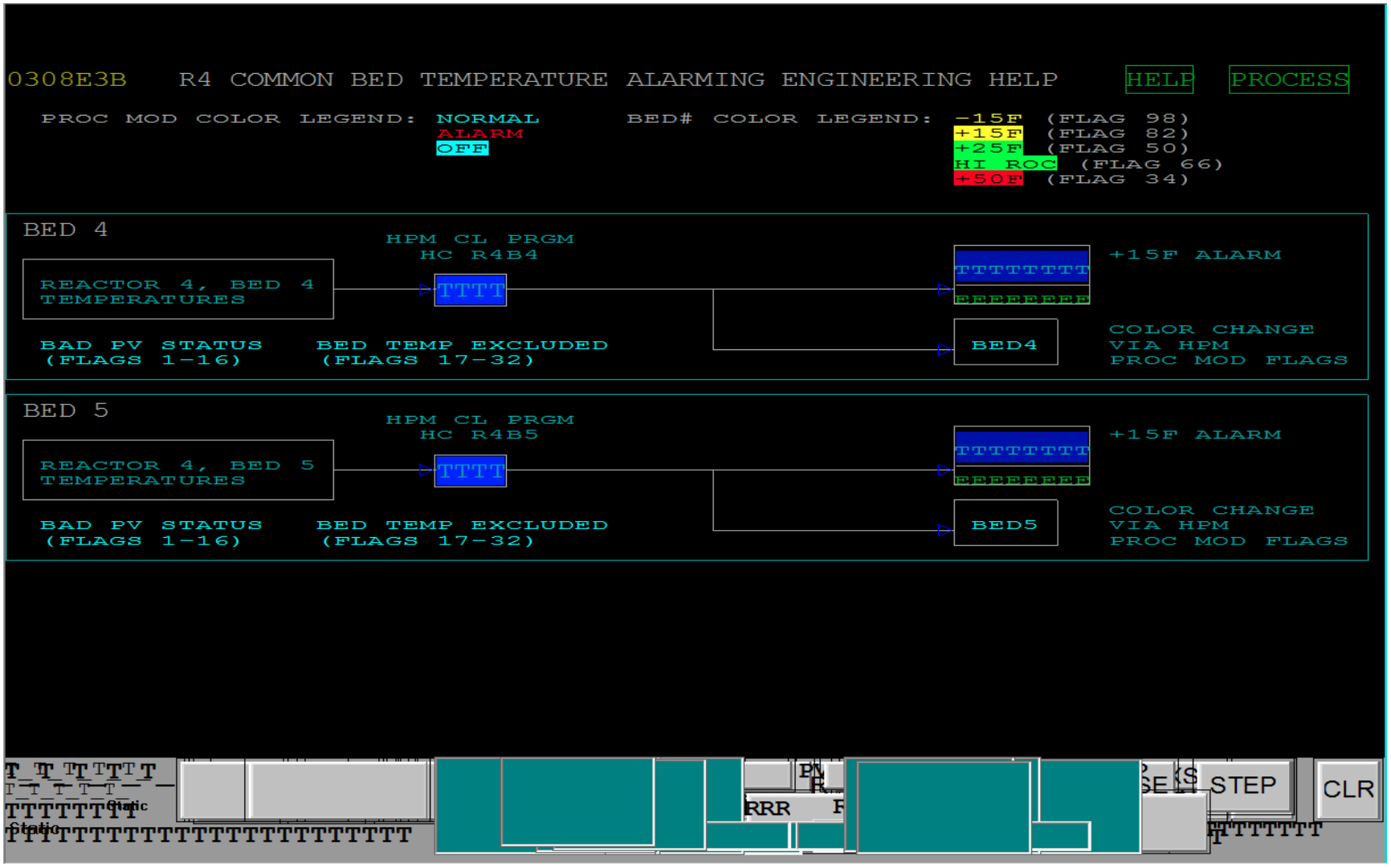
3.34 R4 COMMON BED TEMPERATURE ALARMING ENGINEERING HELP (0308E3A.DS)

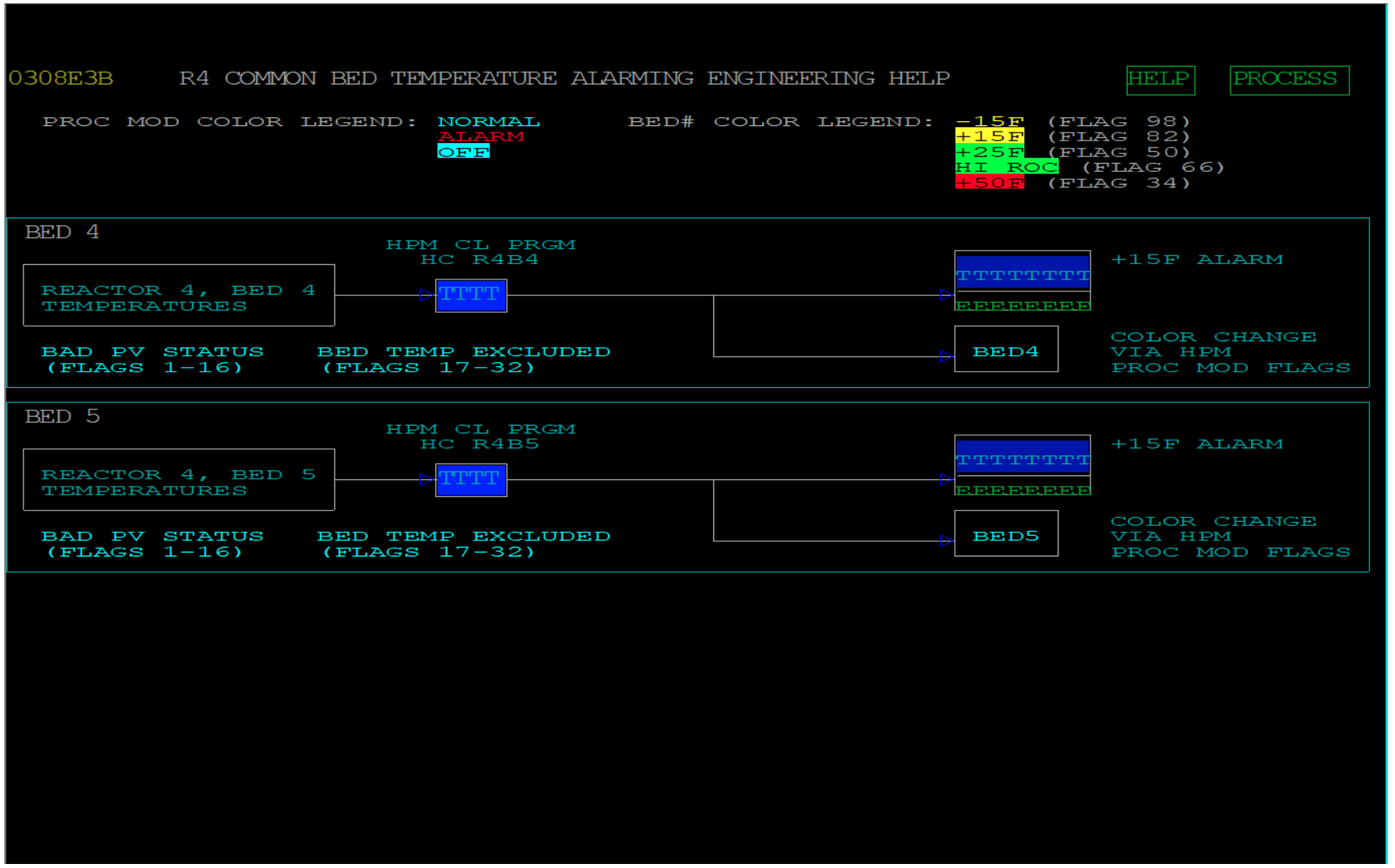


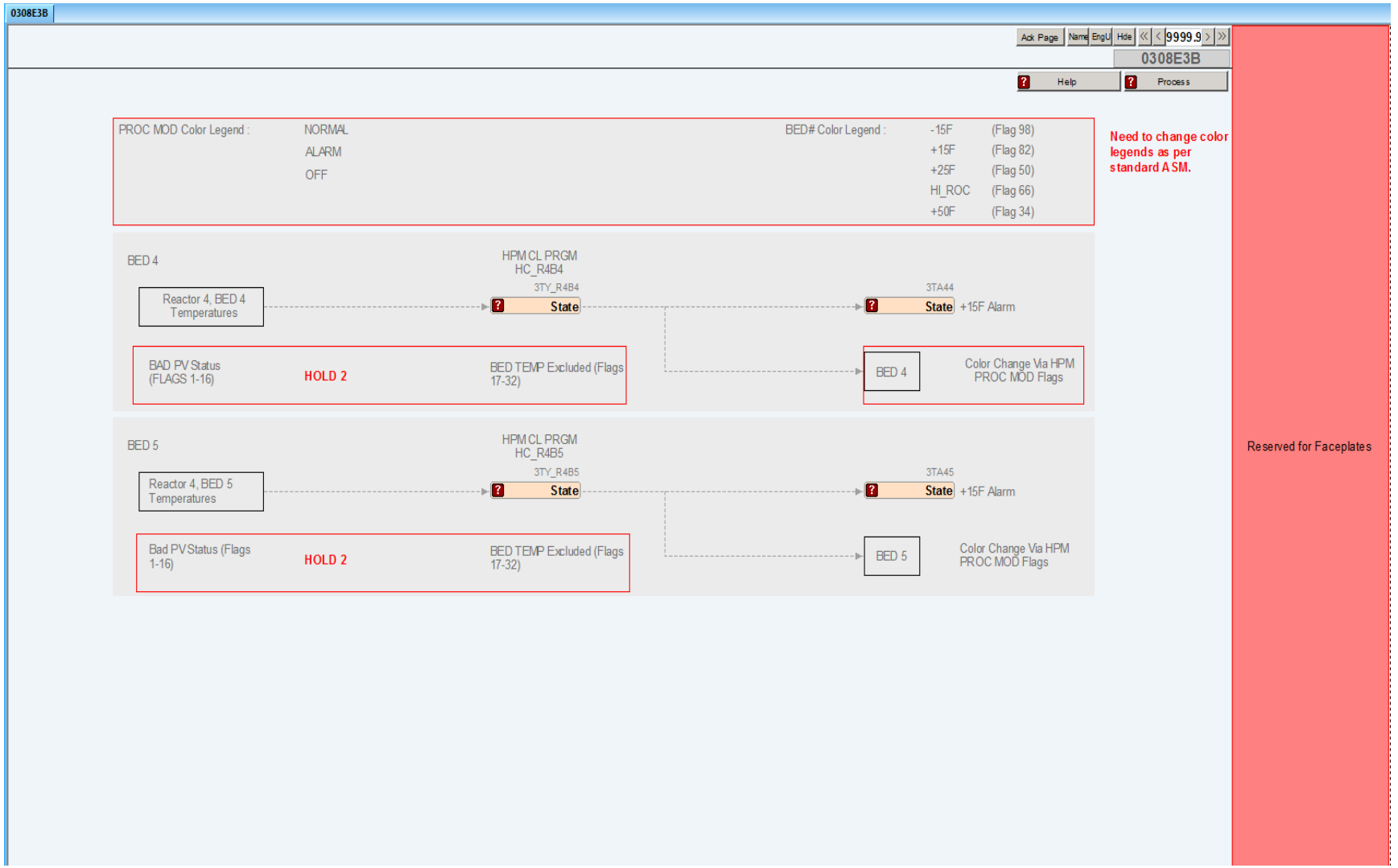

0308E3A
R4 COMMON BED TEMPERATURE ALARMING ENGINEERING HELP
HELP
PROCESS
PROC MOD COLOR LEGEND:
NORMAL
ALARM
OFF
BED# COLOR LEGEND:
-15F (FLAG 98)
+15F (FLAG 82)
+25F (FLAG 50)
HI ROC (FLAG 66)
+50F (FLAG 34)
BED 1
HPM CL PRGM
HC R4B1
REACTOR 4, BED 1
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED1
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)
BED 2
HPM CL PRGM
HC R4B2
REACTOR 4, BED 2
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED2
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)
BED 3
HPM CL PRGM
HC R4B3
REACTOR 4, BED 3
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED3
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)


0308E3A
Ack Page
Name
Engl
Hde
9999.9
0308E3A
Help
Process
PROC MOD Color Legend :
NORMAL
ALARM
OFF
BED# Color Legend :
-15F (Flag 98)
+15F (Flag 82)
+25F (Flag 50)
HI_ROC (Flag 66)
+50F (Flag 34)
Need to change color legends as per standard ASM.
BED 1
HPM CL PRGM HC_R4B1
Reactor 4, BED 1 Temperatures
3TY_R4B1
State
3TA41
State +15F Alarm
BAD PV Status (Flags 1-16)
HOLD 2
BED TEMP Excluded (Flags 17-32)
BED 1
Color Change Via HPM PROC MOD Flags
BED 2
HPM CL PRGM HC_R4B2
Reactor 4, BED 2 Temperatures
3TY_R4B2
State
3TA42
State +15F Alarm
BAD PV Status (Flags 1-16)
HOLD 2
BED TEMP Excluded (FLAGS 17-32)
BED 2
Color Change Via HPM PROC MOD Flags
BED 3
HPM CL PRGM HC_R4B3
Reactor 4, BED 3 Temperatures
3TY_R4B3
State
3TA43
State +15F Alarm
BAD PV Status (Flags 1-16)
HOLD 2
BED TEMP Excluded (Flags 17-32)
BED 3
Color Change Via HPM PROC MOD Flags
Reserved for Faceplates

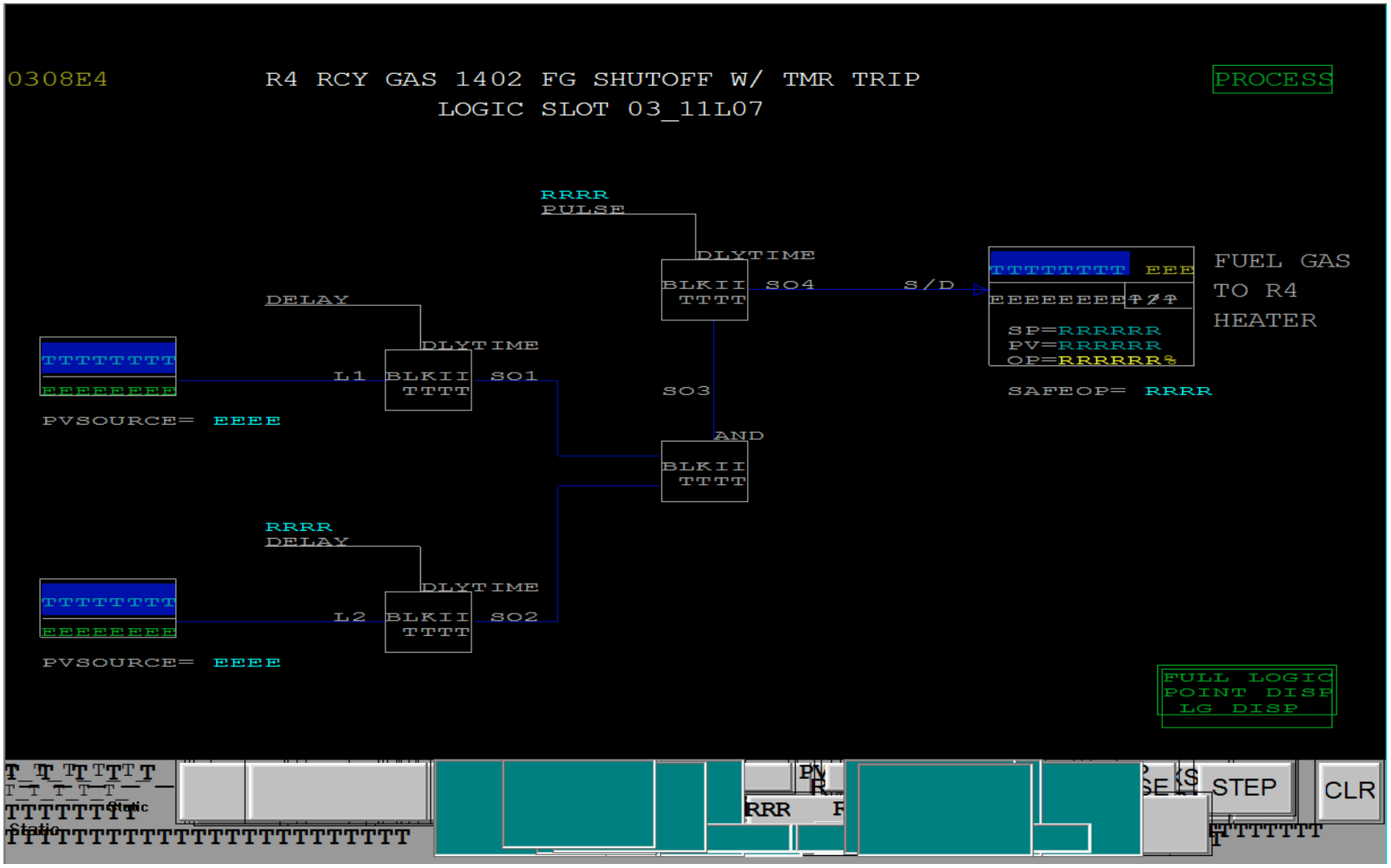
3.35 R4 COMMON BED TEMPERATURE ALARMING ENGINEERING HELP (0308E3B.DS)

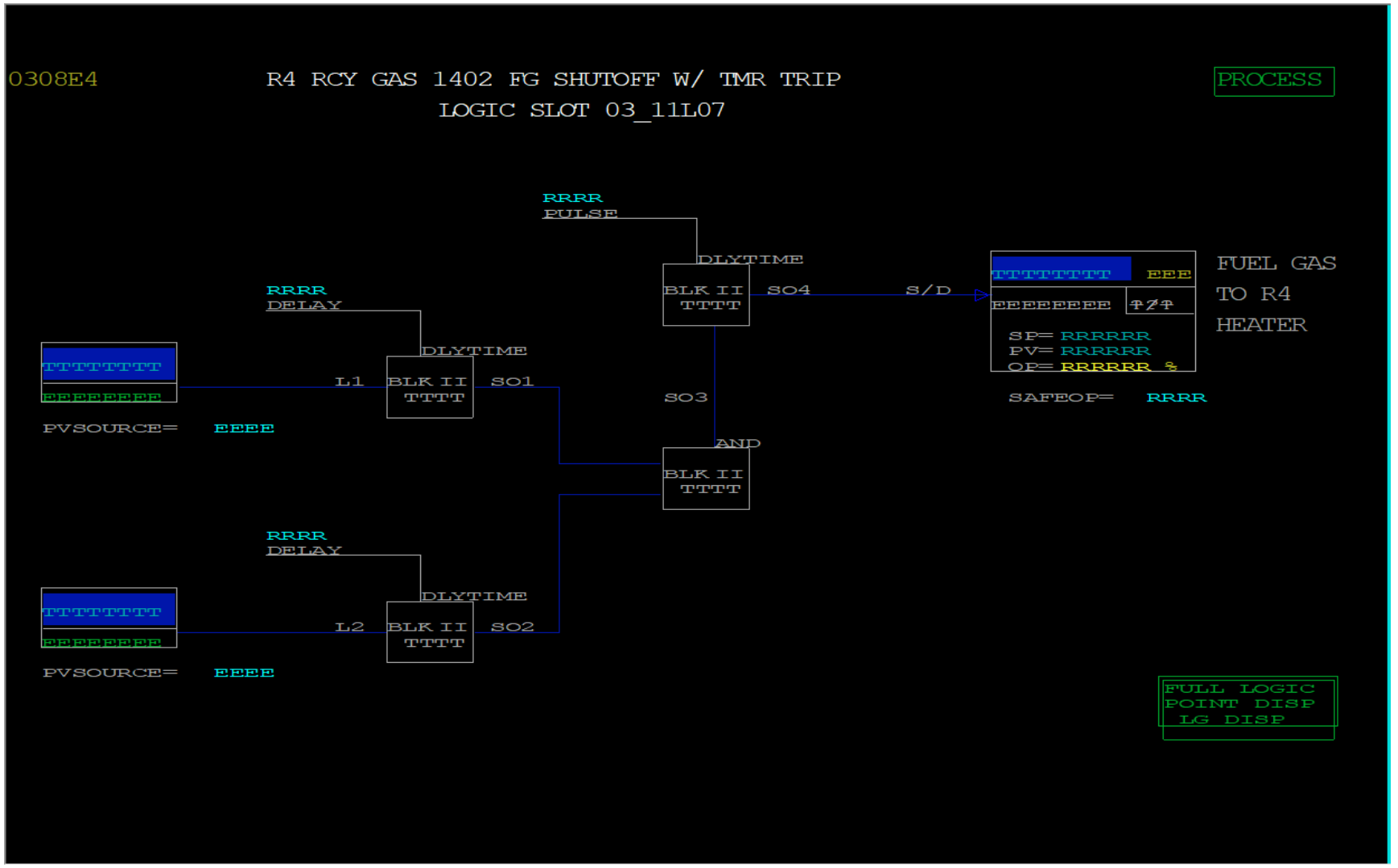


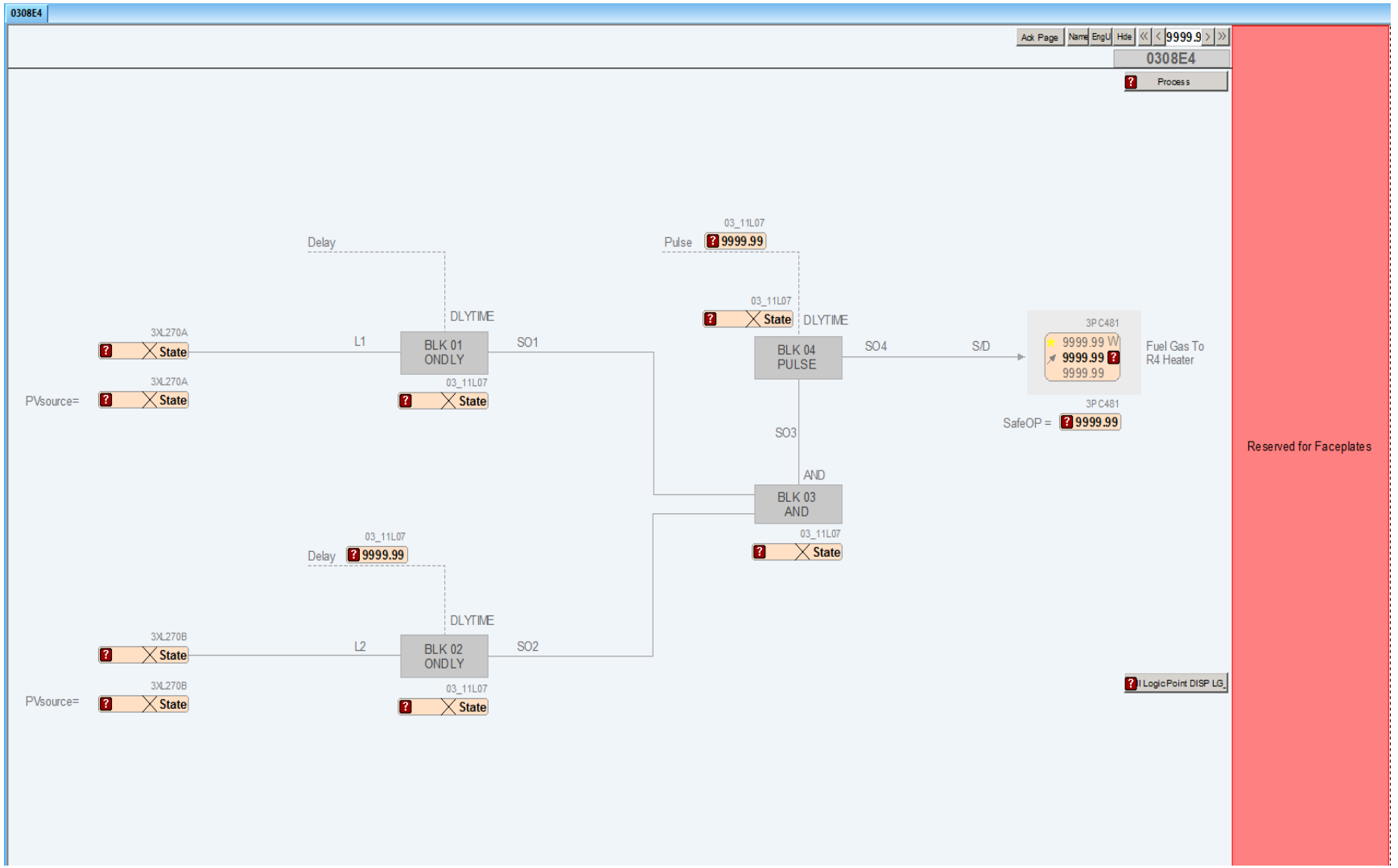

0308E3B
R4 COMMON BED TEMPERATURE ALARMING ENGINEERING HELP
HELP
PROCESS
PROC MOD COLOR LEGEND:
NORMAL
ALARM
OFF
BED# COLOR LEGEND:
-15F (FLAG 98)
+15F (FLAG 82)
+25F (FLAG 50)
HI ROC (FLAG 66)
+50F (FLAG 34)
BED 4
HPM CL PRGM
HC R4B4
REACTOR 4, BED 4
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED4
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)
BED 5
HPM CL PRGM
HC R4B5
REACTOR 4, BED 5
TEMPERATURES
TTTT
TTTTTTTT
EEEEEEEE
+15F ALARM
BED5
COLOR CHANGE
VIA HPM
PROC MOD FLAGS
BAD PV STATUS
(FLAGS 1-16)
BED TEMP EXCLUDED
(FLAGS 17-32)


0308E3B
Ack Page
Name
EngU
Hde
9999.9
0308E3B
Help
Process
PROC MOD Color Legend :
NORMAL
ALARM
OFF
BED# Color Legend :
-15F (Flag 98)
+15F (Flag 82)
+25F (Flag 50)
HI_ROC (Flag 66)
+50F (Flag 34)
Need to change color legends as per standard ASM.
BED 4
HPM CL PRGM HC_R4B4
Reactor 4, BED 4 Temperatures
3TY_R4B4
State
3TA44
State
+15F Alarm
BAD PV Status (FLAGS 1-16)
HOLD 2
BED TEMP Excluded (Flags 17-32)
BED 4
Color Change Via HPM PROC MOD Flags
BED 5
HPM CL PRGM HC_R4B5
Reactor 4, BED 5 Temperatures
3TY_R4B5
State
3TA45
State
+15F Alarm
Bad PV Status (Flags 1-16)
HOLD 2
BED TEMP Excluded (Flags 17-32)
BED 5
Color Change Via HPM PROC MOD Flags
Reserved for Faceplates

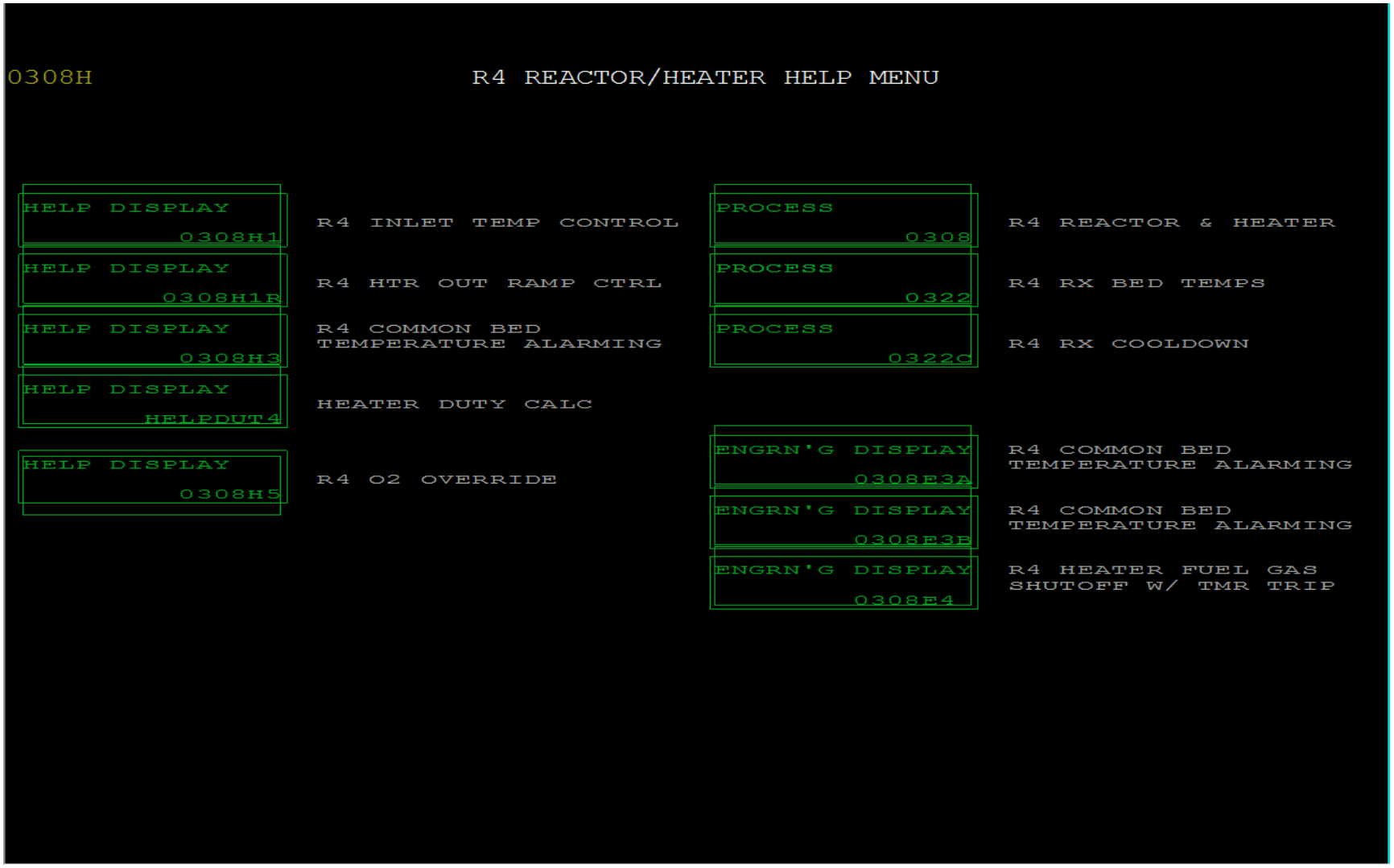
3.36 R4 RCY GAS 1402 FG SHUTOFF W/ TMR TRIP LOGIC SLOT 03_11L07 (0308E4.DS)

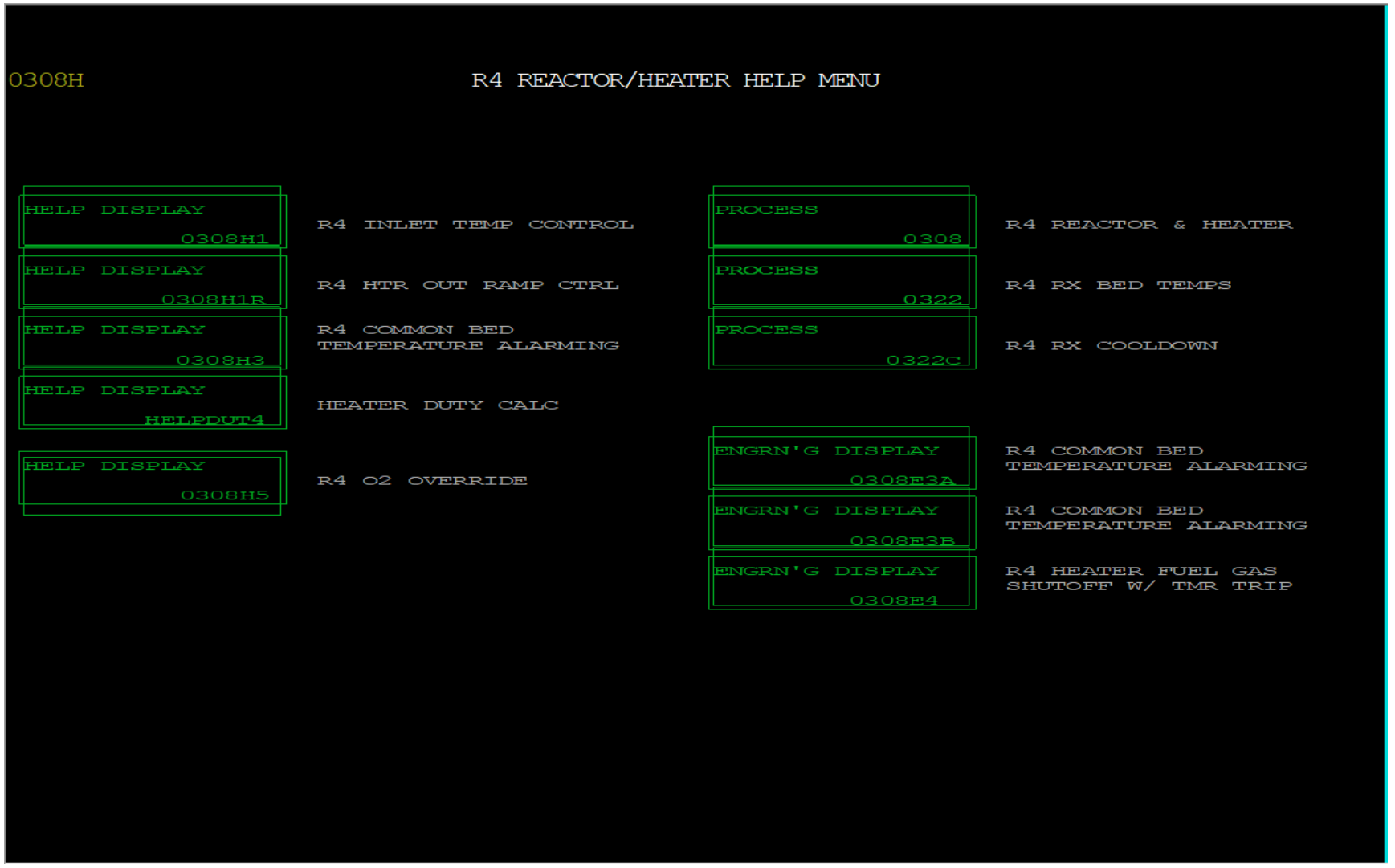


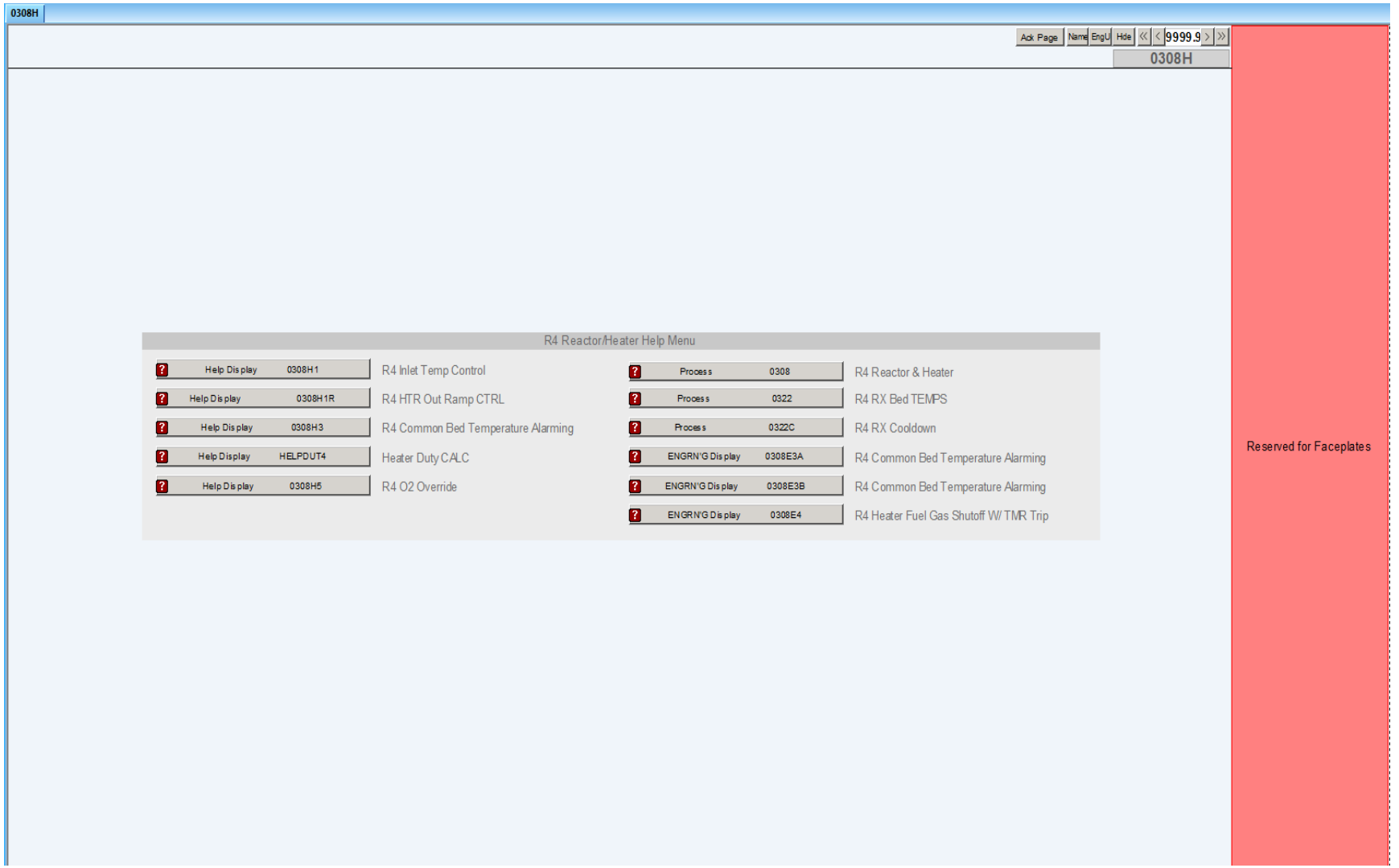

0308E4
R4 RCY GAS 1402 FG SHUTOFF W/ TMR TRIP
LOGIC SLOT 03_11L07
PROCESS
RRRR
PULSE
DLYTIME
BLK II
TTTT
SO4
S/D
TTTTTTTT
EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRRRR %
FUEL GAS
TO R4
HEATER
SAFEOP= RRRR
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L1
BLK II
TTTT
SO1
PVSOURCE= EEEE
SO3
AND
BLK II
TTTT
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L2
BLK II
TTTT
SO2
PVSOURCE= EEEE
FULL LOGIC
POINT DISP
LG DISP


0308E4
Ack Page
Name
Eng U
Hde
9999.9
0308E4
Process
Delay
Pulse
03_11L07
9999.99
DLYTIME
03_11L07
State
DLYTIME
3XL270A
State
L1
BLK 01
ONDLY
SO1
BLK 04
PULSE
SO4
S/D
3PC481
9999.99 W
9999.99
9999.99
Fuel Gas To
R4 Heater
PVsource=
3XL270A
State
03_11L07
State
3PC481
SafeOP =
9999.99
SO3
AND
BLK 03
AND
03_11L07
State
Delay
03_11L07
9999.99
DLYTIME
3XL270B
State
L2
BLK 02
ONDLY
SO2
PVsource=
3XL270B
State
03_11L07
State
Logic Point DISP LG
Reserved for Faceplates

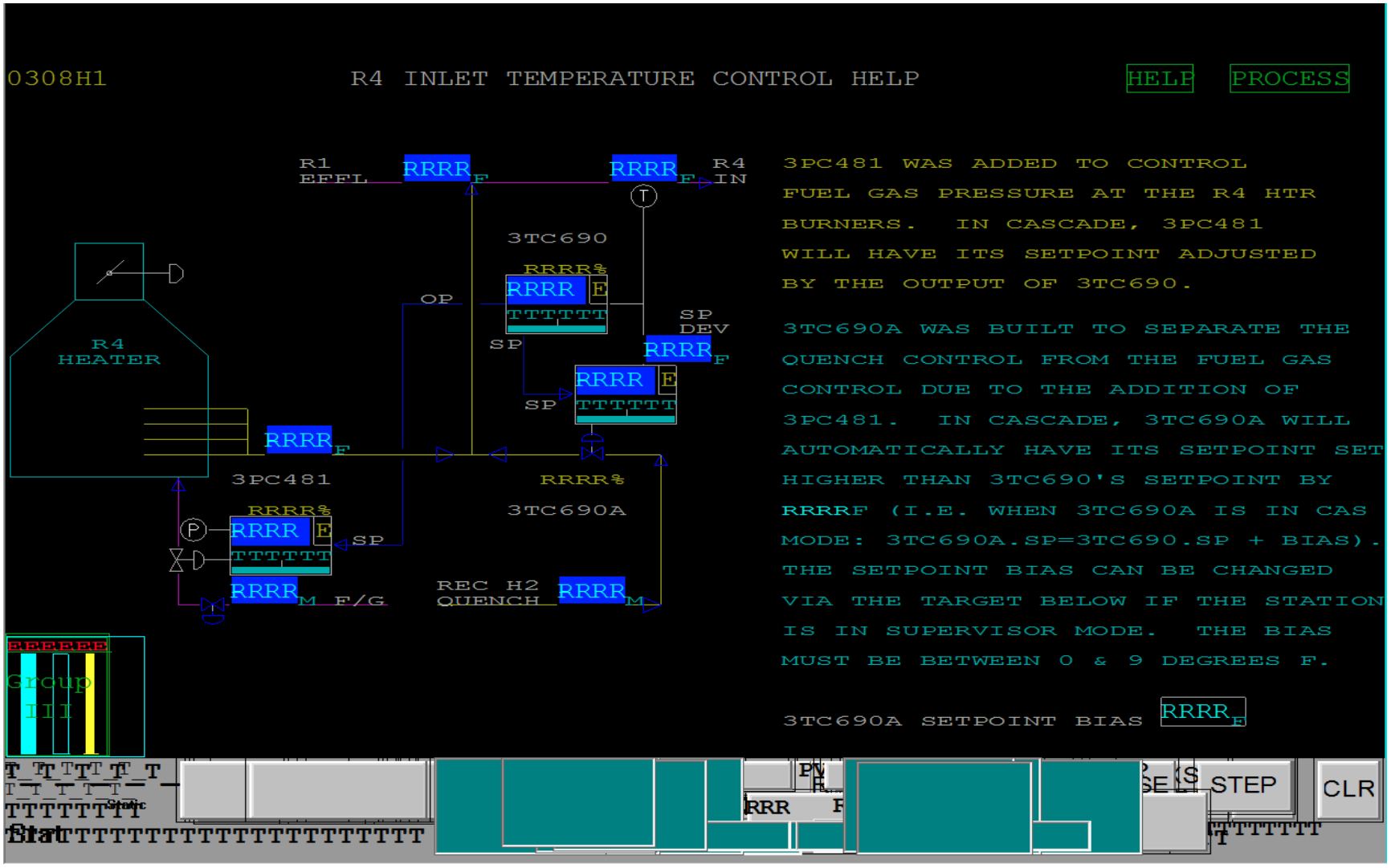
3.37 R4 REACTOR/HEATER HELP MENU (0308H.DS)

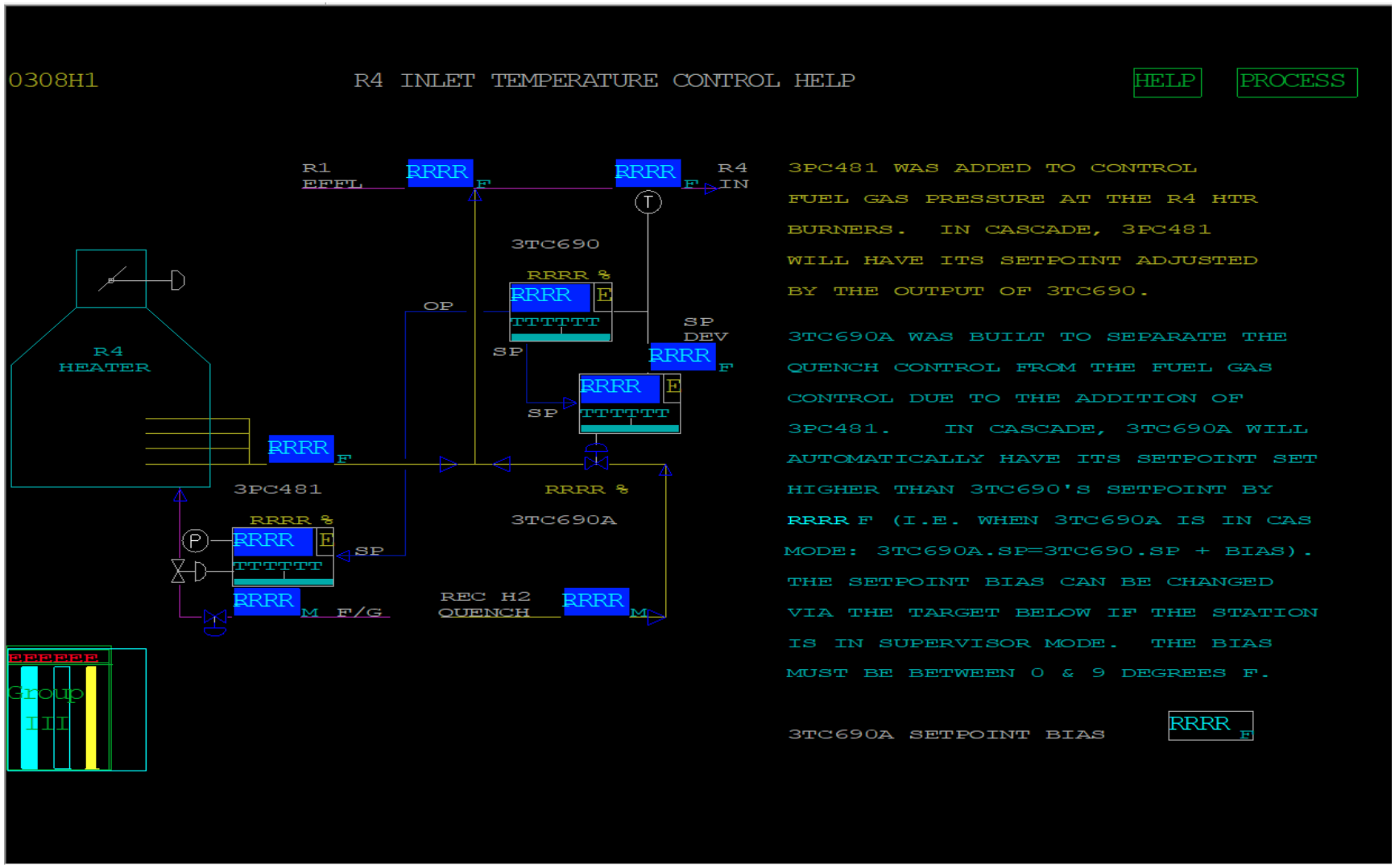


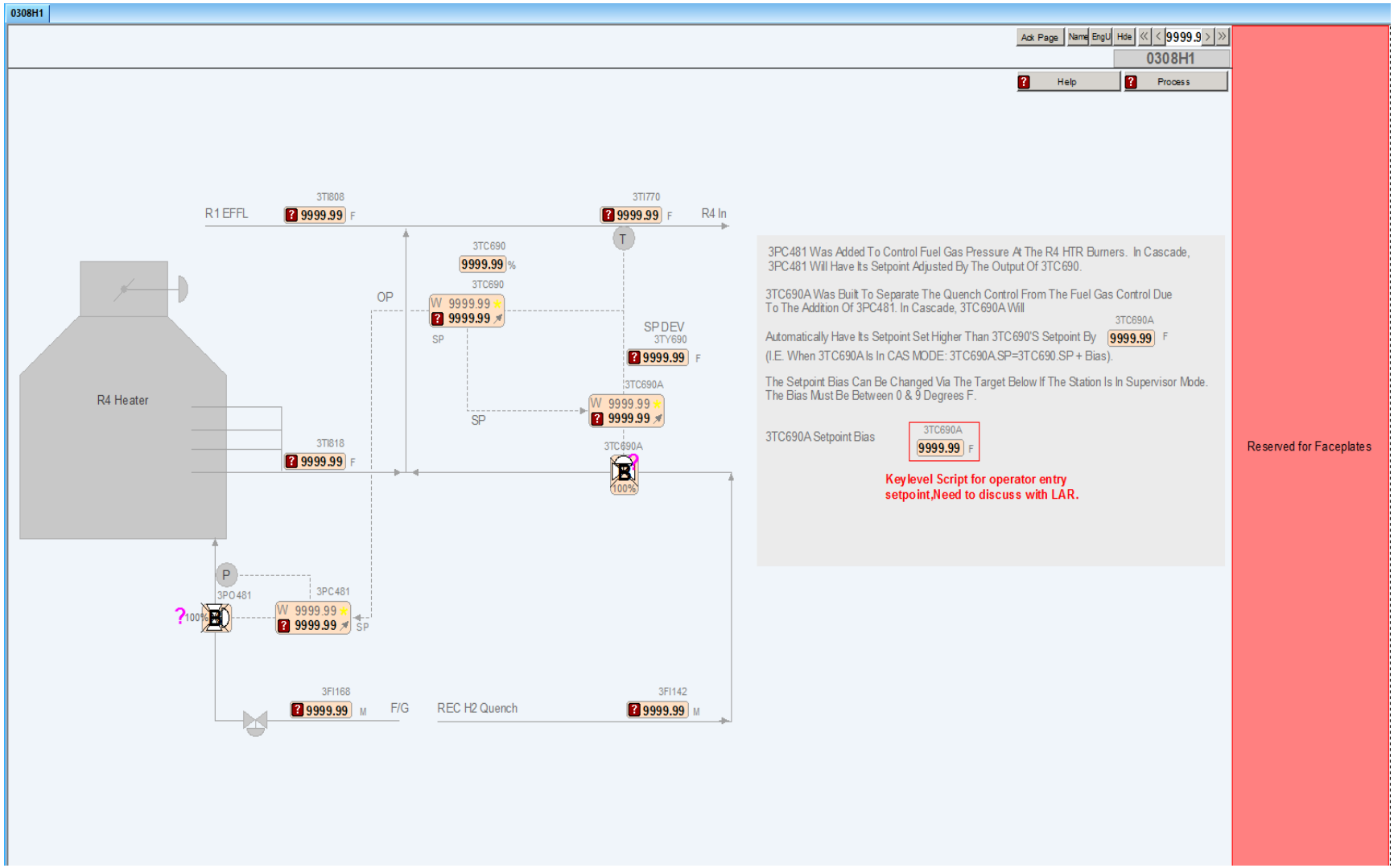

0308H
R4 REACTOR/HEATER HELP MENU
HELP DISPLAY 0308H1
R4 INLET TEMP CONTROL
HELP DISPLAY 0308H1R
R4 HTR OUT RAMP CTRL
HELP DISPLAY 0308H3
R4 COMMON BED TEMPERATURE ALARMING
HELP DISPLAY HELPDUT4
HEATER DUTY CALC
HELP DISPLAY 0308H5
R4 O2 OVERRIDE
PROCESS 0308
R4 REACTOR & HEATER
PROCESS 0322
R4 RX BED TEMPS
PROCESS 0322C
R4 RX COOLDOWN
ENGRN'G DISPLAY 0308E3A
R4 COMMON BED TEMPERATURE ALARMING
ENGRN'G DISPLAY 0308E3B
R4 COMMON BED TEMPERATURE ALARMING
ENGRN'G DISPLAY 0308E4
R4 HEATER FUEL GAS SHUTOFF W/ TMR TRIP


0308H
Ack Page
Name
EngU
Hde
9999.9
0308H
R4 Reactor/Heater Help Menu
Help Display 0308H1
R4 Inlet Temp Control
Help Display 0308H1R
R4 HTR Out Ramp CTRL
Help Display 0308H3
R4 Common Bed Temperature Alarming
Help Display HELPDUT4
Heater Duty CALC
Help Display 0308H5
R4 O2 Override
Process 0308
R4 Reactor & Heater
Process 0322
R4 RX Bed TEMPS
Process 0322C
R4 RX Cooldown
ENGRN'G Display 0308E3A
R4 Common Bed Temperature Alarming
ENGRN'G Display 0308E3B
R4 Common Bed Temperature Alarming
ENGRN'G Display 0308E4
R4 Heater Fuel Gas Shutoff W/ TMR Trip
Reserved for Faceplates

3.38 R4 INLET TEMPERATURE CONTROL HELP (0308H1.DS)

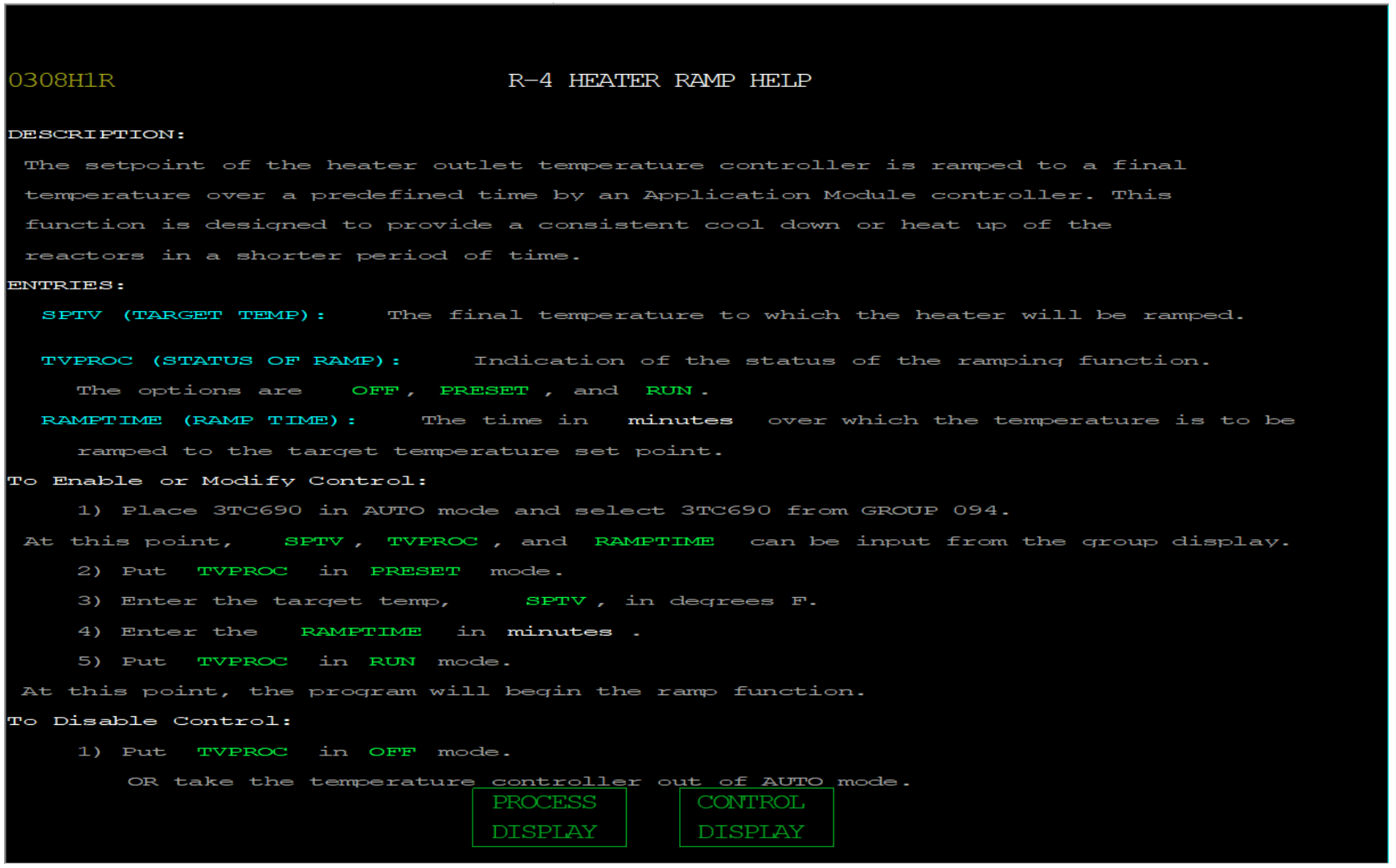


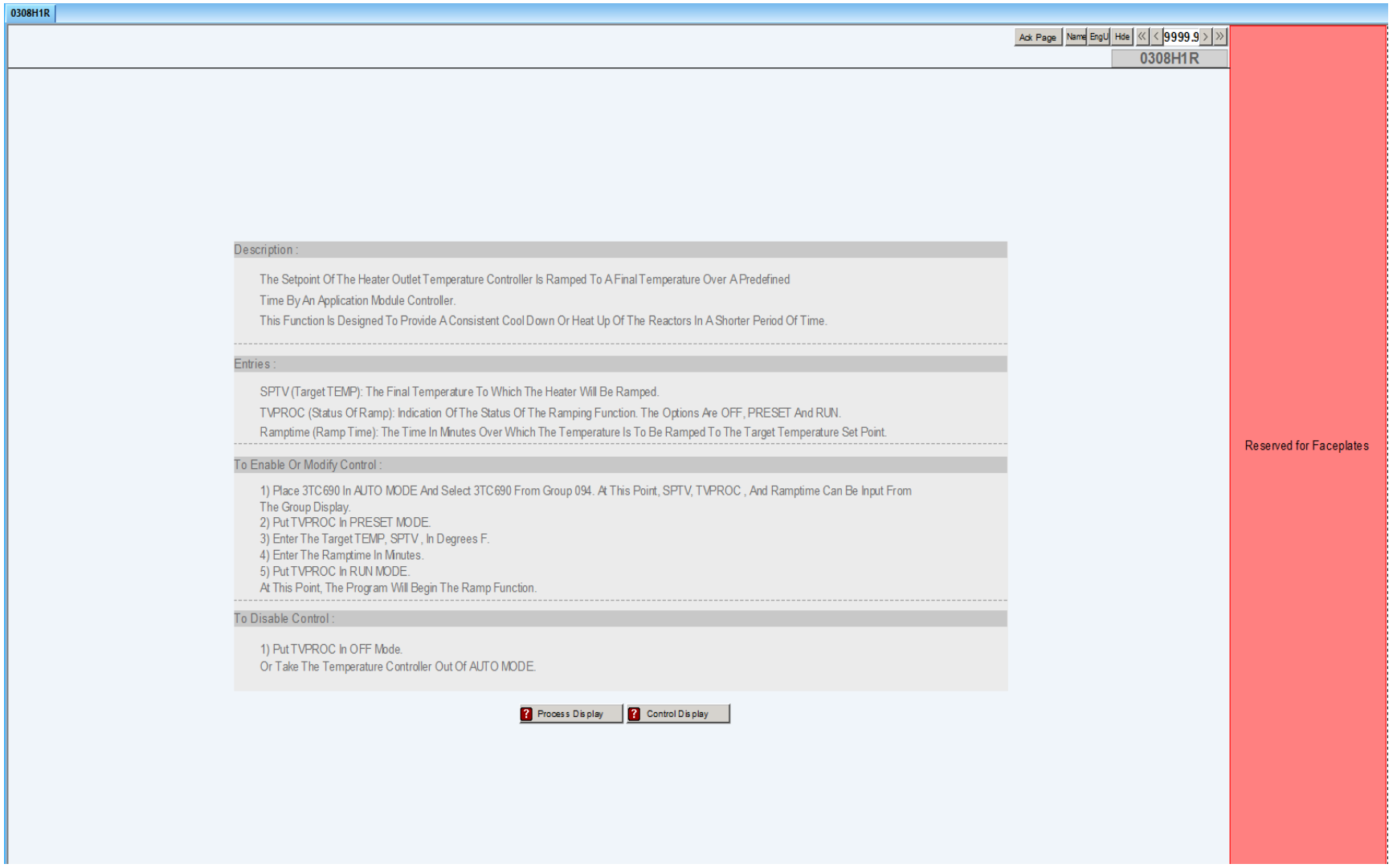

0308H1
R4 INLET TEMPERATURE CONTROL HELP
HELP
PROCESS
R1 EFFL
RRRR F
RRRR F
R4 IN
3TC690
RRRR %
RRRR E
TTTTTT
SP
OP
SP DEV
RRRR F
R4 HEATER
RRRR E
TTTTTT
SP
RRRR F
3PC481
RRRR %
3TC690A
RRRR %
RRRR E
TTTTTT
SP
RRRR M F/G
REC H2 QUENCH
RRRR M
EEEEEE
Group III
3PC481 WAS ADDED TO CONTROL FUEL GAS PRESSURE AT THE R4 HTR BURNERS. IN CASCADE, 3PC481 WILL HAVE ITS SETPOINT ADJUSTED BY THE OUTPUT OF 3TC690.
3TC690A WAS BUILT TO SEPARATE THE QUENCH CONTROL FROM THE FUEL GAS CONTROL DUE TO THE ADDITION OF 3PC481. IN CASCADE, 3TC690A WILL AUTOMATICALLY HAVE ITS SETPOINT SET HIGHER THAN 3TC690'S SETPOINT BY RRRR F (I.E. WHEN 3TC690A IS IN CAS MODE: 3TC690A.SP=3TC690.SP + BIAS). THE SETPOINT BIAS CAN BE CHANGED VIA THE TARGET BELOW IF THE STATION IS IN SUPERVISOR MODE. THE BIAS MUST BE BETWEEN 0 & 9 DEGREES F.
3TC690A SETPOINT BIAS
RRRR E


0308H1
Ack Page
Name
EngU
Hde
9999.9
0308H1
Help
Process
R1 EFFL
3TI808
9999.99 F
3TI770
9999.99 F
R4 In
T
3TC690
9999.99 %
3TC690
W 9999.99
9999.99
SP
OP
SP DEV
3TY690
9999.99 F
3TC690A
W 9999.99
9999.99
SP
R4 Heater
3TI818
9999.99 F
3TC690A
100%
P
3PO481
100%
3PC481
W 9999.99
9999.99
SP
3FI168
9999.99 M
F/G
REC H2 Quench
3FI142
9999.99 M
3PC481 Was Added To Control Fuel Gas Pressure At The R4 HTR Burners. In Cascade, 3PC481 Will Have Its Setpoint Adjusted By The Output Of 3TC690.
3TC690A Was Built To Separate The Quench Control From The Fuel Gas Control Due To The Addition Of 3PC481. In Cascade, 3TC690A Will
3TC690A
Automatically Have Its Setpoint Set Higher Than 3TC690'S Setpoint By 9999.99 F
(I.E. When 3TC690A Is In CAS MODE: 3TC690A.SP=3TC690.SP + Bias).
The Setpoint Bias Can Be Changed Via The Target Below If The Station Is In Supervisor Mode. The Bias Must Be Between 0 & 9 Degrees F.
3TC690A Setpoint Bias
3TC690A
9999.99 F
Keylevel Script for operator entry setpoint,Need to discuss with LAR.
Reserved for Faceplates

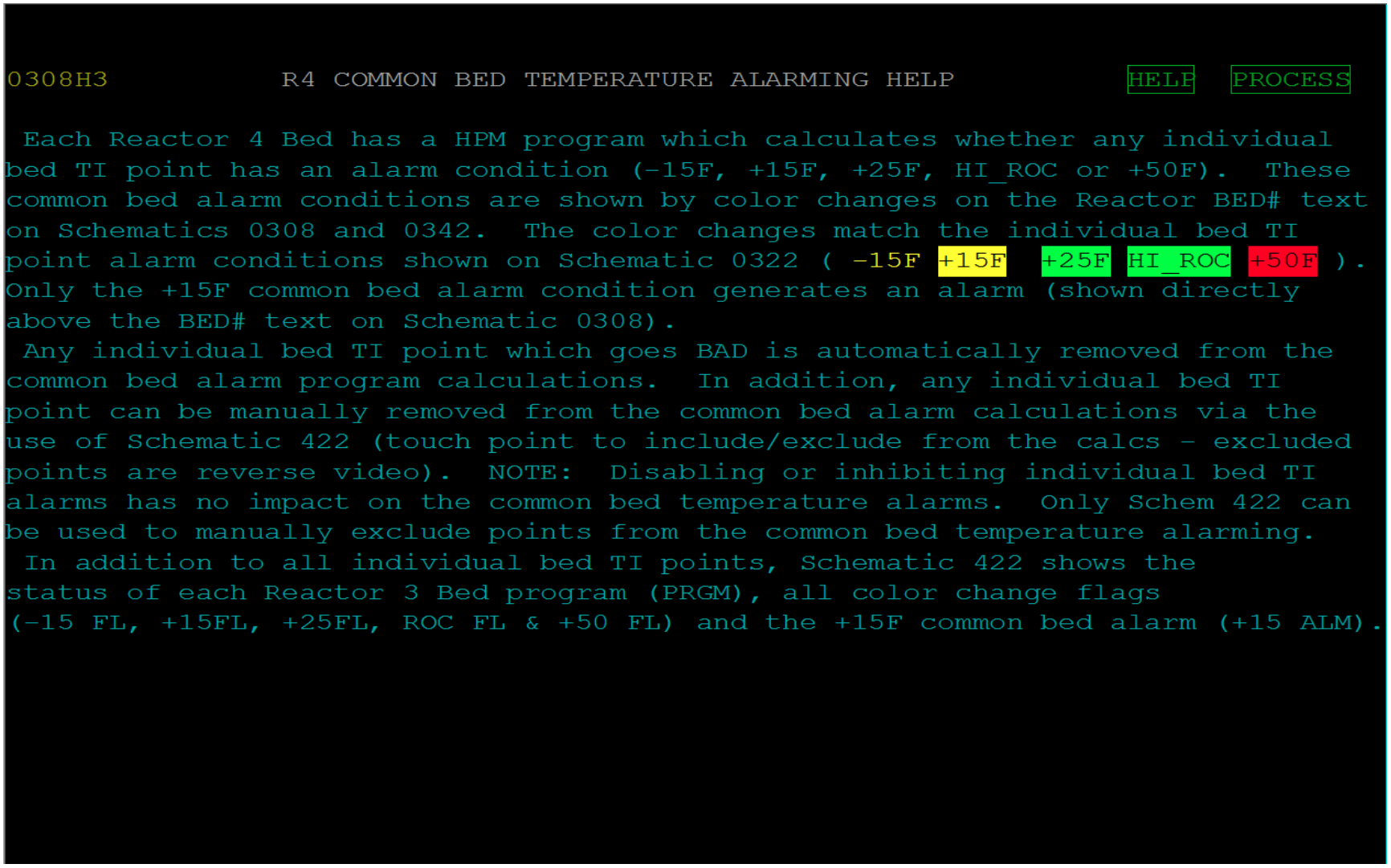
3.39 R-4 HEATER RAMP HELP (0308H1R.DS)

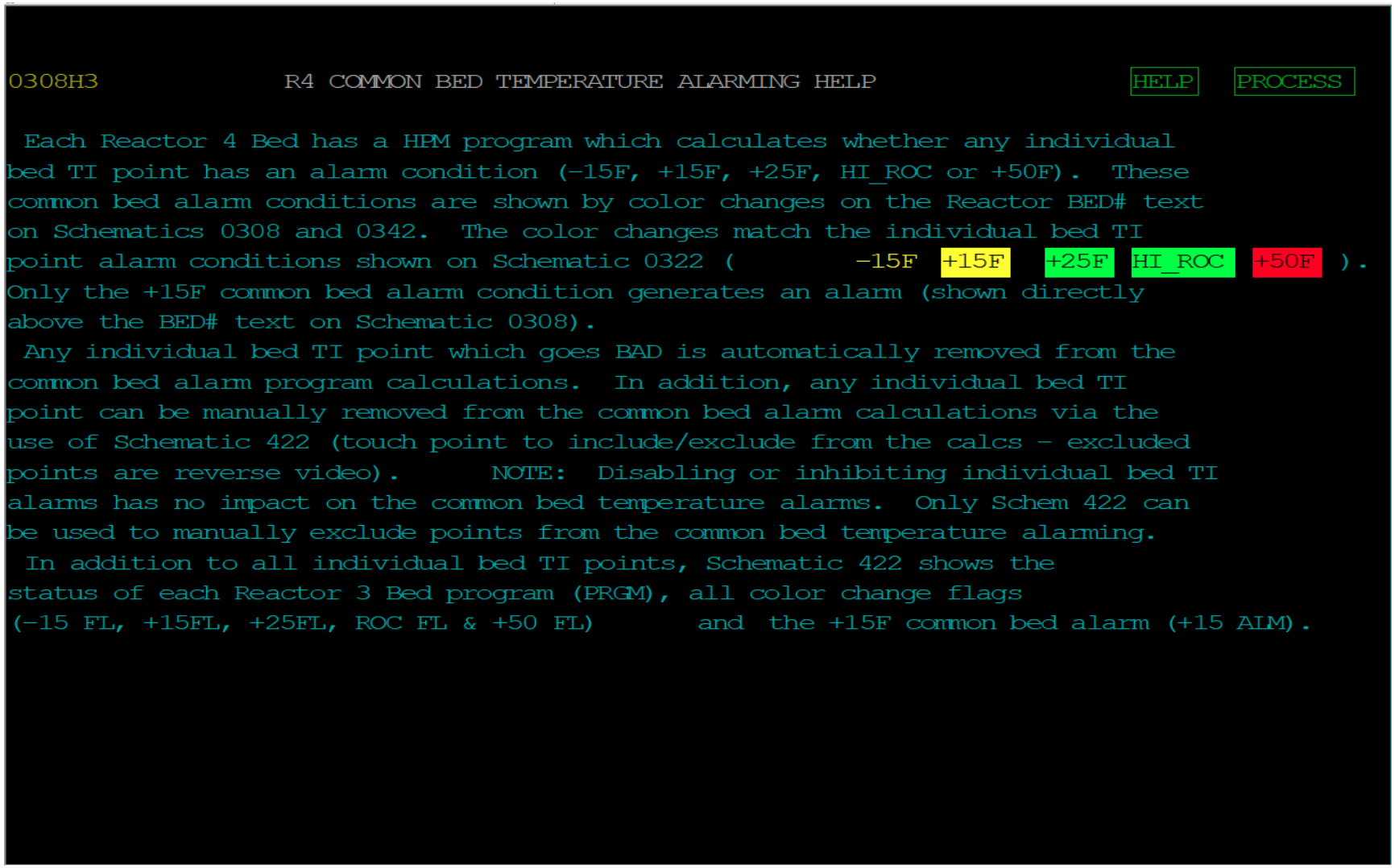
```
0308H1R                          R-4 HEATER RAMP HELP

DESCRIPTION:
 The setpoint of the heater outlet temperature controller is ramped to a final
 temperature over a predefined time by an Application Module controller. This
 function is designed to provide a consistent cool down or heat up of the
 reactors in a shorter period of time.
ENTRIES:
  SPTV (TARGET TEMP): The final temperature to which the heater will be ramped.

  TVPROC (STATUS OF RAMP): Indication of the status of the ramping function.
    The options are OFF, PRESET, and RUN.
  RAMPTIME (RAMP TIME): The time in minutes over which the temperature is to be
    ramped to the target temperature set point.
To Enable or Modify Control:
    1) Place 3TC690 in AUTO mode and select 3TC690 from GROUP 094.
 At this point, SPTV, TVPROC, and RAMPTIME can be input from the group display.
    2) Put TVPROC in PRESET mode.
    3) Enter the target temp, SPTV, in degrees F.
    4) Enter the RAMPTIME in minutes.
    5) Put TVPROC in RUN mode.
 At this point, the program will begin the ramp function.
To Disable Control:
    1) Put TVPROC in OFF mode.
       OR take the temperature controller out of AUTO mode.
                          PROCESS    CONTROL
                          DISPLAY    DISPLAY
```

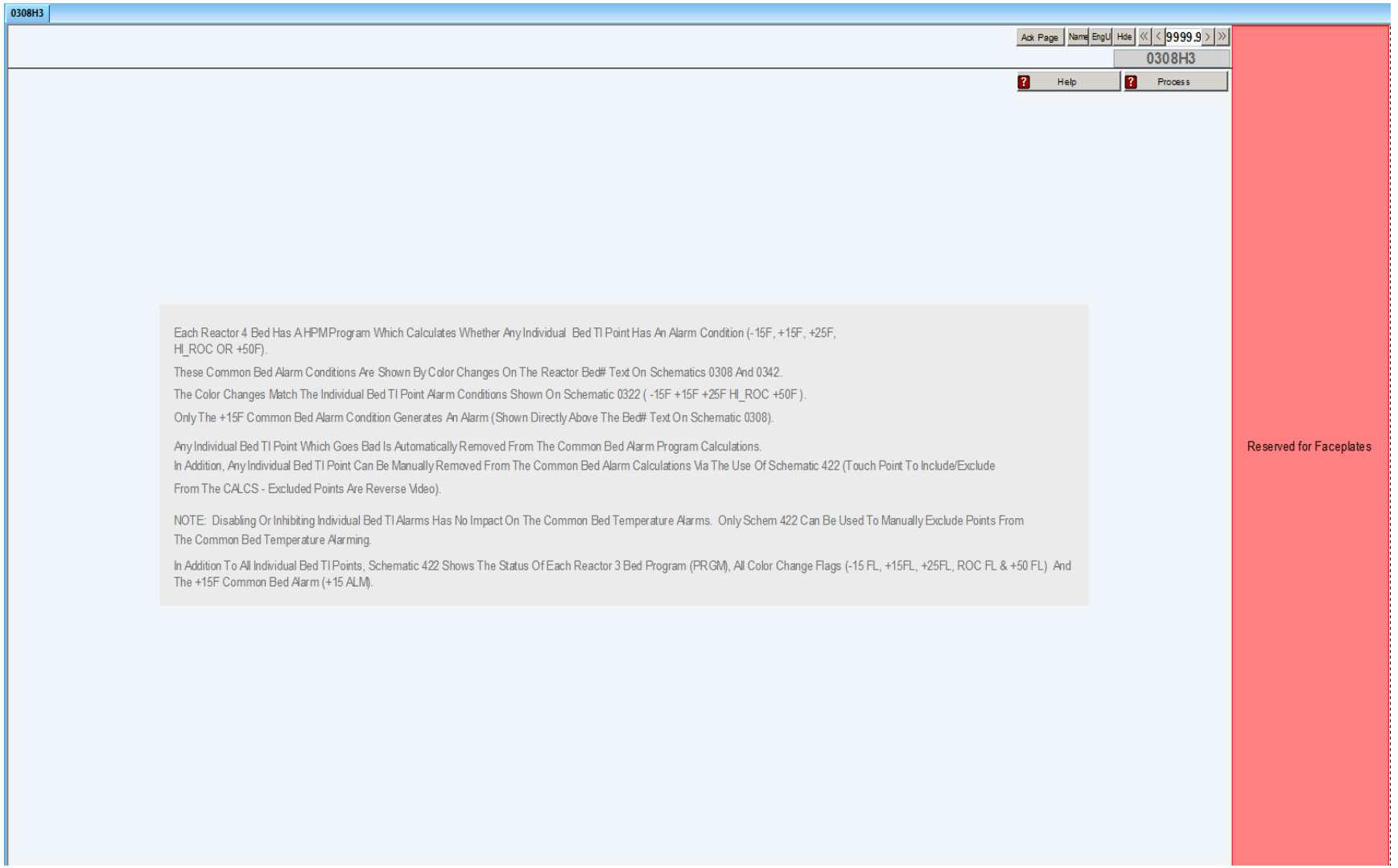

0308H1R
R-4 HEATER RAMP HELP
DESCRIPTION:
The setpoint of the heater outlet temperature controller is ramped to a final temperature over a predefined time by an Application Module controller. This function is designed to provide a consistent cool down or heat up of the reactors in a shorter period of time.
ENTRIES:
SPTV (TARGET TEMP): The final temperature to which the heater will be ramped.
TVPROC (STATUS OF RAMP): Indication of the status of the ramping function.
The options are OFF, PRESET, and RUN.
RAMPTIME (RAMP TIME): The time in minutes over which the temperature is to be ramped to the target temperature set point.
To Enable or Modify Control:
1) Place 3TC690 in AUTO mode and select 3TC690 from GROUP 094.
At this point, SPTV, TVPROC, and RAMPTIME can be input from the group display.
2) Put TVPROC in PRESET mode.
3) Enter the target temp, SPTV, in degrees F.
4) Enter the RAMPTIME in minutes.
5) Put TVPROC in RUN mode.
At this point, the program will begin the ramp function.
To Disable Control:
1) Put TVPROC in OFF mode.
OR take the temperature controller out of AUTO mode.
PROCESS DISPLAY
CONTROL DISPLAY


0308H1R
Ack Page
Name
Engl
Hde
9999.9
0308H1R
Description :
The Setpoint Of The Heater Outlet Temperature Controller Is Ramped To A Final Temperature Over A Predefined
Time By An Application Module Controller.
This Function Is Designed To Provide A Consistent Cool Down Or Heat Up Of The Reactors In A Shorter Period Of Time.
Entries :
SPTV (Target TEMP): The Final Temperature To Which The Heater Will Be Ramped.
TVPROC (Status Of Ramp): Indication Of The Status Of The Ramping Function. The Options Are OFF, PRESET And RUN.
Ramptime (Ramp Time): The Time In Minutes Over Which The Temperature Is To Be Ramped To The Target Temperature Set Point.
To Enable Or Modify Control :
1) Place 3TC690 In AUTO MODE And Select 3TC690 From Group 094. At This Point, SPTV, TVPROC , And Ramptime Can Be Input From
The Group Display.
2) Put TVPROC In PRESET MODE.
3) Enter The Target TEMP, SPTV , In Degrees F.
4) Enter The Ramptime In Minutes.
5) Put TVPROC In RUN MODE.
At This Point, The Program Will Begin The Ramp Function.
To Disable Control :
1) Put TVPROC In OFF Mode.
Or Take The Temperature Controller Out Of AUTO MODE.
Process Display
Control Display
Reserved for Faceplates

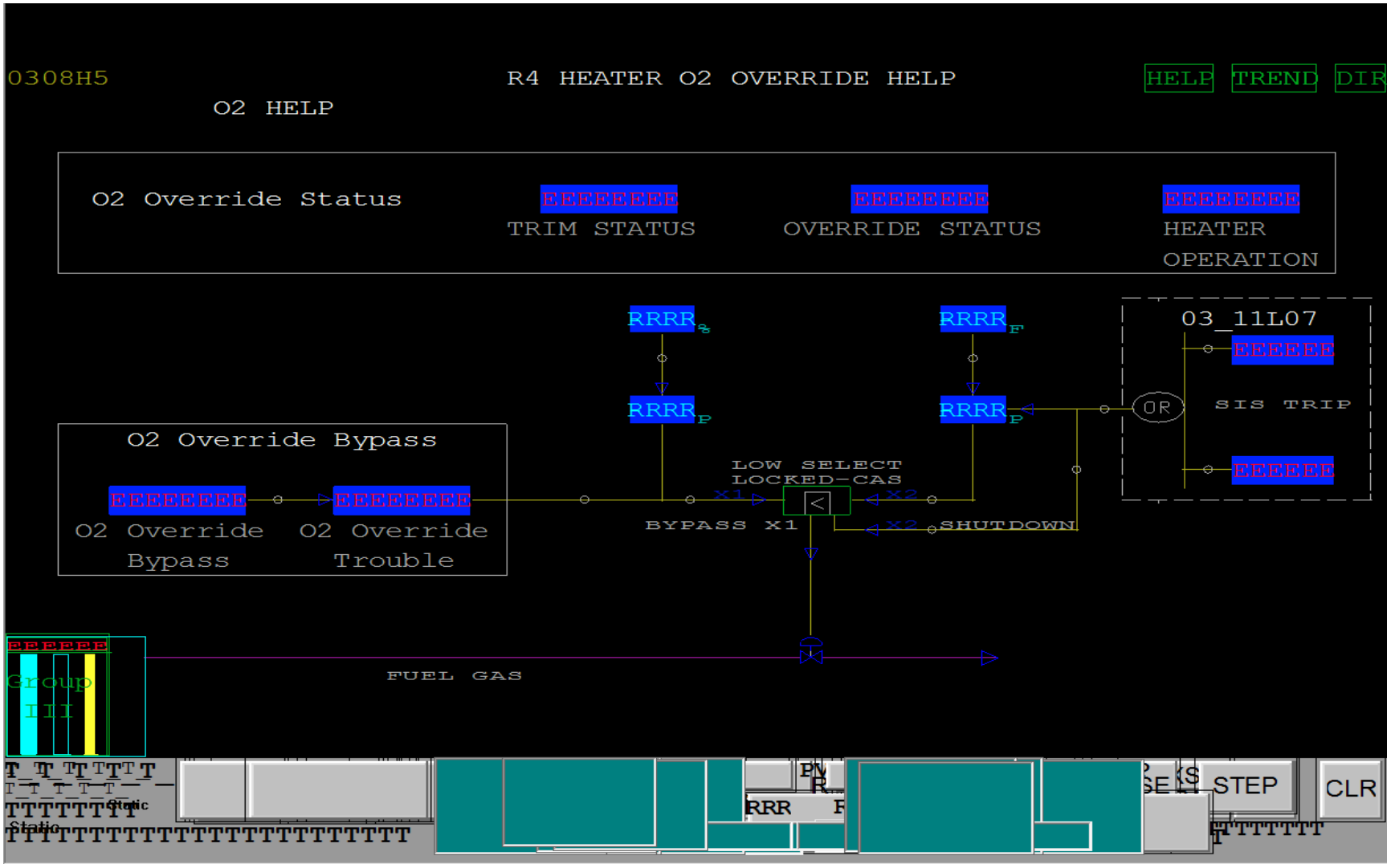
3.40 R4 COMMON BED TEMPERATURE ALARMING HELP (0308H3.DS)

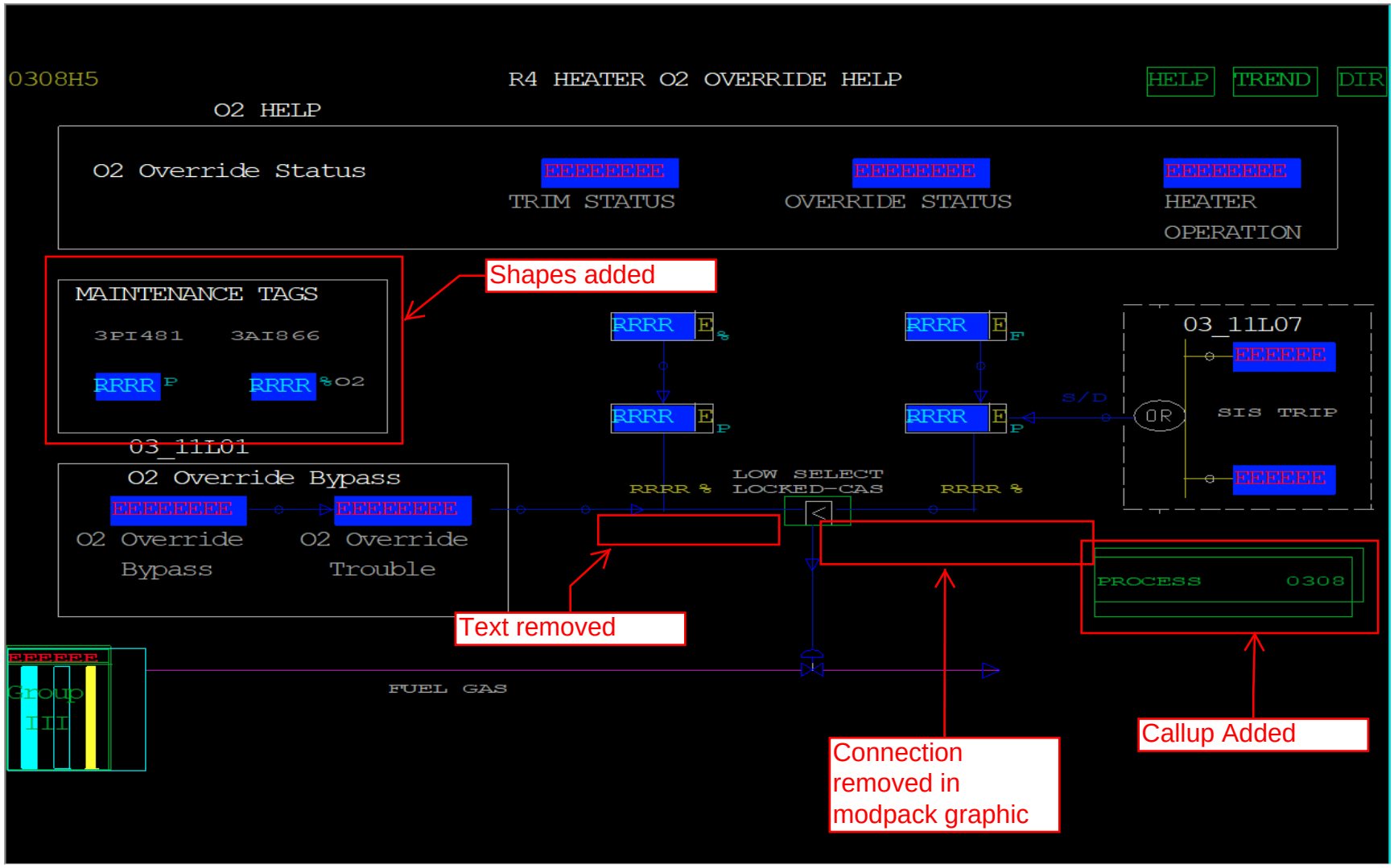


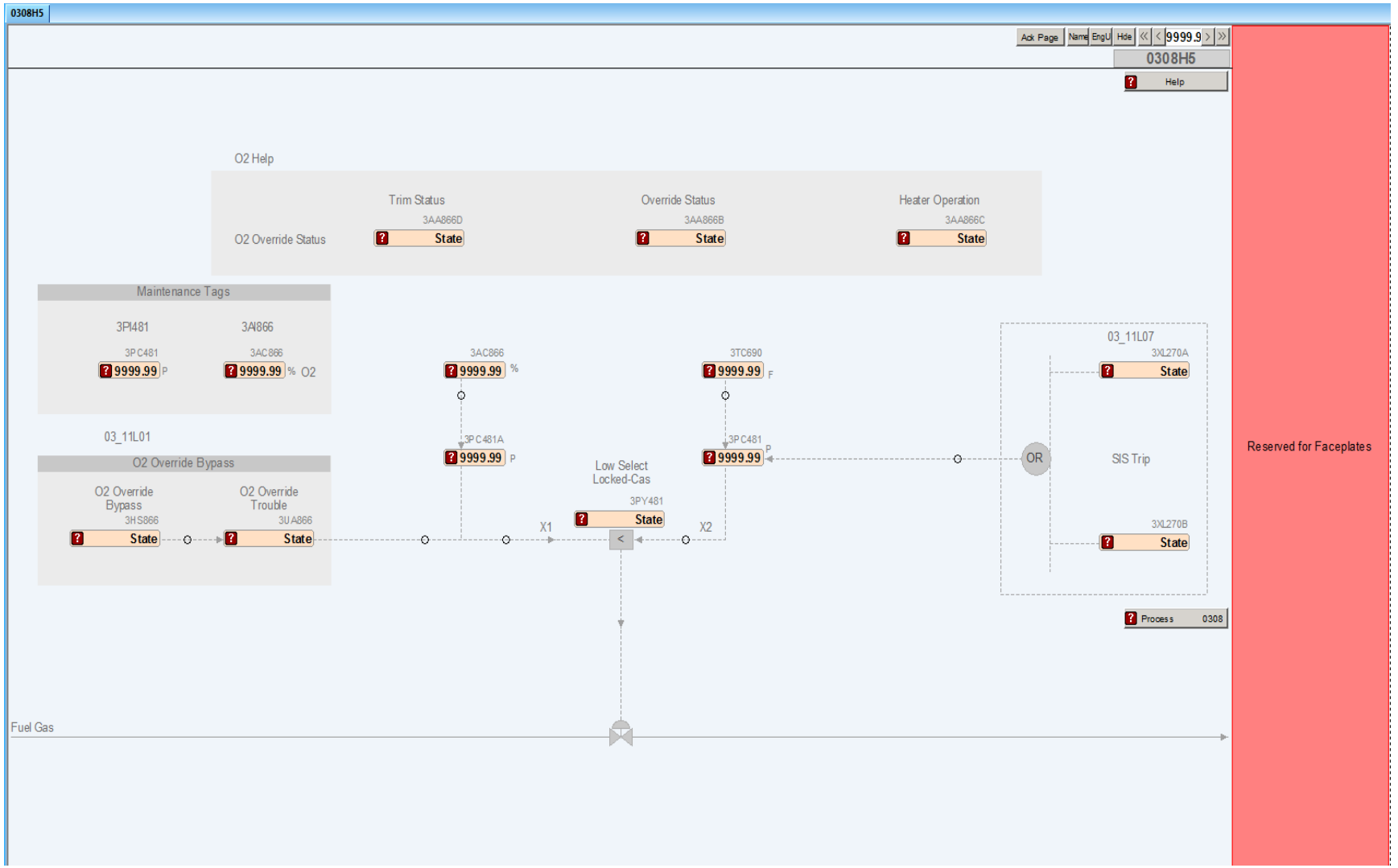

0308H3
R4 COMMON BED TEMPERATURE ALARMING HELP
HELP
PROCESS
Each Reactor 4 Bed has a HPM program which calculates whether any individual bed TI point has an alarm condition (-15F, +15F, +25F, HI_ROC or +50F). These common bed alarm conditions are shown by color changes on the Reactor BED# text on Schematics 0308 and 0342. The color changes match the individual bed TI point alarm conditions shown on Schematic 0322 (-15F +15F +25F HI_ROC +50F).
Only the +15F common bed alarm condition generates an alarm (shown directly above the BED# text on Schematic 0308).
Any individual bed TI point which goes BAD is automatically removed from the common bed alarm program calculations. In addition, any individual bed TI point can be manually removed from the common bed alarm calculations via the use of Schematic 422 (touch point to include/exclude from the calcs - excluded points are reverse video). NOTE: Disabling or inhibiting individual bed TI alarms has no impact on the common bed temperature alarms. Only Schem 422 can be used to manually exclude points from the common bed temperature alarming.
In addition to all individual bed TI points, Schematic 422 shows the status of each Reactor 3 Bed program (PRGM), all color change flags (-15 FL, +15FL, +25FL, ROC FL & +50 FL) and the +15F common bed alarm (+15 ALM).


0308H3
Ack Page
Name
Engl
Hde
9999.9
0308H3
Help
Process
Each Reactor 4 Bed Has A HPM Program Which Calculates Whether Any Individual Bed TI Point Has An Alarm Condition (-15F, +15F, +25F, HI_ROC OR +50F).
These Common Bed Alarm Conditions Are Shown By Color Changes On The Reactor Bed# Text On Schematics 0308 And 0342.
The Color Changes Match The Individual Bed TI Point Alarm Conditions Shown On Schematic 0322 (-15F +15F +25F HI_ROC +50F).
Only The +15F Common Bed Alarm Condition Generates An Alarm (Shown Directly Above The Bed# Text On Schematic 0308).
Any Individual Bed TI Point Which Goes Bad Is Automatically Removed From The Common Bed Alarm Program Calculations.
In Addition, Any Individual Bed TI Point Can Be Manually Removed From The Common Bed Alarm Calculations Via The Use Of Schematic 422 (Touch Point To Include/Exclude From The CALCS - Excluded Points Are Reverse Video).
NOTE: Disabling Or Inhibiting Individual Bed TI Alarms Has No Impact On The Common Bed Temperature Alarms. Only Schem 422 Can Be Used To Manually Exclude Points From The Common Bed Temperature Alarming.
In Addition To All Individual Bed TI Points, Schematic 422 Shows The Status Of Each Reactor 3 Bed Program (PRGM), All Color Change Flags (-15 FL, +15FL, +25FL, ROC FL & +50 FL) And The +15F Common Bed Alarm (+15 ALM).
Reserved for Faceplates

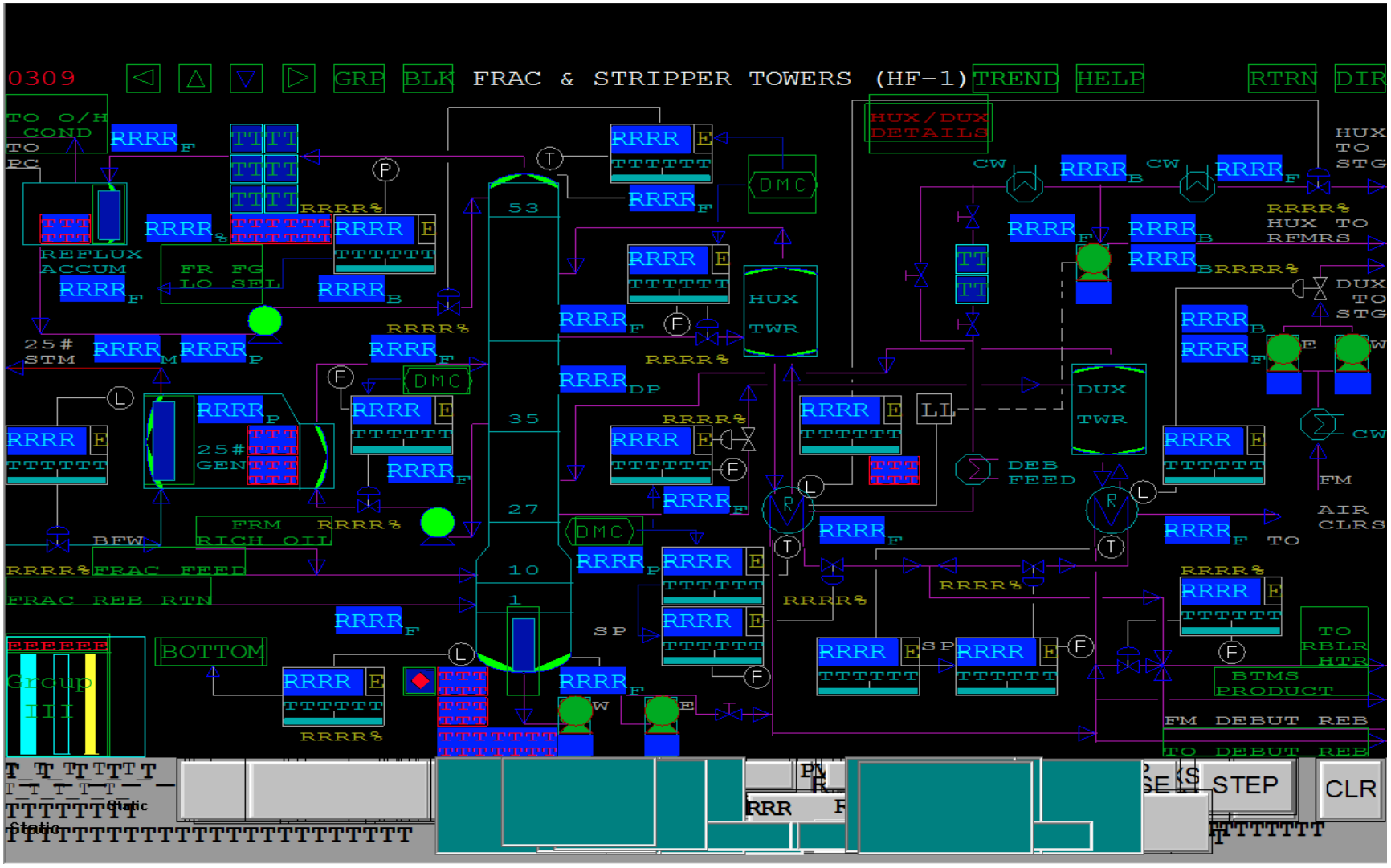
3.41 R4 HEATER O2 OVERRIDE HELP (0308H5.DS)

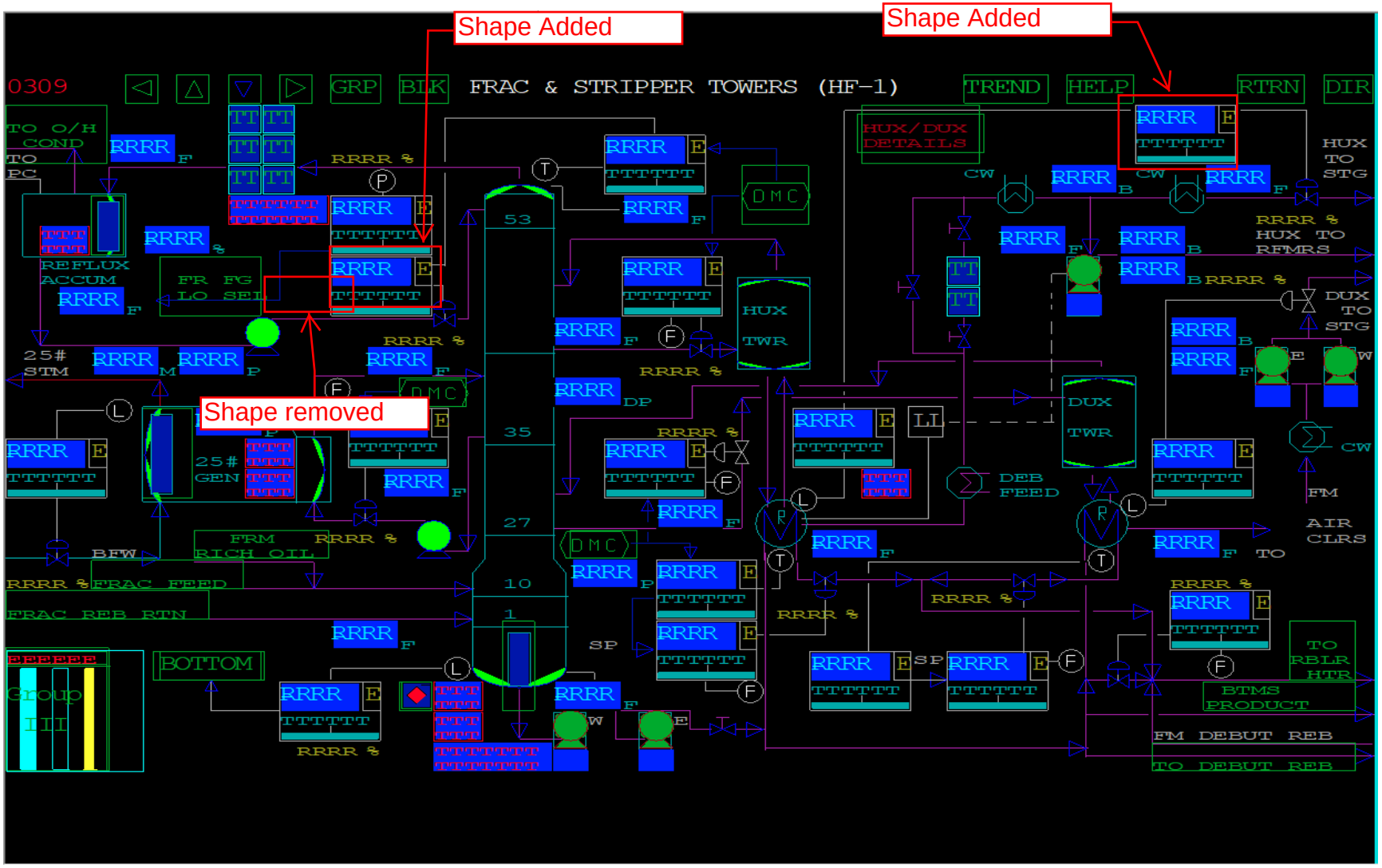


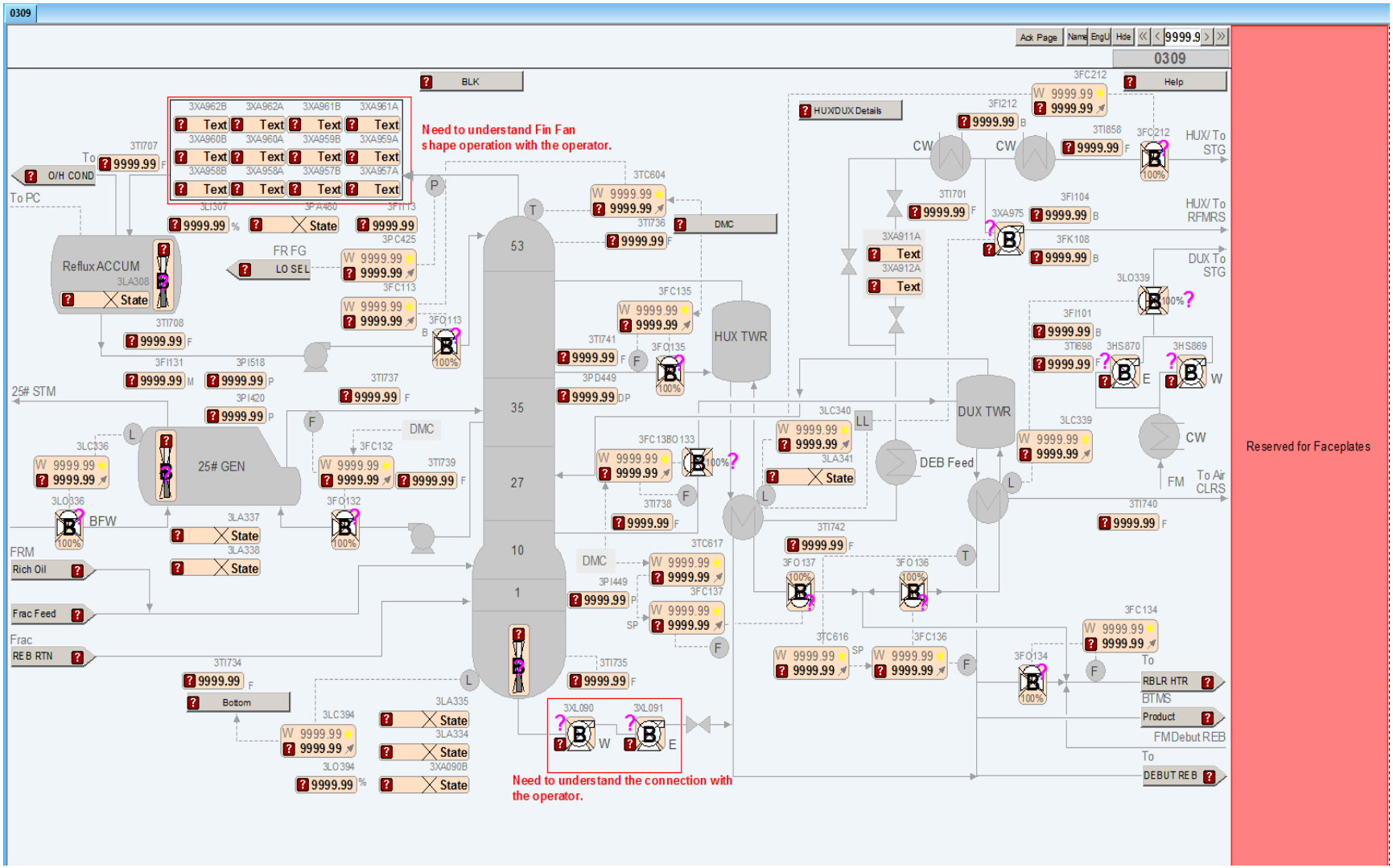

0308H5
R4 HEATER O2 OVERRIDE HELP
HELP
TREND
DIR
O2 HELP
O2 Override Status
EEEEEEEE
TRIM STATUS
EEEEEEEE
OVERRIDE STATUS
EEEEEEEE
HEATER OPERATION
MAINTENANCE TAGS
3PI481
3AI866
RRRR P
RRRR %O2
Shapes added
03_11L01
O2 Override Bypass
EEEEEEEE
EEEEEEEE
O2 Override Bypass
O2 Override Trouble
RRRR E %
RRRR E P
RRRR E F
RRRR E P
S/D
OR
03_11L07
EEEEEE
SIS TRIP
EEEEEE
LOW SELECT
LOCKED-CAS
RRRR %
RRRR %
PROCESS
0308
Text removed
EEEEEE
Group III
FUEL GAS
Connection removed in modpack graphic
Callup Added


0308H5
Ack Page
Name
Engu
Hde
9999.9
0308H5
Help
O2 Help
Trim Status
3AA866D
State
Override Status
3AA866B
State
Heater Operation
3AA866C
State
O2 Override Status
Maintenance Tags
3PI481
3PC481
9999.99
P
3AI866
3AC866
9999.99
% O2
03_11L01
O2 Override Bypass
O2 Override Bypass
3HS866
State
O2 Override Trouble
3UA866
State
3AC866
9999.99
%
3PC481A
9999.99
P
X1
Low Select Locked-Cas
3PY481
State
X2
3TC690
9999.99
F
3PC481
9999.99
P
OR
03_11L07
3XL270A
State
SIS Trip
3XL270B
State
Process
0308
Reserved for Faceplates
Fuel Gas

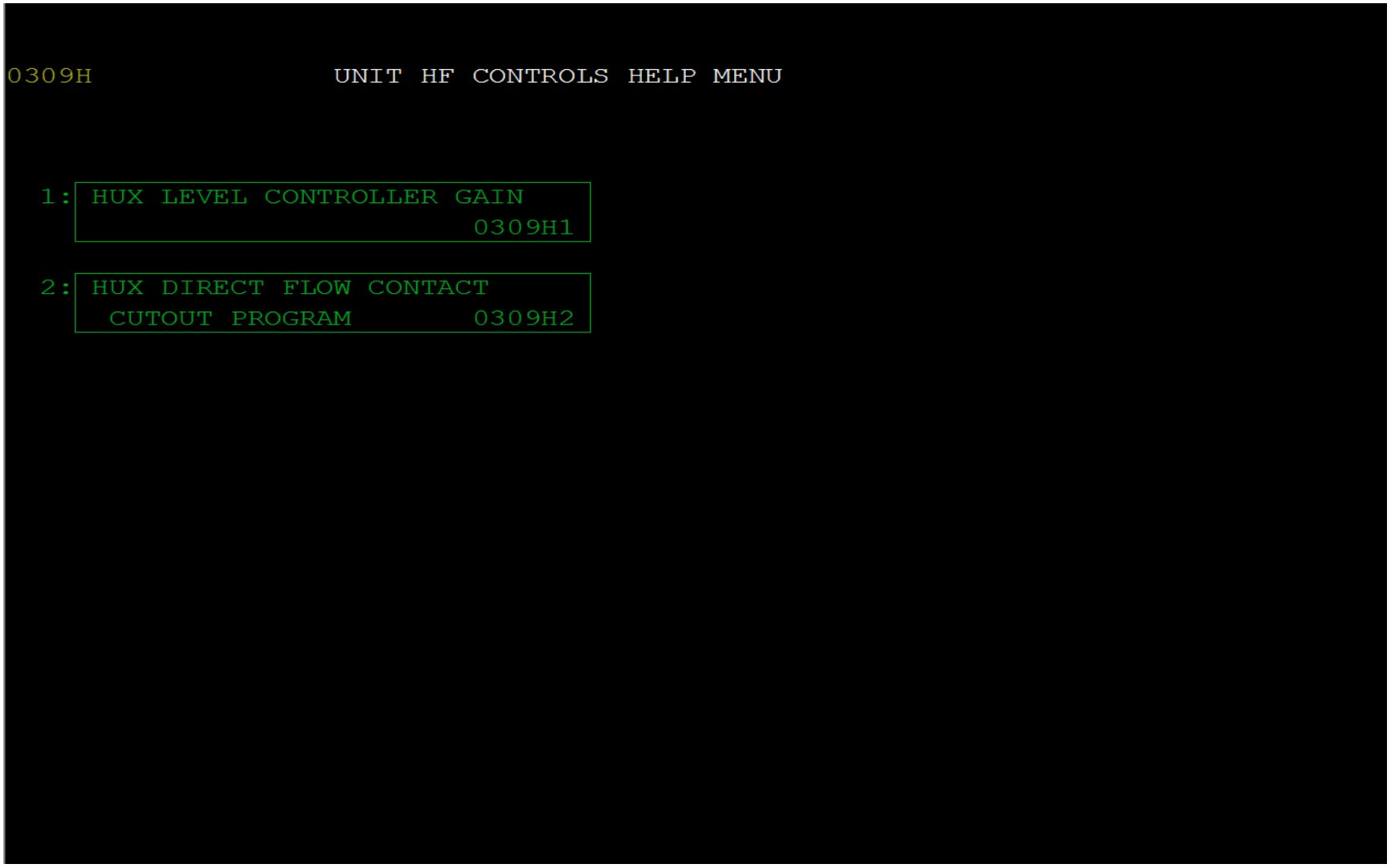
3.42 FRAC & STRIPPER TOWERS (HF-1) (0309.DS)

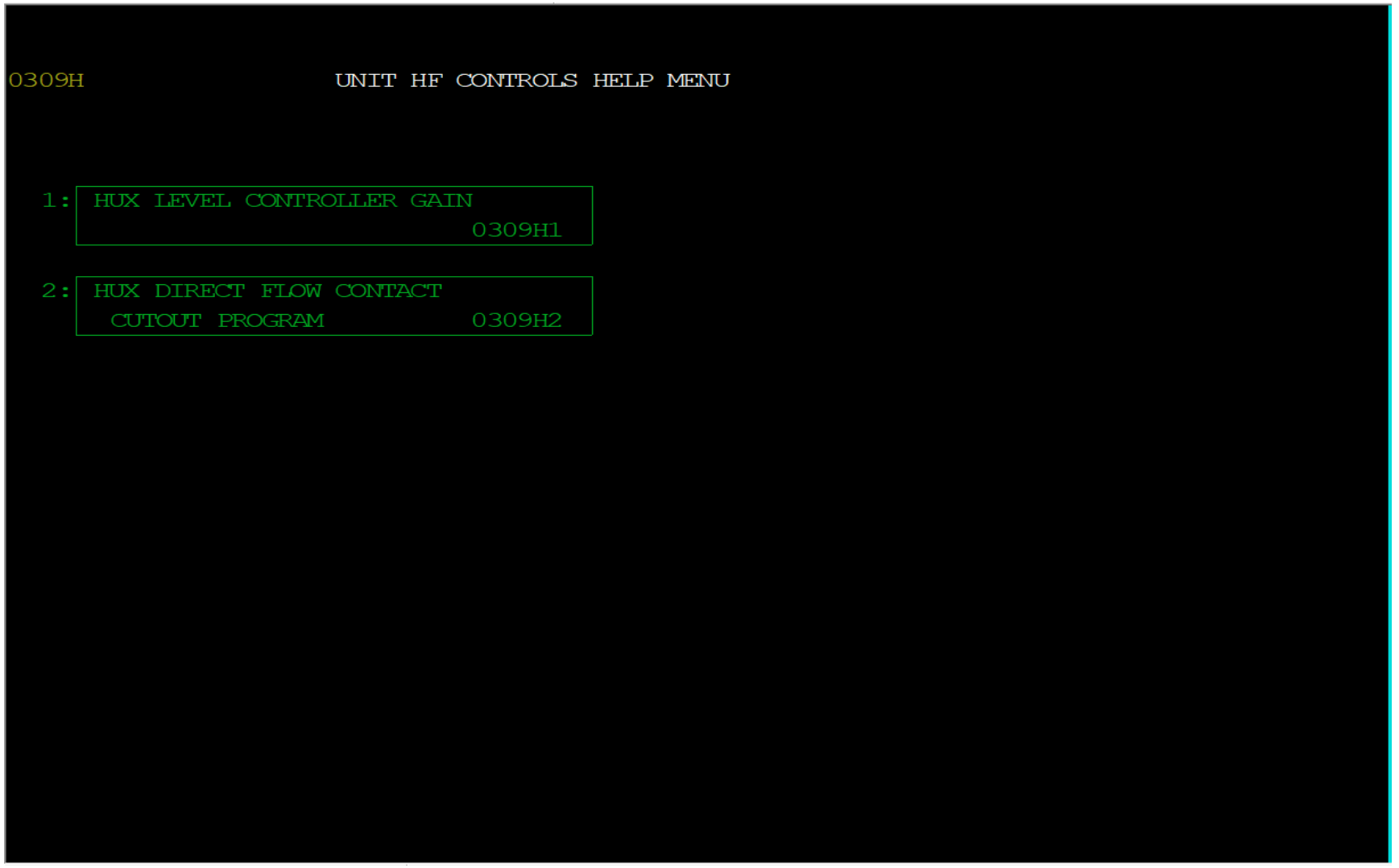


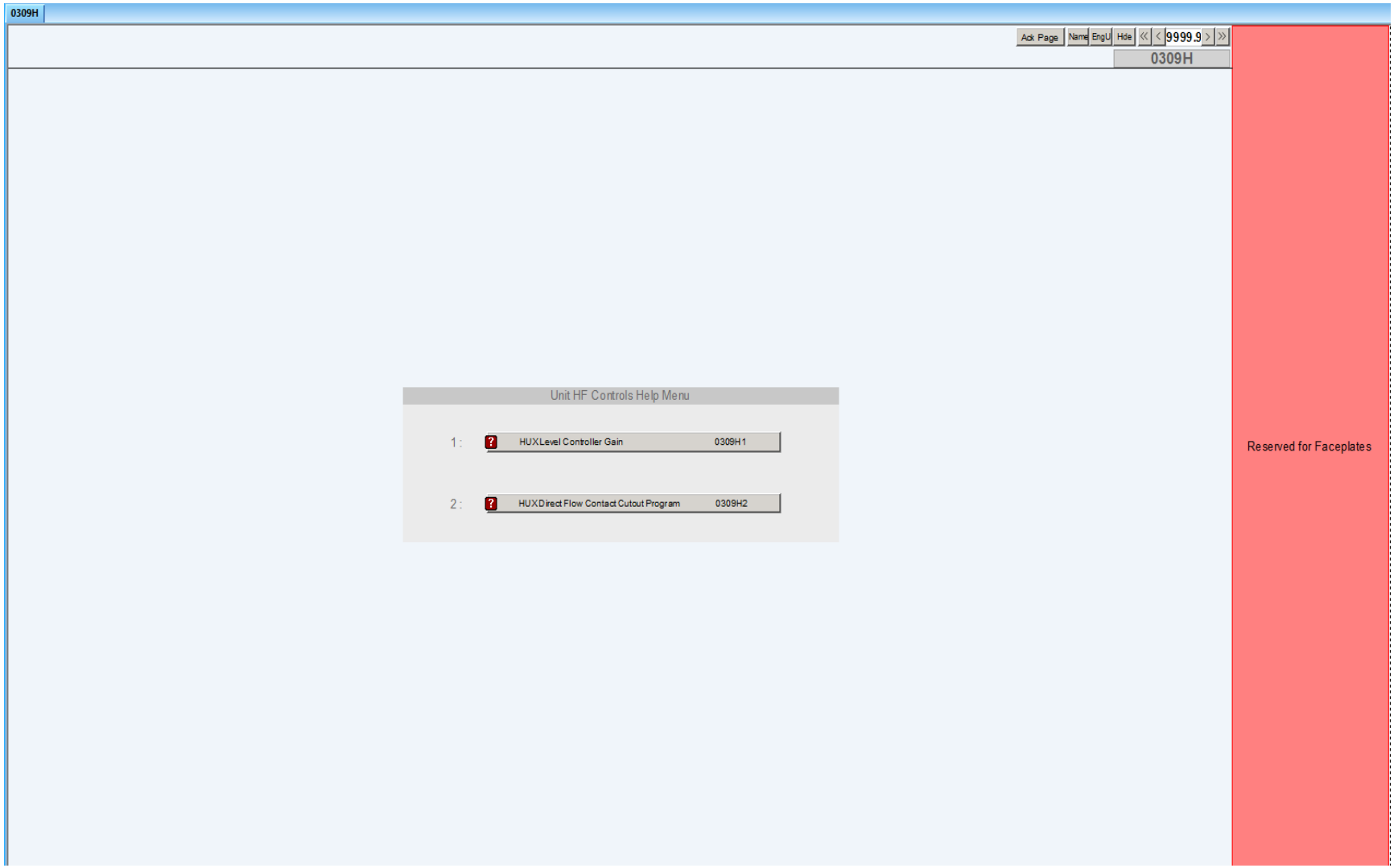

Shape Added
Shape Added
Shape removed
0309
FRAC & STRIPPER TOWERS (HF-1)
GRP
BLK
TREND
HELP
RTRN
DIR
HUX/DUX DETAILS
HUX TO STG
DUX TO STG
RRRR % HUX TO RFMRS
REFLUX ACCUM
FR FG LO SEL
25# STM
25# GEN
HUX TWR
DUX TWR
DEB FEED
FM
AIR CLRS
FRM RICH OIL
FRAC FEED
FRAC REB RTN
BOTTOM
Group III
TO RBLR HTR
BTMS PRODUCT
FM DEBUT REB
TO DEBUT REB


0309
Ack Page
Name
Eng'g
Hide
0309
BLK
Help
HUXDUX Details
Need to understand Fin Fan shape operation with the operator.
Need to understand the connection with the operator.
Reflux ACCUM
3LA308
State
O/H COND
To PC
LO SEL
FR FG
25# STM
25# GEN
BFW
FRM
Rich Oil
Frac Feed
Frac
REB RTN
Bottom
DMC
HUX TWR
DUX TWR
DEB Feed
CW
FM
To Air CLRS
HUX/ To STG
HUX/ To RFMRS
DUX To STG
RBLR HTR
BTMS
Product
FMDebut REB
DEBUT REB
To
Reserved for Faceplates
53
35
27
10
1

3.43 UNIT HF CONTROLS HELP MENU (0309H.DS)




0309H
UNIT HF CONTROLS HELP MENU
1:
HUX LEVEL CONTROLLER GAIN
0309H1
2:
HUX DIRECT FLOW CONTACT
CUTOUT PROGRAM
0309H2


0309H
Ack Page
Name
EngU
Hde
9999.9
0309H
Unit HF Controls Help Menu
1 :
HUXLevel Controller Gain
0309H1
2 :
HUXDirect Flow Contact Cutout Program
0309H2
Reserved for Faceplates

3.44 HUX DIRECT FLOW CONTACT CUTOUT PROGRAM (0309H2.DS)

```
0309H2              HUX DIRECT FLOW CONTACT CUTOUT PROGRAM


THERE IS A PROGRAM ATTACHED TO 3FA3104 WHICH MONITORS THE STATUS OF THE HUX
DIRECT PUMP, 3XA975. IF IT DETECTS THAT THE PUMP IS OFF, IT SET THE CONTACT
CUTOUT PARAMETER (CONTCUT) OF 3FI104 TO ON.  THIS PREVENTS GETTING AN ALARM
FOR A SYSTEM THAT IS DOWN.


GREG RUHL  EXT. 8249, PAGER 2153
```

0309H2 HUX DIRECT FLOW CONTACT CUTOUT PROGRAM

THERE IS A PROGRAM ATTACHED TO 3FA3104 WHICH MONITORS THE STATUS OF THE HUX DIRECT PUMP, 3XA975. IF IT DETECTS THAT THE PUMP IS OFF, IT SET THE CONTACT CUTOUT PARAMETER (CONTCUT) OF 3FI104 TO ON. THIS PREVENTS GETTING AN ALARM FOR A SYSTEM THAT IS DOWN.

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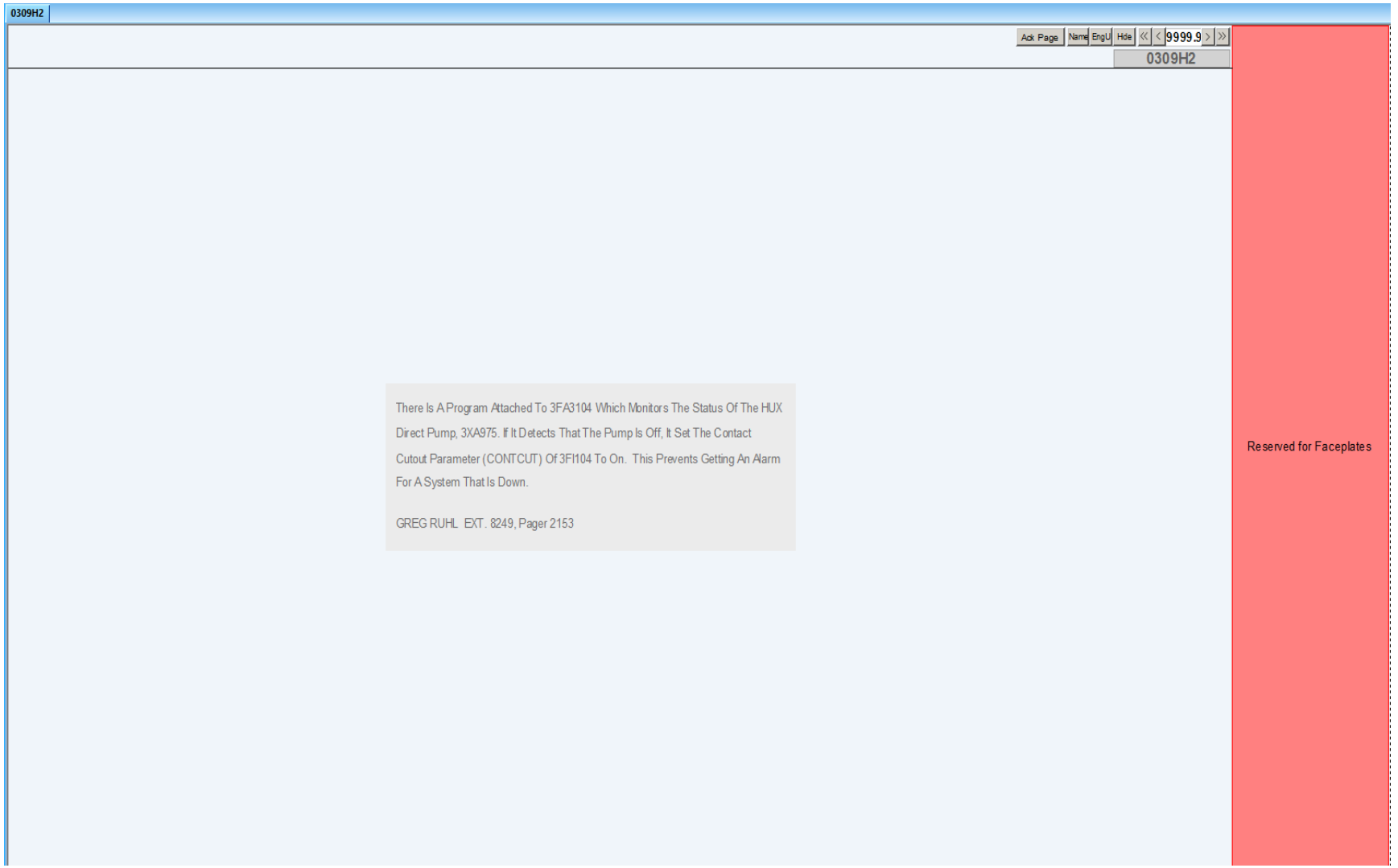
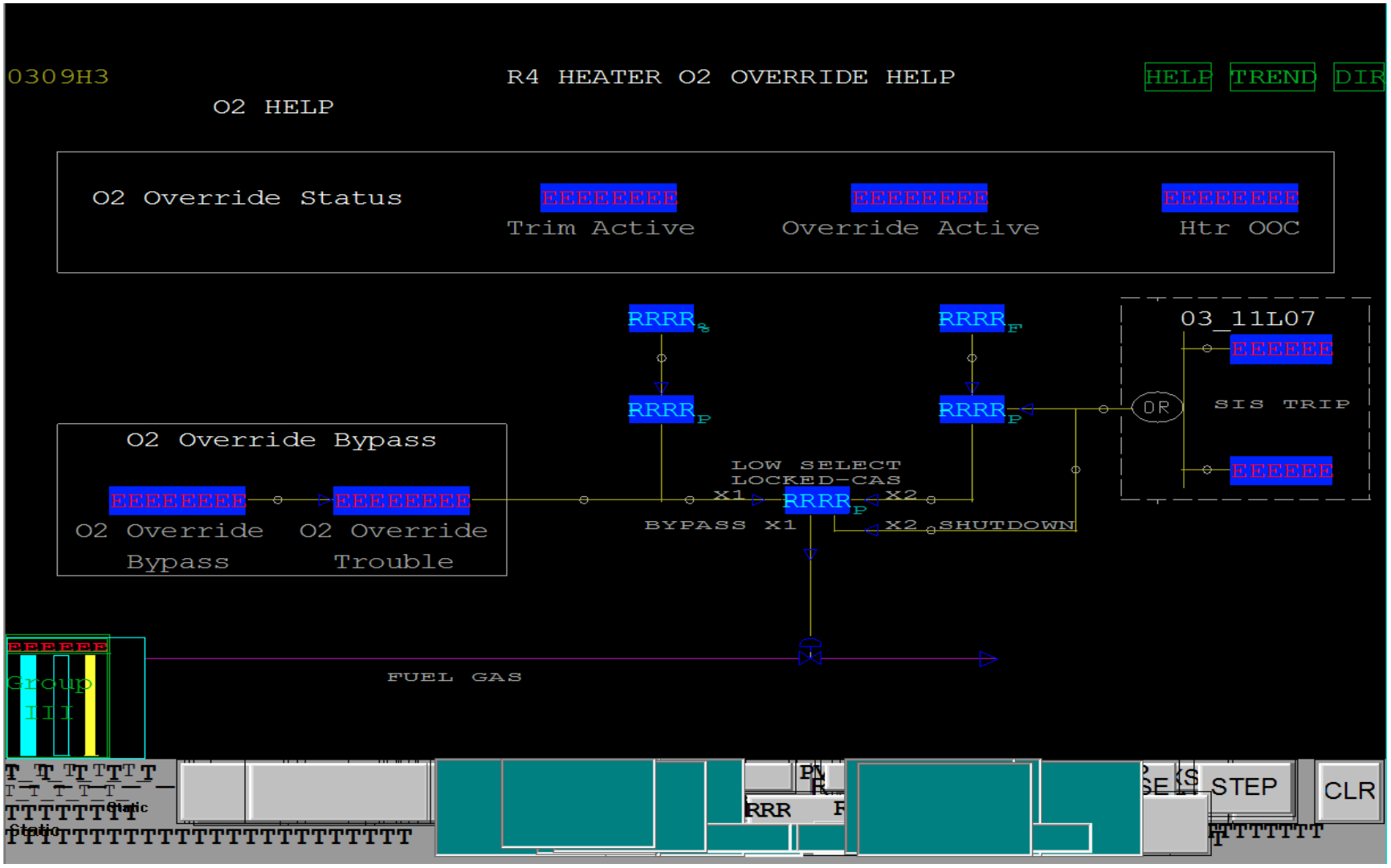
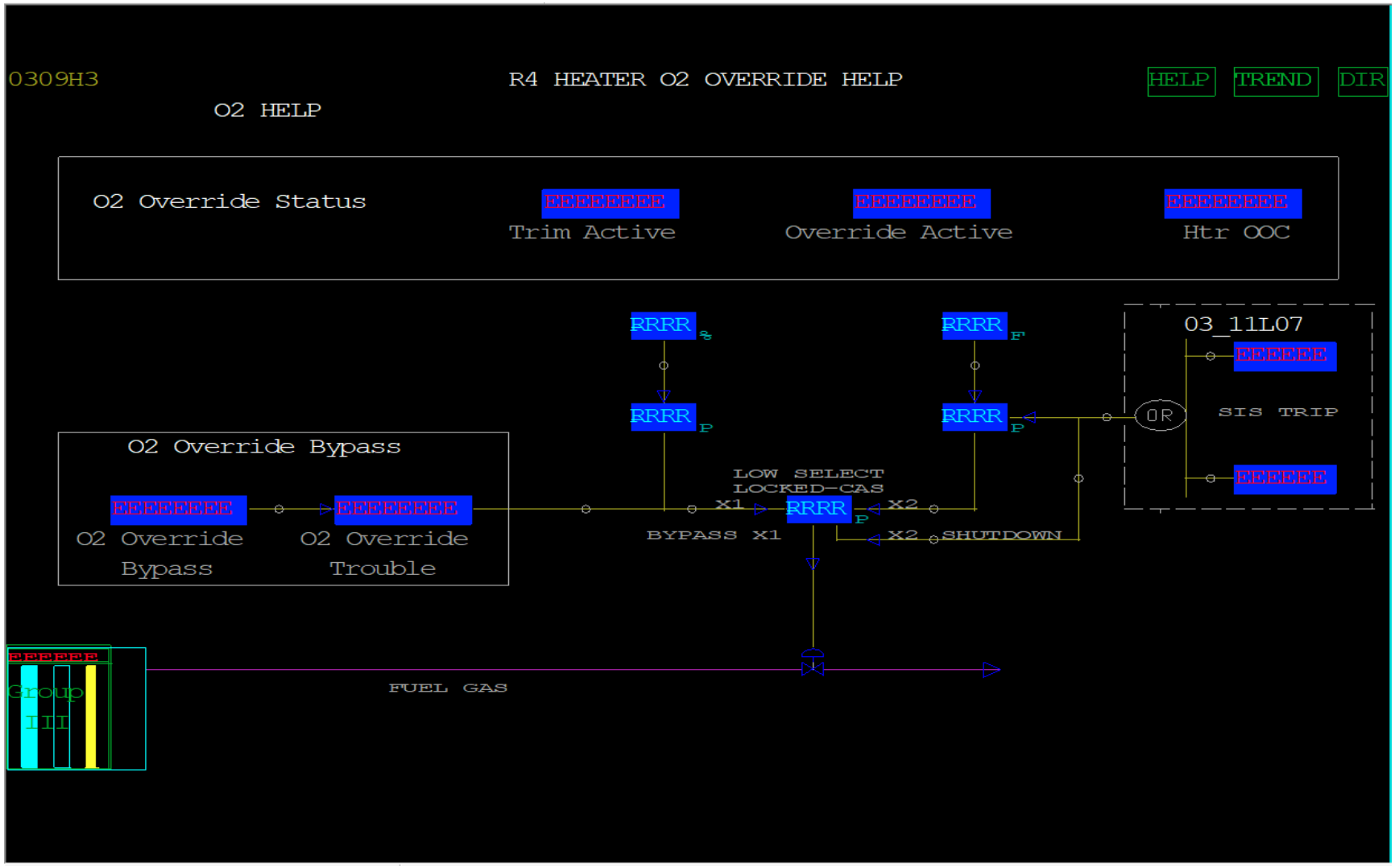
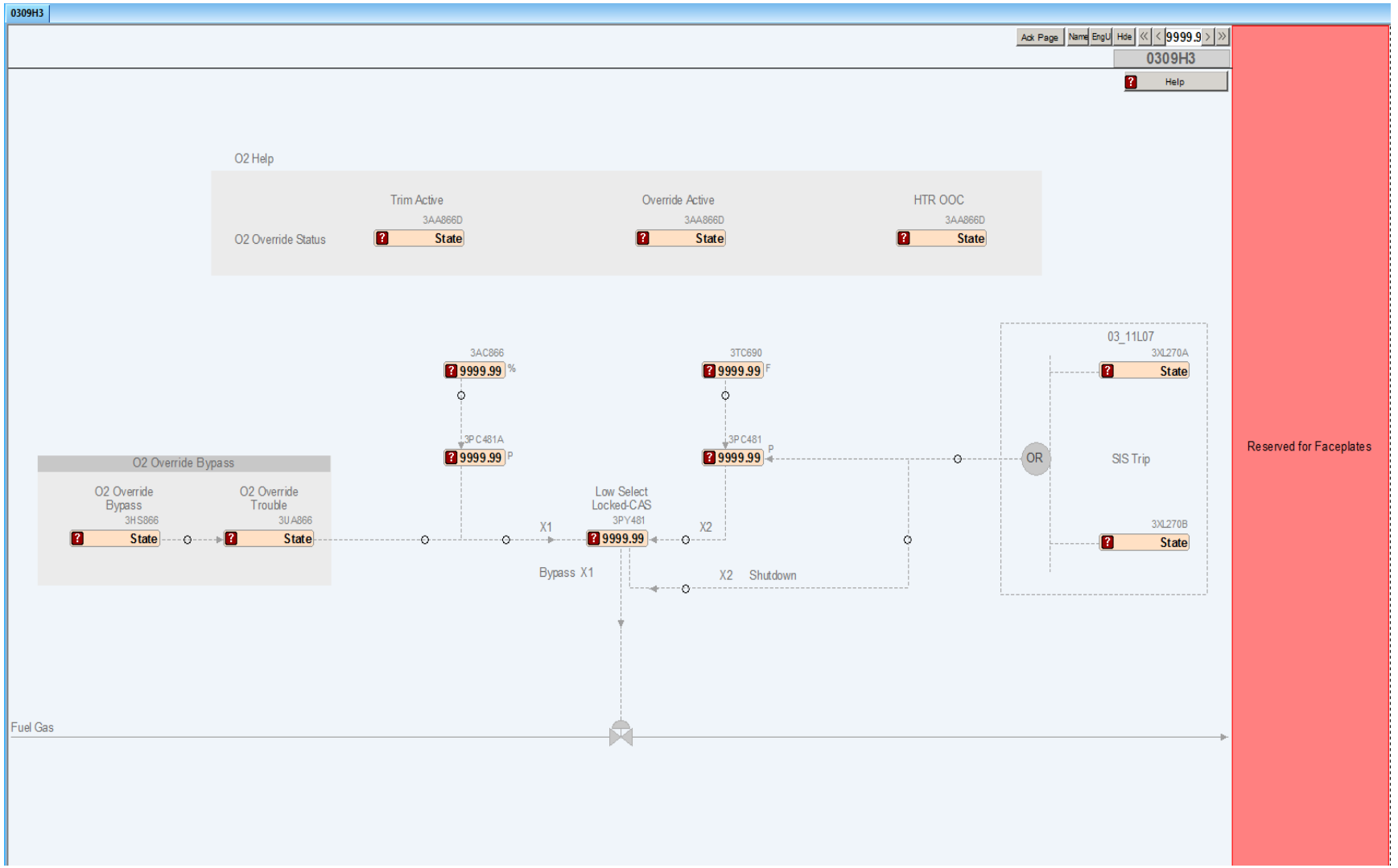

0309H2
Ack Page
Name
Engu
Hde
9999.9
0309H2
There Is A Program Attached To 3FA3104 Which Monitors The Status Of The HUX Direct Pump, 3XA975. If It Detects That The Pump Is Off, It Set The Contact Cutout Parameter (CONTCUT) Of 3FI104 To On. This Prevents Getting An Alarm For A System That Is Down.
GREG RUHL EXT. 8249, Pager 2153
Reserved for Faceplates

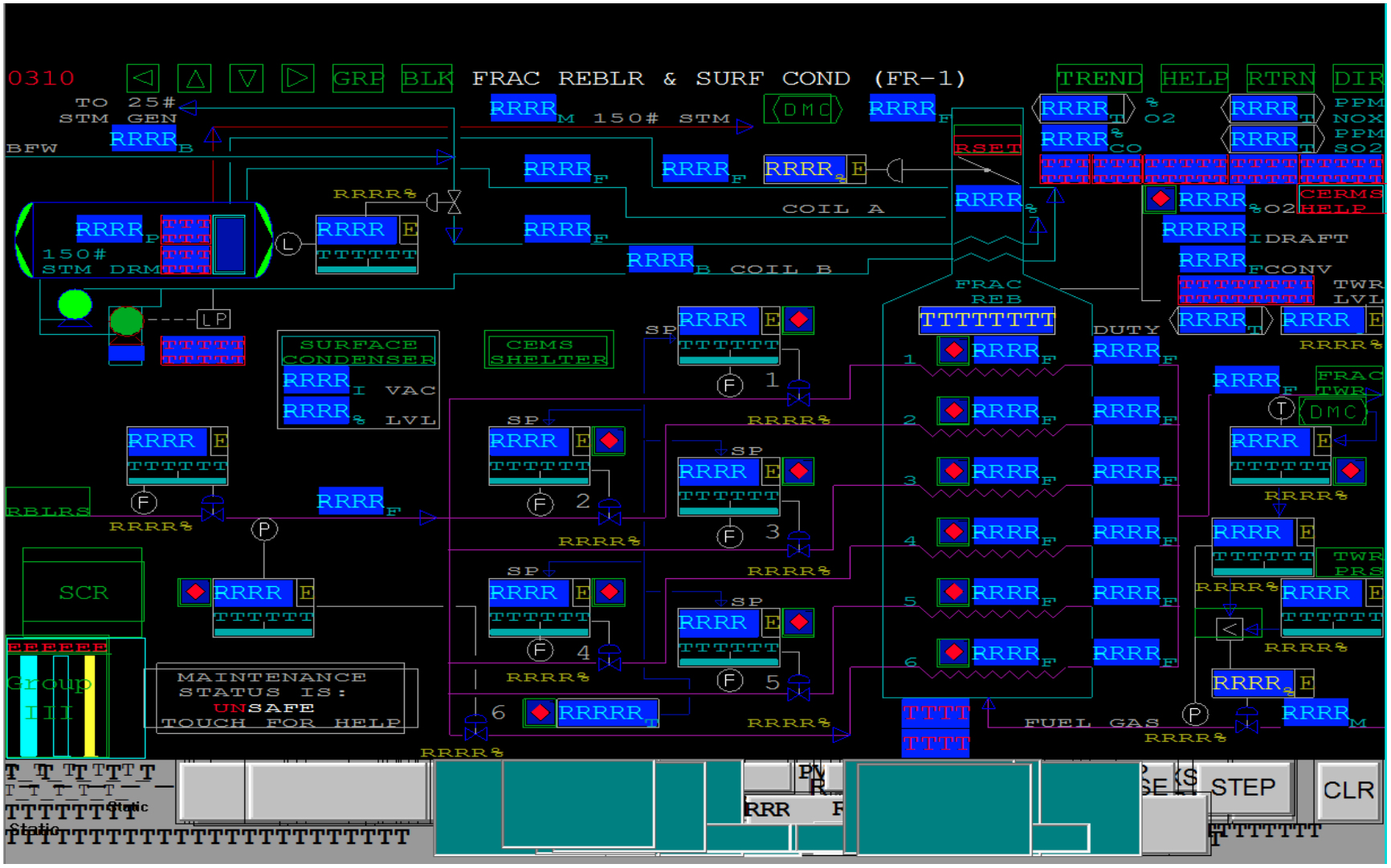
3.45 R4 HEATER O2 OVERRIDE HELP (0309H3.DS)

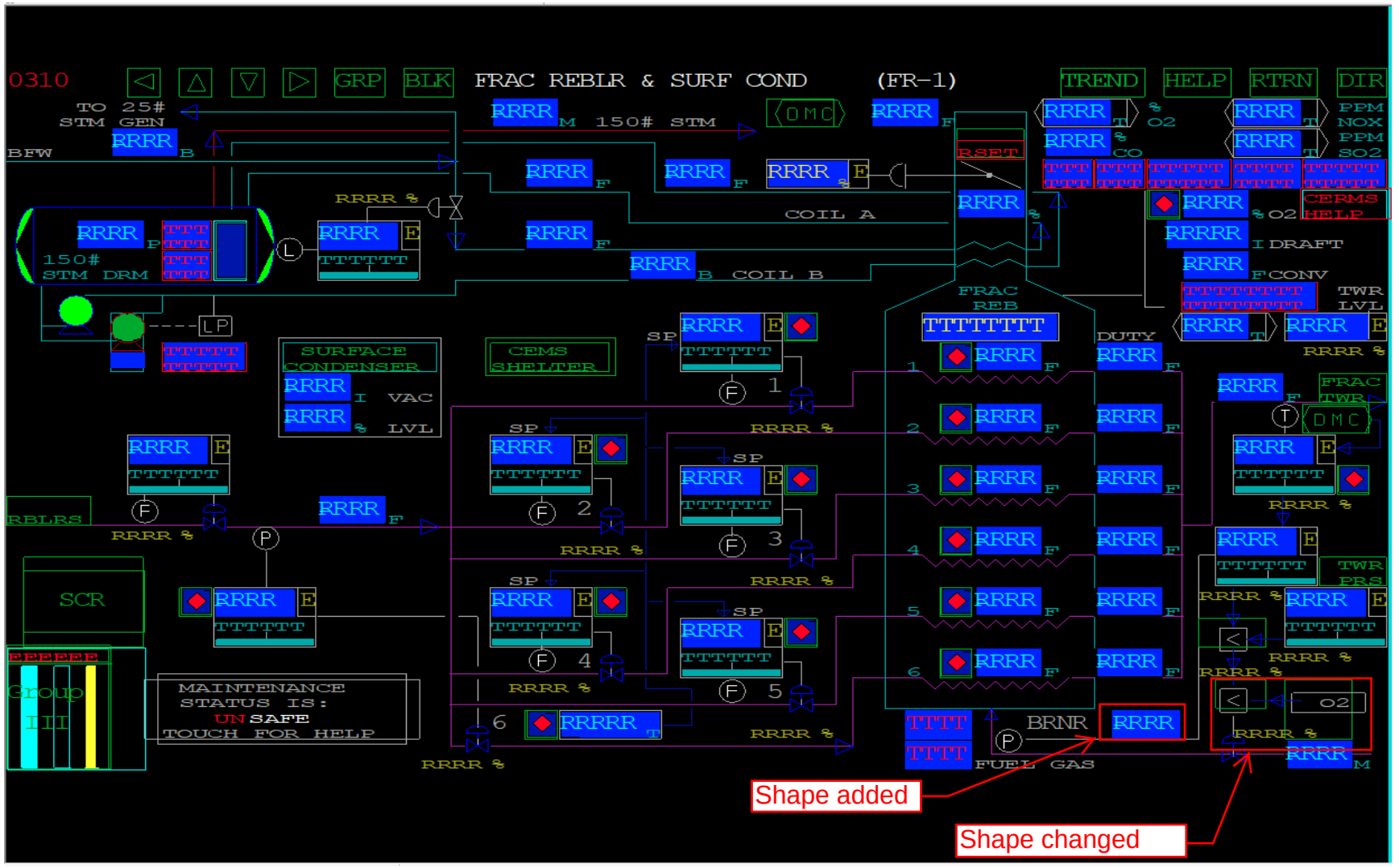


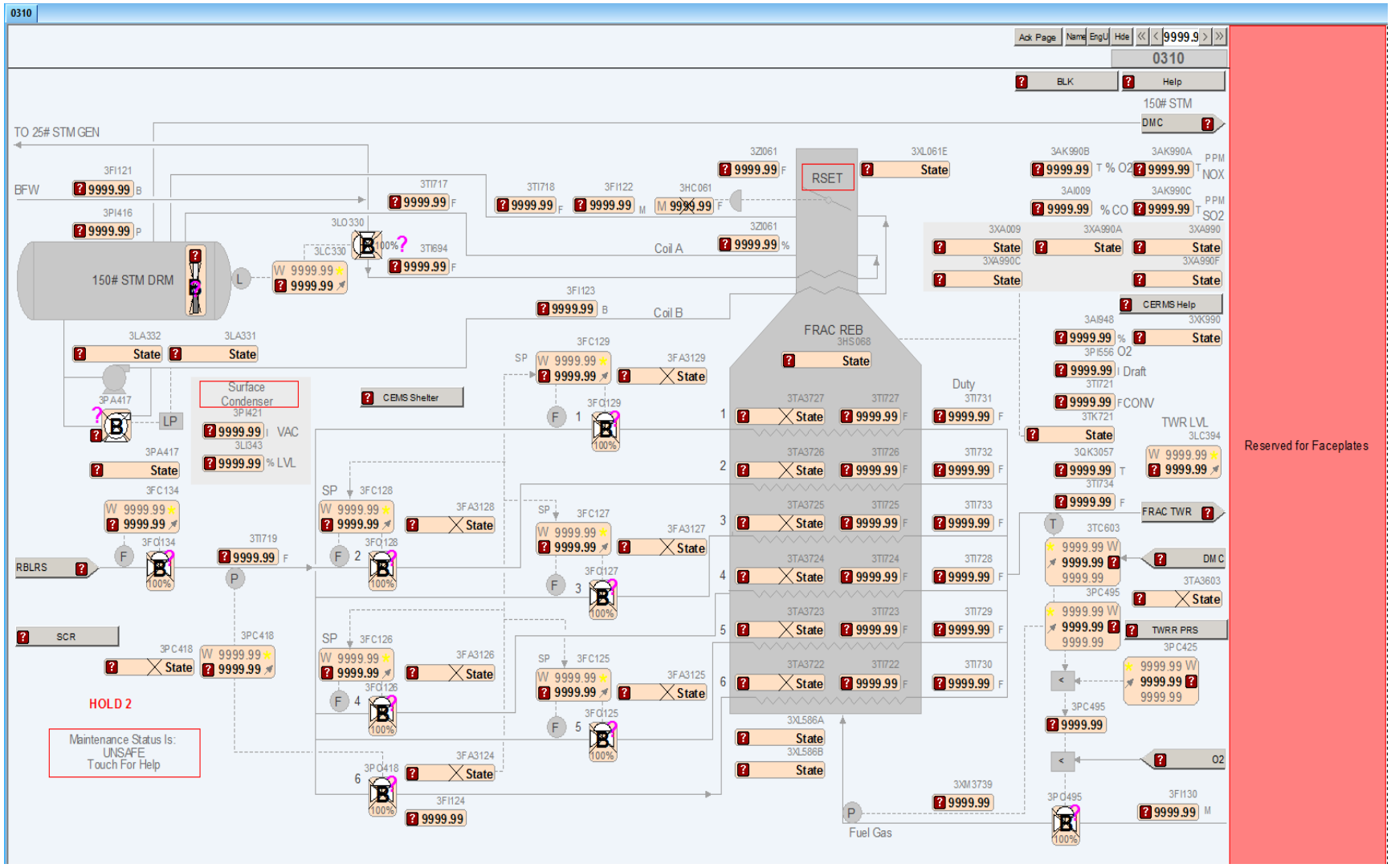

0309H3
R4 HEATER O2 OVERRIDE HELP
HELP
TREND
DIR
O2 HELP
O2 Override Status
EEEEEEEE
Trim Active
EEEEEEEE
Override Active
EEEEEEEE
Htr OOC
RRRR
S
RRRR
P
RRRR
F
RRRR
P
03_11L07
EEEEEE
OR
SIS TRIP
EEEEEE
O2 Override Bypass
EEEEEEEE
O2 Override Bypass
EEEEEEEE
O2 Override Trouble
LOW SELECT
LOCKED-CAS
X1
RRRR
P
X2
BYPASS X1
X2
SHUTDOWN
EEEEEE
Group III
FUEL GAS


0309H3
Ack Page
Name
Eng U
Hide
9999.9
0309H3
Help
O2 Help
Trim Active
3AA866D
State
Override Active
3AA866D
State
HTR OOC
3AA866D
State
O2 Override Status
3AC866
9999.99
%
3TC690
9999.99
F
3PC481A
9999.99
P
3PC481
9999.99
P
03_11L07
3XL270A
State
OR
SIS Trip
3XL270B
State
O2 Override Bypass
O2 Override Bypass
3HS866
State
O2 Override Trouble
3UA866
State
Low Select Locked-CAS
3PY481
9999.99
X1
X2
Bypass X1
X2 Shutdown
Fuel Gas
Reserved for Faceplates

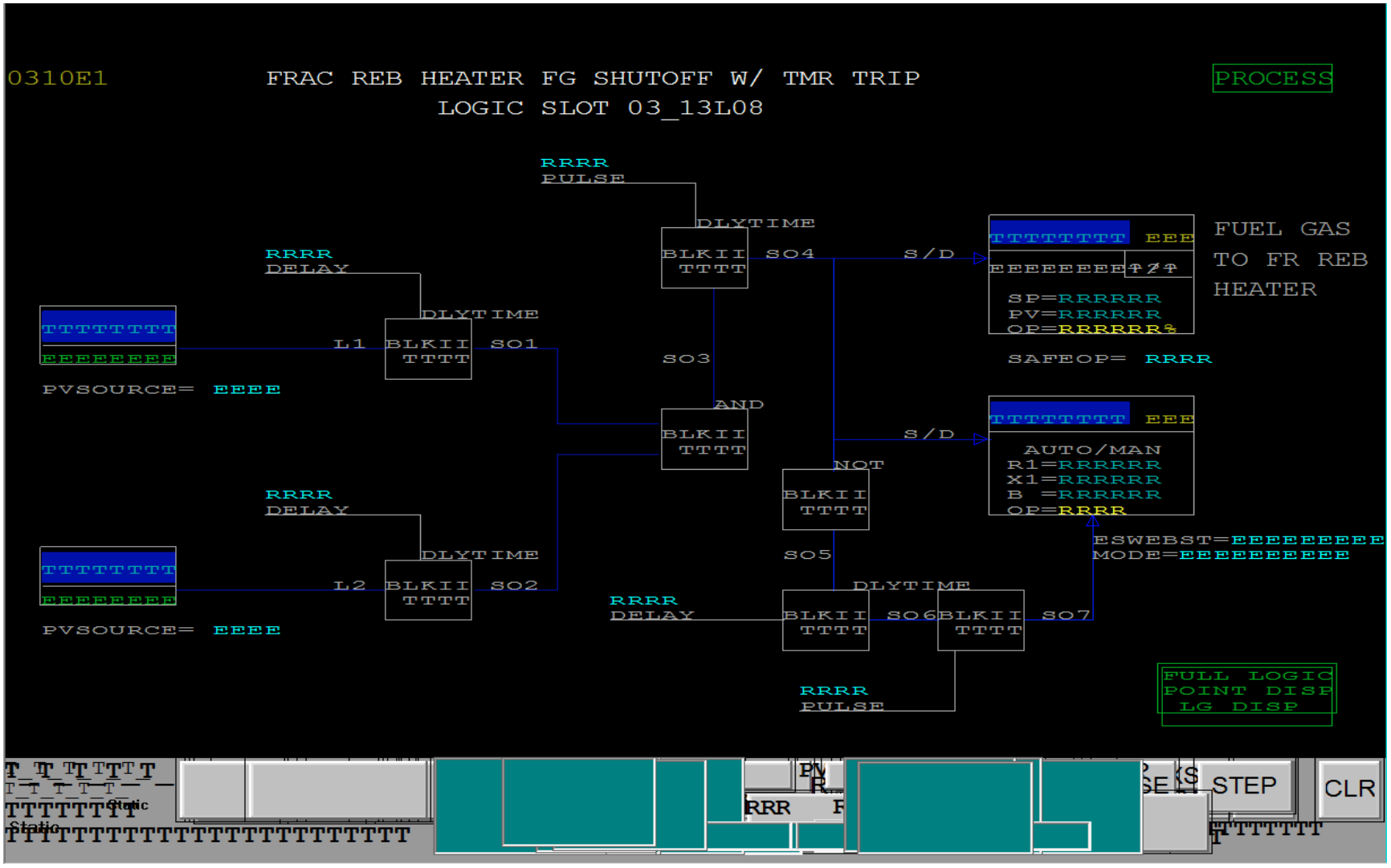
3.46 FRAC REBLR & SURF COND (FR-1) (0310.DS)

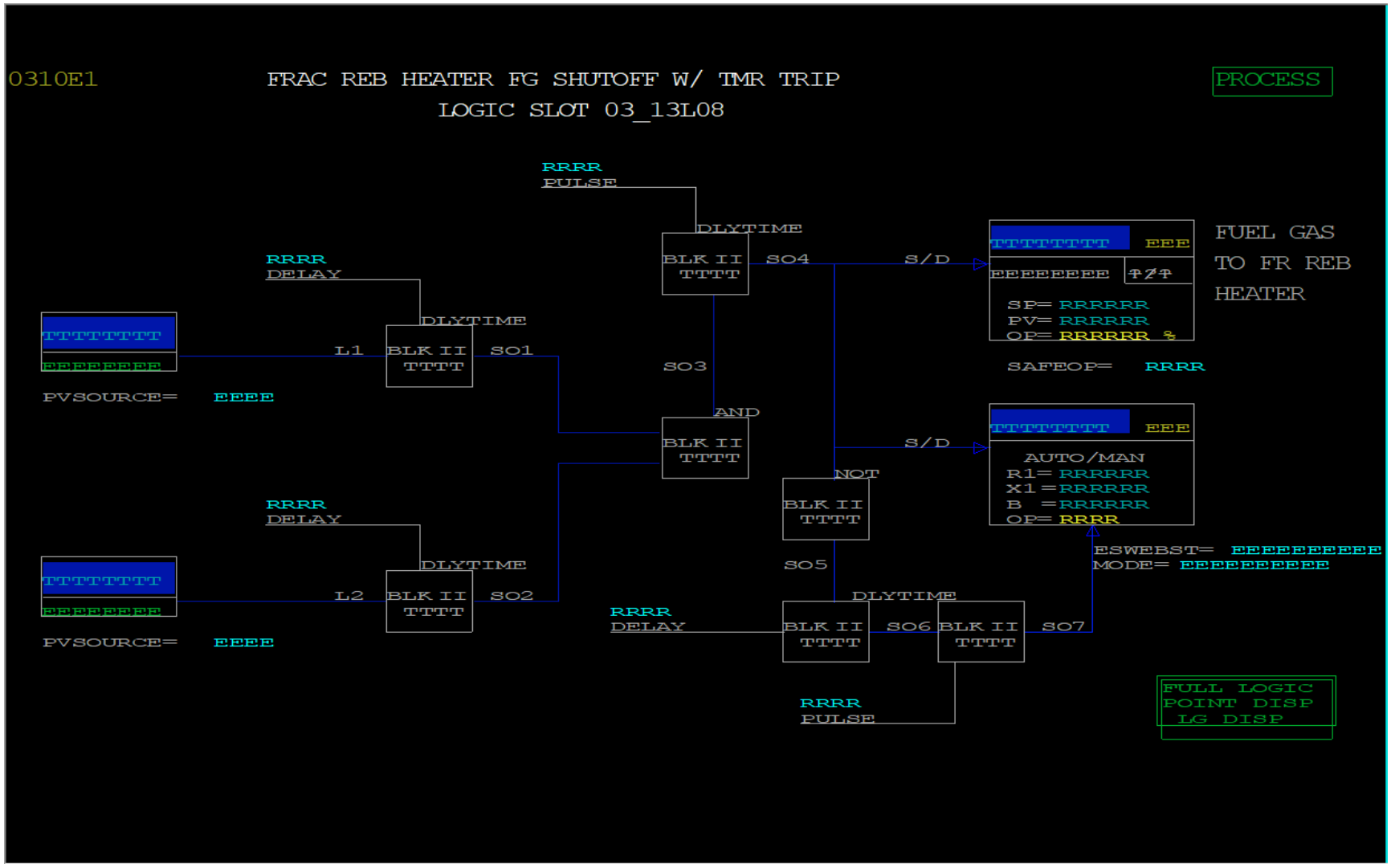


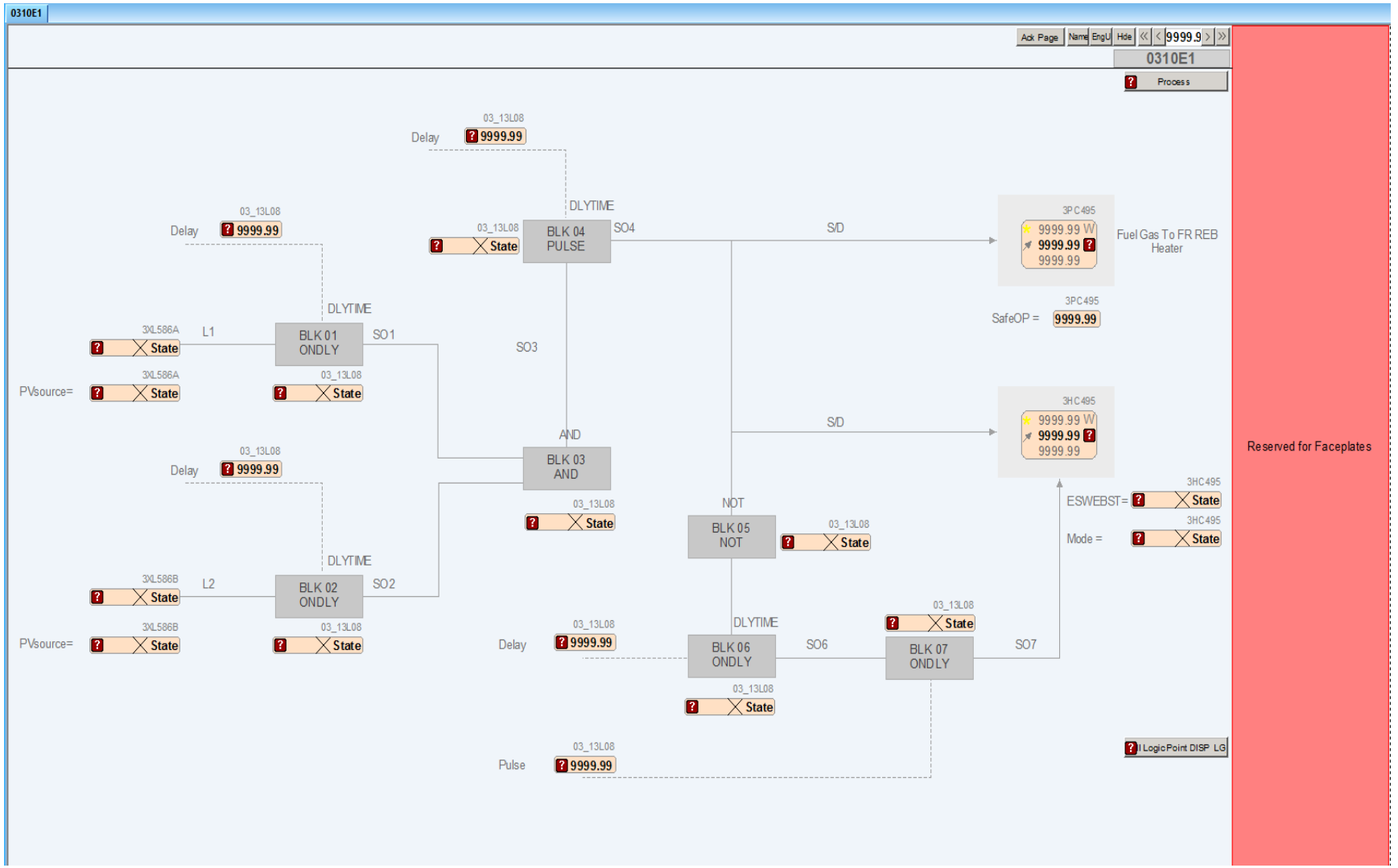

0310
GRP
BLK
FRAC REBLR & SURF COND (FR-1)
TREND
HELP
RTRN
DIR
TO 25# STM GEN
BFW
M 150# STM
DMC
RSET
COIL A
COIL B
150# STM DRM
SURFACE CONDENSER
VAC
LVL
CEMS SHELTER
FRAC REB
DUTY
I DRAFT
F CONV
TWR LVL
FRAC TWR
TWR PRS
CERMS HELP
RBLRS
SCR
Group III
MAINTENANCE STATUS IS:
UNSAFE
TOUCH FOR HELP
BRNR
FUEL GAS
Shape added
Shape changed


0310
Ack Page
Name
Engu
Hde
0310
BLK
Help
150# STM
DMC
TO 25# STM GEN
BFW
3FI121
9999.99
3PI416
9999.99
150# STM DRM
3LO330
3LC330
3TI694
3TI717
3TI718
3FI122
3HC061
3ZI061
Coil A
3FI123
Coil B
RSET
3XL061E
State
3AK990B
3AK990A
3AI009
3AK990C
PPM NOX
PPM SO2
% CO
% O2
3XA009
3XA990A
3XA990
3XA990C
3XA990F
CEMS Help
3AI948
3XK990
3PI556 O2
I Draft
3TI721
FCONV
3TK721
TWR LVL
3LC394
3QK3057
3TI734
FRAC TWR
3TC603
DMC
3TA3603
TWR PRS
3PC425
3PC495
O2
3FI130
3LA332
3LA331
3PA417
LP
Surface Condenser
3PI421
VAC
3LI343
% LVL
CEMS Shelter
3FC129
3FA3129
3FC128
3FA3128
3FC127
3FA3127
3FC126
3FA3126
3FC125
3FA3125
3FC134
3TI719
RBLRS
SCR
3PC418
HOLD 2
Maintenance Status Is:
UNSAFE
Touch For Help
3FA3124
3FI124
FRAC REB
3HS068
3TA3727
3TI727
3TI731
3TA3726
3TI726
3TI732
3TA3725
3TI725
3TI733
3TA3724
3TI724
3TI728
3TA3723
3TI723
3TI729
3TA3722
3TI722
3TI730
Duty
3XL586A
3XL586B
3XM3739
Fuel Gas
Reserved for Faceplates

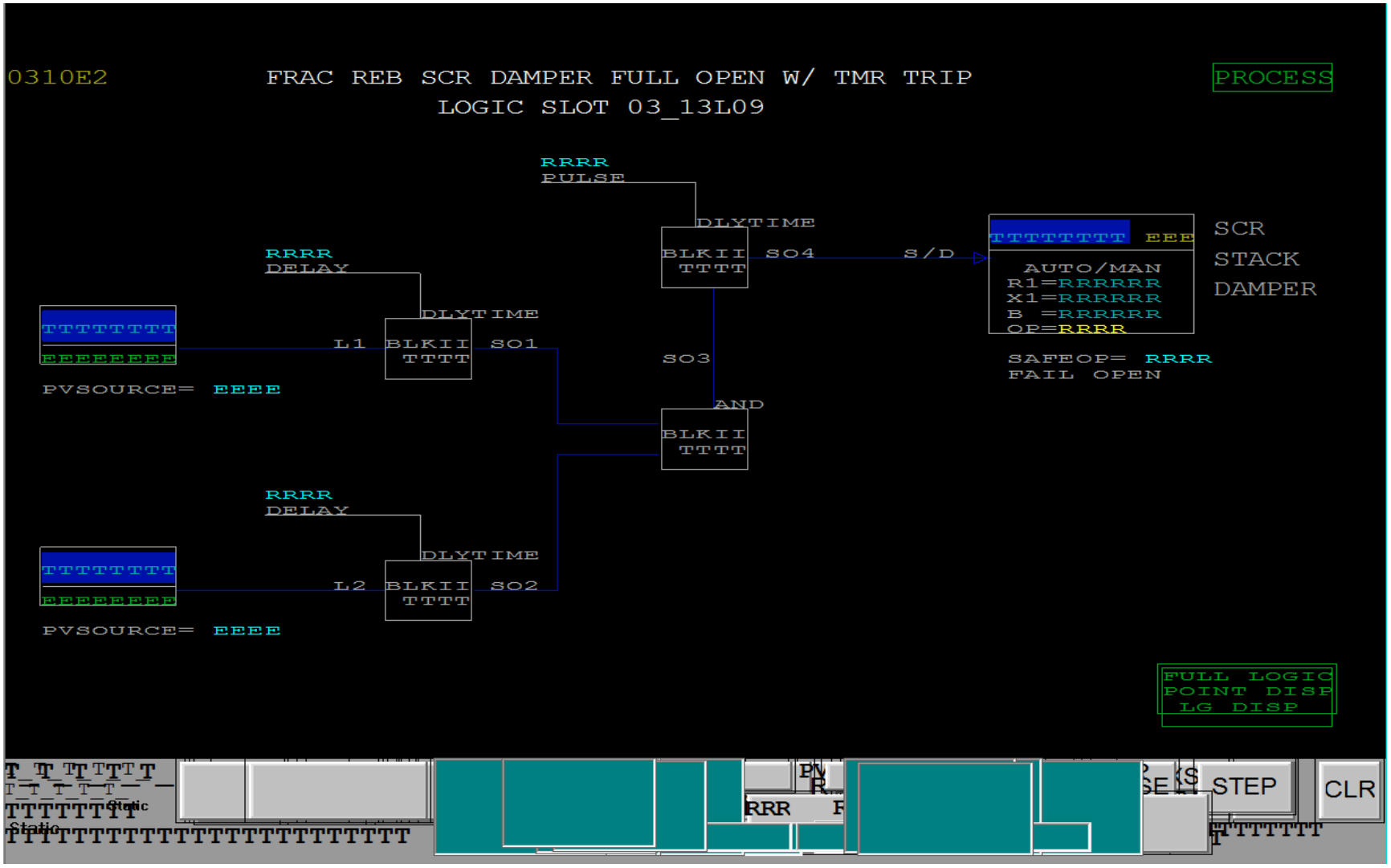
3.47 FRAC REB HEATER FG SHUTOFF W/ TMR TRIP LOGIC SLOT 03_13L08 (0310E1.DS)

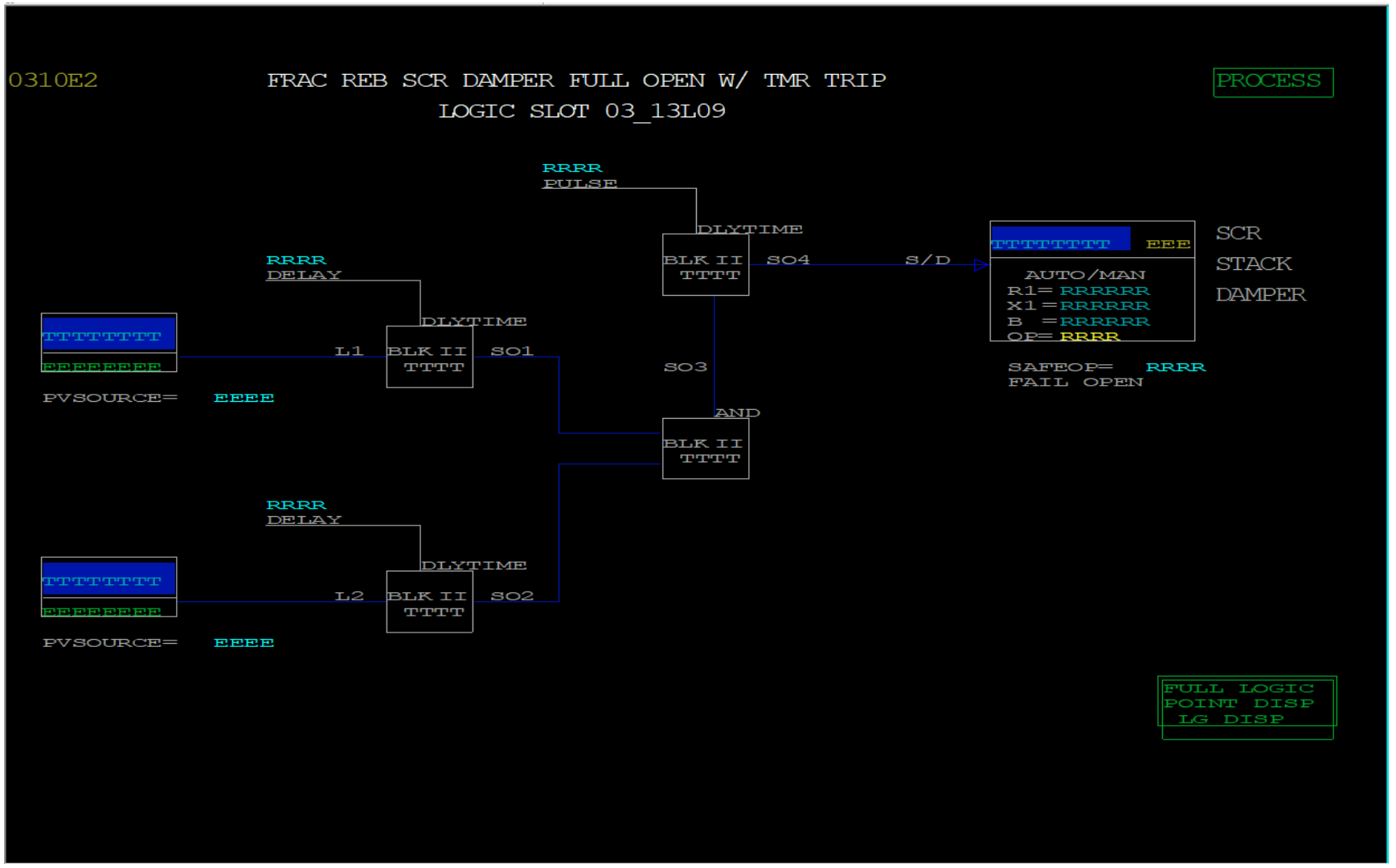


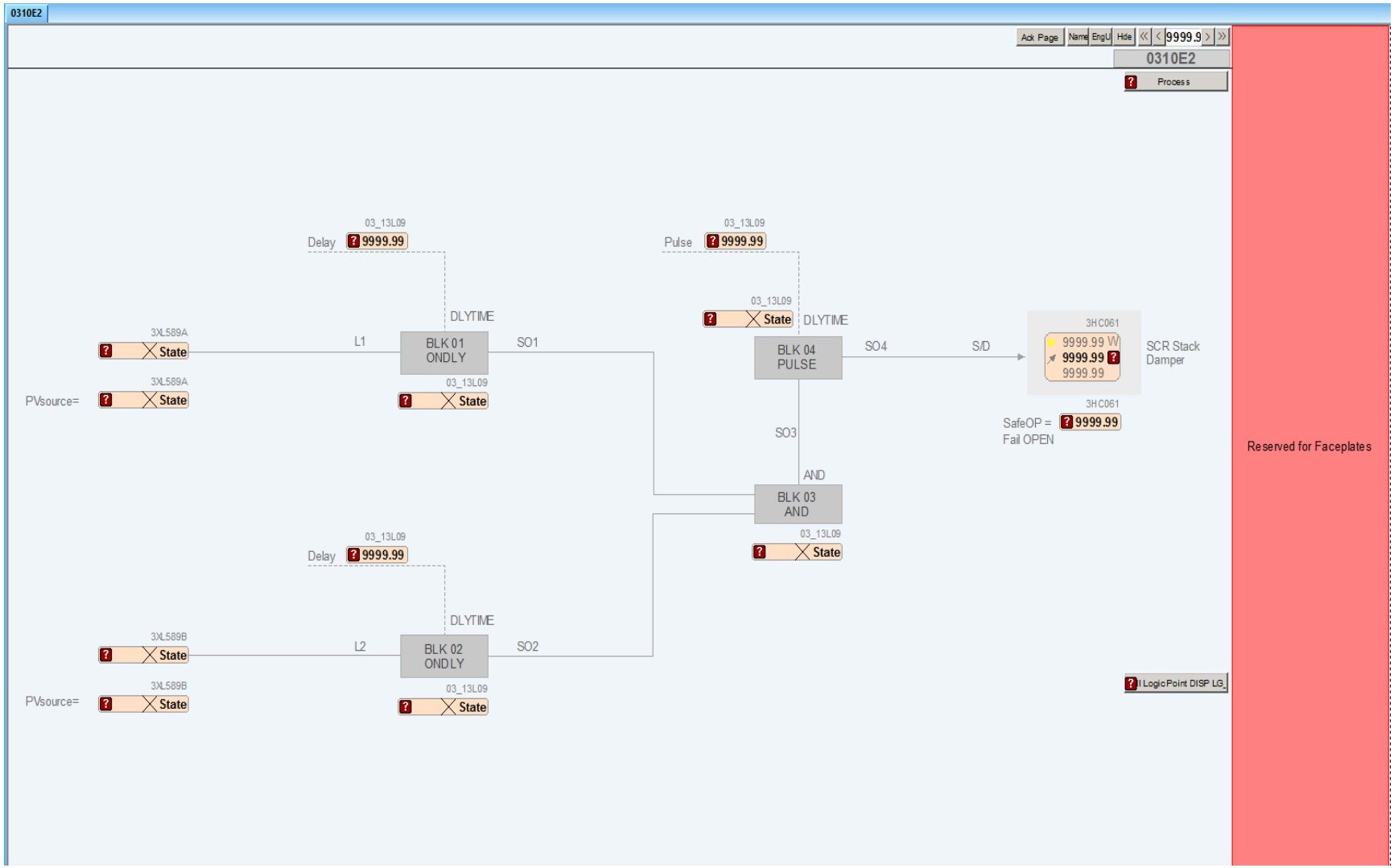

0310E1
FRAC REB HEATER FG SHUTOFF W/ TMR TRIP
LOGIC SLOT 03_13L08
PROCESS
RRRR
PULSE
DLYTIME
BLK II
TTTT
SO4
S/D
TTTTTTTT
EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRRRR %
FUEL GAS
TO FR REB
HEATER
SAFEOP= RRRR
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L1
BLK II
TTTT
SO1
PVSOURCE= EEEE
SO3
AND
BLK II
TTTT
S/D
TTTTTTTT
EEE
AUTO/MAN
R1= RRRRRR
X1 =RRRRRR
B =RRRRRR
OP= RRRR
NOT
BLK II
TTTT
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L2
BLK II
TTTT
SO2
PVSOURCE= EEEE
SO5
ESWEBST= EEEEEEEEEE
MODE= EEEEEEEEEE
DLYTIME
RRRR
DELAY
BLK II
TTTT
SO6
BLK II
TTTT
SO7
RRRR
PULSE
FULL LOGIC
POINT DISP
LG DISP


0310E1
Ack Page
Name
EngU
Hde
9999.9
0310E1
Process
Delay
03_13L08
9999.99
DLYTIME
BLK 04
PULSE
SO4
S/D
3PC495
9999.99 W
9999.99
9999.99
Fuel Gas To FR REB Heater
SafeOP =
3PC495
9999.99
Delay
03_13L08
9999.99
03_13L08
State
DLYTIME
3XL586A
L1
BLK 01
ONDLY
SO1
SO3
3XL586A
State
PVsource=
3XL586A
State
03_13L08
State
AND
BLK 03
AND
3HC495
9999.99 W
9999.99
9999.99
S/D
Delay
03_13L08
9999.99
03_13L08
State
NOT
BLK 05
NOT
03_13L08
State
3HC495
ESWEBST=
State
3HC495
Mode =
State
DLYTIME
3XL586B
L2
BLK 02
ONDLY
SO2
3XL586B
State
PVsource=
3XL586B
State
03_13L08
State
Delay
03_13L08
9999.99
DLYTIME
BLK 06
ONDLY
SO6
03_13L08
State
BLK 07
ONDLY
SO7
03_13L08
State
03_13L08
State
Pulse
03_13L08
9999.99
I Logic Point DISP LG
Reserved for Faceplates

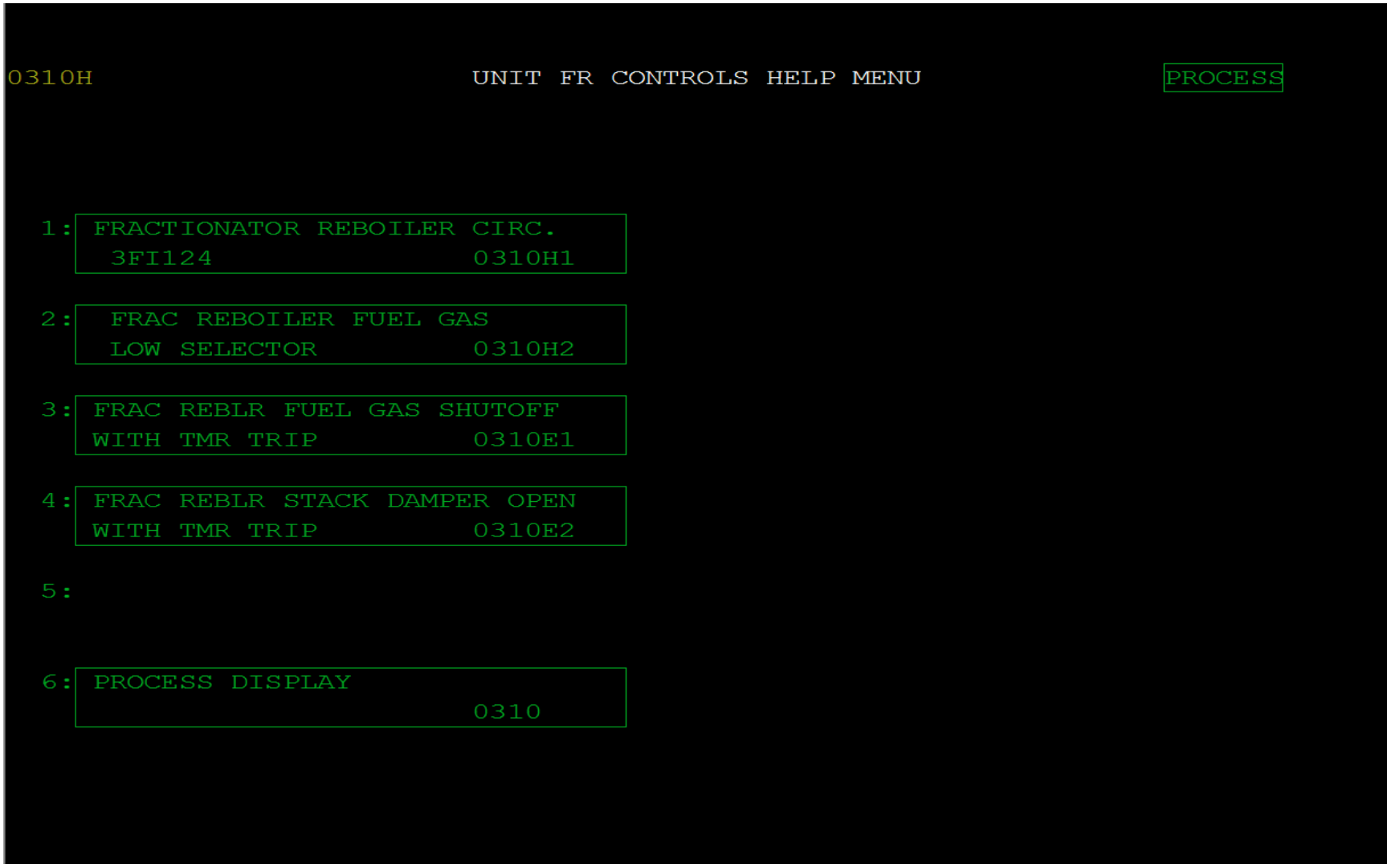
3.48 FRAC REB SCR DAMPER FULL OPEN W/ TMR TRIP LOGIC SLOT 03_13L09 (0310E2.DS)

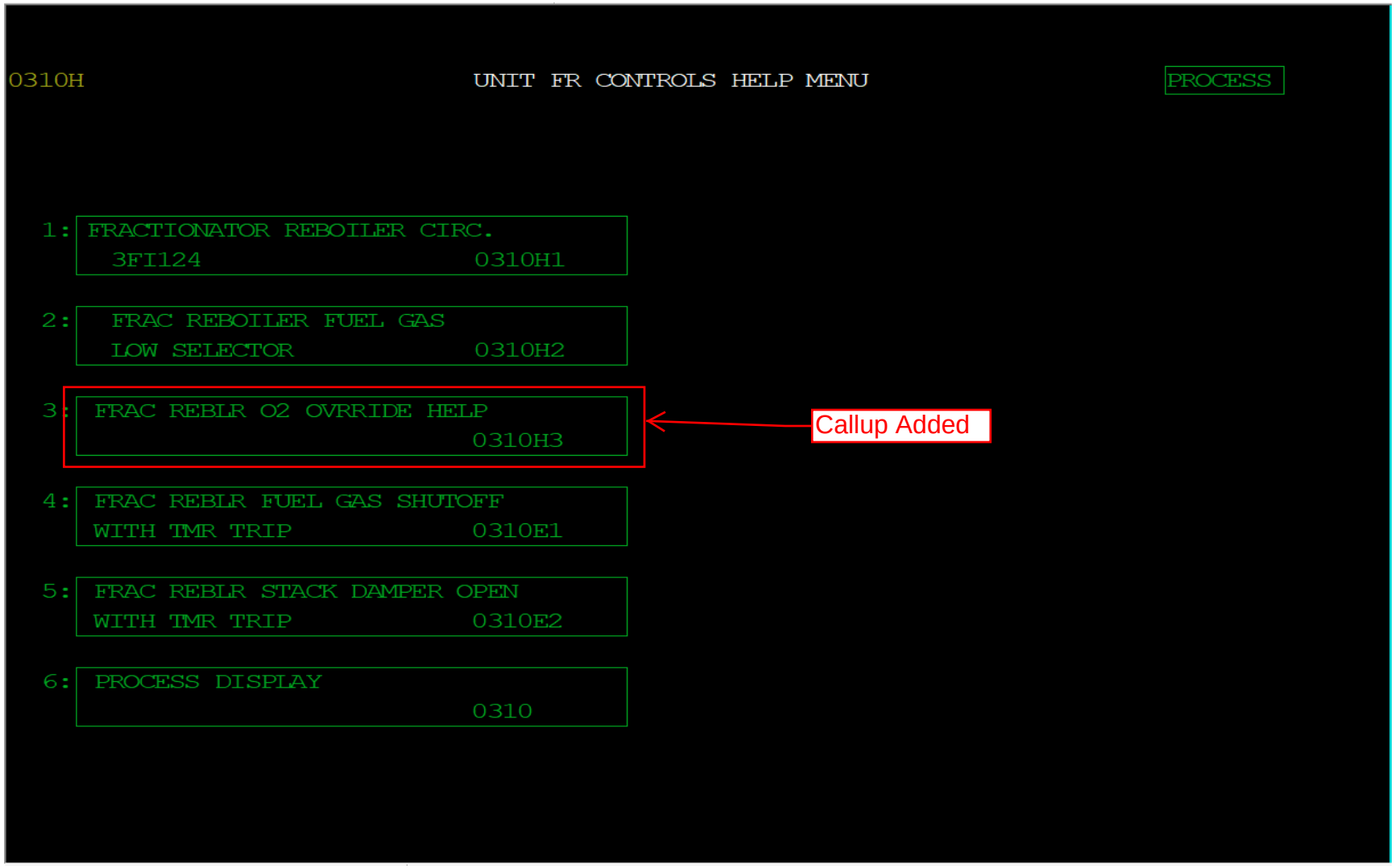


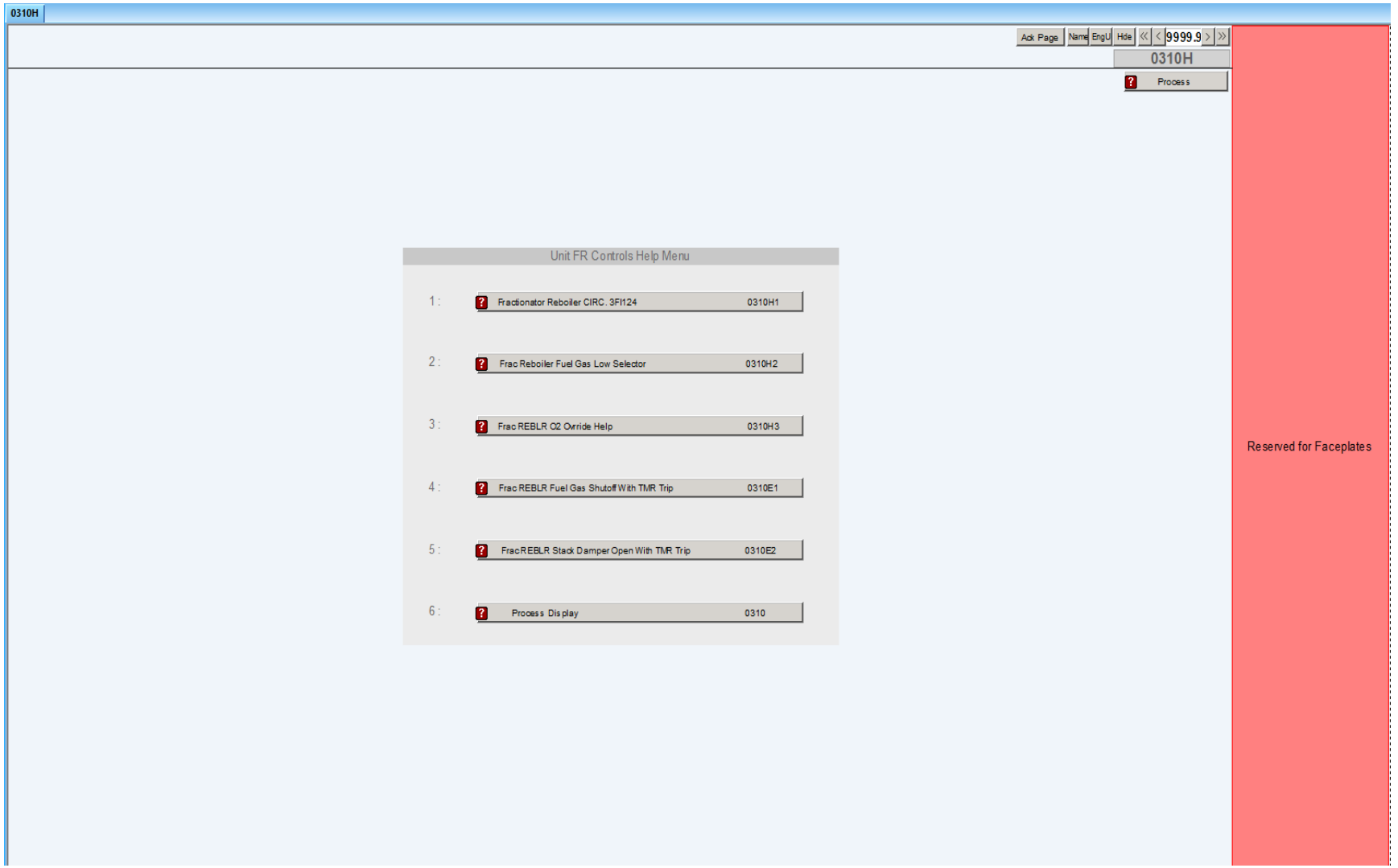

0310E2
FRAC REB SCR DAMPER FULL OPEN W/ TMR TRIP
LOGIC SLOT 03_13L09
PROCESS
RRRR
PULSE
DLYTIME
BLK II
TTTT
SO4
S/D
TTTTTTTT
EEE
AUTO/MAN
R1= RRRRRR
X1 = RRRRRR
B = RRRRRR
OP= RRRR
SCR
STACK
DAMPER
SAFEOP= RRRR
FAIL OPEN
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L1
BLK II
TTTT
SO1
PVSOURCE= EEEE
SO3
AND
BLK II
TTTT
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L2
BLK II
TTTT
SO2
PVSOURCE= EEEE
FULL LOGIC
POINT DISP
LG DISP


0310E2
Ack Page
Name
Eng U
Hde
9999.9
0310E2
Process
03_13L09
Delay
9999.99
03_13L09
Pulse
9999.99
03_13L09
State
DLYTIME
3XL589A
State
L1
BLK 01
ONDLY
SO1
PVsource=
3XL589A
State
03_13L09
State
03_13L09
State
DLYTIME
BLK 04
PULSE
SO4
S/D
3HC061
9999.99 W
9999.99
9999.99
SCR Stack
Damper
3HC061
SafeOP =
Fail OPEN
9999.99
SO3
AND
BLK 03
AND
03_13L09
State
03_13L09
Delay
9999.99
DLYTIME
3XL589B
State
L2
BLK 02
ONDLY
SO2
PVsource=
3XL589B
State
03_13L09
State
Reserved for Faceplates
I Logic Point DISP LG

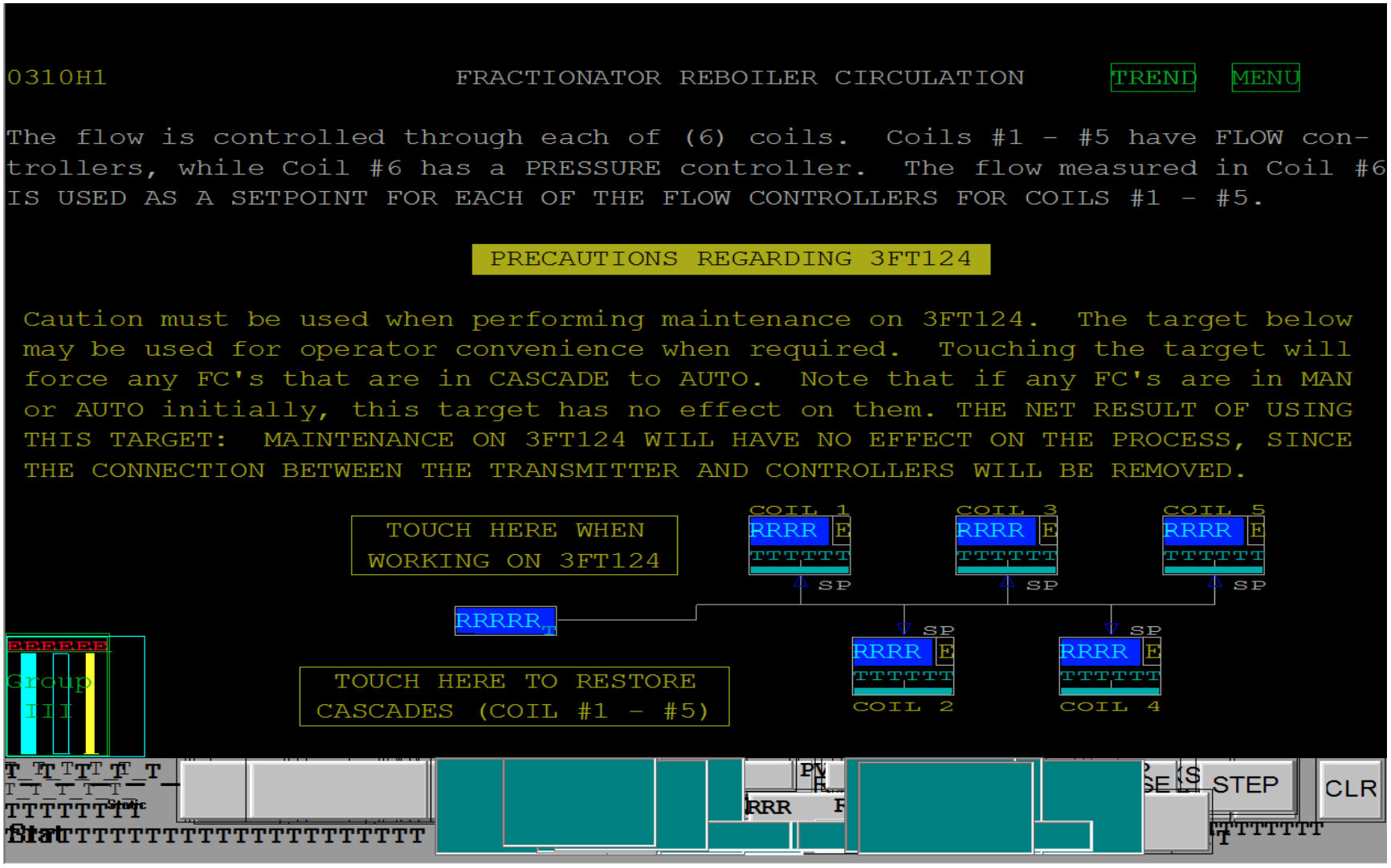
3.49 UNIT FR CONTROLS HELP MENU (0310H.DS)

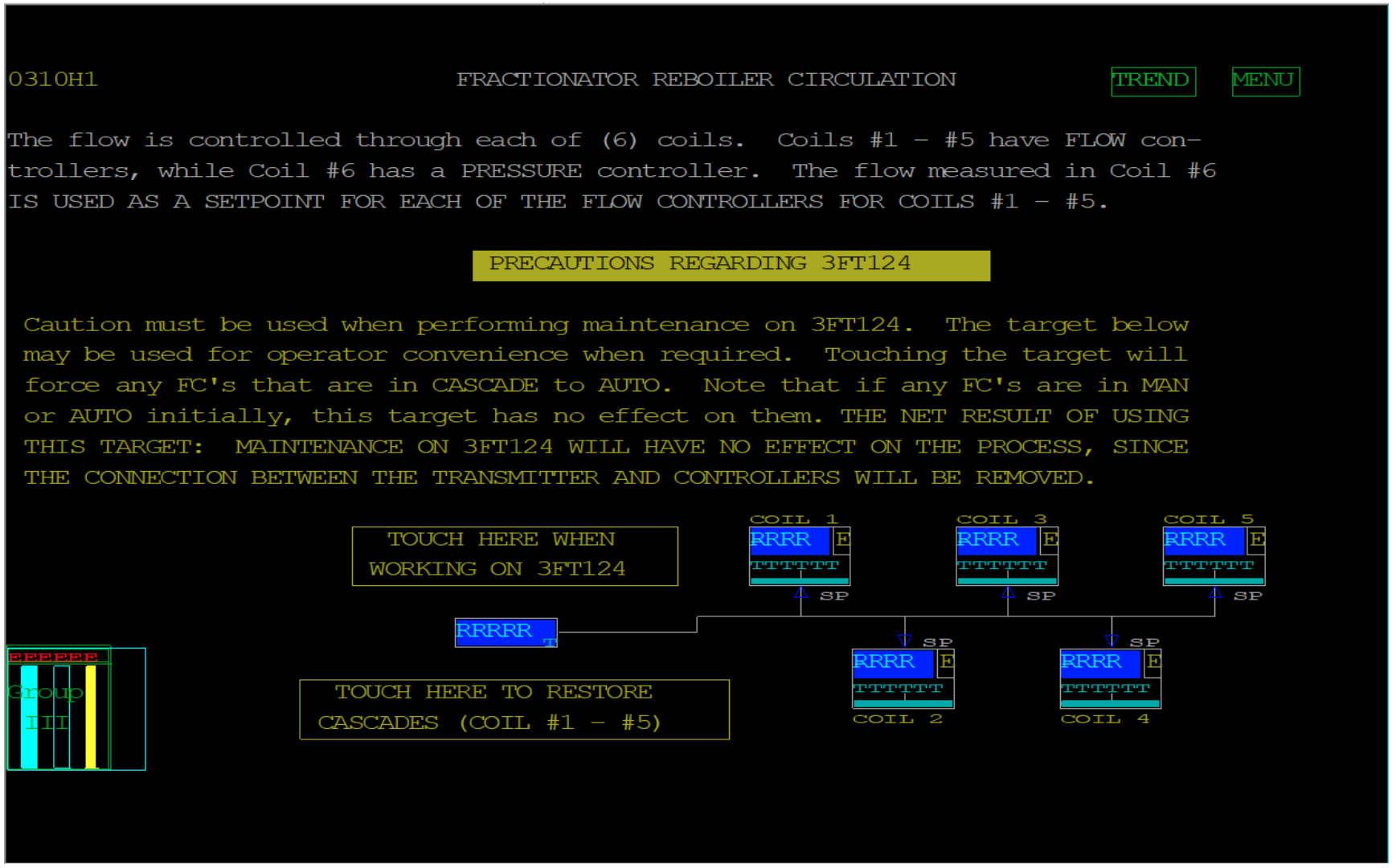


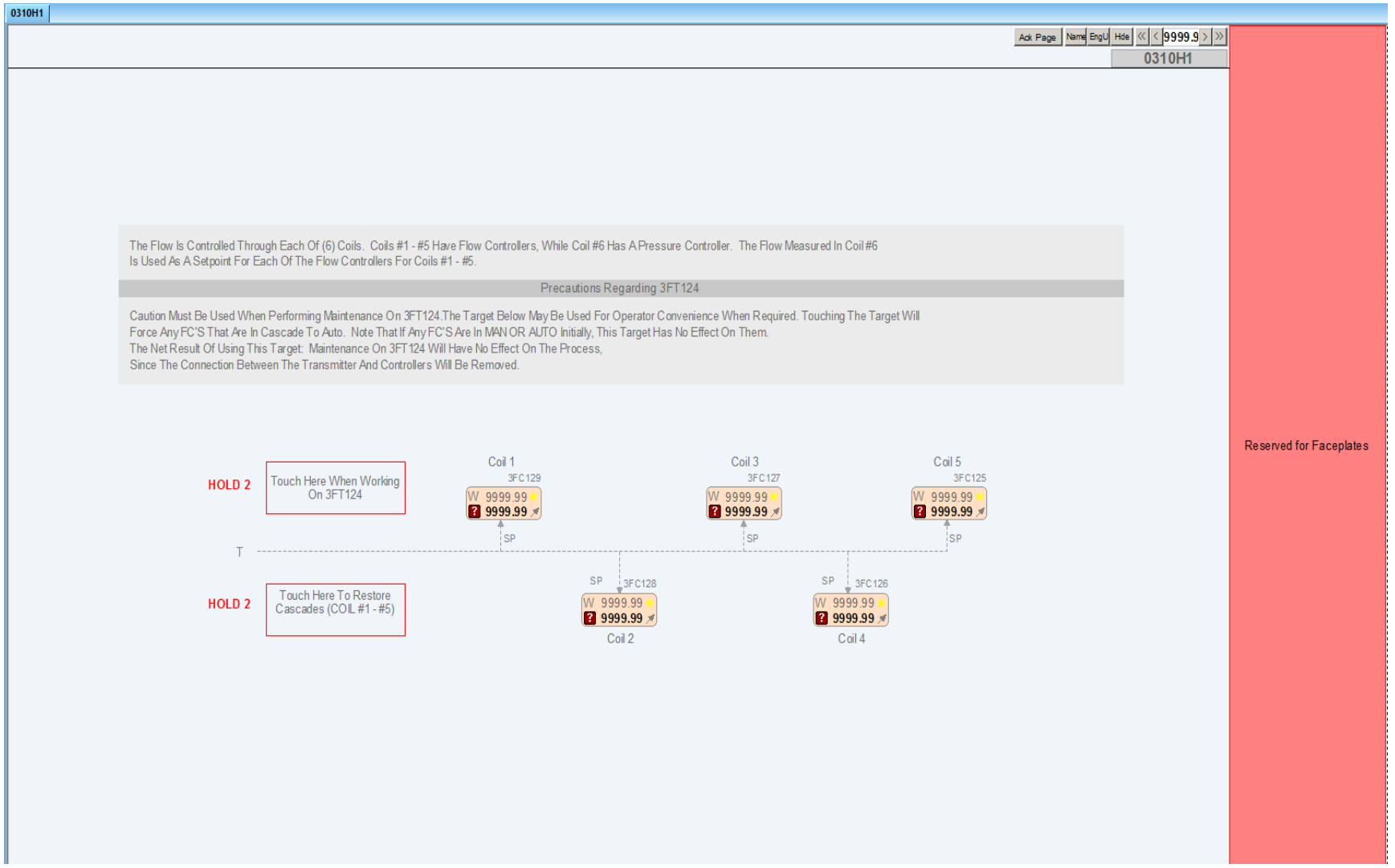

0310H
UNIT FR CONTROLS HELP MENU
PROCESS
1: FRACTIONATOR REBOILER CIRC.
3FI124 0310H1
2: FRAC REBOILER FUEL GAS
LOW SELECTOR 0310H2
3: FRAC REBLR O2 OVRRIDE HELP
0310H3
Callup Added
4: FRAC REBLR FUEL GAS SHUTOFF
WITH TMR TRIP 0310E1
5: FRAC REBLR STACK DAMPER OPEN
WITH TMR TRIP 0310E2
6: PROCESS DISPLAY
0310


0310H
Ack Page
Name
EngU
Hde
9999.9
0310H
Process
Unit FR Controls Help Menu
1 :
Fractionator Reboiler CIRC. 3FI124
0310H1
2 :
Frac Reboiler Fuel Gas Low Selector
0310H2
3 :
Frac REBLR O2 Override Help
0310H3
4 :
Frac REBLR Fuel Gas Shutoff With TMR Trip
0310E1
5 :
Frac REBLR Stack Damper Open With TMR Trip
0310E2
6 :
Process Display
0310
Reserved for Faceplates

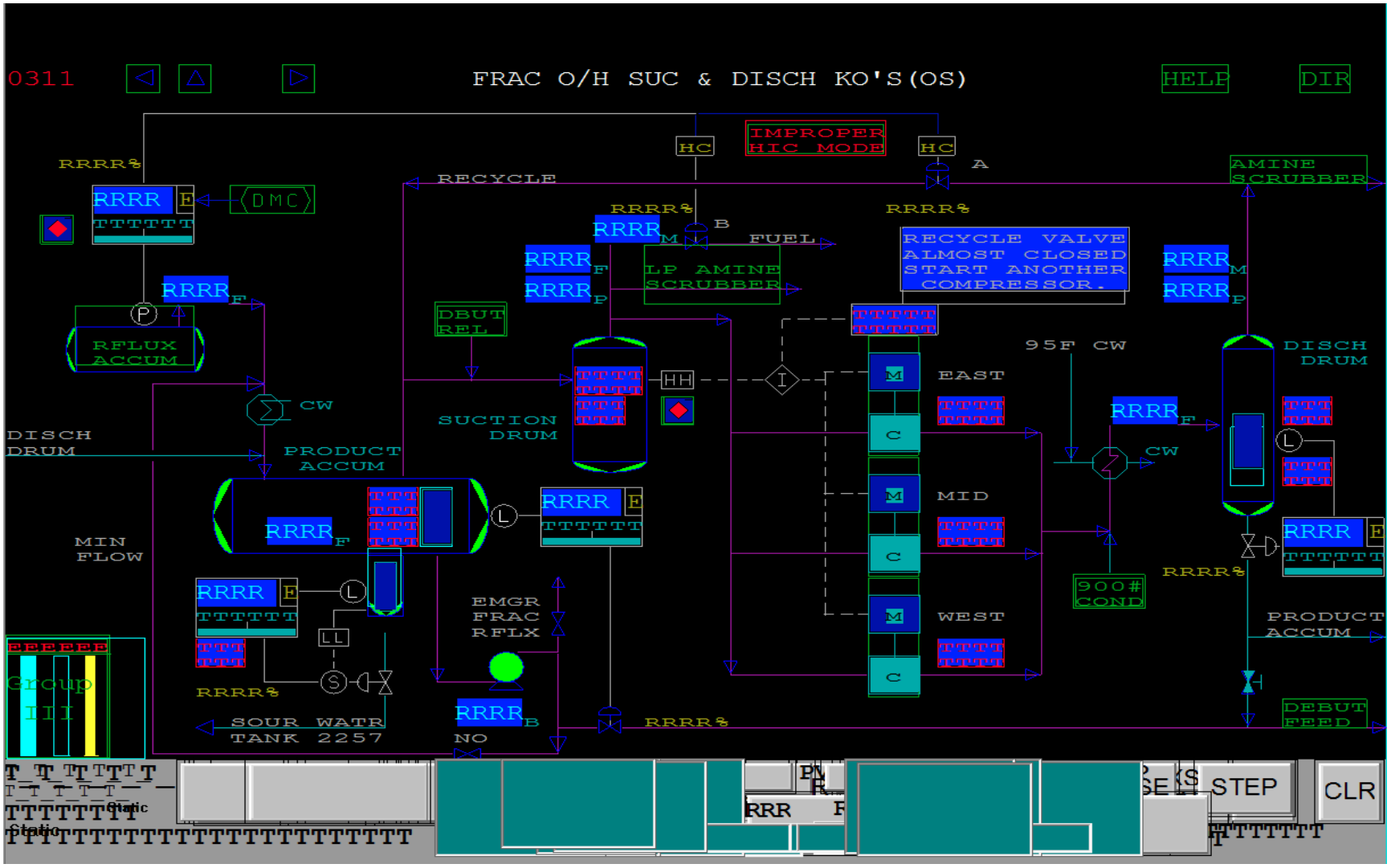
3.50 FRACTIONATOR REBOILER CIRCULATION (0310H1.DS)

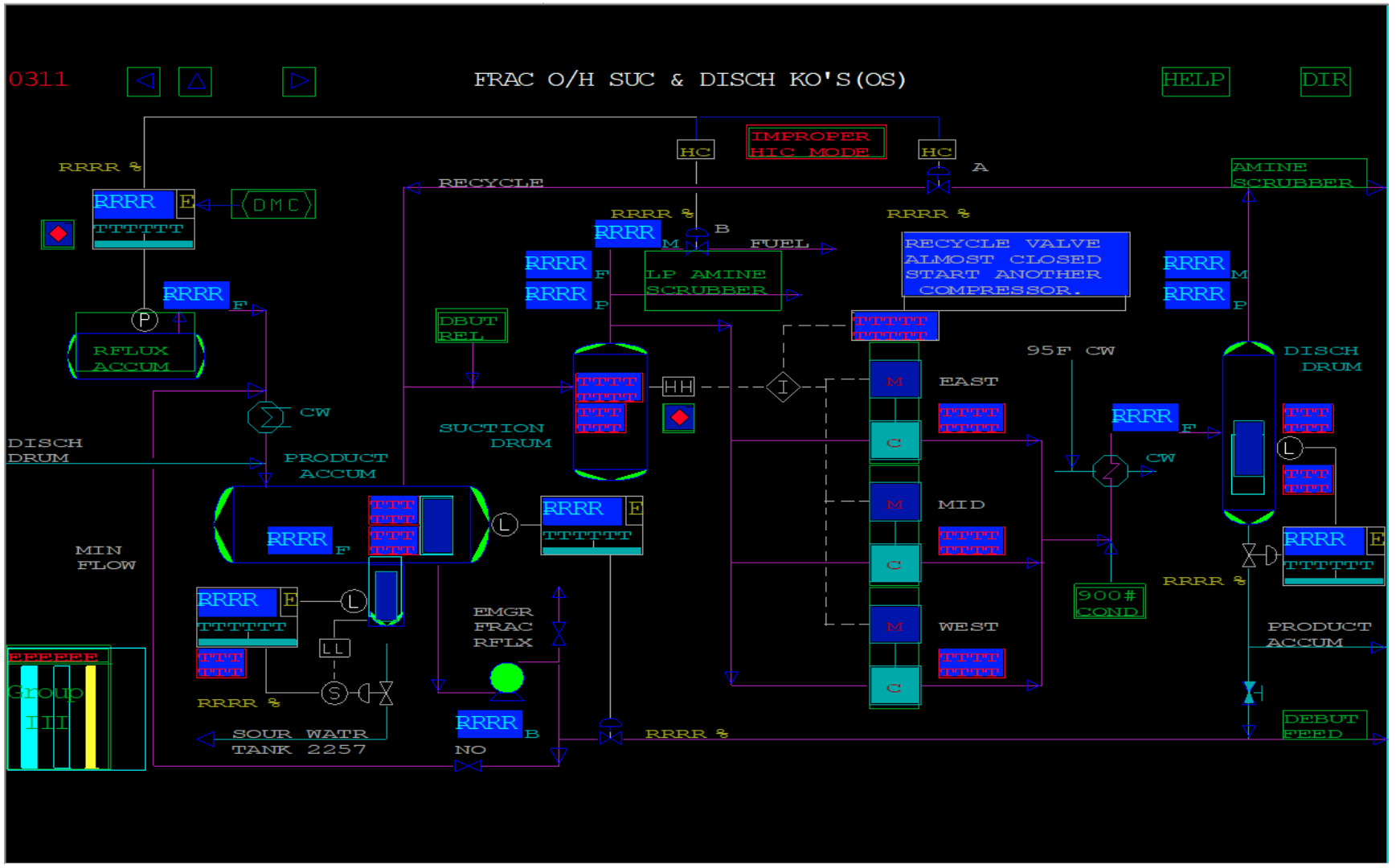


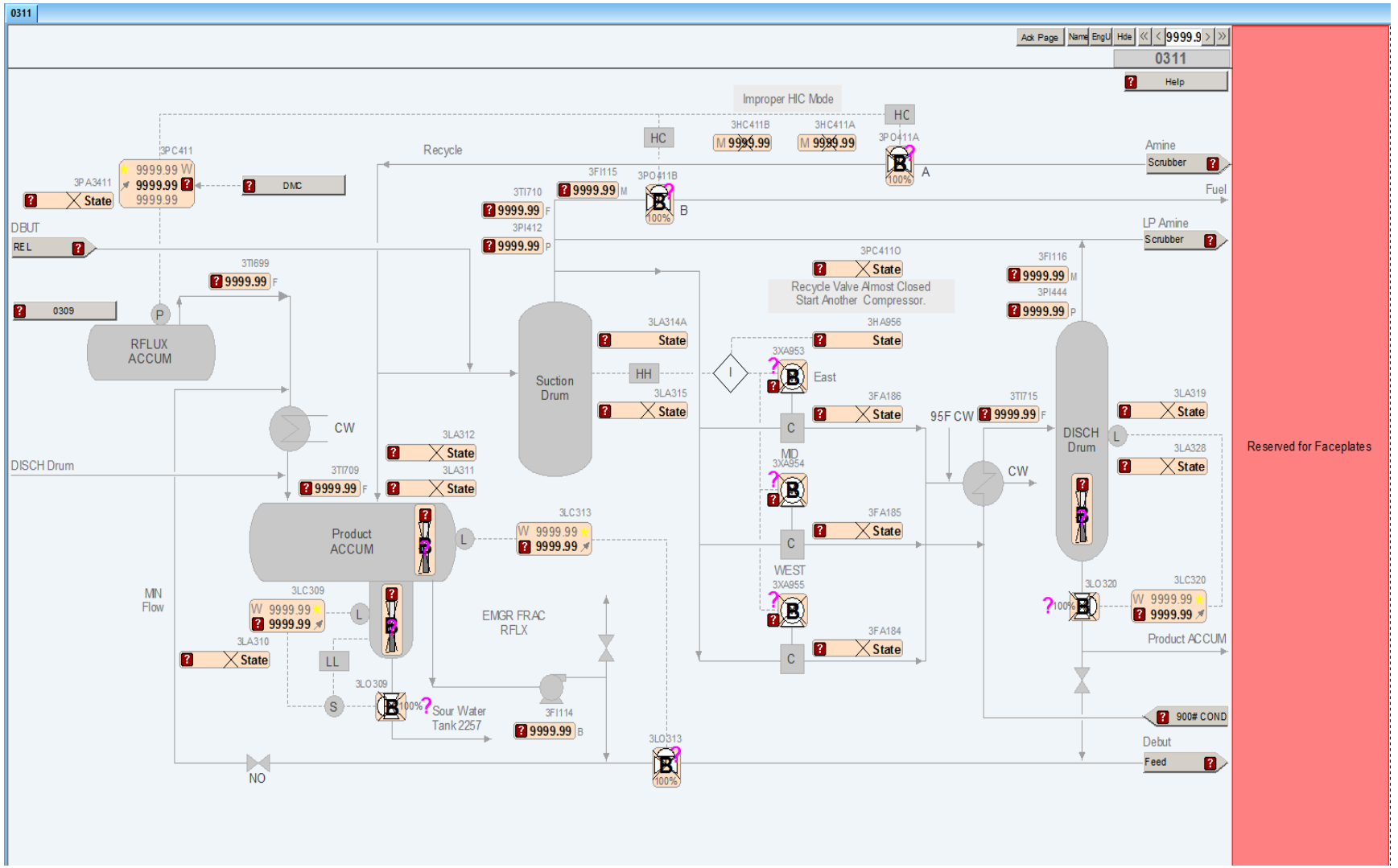

0310H1
FRACTIONATOR REBOILER CIRCULATION
TREND
MENU
The flow is controlled through each of (6) coils. Coils #1 - #5 have FLOW con-
trollers, while Coil #6 has a PRESSURE controller. The flow measured in Coil #6
IS USED AS A SETPOINT FOR EACH OF THE FLOW CONTROLLERS FOR COILS #1 - #5.
PRECAUTIONS REGARDING 3FT124
Caution must be used when performing maintenance on 3FT124. The target below
may be used for operator convenience when required. Touching the target will
force any FC's that are in CASCADE to AUTO. Note that if any FC's are in MAN
or AUTO initially, this target has no effect on them. THE NET RESULT OF USING
THIS TARGET: MAINTENANCE ON 3FT124 WILL HAVE NO EFFECT ON THE PROCESS, SINCE
THE CONNECTION BETWEEN THE TRANSMITTER AND CONTROLLERS WILL BE REMOVED.
TOUCH HERE WHEN
WORKING ON 3FT124
COIL 1
COIL 3
COIL 5
RRRR
E
TTTTTT
SP
RRRRR
T
TOUCH HERE TO RESTORE
CASCADES (COIL #1 - #5)
COIL 2
COIL 4
Group
III


0310H1
Ack Page
Name
Eng'U
Hde
9999.9
0310H1
The Flow Is Controlled Through Each Of (6) Coils. Coils #1 - #5 Have Flow Controllers, While Coil #6 Has A Pressure Controller. The Flow Measured In Coil #6 Is Used As A Setpoint For Each Of The Flow Controllers For Coils #1 - #5.
Precautions Regarding 3FT124
Caution Must Be Used When Performing Maintenance On 3FT124.The Target Below May Be Used For Operator Convenience When Required. Touching The Target Will Force Any FC'S That Are In Cascade To Auto. Note That If Any FC'S Are In MAN OR AUTO Initially, This Target Has No Effect On Them.
The Net Result Of Using This Target: Maintenance On 3FT124 Will Have No Effect On The Process,
Since The Connection Between The Transmitter And Controllers Will Be Removed.
HOLD 2
Touch Here When Working On 3FT124
HOLD 2
Touch Here To Restore Cascades (COIL #1 - #5)
Coil 1
3FC129
Coil 3
3FC127
Coil 5
3FC125
Coil 2
3FC128
Coil 4
3FC126
W 9999.99
9999.99
SP
T
Reserved for Faceplates

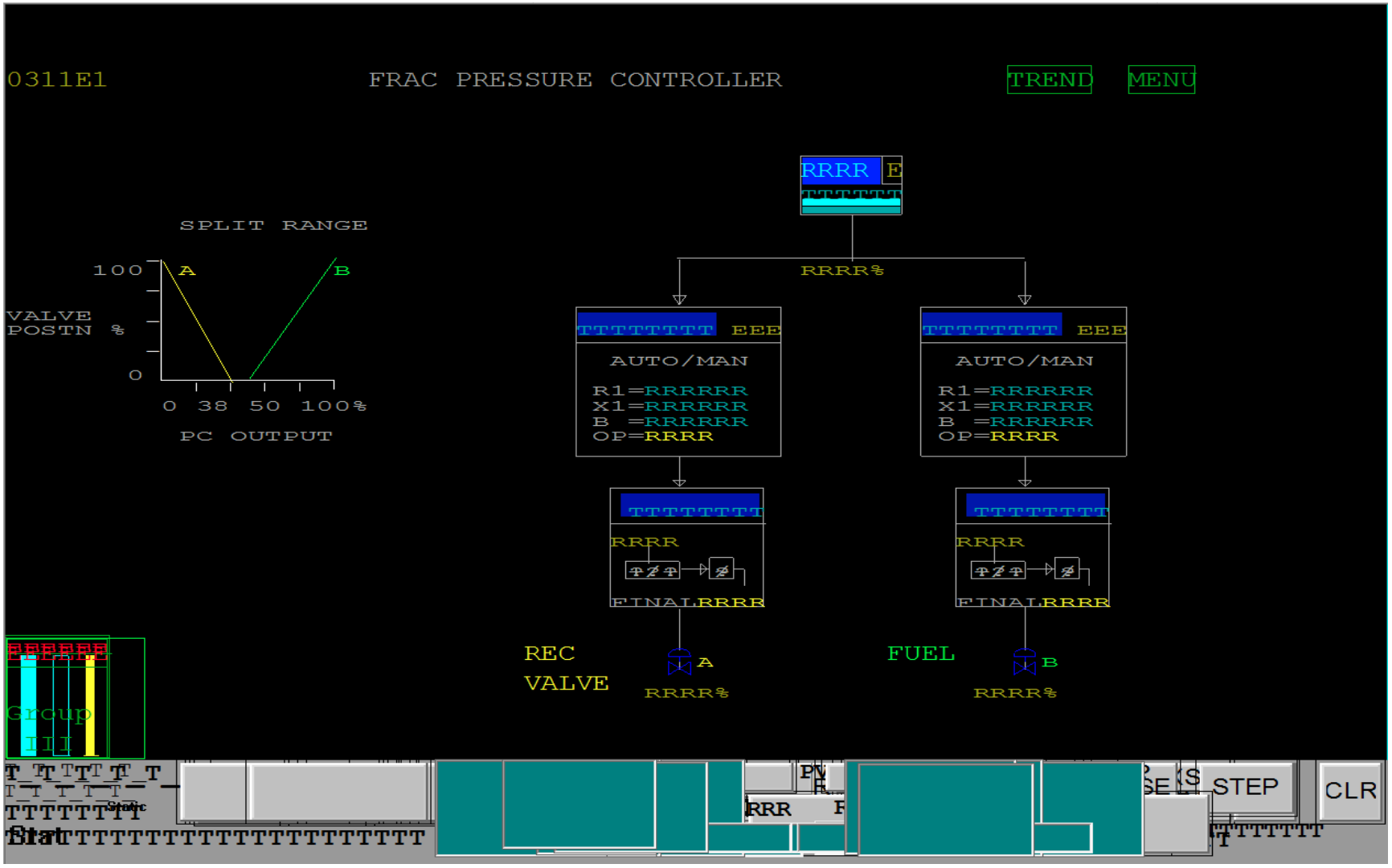
3.51 FRAC O/H SUC & DISCH KO'S(OS) (0311.DS)

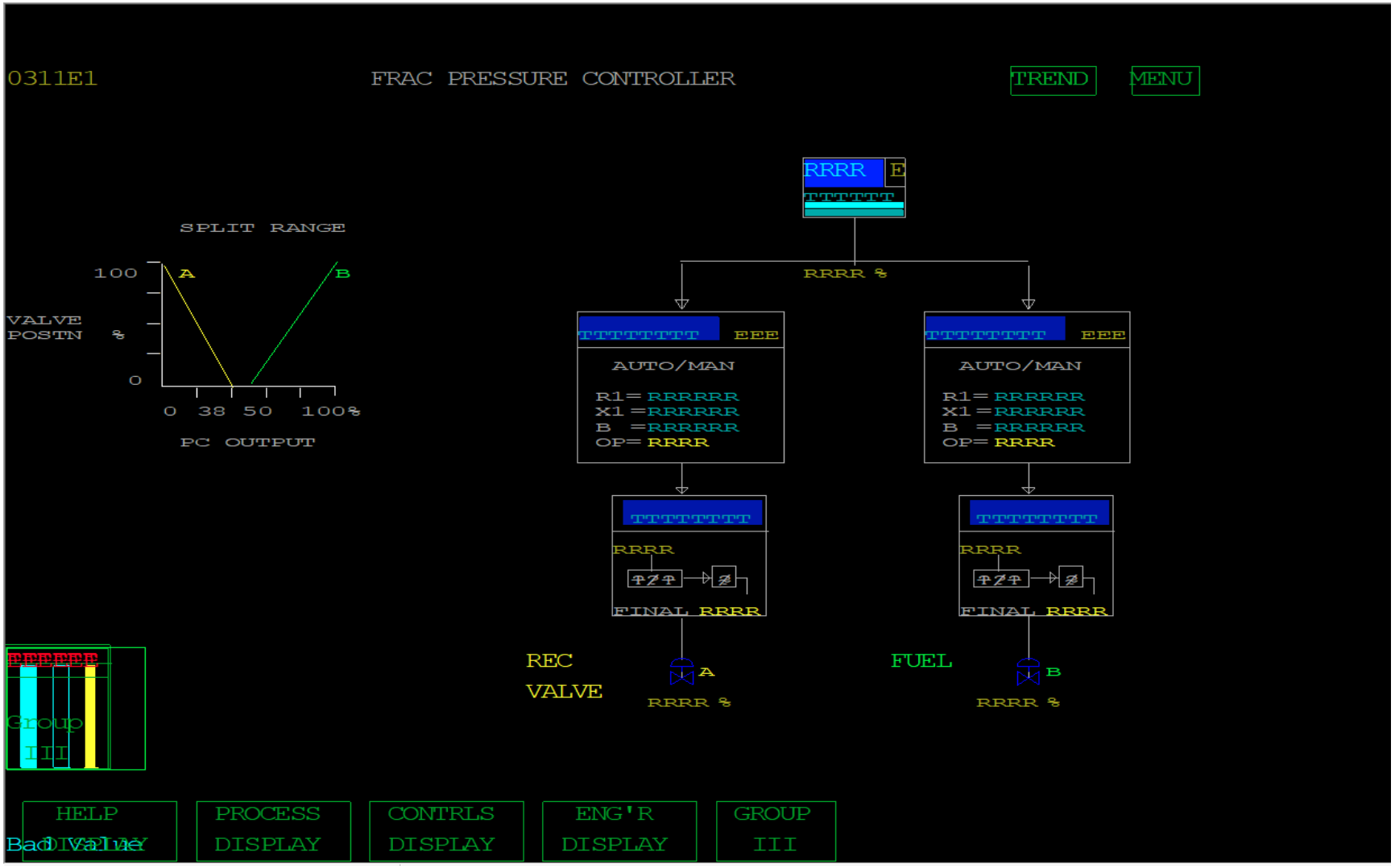


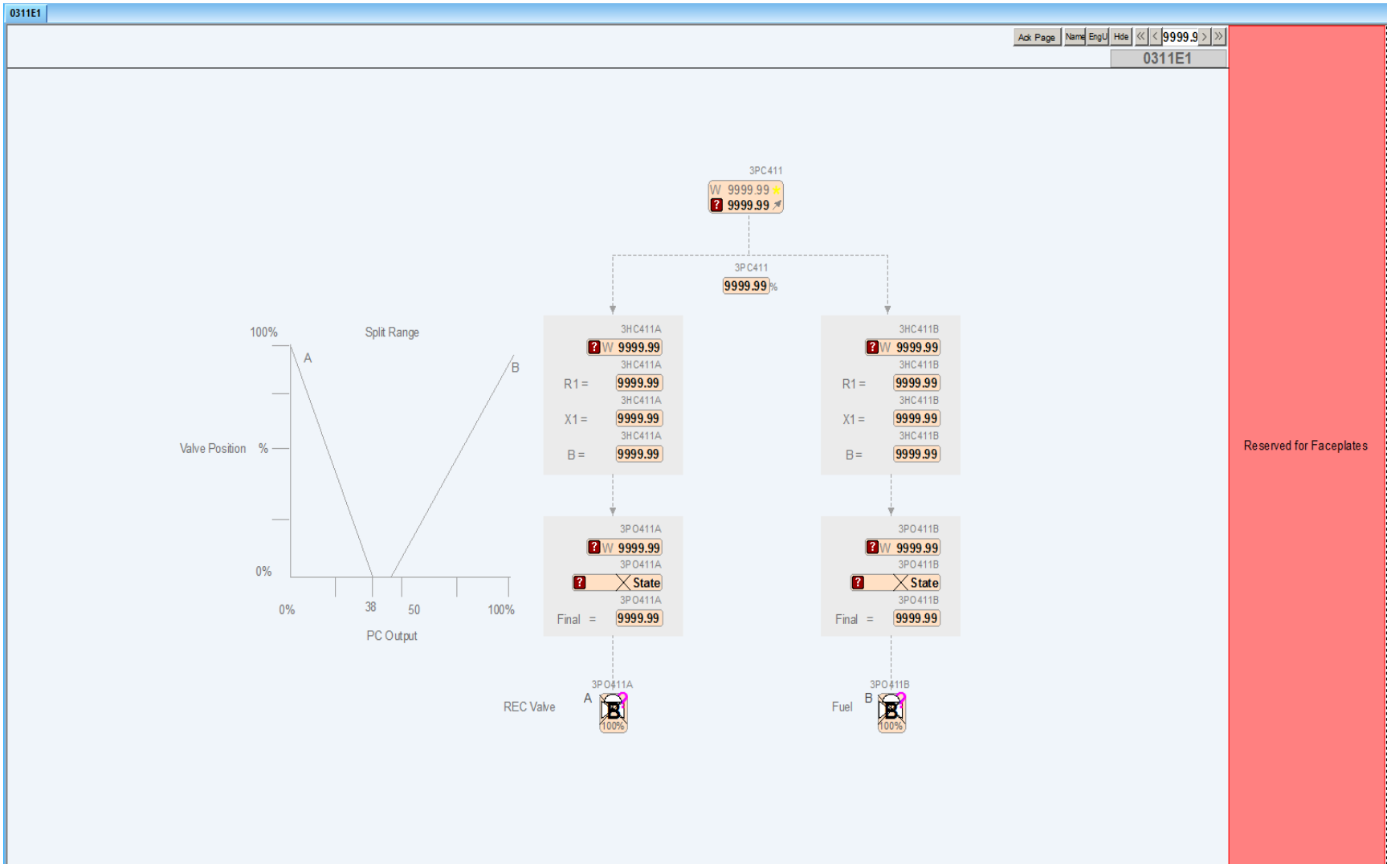

0311
FRAC O/H SUC & DISCH KO'S(OS)
HELP
DIR
HC
IMPROPER HIC MODE
HC
A
RECYCLE
AMINE SCRUBBER
RRRR %
RRRR
E
TTTTTT
DMC
RRRR
B
M
FUEL
RRRR
F
RRRR
P
LP AMINE SCRUBBER
RECYCLE VALVE ALMOST CLOSED START ANOTHER COMPRESSOR.
RRRR
M
RRRR
P
RRRR
F
RFLUX ACCUM
DBUT REL
TTTTTT
TTTTTT
95F CW
DISCH DRUM
CW
SUCTION DRUM
TTTT
TTTT
TTT
TTT
HH
I
M
EAST
C
TTTT
TTTT
RRRR
F
CW
DISCH DRUM
TTT
TTT
L
TTT
TTT
DISCH DRUM
PRODUCT ACCUM
TTT
TTT
TTT
TTT
RRRR
F
L
RRRR
E
TTTTTT
M
MID
C
TTTT
TTTT
MIN FLOW
RRRR
E
TTTTTT
TTT
TTT
L
LL
S
RRRR %
EMGR FRAC RFLX
900# COND
RRRR %
PRODUCT ACCUM
M
WEST
C
TTTT
TTTT
EEEEEE
Group III
RRRR %
SOUR WATR TANK 2257
RRRR
B
NO
RRRR %
DEBUT FEED


0311
Ack Page
Name
Engl
Hide
9999.9
0311
Help
Improper HIC Mode
HC
3HC411B
M 9999.99
3HC411A
M 9999.99
3PO411A
100%
A
Amine
Scrubber
Recycle
3PC411
9999.99 W
9999.99
9999.99
3PA3411
State
DMC
3FI115
9999.99 M
3PO411B
100%
B
Fuel
3TI710
9999.99 F
3PI412
9999.99 P
LP Amine
Scrubber
DBUT
REL
3PC411O
State
Recycle Valve Almost Closed
Start Another Compressor.
3FI116
9999.99 M
3PI444
9999.99 P
3TI699
9999.99 F
0309
P
RFLUX
ACCUM
3LA314A
State
HH
3LA315
State
Suction
Drum
3HA956
State
3XA953
East
I
3FA186
State
C
3TI715
95F CW 9999.99 F
3LA319
State
DISCH
Drum
L
3LA328
State
CW
3LA312
State
3LA311
State
DISCH Drum
3TI709
9999.99 F
MD
3XA954
C
3FA185
State
C
CW
Product
ACCUM
L
3LC313
W 9999.99
9999.99
WEST
3XA955
C
3FA184
State
C
MIN
Flow
3LC309
W 9999.99
9999.99
L
3LA310
State
LL
EMGR FRAC
RFLX
3LO320
100%
3LC320
W 9999.99
9999.99
Product ACCUM
S
3LO309
100%
Sour Water
Tank 2257
3FI114
9999.99 B
900# COND
Debut
Feed
NO
3LO313
100%
Reserved for Faceplates

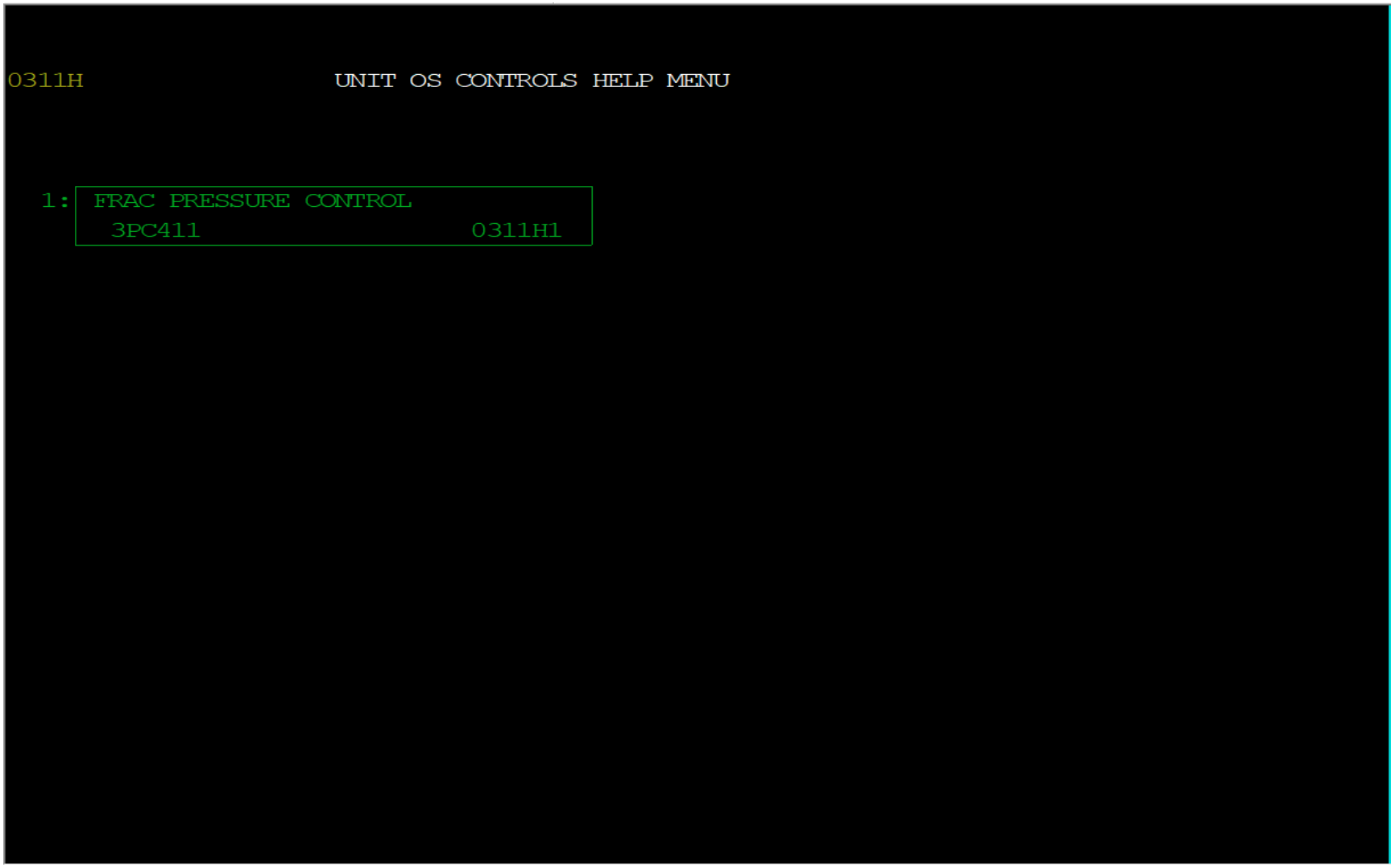
3.52 FRAC PRESSURE CONTROLLER (0311E1.DS)

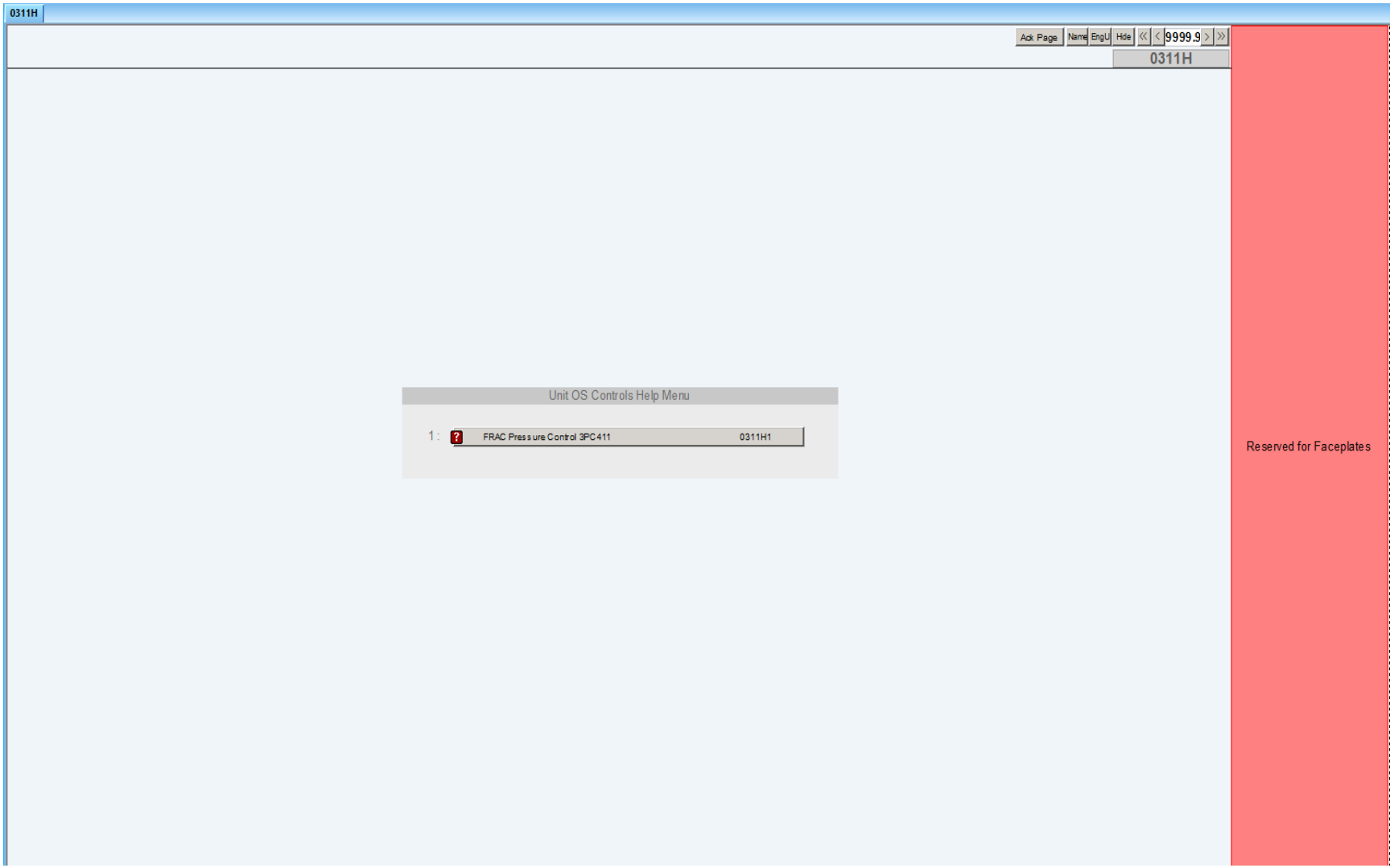



0311E1
FRAC PRESSURE CONTROLLER
TREND
MENU
SPLIT RANGE
100
A
B
VALVE
POSTN
%
0
0 38 50 100%
PC OUTPUT
RRRR
E
TTTTTT
RRRR %
TTTTTTTT
EEE
AUTO/MAN
R1= RRRRRR
X1 =RRRRRR
B =RRRRRR
OP= RRRR
TTTTTTTT
EEE
AUTO/MAN
R1= RRRRRR
X1 =RRRRRR
B =RRRRRR
OP= RRRR
TTTTTTTTT
RRRR
FINAL RRRR
TTTTTTTTT
RRRR
FINAL RRRR
REC
VALVE
A
RRRR %
FUEL
B
RRRR %
Group
III
HELP
DISPLAY
PROCESS
DISPLAY
CONTRLS
DISPLAY
ENG'R
DISPLAY
GROUP
III
Bad Value

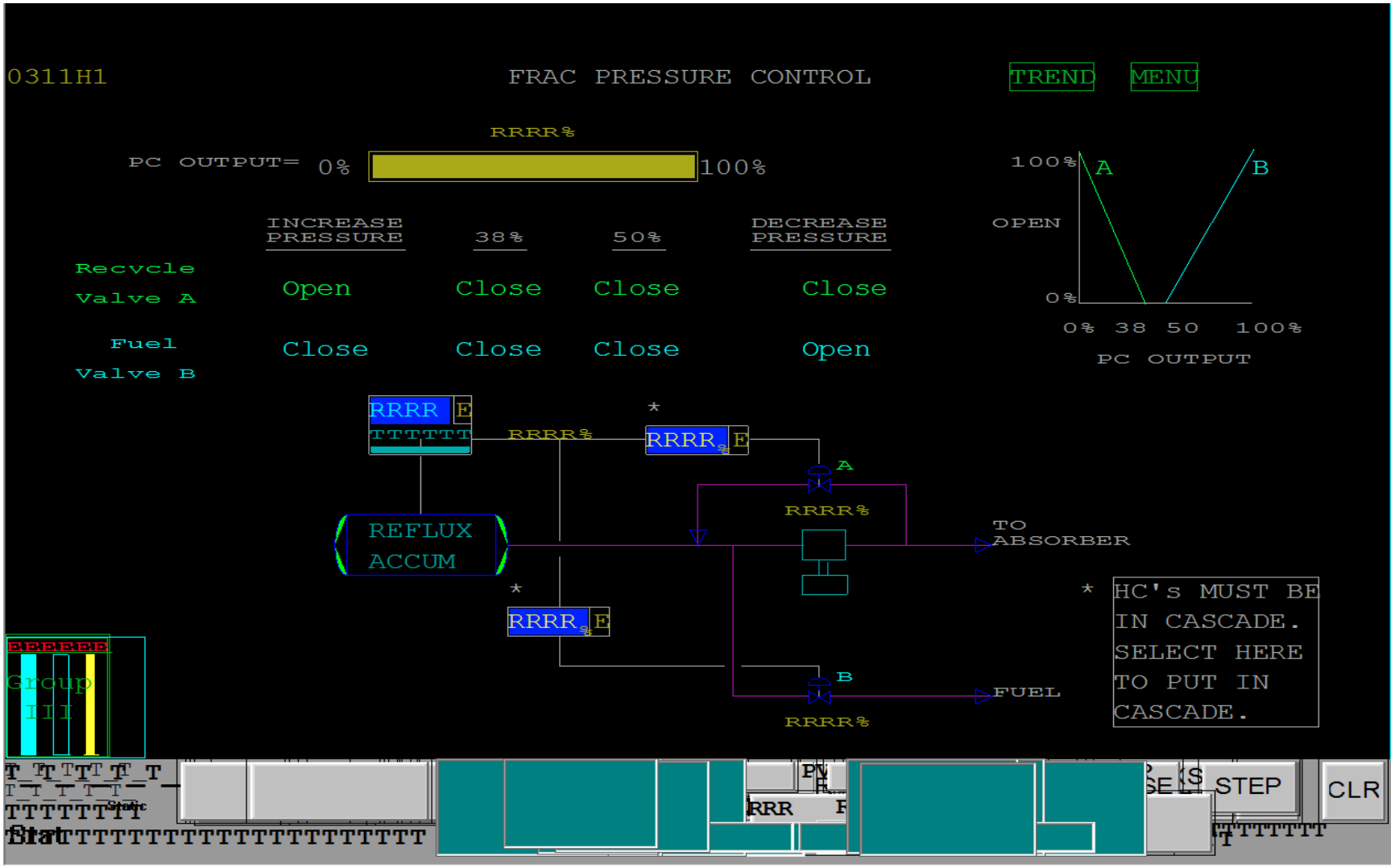

0311E1
Ack Page
Name
EngU
Hide
9999.9
0311E1
3PC411
W 9999.99
9999.99
3PC411
9999.99 %
100%
Split Range
A
B
Valve Position %
0%
0%
38
50
100%
PC Output
3HC411A
W 9999.99
3HC411A
R1 = 9999.99
3HC411A
X1 = 9999.99
3HC411A
B = 9999.99
3HC411B
W 9999.99
3HC411B
R1 = 9999.99
3HC411B
X1 = 9999.99
3HC411B
B = 9999.99
3PO411A
W 9999.99
3PO411A
State
3PO411A
Final = 9999.99
3PO411B
W 9999.99
3PO411B
State
3PO411B
Final = 9999.99
REC Valve
A
3PO411A
100%
Fuel
B
3PO411B
100%
Reserved for Faceplates

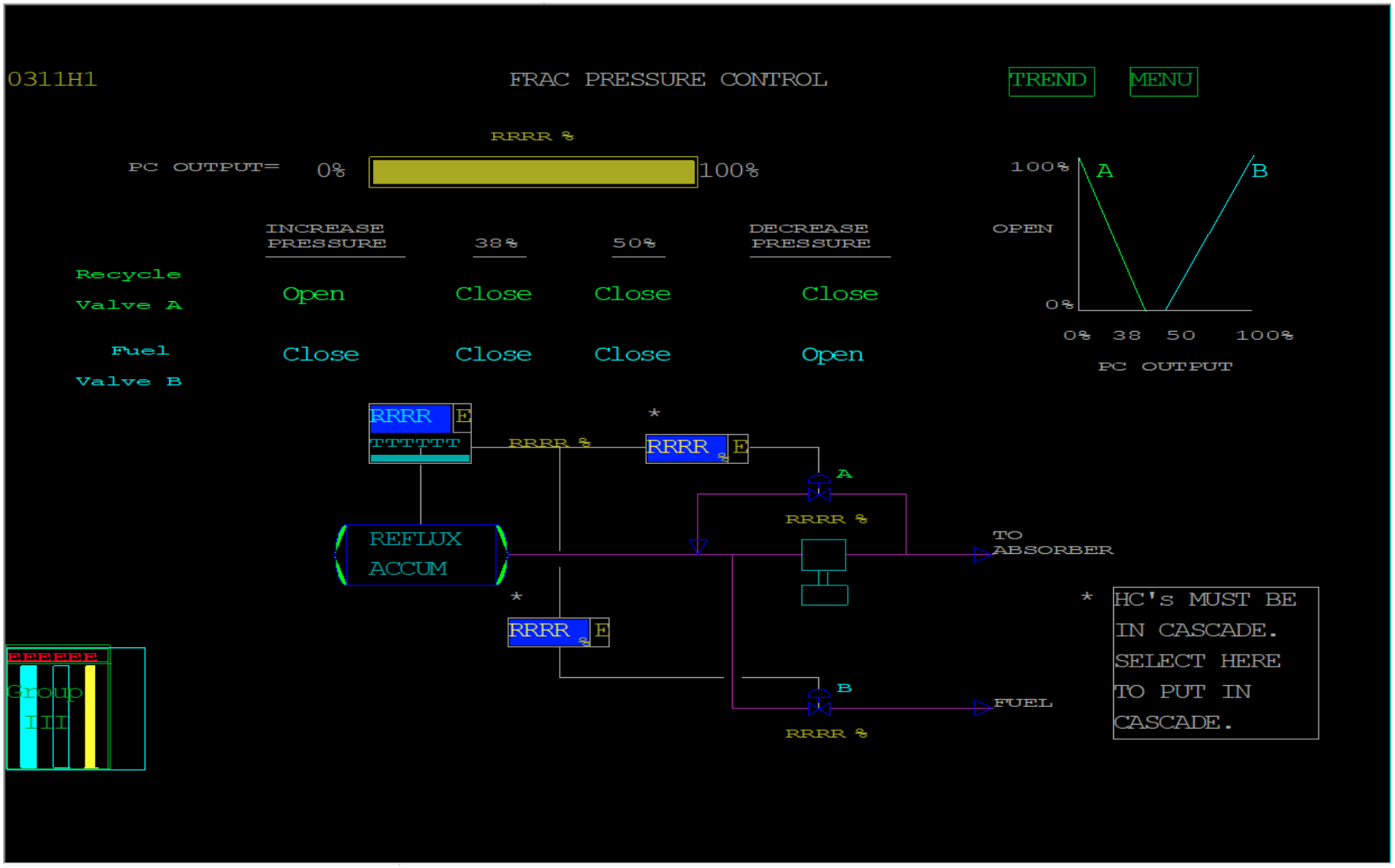
3.53 UNIT OS CONTROLS HELP MENU (0311H.DS)

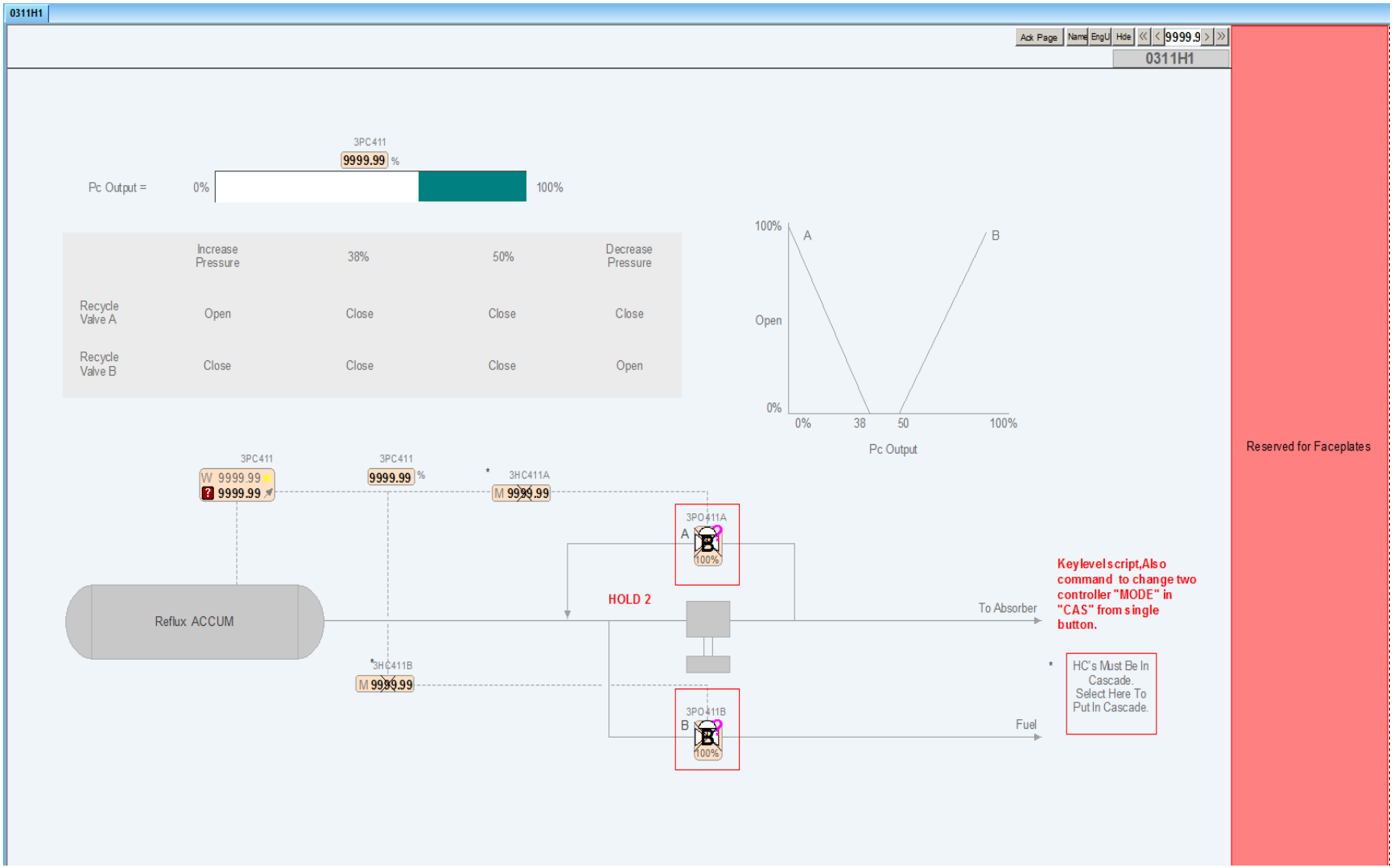

0311H
UNIT OS CONTROLS HELP MENU
1:
FRAC PRESSURE CONTROL
3PC411
0311H1


0311H
Ack Page
Name
EngU
Hide
9999.9
0311H
Unit OS Controls Help Menu
1 :
FRAC Pressure Control 3PC411
0311H1
Reserved for Faceplates

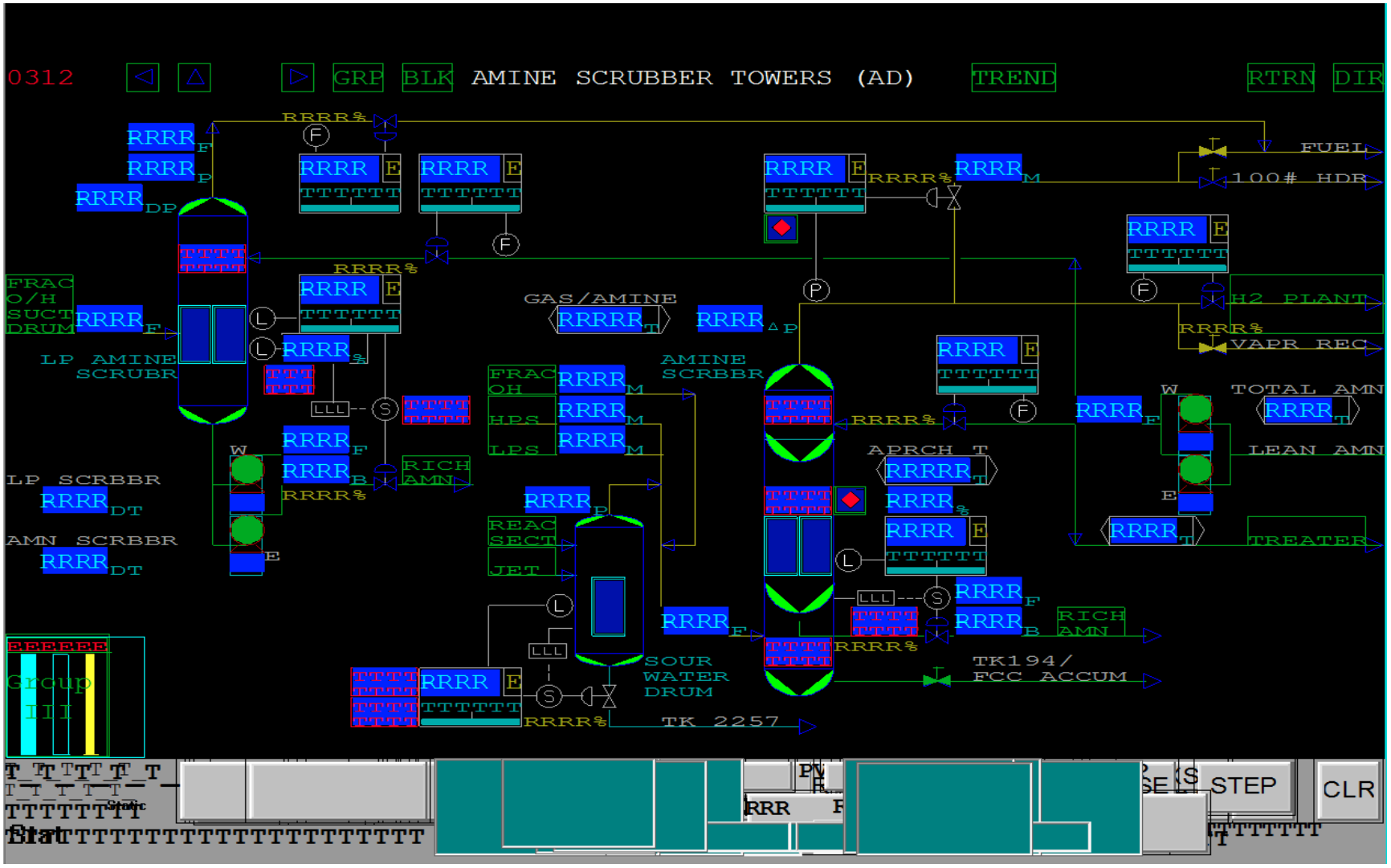
3.54 FRAC PRESSURE CONTROL (0311H1.DS)

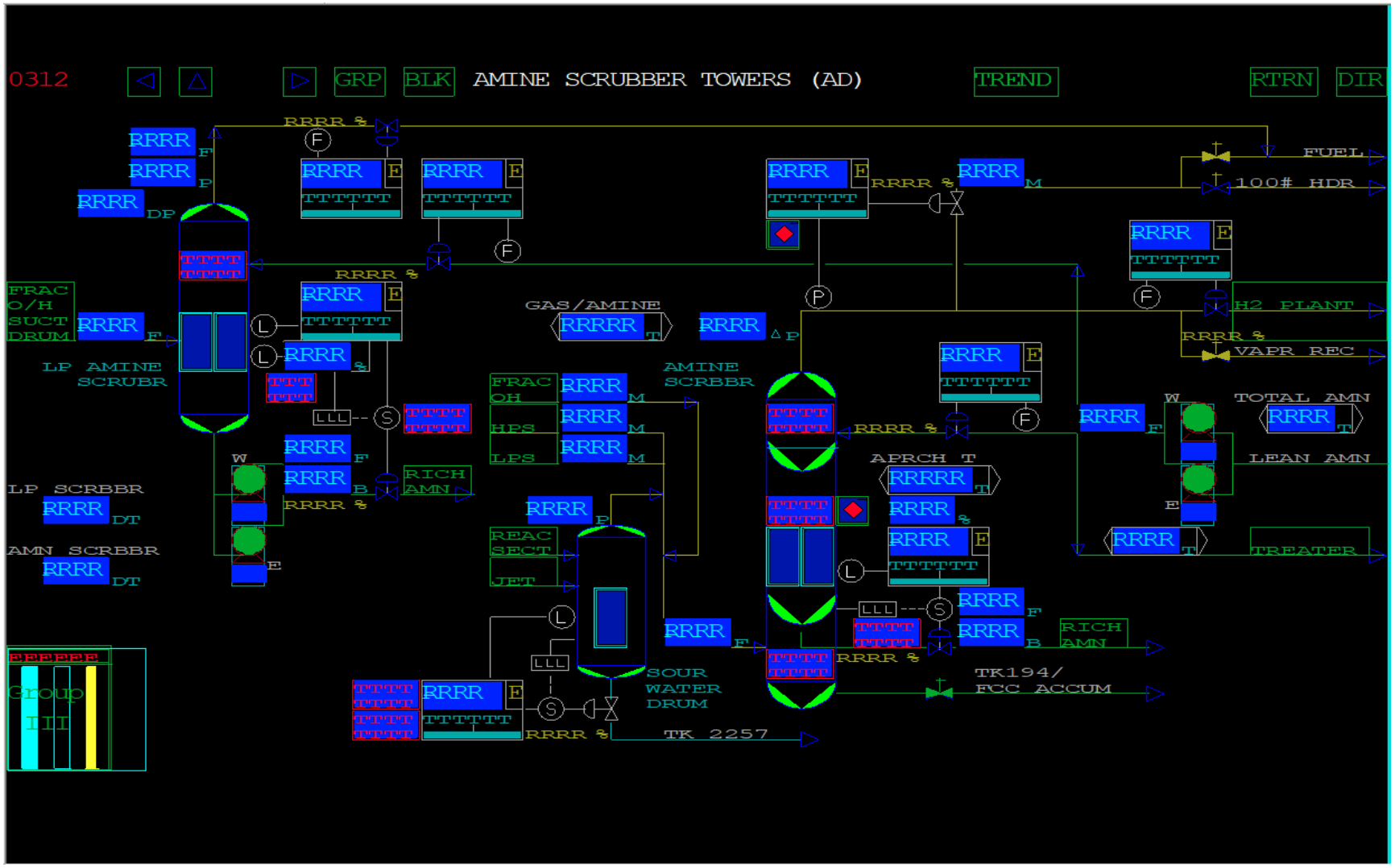


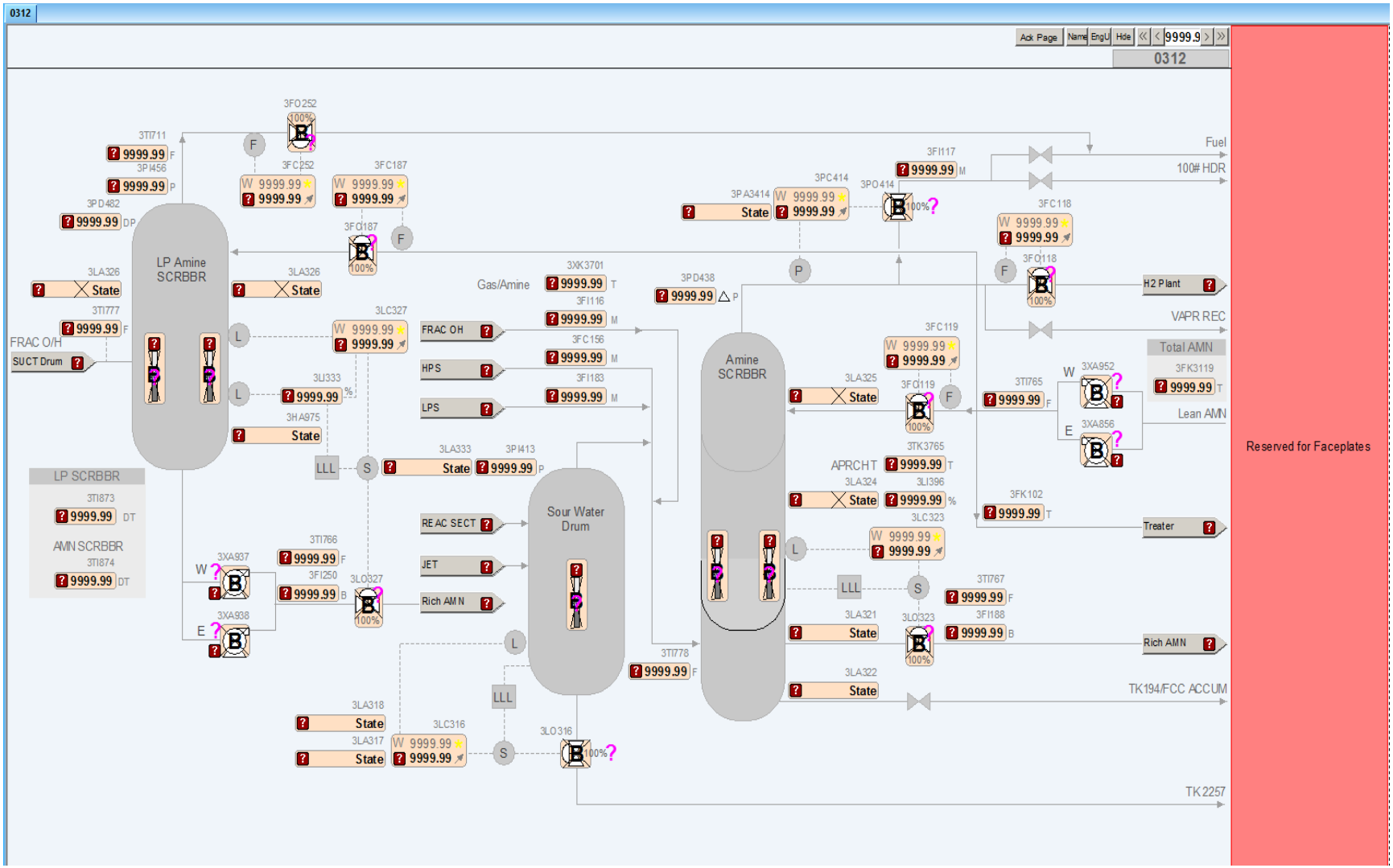

0311H1
FRAC PRESSURE CONTROL
TREND
MENU
RRRR %
PC OUTPUT=
0%
100%
INCREASE PRESSURE
38%
50%
DECREASE PRESSURE
Recycle Valve A
Open
Close
Close
Close
Fuel Valve B
Close
Close
Close
Open
100%
OPEN
0%
A
B
0% 38 50 100%
PC OUTPUT
RRRR
TTTTTT
E
RRRR %
RRRR
E
A
RRRR %
REFLUX ACCUM
TO ABSORBER
RRRR
E
B
FUEL
RRRR %
Group III
HC's MUST BE IN CASCADE. SELECT HERE TO PUT IN CASCADE.


0311H1
Ack Page
Name
EngU
Hide
9999.9
0311H1
3PC411
9999.99 %
Pc Output =
0%
100%
Increase Pressure
38%
50%
Decrease Pressure
Recycle Valve A
Open
Close
Close
Close
Recycle Valve B
Close
Close
Close
Open
100%
Open
0%
A
B
0%
38
50
100%
Pc Output
Reserved for Faceplates
3PC411
W 9999.99
9999.99
3PC411
9999.99 %
3HC411A
M 9999.99
3PO411A
A
100%
HOLD 2
Reflux ACCUM
To Absorber
Keylevel script,Also command to change two controller "MODE" in "CAS" from single button.
3HC411B
M 9999.99
HC's Must Be In Cascade. Select Here To Put In Cascade.
3PO411B
B
100%
Fuel

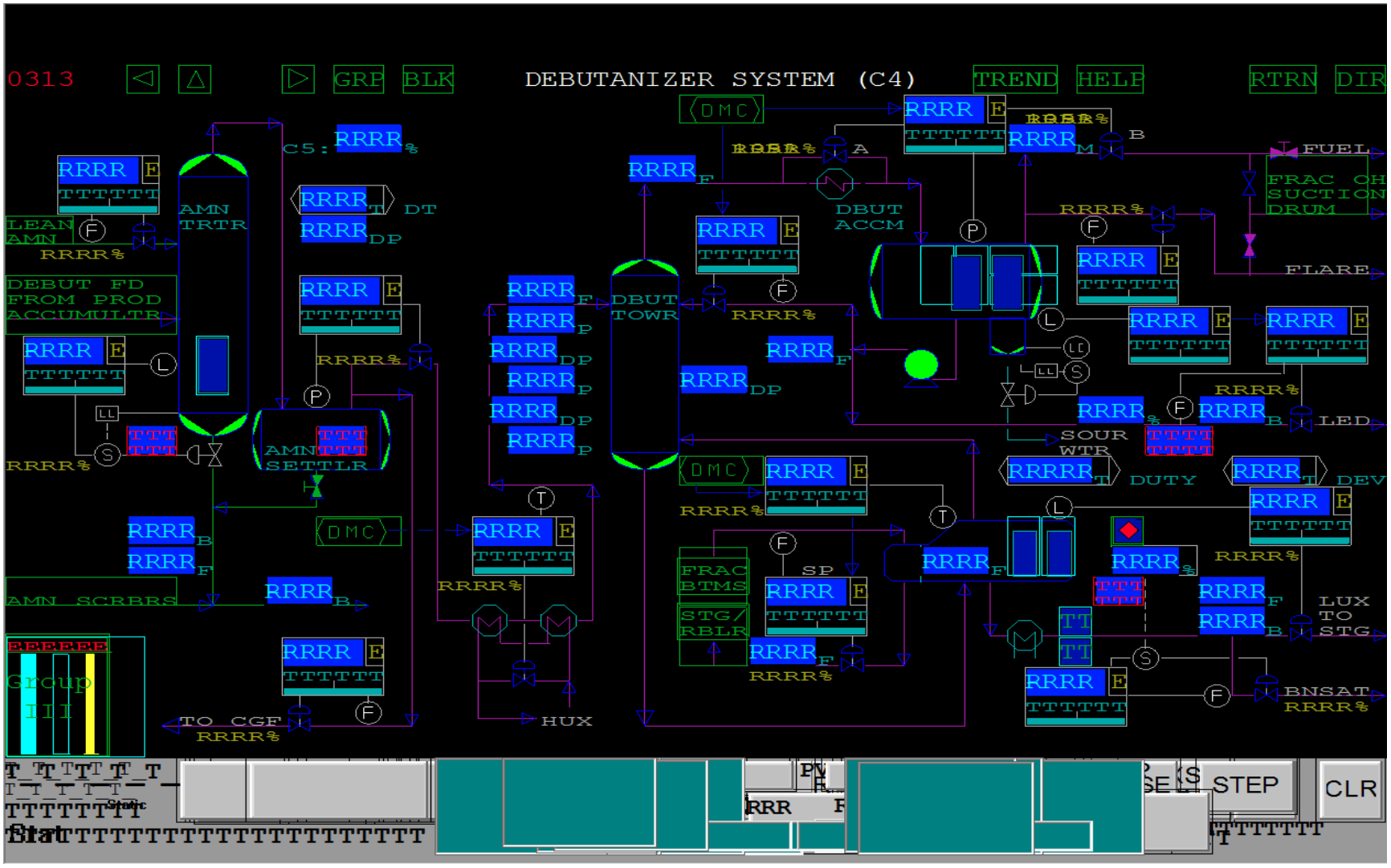
3.55 AMINE SCRUBBER TOWERS (AD) (0312.DS)

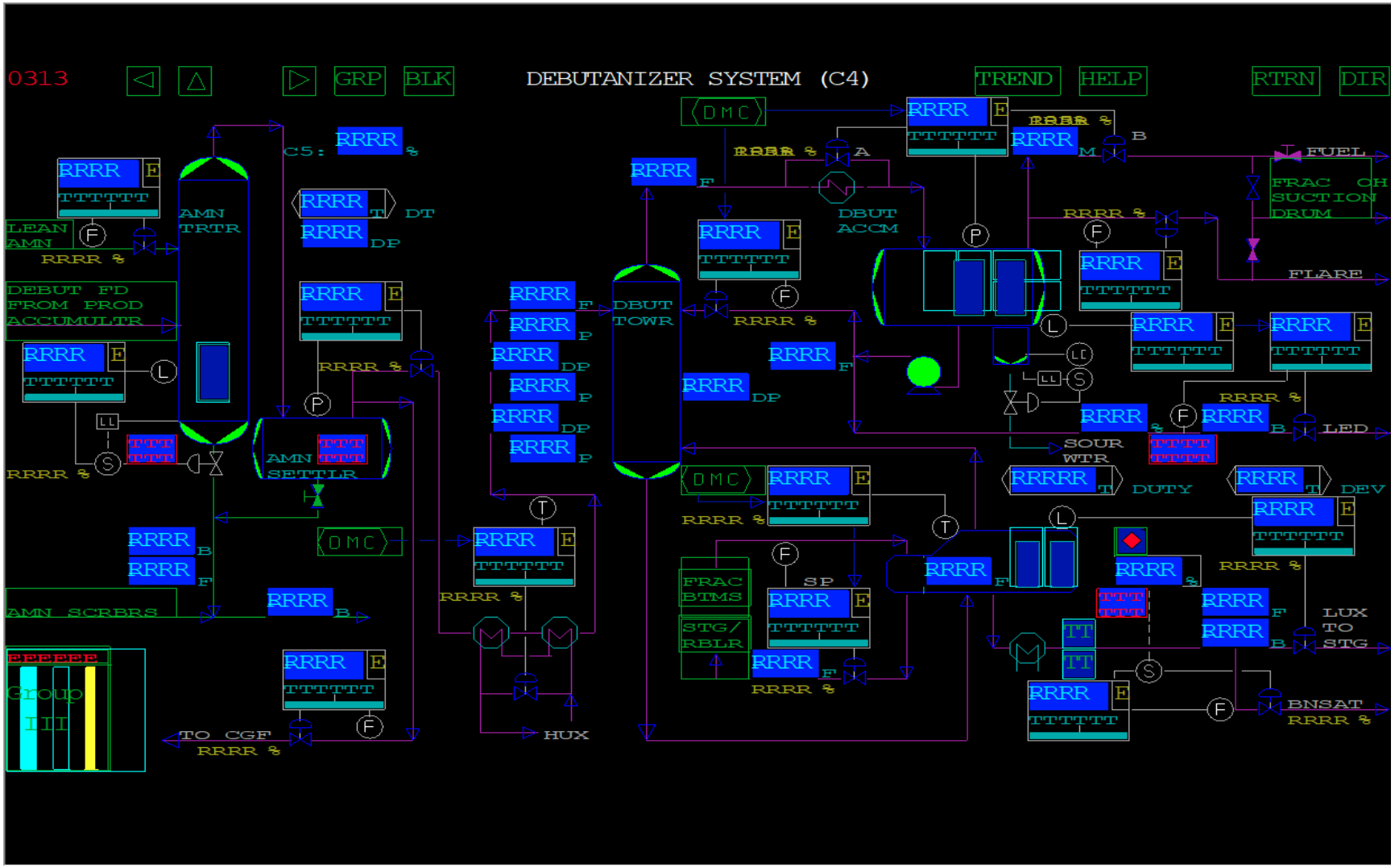


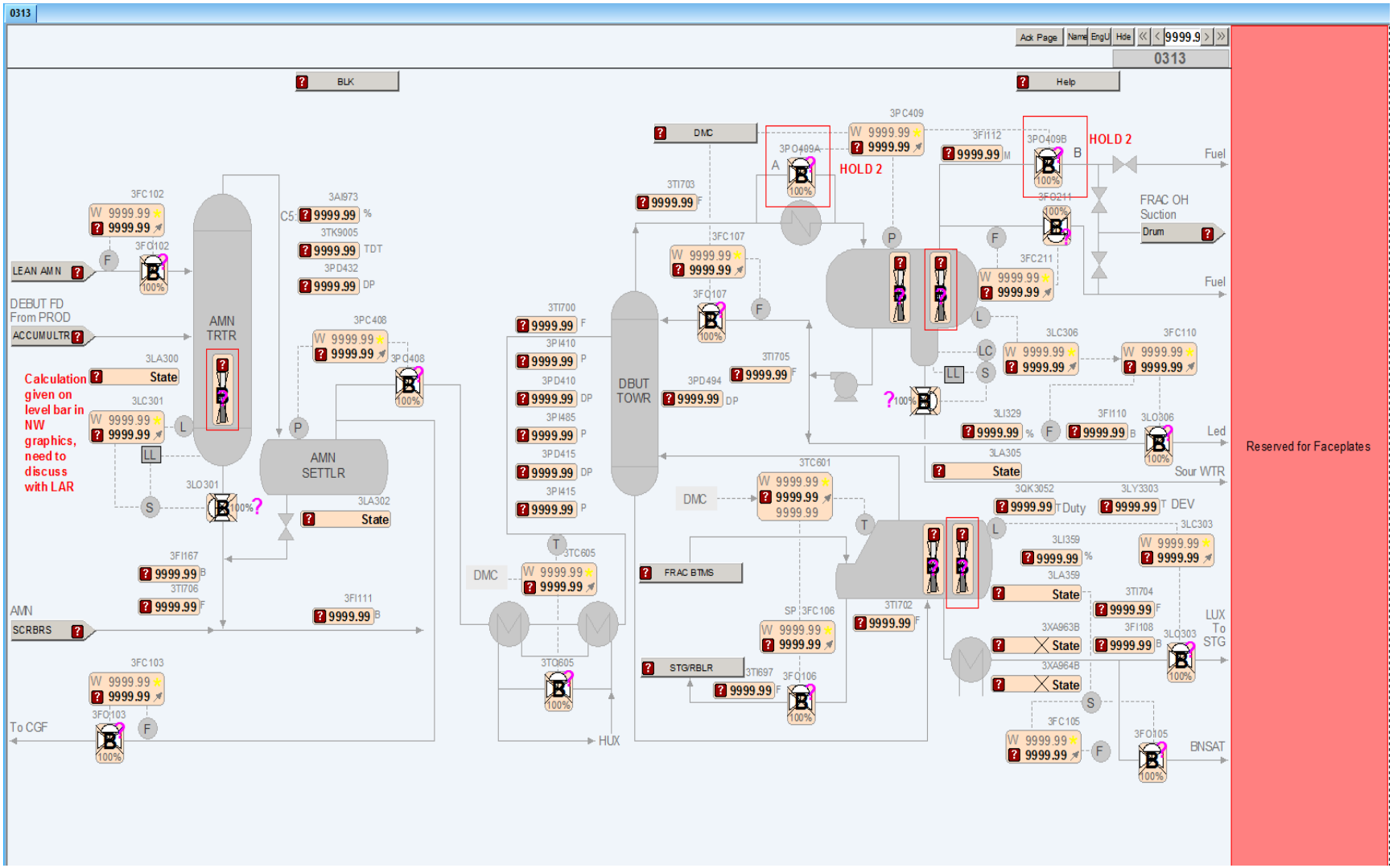

0312
GRP
BLK
AMINE SCRUBBER TOWERS (AD)
TREND
RTRN
DIR
FUEL
100# HDR
H2 PLANT
VAPR REC
TOTAL AMN
LEAN AMN
TREATER
RICH AMN
LP AMINE SCRUBR
AMINE SCRBBR
LP SCRBBR
AMN SCRBBR
FRAC O/H SUCT DRUM
GAS/AMINE
APRCH T
REAC SECT
JET
SOUR WATER DRUM
TK 2257
TK194/ FCC ACCUM
GROUP III


0312
Ack Page
Name
Eng U
Hide
9999.9
0312
LP Amine SCRBBR
Amine SCRBBR
Sour Water Drum
LP SCRBBR
AMN SCRBBR
Gas/Amine
FRAC O/H
SUCT Drum
FRAC OH
HPS
LPS
REAC SECT
JET
Rich AMN
APRCHT
Fuel
100# HDR
H2 Plant
VAPR REC
Total AMN
Lean AMN
Treater
Rich AMN
TK194/FCC ACCUM
TK 2257
Reserved for Faceplates

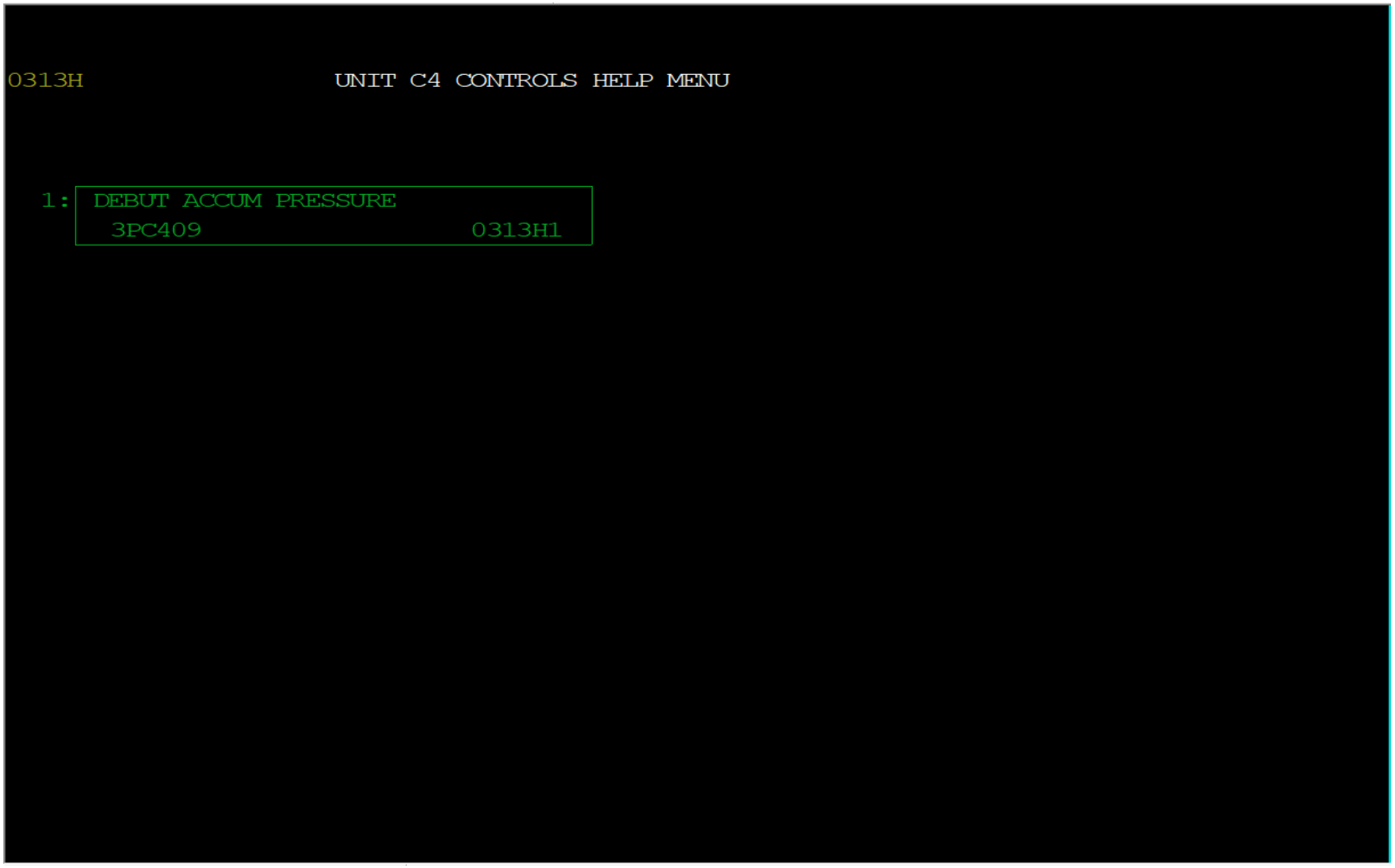
3.56 DEBUTANIZER SYSTEM (C4) (0313.DS)

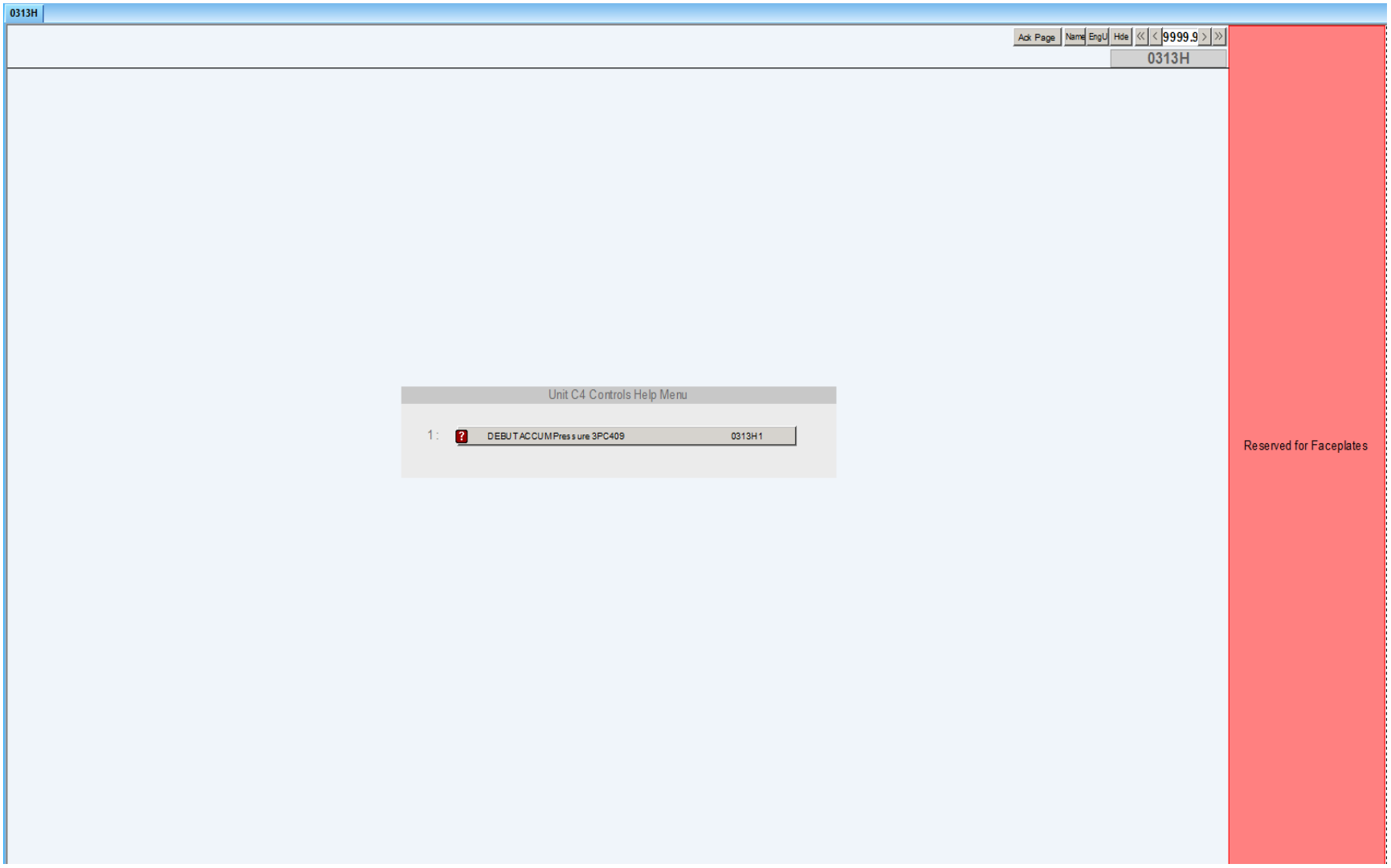



0313
GRP
BLK
DEBUTANIZER SYSTEM (C4)
TREND
HELP
RTRN
DIR
DMC
C5:
AMN TRTR
LEAN AMN
DEBUT FD FROM PROD ACCUMULTR
AMN SETTLR
AMN SCRBRS
DBUT TOWR
DBUT ACCM
FRAC BTMS
STG/ RBLR
SP
SOUR WTR
DUTY
FUEL
FRAC CH SUCTION DRUM
FLARE
LED
DEV
LUX TO STG
BNSAT
HUX
TO CGF
GROUP III
RRRR
TTTTTT

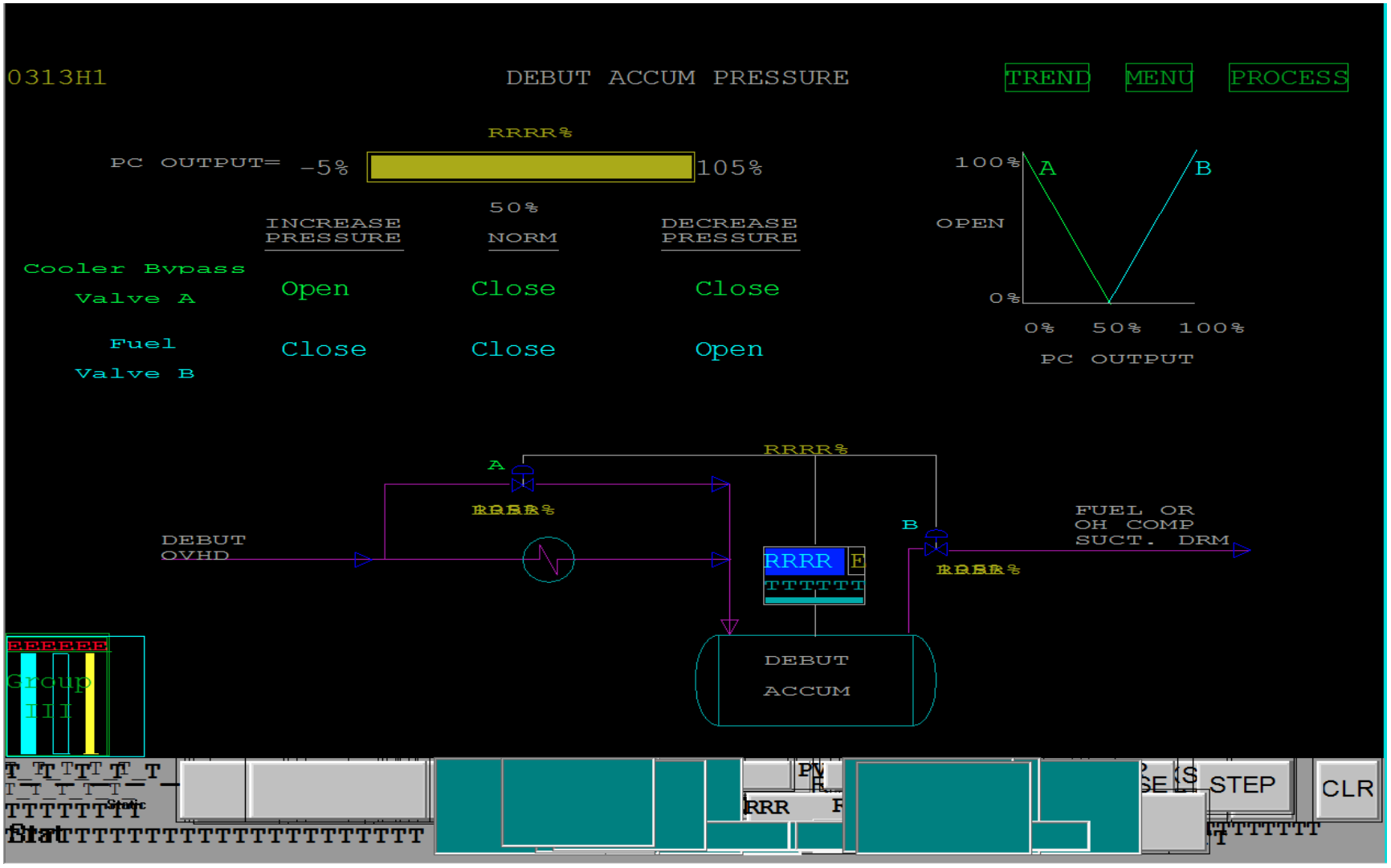

0313
Ack Page
Name
Eng'U
Hide
0313
BLK
Help
LEAN AMN
DEBUT FD
From PROD
ACCUMULTR
AMN
TRTR
AMN
SETTLR
Calculation given on level bar in NW graphics, need to discuss with LAR
AMN
SCRBRS
To CGF
DBUT
TOWR
DMC
FRAC BTMS
STG/RBLR
HUX
HOLD 2
HOLD 2
Fuel
FRAC OH
Suction
Drum
Fuel
Led
Sour WTR
LUX
To
STG
BNSAT
Reserved for Faceplates

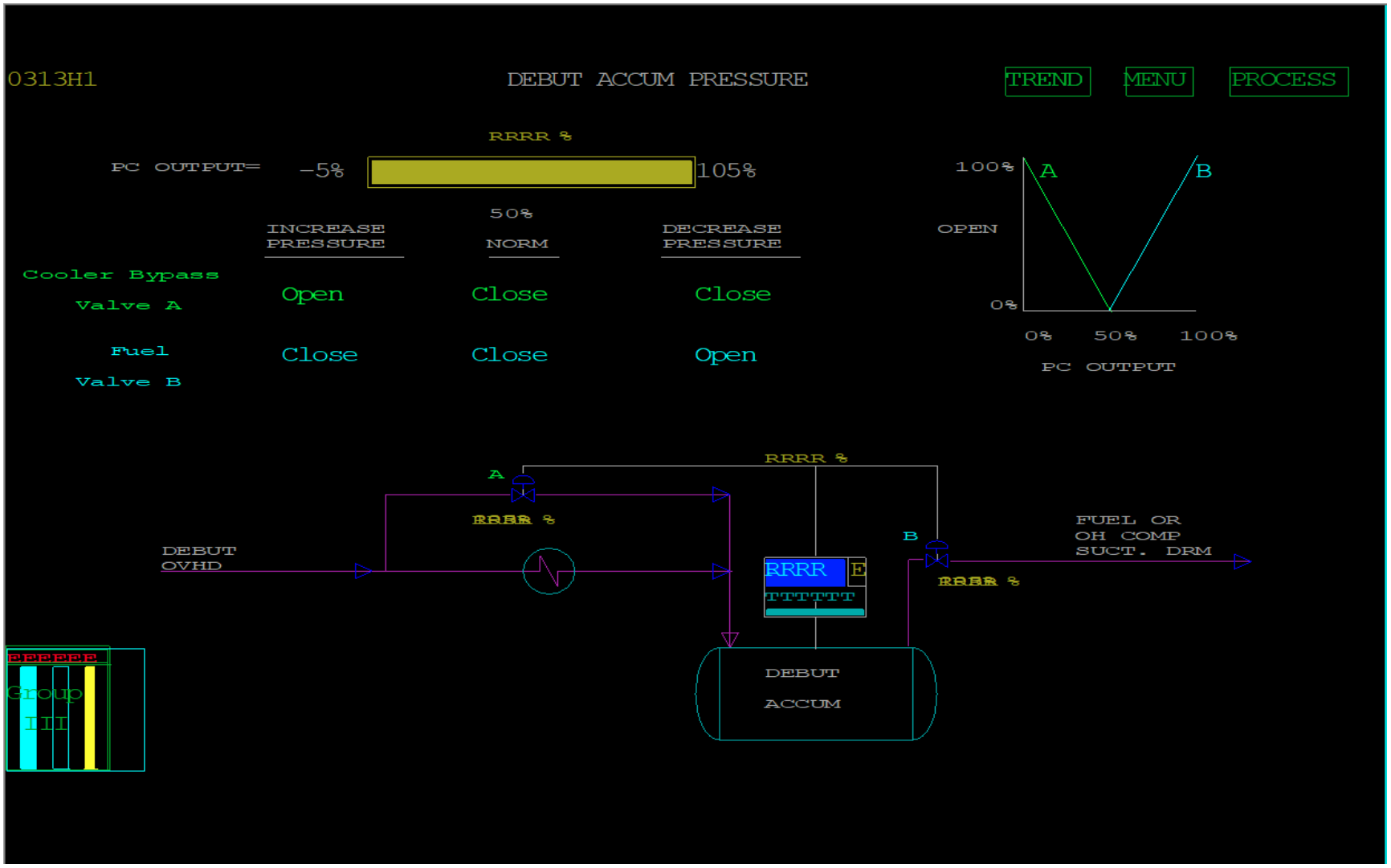
3.57 UNIT C4 CONTROLS HELP MENU (0313H.DS)

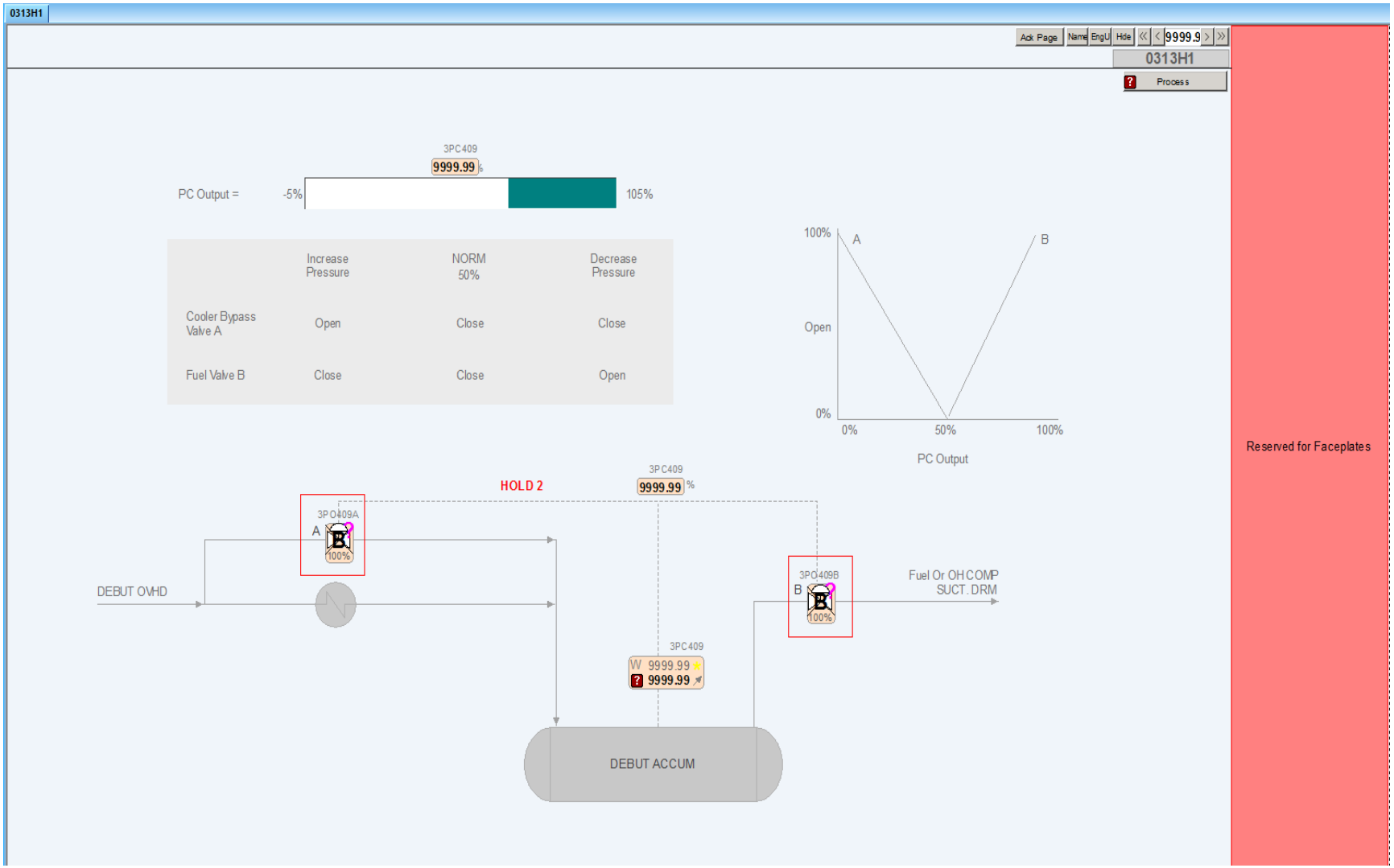

0313H
UNIT C4 CONTROLS HELP MENU
1:
DEBUT ACCUM PRESSURE
3PC409
0313H1


0313H
Ack Page
Name
EngU
Hide
9999.9
0313H
Unit C4 Controls Help Menu
1 :
DEBUTACCUMPressure3PC409
0313H1
Reserved for Faceplates

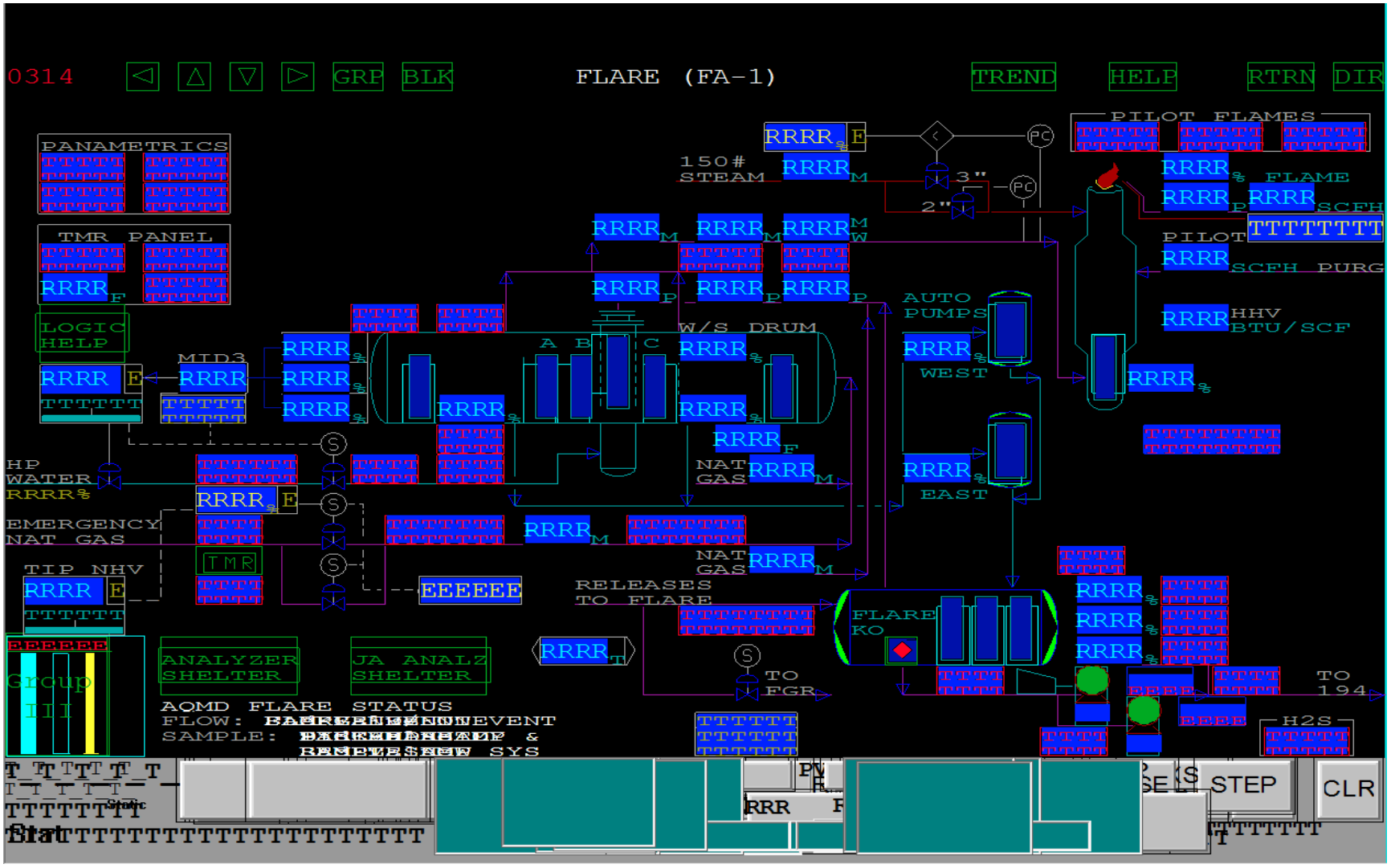
3.58 DEBUT ACCUM PRESSURE (0313H1.DS)

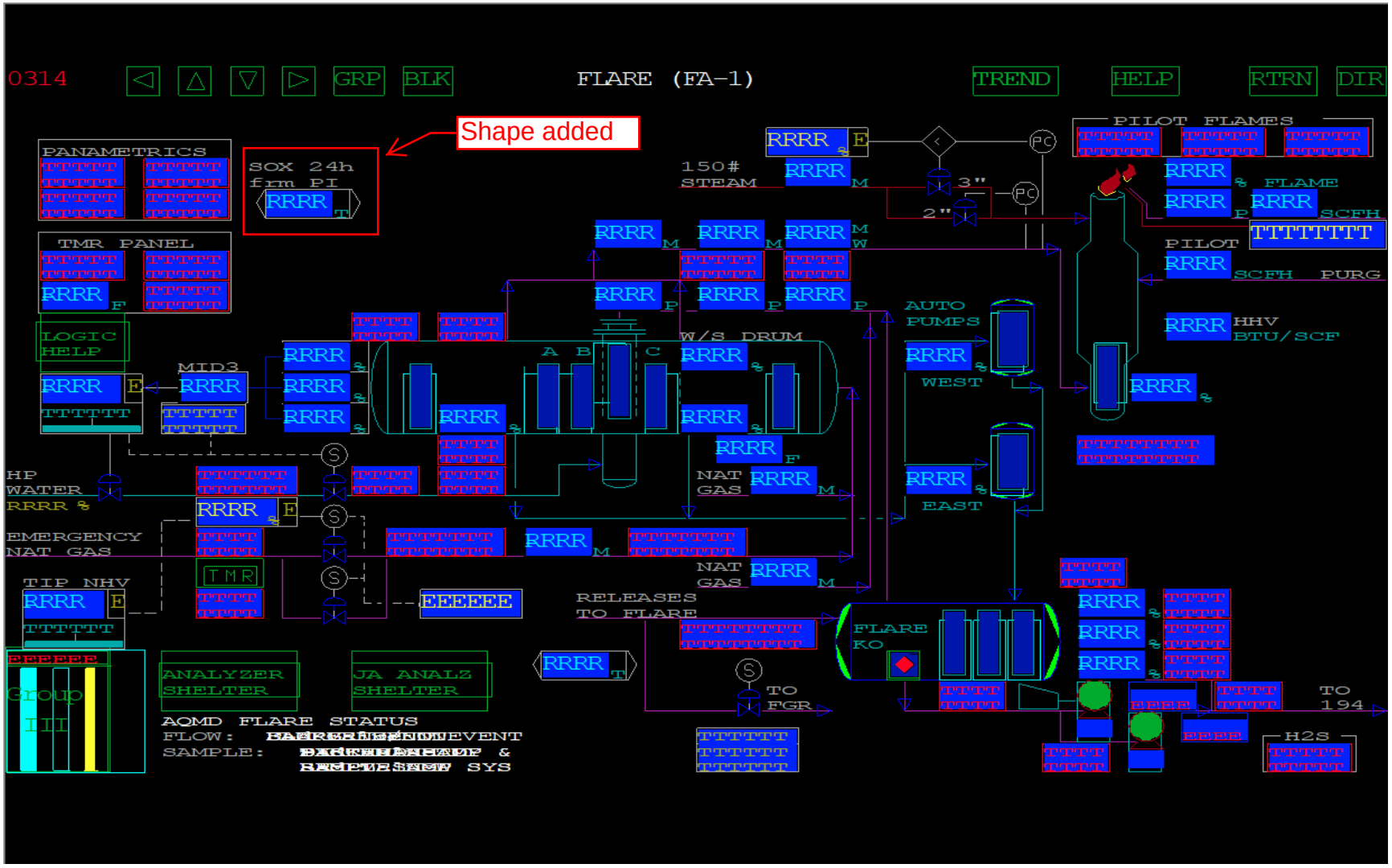


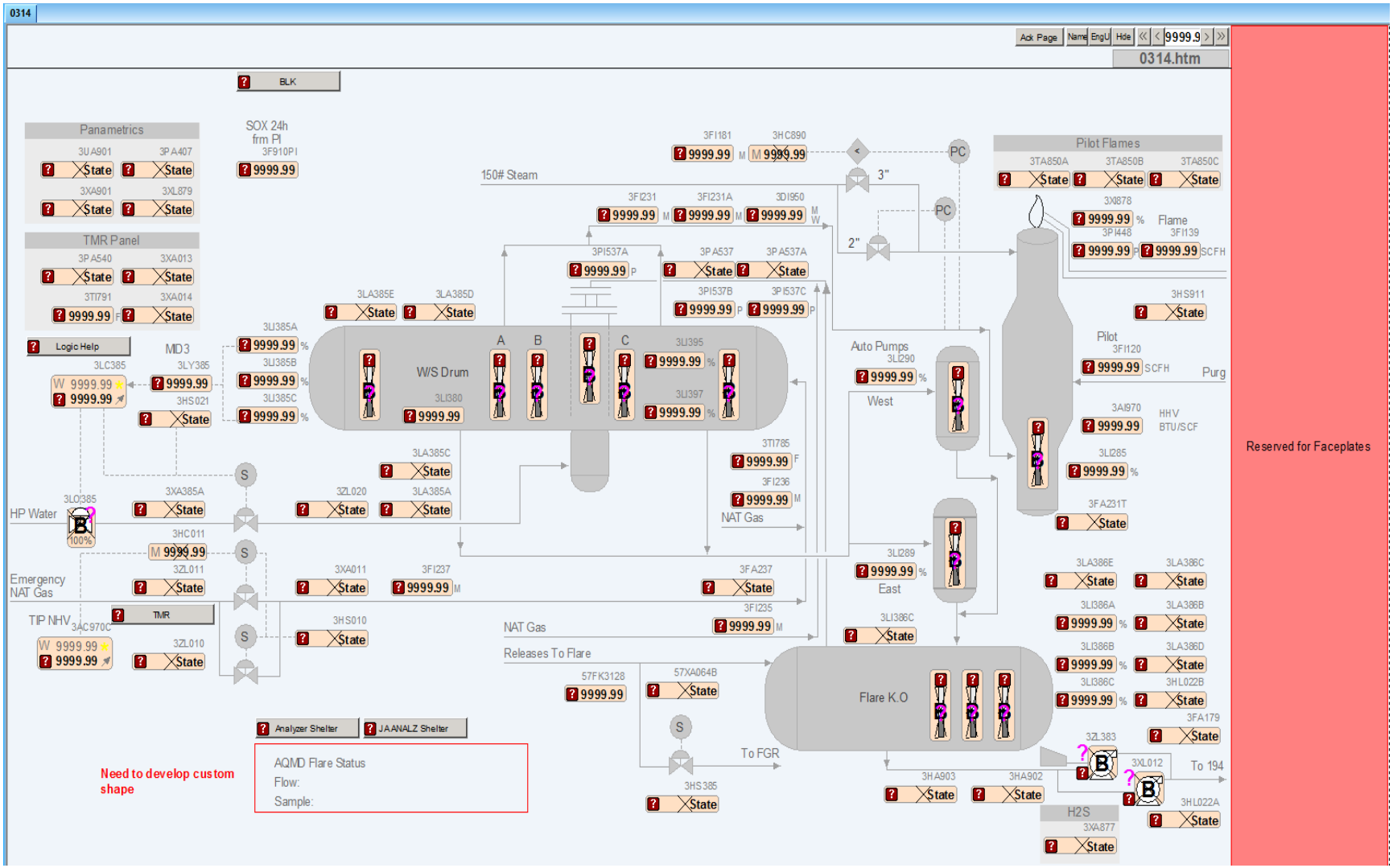

0313H1
DEBUT ACCUM PRESSURE
TREND
MENU
PROCESS
RRRR %
PC OUTPUT=
-5%
105%
50%
INCREASE PRESSURE
NORM
DECREASE PRESSURE
Cooler Bypass Valve A
Open
Close
Close
Fuel Valve B
Close
Close
Open
100%
A
B
OPEN
0%
0%
50%
100%
PC OUTPUT
RRRR %
A
RRRR %
DEBUT OVHD
B
RRRR %
FUEL OR OH COMP SUCT. DRM
RRRR
E
TTTTTT
DEBUT ACCUM
EEEEEE
Group III


0313H1
Ack Page
Name
EngU
Hide
9999.9
0313H1
Process
3PC409
9999.99 %
PC Output =
-5%
105%
Increase Pressure
NORM 50%
Decrease Pressure
Cooler Bypass Valve A
Open
Close
Close
Fuel Valve B
Close
Close
Open
100%
Open
0%
A
B
0%
50%
100%
PC Output
Reserved for Faceplates
HOLD 2
3PC409
9999.99 %
3PO409A
A
100%
DEBUT OVHD
3PO409B
B
100%
Fuel Or OH COMP SUCT. DRM
3PC409
W 9999.99
9999.99
DEBUT ACCUM

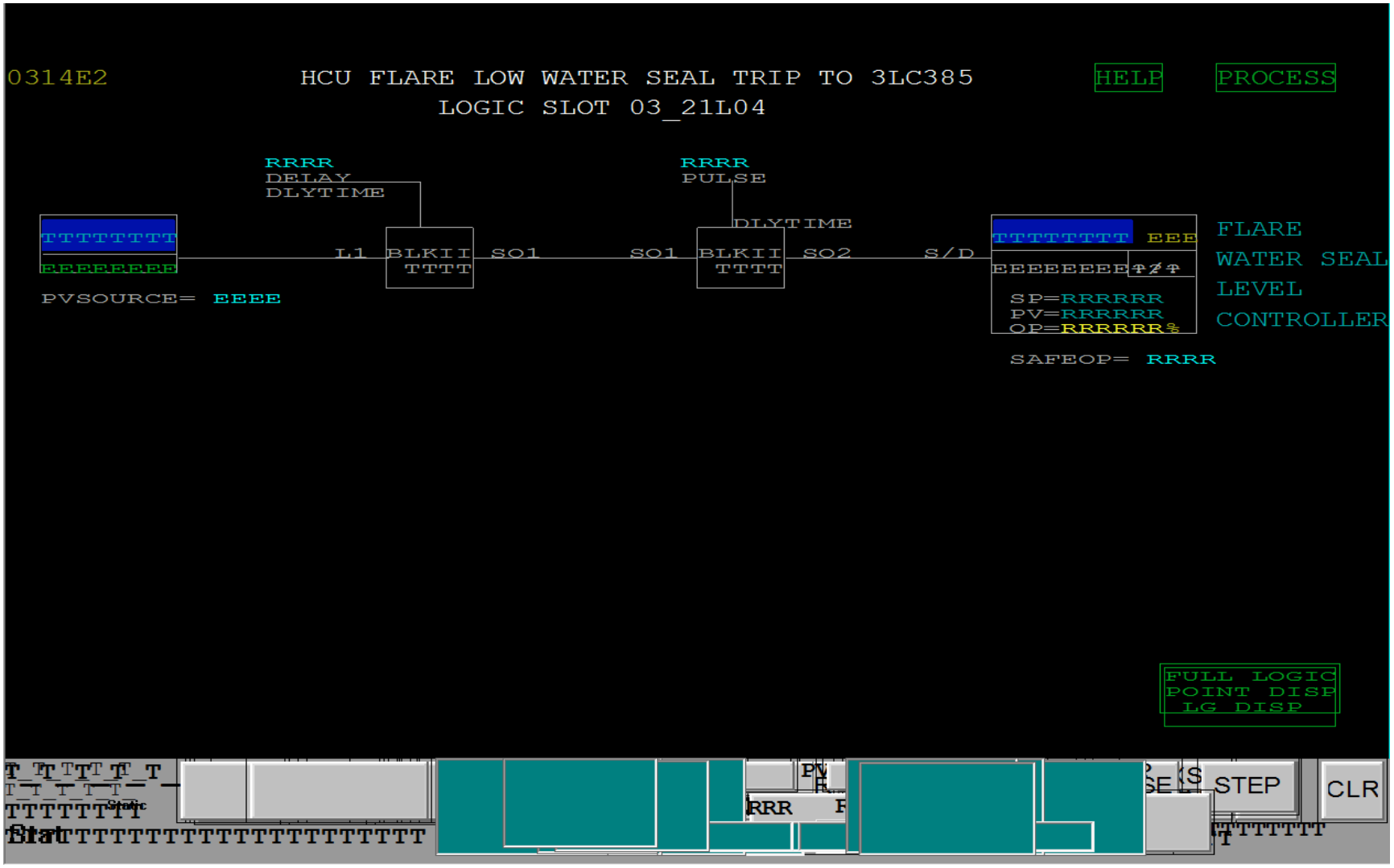
3.59 FLARE (FA-1) (0314.DS)

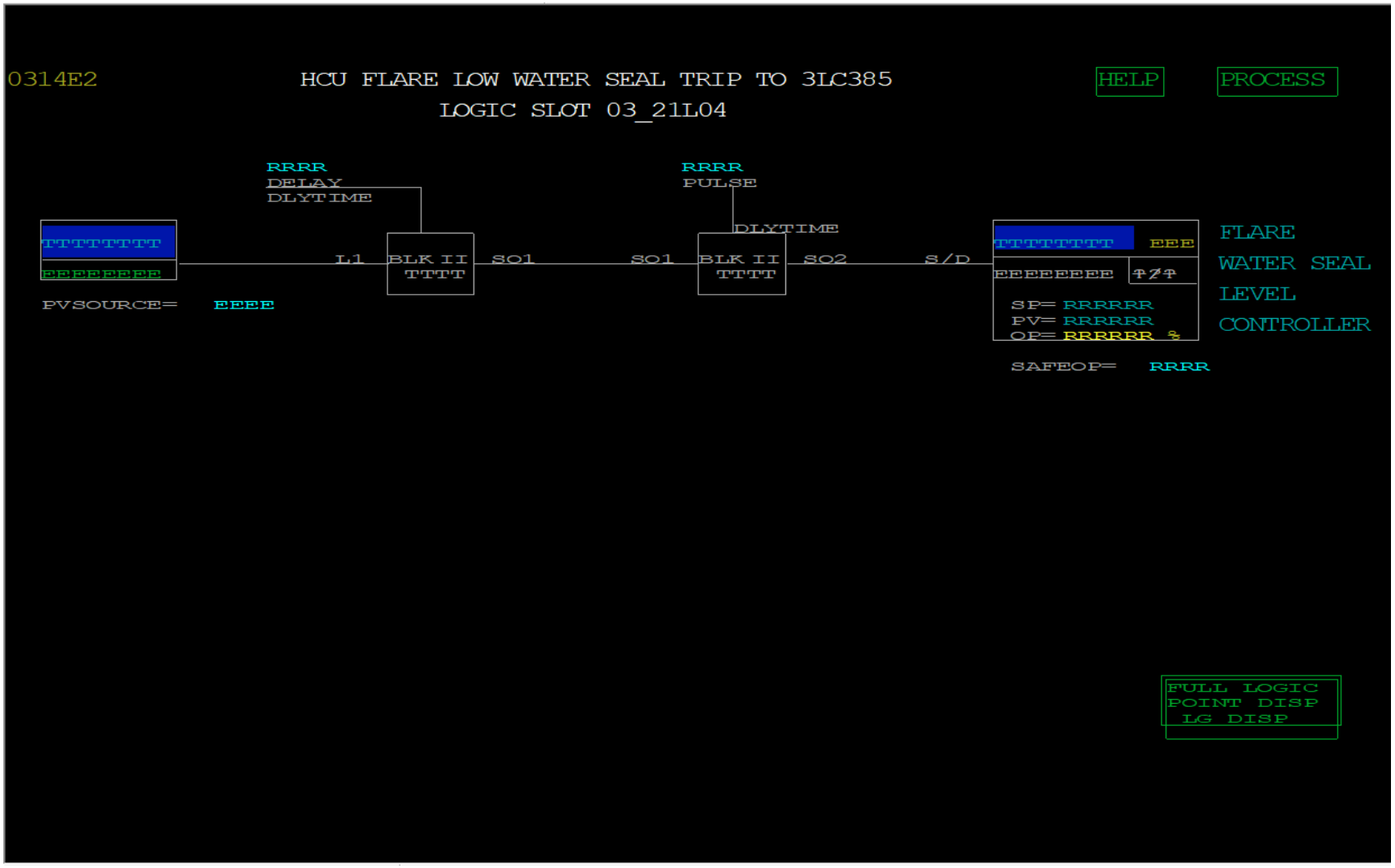


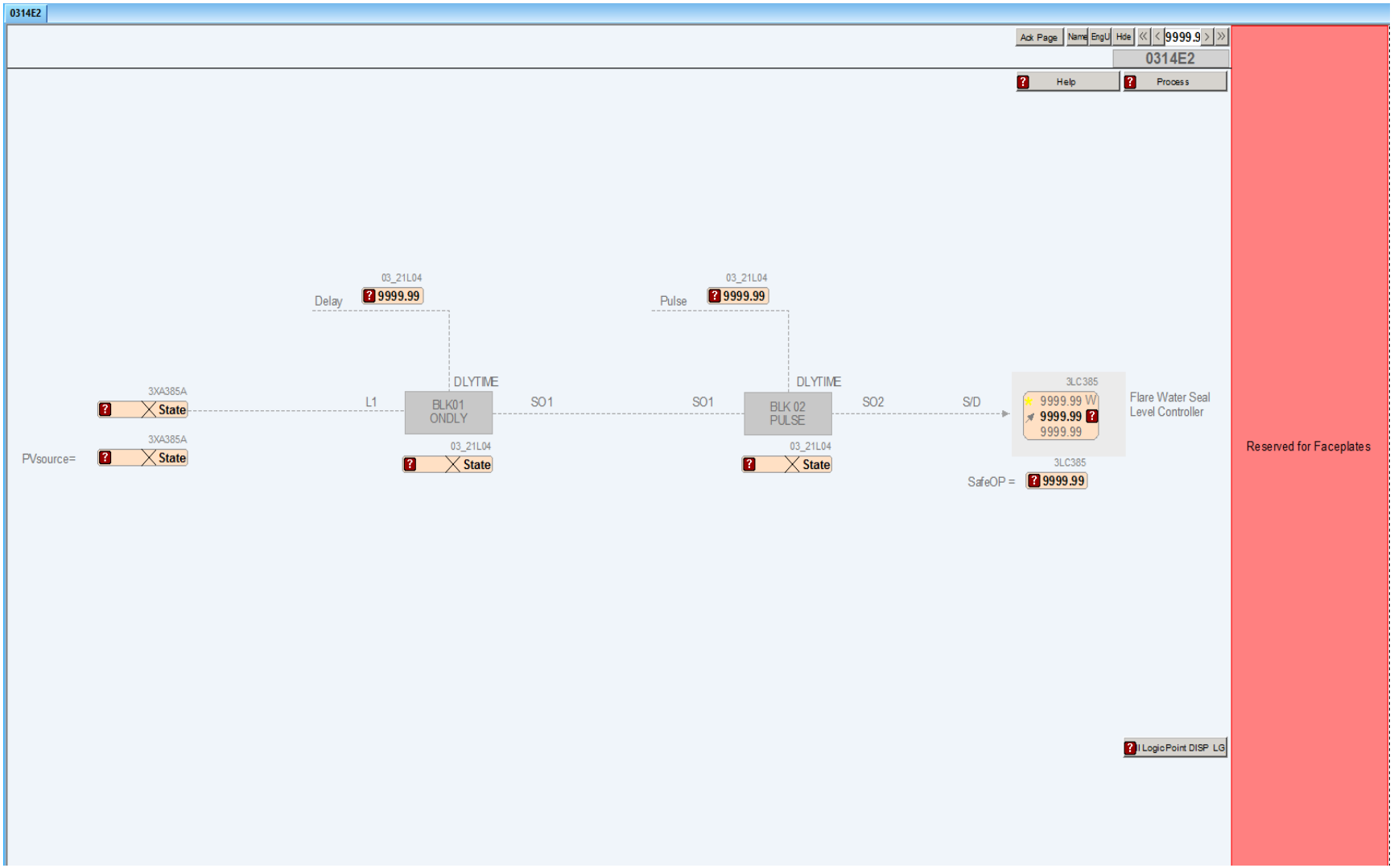

0314
GRP
BLK
FLARE (FA-1)
TREND
HELP
RTRN
DIR
Shape added
PANAMETRICS
SOX 24h
frm PI
TMR PANEL
LOGIC
HELP
MID3
150#
STEAM
3"
2"
PILOT FLAMES
FLAME
SCFH
PILOT
SCFH PURG
HHV
BTU/SCF
AUTO
PUMPS
W/S DRUM
A B C
WEST
EAST
HP
WATER
EMERGENCY
NAT GAS
NAT
GAS
TIP NHV
TMR
RELEASES
TO FLARE
FLARE
KO
TO
FGR
TO
194
H2S
Group
III
ANALYZER
SHELTER
JA ANALZ
SHELTER
AQMD FLARE STATUS
FLOW:
SAMPLE:
SYS


0314
Ack Page
Name
Eng U
Hide
9999.9
0314.htm
BLK
Panametrics
3UA901
3PA407
3XA901
3XL879
TMR Panel
3PA540
3XA013
3TI791
3XA014
SOX 24h
frm PI
3F910PI
9999.99
Logic Help
MD3
3LC385
3LY385
3HS021
3LJ385A
3LJ385B
3LJ385C
W/S Drum
3LJ380
3LJ395
3LJ397
3LA385E
3LA385D
3LA385C
3LA385A
3ZL020
3XA385A
HP Water
3LO385
3HC011
3ZL011
Emergency
NAT Gas
TIP NHV
3AC970C
TMR
3ZL010
3XA011
3FI237
3HS010
3FA237
3FI235
NAT Gas
Releases To Flare
57FK3128
57XA064B
3HS385
To FGR
Flare K.O
3HA903
3HA902
3ZL383
3XL012
To 194
H2S
3XA877
3HL022A
Analyzer Shelter
JAANALZ Shelter
Need to develop custom shape
AQMD Flare Status
Flow:
Sample:
150# Steam
3FI181
3HC890
3FI231
3FI231A
3DI950
3PI537A
3PA537
3PA537A
3PI537B
3PI537C
3TI785
3FI236
NAT Gas
3LI290
Auto Pumps
West
3LI289
East
3LI386C
3LA386E
3LA386C
3LI386A
3LA386B
3LI386B
3LA386D
3LI386C
3HL022B
3FA179
PC
3"
2"
Pilot Flames
3TA850A
3TA850B
3TA850C
3XI878
Flame
3PI448
3FI139
SCFH
3HS911
Pilot
3FI120
Purg
3AI970
HHV
BTU/SCF
3LI285
3FA231T
Reserved for Faceplates

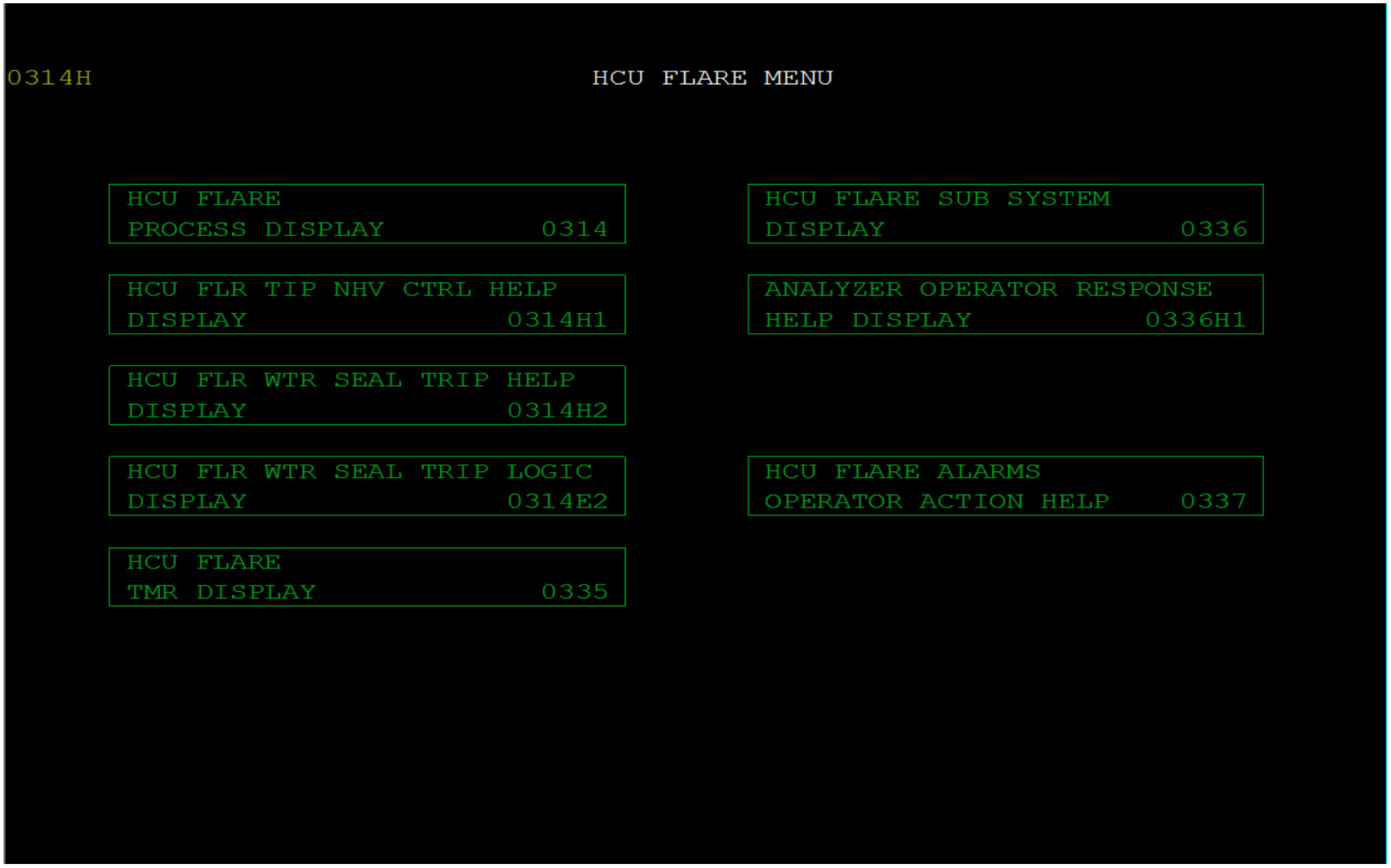
3.60 HCU FLARE LOW WATER SEAL TRIP TO 3LC385 LOGIC SLOT 03_21L04 (0314E2.DS)

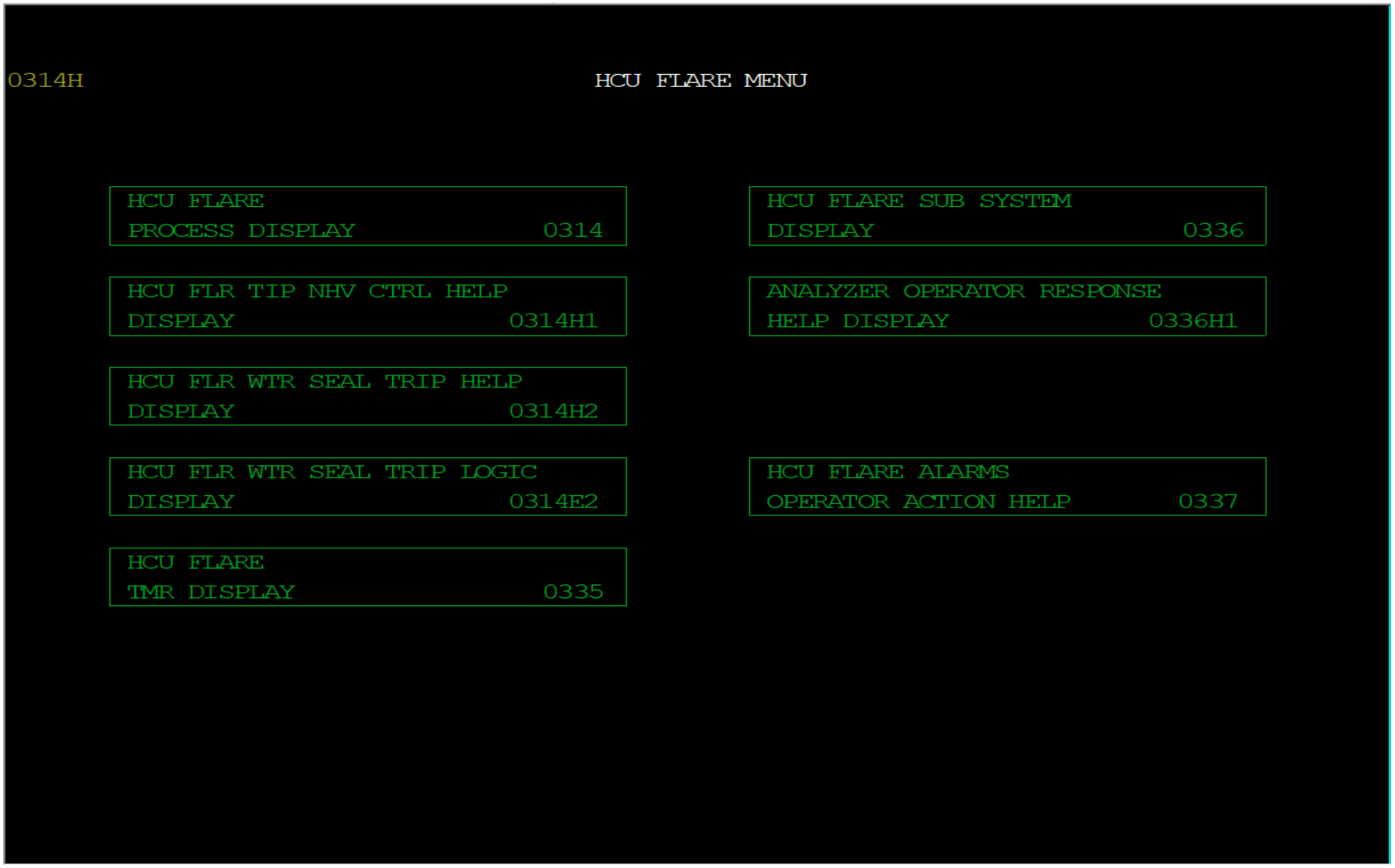


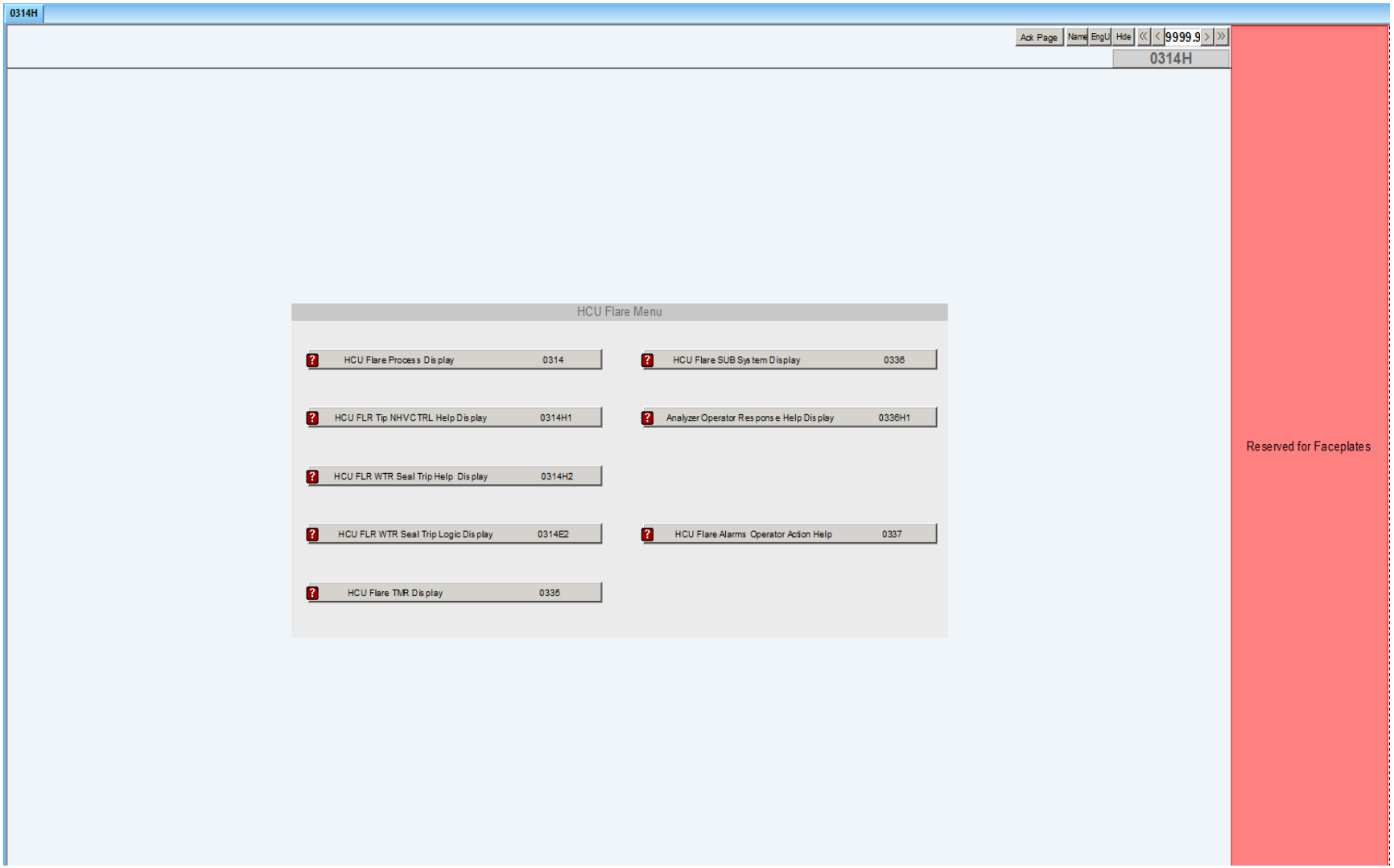

0314E2
HCU FLARE LOW WATER SEAL TRIP TO 3LC385
LOGIC SLOT 03_21L04
HELP
PROCESS
RRRR
DELAY
DLYTIME
RRRR
PULSE
DLYTIME
TTTTTTTT
EEEEEEEE
L1
BLK II
TTTT
SO1
SO1
BLK II
TTTT
SO2
S/D
TTTTTTTT
EEE
EEEEEEEE
PVSOURCE=
EEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRRRR %
SAFEOP=
RRRR
FLARE
WATER SEAL
LEVEL
CONTROLLER
FULL LOGIC
POINT DISP
LG DISP


0314E2
Ack Page
Name
Eng U
Hide
9999.9
0314E2
Help
Process
03_21L04
Delay
9999.99
03_21L04
Pulse
9999.99
DLYTIME
DLYTIME
3XA385A
State
L1
BLK01
ONDLY
SO1
SO1
BLK 02
PULSE
SO2
S/D
3LC385
9999.99 W
9999.99
9999.99
Flare Water Seal
Level Controller
3XA385A
PVsource=
State
03_21L04
State
03_21L04
State
3LC385
SafeOP =
9999.99
Reserved for Faceplates
Logic Point DISP LG

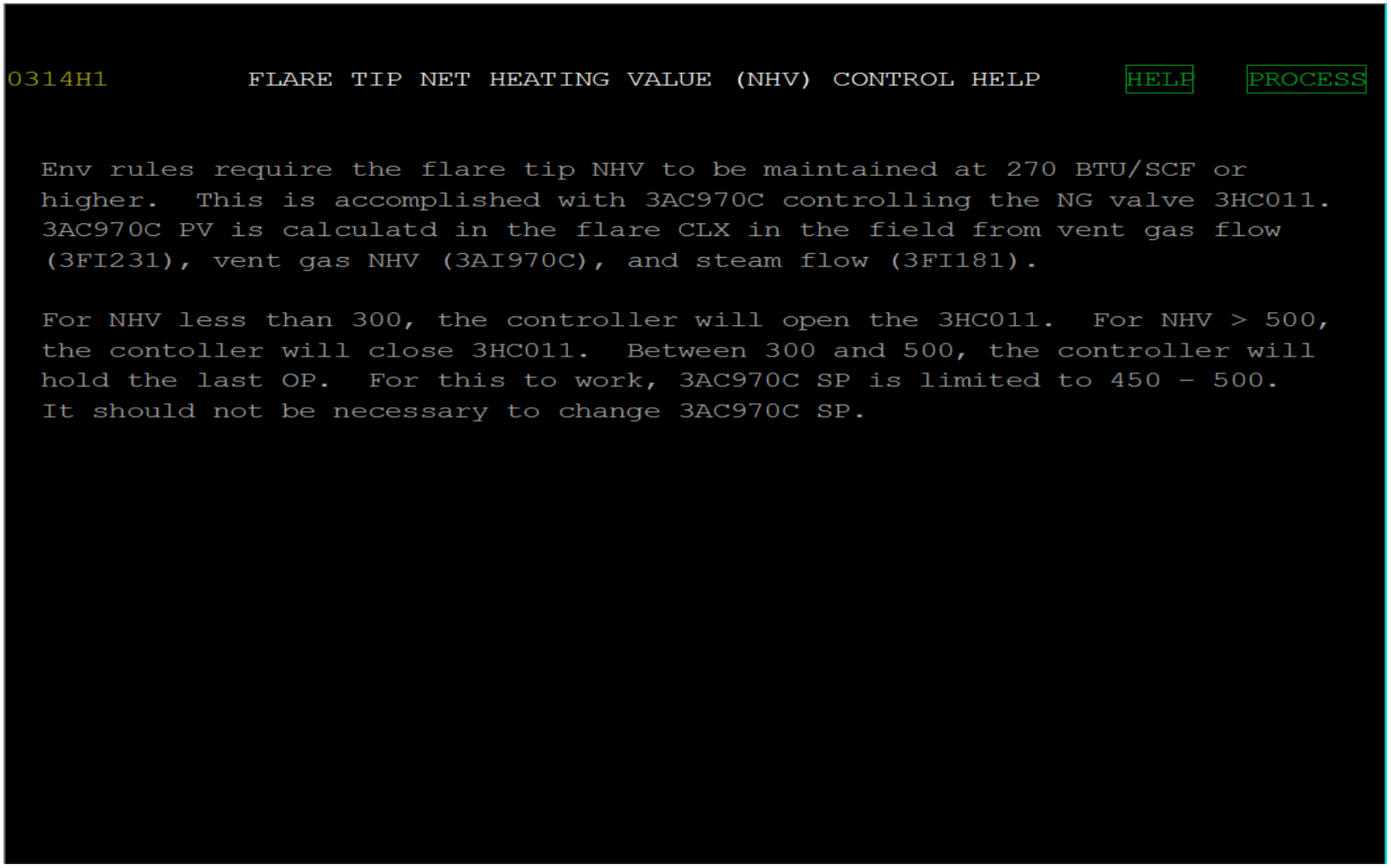
3.61 HCU FLARE MENU (0314H.DS)

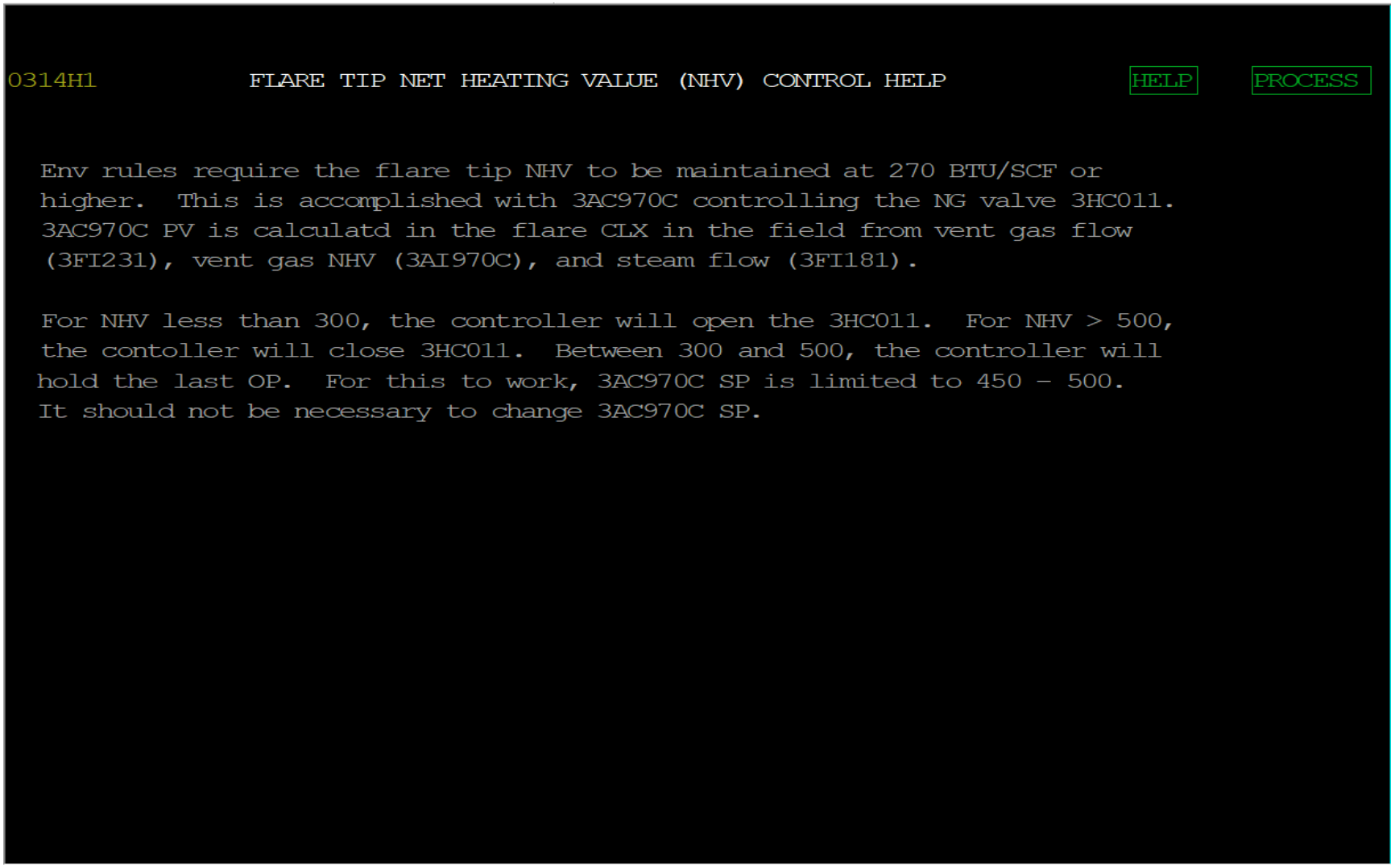


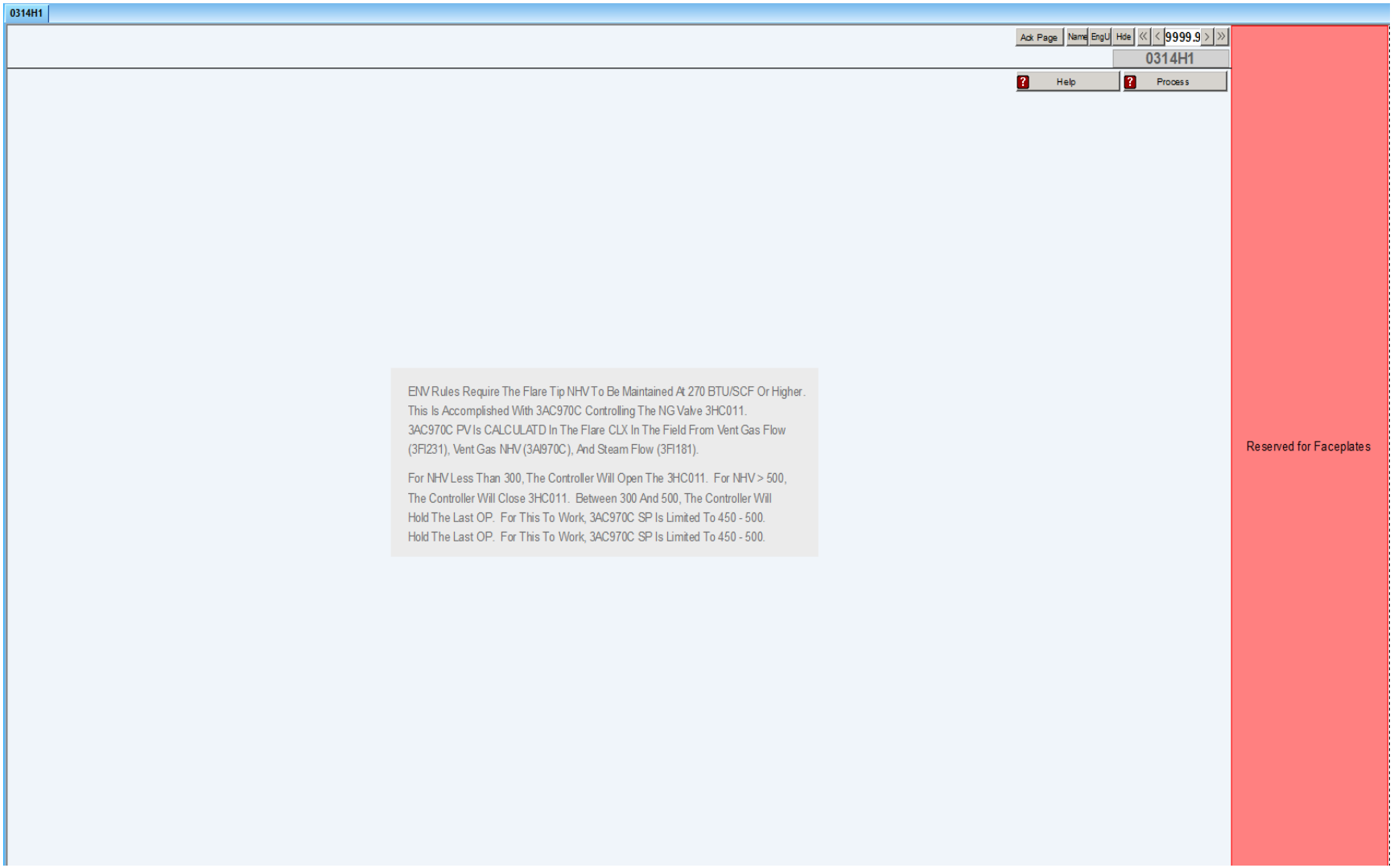

0314H
HCU FLARE MENU
HCU FLARE
PROCESS DISPLAY 0314
HCU FLARE SUB SYSTEM
DISPLAY 0336
HCU FLR TIP NHV CTRL HELP
DISPLAY 0314H1
ANALYZER OPERATOR RESPONSE
HELP DISPLAY 0336H1
HCU FLR WTR SEAL TRIP HELP
DISPLAY 0314H2
HCU FLR WTR SEAL TRIP LOGIC
DISPLAY 0314E2
HCU FLARE ALARMS
OPERATOR ACTION HELP 0337
HCU FLARE
TMR DISPLAY 0335


0314H
Ack Page
Name
Eng U
Hide
9999.9
0314H
HCU Flare Menu
HCU Flare Process Display 0314
HCU Flare SUB System Display 0336
HCU FLR Tip NHVCTRL Help Display 0314H1
Analyzer Operator Response Help Display 0336H1
HCU FLR WTR Seal Trip Help Display 0314H2
HCU FLR WTR Seal Trip Logic Display 0314E2
HCU Flare Alarms Operator Action Help 0337
HCU Flare TMR Display 0335
Reserved for Faceplates

3.62 FLARE TIP NET HEATING VALUE (NHV) CONTROL HELP (0314H1.DS)

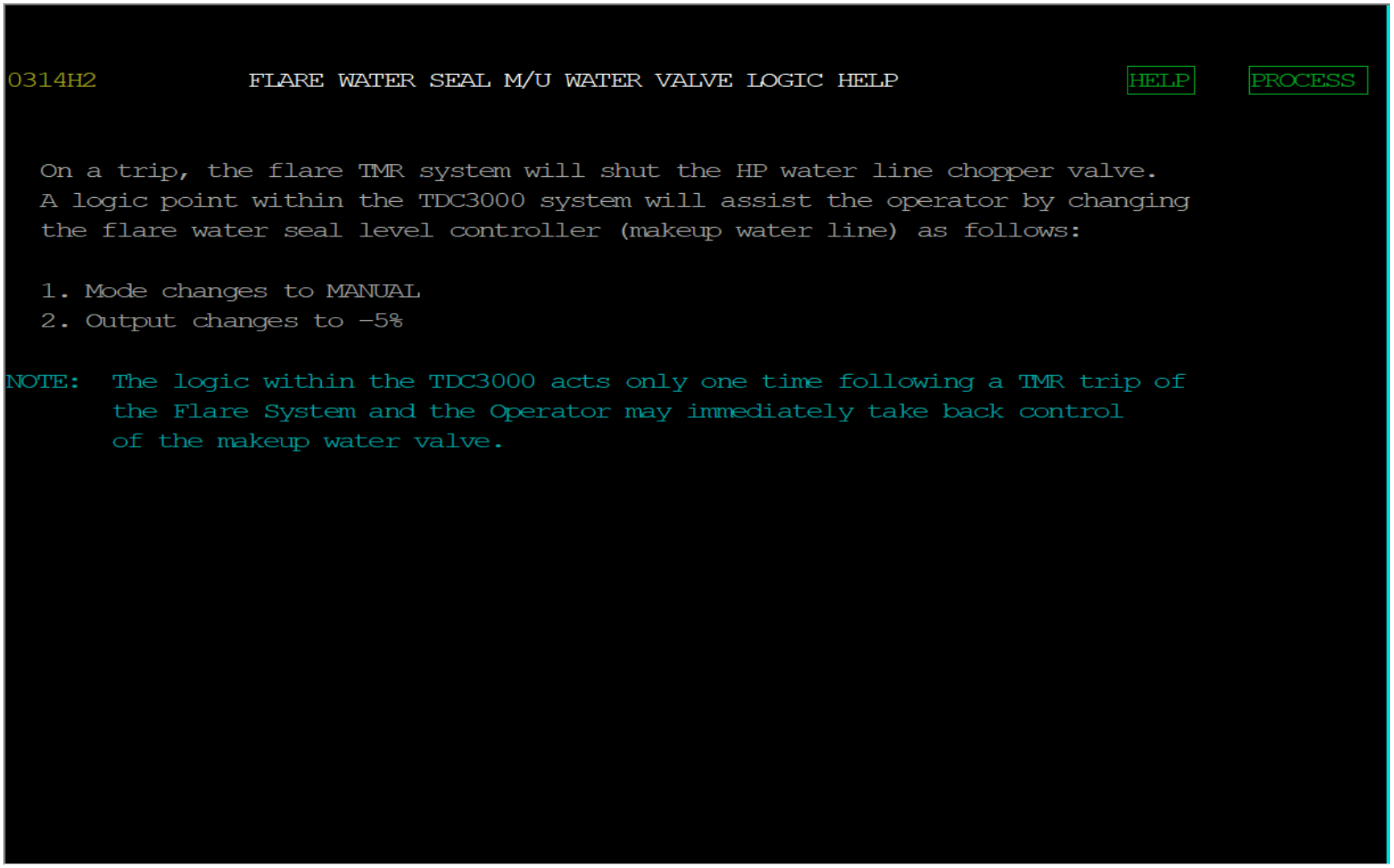


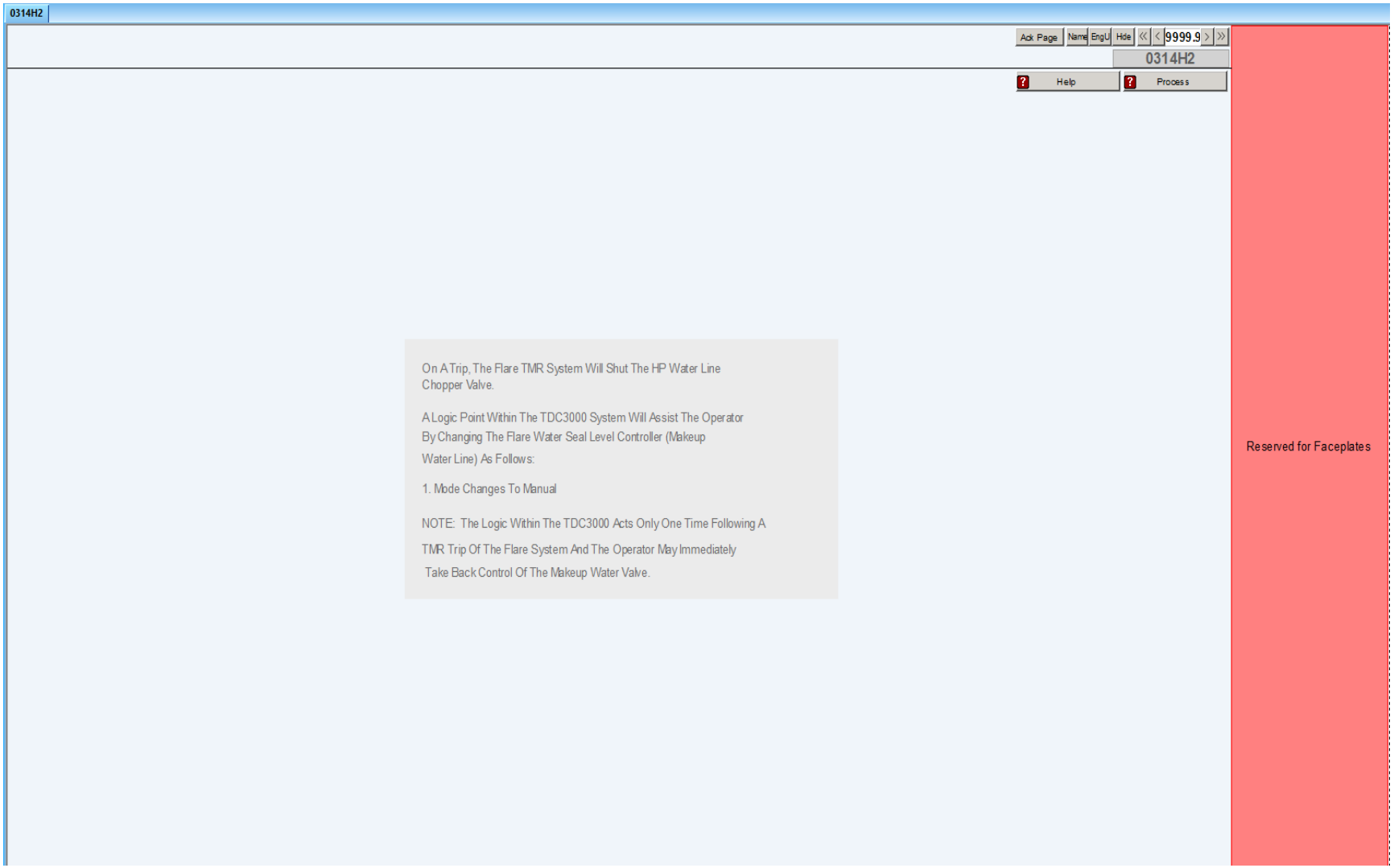

0314H1
FLARE TIP NET HEATING VALUE (NHV) CONTROL HELP
HELP
PROCESS
Env rules require the flare tip NHV to be maintained at 270 BTU/SCF or higher. This is accomplished with 3AC970C controlling the NG valve 3HC011. 3AC970C PV is calculatd in the flare CLX in the field from vent gas flow (3FI231), vent gas NHV (3AI970C), and steam flow (3FI181).
For NHV less than 300, the controller will open the 3HC011. For NHV > 500, the contoller will close 3HC011. Between 300 and 500, the controller will hold the last OP. For this to work, 3AC970C SP is limited to 450 - 500. It should not be necessary to change 3AC970C SP.


0314H1
Ack Page
Name
EngU
Hide
9999.9
0314H1
Help
Process
ENV Rules Require The Flare Tip NHV To Be Maintained At 270 BTU/SCF Or Higher. This Is Accomplished With 3AC970C Controlling The NG Valve 3HC011. 3AC970C PV Is CALCULATD In The Flare CLX In The Field From Vent Gas Flow (3FI231), Vent Gas NHV (3AI970C), And Steam Flow (3FI181).
For NHV Less Than 300, The Controller Will Open The 3HC011. For NHV > 500, The Controller Will Close 3HC011. Between 300 And 500, The Controller Will Hold The Last OP. For This To Work, 3AC970C SP Is Limited To 450 - 500.
Hold The Last OP. For This To Work, 3AC970C SP Is Limited To 450 - 500.
Reserved for Faceplates

3.63 FLARE WATER SEAL M/U WATER VALVE LOGIC HELP (0314H2.DS)

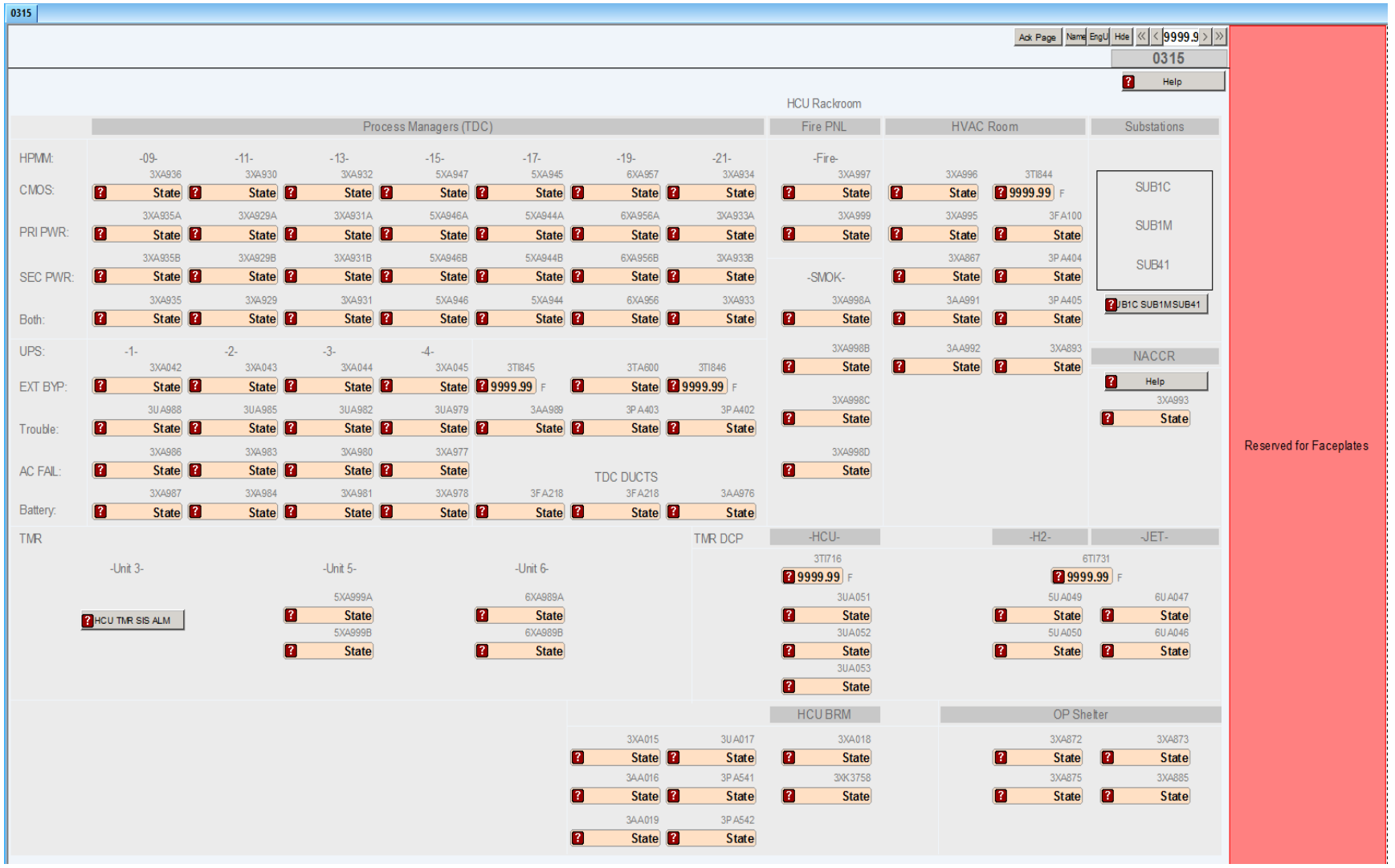
```
0314H2          FLARE WATER SEAL M/U WATER VALVE LOGIC HELP          HELP    PROCESS

  On a trip, the flare TMR system will shut the HP water line chopper valve.
  A logic point within the TDC3000 system will assist the operator by changing
  the flare water seal level controller (makeup water line) as follows:

  1. Mode changes to MANUAL
  2. Output changes to -5%

NOTE:  The logic within the TDC3000 acts only one time following a TMR trip of
       the Flare System and the Operator may immediately take back control
       of the makeup water valve.
```


0314H2
FLARE WATER SEAL M/U WATER VALVE LOGIC HELP
HELP
PROCESS
On a trip, the flare TMR system will shut the HP water line chopper valve.
A logic point within the TDC3000 system will assist the operator by changing
the flare water seal level controller (makeup water line) as follows:
1. Mode changes to MANUAL
2. Output changes to -5%
NOTE: The logic within the TDC3000 acts only one time following a TMR trip of
the Flare System and the Operator may immediately take back control
of the makeup water valve.

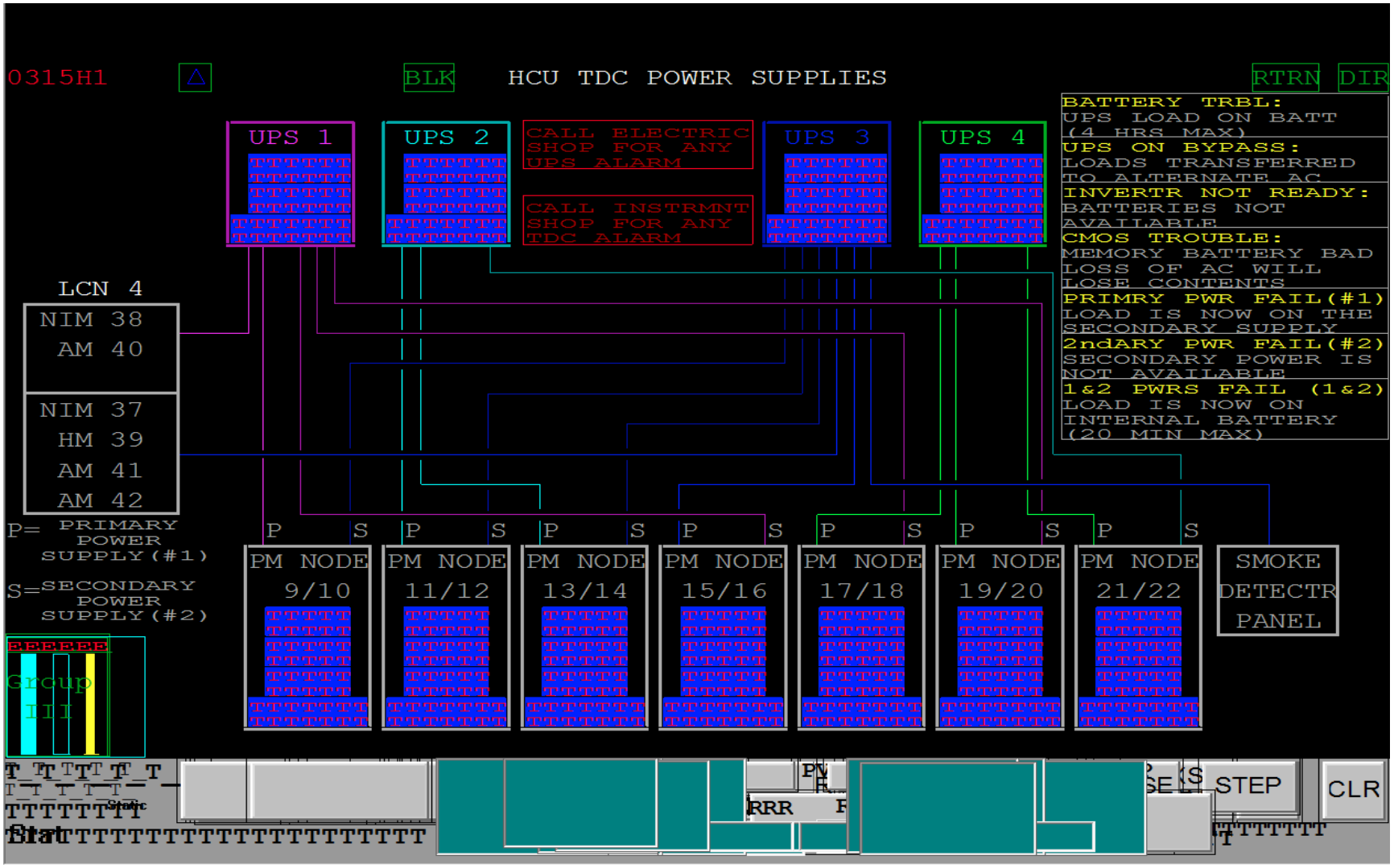

0314H2
Ack Page
Name
Eng U
Hide
9999.9
0314H2
Help
Process
On A Trip, The Flare TMR System Will Shut The HP Water Line Chopper Valve.
A Logic Point Within The TDC3000 System Will Assist The Operator By Changing The Flare Water Seal Level Controller (Makeup Water Line) As Follows:
1. Mode Changes To Manual
NOTE: The Logic Within The TDC3000 Acts Only One Time Following A TMR Trip Of The Flare System And The Operator May Immediately Take Back Control Of The Makeup Water Valve.
Reserved for Faceplates

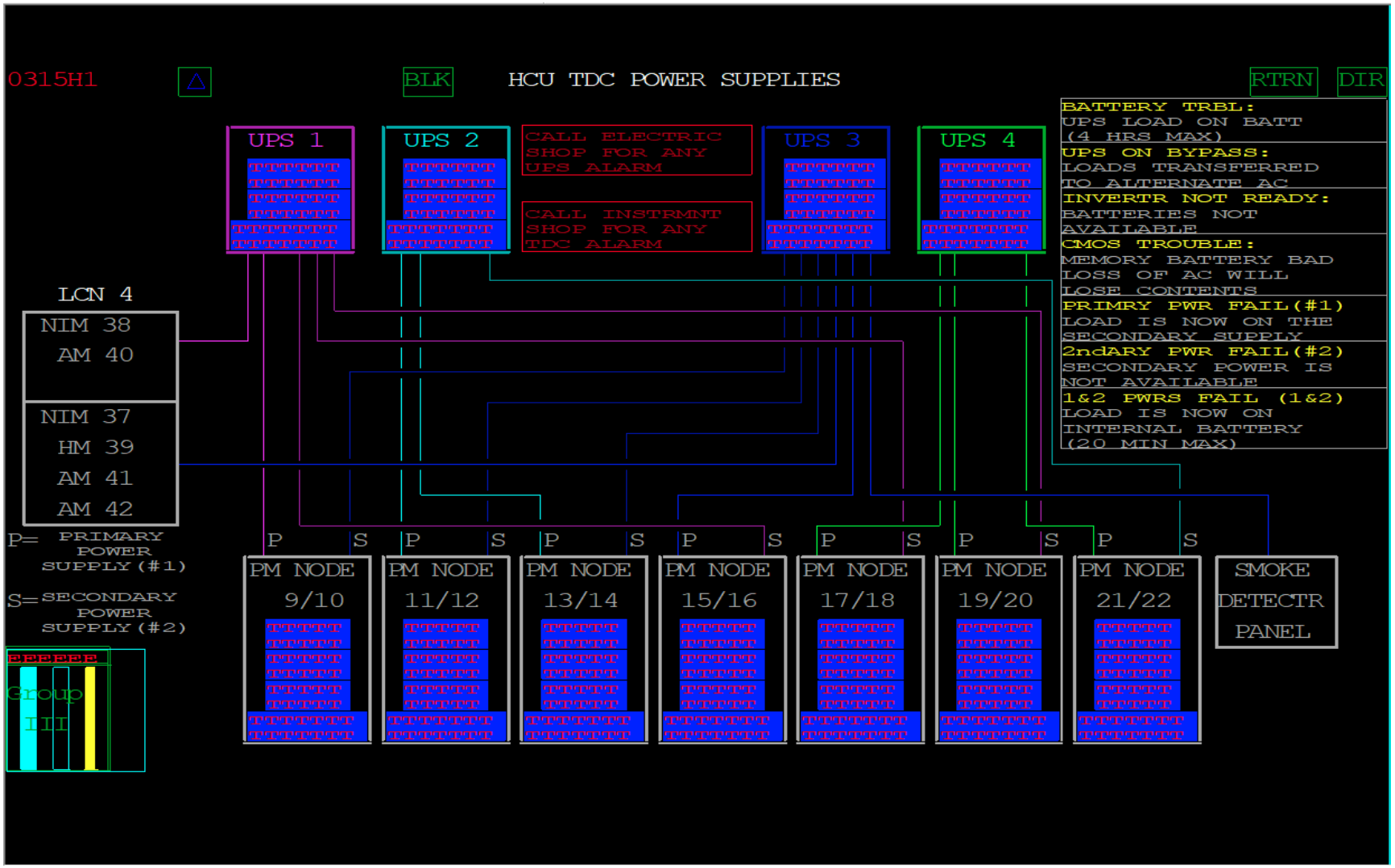
3.64 HCU & RACK ROOM ALARMS (S4) (0315.DS)

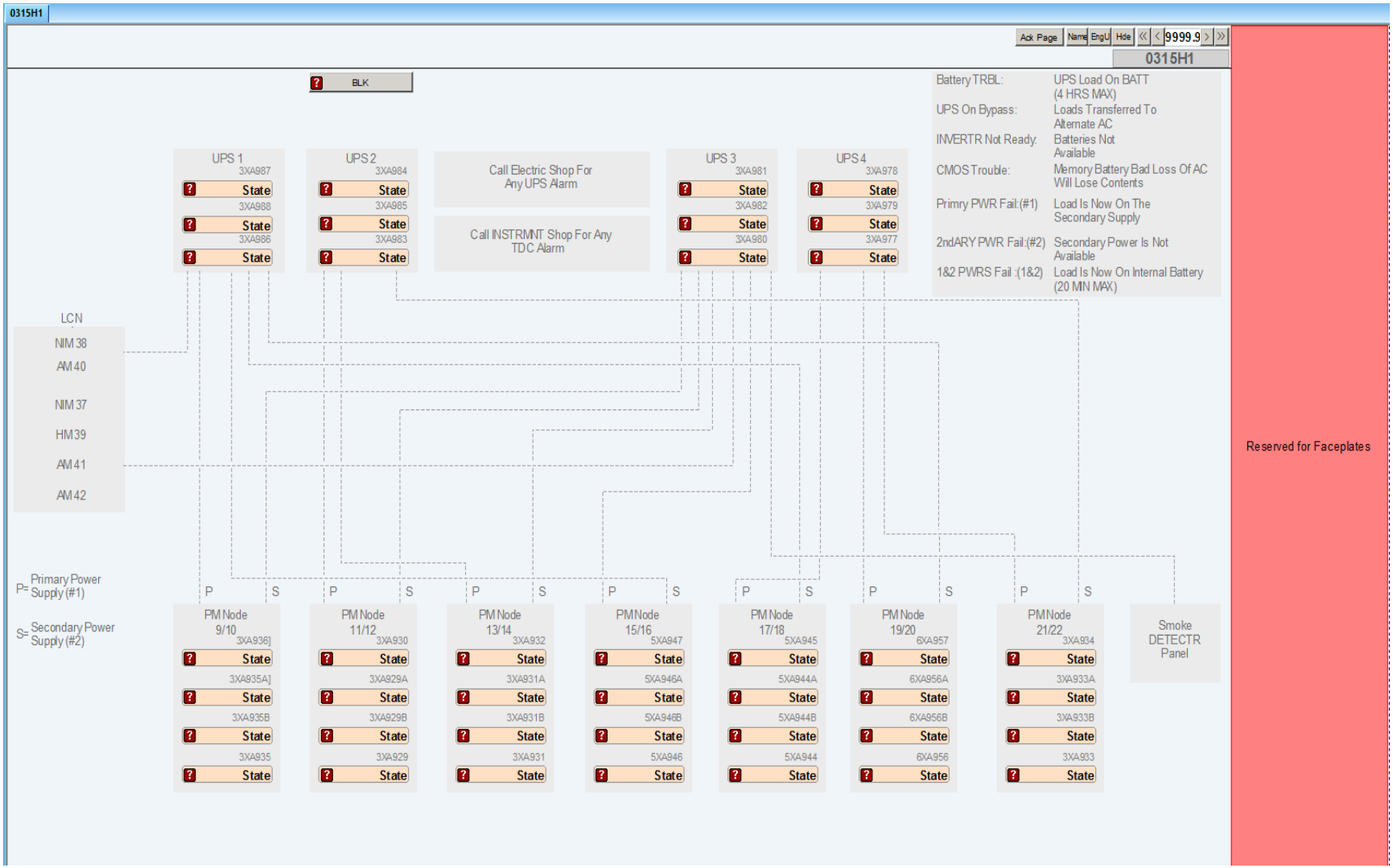
0315
HCU & RACK ROOM ALARMS (S4)
HELP
DIR
PROCESS MANAGERS (TDC)
HCU RACKROOM
HVAC ROOM
SUBSTATIONS
HPMM:
CMOS:
PRI PWR:
SEC PWR:
BOTH:
-09-
-11-
-13-
-15-
-17-
-19-
-21-
FIRE PNL
-FIRE-
-SMOK-
SUB1C
SUB1M
SUB41
NACCR
HELP
UPS:
-1-
-2-
-3-
-4-
EXT BYP:
TROUBLE:
AC FAIL:
BATTERY:
TDC DUCTS
TMR
-UNIT 3-
-UNIT 5-
-UNIT 6-
HCU TMR SIS ALM
TMR DCP
-HCU-
-H2-
-JET-
Group III
HCU BRM
OP SHELTER


0315
Ack Page
Name
Engu
Hde
9999.9
0315
Help
HCU Rackroom
Process Managers (TDC)
Fire PNL
HVAC Room
Substations
HPMM:
-09-
-11-
-13-
-15-
-17-
-19-
-21-
-Fire-
CMOS:
3XA936
3XA930
3XA932
5XA947
5XA945
6XA957
3XA934
3XA997
3XA996
3TI844
State
9999.99
PRI PWR:
3XA935A
3XA929A
3XA931A
5XA946A
5XA944A
6XA956A
3XA933A
3XA999
3XA995
3FA100
SEC PWR:
3XA935B
3XA929B
3XA931B
5XA946B
5XA944B
6XA956B
3XA933B
3XA867
3PA404
-SMOK-
Both:
3XA935
3XA929
3XA931
5XA946
5XA944
6XA956
3XA933
3XA998A
3AA991
3PA405
SUB1C
SUB1M
SUB41
UB1C SUB1M SUB41
UPS:
-1-
-2-
-3-
-4-
EXT BYP:
3XA042
3XA043
3XA044
3XA045
3TI845
3TA600
3TI846
3XA998B
3AA992
3XA893
NACCR
Help
Trouble:
3UA988
3UA985
3UA982
3UA979
3AA989
3PA403
3PA402
3XA998C
3XA993
AC FAIL:
3XA986
3XA983
3XA980
3XA977
3XA998D
TDC DUCTS
Battery:
3XA987
3XA984
3XA981
3XA978
3FA218
3FA218
3AA976
TMR
TMR DCP
-HCU-
-H2-
-JET-
-Unit 3-
-Unit 5-
-Unit 6-
3TI716
6TI731
HCU TMR SIS ALM
5XA999A
6XA989A
3UA051
5UA049
6UA047
5XA999B
6XA989B
3UA052
5UA050
6UA046
3UA053
HCU BRM
OP Shelter
3XA015
3UA017
3XA018
3XA872
3XA873
3AA016
3PA541
3XK3758
3XA875
3XA885
3AA019
3PA542
Reserved for Faceplates

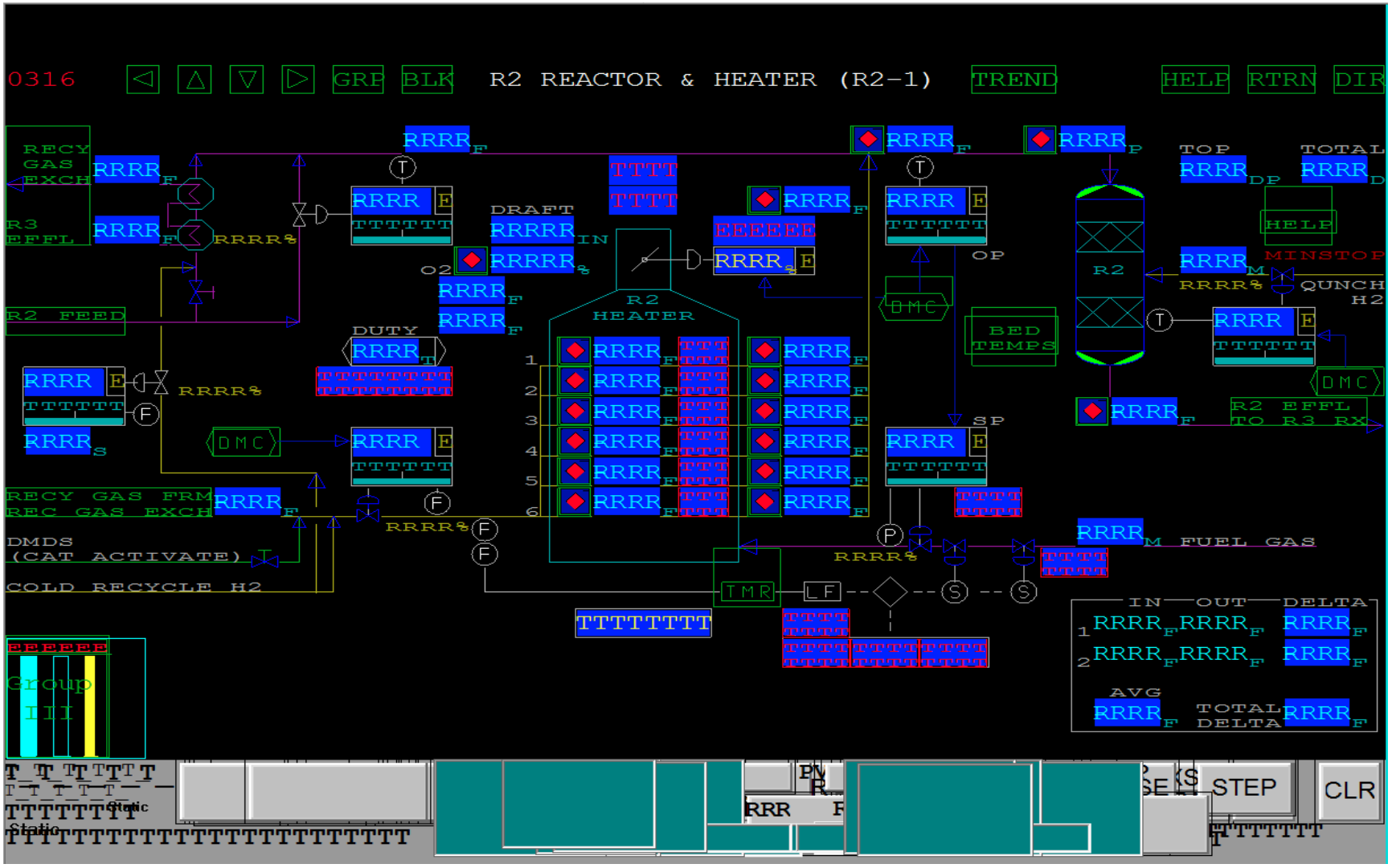
3.65 HCU TDC POWER SUPPLIES (0315H1.DS)

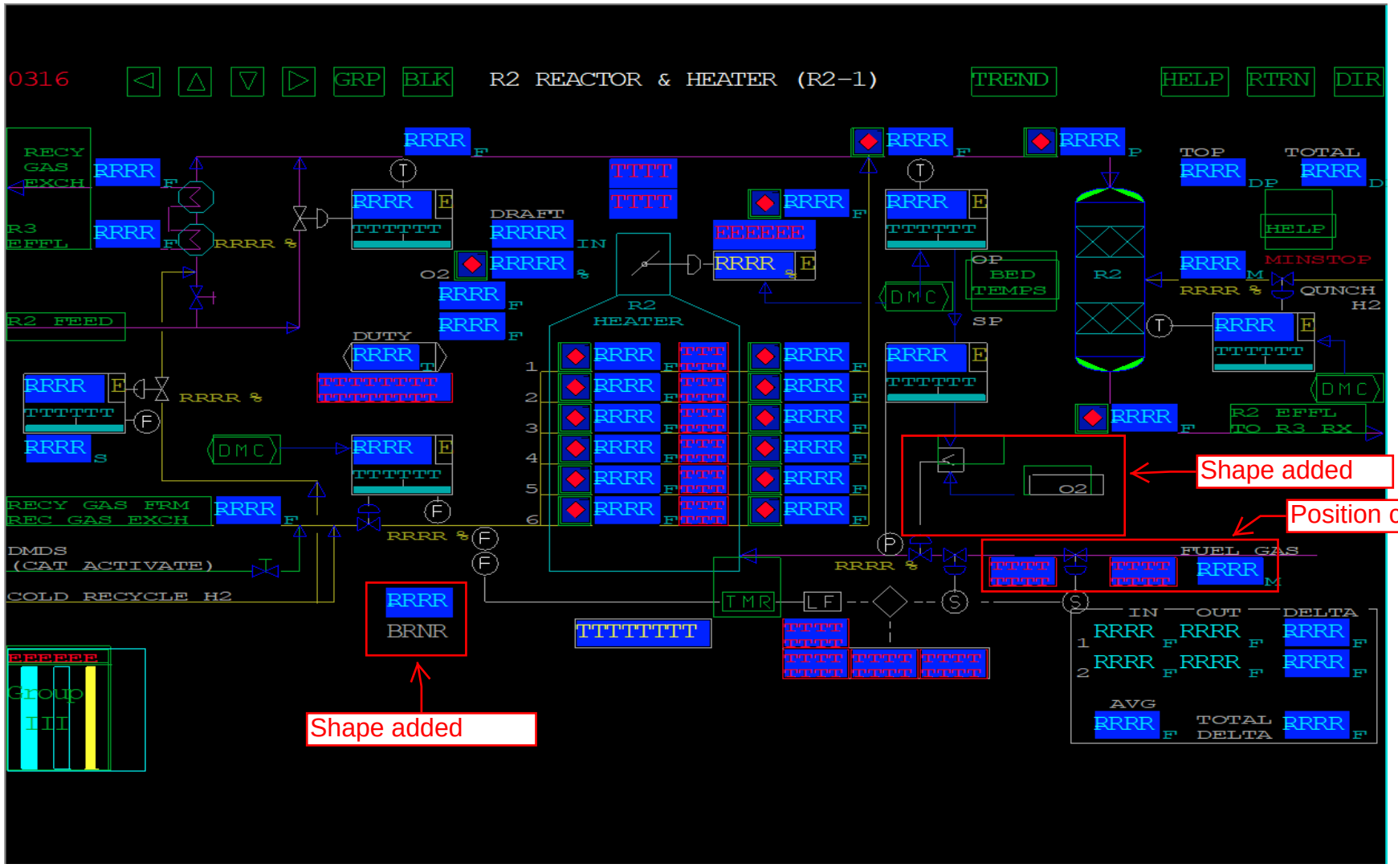


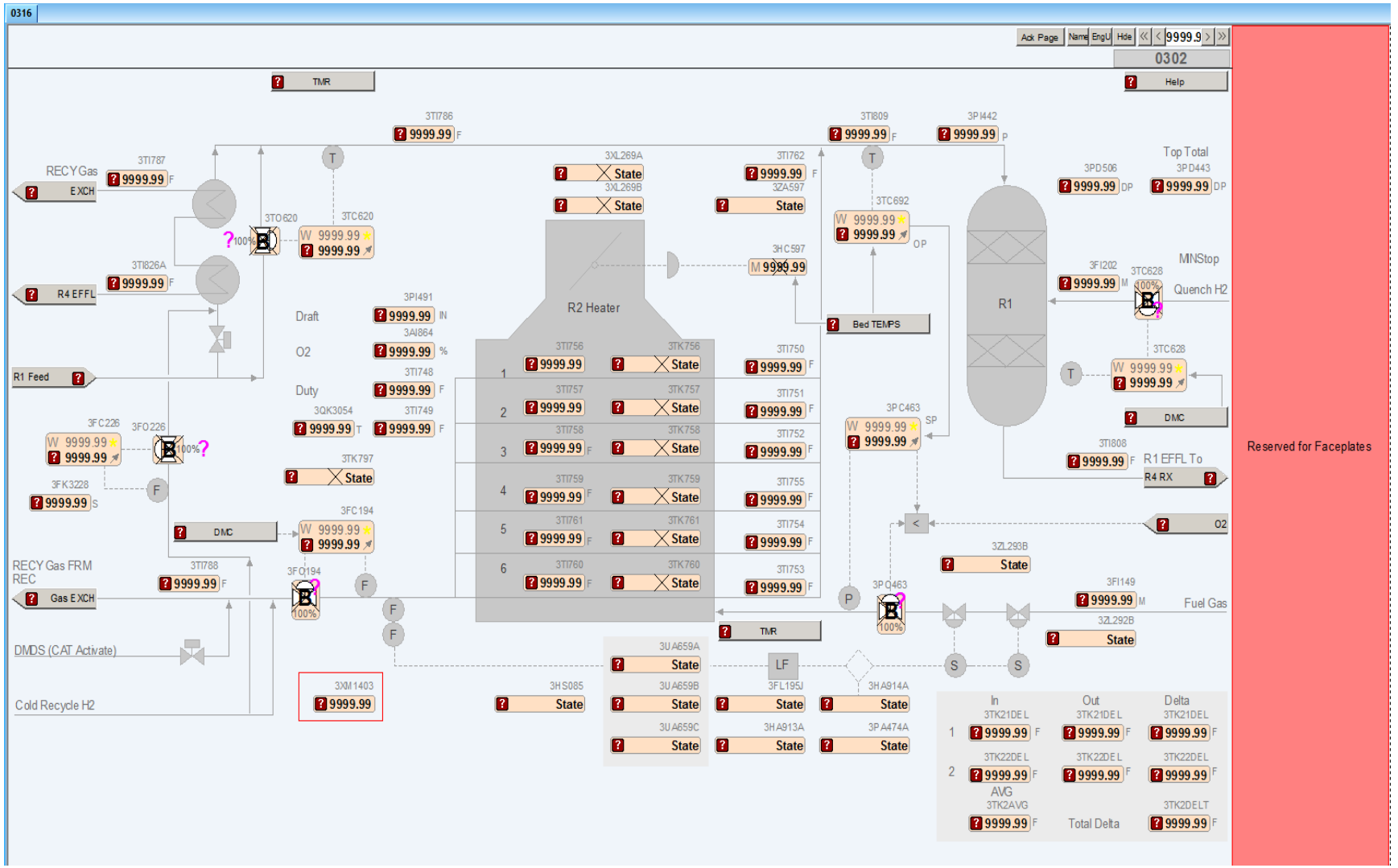

0315H1
BLK
HCU TDC POWER SUPPLIES
RTRN
DIR
UPS 1
UPS 2
UPS 3
UPS 4
CALL ELECTRIC SHOP FOR ANY UPS ALARM
CALL INSTRMNT SHOP FOR ANY TDC ALARM
BATTERY TRBL: UPS LOAD ON BATT (4 HRS MAX)
UPS ON BYPASS: LOADS TRANSFERRED TO ALTERNATE AC
INVERTR NOT READY: BATTERIES NOT AVAILABLE
CMOS TROUBLE: MEMORY BATTERY BAD LOSS OF AC WILL LOSE CONTENTS
PRIMRY PWR FAIL(#1) LOAD IS NOW ON THE SECONDARY SUPPLY
2ndARY PWR FAIL(#2) SECONDARY POWER IS NOT AVAILABLE
1&2 PWRS FAIL (1&2) LOAD IS NOW ON INTERNAL BATTERY (20 MIN MAX)
LCN 4
NIM 38
AM 40
NIM 37
HM 39
AM 41
AM 42
P= PRIMARY POWER SUPPLY (#1)
S= SECONDARY POWER SUPPLY (#2)
Group III
PM NODE 9/10
PM NODE 11/12
PM NODE 13/14
PM NODE 15/16
PM NODE 17/18
PM NODE 19/20
PM NODE 21/22
SMOKE DETECTR PANEL


0315H1
Ack Page
Name
Eng U
Hide
9999.9
0315H1
BLK
Battery TRBL:
UPS Load On BATT (4 HRS MAX)
UPS On Bypass:
Loads Transferred To Alternate AC
INVERTR Not Ready:
Batteries Not Available
CMOS Trouble:
Memory Battery Bad Loss Of AC Will Lose Contents
Primry PWR Fail:(#1)
Load Is Now On The Secondary Supply
2ndARY PWR Fail:(#2)
Secondary Power Is Not Available
1&2 PWRS Fail :(1&2)
Load Is Now On Internal Battery (20 MIN MAX)
UPS 1
3XA987
3XA988
3XA986
UPS 2
3XA984
3XA985
3XA983
Call Electric Shop For Any UPS Alarm
Call INSTRMNT Shop For Any TDC Alarm
UPS 3
3XA981
3XA982
3XA980
UPS 4
3XA978
3XA979
3XA977
State
LCN
NIM 38
AM 40
NIM 37
HM 39
AM 41
AM 42
P= Primary Power Supply (#1)
S= Secondary Power Supply (#2)
P
S
PM Node 9/10
3XA936]
3XA935A]
3XA935B
3XA935
PM Node 11/12
3XA930
3XA929A
3XA929B
3XA929
PM Node 13/14
3XA932
3XA931A
3XA931B
3XA931
PM Node 15/16
5XA947
5XA946A
5XA946B
5XA946
PM Node 17/18
5XA945
5XA944A
5XA944B
5XA944
PM Node 19/20
6XA957
6XA956A
6XA956B
6XA956
PM Node 21/22
3XA934
3XA933A
3XA933B
3XA933
Smoke DETECTR Panel
Reserved for Faceplates

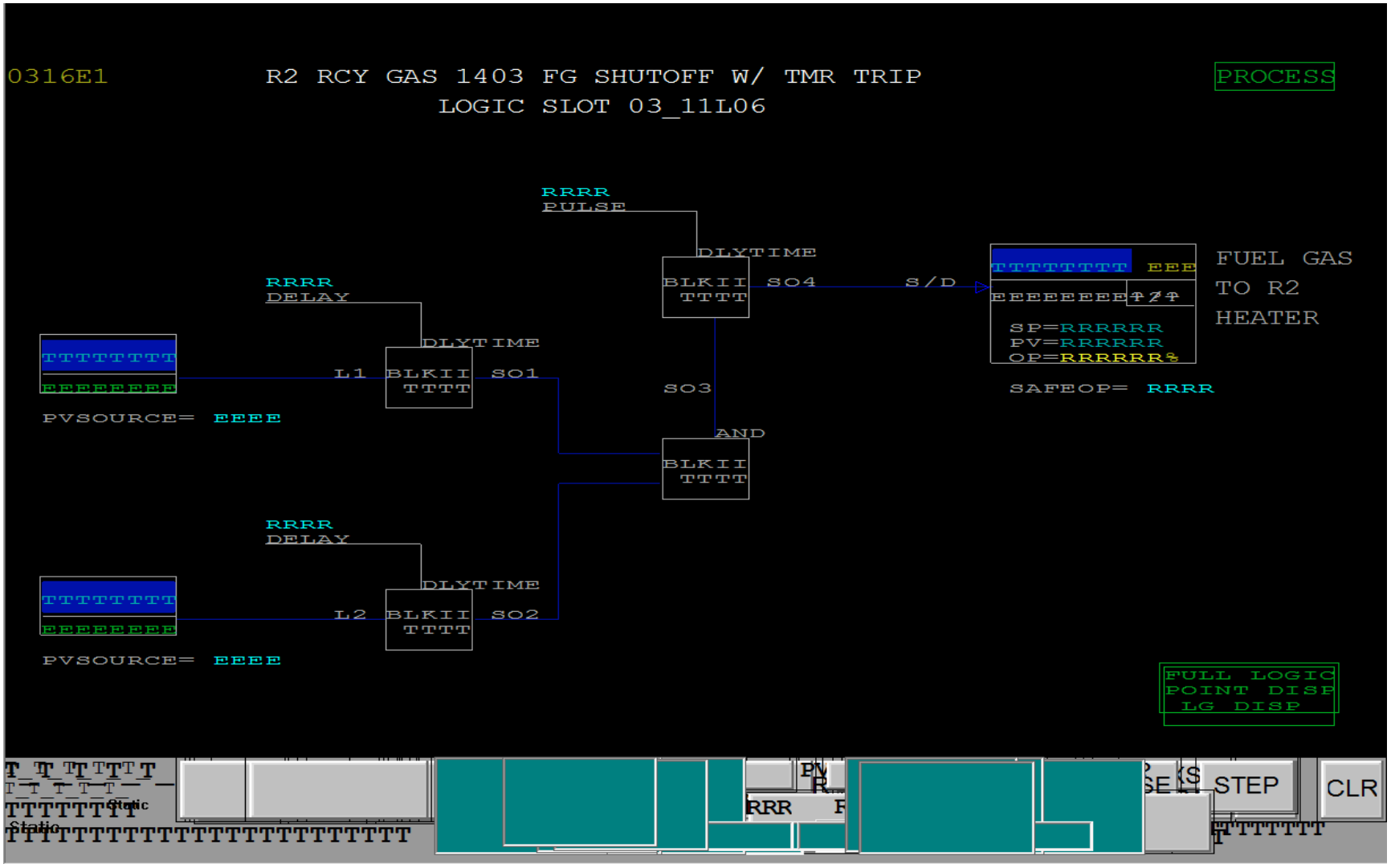
3.66 R2 REACTOR & HEATER (R2-1) (0316.DS)

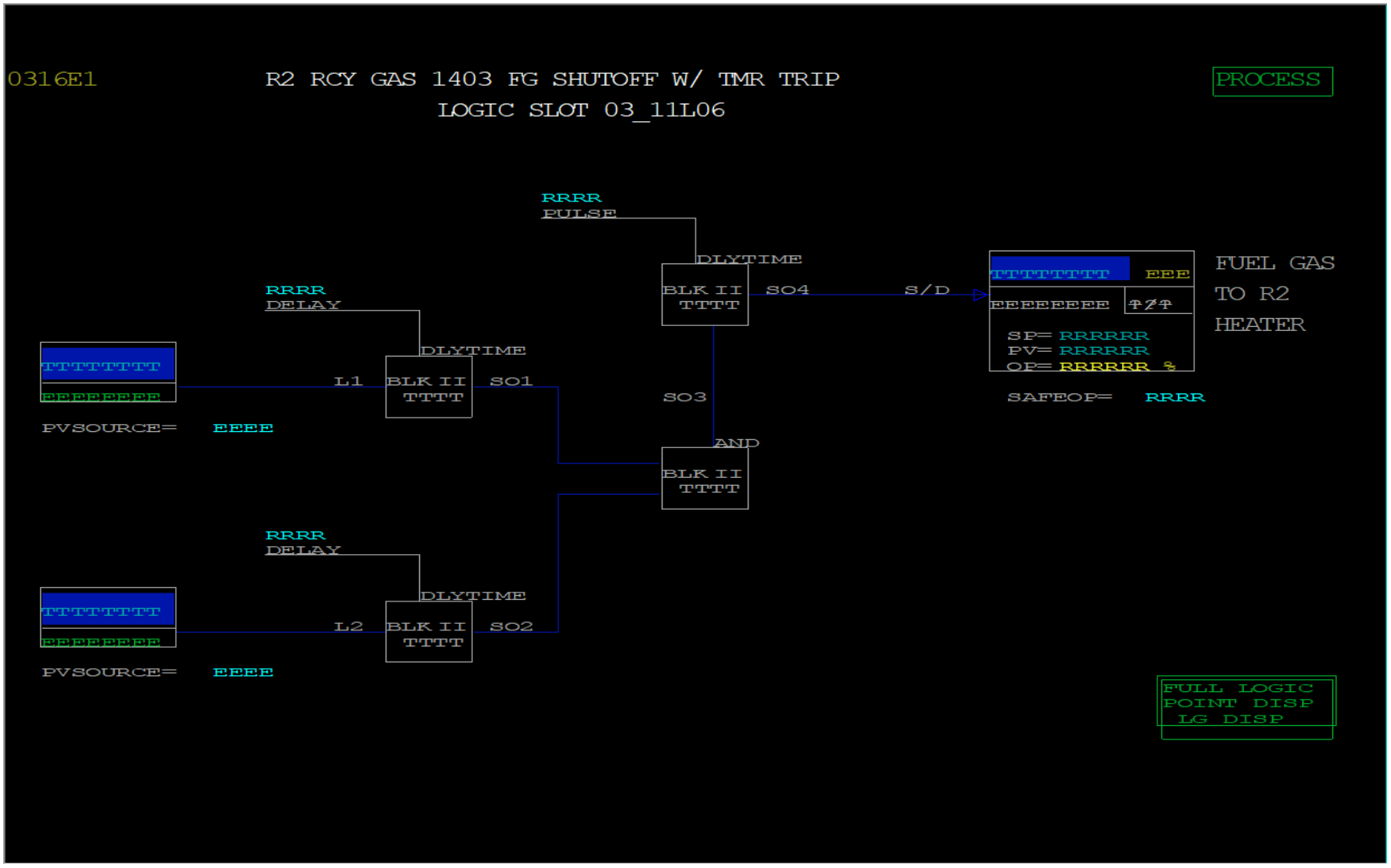


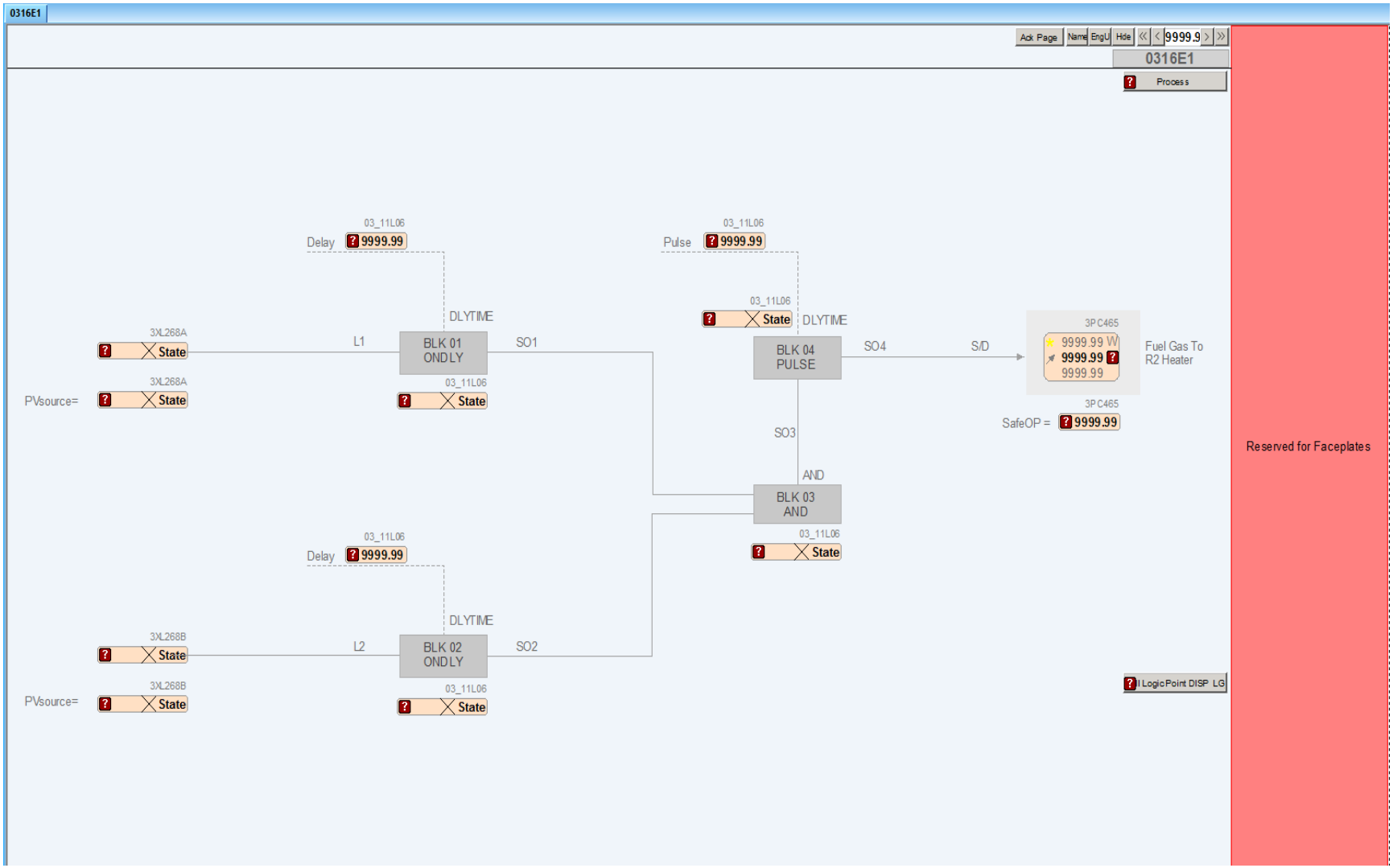

0316
GRP
BLK
R2 REACTOR & HEATER (R2-1)
TREND
HELP
RTRN
DIR
RECY GAS EXCH
R3 EFFL
R2 FEED
DRAFT
IN
O2
DUTY
R2 HEATER
DMC
BED TEMPS
OP
SP
R2
TOP
TOTAL
DP
HELP
MINSTOP
QUNCH
H2
R2 EFFL TO R3 RX
RECY GAS FRM REC GAS EXCH
DMDS (CAT ACTIVATE)
COLD RECYCLE H2
BRNR
TMR
LF
FUEL GAS
IN
OUT
DELTA
AVG
TOTAL DELTA
GROUP III
Shape added
Position changed
Shape added


0316
Ack Page
Name
EngU
Hde
0302
TMR
Help
RECY Gas
EXCH
R4 EFFL
R1 Feed
Draft
O2
Duty
R2 Heater
Bed TEMPS
R1
Top Total
MNStop
Quench H2
DMC
R1 EFFL To
R4 RX
O2
Fuel Gas
RECY Gas FRM REC
Gas EXCH
DMDS (CAT Activate)
Cold Recycle H2
LF
In
Out
Delta
AVG
Total Delta
Reserved for Faceplates

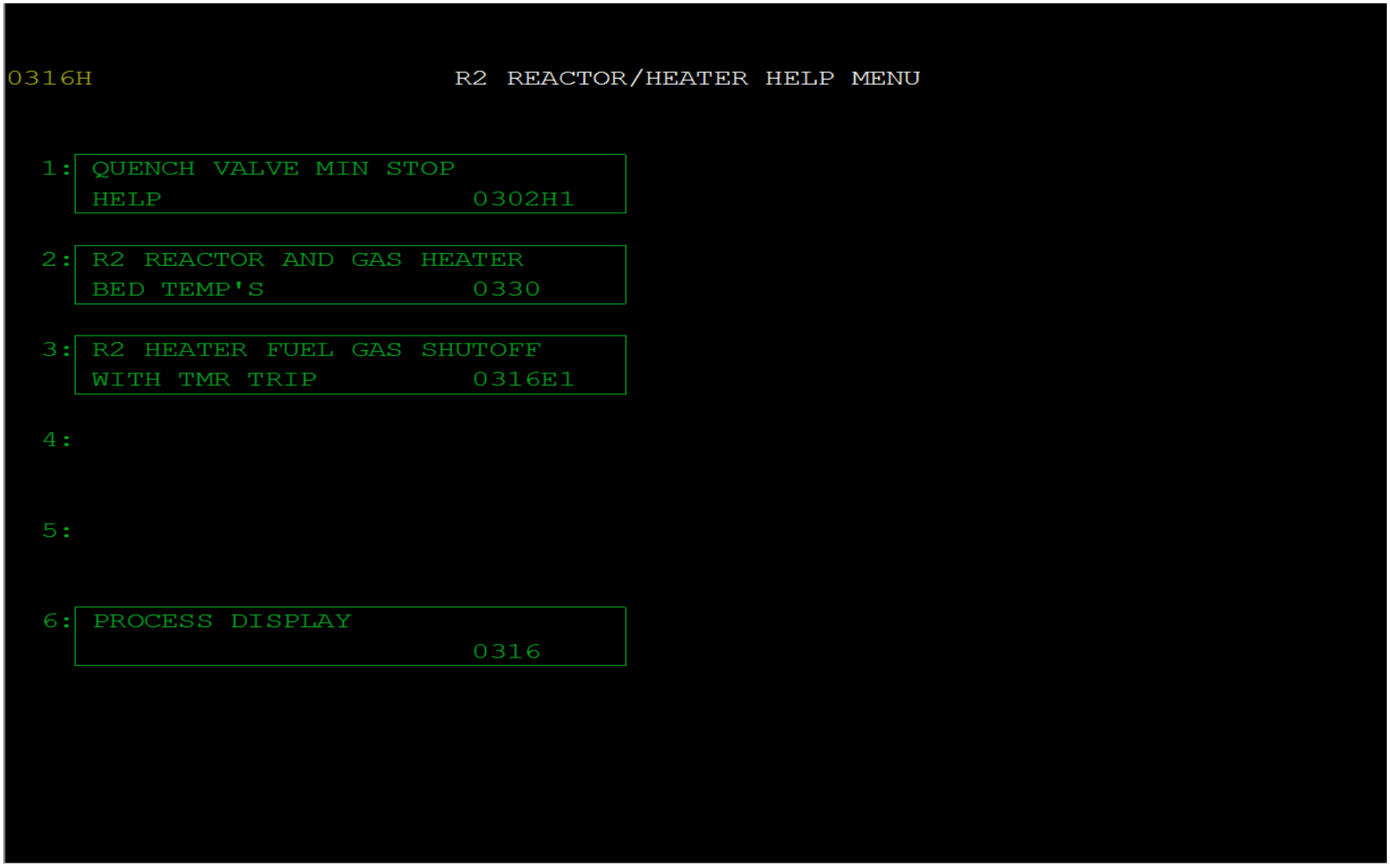
3.67 R2 RCY GAS 1403 FG SHUTOFF W/ TMR TRIP LOGIC SLOT 03_11L06 (0316E1.DS)

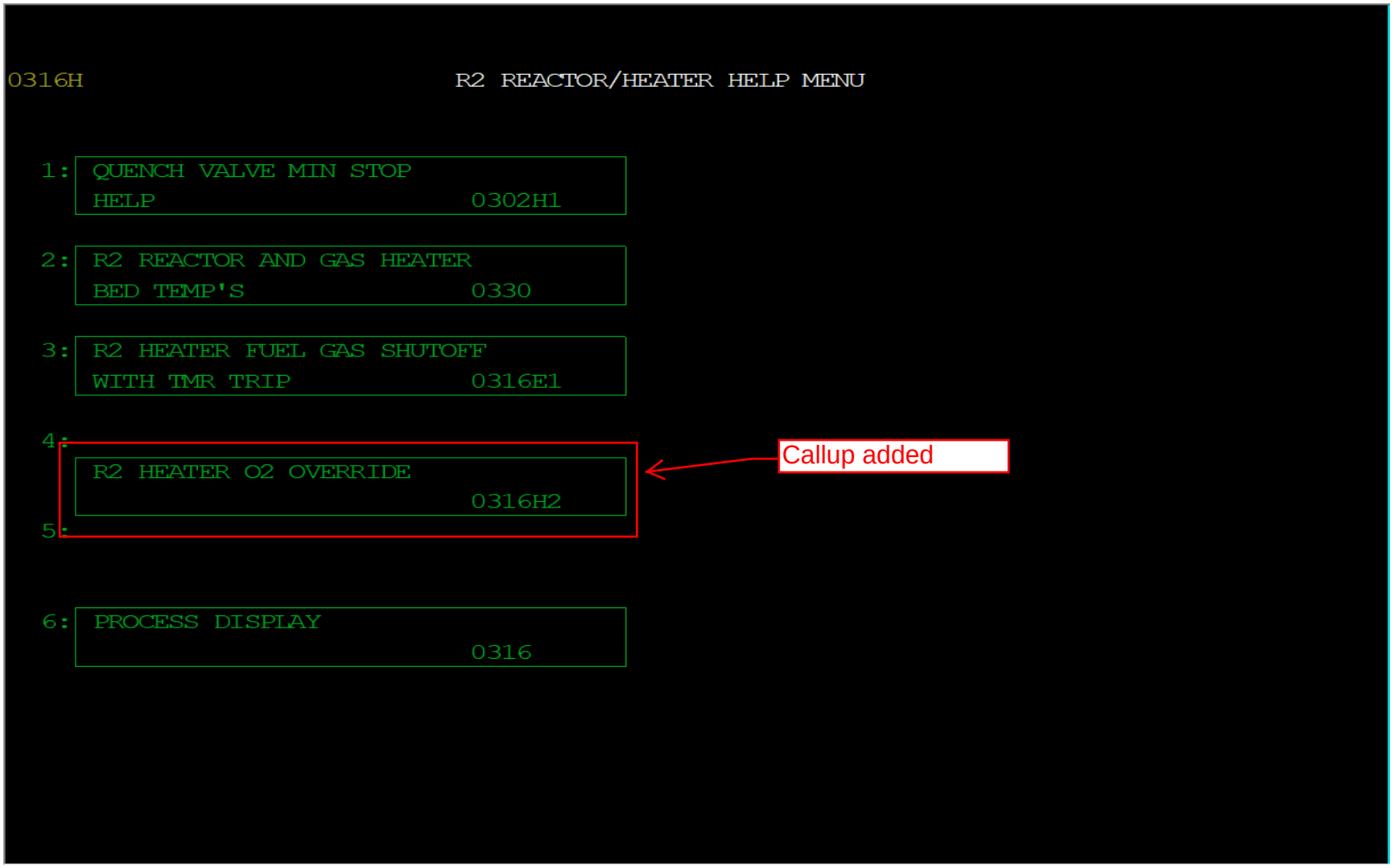


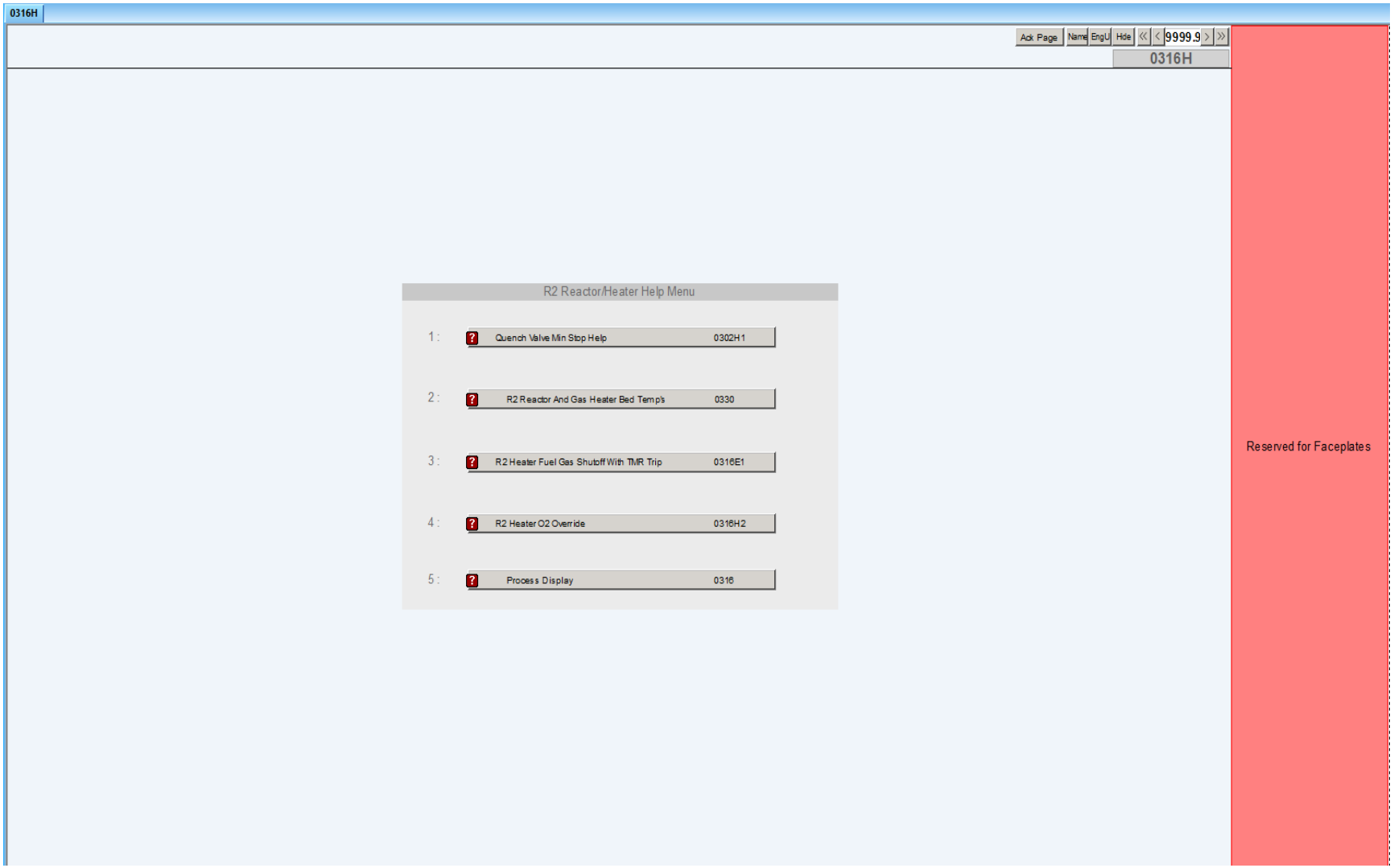

0316E1
R2 RCY GAS 1403 FG SHUTOFF W/ TMR TRIP
LOGIC SLOT 03_11L06
PROCESS
RRRR
PULSE
DLYTIME
BLK II
TTTT
SO4
S/D
TTTTTTTT
EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRRRR %
FUEL GAS
TO R2
HEATER
SAFEOP= RRRR
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L1
BLK II
TTTT
SO1
PVSOURCE= EEEE
SO3
AND
BLK II
TTTT
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L2
BLK II
TTTT
SO2
PVSOURCE= EEEE
FULL LOGIC
POINT DISP
LG DISP


0316E1
Ack Page
Name
EngU
Hide
9999.9
0316E1
Process
03_11L06
Delay
9999.99
DLYTIME
3XL268A
State
L1
BLK 01
ONDLY
SO1
PVsource=
3XL268A
State
03_11L06
State
03_11L06
Pulse
9999.99
03_11L06
State
DLYTIME
BLK 04
PULSE
SO4
S/D
3P C465
9999.99 W
9999.99
9999.99
Fuel Gas To
R2 Heater
3P C465
SafeOP =
9999.99
SO3
AND
BLK 03
AND
03_11L06
State
03_11L06
Delay
9999.99
DLYTIME
3XL268B
State
L2
BLK 02
ONDLY
SO2
PVsource=
3XL268B
State
03_11L06
State
Logic Point DISP LG
Reserved for Faceplates

3.68 R2 REACTOR/HEATER HELP MENU (0316H.DS)




0316H
R2 REACTOR/HEATER HELP MENU
1:
QUENCH VALVE MIN STOP
HELP
0302H1
2:
R2 REACTOR AND GAS HEATER
BED TEMP'S
0330
3:
R2 HEATER FUEL GAS SHUTOFF
WITH TMR TRIP
0316E1
4:
R2 HEATER O2 OVERRIDE
0316H2
5:
6:
PROCESS DISPLAY
0316
Callup added


0316H
Ack Page
Name
Eng U
Hide
9999.9
0316H
R2 Reactor/Heater Help Menu
1 :
Quench Valve Min Stop Help
0302H1
2 :
R2 Reactor And Gas Heater Bed Temp's
0330
3 :
R2 Heater Fuel Gas Shutoff With TMR Trip
0316E1
4 :
R2 Heater O2 Override
0316H2
5 :
Process Display
0316
Reserved for Faceplates

3.69 R-2 HEATER RAMP HELP (0316H1R.DS)

```
0316H1R                          R-2 HEATER RAMP HELP

DESCRIPTION:
 The setpoint of the heater outlet temperature controller is ramped to a final
 temperature over a predefined time by an Application Module controller. This
 function is designed to provide a consistent cool down or heat up of the
 reactors in a shorter period of time.
ENTRIES:
  SPTV (TARGET TEMP): The final temperature to which the heater will be ramped.

  TVPROC (STATUS OF RAMP): Indication of the status of the ramping function.
     The options are OFF, PRESET, and RUN.
  RAMPTIME (RAMP TIME): The time in minutes over which the temperature is to be
     ramped to the target temperature set point.
To Enable or Modify Control:
     1) Place 3TC692 in AUTO mode and select 3TC692 from GROUP 020.
 At this point, SPTV, TVPROC, and RAMPTIME can be input from the group display.
     2) Put TVPROC in PRESET mode.
     3) Enter the target temp, SPTV, in degrees F.
     4) Enter the RAMPTIME in minutes.
     5) Put TVPROC in RUN mode.
 At this point, the program will begin the ramp function.
To Disable Control:
     1) Put TVPROC in OFF mode.
        OR take the temperature controller out of AUTO mode.
                              PROCESS     CONTROL
                              DISPLAY     DISPLAY
```

0316H1R R-2 HEATER RAMP HELP

DESCRIPTION:

The setpoint of the heater outlet temperature controller is ramped to a final temperature over a predefined time by an Application Module controller. This function is designed to provide a consistent cool down or heat up of the reactors in a shorter period of time.

ENTRIES:

SPTV (TARGET TEMP): The final temperature to which the heater will be ramped.

TVPROC (STATUS OF RAMP): Indication of the status of the ramping function. The options are OFF, PRESET, and RUN.

RAMPTIME (RAMP TIME): The time in minutes over which the temperature is to be ramped to the target temperature set point.

To Enable or Modify Control:

1) Place 3TC692 in AUTO mode and select 3TC692 from GROUP 020.

At this point, SPTV, TVPROC, and RAMPTIME can be input from the group display.

2) Put TVPROC in PRESET mode.

3) Enter the target temp, SPTV, in degrees F.

4) Enter the RAMPTIME in minutes.

5) Put TVPROC in RUN mode.

At this point, the program will begin the ramp function.

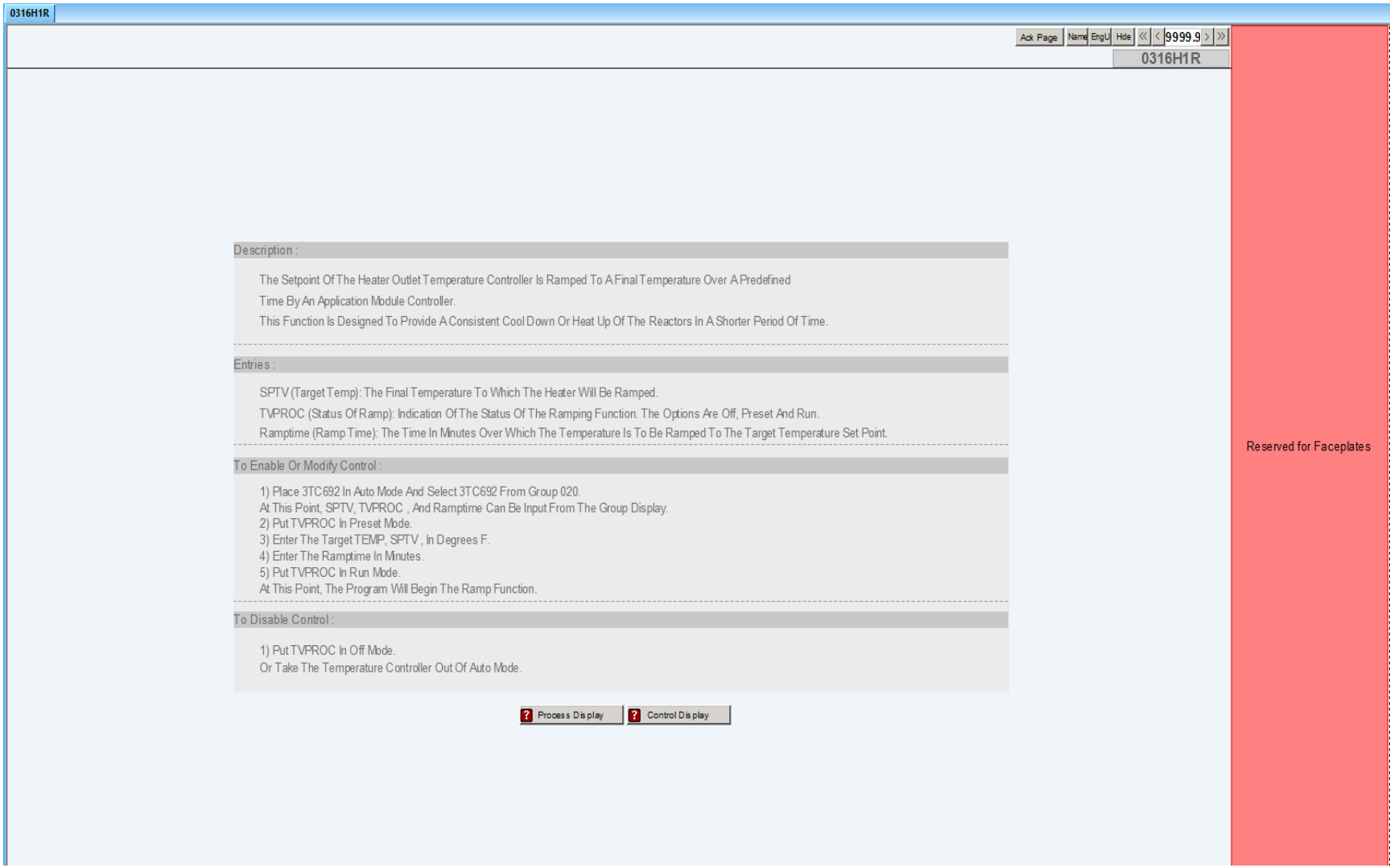
To Disable Control:

1) Put TVPROC in OFF mode.

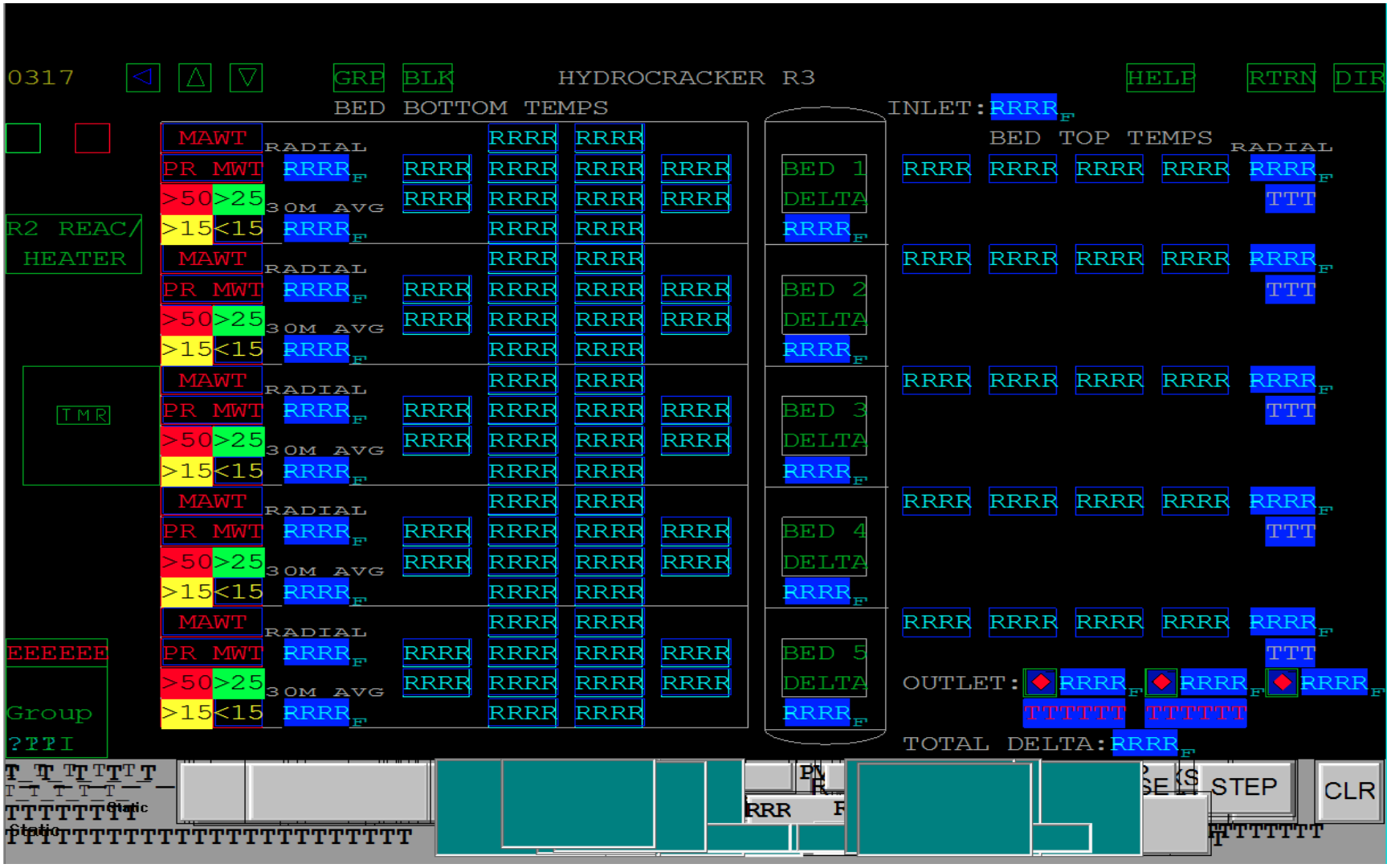
OR take the temperature controller out of AUTO mode.

PROCESS DISPLAY

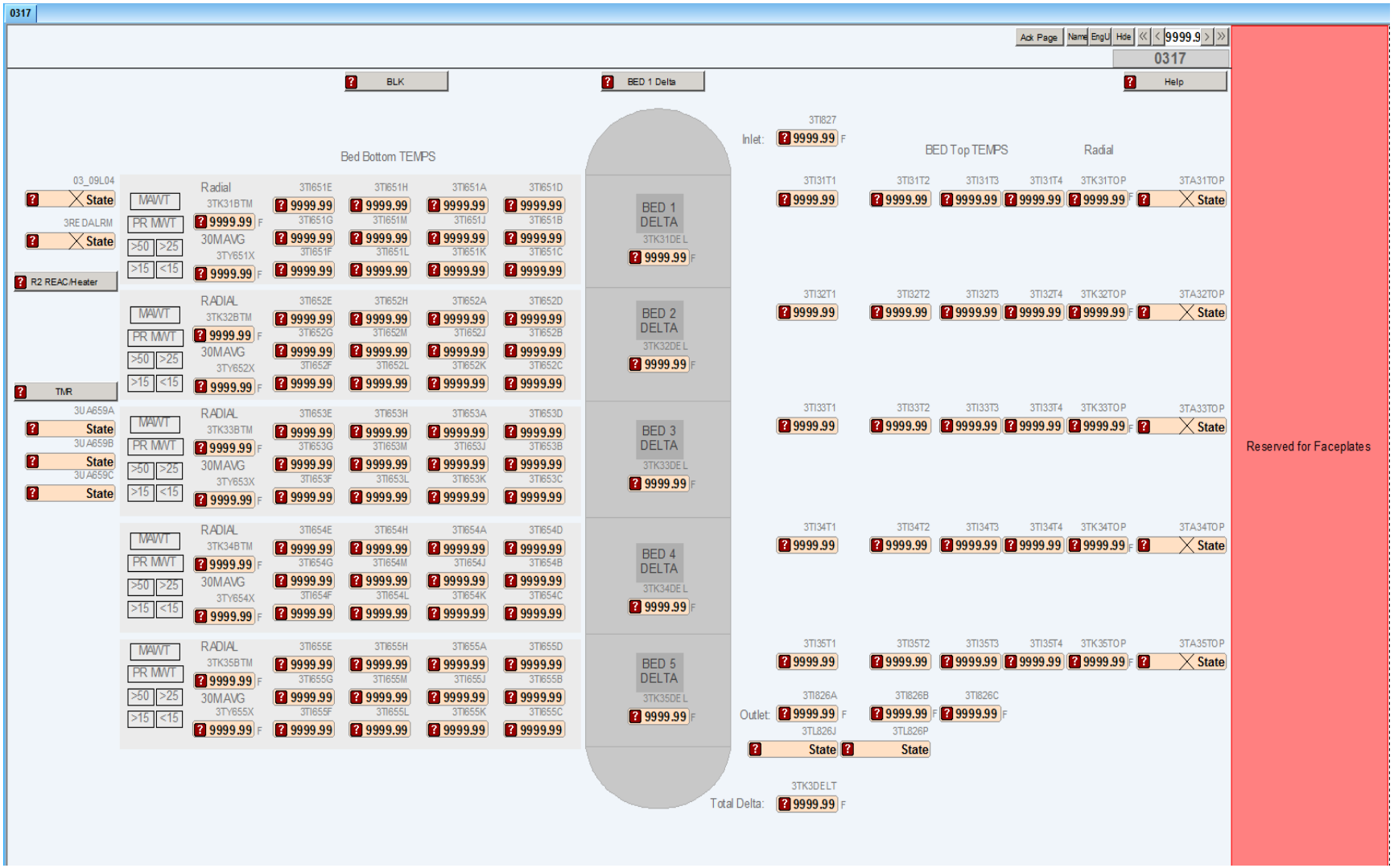
CONTROL DISPLAY


0316H1R
Ack Page
Name
Eng U
Hide
9999.9
0316H1R
Description :
The Setpoint Of The Heater Outlet Temperature Controller Is Ramped To A Final Temperature Over A Predefined
Time By An Application Module Controller.
This Function Is Designed To Provide A Consistent Cool Down Or Heat Up Of The Reactors In A Shorter Period Of Time.
Entries :
SPTV (Target Temp): The Final Temperature To Which The Heater Will Be Ramped.
TVPROC (Status Of Ramp): Indication Of The Status Of The Ramping Function. The Options Are Off, Preset And Run.
Ramptime (Ramp Time): The Time In Minutes Over Which The Temperature Is To Be Ramped To The Target Temperature Set Point.
To Enable Or Modify Control :
1) Place 3TC692 In Auto Mode And Select 3TC692 From Group 020.
At This Point, SPTV, TVPROC , And Ramptime Can Be Input From The Group Display.
2) Put TVPROC In Preset Mode.
3) Enter The Target TEMP, SPTV , In Degrees F.
4) Enter The Ramptime In Minutes.
5) Put TVPROC In Run Mode.
At This Point, The Program Will Begin The Ramp Function.
To Disable Control :
1) Put TVPROC In Off Mode.
Or Take The Temperature Controller Out Of Auto Mode.
Process Display
Control Display
Reserved for Faceplates

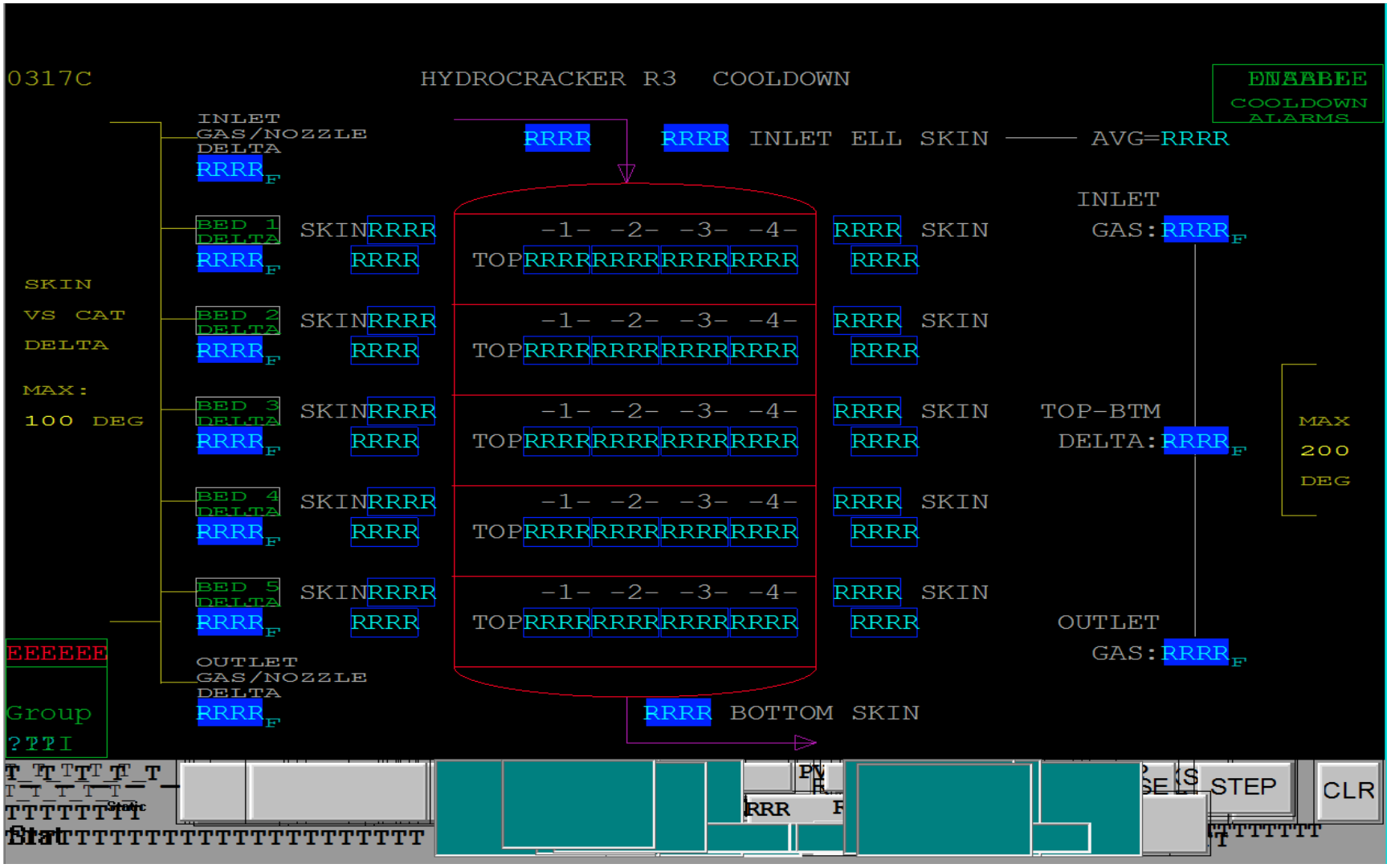
3.70 HYDROCRACKER R3 (0317.DS)

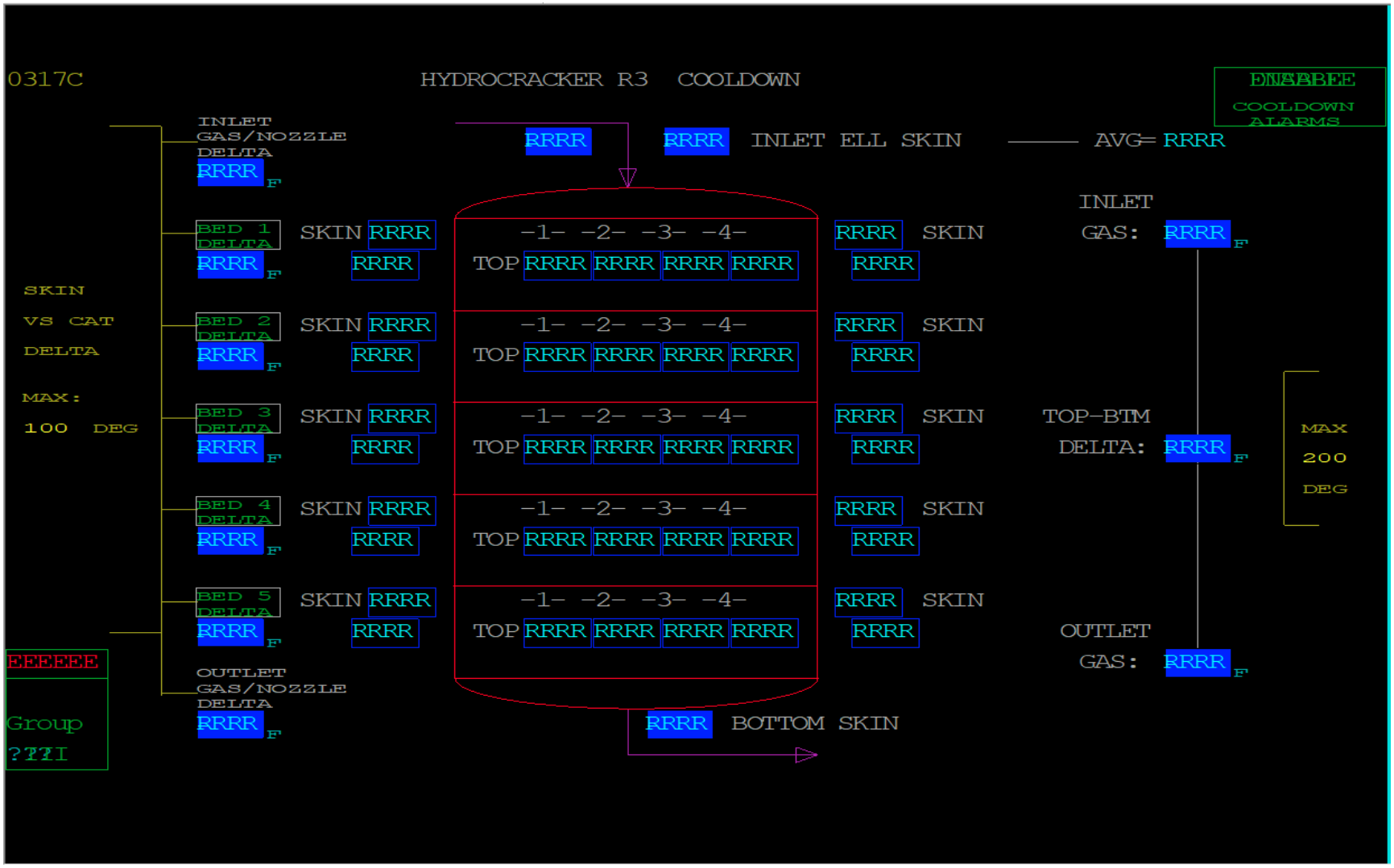


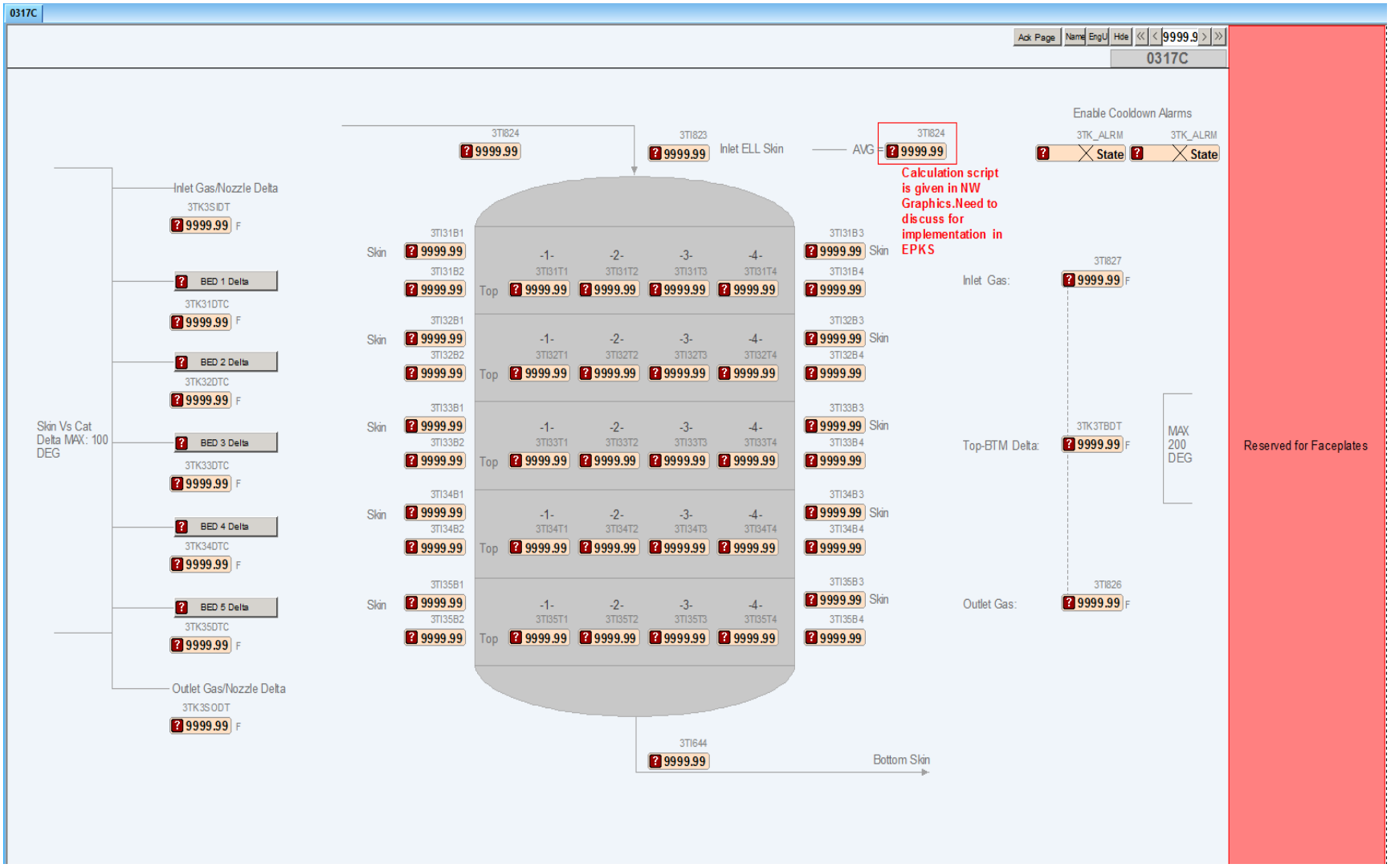
0317
GRP
BLK
HYDROCRACKER R3
HELP
RTRN
DIR
BED BOTTOM TEMPS
INLET: RRRR F
BED TOP TEMPS
MAWT
RADIAL
PR MWT
RRRR F
>50 >25
30M AVG
>15 <15
R2 REAC/
HEATER
TMR
EEEEEE
Group
?TTI
BED 1 DELTA
BED 2 DELTA
BED 3 DELTA
BED 4 DELTA
BED 5 DELTA
TTT
OUTLET:
TTTTTT
TOTAL DELTA:


0317
Ack Page
Name
Eng U
Hide
9999.9
0317
BLK
BED 1 Delta
Help
Bed Bottom TEMPS
BED Top TEMPS
Radial
Inlet:
3TI827
9999.99 F
03_09L04
State
3RE DALRM
State
R2 REAC/Heater
TMR
3U A659A
State
3U A659B
State
3U A659C
State
MAWT
PR MWT
>50
>25
>15
<15
Radial
3TK31BTM
9999.99 F
30MAVG
3TY651X
9999.99 F
3TI651E 3TI651H 3TI651A 3TI651D
3TI651G 3TI651M 3TI651J 3TI651B
3TI651F 3TI651L 3TI651K 3TI651C
RADIAL
3TK32BTM
9999.99 F
30MAVG
3TY652X
9999.99 F
3TI652E 3TI652H 3TI652A 3TI652D
3TI652G 3TI652M 3TI652J 3TI652B
3TI652F 3TI652L 3TI652K 3TI652C
RADIAL
3TK33BTM
9999.99 F
30MAVG
3TY653X
9999.99 F
3TI653E 3TI653H 3TI653A 3TI653D
3TI653G 3TI653M 3TI653J 3TI653B
3TI653F 3TI653L 3TI653K 3TI653C
RADIAL
3TK34BTM
9999.99 F
30MAVG
3TY654X
9999.99 F
3TI654E 3TI654H 3TI654A 3TI654D
3TI654G 3TI654M 3TI654J 3TI654B
3TI654F 3TI654L 3TI654K 3TI654C
RADIAL
3TK35BTM
9999.99 F
30MAVG
3TY655X
9999.99 F
3TI655E 3TI655H 3TI655A 3TI655D
3TI655G 3TI655M 3TI655J 3TI655B
3TI655F 3TI655L 3TI655K 3TI655C
BED 1 DELTA
3TK31DEL
9999.99 F
BED 2 DELTA
3TK32DEL
9999.99 F
BED 3 DELTA
3TK33DEL
9999.99 F
BED 4 DELTA
3TK34DEL
9999.99 F
BED 5 DELTA
3TK35DEL
9999.99 F
3TI31T1 3TI31T2 3TI31T3 3TI31T4 3TK31TOP 3TA31TOP
9999.99 9999.99 9999.99 9999.99 9999.99 F State
3TI32T1 3TI32T2 3TI32T3 3TI32T4 3TK32TOP 3TA32TOP
9999.99 9999.99 9999.99 9999.99 9999.99 F State
3TI33T1 3TI33T2 3TI33T3 3TI33T4 3TK33TOP 3TA33TOP
9999.99 9999.99 9999.99 9999.99 9999.99 F State
3TI34T1 3TI34T2 3TI34T3 3TI34T4 3TK34TOP 3TA34TOP
9999.99 9999.99 9999.99 9999.99 9999.99 F State
3TI35T1 3TI35T2 3TI35T3 3TI35T4 3TK35TOP 3TA35TOP
9999.99 9999.99 9999.99 9999.99 9999.99 F State
Outlet:
3TI826A 3TI826B 3TI826C
9999.99 F 9999.99 F 9999.99 F
3TL826J 3TL826P
State State
Total Delta:
3TK3DELT
9999.99 F
Reserved for Faceplates

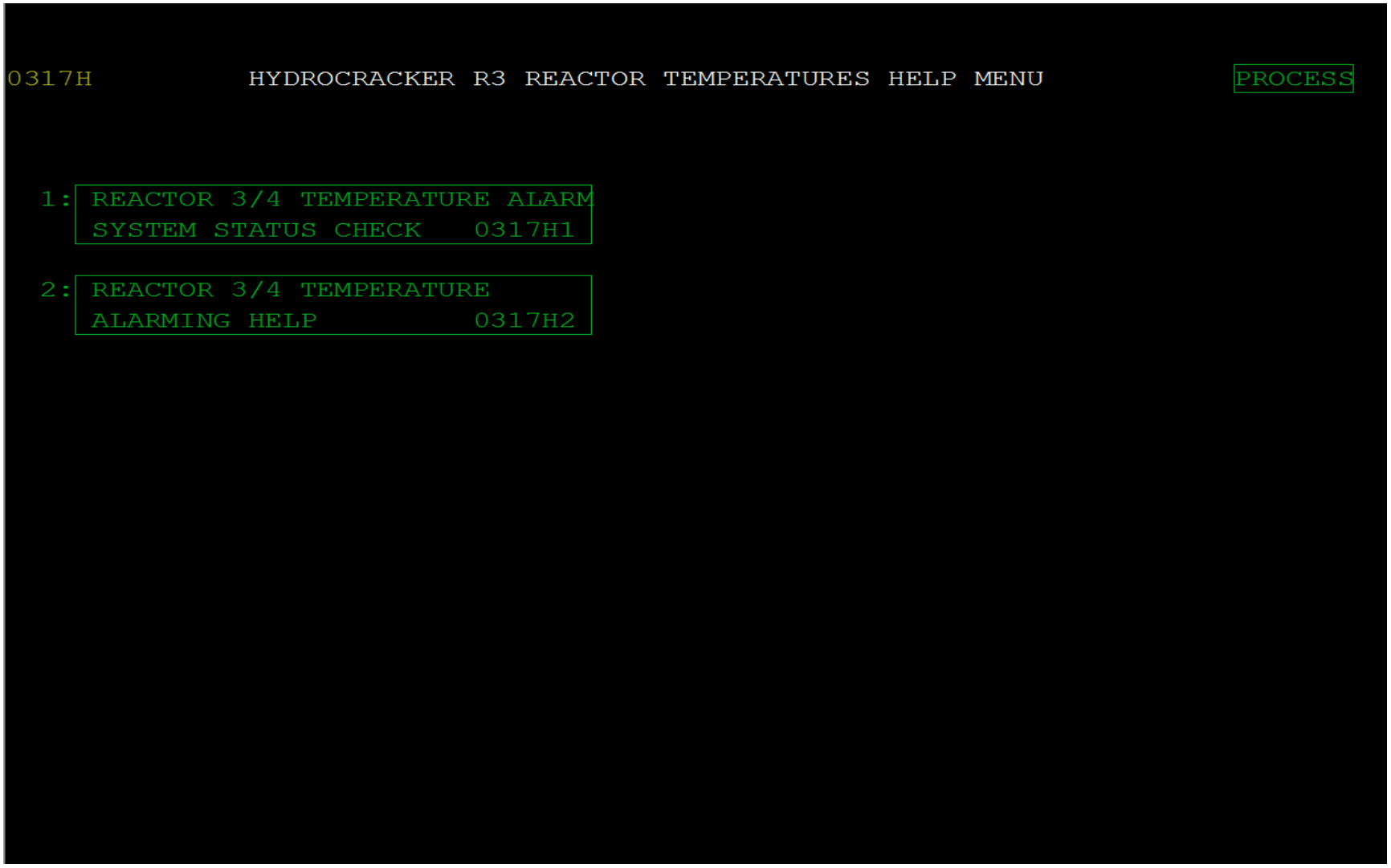
3.71 HYDROCRACKER R3 COOLDOWN (0317C.DS)

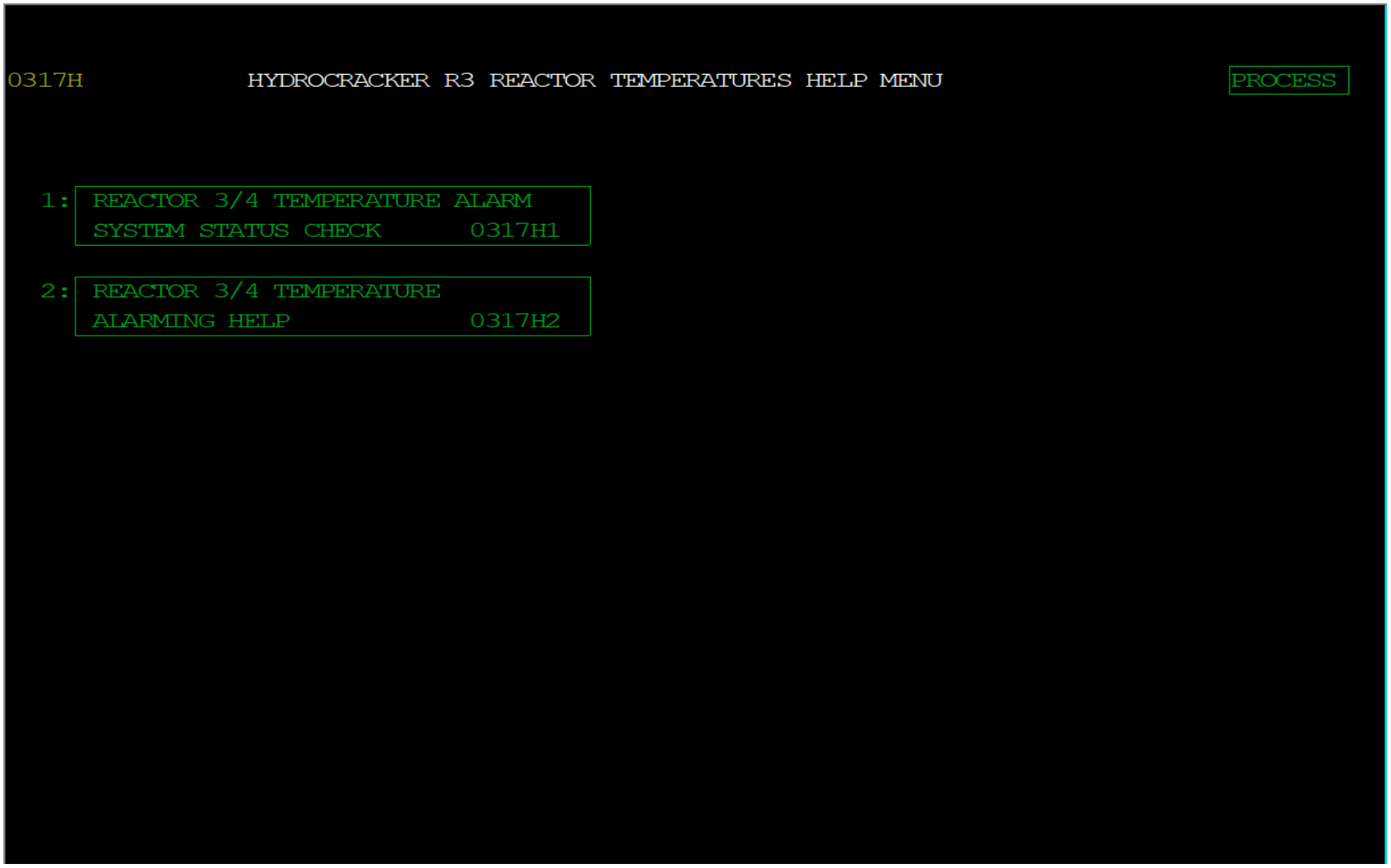


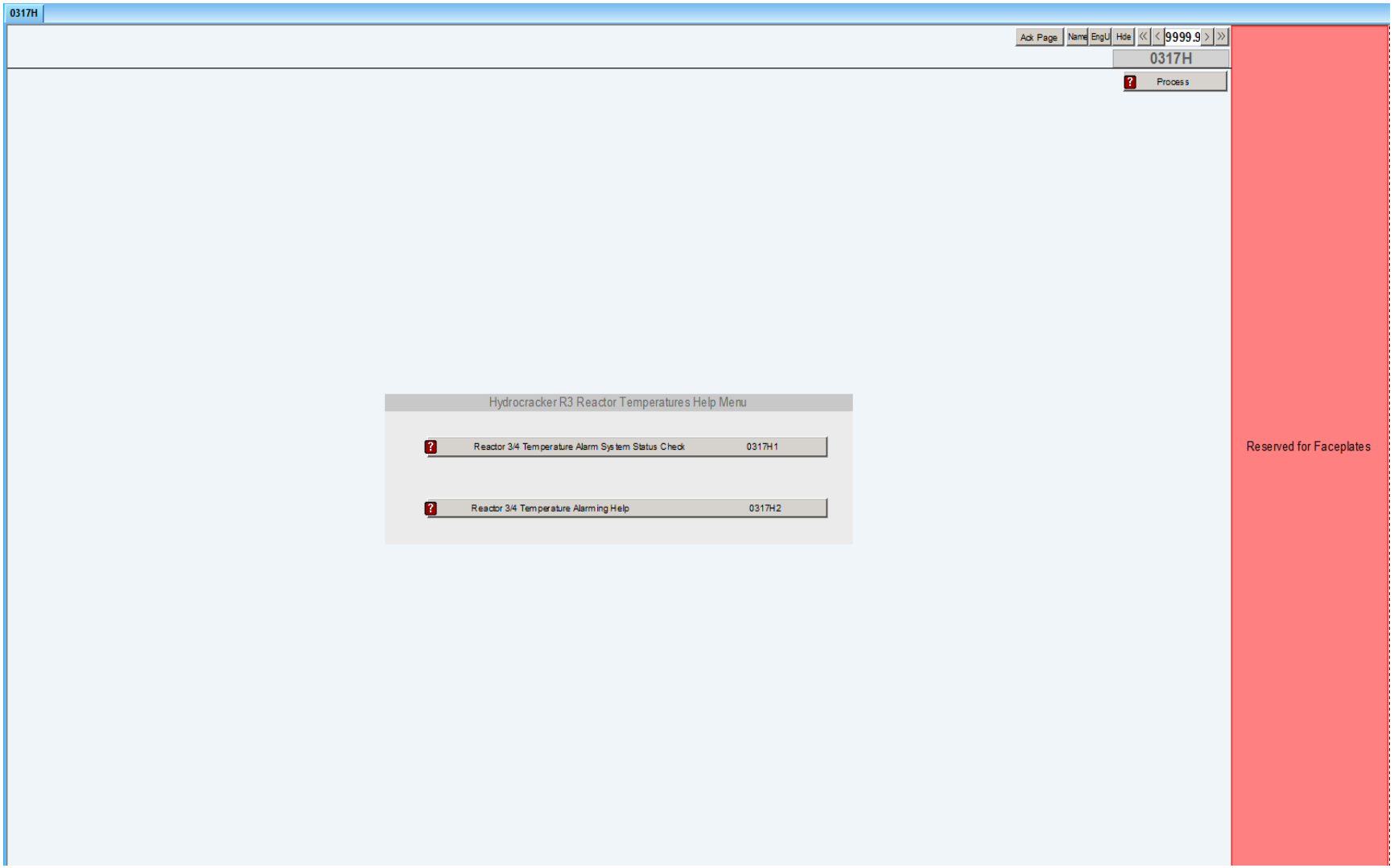

0317C
HYDROCRACKER R3 COOLDOWN
DISABLE
COOLDOWN
ALARMS
INLET
GAS/NOZZLE
DELTA
RRRR F
RRRR
RRRR INLET ELL SKIN
AVG= RRRR
INLET
GAS: RRRR F
BED 1
DELTA
RRRR F
SKIN RRRR
RRRR
-1- -2- -3- -4-
TOP RRRR RRRR RRRR RRRR
RRRR SKIN
RRRR
BED 2
DELTA
RRRR F
BED 3
DELTA
RRRR F
BED 4
DELTA
RRRR F
BED 5
DELTA
RRRR F
SKIN
VS CAT
DELTA
MAX:
100 DEG
TOP-BTM
DELTA: RRRR F
MAX
200
DEG
OUTLET
GAS: RRRR F
EEEEEE
Group
?TTI
OUTLET
GAS/NOZZLE
DELTA
RRRR F
RRRR BOTTOM SKIN


0317C
Ack Page
Name
Eng U
Hide
9999.9
0317C
Enable Cooldown Alarms
3TK_ALRM
State
3TK_ALRM
State
3TI824
9999.99
3TI823
9999.99
Inlet ELL Skin
AVG
3TI824
9999.99
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
Inlet Gas/Nozzle Delta
3TK3SIDT
9999.99 F
BED 1 Delta
3TK31DTC
9999.99 F
BED 2 Delta
3TK32DTC
9999.99 F
BED 3 Delta
3TK33DTC
9999.99 F
BED 4 Delta
3TK34DTC
9999.99 F
BED 5 Delta
3TK35DTC
9999.99 F
Outlet Gas/Nozzle Delta
3TK3SODT
9999.99 F
Skin Vs Cat Delta MAX: 100 DEG
3TI131B1
Skin 9999.99
3TI131B2
9999.99
-1- 3TI31T1 9999.99
-2- 3TI31T2 9999.99
-3- 3TI31T3 9999.99
-4- 3TI31T4 9999.99
Top
3TI131B3
9999.99 Skin
3TI131B4
9999.99
3TI132B1
Skin 9999.99
3TI132B2
9999.99
-1- 3TI32T1 9999.99
-2- 3TI32T2 9999.99
-3- 3TI32T3 9999.99
-4- 3TI32T4 9999.99
Top
3TI132B3
9999.99 Skin
3TI132B4
9999.99
3TI133B1
Skin 9999.99
3TI133B2
9999.99
-1- 3TI33T1 9999.99
-2- 3TI33T2 9999.99
-3- 3TI33T3 9999.99
-4- 3TI33T4 9999.99
Top
3TI133B3
9999.99 Skin
3TI133B4
9999.99
3TI134B1
Skin 9999.99
3TI134B2
9999.99
-1- 3TI34T1 9999.99
-2- 3TI34T2 9999.99
-3- 3TI34T3 9999.99
-4- 3TI34T4 9999.99
Top
3TI134B3
9999.99 Skin
3TI134B4
9999.99
3TI135B1
Skin 9999.99
3TI135B2
9999.99
-1- 3TI35T1 9999.99
-2- 3TI35T2 9999.99
-3- 3TI35T3 9999.99
-4- 3TI35T4 9999.99
Top
3TI135B3
9999.99 Skin
3TI135B4
9999.99
3TI644
9999.99
Bottom Skin
Inlet Gas:
3TI827
9999.99 F
Top-BTM Delta:
3TK3TBDT
9999.99 F
Outlet Gas:
3TI826
9999.99 F
MAX 200 DEG
Reserved for Faceplates

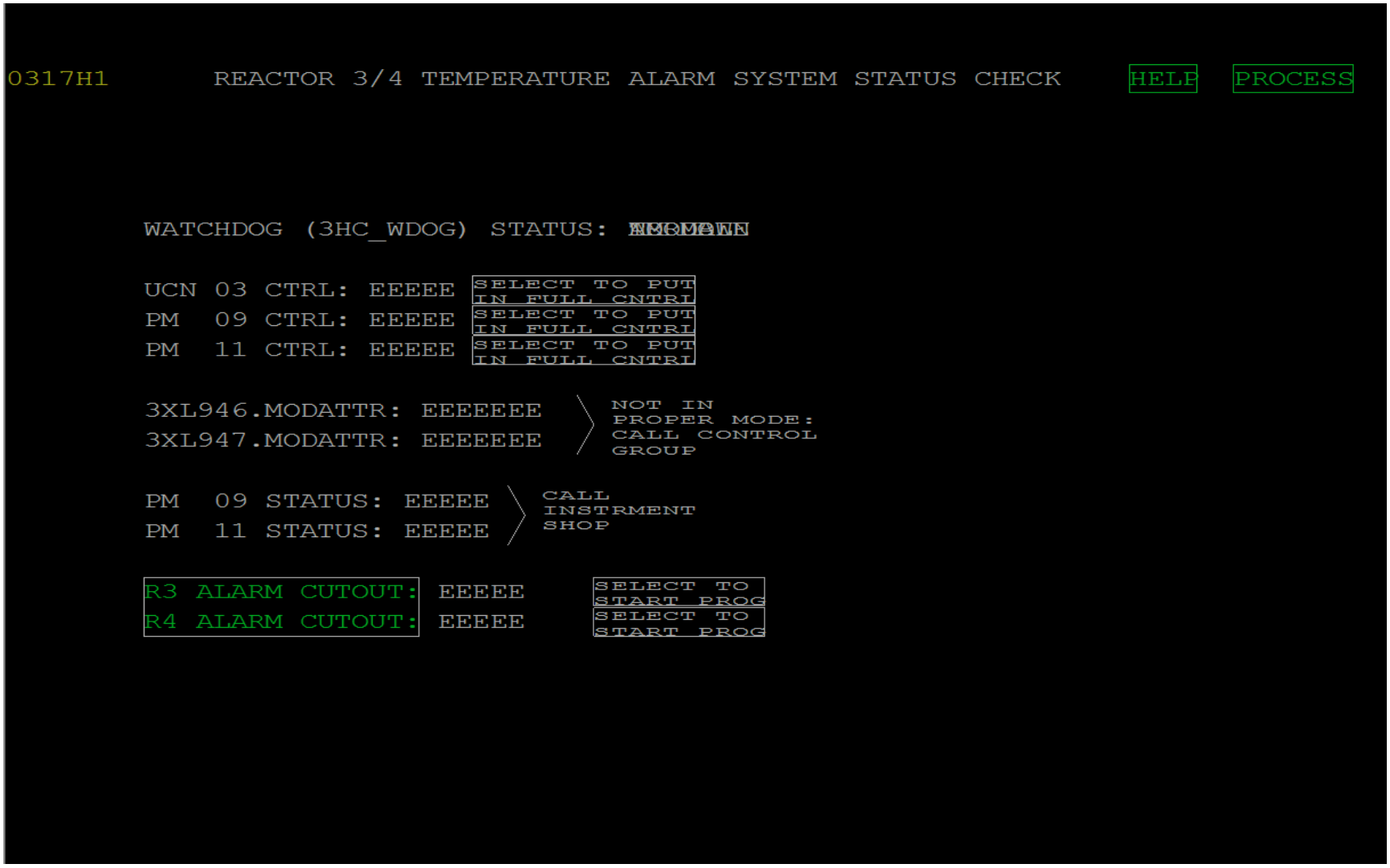
3.72 HYDROCRACKER R3 REACTOR TEMPERATURES HELP MENU (0317H.DS)

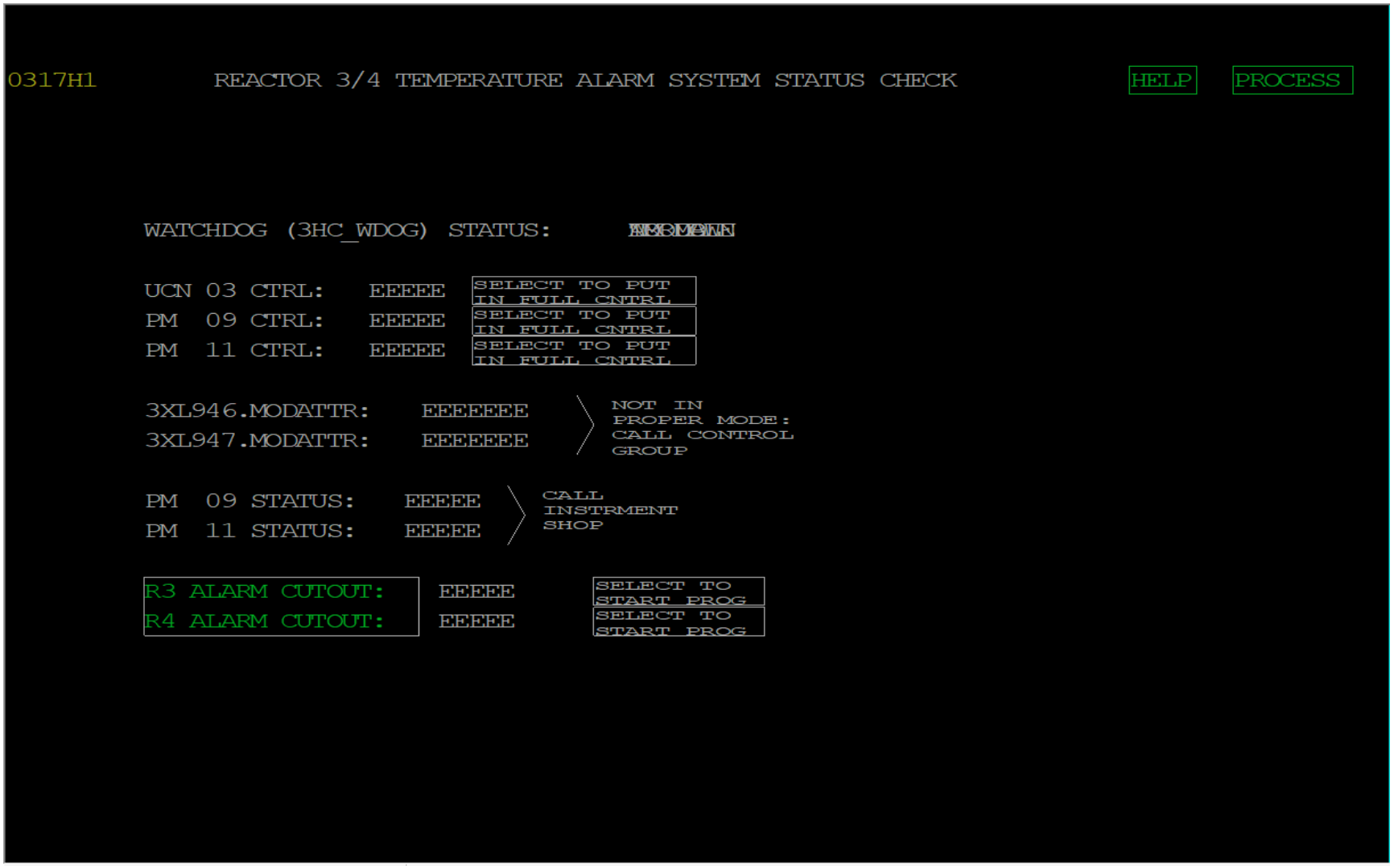


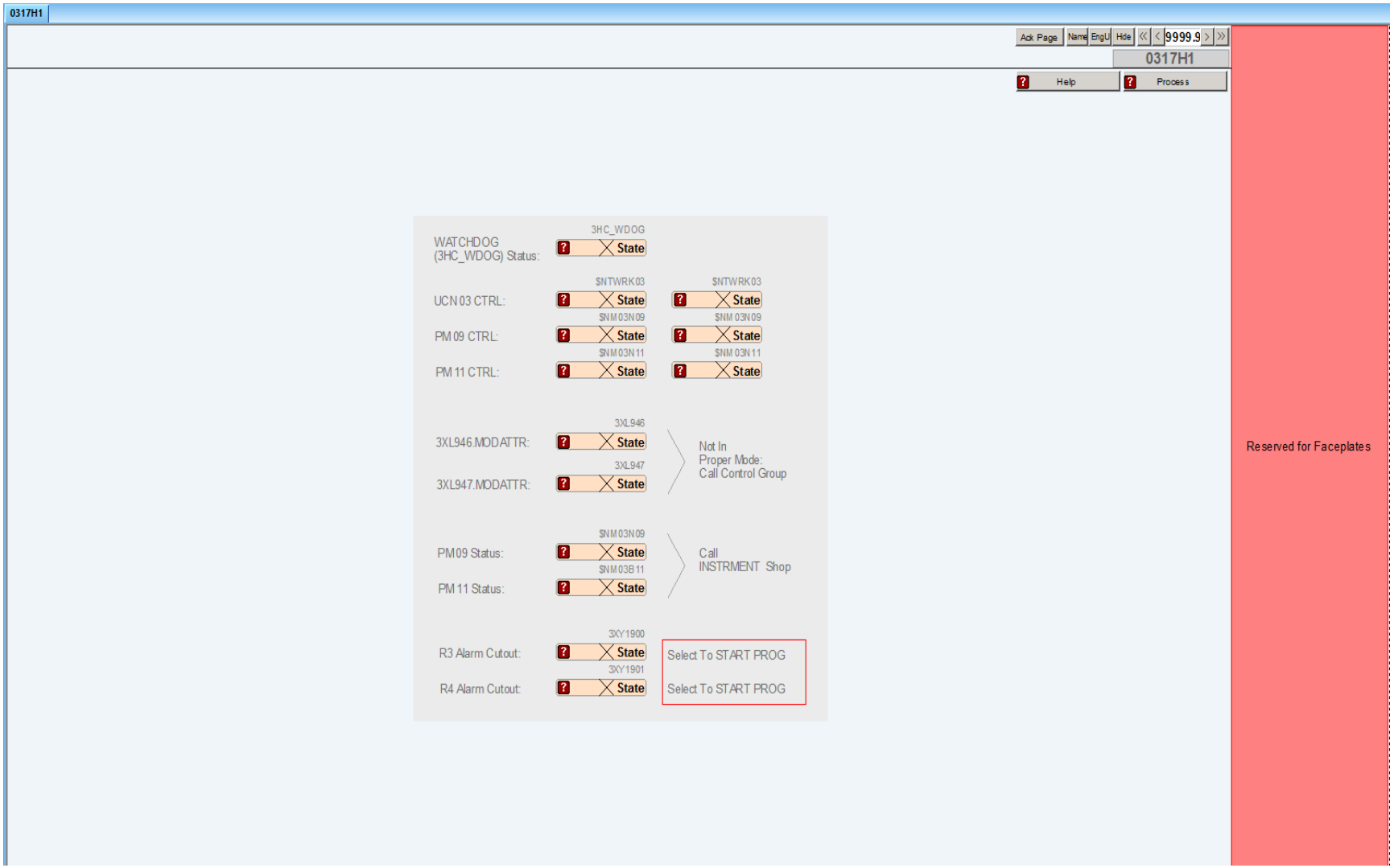

0317H
HYDROCRACKER R3 REACTOR TEMPERATURES HELP MENU
PROCESS
1:
REACTOR 3/4 TEMPERATURE ALARM
SYSTEM STATUS CHECK 0317H1
2:
REACTOR 3/4 TEMPERATURE
ALARMING HELP 0317H2


0317H
Ack Page
Name
EngU
Hide
9999.9
0317H
Process
Hydrocracker R3 Reactor Temperatures Help Menu
Reactor 3/4 Temperature Alarm System Status Check
0317H1
Reactor 3/4 Temperature Alarming Help
0317H2
Reserved for Faceplates

3.73 REACTOR 3/4 TEMPERATURE ALARM SYSTEM STATUS CHECK (0317H1.DS)




0317H1
REACTOR 3/4 TEMPERATURE ALARM SYSTEM STATUS CHECK
HELP
PROCESS
WATCHDOG (3HC_WDOG) STATUS:
UCN 03 CTRL: EEEEE
SELECT TO PUT IN FULL CNTRL
PM 09 CTRL: EEEEE
SELECT TO PUT IN FULL CNTRL
PM 11 CTRL: EEEEE
SELECT TO PUT IN FULL CNTRL
3XL946.MODATTR: EEEEEEE
3XL947.MODATTR: EEEEEEE
NOT IN PROPER MODE: CALL CONTROL GROUP
PM 09 STATUS: EEEEE
PM 11 STATUS: EEEEE
CALL INSTRMENT SHOP
R3 ALARM CUTOUT: EEEEE
R4 ALARM CUTOUT: EEEEE
SELECT TO START PROG
SELECT TO START PROG


0317H1
Ack Page
Name
Eng U
Hide
9999.9
0317H1
Help
Process
3HC_WDOG
WATCHDOG (3HC_WDOG) Status:
State
$NTWRK03
UCN 03 CTRL:
State
$NTWRK03
State
$NM03N09
PM 09 CTRL:
State
$NM03N09
State
$NM03N11
PM 11 CTRL:
State
$NM03N11
State
3XL946
3XL946.MODATTR:
State
3XL947
3XL947.MODATTR:
State
Not In Proper Mode: Call Control Group
$NM03N09
PM 09 Status:
State
$NM03B11
PM 11 Status:
State
Call INSTRMENT Shop
3XY1900
R3 Alarm Cutout:
State
Select To START PROG
3XY1901
R4 Alarm Cutout:
State
Select To START PROG
Reserved for Faceplates

3.74 REACTOR R3/R4 TEMPERATURE ALARMING HELP (0317H2.DS)

0317H2 REACTOR R3/R4 TEMPERATURE ALARMING HELP HELP PROCESS

Below is a typical representation of a Reactor 3 or 4 set of bed temperatures. The temperatures are shown for illustration purposes only as "T1" for Top #1, "M2" for Mid #2, etc. The purpose is to illustrate the schematic changes that occur when Reactor 3 or 4 temperatures change from their time averaged "normals". This schematic assumes the R3 and R4 Application Module temperature alarming system is functioning normally. Individual TI points do not alarm on the alarm summary, only the common elevation points ("TOP", "MID", etc.) alarm on the alarm summary. Touch the appropriate target to simulate a change in the designated temperature(s) and observe the associated schematic change(s).

	-1-	-2-	-3-	-4-
TOP	T1	T2	T3	T4
MID	M1	M2	M3	M4
UPB	U1	U2	U3	U4
BTM	B1	B2	B3	B4

70 DEGREES ABOVE NORM

Temperature change to T1:

T1 Normal | T1 -15 | T1 +15 | T1 Hi Rate of Change | T1 +25 | T1 +50 | T1 +70

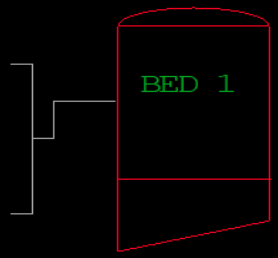
Temperature change to M2 and M4:

M2/M4 Normal | M2/M4 -15 | M2/M4 +15 | M2/M4 Hi ROC | M2/M4 +25 | M2/M34 +50 | M2/M4 +70

0317H2 REACTOR R3/R4 TEMPERATURE ALARMING HELP HELP PROCESS

Below is a typical representation of a Reactor 3 or 4 set of bed temperatures. The temperatures are shown for illustration purposes only as "T1" for Top #1, "M2" for Mid #2, etc. The purpose is to illustrate the schematic changes that occur when Reactor 3 or 4 temperatures change from their time averaged "normals". This schematic assumes the R3 and R4 Application Module temperature alarming system is functioning normally. Individual TI points do not alarm on the alarm summary, only the common elevation points ("TOP", "MID", etc.) alarm on the alarm summary. Touch the appropriate target to simulate a change in the designated temperature(s) and observe the associated schematic change(s).

	-1-	-2-	-3-	-4-
TOP	T1	T2	T3	T4
MID	M1	M2	M3	M4
UPB	U1	U2	U3	U4
BTM	B1	B2	B3	B4



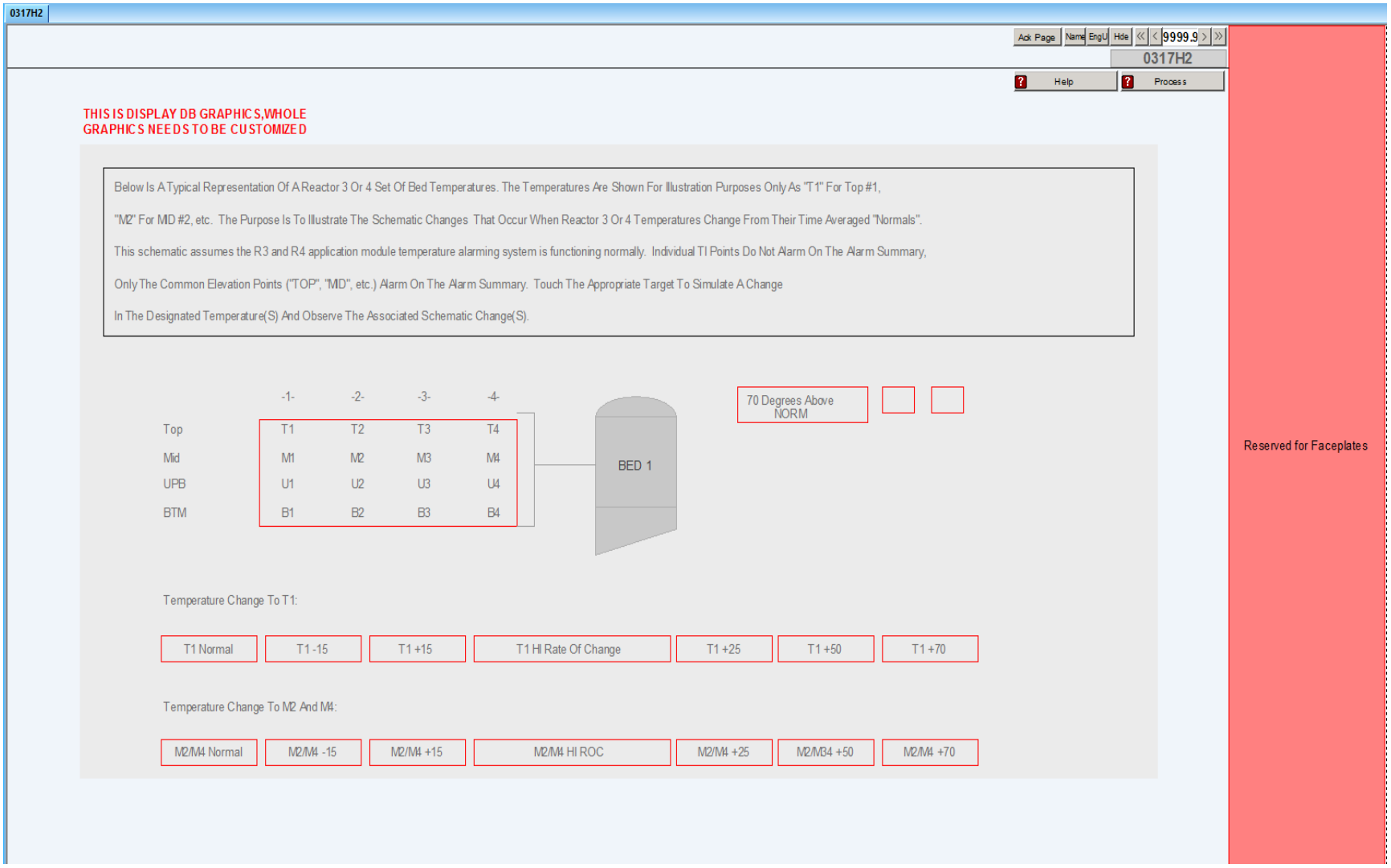
70 DEGREES ABOVE NORM

Temperature change to T1:

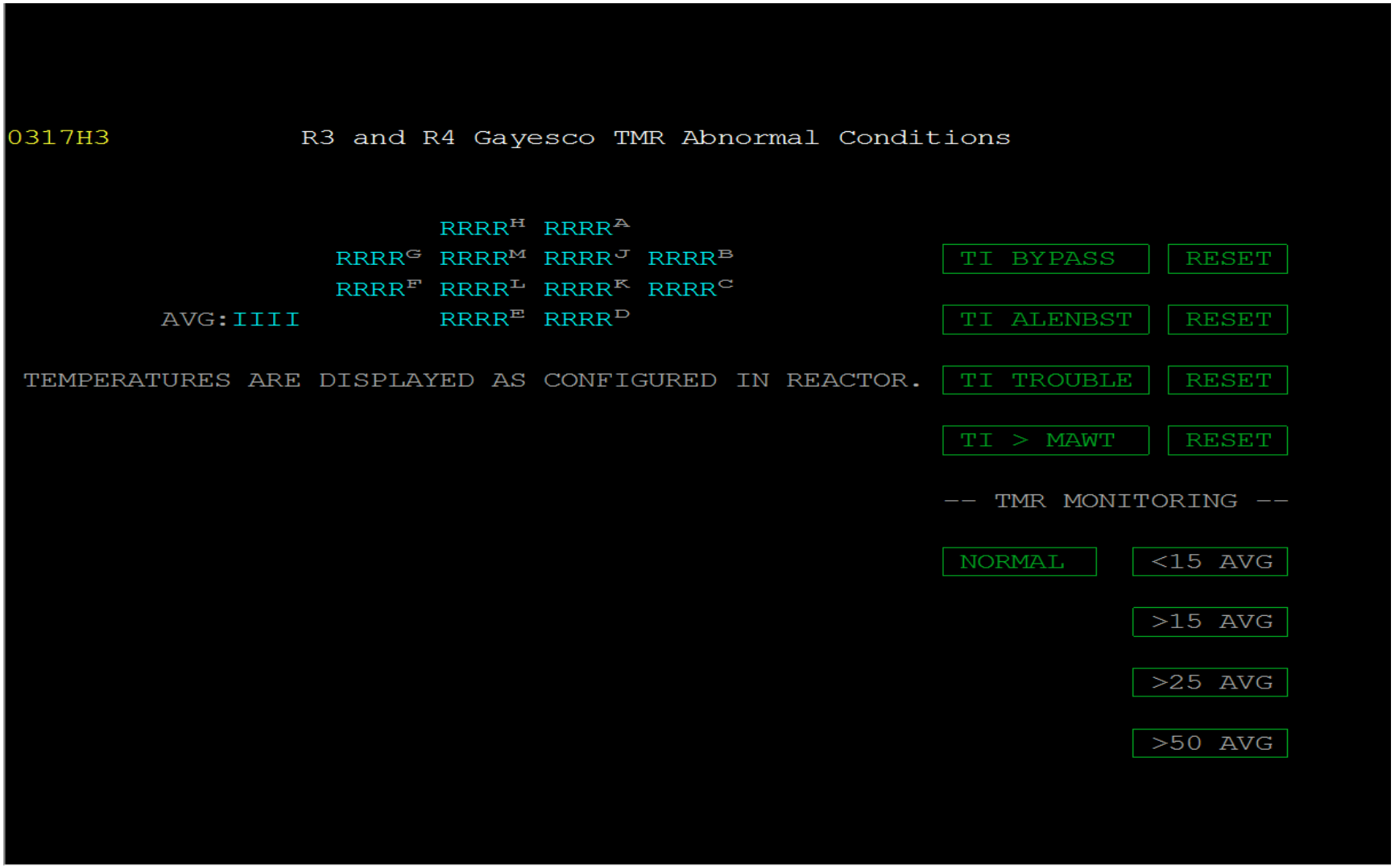
T1 Normal | T1 -15 | T1 +15 | T1 Hi Rate of Change | T1 +25 | T1 +50 | T1 +70

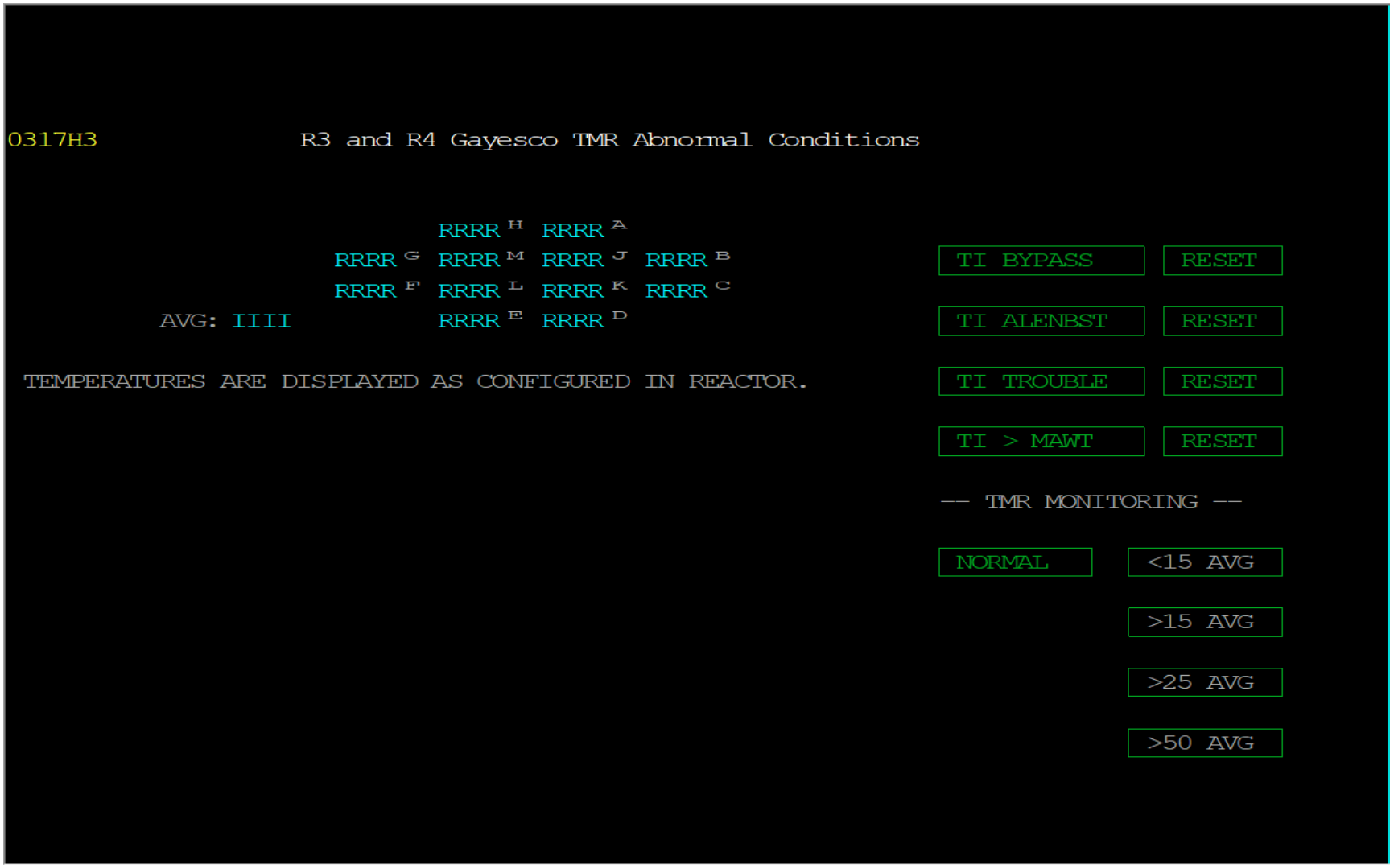
Temperature change to M2 and M4:

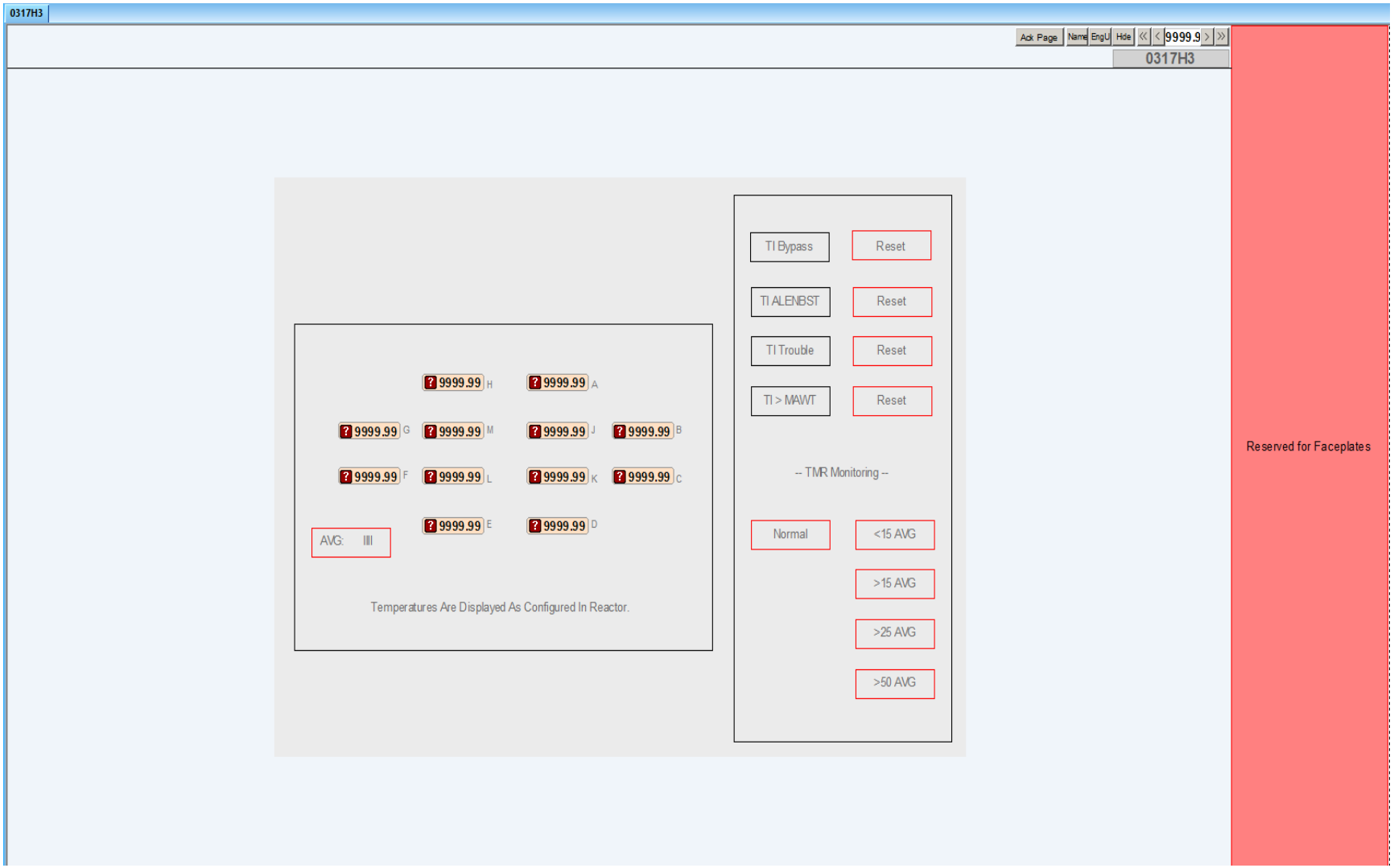
M2/M4 Normal | M2/M4 -15 | M2/M4 +15 | M2/M4 Hi ROC | M2/M4 +25 | M2/M34 +50 | M2/M4 +70


0317H2
Ack Page
Name
Eng U
Hide
9999.9
0317H2
Help
Process
THIS IS DISPLAY DB GRAPHICS,WHOLE
GRAPHICS NEEDS TO BE CUSTOMIZED
Below Is A Typical Representation Of A Reactor 3 Or 4 Set Of Bed Temperatures. The Temperatures Are Shown For Illustration Purposes Only As "T1" For Top #1,
"M2" For MID #2, etc. The Purpose Is To Illustrate The Schematic Changes That Occur When Reactor 3 Or 4 Temperatures Change From Their Time Averaged "Normals".
This schematic assumes the R3 and R4 application module temperature alarming system is functioning normally. Individual TI Points Do Not Alarm On The Alarm Summary,
Only The Common Elevation Points ("TOP", "MID", etc.) Alarm On The Alarm Summary. Touch The Appropriate Target To Simulate A Change
In The Designated Temperature(S) And Observe The Associated Schematic Change(S).
-1-
-2-
-3-
-4-
Top
Mid
UPB
BTM
T1
T2
T3
T4
M1
M2
M3
M4
U1
U2
U3
U4
B1
B2
B3
B4
BED 1
70 Degrees Above NORM
Temperature Change To T1:
T1 Normal
T1 -15
T1 +15
T1 HI Rate Of Change
T1 +25
T1 +50
T1 +70
Temperature Change To M2 And M4:
M2/M4 Normal
M2/M4 -15
M2/M4 +15
M2/M4 HI ROC
M2/M4 +25
M2/M34 +50
M2/M4 +70
Reserved for Faceplates

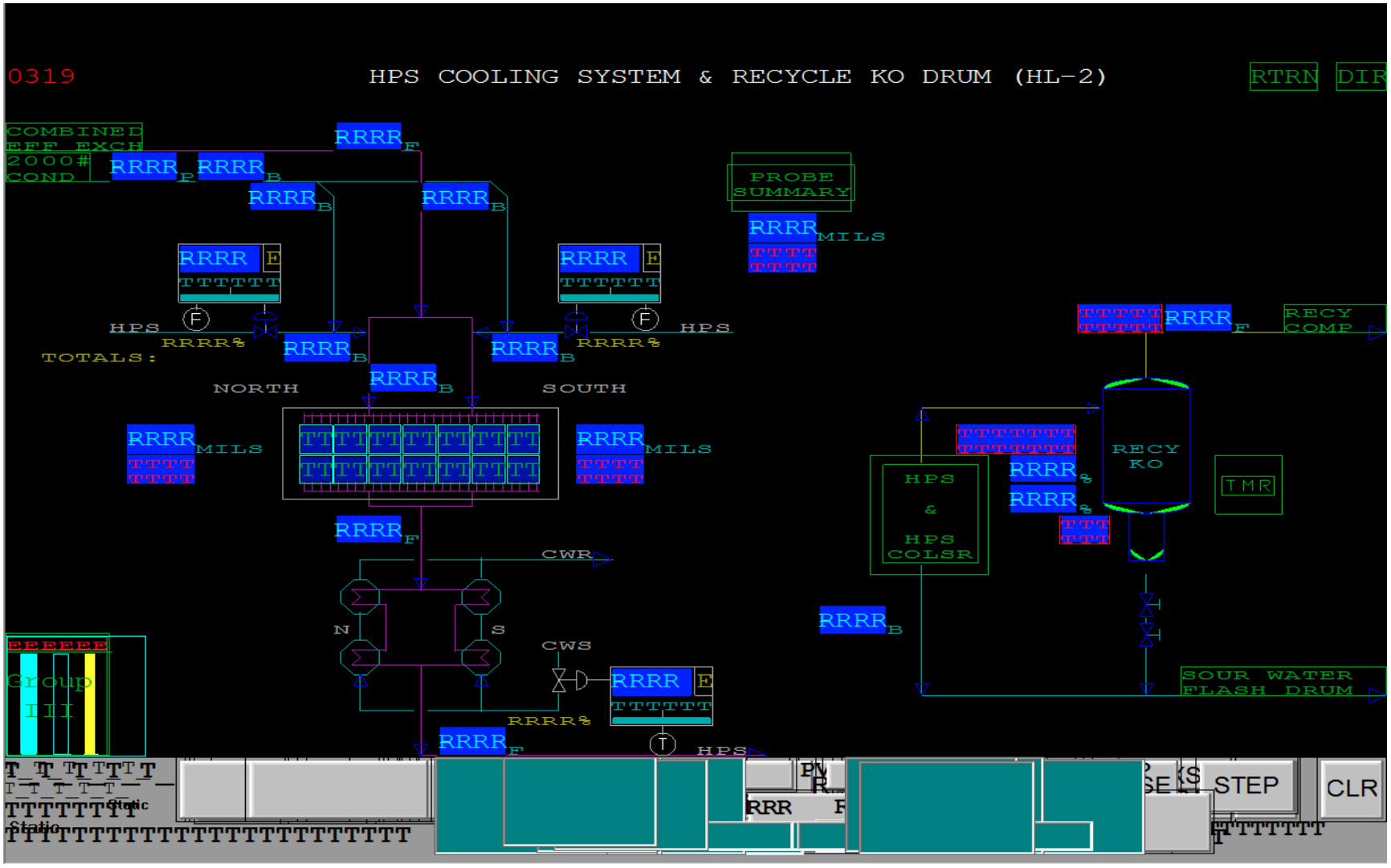
3.75 R3 and R4 Gayesco TMR Abnormal Conditions (0317H3.DS)

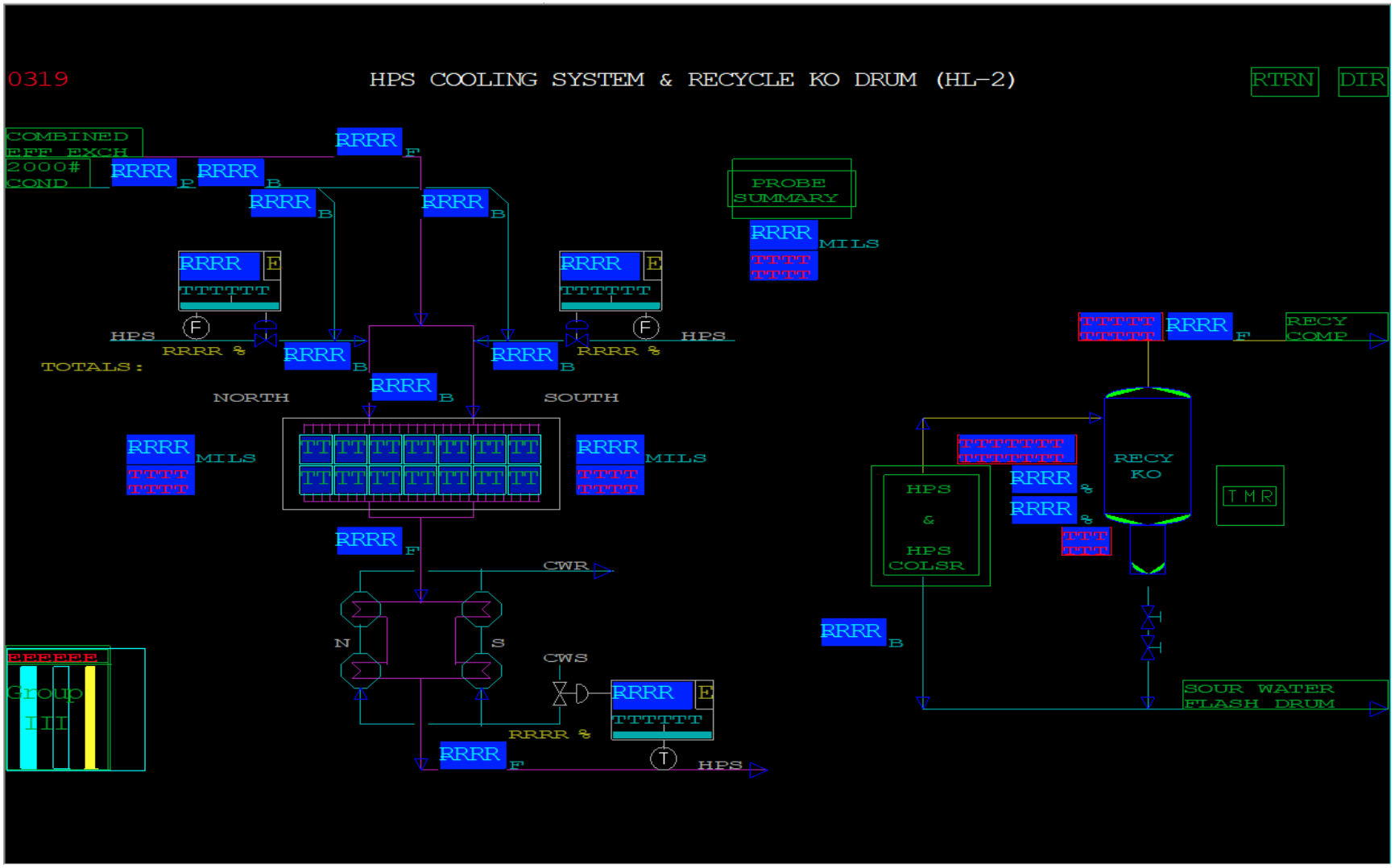


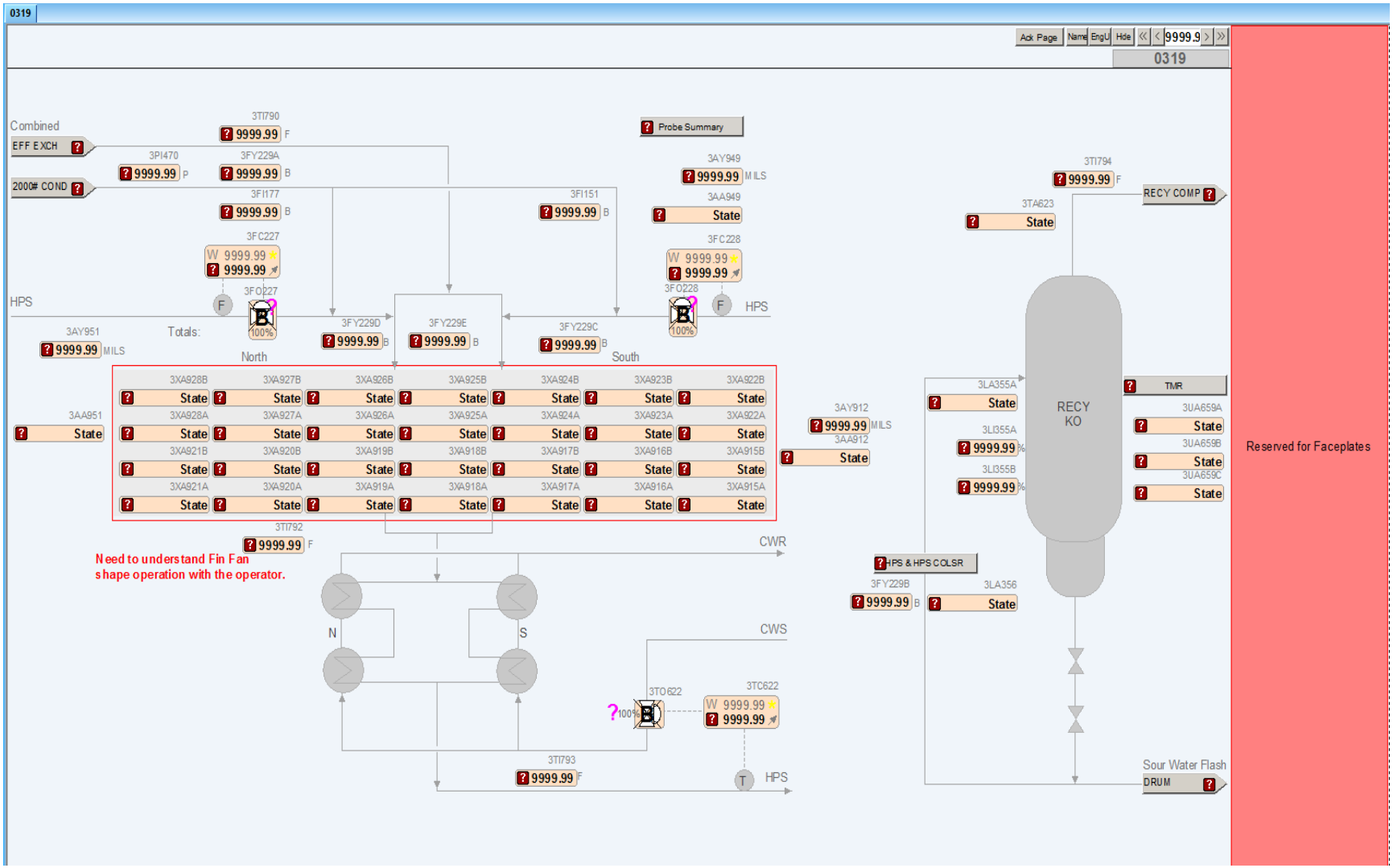

0317H3
R3 and R4 Gayesco TMR Abnormal Conditions
RRRR H
RRRR A
RRRR G
RRRR M
RRRR J
RRRR B
RRRR F
RRRR L
RRRR K
RRRR C
AVG: IIII
RRRR E
RRRR D
TEMPERATURES ARE DISPLAYED AS CONFIGURED IN REACTOR.
TI BYPASS
RESET
TI ALENBST
RESET
TI TROUBLE
RESET
TI > MAWT
RESET
-- TMR MONITORING --
NORMAL
<15 AVG
>15 AVG
>25 AVG
>50 AVG


0317H3
Ack Page
Name
Eng U
Hide
9999.9
0317H3
9999.99 H
9999.99 A
9999.99 G
9999.99 M
9999.99 J
9999.99 B
9999.99 F
9999.99 L
9999.99 K
9999.99 C
9999.99 E
9999.99 D
AVG: III
Temperatures Are Displayed As Configured In Reactor.
TI Bypass
Reset
TI ALENBST
Reset
TI Trouble
Reset
TI > MAWT
Reset
-- TMR Monitoring --
Normal
<15 AVG
>15 AVG
>25 AVG
>50 AVG
Reserved for Faceplates

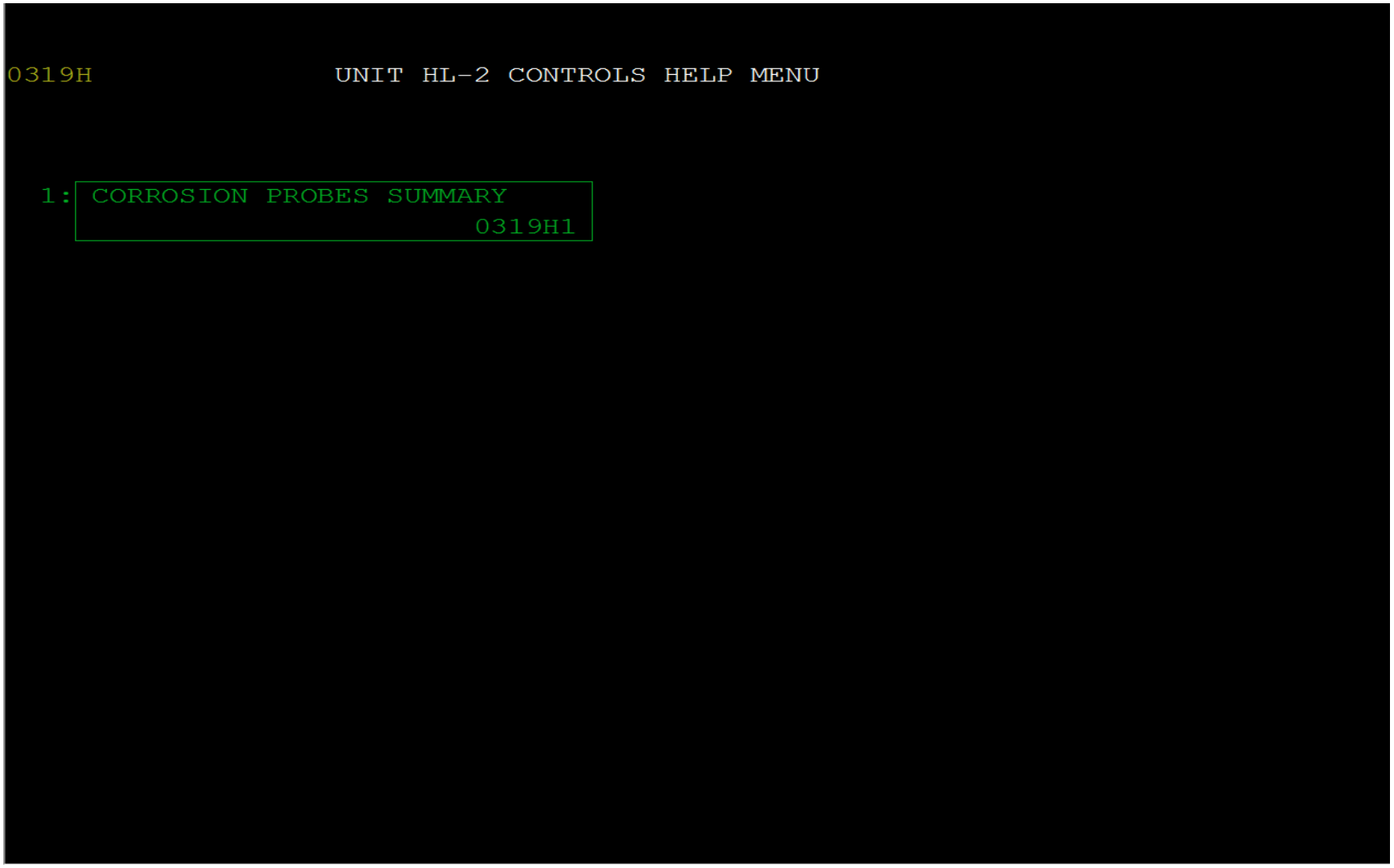
3.76 HPS COOLING SYSTEM & RECYCLE KO DRUM (HL-2) (0319.DS)

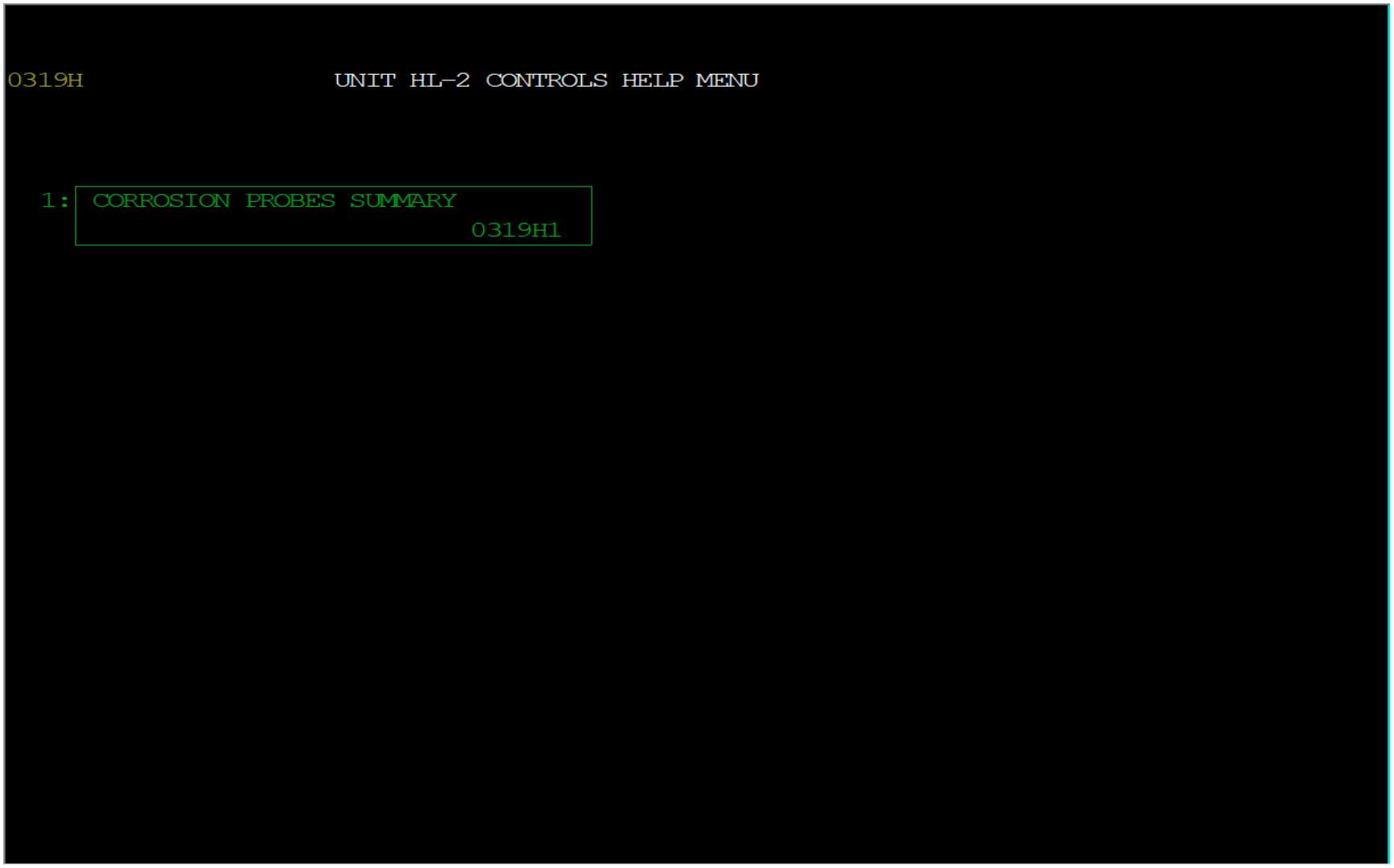


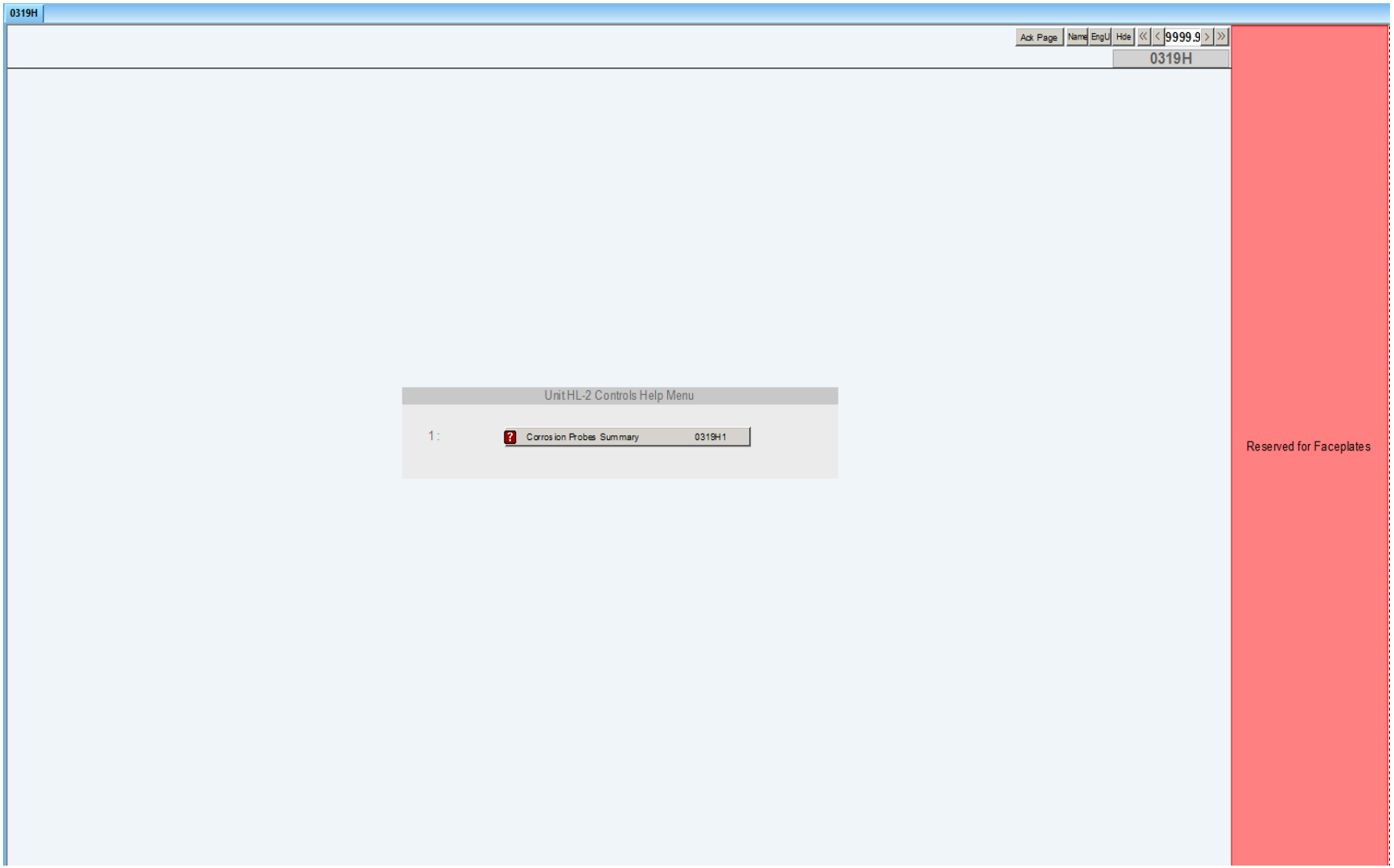

0319
HPS COOLING SYSTEM & RECYCLE KO DRUM (HL-2)
RTRN
DIR
COMBINED EFF EXCH 2000# COND
PROBE SUMMARY
MILS
HPS
TOTALS :
NORTH
SOUTH
CWR
CWS
N
S
Group III
HPS & HPS COLSR
RECY KO
TMR
RECY COMP
SOUR WATER FLASH DRUM


0319
Ack Page
Name
Eng U
Hide
9999.9
0319
Combined
EFF EXCH
2000# COND
3TI790
9999.99 F
3PI470
9999.99 P
3FY229A
9999.99 B
3FI177
9999.99 B
3FI151
9999.99 B
3FC227
W 9999.99
9999.99
3FC228
W 9999.99
9999.99
Probe Summary
3AY949
9999.99 MILS
3AA949
State
HPS
3FO227
3FO228
HPS
3AY951
9999.99 MILS
Totals:
3FY229D
9999.99 B
3FY229E
9999.99 B
3FY229C
9999.99 B
North
South
3XA928B 3XA927B 3XA926B 3XA925B 3XA924B 3XA923B 3XA922B
3AA951
State
3XA928A 3XA927A 3XA926A 3XA925A 3XA924A 3XA923A 3XA922A
3XA921B 3XA920B 3XA919B 3XA918B 3XA917B 3XA916B 3XA915B
3XA921A 3XA920A 3XA919A 3XA918A 3XA917A 3XA916A 3XA915A
3TI792
9999.99 F
Need to understand Fin Fan
shape operation with the operator.
CWR
N
S
CWS
3TO622
3TC622
W 9999.99
9999.99
3TI793
9999.99 F
HPS
3AY912
9999.99 MILS
3AA912
State
3TI794
9999.99 F
RECY COMP
3TA623
State
3LA355A
State
3LI355A
9999.99 %
3LI355B
9999.99 %
RECY
KO
TMR
3UA659A
State
3UA659B
State
3UA659C
State
HPS & HPS COLSR
3FY229B
9999.99 B
3LA356
State
Sour Water Flash
DRUM
Reserved for Faceplates

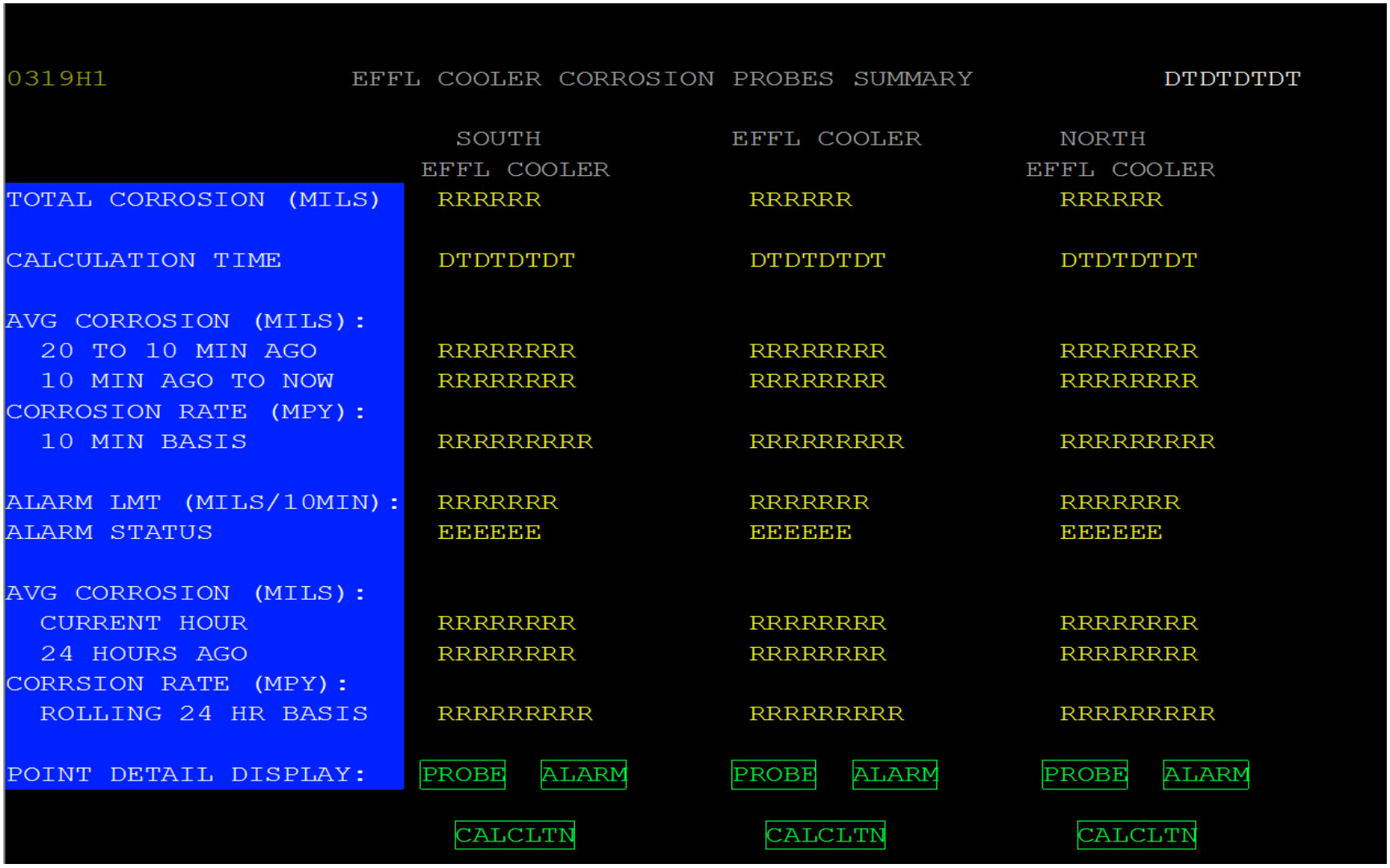
3.77 UNIT HL-2 CONTROLS HELP MENU (0319H.DS)

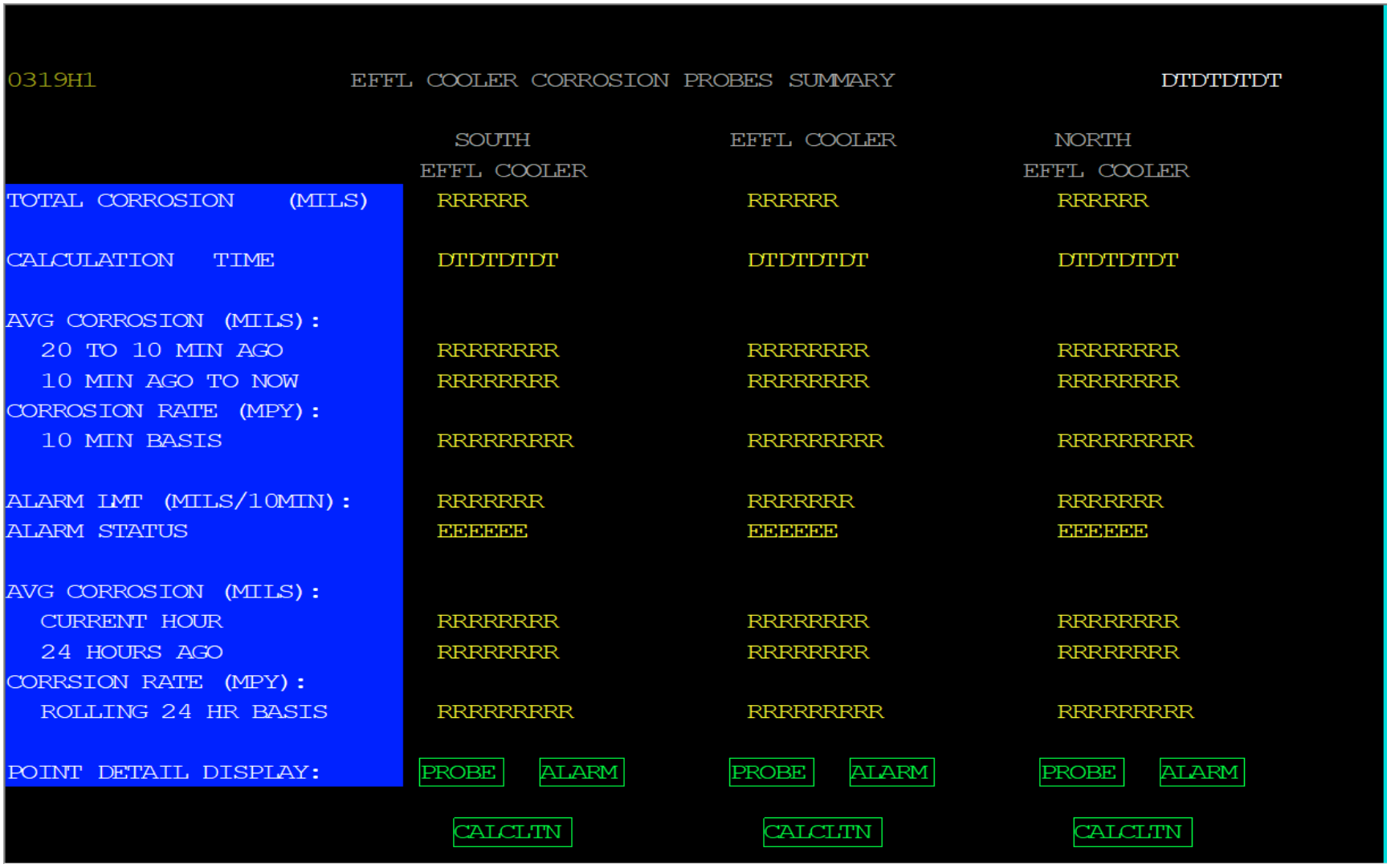


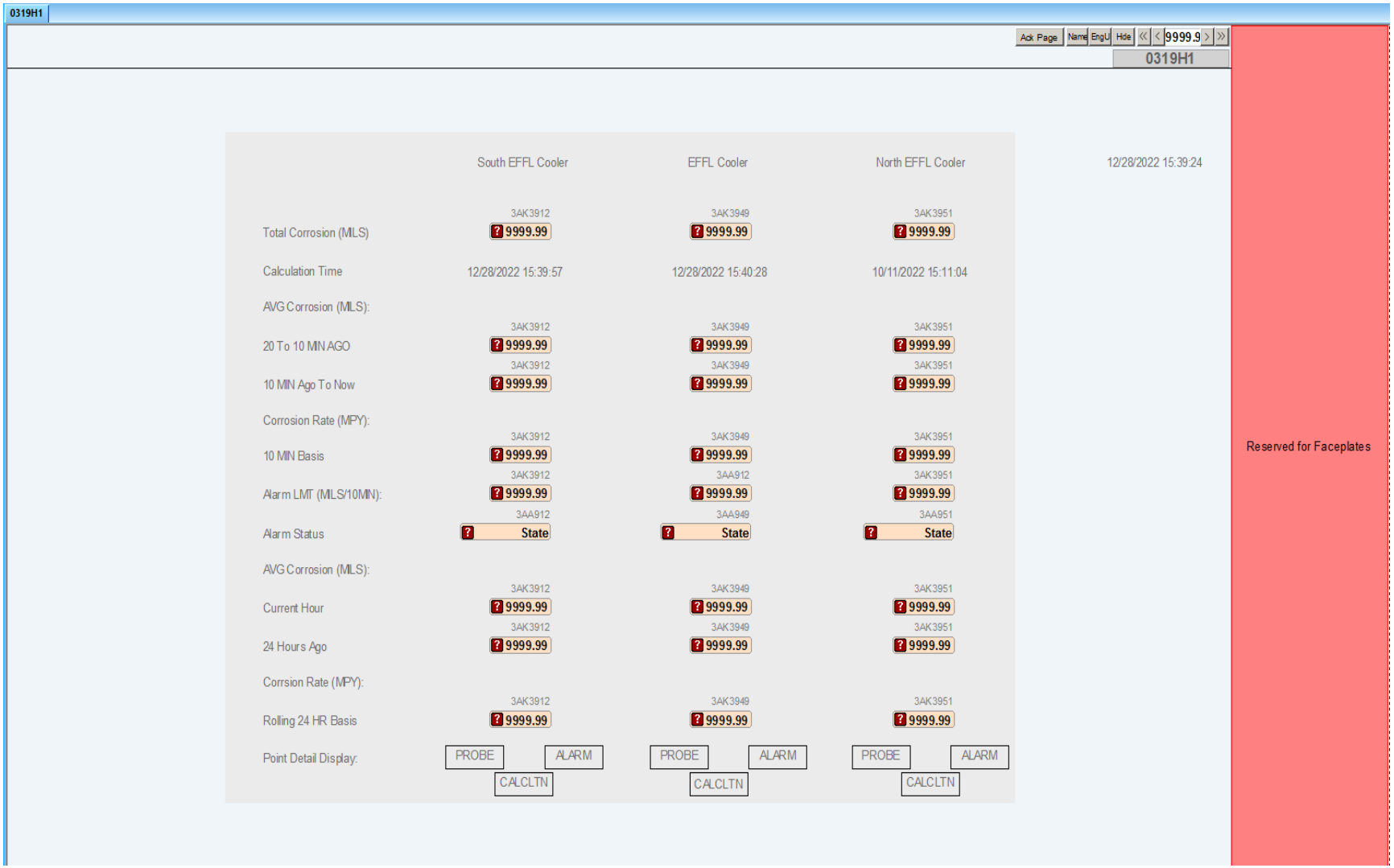

0319H
UNIT HL-2 CONTROLS HELP MENU
1:
CORROSION PROBES SUMMARY
0319H1


0319H
Ack Page
Name
EngU
Hide
9999.9
0319H
Unit HL-2 Controls Help Menu
1 :
Corrosion Probes Summary
0319H1
Reserved for Faceplates

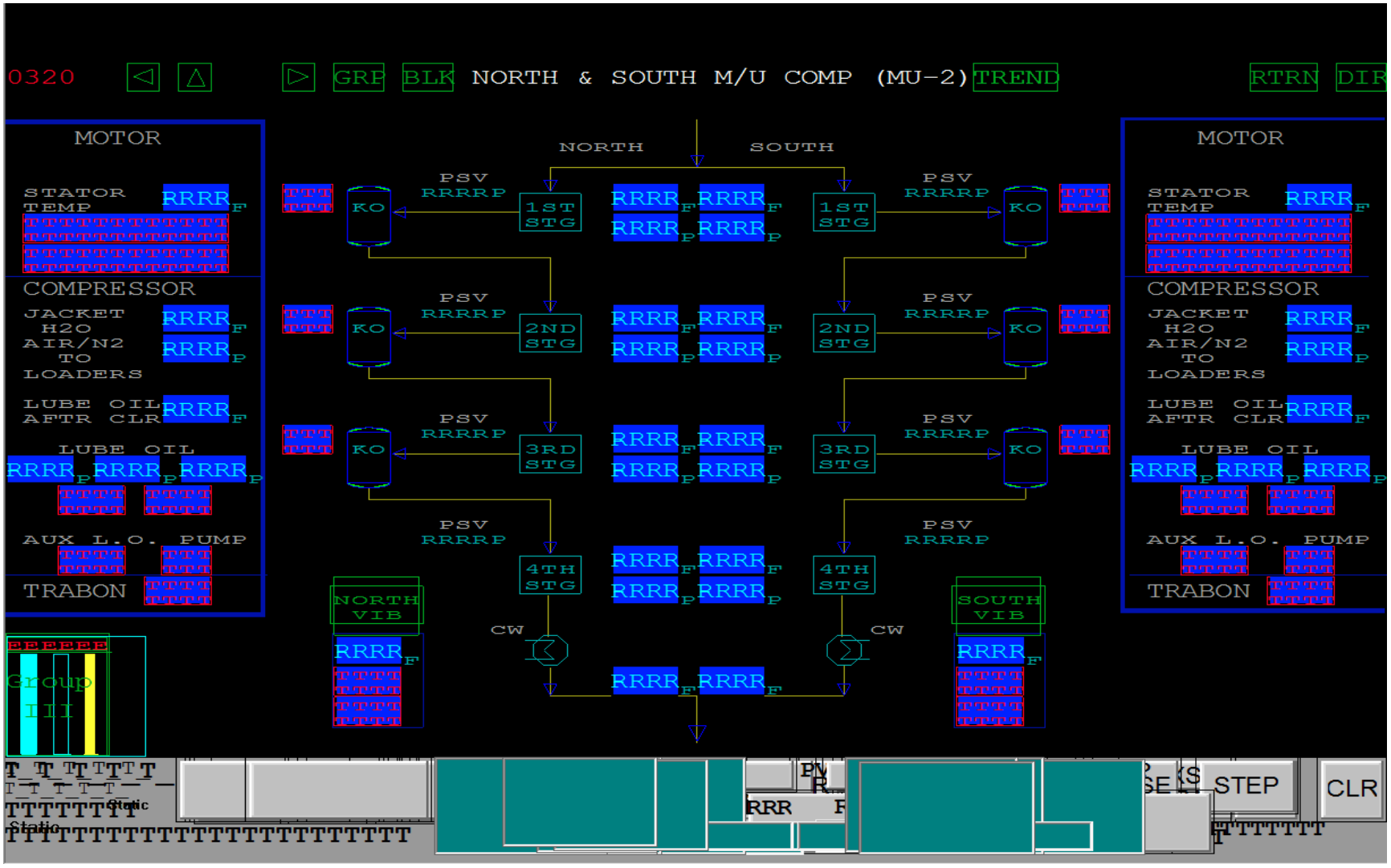
3.78 EFFL COOLER CORROSION PROBES SUMMARY (0319H1.DS)

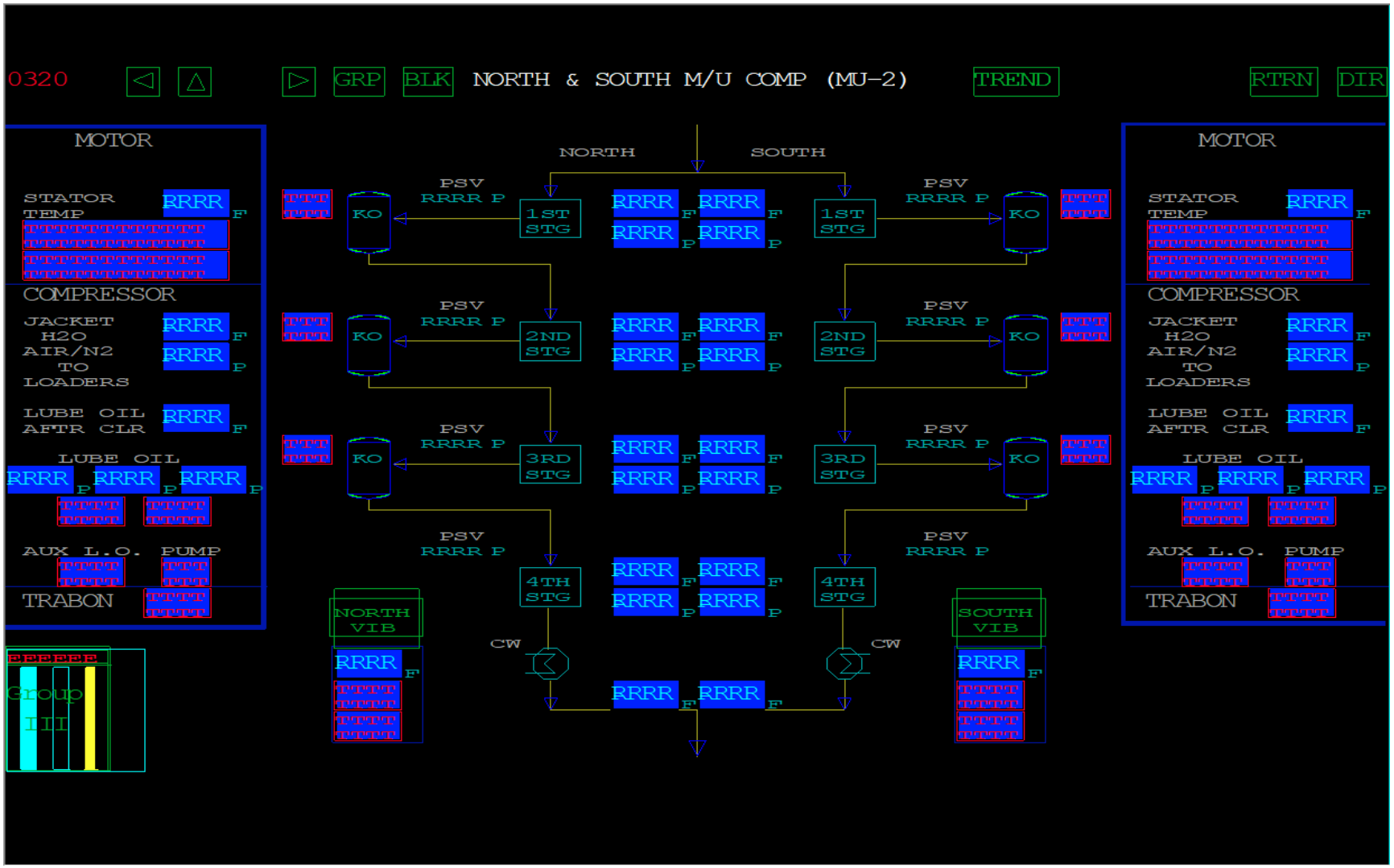


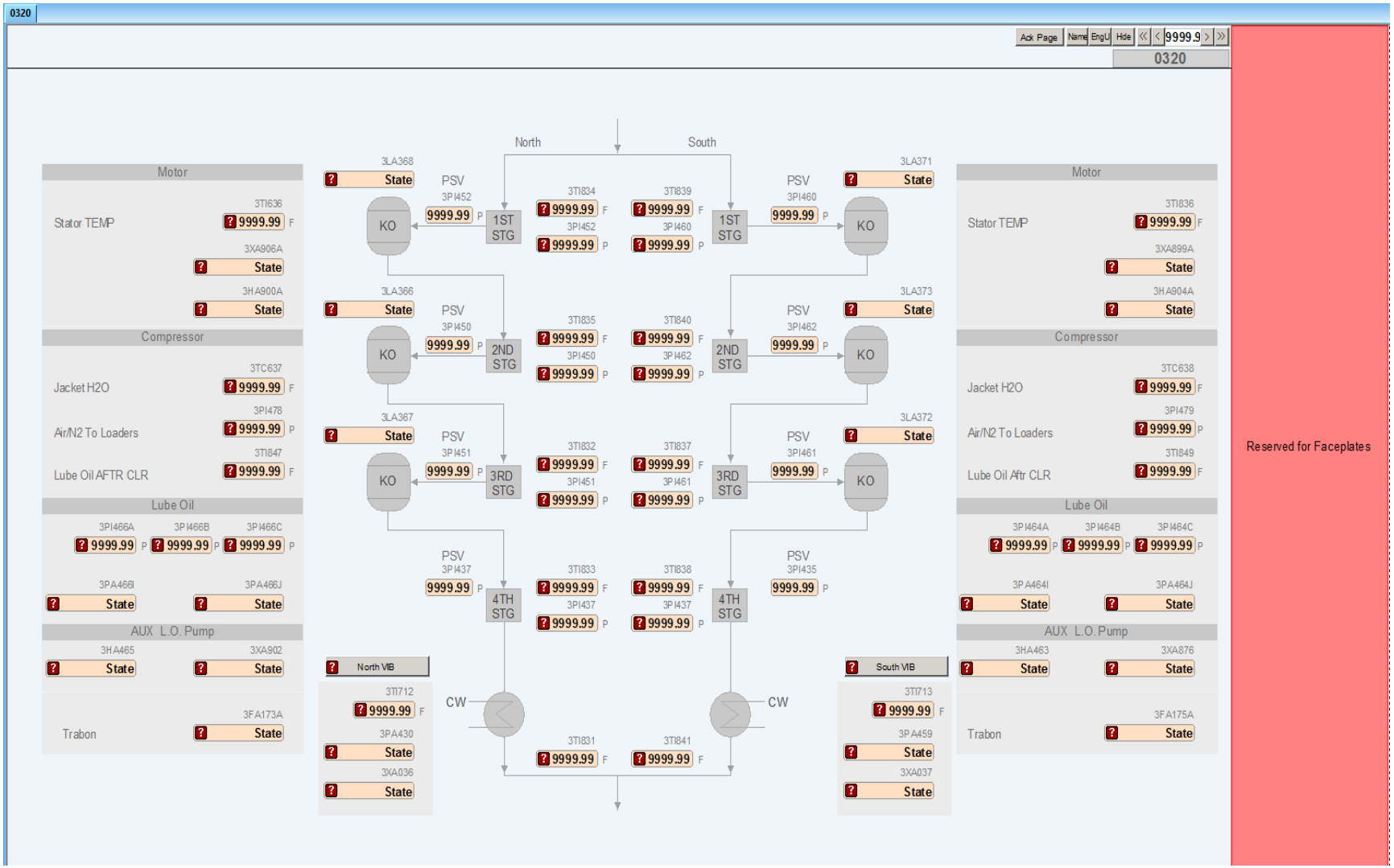

0319H1
EFFL COOLER CORROSION PROBES SUMMARY
DTDTDTDT
SOUTH EFFL COOLER
EFFL COOLER
NORTH EFFL COOLER
TOTAL CORROSION (MILS)
RRRRRR
RRRRRR
RRRRRR
CALCULATION TIME
DTDTDTDT
DTDTDTDT
DTDTDTDT
AVG CORROSION (MILS):
20 TO 10 MIN AGO
RRRRRRRR
RRRRRRRR
RRRRRRRR
10 MIN AGO TO NOW
RRRRRRRR
RRRRRRRR
RRRRRRRR
CORROSION RATE (MPY):
10 MIN BASIS
RRRRRRRRR
RRRRRRRRR
RRRRRRRRR
ALARM LMT (MILS/10MIN):
RRRRRR
RRRRRR
RRRRRR
ALARM STATUS
EEEEEE
EEEEEE
EEEEEE
AVG CORROSION (MILS):
CURRENT HOUR
RRRRRRRR
RRRRRRRR
RRRRRRRR
24 HOURS AGO
RRRRRRRR
RRRRRRRR
RRRRRRRR
CORRSION RATE (MPY):
ROLLING 24 HR BASIS
RRRRRRRRR
RRRRRRRRR
RRRRRRRRR
POINT DETAIL DISPLAY:
PROBE
ALARM
PROBE
ALARM
PROBE
ALARM
CALCLTN
CALCLTN
CALCLTN


0319H1
Ack Page
Name
Eng U
Hide
9999.9
0319H1
South EFFL Cooler
EFFL Cooler
North EFFL Cooler
12/28/2022 15:39:24
Total Corrosion (MLS)
3AK3912 9999.99
3AK3949 9999.99
3AK3951 9999.99
Calculation Time
12/28/2022 15:39:57
12/28/2022 15:40:28
10/11/2022 15:11:04
AVG Corrosion (MLS):
20 To 10 MIN AGO
3AK3912 9999.99
3AK3949 9999.99
3AK3951 9999.99
10 MIN Ago To Now
3AK3912 9999.99
3AK3949 9999.99
3AK3951 9999.99
Corrosion Rate (MPY):
10 MIN Basis
3AK3912 9999.99
3AK3949 9999.99
3AK3951 9999.99
Alarm LMT (MLS/10MIN):
3AK3912 9999.99
3AA912 9999.99
3AK3951 9999.99
Alarm Status
3AA912 State
3AA949 State
3AA951 State
AVG Corrosion (MLS):
Current Hour
3AK3912 9999.99
3AK3949 9999.99
3AK3951 9999.99
24 Hours Ago
3AK3912 9999.99
3AK3949 9999.99
3AK3951 9999.99
Corrsion Rate (MPY):
Rolling 24 HR Basis
3AK3912 9999.99
3AK3949 9999.99
3AK3951 9999.99
Point Detail Display:
PROBE
ALARM
CALCLTN
PROBE
ALARM
CALCLTN
PROBE
ALARM
CALCLTN
Reserved for Faceplates

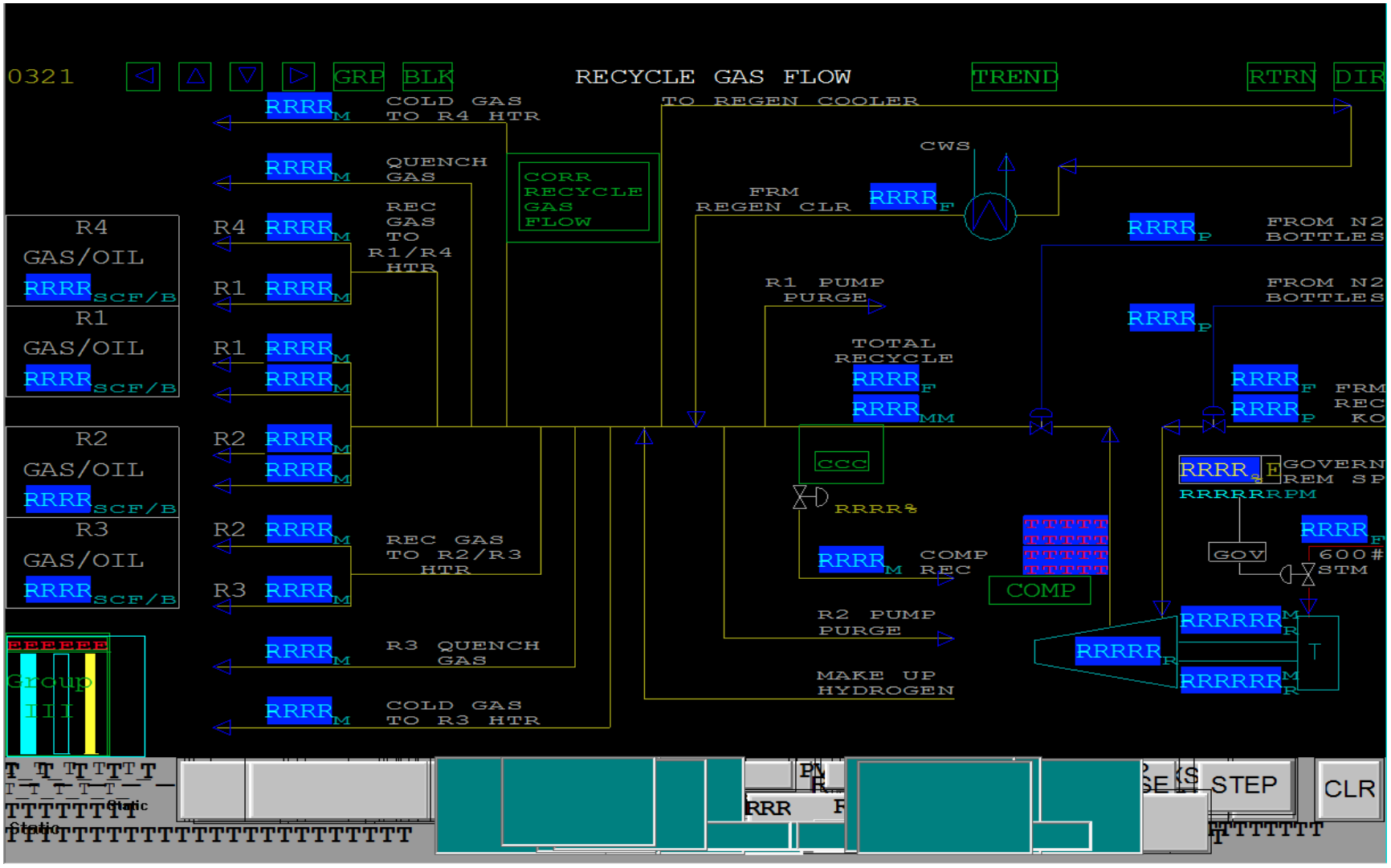
3.79 NORTH & SOUTH M/U COMP (MU-2) (0320.DS)

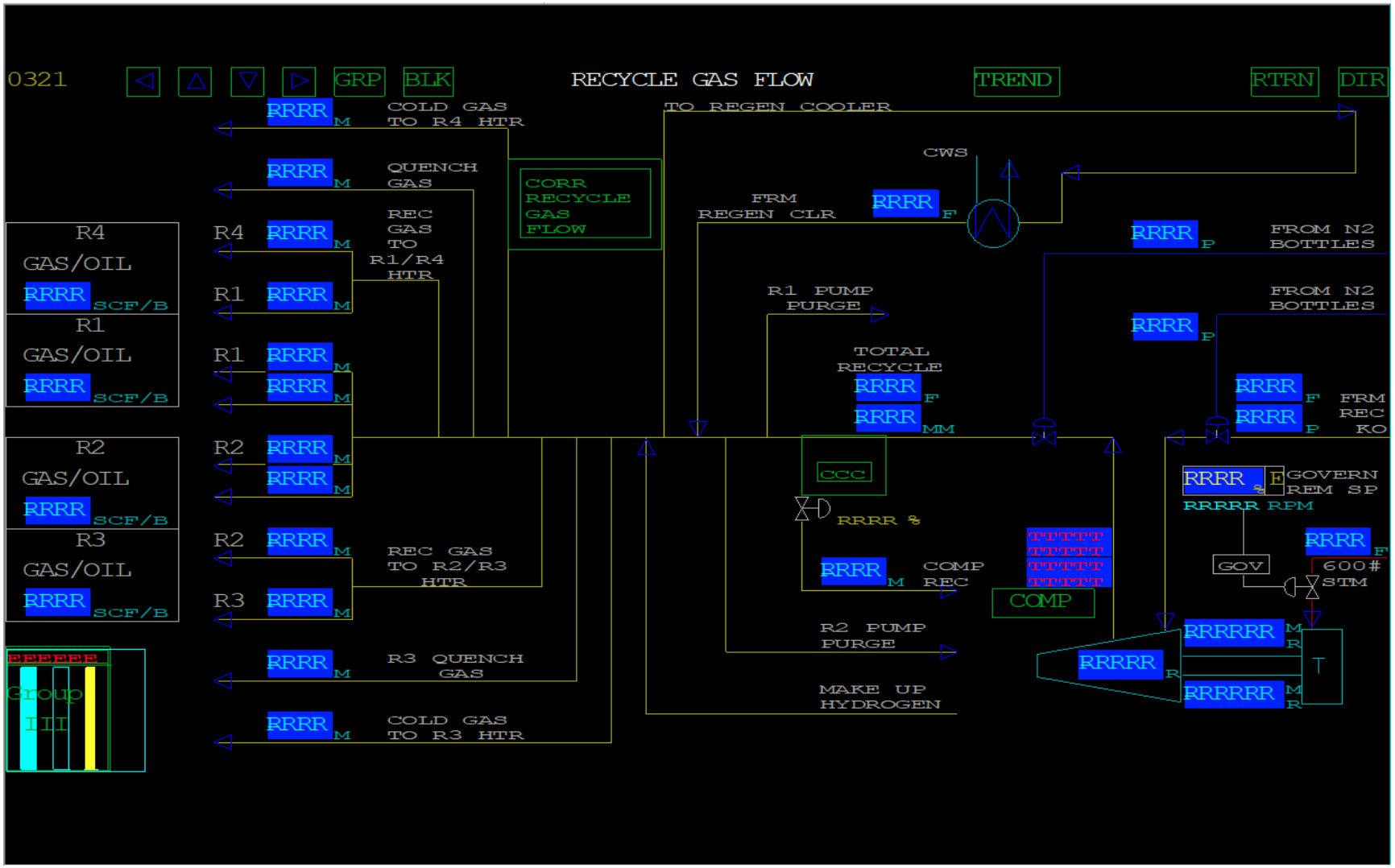


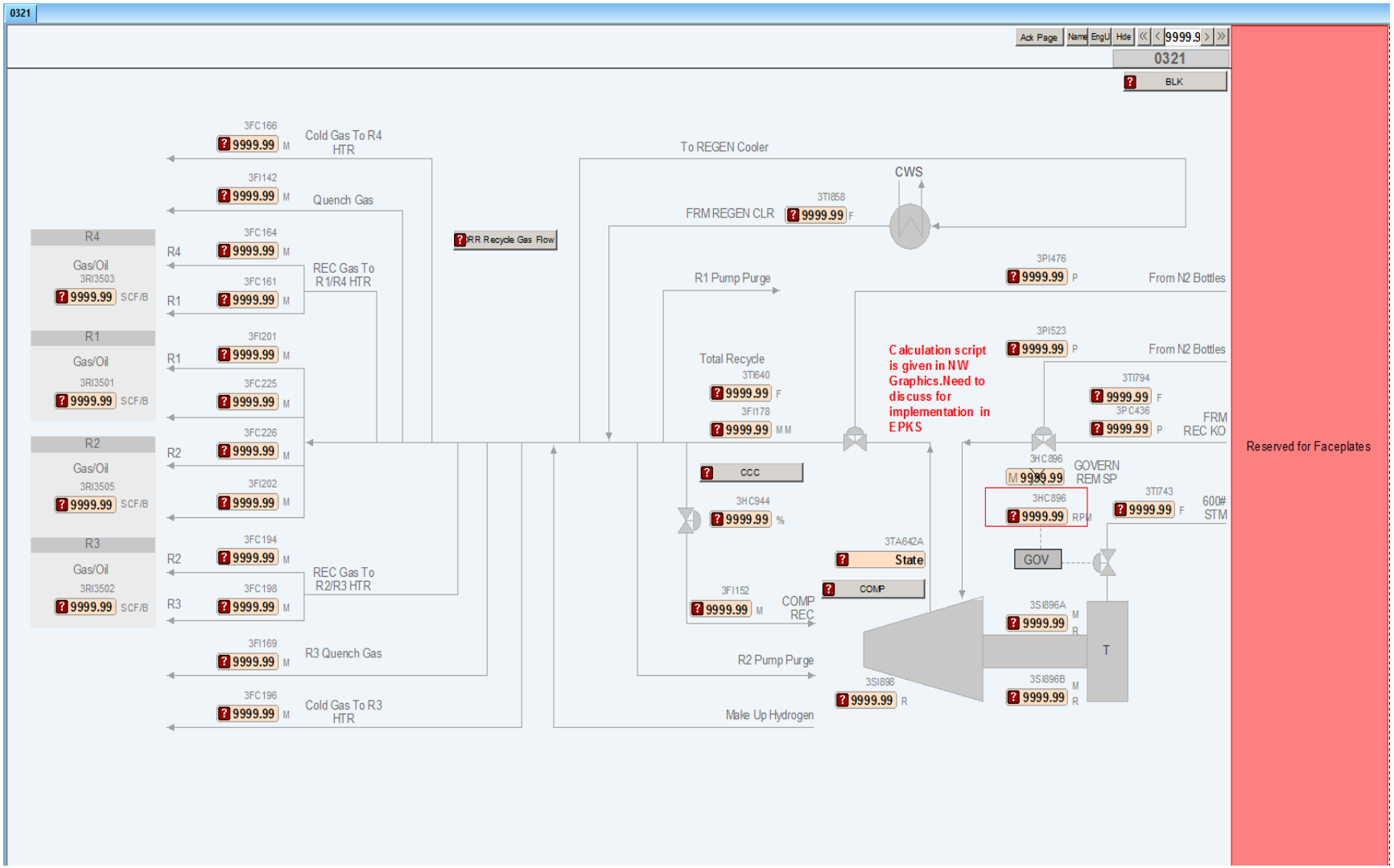

0320
GRP
BLK
NORTH & SOUTH M/U COMP (MU-2)
TREND
RTRN
DIR
MOTOR
STATOR TEMP
COMPRESSOR
JACKET H2O
AIR/N2 TO LOADERS
LUBE OIL AFTR CLR
LUBE OIL
AUX L.O. PUMP
TRABON
NORTH
SOUTH
PSV
KO
1ST STG
2ND STG
3RD STG
4TH STG
CW
NORTH VIB
SOUTH VIB
Group III


0320
Ack Page
Name
Eng'g
Hide
9999.9
0320
North
South
Motor
Stator TEMP
3TI636
9999.99
F
3XA906A
State
3HA900A
State
Compressor
Jacket H2O
3TC637
9999.99
F
Air/N2 To Loaders
3PI478
9999.99
P
Lube Oil AFTR CLR
3TI847
9999.99
F
Lube Oil
3PI466A
3PI466B
3PI466C
9999.99
P
3PA466I
3PA466J
State
AUX L.O. Pump
3HA465
3XA902
State
Trabon
3FA173A
State
3LA368
State
PSV
3PI452
9999.99
P
KO
1ST STG
3TI834
9999.99
F
3PI452
9999.99
P
3TI839
9999.99
F
3PI460
9999.99
P
1ST STG
PSV
3PI460
9999.99
P
KO
3LA371
State
3LA366
State
PSV
3PI450
9999.99
P
KO
2ND STG
3TI835
9999.99
F
3PI450
9999.99
P
3TI840
9999.99
F
3PI462
9999.99
P
2ND STG
PSV
3PI462
9999.99
P
KO
3LA373
State
3LA367
State
PSV
3PI451
9999.99
P
KO
3RD STG
3TI832
9999.99
F
3PI451
9999.99
P
3TI837
9999.99
F
3PI461
9999.99
P
3RD STG
PSV
3PI461
9999.99
P
KO
3LA372
State
PSV
3PI437
9999.99
P
4TH STG
3TI833
9999.99
F
3PI437
9999.99
P
3TI838
9999.99
F
3PI437
9999.99
P
4TH STG
PSV
3PI435
9999.99
P
North VIB
3TI712
9999.99
F
3PA430
State
3XA036
State
CW
3TI831
9999.99
F
3TI841
9999.99
F
CW
South VIB
3TI713
9999.99
F
3PA459
State
3XA037
State
Motor
Stator TEMP
3TI836
9999.99
F
3XA899A
State
3HA904A
State
Compressor
Jacket H2O
3TC638
9999.99
F
Air/N2 To Loaders
3PI479
9999.99
P
Lube Oil Aftr CLR
3TI849
9999.99
F
Lube Oil
3PI464A
3PI464B
3PI464C
9999.99
P
3PA464I
3PA464J
State
AUX L.O. Pump
3HA463
3XA876
State
Trabon
3FA175A
State
Reserved for Faceplates

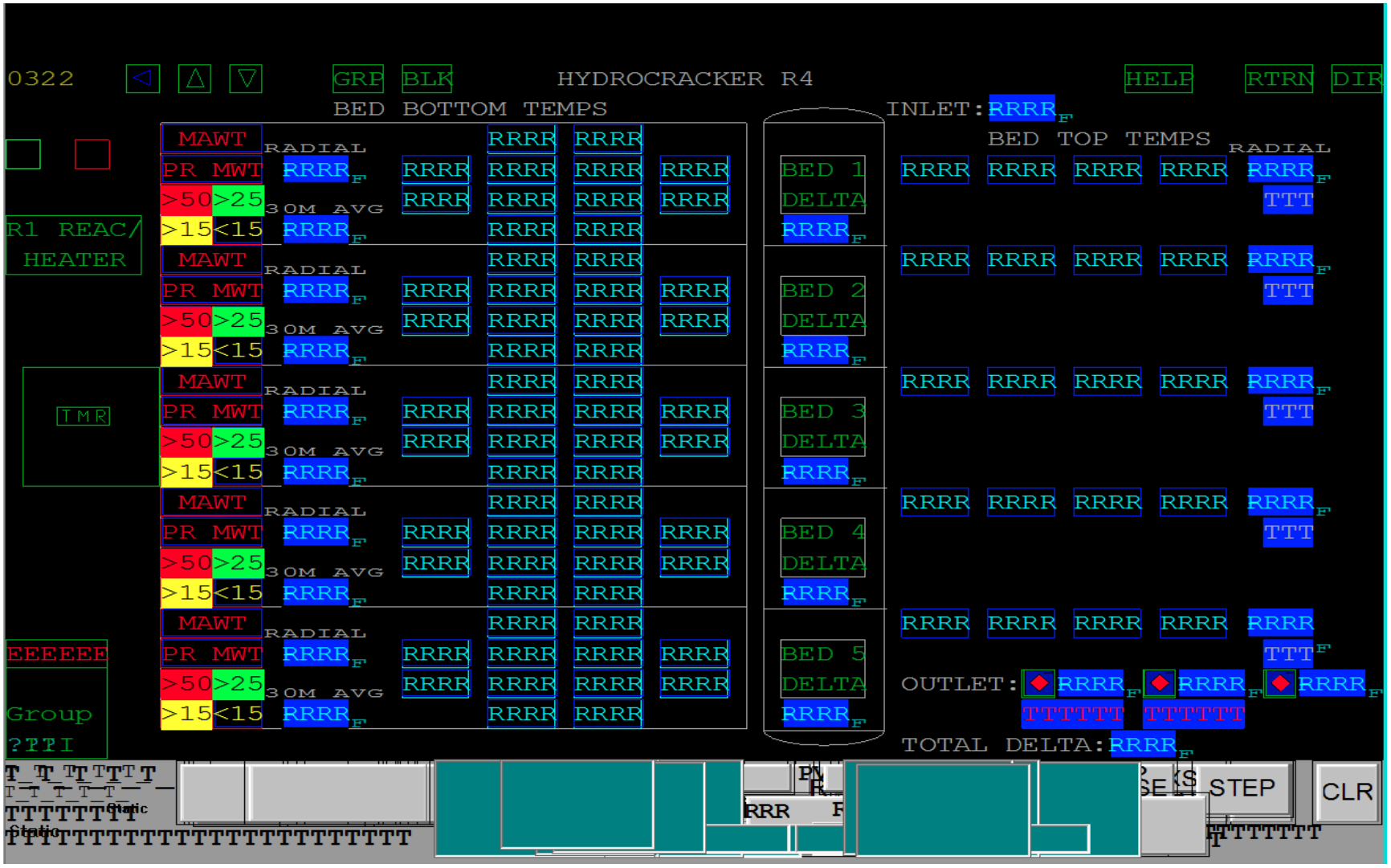
3.80 RECYCLE GAS FLOW (0321.DS)



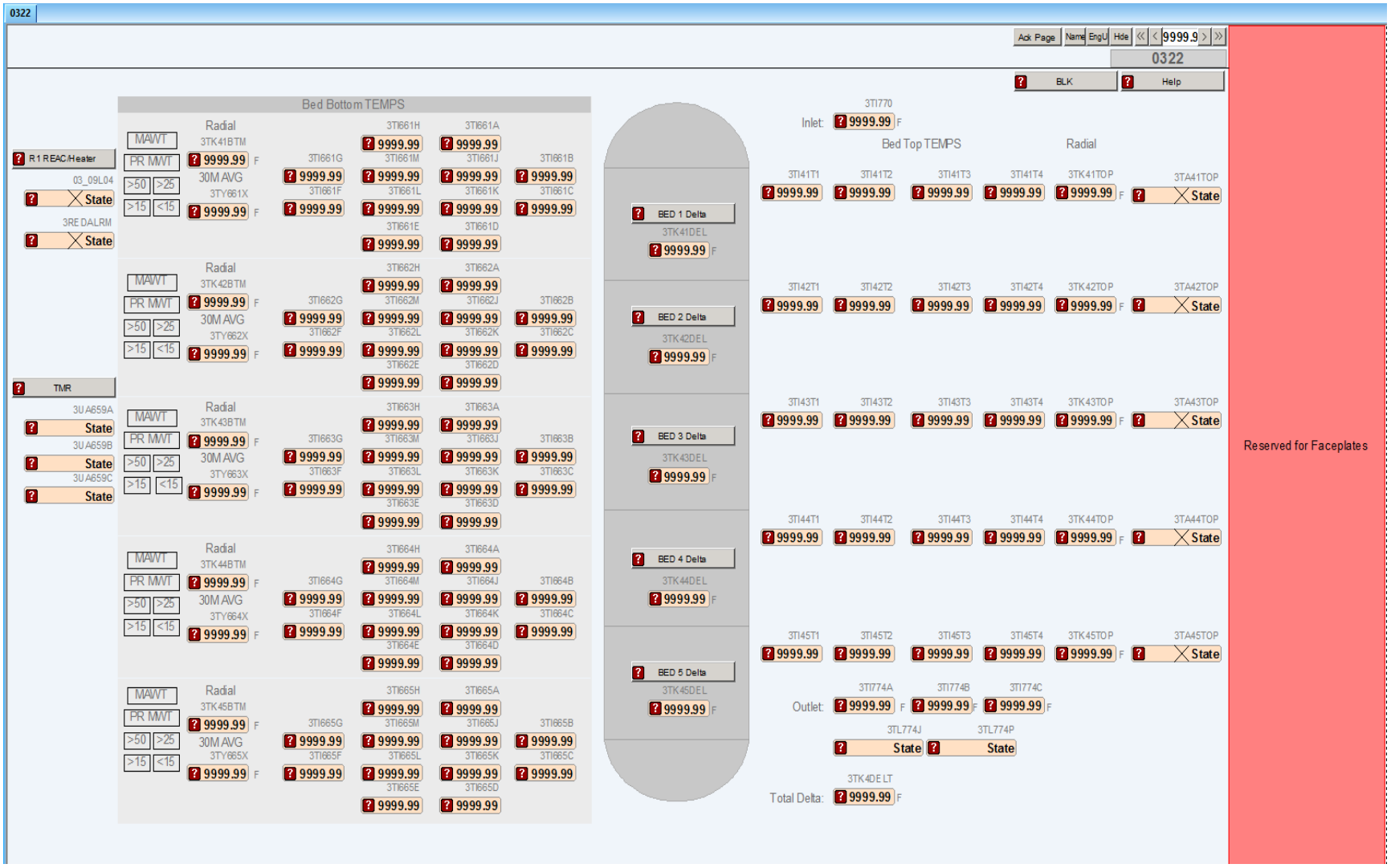

0321
GRP
BLK
RECYCLE GAS FLOW
TREND
RTRN
DIR
COLD GAS TO R4 HTR
QUENCH GAS
REC GAS TO R1/R4 HTR
REC GAS TO R2/R3 HTR
R3 QUENCH GAS
COLD GAS TO R3 HTR
CORR RECYCLE GAS FLOW
TO REGEN COOLER
CWS
FRM REGEN CLR
R1 PUMP PURGE
TOTAL RECYCLE
FROM N2 BOTTLES
FROM N2 BOTTLES
FRM REC KO
CCC
GOVERN REM SP
RRRRR RPM
GOV
600# STM
COMP REC
COMP
R2 PUMP PURGE
MAKE UP HYDROGEN
R4 GAS/OIL
R1 GAS/OIL
R2 GAS/OIL
R3 GAS/OIL
SCF/B
Group III


0321
Ack Page
Name
Eng U
Hide
9999.9
0321
BLK
3FC166
9999.99 M
Cold Gas To R4 HTR
3FI142
9999.99 M
Quench Gas
R4
Gas/Oil
3RI3503
9999.99 SCF/B
3FC164
R4
9999.99 M
REC Gas To R1/R4 HTR
3FC161
R1
9999.99 M
R1
Gas/Oil
3RI3501
9999.99 SCF/B
3FI201
R1
9999.99 M
3FC225
9999.99 M
R2
Gas/Oil
3RI3505
9999.99 SCF/B
3FC226
R2
9999.99 M
3FI202
9999.99 M
R3
Gas/Oil
3RI3502
9999.99 SCF/B
3FC194
R2
9999.99 M
REC Gas To R2/R3 HTR
3FC198
R3
9999.99 M
3FI169
9999.99 M
R3 Quench Gas
3FC196
9999.99 M
Cold Gas To R3 HTR
RR Recycle Gas Flow
To REGEN Cooler
CWS
FRM REGEN CLR
3TI858
9999.99 F
R1 Pump Purge
3PI476
9999.99 P
From N2 Bottles
Total Recycle
3TI640
9999.99 F
3FI178
9999.99 M M
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
3PI523
9999.99 P
From N2 Bottles
3TI794
9999.99 F
3PC436
9999.99 P
FRM REC KO
CCC
3HC896
M 9999.99
GOVERN REM SP
3HC944
9999.99 %
3HC896
9999.99 RPM
3TI743
9999.99 F
600# STM
3TA642A
State
GOV
COMP
3FI152
9999.99 M
COMP REC
3SI896A
9999.99 M R
T
R2 Pump Purge
3SI898
9999.99 R
3SI896B
9999.99 M R
Make Up Hydrogen
Reserved for Faceplates

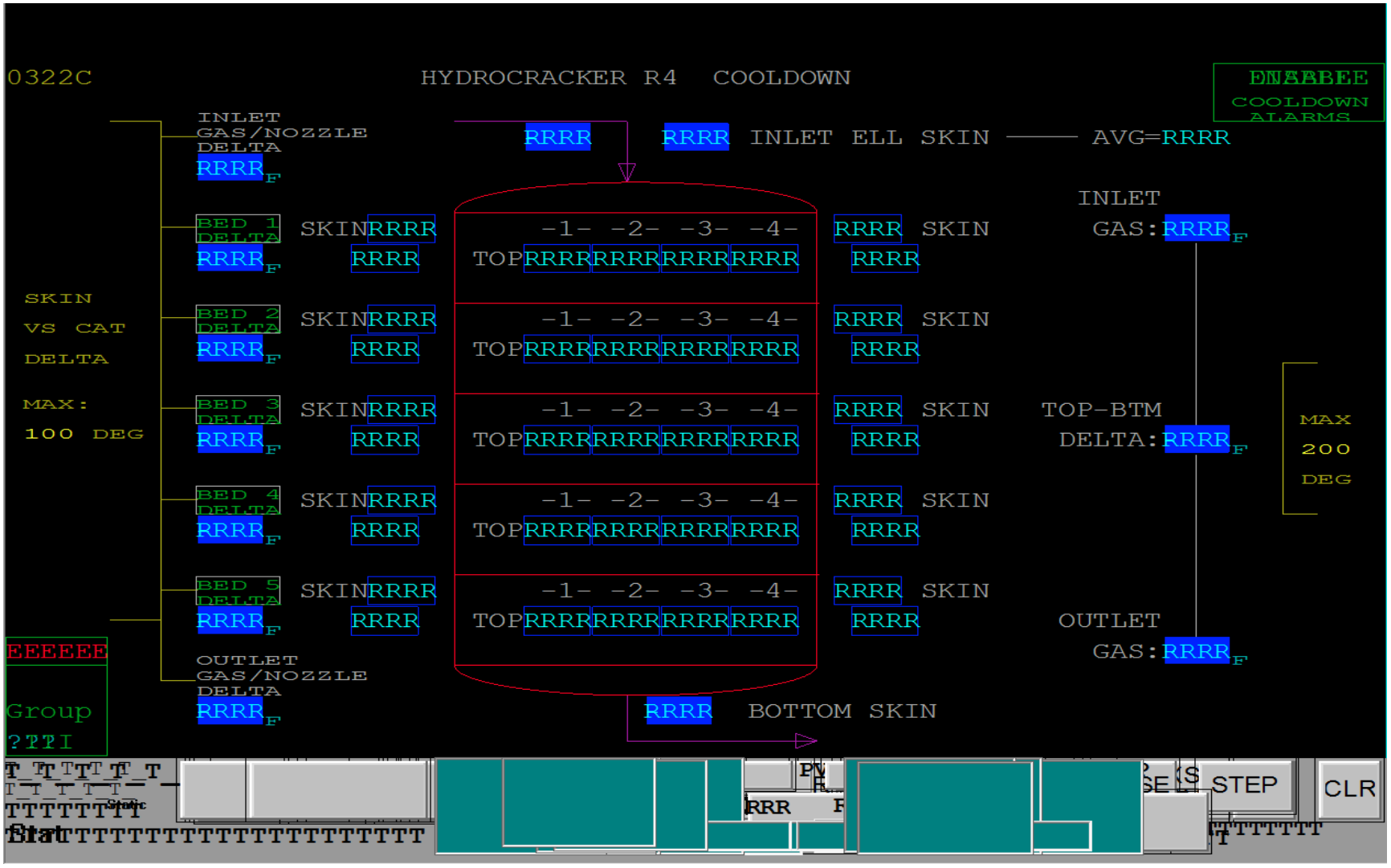
3.81 HYDROCRACKER R4 (0322.DS)

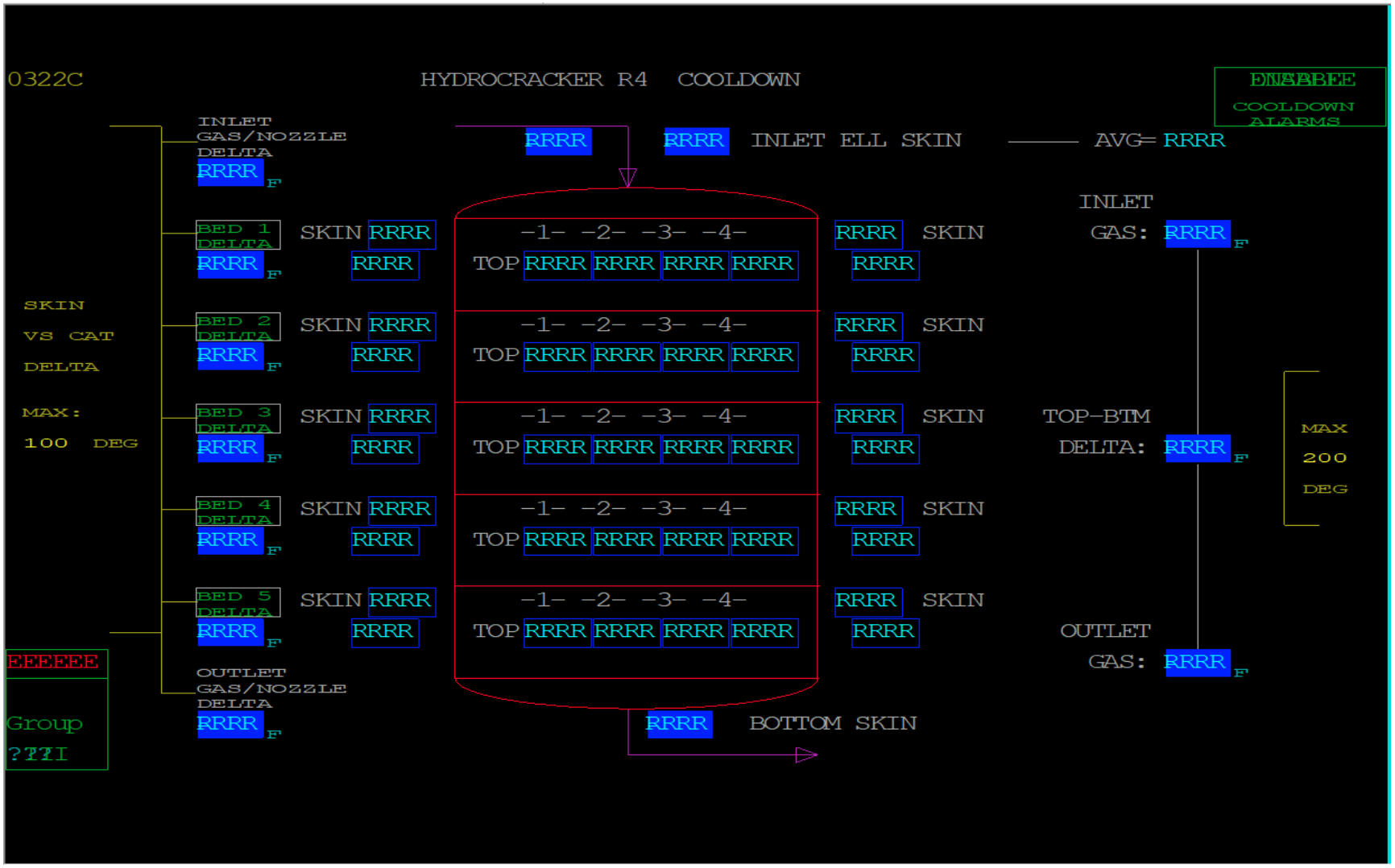


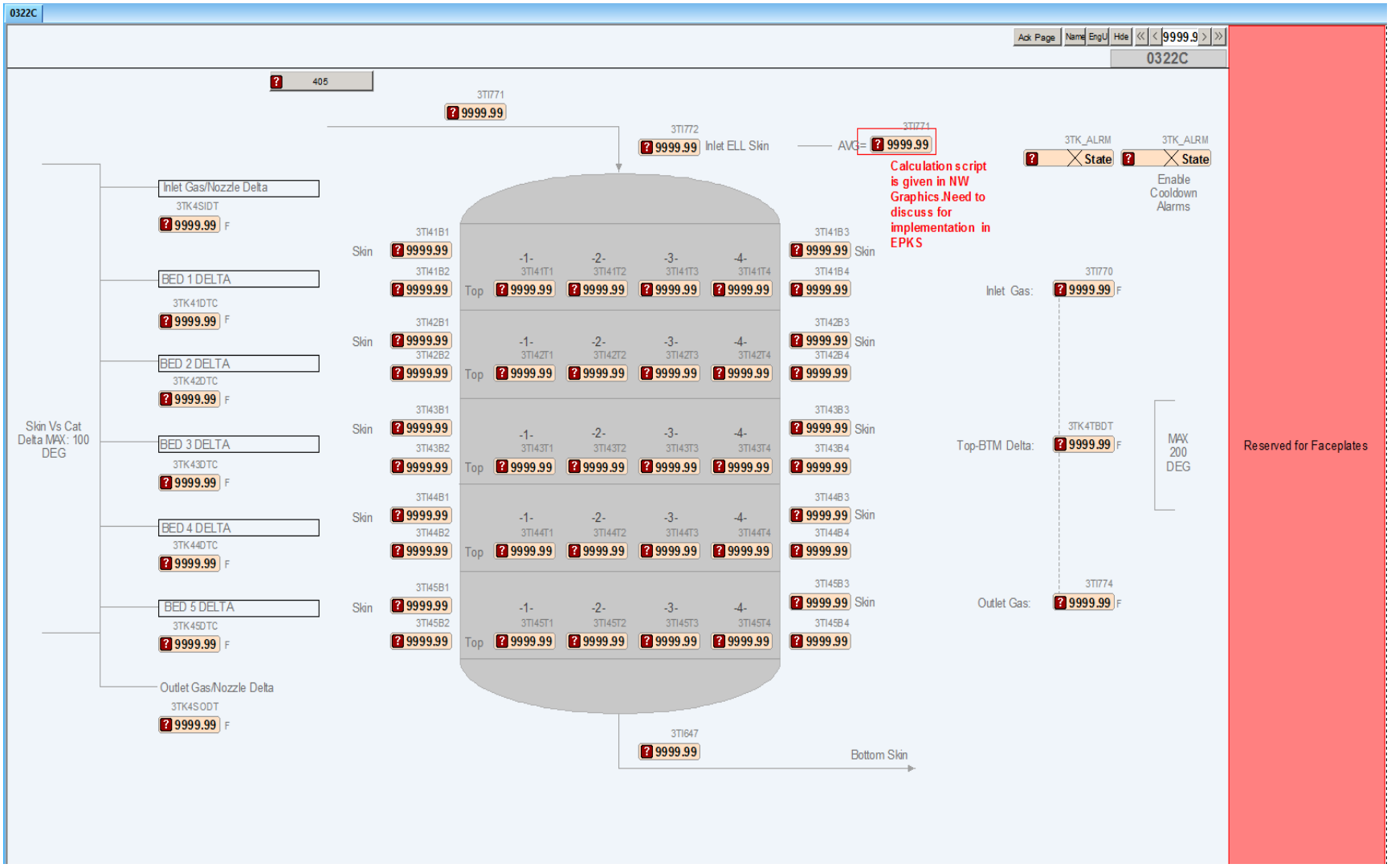
0322
GRP
BLK
HYDROCRACKER R4
HELP
RTRN
DIR
BED BOTTOM TEMPS
INLET: RRRR F
BED TOP TEMPS
MAWT
RADIAL
PR MWT
RRRR F
>50 >25
30M AVG
>15 <15
RRRR F
R1 REAC/
HEATER
TMR
BED 1
DELTA
BED 2
DELTA
BED 3
DELTA
BED 4
DELTA
BED 5
DELTA
TTT
OUTLET:
TTTTTT
TOTAL DELTA:
EEEEEE
Group
?TTI


0322
Ack Page
Name
Eng U
Hide
9999.9
0322
BLK
Help
Bed Bottom TEMPS
Radial
MAWT
PR MWT
30M AVG
>50
>25
>15
<15
3TK41BTM
3TY661X
3TK42BTM
3TY662X
3TK43BTM
3TY663X
3TK44BTM
3TY664X
3TK45BTM
3TY665X
9999.99
F
R1 REAC/Heater
03_09L04
State
3RE DALRM
State
TMR
3U A659A
State
3U A659B
State
3U A659C
State
BED 1 Delta
3TK41DEL
BED 2 Delta
3TK42DEL
BED 3 Delta
3TK43DEL
BED 4 Delta
3TK44DEL
BED 5 Delta
3TK45DEL
3TI770
Inlet:
Bed Top TEMPS
Radial
3TI41T1
3TI41T2
3TI41T3
3TI41T4
3TK41TOP
3TA41TOP
3TI42T1
3TI42T2
3TI42T3
3TI42T4
3TK42TOP
3TA42TOP
3TI43T1
3TI43T2
3TI43T3
3TI43T4
3TK43TOP
3TA43TOP
3TI44T1
3TI44T2
3TI44T3
3TI44T4
3TK44TOP
3TA44TOP
3TI45T1
3TI45T2
3TI45T3
3TI45T4
3TK45TOP
3TA45TOP
Outlet:
3TI774A
3TI774B
3TI774C
3TL774J
3TL774P
Total Delta:
3TK4DE LT
Reserved for Faceplates

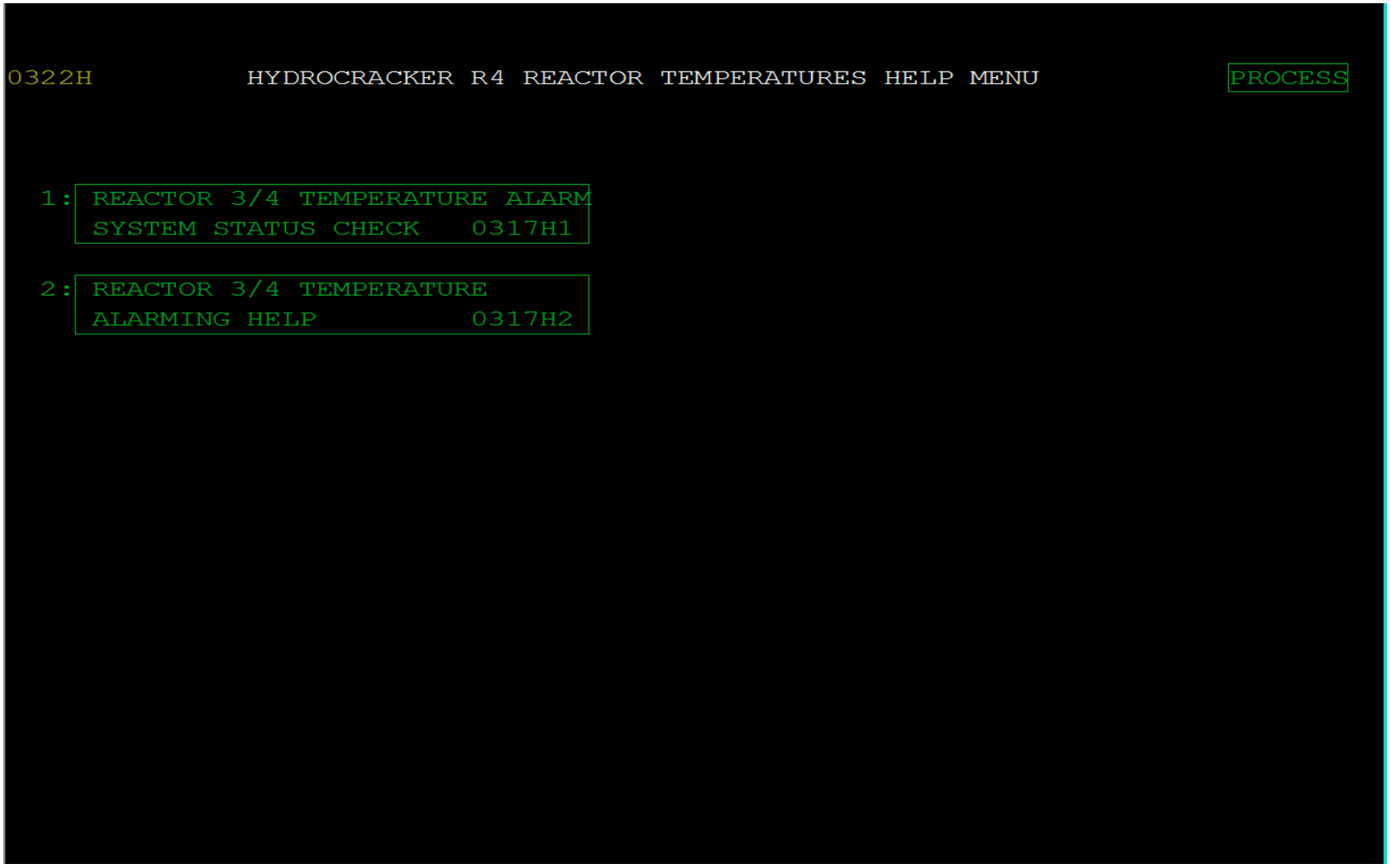
3.82 HYDROCRACKER R4 COOLDOWN (0322C.DS)

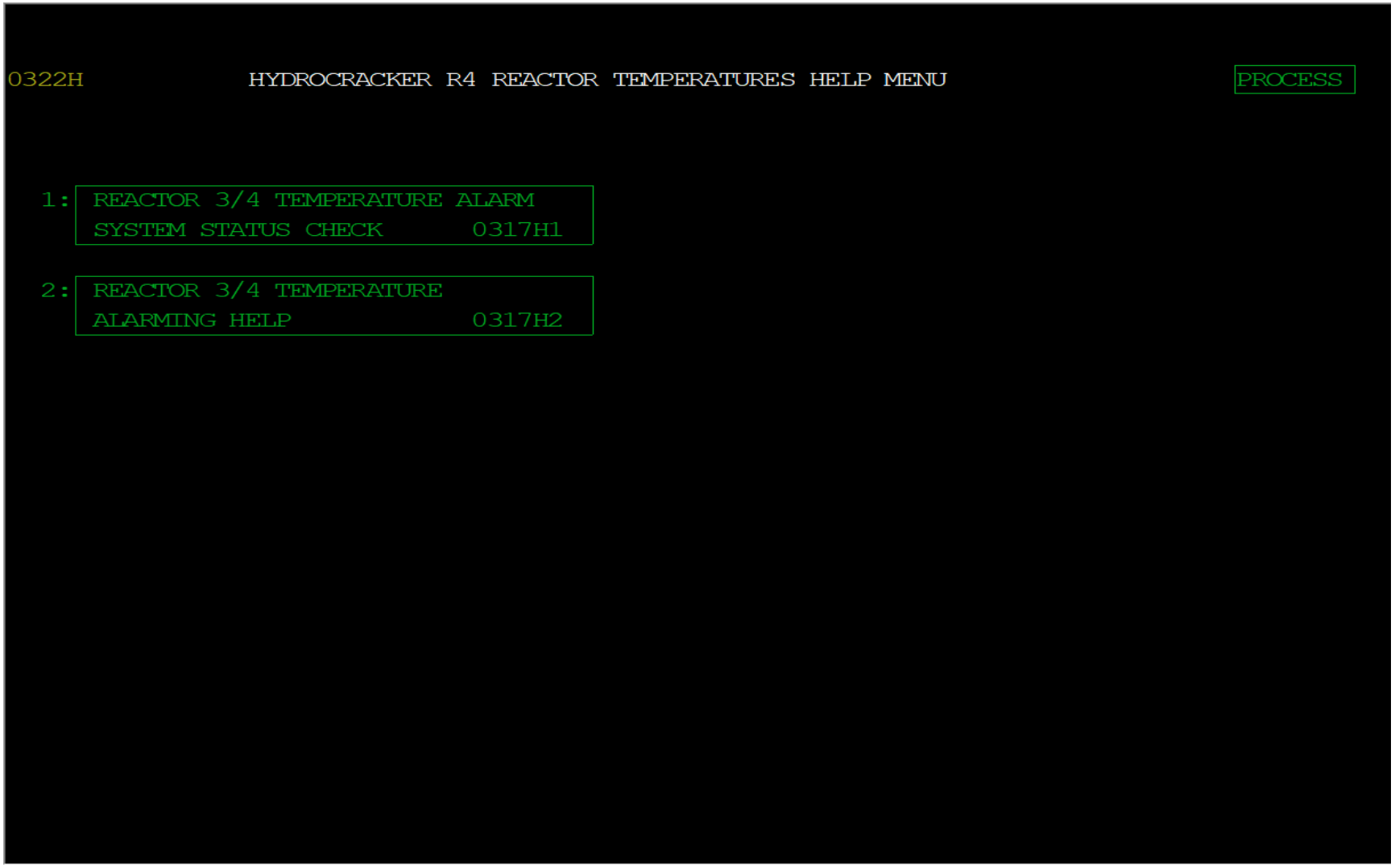


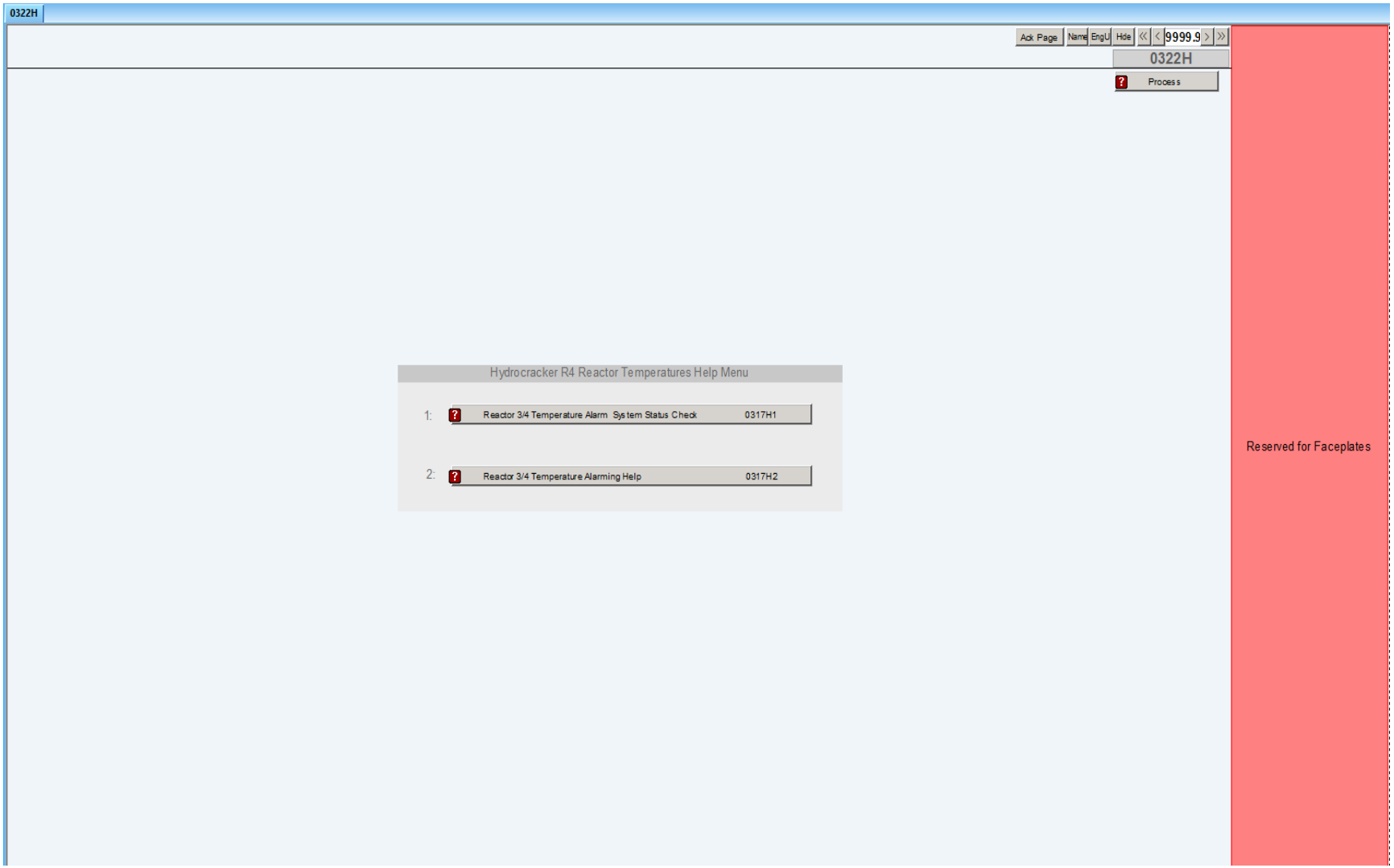

0322C
HYDROCRACKER R4 COOLDOWN
DISABLE
COOLDOWN
ALARMS
INLET
GAS/NOZZLE
DELTA
RRRR F
RRRR
RRRR INLET ELL SKIN
AVG= RRRR
BED 1
DELTA
RRRR F
SKIN RRRR
RRRR
-1- -2- -3- -4-
TOP RRRR RRRR RRRR RRRR
RRRR SKIN
RRRR
BED 2
DELTA
RRRR F
BED 3
DELTA
RRRR F
BED 4
DELTA
RRRR F
BED 5
DELTA
RRRR F
SKIN
VS CAT
DELTA
MAX:
100 DEG
INLET
GAS: RRRR F
TOP-BTM
DELTA: RRRR F
OUTLET
GAS: RRRR F
MAX
200
DEG
OUTLET
GAS/NOZZLE
DELTA
RRRR F
RRRR BOTTOM SKIN
EEEEEE
Group
?TTI


0322C
Ack Page
Name
Eng U
Hide
9999.9
0322C
405
3TI771
9999.99
3TI772
9999.99
Inlet ELL Skin
AVG=
3TI771
9999.99
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
3TK_ALRM
State
Enable Cooldown Alarms
Inlet Gas/Nozzle Delta
3TK4SIDT
BED 1 DELTA
3TK41DTC
BED 2 DELTA
3TK42DTC
BED 3 DELTA
3TK43DTC
BED 4 DELTA
3TK44DTC
BED 5 DELTA
3TK45DTC
Outlet Gas/Nozzle Delta
3TK4SODT
Skin Vs Cat Delta MAX: 100 DEG
Skin
Top
-1-
-2-
-3-
-4-
3TI770
Inlet Gas:
3TK4TBDT
Top-BTM Delta:
MAX 200 DEG
3TI774
Outlet Gas:
3TI647
Bottom Skin
Reserved for Faceplates

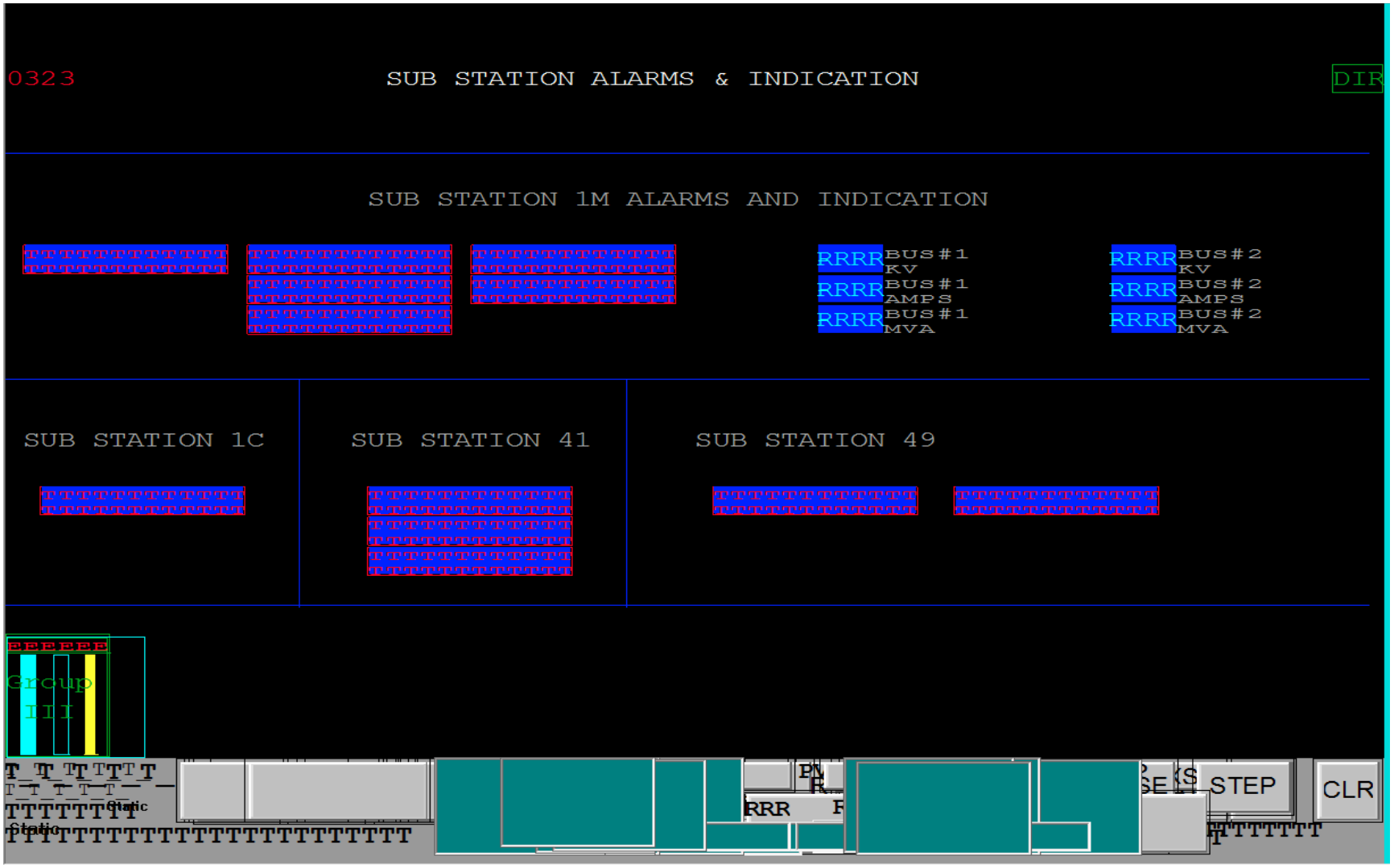
3.83 HYDROCRACKER R4 REACTOR TEMPERATURES HELP MENU (0322H.DS)

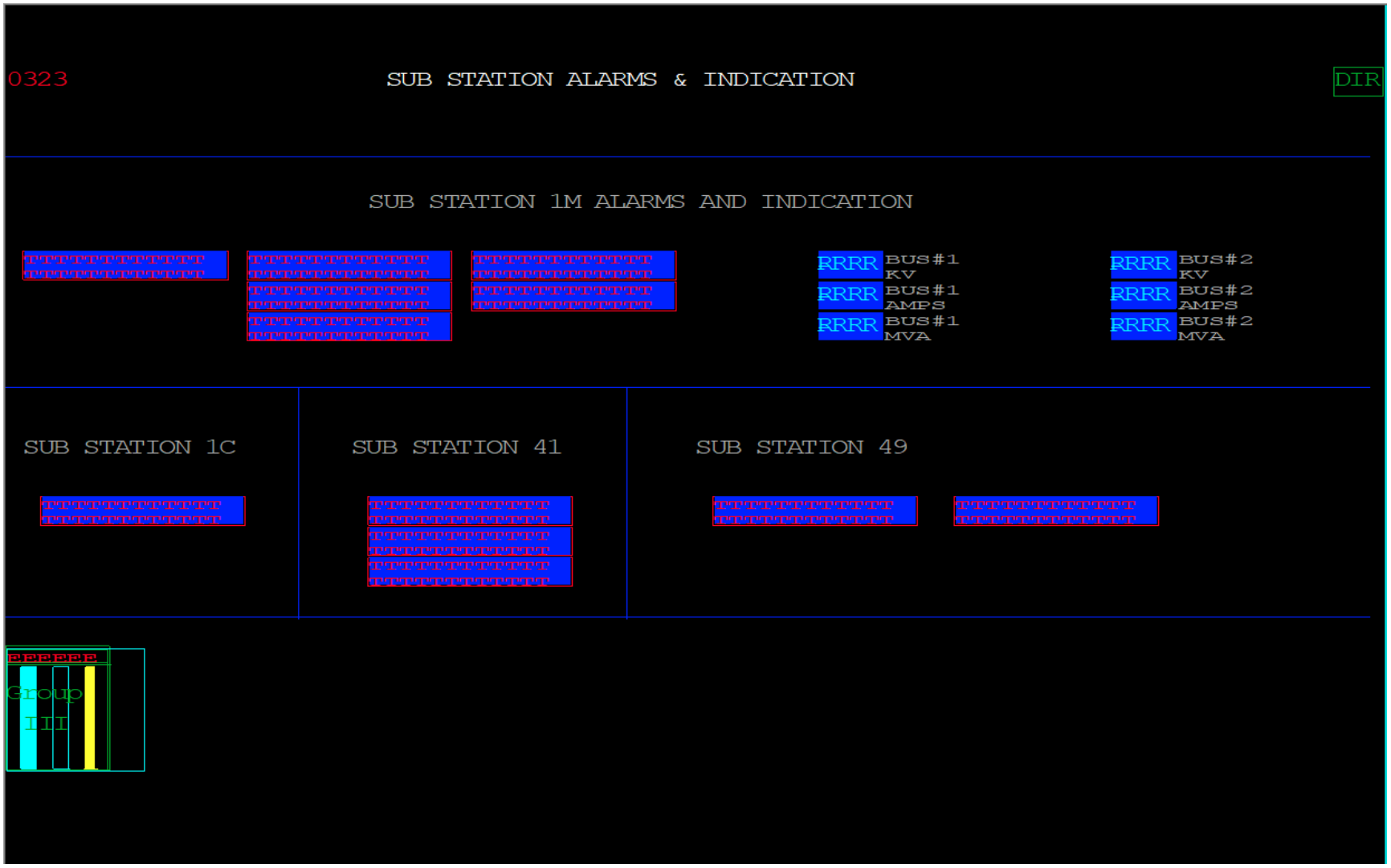


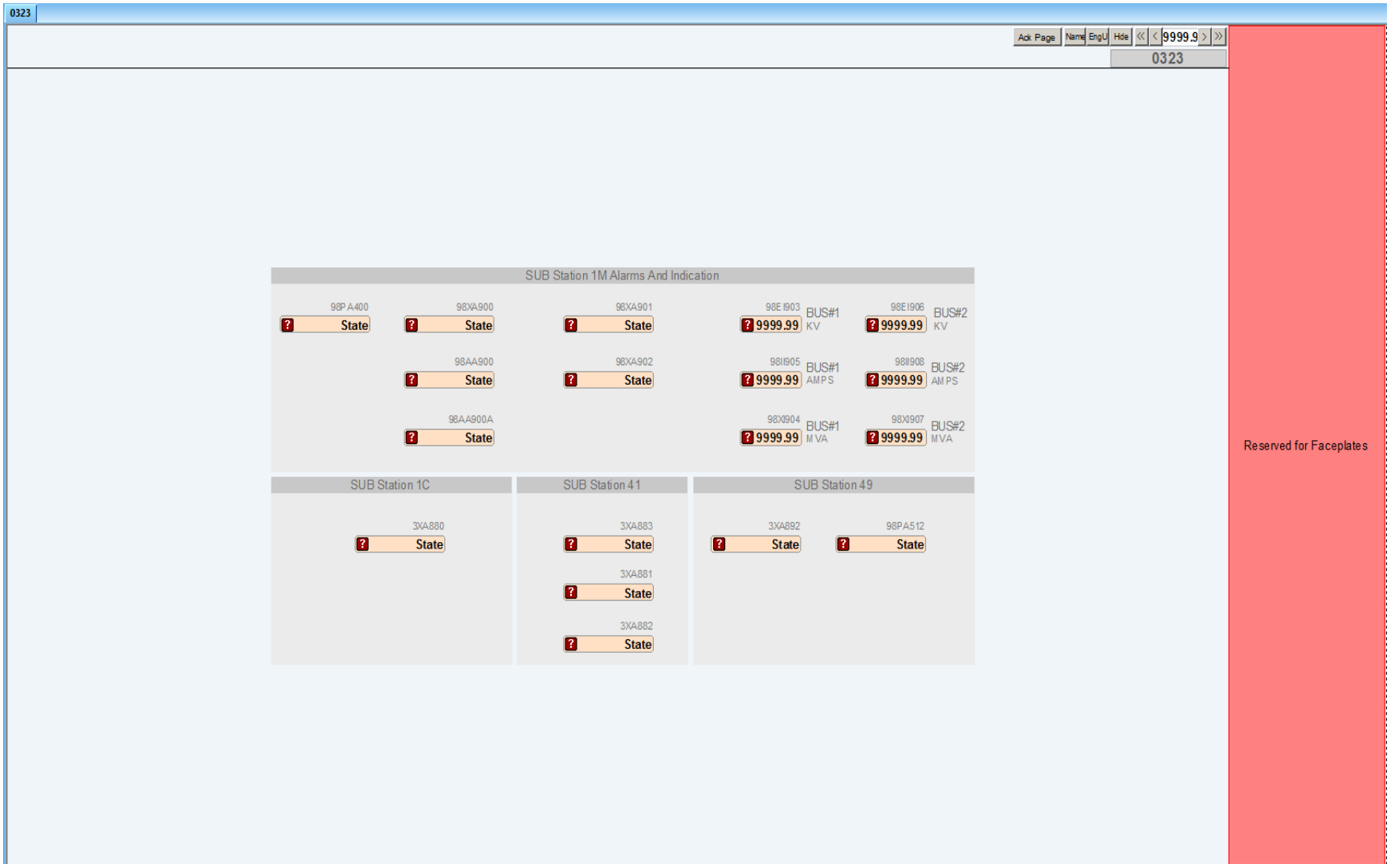

0322H
HYDROCRACKER R4 REACTOR TEMPERATURES HELP MENU
PROCESS
1:
REACTOR 3/4 TEMPERATURE ALARM
SYSTEM STATUS CHECK 0317H1
2:
REACTOR 3/4 TEMPERATURE
ALARMING HELP 0317H2


0322H
Ack Page
Name
EngU
Hide
9999.9
0322H
Process
Hydrocracker R4 Reactor Temperatures Help Menu
1:
Reactor 3/4 Temperature Alarm System Status Check
0317H1
2:
Reactor 3/4 Temperature Alarming Help
0317H2
Reserved for Faceplates

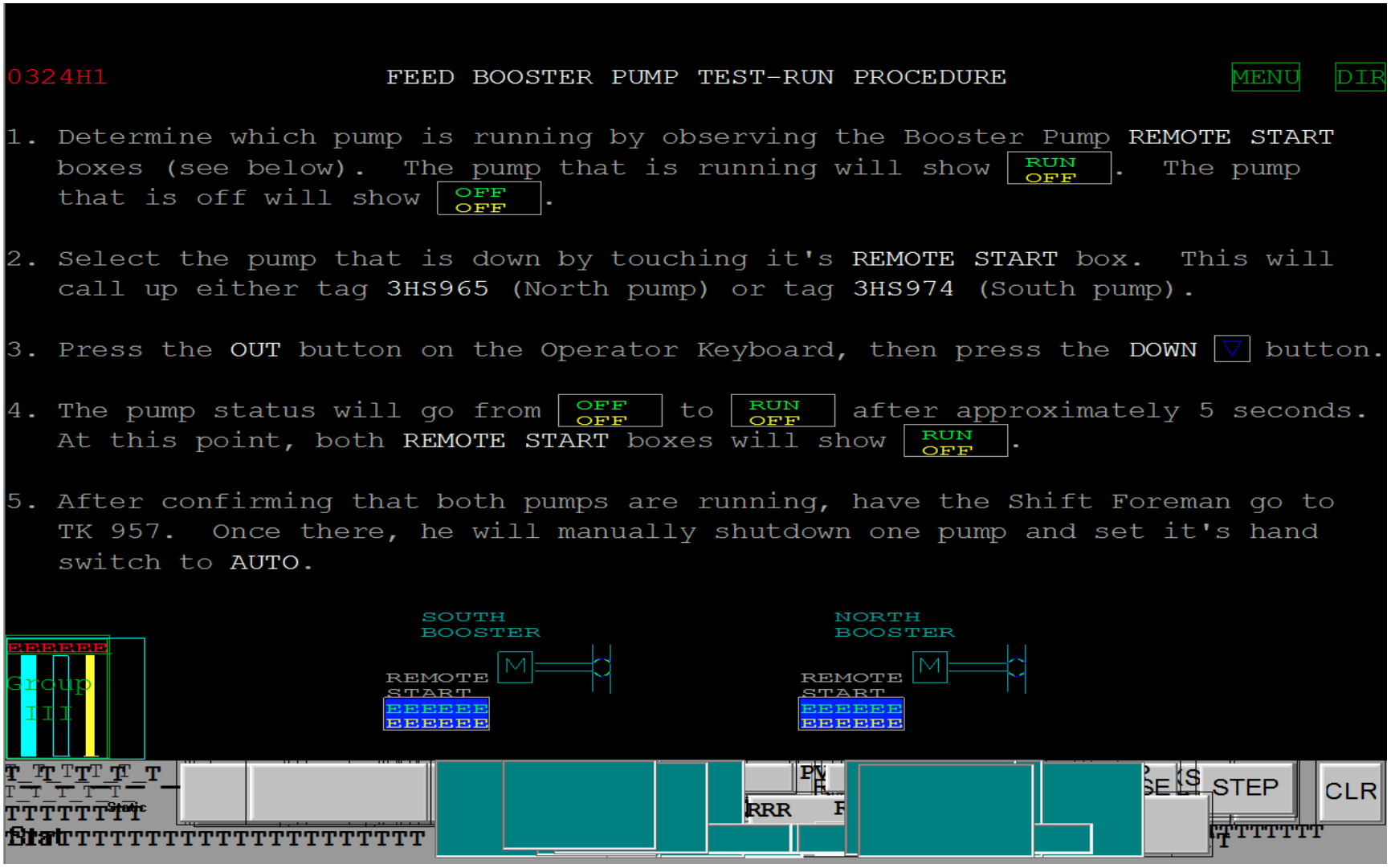
3.84 SUB STATION ALARMS & INDICATION (0323.DS)




0323
SUB STATION ALARMS & INDICATION
DIR
SUB STATION 1M ALARMS AND INDICATION
RRRR BUS#1 KV
RRRR BUS#1 AMPS
RRRR BUS#1 MVA
RRRR BUS#2 KV
RRRR BUS#2 AMPS
RRRR BUS#2 MVA
SUB STATION 1C
SUB STATION 41
SUB STATION 49
Group III


0323
Ack Page
Name
Eng U
Hide
9999.9
0323
SUB Station 1M Alarms And Indication
98P A400
State
98XA900
State
98XA901
State
98E I903
9999.99
BUS#1
KV
98E I906
9999.99
BUS#2
KV
98AA900
State
98XA902
State
98II905
9999.99
BUS#1
AMPS
98II908
9999.99
BUS#2
AMPS
98AA900A
State
98X1904
9999.99
BUS#1
MVA
98X1907
9999.99
BUS#2
MVA
SUB Station 1C
3XA880
State
SUB Station 41
3XA883
State
3XA881
State
3XA882
State
SUB Station 49
3XA892
State
98PA512
State
Reserved for Faceplates

3.85 FEED BOOSTER PUMP TEST-RUN PROCEDURE (0324H1.DS)



0324H1 FEED BOOSTER PUMP TEST-RUN PROCEDURE MENU DIR

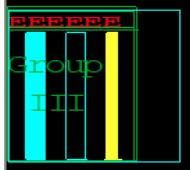
1. Determine which pump is running by observing the Booster Pump REMOTE START boxes (see below). The pump that is running will show RUN OFF. The pump that is off will show OFF OFF.

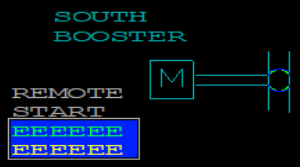
2. Select the pump that is down by touching it's REMOTE START box. This will call up either tag 3HS965 (North pump) or tag 3HS974 (South pump).

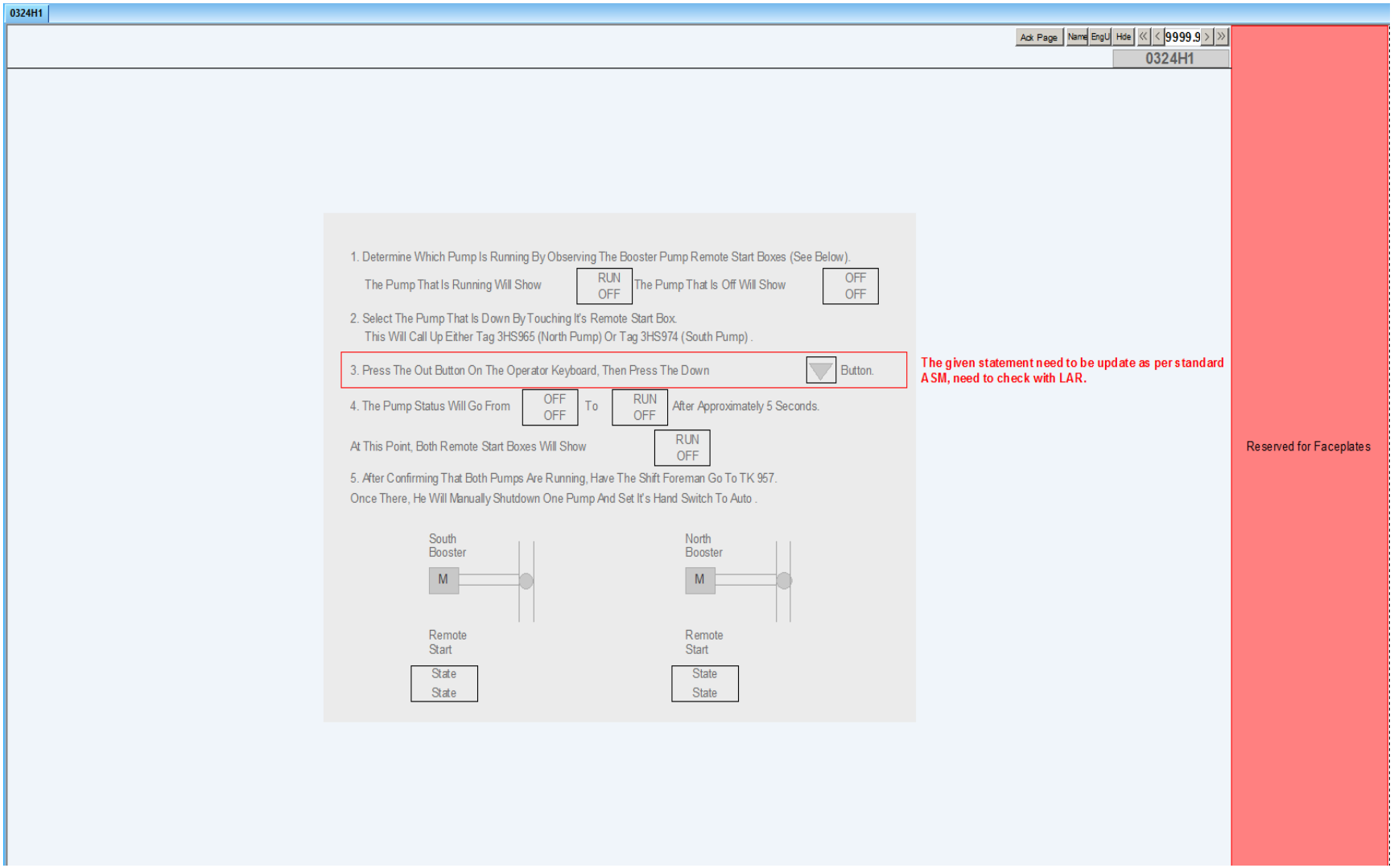
3. Press the OUT button on the Operator Keyboard, then press the DOWN ▽ button.

4. The pump status will go from OFF OFF to RUN OFF after approximately 5 seconds. At this point, both REMOTE START boxes will show RUN OFF.

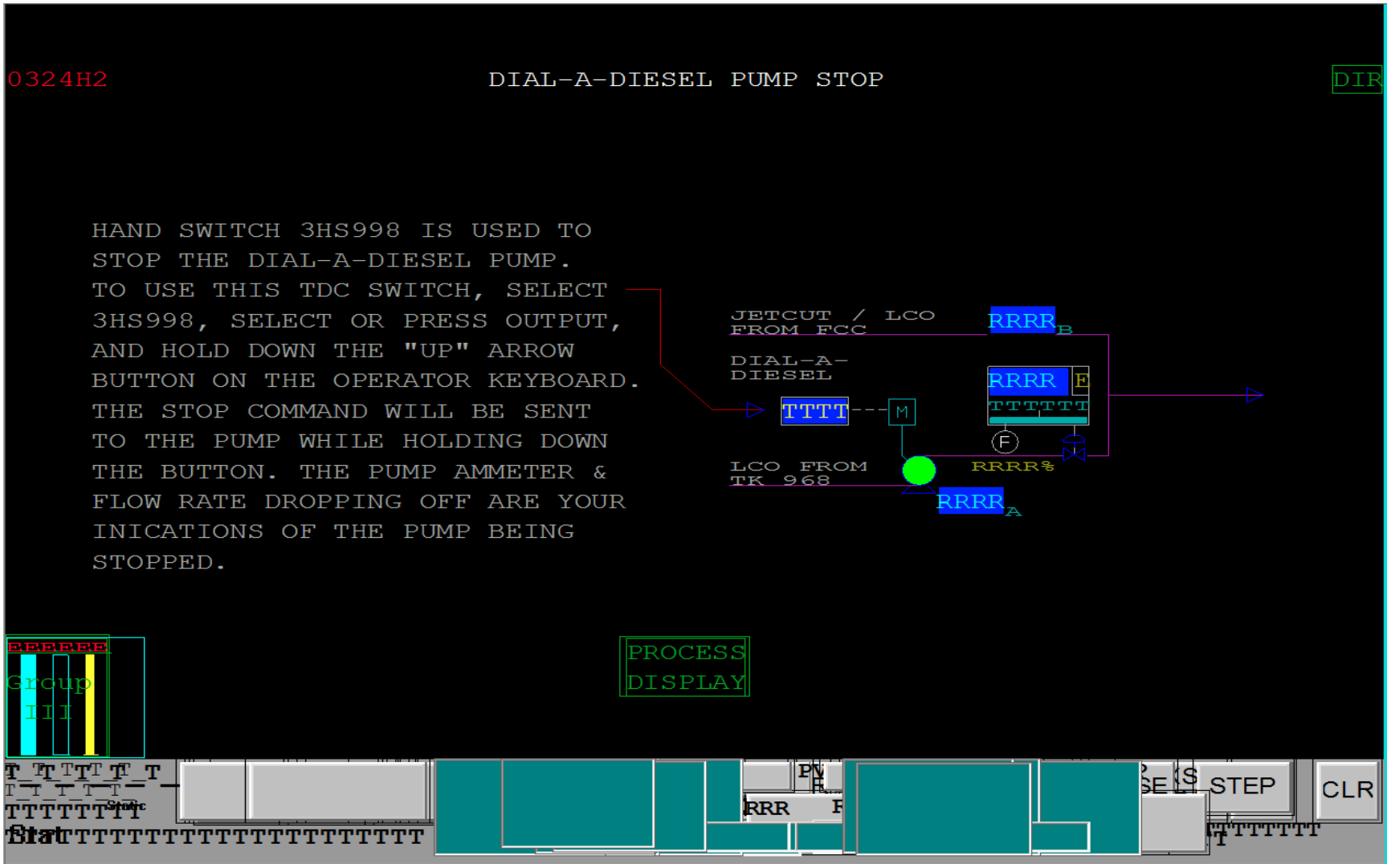
5. After confirming that both pumps are running, have the Shift Foreman go to TK 957. Once there, he will manually shutdown one pump and set it's hand switch to AUTO .

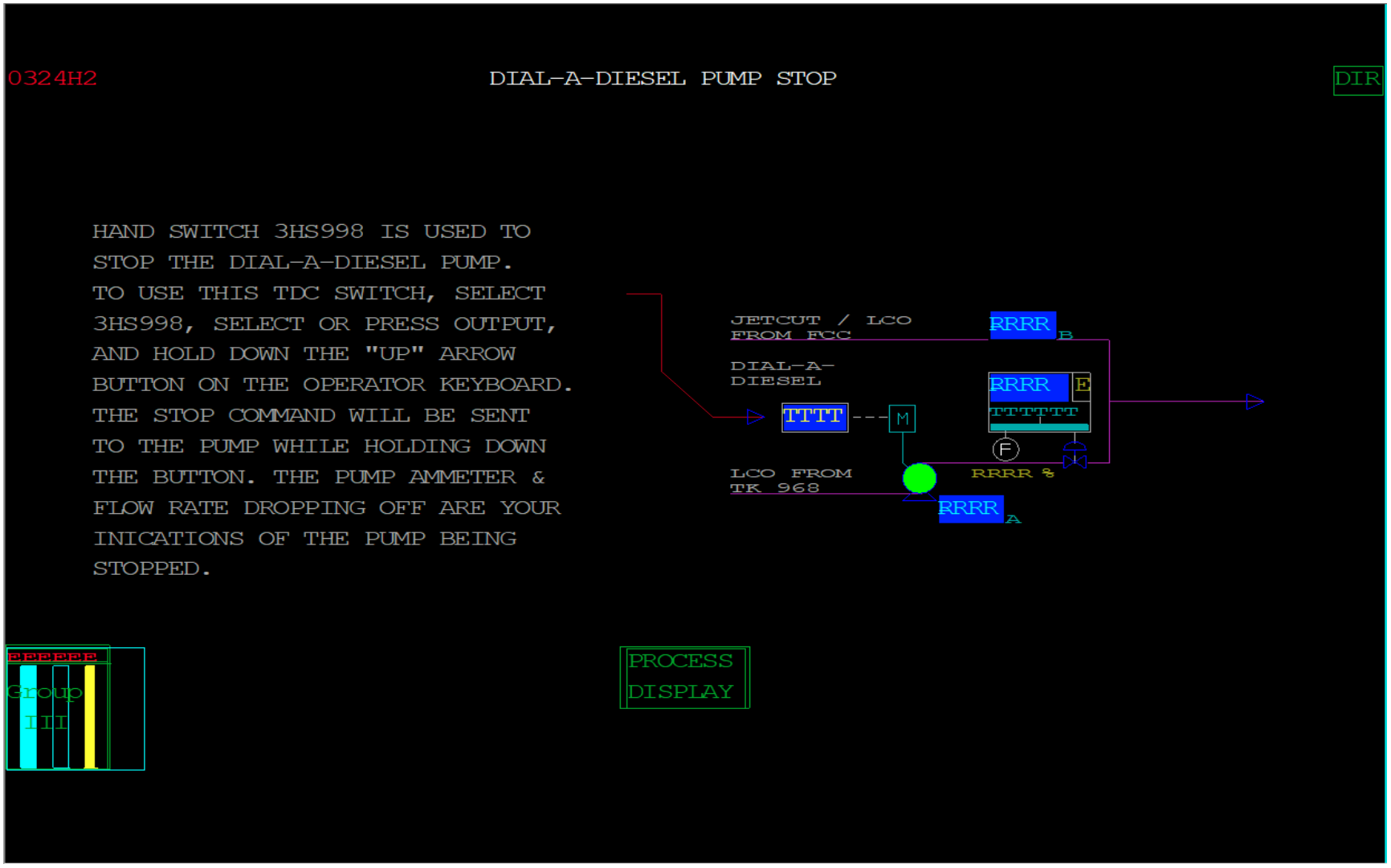


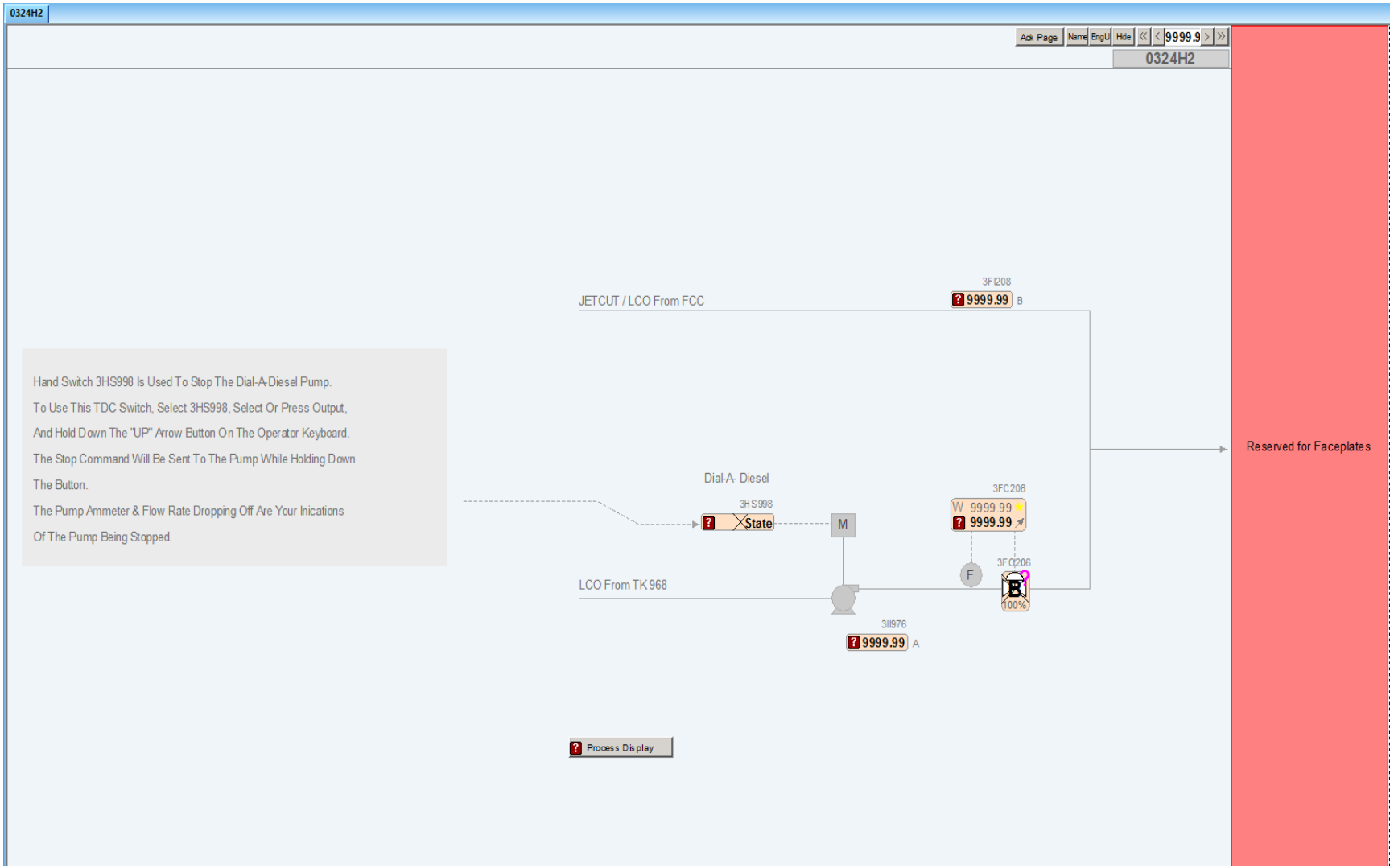



0324H1
Ack Page
Name
Eng U
Hide
9999.9
0324H1
1. Determine Which Pump Is Running By Observing The Booster Pump Remote Start Boxes (See Below).
The Pump That Is Running Will Show
RUN
OFF
The Pump That Is Off Will Show
OFF
OFF
2. Select The Pump That Is Down By Touching It's Remote Start Box.
This Will Call Up Either Tag 3HS965 (North Pump) Or Tag 3HS974 (South Pump) .
3. Press The Out Button On The Operator Keyboard, Then Press The Down
Button.
4. The Pump Status Will Go From
OFF
OFF
To
RUN
OFF
After Approximately 5 Seconds.
At This Point, Both Remote Start Boxes Will Show
RUN
OFF
5. After Confirming That Both Pumps Are Running, Have The Shift Foreman Go To TK 957.
Once There, He Will Manually Shutdown One Pump And Set It's Hand Switch To Auto .
South
Booster
M
Remote
Start
State
State
North
Booster
M
Remote
Start
State
State
The given statement need to be update as per standard ASM, need to check with LAR.
Reserved for Faceplates

3.86 DIAL-A-DIESEL PUMP STOP (0324H2.DS)

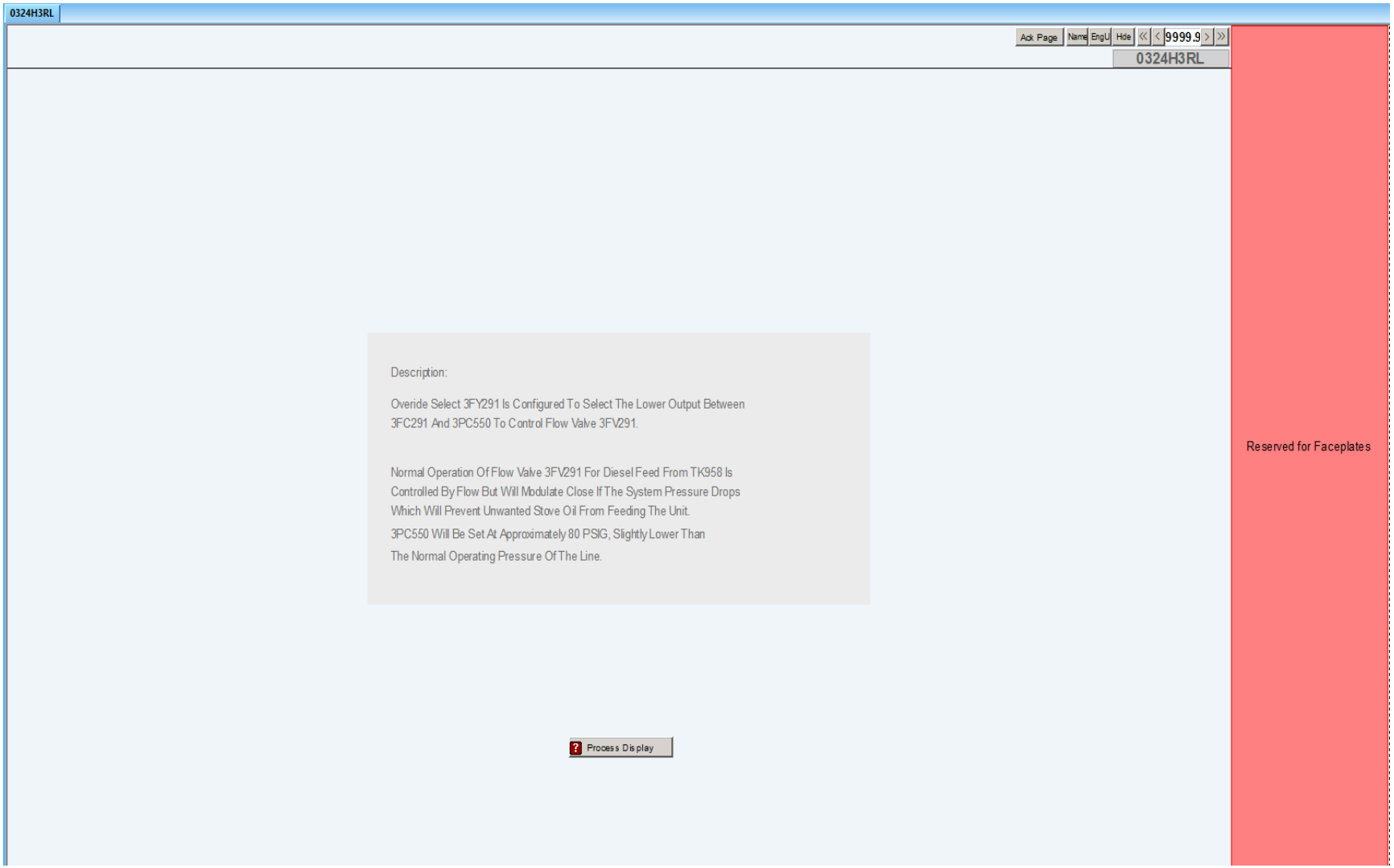



0324H2
DIAL-A-DIESEL PUMP STOP
DIR
HAND SWITCH 3HS998 IS USED TO
STOP THE DIAL-A-DIESEL PUMP.
TO USE THIS TDC SWITCH, SELECT
3HS998, SELECT OR PRESS OUTPUT,
AND HOLD DOWN THE "UP" ARROW
BUTTON ON THE OPERATOR KEYBOARD.
THE STOP COMMAND WILL BE SENT
TO THE PUMP WHILE HOLDING DOWN
THE BUTTON. THE PUMP AMMETER &
FLOW RATE DROPPING OFF ARE YOUR
INICATIONS OF THE PUMP BEING
STOPPED.
JETCUT / LCO
FROM FCC
RRRR
B
DIAL-A-
DIESEL
RRRR
E
TTTT
M
TTTTTT
F
LCO FROM
TK 968
RRRR &
RRRR
A
EEEEEE
Group
III
PROCESS
DISPLAY

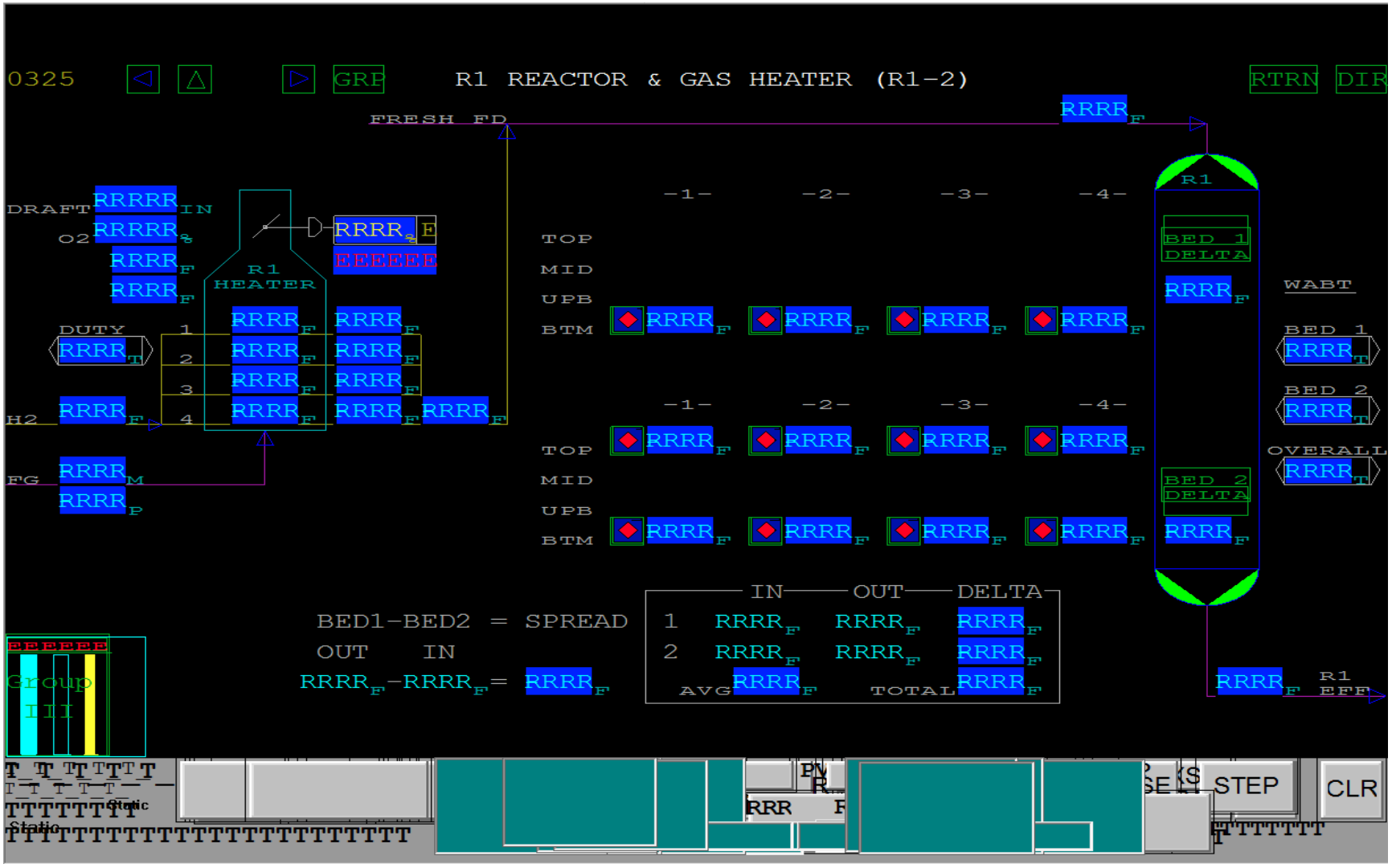

0324H2
Ack Page
Name
EngU
Hide
9999.9
0324H2
Hand Switch 3HS998 Is Used To Stop The Dial-A-Diesel Pump.
To Use This TDC Switch, Select 3HS998, Select Or Press Output,
And Hold Down The "UP" Arrow Button On The Operator Keyboard.
The Stop Command Will Be Sent To The Pump While Holding Down
The Button.
The Pump Ammeter & Flow Rate Dropping Off Are Your Inications
Of The Pump Being Stopped.
JETCUT / LCO From FCC
3FI208
9999.99
B
Dial-A- Diesel
3HS998
State
M
3FC206
W 9999.99
9999.99
F
3FQ206
100%
LCO From TK 968
3II976
9999.99
A
Process Display
Reserved for Faceplates

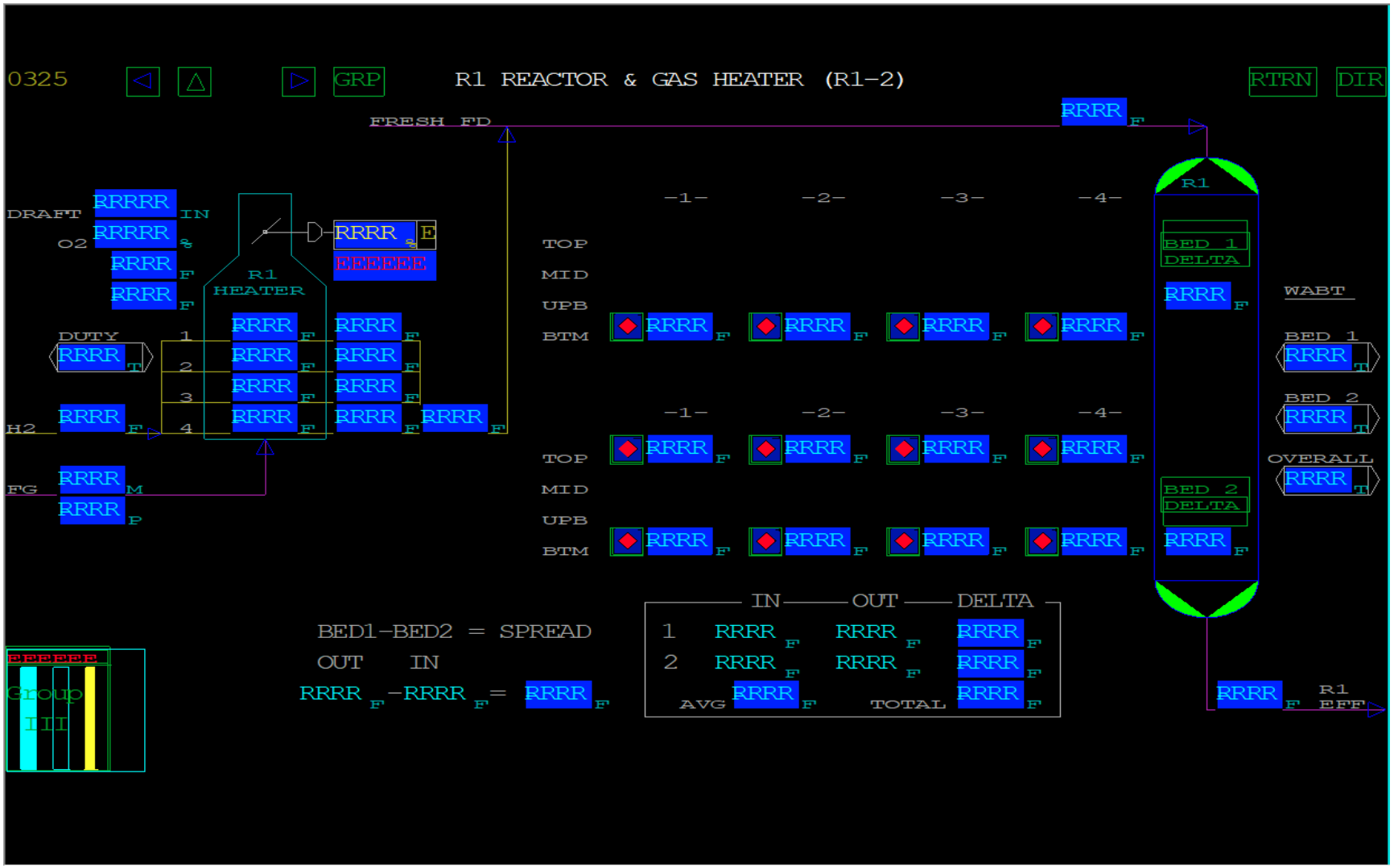
3.87 DIESEL FROM TK958 LOW SELECT (0324H3RL.DS)

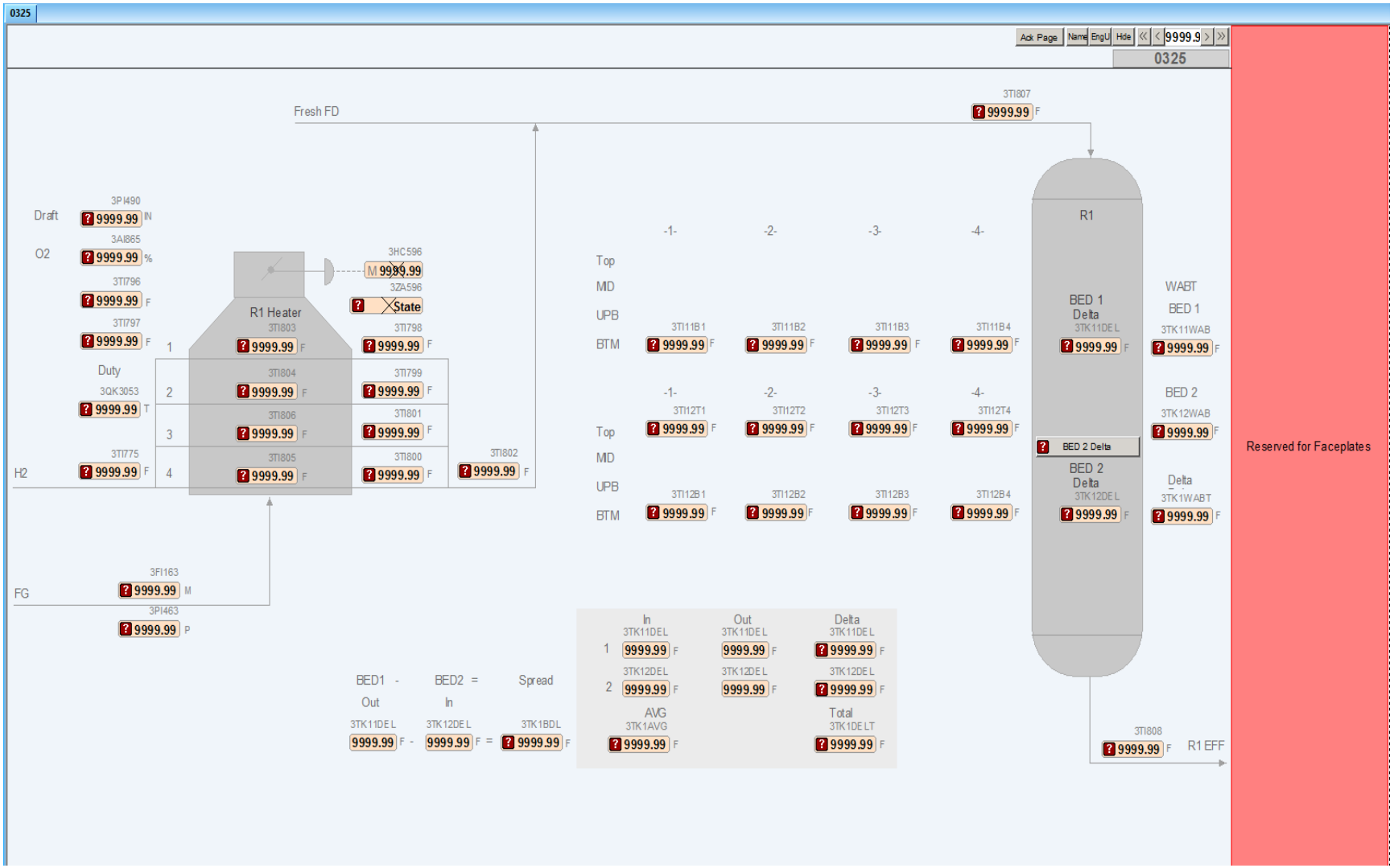
0324H3
DIESEL FROM TK958 LOW SELECT
DIR
DESCRIPTION:
OVERIDE SELECT 3FY291 IS CONFIGURED TO SELECT THE LOWER OUTPUT BETWEEN 3FC291 AND 3PC550 TO CONTROL FLOW VALVE 3FV291.
NORMAL OPERATION OF FLOW VALVE 3FV291 FOR DIESEL FEED FROM TK958 IS CONTROLLED BY FLOW BUT WILL MODULATE CLOSE IF THE SYSTEM PRESSURE DROPS WHICH WILL PREVENT UNWANTED STOVE OIL FROM FEEDING THE UNIT. 3PC550 WILL BE SET AT APPROXIMATELY 80 PSIG, SLIGHTLY LOWER THAN THE NORMAL OPERATING PRESSURE OF THE LINE.
Group III
PROCESS DISPLAY


0324H3RL
Ack Page
Name
EngU
Hide
9999.9
0324H3RL
Description:
Overide Select 3FY291 Is Configured To Select The Lower Output Between 3FC291 And 3PC550 To Control Flow Valve 3FV291.
Normal Operation Of Flow Valve 3FV291 For Diesel Feed From TK958 Is Controlled By Flow But Will Modulate Close If The System Pressure Drops Which Will Prevent Unwanted Stove Oil From Feeding The Unit.
3PC550 Will Be Set At Approximately 80 PSIG, Slightly Lower Than The Normal Operating Pressure Of The Line.
Process Display
Reserved for Faceplates

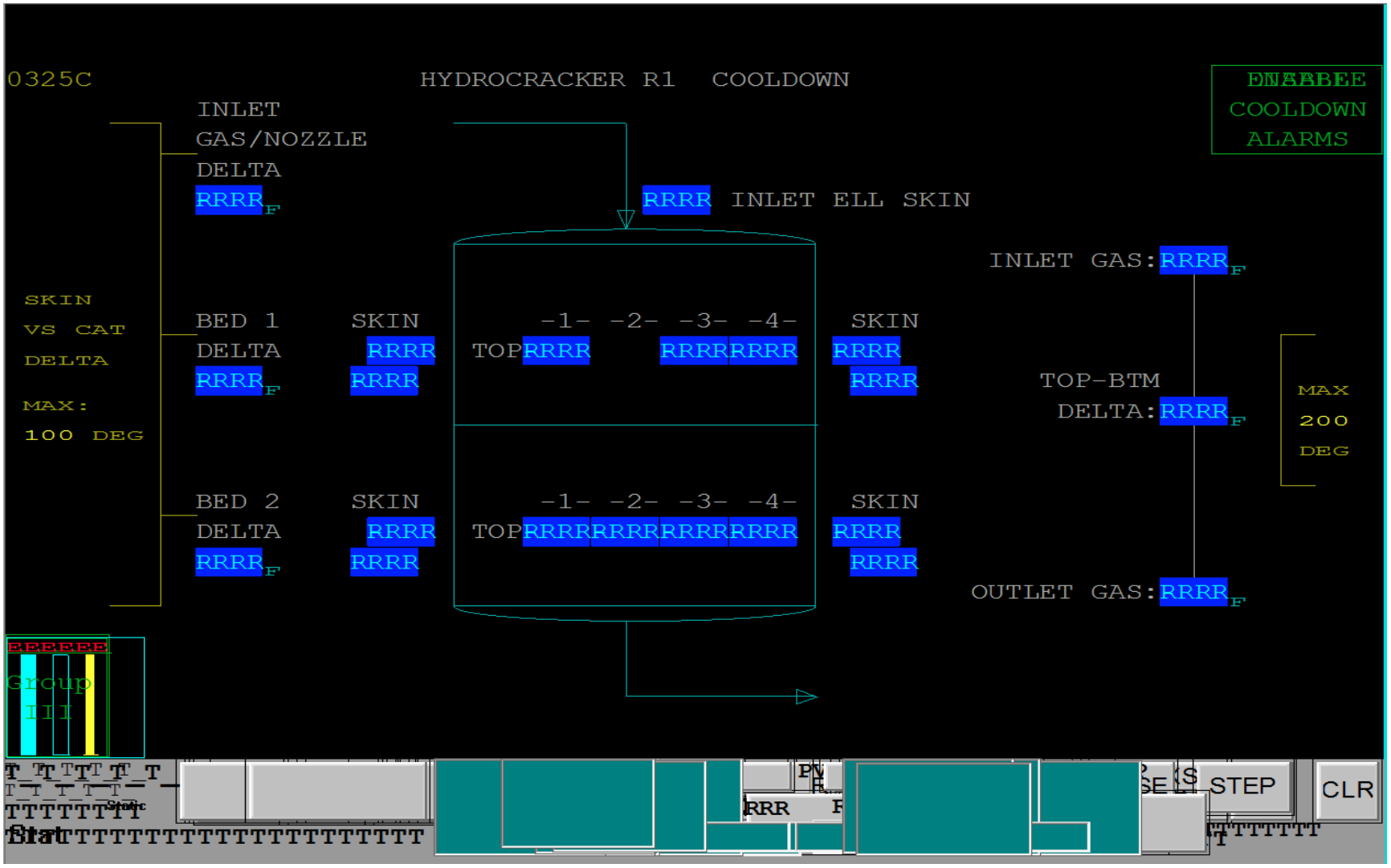
3.88 R1 REACTOR & GAS HEATER (R1-2) (0325.DS)

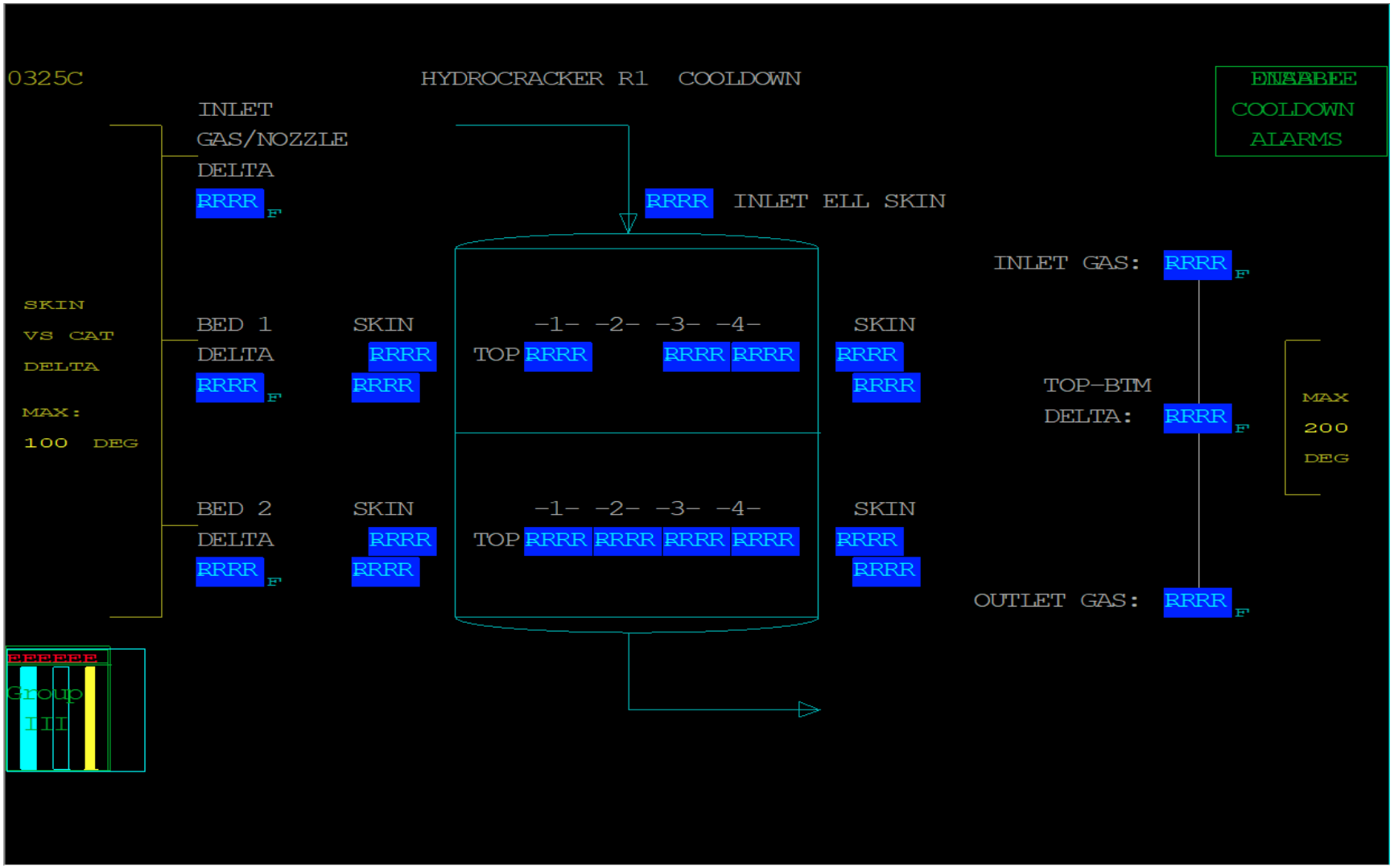


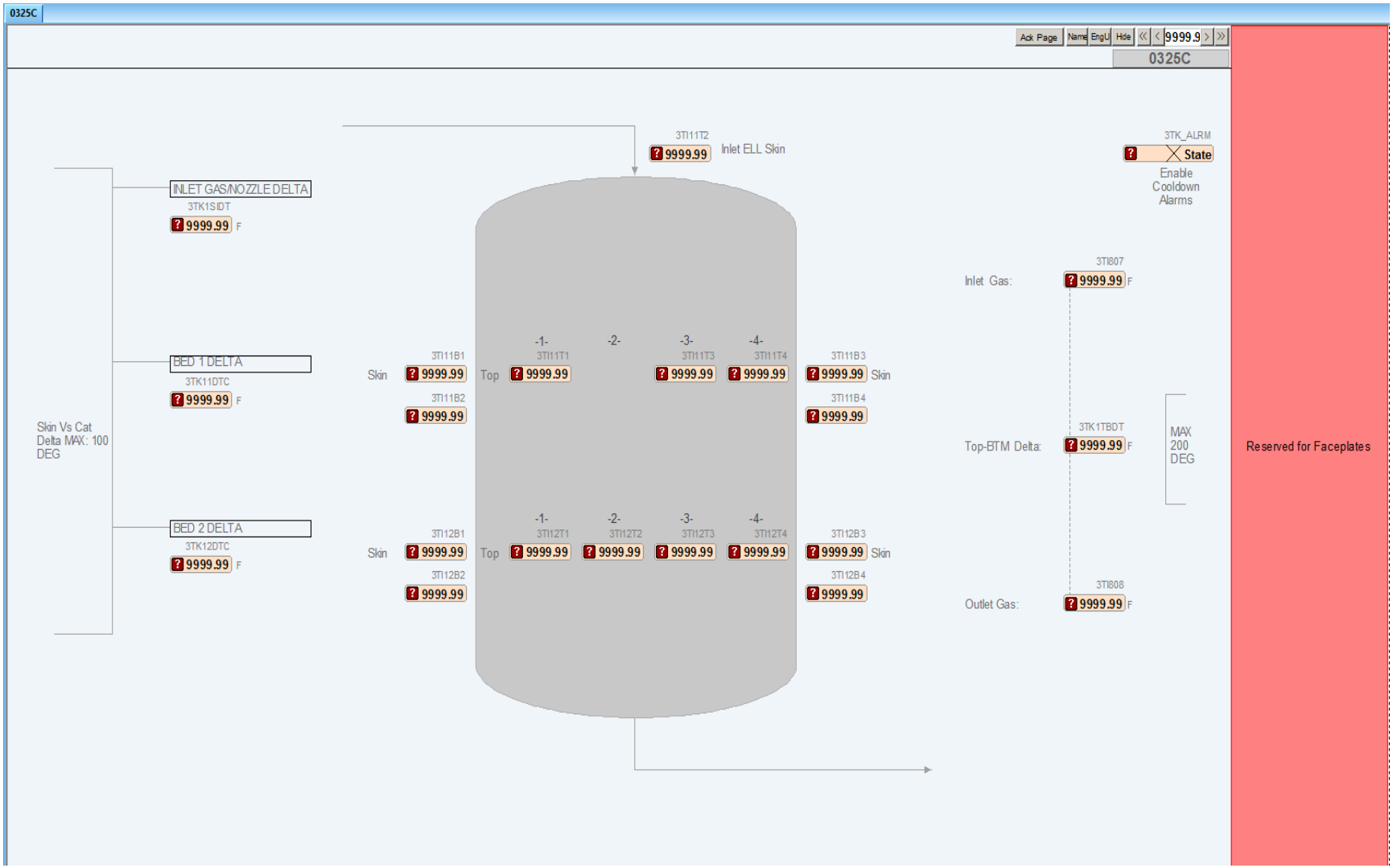

0325
GRP
R1 REACTOR & GAS HEATER (R1-2)
RTRN
DIR
FRESH FD
DRAFT
IN
O2
%
R1
HEATER
DUTY
H2
FG
M
P
E
EEEEEE
-1-
-2-
-3-
-4-
TOP
MID
UPB
BTM
R1
BED 1
DELTA
BED 2
DELTA
WABT
BED 1
BED 2
OVERALL
R1
EFF
BED1-BED2 = SPREAD
OUT IN
IN
OUT
DELTA
1
2
AVG
TOTAL
EEEEEE
Group
III


0325
Ack Page
Name
Eng U
Hide
9999.9
0325
Fresh FD
3TI807
9999.99 F
Draft
3PI490
9999.99 IN
O2
3AI865
9999.99 %
3TI796
9999.99 F
3TI797
9999.99 F
Duty
3QK3053
9999.99 T
H2
3TI775
9999.99 F
3HC596
M 9999.99
3ZA596
State
R1 Heater
3TI803
3TI804
3TI806
3TI805
3TI798
3TI799
3TI801
3TI800
3TI802
1
2
3
4
9999.99 F
FG
3FI163
9999.99 M
3PI463
9999.99 P
-1-
-2-
-3-
-4-
Top
MD
UPB
BTM
3TI11B1
3TI11B2
3TI11B3
3TI11B4
3TI12T1
3TI12T2
3TI12T3
3TI12T4
3TI12B1
3TI12B2
3TI12B3
3TI12B4
R1
BED 1 Delta
3TK11DEL
BED 2 Delta
BED 2 Delta
3TK12DEL
WABT BED 1
3TK11WAB
BED 2
3TK12WAB
Delta
3TK1WABT
Reserved for Faceplates
BED1 - BED2 = Spread
Out In
3TK11DEL 3TK12DEL 3TK1BDL
9999.99 F - 9999.99 F = 9999.99 F
In Out Delta
3TK11DEL 3TK11DEL 3TK11DEL
1 9999.99 F 9999.99 F 9999.99 F
3TK12DEL 3TK12DEL 3TK12DEL
2 9999.99 F 9999.99 F 9999.99 F
AVG
3TK1AVG
9999.99 F
Total
3TK1DELT
9999.99 F
3TI808
9999.99 F
R1 EFF

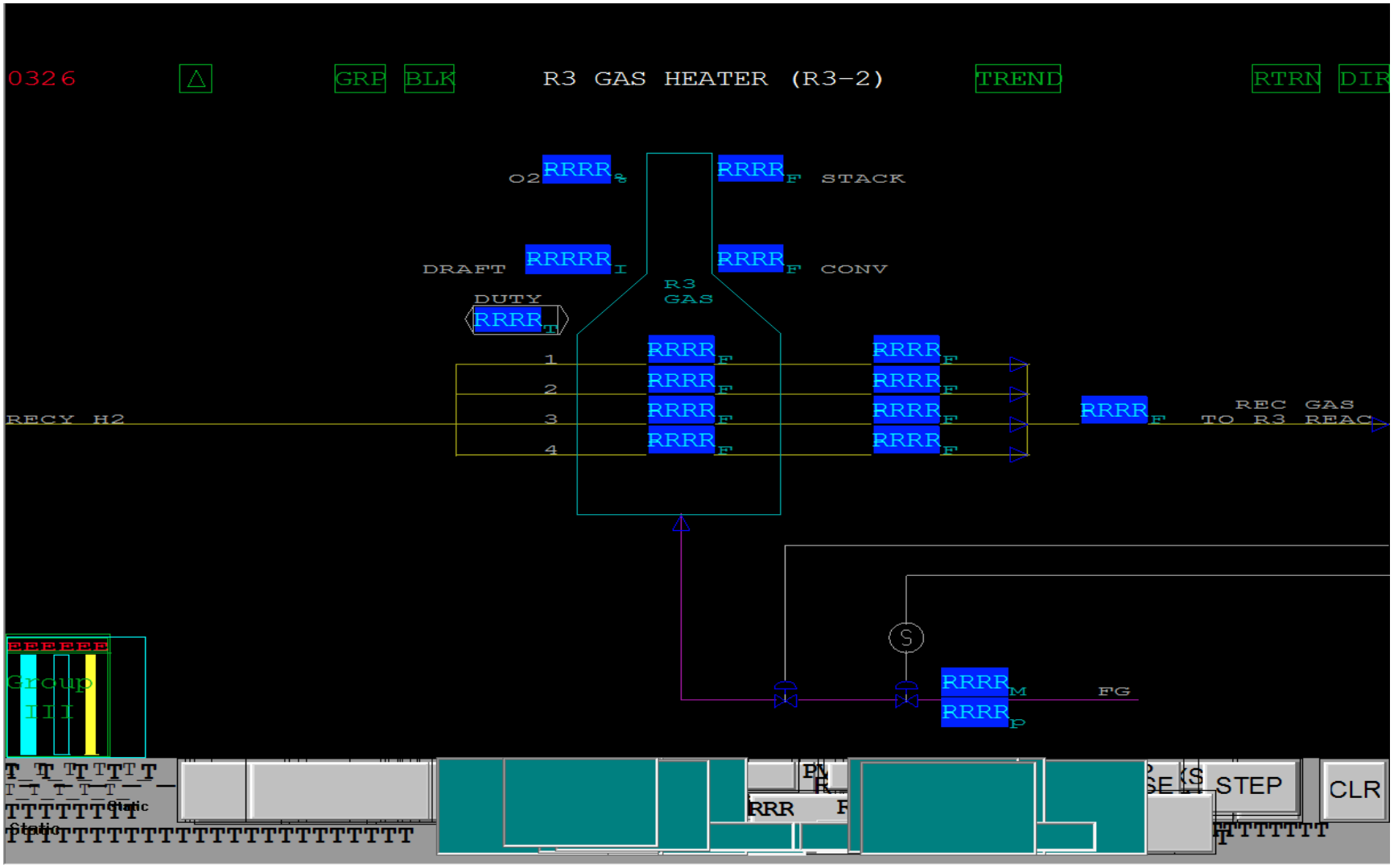
3.89 HYDROCRACKER R1 COOLDOWN (0325C.DS)

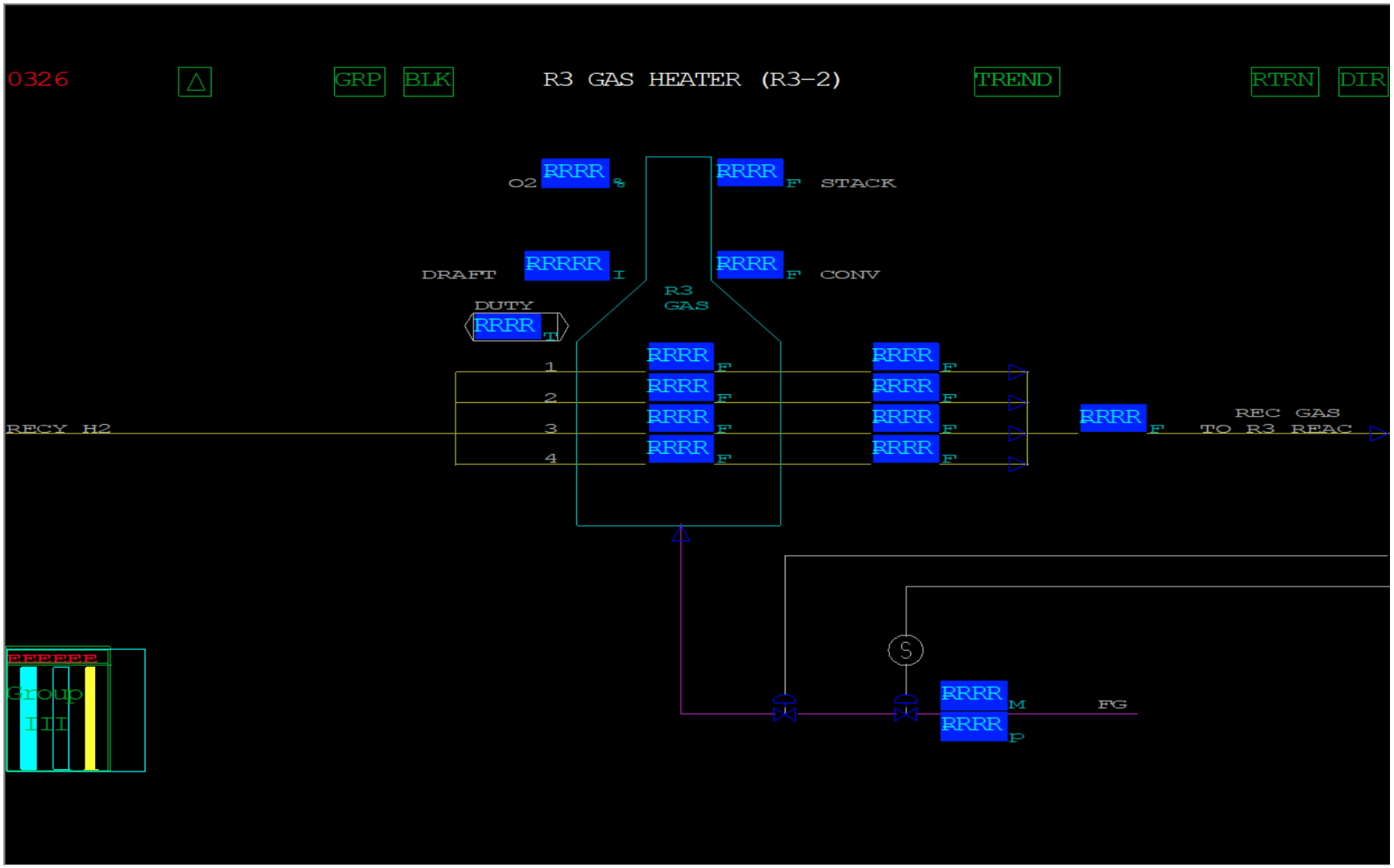


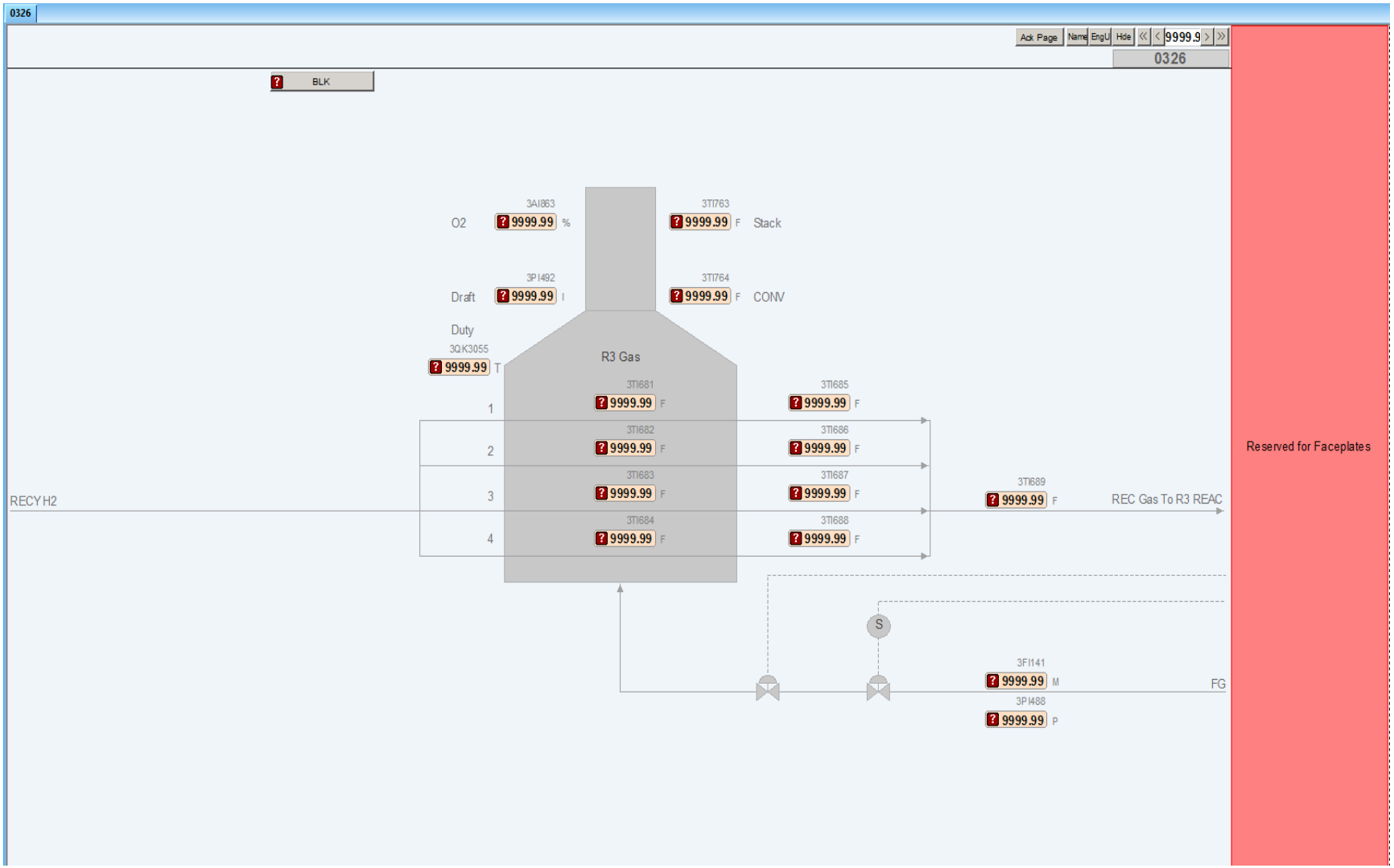

0325C
HYDROCRACKER R1 COOLDOWN
ENABBEE
COOLDOWN
ALARMS
INLET
GAS/NOZZLE
DELTA
RRRR F
RRRR INLET ELL SKIN
INLET GAS: RRRR F
SKIN
VS CAT
DELTA
MAX:
100 DEG
BED 1
DELTA
RRRR F
SKIN
RRRR
RRRR
-1- -2- -3- -4-
TOP RRRR
RRRR RRRR
SKIN
RRRR
RRRR
TOP-BTM
DELTA: RRRR F
MAX
200
DEG
BED 2
DELTA
RRRR F
SKIN
RRRR
RRRR
-1- -2- -3- -4-
TOP RRRR RRRR RRRR RRRR
SKIN
RRRR
RRRR
OUTLET GAS: RRRR F
EEEEEE
Group
III


0325C
Ack Page
Name
Eng U
Hide
9999.9
0325C
3TI11T2
9999.99
Inlet ELL Skin
3TK_ALRM
State
Enable Cooldown Alarms
INLET GAS/NOZZLE DELTA
3TK1SIDT
9999.99 F
BED 1 DELTA
3TK11DTC
9999.99 F
BED 2 DELTA
3TK12DTC
9999.99 F
Skin Vs Cat Delta MAX: 100 DEG
-1-
-2-
-3-
-4-
3TI11B1
3TI11T1
3TI11T3
3TI11T4
3TI11B3
Skin
Top
Skin
3TI11B2
3TI11B4
3TI12B1
3TI12T1
3TI12T2
3TI12T3
3TI12T4
3TI12B3
3TI12B2
3TI12B4
3TI807
Inlet Gas:
3TK1TBDT
Top-BTM Delta:
MAX 200 DEG
3TI808
Outlet Gas:
Reserved for Faceplates

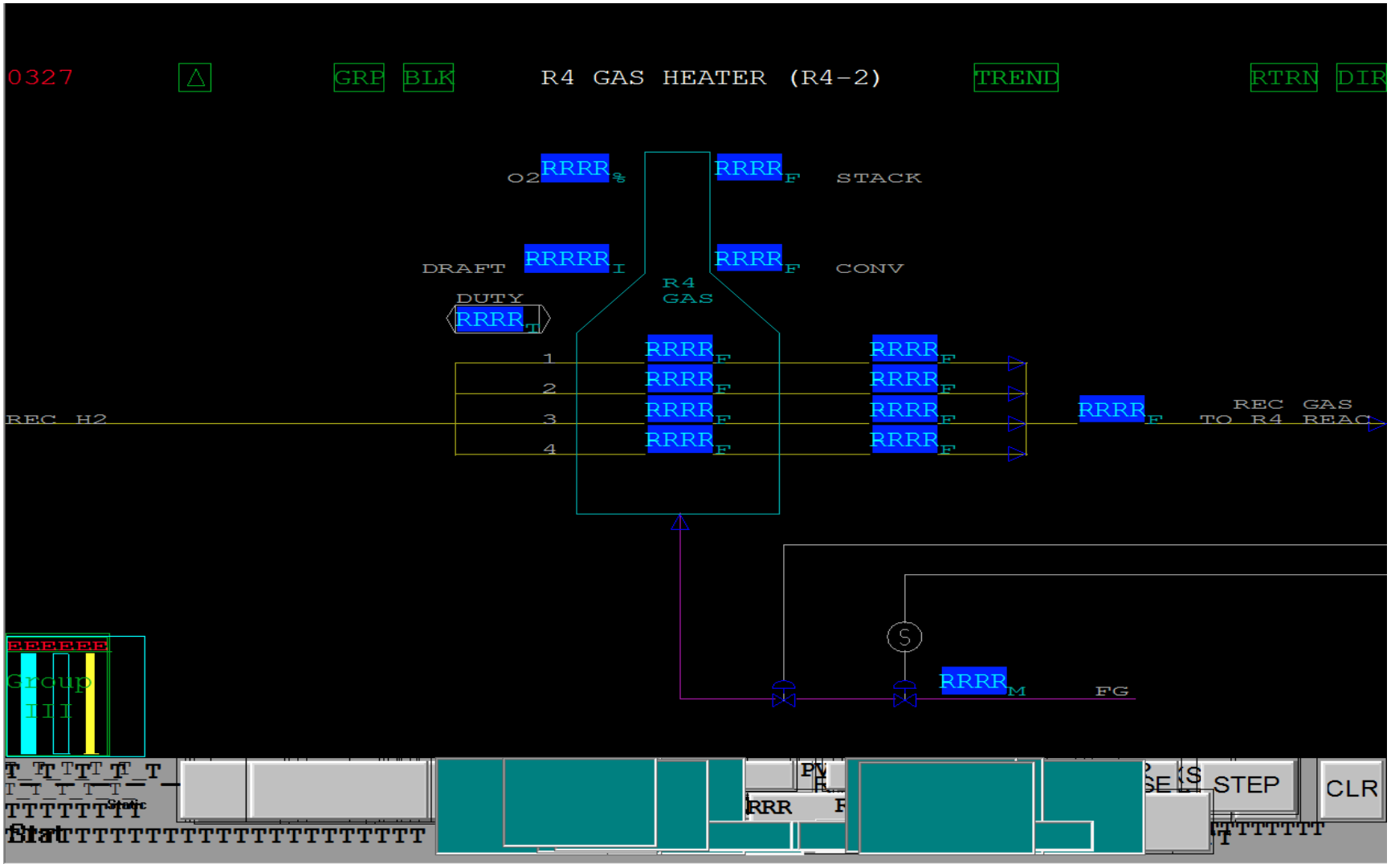
3.90 R3 GAS HEATER (R3-2) (0326.DS)

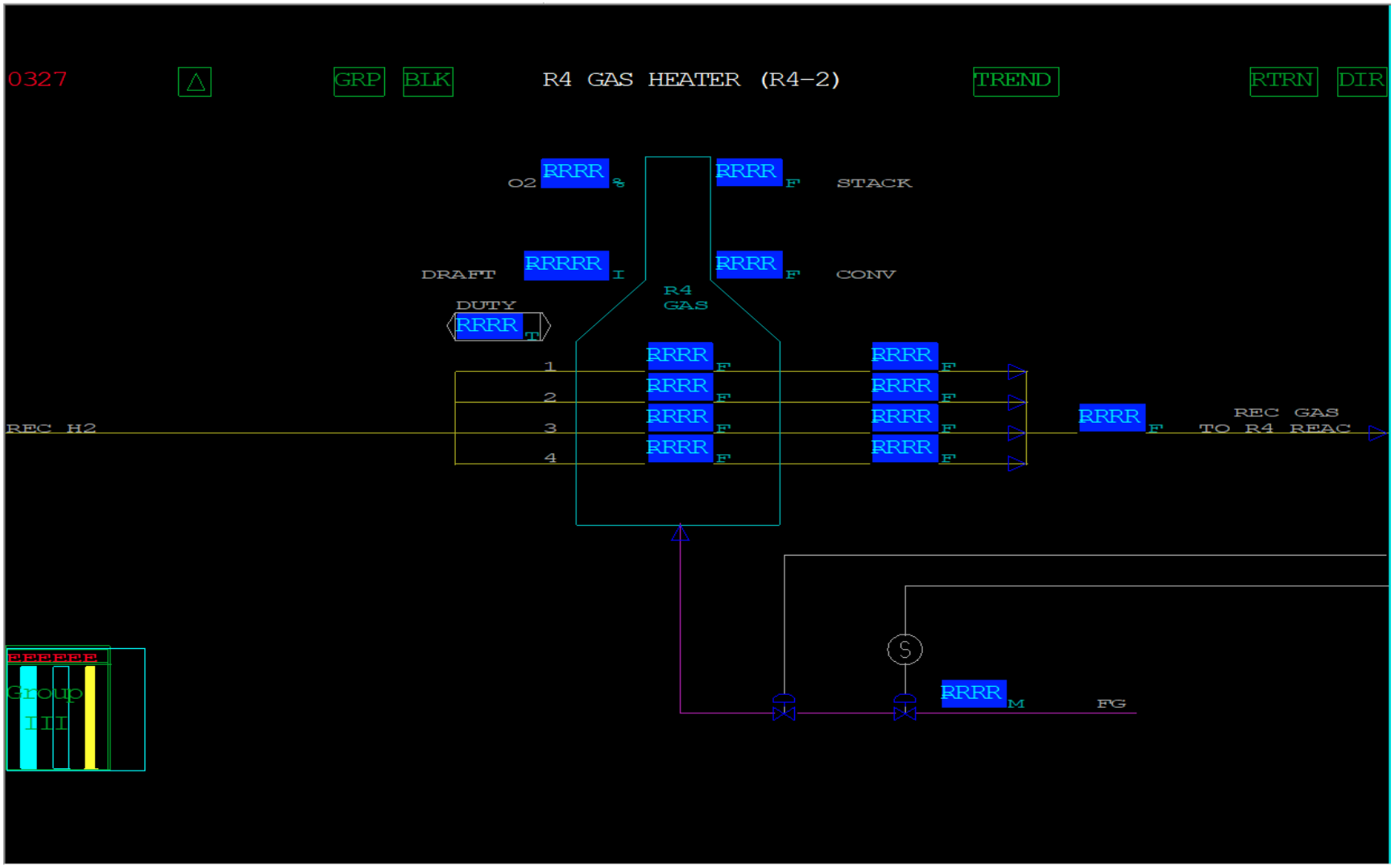


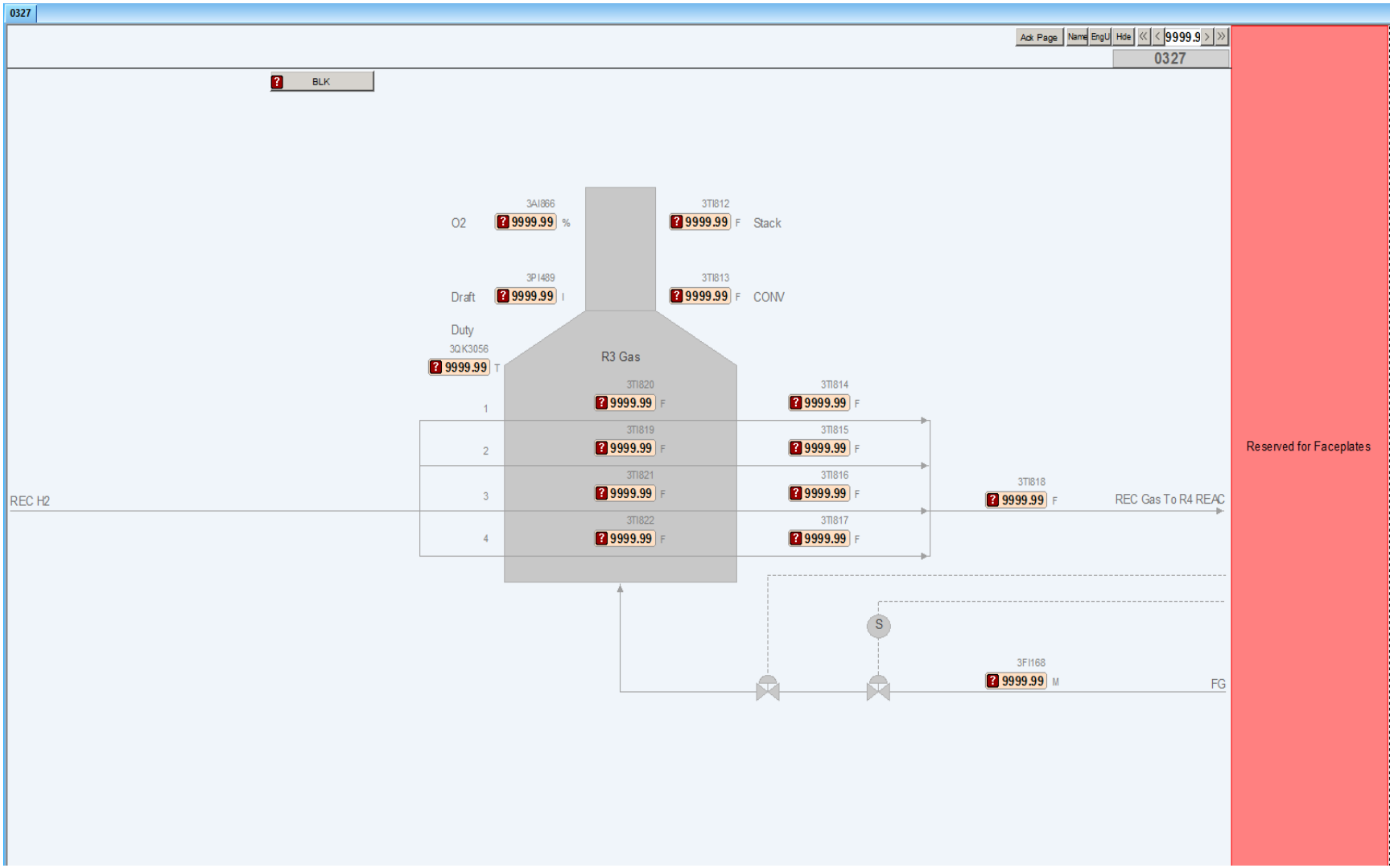

0326
GRP
BLK
R3 GAS HEATER (R3-2)
TREND
RTRN
DIR
O2
RRRR
%
RRRR
F
STACK
DRAFT
RRRRR
I
RRRR
F
CONV
R3
GAS
DUTY
RRRR
T
1
2
3
4
RRRR
F
RECY H2
REC GAS
TO R3 REAC
S
RRRR
M
RRRR
P
FG
FFFFFF
Group
III


0326
Ack Page
Name
EngU
Hide
9999.9
0326
BLK
3AI863
O2
9999.99
%
3TI763
9999.99
F
Stack
3PI492
Draft
9999.99
I
3TI764
9999.99
F
CONV
Duty
3QK3055
9999.99
T
R3 Gas
3TI681
9999.99
F
3TI685
9999.99
F
1
3TI682
9999.99
F
3TI686
9999.99
F
2
3TI683
9999.99
F
3TI687
9999.99
F
3
3TI684
9999.99
F
3TI688
9999.99
F
4
RECYH2
3TI689
9999.99
F
REC Gas To R3 REAC
S
3FI141
9999.99
M
FG
3PI488
9999.99
P
Reserved for Faceplates

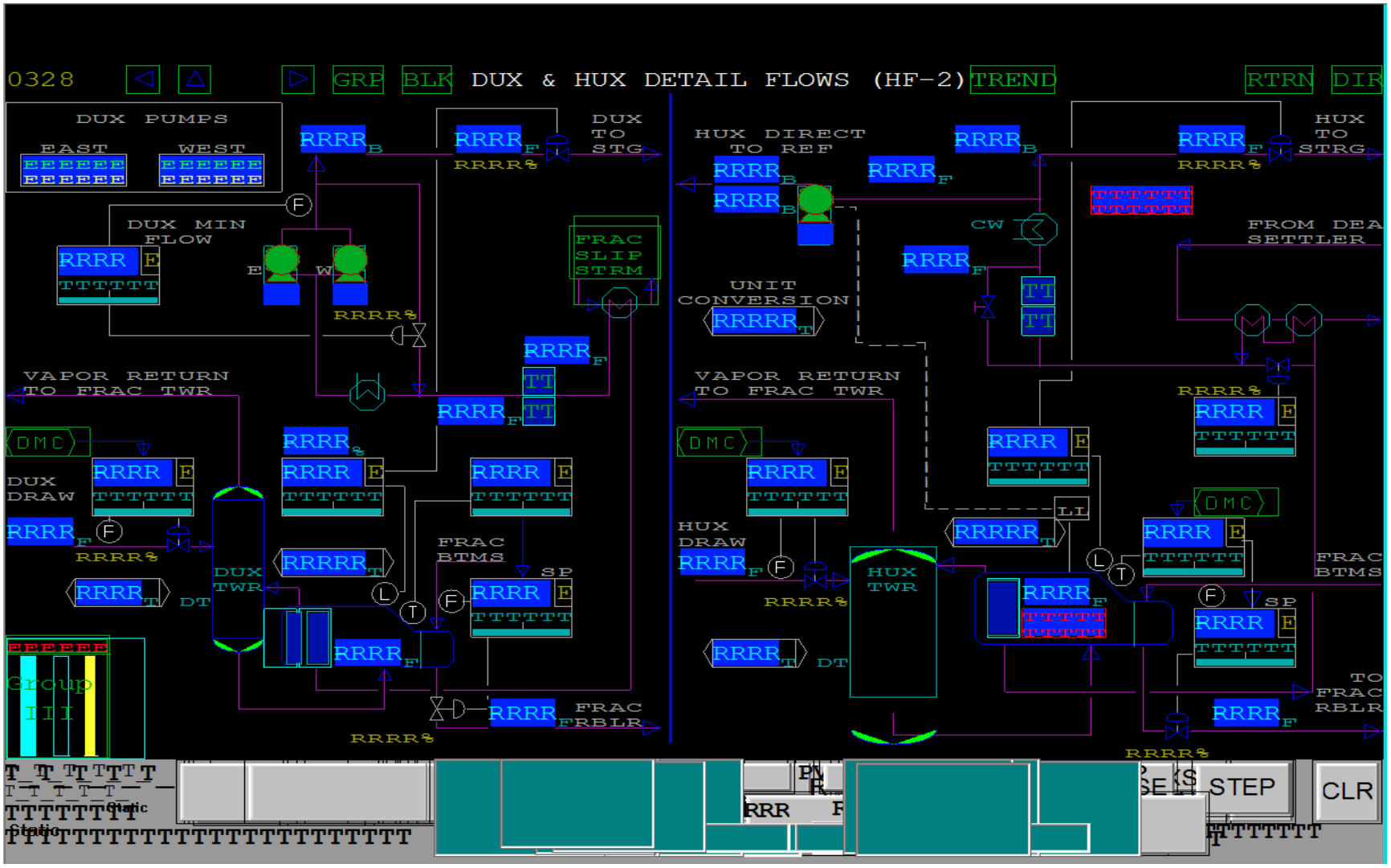
3.91 R4 GAS HEATER (R4-2) (0327.DS)

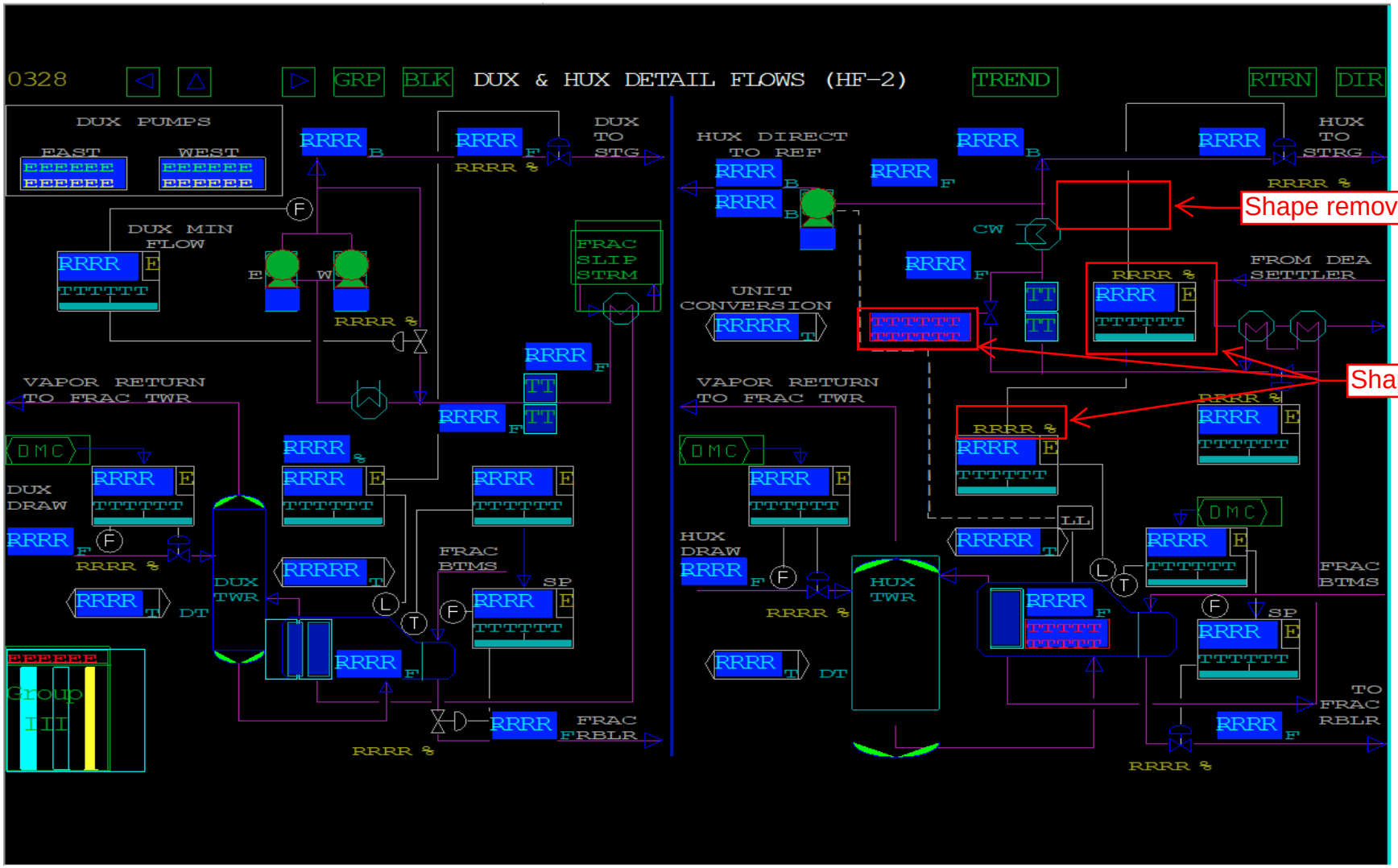


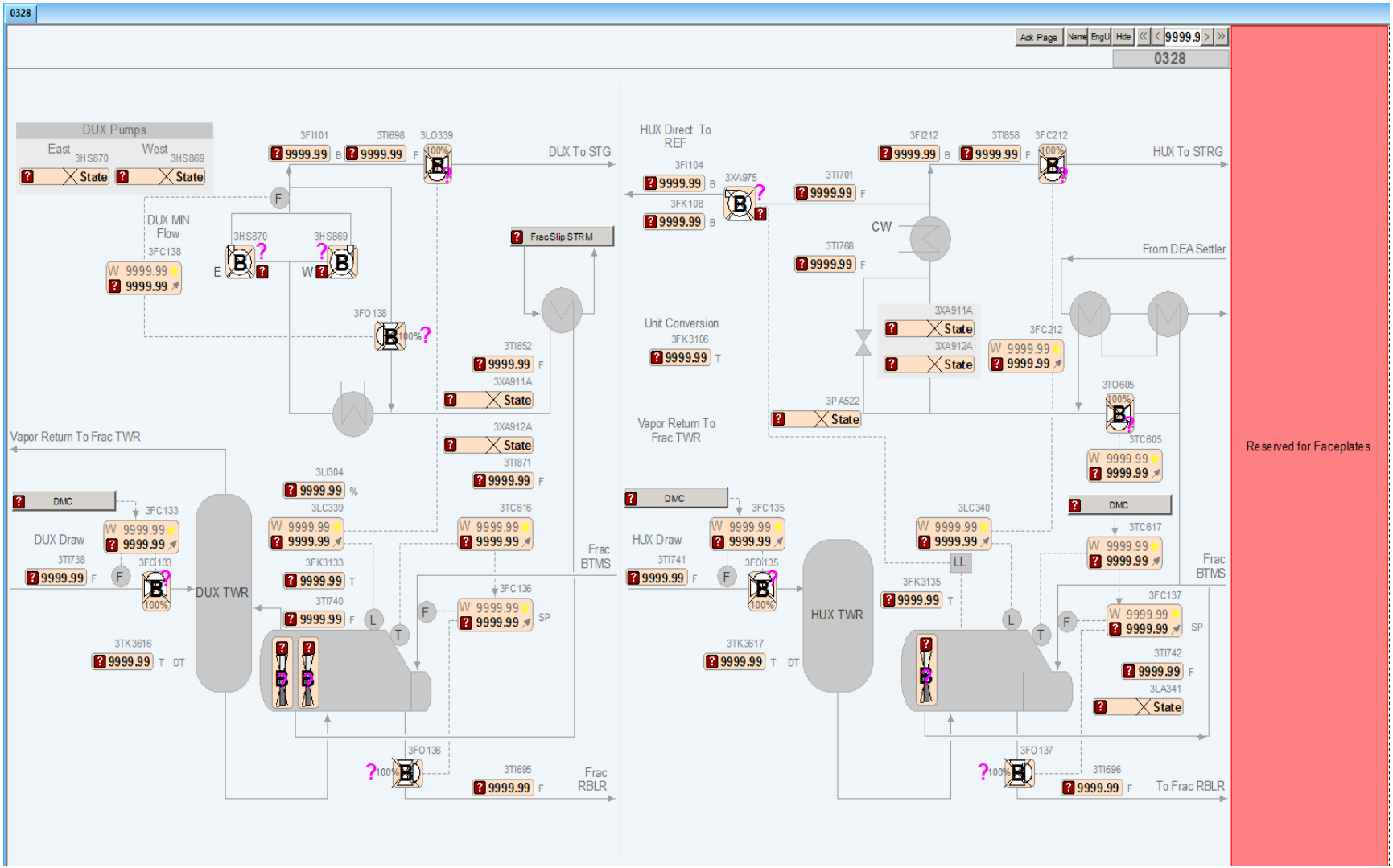

0327
GRP
BLK
R4 GAS HEATER (R4-2)
TREND
RTRN
DIR
O2
RRRR
%
RRRR
F
STACK
DRAFT
RRRRR
I
RRRR
F
CONV
R4
GAS
DUTY
RRRR
T
1
2
3
4
RRRR
F
REC H2
REC GAS
TO R4 REAC
S
RRRR
M
FG
Group
III


0327
Ack Page
Name
EngU
Hide
9999.9
0327
BLK
3AI866
O2
9999.99
%
3TI812
9999.99
F
Stack
3PI489
Draft
9999.99
I
3TI813
9999.99
F
CONV
Duty
3QK3056
9999.99
T
R3 Gas
3TI820
9999.99
F
3TI814
9999.99
F
3TI819
9999.99
F
3TI815
9999.99
F
3TI821
9999.99
F
3TI816
9999.99
F
3TI822
9999.99
F
3TI817
9999.99
F
1
2
3
4
REC H2
3TI818
9999.99
F
REC Gas To R4 REAC
S
3FI168
9999.99
M
FG
Reserved for Faceplates

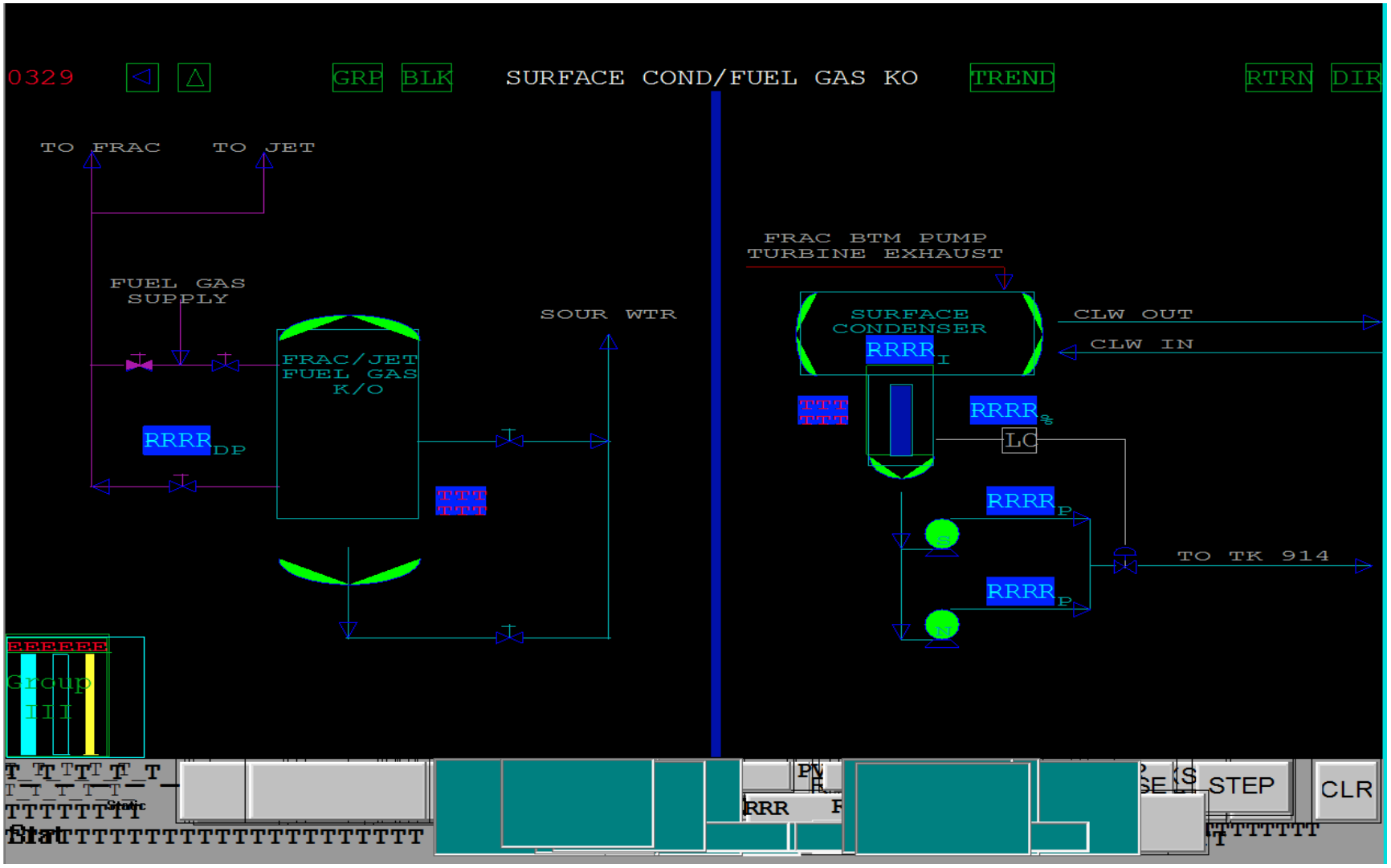
3.92 DUX & HUX DETAIL FLOWS (HF-2) (0328.DS)

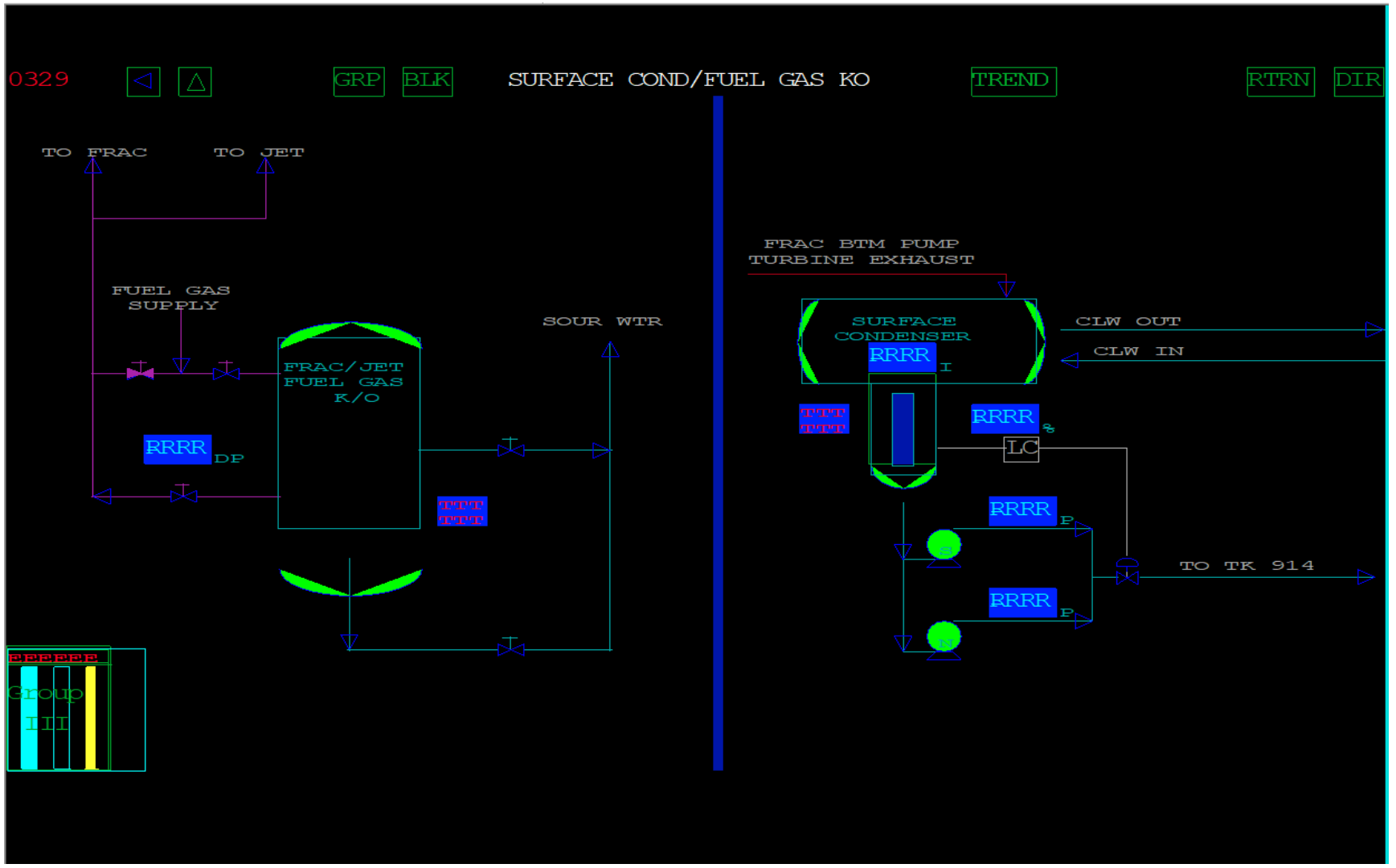


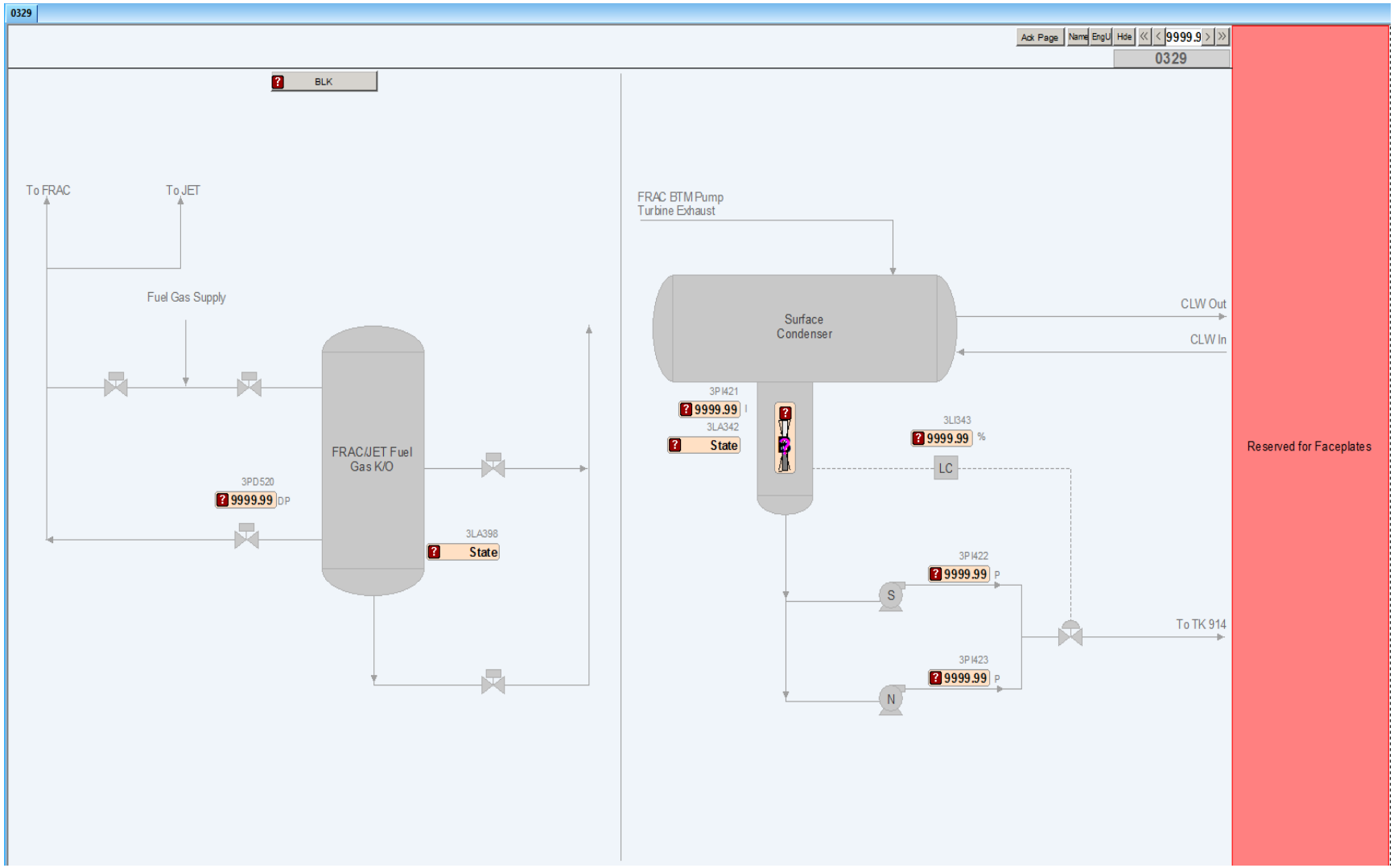

0328
GRP
BLK
DUX & HUX DETAIL FLOWS (HF-2)
TREND
RTRN
DIR
DUX PUMPS
EAST
WEST
DUX MIN FLOW
DUX TO STG
FRAC SLIP STRM
HUX DIRECT TO REF
UNIT CONVERSION
HUX TO STRG
FROM DEA SETTLER
Shape removed
Shape added
VAPOR RETURN TO FRAC TWR
DUX DRAW
HUX DRAW
DUX TWR
HUX TWR
FRAC BTMS
FRAC FRBLR
TO FRAC RBLR
Group III


0328
Ack Page
Name
Eng U
Hide
0328
DUX Pumps
East
West
3HS870
3HS869
State
DUX MIN Flow
3FC138
3FI101
3TI698
3LO339
DUX To STG
3HS870
3HS869
3FO138
Frac Slip STRM
3TI852
3XA911A
3XA912A
3TI871
3LI304
3LC339
3TC616
Vapor Return To Frac TWR
DMC
3FC133
DUX Draw
3TI738
3FO133
DUX TWR
3FK3133
3TI740
3FC136
Frac BTMS
3TK3616
3FO136
3TI695
Frac RBLR
HUX Direct To REF
3FI104
3XA975
3FK108
3TI701
3FI212
3TI858
3FC212
HUX To STRG
CW
3TI768
From DEA Settler
Unit Conversion
3FK3106
3XA911A
3XA912A
3FC212
3P A522
3TO605
Vapor Return To Frac TWR
3TC605
DMC
3FC135
HUX Draw
3TI741
3FO135
HUX TWR
3LC340
3FK3135
3TC617
LL
Frac BTMS
3FC137
3TI742
3LA341
3TK3617
3FO137
3TI696
To Frac RBLR
Reserved for Faceplates

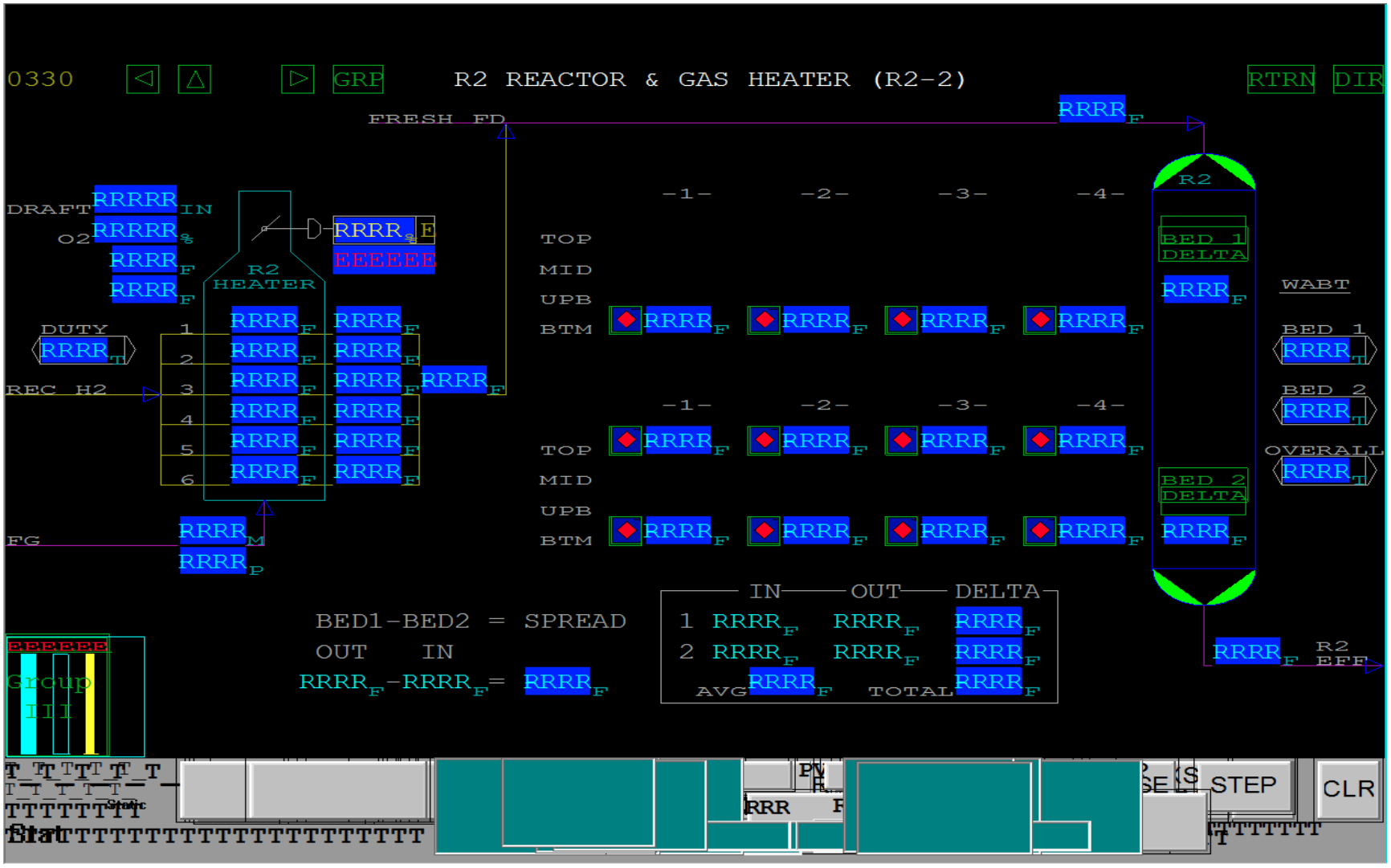
3.93 SURFACE COND/FUEL GAS KO (0329.DS)

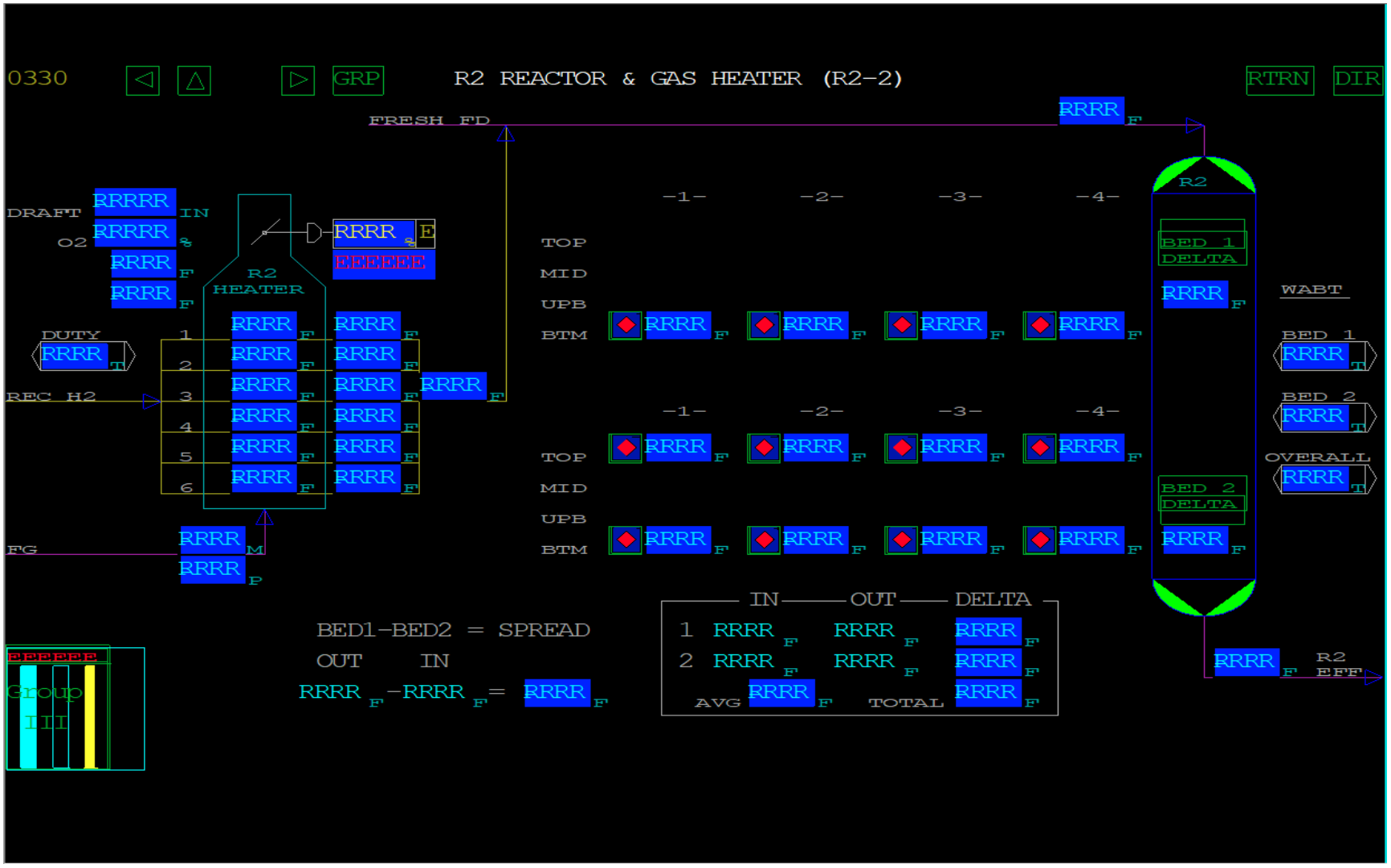


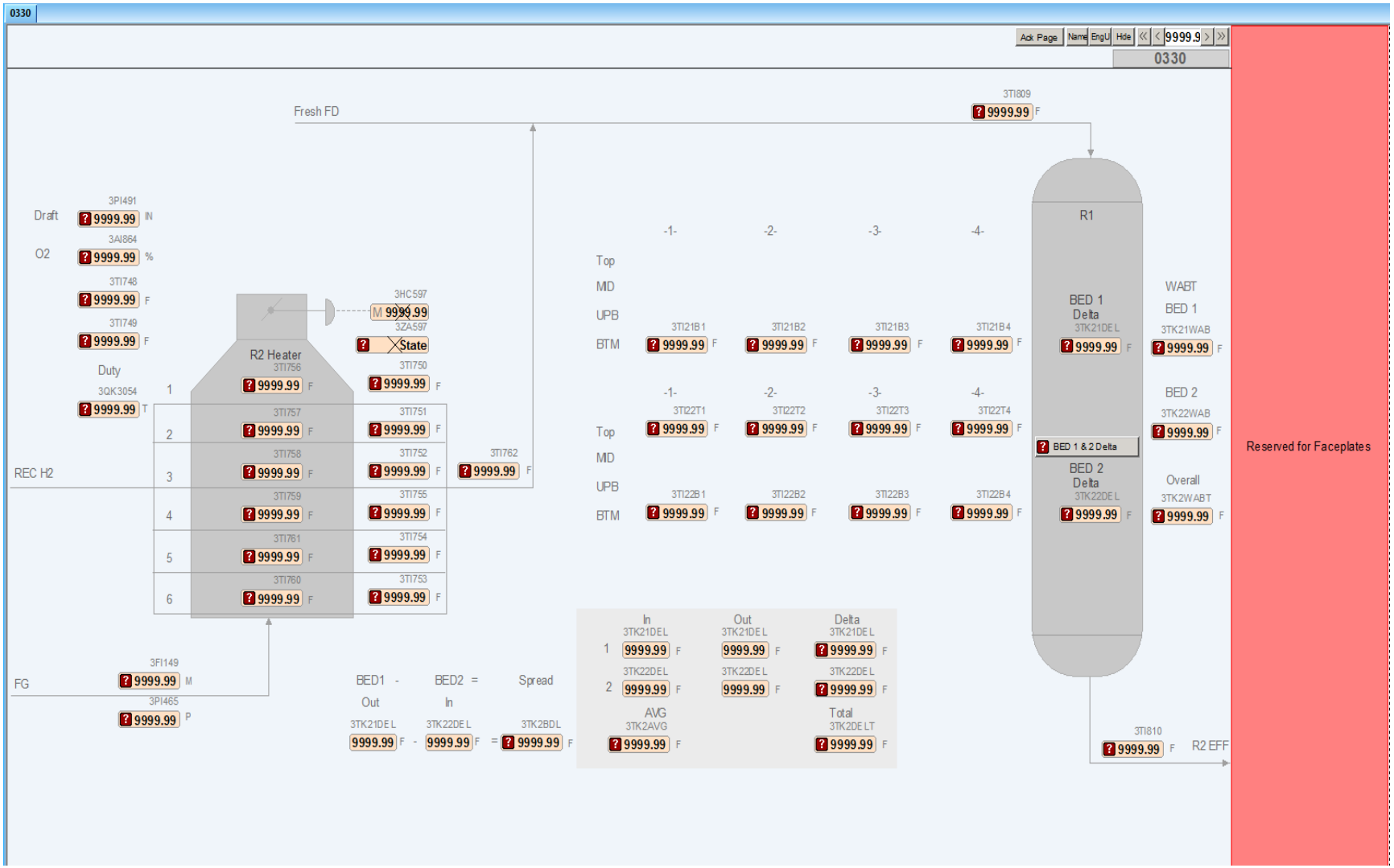

0329
GRP
BLK
SURFACE COND/FUEL GAS KO
TREND
RTRN
DIR
TO FRAC
TO JET
FUEL GAS SUPPLY
FRAC/JET FUEL GAS K/O
SOUR WTR
RRRR
DP
TTT
FRAC BTM PUMP TURBINE EXHAUST
SURFACE CONDENSER
CLW OUT
CLW IN
LC
TO TK 914
EEEEEE
Group III


0329
Ack Page
Name
EngU
Hde
9999.9
0329
BLK
To FRAC
To JET
Fuel Gas Supply
FRAC/JET Fuel Gas K/O
3PD520
9999.99
DP
3LA398
State
FRAC BTM Pump Turbine Exhaust
Surface Condenser
CLW Out
CLW In
3PI421
9999.99
I
3LA342
State
3LI343
9999.99
%
LC
3PI422
9999.99
P
S
3PI423
9999.99
P
N
To TK 914
Reserved for Faceplates

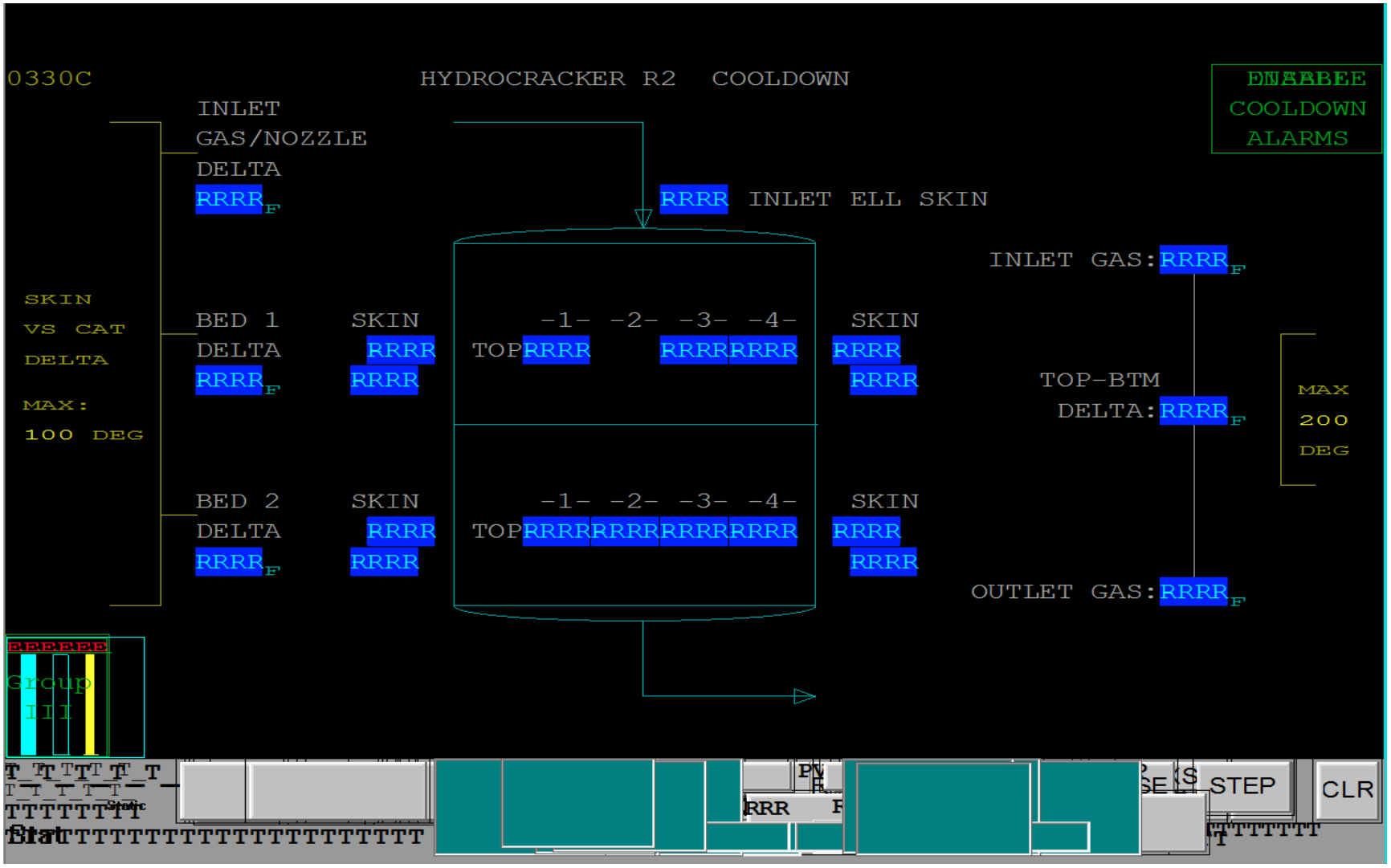
3.94 R2 REACTOR & GAS HEATER (R2-2) (0330.DS)

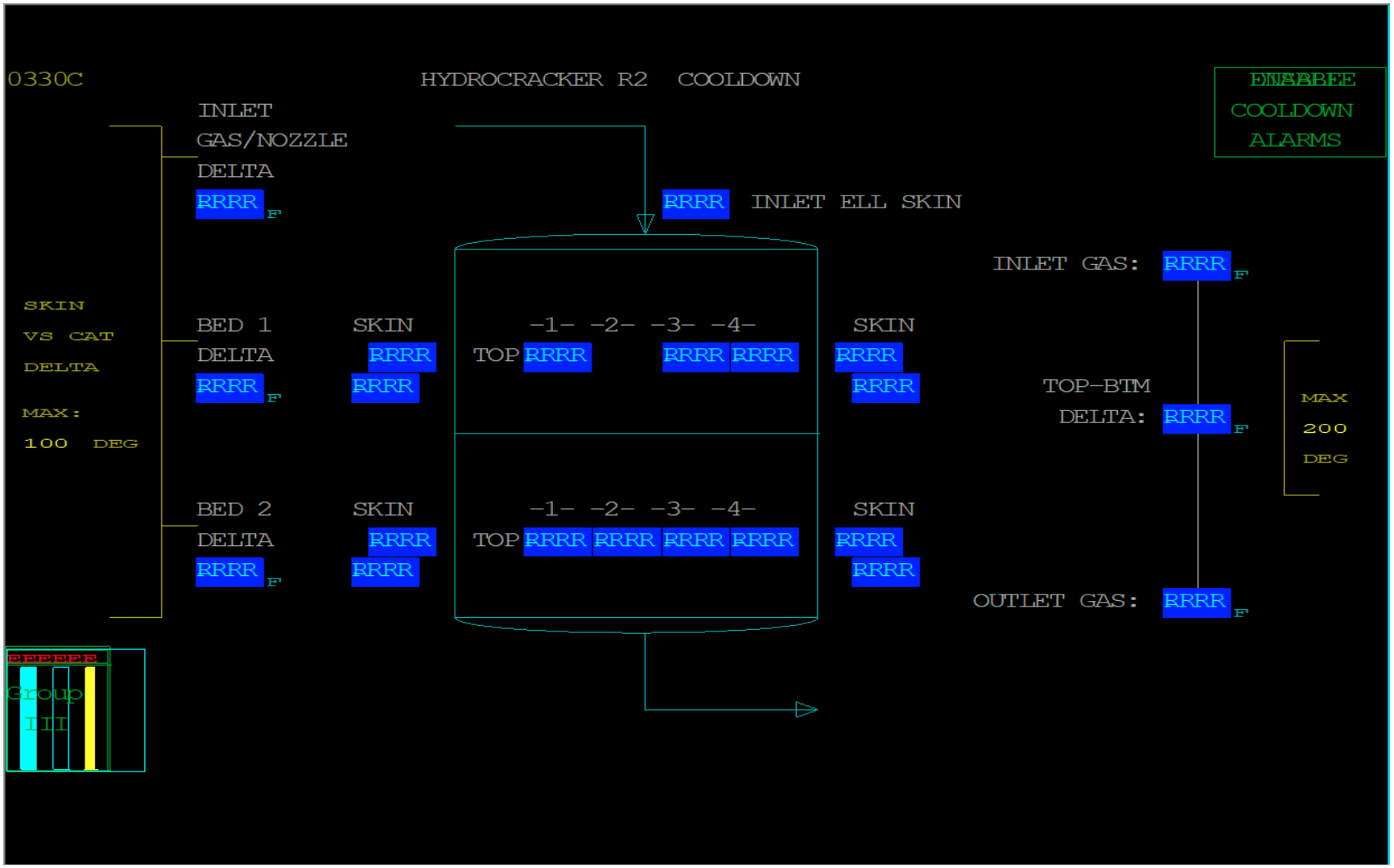


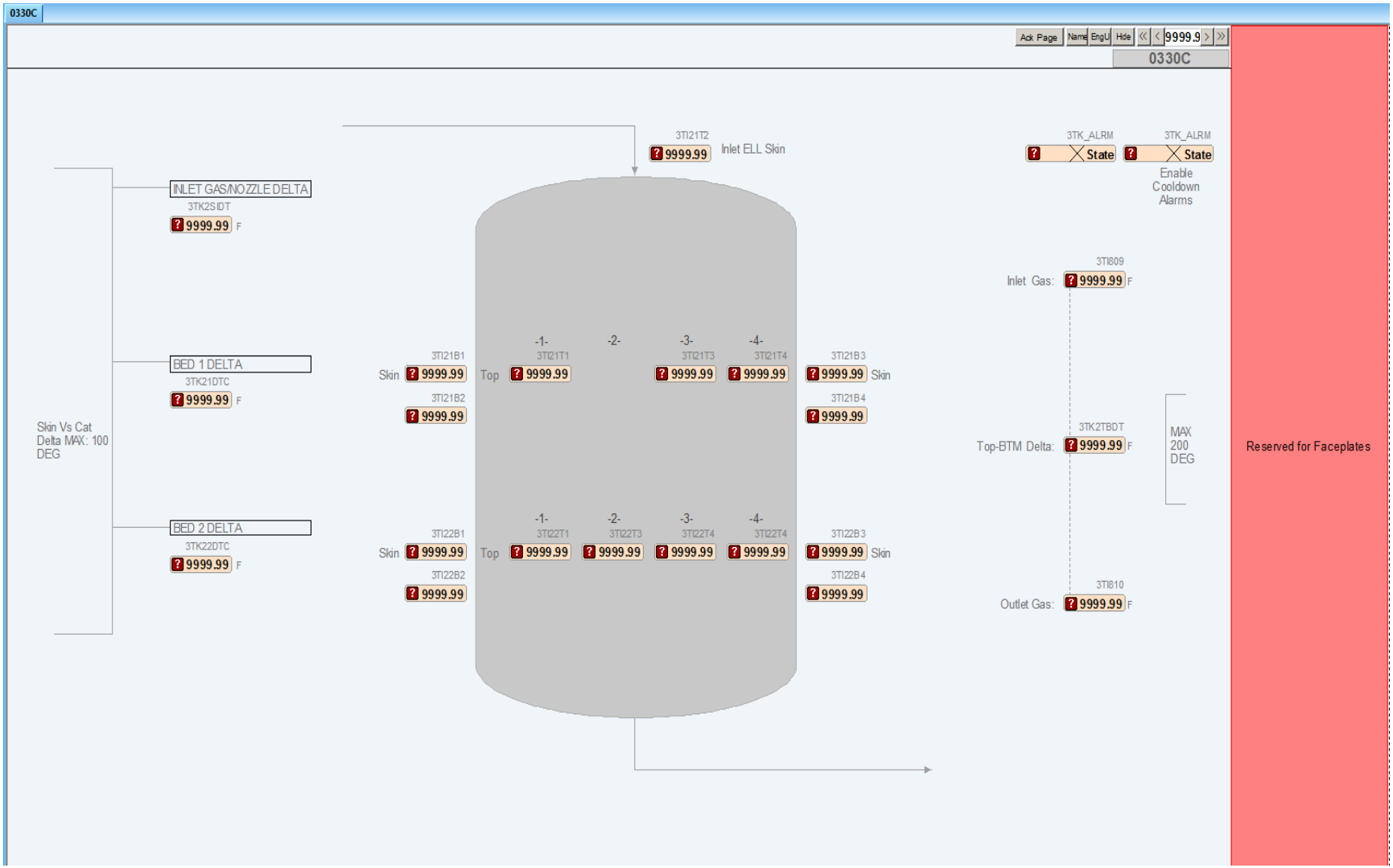

0330
GRP
R2 REACTOR & GAS HEATER (R2-2)
RTRN
DIR
FRESH FD
RRRR F
R2
DRAFT
RRRRR IN
O2
RRRR %
RRRR F
RRRR F
R2
HEATER
RRRR E
EEEEEE
-1-
-2-
-3-
-4-
TOP
MID
UPB
BTM
BED 1
DELTA
WABT
BED 1
RRRR T
DUTY
RRRR T
REC H2
1
2
3
4
5
6
BED 2
DELTA
BED 2
RRRR T
OVERALL
RRRR T
FG
RRRR M
RRRR P
BED1-BED2 = SPREAD
OUT IN
RRRR F -RRRR F = RRRR F
IN OUT DELTA
1 RRRR F RRRR F RRRR F
2 RRRR F RRRR F RRRR F
AVG RRRR F TOTAL RRRR F
R2
EFF
EEEEEE
Group
III


0330
Ack Page
Name
Eng U
Hide
9999.9
0330
Fresh FD
3TI809
9999.99 F
3PI491
Draft
9999.99 IN
3AI864
O2
9999.99 %
3TI748
9999.99 F
3TI749
9999.99 F
Duty
3QK3054
9999.99 T
3HC597
M 9999.99
3ZA597
State
R2 Heater
3TI756
9999.99 F
3TI750
9999.99 F
3TI757
9999.99 F
3TI751
9999.99 F
3TI758
9999.99 F
3TI752
9999.99 F
3TI762
9999.99 F
REC H2
3TI759
9999.99 F
3TI755
9999.99 F
3TI761
9999.99 F
3TI754
9999.99 F
3TI760
9999.99 F
3TI753
9999.99 F
1
2
3
4
5
6
FG
3FI149
9999.99 M
3PI465
9999.99 P
BED1 - BED2 = Spread
Out In
3TK21DEL 3TK22DEL 3TK2BDL
9999.99 F - 9999.99 F = 9999.99 F
-1- -2- -3- -4-
Top
MD
UPB
BTM
3TI21B1 3TI21B2 3TI21B3 3TI21B4
9999.99 F
-1- -2- -3- -4-
Top
MD
UPB
BTM
3TI22T1 3TI22T2 3TI22T3 3TI22T4
9999.99 F
3TI22B1 3TI22B2 3TI22B3 3TI22B4
9999.99 F
In Out Delta
3TK21DEL 3TK21DEL 3TK21DEL
1 9999.99 F 9999.99 F 9999.99 F
3TK22DEL 3TK22DEL 3TK22DEL
2 9999.99 F 9999.99 F 9999.99 F
AVG 3TK2AVG
9999.99 F
Total 3TK2DELT
9999.99 F
R1
BED 1 Delta 3TK21DEL
9999.99 F
BED 1 & 2 Delta
BED 2 Delta 3TK22DEL
9999.99 F
WABT BED 1 3TK21WAB
9999.99 F
BED 2 3TK22WAB
9999.99 F
Overall 3TK2WABT
9999.99 F
3TI810
9999.99 F
R2 EFF
Reserved for Faceplates

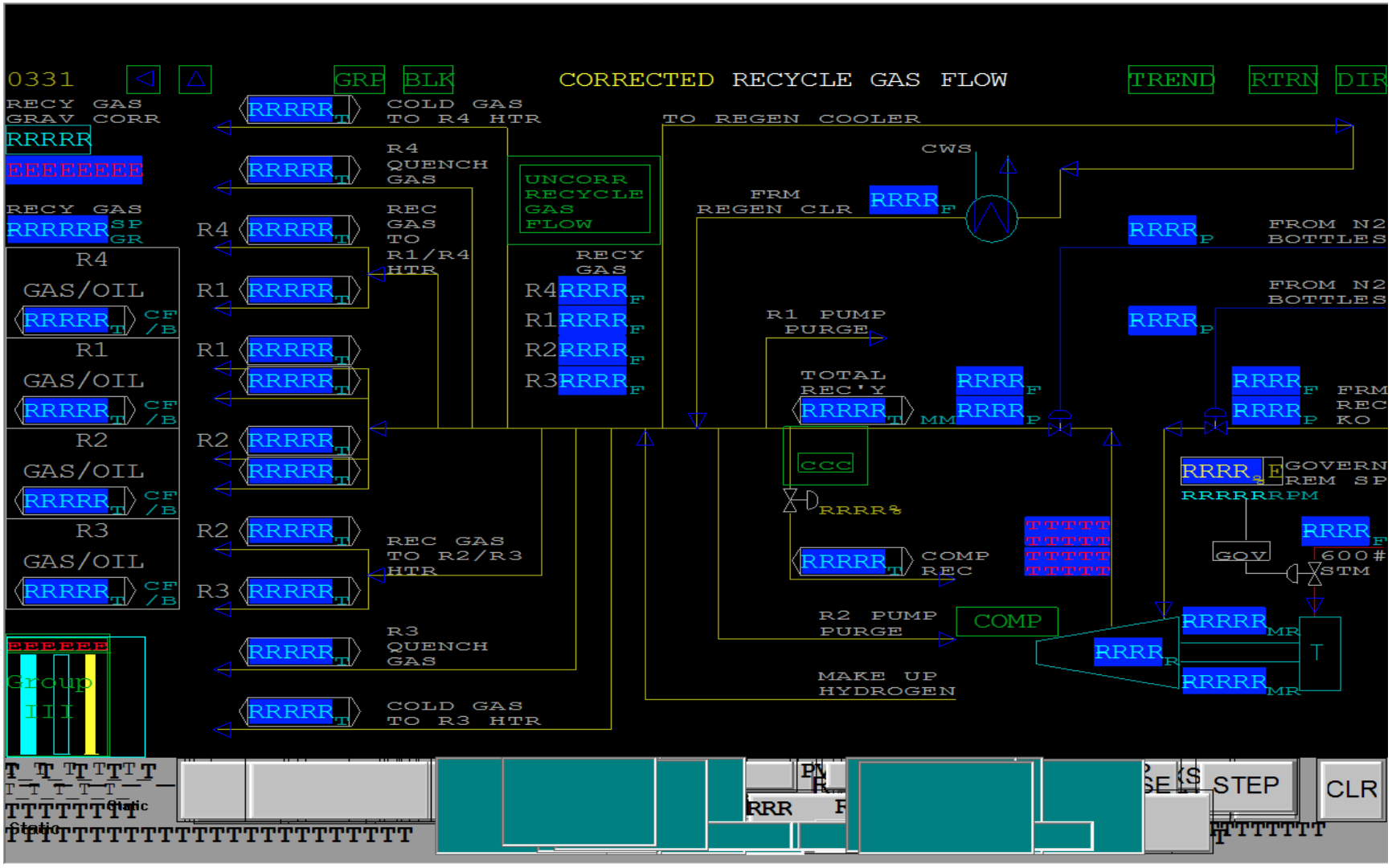
3.95 HYDROCRACKER R2 COOLDOWN (0330C.DS)

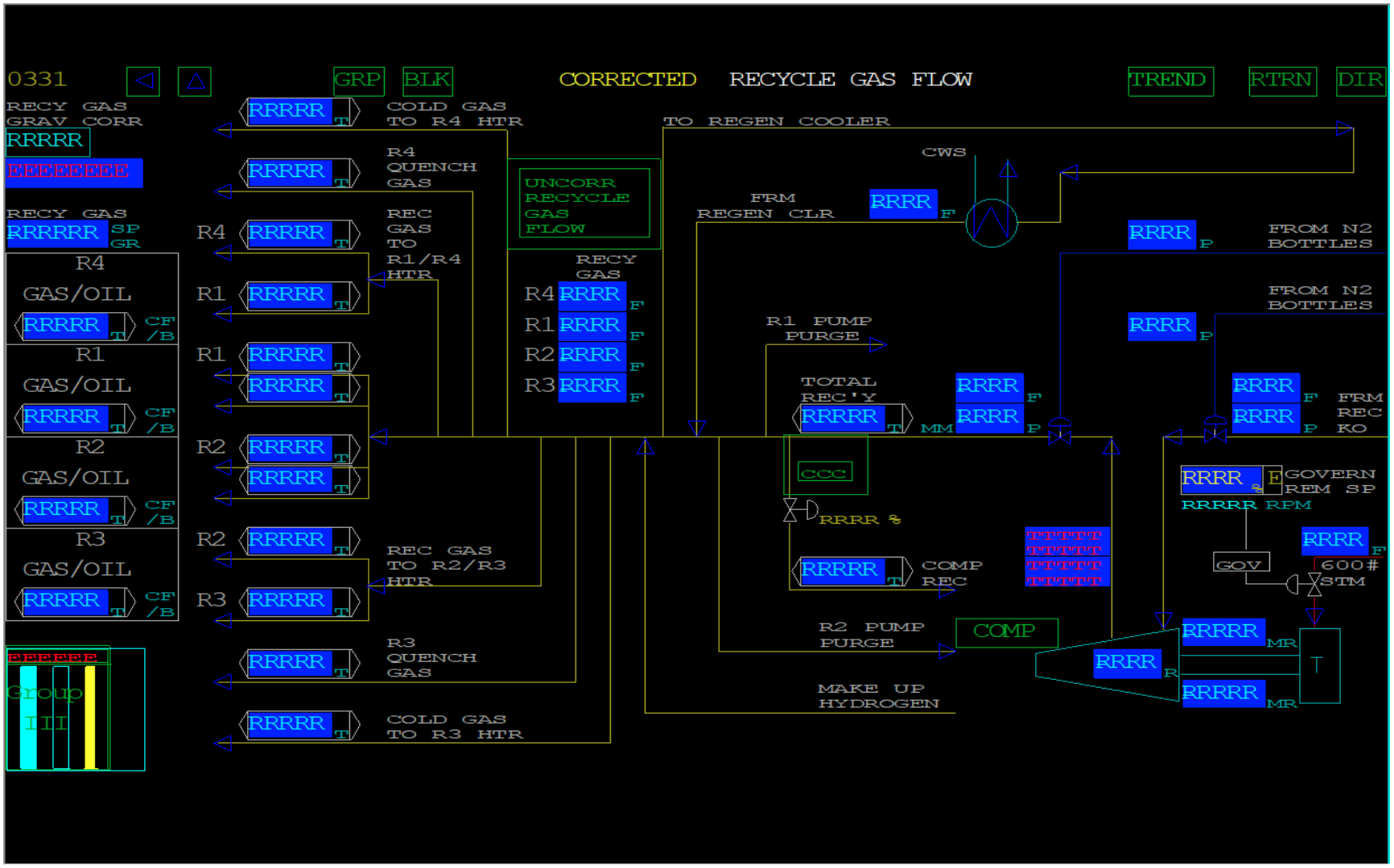


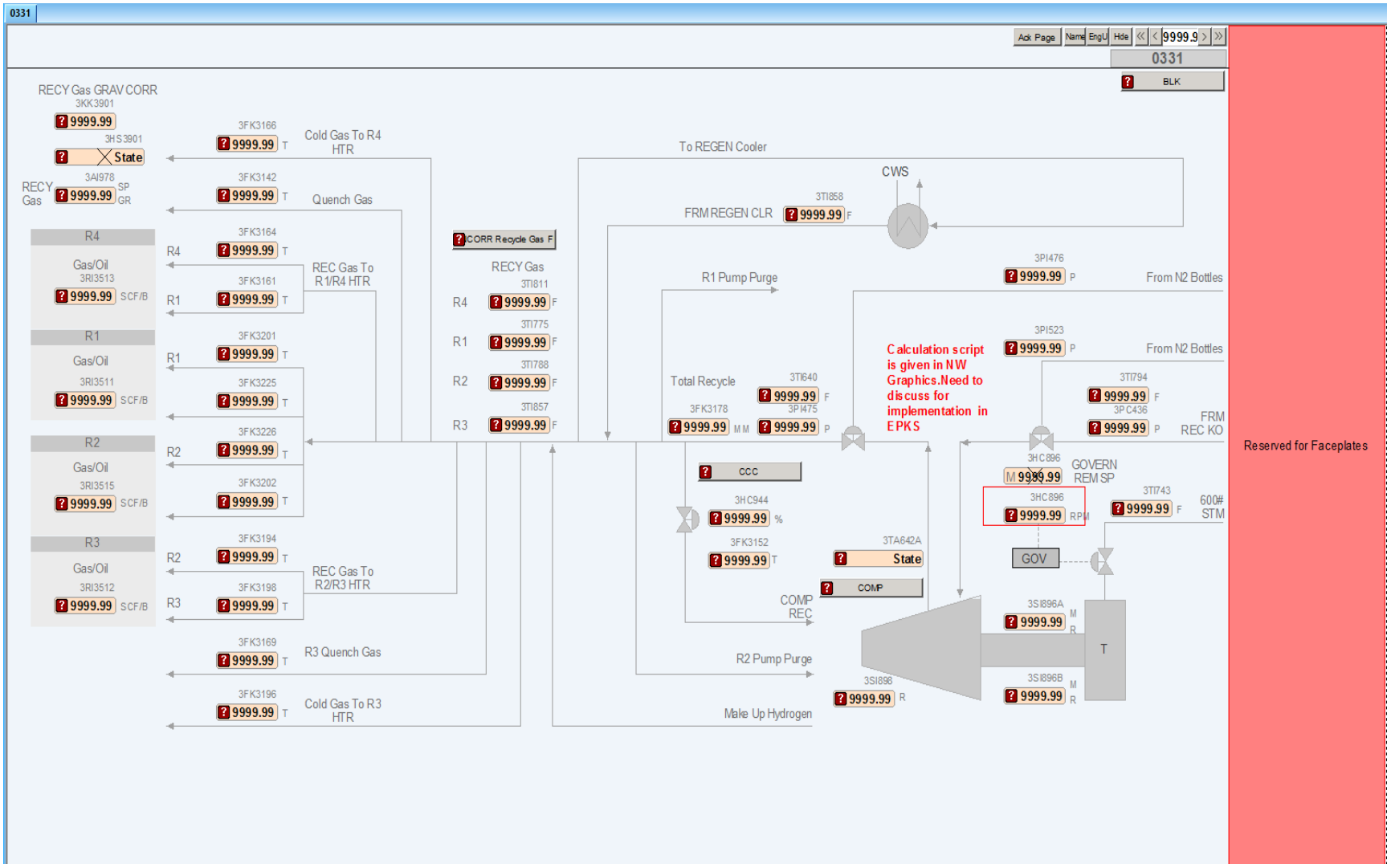

0330C
HYDROCRACKER R2 COOLDOWN
ENABLE
COOLDOWN
ALARMS
INLET
GAS/NOZZLE
DELTA
RRRR F
RRRR INLET ELL SKIN
INLET GAS: RRRR F
SKIN
VS CAT
DELTA
MAX:
100 DEG
BED 1
DELTA
RRRR F
SKIN
RRRR
RRRR
-1- -2- -3- -4-
TOP RRRR
RRRR RRRR
SKIN
RRRR
RRRR
TOP-BTM
DELTA: RRRR F
MAX
200
DEG
BED 2
DELTA
RRRR F
SKIN
RRRR
RRRR
-1- -2- -3- -4-
TOP RRRR RRRR RRRR RRRR
SKIN
RRRR
RRRR
OUTLET GAS: RRRR F
EEEEEE
Group
III


0330C
Ack Page
Name
Eng U
Hide
9999.9
0330C
3TI21T2
9999.99
Inlet ELL Skin
3TK_ALRM
State
3TK_ALRM
State
Enable Cooldown Alarms
INLET GAS/NOZZLE DELTA
3TK2SIDT
9999.99 F
BED 1 DELTA
3TK21DTC
9999.99 F
BED 2 DELTA
3TK22DTC
9999.99 F
Skin Vs Cat Delta MAX: 100 DEG
-1-
-2-
-3-
-4-
3TI21B1
Skin 9999.99
3TI21T1
Top 9999.99
3TI21T3
9999.99
3TI21T4
9999.99
3TI21B3
9999.99 Skin
3TI21B2
9999.99
3TI21B4
9999.99
3TI22B1
Skin 9999.99
3TI22T1
Top 9999.99
3TI22T3
9999.99
3TI22T4
9999.99
3TI22T4
9999.99
3TI22B3
9999.99 Skin
3TI22B2
9999.99
3TI22B4
9999.99
3TI809
Inlet Gas: 9999.99 F
3TK2TBDT
Top-BTM Delta: 9999.99 F
MAX 200 DEG
3TI810
Outlet Gas: 9999.99 F
Reserved for Faceplates

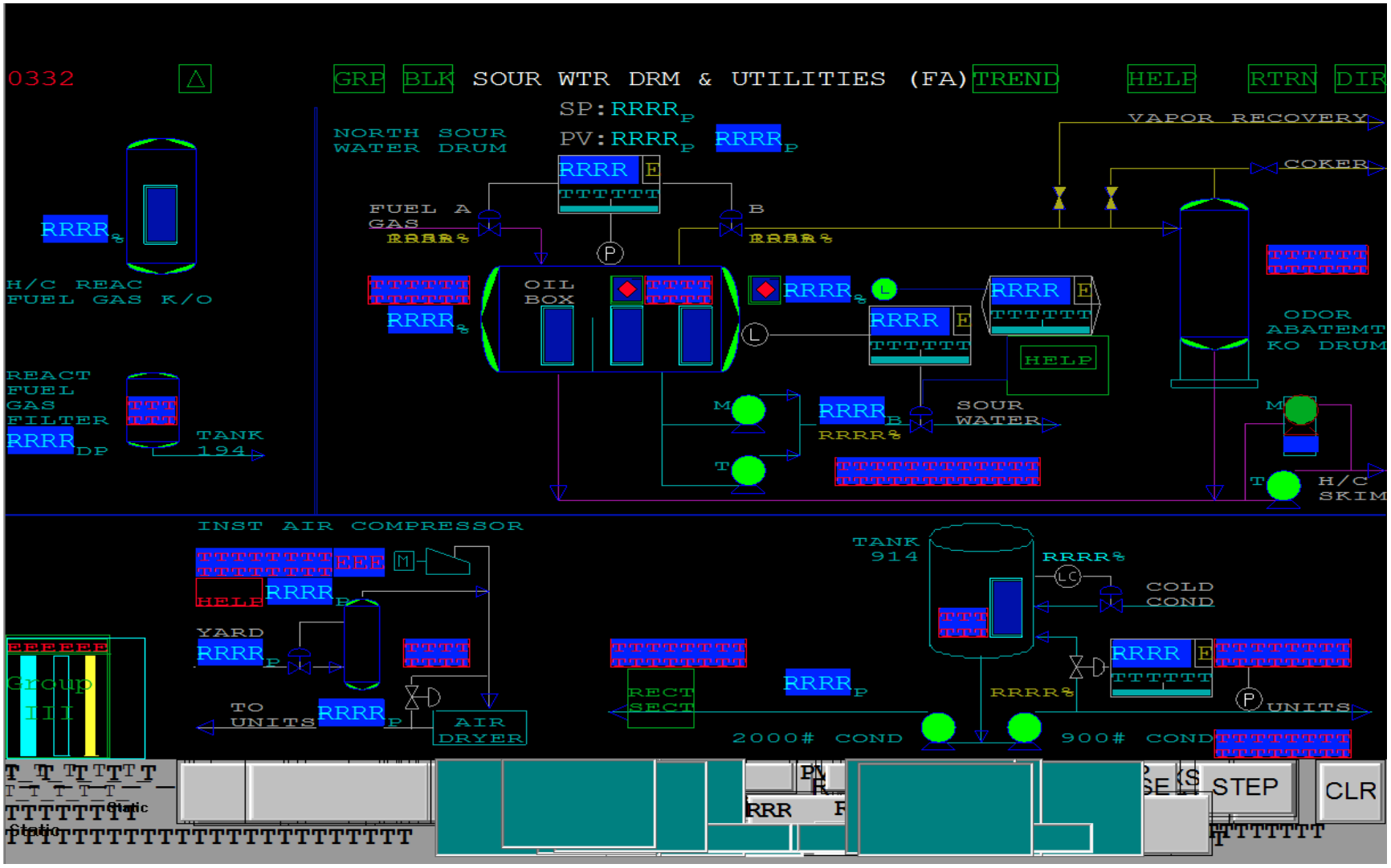
3.96 CORRECTED RECYCLE GAS FLOW (0331.DS)

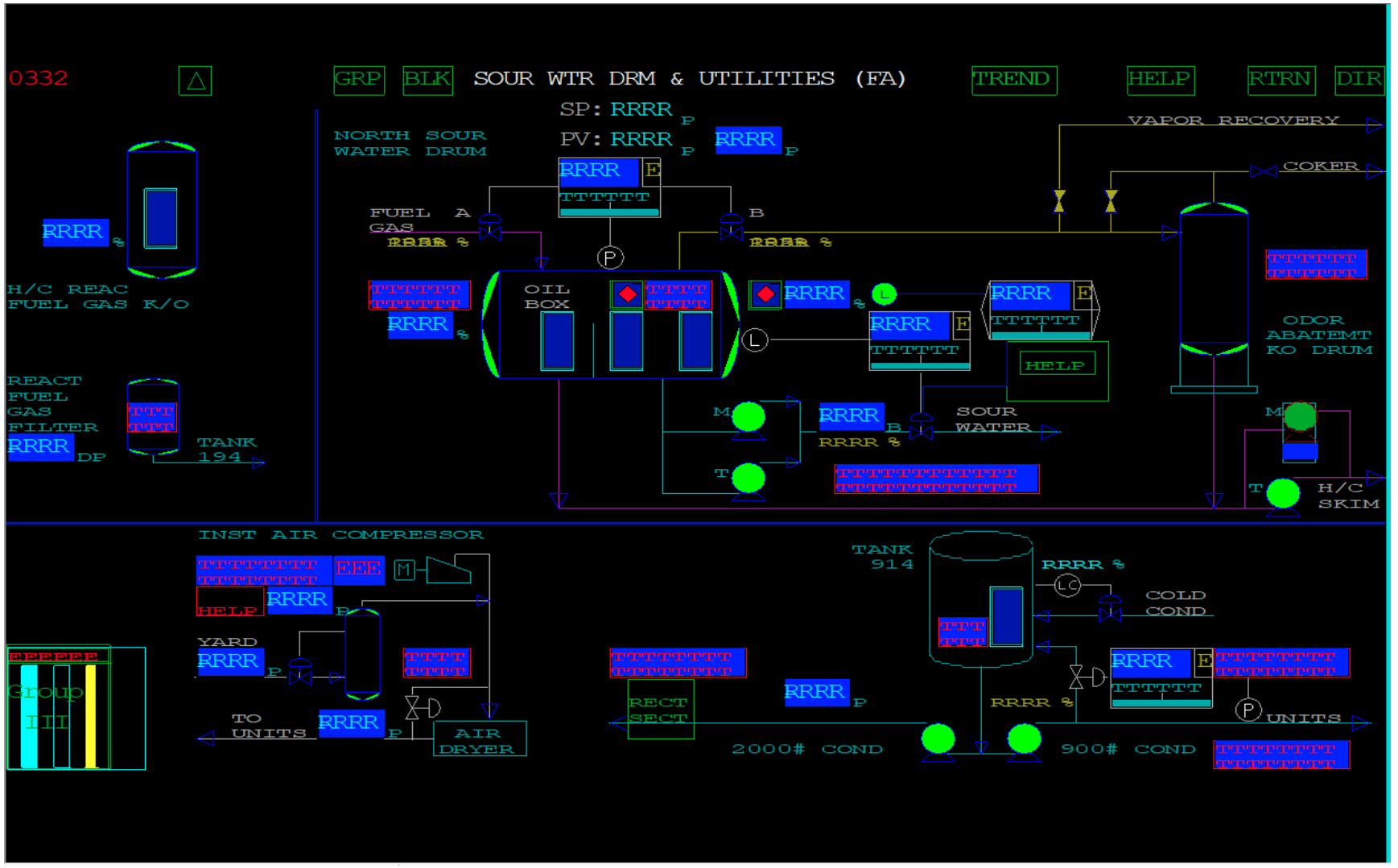


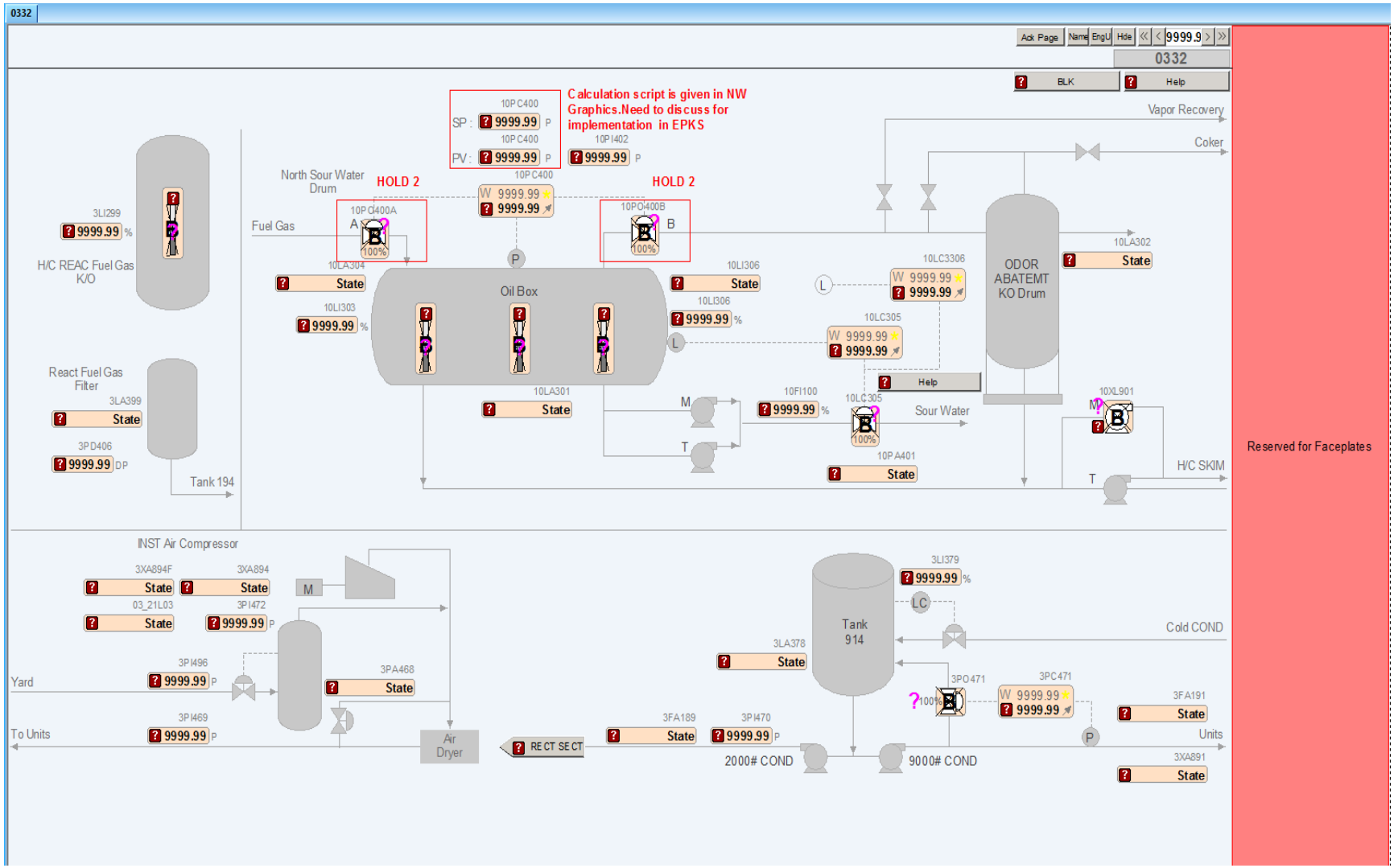

0331
GRP
BLK
CORRECTED RECYCLE GAS FLOW
TREND
RTRN
DIR
RECY GAS GRAV CORR
RRRRR
EEEEEEEE
RECY GAS
RRRRRR SP GR
R4 GAS/OIL
R1 GAS/OIL
R2 GAS/OIL
R3 GAS/OIL
RRRRR T
CF /B
COLD GAS TO R4 HTR
R4 QUENCH GAS
REC GAS TO R1/R4 HTR
REC GAS TO R2/R3 HTR
R3 QUENCH GAS
COLD GAS TO R3 HTR
UNCORR RECYCLE GAS FLOW
RECY GAS
R4 RRRR F
R1 RRRR F
R2 RRRR F
R3 RRRR F
TO REGEN COOLER
CWS
FRM REGEN CLR
RRRR F
RRRR P
FROM N2 BOTTLES
R1 PUMP PURGE
TOTAL REC'Y
RRRRR T
MM
CCC
RRRR %
RRRRR T
COMP REC
TTTTT
R2 PUMP PURGE
COMP
MAKE UP HYDROGEN
FRM REC KO
GOVERN REM SP
RRRRR RPM
GOV
600# STM
RRRRR MR
RRRR R
T
GROUP III


0331
Ack Page
Name
Eng U
Hide
9999.9
0331
BLK
RECY Gas GRAV CORR
3KK3901
9999.99
3HS3901
State
RECY Gas
3AI978
9999.99
SP
GR
3FK3166
9999.99
T
Cold Gas To R4 HTR
3FK3142
9999.99
T
Quench Gas
R4
Gas/Oil
3RI3513
9999.99
SCF/B
3FK3164
9999.99
T
R4
3FK3161
9999.99
T
R1
REC Gas To R1/R4 HTR
R1
Gas/Oil
3RI3511
9999.99
SCF/B
3FK3201
9999.99
T
R1
3FK3225
9999.99
T
R2
Gas/Oil
3RI3515
9999.99
SCF/B
3FK3226
9999.99
T
R2
3FK3202
9999.99
T
R3
Gas/Oil
3RI3512
9999.99
SCF/B
3FK3194
9999.99
T
R2
3FK3198
9999.99
T
R3
REC Gas To R2/R3 HTR
3FK3169
9999.99
T
R3 Quench Gas
3FK3196
9999.99
T
Cold Gas To R3 HTR
CORR Recycle Gas F
RECY Gas
R4
3TI811
9999.99
F
R1
3TI775
9999.99
F
R2
3TI788
9999.99
F
R3
3TI857
9999.99
F
To REGEN Cooler
CWS
FRM REGEN CLR
3TI858
9999.99
F
R1 Pump Purge
3PI476
9999.99
P
From N2 Bottles
3PI523
9999.99
P
From N2 Bottles
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
Total Recycle
3TI640
9999.99
F
3FK3178
9999.99
MM
3PI475
9999.99
P
3TI794
9999.99
F
3PC436
9999.99
P
FRM REC KO
CCC
3HC896
M 9999.99
GOVERN REM SP
3HC896
9999.99
RPM
3TI743
9999.99
F
600# STM
3HC944
9999.99
%
3FK3152
9999.99
T
3TA642A
State
COMP
GOV
COMP REC
3SI896A
9999.99
M
R
T
3SI898
9999.99
R
3SI896B
9999.99
M
R
R2 Pump Purge
Make Up Hydrogen
Reserved for Faceplates

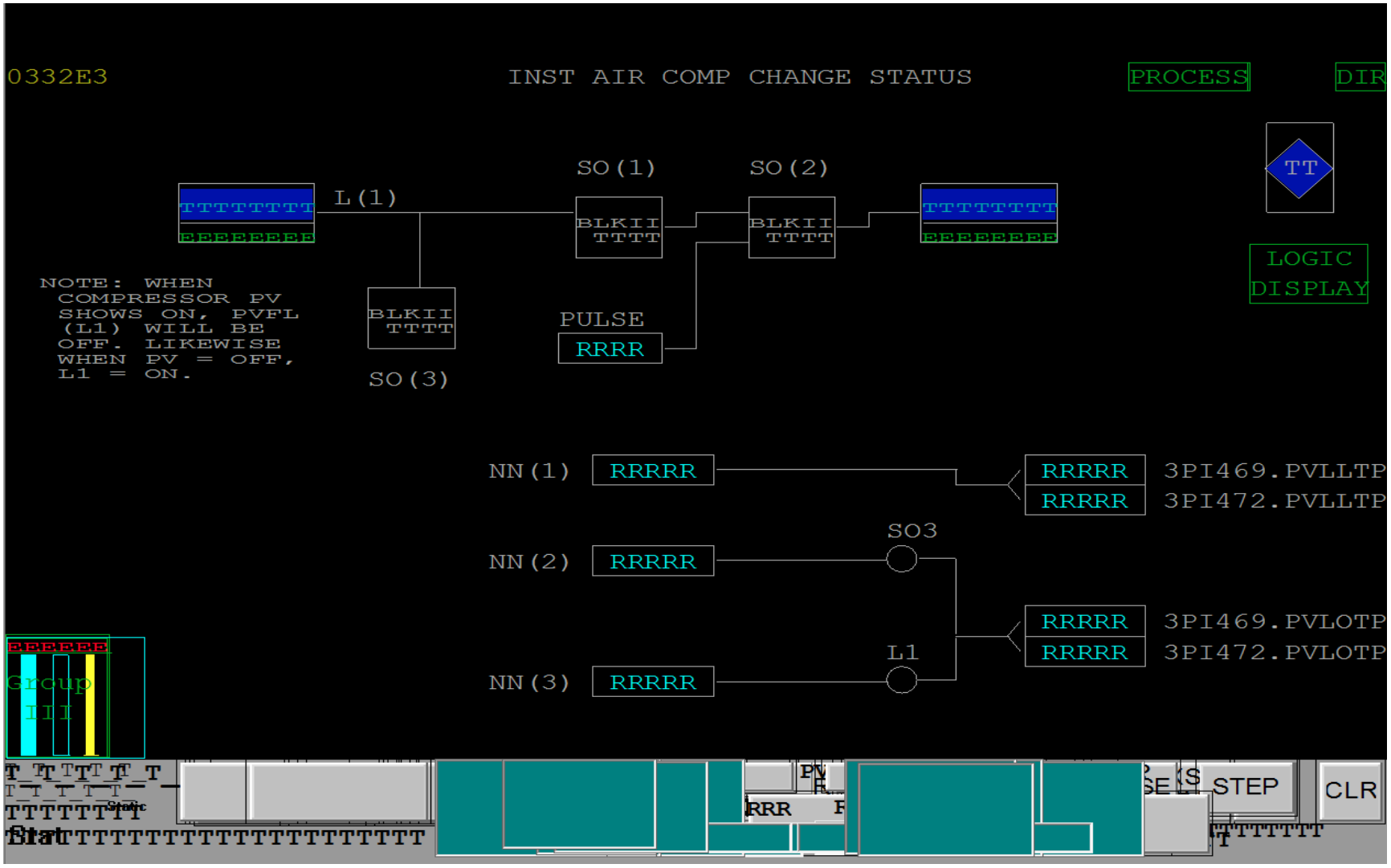
3.97 SOUR WTR DRM & UTILITIES (FA) (0332.DS)

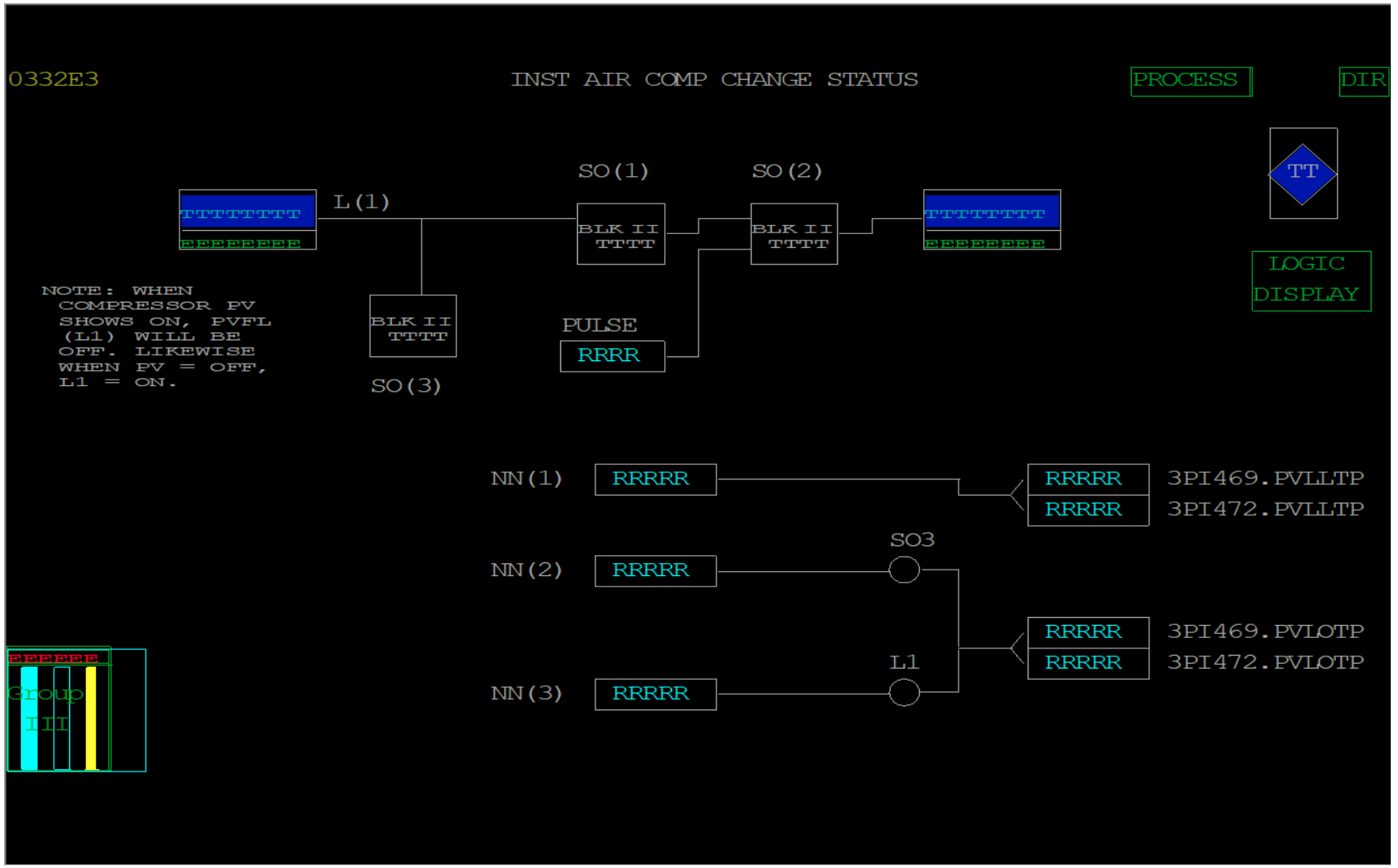


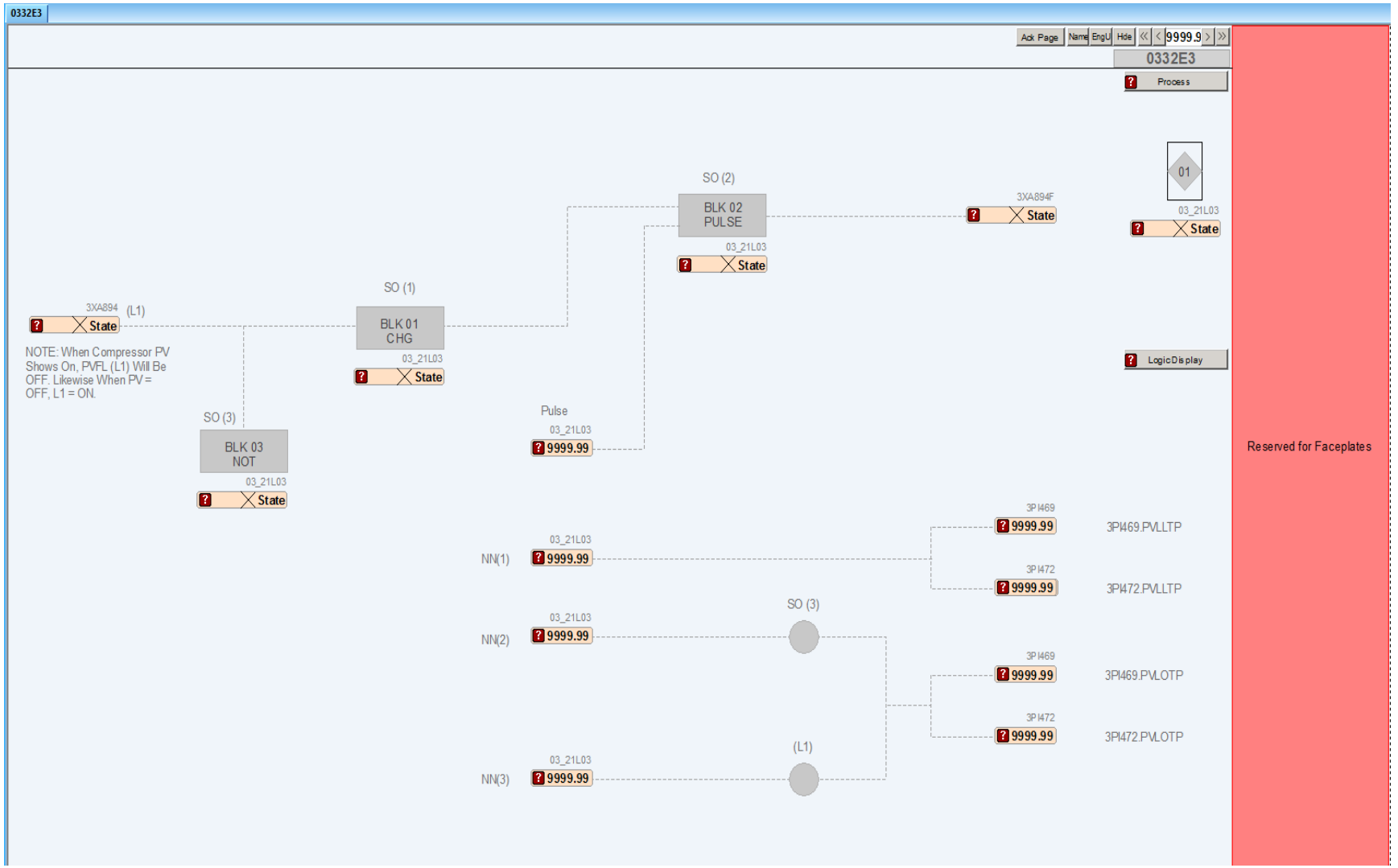

0332
GRP
BLK
SOUR WTR DRM & UTILITIES (FA)
TREND
HELP
RTRN
DIR
SP: RRRR
PV: RRRR
NORTH SOUR WATER DRUM
VAPOR RECOVERY
COKER
FUEL A GAS
B
OIL BOX
H/C REAC FUEL GAS K/O
ODOR ABATEMT KO DRUM
REACT FUEL GAS FILTER
TANK 194
SOUR WATER
H/C SKIM
INST AIR COMPRESSOR
YARD
TO UNITS
AIR DRYER
TANK 914
COLD COND
RECT SECT
2000# COND
900# COND
UNITS
Group III


0332
Ack Page
Name
EngU
Hde
9999.9
0332
BLK
Help
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
10PC400
SP : 9999.99 P
10PC400
PV : 9999.99 P
10PI402
9999.99 P
Vapor Recovery
Coker
North Sour Water Drum
HOLD 2
10PC400
W 9999.99
9999.99
HOLD 2
10PC400A
A
100%
10PC400B
B
100%
Fuel Gas
3LI299
9999.99 %
H/C REAC Fuel Gas K/O
10LA304
State
10LI303
9999.99 %
Oil Box
10LI306
State
10LI306
9999.99 %
10LC3306
W 9999.99
9999.99
10LC305
W 9999.99
9999.99
ODOR ABATEMT KO Drum
10LA302
State
Help
10LA301
State
10FI100
9999.99 %
10LC305
100%
Sour Water
10XL901
10PA401
State
H/C SKIM
React Fuel Gas Filter
3LA399
State
3PD406
9999.99 DP
Tank 194
Reserved for Faceplates
INST Air Compressor
3XA894F
State
3XA894
State
03_21L03
State
3PI472
9999.99 P
3PI496
9999.99 P
Yard
3PA468
State
3PI469
9999.99 P
To Units
Air Dryer
RECT SECT
3FA189
State
3PI470
9999.99 P
2000# COND
9000# COND
3LA378
State
Tank 914
3LI379
9999.99 %
LC
Cold COND
3PO471
100%
3PC471
W 9999.99
9999.99
3FA191
State
Units
3XA891
State

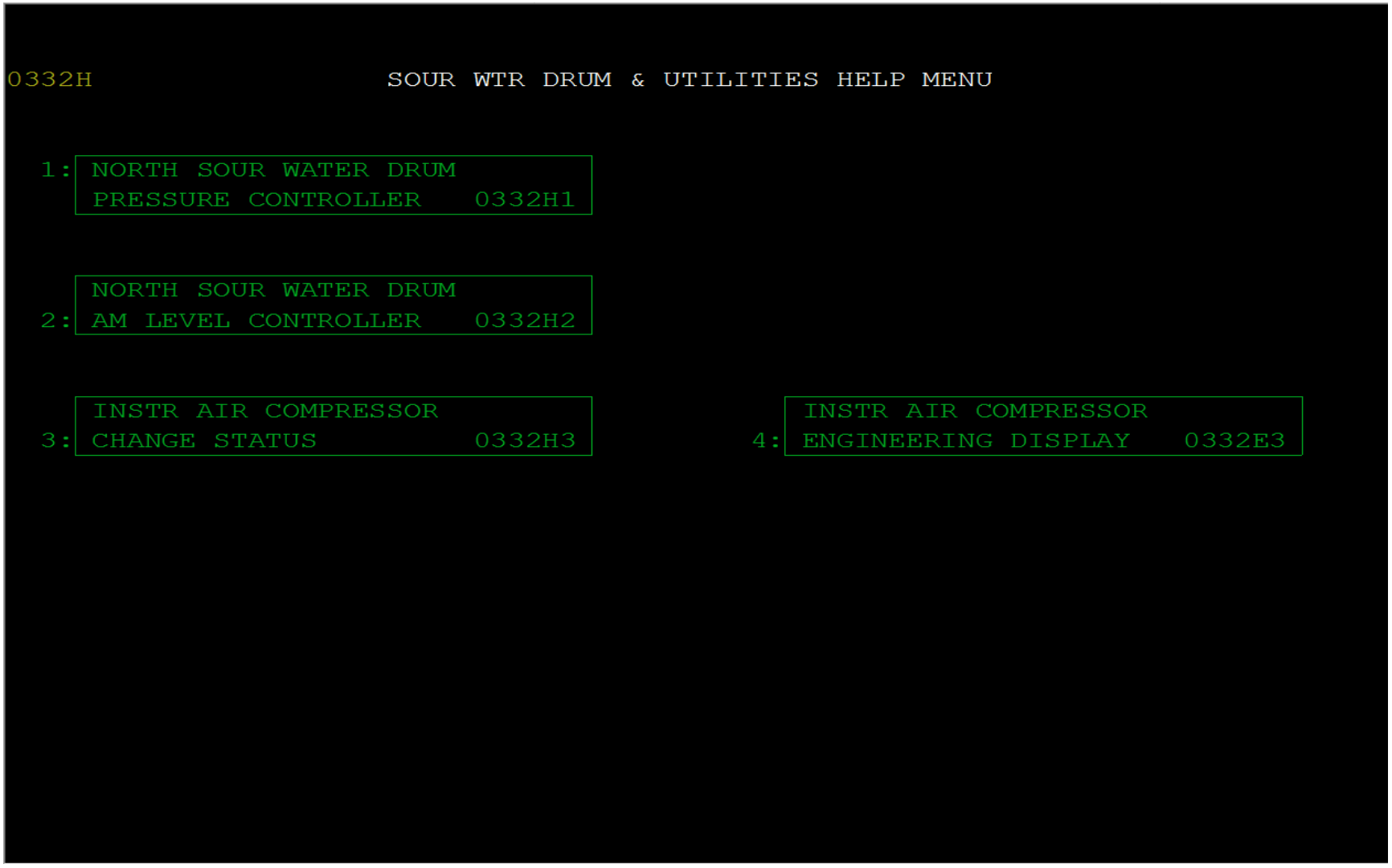
3.98 INST AIR COMP CHANGE STATUS (0332E3.DS)

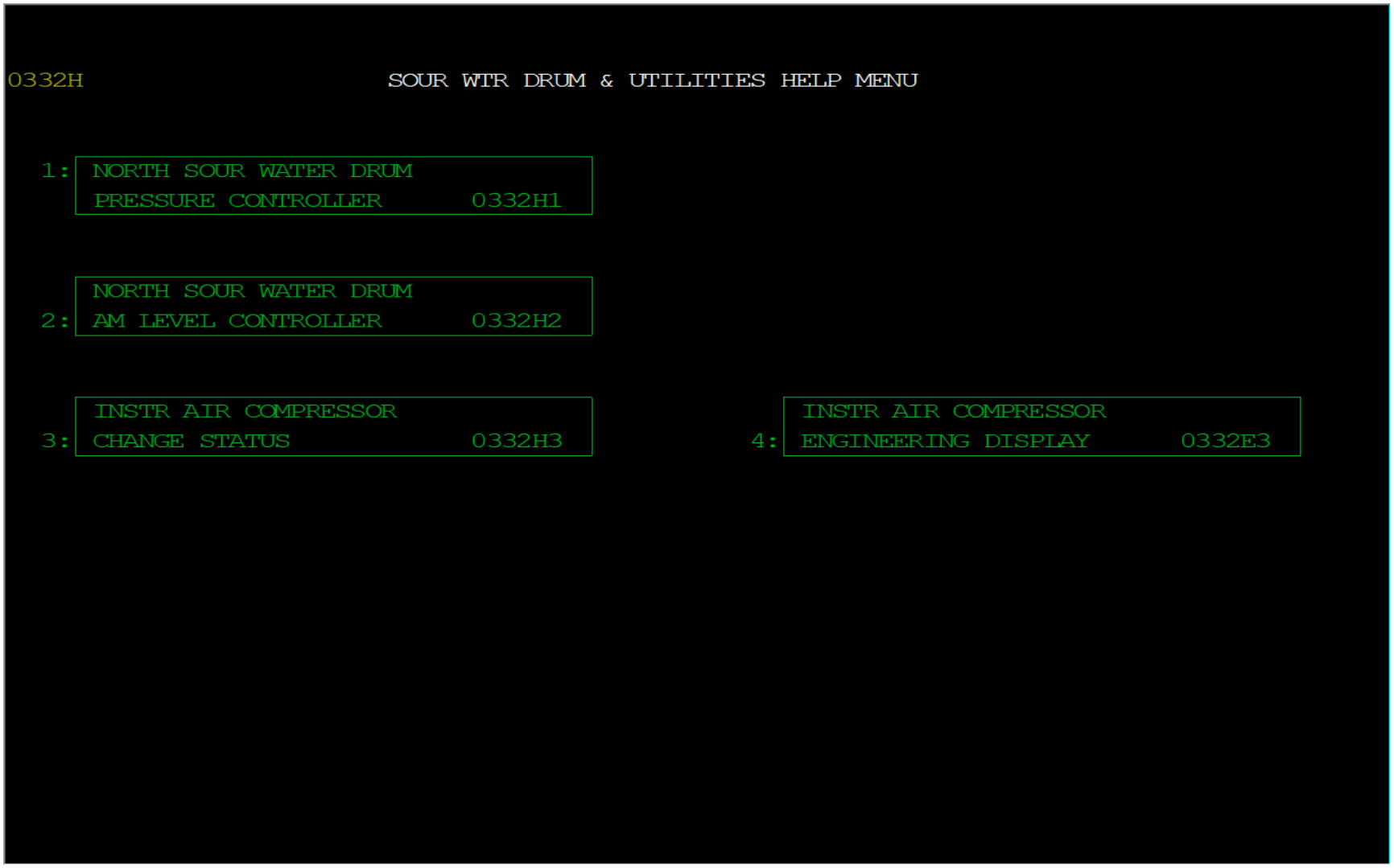


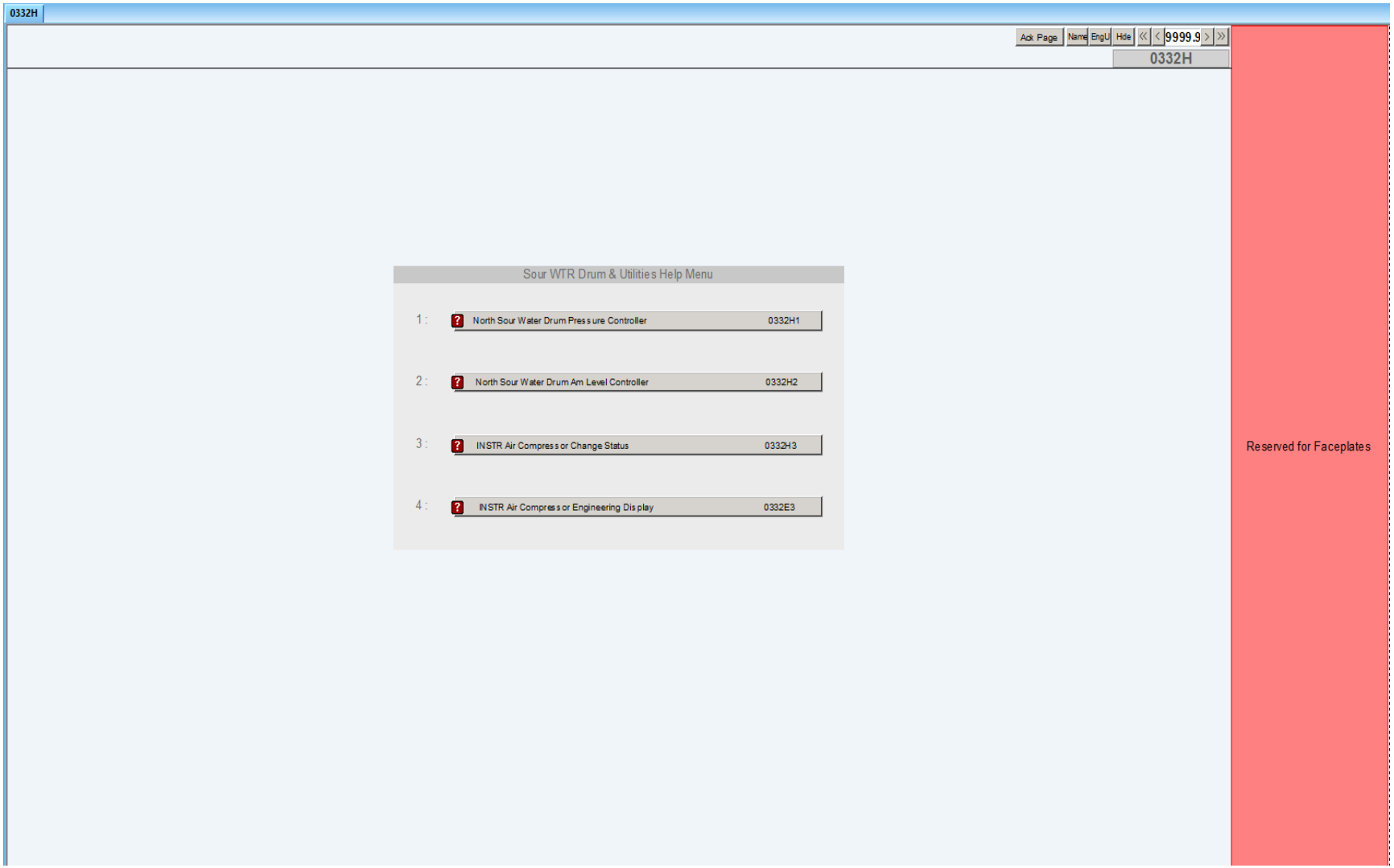

0332E3
INST AIR COMP CHANGE STATUS
PROCESS
DIR
TT
LOGIC DISPLAY
SO(1)
SO(2)
L(1)
TTTTTTTT
EEEEEEEE
BLK II TTTT
BLK II TTTT
TTTTTTTT
EEEEEEEE
NOTE: WHEN COMPRESSOR PV SHOWS ON, PVFL (L1) WILL BE OFF. LIKEWISE WHEN PV = OFF, L1 = ON.
BLK II TTTT
SO(3)
PULSE
RRRR
NN(1)
RRRRR
RRRRR
RRRRR
3PI469.PVLLTP
3PI472.PVLLTP
SO3
NN(2)
RRRRR
RRRRR
RRRRR
3PI469.PVLOTP
3PI472.PVLOTP
L1
NN(3)
RRRRR
EEEEEE
Group III


0332E3
Ack Page
Name
Eng'g
Hide
9999.9
0332E3
Process
01
SO (2)
BLK 02
PULSE
3XA894F
State
03_21L03
State
03_21L03
State
SO (1)
3XA894
(L1)
State
BLK 01
CHG
03_21L03
State
NOTE: When Compressor PV
Shows On, PVFL (L1) Will Be
OFF. Likewise When PV =
OFF, L1 = ON.
Logic Display
SO (3)
BLK 03
NOT
03_21L03
State
Pulse
03_21L03
9999.99
Reserved for Faceplates
3PI469
9999.99
3PI469.PVLLTP
NN(1)
03_21L03
9999.99
3PI472
9999.99
3PI472.PVLLTP
SO (3)
NN(2)
03_21L03
9999.99
3PI469
9999.99
3PI469.PVLOTP
3PI472
9999.99
3PI472.PVLOTP
(L1)
NN(3)
03_21L03
9999.99

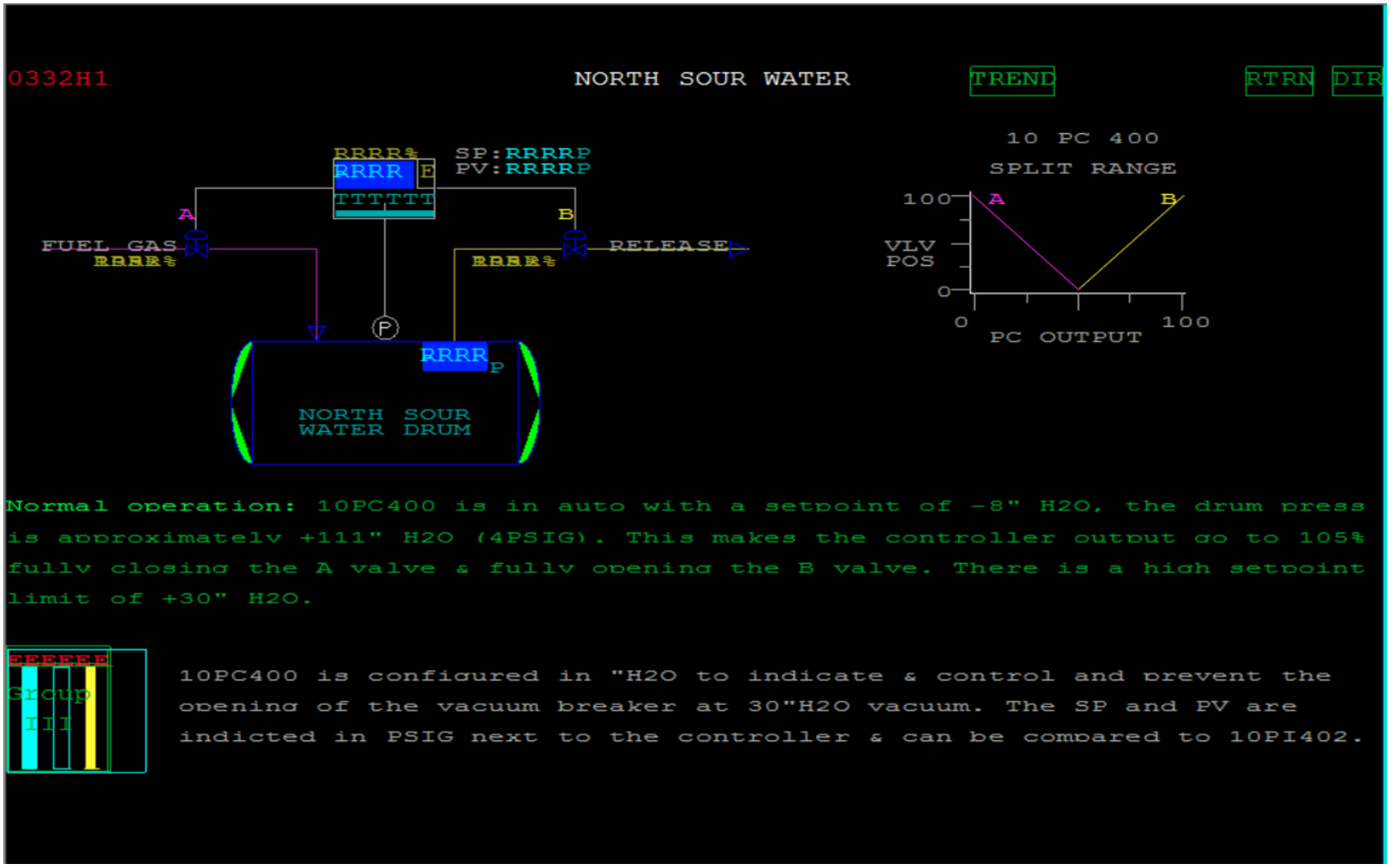
3.99 SOUR WTR DRUM & UTILITIES HELP MENU (0332H.DS)

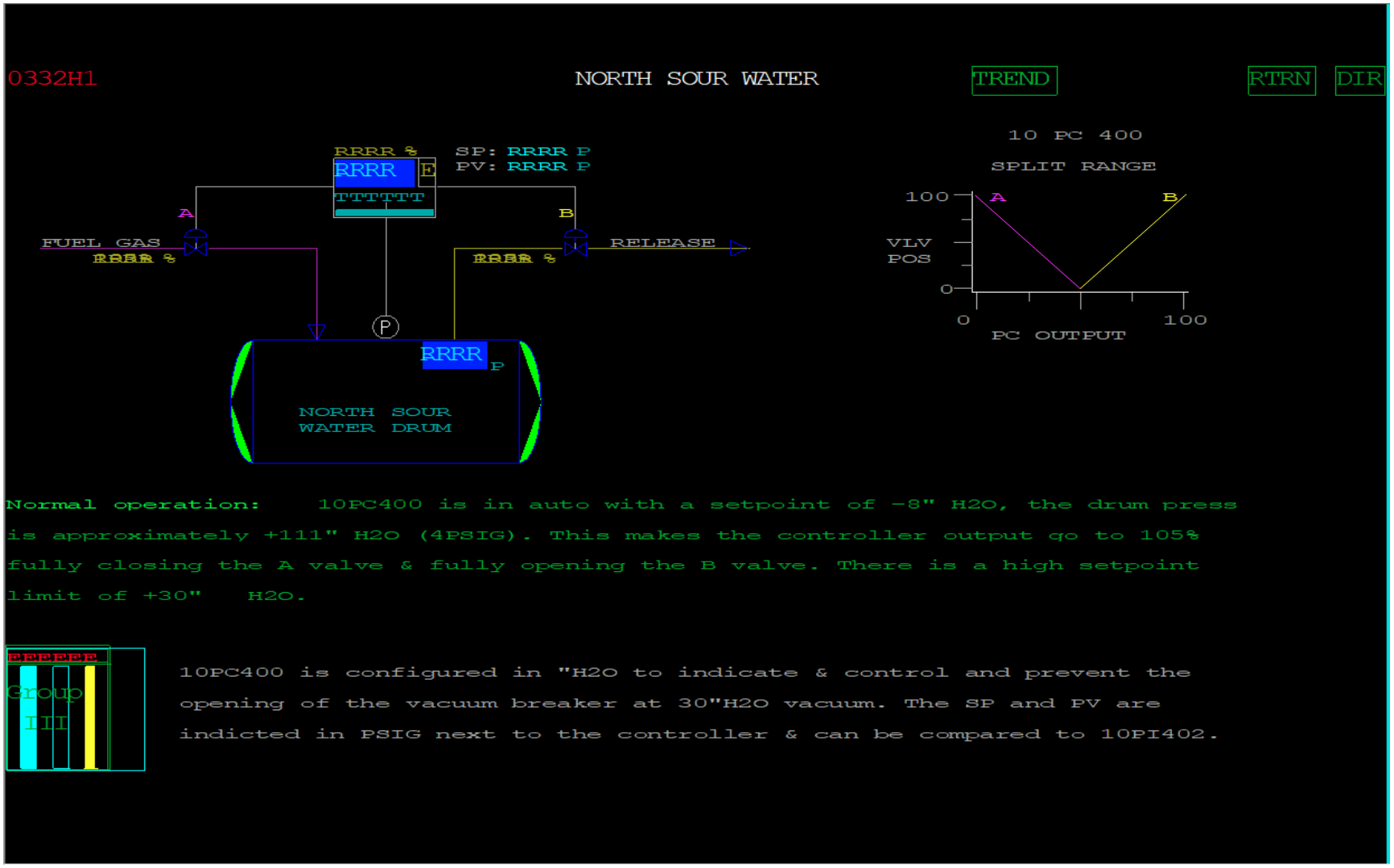


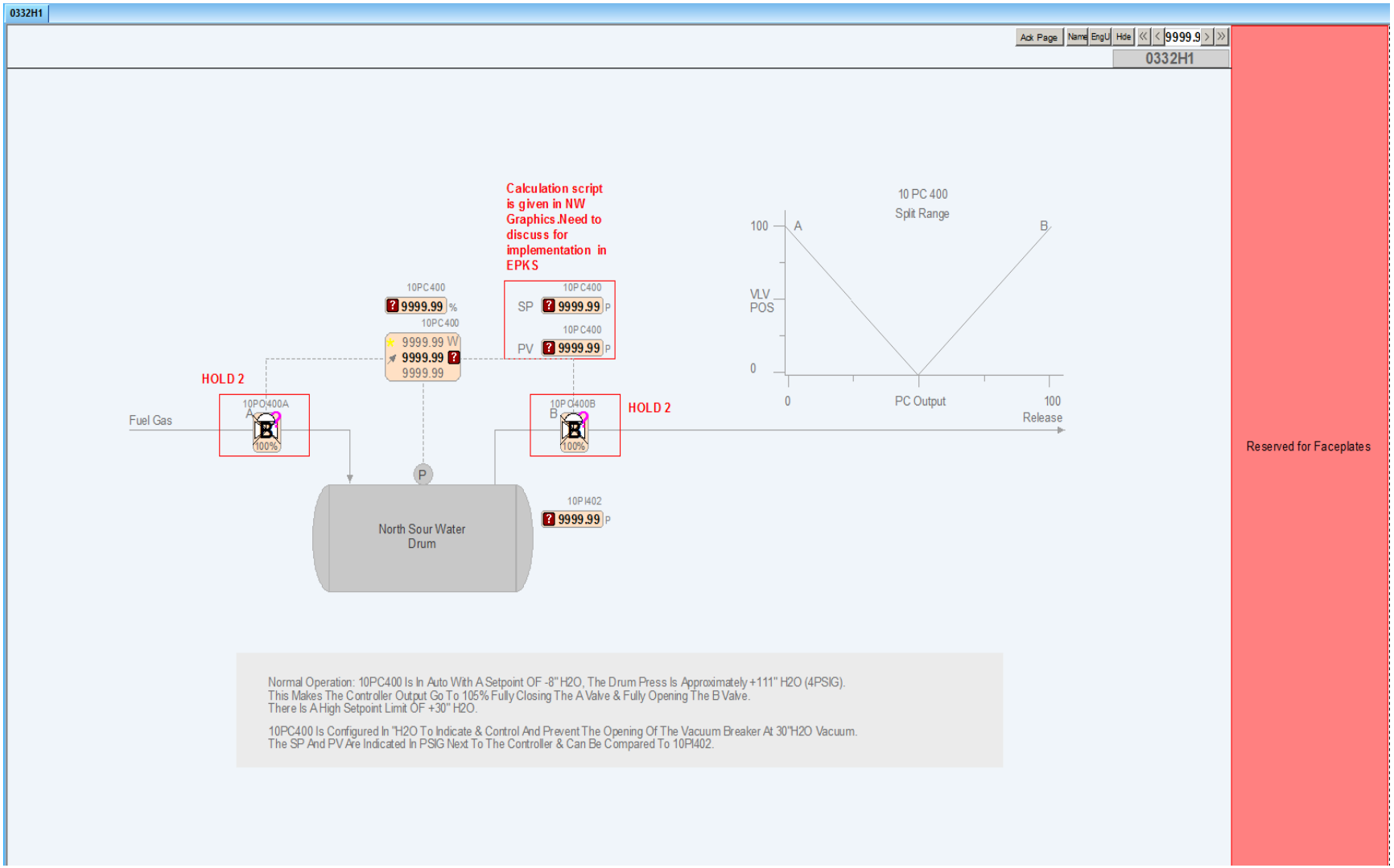

0332H
SOUR WTR DRUM & UTILITIES HELP MENU
1:
NORTH SOUR WATER DRUM
PRESSURE CONTROLLER
0332H1
2:
NORTH SOUR WATER DRUM
AM LEVEL CONTROLLER
0332H2
3:
INSTR AIR COMPRESSOR
CHANGE STATUS
0332H3
4:
INSTR AIR COMPRESSOR
ENGINEERING DISPLAY
0332E3


0332H
Ack Page
Name
Eng U
Hide
9999.9
0332H
Sour WTR Drum & Utilities Help Menu
1 :
North Sour Water Drum Pressure Controller
0332H1
2 :
North Sour Water Drum Am Level Controller
0332H2
3 :
INSTR Air Compressor Change Status
0332H3
4 :
INSTR Air Compressor Engineering Display
0332E3
Reserved for Faceplates

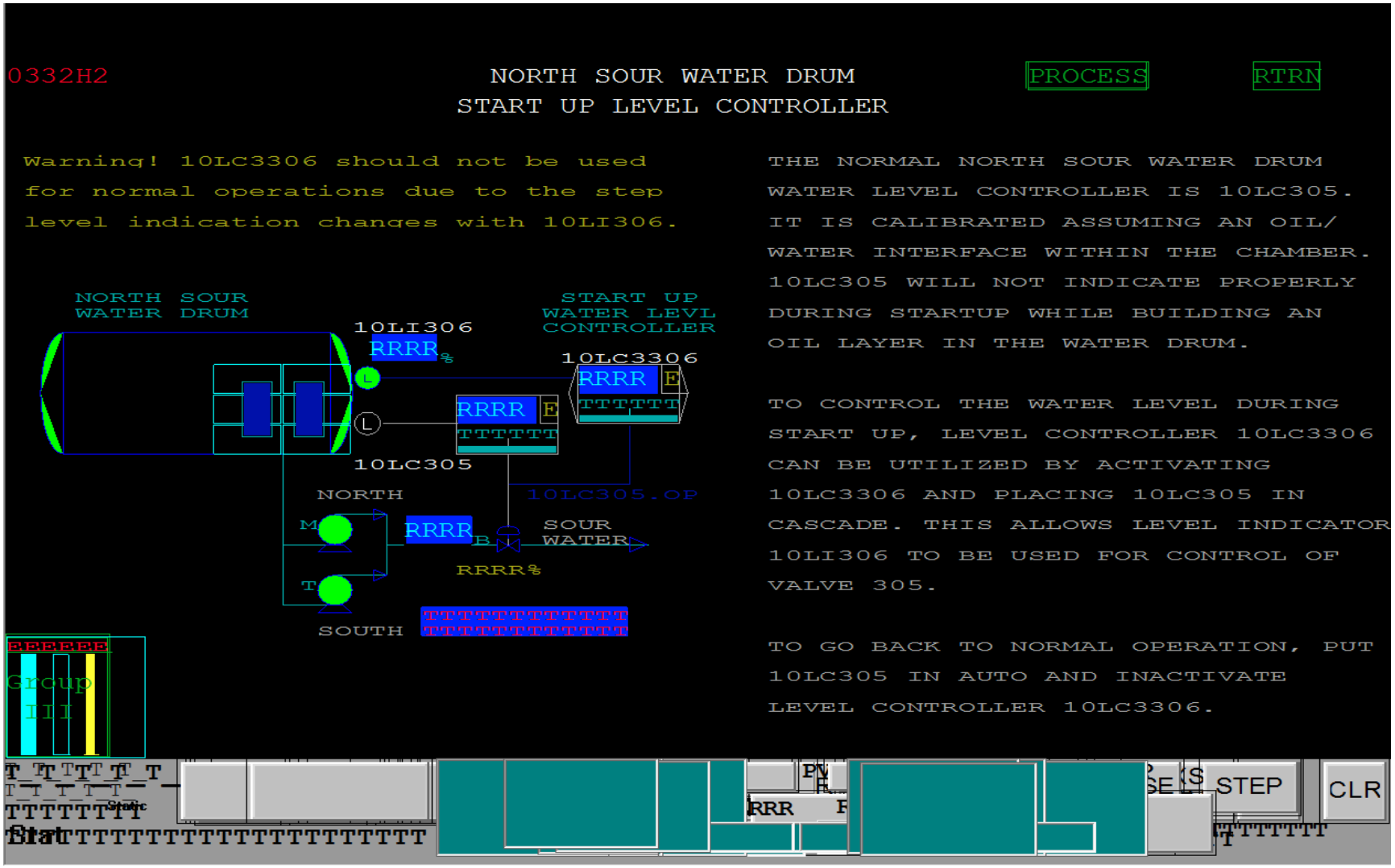
3.100 NORTH SOUR WATER (0332H1.DS)




0332H1
NORTH SOUR WATER
TREND
RTRN
DIR
RRRR %
SP: RRRR P
PV: RRRR P
RRRR
E
TTTTTT
A
B
FUEL GAS
RRRR %
RRRR %
RELEASE
P
RRRR
P
NORTH SOUR
WATER DRUM
10 PC 400
SPLIT RANGE
100
A
B
VLV
POS
0
0
100
PC OUTPUT
Normal operation: 10PC400 is in auto with a setpoint of -8" H2O, the drum press is approximately +111" H2O (4PSIG). This makes the controller output go to 105% fully closing the A valve & fully opening the B valve. There is a high setpoint limit of +30" H2O.
EEEEEE
Group
III
10PC400 is configured in "H2O to indicate & control and prevent the opening of the vacuum breaker at 30"H2O vacuum. The SP and PV are indicted in PSIG next to the controller & can be compared to 10PI402.


0332H1
Ack Page
Name
Eng U
Hide
9999.9
0332H1
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
10PC400
9999.99 %
10PC400
9999.99 W
9999.99
9999.99
10PC400
SP 9999.99 P
10PC400
PV 9999.99 P
HOLD 2
10PO400A
A
100%
Fuel Gas
10PC400B
B
100%
HOLD 2
P
North Sour Water Drum
10PI402
9999.99 P
10 PC 400
Split Range
100
A
B
VLV POS
0
0
PC Output
100
Release
Reserved for Faceplates
Normal Operation: 10PC400 Is In Auto With A Setpoint OF -8" H2O, The Drum Press Is Approximately +111" H2O (4PSIG).
This Makes The Controller Output Go To 105% Fully Closing The A Valve & Fully Opening The B Valve.
There Is A High Setpoint Limit OF +30" H2O.
10PC400 Is Configured In "H2O To Indicate & Control And Prevent The Opening Of The Vacuum Breaker At 30"H2O Vacuum.
The SP And PV Are Indicated In PSIG Next To The Controller & Can Be Compared To 10PI402.

3.101 NORTH SOUR WATER DRUM START UP LEVEL CONTROLLER (0332H2.DS)

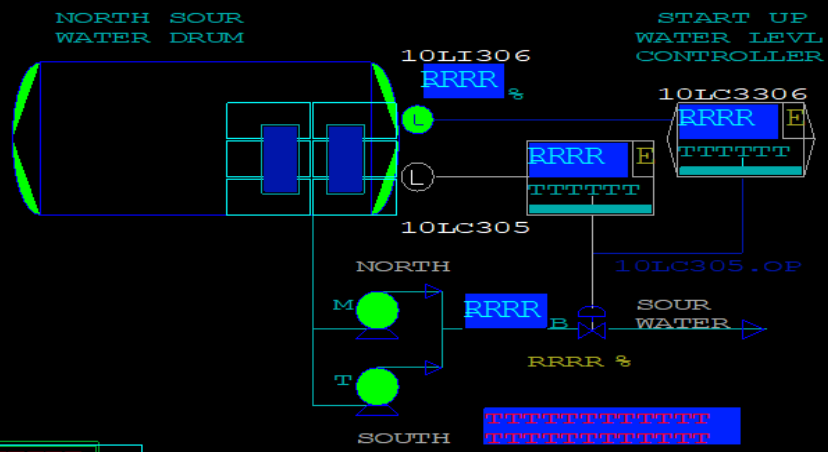


0332H2

NORTH SOUR WATER DRUM START UP LEVEL CONTROLLER

PROCESS RTRN

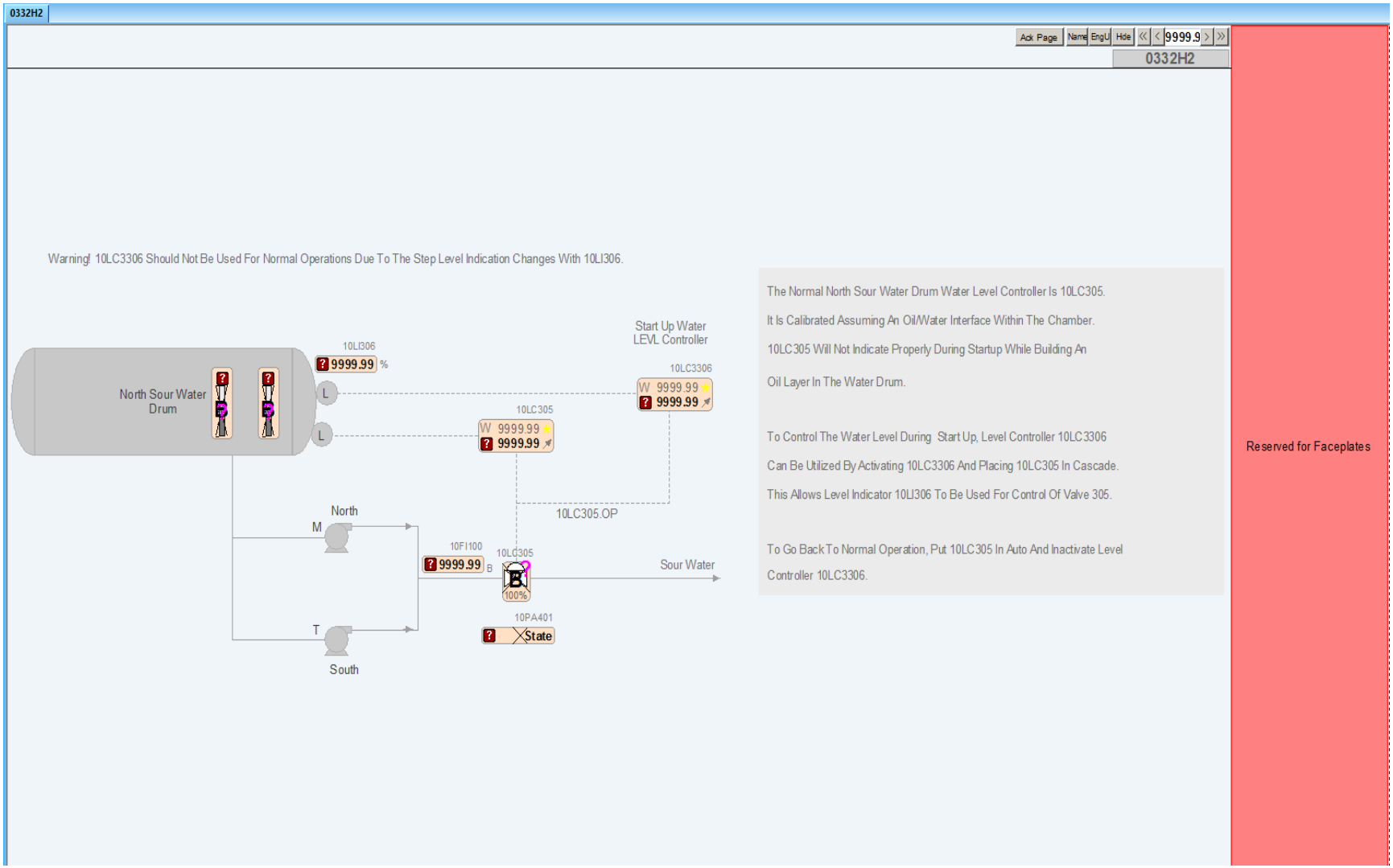
Warning! 10LC3306 should not be used for normal operations due to the step level indication changes with 10LI306.



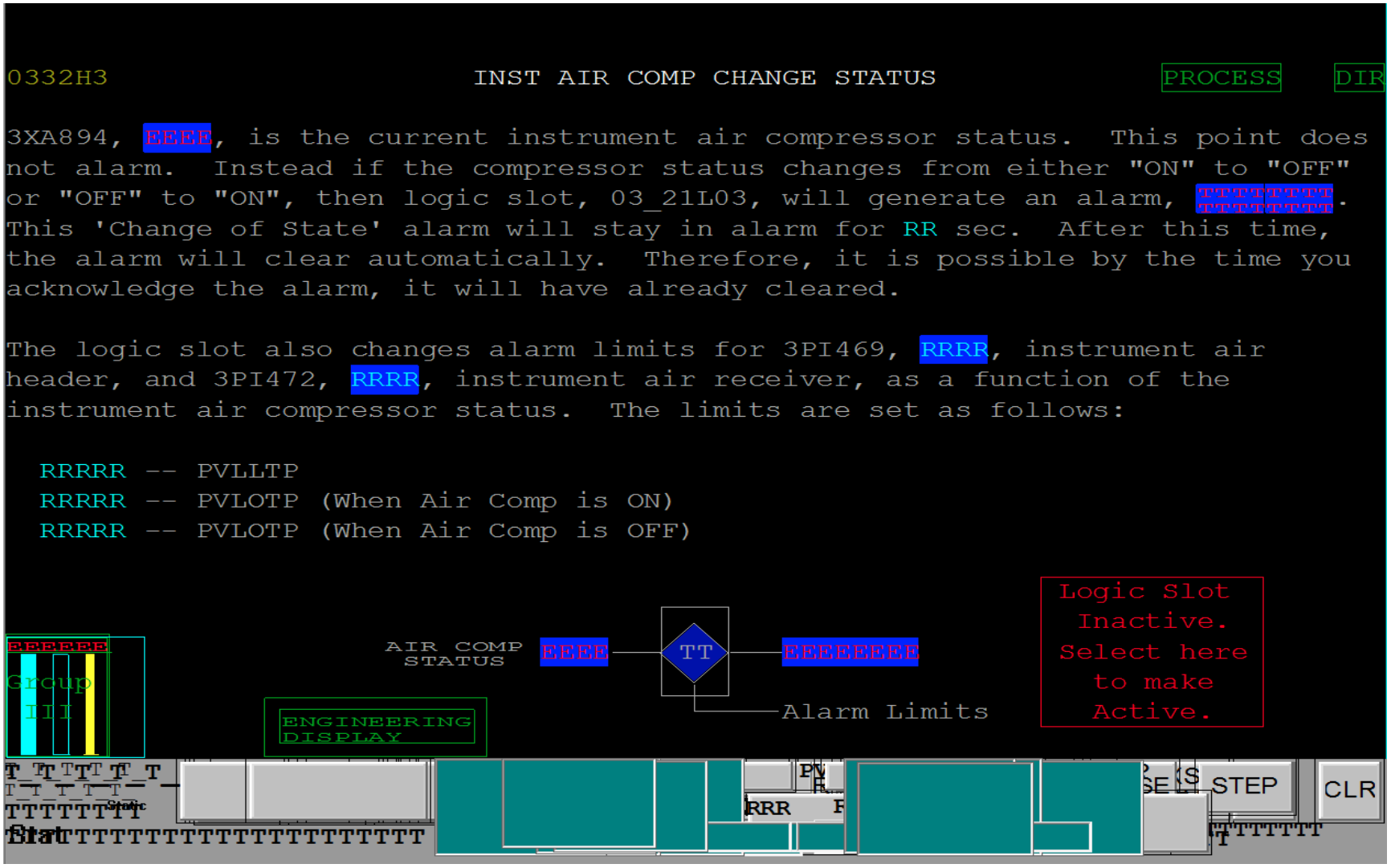
THE NORMAL NORTH SOUR WATER DRUM WATER LEVEL CONTROLLER IS 10LC305. IT IS CALIBRATED ASSUMING AN OIL/ WATER INTERFACE WITHIN THE CHAMBER. 10LC305 WILL NOT INDICATE PROPERLY DURING STARTUP WHILE BUILDING AN OIL LAYER IN THE WATER DRUM.

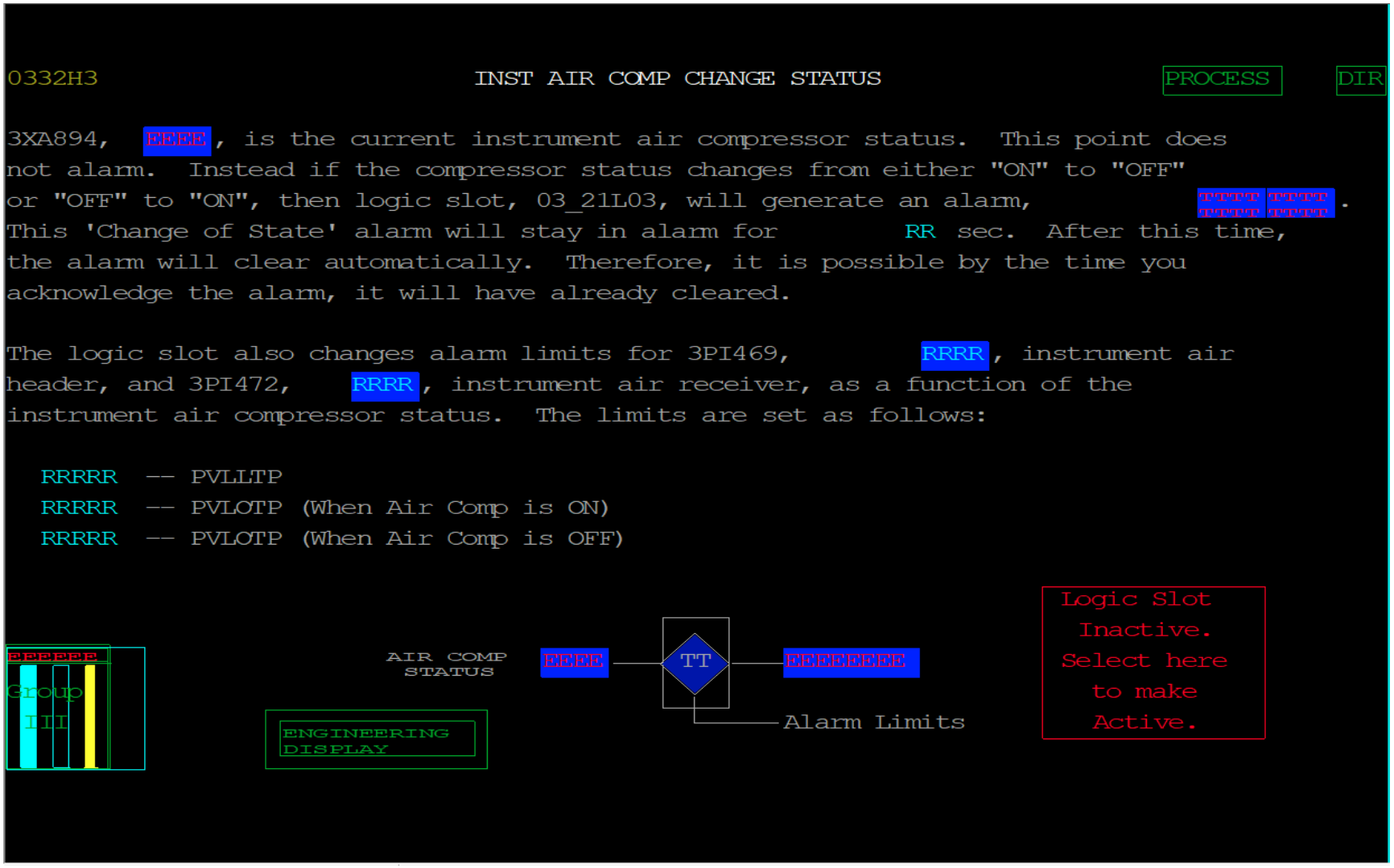
TO CONTROL THE WATER LEVEL DURING START UP, LEVEL CONTROLLER 10LC3306 CAN BE UTILIZED BY ACTIVATING 10LC3306 AND PLACING 10LC305 IN CASCADE. THIS ALLOWS LEVEL INDICATOR 10LI306 TO BE USED FOR CONTROL OF VALVE 305.

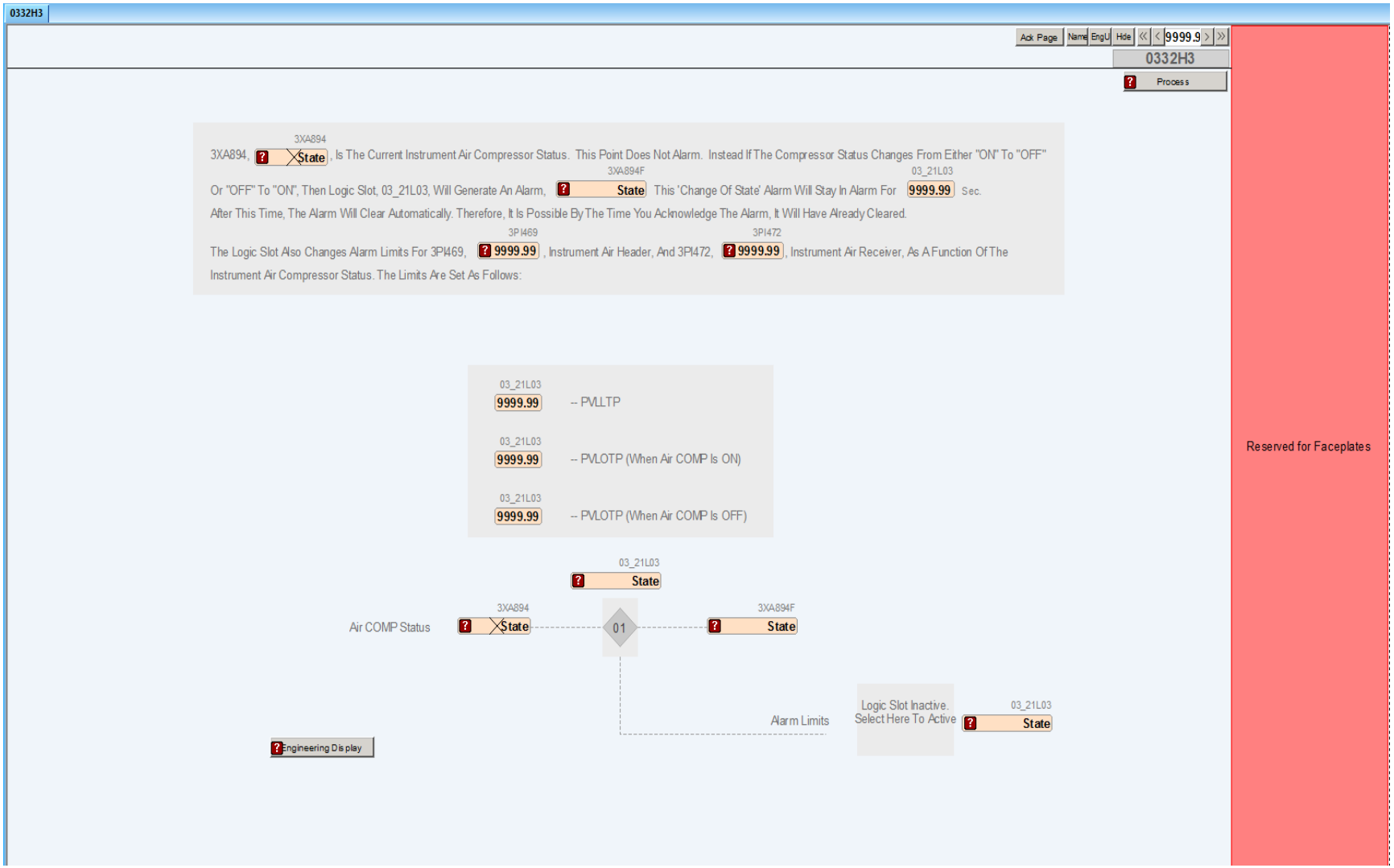
TO GO BACK TO NORMAL OPERATION, PUT 10LC305 IN AUTO AND INACTIVATE LEVEL CONTROLLER 10LC3306.


0332H2
Ack Page
Name
Eng U
Hide
9999.9
0332H2
Warning! 10LC3306 Should Not Be Used For Normal Operations Due To The Step Level Indication Changes With 10LI306.
The Normal North Sour Water Drum Water Level Controller Is 10LC305.
It Is Calibrated Assuming An Oil/Water Interface Within The Chamber.
10LC305 Will Not Indicate Properly During Startup While Building An
Oil Layer In The Water Drum.
To Control The Water Level During Start Up, Level Controller 10LC3306
Can Be Utilized By Activating 10LC3306 And Placing 10LC305 In Cascade.
This Allows Level Indicator 10LI306 To Be Used For Control Of Valve 305.
To Go Back To Normal Operation, Put 10LC305 In Auto And Inactivate Level
Controller 10LC3306.
Reserved for Faceplates
Start Up Water
LEVL Controller
10LI306
9999.99 %
10LC3306
W 9999.99
9999.99
North Sour Water
Drum
L
L
10LC305
W 9999.99
9999.99
10LC305.OP
North
M
10FI100
9999.99
B
10LC305
B
100%
Sour Water
10PA401
State
T
South

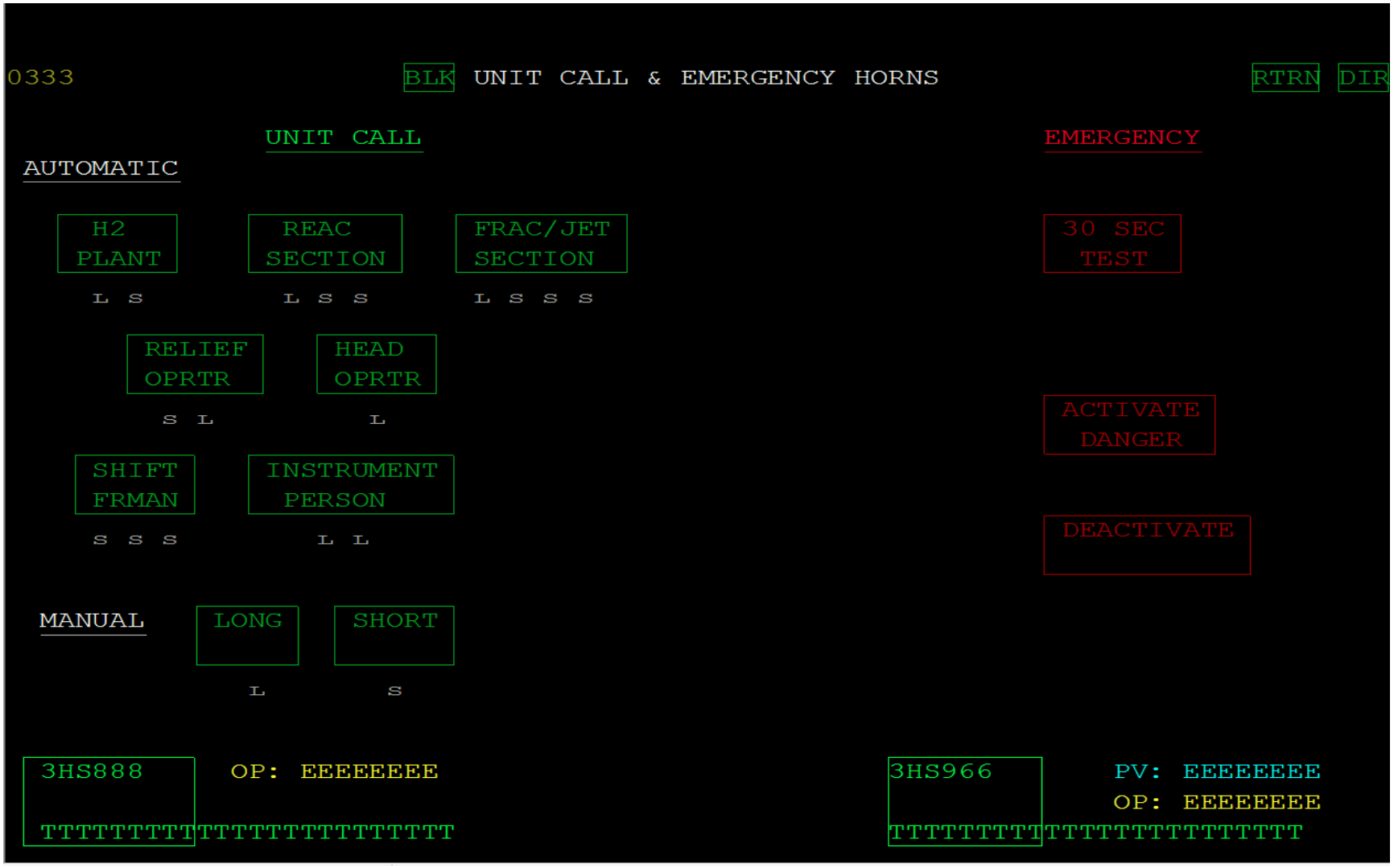
3.102 INST AIR COMP CHANGE STATUS (0332H3.DS)

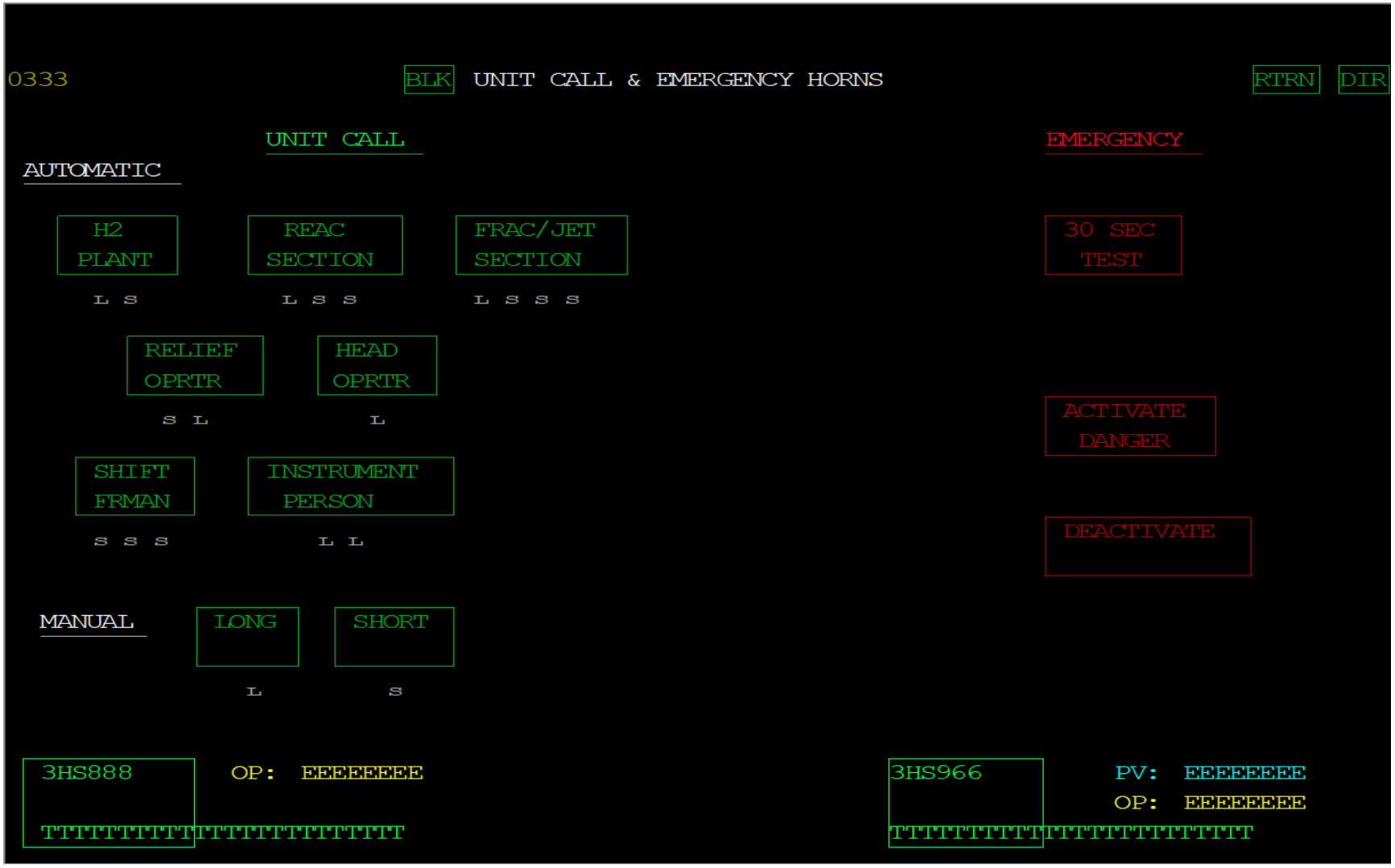


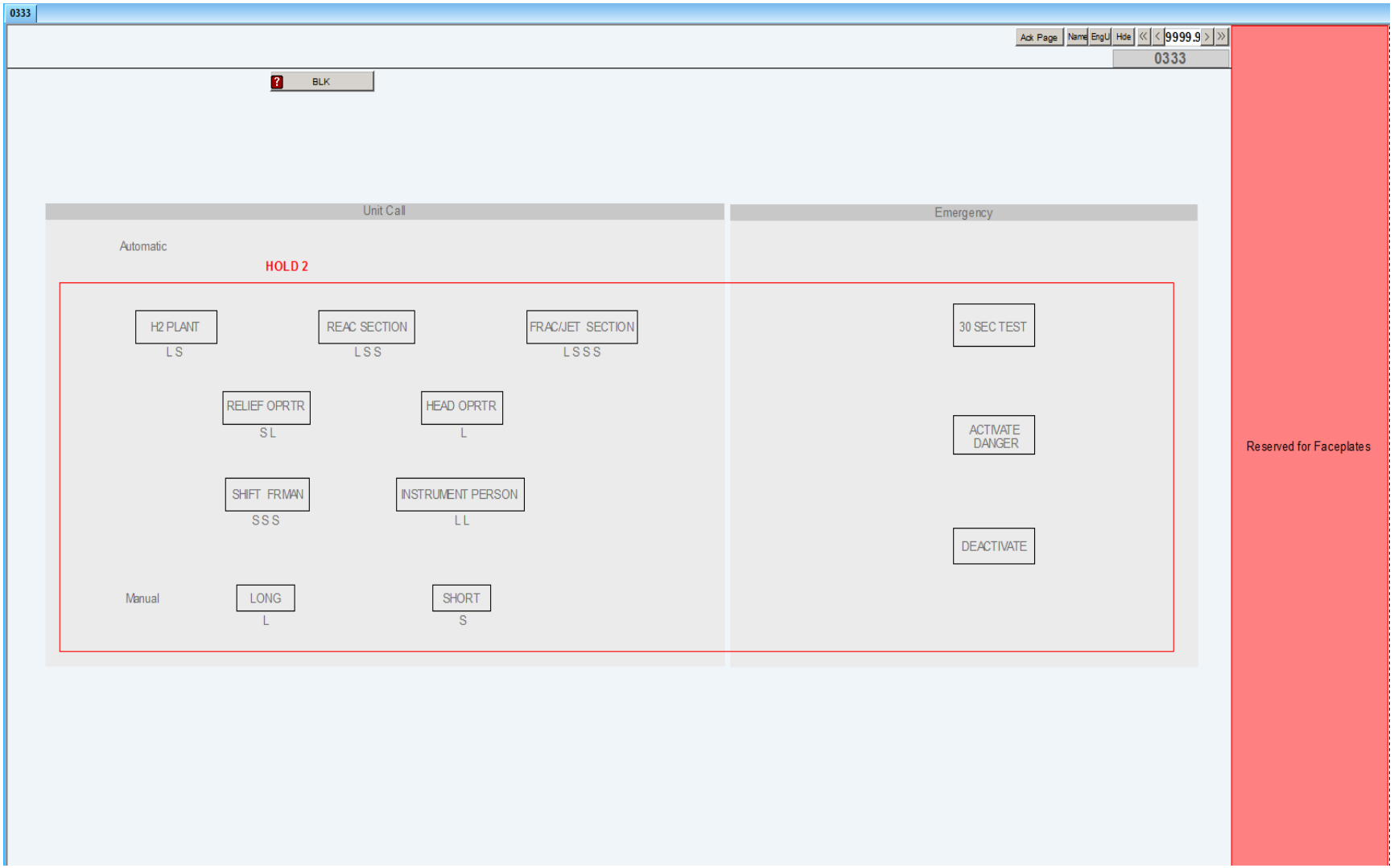

0332H3
INST AIR COMP CHANGE STATUS
PROCESS
DIR
3XA894, EEEE, is the current instrument air compressor status. This point does not alarm. Instead if the compressor status changes from either "ON" to "OFF" or "OFF" to "ON", then logic slot, 03_21L03, will generate an alarm, TTTT TTTT TTTT TTTT .
This 'Change of State' alarm will stay in alarm for RR sec. After this time, the alarm will clear automatically. Therefore, it is possible by the time you acknowledge the alarm, it will have already cleared.
The logic slot also changes alarm limits for 3PI469, RRRR, instrument air header, and 3PI472, RRRR, instrument air receiver, as a function of the instrument air compressor status. The limits are set as follows:
RRRRR -- PVLLTP
RRRRR -- PVLOTP (When Air Comp is ON)
RRRRR -- PVLOTP (When Air Comp is OFF)
EEEEEE
Group III
AIR COMP STATUS
EEEE
TT
EEEEEEEE
Alarm Limits
ENGINEERING DISPLAY
Logic Slot Inactive. Select here to make Active.


0332H3
Ack Page
Name
Eng U
Hide
9999.9
0332H3
Process
3XA894
3XA894, State, Is The Current Instrument Air Compressor Status. This Point Does Not Alarm. Instead If The Compressor Status Changes From Either "ON" To "OFF"
3XA894F
03_21L03
Or "OFF" To "ON", Then Logic Slot, 03_21L03, Will Generate An Alarm, State This 'Change Of State' Alarm Will Stay In Alarm For 9999.99 Sec.
After This Time, The Alarm Will Clear Automatically. Therefore, It Is Possible By The Time You Acknowledge The Alarm, It Will Have Already Cleared.
3PI469
3PI472
The Logic Slot Also Changes Alarm Limits For 3PI469, 9999.99, Instrument Air Header, And 3PI472, 9999.99, Instrument Air Receiver, As A Function Of The
Instrument Air Compressor Status. The Limits Are Set As Follows:
03_21L03
9999.99 -- PVLLTP
03_21L03
9999.99 -- PVLOTP (When Air COMP Is ON)
03_21L03
9999.99 -- PVLOTP (When Air COMP Is OFF)
03_21L03
State
3XA894
Air COMP Status
State
01
3XA894F
State
Alarm Limits
Logic Slot Inactive.
Select Here To Active
03_21L03
State
Engineering Display
Reserved for Faceplates

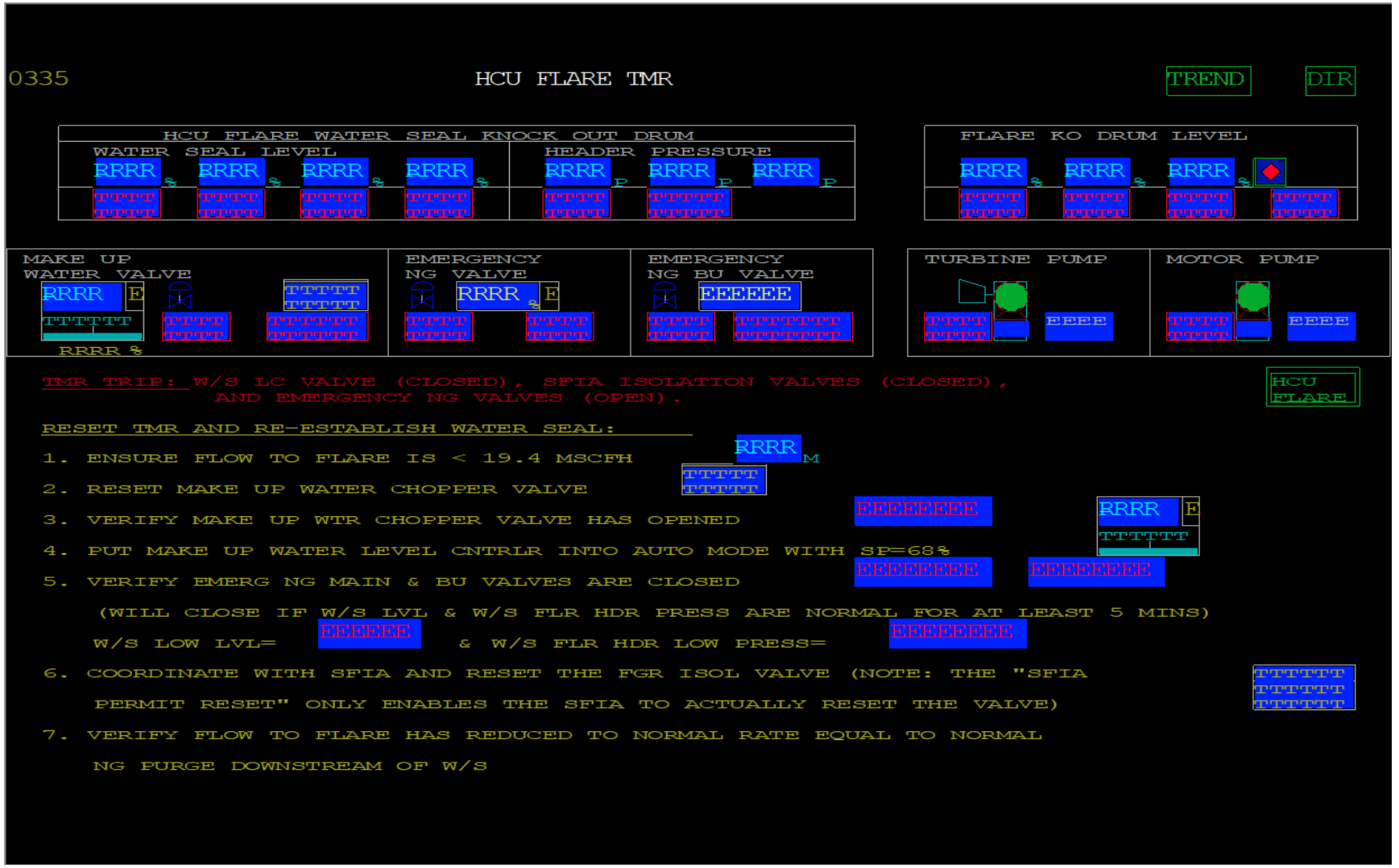
3.103 UNIT CALL & EMERGENCY HORNS (0333.DS)

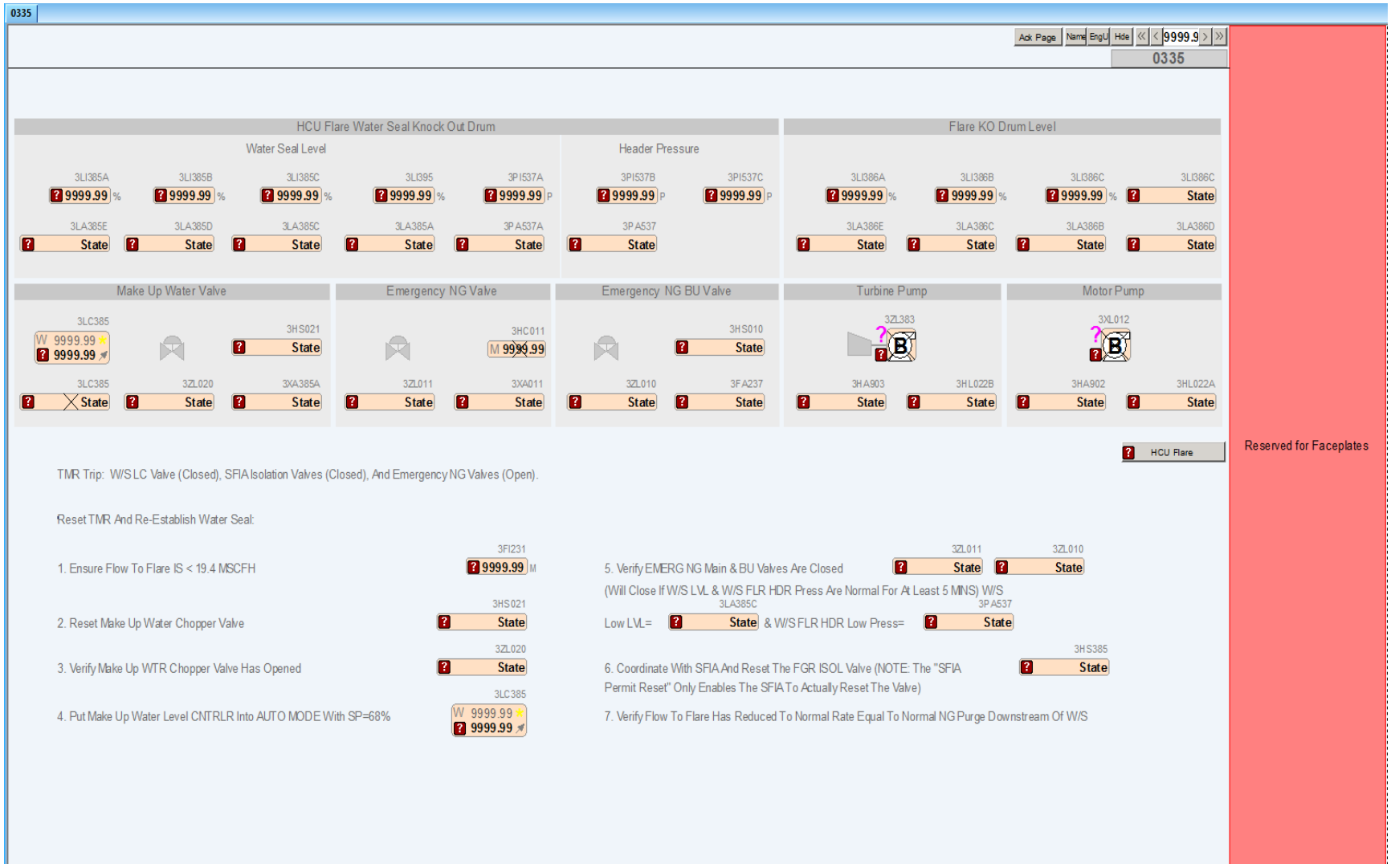



0333
BLK
UNIT CALL & EMERGENCY HORNS
RTRN
DIR
UNIT CALL
AUTOMATIC
H2 PLANT
L S
REAC SECTION
L S S
FRAC/JET SECTION
L S S S
RELIEF OPRTR
S L
HEAD OPRTR
L
SHIFT FRMAN
S S S
INSTRUMENT PERSON
L L
MANUAL
LONG
L
SHORT
S
EMERGENCY
30 SEC TEST
ACTIVATE DANGER
DEACTIVATE
3HS888
OP: EEEEEEEE
3HS966
PV: EEEEEEEE
OP: EEEEEEEE

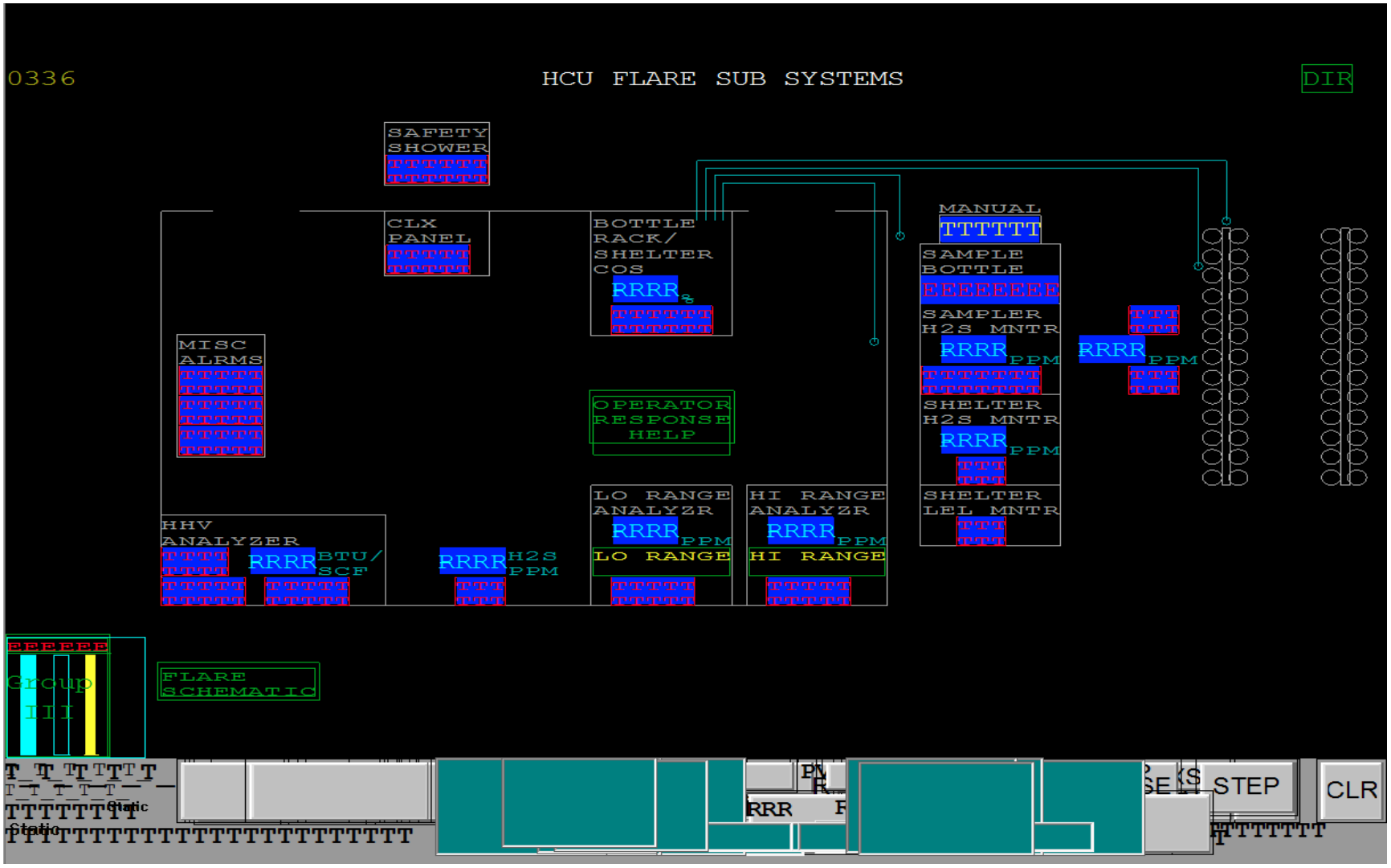

0333
Ack Page
Name
Eng U
Hide
9999.9
0333
BLK
Unit Call
Emergency
Automatic
HOLD 2
H2 PLANT
L S
REAC SECTION
L S S
FRAC/JET SECTION
L S S S
30 SEC TEST
RELIEF OPRTR
S L
HEAD OPRTR
L
ACTIVATE DANGER
SHIFT FRMAN
S S S
INSTRUMENT PERSON
L L
DEACTIVATE
Manual
LONG
L
SHORT
S
Reserved for Faceplates

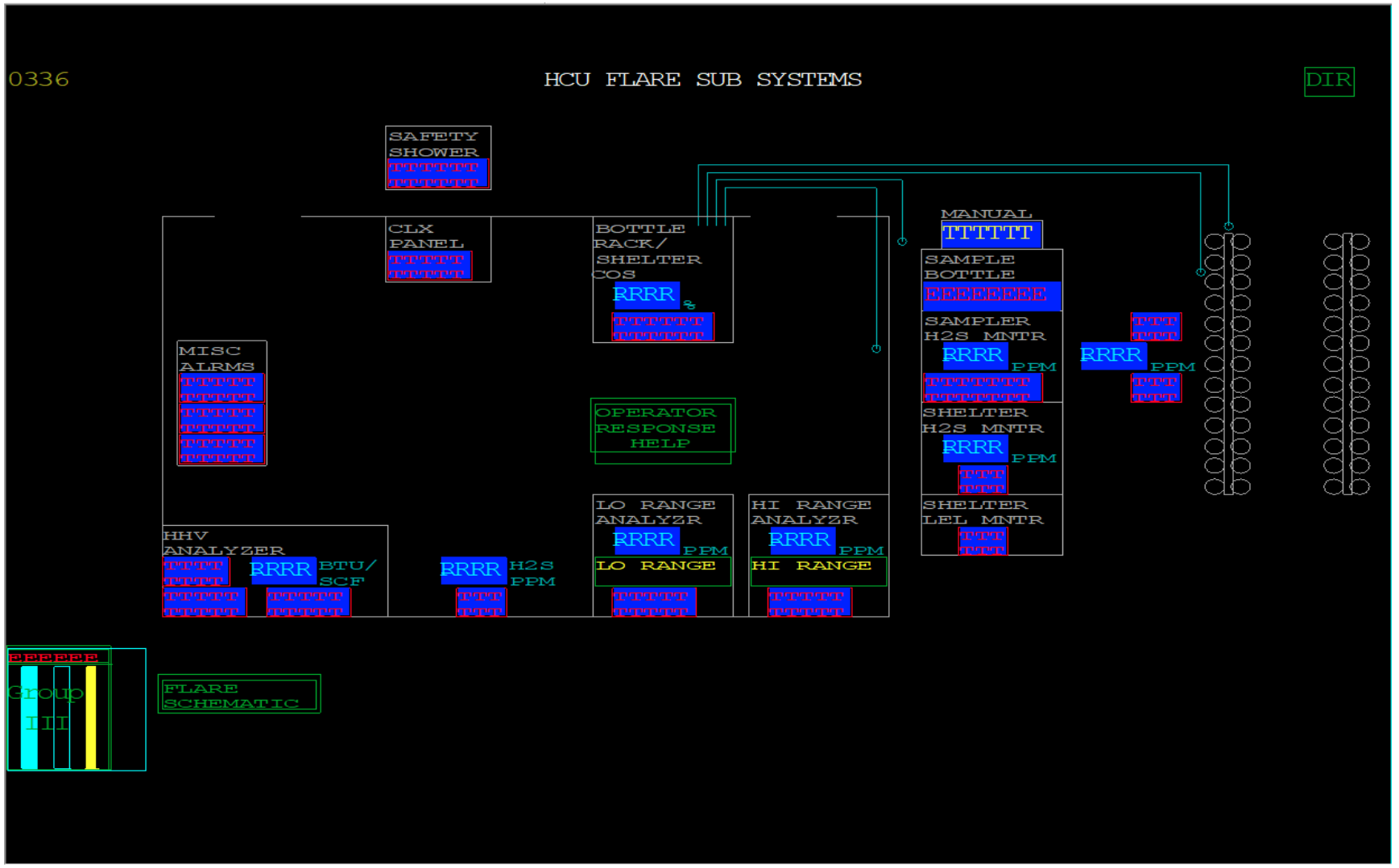
3.104 HCU FLARE TMR (0335.DS)

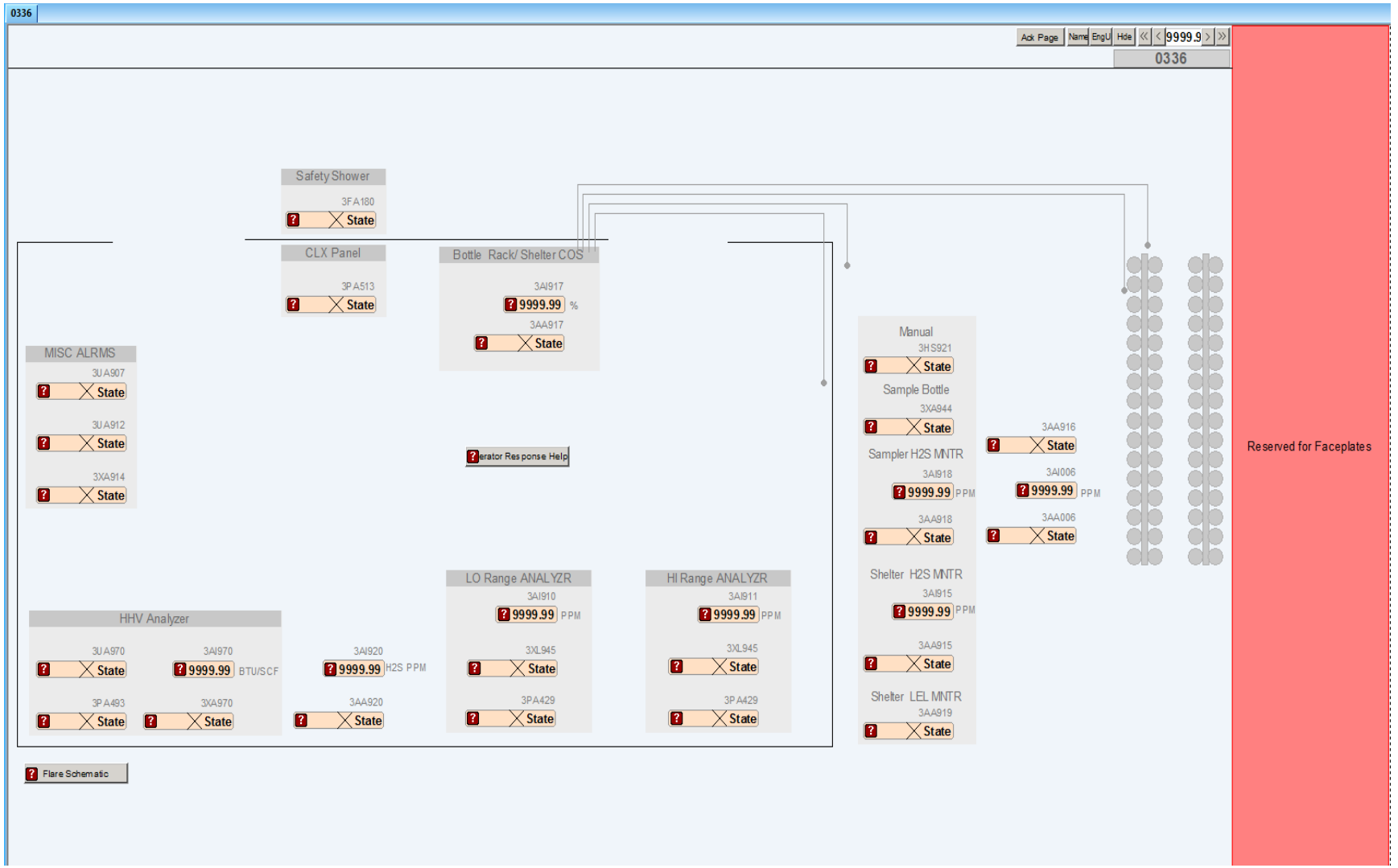

0335
HCU FLARE TMR
TREND
DIR
HCU FLARE WATER SEAL KNOCK OUT DRUM
WATER SEAL LEVEL
HEADER PRESSURE
FLARE KO DRUM LEVEL
MAKE UP WATER VALVE
EMERGENCY NG VALVE
EMERGENCY NG BU VALVE
TURBINE PUMP
MOTOR PUMP
TMR TRIP: W/S LC VALVE (CLOSED), SFIA ISOLATION VALVES (CLOSED), AND EMERGENCY NG VALVES (OPEN).
HCU FLARE
RESET TMR AND RE-ESTABLISH WATER SEAL:
1. ENSURE FLOW TO FLARE IS < 19.4 MSCFH
2. RESET MAKE UP WATER CHOPPER VALVE
3. VERIFY MAKE UP WTR CHOPPER VALVE HAS OPENED
4. PUT MAKE UP WATER LEVEL CNTRLR INTO AUTO MODE WITH SP=68%
5. VERIFY EMERG NG MAIN & BU VALVES ARE CLOSED
(WILL CLOSE IF W/S LVL & W/S FLR HDR PRESS ARE NORMAL FOR AT LEAST 5 MINS)
W/S LOW LVL=
& W/S FLR HDR LOW PRESS=
6. COORDINATE WITH SFIA AND RESET THE FGR ISOL VALVE (NOTE: THE "SFIA PERMIT RESET" ONLY ENABLES THE SFIA TO ACTUALLY RESET THE VALVE)
7. VERIFY FLOW TO FLARE HAS REDUCED TO NORMAL RATE EQUAL TO NORMAL NG PURGE DOWNSTREAM OF W/S


0335
Ack Page
Name
Eng U
Hide
9999.9
0335
HCU Flare Water Seal Knock Out Drum
Water Seal Level
3LI385A 9999.99 %
3LI385B 9999.99 %
3LI385C 9999.99 %
3LI395 9999.99 %
3PI537A 9999.99 P
Header Pressure
3PI537B 9999.99 P
3PI537C 9999.99 P
3LA385E State
3LA385D State
3LA385C State
3LA385A State
3PA537A State
3PA537 State
Flare KO Drum Level
3LI386A 9999.99 %
3LI386B 9999.99 %
3LI386C 9999.99 %
3LI386C State
3LA386E State
3LA386C State
3LA386B State
3LA386D State
Make Up Water Valve
3LC385 W 9999.99 9999.99
3HS021 State
3LC385 State
3ZL020 State
3XA385A State
Emergency NG Valve
3HC011 M 9999.99
3ZL011 State
3XA011 State
Emergency NG BU Valve
3HS010 State
3ZL010 State
3FA237 State
Turbine Pump
3ZL383
3HA903 State
3HL022B State
Motor Pump
3XL012
3HA902 State
3HL022A State
HCU Flare
Reserved for Faceplates
TMR Trip: W/S LC Valve (Closed), SFIA Isolation Valves (Closed), And Emergency NG Valves (Open).
Reset TMR And Re-Establish Water Seal:
1. Ensure Flow To Flare IS < 19.4 MSCFH
3FI231 9999.99 M
2. Reset Make Up Water Chopper Valve
3HS021 State
3. Verify Make Up WTR Chopper Valve Has Opened
3ZL020 State
4. Put Make Up Water Level CNTRLR Into AUTO MODE With SP=68%
3LC385 W 9999.99 9999.99
5. Verify EMERG NG Main & BU Valves Are Closed
3ZL011 State
3ZL010 State
(Will Close If W/S LVL & W/S FLR HDR Press Are Normal For At Least 5 MINS) W/S
Low LVL=
3LA385C State
& W/S FLR HDR Low Press=
3PA537 State
6. Coordinate With SFIA And Reset The FGR ISOL Valve (NOTE: The "SFIA Permit Reset" Only Enables The SFIA To Actually Reset The Valve)
3HS385 State
7. Verify Flow To Flare Has Reduced To Normal Rate Equal To Normal NG Purge Downstream Of W/S

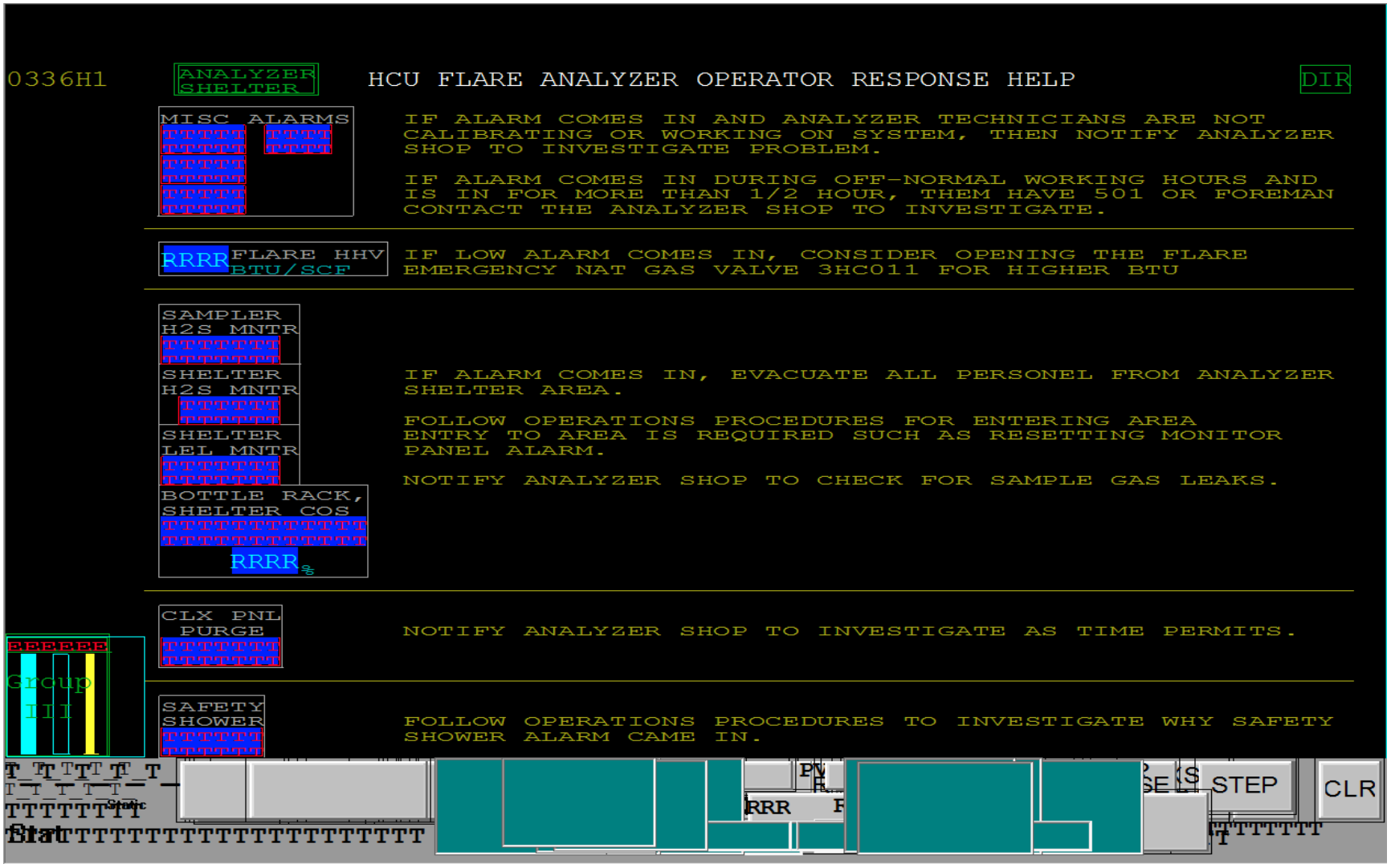
3.105 HCU FLARE SUB SYSTEMS (0336.DS)

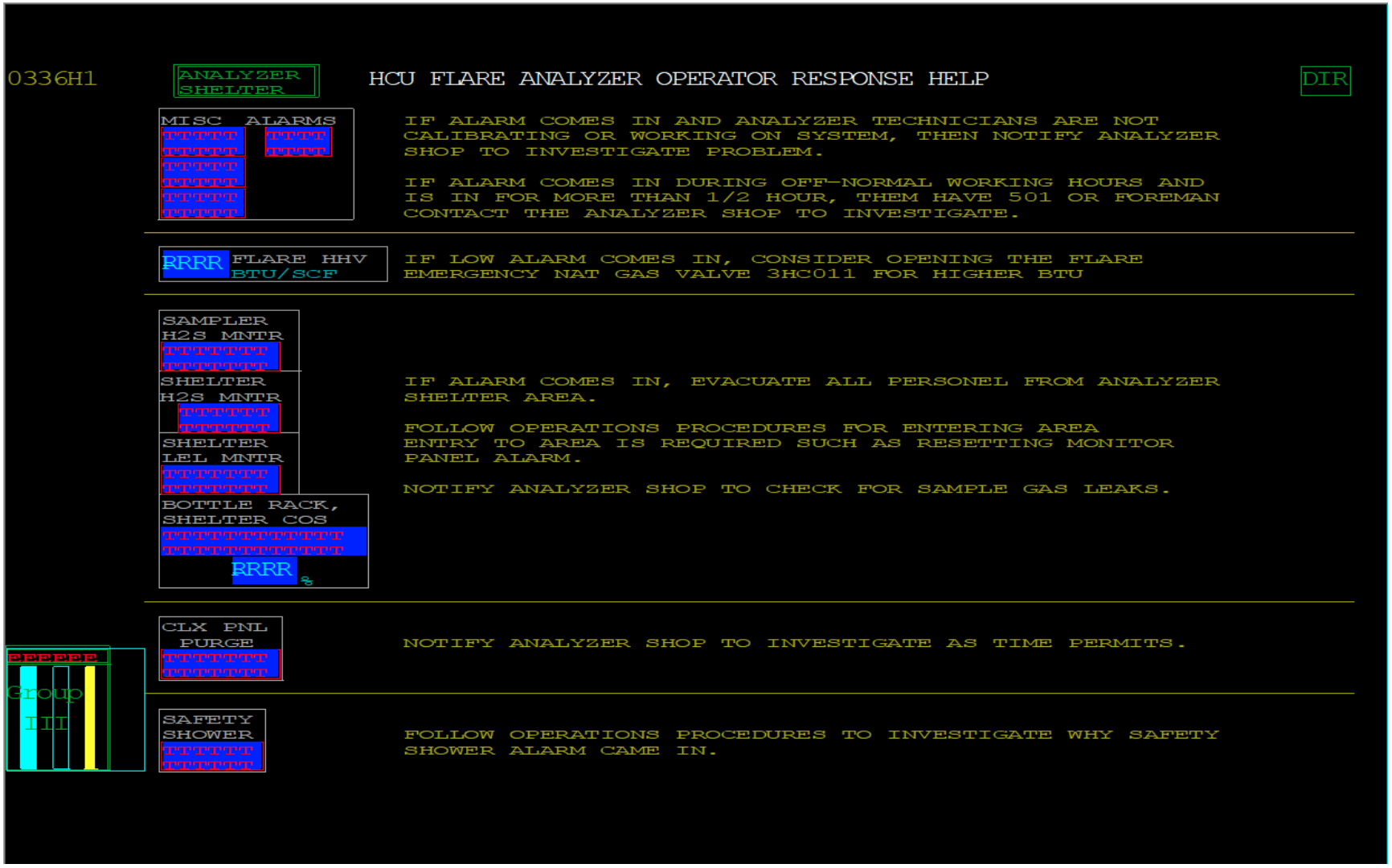


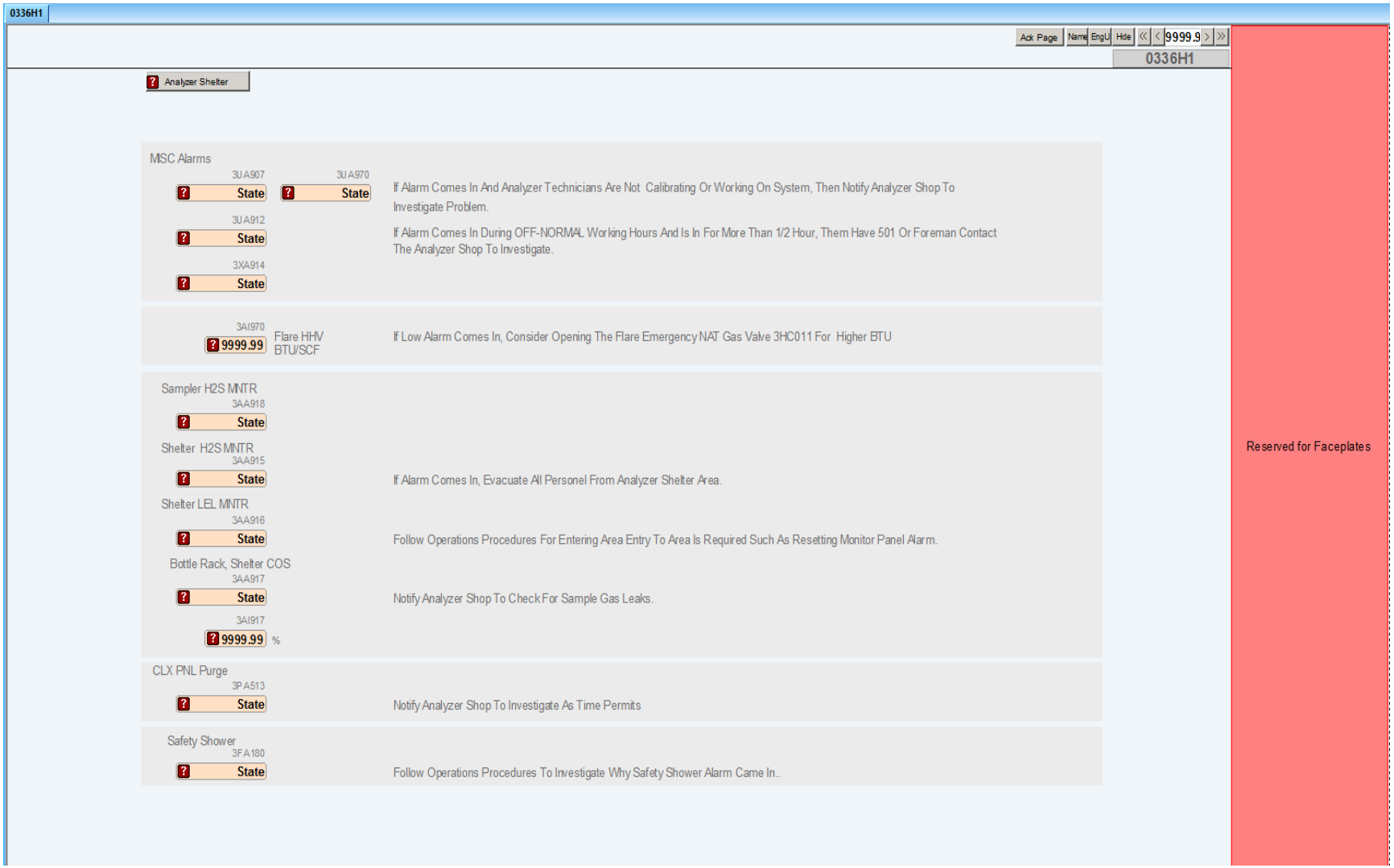

0336
HCU FLARE SUB SYSTEMS
DIR
SAFETY SHOWER
TTTTTT
CLX PANEL
TTTTT
BOTTLE RACK/ SHELTER COS
RRRR
TTTTTT
MANUAL
TTTTT
SAMPLE BOTTLE
EEEEEEEE
SAMPLER H2S MNTR
RRRR PPM
TTTTTTTT
SHELTER H2S MNTR
RRRR PPM
TTT
SHELTER LEL MNTR
TTT
RRRR PPM
TTT
MISC ALRMS
TTTTT
TTTTT
TTTTT
TTTTT
OPERATOR RESPONSE HELP
HHV ANALYZER
TTTT
RRRR BTU/ SCF
TTTTT
TTTTTT
RRRR H2S PPM
TTT
LO RANGE ANALYZR
RRRR PPM
LO RANGE
TTTTT
HI RANGE ANALYZR
RRRR PPM
HI RANGE
TTTTT
EEEEEE
Group III
FLARE SCHEMATIC


0336
Ack Page
Name
Engu
Hde
9999.9
0336
Safety Shower
3FA180
State
CLX Panel
3PA513
State
Bottle Rack/ Shelter COS
3AI917
9999.99
%
3AA917
State
MISC ALRMS
3UA907
State
3UA912
State
3XA914
State
erator Response Help
Manual
3HS921
State
Sample Bottle
3XA944
State
Sampler H2S MNTR
3AI918
9999.99
PPM
3AA918
State
3AA916
State
3AI006
9999.99
PPM
3AA006
State
Shelter H2S MNTR
3AI915
9999.99
PPM
3AA915
State
Shelter LEL MNTR
3AA919
State
Reserved for Faceplates
HHV Analyzer
3UA970
State
3AI970
9999.99
BTU/SCF
3PA493
State
3XA970
State
3AI920
9999.99
H2S PPM
3AA920
State
LO Range ANALYZR
3AI910
9999.99
PPM
3XL945
State
3PA429
State
HI Range ANALYZR
3AI911
9999.99
PPM
3XL945
State
3PA429
State
Flare Schematic

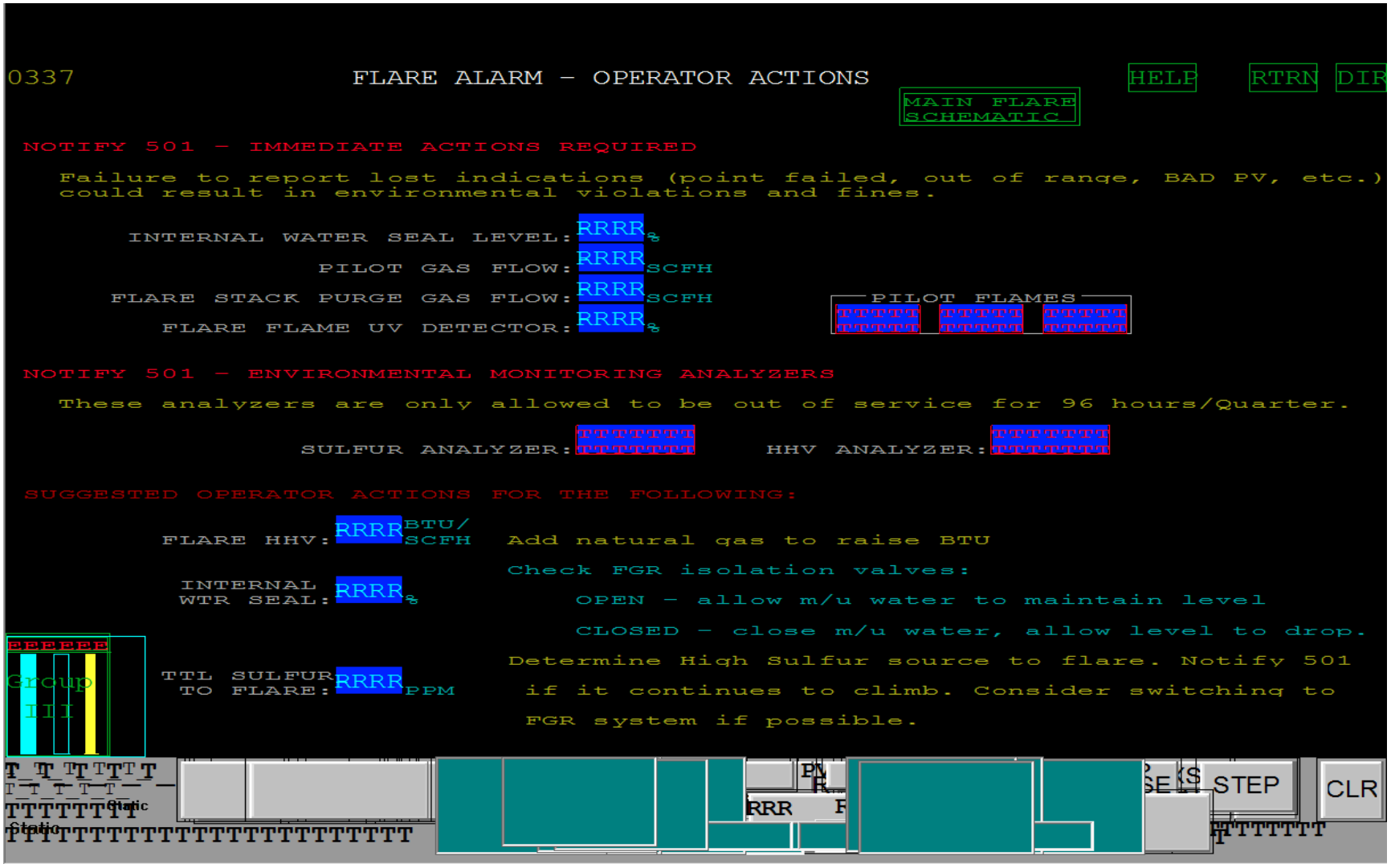
3.106 HCU FLARE ANALYZER OPERATOR RESPONSE HELP (0336H1.DS)

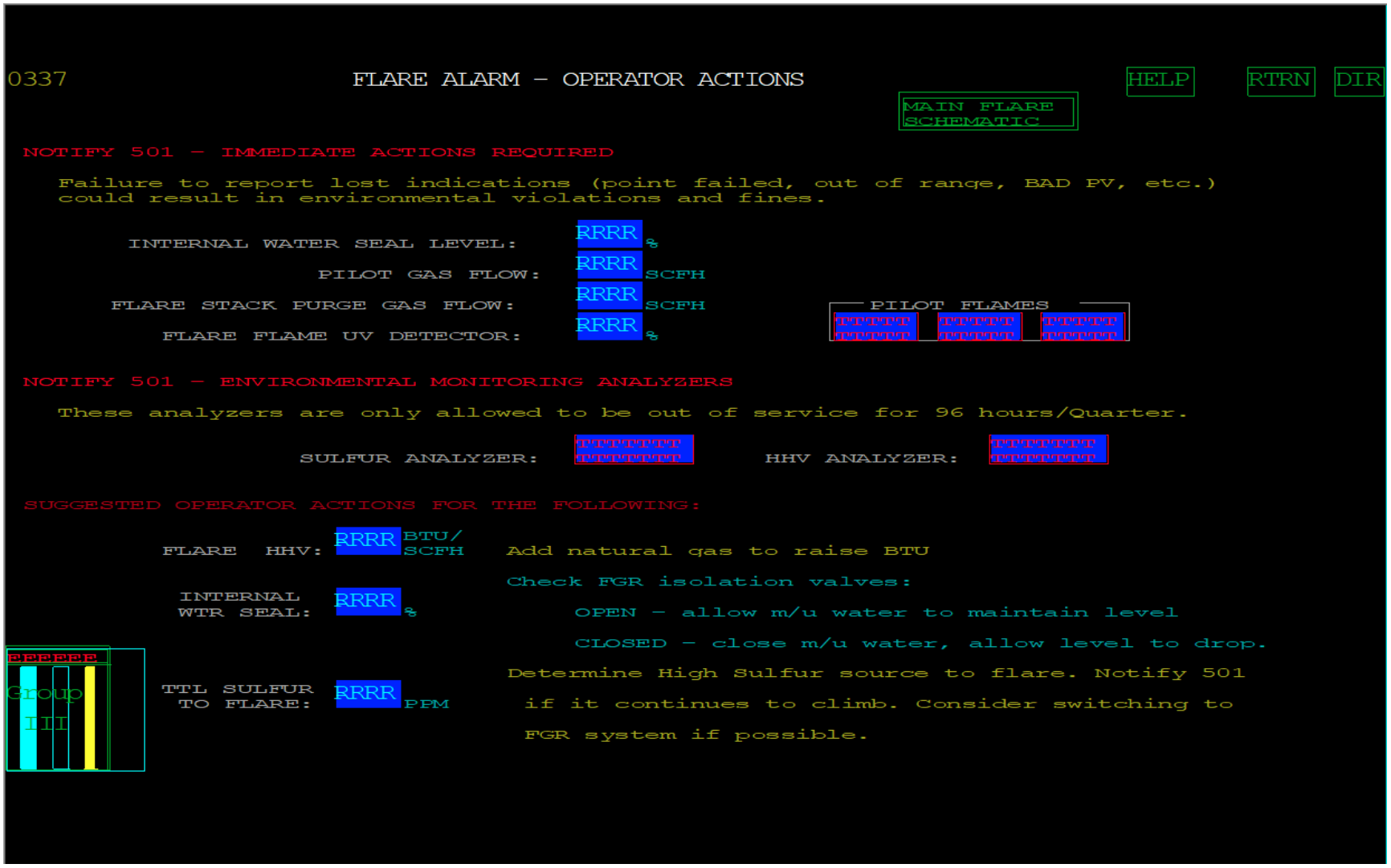


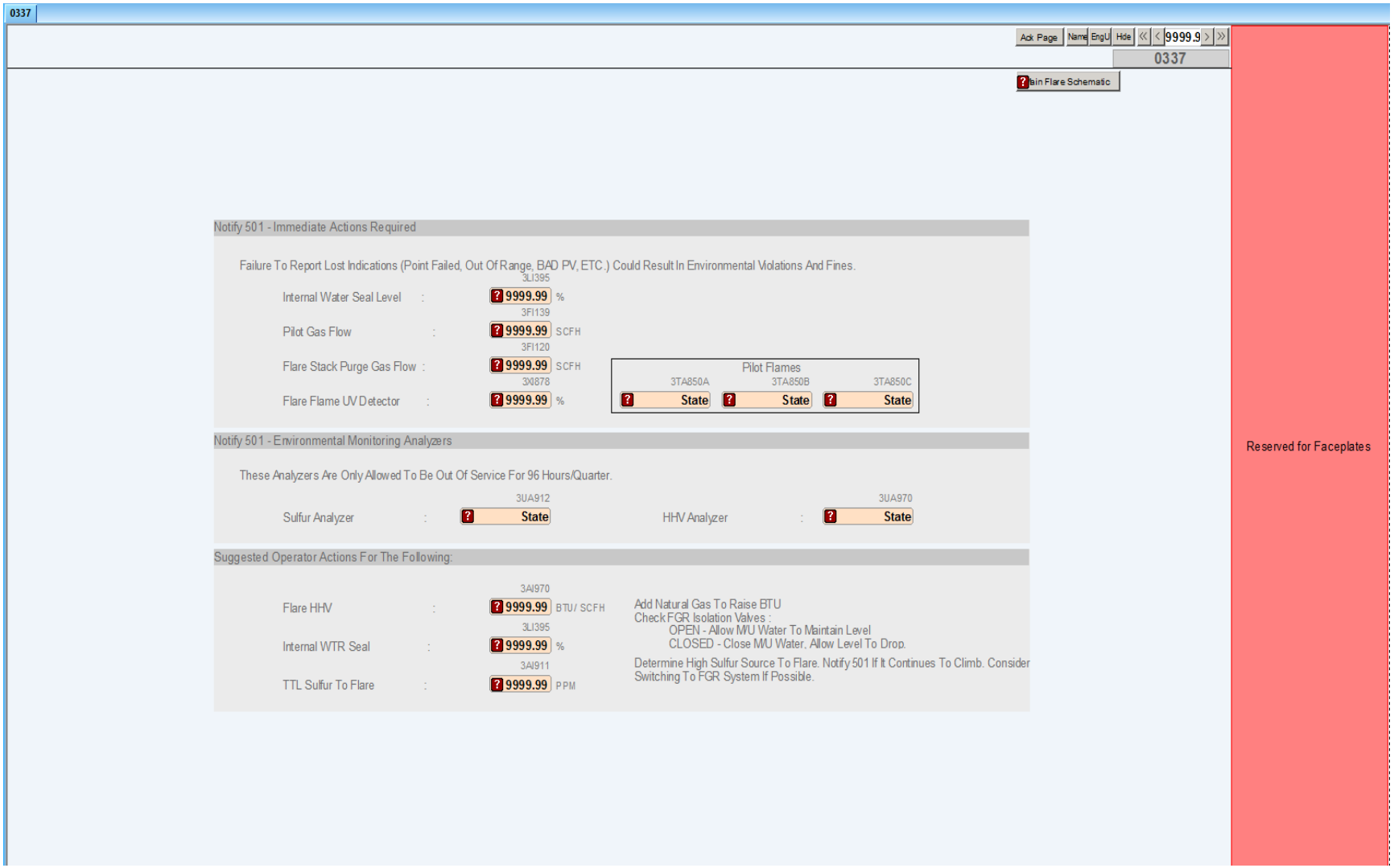

0336H1
ANALYZER SHELTER
HCU FLARE ANALYZER OPERATOR RESPONSE HELP
DIR
MISC ALARMS
IF ALARM COMES IN AND ANALYZER TECHNICIANS ARE NOT CALIBRATING OR WORKING ON SYSTEM, THEN NOTIFY ANALYZER SHOP TO INVESTIGATE PROBLEM.
IF ALARM COMES IN DURING OFF-NORMAL WORKING HOURS AND IS IN FOR MORE THAN 1/2 HOUR, THEM HAVE 501 OR FOREMAN CONTACT THE ANALYZER SHOP TO INVESTIGATE.
RRRR FLARE HHV BTU/SCF
IF LOW ALARM COMES IN, CONSIDER OPENING THE FLARE EMERGENCY NAT GAS VALVE 3HC011 FOR HIGHER BTU
SAMPLER H2S MNTR
SHELTER H2S MNTR
SHELTER LEL MNTR
BOTTLE RACK, SHELTER COS
RRRR
IF ALARM COMES IN, EVACUATE ALL PERSONEL FROM ANALYZER SHELTER AREA.
FOLLOW OPERATIONS PROCEDURES FOR ENTERING AREA ENTRY TO AREA IS REQUIRED SUCH AS RESETTING MONITOR PANEL ALARM.
NOTIFY ANALYZER SHOP TO CHECK FOR SAMPLE GAS LEAKS.
CLX PNL PURGE
NOTIFY ANALYZER SHOP TO INVESTIGATE AS TIME PERMITS.
Group III
SAFETY SHOWER
FOLLOW OPERATIONS PROCEDURES TO INVESTIGATE WHY SAFETY SHOWER ALARM CAME IN.


0336H1
Ack Page
Name
EngU
Hide
9999.9
0336H1
Analyzer Shelter
MSC Alarms
3UA907
State
3UA970
State
If Alarm Comes In And Analyzer Technicians Are Not Calibrating Or Working On System, Then Notify Analyzer Shop To Investigate Problem.
3UA912
State
If Alarm Comes In During OFF-NORMAL Working Hours And Is In For More Than 1/2 Hour, Them Have 501 Or Foreman Contact The Analyzer Shop To Investigate.
3XA914
State
3AI970
9999.99
Flare HHV BTU/SCF
If Low Alarm Comes In, Consider Opening The Flare Emergency NAT Gas Valve 3HC011 For Higher BTU
Sampler H2S MNTR
3AA918
State
Shelter H2S MNTR
3AA915
State
If Alarm Comes In, Evacuate All Personel From Analyzer Shelter Area.
Shelter LEL MNTR
3AA916
State
Follow Operations Procedures For Entering Area Entry To Area Is Required Such As Resetting Monitor Panel Alarm.
Bottle Rack, Shelter COS
3AA917
State
Notify Analyzer Shop To Check For Sample Gas Leaks.
3AI917
9999.99
%
CLX PNL Purge
3PA513
State
Notify Analyzer Shop To Investigate As Time Permits
Safety Shower
3FA180
State
Follow Operations Procedures To Investigate Why Safety Shower Alarm Came In..
Reserved for Faceplates

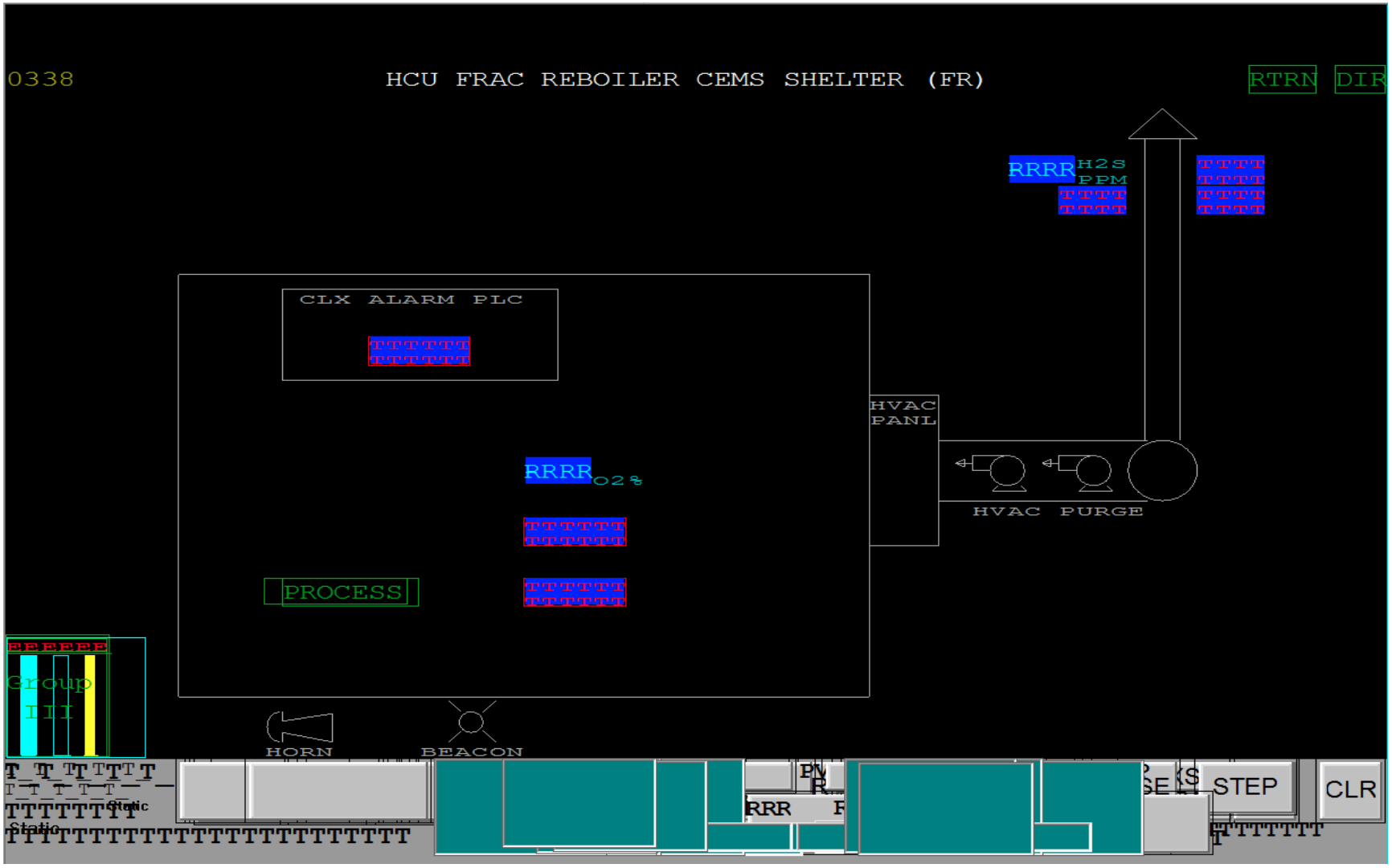
3.107 FLARE ALARM - OPERATOR ACTIONS (0337.DS)

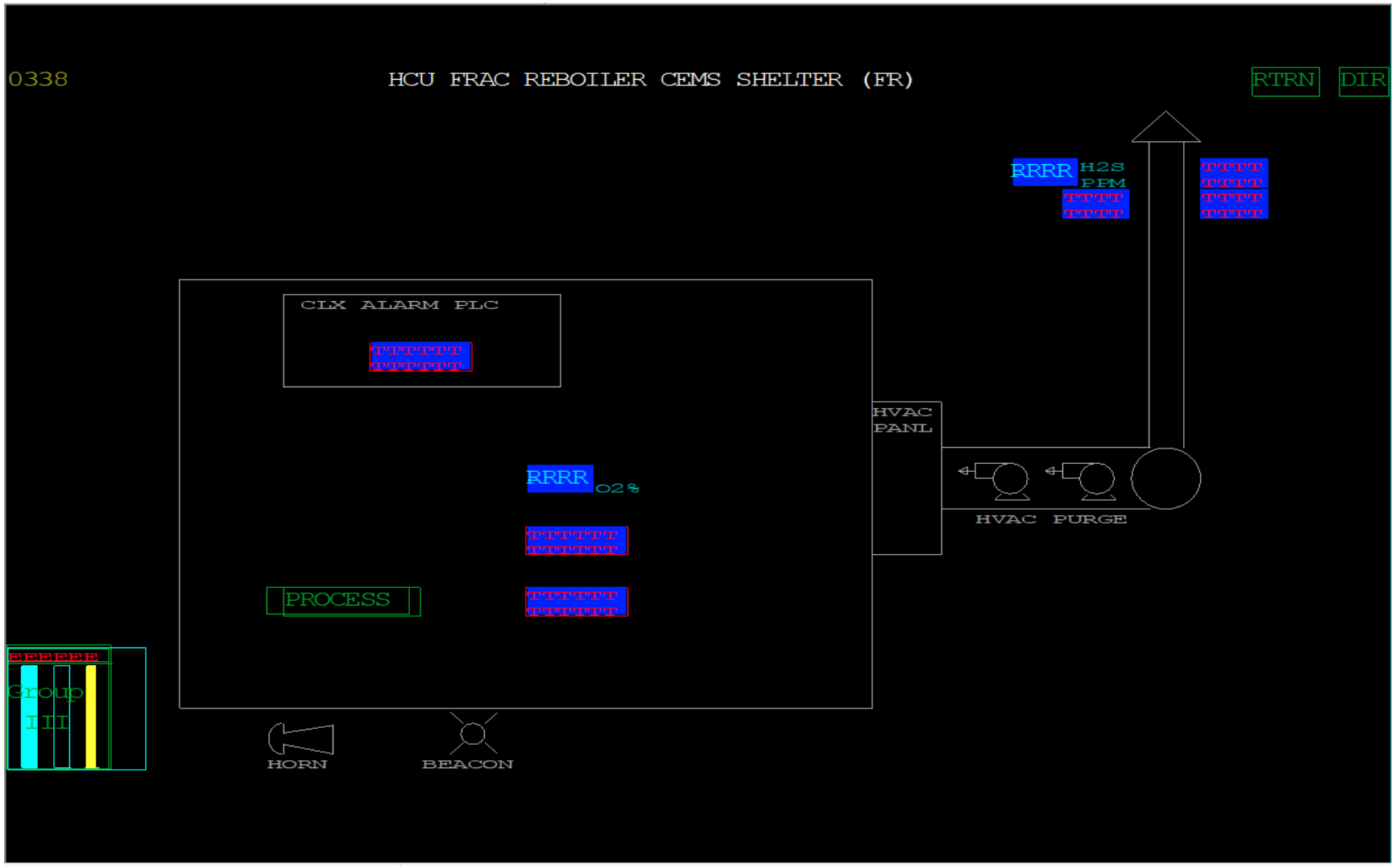


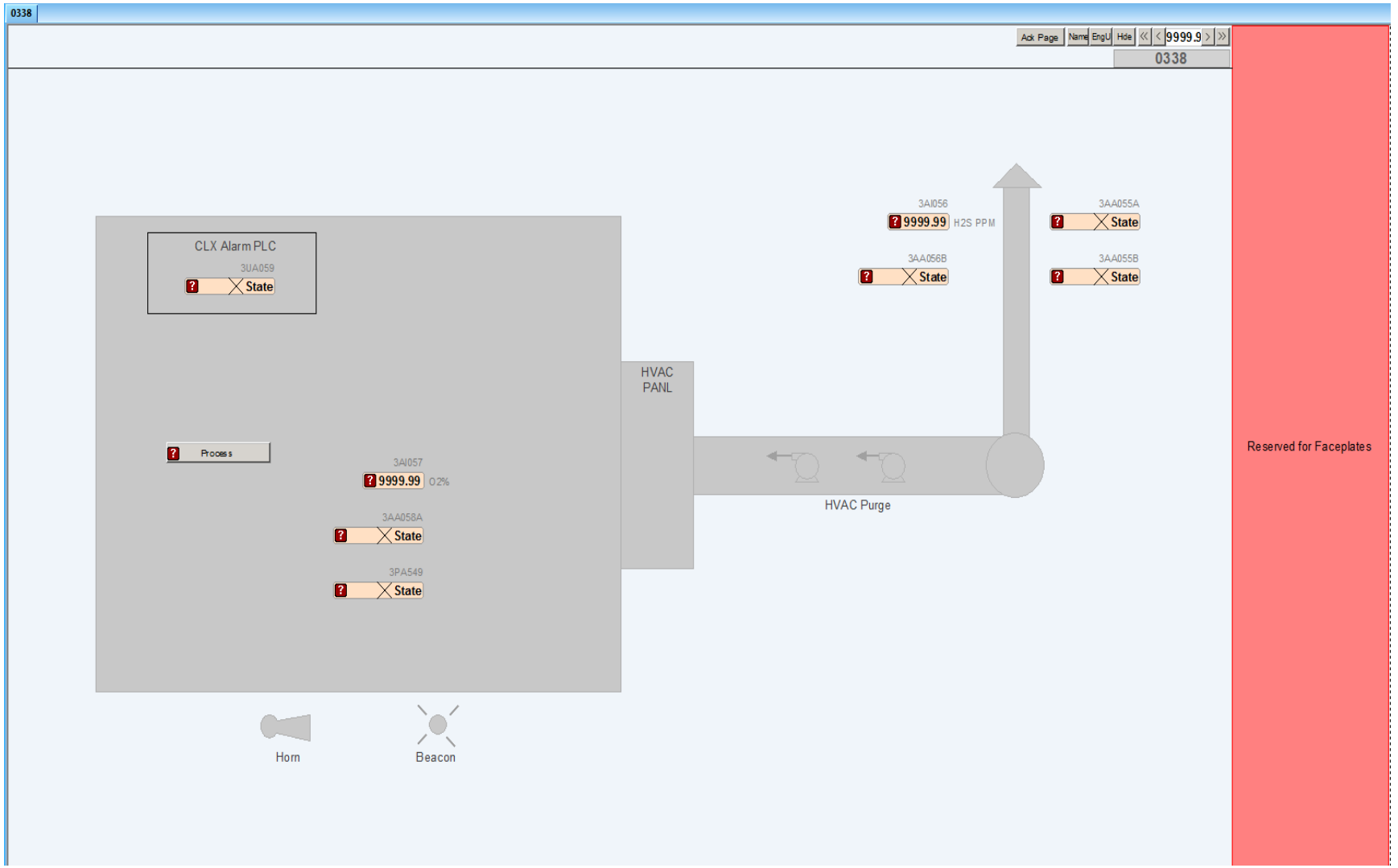

0337
FLARE ALARM – OPERATOR ACTIONS
HELP
RTRN
DIR
MAIN FLARE SCHEMATIC
NOTIFY 501 – IMMEDIATE ACTIONS REQUIRED
Failure to report lost indications (point failed, out of range, BAD PV, etc.) could result in environmental violations and fines.
INTERNAL WATER SEAL LEVEL: RRRR %
PILOT GAS FLOW: RRRR SCFH
FLARE STACK PURGE GAS FLOW: RRRR SCFH
FLARE FLAME UV DETECTOR: RRRR %
PILOT FLAMES
NOTIFY 501 – ENVIRONMENTAL MONITORING ANALYZERS
These analyzers are only allowed to be out of service for 96 hours/Quarter.
SULFUR ANALYZER:
HHV ANALYZER:
SUGGESTED OPERATOR ACTIONS FOR THE FOLLOWING:
FLARE HHV: RRRR BTU/SCFH
Add natural gas to raise BTU
INTERNAL WTR SEAL: RRRR %
Check FGR isolation valves:
OPEN – allow m/u water to maintain level
CLOSED – close m/u water, allow level to drop.
Group III
TTL SULFUR TO FLARE: RRRR PPM
Determine High Sulfur source to flare. Notify 501 if it continues to climb. Consider switching to FGR system if possible.


0337
Ack Page
Name
Eng U
Hide
9999.9
0337
Main Flare Schematic
Notify 501 - Immediate Actions Required
Failure To Report Lost Indications (Point Failed, Out Of Range, BAD PV, ETC.) Could Result In Environmental Violations And Fines.
3LI395
Internal Water Seal Level : 9999.99 %
3FI139
Pilot Gas Flow : 9999.99 SCFH
3FI120
Flare Stack Purge Gas Flow : 9999.99 SCFH
3XI878
Flare Flame UV Detector : 9999.99 %
Pilot Flames
3TA850A
State
3TA850B
State
3TA850C
State
Notify 501 - Environmental Monitoring Analyzers
These Analyzers Are Only Allowed To Be Out Of Service For 96 Hours/Quarter.
3UA912
Sulfur Analyzer : State
HHV Analyzer : 3UA970 State
Suggested Operator Actions For The Following:
3AI970
Flare HHV : 9999.99 BTU/ SCFH
Add Natural Gas To Raise BTU
Check FGR Isolation Valves :
OPEN - Allow M/U Water To Maintain Level
CLOSED - Close M/U Water, Allow Level To Drop.
3LI395
Internal WTR Seal : 9999.99 %
3AI911
TTL Sulfur To Flare : 9999.99 PPM
Determine High Sulfur Source To Flare. Notify 501 If It Continues To Climb. Consider Switching To FGR System If Possible.
Reserved for Faceplates

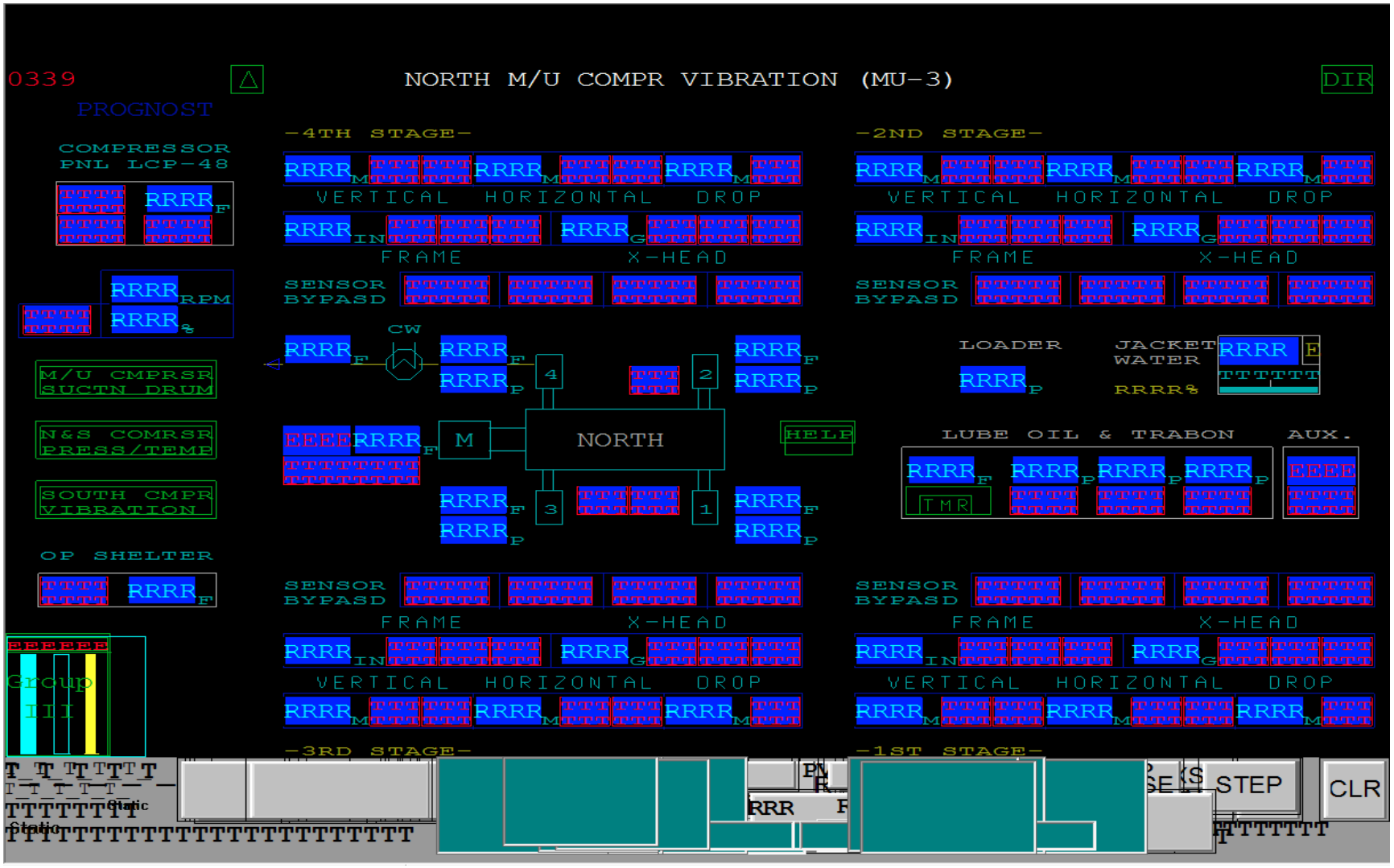
3.108 HCU FRAC REBOILER CEMS SHELTER (FR) (0338.DS)

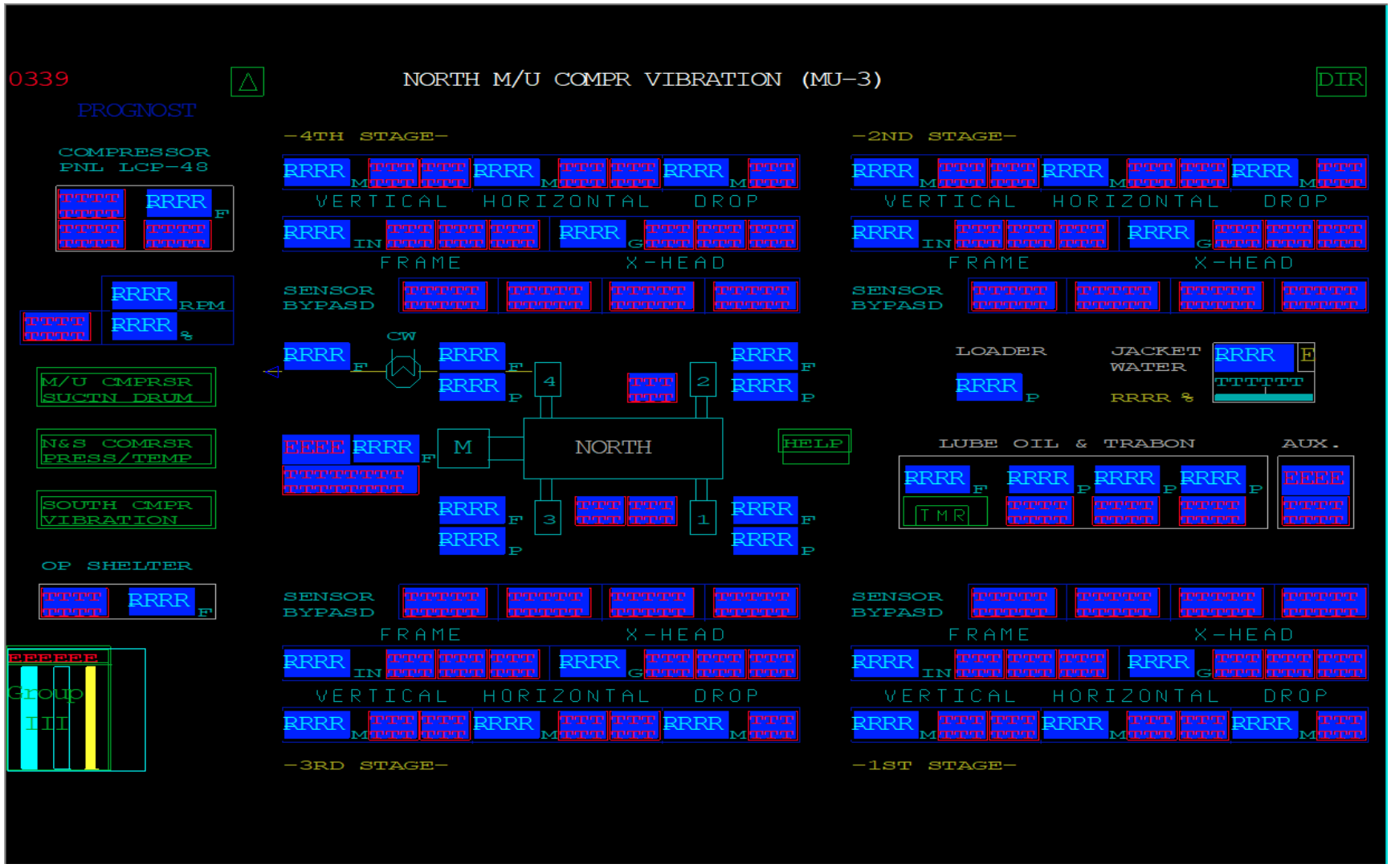


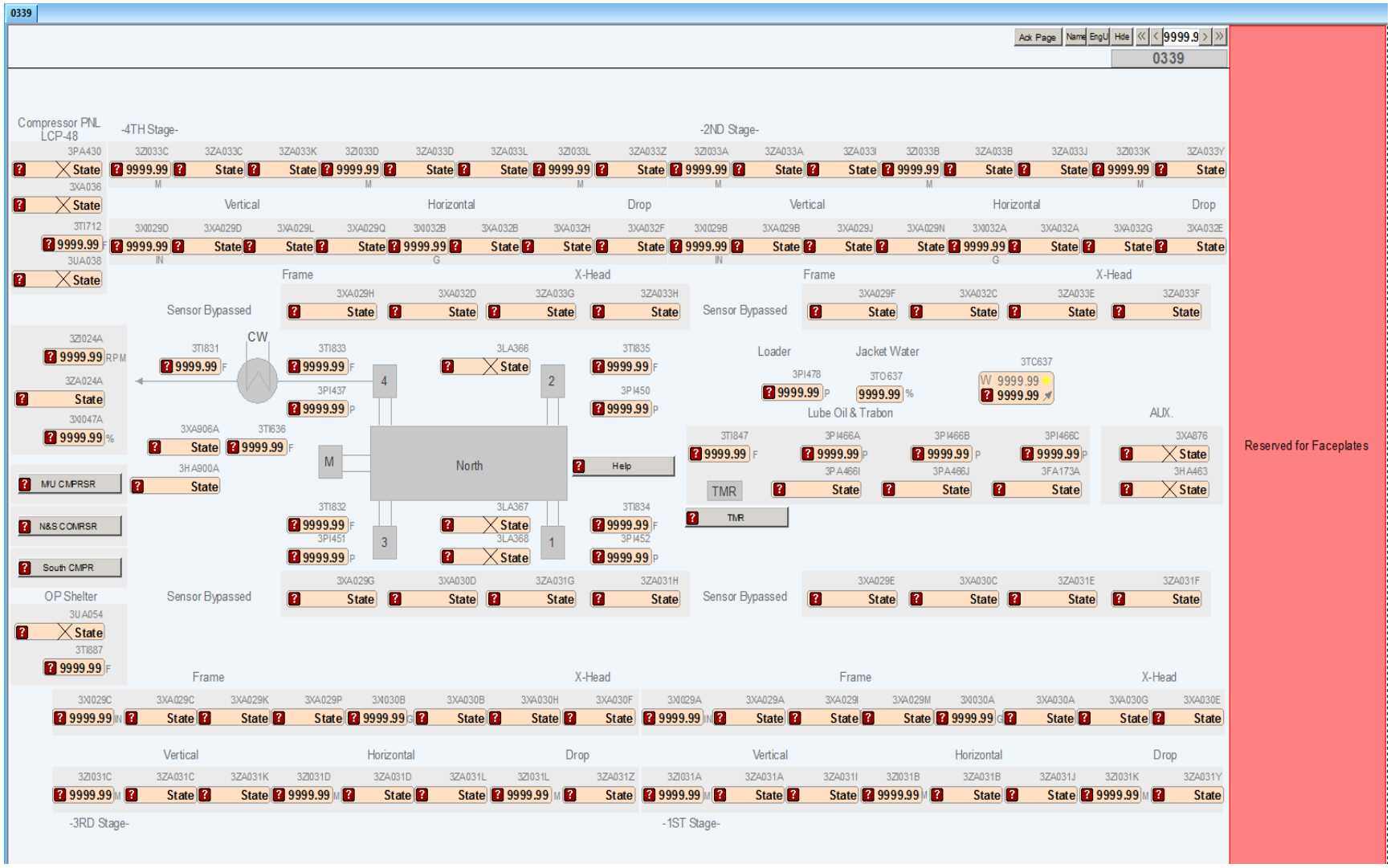

0338
HCU FRAC REBOILER CEMS SHELTER (FR)
RTRN
DIR
RRRR
H2S
PPM
TTTT
TTTT
TTTT
TTTT
TTTT
TTTT
CLX ALARM PLC
TTTTTT
TTTTTT
HVAC
PANL
RRRR
O2%
TTTTTT
TTTTTT
HVAC PURGE
PROCESS
TTTTTT
TTTTTT
EEEEEE
Group
III
HORN
BEACON


0338
Ack Page
Name
EngU
Hde
9999.9
0338
CLX Alarm PLC
3UA059
State
Process
3AI057
9999.99
O2%
3AA058A
State
3PA549
State
HVAC
PANL
3AI056
9999.99
H2S PPM
3AA056B
State
3AA055A
State
3AA055B
State
HVAC Purge
Horn
Beacon
Reserved for Faceplates

3.109 NORTH M/U COMPR VIBRATION (MU-3) (0339.DS)

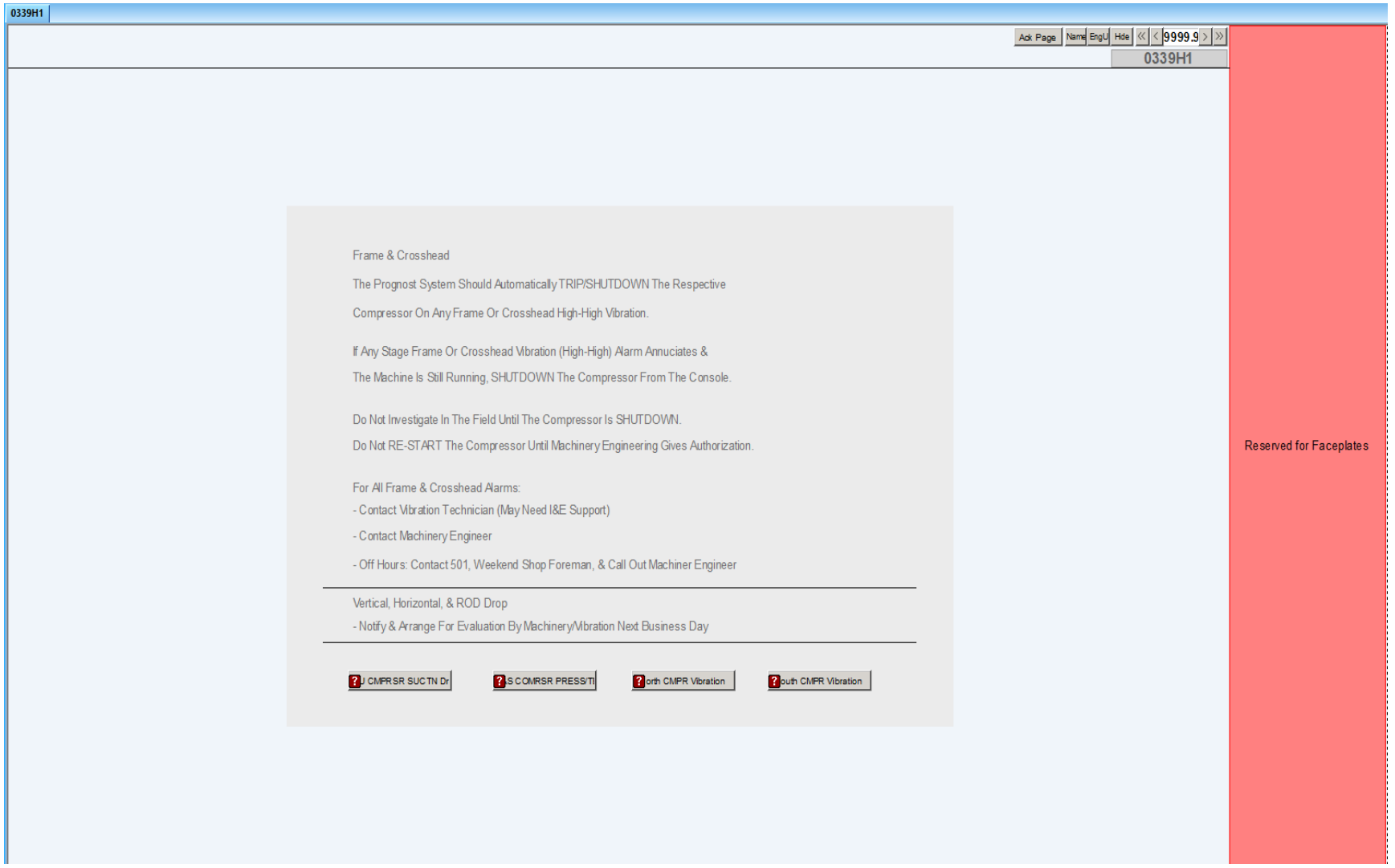



0339
NORTH M/U COMPR VIBRATION (MU-3)
DIR
PROGNOST
COMPRESSOR
PNL LCP-48
-4TH STAGE-
-2ND STAGE-
VERTICAL HORIZONTAL DROP
FRAME X-HEAD
SENSOR
BYPASD
CW
RPM
M/U CMPRSR
SUCTN DRUM
N&S COMRSR
PRESS/TEMP
SOUTH CMPR
VIBRATION
OP SHELTER
NORTH
HELP
LOADER
JACKET
WATER
LUBE OIL & TRABON
AUX.
TMR
GROUP
III
-3RD STAGE-
-1ST STAGE-

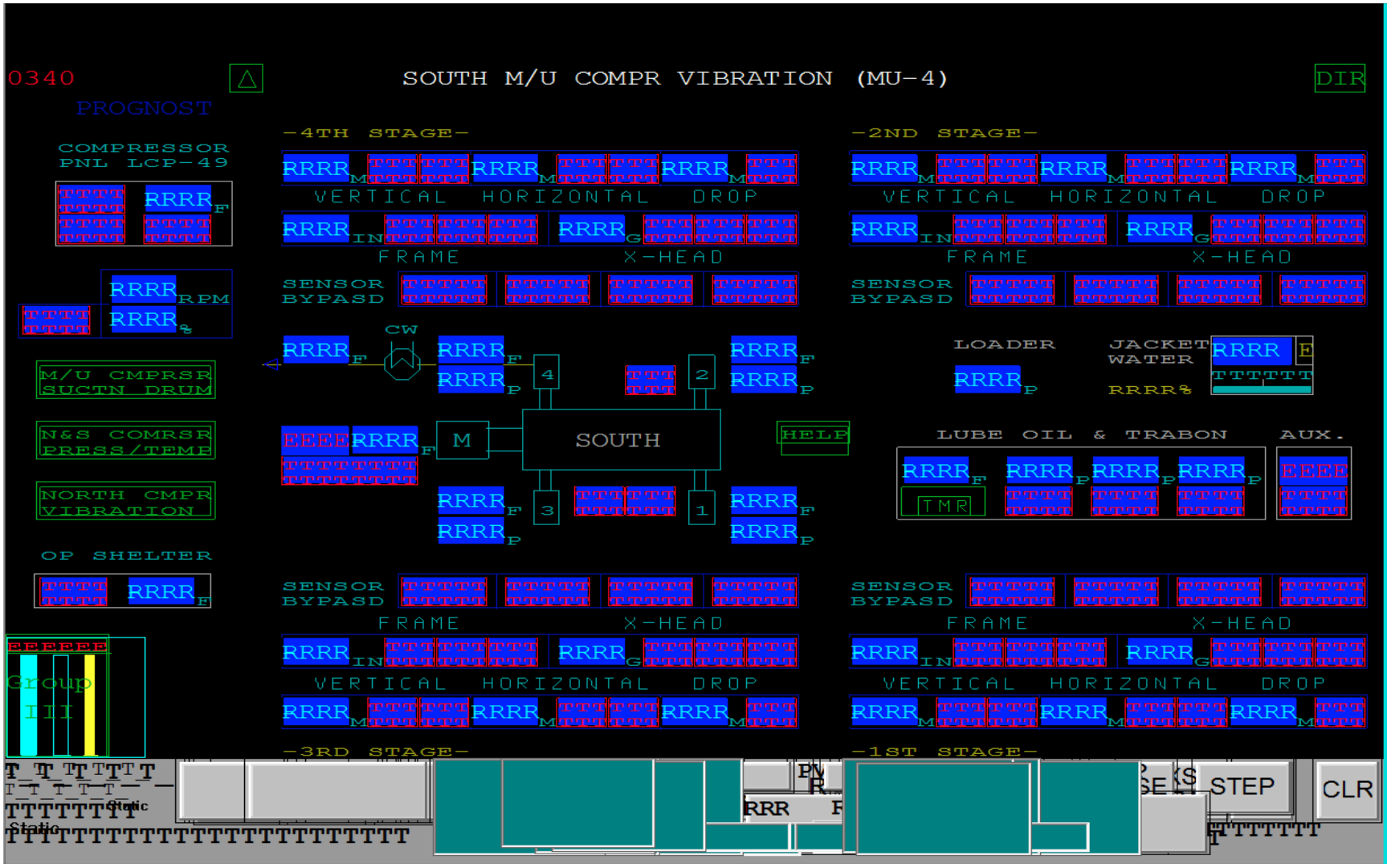

0339
Ack Page
Name
Engl
Hide
0339
Compressor PNL
LCP-48
-4TH Stage-
-2ND Stage-
Vertical
Horizontal
Drop
Frame
X-Head
Sensor Bypassed
CW
North
Help
MU CMPRSR
N&S COMRSR
South CMPR
OP Shelter
Loader
Jacket Water
Lube Oil & Trabon
AUX.
TMR
Reserved for Faceplates
-3RD Stage-
-1ST Stage-

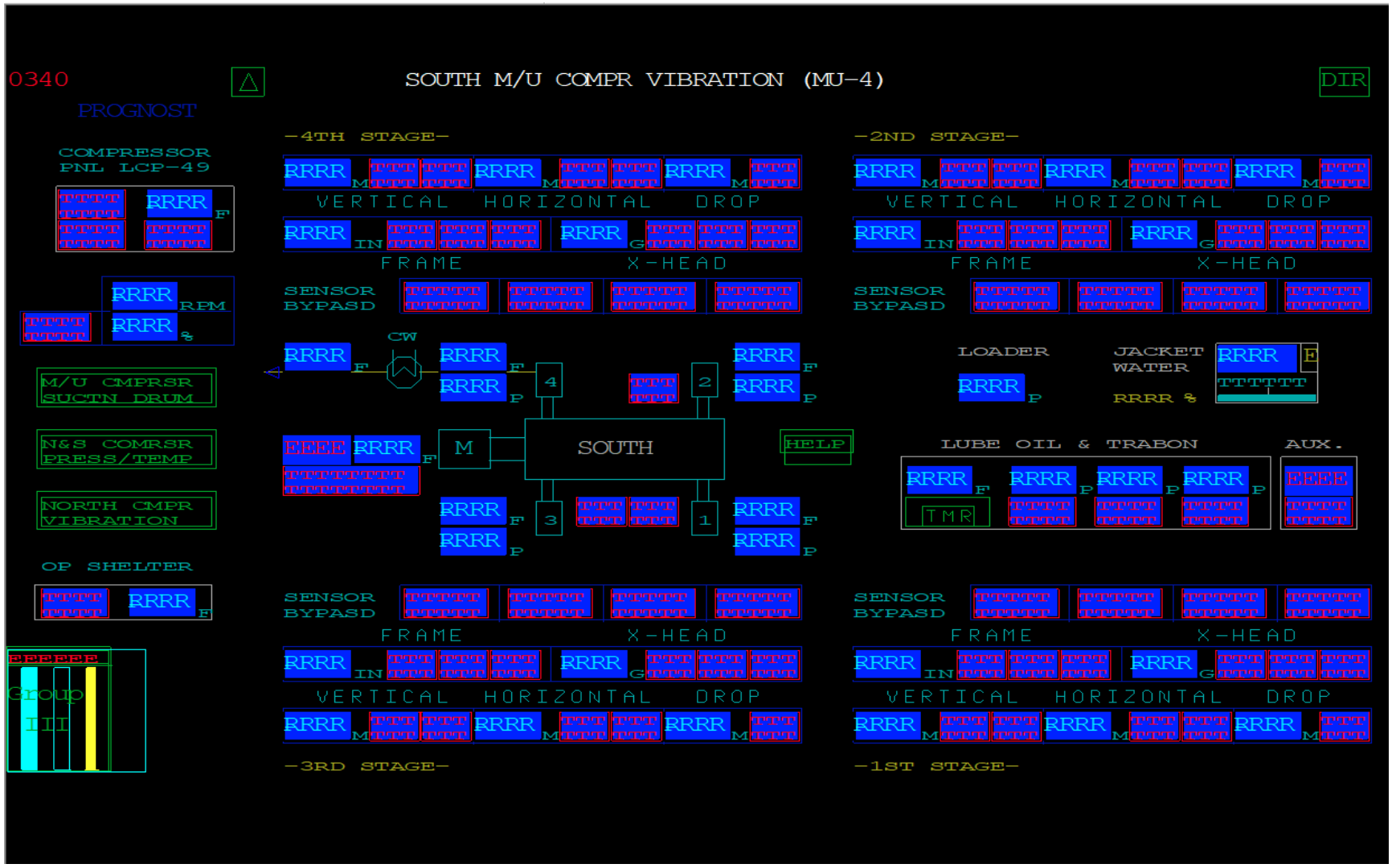
3.110 PROGNOST - OPERATOR ACTIONS (0339H1.DS)

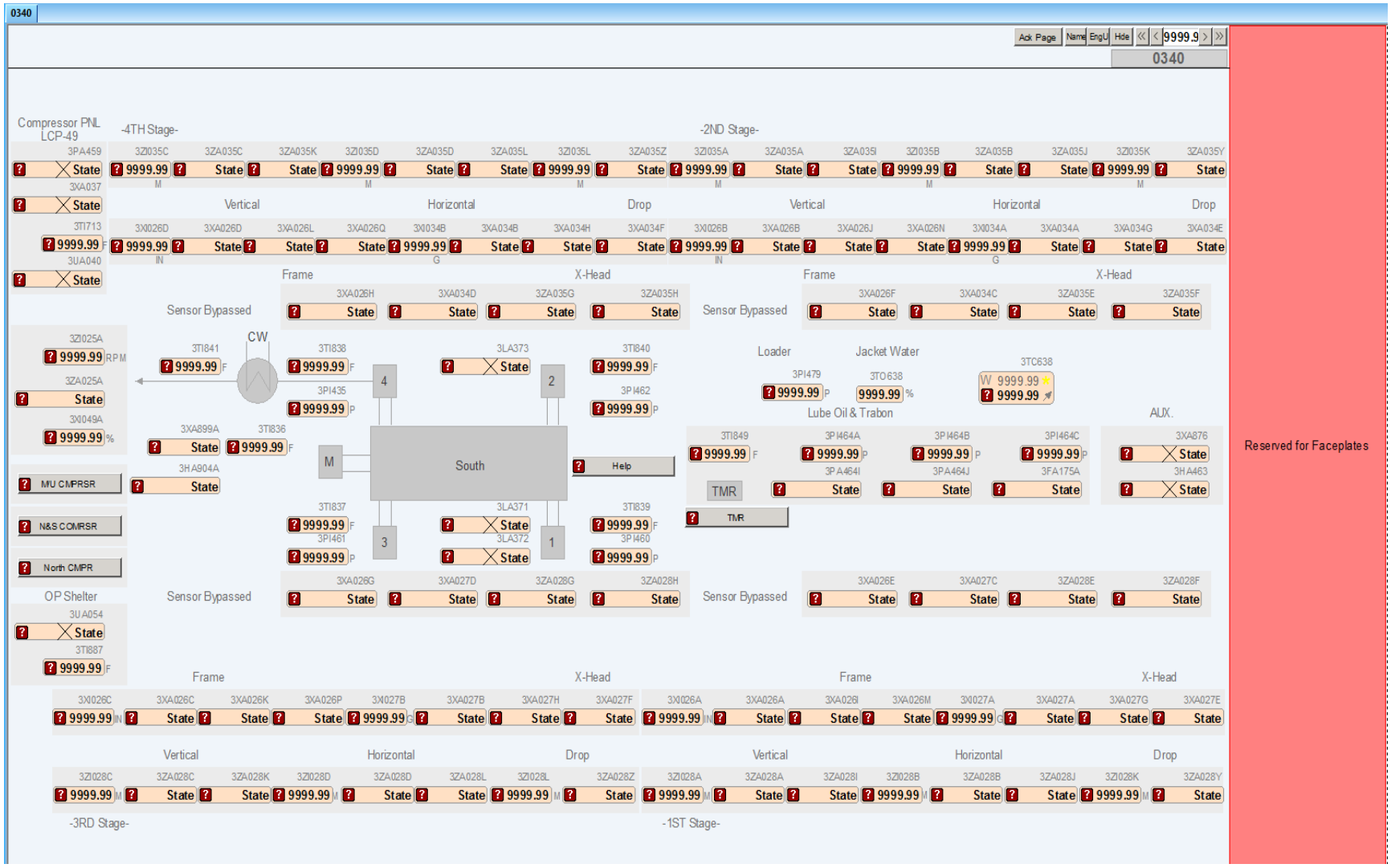
0339H1
PROGNOST – OPERATOR ACTIONS
FRAME & CROSSHEAD
THE PROGNOST SYSTEM SHOULD AUTOMATICALLY TRIP/SHUTDOWN THE RESPECTIVE
COMPRESSOR ON ANY FRAME OR CROSSHEAD HIGH-HIGH VIBRATION.
IF ANY STAGE FRAME OR CROSSHEAD VIBRATION (HIGH-HIGH) ALARM ANNUCIATES &
THE MACHINE IS STILL RUNNING, SHUTDOWN THE COMPRESSOR FROM THE CONSOLE.
DO NOT INVESTIGATE IN THE FIELD UNTIL THE COMPRESSOR IS SHUTDOWN.
DO NOT RE-START THE COMPRESSOR UNTIL MACHINERY ENGINEERING GIVES AUTHORIZATION.
FOR ALL FRAME & CROSSHEAD ALARMS:
– CONTACT VIBRATION TECHNICIAN (MAY NEED I&E SUPPORT)
– CONTACT MACHINERY ENGINEER
– OFF HOURS: CONTACT 501, WEEKEND SHOP FOREMAN, & CALL OUT MACHINER ENGINEER
VERTICAL, HORIZONTAL, & ROD DROP
– NOTIFY & ARRANGE FOR EVALUATION BY MACHINERY/VIBRATION NEXT BUSINESS DAY
M/U CMPRSR SUCTN DRUM
N&S COMRSR PRESS/TEMP
NORTH CMPR VIBRATION
SOUTH CMPR VIBRATION


0339H1
Ack Page
Name
EngU
Hde
9999.9
0339H1
Frame & Crosshead
The Prognost System Should Automatically TRIP/SHUTDOWN The Respective
Compressor On Any Frame Or Crosshead High-High Vibration.
If Any Stage Frame Or Crosshead Vibration (High-High) Alarm Annuciates &
The Machine Is Still Running, SHUTDOWN The Compressor From The Console.
Do Not Investigate In The Field Until The Compressor Is SHUTDOWN.
Do Not RE-START The Compressor Until Machinery Engineering Gives Authorization.
For All Frame & Crosshead Alarms:
- Contact Vibration Technician (May Need I&E Support)
- Contact Machinery Engineer
- Off Hours: Contact 501, Weekend Shop Foreman, & Call Out Machiner Engineer
Vertical, Horizontal, & ROD Drop
- Notify & Arrange For Evaluation By Machinery/Vibration Next Business Day
J CMPR SR SUCTN Dr
S COMRSR PRESS/TI
orth CMPR Vibration
outh CMPR Vibration
Reserved for Faceplates

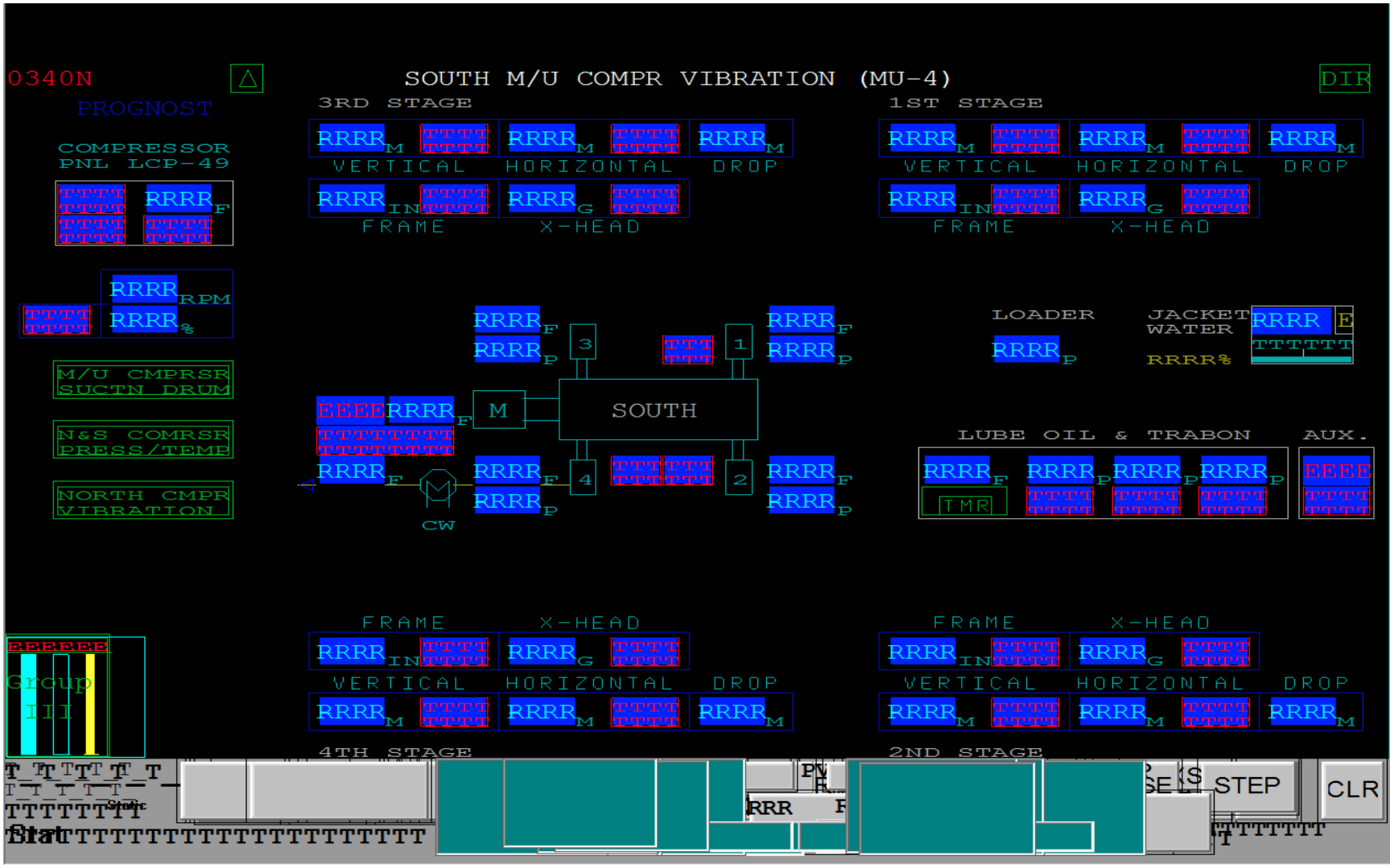
3.111 SOUTH M/U COMPR VIBRATION (MU-4) (0340.DS)



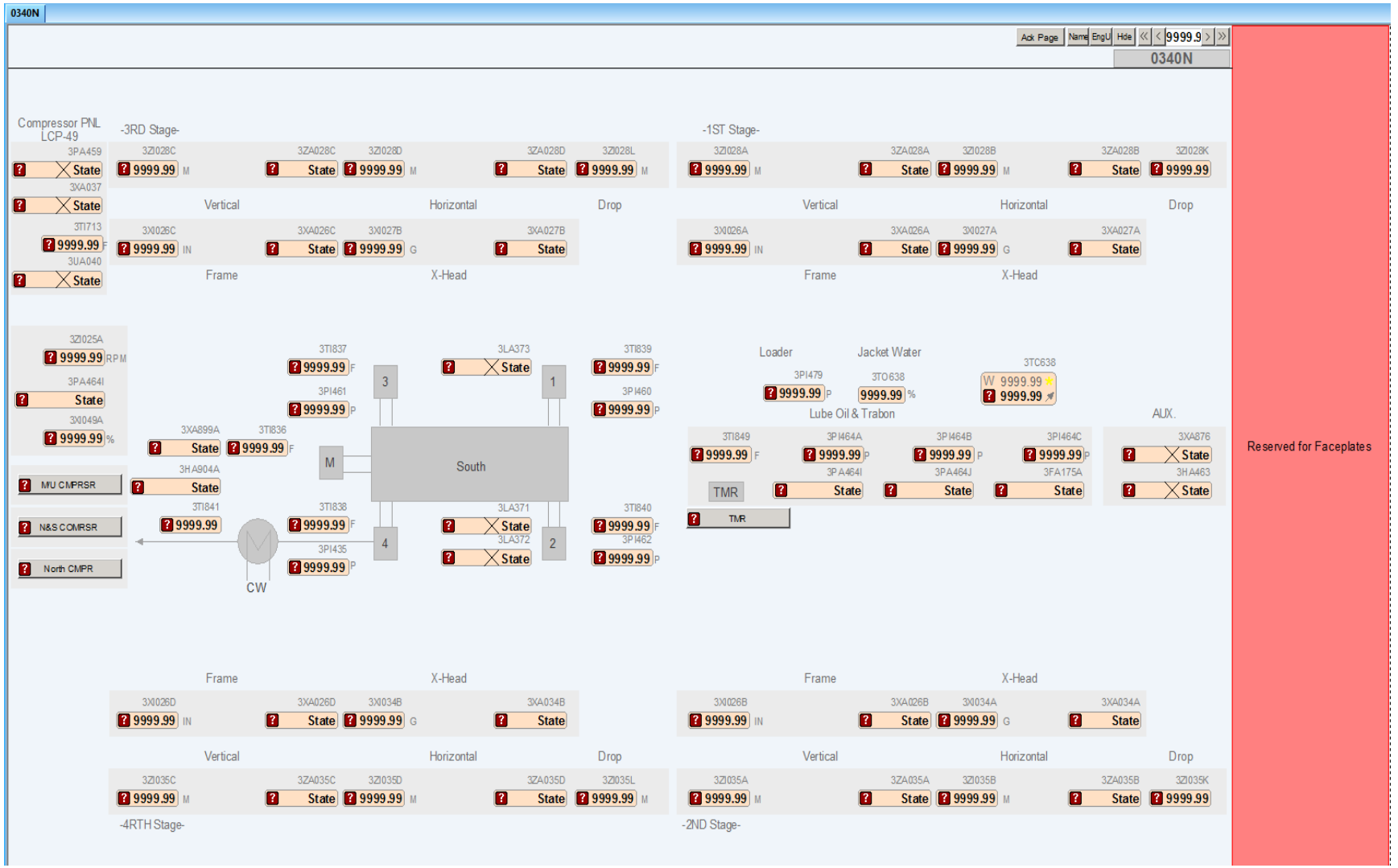

0340
SOUTH M/U COMPR VIBRATION (MU-4)
DIR
PROGNOST
COMPRESSOR
PNL LCP-49
RRRR
F
RRRR
RPM
RRRR
%
M/U CMPRSR
SUCTN DRUM
N&S COMRSR
PRESS/TEMP
NORTH CMPR
VIBRATION
OP SHELTER
RRRR
F
EEEEEE
Group
III
-4TH STAGE-
-2ND STAGE-
VERTICAL HORIZONTAL DROP
FRAME X-HEAD
SENSOR
BYPASD
CW
4
2
3
1
M
SOUTH
HELP
LOADER
JACKET
WATER
RRRR
E
TTTTTT
LUBE OIL & TRABON
AUX.
TMR
-3RD STAGE-
-1ST STAGE-


0340
Ack Page
Name
Engl
Hide
0340
Compressor PNL LCP-49
-4TH Stage-
-2ND Stage-
Vertical
Horizontal
Drop
Frame
X-Head
Sensor Bypassed
CW
South
Loader
Jacket Water
Lube Oil & Trabon
AUX.
TMR
MU CMPRSR
N&S COMRSR
North CMPR
OP Shelter
Help
-3RD Stage-
-1ST Stage-
Reserved for Faceplates

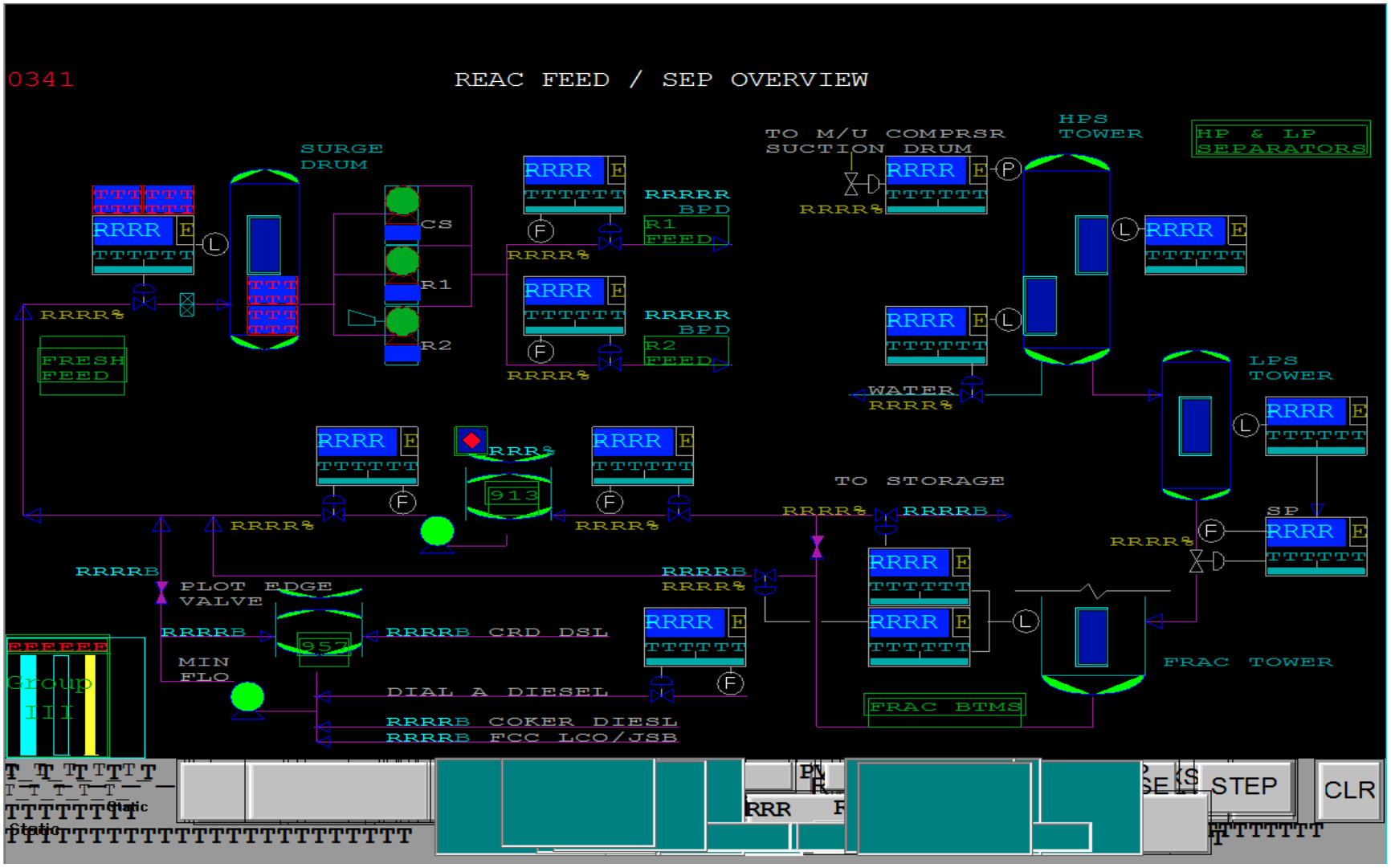
3.112 SOUTH M/U COMPR VIBRATION (MU-4) (0340N.DS)

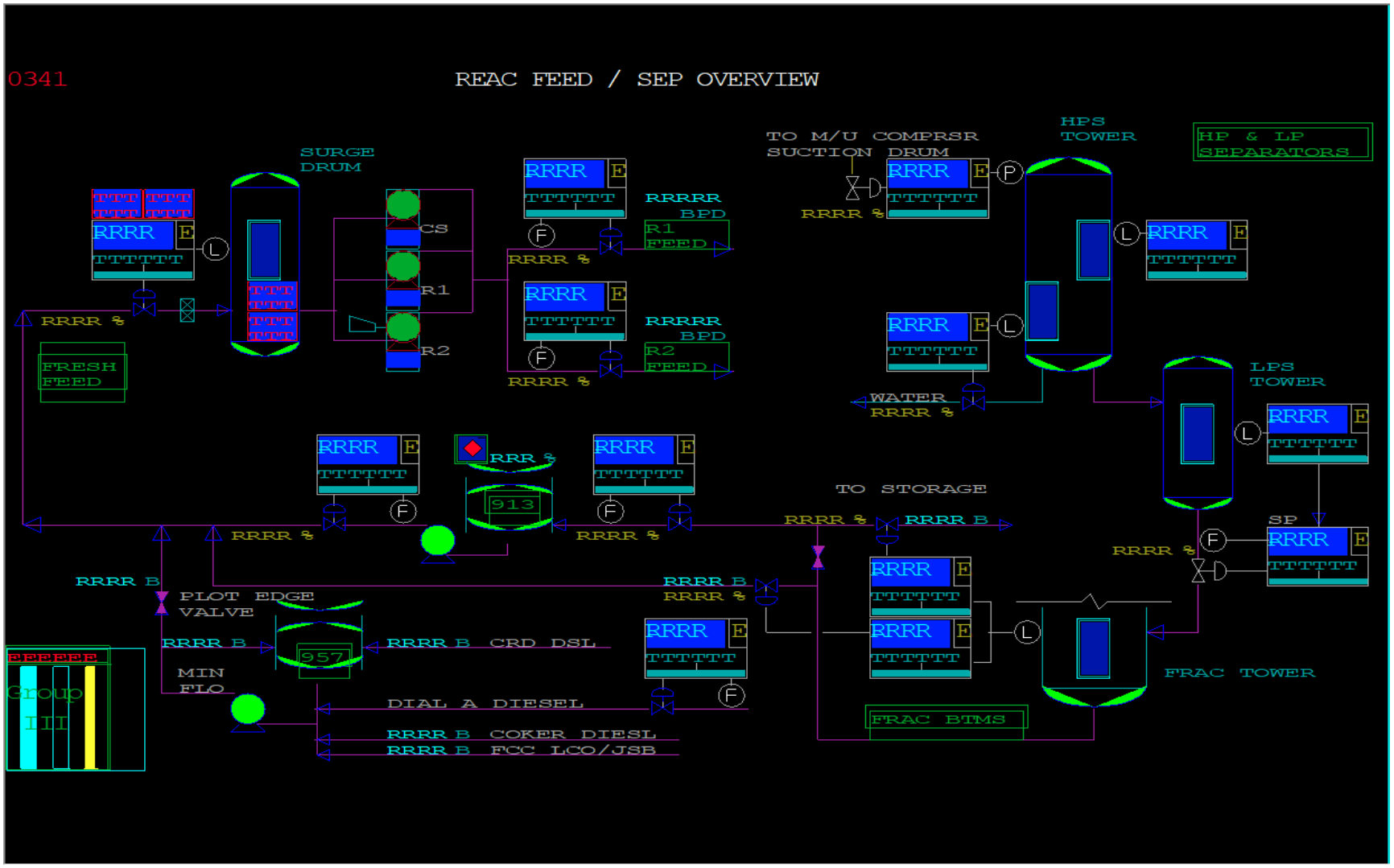


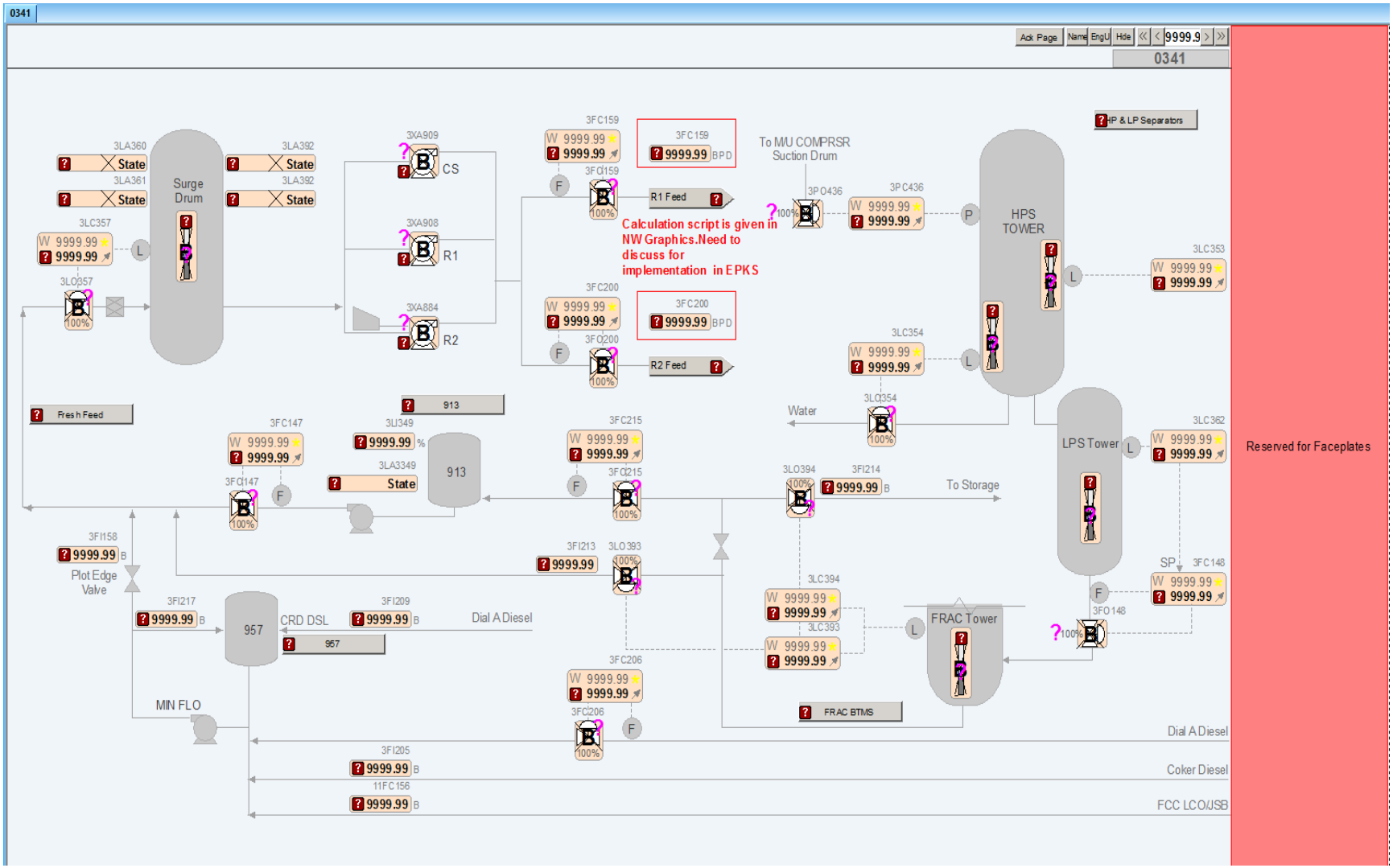
0340N
PROGNOST
SOUTH M/U COMPR VIBRATION (MU-4)
DIR
3RD STAGE
1ST STAGE
VERTICAL
HORIZONTAL
DROP
FRAME
X-HEAD
COMPRESSOR
PNL LCP-49
RPM
M/U CMPRSR
SUCTN DRUM
N&S COMRSR
PRESS/TEMP
NORTH CMPR
VIBRATION
SOUTH
CW
LOADER
JACKET
WATER
LUBE OIL & TRABON
AUX.
TMR
Group
III
4TH STAGE
2ND STAGE


0340N
Ack Page
Name
Engl
Hde
0340N
Compressor PNL LCP-49
-3RD Stage-
-1ST Stage-
Vertical
Horizontal
Drop
Frame
X-Head
Loader
Jacket Water
Lube Oil & Trabon
AUX.
MU CMPRSR
N&S COMRSR
North CMPR
South
CW
TMR
Reserved for Faceplates
-4RTH Stage-
-2ND Stage-

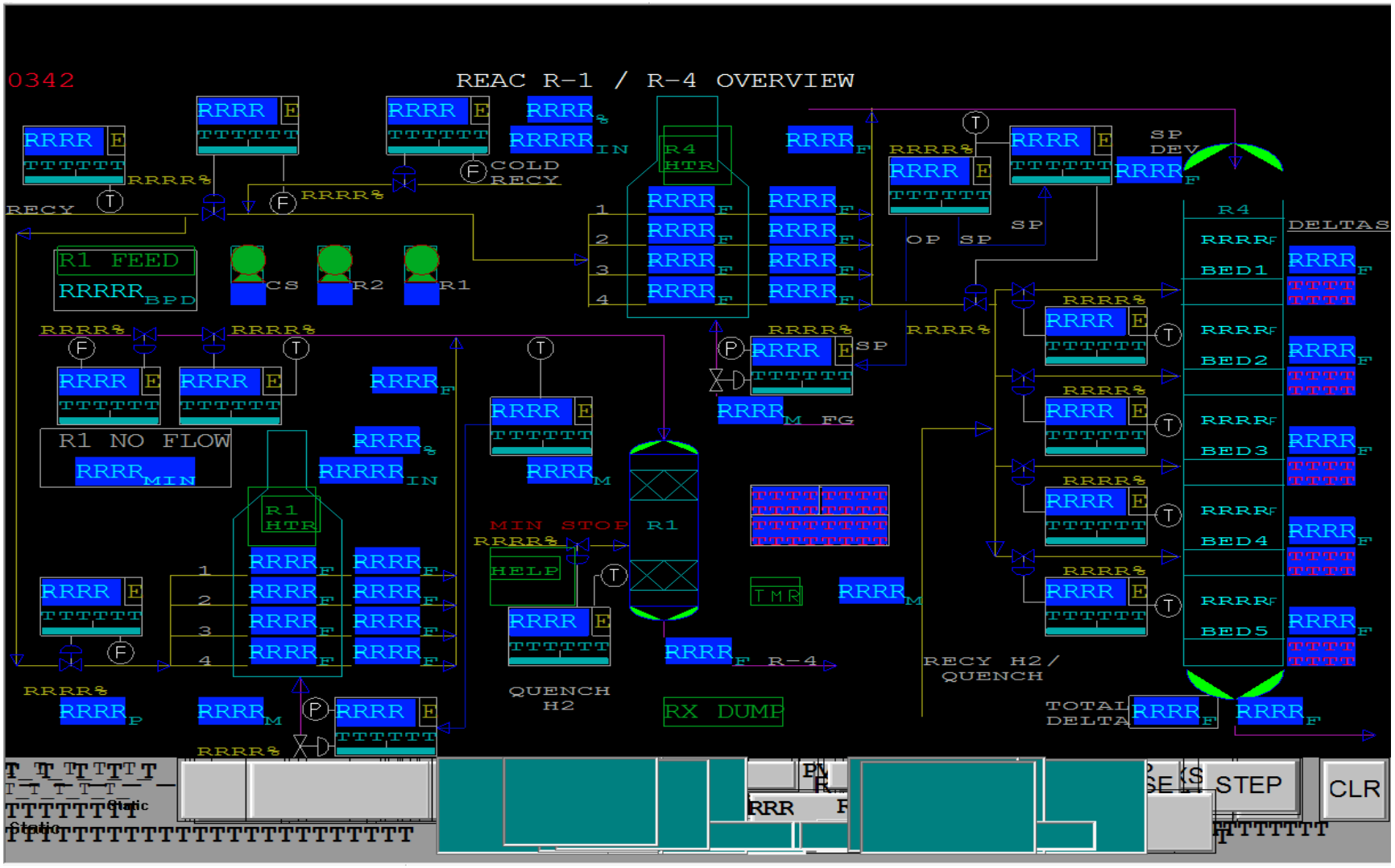
3.113 REAC FEED / SEP OVERVIEW (0341.DS)

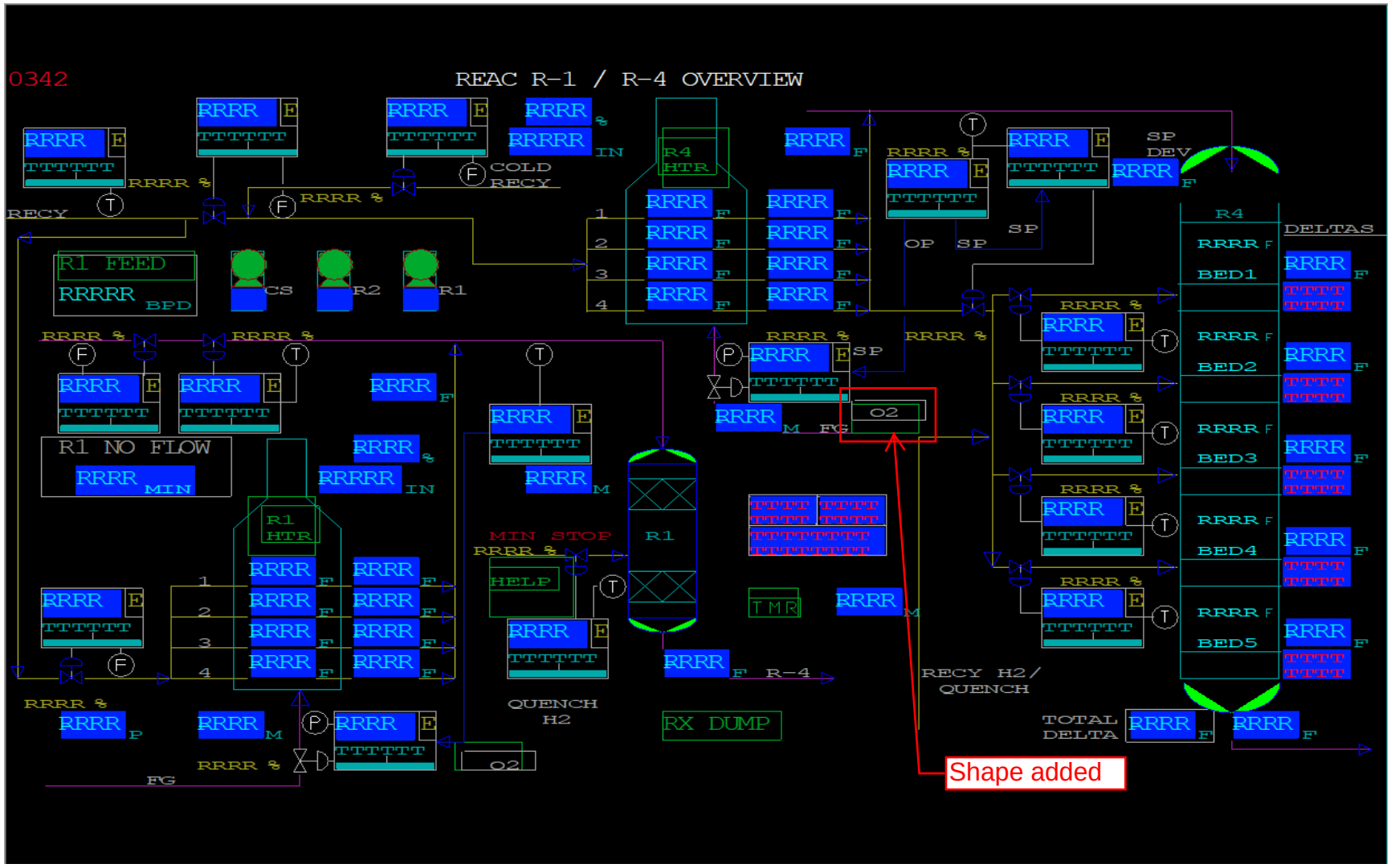


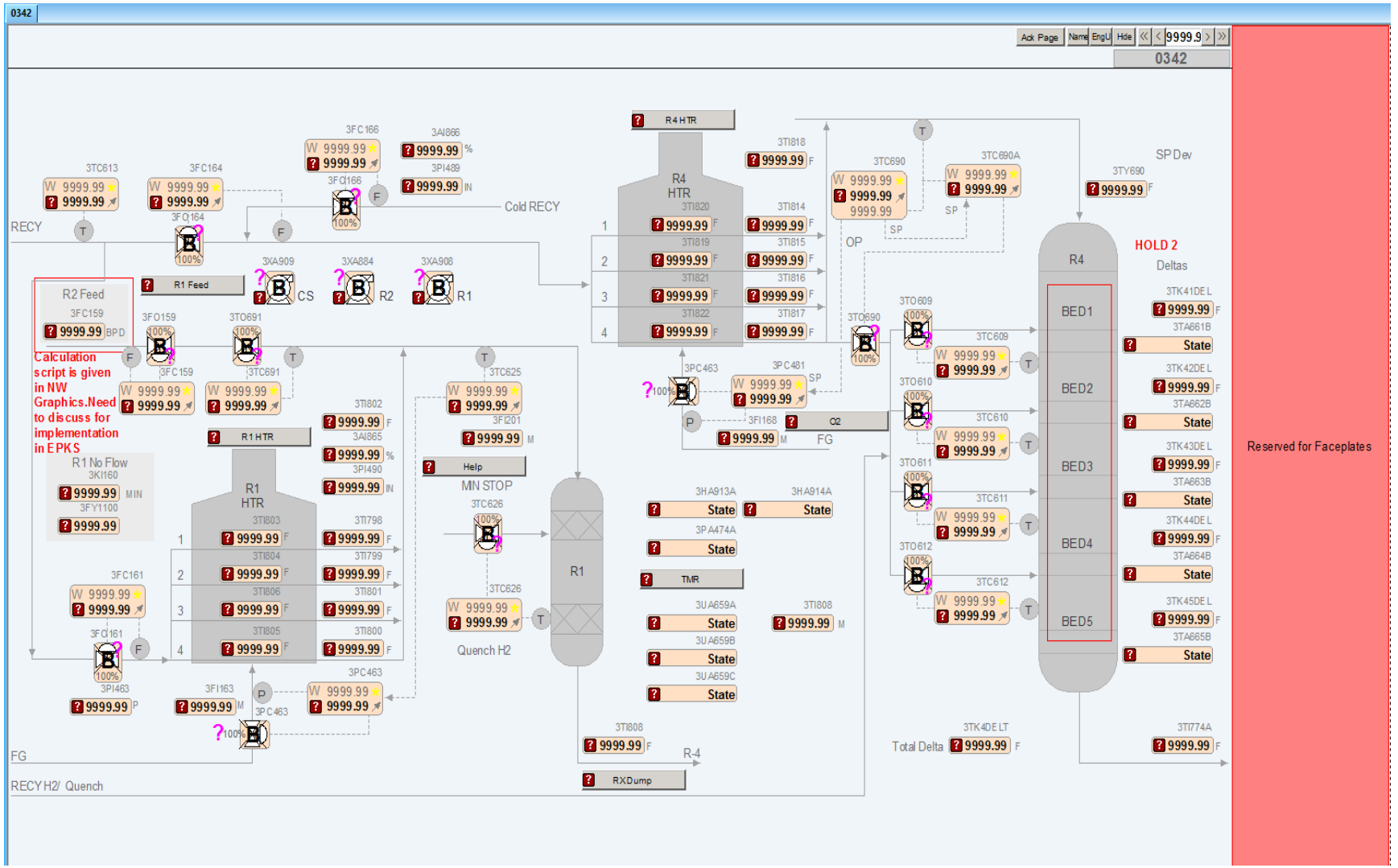

0341
REAC FEED / SEP OVERVIEW
SURGE DRUM
CS
R1
R2
FRESH FEED
RRRR %
RRRRR BPD
R1 FEED
R2 FEED
TO M/U COMPRSR SUCTION DRUM
HPS TOWER
HP & LP SEPARATORS
LPS TOWER
WATER
TO STORAGE
RRRR B
PLOT EDGE VALVE
MIN FLO
RRRR B CRD DSL
DIAL A DIESEL
RRRR B COKER DIESL
RRRR B FCC LCO/JSB
FRAC TOWER
FRAC BTMS
SP
913
957
Group III


0341
Ack Page
Name
Eng U
Hide
9999.9
0341
HP & LP Separators
3LA360
State
3LA361
State
Surge Drum
3LA392
State
3LA392
State
3LC357
W 9999.99
9999.99
3LO357
100%
3XA909
CS
3XA908
R1
3XA884
R2
3FC159
W 9999.99
9999.99
3FC159
9999.99 BPD
3FO159
100%
R1 Feed
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
3FC200
W 9999.99
9999.99
3FC200
9999.99 BPD
3FO200
100%
R2 Feed
To MU COMPRSR Suction Drum
3PO436
100%
3PC436
W 9999.99
9999.99
P
HPS TOWER
3LC353
W 9999.99
9999.99
L
3LC354
W 9999.99
9999.99
L
3LO354
100%
Water
Fresh Feed
913
3FC147
W 9999.99
9999.99
3FO147
100%
F
3LI349
9999.99 %
3LA3349
State
913
3FC215
W 9999.99
9999.99
3FO215
100%
F
3LO394
100%
3FI214
9999.99 B
To Storage
LPS Tower
3LC362
W 9999.99
9999.99
L
Reserved for Faceplates
3FI158
9999.99 B
Plot Edge Valve
3FI213
9999.99
3LO393
100%
3LC394
W 9999.99
9999.99
3LC393
W 9999.99
9999.99
L
FRAC Tower
SP
3FC148
W 9999.99
9999.99
F
3FO148
100%
3FI217
9999.99 B
957
CRD DSL
3FI209
9999.99 B
Dial A Diesel
957
3FC206
W 9999.99
9999.99
3FO206
100%
F
FRAC BTMS
MIN FLO
Dial A Diesel
3FI205
9999.99 B
Coker Diesel
11FC156
9999.99 B
FCC LCO/JSB

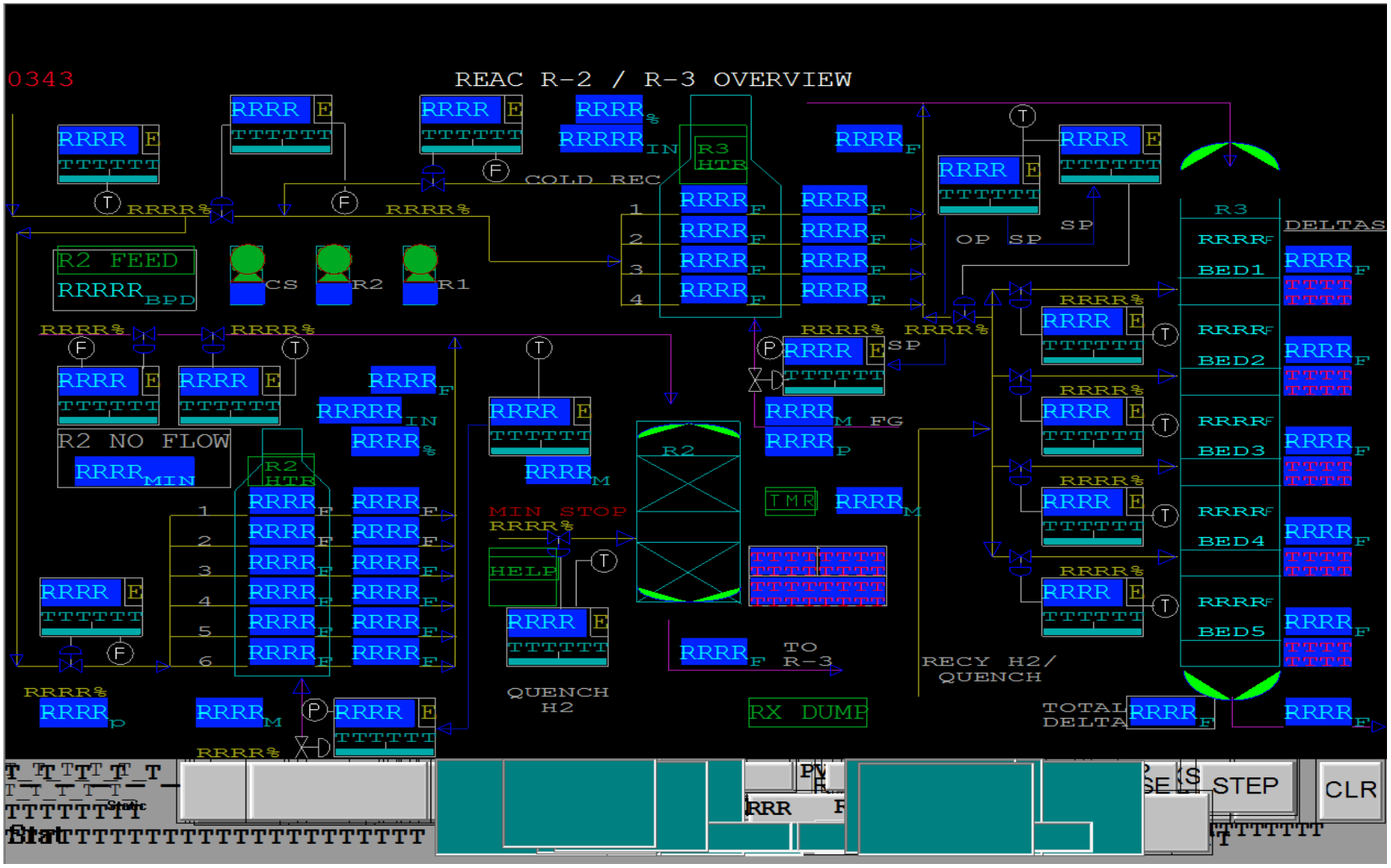
3.114 REAC R-1 / R-4 OVERVIEW (0342.DS)

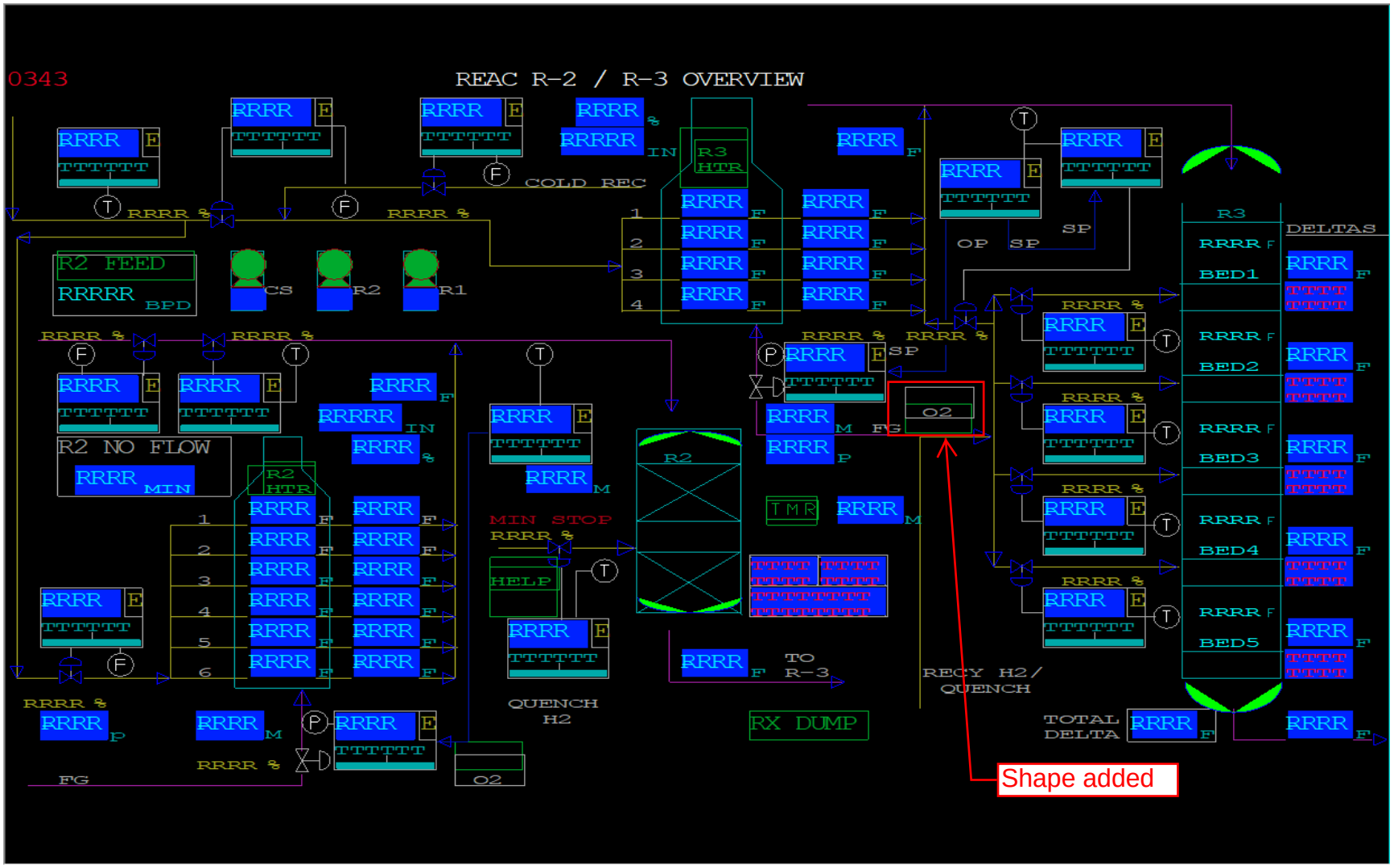


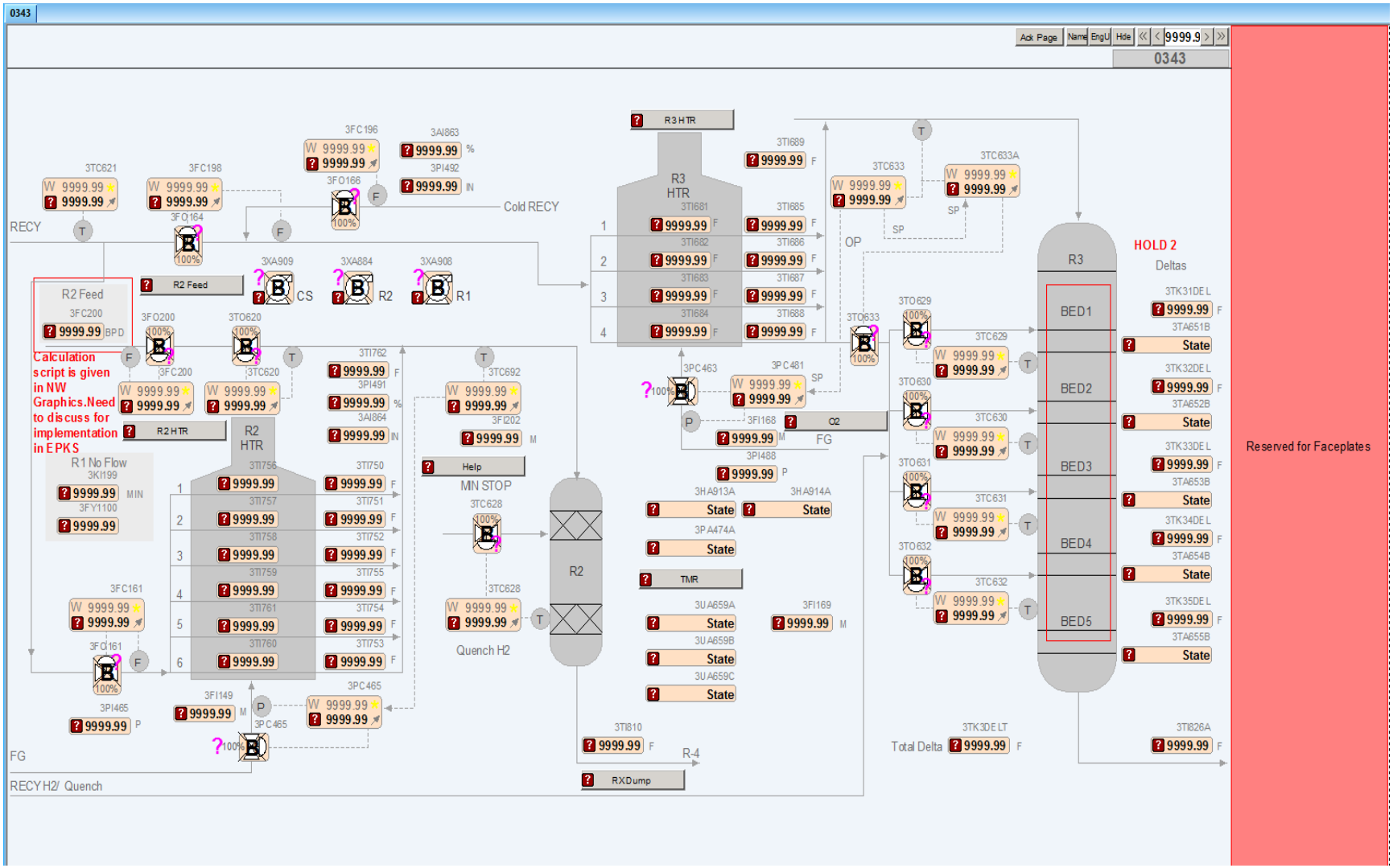

0342
REAC R-1 / R-4 OVERVIEW
R1 FEED
R1 NO FLOW
MIN STOP
HELP
QUENCH H2
RX DUMP
RECY H2/ QUENCH
TOTAL DELTA
DELTAS
BED1
BED2
BED3
BED4
BED5
Shape added


0342
Ack Page
0342
R2 Feed
R1 Feed
R1 HTR
R4 HTR
R1 No Flow
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
Help
MN STOP
Quench H2
Cold RECY
RECY
FG
RECY H2/ Quench
R-4
RXDump
TMR
OP
SP
SP Dev
HOLD 2
Deltas
Total Delta
BED1
BED2
BED3
BED4
BED5
Reserved for Faceplates

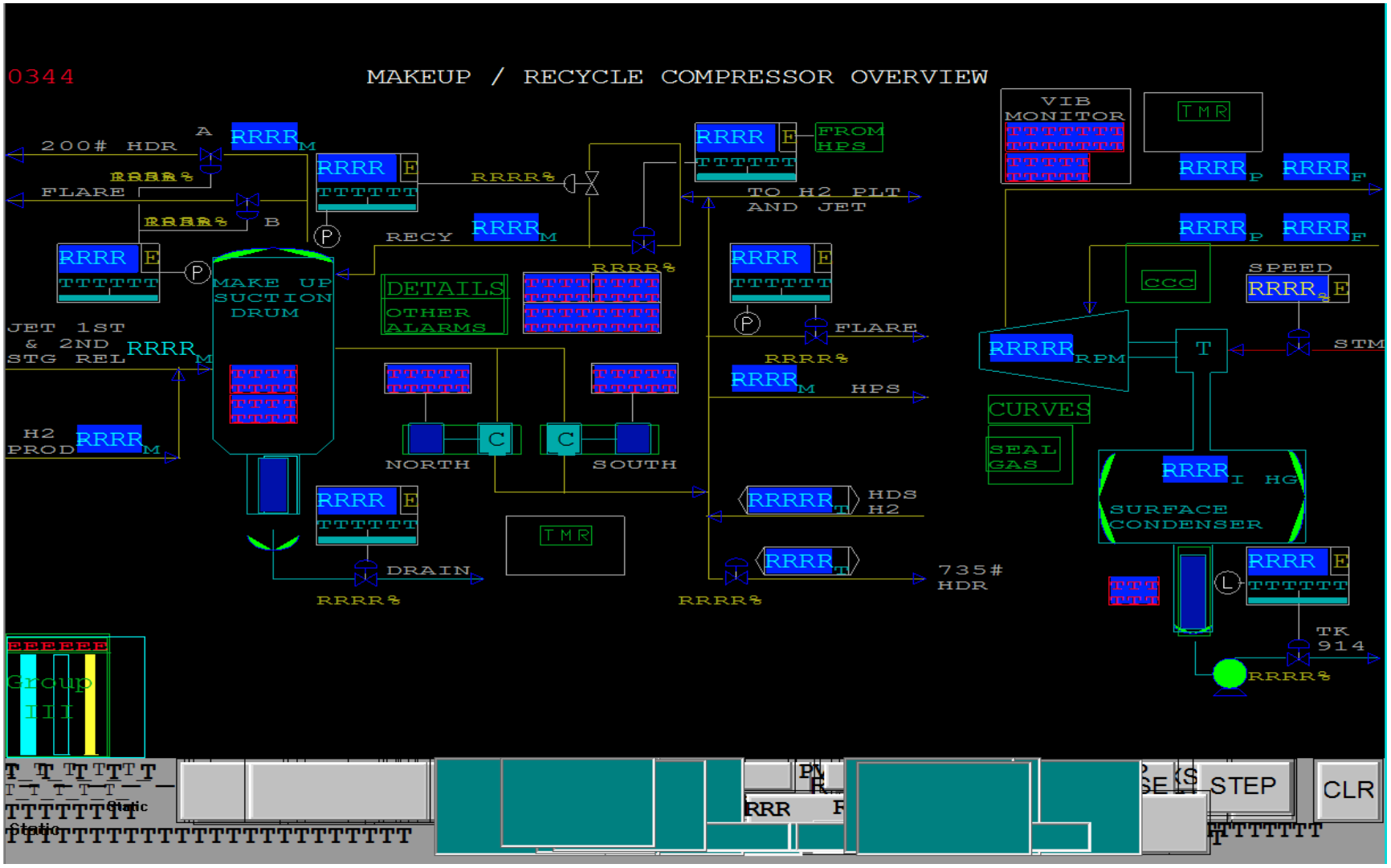
3.115 REAC R-2 / R-3 OVERVIEW (0343.DS)

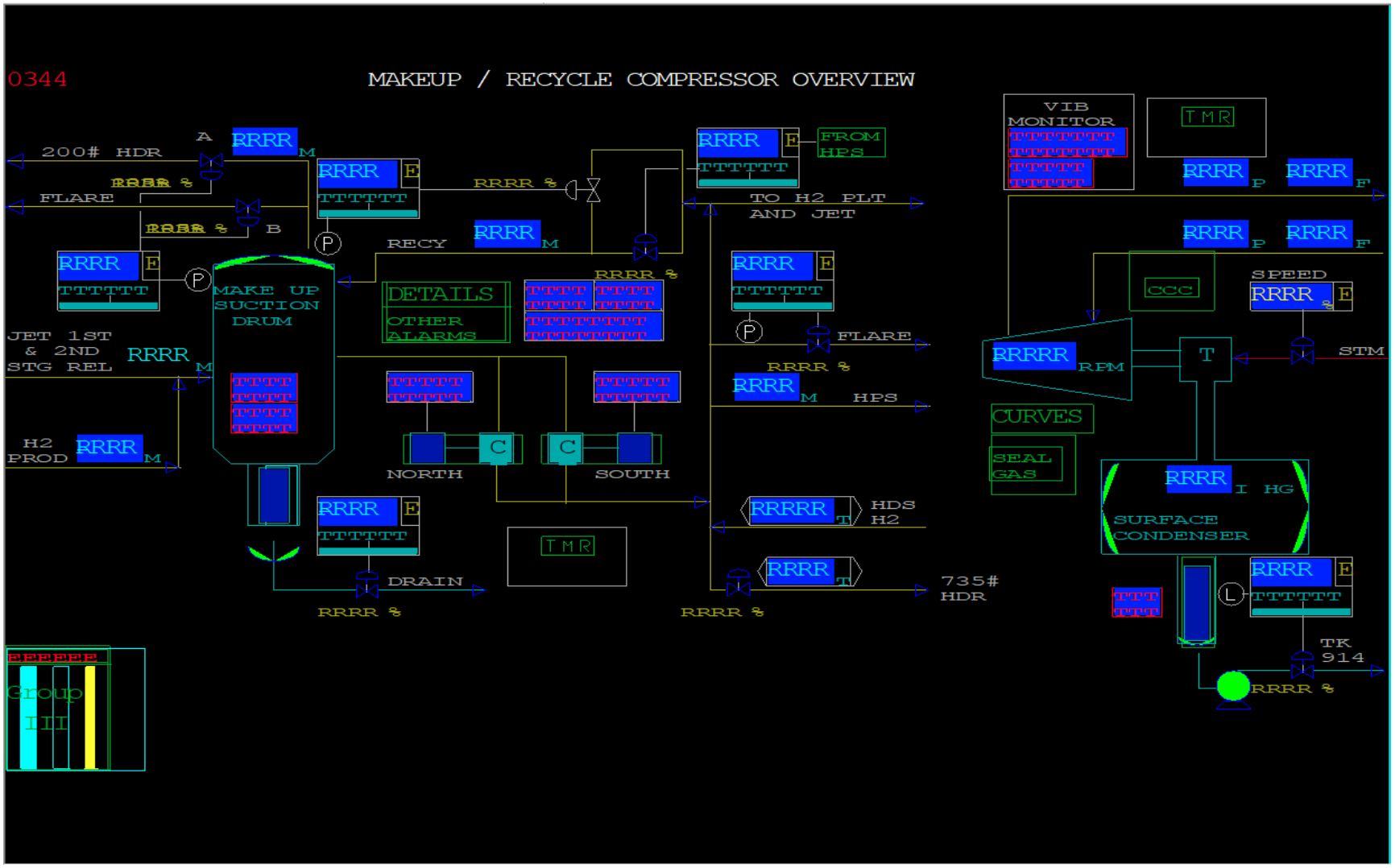


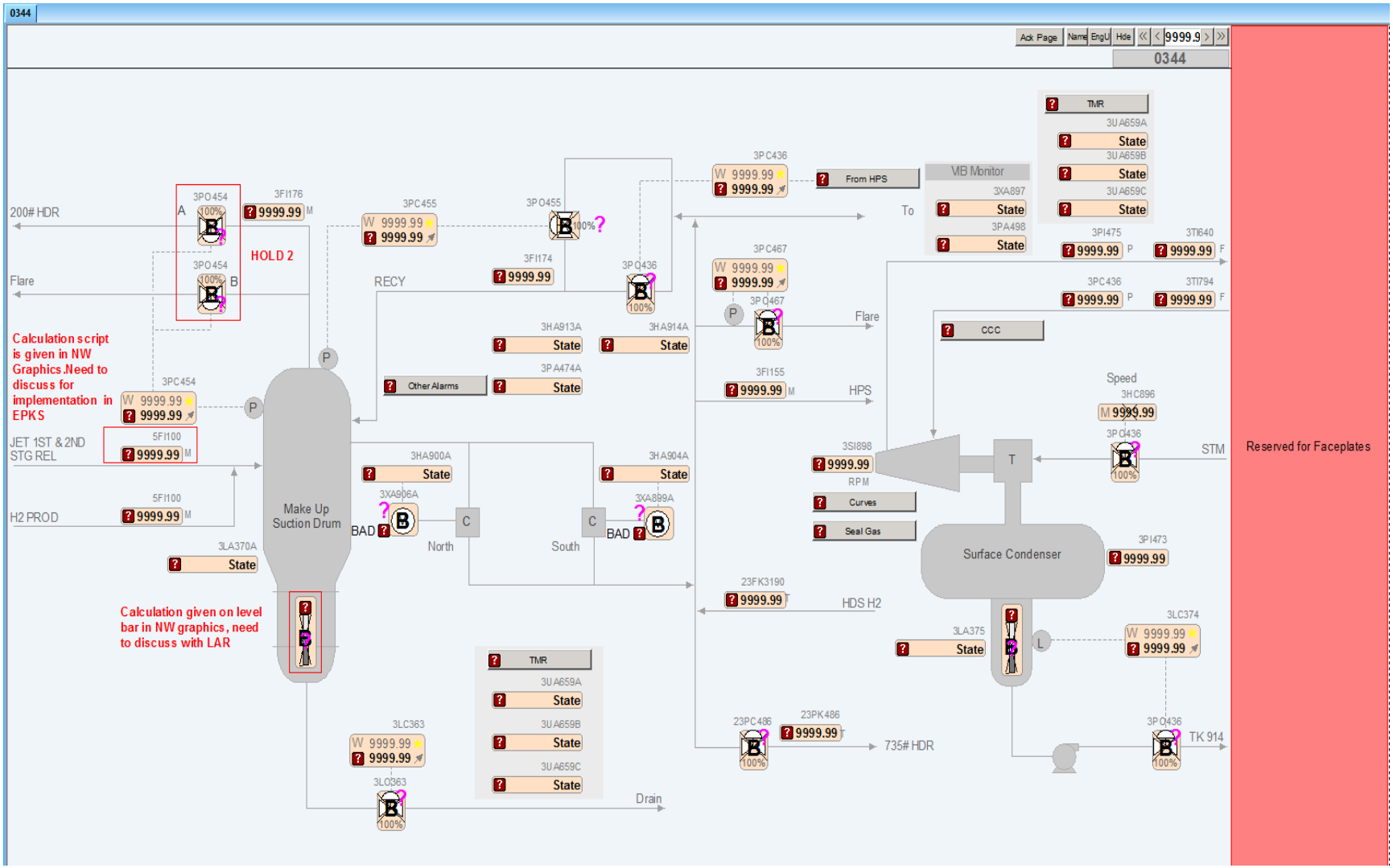

0343
REAC R-2 / R-3 OVERVIEW
COLD REC
R2 FEED
BPD
CS
R2
R1
R2 NO FLOW
MIN
R2 HTR
R3 HTR
IN
R2
MIN STOP
HELP
TMR
O2
SP
OP
R3
DELTAS
BED1
BED2
BED3
BED4
BED5
TO R-3
RECY H2/ QUENCH
QUENCH H2
RX DUMP
TOTAL DELTA
FG
Shape added


0343
Ack Page
Name
Eng U
Hide
0343
Reserved for Faceplates
R2 Feed
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
R1 No Flow
R2 HTR
R3 HTR
R3
HOLD 2
Deltas
BED1
BED2
BED3
BED4
BED5
Cold RECY
RECY
Quench H2
MN STOP
Help
TMR
RXDump
R-4
Total Delta
RECY H2/ Quench
FG
OP
SP
MIN
BPD
State

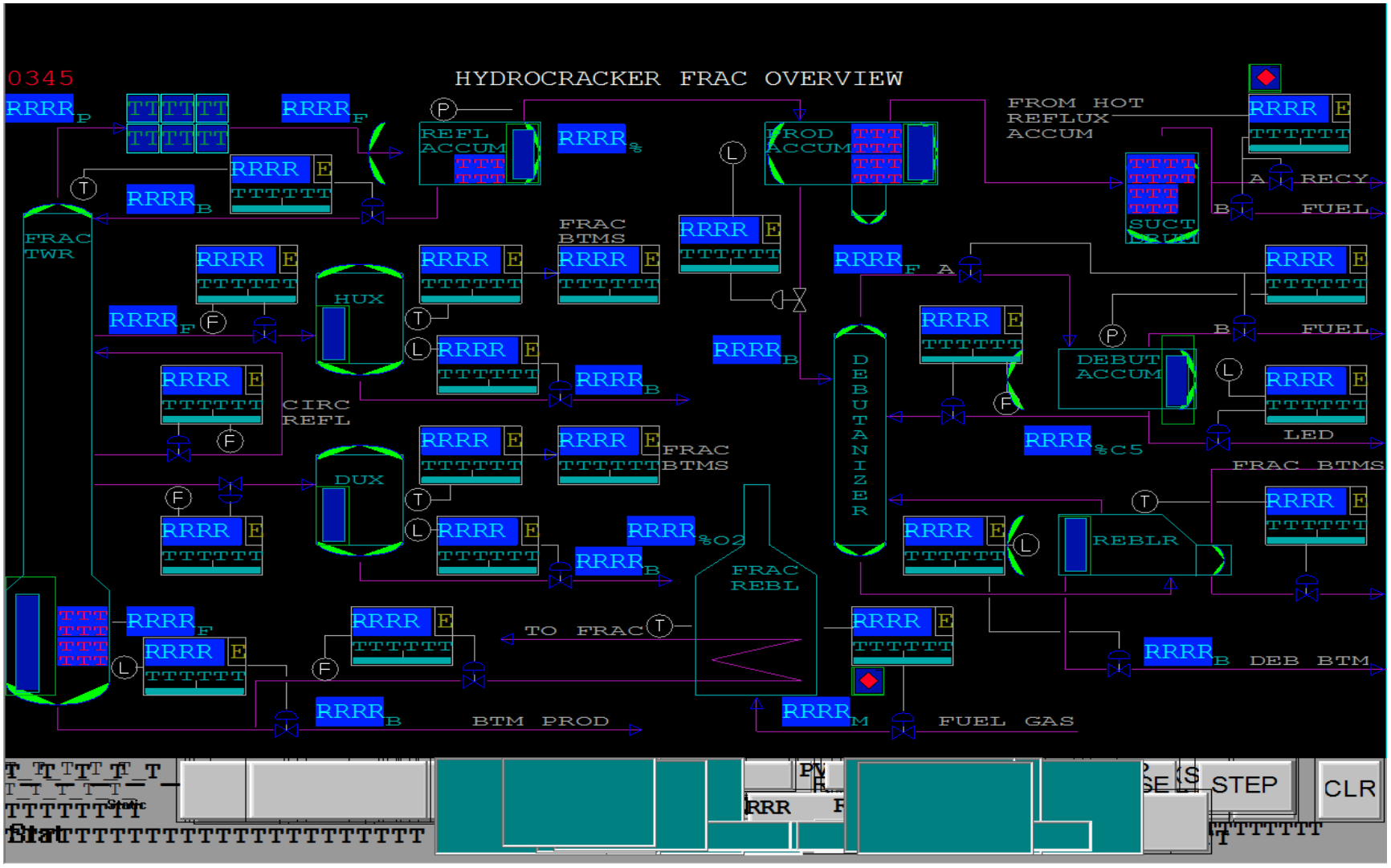
3.116 MAKEUP / RECYCLE COMPRESSOR OVERVIEW (0344.DS)

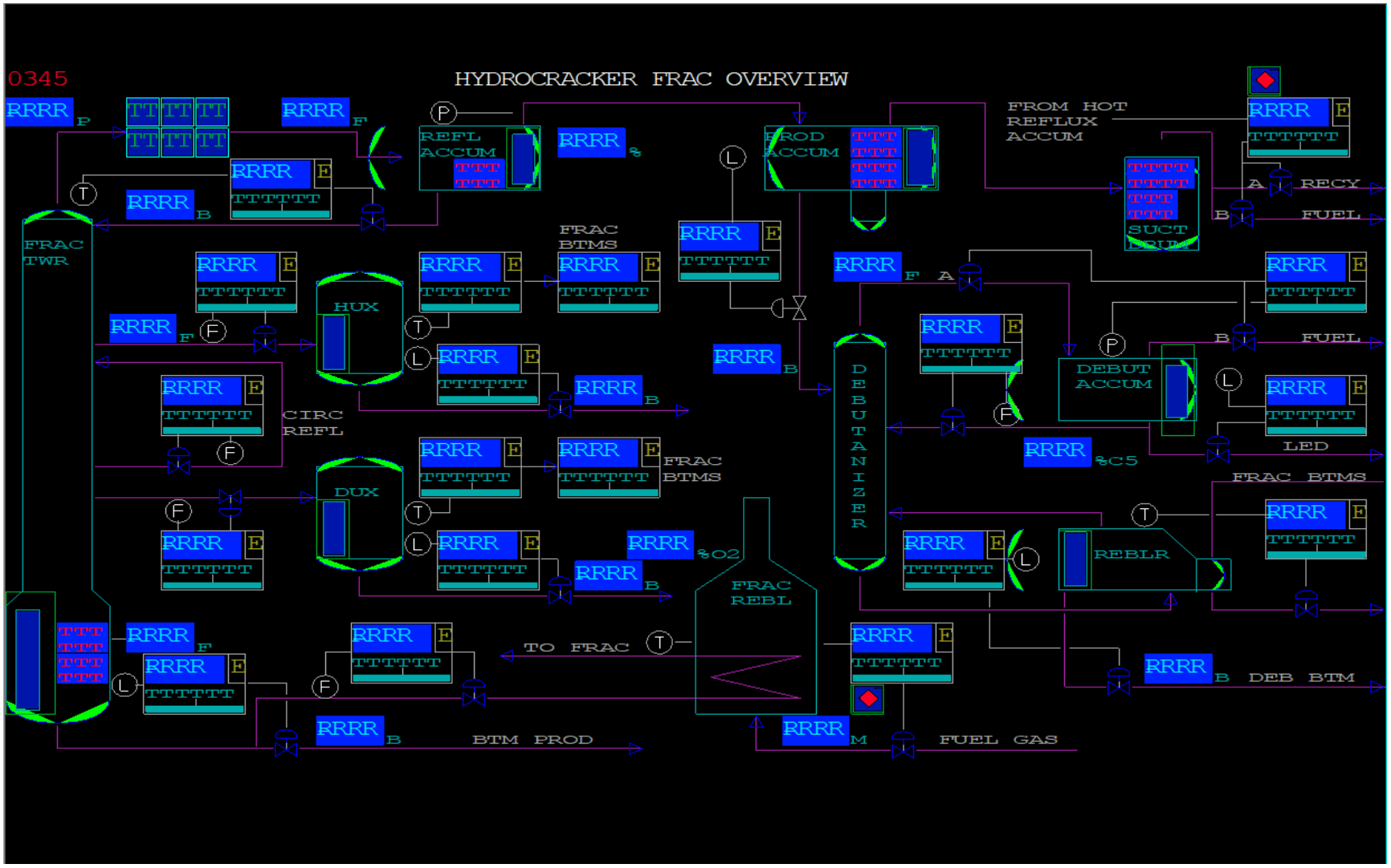


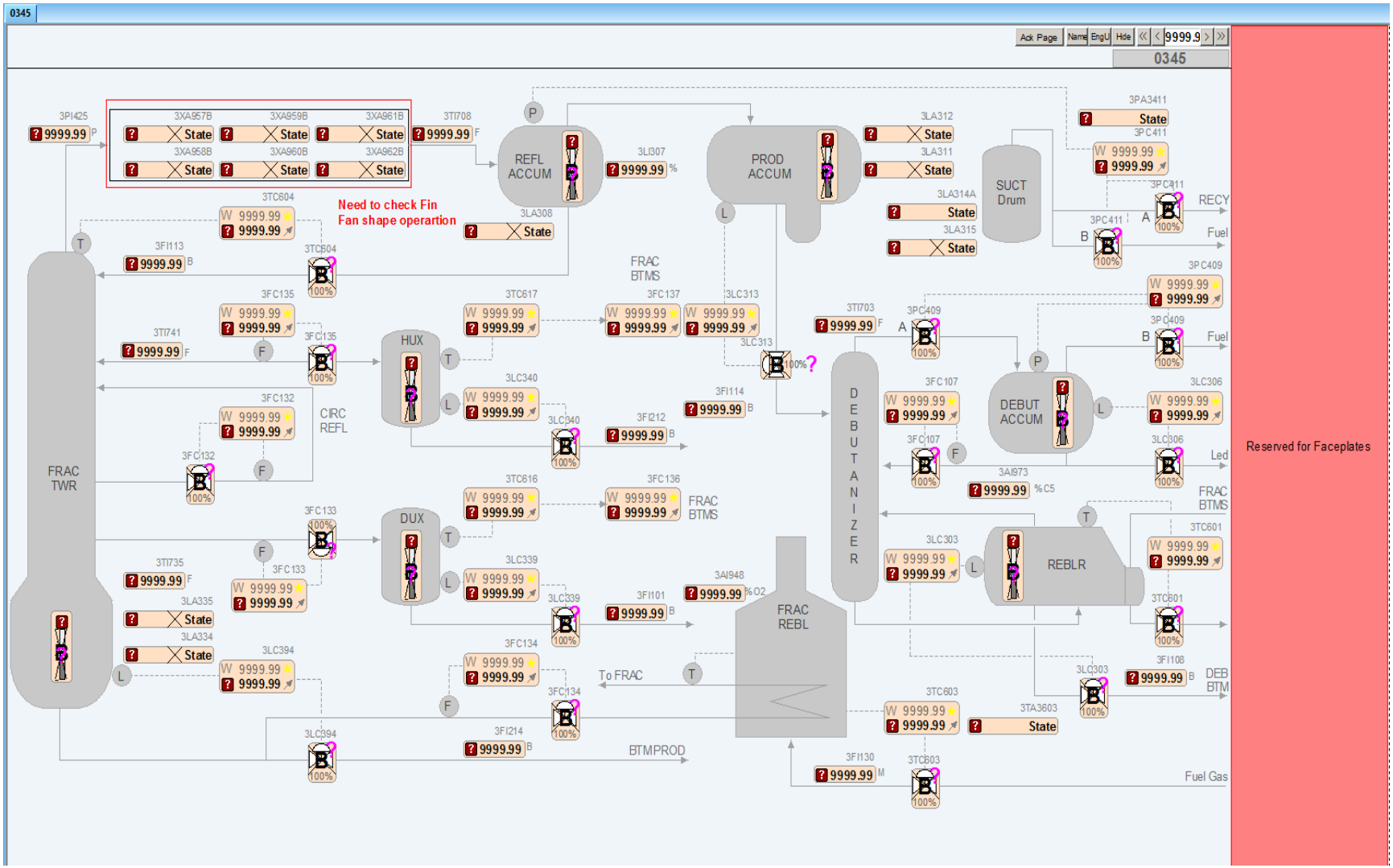

0344
MAKEUP / RECYCLE COMPRESSOR OVERVIEW
200# HDR
FLARE
RECY
MAKE UP SUCTION DRUM
DETAILS
OTHER ALARMS
JET 1ST & 2ND STG REL
H2 PROD
NORTH
SOUTH
DRAIN
TMR
FROM HPS
TO H2 PLT AND JET
FLARE
HPS
HDS H2
735# HDR
VIB MONITOR
RPM
CURVES
SEAL GAS
SURFACE CONDENSER
SPEED
CCC
STM
TK 914
Group III


0344
Ack Page
Name
EngU
Hide
9999.9
0344
200# HDR
Flare
JET 1ST & 2ND STG REL
H2 PROD
HOLD 2
RECY
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
Calculation given on level bar in NW graphics, need to discuss with LAR
Make Up Suction Drum
North
South
BAD
Other Alarms
From HPS
To
VIB Monitor
TMR
HPS
Flare
CCC
Speed
STM
RPM
Curves
Seal Gas
Surface Condenser
HDS H2
735# HDR
TK 914
Drain
Reserved for Faceplates

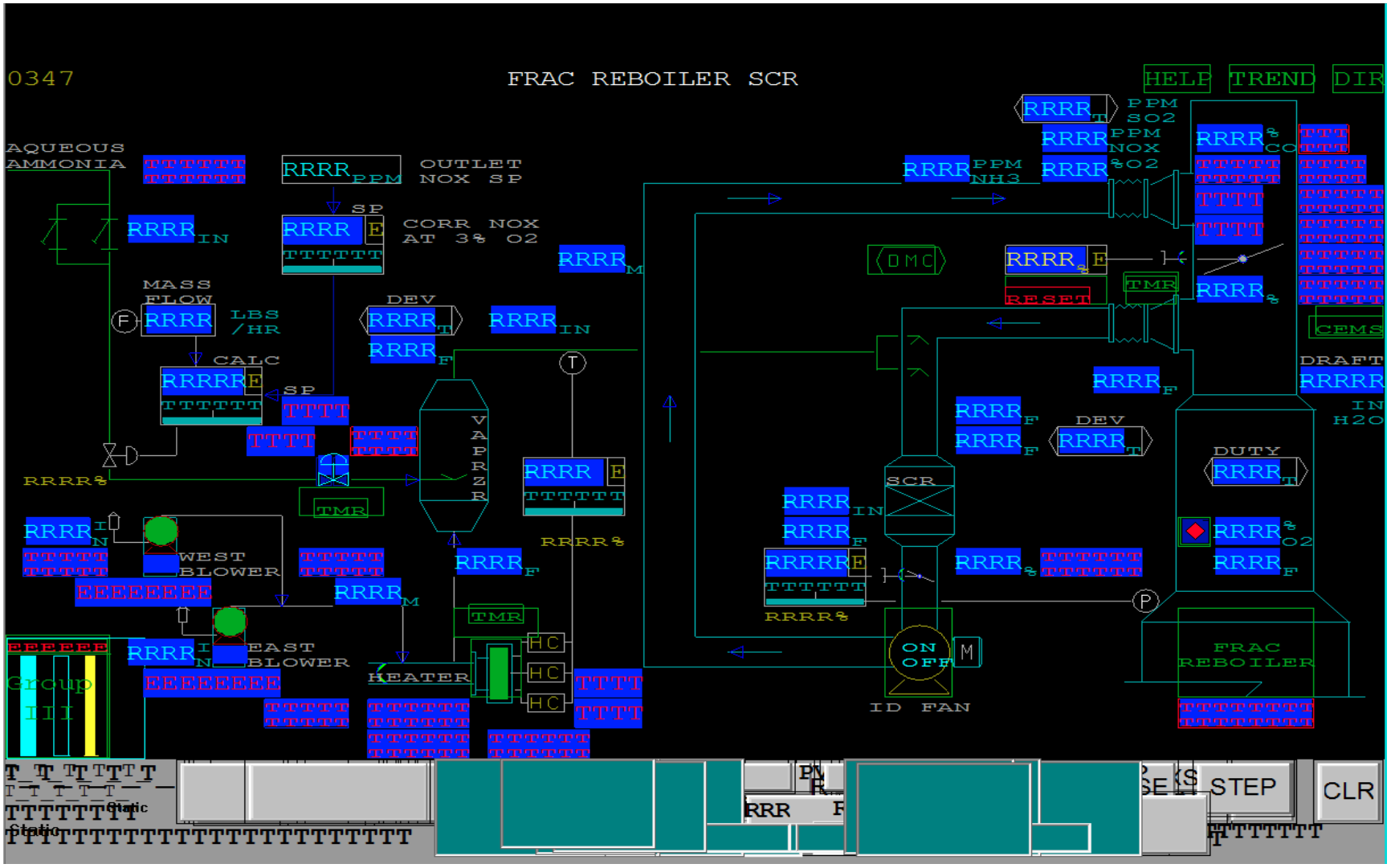
3.117 HYDROCRACKER FRAC OVERVIEW (0345.DS)

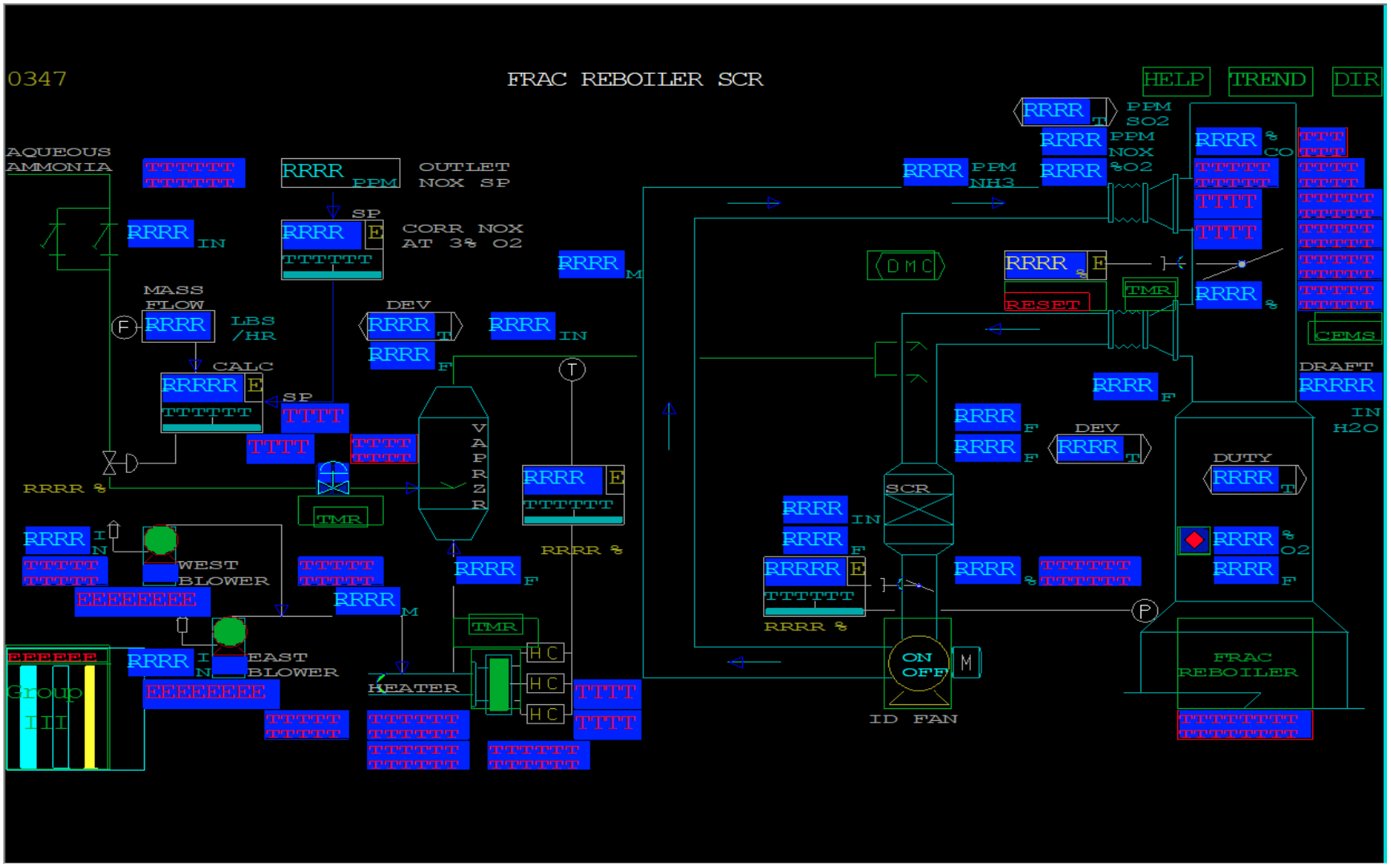


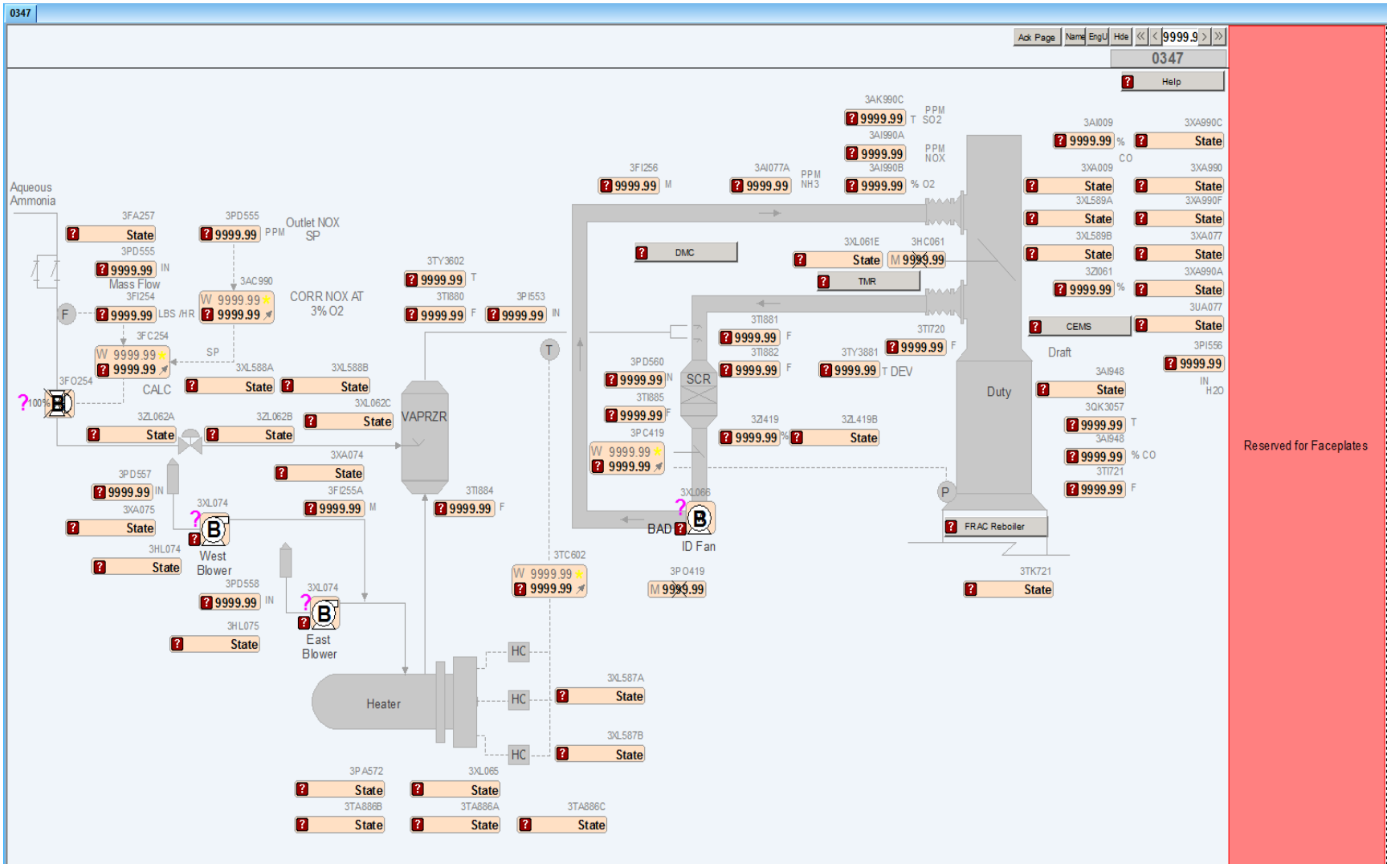

0345
HYDROCRACKER FRAC OVERVIEW
FROM HOT REFLUX ACCUM
REFL ACCUM
PROD ACCUM
SUCT DRUM
RECY
FUEL
FRAC TWR
FRAC BTMS
HUX
DUX
CIRC REFL
DEBUTANIZER
DEBUT ACCUM
LED
REBLR
FRAC REBL
TO FRAC
BTM PROD
FUEL GAS
DEB BTM


0345
Ack Page
Name
Eng U
Hide
0345
Need to check Fin
Fan shape operartion
REFL ACCUM
PROD ACCUM
SUCT Drum
DEBUTANIZER
DEBUT ACCUM
REBLR
FRAC REBL
HUX
DUX
FRAC TWR
CIRC REFL
FRAC BTMS
To FRAC
BTMPROD
Fuel
Fuel Gas
RECY
Led
DEB BTM
Reserved for Faceplates

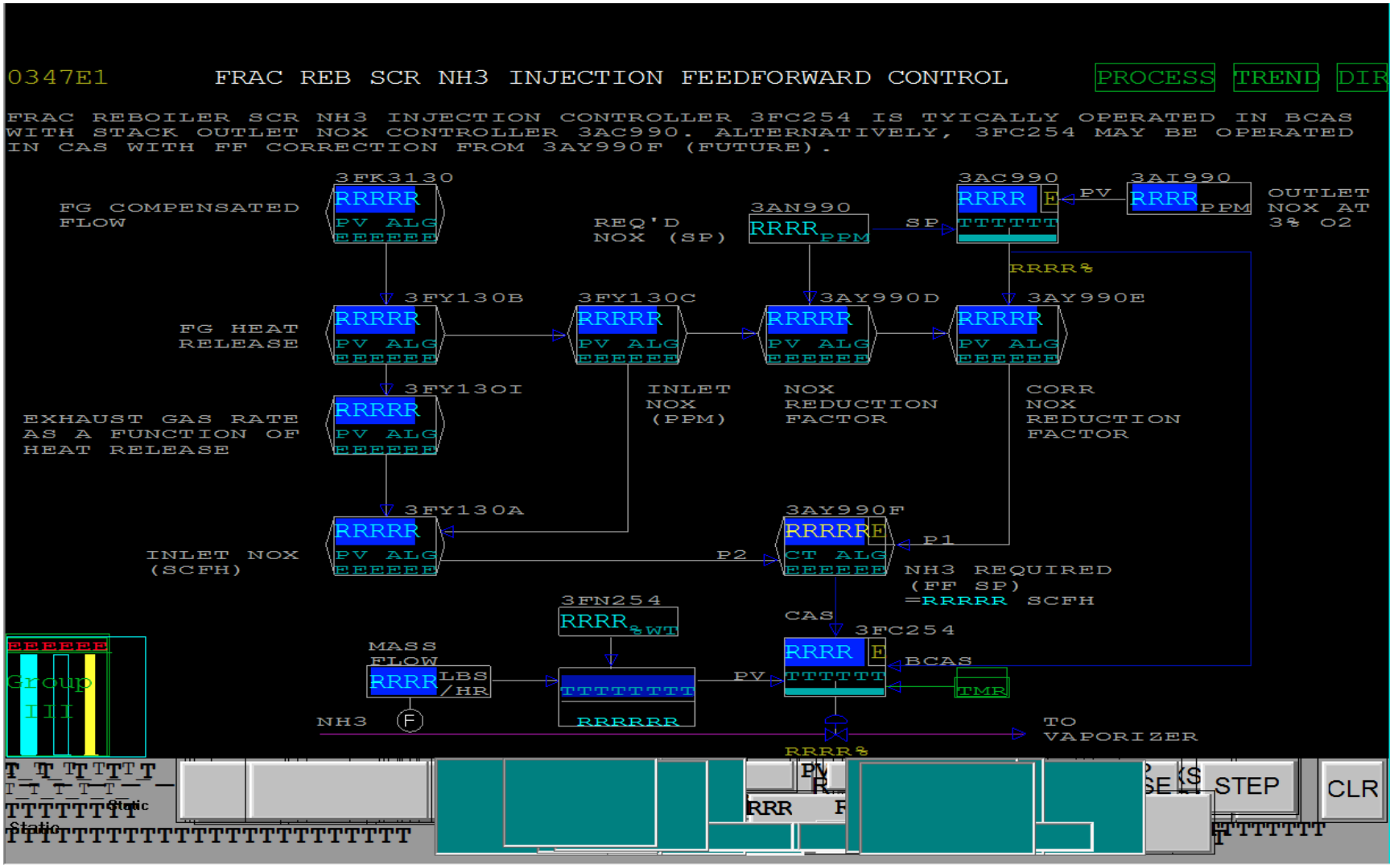
3.118 FRAC REBOILER SCR (0347.DS)

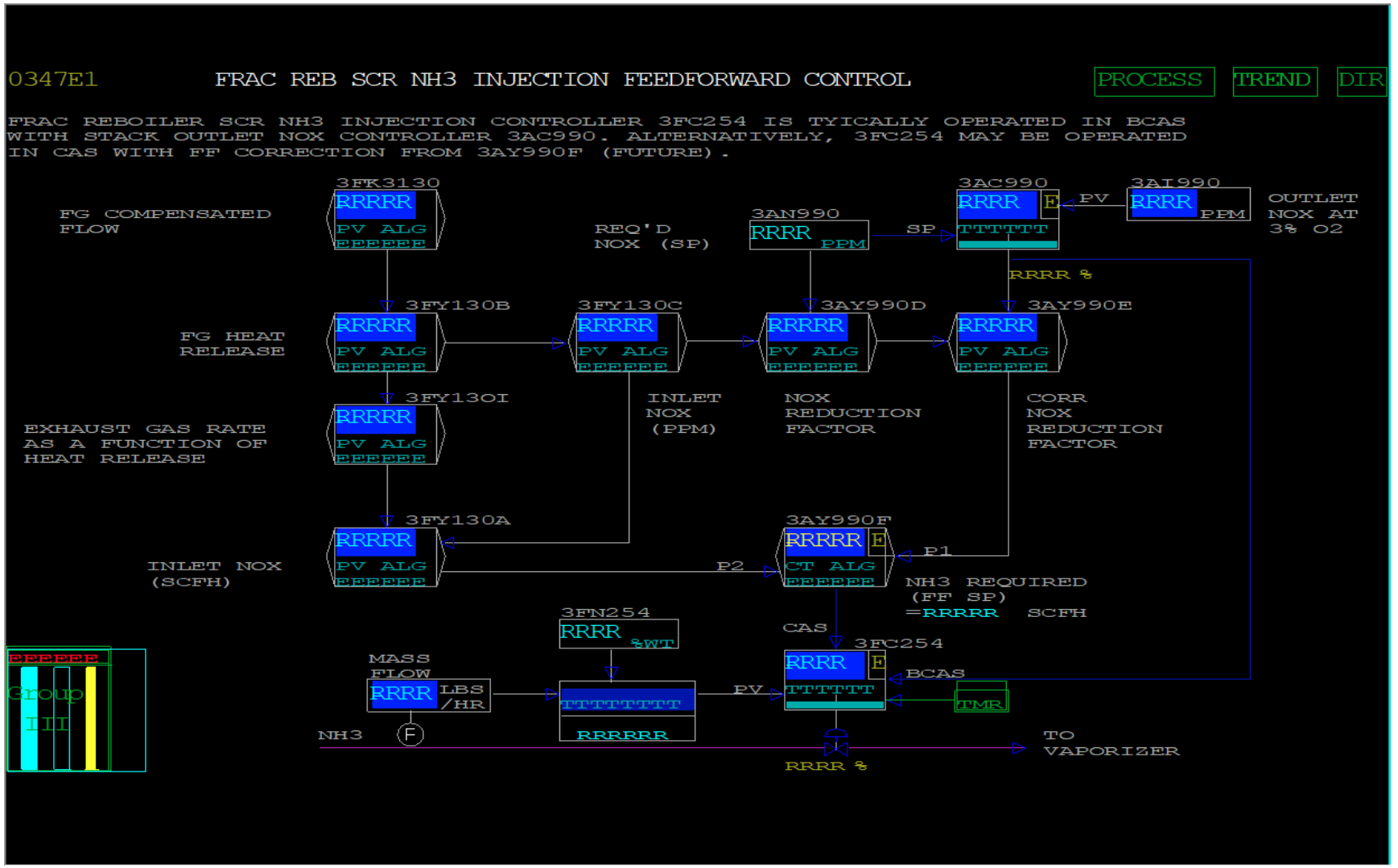


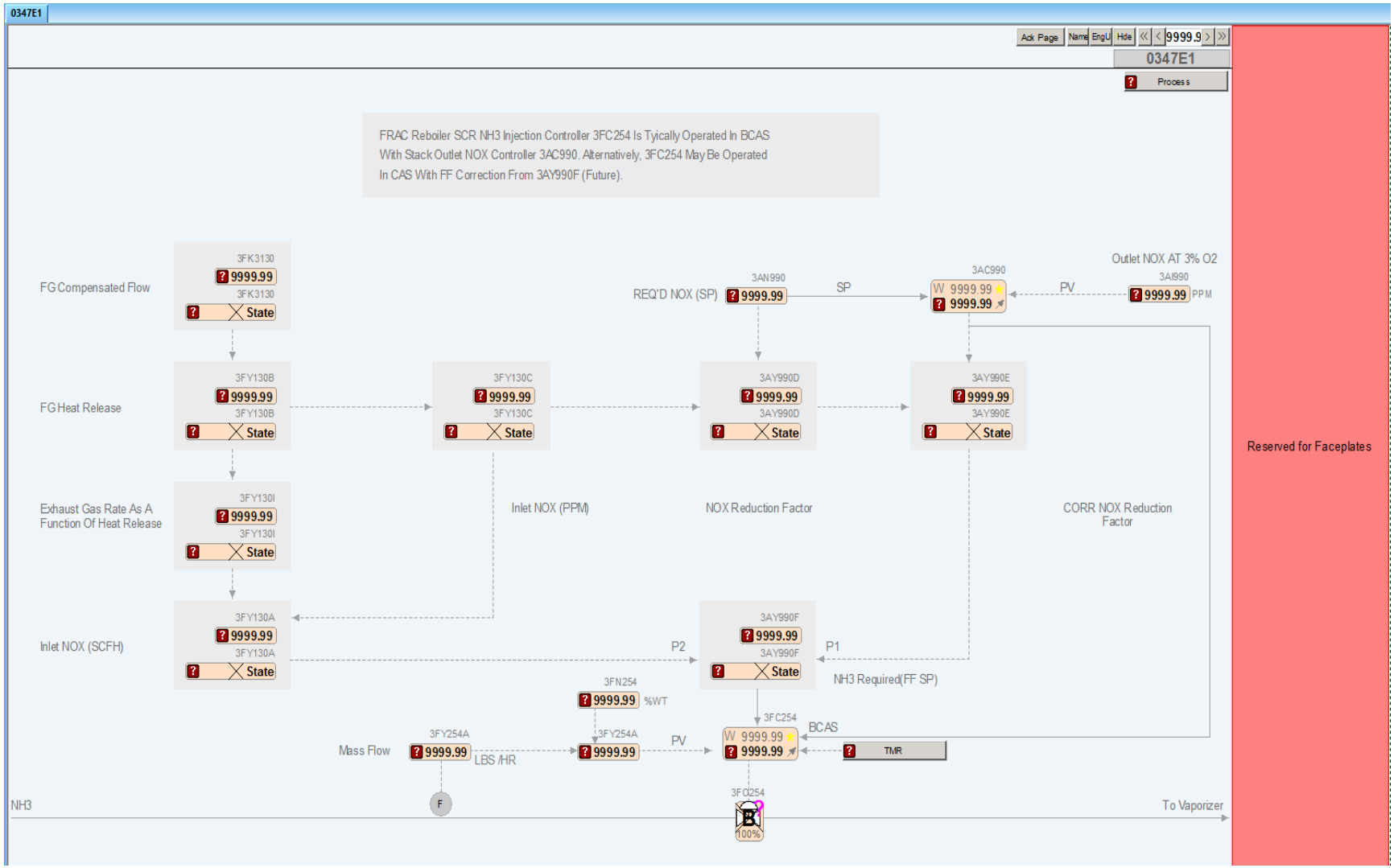

0347
FRAC REBOILER SCR
HELP
TREND
DIR
AQUEOUS AMMONIA
OUTLET NOX SP
CORR NOX AT 3% O2
MASS FLOW
LBS /HR
CALC
SP
DEV
VAPRZR
TMR
WEST BLOWER
EAST BLOWER
HEATER
Group III
DMC
RESET
PPM SO2
PPM NOX
%O2
PPM NH3
%CO
CEMS
DRAFT
IN H2O
SCR
DUTY
ON
OFF
ID FAN
FRAC REBOILER


0347
Ack Page
Name
Eng U
Hide
9999.9
0347
Help
Aqueous Ammonia
3FA257
State
3PD555
9999.99
PPM
Outlet NOX SP
3PD555
9999.99
IN
Mass Flow
3FI254
9999.99
LBS /HR
3AC990
9999.99
CORR NOX AT 3% O2
3FC254
9999.99
SP
CALC
3FO254
100%
3XL588A
State
3XL588B
State
3ZL062A
State
3ZL062B
State
3XL062C
State
VAPRZR
3XA074
State
3PD557
9999.99
IN
3XL074
3FI255A
9999.99
M
3TI884
9999.99
F
3XA075
State
3HL074
State
West Blower
3PD558
9999.99
IN
3XL074
3HL075
State
East Blower
Heater
HC
HC
HC
3XL587A
State
3XL587B
State
3PA572
State
3XL065
State
3TA886B
State
3TA886A
State
3TA886C
State
3TY3602
9999.99
T
3TI880
9999.99
F
3PI553
9999.99
IN
T
3FI256
9999.99
M
3AI077A
9999.99
PPM NH3
3AK990C
9999.99
T
PPM SO2
3AI990A
9999.99
PPM NOX
3AI990B
9999.99
% O2
DMC
3XL061E
State
3HC061
M 9999.99
TMR
3TI881
9999.99
F
3TI882
9999.99
F
3TY3881
9999.99
T DEV
3TI720
9999.99
F
3PD560
9999.99
N
3TI885
9999.99
F
SCR
3PC419
W 9999.99
9999.99
3ZI419
9999.99
%
3ZL419B
State
BAD
3XL066
ID Fan
3TC602
W 9999.99
9999.99
3PO419
M 9999.99
3TK721
State
Duty
FRAC Reboiler
3AI009
9999.99
%
CO
3XA990C
State
3XA009
State
3XA990
State
3XL589A
State
3XA990F
State
3XL589B
State
3XA077
State
3ZI061
9999.99
%
3XA990A
State
CEMS
3UA077
State
Draft
3PI556
9999.99
IN H2O
3AI948
State
3QK3057
9999.99
T
3AI948
9999.99
% CO
3TI721
9999.99
F
Reserved for Faceplates

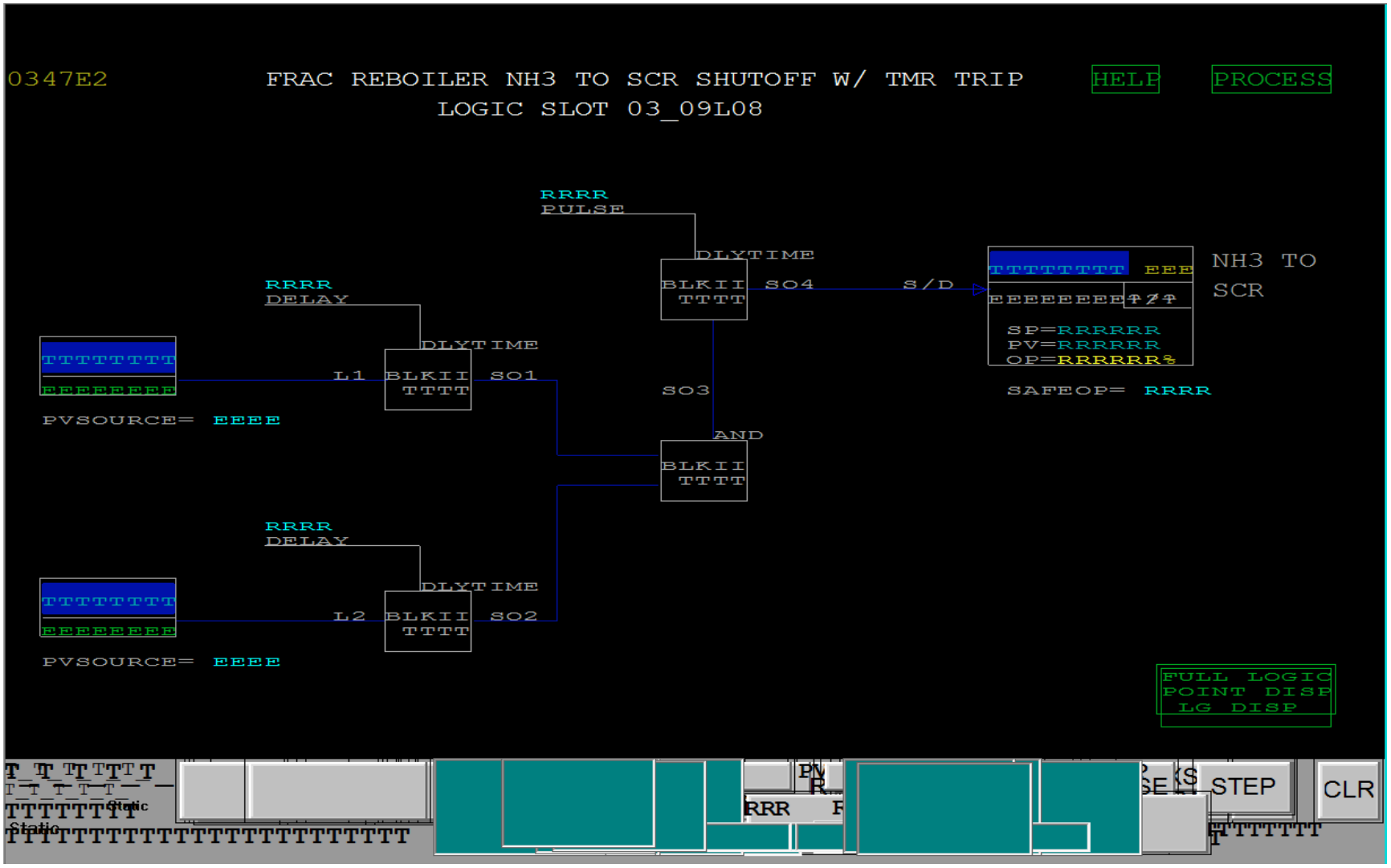
3.119 FRAC REB SCR NH3 INJECTION FEEDFORWARD CONTROL (0347E1.DS)

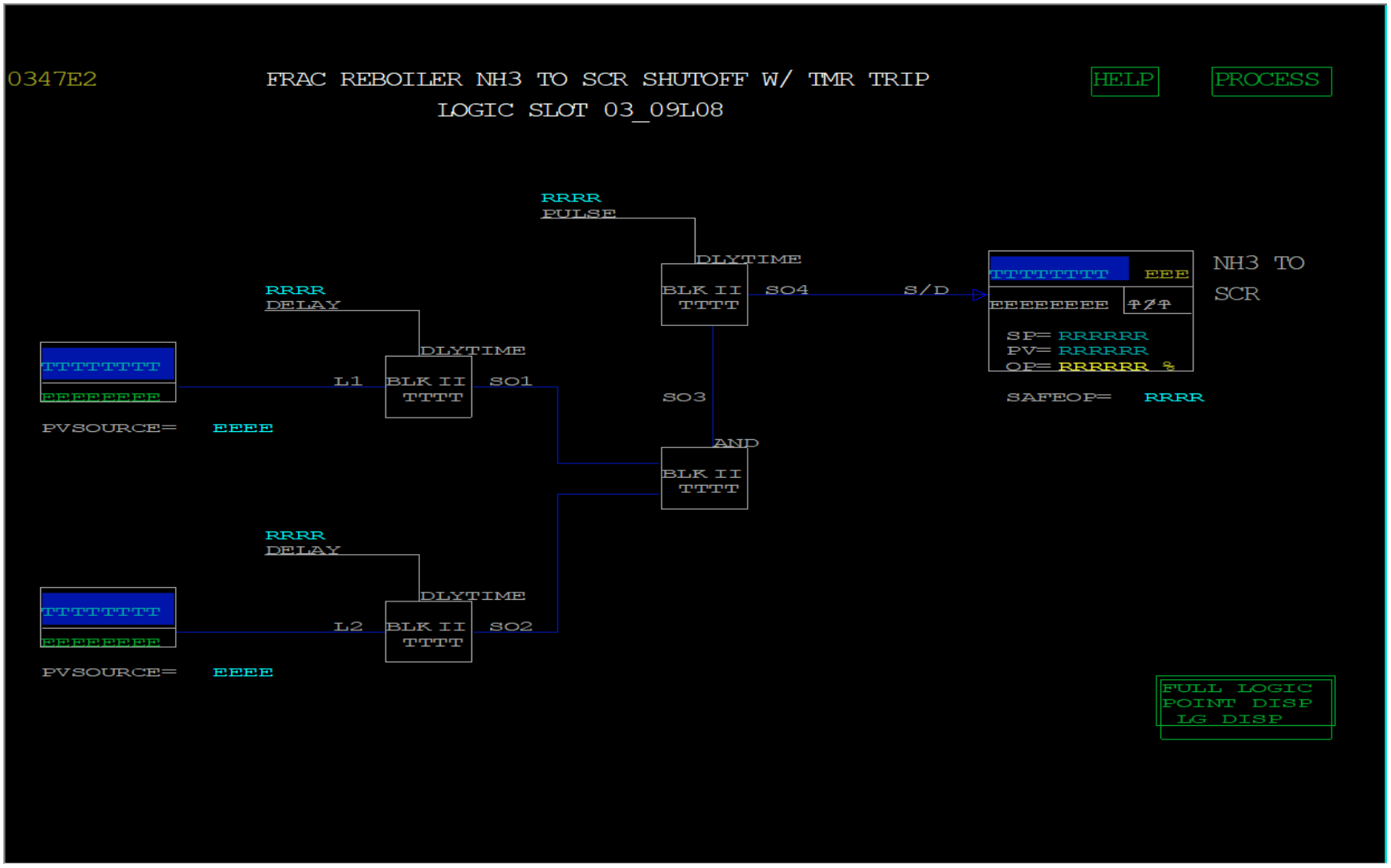


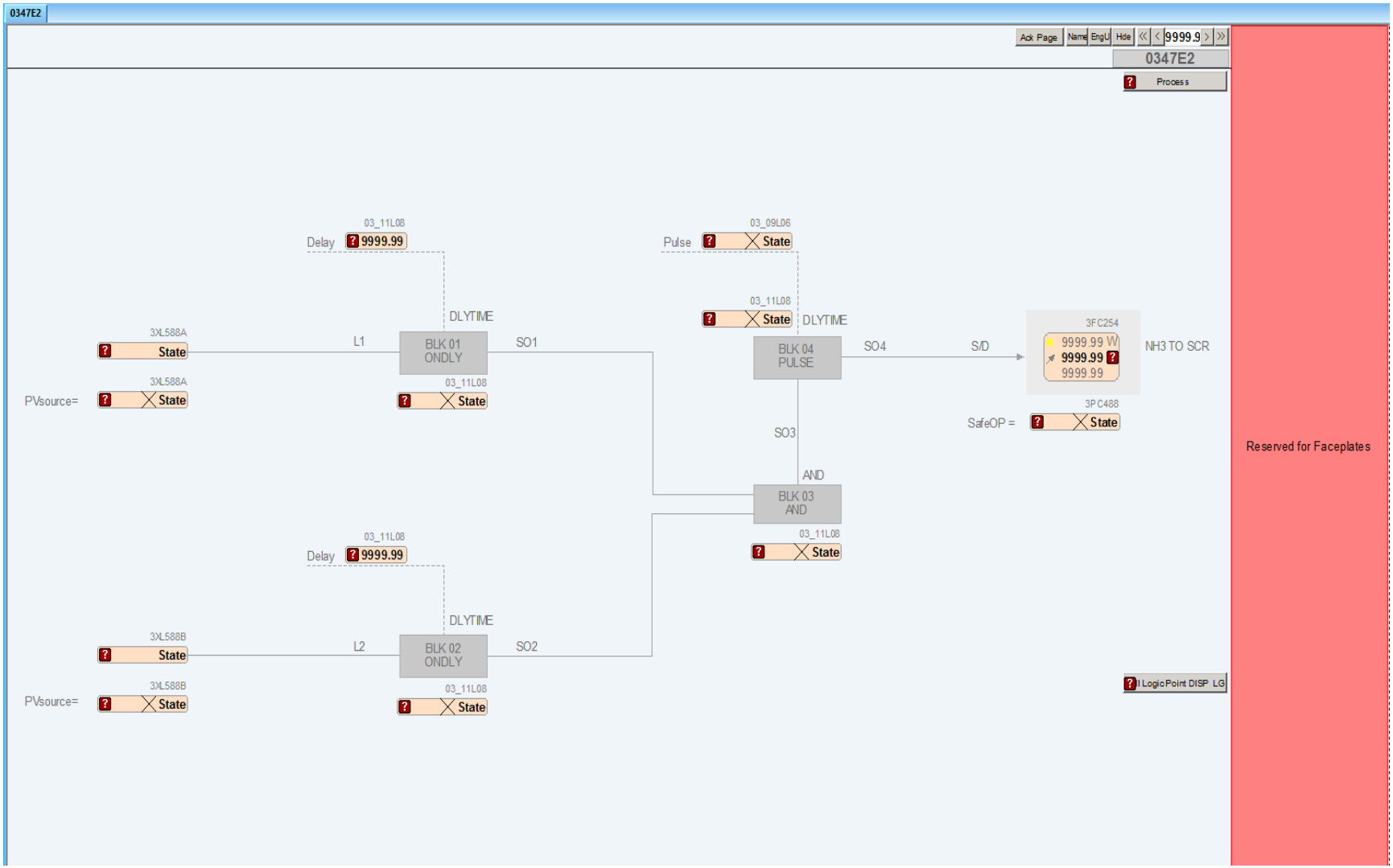

0347E1
FRAC REB SCR NH3 INJECTION FEEDFORWARD CONTROL
PROCESS
TREND
DIR
FRAC REBOILER SCR NH3 INJECTION CONTROLLER 3FC254 IS TYICALLY OPERATED IN BCAS WITH STACK OUTLET NOX CONTROLLER 3AC990. ALTERNATIVELY, 3FC254 MAY BE OPERATED IN CAS WITH FF CORRECTION FROM 3AY990F (FUTURE).
FG COMPENSATED FLOW
3FK3130
REQ'D NOX (SP)
3AN990
SP
3AC990
PV
3AI990
OUTLET NOX AT 3% O2
RRRR %
FG HEAT RELEASE
3FY130B
3FY130C
3AY990D
3AY990E
EXHAUST GAS RATE AS A FUNCTION OF HEAT RELEASE
3FY130I
INLET NOX (PPM)
NOX REDUCTION FACTOR
CORR NOX REDUCTION FACTOR
INLET NOX (SCFH)
3FY130A
3AY990F
P2
P1
NH3 REQUIRED (FF SP) =RRRRR SCFH
3FN254
%WT
CAS
3FC254
MASS FLOW
LBS /HR
BCAS
TMR
NH3
TO VAPORIZER
Group III


0347E1
Ack Page
Name
EngU
Hde
9999.9
0347E1
Process
FRAC Reboiler SCR NH3 Injection Controller 3FC254 Is Tyically Operated In BCAS With Stack Outlet NOX Controller 3AC990. Alternatively, 3FC254 May Be Operated In CAS With FF Correction From 3AY990F (Future).
FG Compensated Flow
3FK3130
9999.99
3FK3130
State
REQ'D NOX (SP)
3AN990
9999.99
SP
3AC990
W 9999.99
9999.99
PV
Outlet NOX AT 3% O2
3AI990
9999.99
PPM
FG Heat Release
3FY130B
9999.99
3FY130B
State
3FY130C
9999.99
3FY130C
State
3AY990D
9999.99
3AY990D
State
3AY990E
9999.99
3AY990E
State
Exhaust Gas Rate As A Function Of Heat Release
3FY130I
9999.99
3FY130I
State
Inlet NOX (PPM)
NOX Reduction Factor
CORR NOX Reduction Factor
Inlet NOX (SCFH)
3FY130A
9999.99
3FY130A
State
P2
3AY990F
9999.99
3AY990F
State
P1
NH3 Required(FF SP)
3FN254
9999.99
%WT
3FC254
W 9999.99
9999.99
BCAS
TMR
Mass Flow
3FY254A
9999.99
LBS /HR
3FY254A
9999.99
PV
F
3FO254
100%
NH3
To Vaporizer
Reserved for Faceplates

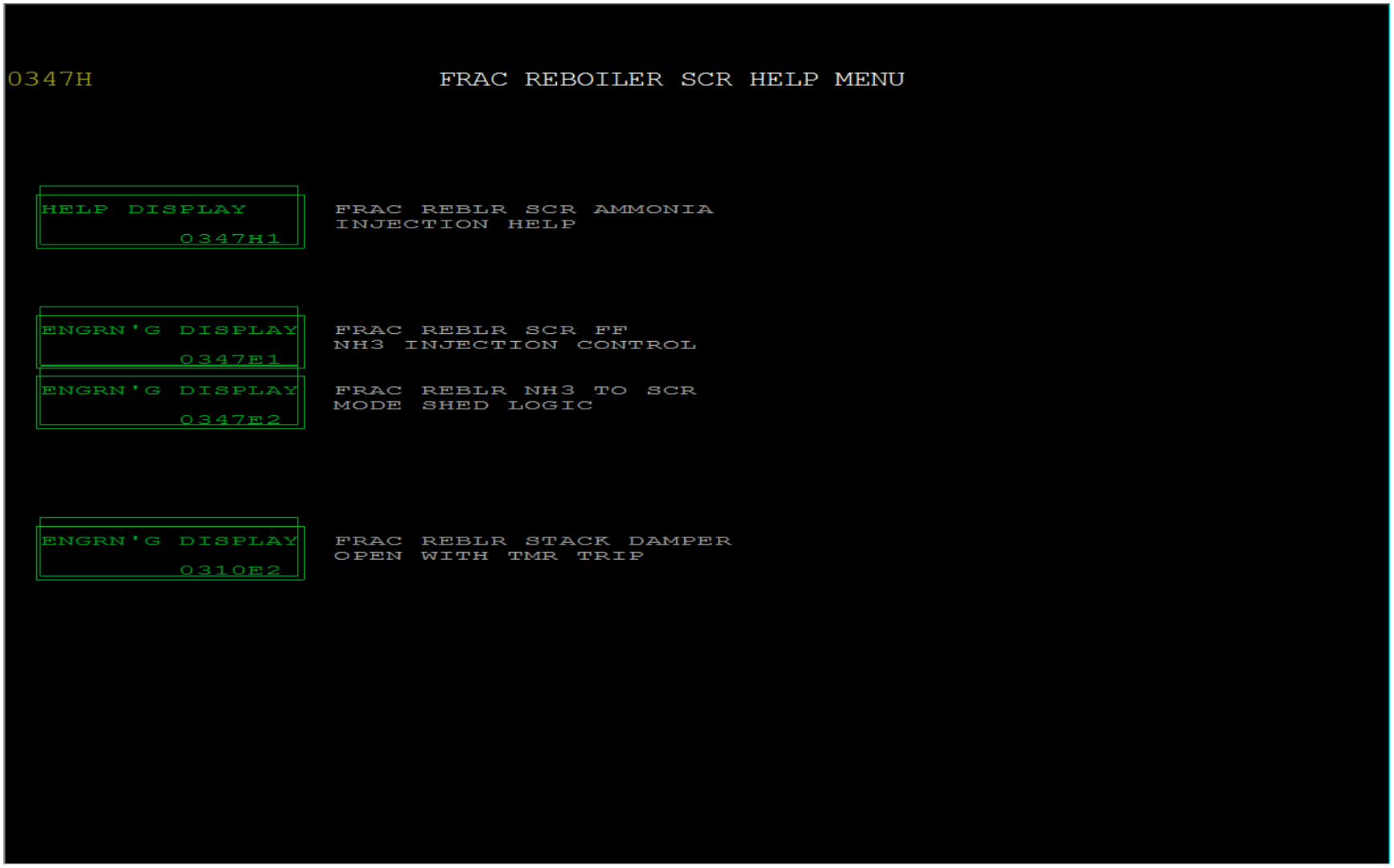
3.120 FRAC REBOILER NH3 TO SCR SHUTOFF W/ TMR TRIP LOGIC SLOT 03_09L08 (0347E2.DS)

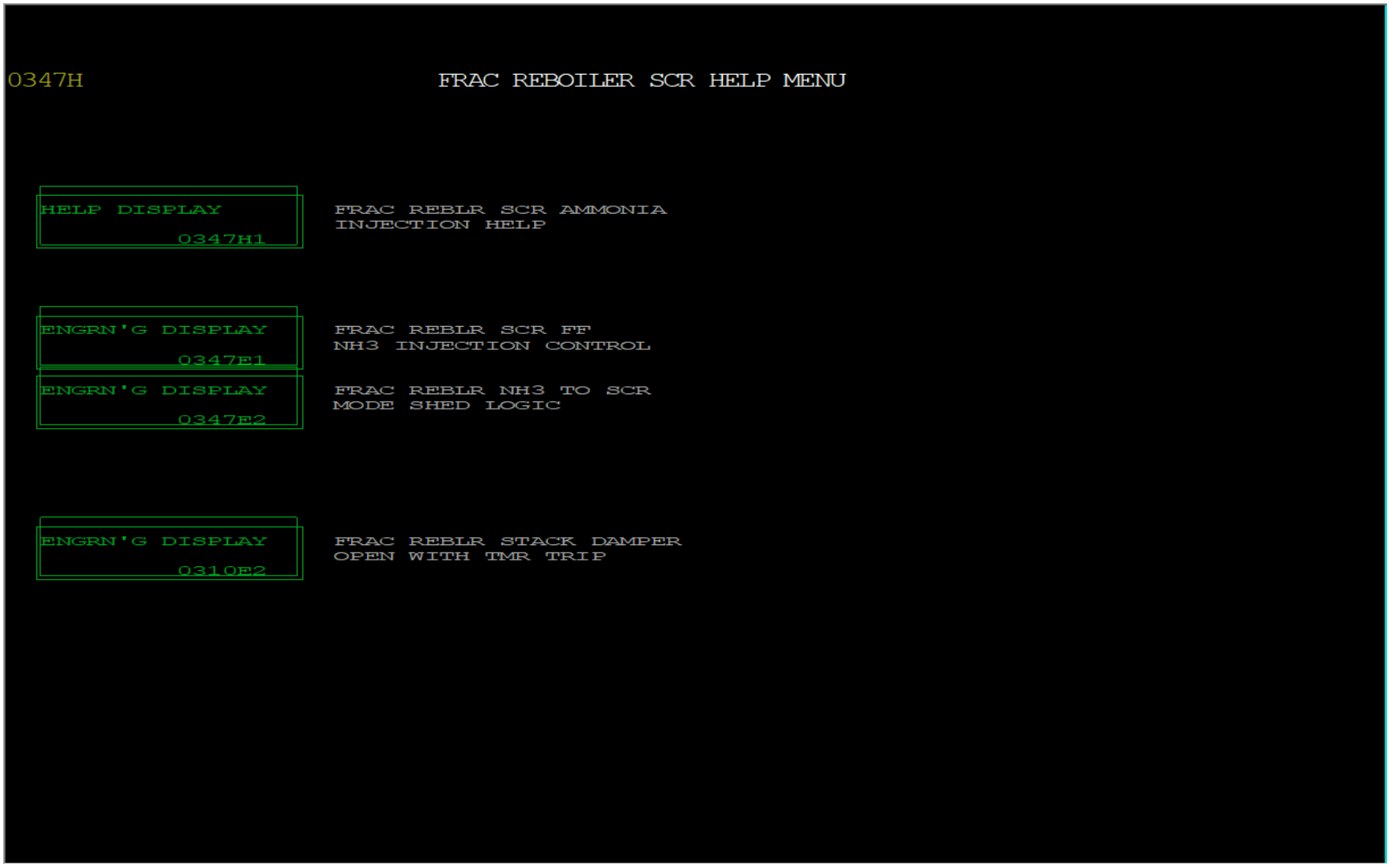


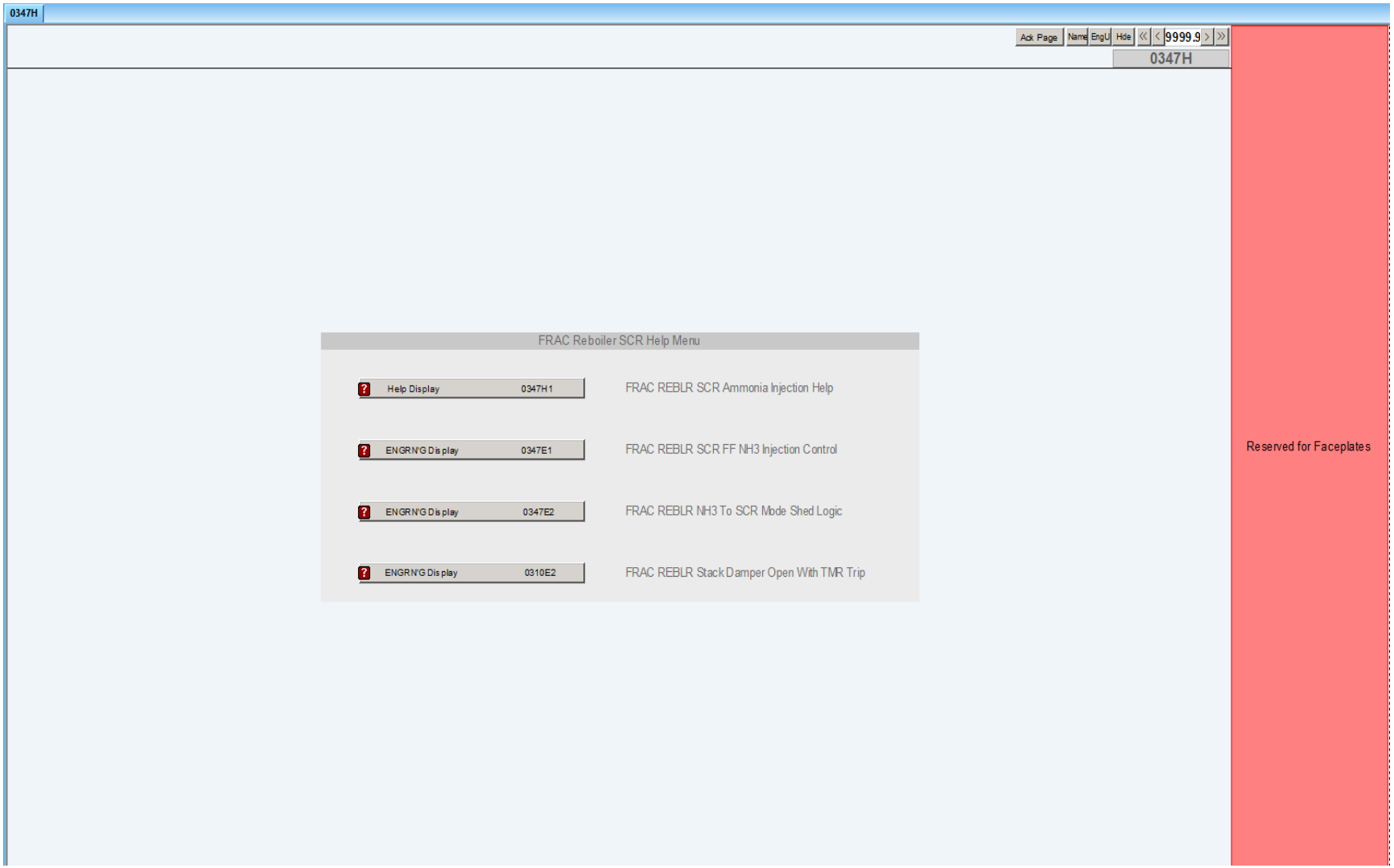

0347E2
FRAC REBOILER NH3 TO SCR SHUTOFF W/ TMR TRIP
LOGIC SLOT 03_09L08
HELP
PROCESS
RRRR
PULSE
DLYTIME
BLK II
TTTT
SO4
S/D
TTTTTTTT
EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRRRR %
NH3 TO
SCR
SAFEOP= RRRR
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L1
BLK II
TTTT
SO1
SO3
AND
BLK II
TTTT
PVSOURCE= EEEE
RRRR
DELAY
DLYTIME
TTTTTTTT
EEEEEEEE
L2
BLK II
TTTT
SO2
PVSOURCE= EEEE
FULL LOGIC
POINT DISP
LG DISP


0347E2
Ack Page
Name
Eng U
Hide
9999.9
0347E2
Process
03_11L08
Delay
9999.99
03_09L06
Pulse
State
03_11L08
State
DLYTIME
DLYTIME
3XL588A
State
L1
BLK 01
ONDLY
SO1
BLK 04
PULSE
SO4
S/D
3FC254
9999.99 W
9999.99
9999.99
NH3 TO SCR
PVsource=
3XL588A
State
03_11L08
State
3PC488
SafeOP =
State
SO3
AND
BLK 03
AND
03_11L08
State
Reserved for Faceplates
03_11L08
Delay
9999.99
DLYTIME
3XL588B
State
L2
BLK 02
ONDLY
SO2
PVsource=
3XL588B
State
03_11L08
State
I Logic Point DISP LG

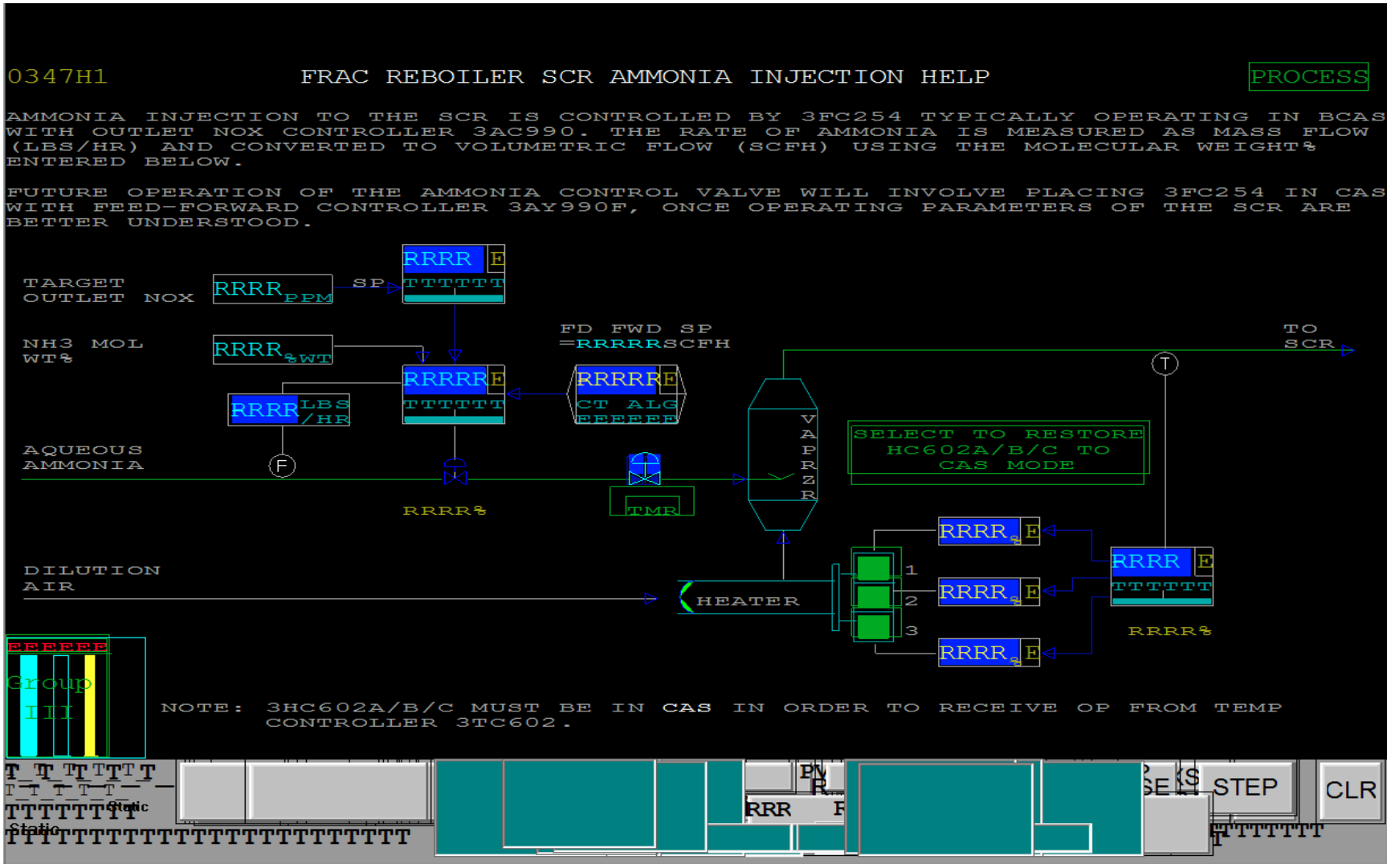
3.121 FRAC REBOILER SCR HELP MENU (0347H.DS)

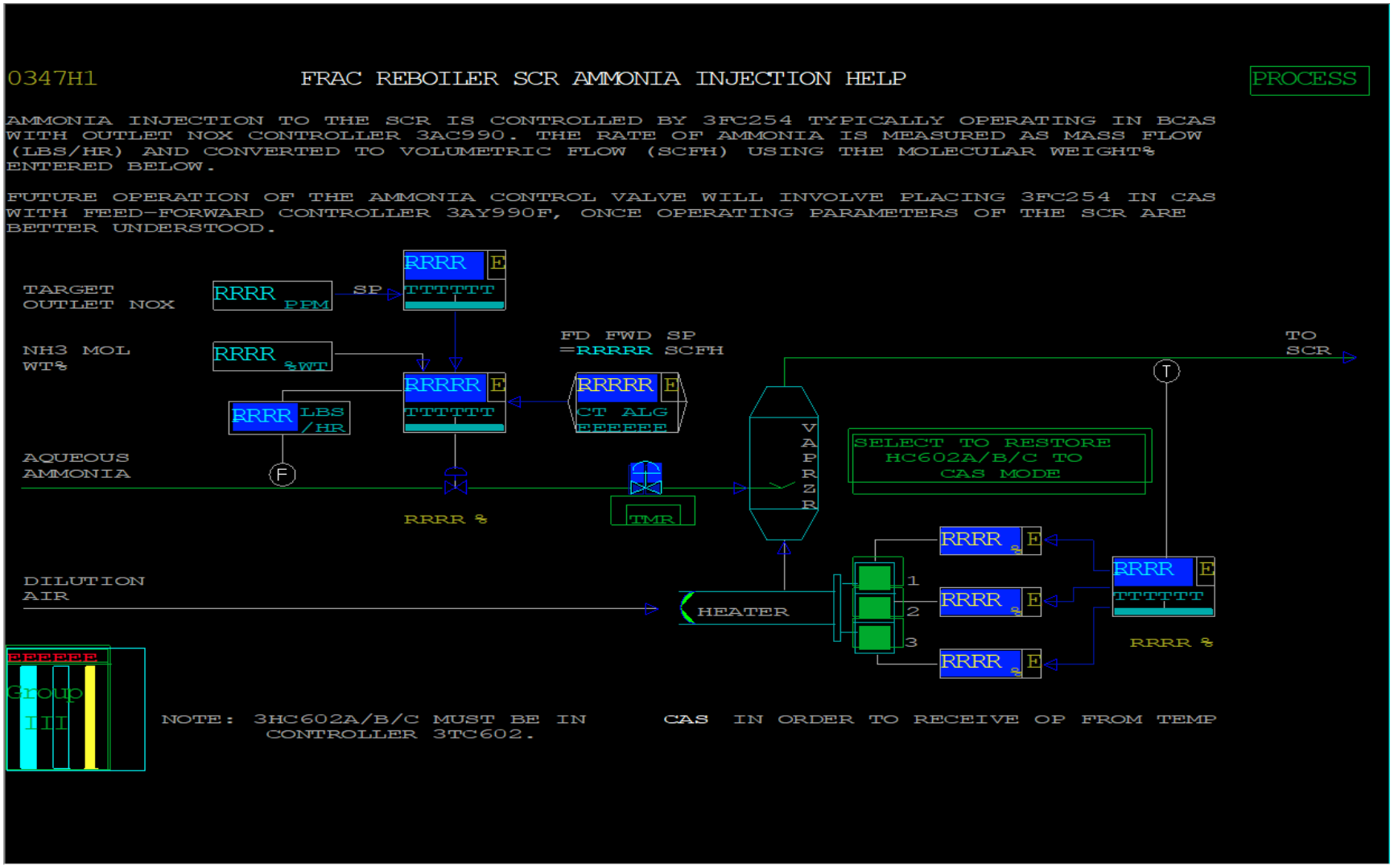


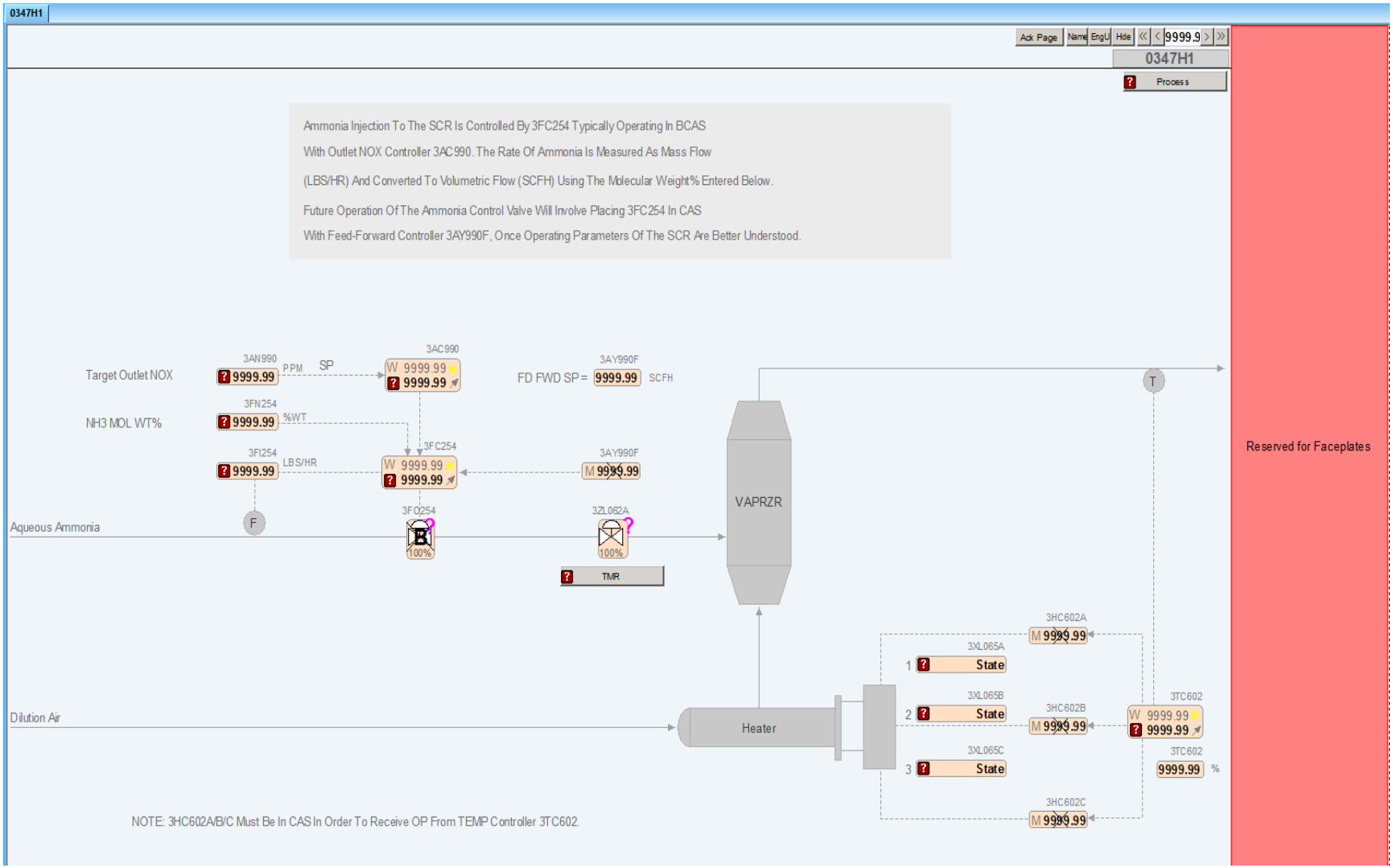

0347H
FRAC REBOILER SCR HELP MENU
HELP DISPLAY
0347H1
FRAC REBLR SCR AMMONIA
INJECTION HELP
ENGRN'G DISPLAY
0347E1
FRAC REBLR SCR FF
NH3 INJECTION CONTROL
ENGRN'G DISPLAY
0347E2
FRAC REBLR NH3 TO SCR
MODE SHED LOGIC
ENGRN'G DISPLAY
0310E2
FRAC REBLR STACK DAMPER
OPEN WITH TMR TRIP


0347H
Ack Page
Name
EngU
Hide
9999.9
0347H
FRAC Reboiler SCR Help Menu
Help Display
0347H1
FRAC REBLR SCR Ammonia Injection Help
ENGRN'G Display
0347E1
FRAC REBLR SCR FF NH3 Injection Control
ENGRN'G Display
0347E2
FRAC REBLR NH3 To SCR Mode Shed Logic
ENGRN'G Display
0310E2
FRAC REBLR Stack Damper Open With TMR Trip
Reserved for Faceplates

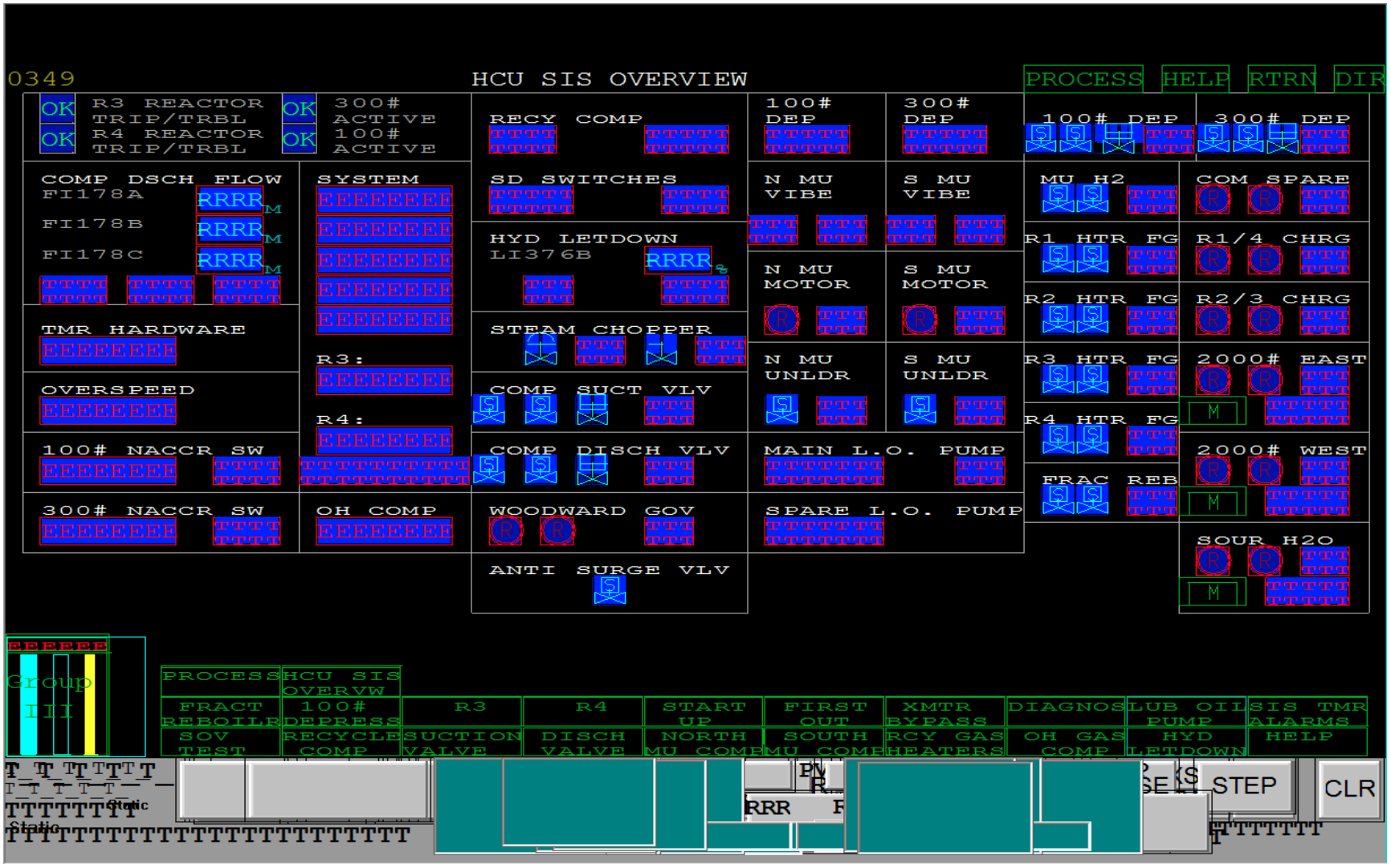
3.122 FRAC REBOILER SCR AMMONIA INJECTION HELP (0347H1.DS)

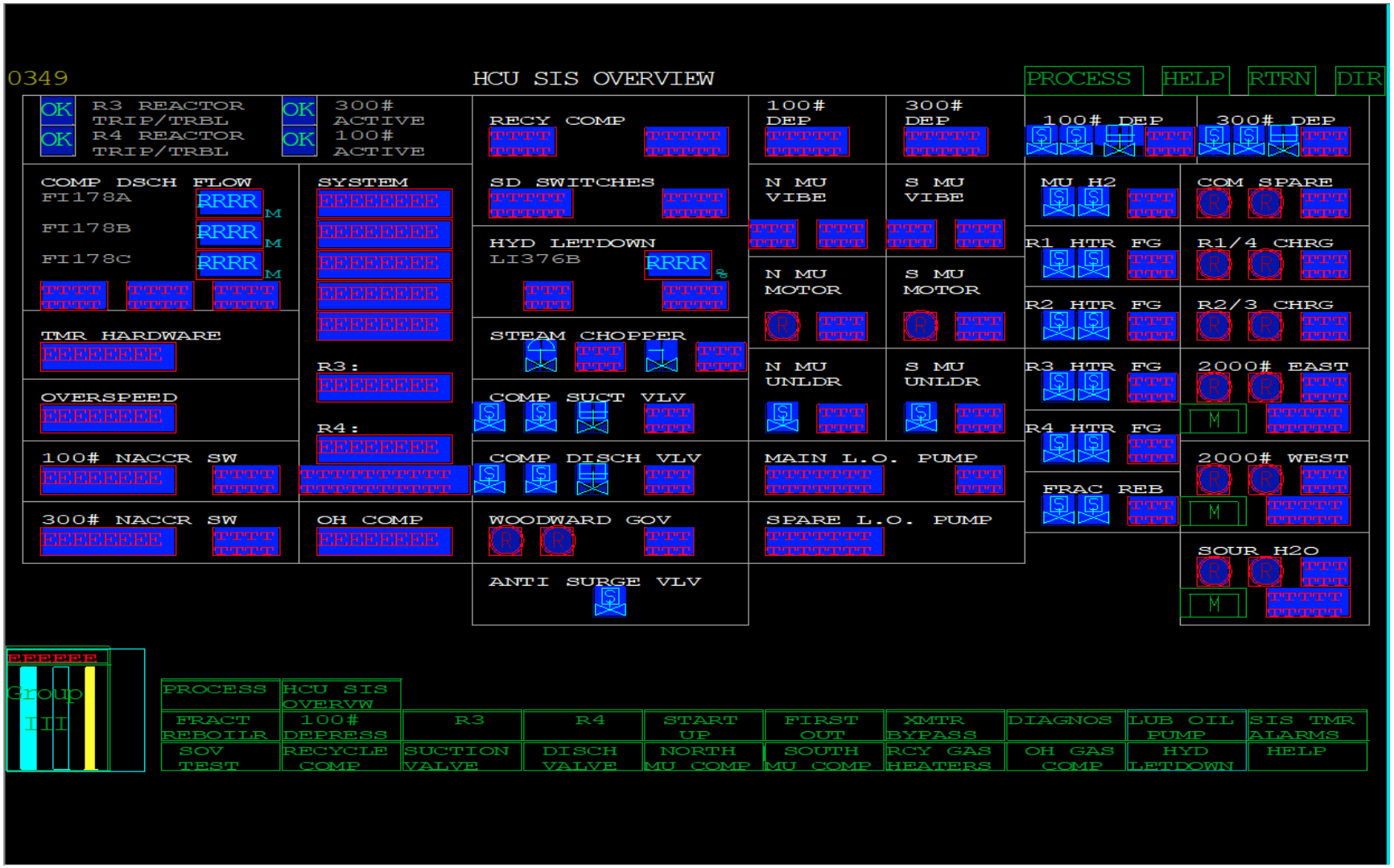


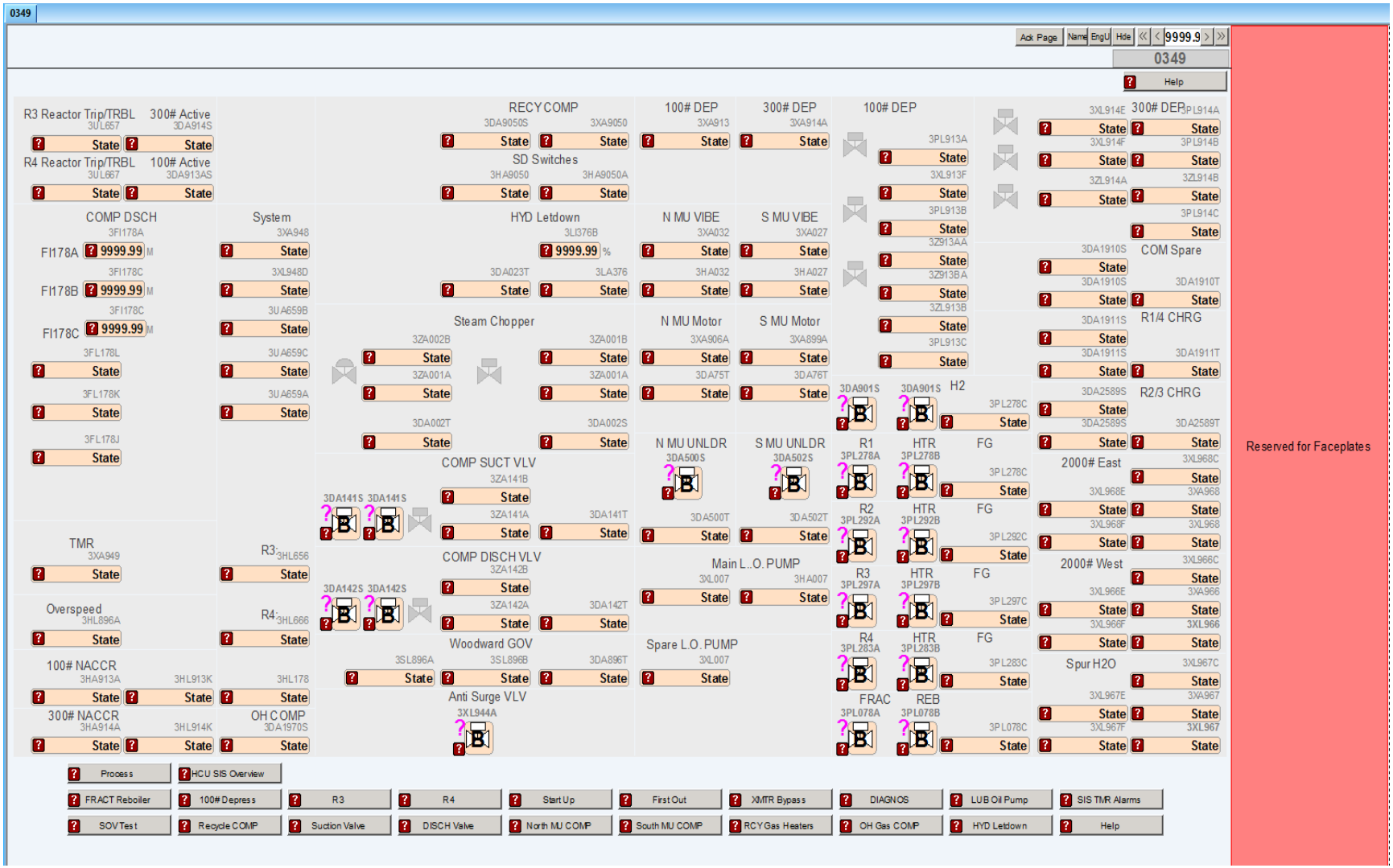

0347H1
FRAC REBOILER SCR AMMONIA INJECTION HELP
PROCESS
AMMONIA INJECTION TO THE SCR IS CONTROLLED BY 3FC254 TYPICALLY OPERATING IN BCAS WITH OUTLET NOX CONTROLLER 3AC990. THE RATE OF AMMONIA IS MEASURED AS MASS FLOW (LBS/HR) AND CONVERTED TO VOLUMETRIC FLOW (SCFH) USING THE MOLECULAR WEIGHT% ENTERED BELOW.
FUTURE OPERATION OF THE AMMONIA CONTROL VALVE WILL INVOLVE PLACING 3FC254 IN CAS WITH FEED-FORWARD CONTROLLER 3AY990F, ONCE OPERATING PARAMETERS OF THE SCR ARE BETTER UNDERSTOOD.
TARGET OUTLET NOX
RRRR PPM
SP
RRRR E
TTTTTT
NH3 MOL WT%
RRRR %WT
FD FWD SP =RRRRR SCFH
RRRRR E
CT ALG
EEEEEE
TO SCR
RRRR LBS /HR
AQUEOUS AMMONIA
F
RRRR %
TMR
VAPRZR
SELECT TO RESTORE HC602A/B/C TO CAS MODE
DILUTION AIR
HEATER
1
2
3
RRRR %
RRRR %
RRRR %
RRRR E
TTTTTT
RRRR %
EEEEEE
Group III
NOTE: 3HC602A/B/C MUST BE IN CAS IN ORDER TO RECEIVE OP FROM TEMP CONTROLLER 3TC602.


0347H1
Ack Page
Name
Eng U
Hide
9999.9
0347H1
Process
Ammonia Injection To The SCR Is Controlled By 3FC254 Typically Operating In BCAS
With Outlet NOX Controller 3AC990. The Rate Of Ammonia Is Measured As Mass Flow
(LBS/HR) And Converted To Volumetric Flow (SCFH) Using The Molecular Weight% Entered Below.
Future Operation Of The Ammonia Control Valve Will Involve Placing 3FC254 In CAS
With Feed-Forward Controller 3AY990F, Once Operating Parameters Of The SCR Are Better Understood.
Target Outlet NOX
3AN990
9999.99
PPM
SP
3AC990
W 9999.99
9999.99
FD FWD SP =
3AY990F
9999.99
SCFH
NH3 MOL WT%
3FN254
9999.99
%WT
3FI254
9999.99
LBS/HR
3FC254
W 9999.99
9999.99
3AY990F
M 9999.99
F
3FO254
100%
Aqueous Ammonia
3ZL062A
100%
TMR
VAPRZR
T
Reserved for Faceplates
3HC602A
M 9999.99
3XL065A
1
State
3XL065B
2
State
3HC602B
M 9999.99
3TC602
W 9999.99
9999.99
3XL065C
3
State
3TC602
9999.99
%
3HC602C
M 9999.99
Dilution Air
Heater
NOTE: 3HC602A/B/C Must Be In CAS In Order To Receive OP From TEMP Controller 3TC602.

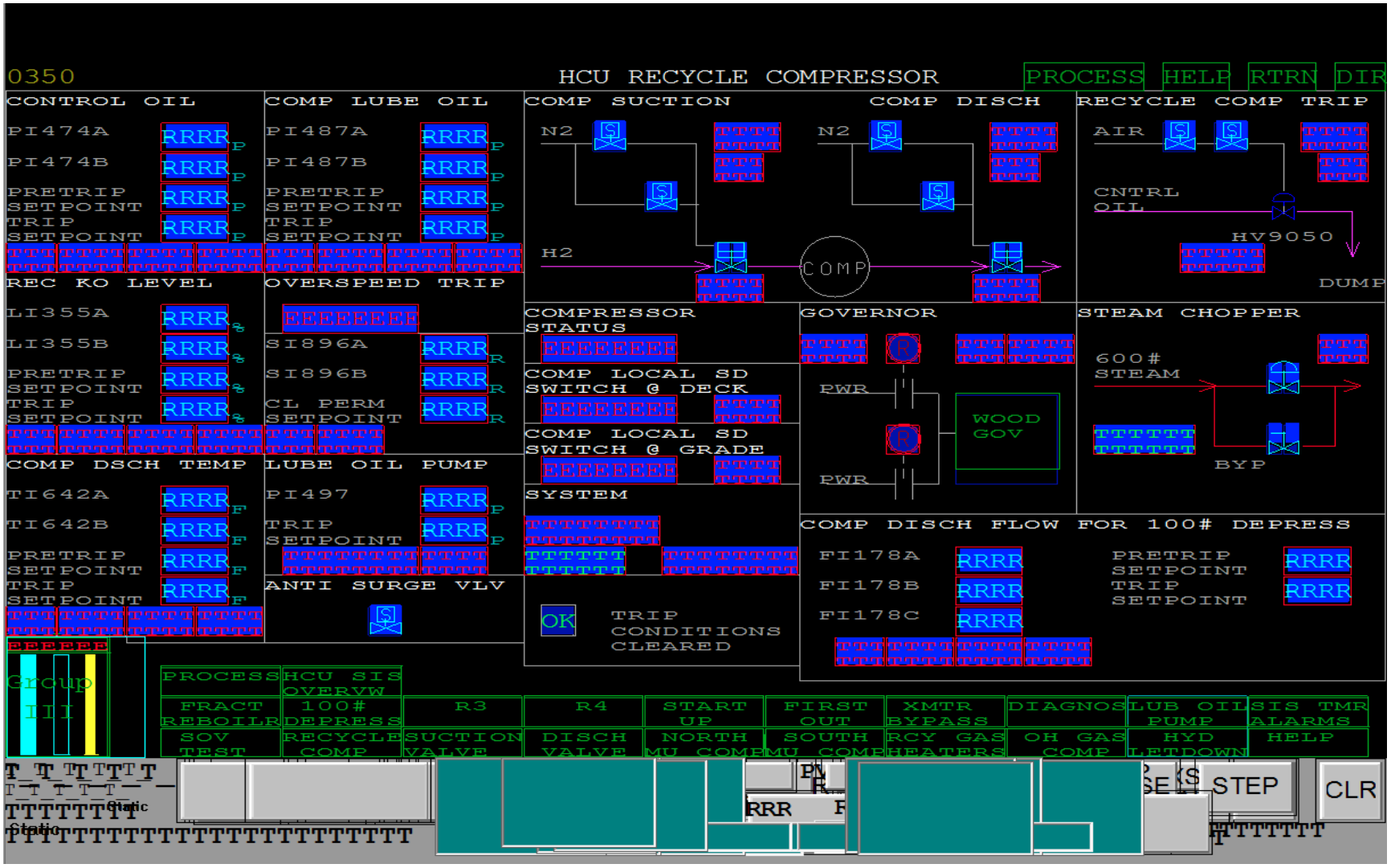
3.123 HCU SIS OVERVIEW (0349.DS)

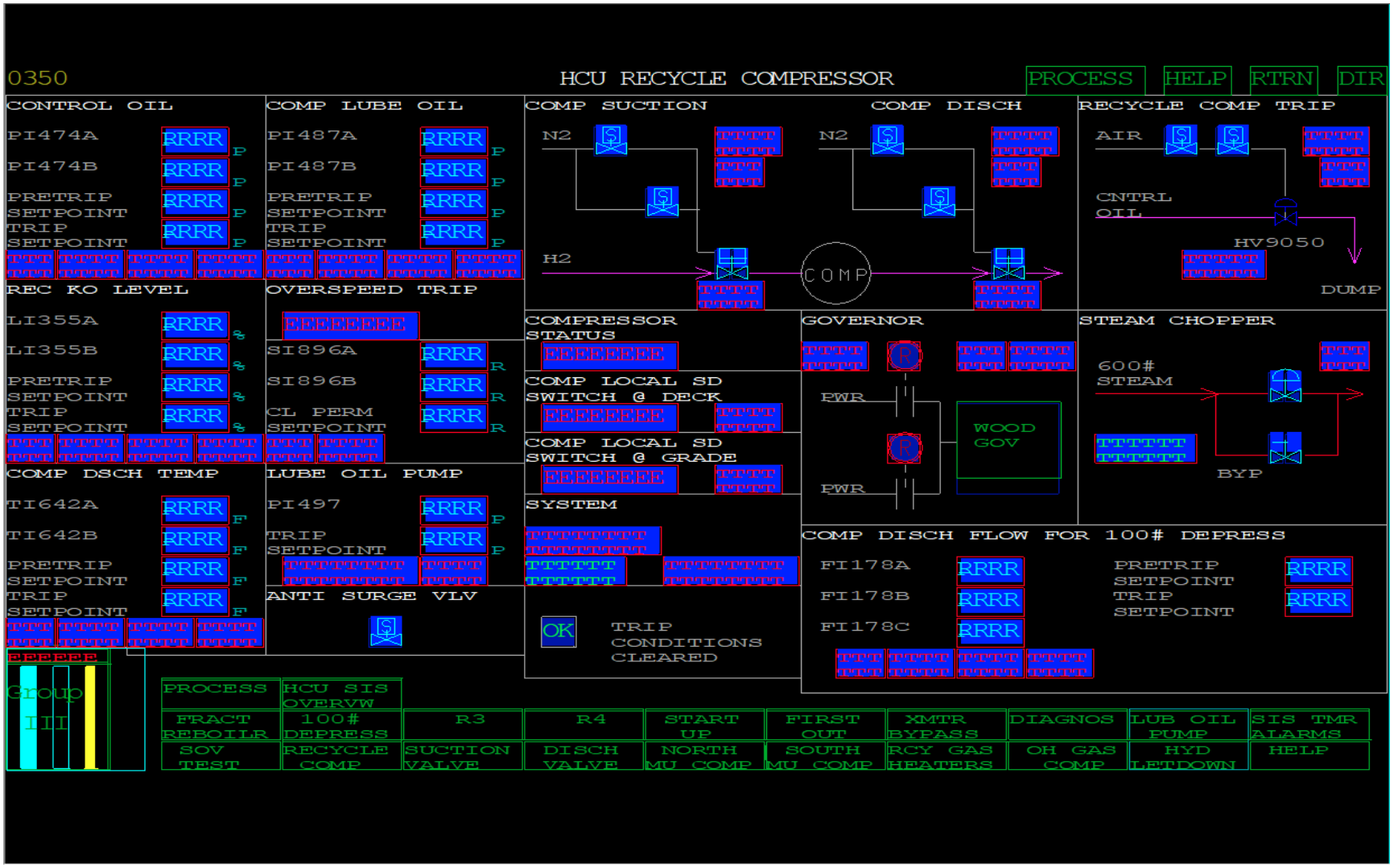


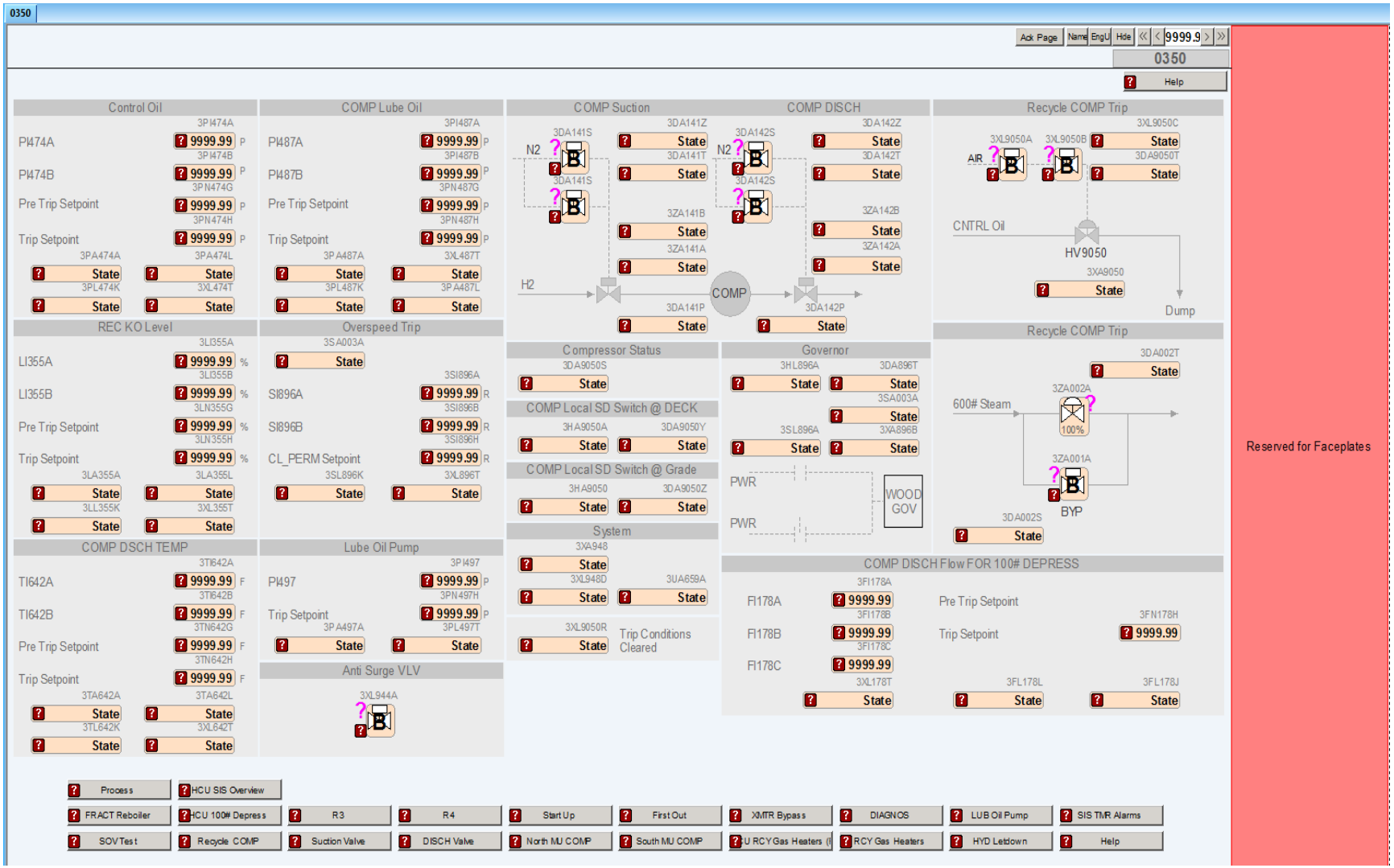

0349
HCU SIS OVERVIEW
PROCESS
HELP
RTRN
DIR
OK R3 REACTOR TRIP/TRBL
OK R4 REACTOR TRIP/TRBL
OK 300# ACTIVE
OK 100# ACTIVE
RECY COMP
100# DEP
300# DEP
SD SWITCHES
N MU VIBE
S MU VIBE
HYD LETDOWN
LI376B
N MU MOTOR
S MU MOTOR
STEAM CHOPPER
N MU UNLDR
S MU UNLDR
COMP SUCT VLV
COMP DISCH VLV
MAIN L.O. PUMP
WOODWARD GOV
SPARE L.O. PUMP
ANTI SURGE VLV
COMP DSCH FLOW
FI178A
FI178B
FI178C
SYSTEM
R3:
R4:
TMR HARDWARE
OVERSPEED
100# NACCR SW
300# NACCR SW
OH COMP
MU H2
COM SPARE
R1 HTR FG
R1/4 CHRG
R2 HTR FG
R2/3 CHRG
R3 HTR FG
2000# EAST
R4 HTR FG
2000# WEST
FRAC REB
SOUR H2O
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0349
Ack Page
Name
Eng U
Hide
9999.9
0349
Help
R3 Reactor Trip/TRBL
3UL657
300# Active
3DA914S
State
R4 Reactor Trip/TRBL
3UL667
100# Active
3DA913AS
RECY COMP
3DA9050S
3XA9050
SD Switches
3HA9050
3HA9050A
100# DEP
3XA913
300# DEP
3XA914A
100# DEP
3PL913A
3XL913F
3PL913B
3ZJ913AA
3ZJ913BA
3ZL913B
3PL913C
3XL914E
300# DEP
3PL914A
3XL914F
3PL914B
3ZL914A
3ZL914B
3PL914C
COMP DSCH
3FI178A
FI178A
9999.99
M
3FI178C
FI178B
3FI178C
FI178C
3FL178L
3FL178K
3FL178J
System
3XA948
3XL948D
3UA659B
3UA659C
3UA659A
HYD Letdown
3LI376B
9999.99
%
3DA023T
3LA376
N MU VIBE
3XA032
3HA032
S MU VIBE
3XA027
3HA027
3DA1910S
COM Spare
3DA1910T
Steam Chopper
3ZA002B
3ZA001B
3ZA001A
3DA002T
3DA002S
N MU Motor
3XA906A
S MU Motor
3XA899A
3DA75T
3DA76T
3DA1911S
R1/4 CHRG
3DA1911T
3DA901S
H2
3PL278C
3DA2589S
R2/3 CHRG
3DA2589T
COMP SUCT VLV
3ZA141B
3DA141S
3ZA141A
3DA141T
N MU UNLDR
3DA500S
3DA500T
S MU UNLDR
3DA502S
3DA502T
R1
3PL278A
HTR
3PL278B
FG
2000# East
3XL968C
3XL968E
3XL968
3XL968F
TMR
3XA949
R3:
3HL656
COMP DISCH VLV
3ZA142B
3DA142S
3ZA142A
3DA142T
Main L..O. PUMP
3XL007
3HA007
R2
3PL292A
3PL292B
3PL292C
2000# West
3XL966C
3XL966E
3XA966
3XL966F
3XL966
Overspeed
3HL896A
R4:
3HL666
Woodward GOV
3SL896A
3SL896B
3DA896T
Spare L.O. PUMP
3XL007
R3
3PL297A
3PL297B
3PL297C
R4
3PL283A
3PL283B
3PL283C
Spur H2O
3XL967C
3XL967E
3XA967
3XL967F
3XL967
100# NACCR
3HA913A
3HL913K
3HL178
Anti Surge VLV
3XL944A
FRAC
3PL078A
REB
3PL078B
3PL078C
300# NACCR
3HA914A
3HL914K
OH COMP
3DA1970S
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

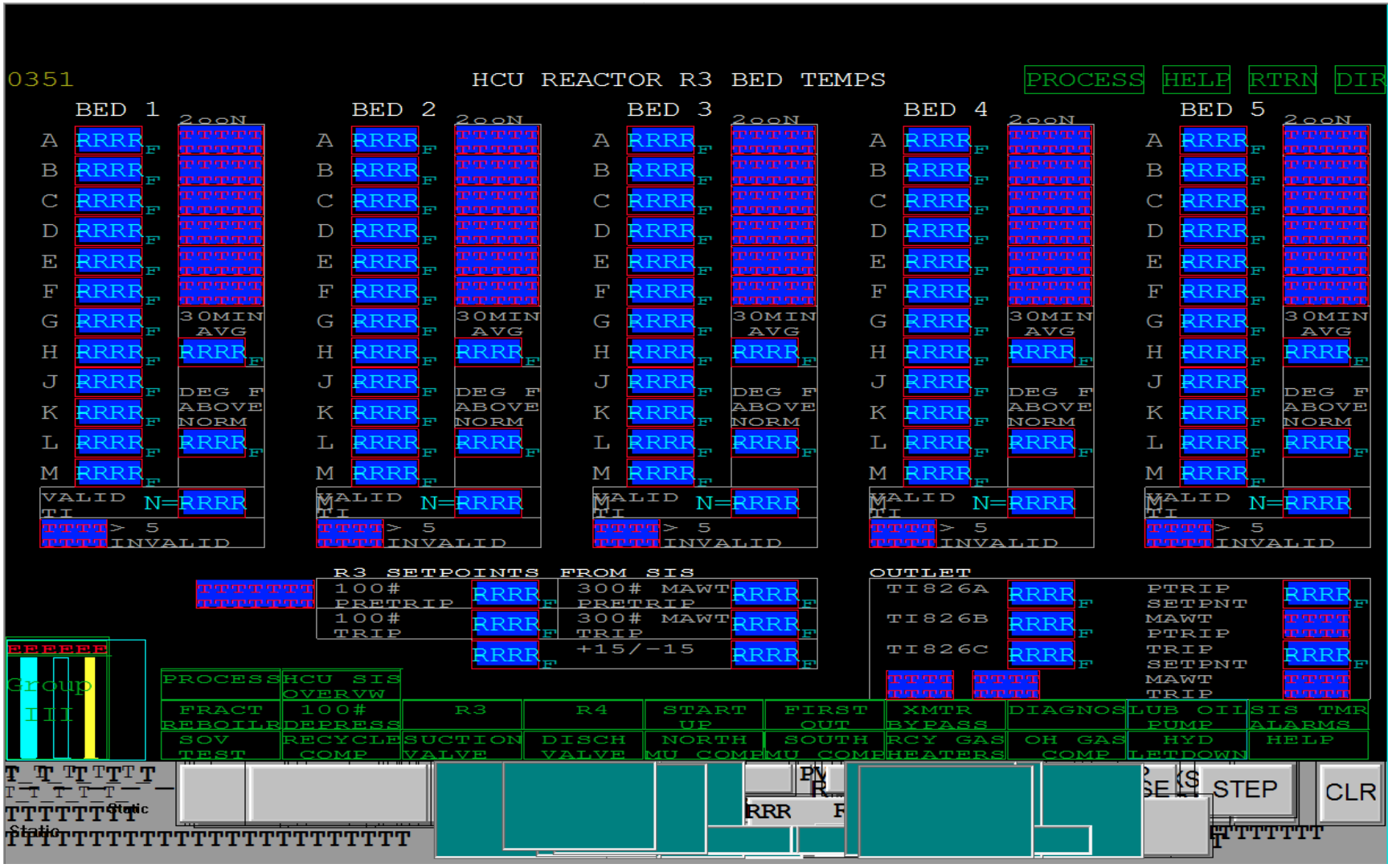
3.124 HCU RECYCLE COMPRESSOR (0350.DS)

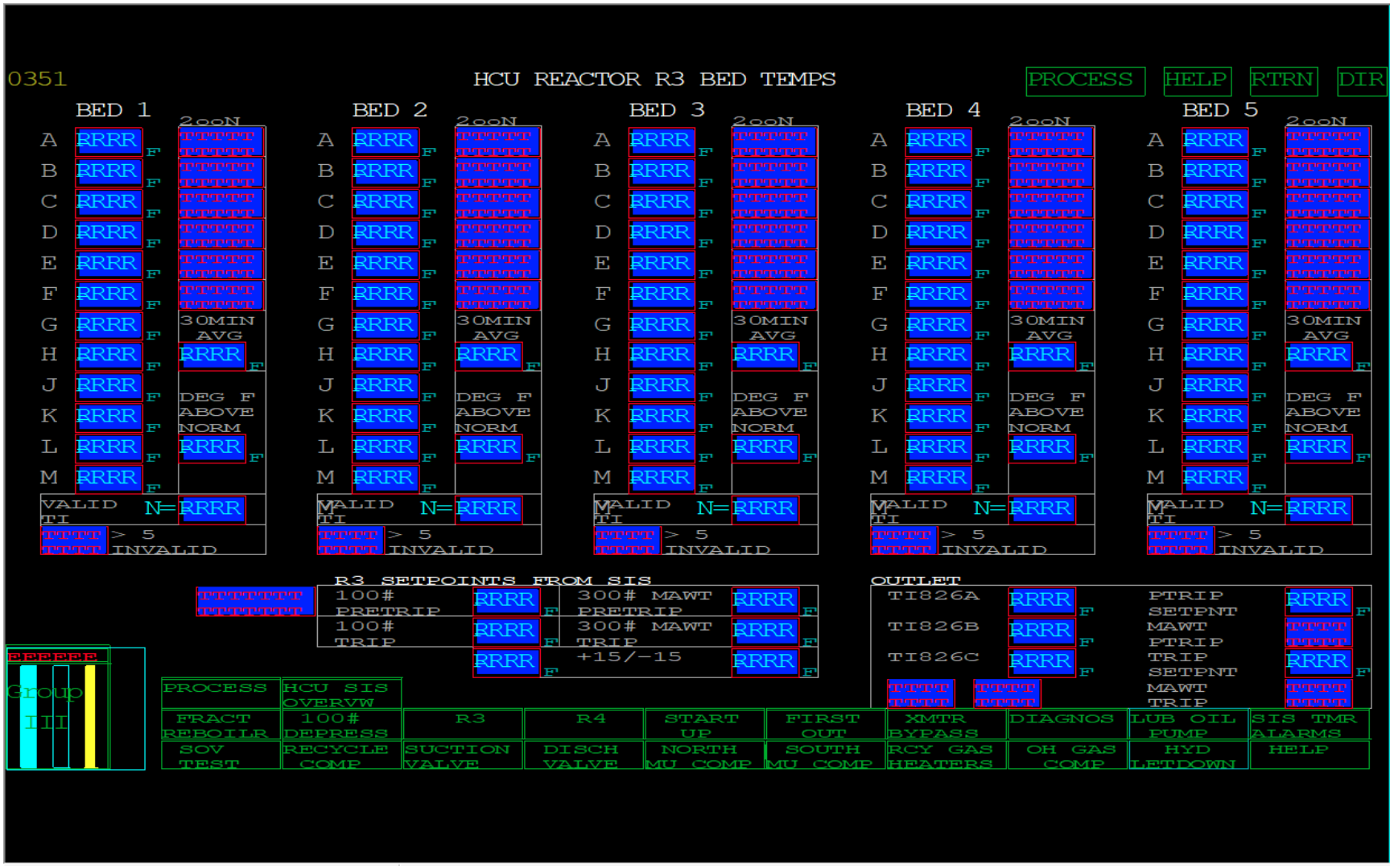


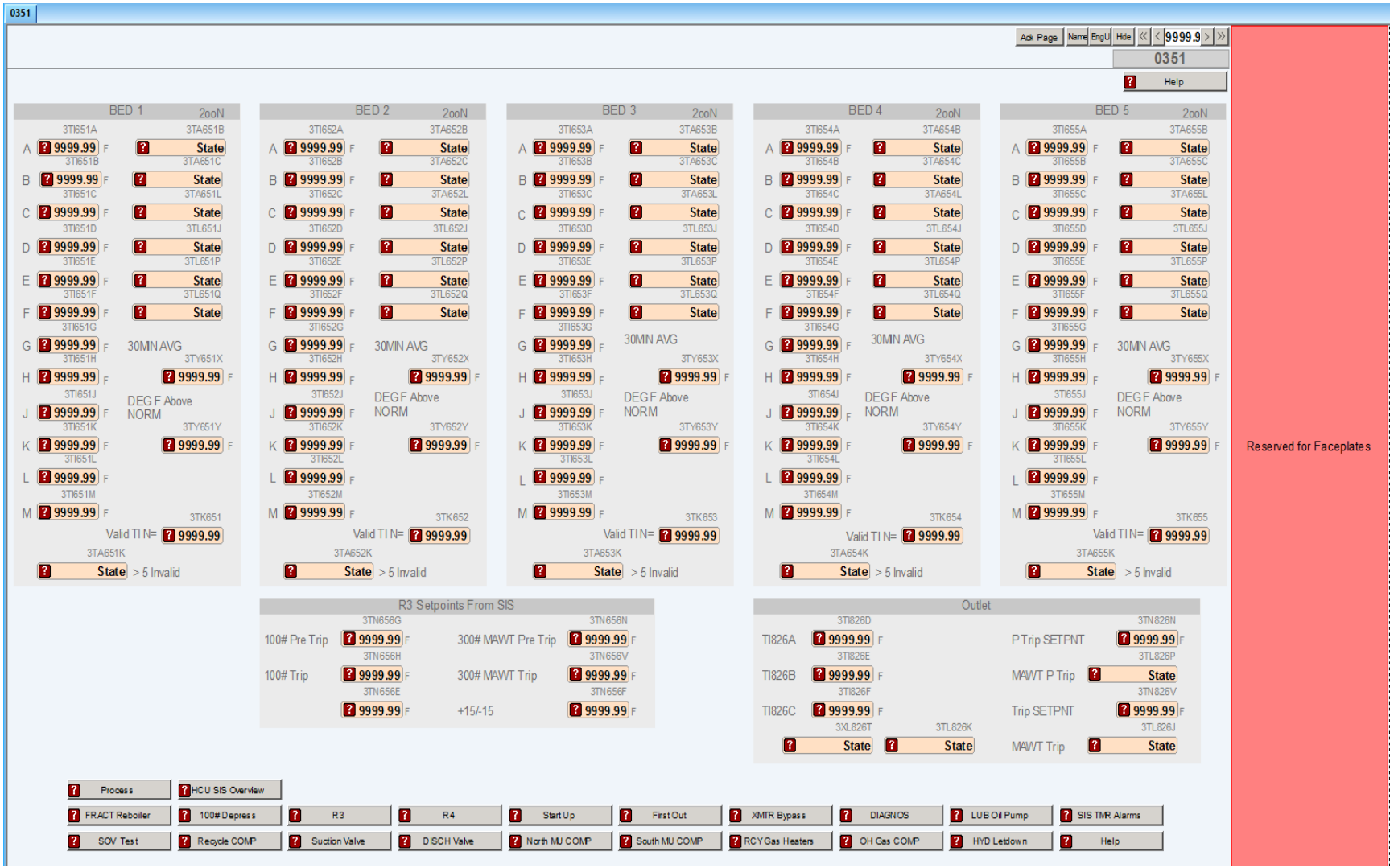

0350
HCU RECYCLE COMPRESSOR
PROCESS
HELP
RTRN
DIR
CONTROL OIL
PI474A
PI474B
PRETRIP SETPOINT
TRIP SETPOINT
COMP LUBE OIL
PI487A
PI487B
PRETRIP SETPOINT
TRIP SETPOINT
COMP SUCTION
N2
H2
COMP
COMP DISCH
N2
RECYCLE COMP TRIP
AIR
CNTRL OIL
HV9050
DUMP
REC KO LEVEL
LI355A
LI355B
PRETRIP SETPOINT
TRIP SETPOINT
OVERSPEED TRIP
SI896A
SI896B
CL PERM SETPOINT
COMPRESSOR STATUS
COMP LOCAL SD SWITCH @ DECK
COMP LOCAL SD SWITCH @ GRADE
SYSTEM
GOVERNOR
PWR
WOOD GOV
STEAM CHOPPER
600# STEAM
BYP
COMP DSCH TEMP
TI642A
TI642B
PRETRIP SETPOINT
TRIP SETPOINT
LUBE OIL PUMP
PI497
TRIP SETPOINT
ANTI SURGE VLV
OK
TRIP CONDITIONS CLEARED
COMP DISCH FLOW FOR 100# DEPRESS
FI178A
FI178B
FI178C
PRETRIP SETPOINT
TRIP SETPOINT
GROUP III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0350
Ack Page
Name
EngU
Hide
9999.9
0350
Help
Control Oil
3PI474A
PI474A
9999.99
P
3PI474B
PI474B
9999.99
P
3PN474G
Pre Trip Setpoint
9999.99
P
3PN474H
Trip Setpoint
9999.99
P
3PA474A
3PA474L
State
State
3PL474K
3XL474T
State
State
COMP Lube Oil
3PI487A
PI487A
9999.99
P
3PI487B
PI487B
9999.99
P
3PN487G
Pre Trip Setpoint
9999.99
P
3PN487H
Trip Setpoint
9999.99
P
3PA487A
3XL487T
State
State
3PL487K
3PA487L
State
State
COMP Suction
3DA141S
3DA141Z
N2
State
3DA141T
State
3DA141S
3ZA141B
State
3ZA141A
State
H2
COMP
3DA141P
State
COMP DISCH
3DA142S
3DA142Z
N2
State
3DA142T
State
3DA142S
3ZA142B
State
3ZA142A
State
3DA142P
State
Recycle COMP Trip
3XL9050C
3XL9050A
3XL9050B
AIR
State
3DA9050T
State
CNTRL Oil
HV9050
3XA9050
State
Dump
REC KO Level
3LI355A
LI355A
9999.99
%
3LI355B
LI355B
9999.99
%
3LN355G
Pre Trip Setpoint
9999.99
%
3LN355H
Trip Setpoint
9999.99
%
3LA355A
3LA355L
State
State
3LL355K
3XL355T
State
State
Overspeed Trip
3SA003A
State
3SI896A
SI896A
9999.99
R
3SI896B
SI896B
9999.99
R
CL_PERM Setpoint
9999.99
R
3SL896K
3XL896T
State
State
Compressor Status
3DA9050S
State
COMP Local SD Switch @ DECK
3HA9050A
3DA9050Y
State
State
COMP Local SD Switch @ Grade
3HA9050
3DA9050Z
State
State
System
3XA948
State
3XL948D
3UA659A
State
State
3XL9050R
State
Trip Conditions Cleared
Governor
3HL896A
3DA896T
State
State
3SA003A
State
3SL896A
3XA896B
State
State
PWR
PWR
WOOD GOV
Recycle COMP Trip
3DA002T
State
600# Steam
3ZA002A
100%
3ZA001A
BYP
3DA002S
State
COMP DISCH TEMP
3TI642A
TI642A
9999.99
F
3TI642B
TI642B
9999.99
F
3TN642G
Pre Trip Setpoint
9999.99
F
3TN642H
Trip Setpoint
9999.99
F
3TA642A
3TA642L
State
State
3TL642K
3XL642T
State
State
Lube Oil Pump
3PI497
PI497
9999.99
P
3PN497H
Trip Setpoint
9999.99
P
3PA497A
3PL497T
State
State
Anti Surge VLV
3XL944A
COMP DISCH Flow FOR 100# DEPRESS
3FI178A
FI178A
9999.99
3FI178B
FI178B
9999.99
3FI178C
FI178C
9999.99
3XL178T
State
Pre Trip Setpoint
3FN178H
Trip Setpoint
9999.99
3FL178L
State
3FL178J
State
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
HCU 100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
U RCY Gas Heaters
RCY Gas Heaters
HYD Letdown
Help

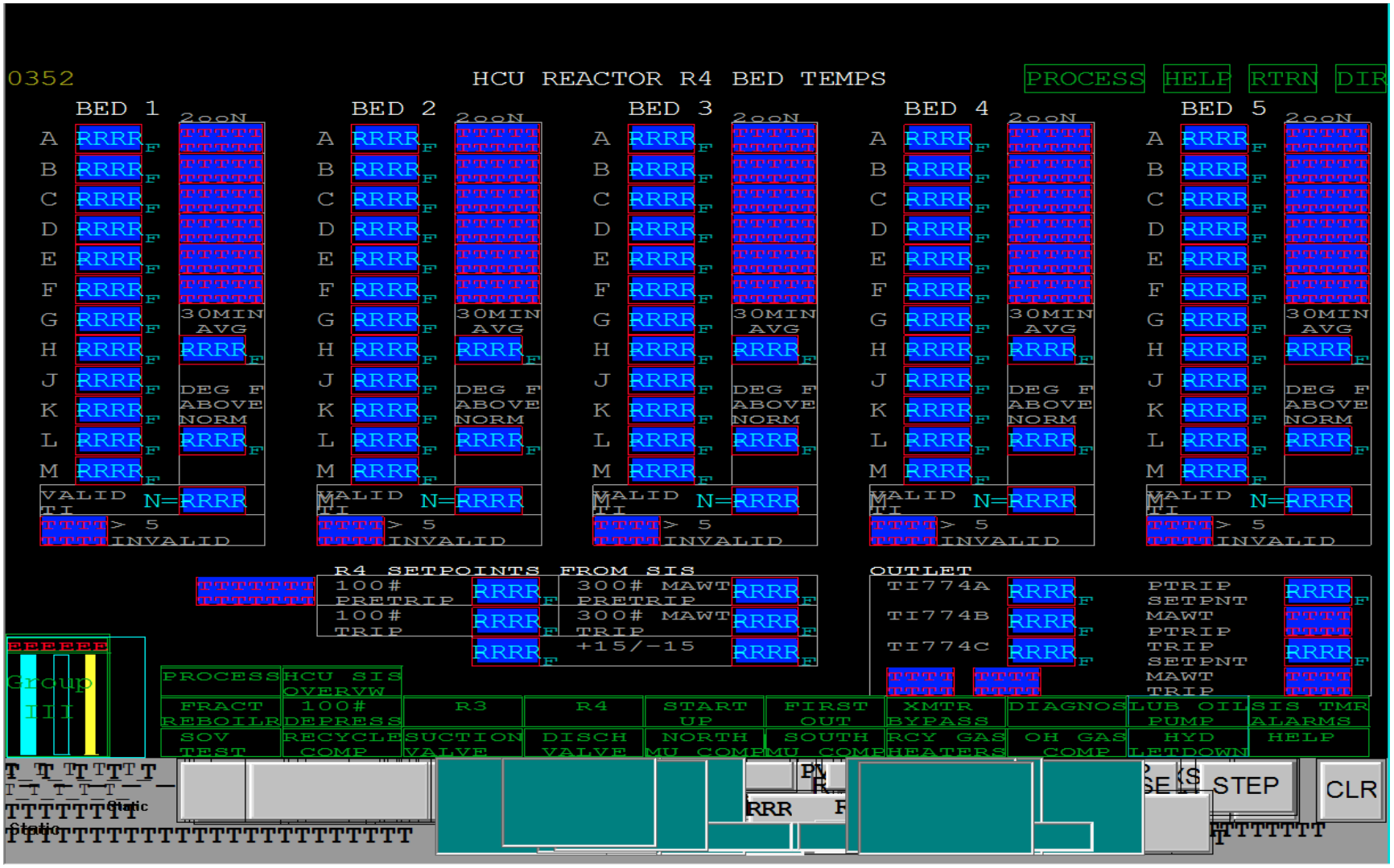
3.125 HCU REACTOR R3 BED TEMPS (0351.DS)

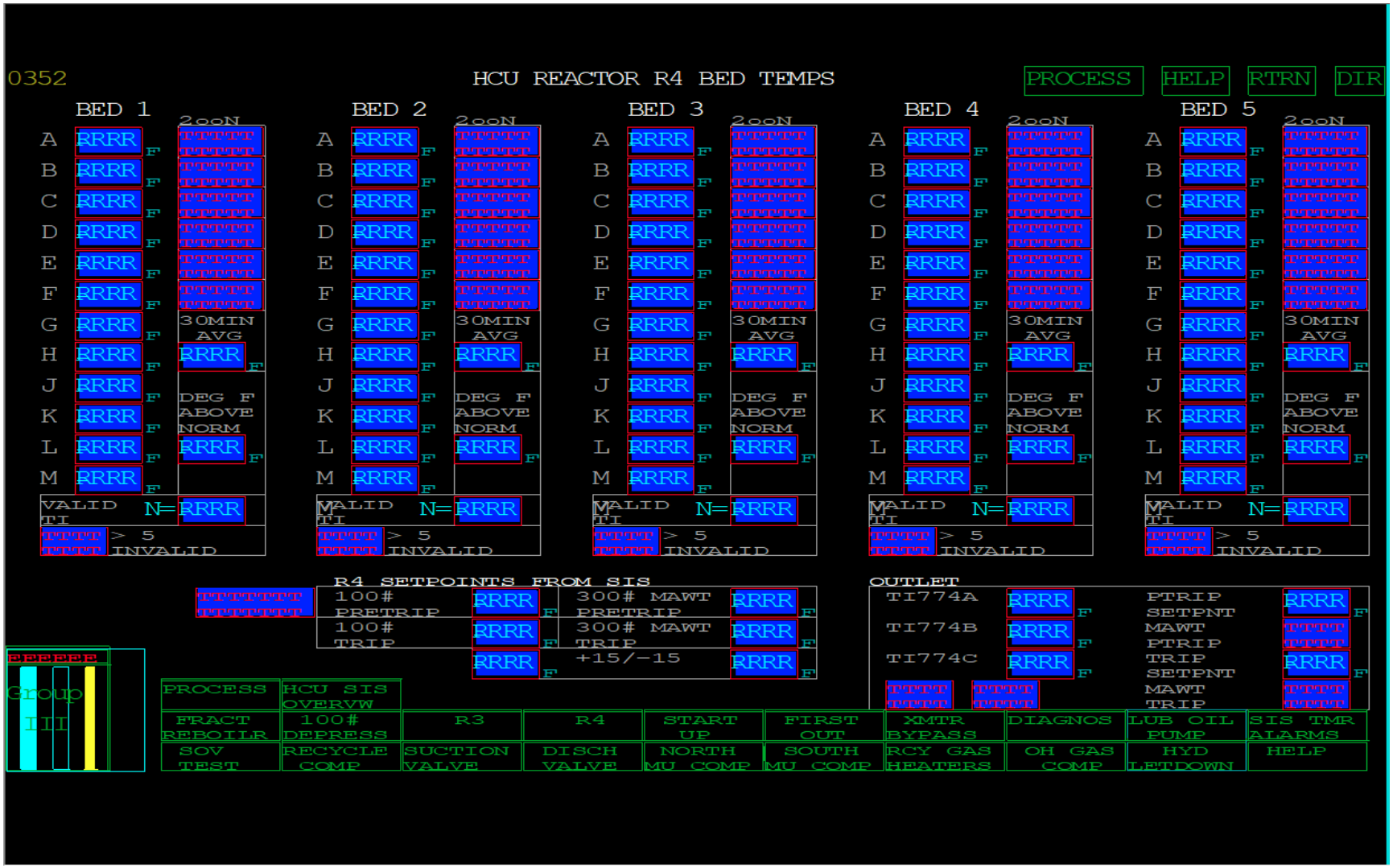


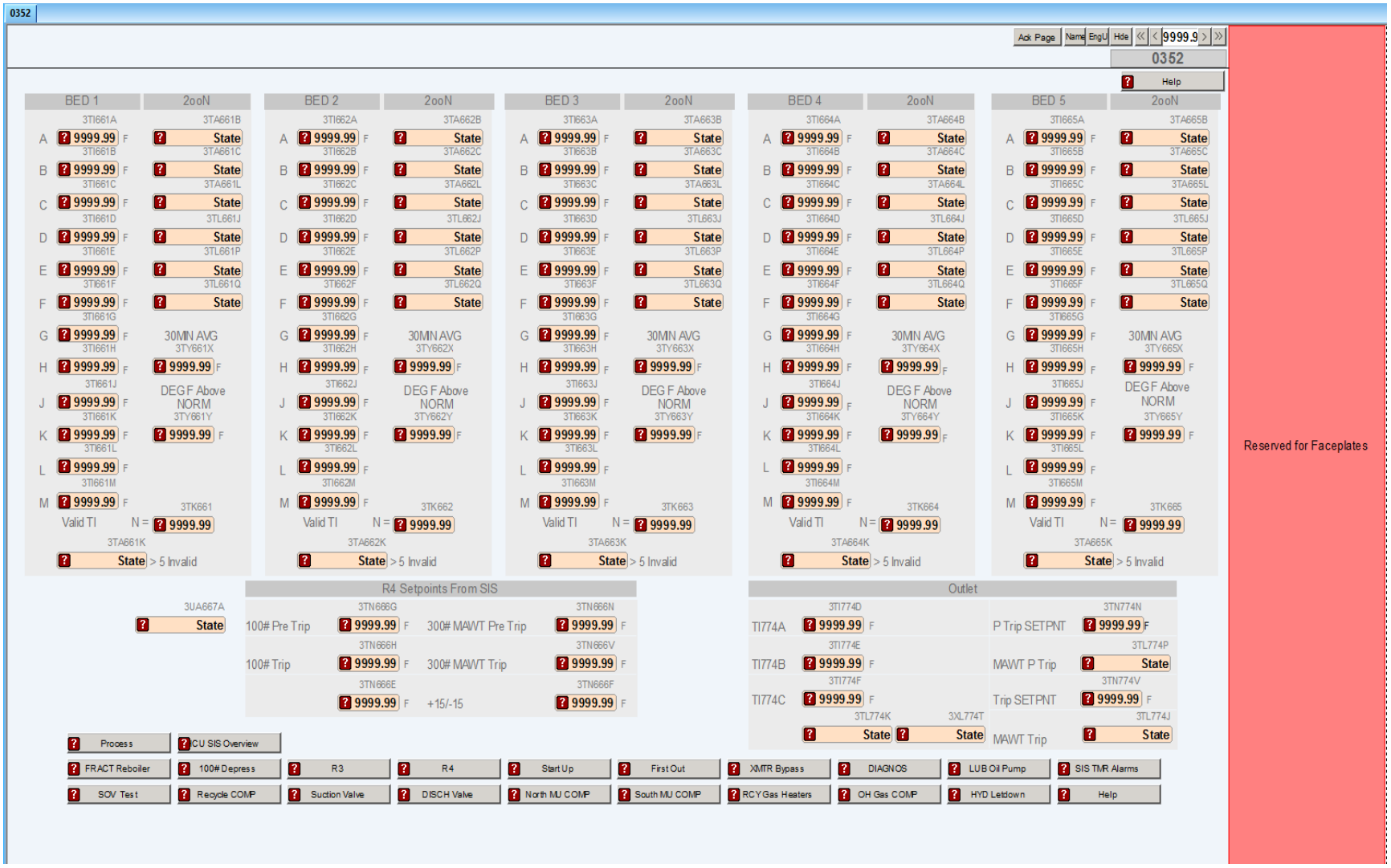

0351
HCU REACTOR R3 BED TEMPS
PROCESS
HELP
RTRN
DIR
BED 1
BED 2
BED 3
BED 4
BED 5
2ooN
A
B
C
D
E
F
G
H
J
K
L
M
30MIN AVG
DEG F ABOVE NORM
VALID TI
N=
> 5
INVALID
R3 SETPOINTS FROM SIS
100# PRETRIP
100# TRIP
300# MAWT PRETRIP
300# MAWT TRIP
+15/-15
OUTLET
TI826A
TI826B
TI826C
PTRIP SETPNT
MAWT PTRIP
TRIP SETPNT
MAWT TRIP
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0351
Ack Page
Name
Eng U
Hide
9999.9
0351
Help
BED 1
2ooN
BED 2
2ooN
BED 3
2ooN
BED 4
2ooN
BED 5
2ooN
30MIN AVG
DEG F Above NORM
Valid TI N=
> 5 Invalid
R3 Setpoints From SIS
100# Pre Trip
100# Trip
300# MAWT Pre Trip
300# MAWT Trip
+15/-15
Outlet
TI826A
TI826B
TI826C
P Trip SETPNT
MAWT P Trip
Trip SETPNT
MAWT Trip
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

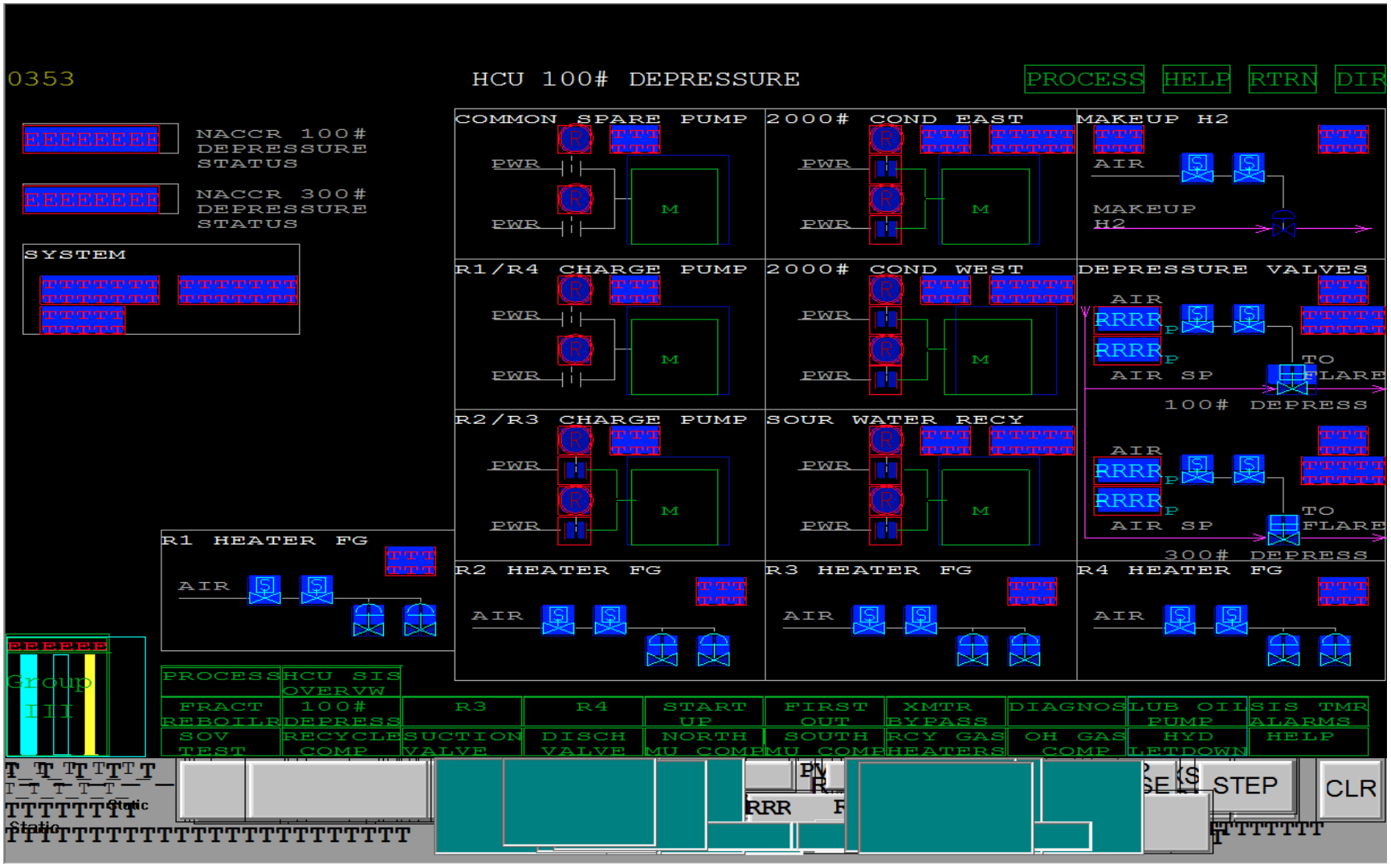
3.126 HCU REACTOR R4 BED TEMPS (0352.DS)

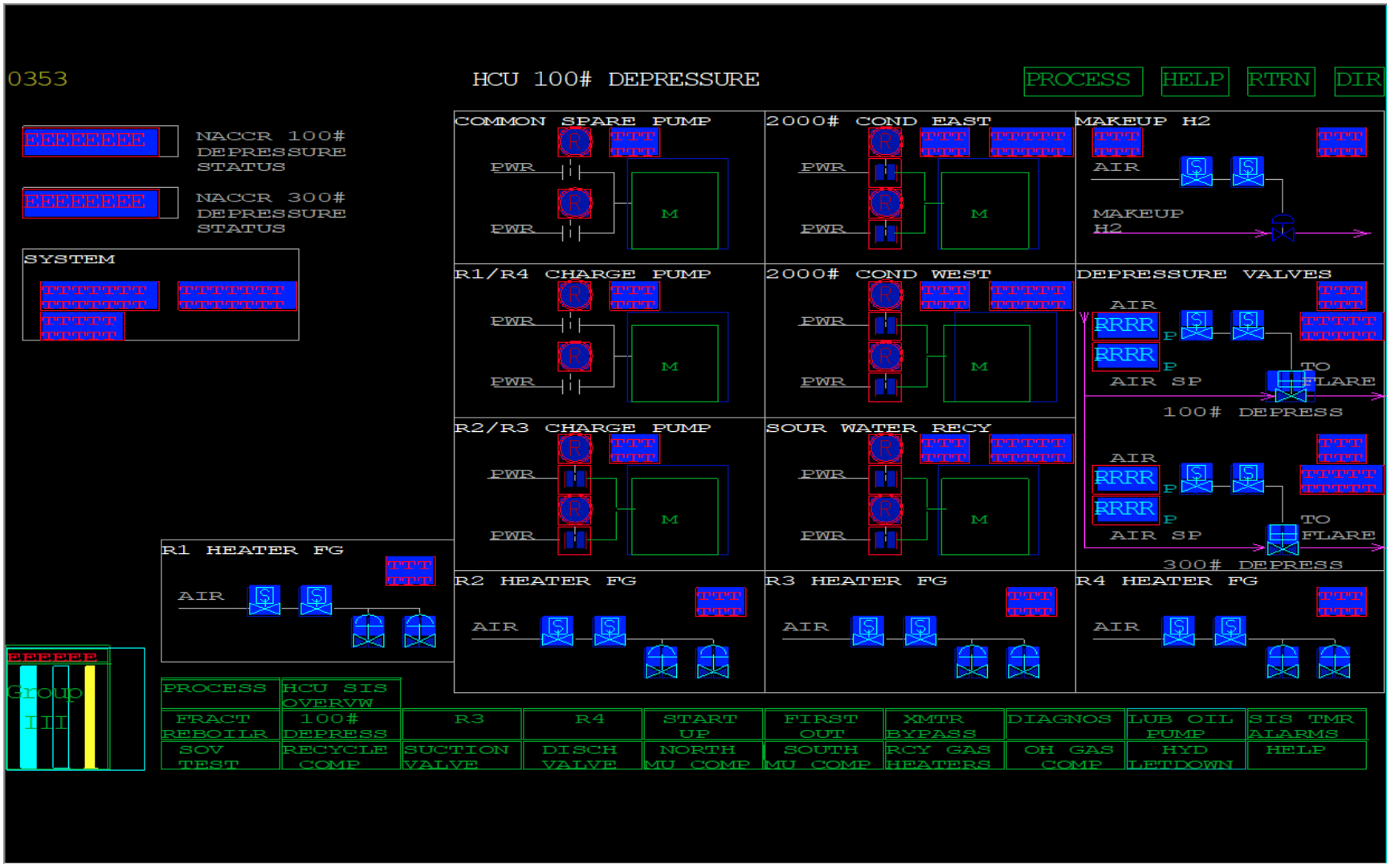


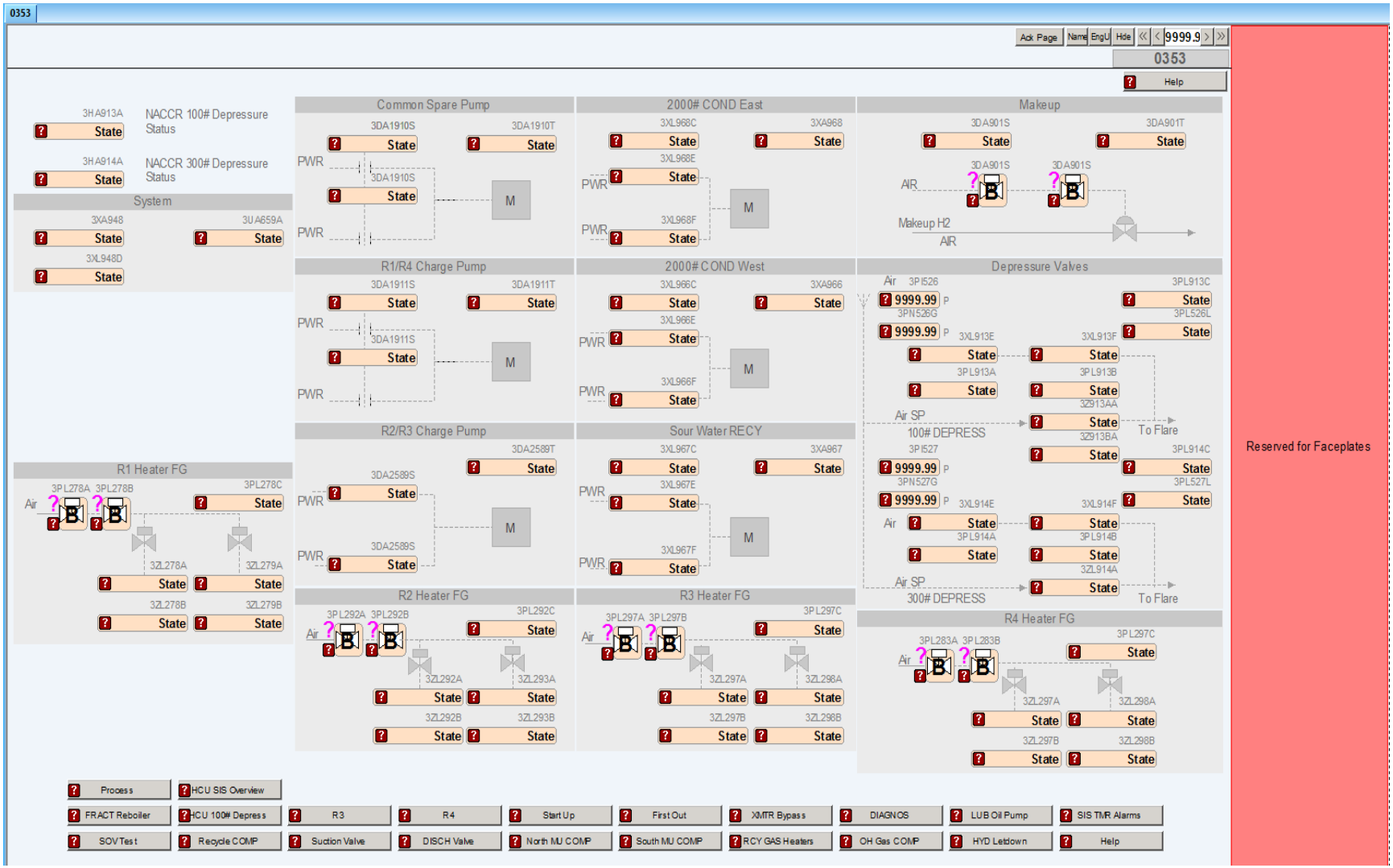

0352
HCU REACTOR R4 BED TEMPS
PROCESS
HELP
RTRN
DIR
BED 1
BED 2
BED 3
BED 4
BED 5
2ooN
30MIN AVG
DEG F ABOVE NORM
VALID TI
INVALID
R4 SETPOINTS FROM SIS
100# PRETRIP
100# TRIP
300# MAWT PRETRIP
300# MAWT TRIP
+15/-15
OUTLET
TI774A
TI774B
TI774C
PTRIP SETPNT
MAWT PTRIP
TRIP SETPNT
MAWT TRIP
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0352
Ack Page
Name
EngU
Hide
9999.9
0352
Help
BED 1
2ooN
BED 2
2ooN
BED 3
2ooN
BED 4
2ooN
BED 5
2ooN
3TI661A
3TA661B
3TI662A
3TA662B
3TI663A
3TA663B
3TI664A
3TA664B
3TI665A
3TA665B
A 9999.99 F
State
B 9999.99 F
State
C 9999.99 F
State
D 9999.99 F
State
E 9999.99 F
State
F 9999.99 F
State
G 9999.99 F
30MIN AVG
H 9999.99 F
9999.99 F
DEG F Above NORM
J 9999.99 F
K 9999.99 F
9999.99 F
L 9999.99 F
M 9999.99 F
3TK661
3TK662
3TK663
3TK664
3TK665
Valid TI
N = 9999.99
3TA661K
3TA662K
3TA663K
3TA664K
3TA665K
State > 5 Invalid
Reserved for Faceplates
R4 Setpoints From SIS
3UA667A
State
100# Pre Trip
3TN666G
9999.99 F
300# MAWT Pre Trip
3TN666N
9999.99 F
100# Trip
3TN666H
9999.99 F
300# MAWT Trip
3TN666V
9999.99 F
3TN666E
9999.99 F
+15/-15
3TN666F
9999.99 F
Outlet
TI774A
3TI774D
9999.99 F
TI774B
3TI774E
9999.99 F
TI774C
3TI774F
9999.99 F
P Trip SETPNT
3TN774N
9999.99 F
MAWT P Trip
3TL774P
State
Trip SETPNT
3TN774V
9999.99 F
MAWT Trip
3TL774J
State
3TL774K
State
3XL774T
State
Process
CU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

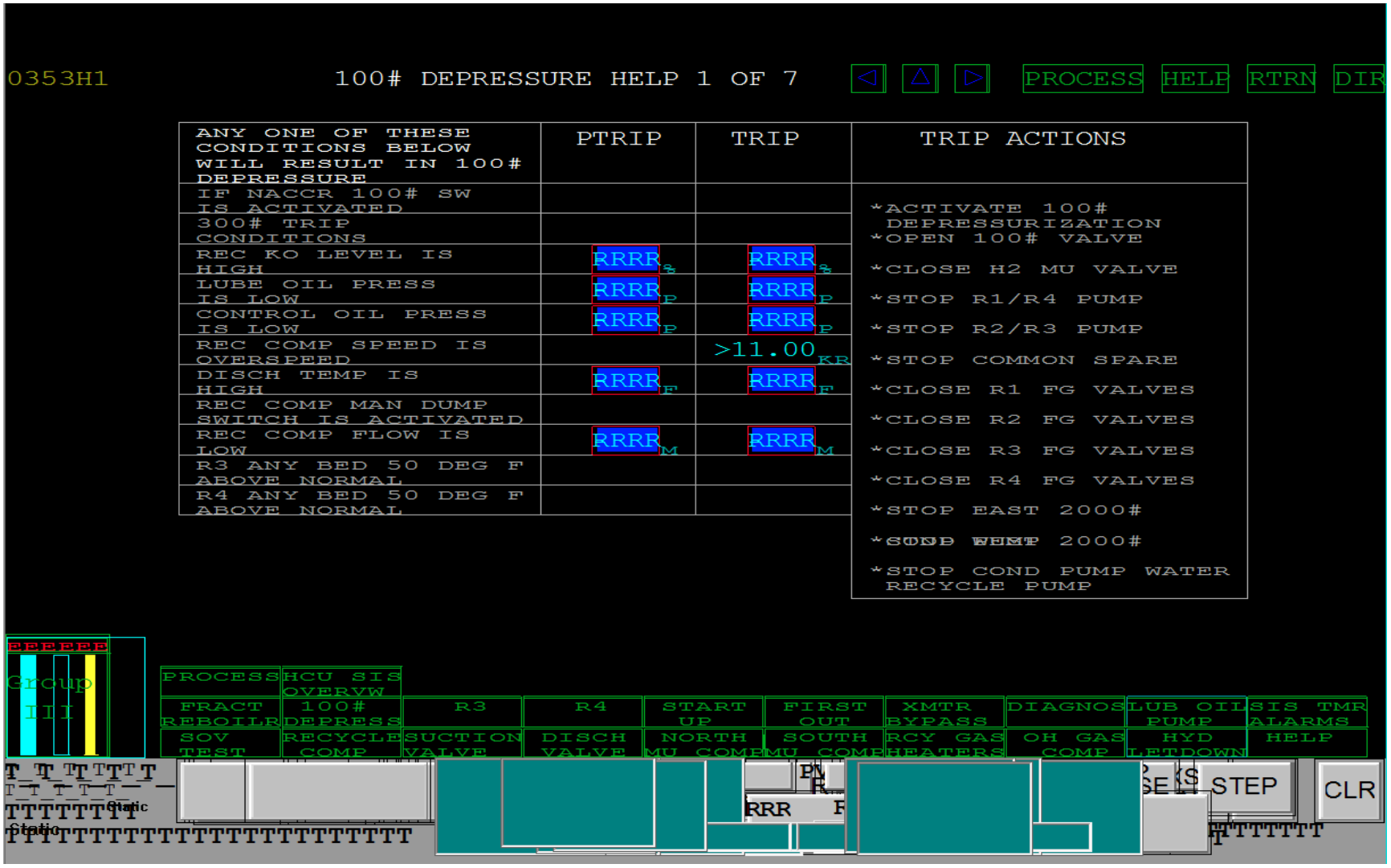
3.127 HCU 100# DEPRESSURE (0353.DS)

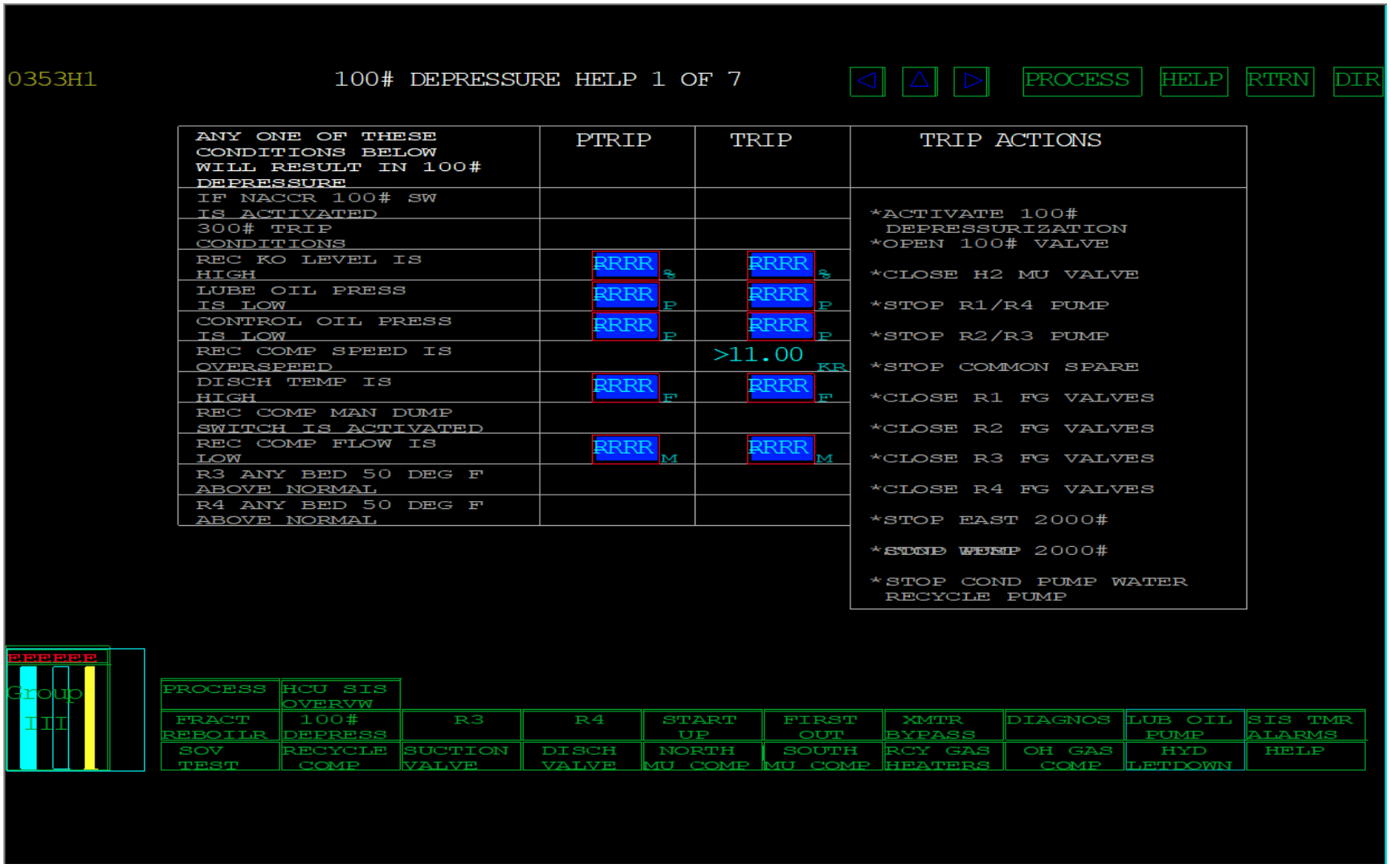


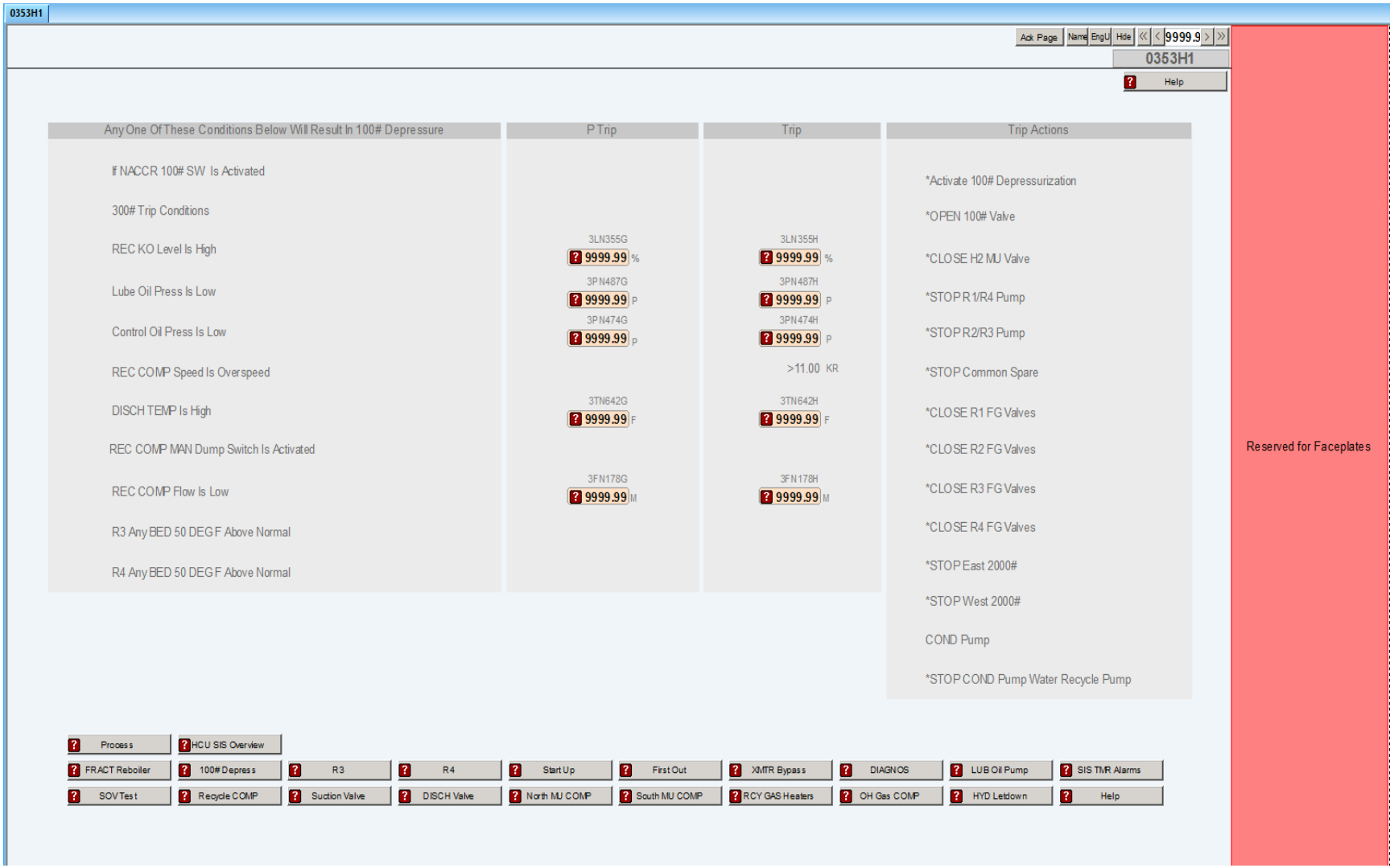

0353
HCU 100# DEPRESSURE
PROCESS
HELP
RTRN
DIR
NACCR 100# DEPRESSURE STATUS
NACCR 300# DEPRESSURE STATUS
SYSTEM
COMMON SPARE PUMP
2000# COND EAST
MAKEUP H2
AIR
MAKEUP H2
R1/R4 CHARGE PUMP
2000# COND WEST
DEPRESSURE VALVES
AIR SP
TO FLARE
100# DEPRESS
R2/R3 CHARGE PUMP
SOUR WATER RECY
300# DEPRESS
PWR
M
R1 HEATER FG
R2 HEATER FG
R3 HEATER FG
R4 HEATER FG
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0353
Ack Page
Name
Eng'U
Hide
9999.9
0353
Help
3HA913A
NACCR 100# Depressure Status
State
3HA914A
NACCR 300# Depressure Status
State
System
3XA948
State
3UA659A
State
3XL948D
State
Common Spare Pump
3DA1910S
State
3DA1910T
State
PWR
3DA1910S
State
M
PWR
2000# COND East
3XL968C
State
3XA968
State
3XL968E
State
PWR
M
PWR
3XL968F
State
Makeup
3DA901S
State
3DA901T
State
AIR
3DA901S
3DA901S
Makeup H2
AIR
R1/R4 Charge Pump
3DA1911S
State
3DA1911T
State
PWR
3DA1911S
State
M
PWR
2000# COND West
3XL966C
State
3XA966
State
3XL966E
State
PWR
M
PWR
3XL966F
State
Depressure Valves
Air
3PI526
9999.99
P
3PN526G
9999.99
P
3PL913C
State
3PL526L
State
3XL913E
State
3XL913F
State
3PL913A
State
3PL913B
State
3Z913AA
Air SP
100# DEPRESS
State
3Z913BA
To Flare
3PI527
9999.99
P
3PN527G
9999.99
P
3PL914C
State
3PL527L
State
3XL914E
State
3XL914F
State
Air
State
State
3PL914A
State
3PL914B
State
3ZL914A
Air SP
300# DEPRESS
State
To Flare
R1 Heater FG
Air
3PL278A
3PL278B
3PL278C
State
3ZL278A
State
3ZL279A
State
3ZL278B
State
3ZL279B
State
R2/R3 Charge Pump
3DA2589T
State
3DA2589S
State
PWR
State
M
PWR
3DA2589S
State
Sour Water RECY
3XL967C
State
3XA967
State
3XL967E
State
PWR
M
PWR
3XL967F
State
R2 Heater FG
Air
3PL292A
3PL292B
3PL292C
State
3ZL292A
State
3ZL293A
State
3ZL292B
State
3ZL293B
State
R3 Heater FG
Air
3PL297A
3PL297B
3PL297C
State
3ZL297A
State
3ZL298A
State
3ZL297B
State
3ZL298B
State
R4 Heater FG
Air
3PL283A
3PL283B
3PL297C
State
3ZL297A
State
3ZL298A
State
3ZL297B
State
3ZL298B
State
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
HCU 100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY GAS Heaters
OH Gas COMP
HYD Letdown
Help

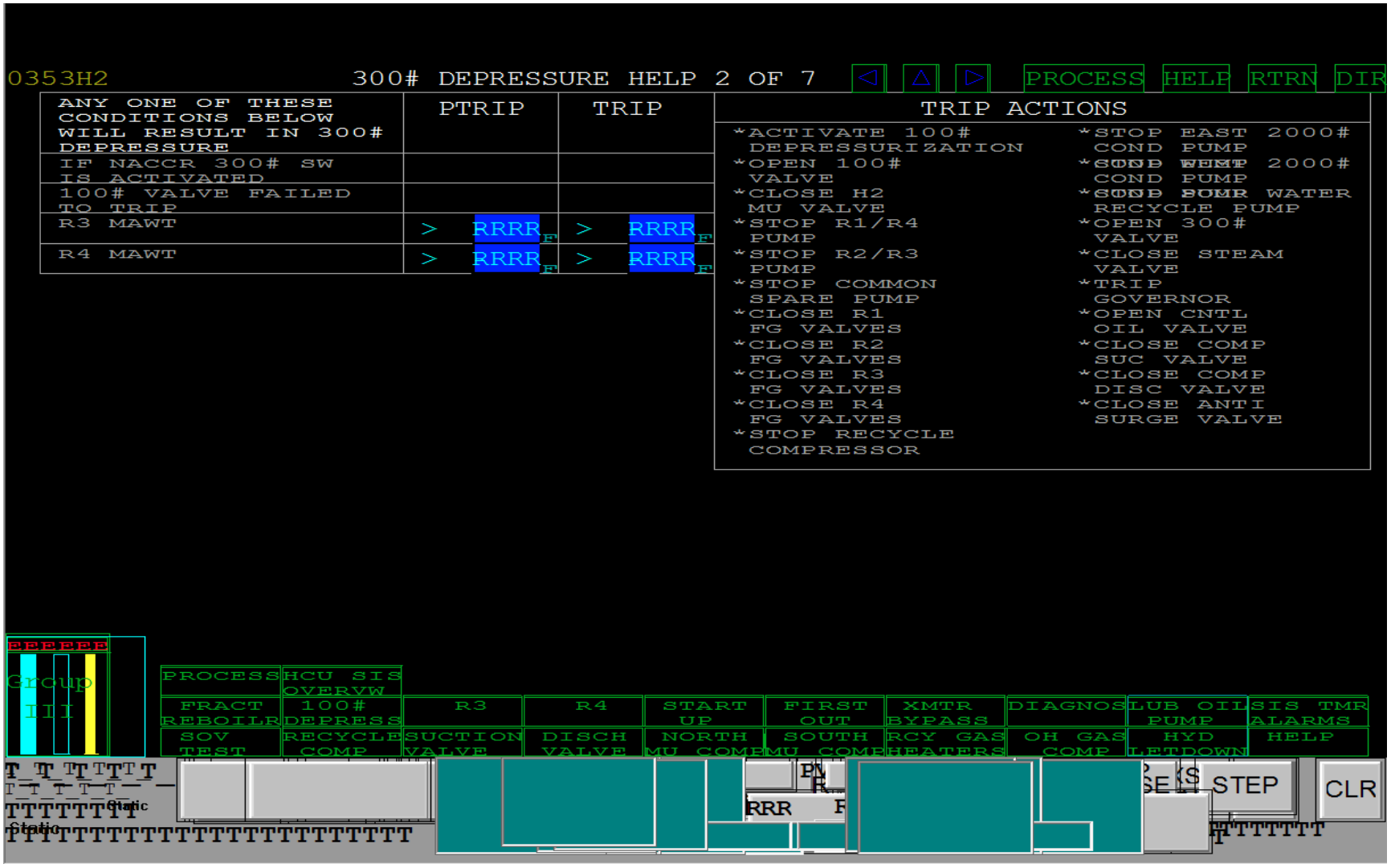
3.128 100# DEPRESSURE HELP 1 OF 7 (0353H1.DS)

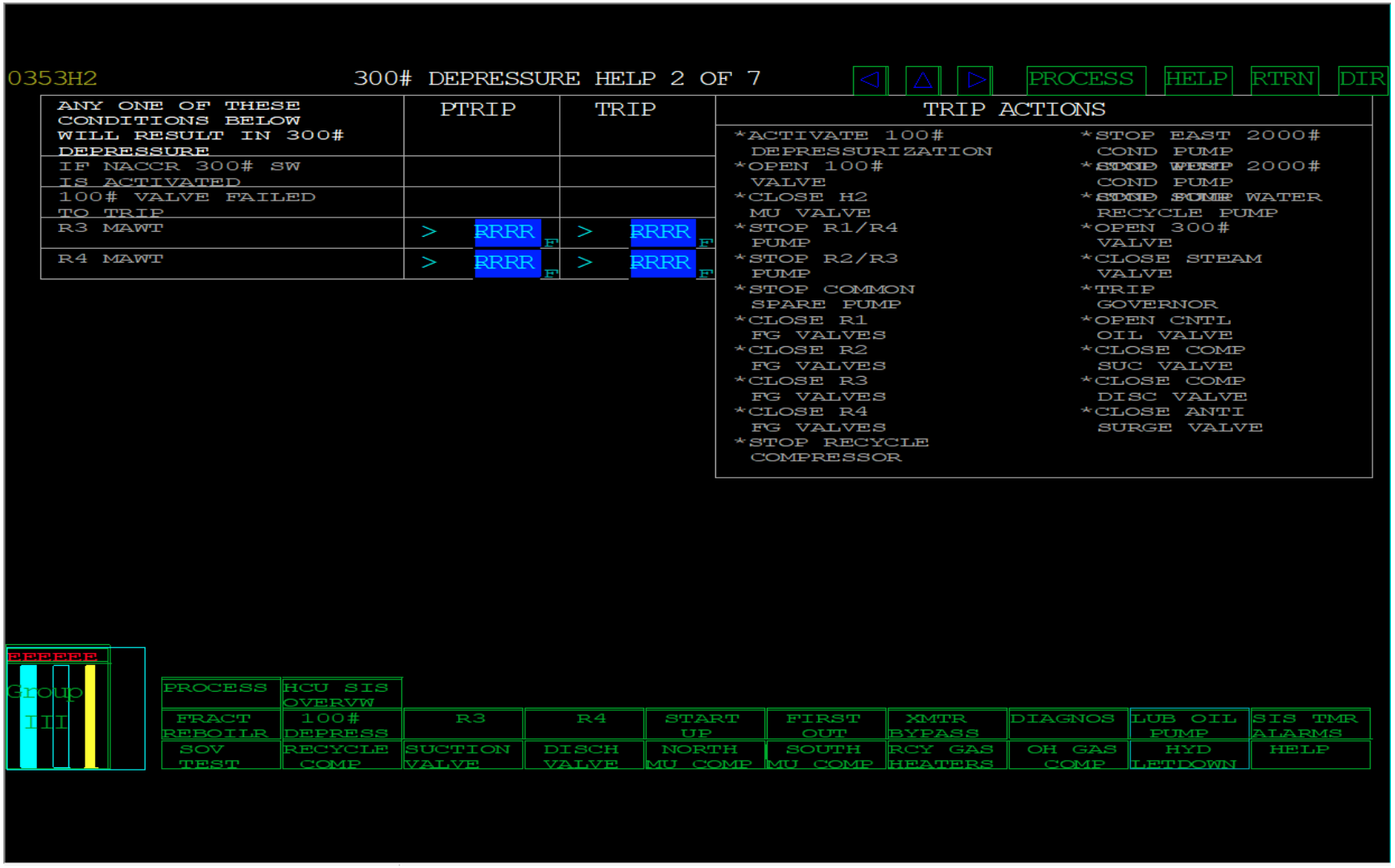


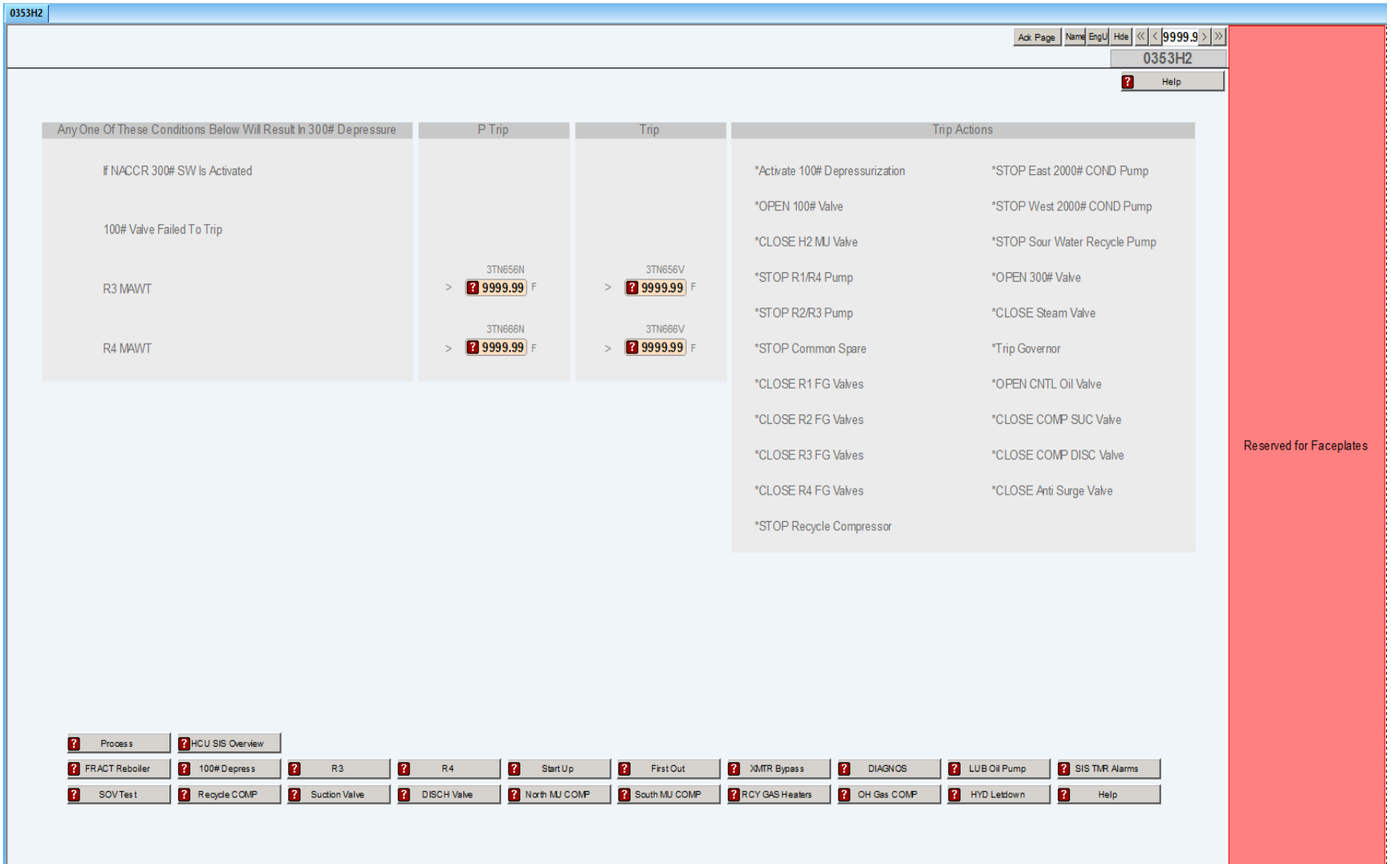

0353H1
100# DEPRESSURE HELP 1 OF 7
PROCESS
HELP
RTRN
DIR
ANY ONE OF THESE CONDITIONS BELOW WILL RESULT IN 100# DEPRESSURE
PTRIP
TRIP
TRIP ACTIONS
IF NACCR 100# SW IS ACTIVATED
300# TRIP CONDITIONS
REC KO LEVEL IS HIGH
LUBE OIL PRESS IS LOW
CONTROL OIL PRESS IS LOW
REC COMP SPEED IS OVERSPEED
>11.00
DISCH TEMP IS HIGH
REC COMP MAN DUMP SWITCH IS ACTIVATED
REC COMP FLOW IS LOW
R3 ANY BED 50 DEG F ABOVE NORMAL
R4 ANY BED 50 DEG F ABOVE NORMAL
*ACTIVATE 100# DEPRESSURIZATION
*OPEN 100# VALVE
*CLOSE H2 MU VALVE
*STOP R1/R4 PUMP
*STOP R2/R3 PUMP
*STOP COMMON SPARE
*CLOSE R1 FG VALVES
*CLOSE R2 FG VALVES
*CLOSE R3 FG VALVES
*CLOSE R4 FG VALVES
*STOP EAST 2000#
*STOP WEST 2000#
*STOP COND PUMP WATER RECYCLE PUMP
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0353H1
Ack Page
Name
Eng U
Hide
9999.9
0353H1
Help
Any One Of These Conditions Below Will Result In 100# Depressure
P Trip
Trip
Trip Actions
If NACCR 100# SW Is Activated
300# Trip Conditions
REC KO Level Is High
3LN355G
9999.99 %
3LN355H
9999.99 %
Lube Oil Press Is Low
3PN487G
9999.99 P
3PN487H
9999.99 P
Control Oil Press Is Low
3PN474G
9999.99 P
3PN474H
9999.99 P
REC COMP Speed Is Overspeed
>11.00 KR
DISCH TEMP Is High
3TN642G
9999.99 F
3TN642H
9999.99 F
REC COMP MAN Dump Switch Is Activated
REC COMP Flow Is Low
3FN178G
9999.99 M
3FN178H
9999.99 M
R3 Any BED 50 DEG F Above Normal
R4 Any BED 50 DEG F Above Normal
*Activate 100# Depressurization
*OPEN 100# Valve
*CLOSE H2 MU Valve
*STOP R1/R4 Pump
*STOP R2/R3 Pump
*STOP Common Spare
*CLOSE R1 FG Valves
*CLOSE R2 FG Valves
*CLOSE R3 FG Valves
*CLOSE R4 FG Valves
*STOP East 2000#
*STOP West 2000#
COND Pump
*STOP COND Pump Water Recycle Pump
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY GAS Heaters
OH Gas COMP
HYD Letdown
Help

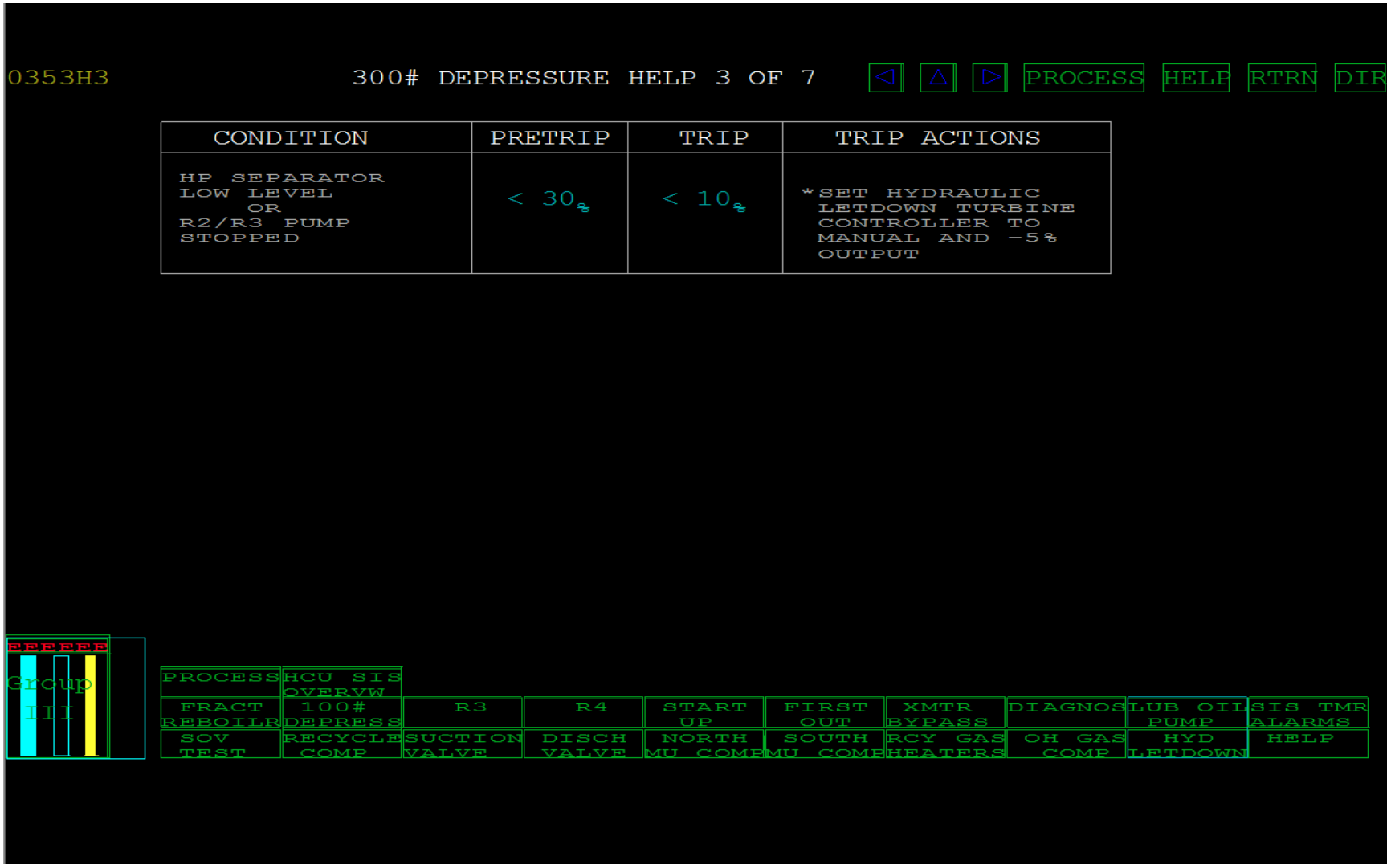
3.129 300# DEPRESSURE HELP 2 OF 7 (0353H2.DS)

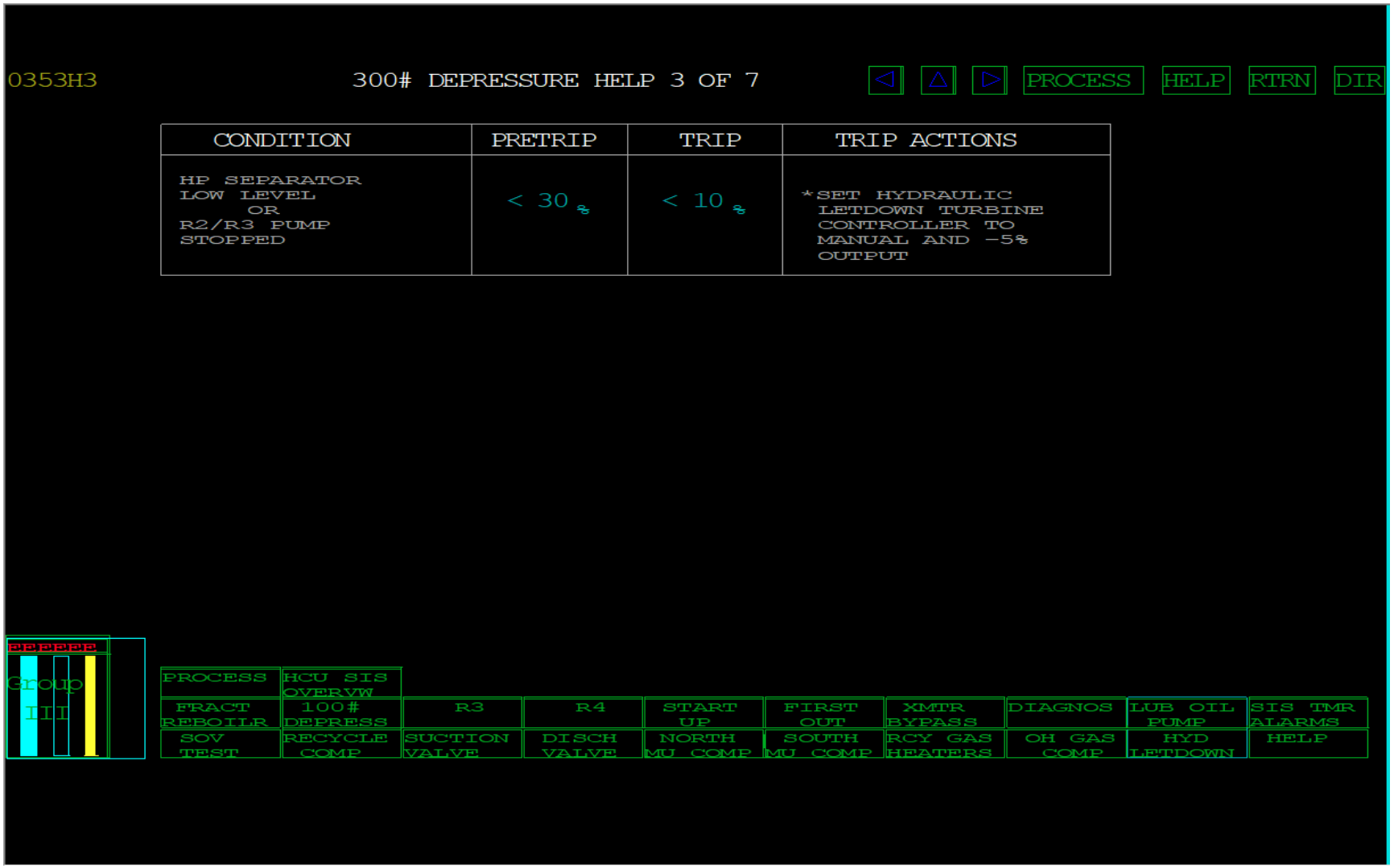


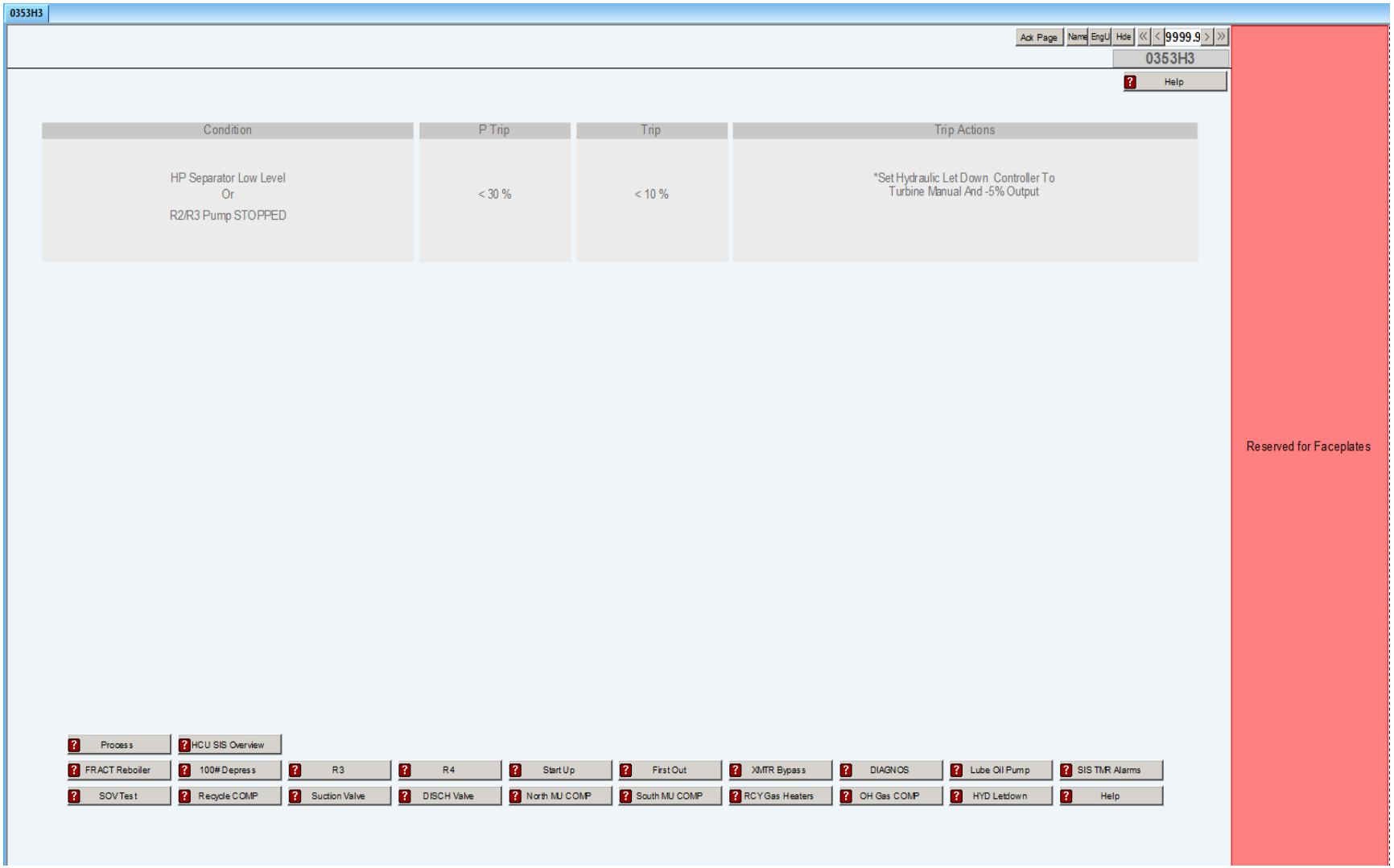

0353H2
300# DEPRESSURE HELP 2 OF 7
PROCESS
HELP
RTRN
DIR
ANY ONE OF THESE CONDITIONS BELOW WILL RESULT IN 300# DEPRESSURE
PTRIP
TRIP
IF NACCR 300# SW IS ACTIVATED
100# VALVE FAILED TO TRIP
R3 MAWT
R4 MAWT
RRRR
TRIP ACTIONS
*ACTIVATE 100# DEPRESSURIZATION
*OPEN 100# VALVE
*CLOSE H2 MU VALVE
*STOP R1/R4 PUMP
*STOP R2/R3 PUMP
*STOP COMMON SPARE PUMP
*CLOSE R1 FG VALVES
*CLOSE R2 FG VALVES
*CLOSE R3 FG VALVES
*CLOSE R4 FG VALVES
*STOP RECYCLE COMPRESSOR
*STOP EAST 2000# COND PUMP
*STOP WEST 2000# COND PUMP
*STOP SOME WATER RECYCLE PUMP
*OPEN 300# VALVE
*CLOSE STEAM VALVE
*TRIP GOVERNOR
*OPEN CNTL OIL VALVE
*CLOSE COMP SUC VALVE
*CLOSE COMP DISC VALVE
*CLOSE ANTI SURGE VALVE
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0353H2
Ack Page
Name
Eng'U
Hide
9999.9
0353H2
Help
Any One Of These Conditions Below Will Result In 300# Depressure
P Trip
Trip
Trip Actions
If NACCR 300# SW Is Activated
100# Valve Failed To Trip
R3 MAWT
3TN656N
> 9999.99 F
3TN656V
> 9999.99 F
R4 MAWT
3TN666N
> 9999.99 F
3TN666V
> 9999.99 F
*Activate 100# Depressurization
*OPEN 100# Valve
*CLOSE H2 MU Valve
*STOP R1/R4 Pump
*STOP R2/R3 Pump
*STOP Common Spare
*CLOSE R1 FG Valves
*CLOSE R2 FG Valves
*CLOSE R3 FG Valves
*CLOSE R4 FG Valves
*STOP Recycle Compressor
*STOP East 2000# COND Pump
*STOP West 2000# COND Pump
*STOP Sour Water Recycle Pump
*OPEN 300# Valve
*CLOSE Steam Valve
*Trip Governor
*OPEN CNTL Oil Valve
*CLOSE COMP SUC Valve
*CLOSE COMP DISC Valve
*CLOSE Anti Surge Valve
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY GAS Heaters
OH Gas COMP
HYD Letdown
Help

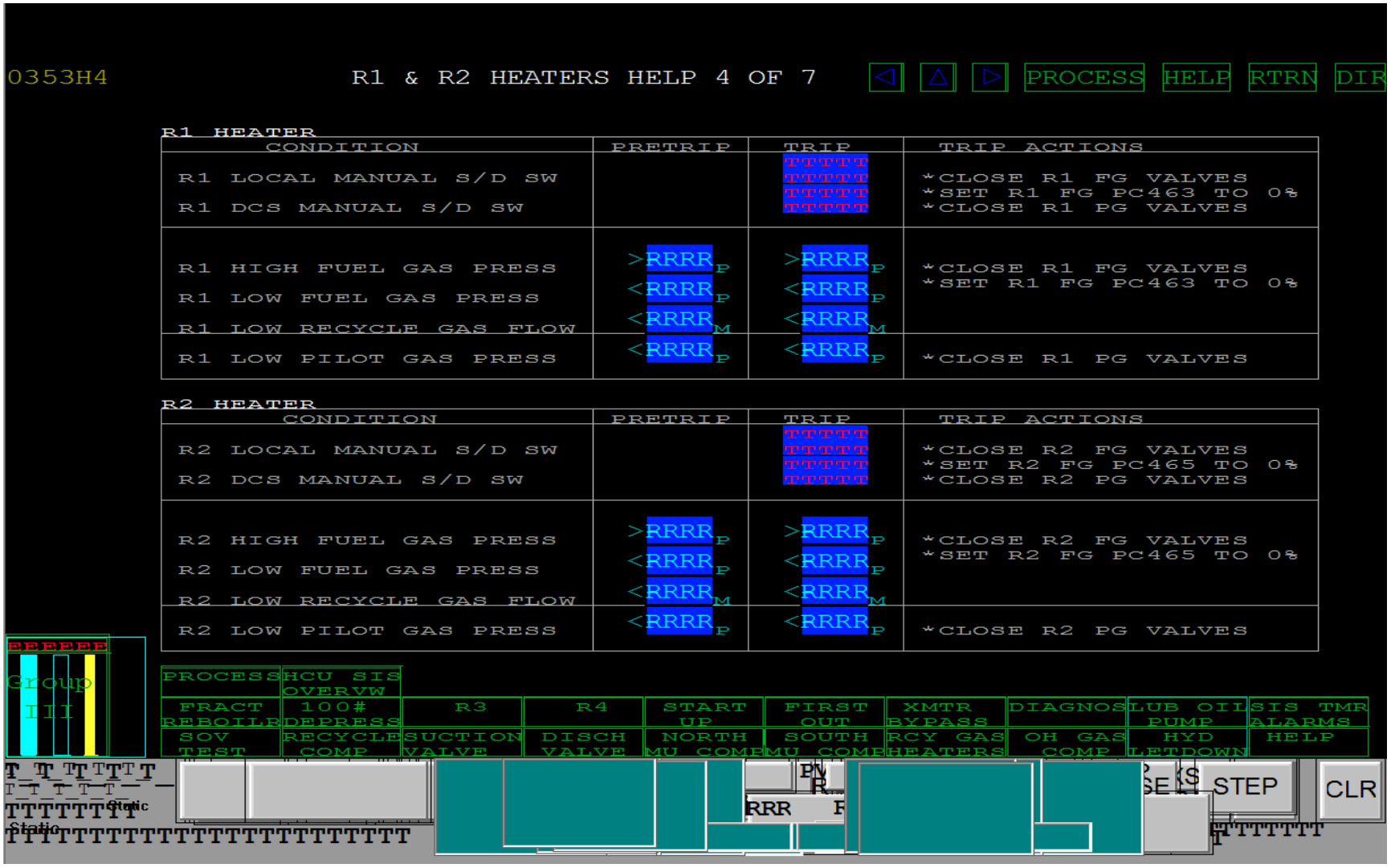
3.130 300# DEPRESSURE HELP 3 OF 7 (0353H3.DS)

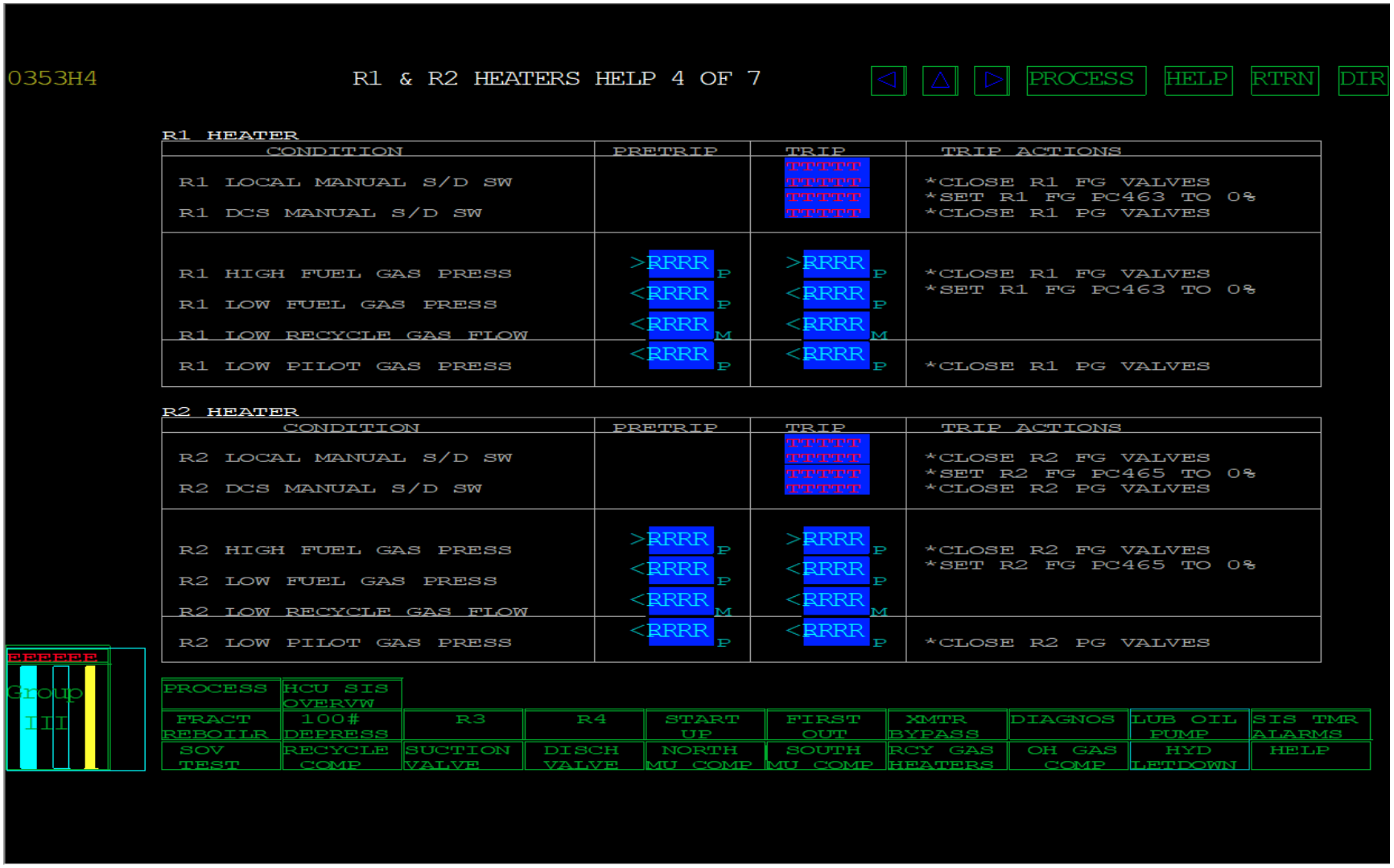


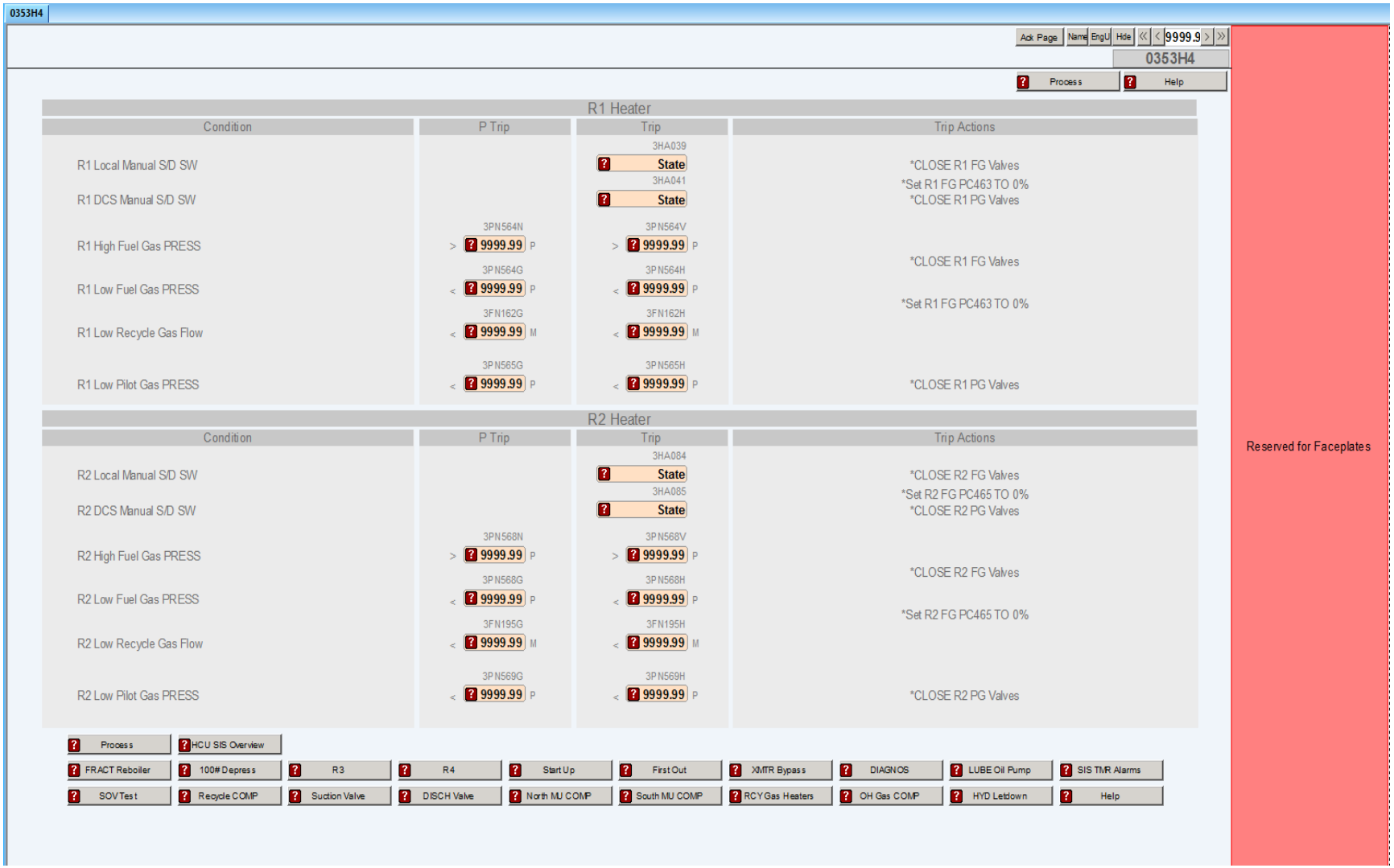

0353H3
300# DEPRESSURE HELP 3 OF 7
PROCESS
HELP
RTRN
DIR
CONDITION
PRETRIP
TRIP
TRIP ACTIONS
HP SEPARATOR LOW LEVEL OR R2/R3 PUMP STOPPED
< 30 %
< 10 %
*SET HYDRAULIC LETDOWN TURBINE CONTROLLER TO MANUAL AND -5% OUTPUT
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0353H3
Ack Page
Name
Eng U
Hide
9999.9
0353H3
Help
Condition
P Trip
Trip
Trip Actions
HP Separator Low Level
Or
R2/R3 Pump STOPPED
< 30 %
< 10 %
*Set Hydraulic Let Down Controller To
Turbine Manual And -5% Output
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

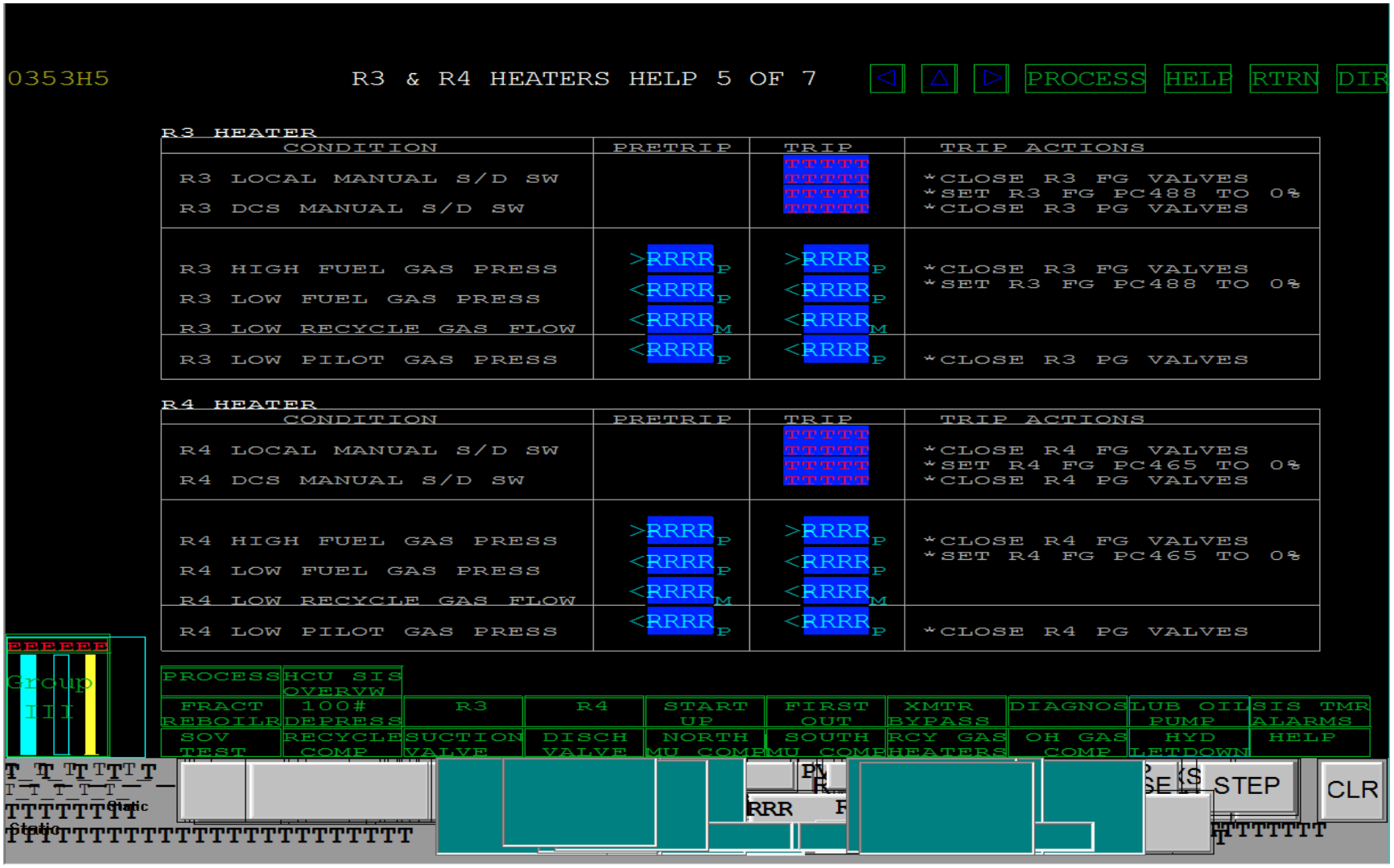
3.131 R1 & R2 HEATERS HELP 4 OF 7 (0353H4.DS)

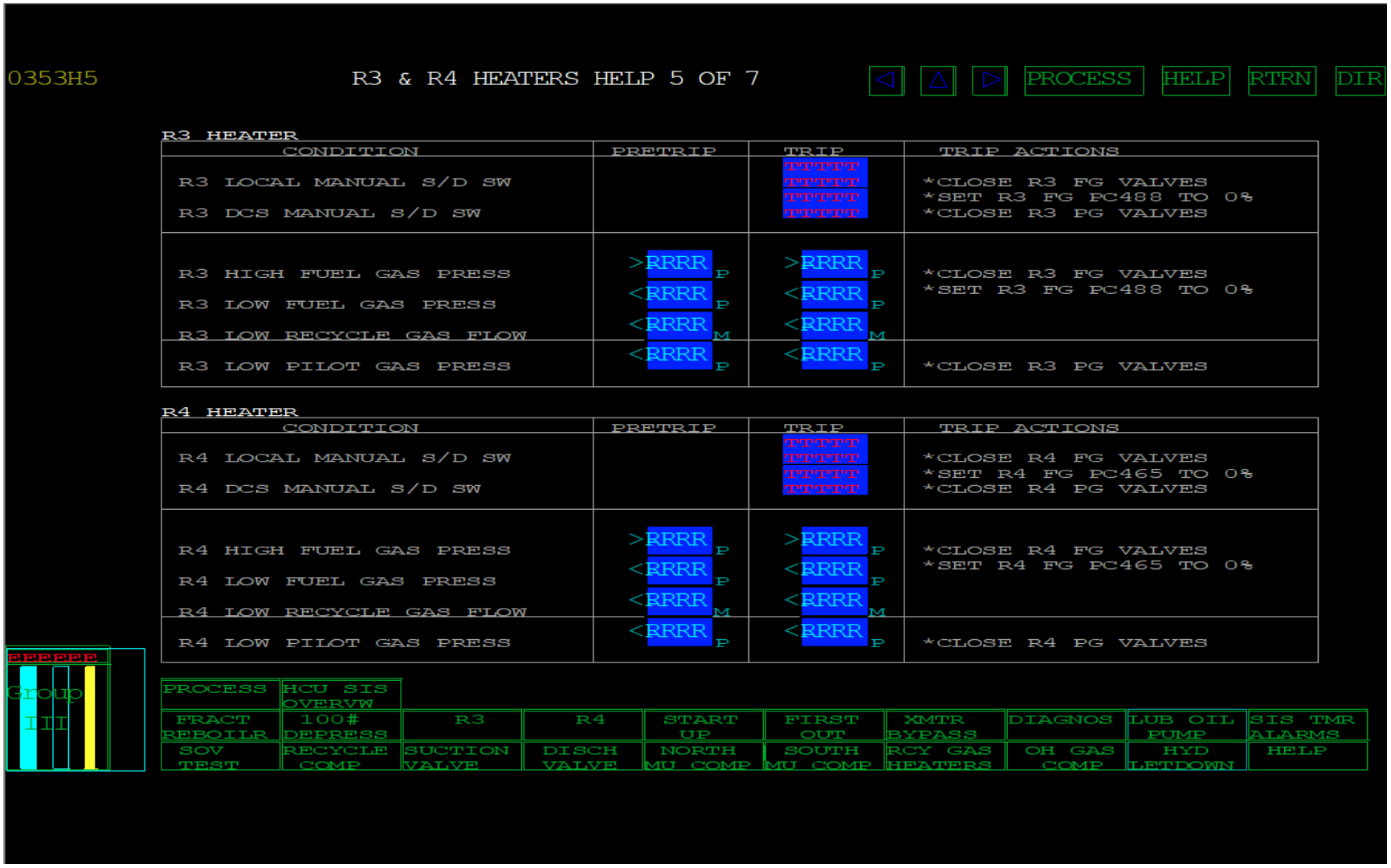


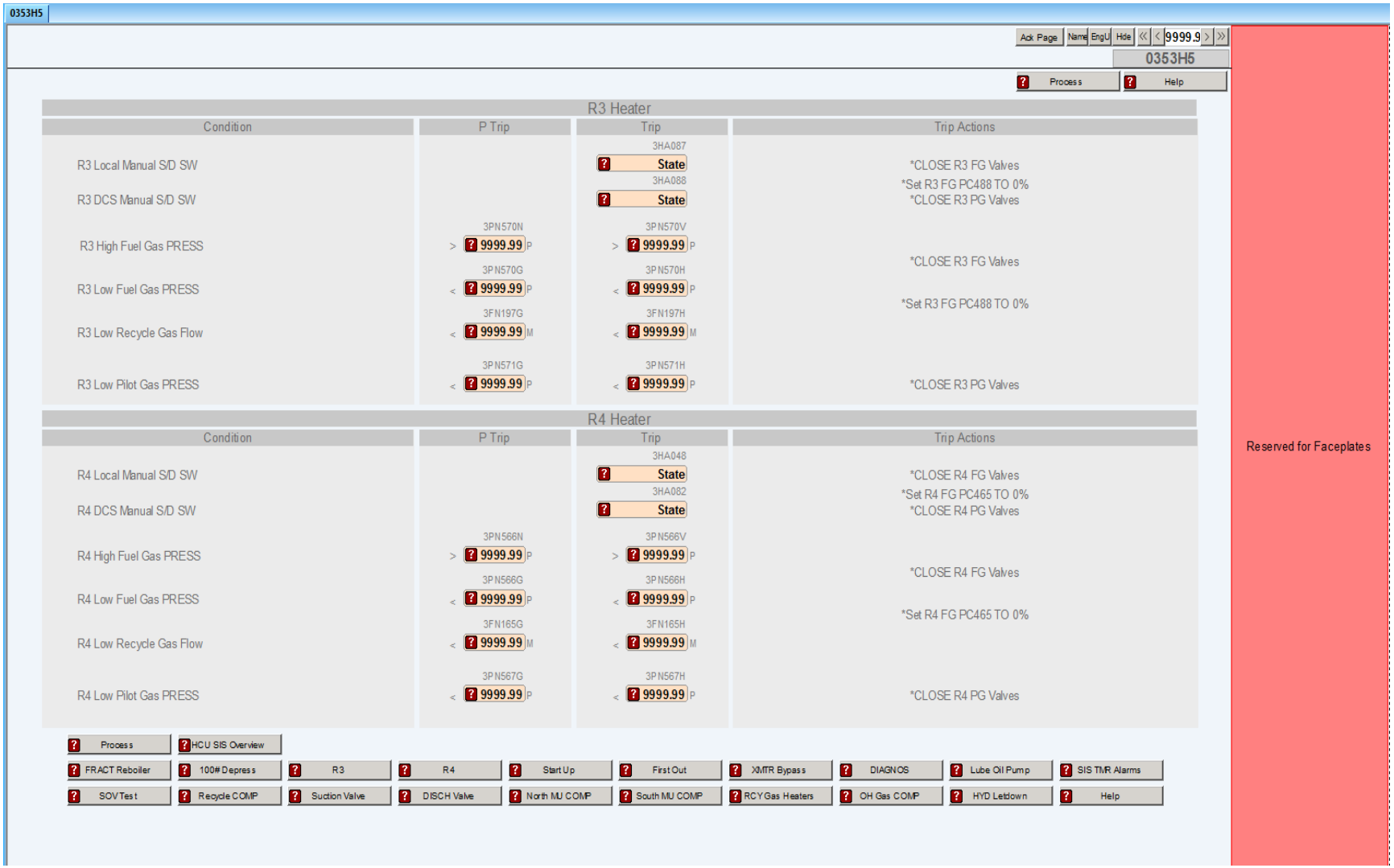

0353H4
R1 & R2 HEATERS HELP 4 OF 7
PROCESS
HELP
RTRN
DIR
R1 HEATER
CONDITION
PRETRIP
TRIP
TRIP ACTIONS
R1 LOCAL MANUAL S/D SW
R1 DCS MANUAL S/D SW
*CLOSE R1 FG VALVES
*SET R1 FG PC463 TO 0%
*CLOSE R1 PG VALVES
R1 HIGH FUEL GAS PRESS
R1 LOW FUEL GAS PRESS
R1 LOW RECYCLE GAS FLOW
R1 LOW PILOT GAS PRESS
R2 HEATER
R2 LOCAL MANUAL S/D SW
R2 DCS MANUAL S/D SW
*CLOSE R2 FG VALVES
*SET R2 FG PC465 TO 0%
*CLOSE R2 PG VALVES
R2 HIGH FUEL GAS PRESS
R2 LOW FUEL GAS PRESS
R2 LOW RECYCLE GAS FLOW
R2 LOW PILOT GAS PRESS
GROUP III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0353H4
Ack Page
Name
Eng U
Hide
9999.9
0353H4
Process
Help
R1 Heater
Condition
P Trip
Trip
Trip Actions
R1 Local Manual S/D SW
3HA039
State
*CLOSE R1 FG Valves
R1 DCS Manual S/D SW
3HA041
State
*Set R1 FG PC463 TO 0%
*CLOSE R1 PG Valves
R1 High Fuel Gas PRESS
3PN564N
> 9999.99 P
3PN564V
> 9999.99 P
*CLOSE R1 FG Valves
R1 Low Fuel Gas PRESS
3PN564G
< 9999.99 P
3PN564H
< 9999.99 P
*Set R1 FG PC463 TO 0%
R1 Low Recycle Gas Flow
3FN162G
< 9999.99 M
3FN162H
< 9999.99 M
R1 Low Pilot Gas PRESS
3PN565G
< 9999.99 P
3PN565H
< 9999.99 P
*CLOSE R1 PG Valves
R2 Heater
Condition
P Trip
Trip
Trip Actions
R2 Local Manual S/D SW
3HA084
State
*CLOSE R2 FG Valves
R2 DCS Manual S/D SW
3HA085
State
*Set R2 FG PC465 TO 0%
*CLOSE R2 PG Valves
R2 High Fuel Gas PRESS
3PN568N
> 9999.99 P
3PN568V
> 9999.99 P
*CLOSE R2 FG Valves
R2 Low Fuel Gas PRESS
3PN568G
< 9999.99 P
3PN568H
< 9999.99 P
*Set R2 FG PC465 TO 0%
R2 Low Recycle Gas Flow
3FN195G
< 9999.99 M
3FN195H
< 9999.99 M
R2 Low Pilot Gas PRESS
3PN569G
< 9999.99 P
3PN569H
< 9999.99 P
*CLOSE R2 PG Valves
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUBE Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

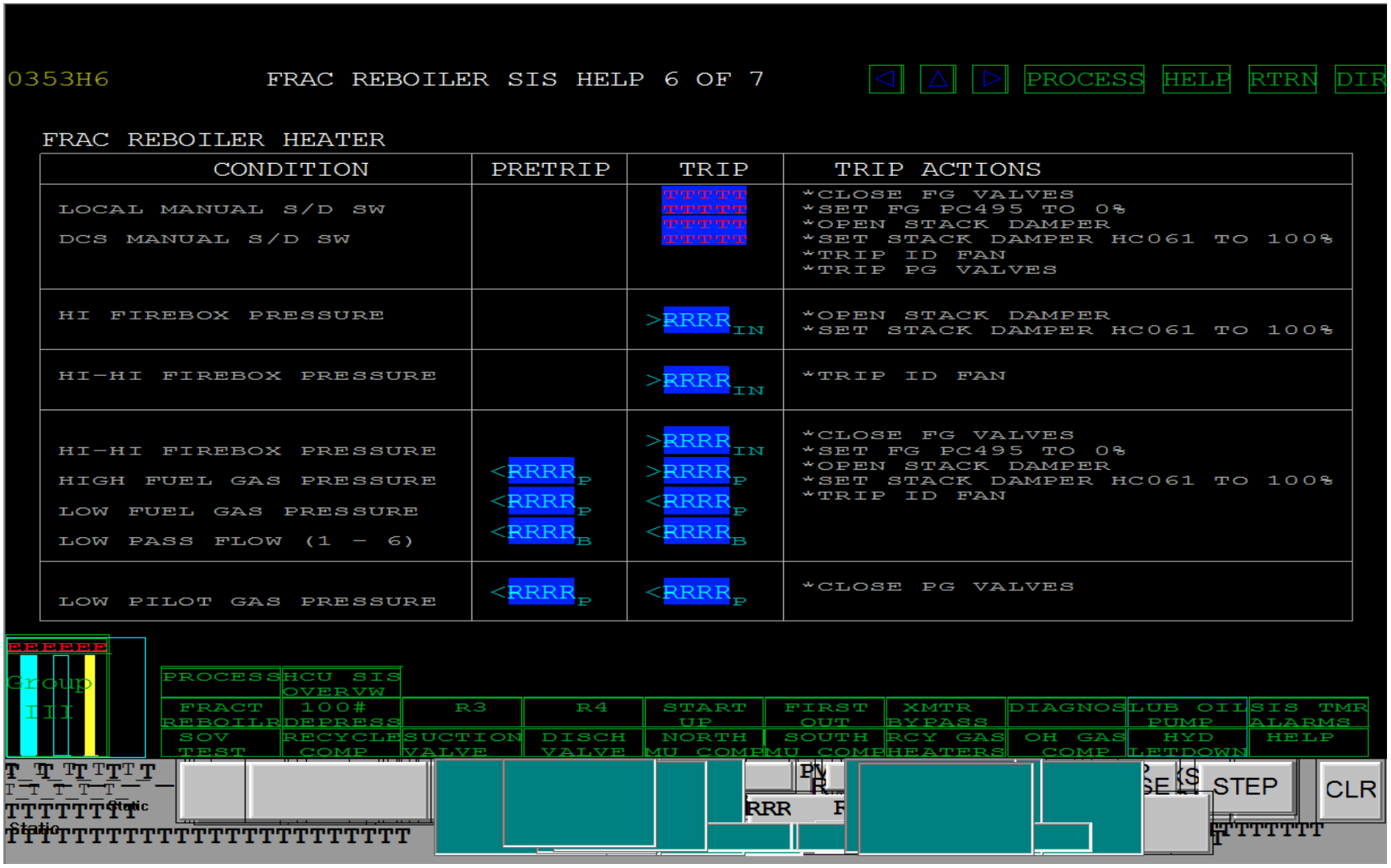
3.132 R3 & R4 HEATERS HELP 5 OF 7 (0353H5.DS)

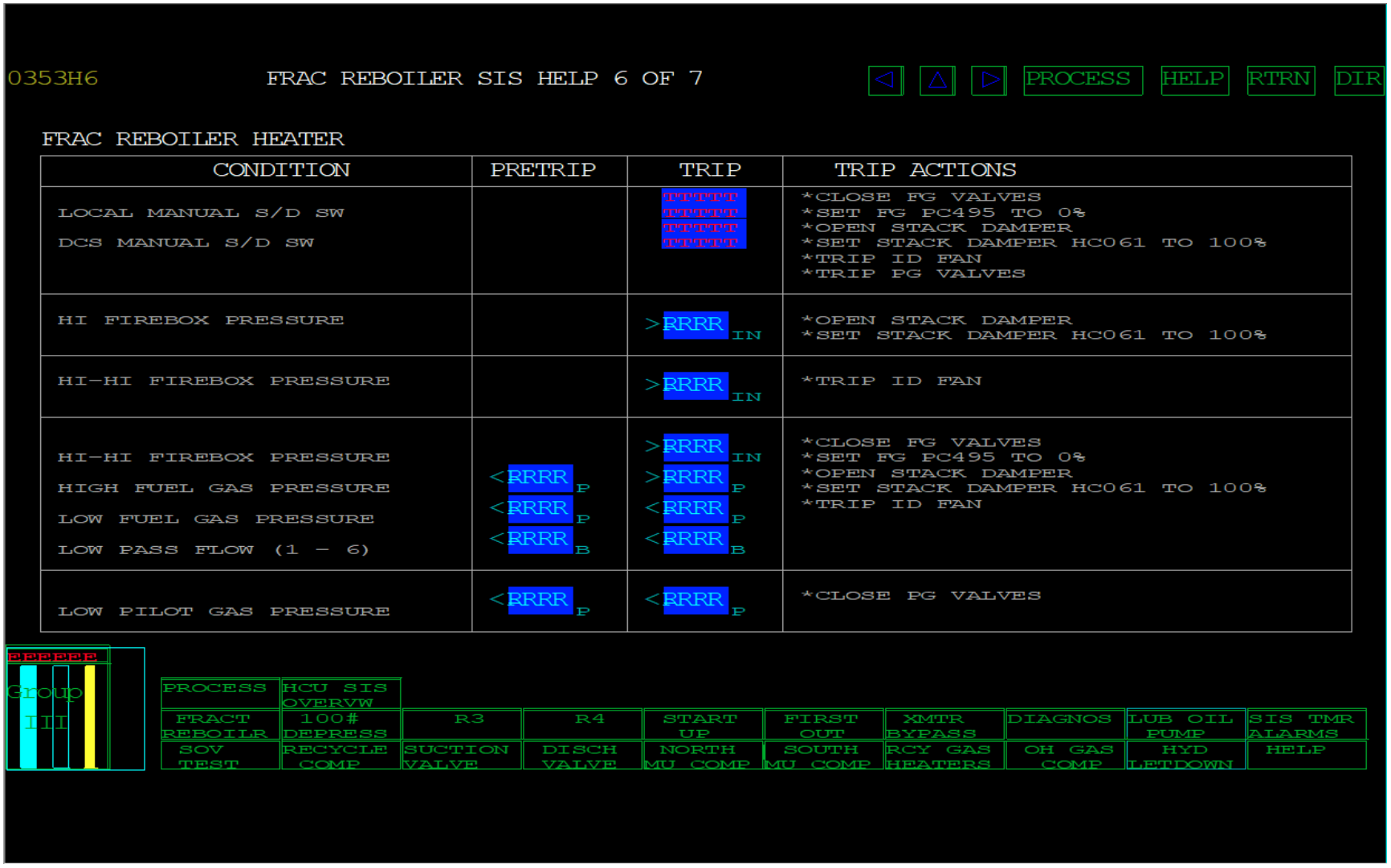


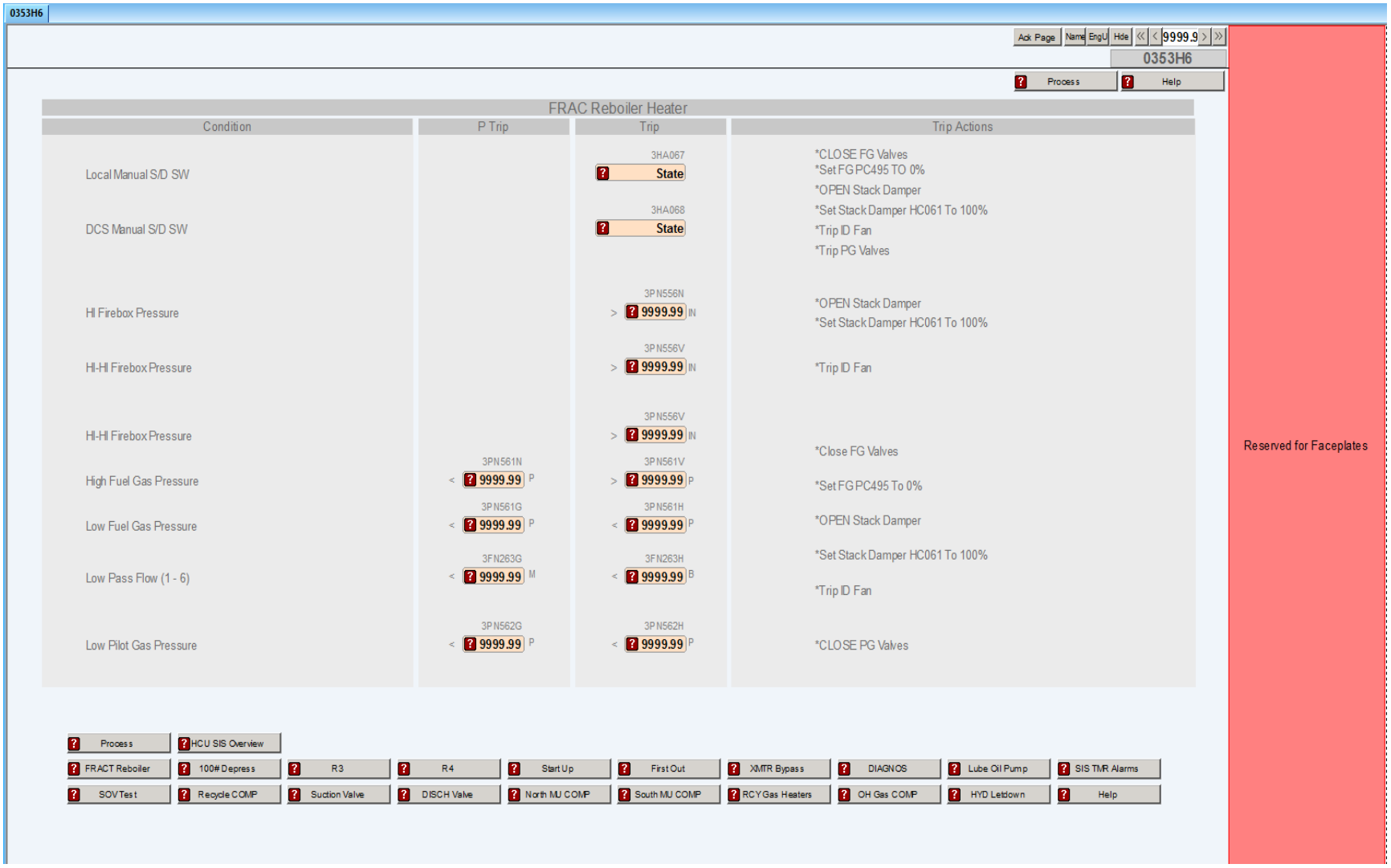

0353H5
R3 & R4 HEATERS HELP 5 OF 7
PROCESS
HELP
RTRN
DIR
R3 HEATER
CONDITION
PRETRIP
TRIP
TRIP ACTIONS
R3 LOCAL MANUAL S/D SW
R3 DCS MANUAL S/D SW
TTTTT
*CLOSE R3 FG VALVES
*SET R3 FG PC488 TO 0%
*CLOSE R3 PG VALVES
R3 HIGH FUEL GAS PRESS
R3 LOW FUEL GAS PRESS
R3 LOW RECYCLE GAS FLOW
>RRRR P
<RRRR P
<RRRR M
*CLOSE R3 FG VALVES
*SET R3 FG PC488 TO 0%
R3 LOW PILOT GAS PRESS
<RRRR P
*CLOSE R3 PG VALVES
R4 HEATER
CONDITION
PRETRIP
TRIP
TRIP ACTIONS
R4 LOCAL MANUAL S/D SW
R4 DCS MANUAL S/D SW
TTTTT
*CLOSE R4 FG VALVES
*SET R4 FG PC465 TO 0%
*CLOSE R4 PG VALVES
R4 HIGH FUEL GAS PRESS
R4 LOW FUEL GAS PRESS
R4 LOW RECYCLE GAS FLOW
>RRRR P
<RRRR P
<RRRR M
*CLOSE R4 FG VALVES
*SET R4 FG PC465 TO 0%
R4 LOW PILOT GAS PRESS
<RRRR P
*CLOSE R4 PG VALVES
EEEEEE
GROUP
III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0353H5
Ack Page
Name
Eng U
Hide
9999.9
0353H5
Process
Help
R3 Heater
Condition
P Trip
Trip
Trip Actions
R3 Local Manual S/D SW
3HA087
State
*CLOSE R3 FG Valves
*Set R3 FG PC488 TO 0%
R3 DCS Manual S/D SW
3HA088
State
*CLOSE R3 PG Valves
R3 High Fuel Gas PRESS
3PN570N
> 9999.99 P
3PN570V
> 9999.99 P
*CLOSE R3 FG Valves
R3 Low Fuel Gas PRESS
3PN570G
< 9999.99 P
3PN570H
< 9999.99 P
*Set R3 FG PC488 TO 0%
R3 Low Recycle Gas Flow
3FN197G
< 9999.99 M
3FN197H
< 9999.99 M
R3 Low Pilot Gas PRESS
3PN571G
< 9999.99 P
3PN571H
< 9999.99 P
*CLOSE R3 PG Valves
R4 Heater
Condition
P Trip
Trip
Trip Actions
R4 Local Manual S/D SW
3HA048
State
*CLOSE R4 FG Valves
*Set R4 FG PC465 TO 0%
R4 DCS Manual S/D SW
3HA082
State
*CLOSE R4 PG Valves
R4 High Fuel Gas PRESS
3PN566N
> 9999.99 P
3PN566V
> 9999.99 P
*CLOSE R4 FG Valves
R4 Low Fuel Gas PRESS
3PN566G
< 9999.99 P
3PN566H
< 9999.99 P
*Set R4 FG PC465 TO 0%
R4 Low Recycle Gas Flow
3FN165G
< 9999.99 M
3FN165H
< 9999.99 M
R4 Low Pilot Gas PRESS
3PN567G
< 9999.99 P
3PN567H
< 9999.99 P
*CLOSE R4 PG Valves
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

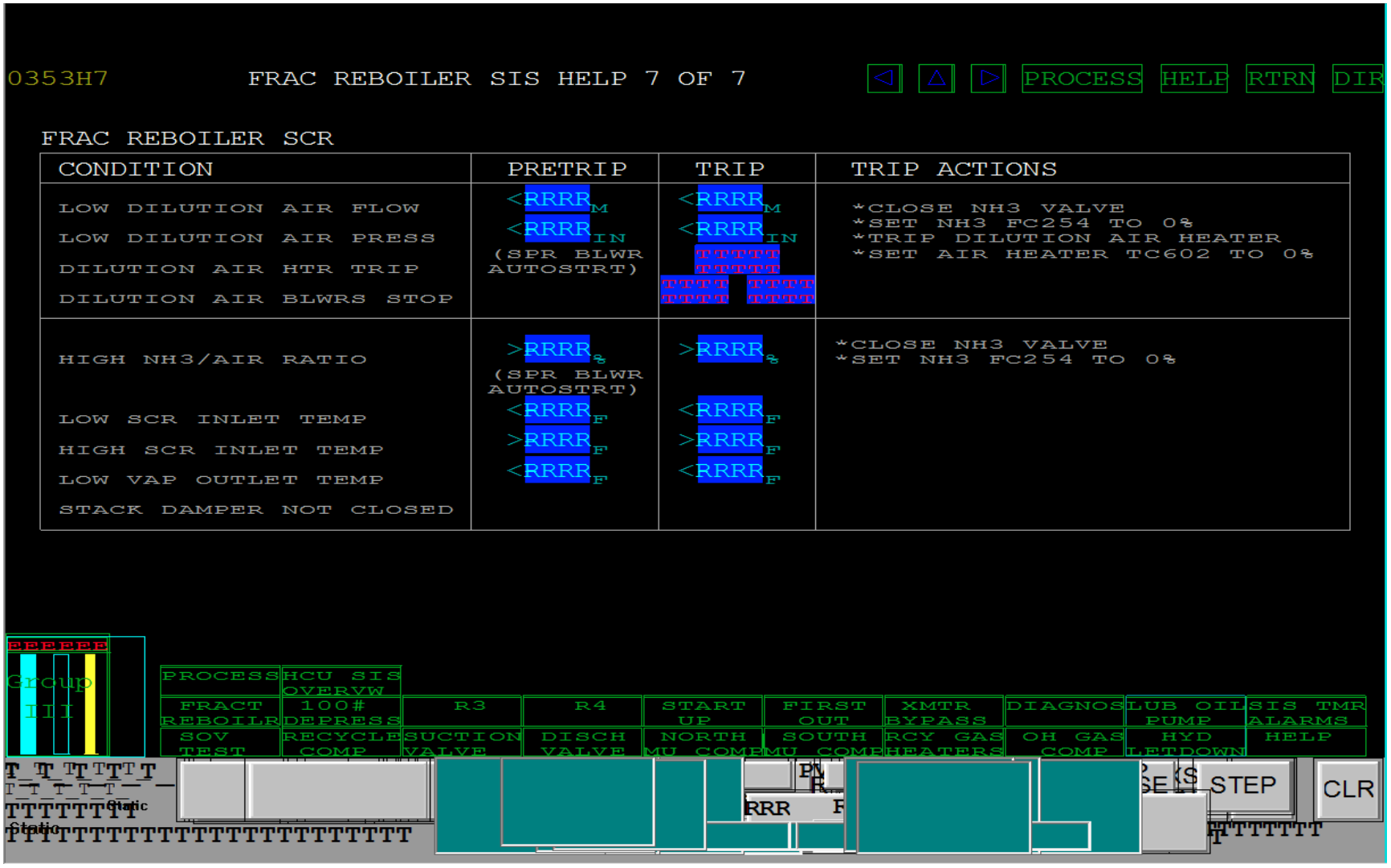
3.133 FRAC REBOILER SIS HELP 6 OF 7 (0353H6.DS)

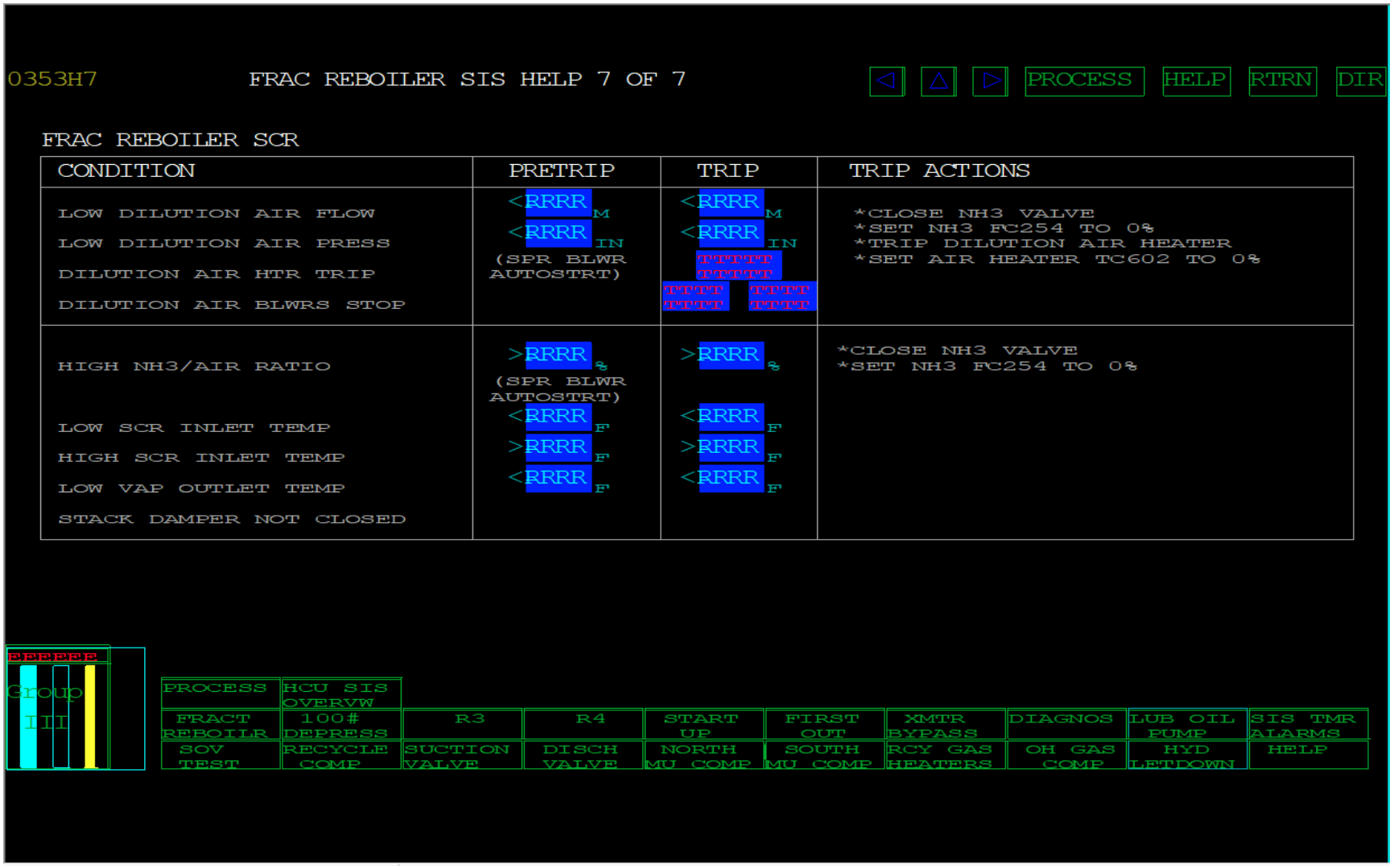


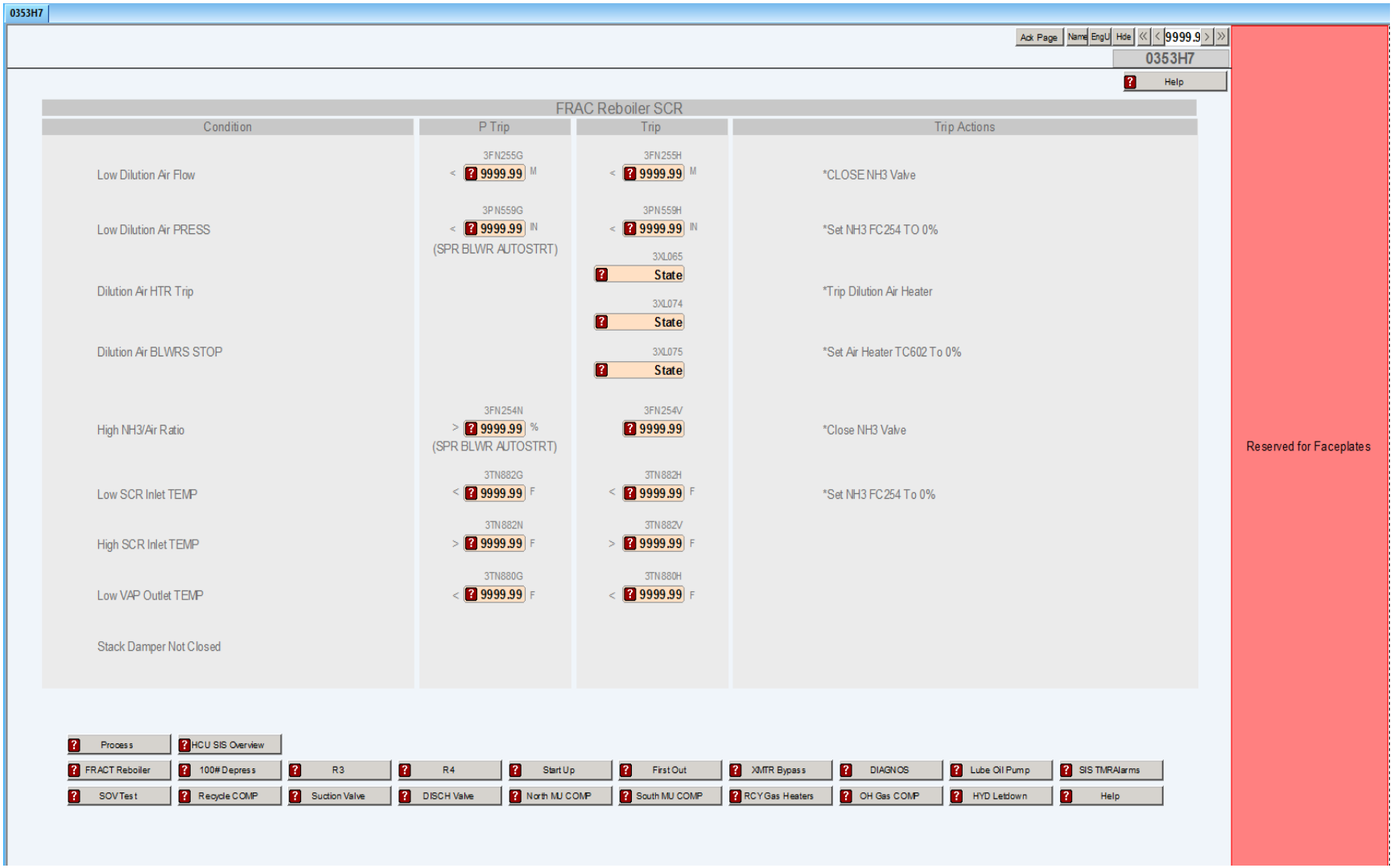

0353H6
FRAC REBOILER SIS HELP 6 OF 7
PROCESS
HELP
RTRN
DIR
FRAC REBOILER HEATER
CONDITION
PRETRIP
TRIP
TRIP ACTIONS
LOCAL MANUAL S/D SW
DCS MANUAL S/D SW
TTTTT
TTTTT
TTTTT
TTTTT
*CLOSE FG VALVES
*SET FG PC495 TO 0%
*OPEN STACK DAMPER
*SET STACK DAMPER HC061 TO 100%
*TRIP ID FAN
*TRIP PG VALVES
HI FIREBOX PRESSURE
>RRRR IN
*OPEN STACK DAMPER
*SET STACK DAMPER HC061 TO 100%
HI-HI FIREBOX PRESSURE
>RRRR IN
*TRIP ID FAN
HI-HI FIREBOX PRESSURE
HIGH FUEL GAS PRESSURE
LOW FUEL GAS PRESSURE
LOW PASS FLOW (1 - 6)
>RRRR IN
<RRRR P
>RRRR P
<RRRR P
<RRRR B
<RRRR P
<RRRR B
*CLOSE FG VALVES
*SET FG PC495 TO 0%
*OPEN STACK DAMPER
*SET STACK DAMPER HC061 TO 100%
*TRIP ID FAN
LOW PILOT GAS PRESSURE
<RRRR P
<RRRR P
*CLOSE PG VALVES
EEEEEE
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0353H6
Ack Page
Name
Eng U
Hide
9999.9
0353H6
Process
Help
FRAC Reboiler Heater
Condition
P Trip
Trip
Trip Actions
Local Manual S/D SW
3HA067
State
*CLOSE FG Valves
*Set FG PC495 TO 0%
*OPEN Stack Damper
*Set Stack Damper HC061 To 100%
*Trip ID Fan
*Trip PG Valves
DCS Manual S/D SW
3HA068
State
HI Firebox Pressure
3PN556N
> 9999.99 IN
*OPEN Stack Damper
*Set Stack Damper HC061 To 100%
HI-HI Firebox Pressure
3PN556V
> 9999.99 IN
*Trip ID Fan
HI-HI Firebox Pressure
3PN556V
> 9999.99 IN
*Close FG Valves
High Fuel Gas Pressure
3PN561N
< 9999.99 P
3PN561V
> 9999.99 P
*Set FG PC495 To 0%
Low Fuel Gas Pressure
3PN561G
< 9999.99 P
3PN561H
< 9999.99 P
*OPEN Stack Damper
*Set Stack Damper HC061 To 100%
Low Pass Flow (1 - 6)
3FN263G
< 9999.99 M
3FN263H
< 9999.99 B
*Trip ID Fan
Low Pilot Gas Pressure
3PN562G
< 9999.99 P
3PN562H
< 9999.99 P
*CLOSE PG Valves
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

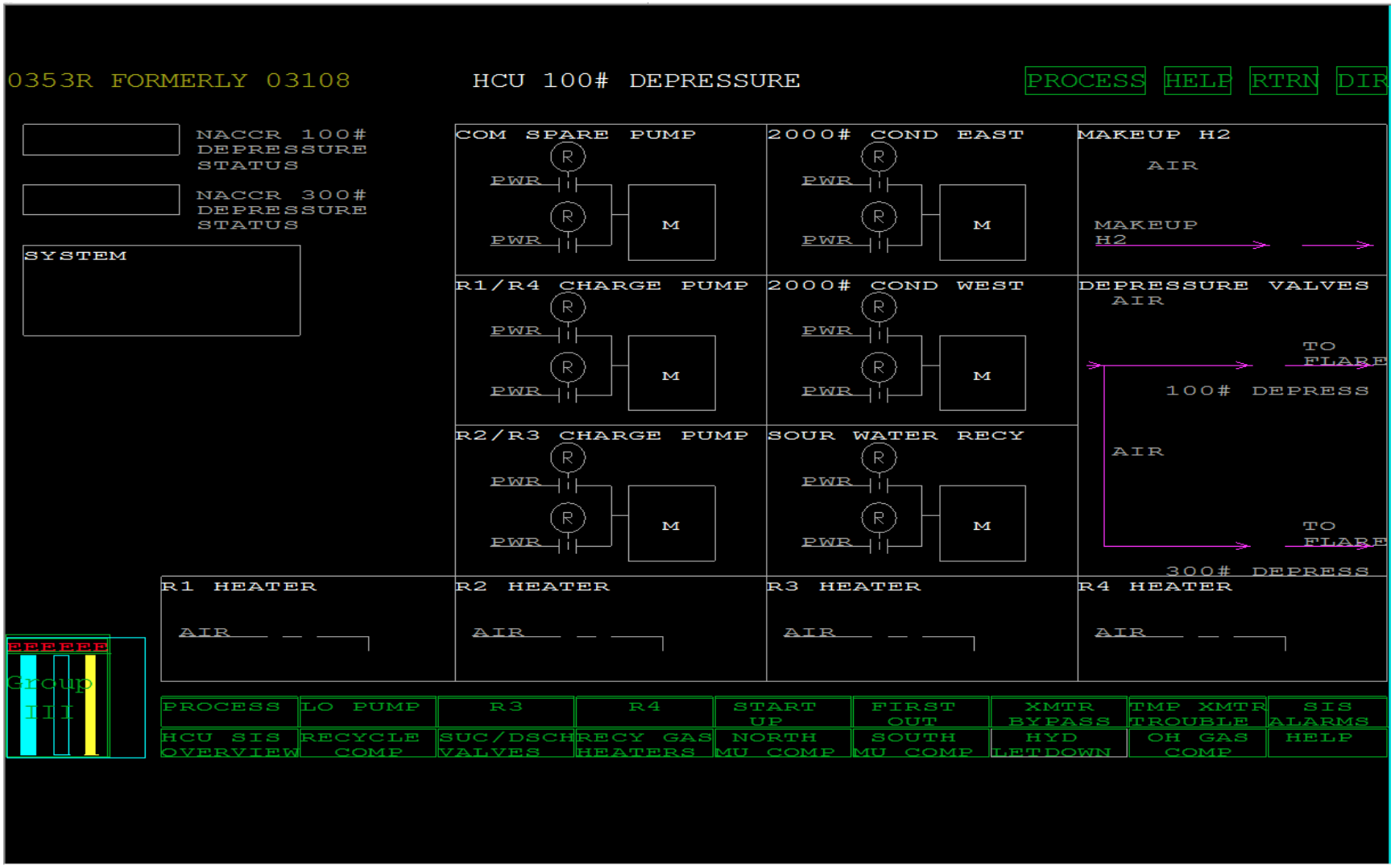
3.134 FRAC REBOILER SIS HELP 7 OF 7 (0353H7.DS)

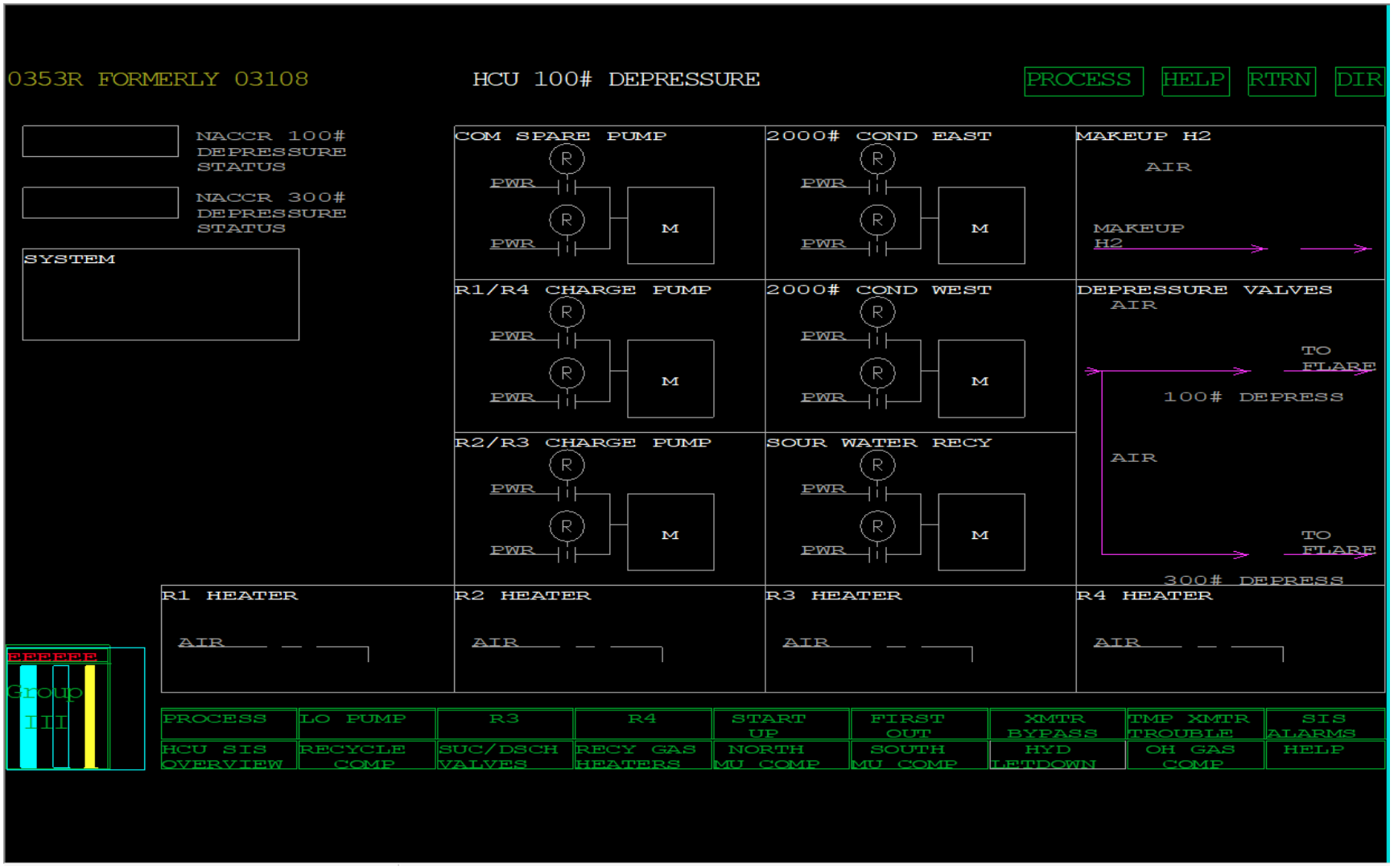


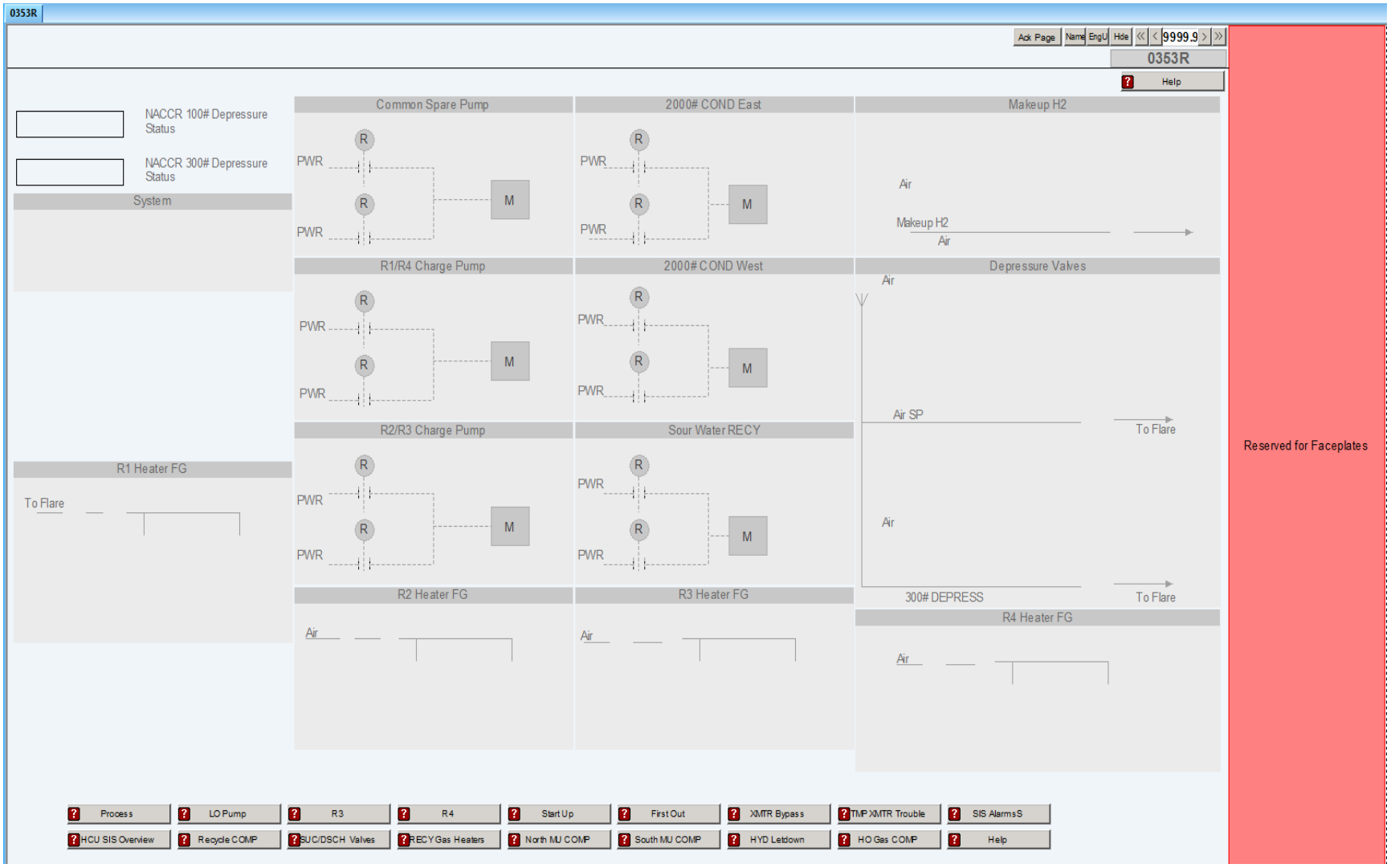

0353H7
FRAC REBOILER SIS HELP 7 OF 7
PROCESS
HELP
RTRN
DIR
FRAC REBOILER SCR
CONDITION
PRETRIP
TRIP
TRIP ACTIONS
LOW DILUTION AIR FLOW
LOW DILUTION AIR PRESS
DILUTION AIR HTR TRIP
DILUTION AIR BLWRS STOP
<RRRR M
<RRRR IN
(SPR BLWR AUTOSTRT)
<RRRR M
<RRRR IN
TTTTT
TTTTT
TTTT TTTT
TTTT TTTT
*CLOSE NH3 VALVE
*SET NH3 FC254 TO 0%
*TRIP DILUTION AIR HEATER
*SET AIR HEATER TC602 TO 0%
HIGH NH3/AIR RATIO
LOW SCR INLET TEMP
HIGH SCR INLET TEMP
LOW VAP OUTLET TEMP
STACK DAMPER NOT CLOSED
>RRRR %
(SPR BLWR AUTOSTRT)
<RRRR F
>RRRR F
<RRRR F
>RRRR %
<RRRR F
>RRRR F
<RRRR F
*CLOSE NH3 VALVE
*SET NH3 FC254 TO 0%
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0353H7
Ack Page
Name
Eng U
Hide
9999.9
0353H7
Help
FRAC Reboiler SCR
Condition
P Trip
Trip
Trip Actions
Low Dilution Air Flow
3FN255G
< 9999.99 M
3FN255H
< 9999.99 M
*CLOSE NH3 Valve
Low Dilution Air PRESS
3PN559G
< 9999.99 IN
(SPR BLWR AUTOSTRT)
3PN559H
< 9999.99 IN
*Set NH3 FC254 TO 0%
Dilution Air HTR Trip
3XL065
State
*Trip Dilution Air Heater
Dilution Air BLWRS STOP
3XL074
State
3XL075
State
*Set Air Heater TC602 To 0%
High NH3/Air Ratio
3FN254N
> 9999.99 %
(SPR BLWR AUTOSTRT)
3FN254V
9999.99
*Close NH3 Valve
Low SCR Inlet TEMP
3TN882G
< 9999.99 F
3TN882H
< 9999.99 F
*Set NH3 FC254 To 0%
High SCR Inlet TEMP
3TN882N
> 9999.99 F
3TN882V
> 9999.99 F
Low VAP Outlet TEMP
3TN880G
< 9999.99 F
3TN880H
< 9999.99 F
Stack Damper Not Closed
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
Lube Oil Pump
SIS TMRAlarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

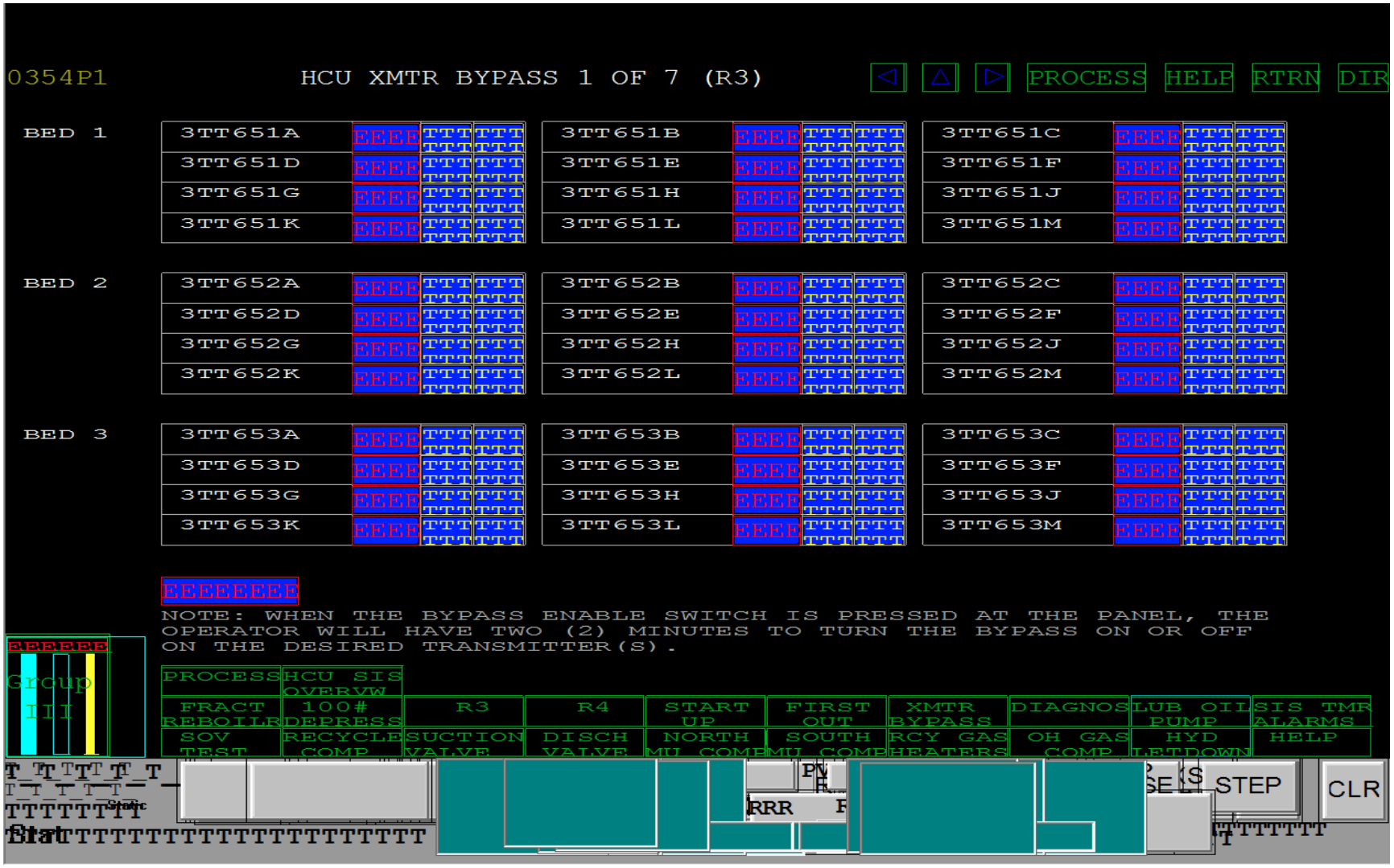
3.135 HCU 100# DEPRESSURE (0353R.DS)

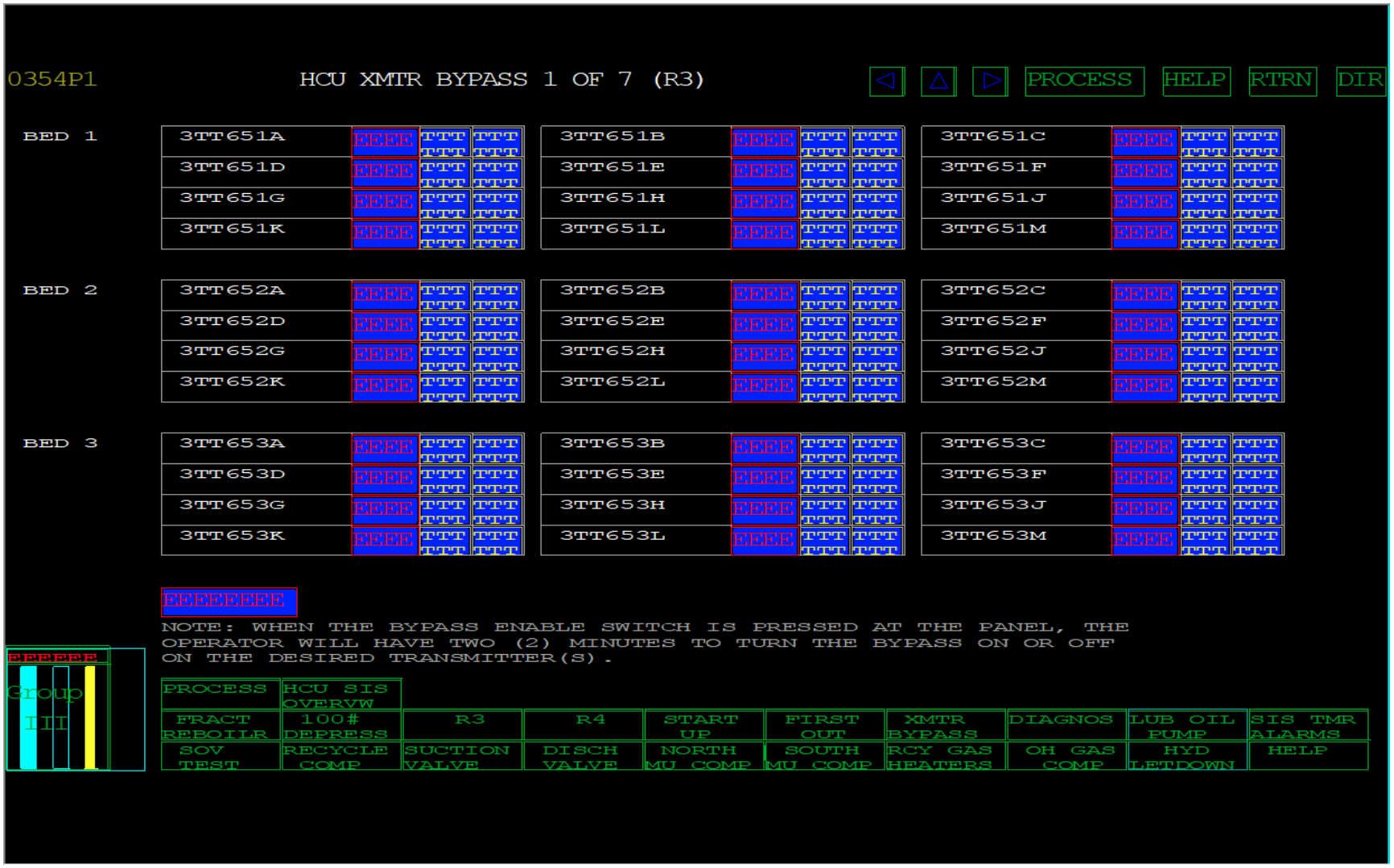


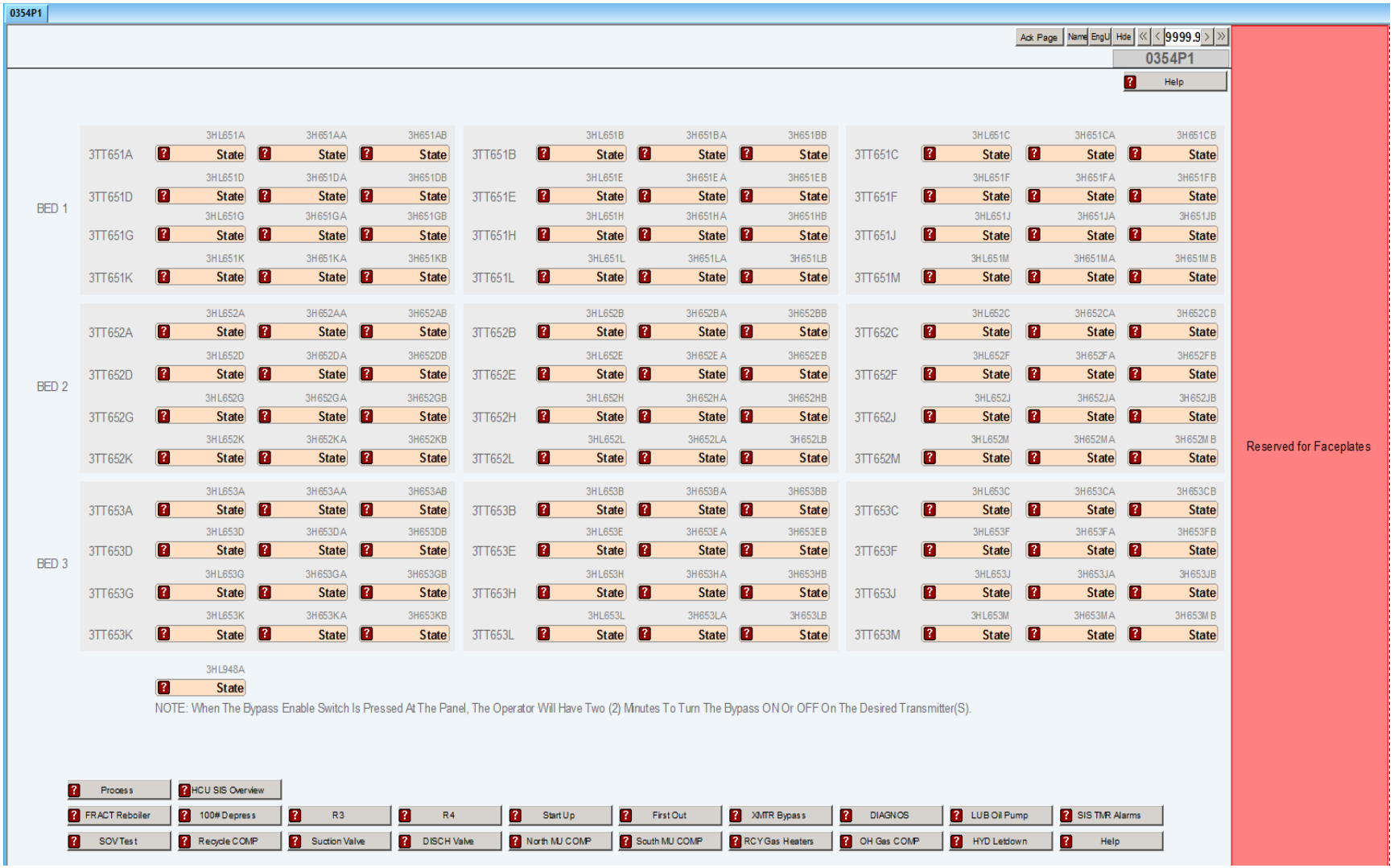

0353R FORMERLY 03108
HCU 100# DEPRESSURE
PROCESS
HELP
RTRN
DIR
NACCR 100# DEPRESSURE STATUS
NACCR 300# DEPRESSURE STATUS
SYSTEM
COM SPARE PUMP
2000# COND EAST
MAKEUP H2
AIR
MAKEUP H2
R1/R4 CHARGE PUMP
2000# COND WEST
DEPRESSURE VALVES
AIR
TO FLARE
100# DEPRESS
AIR
R2/R3 CHARGE PUMP
SOUR WATER RECY
TO FLARE
300# DEPRESS
R1 HEATER
R2 HEATER
R3 HEATER
R4 HEATER
AIR
PWR
M
Group III
PROCESS
LO PUMP
R3
R4
START UP
FIRST OUT
XMTR BYPASS
TMP XMTR TROUBLE
SIS ALARMS
HCU SIS OVERVIEW
RECYCLE COMP
SUC/DSCH VALVES
RECY GAS HEATERS
NORTH MU COMP
SOUTH MU COMP
HYD LETDOWN
OH GAS COMP
HELP


0353R
Ack Page
Name
Eng'U
Hide
9999.9
0353R
Help
NACCR 100# Depressure Status
NACCR 300# Depressure Status
System
Common Spare Pump
2000# COND East
Makeup H2
Air
Makeup H2
Air
R1/R4 Charge Pump
2000# COND West
Depressure Valves
Air
Air SP
To Flare
Air
300# DEPRESS
To Flare
R2/R3 Charge Pump
Sour Water RECY
R1 Heater FG
To Flare
R2 Heater FG
Air
R3 Heater FG
Air
R4 Heater FG
Air
PWR
R
M
Reserved for Faceplates
Process
LO Pump
R3
R4
Start Up
First Out
XMTR Bypass
TMP XMTR Trouble
SIS Alarms
HCU SIS Overview
Recycle COMP
SUC/DSCH Valves
RECY Gas Heaters
North MU COMP
South MU COMP
HYD Letdown
HO Gas COMP
Help

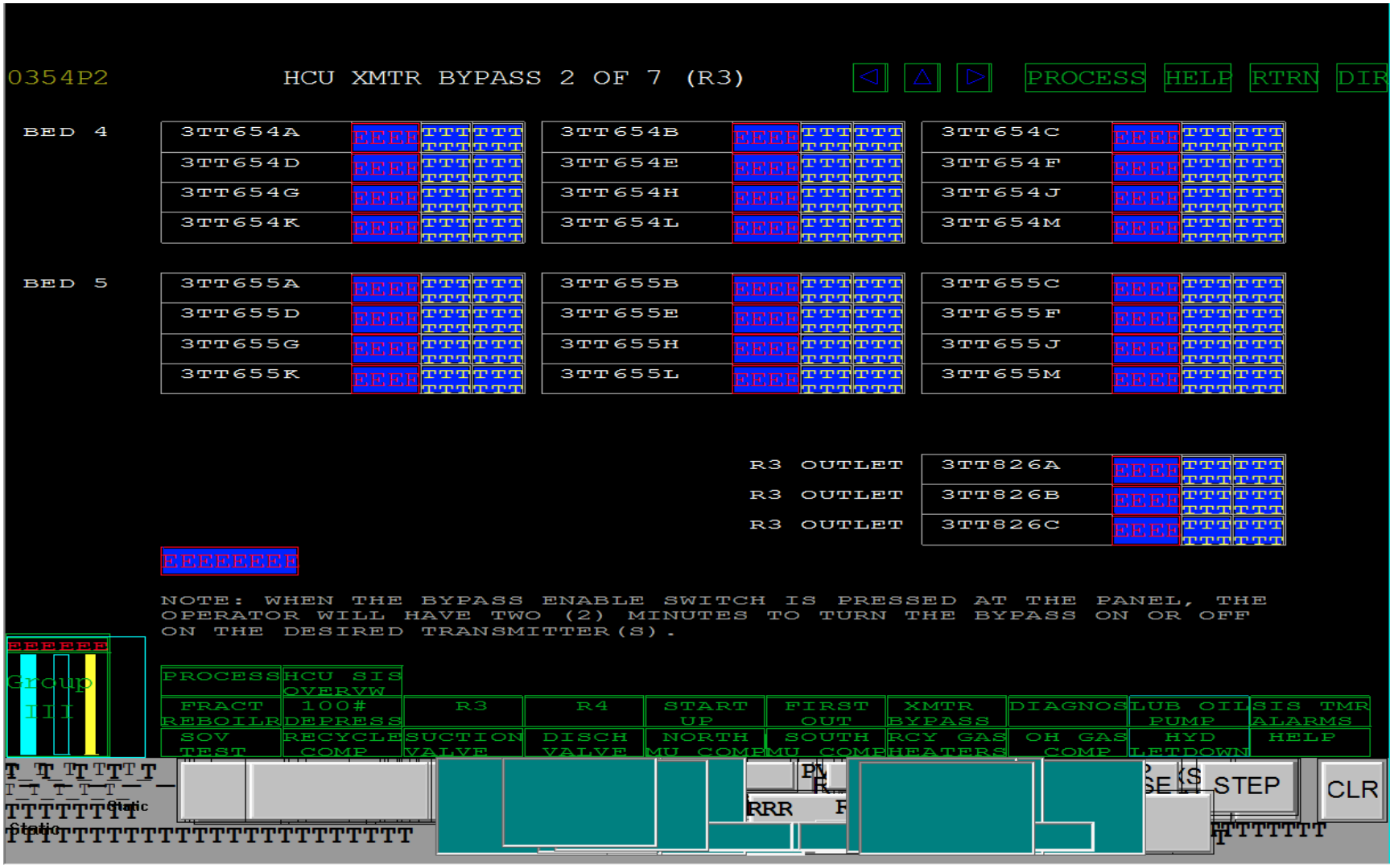
3.136 HCU XMTR BYPASS 1 OF 7 (R3) (0354P1.DS)

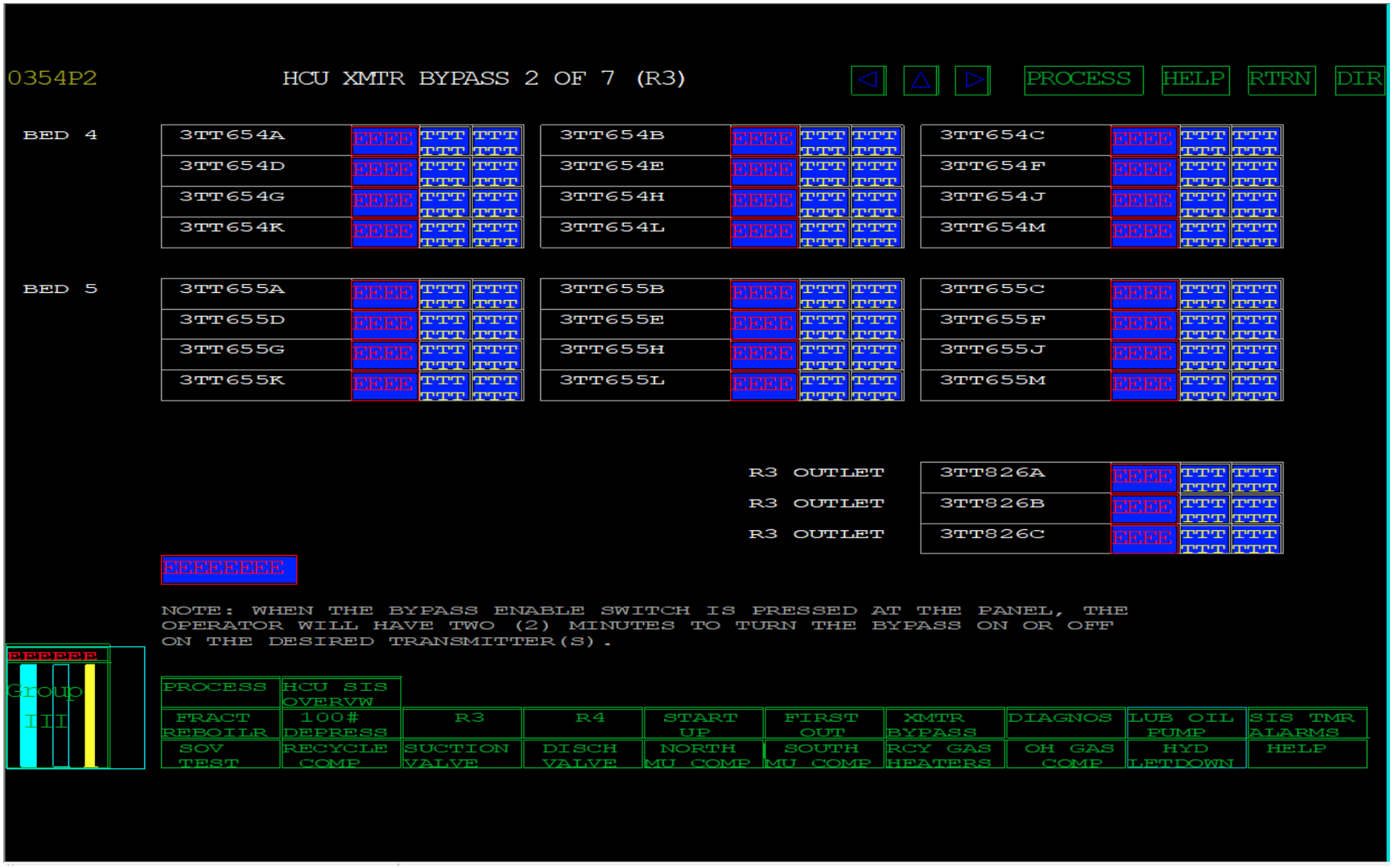


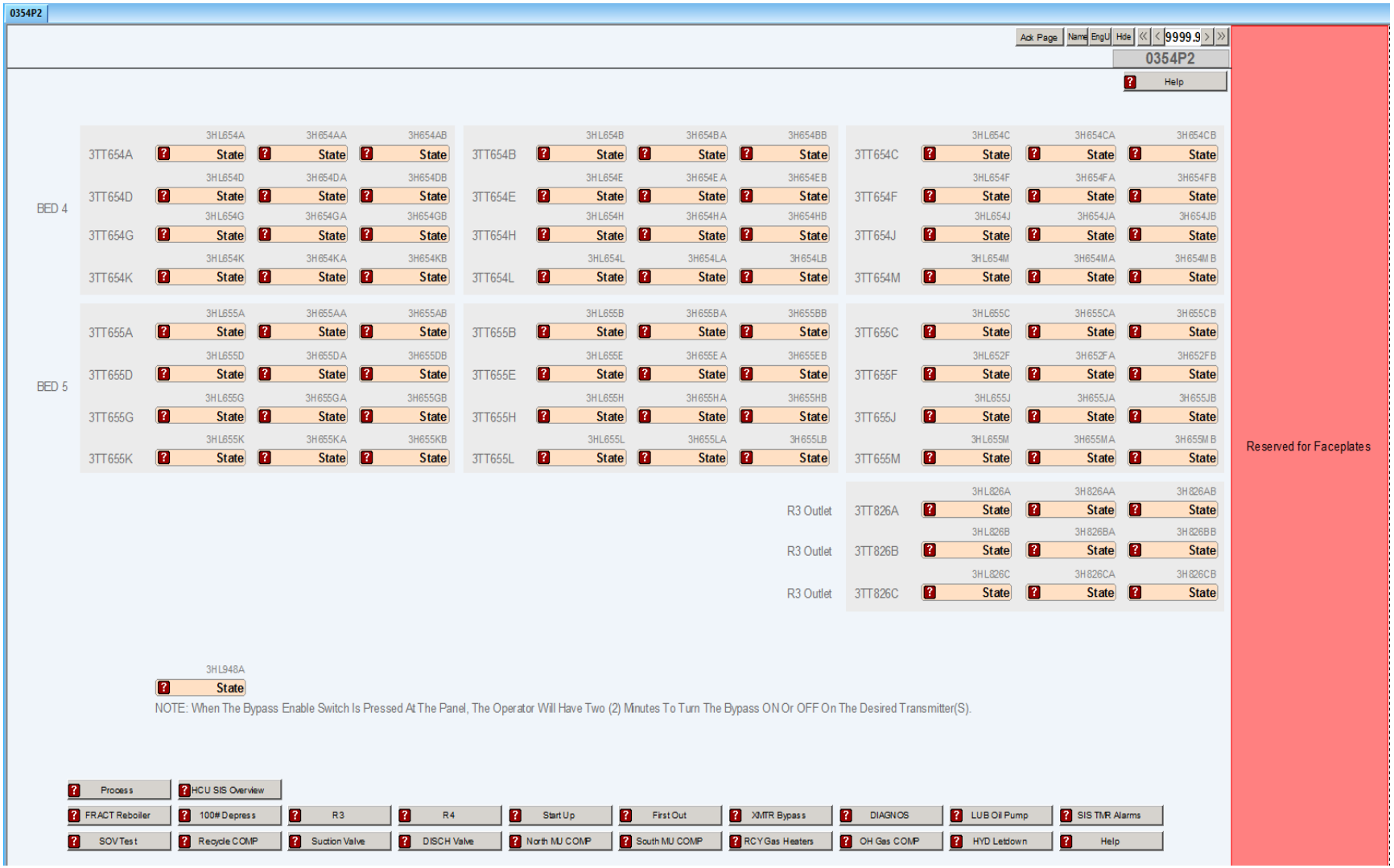

0354P1
HCU XMTR BYPASS 1 OF 7 (R3)
PROCESS
HELP
RTRN
DIR
BED 1
3TT651A
3TT651B
3TT651C
3TT651D
3TT651E
3TT651F
3TT651G
3TT651H
3TT651J
3TT651K
3TT651L
3TT651M
BED 2
3TT652A
3TT652B
3TT652C
3TT652D
3TT652E
3TT652F
3TT652G
3TT652H
3TT652J
3TT652K
3TT652L
3TT652M
BED 3
3TT653A
3TT653B
3TT653C
3TT653D
3TT653E
3TT653F
3TT653G
3TT653H
3TT653J
3TT653K
3TT653L
3TT653M
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE PANEL, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF ON THE DESIRED TRANSMITTER(S).
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0354P1
Ack Page
Name
Eng U
Hide
9999.9
0354P1
Help
BED 1
3TT651A 3HL651A 3H651AA 3H651AB
3TT651B 3HL651B 3H651BA 3H651BB
3TT651C 3HL651C 3H651CA 3H651CB
3TT651D 3HL651D 3H651DA 3H651DB
3TT651E 3HL651E 3H651EA 3H651EB
3TT651F 3HL651F 3H651FA 3H651FB
3TT651G 3HL651G 3H651GA 3H651GB
3TT651H 3HL651H 3H651HA 3H651HB
3TT651J 3HL651J 3H651JA 3H651JB
3TT651K 3HL651K 3H651KA 3H651KB
3TT651L 3HL651L 3H651LA 3H651LB
3TT651M 3HL651M 3H651MA 3H651MB
State
BED 2
3TT652A 3HL652A 3H652AA 3H652AB
3TT652B 3HL652B 3H652BA 3H652BB
3TT652C 3HL652C 3H652CA 3H652CB
3TT652D 3HL652D 3H652DA 3H652DB
3TT652E 3HL652E 3H652EA 3H652EB
3TT652F 3HL652F 3H652FA 3H652FB
3TT652G 3HL652G 3H652GA 3H652GB
3TT652H 3HL652H 3H652HA 3H652HB
3TT652J 3HL652J 3H652JA 3H652JB
3TT652K 3HL652K 3H652KA 3H652KB
3TT652L 3HL652L 3H652LA 3H652LB
3TT652M 3HL652M 3H652MA 3H652MB
BED 3
3TT653A 3HL653A 3H653AA 3H653AB
3TT653B 3HL653B 3H653BA 3H653BB
3TT653C 3HL653C 3H653CA 3H653CB
3TT653D 3HL653D 3H653DA 3H653DB
3TT653E 3HL653E 3H653EA 3H653EB
3TT653F 3HL653F 3H653FA 3H653FB
3TT653G 3HL653G 3H653GA 3H653GB
3TT653H 3HL653H 3H653HA 3H653HB
3TT653J 3HL653J 3H653JA 3H653JB
3TT653K 3HL653K 3H653KA 3H653KB
3TT653L 3HL653L 3H653LA 3H653LB
3TT653M 3HL653M 3H653MA 3H653MB
3HL948A
State
NOTE: When The Bypass Enable Switch Is Pressed At The Panel, The Operator Will Have Two (2) Minutes To Turn The Bypass ON Or OFF On The Desired Transmitter(S).
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help
Reserved for Faceplates

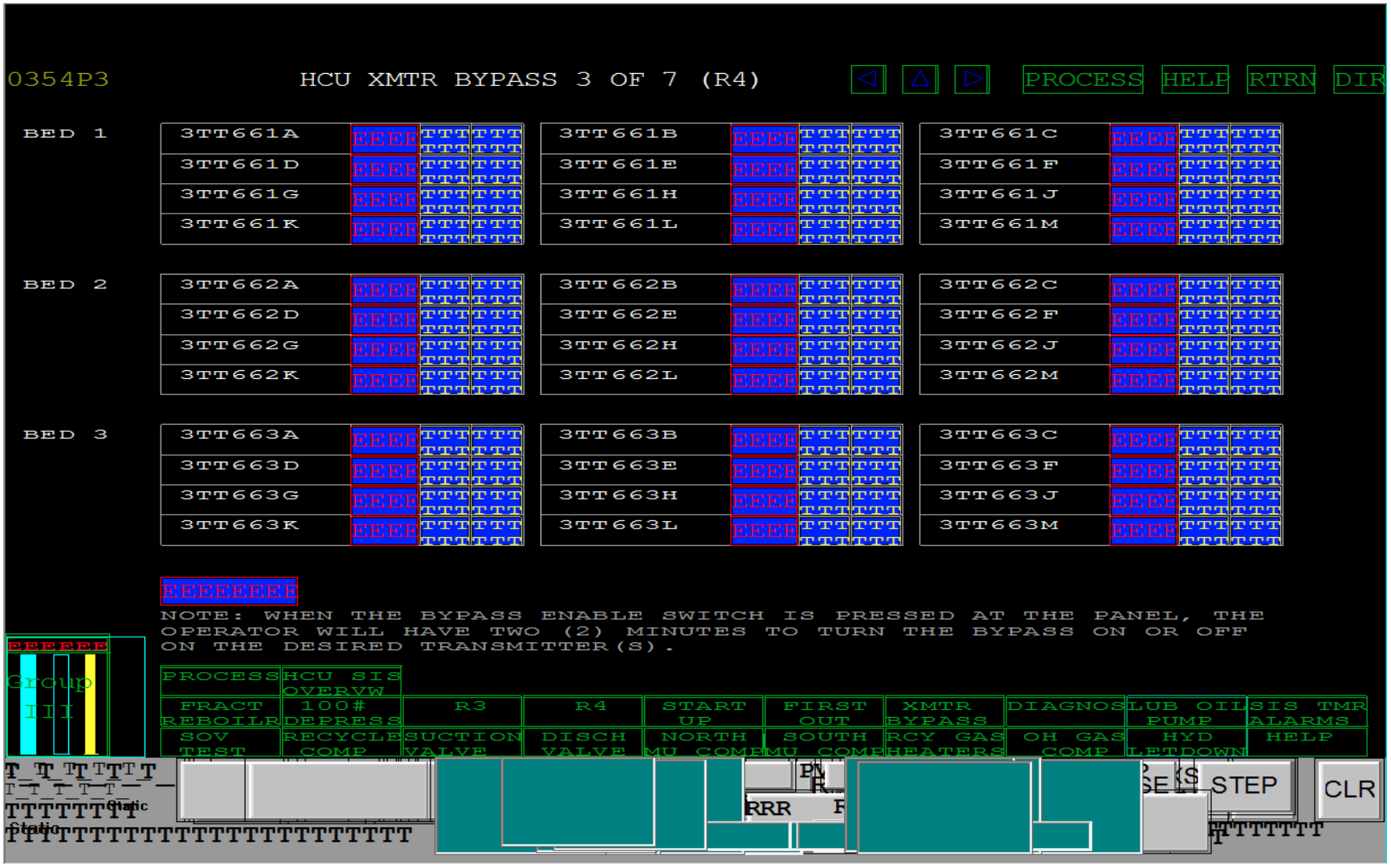
3.137 HCU XMTR BYPASS 2 OF 7 (R3) (0354P2.DS)



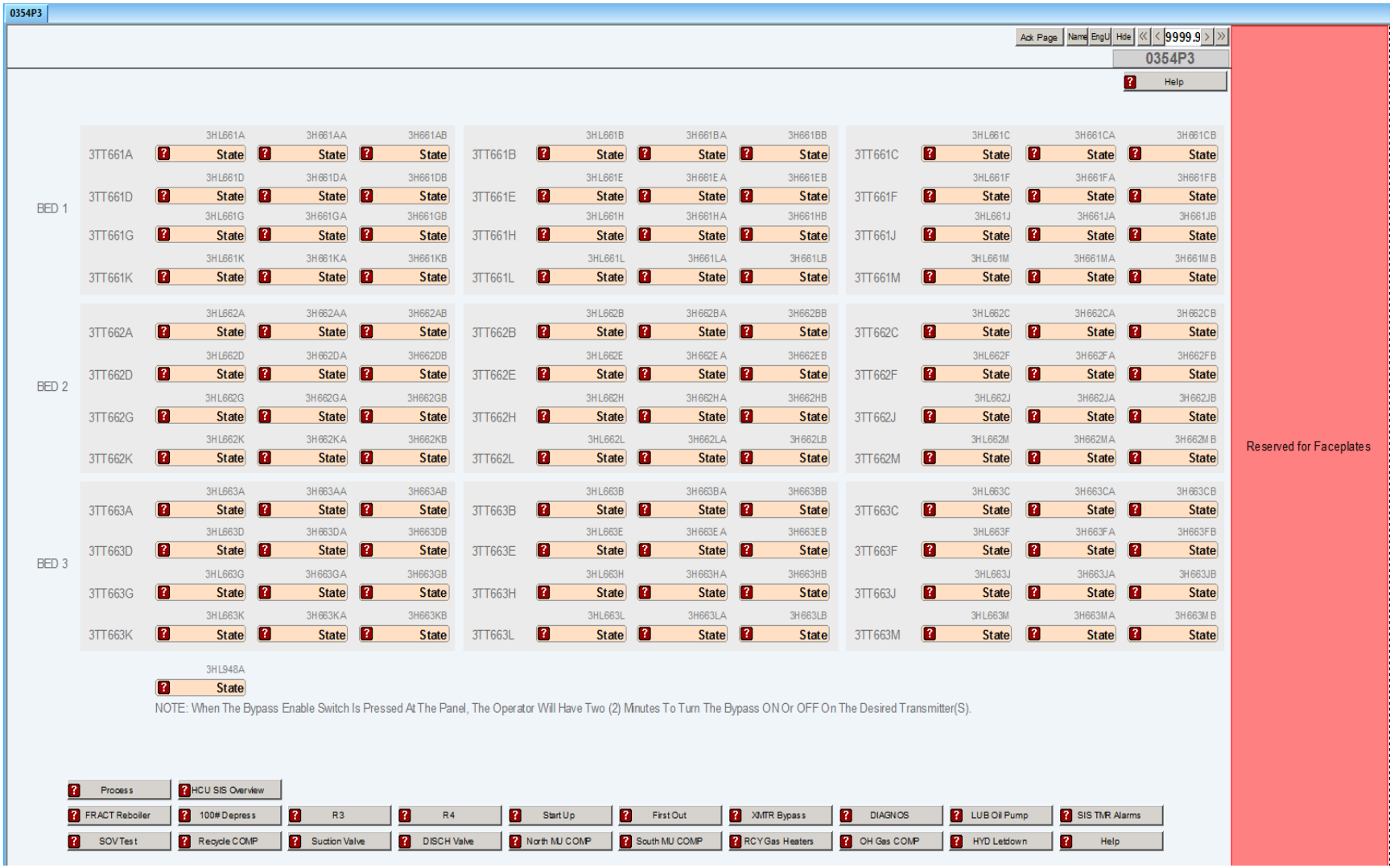

0354P2
HCU XMTR BYPASS 2 OF 7 (R3)
PROCESS
HELP
RTRN
DIR
BED 4
3TT654A
3TT654B
3TT654C
3TT654D
3TT654E
3TT654F
3TT654G
3TT654H
3TT654J
3TT654K
3TT654L
3TT654M
BED 5
3TT655A
3TT655B
3TT655C
3TT655D
3TT655E
3TT655F
3TT655G
3TT655H
3TT655J
3TT655K
3TT655L
3TT655M
R3 OUTLET
3TT826A
R3 OUTLET
3TT826B
R3 OUTLET
3TT826C
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE PANEL, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF ON THE DESIRED TRANSMITTER(S).
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0354P2
Ack Page
Name
Eng U
Hide
9999.9
0354P2
Help
BED 4
3TT654A 3HL654A State 3H654AA State 3H654AB State
3TT654B 3HL654B State 3H654BA State 3H654BB State
3TT654C 3HL654C State 3H654CA State 3H654CB State
3TT654D 3HL654D State 3H654DA State 3H654DB State
3TT654E 3HL654E State 3H654EA State 3H654EB State
3TT654F 3HL654F State 3H654FA State 3H654FB State
3TT654G 3HL654G State 3H654GA State 3H654GB State
3TT654H 3HL654H State 3H654HA State 3H654HB State
3TT654J 3HL654J State 3H654JA State 3H654JB State
3TT654K 3HL654K State 3H654KA State 3H654KB State
3TT654L 3HL654L State 3H654LA State 3H654LB State
3TT654M 3HL654M State 3H654MA State 3H654MB State
BED 5
3TT655A 3HL655A State 3H655AA State 3H655AB State
3TT655B 3HL655B State 3H655BA State 3H655BB State
3TT655C 3HL655C State 3H655CA State 3H655CB State
3TT655D 3HL655D State 3H655DA State 3H655DB State
3TT655E 3HL655E State 3H655EA State 3H655EB State
3TT655F 3HL652F State 3H652FA State 3H652FB State
3TT655G 3HL655G State 3H655GA State 3H655GB State
3TT655H 3HL655H State 3H655HA State 3H655HB State
3TT655J 3HL655J State 3H655JA State 3H655JB State
3TT655K 3HL655K State 3H655KA State 3H655KB State
3TT655L 3HL655L State 3H655LA State 3H655LB State
3TT655M 3HL655M State 3H655MA State 3H655MB State
R3 Outlet 3TT826A 3HL826A State 3H826AA State 3H826AB State
R3 Outlet 3TT826B 3HL826B State 3H826BA State 3H826BB State
R3 Outlet 3TT826C 3HL826C State 3H826CA State 3H826CB State
Reserved for Faceplates
3HL948A State
NOTE: When The Bypass Enable Switch Is Pressed At The Panel, The Operator Will Have Two (2) Minutes To Turn The Bypass ON Or OFF On The Desired Transmitter(S).
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

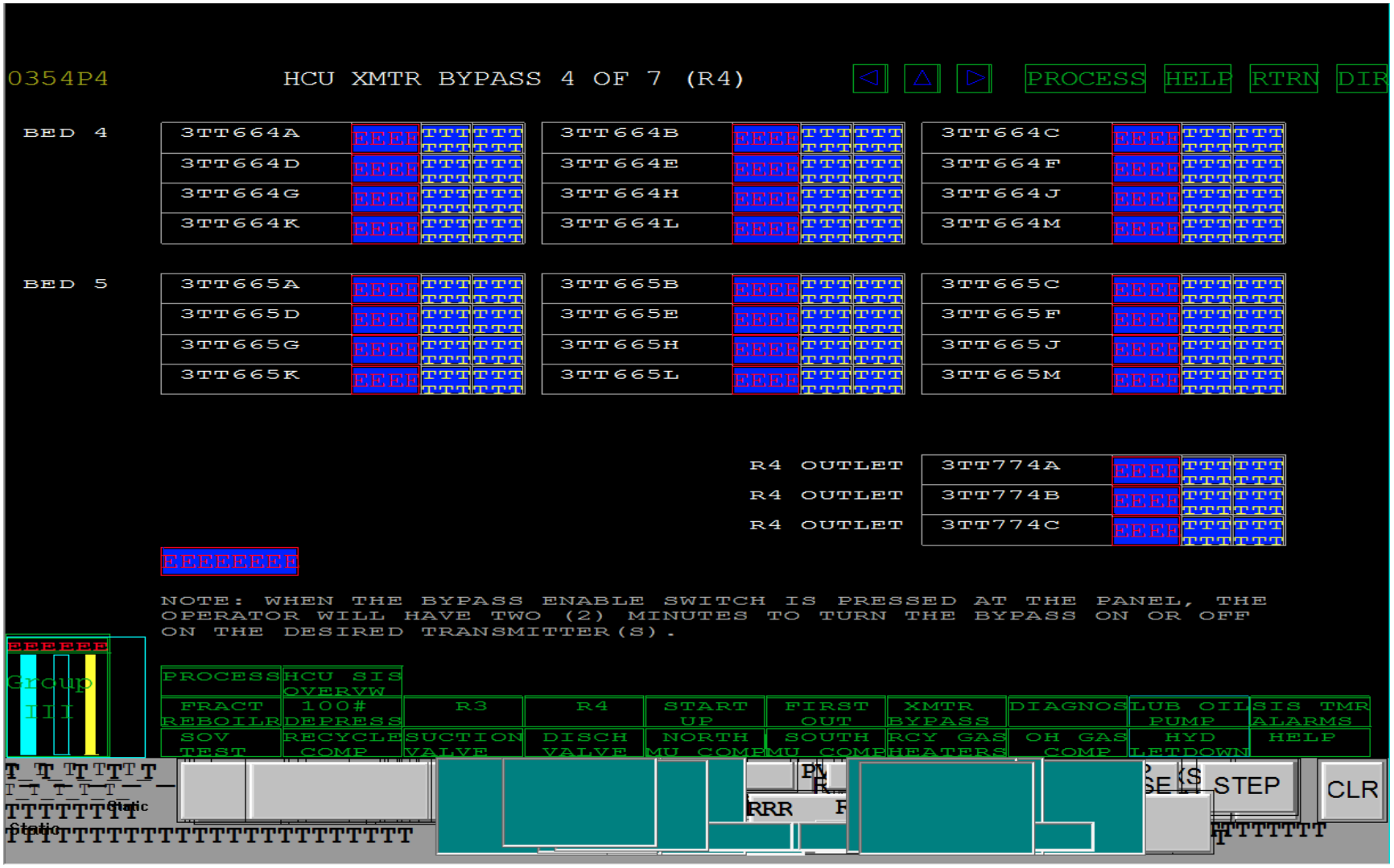
3.138 HCU XMTR BYPASS 3 OF 7 (R4) (0354P3.DS)

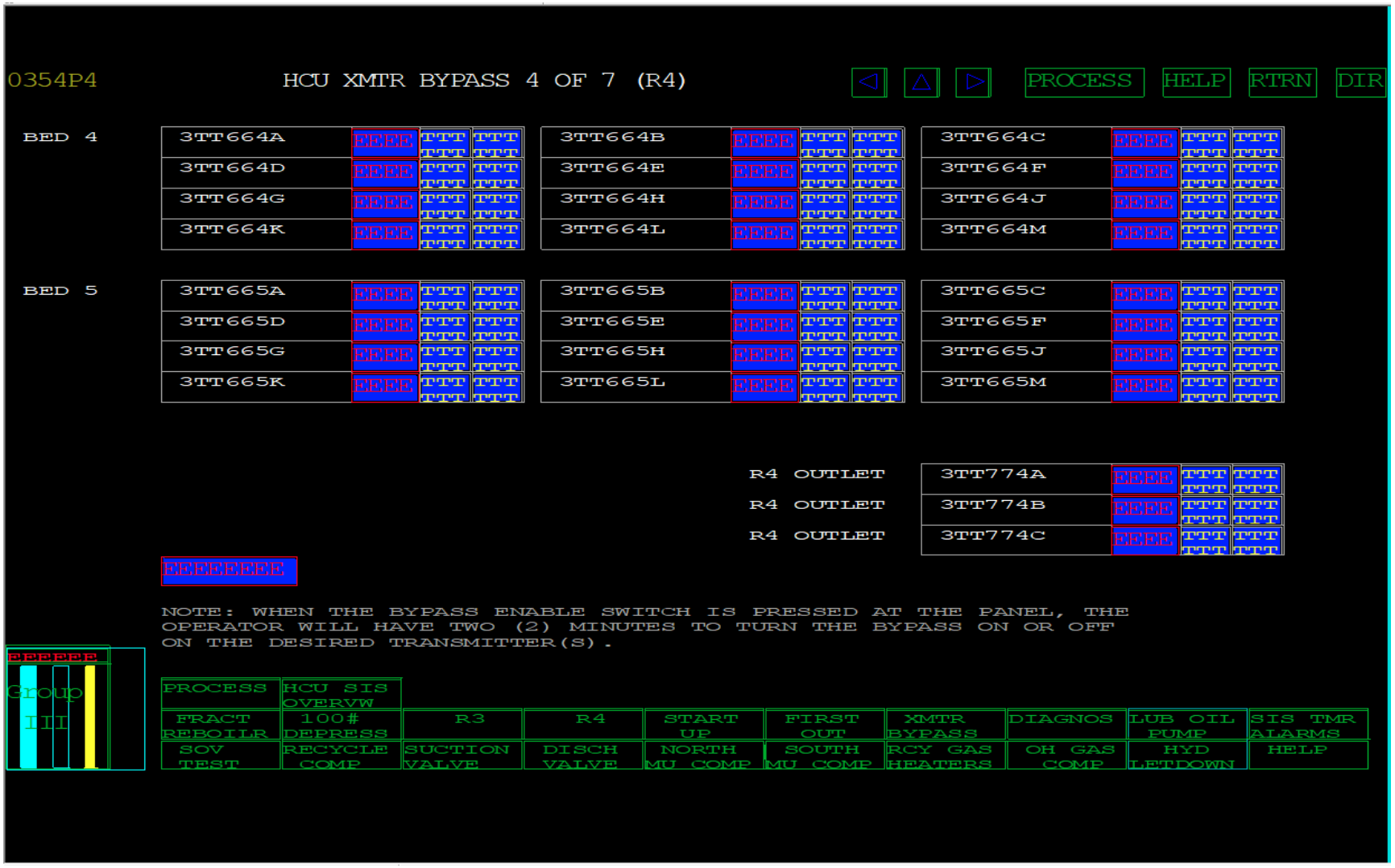


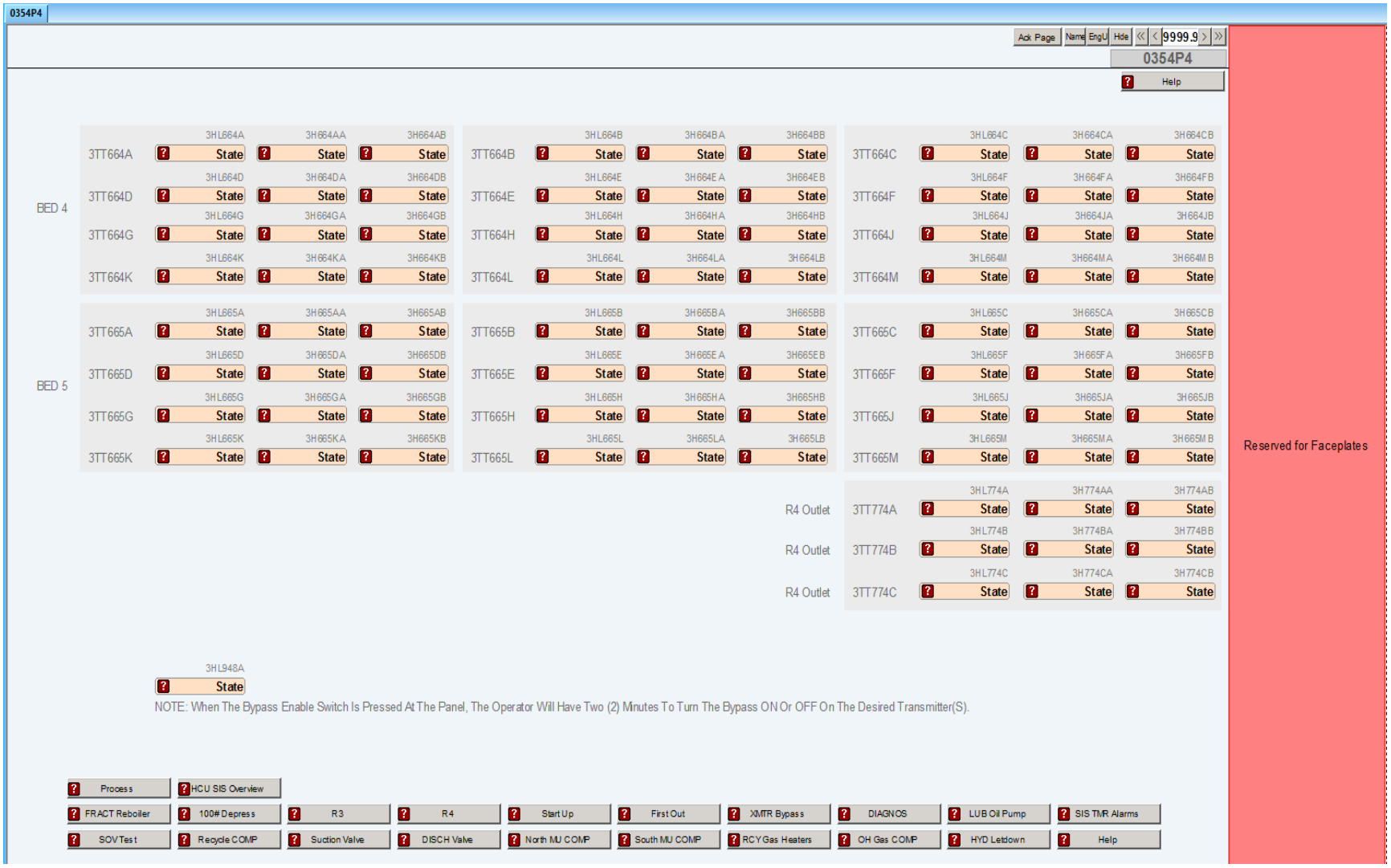
0354P3
HCU XMTR BYPASS 3 OF 7 (R4)
PROCESS
HELP
RTRN
DIR
BED 1
3TT661A
3TT661B
3TT661C
3TT661D
3TT661E
3TT661F
3TT661G
3TT661H
3TT661J
3TT661K
3TT661L
3TT661M
BED 2
3TT662A
3TT662B
3TT662C
3TT662D
3TT662E
3TT662F
3TT662G
3TT662H
3TT662J
3TT662K
3TT662L
3TT662M
BED 3
3TT663A
3TT663B
3TT663C
3TT663D
3TT663E
3TT663F
3TT663G
3TT663H
3TT663J
3TT663K
3TT663L
3TT663M
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE PANEL, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF ON THE DESIRED TRANSMITTER(S).
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0354P3
Ack Page
Name
Eng U
Hide
9999.9
0354P3
Help
BED 1
3TT661A 3HL661A 3H661AA 3H661AB State
3TT661B 3HL661B 3H661BA 3H661BB State
3TT661C 3HL661C 3H661CA 3H661CB State
3TT661D 3HL661D 3H661DA 3H661DB State
3TT661E 3HL661E 3H661EA 3H661EB State
3TT661F 3HL661F 3H661FA 3H661FB State
3TT661G 3HL661G 3H661GA 3H661GB State
3TT661H 3HL661H 3H661HA 3H661HB State
3TT661J 3HL661J 3H661JA 3H661JB State
3TT661K 3HL661K 3H661KA 3H661KB State
3TT661L 3HL661L 3H661LA 3H661LB State
3TT661M 3HL661M 3H661MA 3H661MB State
BED 2
3TT662A 3HL662A 3H662AA 3H662AB State
3TT662B 3HL662B 3H662BA 3H662BB State
3TT662C 3HL662C 3H662CA 3H662CB State
3TT662D 3HL662D 3H662DA 3H662DB State
3TT662E 3HL662E 3H662EA 3H662EB State
3TT662F 3HL662F 3H662FA 3H662FB State
3TT662G 3HL662G 3H662GA 3H662GB State
3TT662H 3HL662H 3H662HA 3H662HB State
3TT662J 3HL662J 3H662JA 3H662JB State
3TT662K 3HL662K 3H662KA 3H662KB State
3TT662L 3HL662L 3H662LA 3H662LB State
3TT662M 3HL662M 3H662MA 3H662MB State
BED 3
3TT663A 3HL663A 3H663AA 3H663AB State
3TT663B 3HL663B 3H663BA 3H663BB State
3TT663C 3HL663C 3H663CA 3H663CB State
3TT663D 3HL663D 3H663DA 3H663DB State
3TT663E 3HL663E 3H663EA 3H663EB State
3TT663F 3HL663F 3H663FA 3H663FB State
3TT663G 3HL663G 3H663GA 3H663GB State
3TT663H 3HL663H 3H663HA 3H663HB State
3TT663J 3HL663J 3H663JA 3H663JB State
3TT663K 3HL663K 3H663KA 3H663KB State
3TT663L 3HL663L 3H663LA 3H663LB State
3TT663M 3HL663M 3H663MA 3H663MB State
3HL948A
State
NOTE: When The Bypass Enable Switch Is Pressed At The Panel, The Operator Will Have Two (2) Minutes To Turn The Bypass ON Or OFF On The Desired Transmitter(S).
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

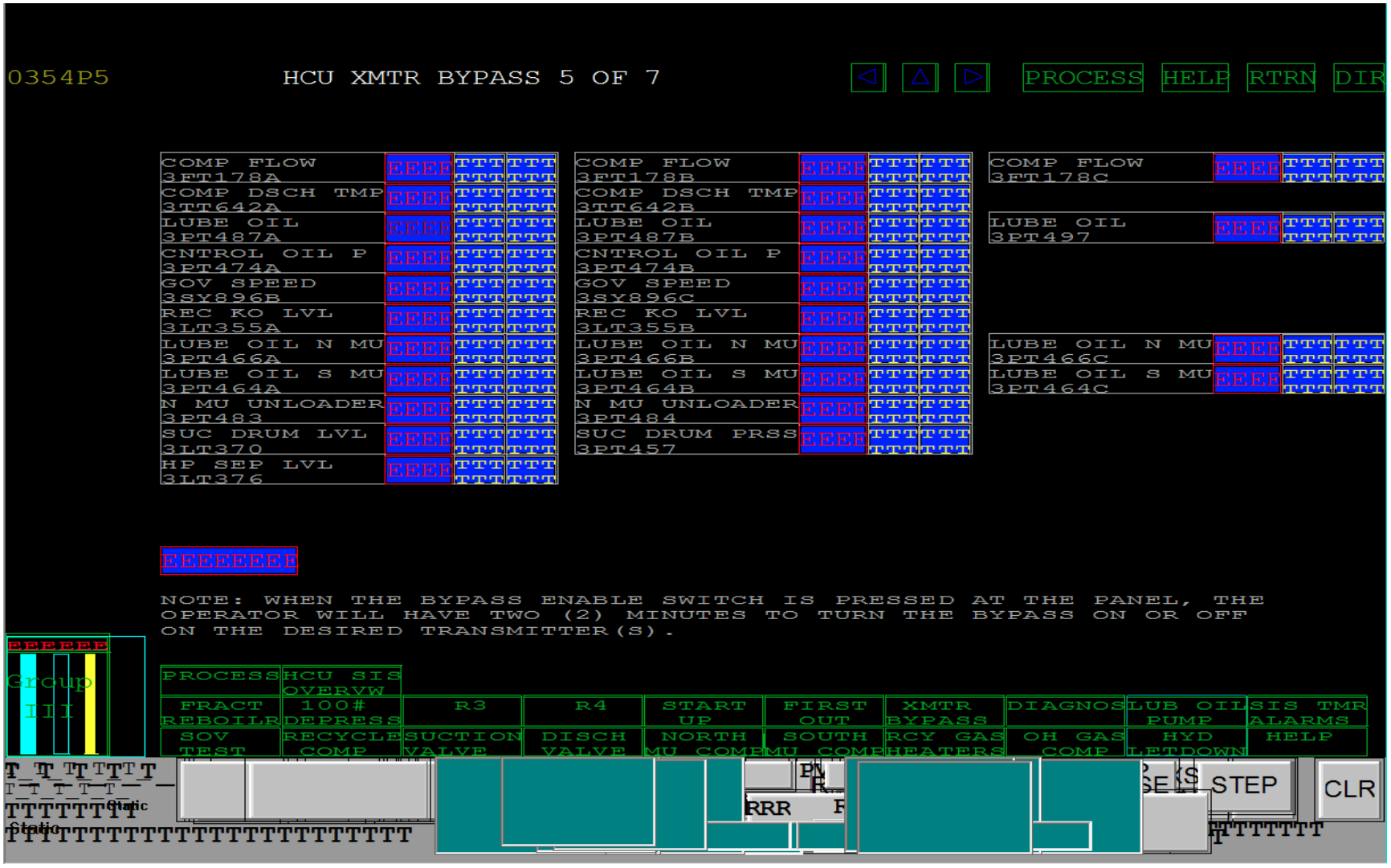
3.139 HCU XMTR BYPASS 4 OF 7 (R4) (0354P4.DS)

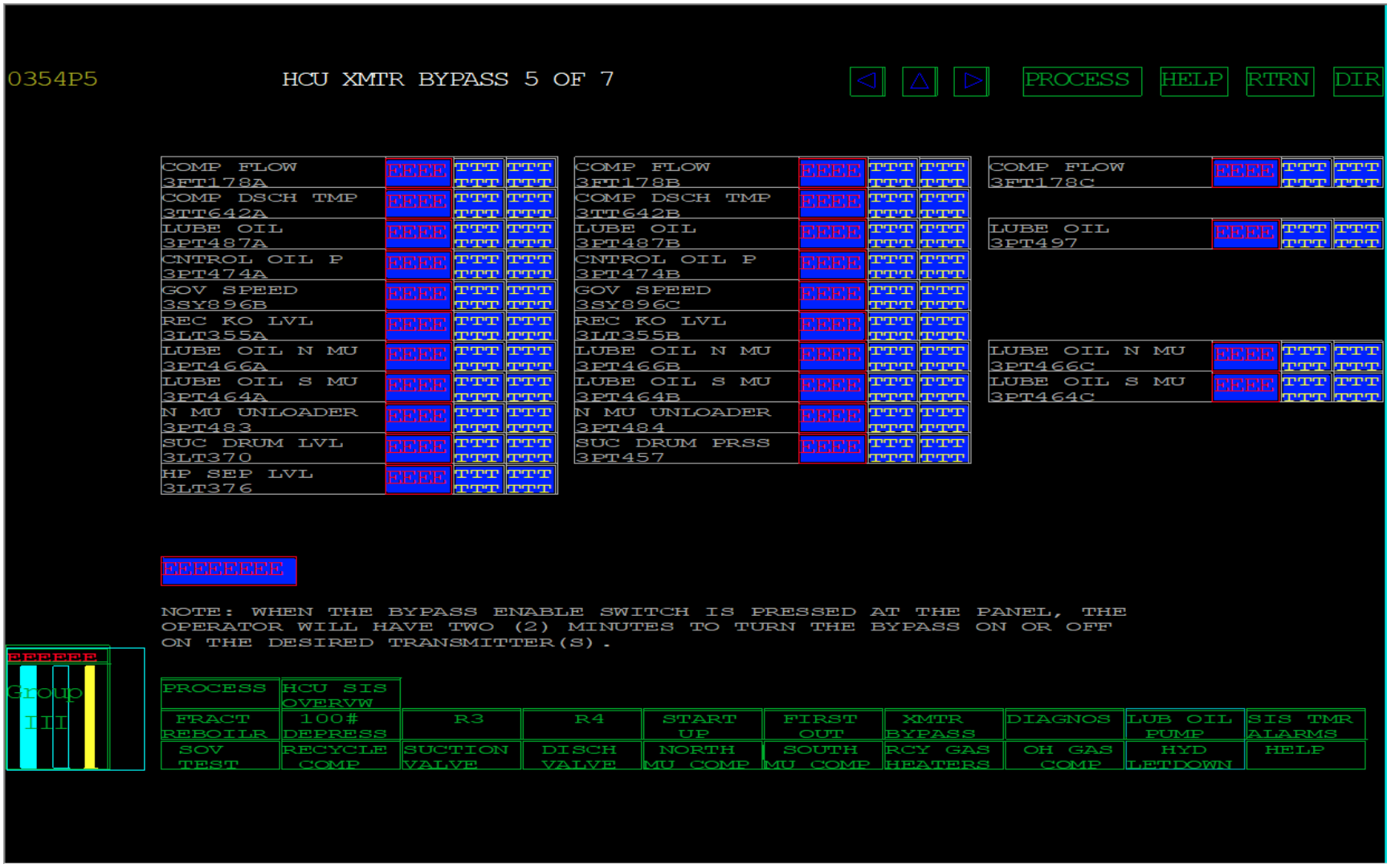


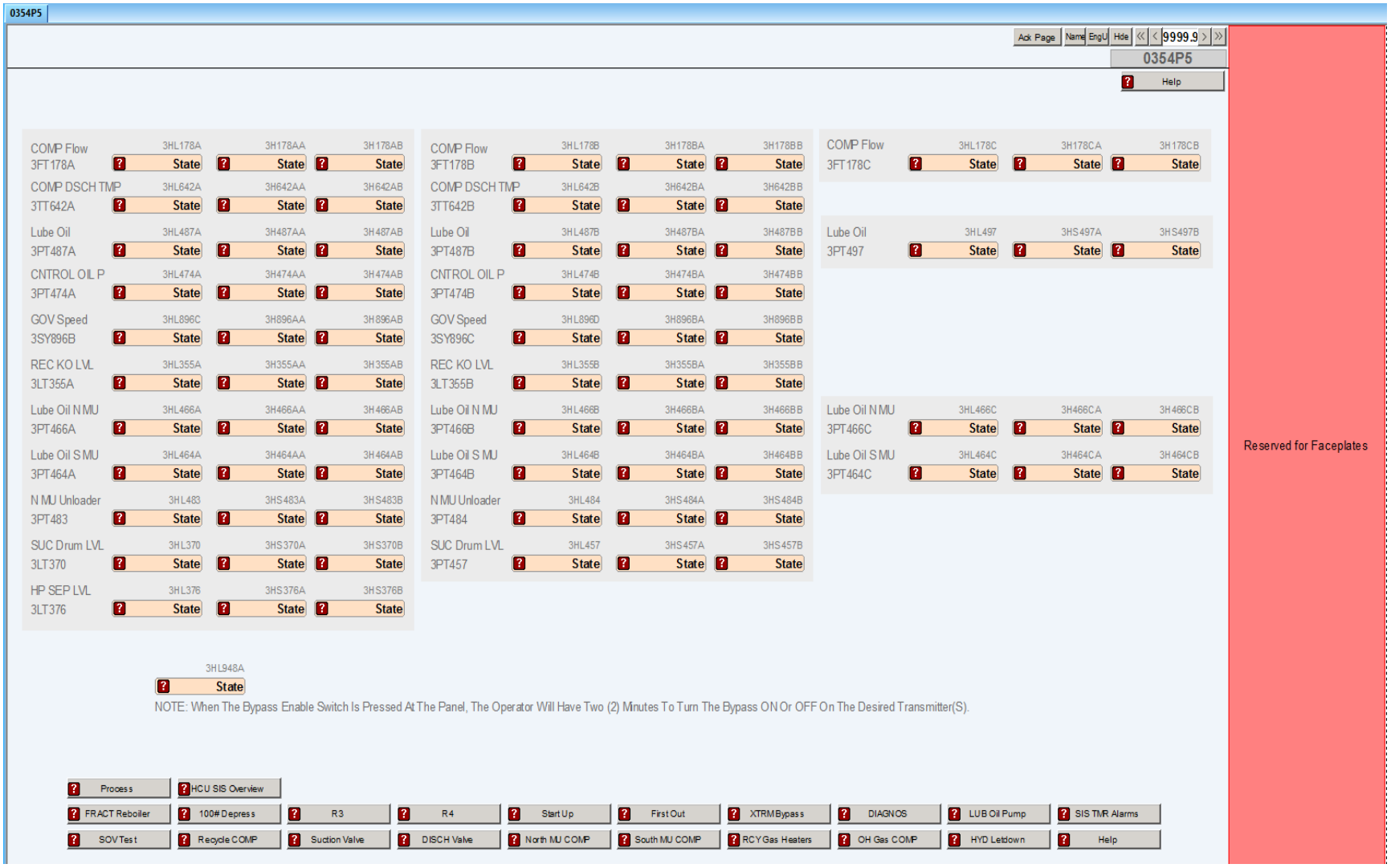

0354P4
HCU XMTR BYPASS 4 OF 7 (R4)
PROCESS
HELP
RTRN
DIR
BED 4
3TT664A
3TT664B
3TT664C
3TT664D
3TT664E
3TT664F
3TT664G
3TT664H
3TT664J
3TT664K
3TT664L
3TT664M
BED 5
3TT665A
3TT665B
3TT665C
3TT665D
3TT665E
3TT665F
3TT665G
3TT665H
3TT665J
3TT665K
3TT665L
3TT665M
R4 OUTLET
3TT774A
R4 OUTLET
3TT774B
R4 OUTLET
3TT774C
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE PANEL, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF ON THE DESIRED TRANSMITTER(S).
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0354P4
Ack Page
Name
Eng U
Hide
9999.9
0354P4
Help
BED 4
3TT664A 3HL664A 3H664AA 3H664AB State State State
3TT664B 3HL664B 3H664BA 3H664BB State State State
3TT664C 3HL664C 3H664CA 3H664CB State State State
3TT664D 3HL664D 3H664DA 3H664DB State State State
3TT664E 3HL664E 3H664EA 3H664EB State State State
3TT664F 3HL664F 3H664FA 3H664FB State State State
3TT664G 3HL664G 3H664GA 3H664GB State State State
3TT664H 3HL664H 3H664HA 3H664HB State State State
3TT664J 3HL664J 3H664JA 3H664JB State State State
3TT664K 3HL664K 3H664KA 3H664KB State State State
3TT664L 3HL664L 3H664LA 3H664LB State State State
3TT664M 3HL664M 3H664MA 3H664MB State State State
BED 5
3TT665A 3HL665A 3H665AA 3H665AB State State State
3TT665B 3HL665B 3H665BA 3H665BB State State State
3TT665C 3HL665C 3H665CA 3H665CB State State State
3TT665D 3HL665D 3H665DA 3H665DB State State State
3TT665E 3HL665E 3H665EA 3H665EB State State State
3TT665F 3HL665F 3H665FA 3H665FB State State State
3TT665G 3HL665G 3H665GA 3H665GB State State State
3TT665H 3HL665H 3H665HA 3H665HB State State State
3TT665J 3HL665J 3H665JA 3H665JB State State State
3TT665K 3HL665K 3H665KA 3H665KB State State State
3TT665L 3HL665L 3H665LA 3H665LB State State State
3TT665M 3HL665M 3H665MA 3H665MB State State State
Reserved for Faceplates
R4 Outlet 3TT774A 3HL774A 3H774AA 3H774AB State State State
R4 Outlet 3TT774B 3HL774B 3H774BA 3H774BB State State State
R4 Outlet 3TT774C 3HL774C 3H774CA 3H774CB State State State
3HL948A
State
NOTE: When The Bypass Enable Switch Is Pressed At The Panel, The Operator Will Have Two (2) Minutes To Turn The Bypass ON Or OFF On The Desired Transmitter(S).
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

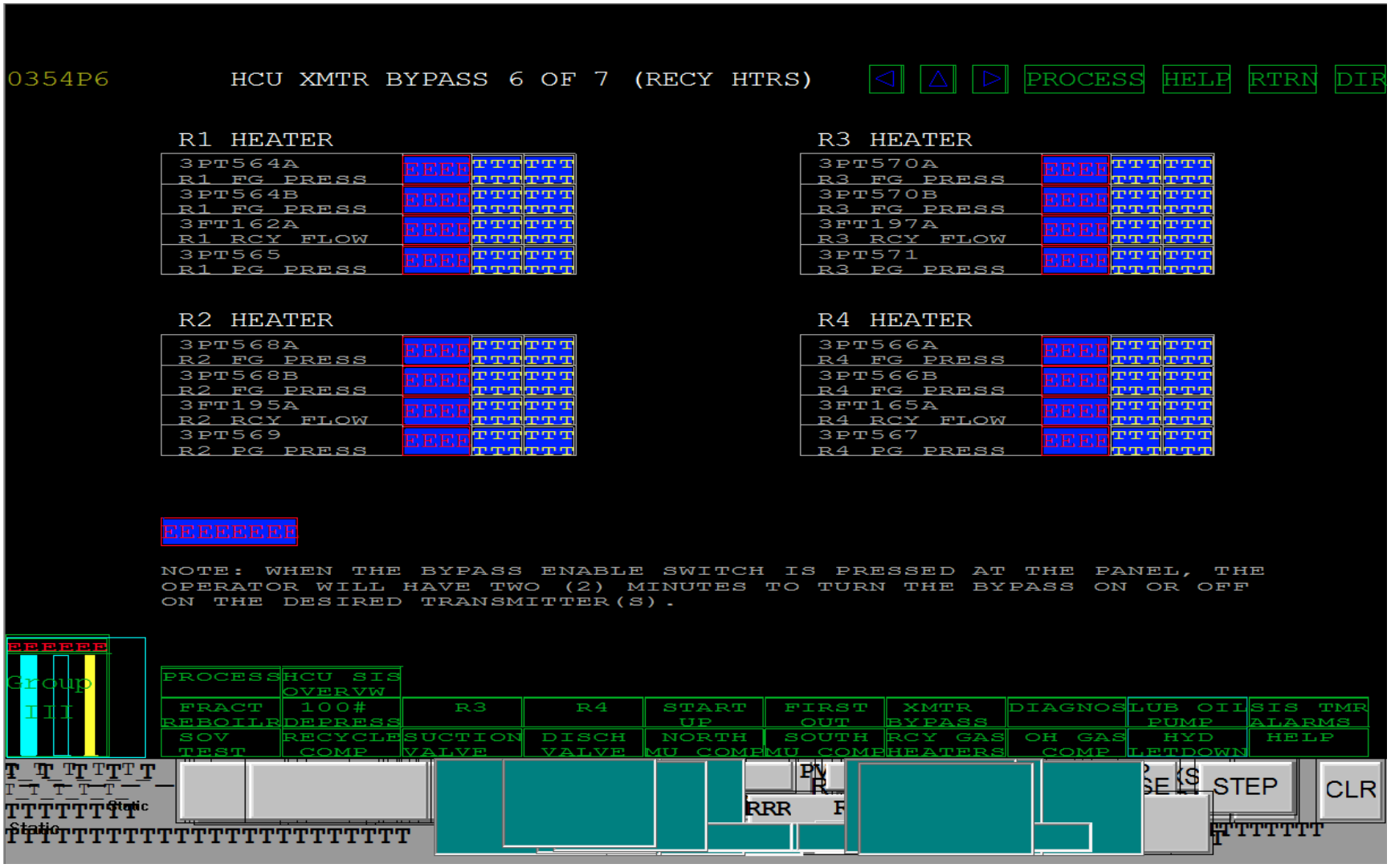
3.140 HCU XMTR BYPASS 5 OF 7 (0354P5.DS)

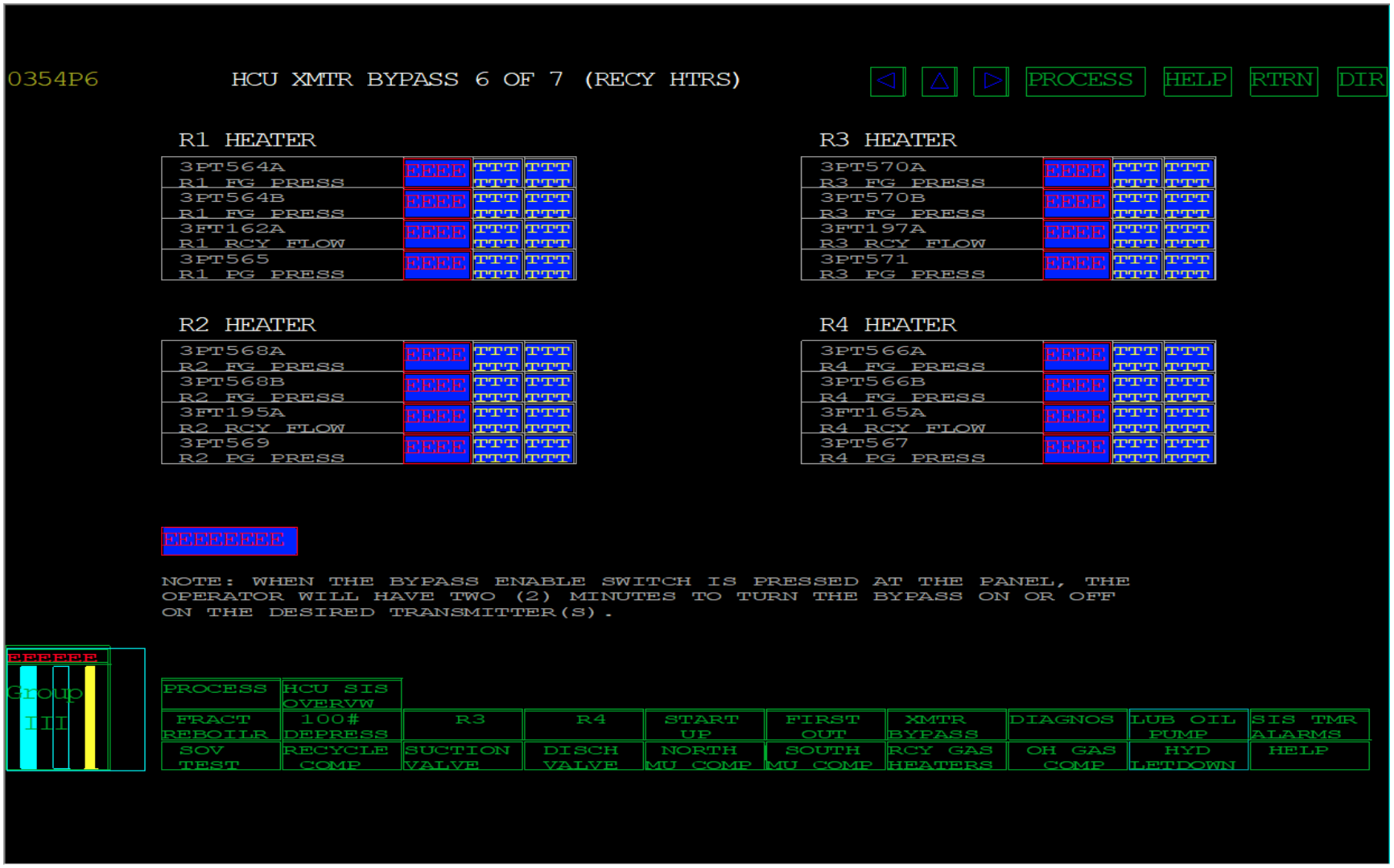


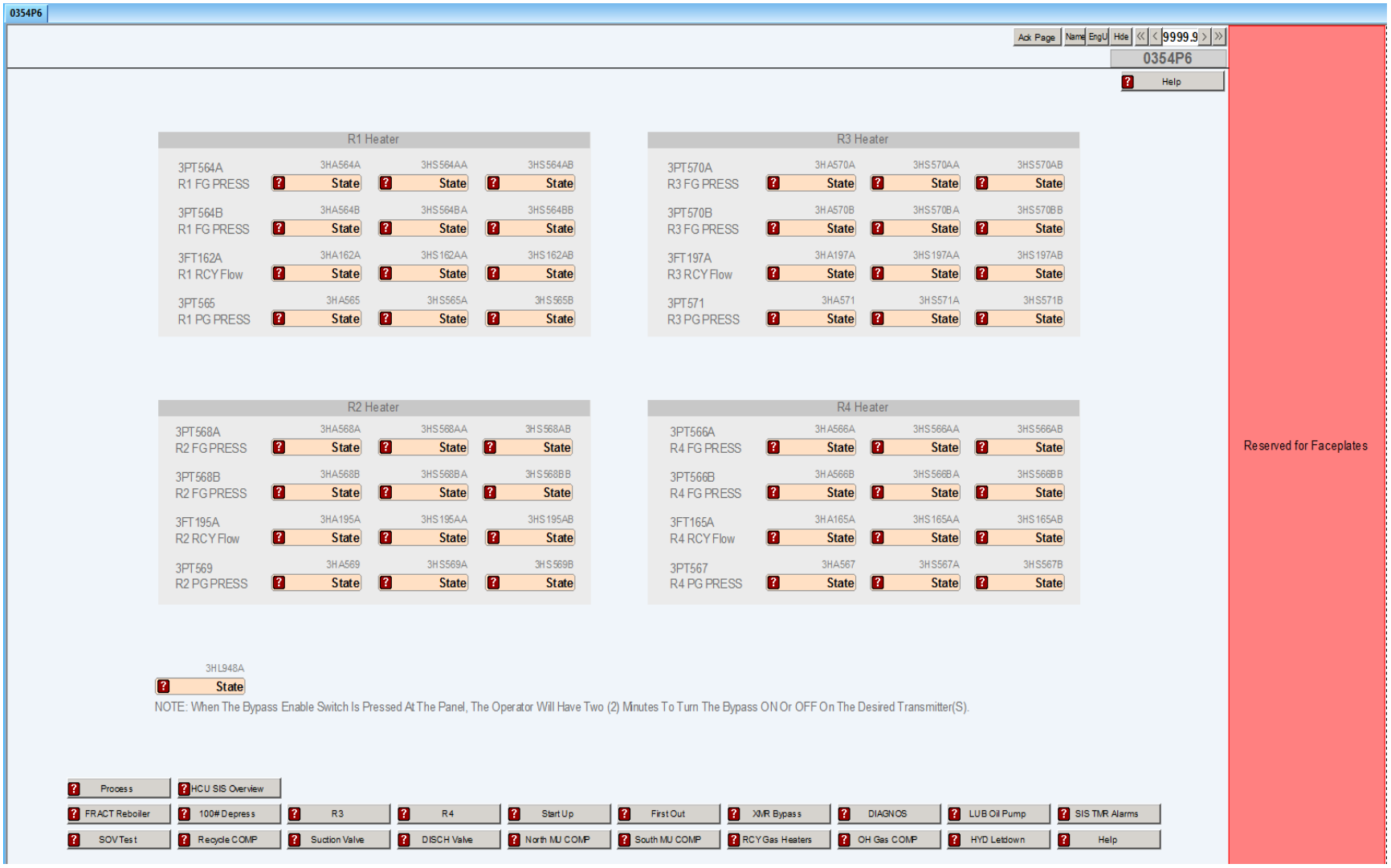

0354P5
HCU XMTR BYPASS 5 OF 7
PROCESS
HELP
RTRN
DIR
COMP FLOW 3FT178A
COMP DSCH TMP 3TT642A
LUBE OIL 3PT487A
CNTROL OIL P 3PT474A
GOV SPEED 3SY896B
REC KO LVL 3LT355A
LUBE OIL N MU 3PT466A
LUBE OIL S MU 3PT464A
N MU UNLOADER 3PT483
SUC DRUM LVL 3LT370
HP SEP LVL 3LT376
COMP FLOW 3FT178B
COMP DSCH TMP 3TT642B
LUBE OIL 3PT487B
CNTROL OIL P 3PT474B
GOV SPEED 3SY896C
REC KO LVL 3LT355B
LUBE OIL N MU 3PT466B
LUBE OIL S MU 3PT464B
N MU UNLOADER 3PT484
SUC DRUM PRSS 3PT457
COMP FLOW 3FT178C
LUBE OIL 3PT497
LUBE OIL N MU 3PT466C
LUBE OIL S MU 3PT464C
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE PANEL, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF ON THE DESIRED TRANSMITTER(S).
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0354P5
Ack Page
Name
Eng U
Hide
9999.9
0354P5
Help
COMP Flow 3FT178A 3HL178A 3H178AA 3H178AB State State State
COMP DSCH TMP 3TT642A 3HL642A 3H642AA 3H642AB State State State
Lube Oil 3PT487A 3HL487A 3H487AA 3H487AB State State State
CNTROL OIL P 3PT474A 3HL474A 3H474AA 3H474AB State State State
GOV Speed 3SY896B 3HL896C 3H896AA 3H896AB State State State
REC KO LVL 3LT355A 3HL355A 3H355AA 3H355AB State State State
Lube Oil N MU 3PT466A 3HL466A 3H466AA 3H466AB State State State
Lube Oil S MU 3PT464A 3HL464A 3H464AA 3H464AB State State State
N MU Unloader 3PT483 3HL483 3HS483A 3HS483B State State State
SUC Drum LVL 3LT370 3HL370 3HS370A 3HS370B State State State
HP SEP LVL 3LT376 3HL376 3HS376A 3HS376B State State State
COMP Flow 3FT178B 3HL178B 3H178BA 3H178BB State State State
COMP DSCH TMP 3TT642B 3HL642B 3H642BA 3H642BB State State State
Lube Oil 3PT487B 3HL487B 3H487BA 3H487BB State State State
CNTROL OIL P 3PT474B 3HL474B 3H474BA 3H474BB State State State
GOV Speed 3SY896C 3HL896D 3H896BA 3H896BB State State State
REC KO LVL 3LT355B 3HL355B 3H355BA 3H355BB State State State
Lube Oil N MU 3PT466B 3HL466B 3H466BA 3H466BB State State State
Lube Oil S MU 3PT464B 3HL464B 3H464BA 3H464BB State State State
N MU Unloader 3PT484 3HL484 3HS484A 3HS484B State State State
SUC Drum LVL 3PT457 3HL457 3HS457A 3HS457B State State State
COMP Flow 3FT178C 3HL178C 3H178CA 3H178CB State State State
Lube Oil 3PT497 3HL497 3HS497A 3HS497B State State State
Lube Oil N MU 3PT466C 3HL466C 3H466CA 3H466CB State State State
Lube Oil S MU 3PT464C 3HL464C 3H464CA 3H464CB State State State
Reserved for Faceplates
3HL948A
State
NOTE: When The Bypass Enable Switch Is Pressed At The Panel, The Operator Will Have Two (2) Minutes To Turn The Bypass ON Or OFF On The Desired Transmitter(S).
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XTRM Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

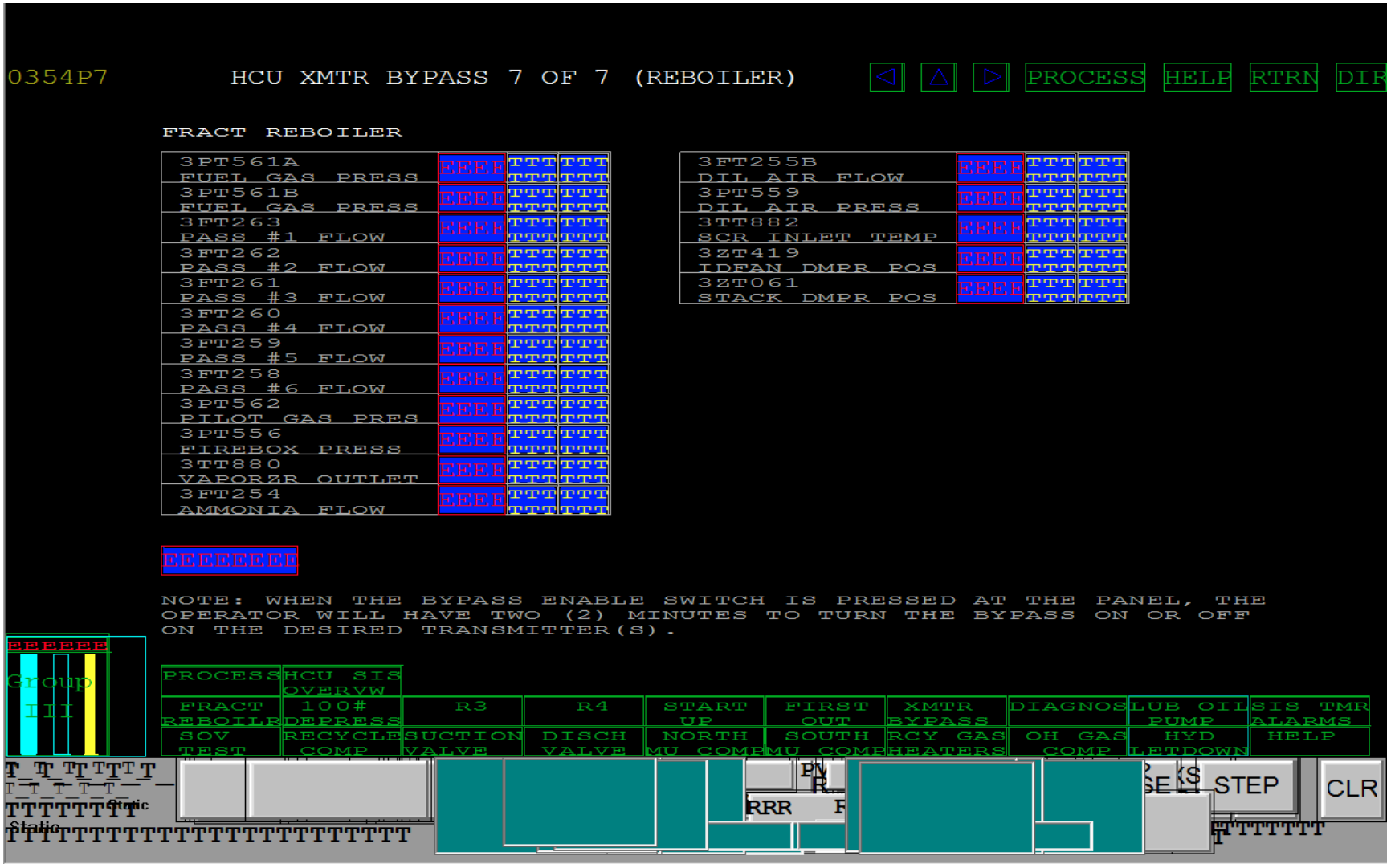
3.141 HCU XMTR BYPASS 6 OF 7 (RECY HTRS) (0354P6.DS)

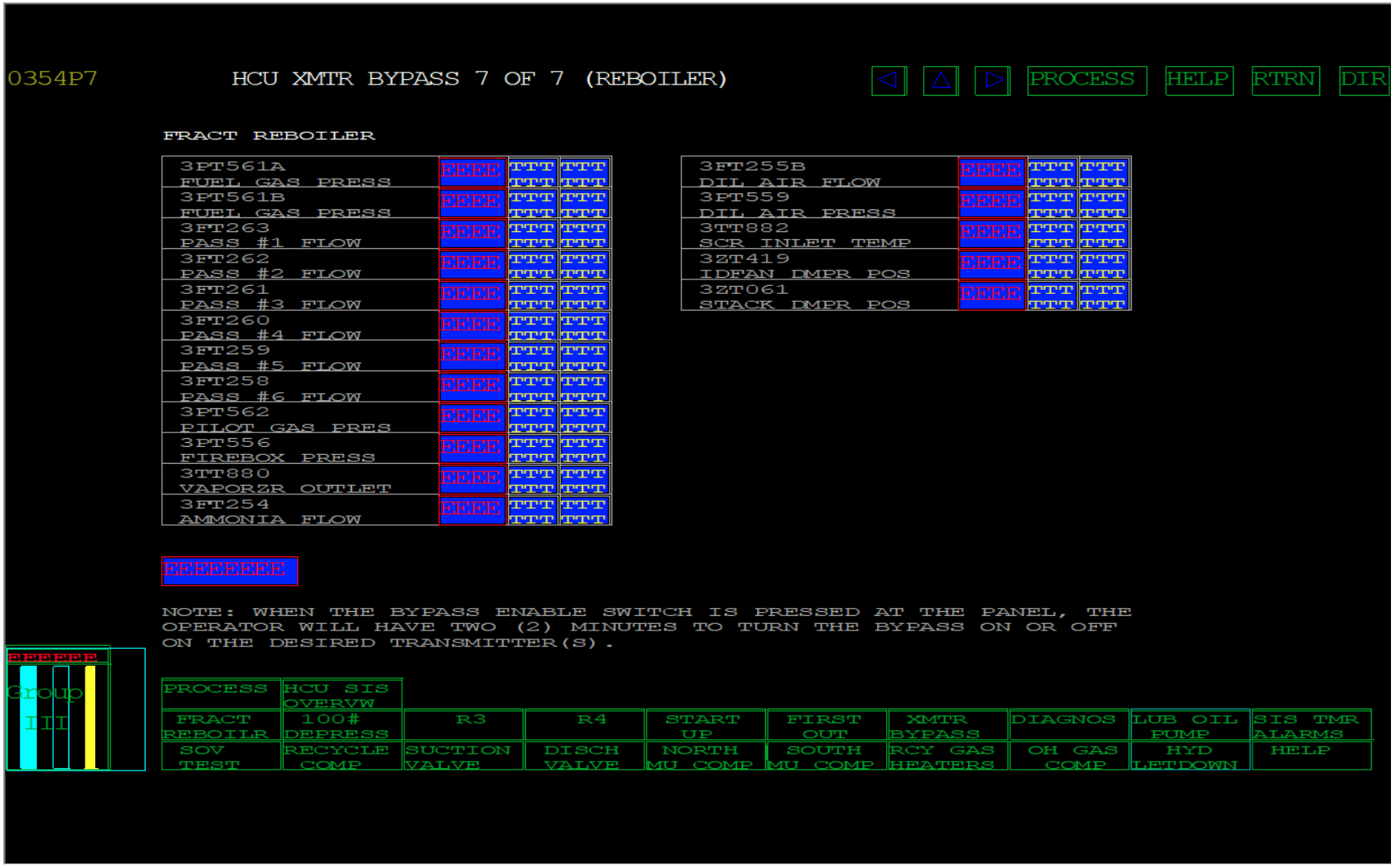


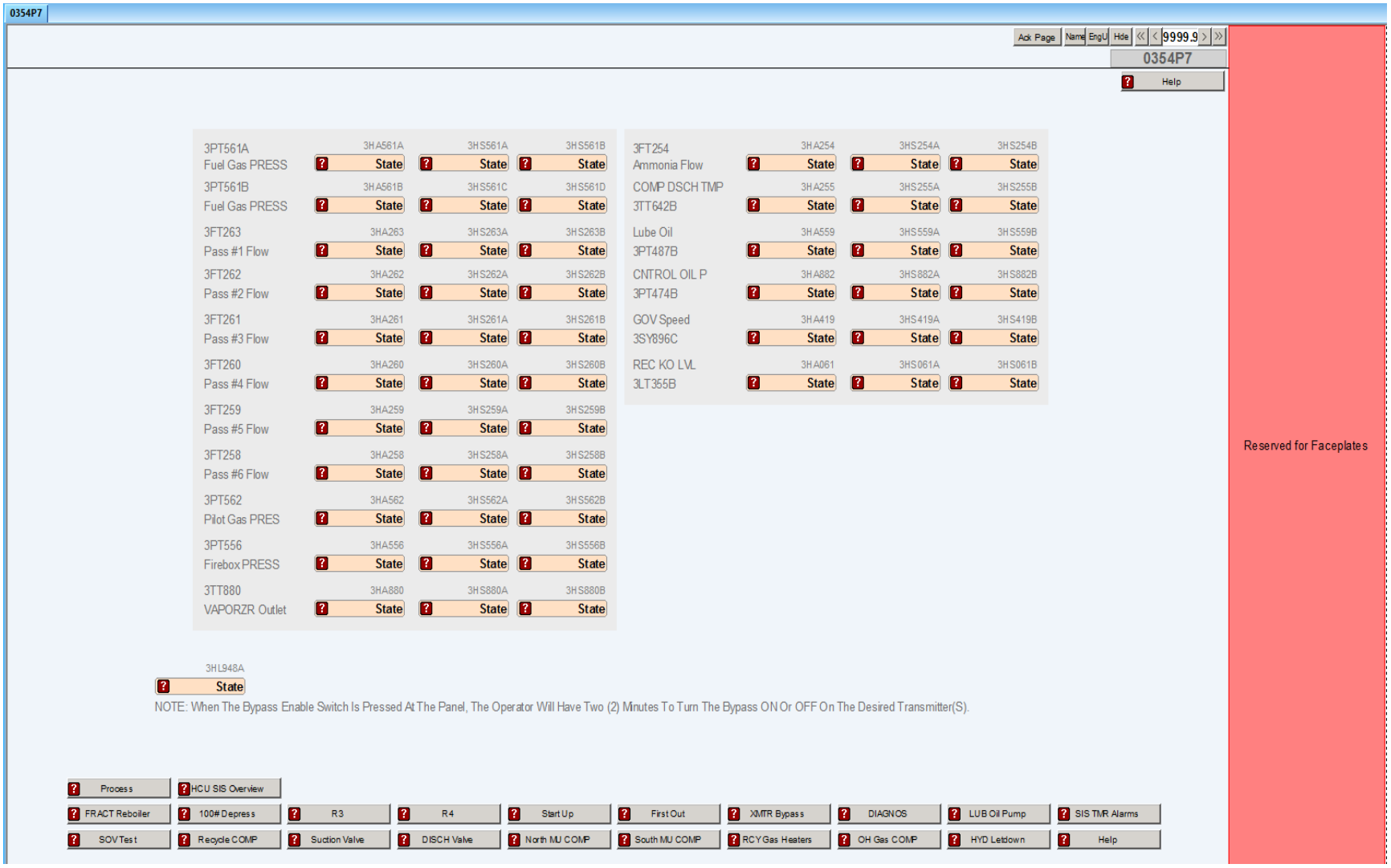

0354P6
HCU XMTR BYPASS 6 OF 7 (RECY HTRS)
PROCESS
HELP
RTRN
DIR
R1 HEATER
3PT564A R1 FG PRESS
3PT564B R1 FG PRESS
3FT162A R1 RCY FLOW
3PT565 R1 PG PRESS
R3 HEATER
3PT570A R3 FG PRESS
3PT570B R3 FG PRESS
3FT197A R3 RCY FLOW
3PT571 R3 PG PRESS
R2 HEATER
3PT568A R2 FG PRESS
3PT568B R2 FG PRESS
3FT195A R2 RCY FLOW
3PT569 R2 PG PRESS
R4 HEATER
3PT566A R4 FG PRESS
3PT566B R4 FG PRESS
3FT165A R4 RCY FLOW
3PT567 R4 PG PRESS
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE PANEL, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF ON THE DESIRED TRANSMITTER(S).
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0354P6
Ack Page
Name
Eng U
Hide
9999.9
0354P6
Help
R1 Heater
3PT564A
R1 FG PRESS
3HA564A
3HS564AA
3HS564AB
3PT564B
R1 FG PRESS
3HA564B
3HS564BA
3HS564BB
3FT162A
R1 RCY Flow
3HA162A
3HS162AA
3HS162AB
3PT565
R1 PG PRESS
3HA565
3HS565A
3HS565B
R3 Heater
3PT570A
R3 FG PRESS
3HA570A
3HS570AA
3HS570AB
3PT570B
R3 FG PRESS
3HA570B
3HS570BA
3HS570BB
3FT197A
R3 RCY Flow
3HA197A
3HS197AA
3HS197AB
3PT571
R3 PG PRESS
3HA571
3HS571A
3HS571B
R2 Heater
3PT568A
R2 FG PRESS
3HA568A
3HS568AA
3HS568AB
3PT568B
R2 FG PRESS
3HA568B
3HS568BA
3HS568BB
3FT195A
R2 RCY Flow
3HA195A
3HS195AA
3HS195AB
3PT569
R2 PG PRESS
3HA569
3HS569A
3HS569B
R4 Heater
3PT566A
R4 FG PRESS
3HA566A
3HS566AA
3HS566AB
3PT566B
R4 FG PRESS
3HA566B
3HS566BA
3HS566BB
3FT165A
R4 RCY Flow
3HA165A
3HS165AA
3HS165AB
3PT567
R4 PG PRESS
3HA567
3HS567A
3HS567B
State
Reserved for Faceplates
3HL948A
State
NOTE: When The Bypass Enable Switch Is Pressed At The Panel, The Operator Will Have Two (2) Minutes To Turn The Bypass ON Or OFF On The Desired Transmitter(S).
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

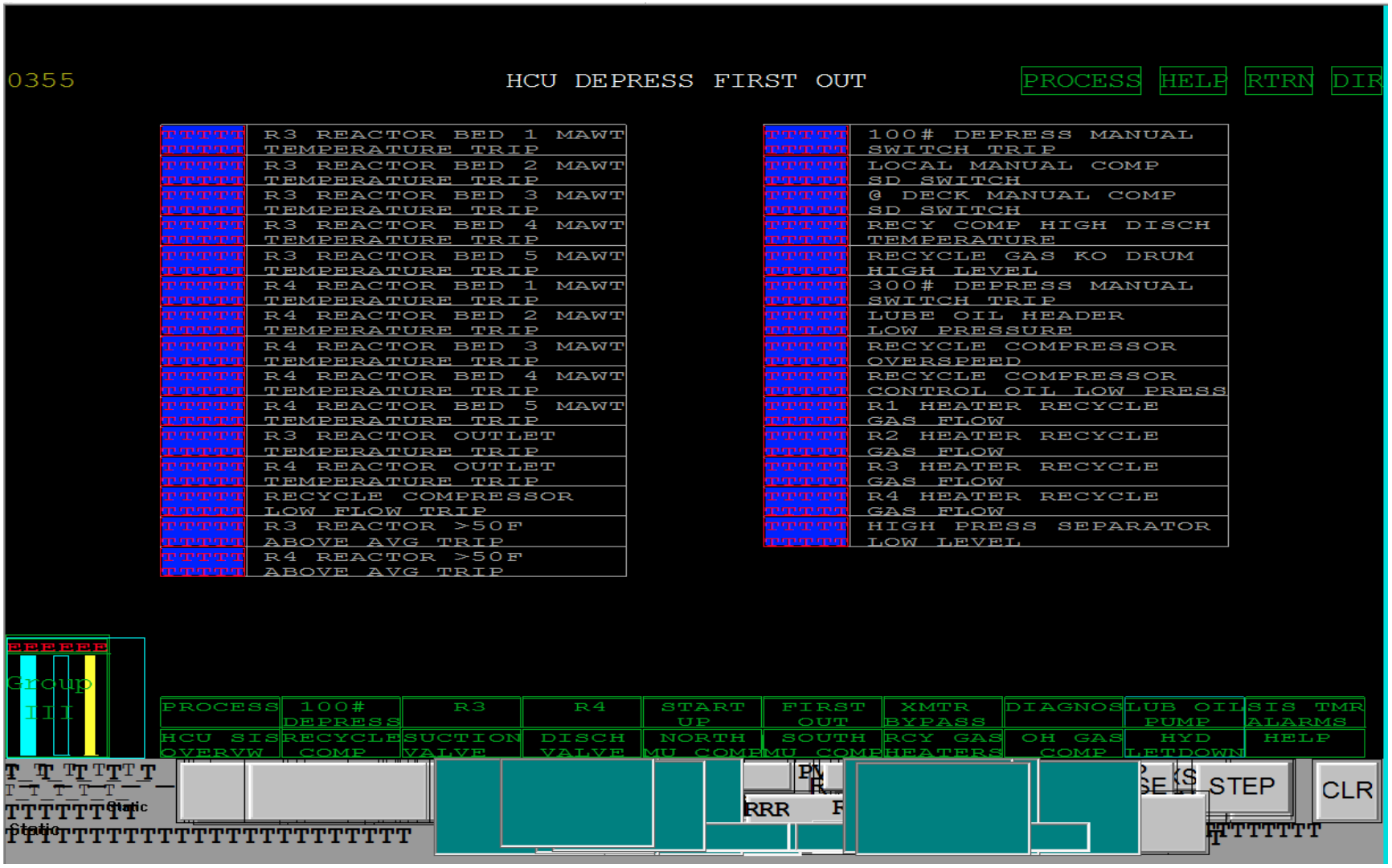
3.142 HCU XMTR BYPASS 7 OF 7 (REBOILER) (0354P7.DS)

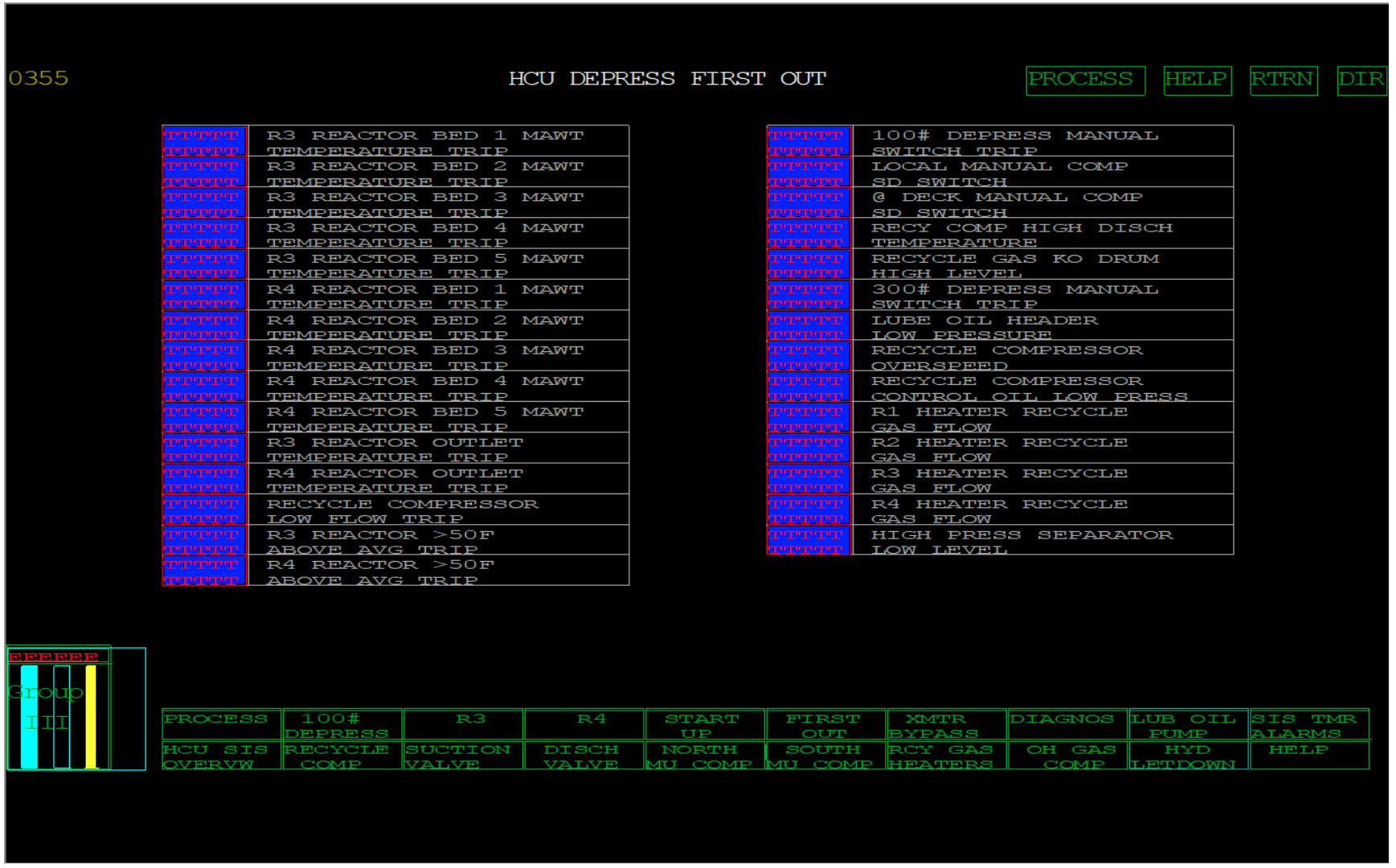


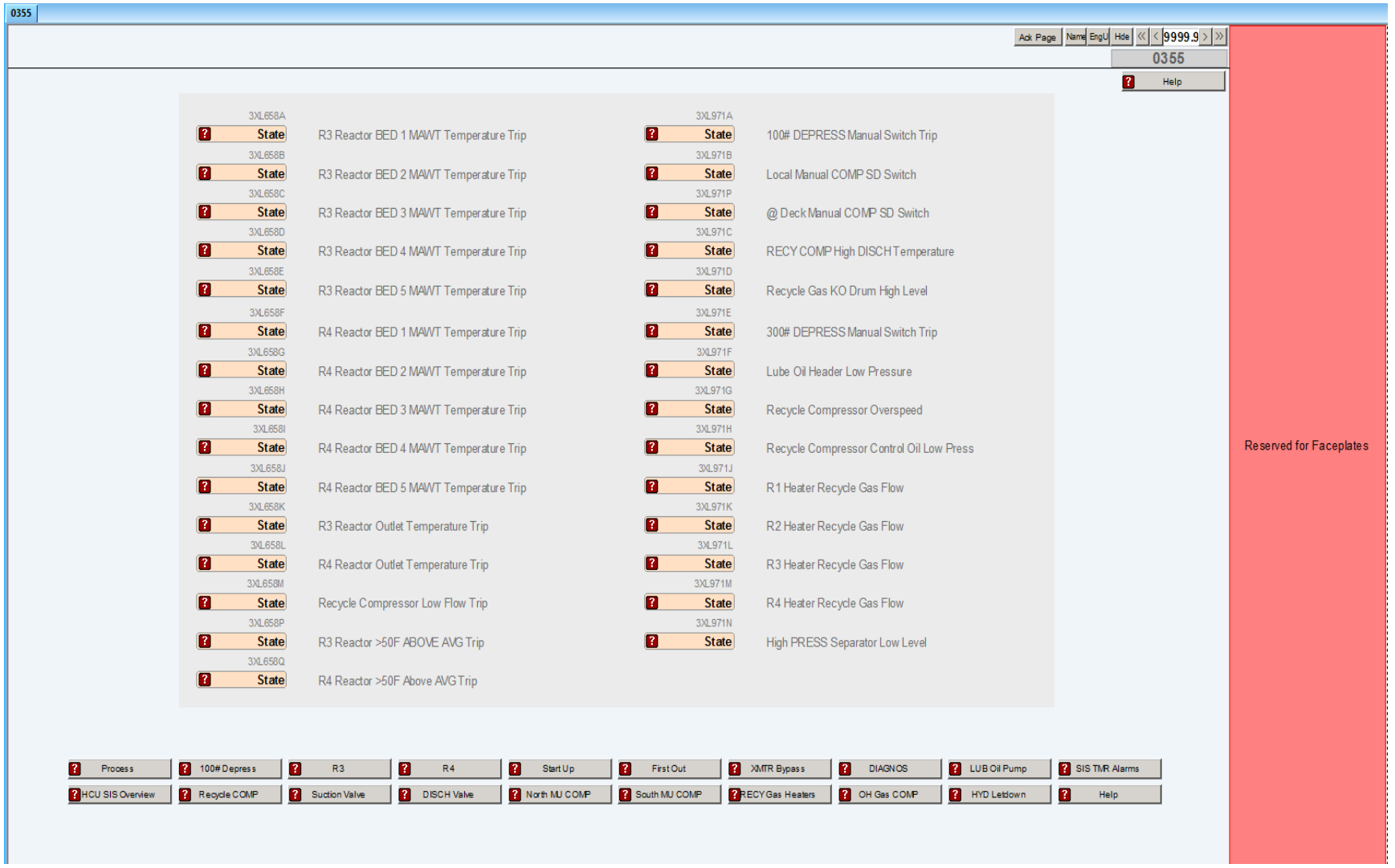

0354P7
HCU XMTR BYPASS 7 OF 7 (REBOILER)
PROCESS
HELP
RTRN
DIR
FRACT REBOILER
3PT561A FUEL GAS PRESS
3PT561B FUEL GAS PRESS
3FT263 PASS #1 FLOW
3FT262 PASS #2 FLOW
3FT261 PASS #3 FLOW
3FT260 PASS #4 FLOW
3FT259 PASS #5 FLOW
3FT258 PASS #6 FLOW
3PT562 PILOT GAS PRES
3PT556 FIREBOX PRESS
3TT880 VAPORZR OUTLET
3FT254 AMMONIA FLOW
3FT255B DIL AIR FLOW
3PT559 DIL AIR PRESS
3TT882 SCR INLET TEMP
3ZT419 IDFAN DMPR POS
3ZT061 STACK DMPR POS
NOTE: WHEN THE BYPASS ENABLE SWITCH IS PRESSED AT THE PANEL, THE OPERATOR WILL HAVE TWO (2) MINUTES TO TURN THE BYPASS ON OR OFF ON THE DESIRED TRANSMITTER(S).
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0354P7
Ack Page
Name
Eng U
Hide
9999.9
0354P7
Help
3PT561A
Fuel Gas PRESS
3HA561A
3HS561A
3HS561B
3PT561B
Fuel Gas PRESS
3HA561B
3HS561C
3HS561D
3FT263
Pass #1 Flow
3HA263
3HS263A
3HS263B
3FT262
Pass #2 Flow
3HA262
3HS262A
3HS262B
3FT261
Pass #3 Flow
3HA261
3HS261A
3HS261B
3FT260
Pass #4 Flow
3HA260
3HS260A
3HS260B
3FT259
Pass #5 Flow
3HA259
3HS259A
3HS259B
3FT258
Pass #6 Flow
3HA258
3HS258A
3HS258B
3PT562
Pilot Gas PRES
3HA562
3HS562A
3HS562B
3PT556
Firebox PRESS
3HA556
3HS556A
3HS556B
3TT880
VAPORZR Outlet
3HA880
3HS880A
3HS880B
3FT254
Ammonia Flow
3HA254
3HS254A
3HS254B
COMP DSCH TMP
3TT642B
3HA255
3HS255A
3HS255B
Lube Oil
3PT487B
3HA559
3HS559A
3HS559B
CNTROL OIL P
3PT474B
3HA882
3HS882A
3HS882B
GOV Speed
3SY896C
3HA419
3HS419A
3HS419B
REC KO LVL
3LT355B
3HA061
3HS061A
3HS061B
State
Reserved for Faceplates
3HL948A
State
NOTE: When The Bypass Enable Switch Is Pressed At The Panel, The Operator Will Have Two (2) Minutes To Turn The Bypass ON Or OFF On The Desired Transmitter(S).
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

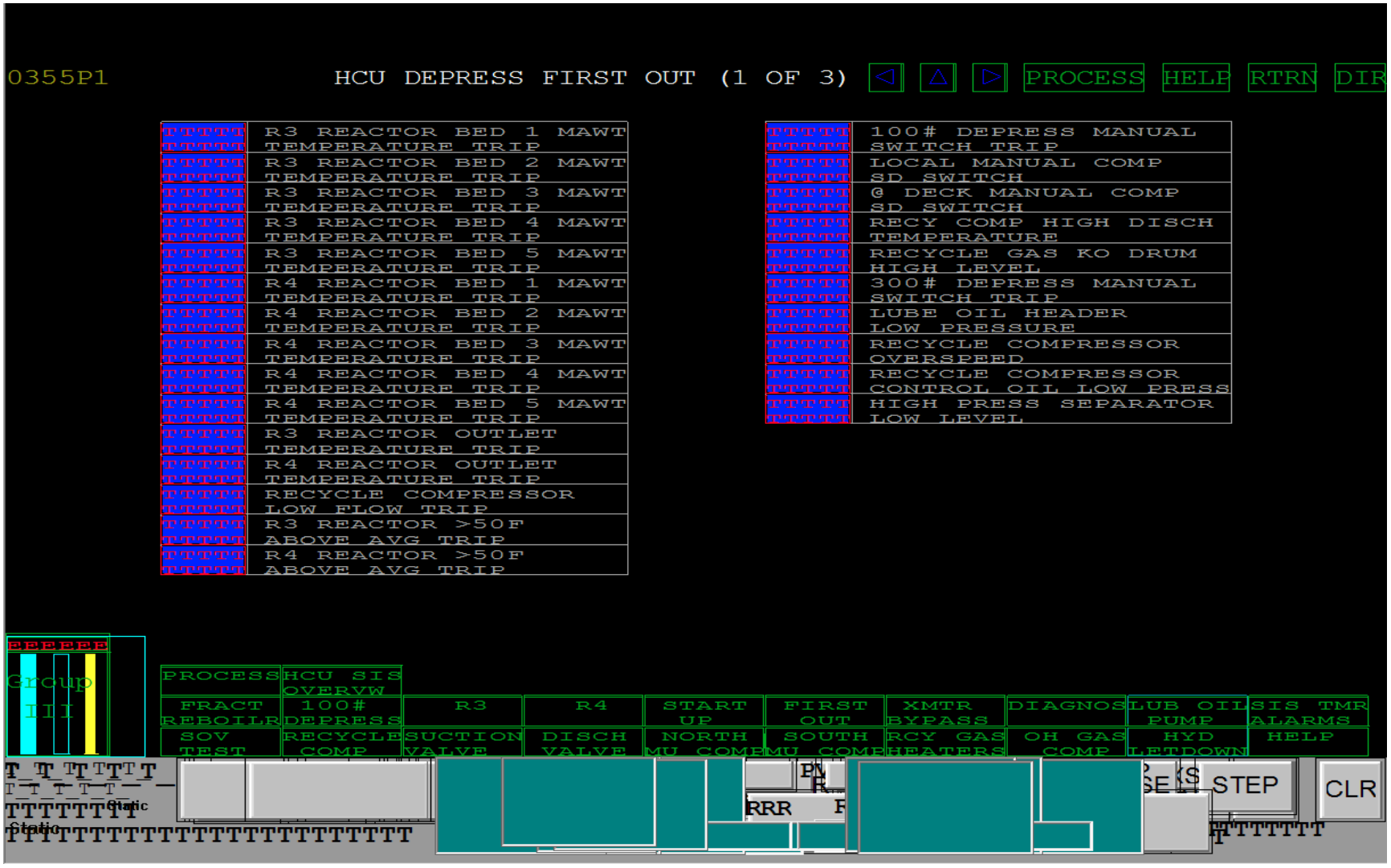
3.143 HCU DEPRESS FIRST OUT (0355.DS)

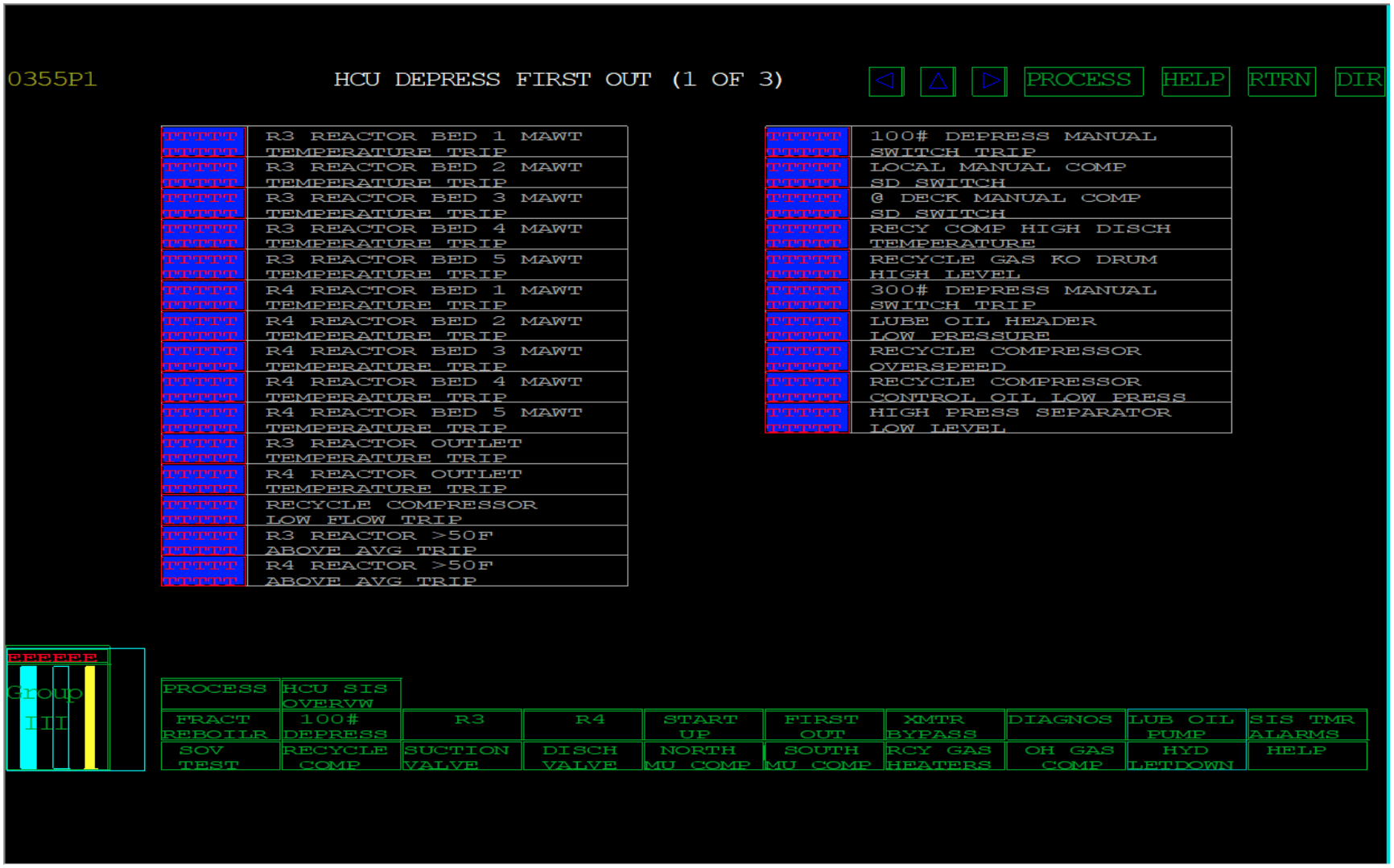


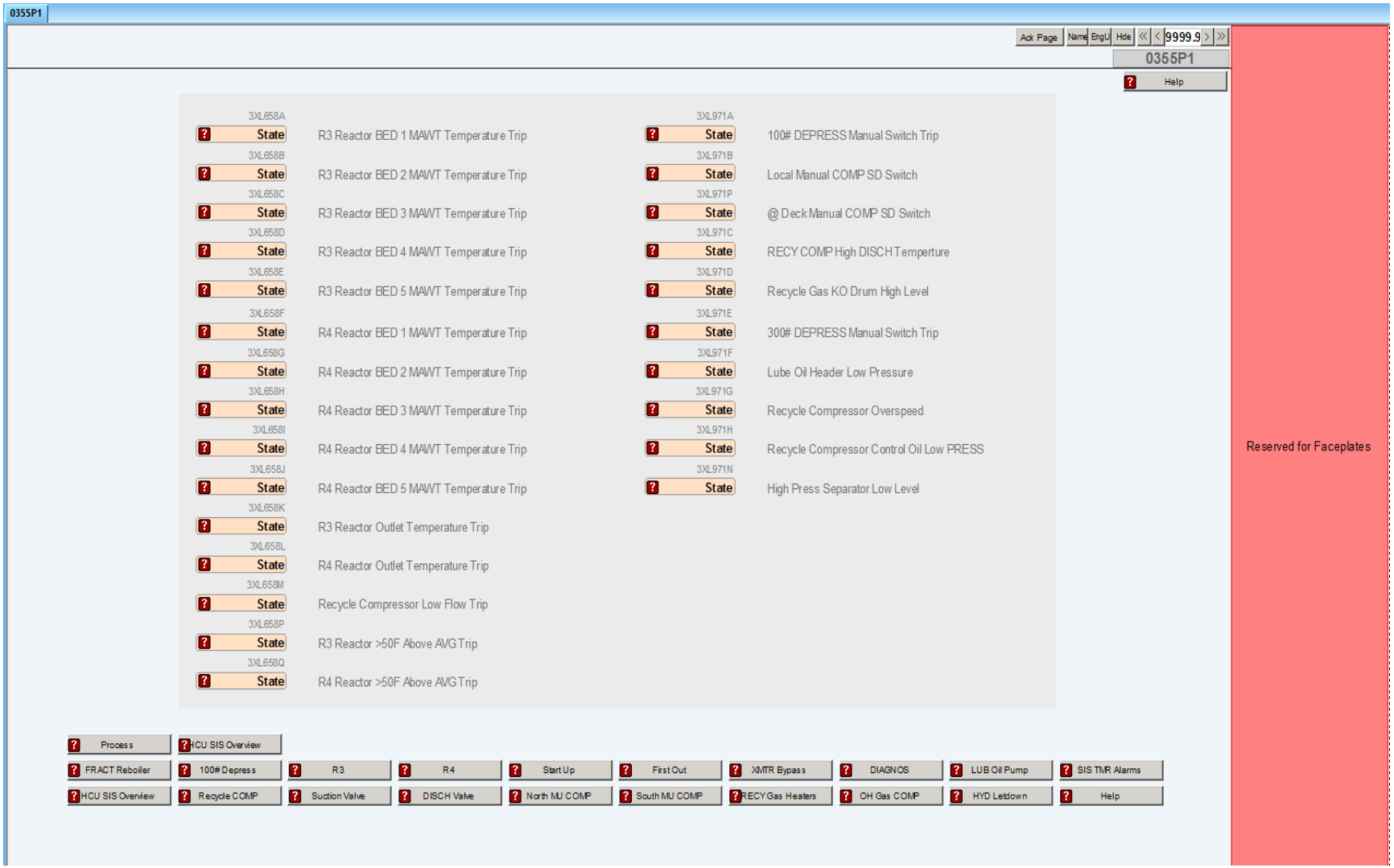

0355
HCU DEPRESS FIRST OUT
PROCESS
HELP
RTRN
DIR
TTTTT R3 REACTOR BED 1 MAWT TEMPERATURE TRIP
TTTTT R3 REACTOR BED 2 MAWT TEMPERATURE TRIP
TTTTT R3 REACTOR BED 3 MAWT TEMPERATURE TRIP
TTTTT R3 REACTOR BED 4 MAWT TEMPERATURE TRIP
TTTTT R3 REACTOR BED 5 MAWT TEMPERATURE TRIP
TTTTT R4 REACTOR BED 1 MAWT TEMPERATURE TRIP
TTTTT R4 REACTOR BED 2 MAWT TEMPERATURE TRIP
TTTTT R4 REACTOR BED 3 MAWT TEMPERATURE TRIP
TTTTT R4 REACTOR BED 4 MAWT TEMPERATURE TRIP
TTTTT R4 REACTOR BED 5 MAWT TEMPERATURE TRIP
TTTTT R3 REACTOR OUTLET TEMPERATURE TRIP
TTTTT R4 REACTOR OUTLET TEMPERATURE TRIP
TTTTT RECYCLE COMPRESSOR LOW FLOW TRIP
TTTTT R3 REACTOR >50F ABOVE AVG TRIP
TTTTT R4 REACTOR >50F ABOVE AVG TRIP
TTTTT 100# DEPRESS MANUAL SWITCH TRIP
TTTTT LOCAL MANUAL COMP SD SWITCH
TTTTT @ DECK MANUAL COMP SD SWITCH
TTTTT RECY COMP HIGH DISCH TEMPERATURE
TTTTT RECYCLE GAS KO DRUM HIGH LEVEL
TTTTT 300# DEPRESS MANUAL SWITCH TRIP
TTTTT LUBE OIL HEADER LOW PRESSURE
TTTTT RECYCLE COMPRESSOR OVERSPEED
TTTTT RECYCLE COMPRESSOR CONTROL OIL LOW PRESS
TTTTT R1 HEATER RECYCLE GAS FLOW
TTTTT R2 HEATER RECYCLE GAS FLOW
TTTTT R3 HEATER RECYCLE GAS FLOW
TTTTT R4 HEATER RECYCLE GAS FLOW
TTTTT HIGH PRESS SEPARATOR LOW LEVEL
Group III
PROCESS
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
HCU SIS OVERVW
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0355
Ack Page
Name
Eng'U
Hde
9999.9
0355
Help
3XL658A
State
R3 Reactor BED 1 MAWT Temperature Trip
3XL658B
State
R3 Reactor BED 2 MAWT Temperature Trip
3XL658C
State
R3 Reactor BED 3 MAWT Temperature Trip
3XL658D
State
R3 Reactor BED 4 MAWT Temperature Trip
3XL658E
State
R3 Reactor BED 5 MAWT Temperature Trip
3XL658F
State
R4 Reactor BED 1 MAWT Temperature Trip
3XL658G
State
R4 Reactor BED 2 MAWT Temperature Trip
3XL658H
State
R4 Reactor BED 3 MAWT Temperature Trip
3XL658I
State
R4 Reactor BED 4 MAWT Temperature Trip
3XL658J
State
R4 Reactor BED 5 MAWT Temperature Trip
3XL658K
State
R3 Reactor Outlet Temperature Trip
3XL658L
State
R4 Reactor Outlet Temperature Trip
3XL658M
State
Recycle Compressor Low Flow Trip
3XL658P
State
R3 Reactor >50F ABOVE AVG Trip
3XL658Q
State
R4 Reactor >50F Above AVG Trip
3XL971A
State
100# DEPRESS Manual Switch Trip
3XL971B
State
Local Manual COMP SD Switch
3XL971P
State
@ Deck Manual COMP SD Switch
3XL971C
State
RECY COMP High DISCH Temperature
3XL971D
State
Recycle Gas KO Drum High Level
3XL971E
State
300# DEPRESS Manual Switch Trip
3XL971F
State
Lube Oil Header Low Pressure
3XL971G
State
Recycle Compressor Overspeed
3XL971H
State
Recycle Compressor Control Oil Low Press
3XL971J
State
R1 Heater Recycle Gas Flow
3XL971K
State
R2 Heater Recycle Gas Flow
3XL971L
State
R3 Heater Recycle Gas Flow
3XL971M
State
R4 Heater Recycle Gas Flow
3XL971N
State
High PRESS Separator Low Level
Process
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
HCU SIS Overview
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RECY Gas Heaters
OH Gas COMP
HYD Letdown
Help
Reserved for Faceplates

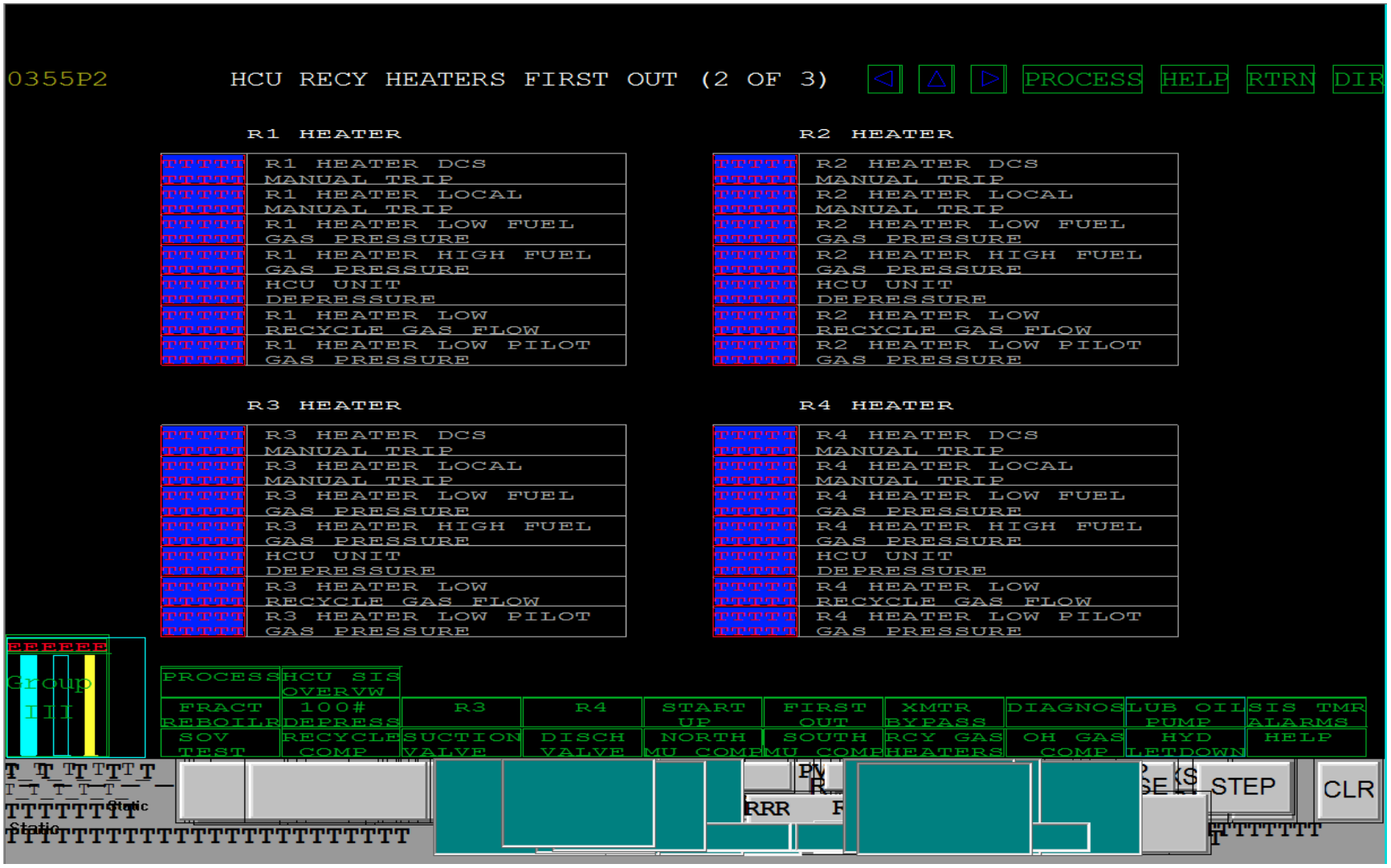
3.144 HCU DEPRESS FIRST OUT (1 OF 3) (0355P1.DS)

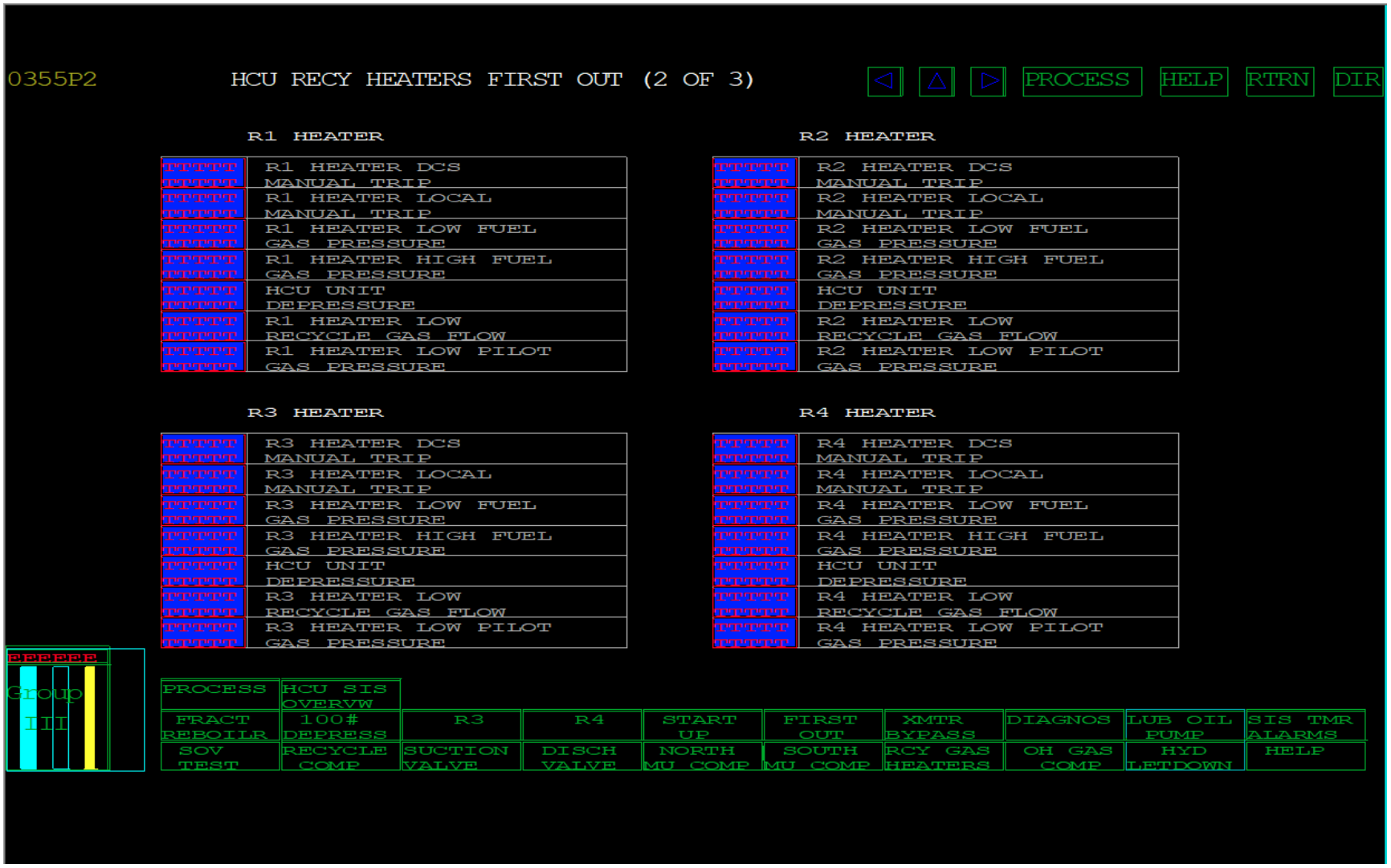


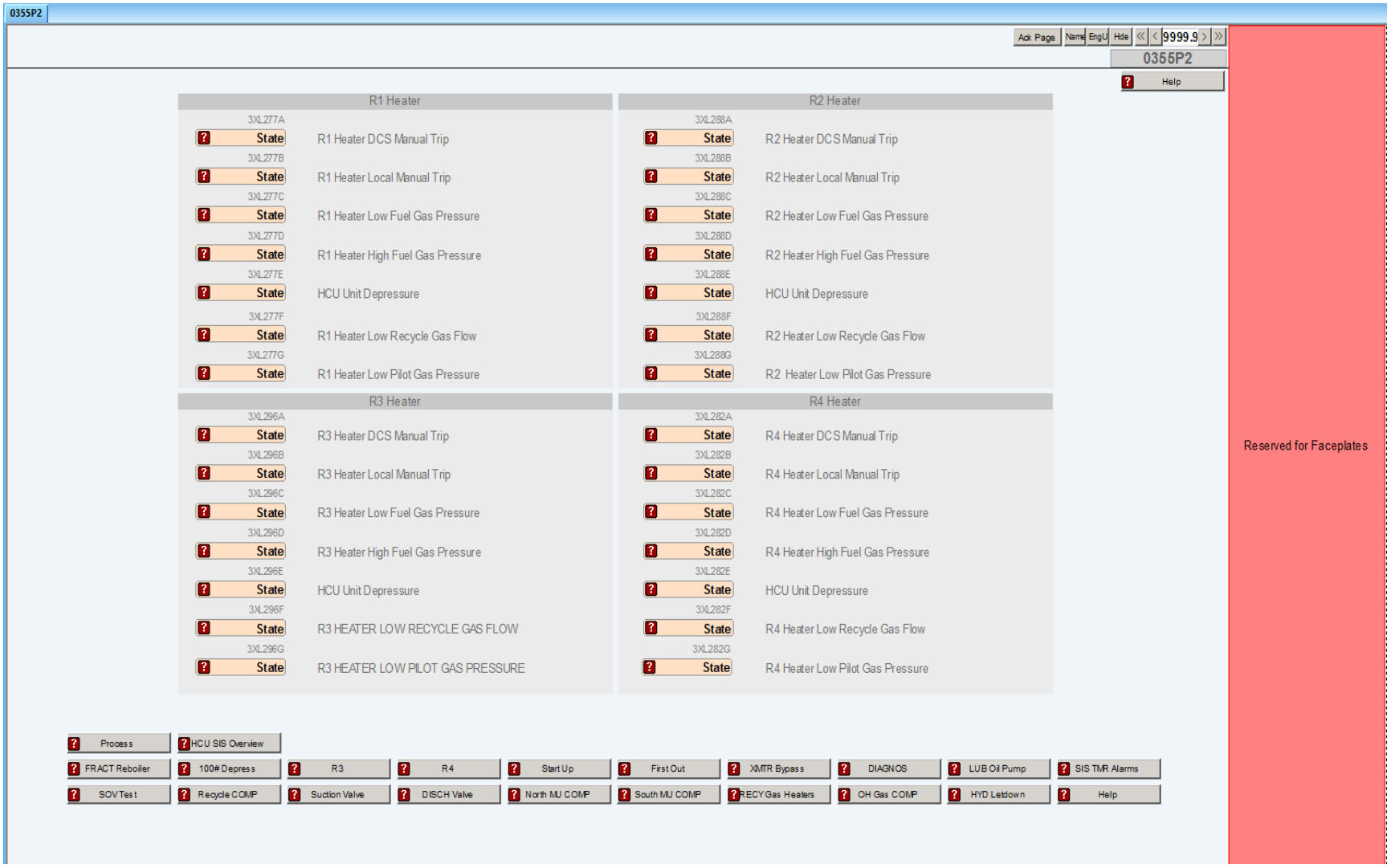

0355P1
HCU DEPRESS FIRST OUT (1 OF 3)
PROCESS
HELP
RTRN
DIR
R3 REACTOR BED 1 MAWT TEMPERATURE TRIP
R3 REACTOR BED 2 MAWT TEMPERATURE TRIP
R3 REACTOR BED 3 MAWT TEMPERATURE TRIP
R3 REACTOR BED 4 MAWT TEMPERATURE TRIP
R3 REACTOR BED 5 MAWT TEMPERATURE TRIP
R4 REACTOR BED 1 MAWT TEMPERATURE TRIP
R4 REACTOR BED 2 MAWT TEMPERATURE TRIP
R4 REACTOR BED 3 MAWT TEMPERATURE TRIP
R4 REACTOR BED 4 MAWT TEMPERATURE TRIP
R4 REACTOR BED 5 MAWT TEMPERATURE TRIP
R3 REACTOR OUTLET TEMPERATURE TRIP
R4 REACTOR OUTLET TEMPERATURE TRIP
RECYCLE COMPRESSOR LOW FLOW TRIP
R3 REACTOR >50F ABOVE AVG TRIP
R4 REACTOR >50F ABOVE AVG TRIP
100# DEPRESS MANUAL SWITCH TRIP
LOCAL MANUAL COMP SD SWITCH
@ DECK MANUAL COMP SD SWITCH
RECY COMP HIGH DISCH TEMPERATURE
RECYCLE GAS KO DRUM HIGH LEVEL
300# DEPRESS MANUAL SWITCH TRIP
LUBE OIL HEADER LOW PRESSURE
RECYCLE COMPRESSOR OVERSPEED
RECYCLE COMPRESSOR CONTROL OIL LOW PRESS
HIGH PRESS SEPARATOR LOW LEVEL
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0355P1
Ack Page
Name
Eng U
Hide
9999.9
0355P1
Help
3XL658A
State
R3 Reactor BED 1 MAWT Temperature Trip
3XL658B
State
R3 Reactor BED 2 MAWT Temperature Trip
3XL658C
State
R3 Reactor BED 3 MAWT Temperature Trip
3XL658D
State
R3 Reactor BED 4 MAWT Temperature Trip
3XL658E
State
R3 Reactor BED 5 MAWT Temperature Trip
3XL658F
State
R4 Reactor BED 1 MAWT Temperature Trip
3XL658G
State
R4 Reactor BED 2 MAWT Temperature Trip
3XL658H
State
R4 Reactor BED 3 MAWT Temperature Trip
3XL658I
State
R4 Reactor BED 4 MAWT Temperature Trip
3XL658J
State
R4 Reactor BED 5 MAWT Temperature Trip
3XL658K
State
R3 Reactor Outlet Temperature Trip
3XL658L
State
R4 Reactor Outlet Temperature Trip
3XL658M
State
Recycle Compressor Low Flow Trip
3XL658P
State
R3 Reactor >50F Above AVG Trip
3XL658Q
State
R4 Reactor >50F Above AVG Trip
3XL971A
State
100# DEPRESS Manual Switch Trip
3XL971B
State
Local Manual COMP SD Switch
3XL971P
State
@ Deck Manual COMP SD Switch
3XL971C
State
RECY COMP High DISCH Temperture
3XL971D
State
Recycle Gas KO Drum High Level
3XL971E
State
300# DEPRESS Manual Switch Trip
3XL971F
State
Lube Oil Header Low Pressure
3XL971G
State
Recycle Compressor Overspeed
3XL971H
State
Recycle Compressor Control Oil Low PRESS
3XL971N
State
High Press Separator Low Level
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
HCU SIS Overview
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RECY Gas Heaters
OH Gas COMP
HYD Letdown
Help

3.145 HCU RECY HEATERS FIRST OUT (2 OF 3) (0355P2.DS)




0355P2
HCU RECY HEATERS FIRST OUT (2 OF 3)
PROCESS
HELP
RTRN
DIR
R1 HEATER
R1 HEATER DCS MANUAL TRIP
R1 HEATER LOCAL MANUAL TRIP
R1 HEATER LOW FUEL GAS PRESSURE
R1 HEATER HIGH FUEL GAS PRESSURE
HCU UNIT DEPRESSURE
R1 HEATER LOW RECYCLE GAS FLOW
R1 HEATER LOW PILOT GAS PRESSURE
R2 HEATER
R2 HEATER DCS MANUAL TRIP
R2 HEATER LOCAL MANUAL TRIP
R2 HEATER LOW FUEL GAS PRESSURE
R2 HEATER HIGH FUEL GAS PRESSURE
HCU UNIT DEPRESSURE
R2 HEATER LOW RECYCLE GAS FLOW
R2 HEATER LOW PILOT GAS PRESSURE
R3 HEATER
R3 HEATER DCS MANUAL TRIP
R3 HEATER LOCAL MANUAL TRIP
R3 HEATER LOW FUEL GAS PRESSURE
R3 HEATER HIGH FUEL GAS PRESSURE
HCU UNIT DEPRESSURE
R3 HEATER LOW RECYCLE GAS FLOW
R3 HEATER LOW PILOT GAS PRESSURE
R4 HEATER
R4 HEATER DCS MANUAL TRIP
R4 HEATER LOCAL MANUAL TRIP
R4 HEATER LOW FUEL GAS PRESSURE
R4 HEATER HIGH FUEL GAS PRESSURE
HCU UNIT DEPRESSURE
R4 HEATER LOW RECYCLE GAS FLOW
R4 HEATER LOW PILOT GAS PRESSURE
GROUP III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0355P2
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Name
Eng U
Hide
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0355P2
Help
R1 Heater
3XL277A
State
R1 Heater DCS Manual Trip
3XL277B
State
R1 Heater Local Manual Trip
3XL277C
State
R1 Heater Low Fuel Gas Pressure
3XL277D
State
R1 Heater High Fuel Gas Pressure
3XL277E
State
HCU Unit Depressure
3XL277F
State
R1 Heater Low Recycle Gas Flow
3XL277G
State
R1 Heater Low Pilot Gas Pressure
R2 Heater
3XL288A
State
R2 Heater DCS Manual Trip
3XL288B
State
R2 Heater Local Manual Trip
3XL288C
State
R2 Heater Low Fuel Gas Pressure
3XL288D
State
R2 Heater High Fuel Gas Pressure
3XL288E
State
HCU Unit Depressure
3XL288F
State
R2 Heater Low Recycle Gas Flow
3XL288G
State
R2 Heater Low Pilot Gas Pressure
R3 Heater
3XL296A
State
R3 Heater DCS Manual Trip
3XL296B
State
R3 Heater Local Manual Trip
3XL296C
State
R3 Heater Low Fuel Gas Pressure
3XL296D
State
R3 Heater High Fuel Gas Pressure
3XL296E
State
HCU Unit Depressure
3XL296F
State
R3 HEATER LOW RECYCLE GAS FLOW
3XL296G
State
R3 HEATER LOW PILOT GAS PRESSURE
R4 Heater
3XL282A
State
R4 Heater DCS Manual Trip
3XL282B
State
R4 Heater Local Manual Trip
3XL282C
State
R4 Heater Low Fuel Gas Pressure
3XL282D
State
R4 Heater High Fuel Gas Pressure
3XL282E
State
HCU Unit Depressure
3XL282F
State
R4 Heater Low Recycle Gas Flow
3XL282G
State
R4 Heater Low Pilot Gas Pressure
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
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R4
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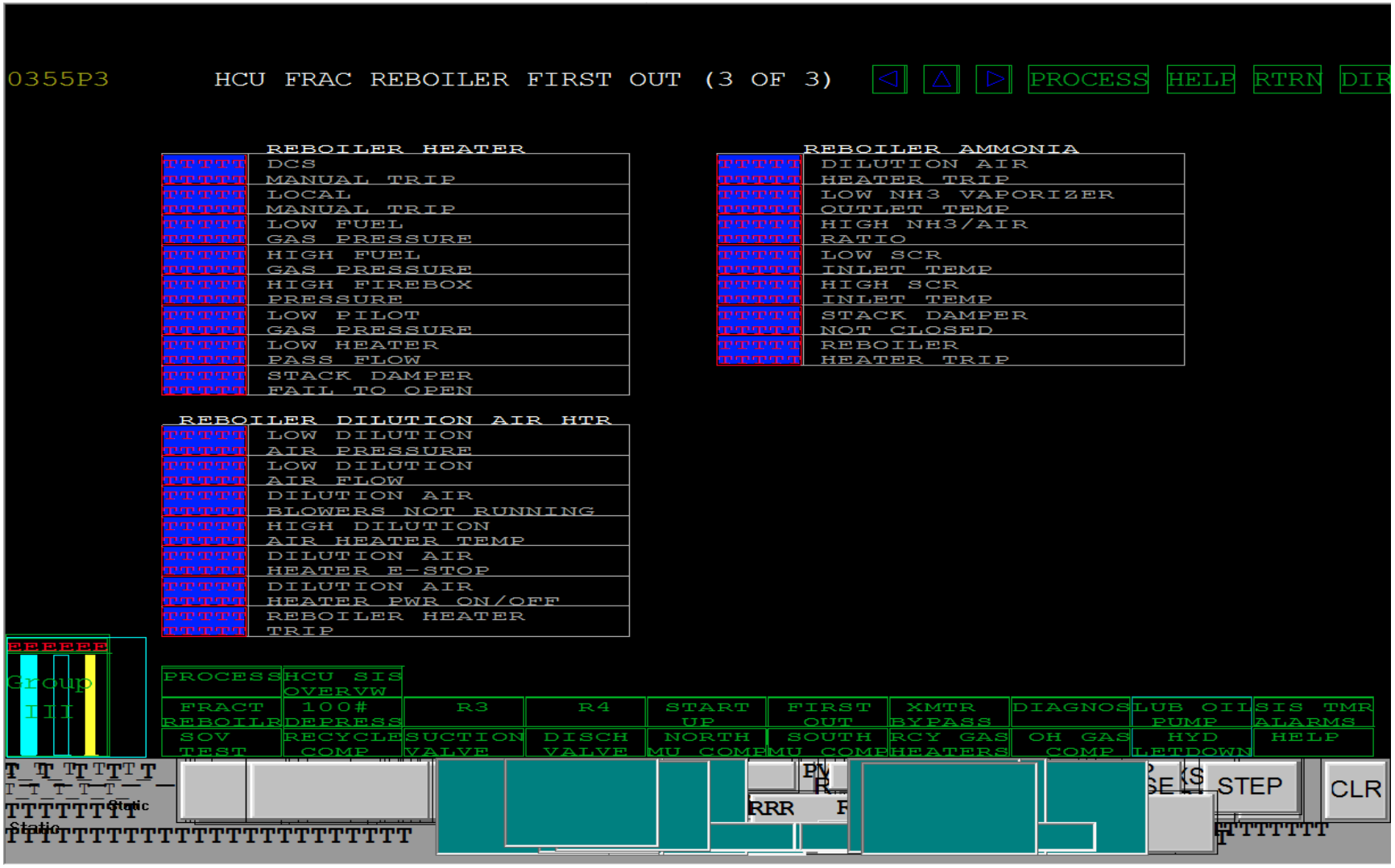
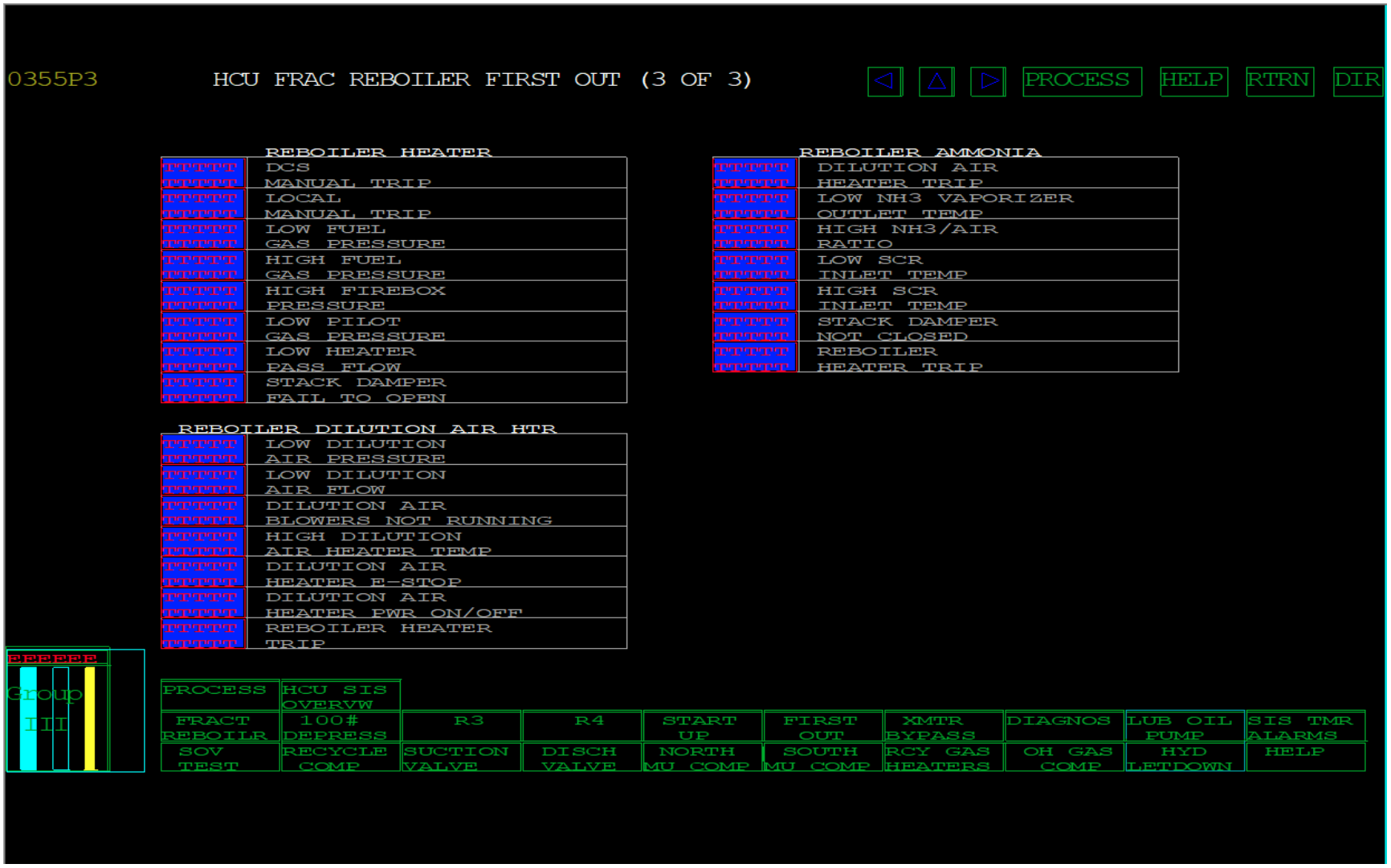
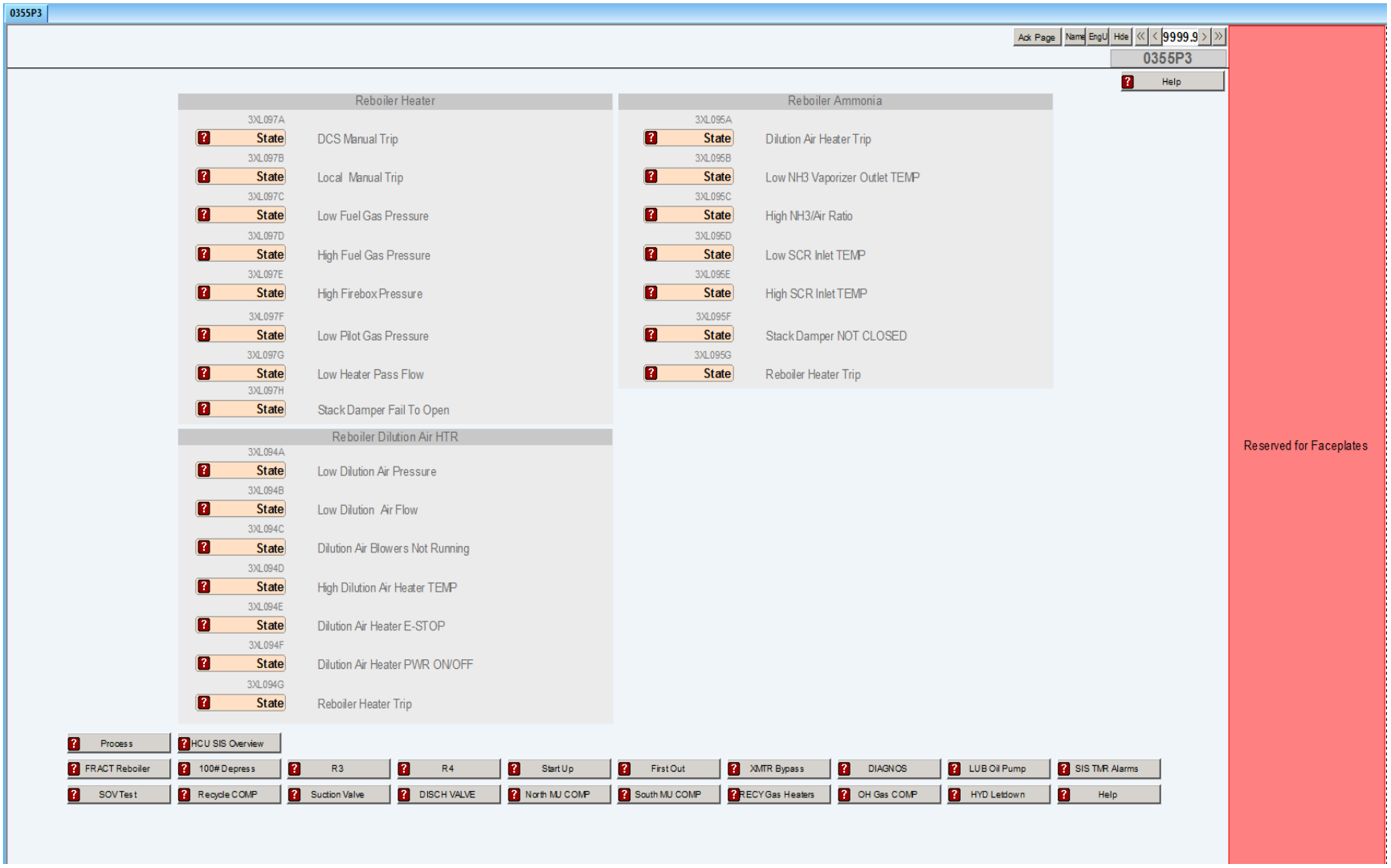
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RECY Gas Heaters
OH Gas COMP
HYD Letdown
Help

3.146 HCU FRAC REBOILER FIRST OUT (3 OF 3) (0355P3.DS)




0355P3
HCU FRAC REBOILER FIRST OUT (3 OF 3)
PROCESS
HELP
RTRN
DIR
REBOILER HEATER
DCS
MANUAL TRIP
LOCAL
MANUAL TRIP
LOW FUEL
GAS PRESSURE
HIGH FUEL
GAS PRESSURE
HIGH FIREBOX
PRESSURE
LOW PILOT
GAS PRESSURE
LOW HEATER
PASS FLOW
STACK DAMPER
FAIL TO OPEN
REBOILER AMMONIA
DILUTION AIR
HEATER TRIP
LOW NH3 VAPORIZER
OUTLET TEMP
HIGH NH3/AIR
RATIO
LOW SCR
INLET TEMP
HIGH SCR
INLET TEMP
STACK DAMPER
NOT CLOSED
REBOILER
HEATER TRIP
REBOILER DILUTION AIR HTR
LOW DILUTION
AIR PRESSURE
LOW DILUTION
AIR FLOW
DILUTION AIR
BLOWERS NOT RUNNING
HIGH DILUTION
AIR HEATER TEMP
DILUTION AIR
HEATER E-STOP
DILUTION AIR
HEATER PWR ON/OFF
REBOILER HEATER
TRIP
Group
III
PROCESS
HCU SIS
OVERVW
FRACT
REBOILR
100#
DEPRESS
R3
R4
START
UP
FIRST
OUT
XMTR
BYPASS
DIAGNOS
LUB OIL
PUMP
SIS TMR
ALARMS
SOV
TEST
RECYCLE
COMP
SUCTION
VALVE
DISCH
VALVE
NORTH
MU COMP
SOUTH
MU COMP
RCY GAS
HEATERS
OH GAS
COMP
HYD
LETDOWN
HELP


0355P3
Ack Page
Name
Eng U
Hide
9999.9
0355P3
Help
Reboiler Heater
3XL097A
State
DCS Manual Trip
3XL097B
State
Local Manual Trip
3XL097C
State
Low Fuel Gas Pressure
3XL097D
State
High Fuel Gas Pressure
3XL097E
State
High Firebox Pressure
3XL097F
State
Low Pilot Gas Pressure
3XL097G
State
Low Heater Pass Flow
3XL097H
State
Stack Damper Fail To Open
Reboiler Ammonia
3XL095A
State
Dilution Air Heater Trip
3XL095B
State
Low NH3 Vaporizer Outlet TEMP
3XL095C
State
High NH3/Air Ratio
3XL095D
State
Low SCR Inlet TEMP
3XL095E
State
High SCR Inlet TEMP
3XL095F
State
Stack Damper NOT CLOSED
3XL095G
State
Reboiler Heater Trip
Reboiler Dilution Air HTR
3XL094A
State
Low Dilution Air Pressure
3XL094B
State
Low Dilution Air Flow
3XL094C
State
Dilution Air Blowers Not Running
3XL094D
State
High Dilution Air Heater TEMP
3XL094E
State
Dilution Air Heater E-STOP
3XL094F
State
Dilution Air Heater PWR ON/OFF
3XL094G
State
Reboiler Heater Trip
Reserved for Faceplates
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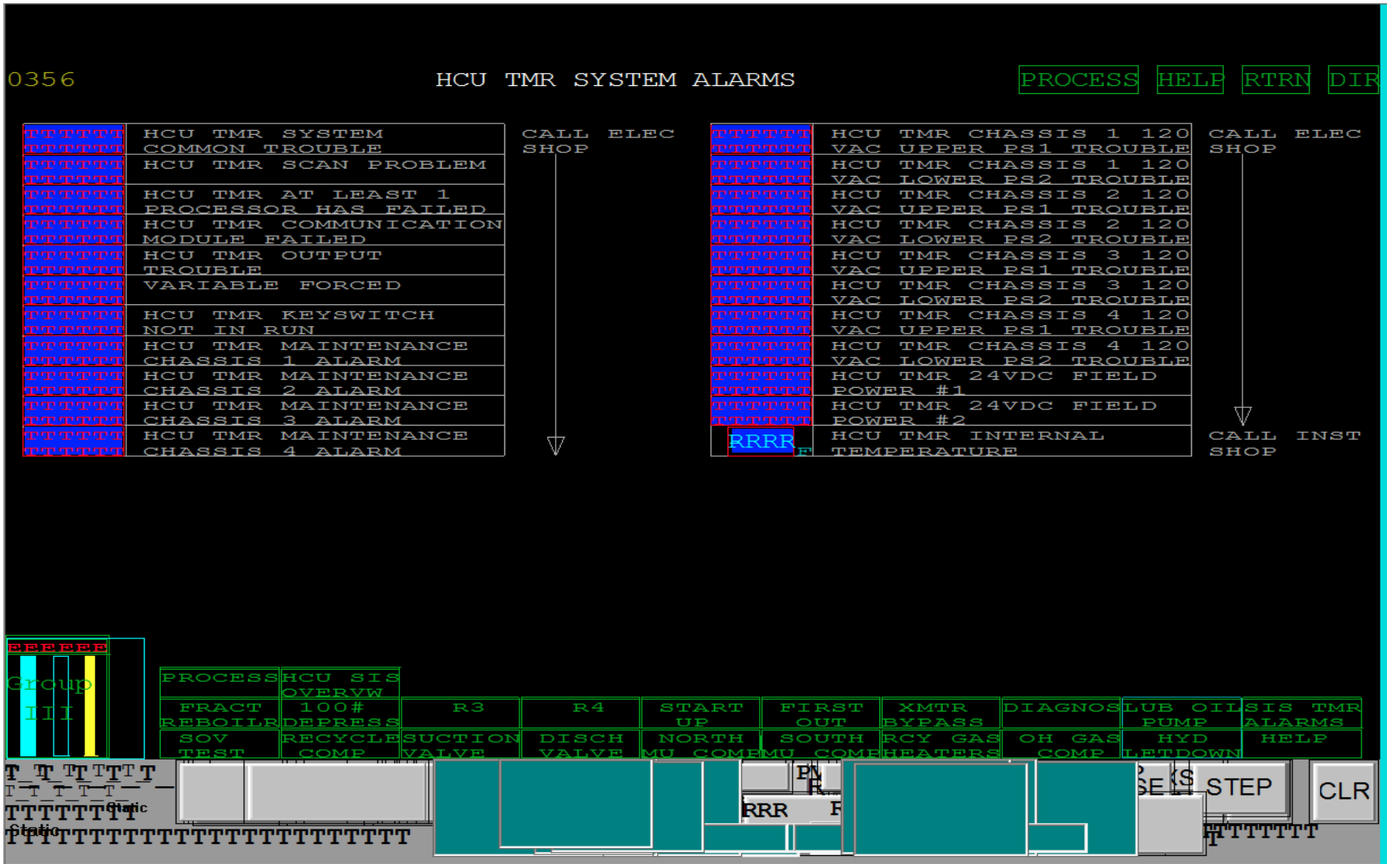
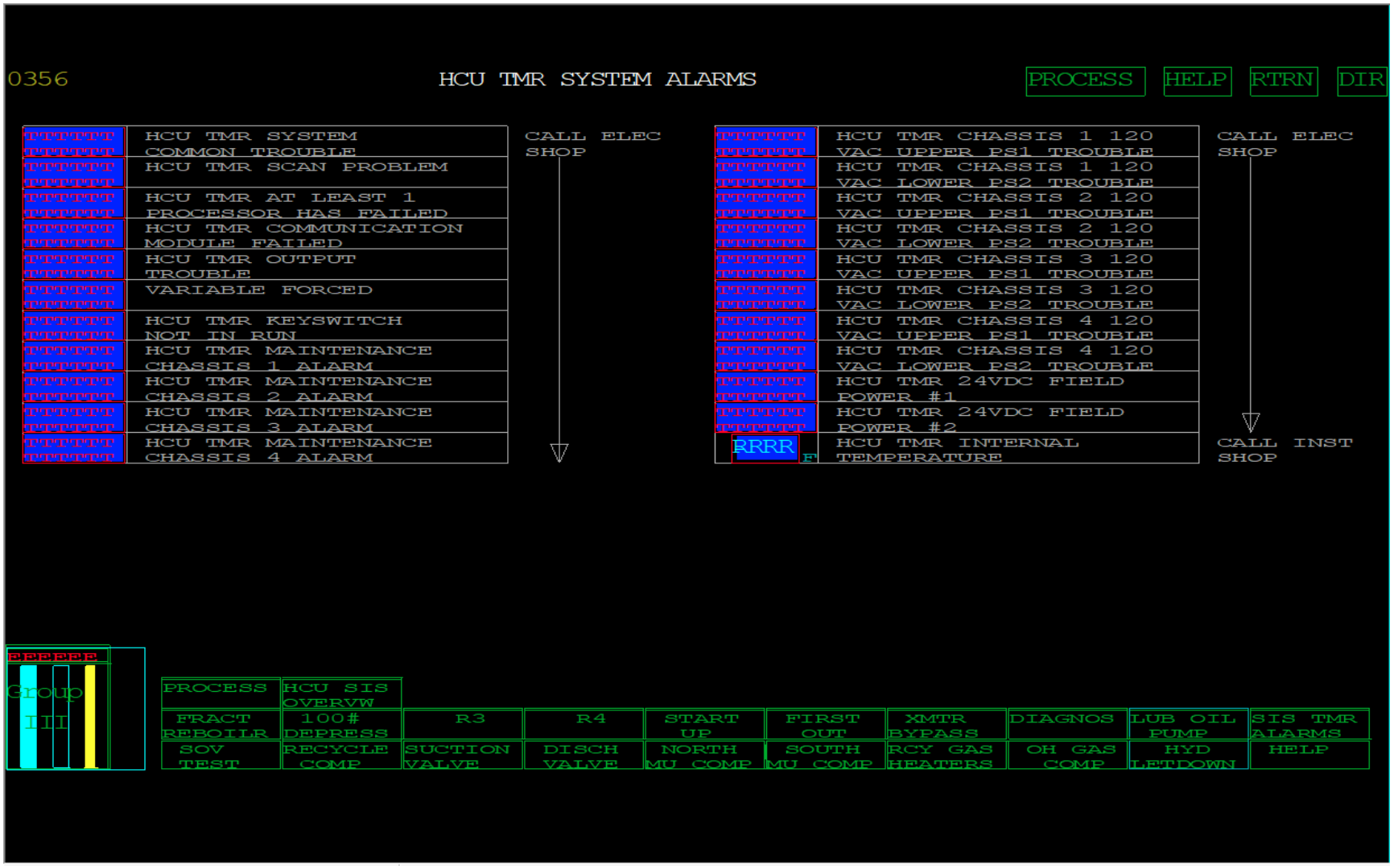
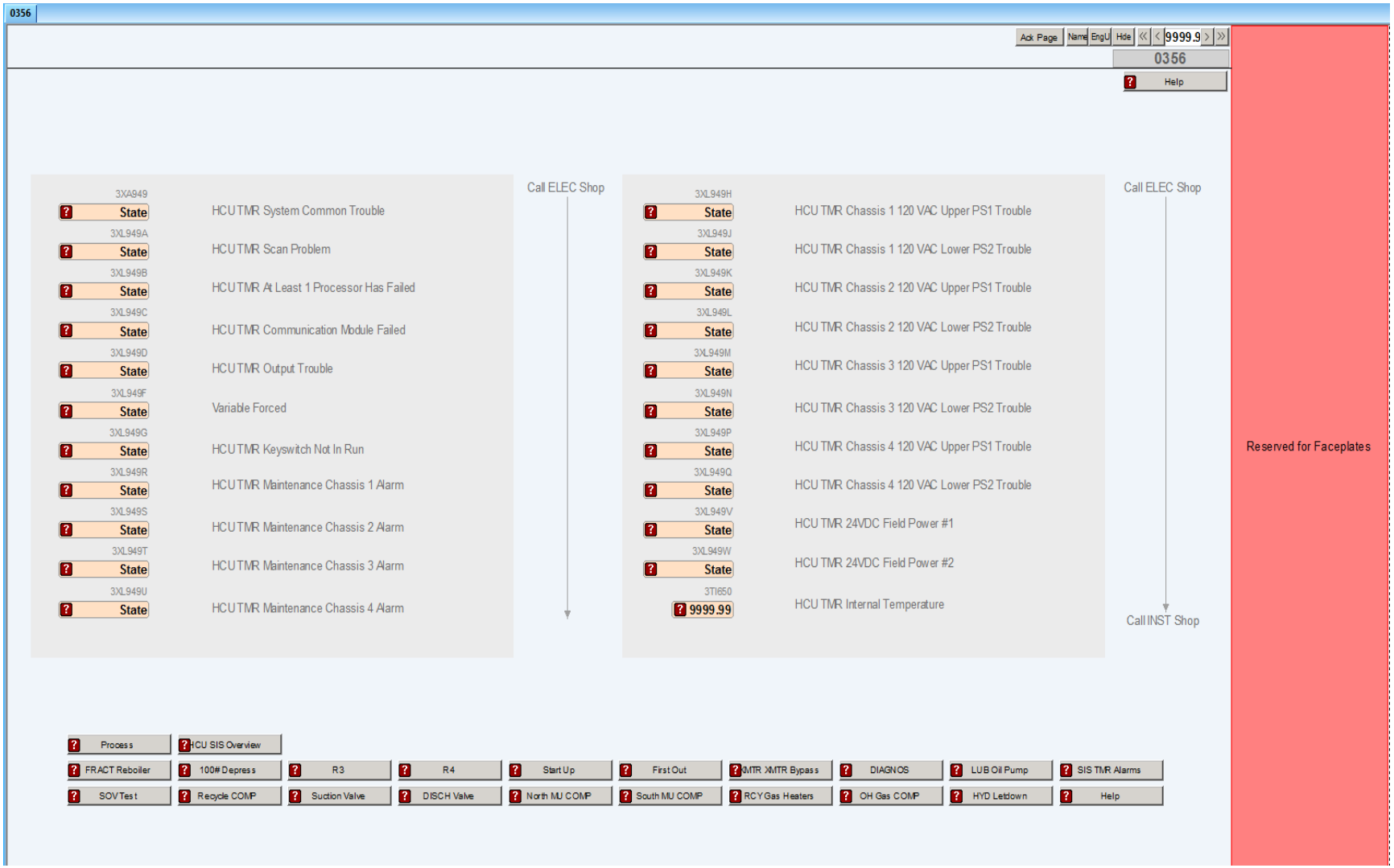
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH VALVE
North MU COMP
South MU COMP
RECY Gas Heaters
OH Gas COMP
HYD Letdown
Help

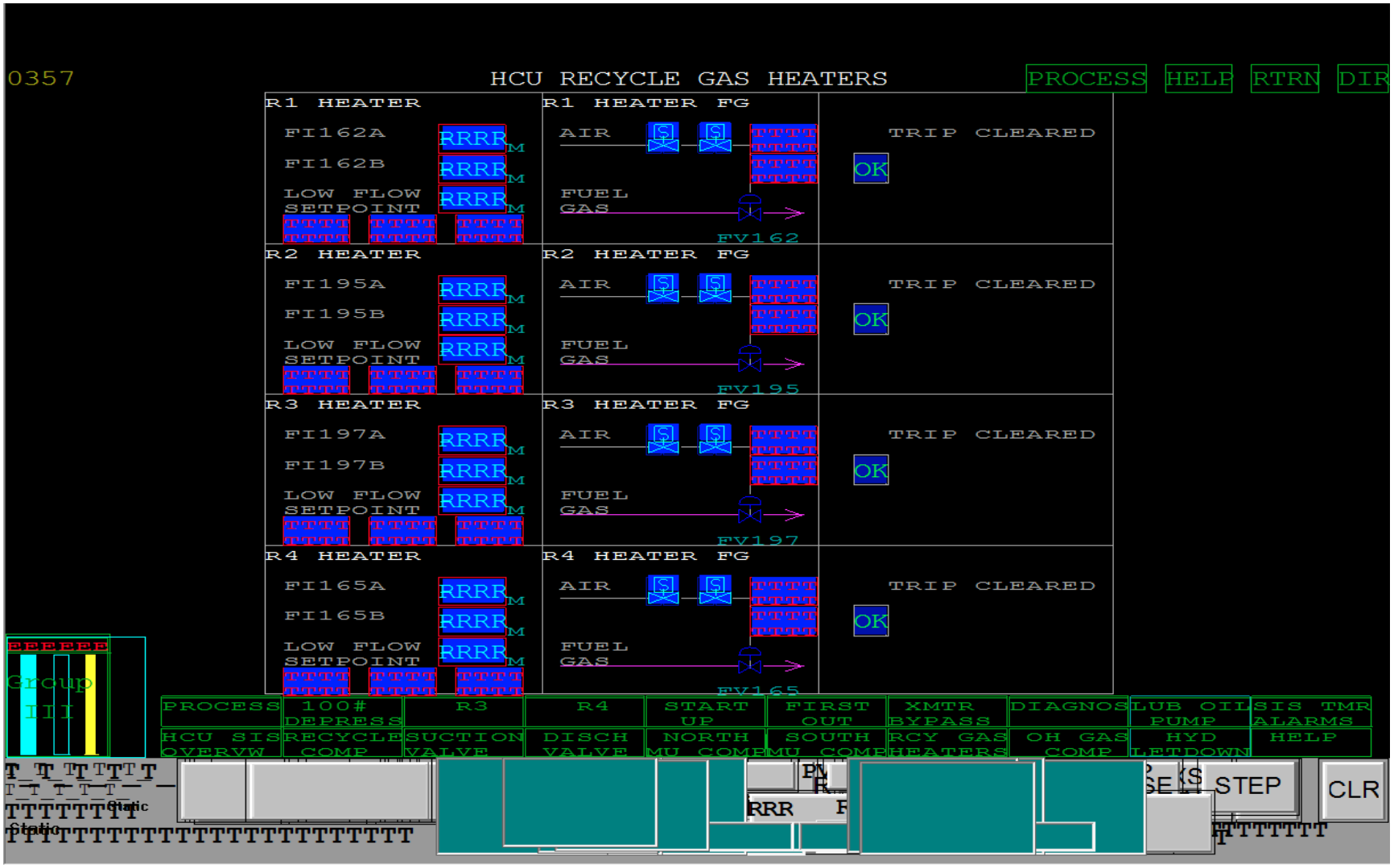
3.147 HCU TMR SYSTEM ALARMS (0356.DS)

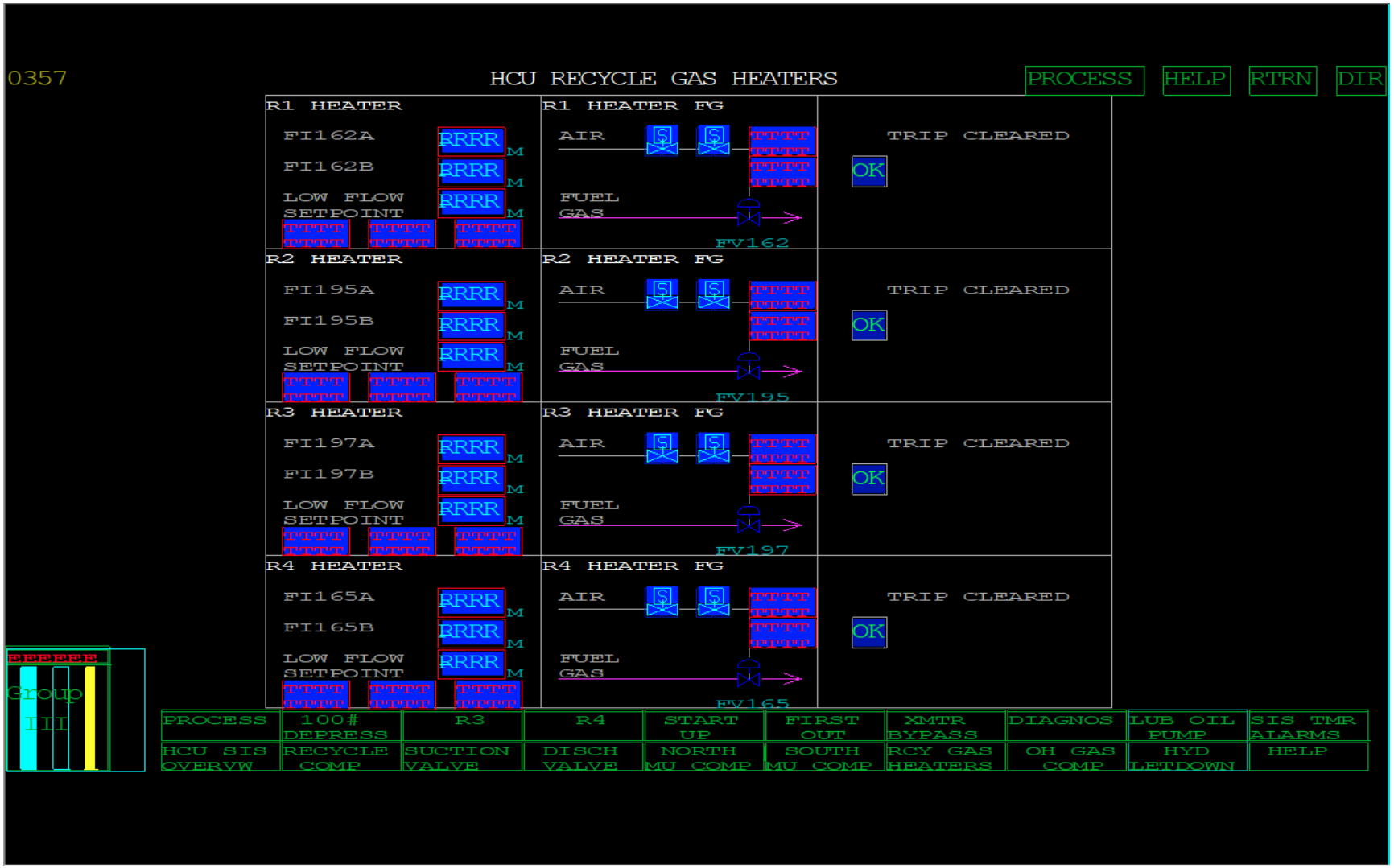


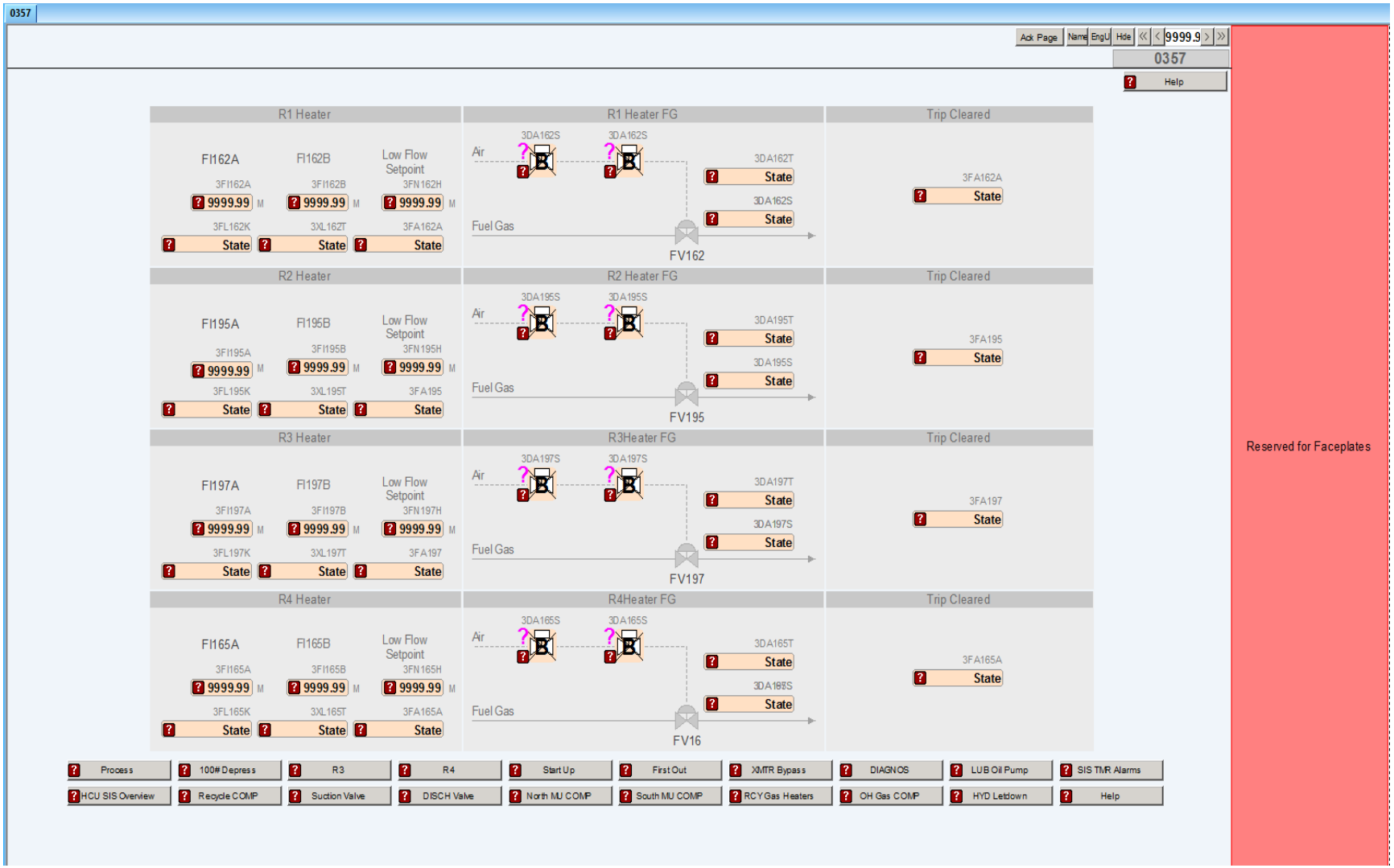

0356
HCU TMR SYSTEM ALARMS
PROCESS
HELP
RTRN
DIR
TTTTTT HCU TMR SYSTEM COMMON TROUBLE
TTTTTT HCU TMR SCAN PROBLEM
TTTTTT HCU TMR AT LEAST 1 PROCESSOR HAS FAILED
TTTTTT HCU TMR COMMUNICATION MODULE FAILED
TTTTTT HCU TMR OUTPUT TROUBLE
TTTTTT VARIABLE FORCED
TTTTTT HCU TMR KEYSWITCH NOT IN RUN
TTTTTT HCU TMR MAINTENANCE CHASSIS 1 ALARM
TTTTTT HCU TMR MAINTENANCE CHASSIS 2 ALARM
TTTTTT HCU TMR MAINTENANCE CHASSIS 3 ALARM
TTTTTT HCU TMR MAINTENANCE CHASSIS 4 ALARM
CALL ELEC SHOP
TTTTTT HCU TMR CHASSIS 1 120 VAC UPPER PS1 TROUBLE
TTTTTT HCU TMR CHASSIS 1 120 VAC LOWER PS2 TROUBLE
TTTTTT HCU TMR CHASSIS 2 120 VAC UPPER PS1 TROUBLE
TTTTTT HCU TMR CHASSIS 2 120 VAC LOWER PS2 TROUBLE
TTTTTT HCU TMR CHASSIS 3 120 VAC UPPER PS1 TROUBLE
TTTTTT HCU TMR CHASSIS 3 120 VAC LOWER PS2 TROUBLE
TTTTTT HCU TMR CHASSIS 4 120 VAC UPPER PS1 TROUBLE
TTTTTT HCU TMR CHASSIS 4 120 VAC LOWER PS2 TROUBLE
TTTTTT HCU TMR 24VDC FIELD POWER #1
TTTTTT HCU TMR 24VDC FIELD POWER #2
RRRR F HCU TMR INTERNAL TEMPERATURE
CALL ELEC SHOP
CALL INST SHOP
BEEPER
Group III
PROCESS
HCU SIS OVERVW
FRACT HEATER
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0356
Ack Page
Name
Eng'U
Hide
9999.9
0356
Help
3XA949
State
HCU TMR System Common Trouble
3XL949A
State
HCU TMR Scan Problem
3XL949B
State
HCU TMR At Least 1 Processor Has Failed
3XL949C
State
HCU TMR Communication Module Failed
3XL949D
State
HCU TMR Output Trouble
3XL949F
State
Variable Forced
3XL949G
State
HCU TMR Keyswitch Not In Run
3XL949R
State
HCU TMR Maintenance Chassis 1 Alarm
3XL949S
State
HCU TMR Maintenance Chassis 2 Alarm
3XL949T
State
HCU TMR Maintenance Chassis 3 Alarm
3XL949U
State
HCU TMR Maintenance Chassis 4 Alarm
Call ELEC Shop
3XL949H
State
HCU TMR Chassis 1 120 VAC Upper PS1 Trouble
3XL949J
State
HCU TMR Chassis 1 120 VAC Lower PS2 Trouble
3XL949K
State
HCU TMR Chassis 2 120 VAC Upper PS1 Trouble
3XL949L
State
HCU TMR Chassis 2 120 VAC Lower PS2 Trouble
3XL949M
State
HCU TMR Chassis 3 120 VAC Upper PS1 Trouble
3XL949N
State
HCU TMR Chassis 3 120 VAC Lower PS2 Trouble
3XL949P
State
HCU TMR Chassis 4 120 VAC Upper PS1 Trouble
3XL949Q
State
HCU TMR Chassis 4 120 VAC Lower PS2 Trouble
3XL949V
State
HCU TMR 24VDC Field Power #1
3XL949W
State
HCU TMR 24VDC Field Power #2
3TI650
9999.99
HCU TMR Internal Temperature
Call ELEC Shop
Call INST Shop
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

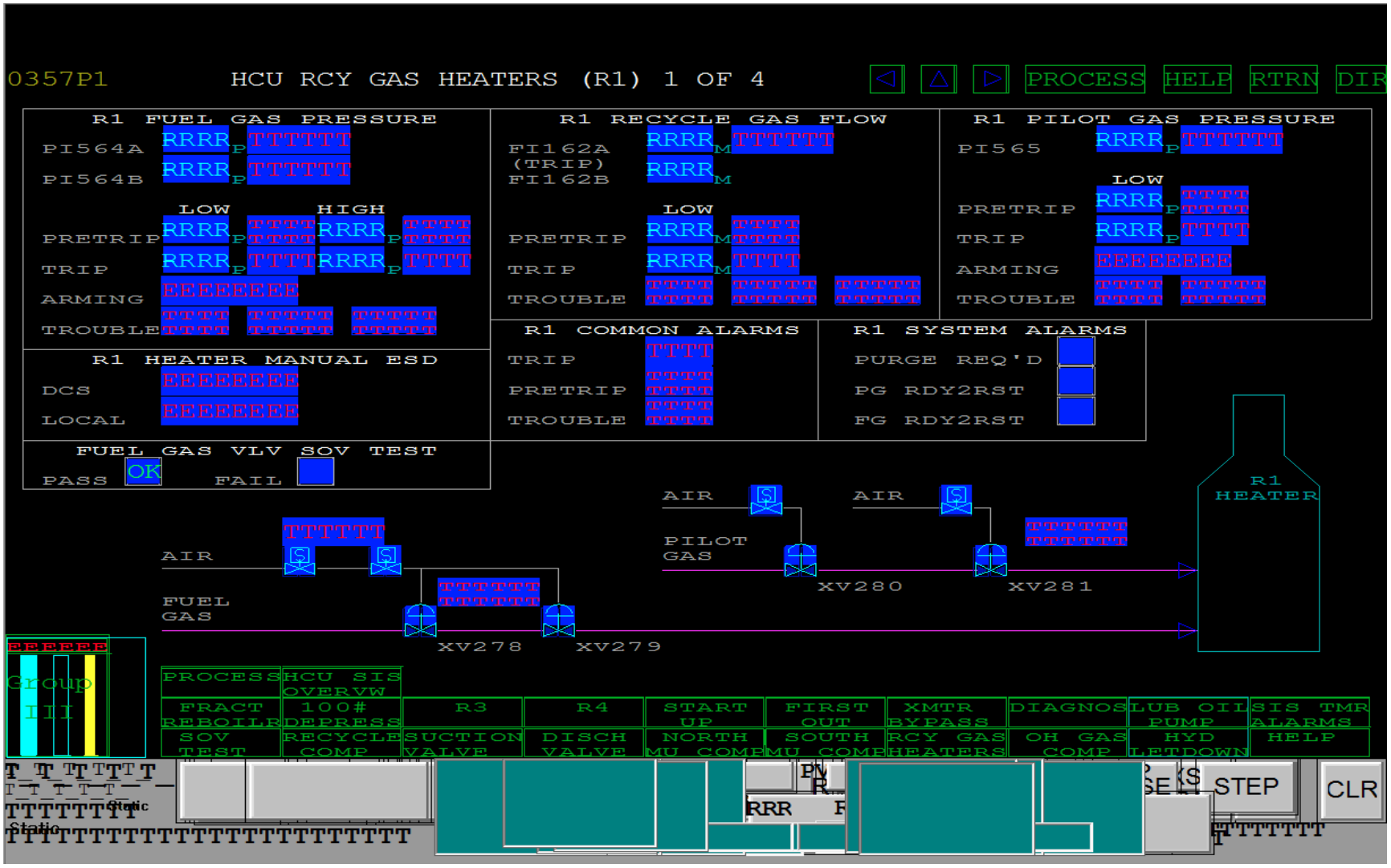
3.148 HCU RECYCLE GAS HEATERS (0357.DS)

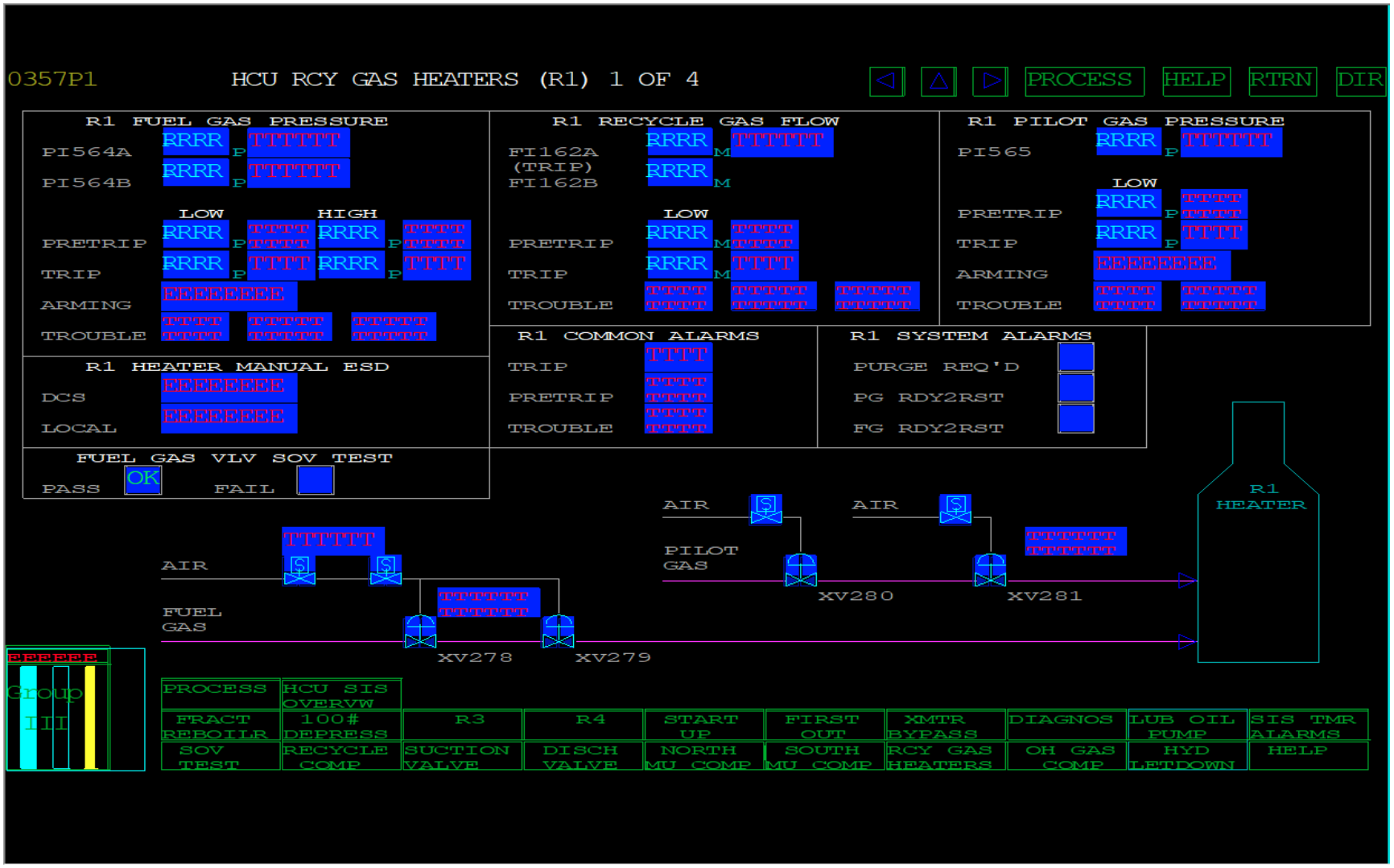


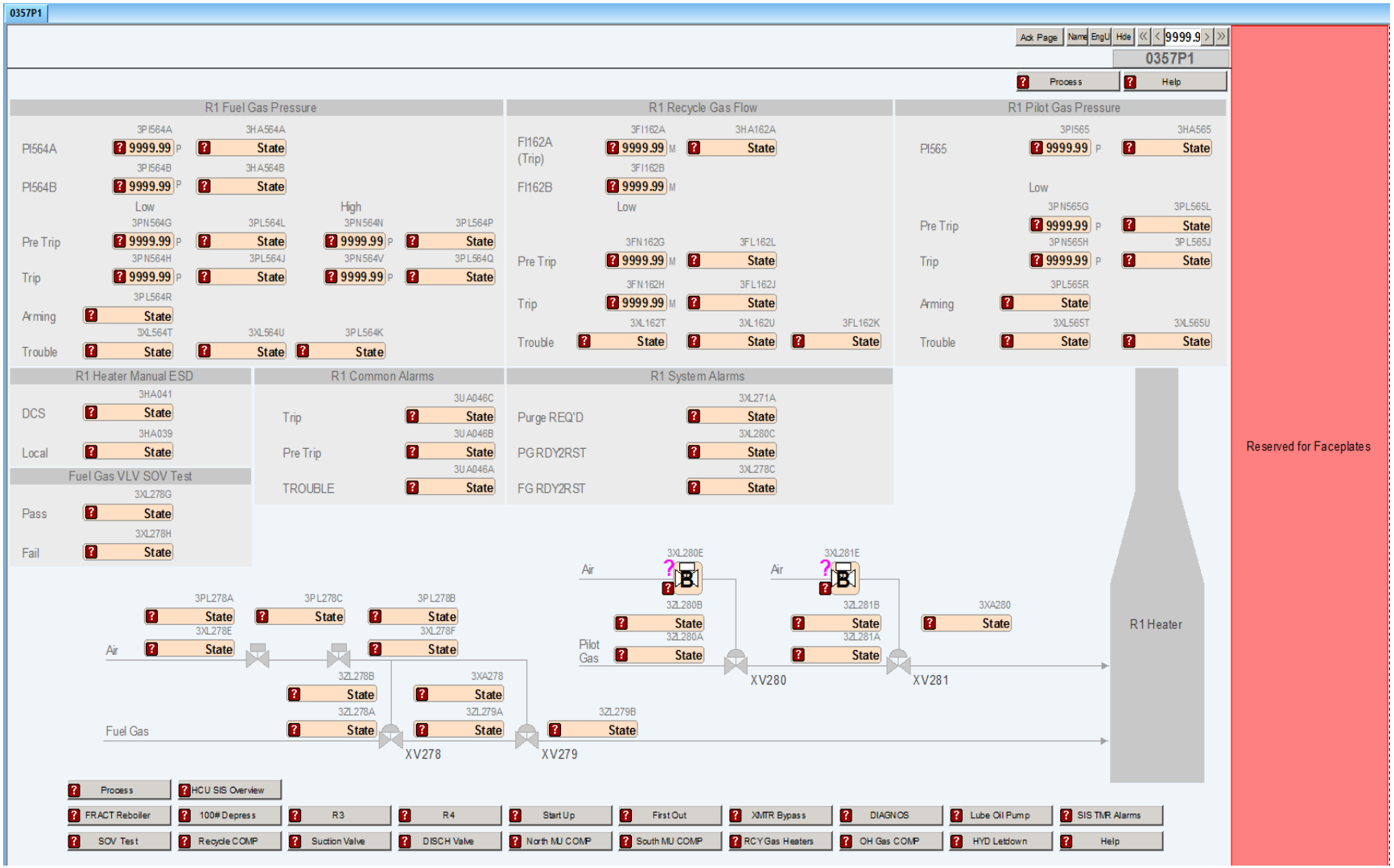

0357
HCU RECYCLE GAS HEATERS
PROCESS
HELP
RTRN
DIR
R1 HEATER
FI162A
FI162B
LOW FLOW SETPOINT
R1 HEATER FG
AIR
FUEL GAS
FV162
TRIP CLEARED
OK
R2 HEATER
FI195A
FI195B
LOW FLOW SETPOINT
R2 HEATER FG
AIR
FUEL GAS
FV195
TRIP CLEARED
OK
R3 HEATER
FI197A
FI197B
LOW FLOW SETPOINT
R3 HEATER FG
AIR
FUEL GAS
FV197
TRIP CLEARED
OK
R4 HEATER
FI165A
FI165B
LOW FLOW SETPOINT
R4 HEATER FG
AIR
FUEL GAS
FV165
TRIP CLEARED
OK
Group III
PROCESS
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
HCU SIS OVERVW
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0357
Ack Page
Name
Eng U
Hide
9999.9
0357
Help
R1 Heater
FI162A
FI162B
Low Flow Setpoint
3FI162A
3FI162B
3FN162H
9999.99
M
3FL162K
3XL162T
3FA162A
State
R1 Heater FG
3DA162S
Air
Fuel Gas
3DA162T
3DA162S
FV162
Trip Cleared
3FA162A
R2 Heater
FI195A
FI195B
Low Flow Setpoint
3FI195A
3FI195B
3FN195H
3FL195K
3XL195T
3FA195
R2 Heater FG
3DA195S
3DA195T
3DA195S
FV195
Trip Cleared
3FA195
R3 Heater
FI197A
FI197B
Low Flow Setpoint
3FI197A
3FI197B
3FN197H
3FL197K
3XL197T
3FA197
R3Heater FG
3DA197S
3DA197T
3DA197S
FV197
Trip Cleared
3FA197
R4 Heater
FI165A
FI165B
Low Flow Setpoint
3FI165A
3FI165B
3FN165H
3FL165K
3XL165T
3FA165A
R4Heater FG
3DA165S
3DA165T
FV16
Trip Cleared
3FA165A
Reserved for Faceplates
Process
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
HCU SIS Overview
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

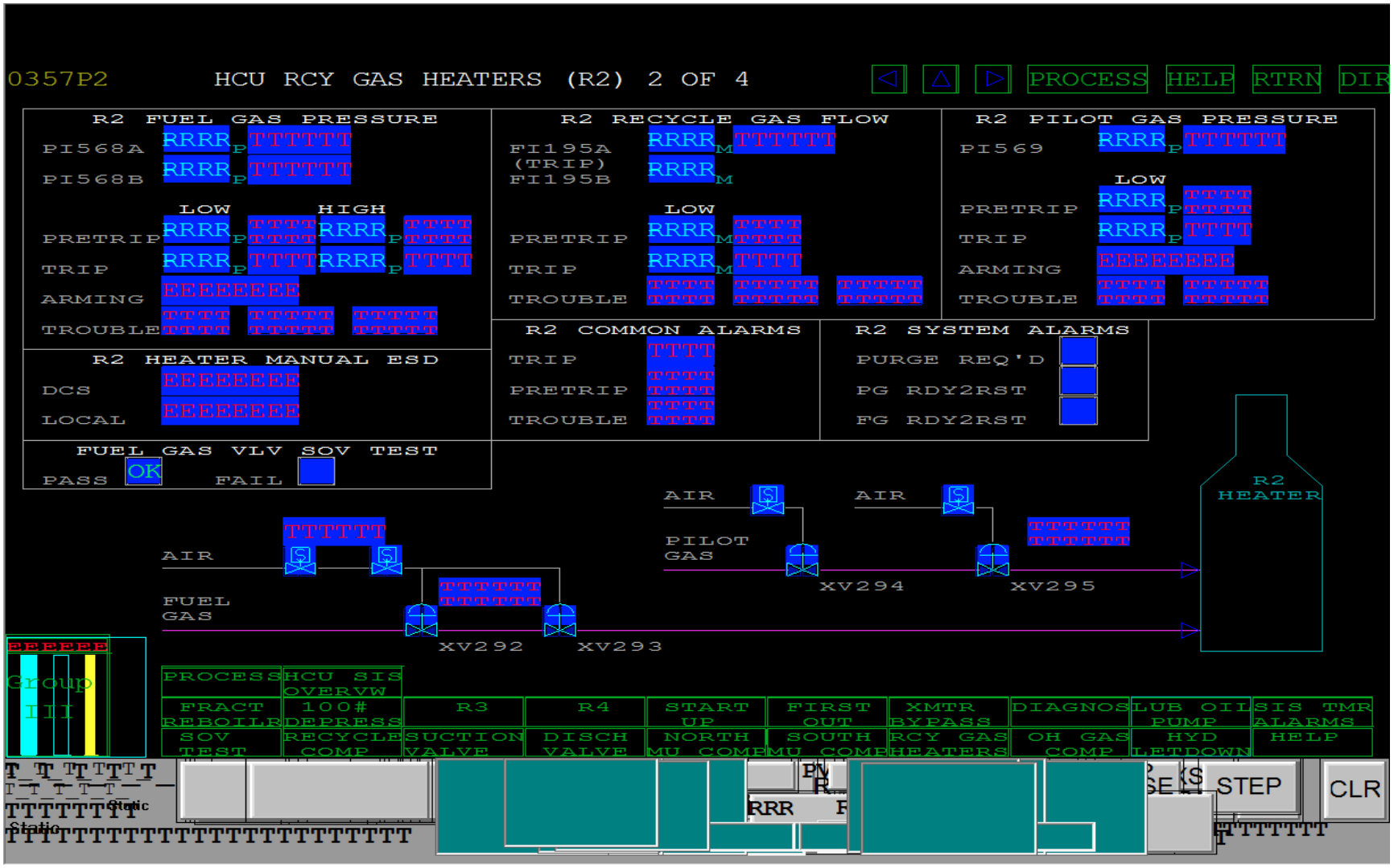
3.149 HCU RCY GAS HEATERS (R1) 1 OF 4 (0357P1.DS)

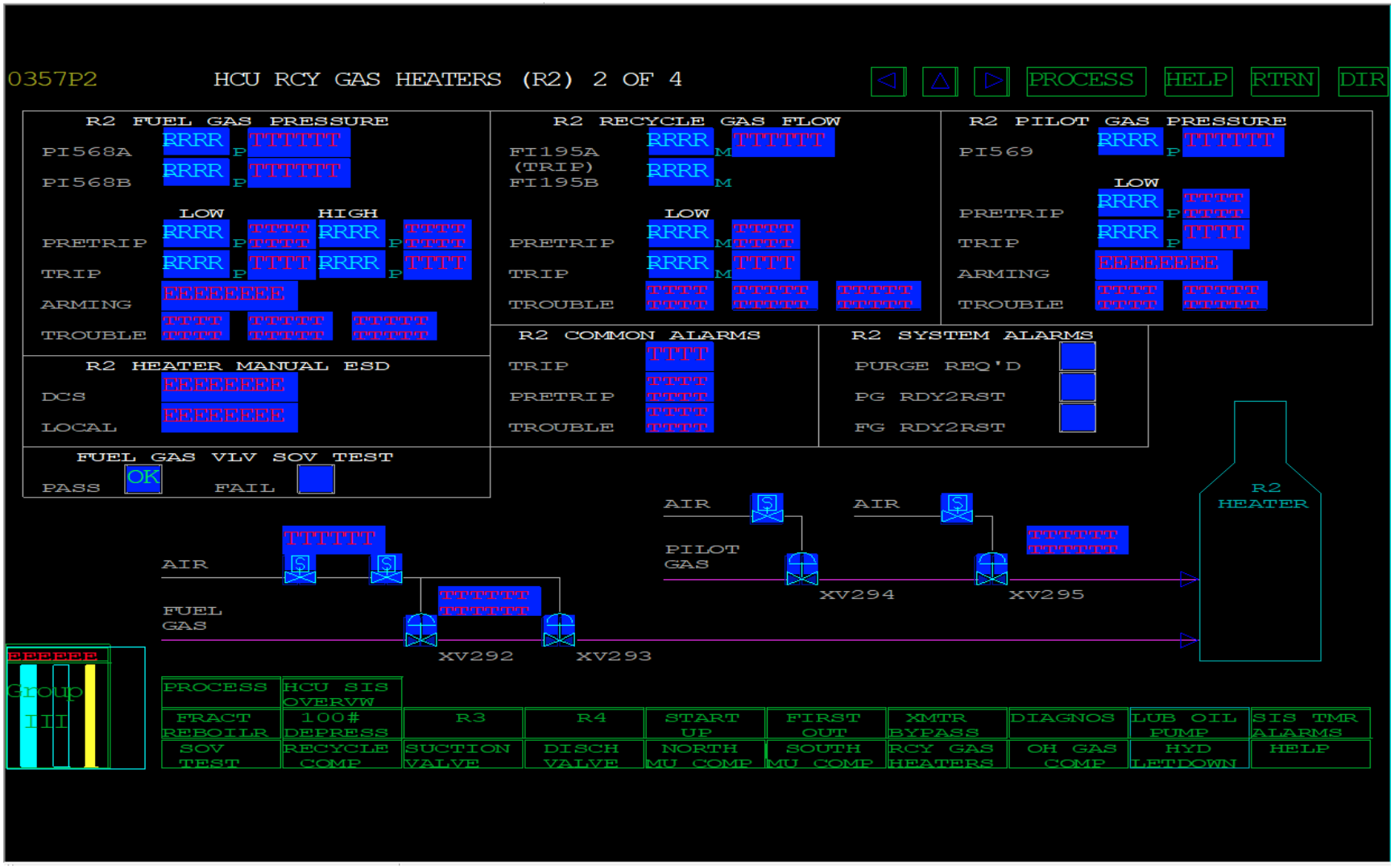


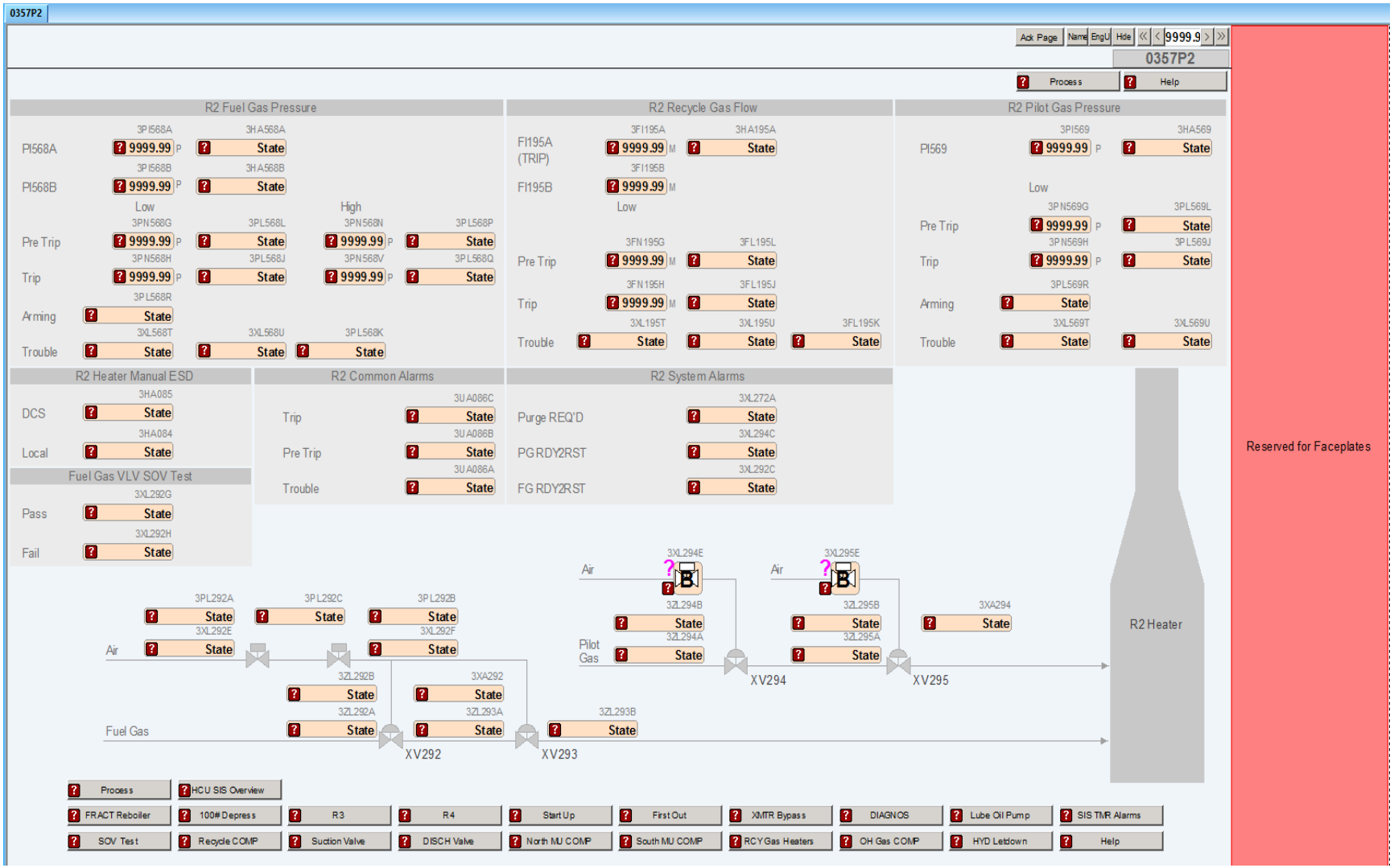

0357P1
HCU RCY GAS HEATERS (R1) 1 OF 4
PROCESS
HELP
RTRN
DIR
R1 FUEL GAS PRESSURE
PI564A
PI564B
LOW
HIGH
PRETRIP
TRIP
ARMING
TROUBLE
R1 RECYCLE GAS FLOW
FI162A (TRIP)
FI162B
R1 PILOT GAS PRESSURE
PI565
R1 HEATER MANUAL ESD
DCS
LOCAL
R1 COMMON ALARMS
R1 SYSTEM ALARMS
PURGE REQ'D
PG RDY2RST
FG RDY2RST
FUEL GAS VLV SOV TEST
PASS
OK
FAIL
AIR
PILOT GAS
FUEL GAS
XV278
XV279
XV280
XV281
R1 HEATER
GROUP III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0357P1
Ack Page
Name
EngU
Hide
9999.9
0357P1
Process
Help
R1 Fuel Gas Pressure
PI564A
PI564B
Low
High
Pre Trip
Trip
Arming
Trouble
R1 Recycle Gas Flow
FI162A (Trip)
FI162B
Low
Pre Trip
Trip
Trouble
R1 Pilot Gas Pressure
PI565
Low
Pre Trip
Trip
Arming
Trouble
R1 Heater Manual ESD
DCS
Local
Fuel Gas VLV SOV Test
Pass
Fail
R1 Common Alarms
Trip
Pre Trip
TROUBLE
R1 System Alarms
Purge REQ'D
PG RDY2RST
FG RDY2RST
Reserved for Faceplates
Air
Pilot Gas
Fuel Gas
XV278
XV279
XV280
XV281
R1 Heater
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

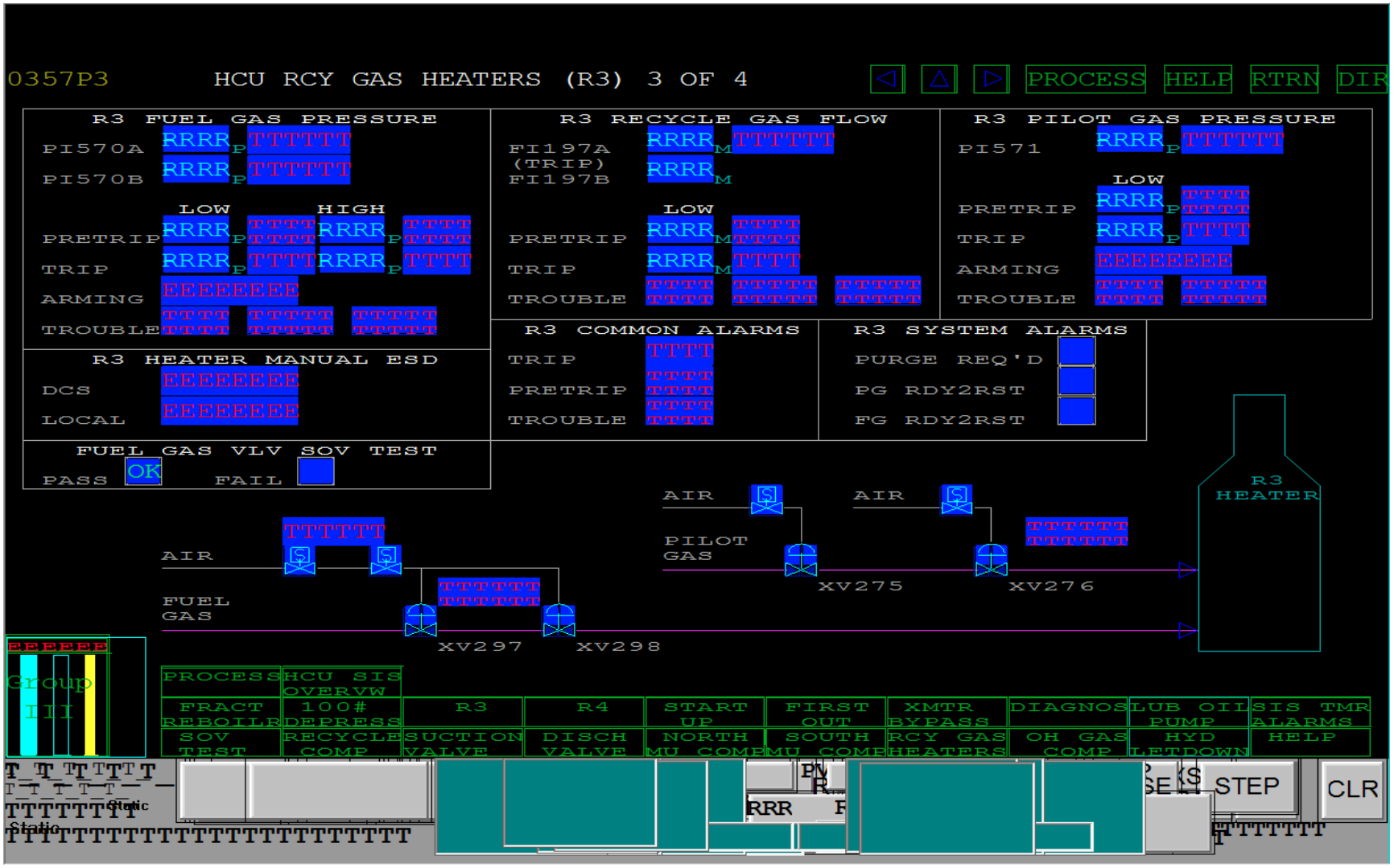
3.150 HCU RCY GAS HEATERS (R2) 2 OF 4 (0357P2.DS)

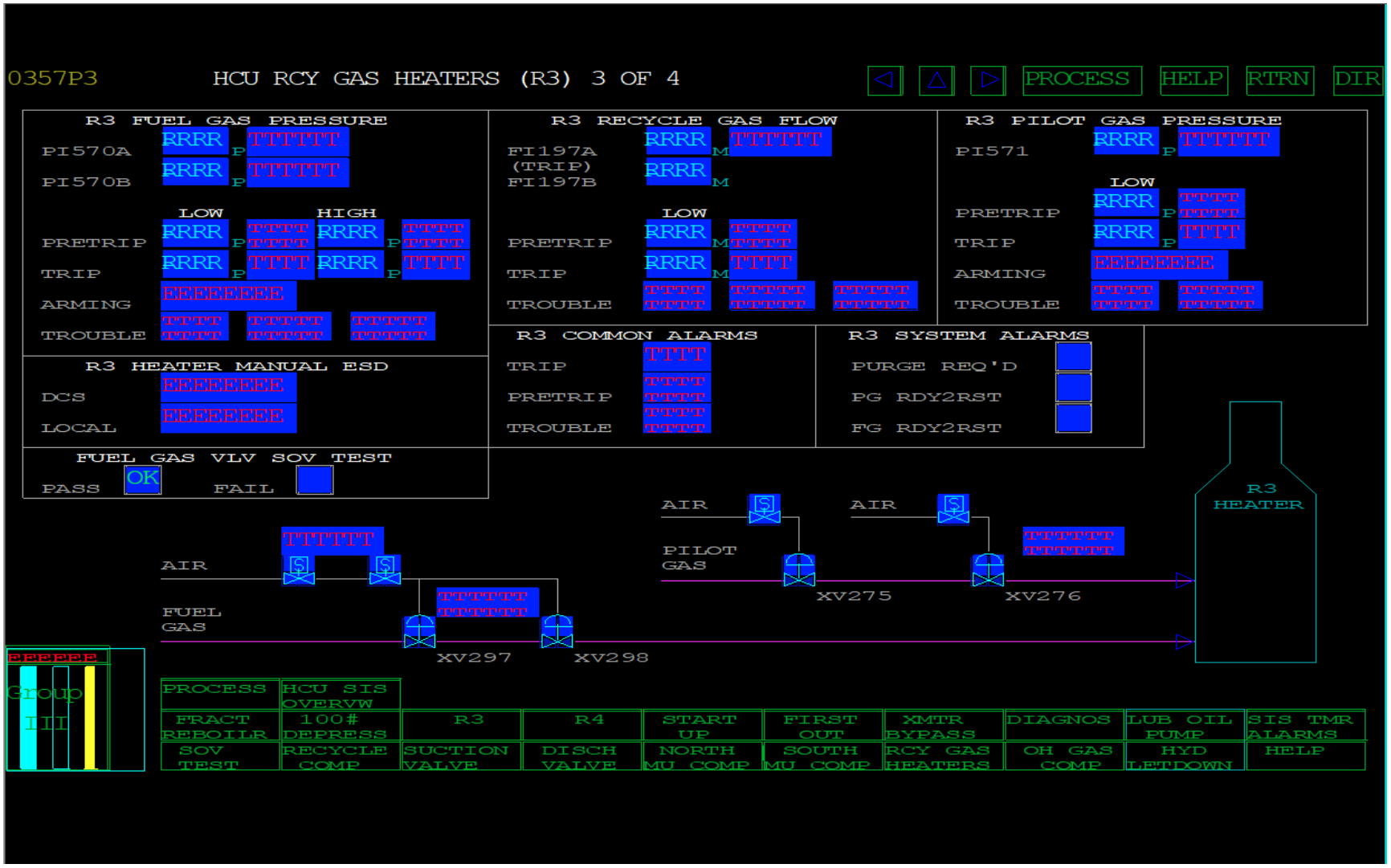


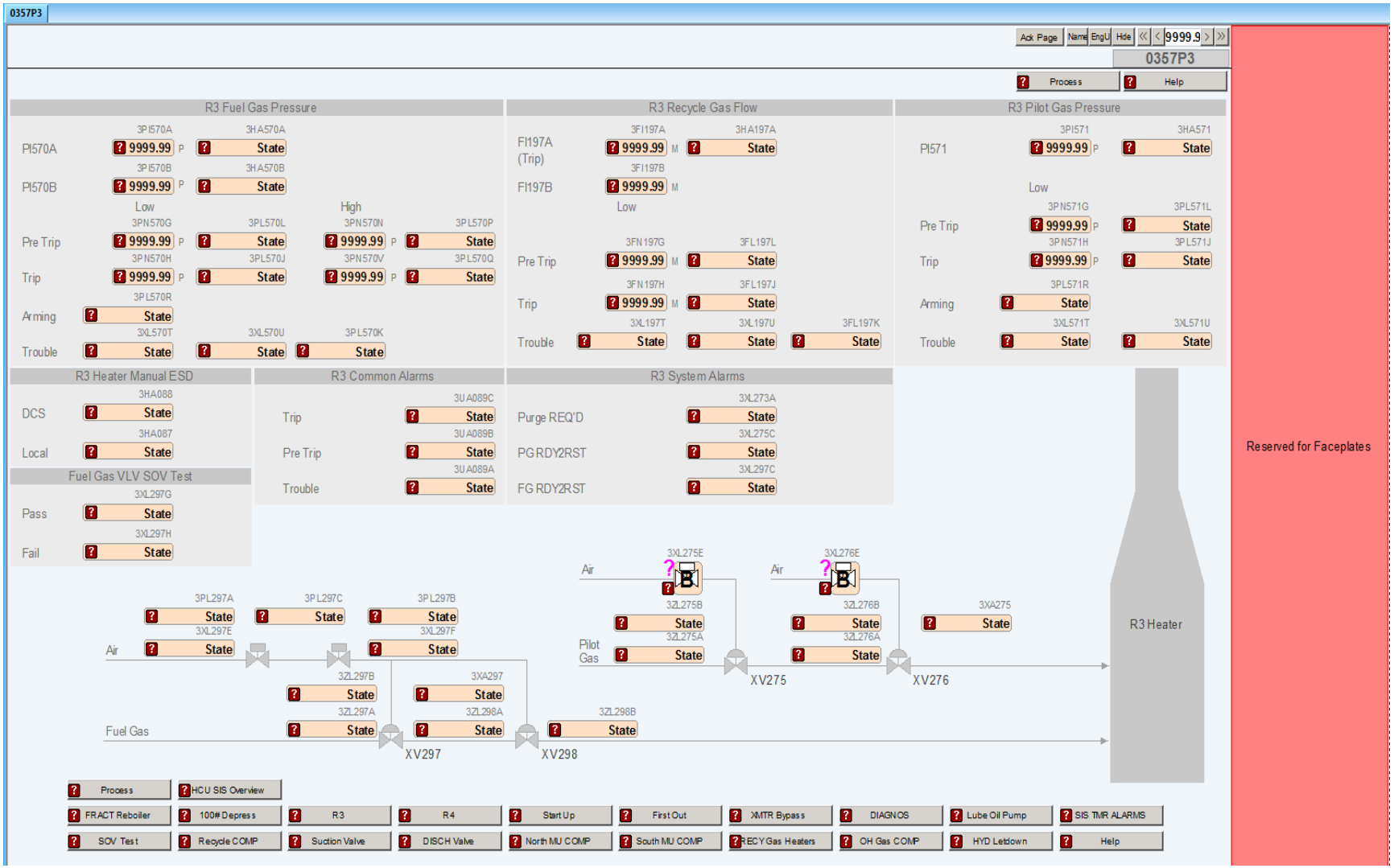

0357P2
HCU RCY GAS HEATERS (R2) 2 OF 4
PROCESS
HELP
RTRN
DIR
R2 FUEL GAS PRESSURE
PI568A
PI568B
LOW
HIGH
PRETRIP
TRIP
ARMING
TROUBLE
R2 RECYCLE GAS FLOW
FI195A (TRIP)
FI195B
R2 PILOT GAS PRESSURE
PI569
R2 HEATER MANUAL ESD
DCS
LOCAL
R2 COMMON ALARMS
R2 SYSTEM ALARMS
PURGE REQ'D
PG RDY2RST
FG RDY2RST
FUEL GAS VLV SOV TEST
PASS
OK
FAIL
AIR
PILOT GAS
FUEL GAS
XV292
XV293
XV294
XV295
R2 HEATER
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0357P2
Ack Page
Name
Eng'U
Hide
9999.9
0357P2
Process
Help
R2 Fuel Gas Pressure
PI568A
PI568B
Low
High
Pre Trip
Trip
Arming
Trouble
R2 Recycle Gas Flow
FI195A (TRIP)
FI195B
Low
Pre Trip
Trip
Trouble
R2 Pilot Gas Pressure
PI569
Low
Pre Trip
Trip
Arming
Trouble
R2 Heater Manual ESD
DCS
Local
Fuel Gas VLV SOV Test
Pass
Fail
R2 Common Alarms
Trip
Pre Trip
Trouble
R2 System Alarms
Purge REQ'D
PG RDY2RST
FG RDY2RST
Reserved for Faceplates
Air
Pilot Gas
Fuel Gas
XV292
XV293
XV294
XV295
R2 Heater
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

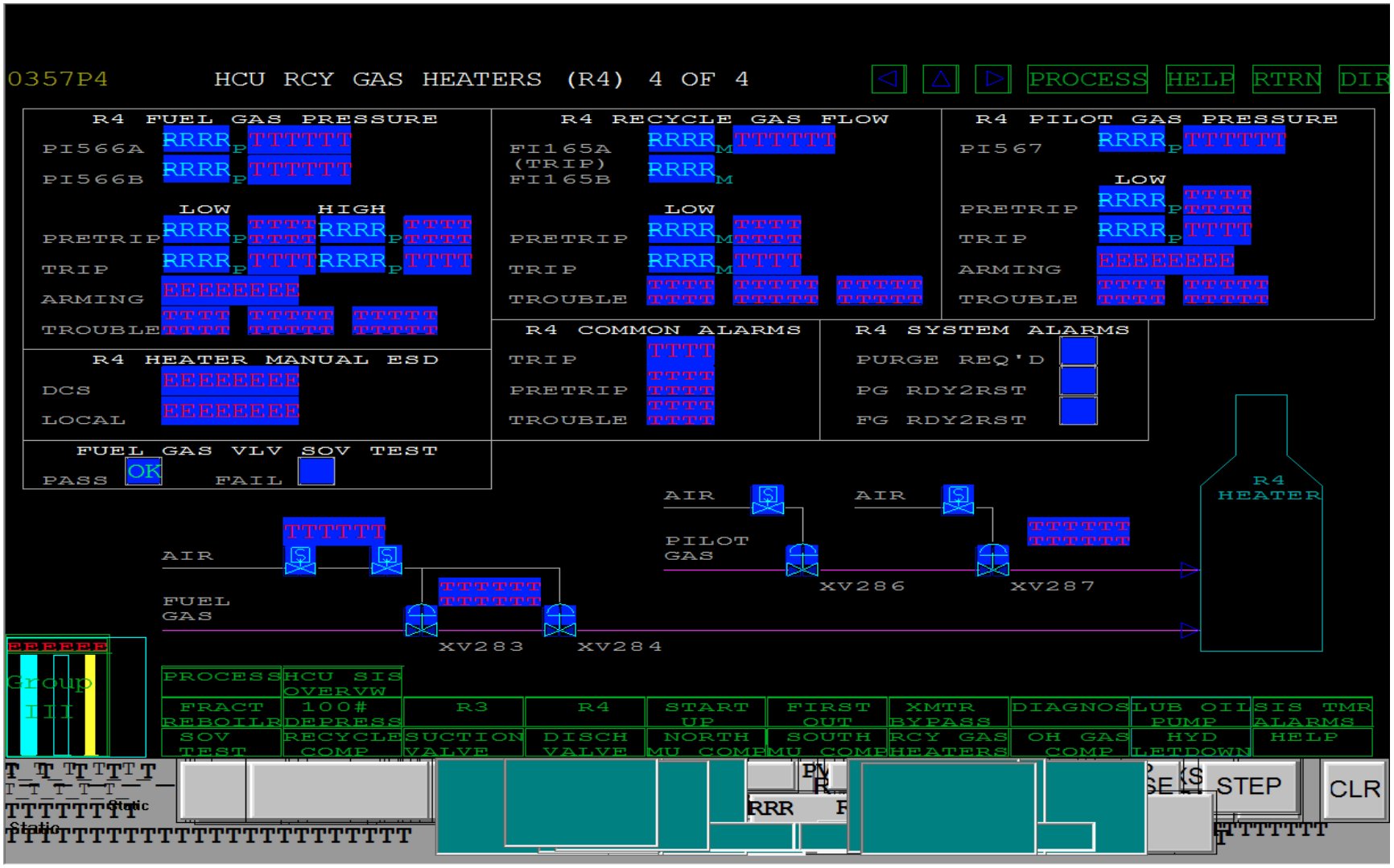
3.151 HCU RCY GAS HEATERS (R3) 3 OF 4 (0357P3.DS)

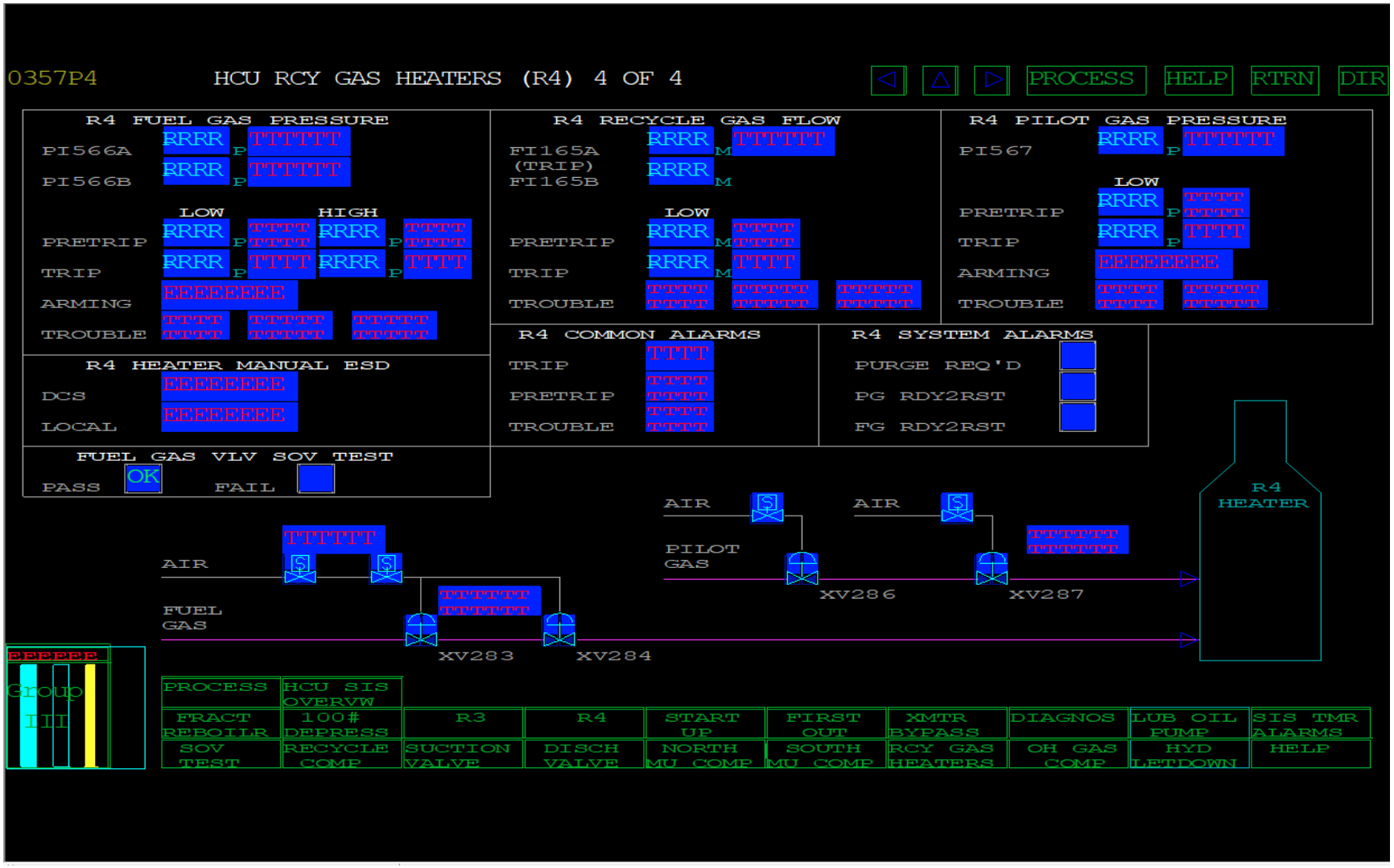


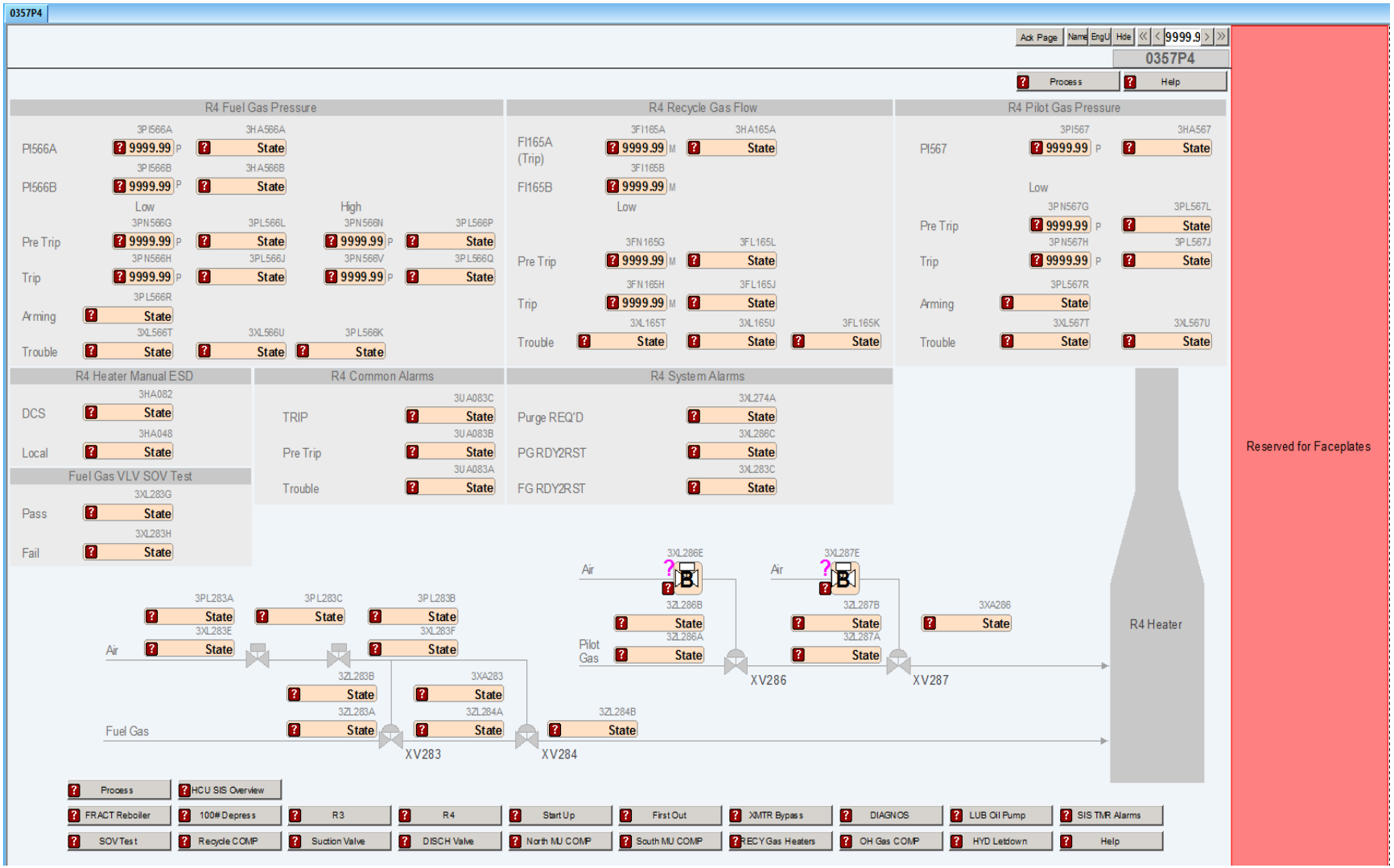

0357P3
HCU RCY GAS HEATERS (R3) 3 OF 4
PROCESS
HELP
RTRN
DIR
R3 FUEL GAS PRESSURE
PI570A
PI570B
LOW
HIGH
PRETRIP
TRIP
ARMING
TROUBLE
R3 RECYCLE GAS FLOW
FI197A (TRIP)
FI197B
R3 PILOT GAS PRESSURE
PI571
R3 HEATER MANUAL ESD
DCS
LOCAL
R3 COMMON ALARMS
R3 SYSTEM ALARMS
PURGE REQ'D
PG RDY2RST
FG RDY2RST
FUEL GAS VLV SOV TEST
PASS
OK
FAIL
AIR
PILOT GAS
FUEL GAS
XV275
XV276
XV297
XV298
R3 HEATER
GROUP III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0357P3
Ack Page
Name
Eng U
Hide
9999.9
0357P3
Process
Help
R3 Fuel Gas Pressure
PI570A
PI570B
Low
High
Pre Trip
Trip
Arming
Trouble
R3 Recycle Gas Flow
FI197A (Trip)
FI197B
Low
Pre Trip
Trip
Trouble
R3 Pilot Gas Pressure
PI571
Low
Pre Trip
Trip
Arming
Trouble
R3 Heater Manual ESD
DCS
Local
Fuel Gas VLV SOV Test
Pass
Fail
R3 Common Alarms
Trip
Pre Trip
Trouble
R3 System Alarms
Purge REQ'D
PG RDY2RST
FG RDY2RST
Reserved for Faceplates
Air
Pilot Gas
Fuel Gas
XV275
XV276
XV297
XV298
R3 Heater
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
Lube Oil Pump
SIS TMR ALARMS
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RECY Gas Heaters
OH Gas COMP
HYD Letdown
Help

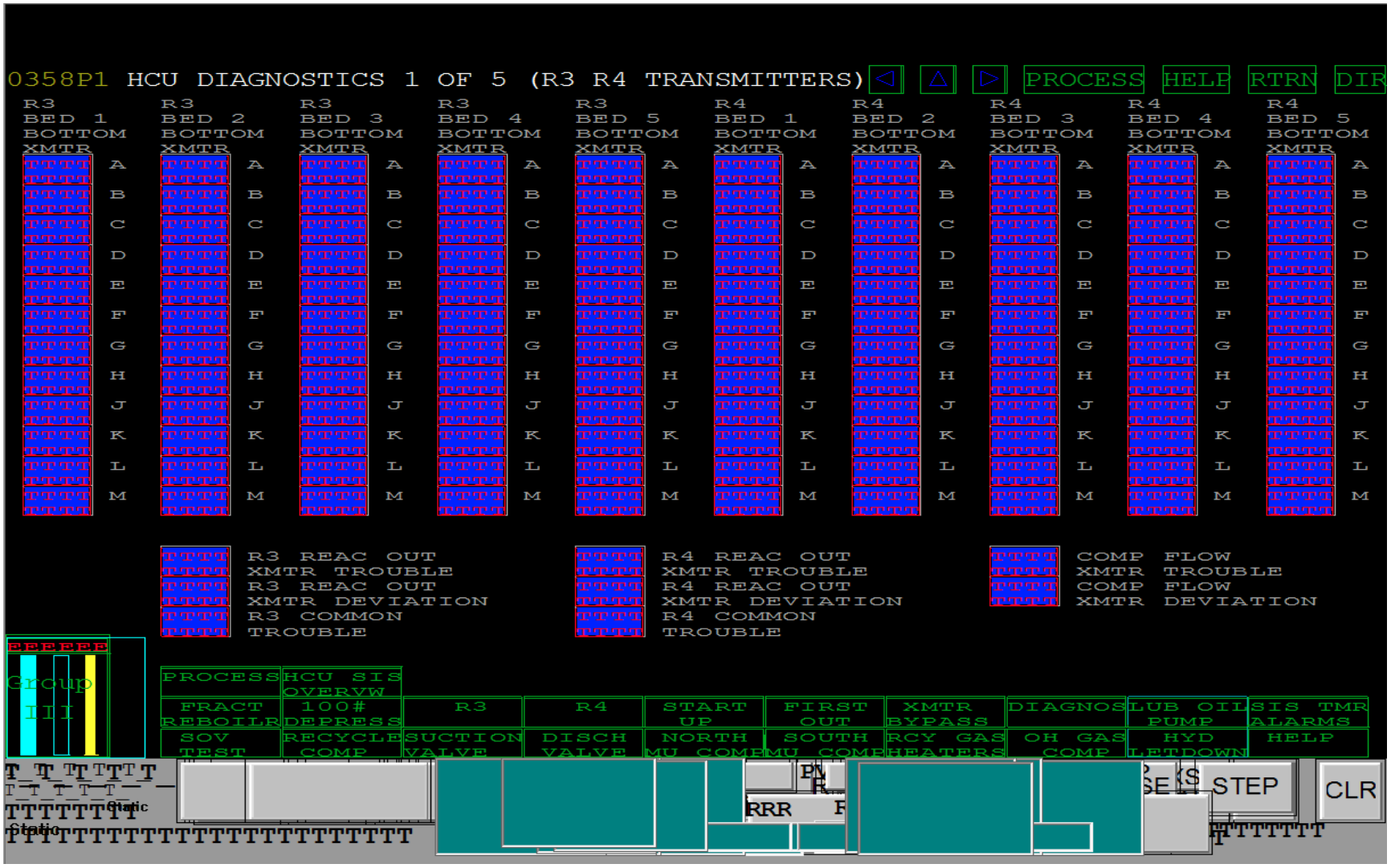
3.152 HCU RCY GAS HEATERS (R4) 4 OF 4 (0357P4.DS)

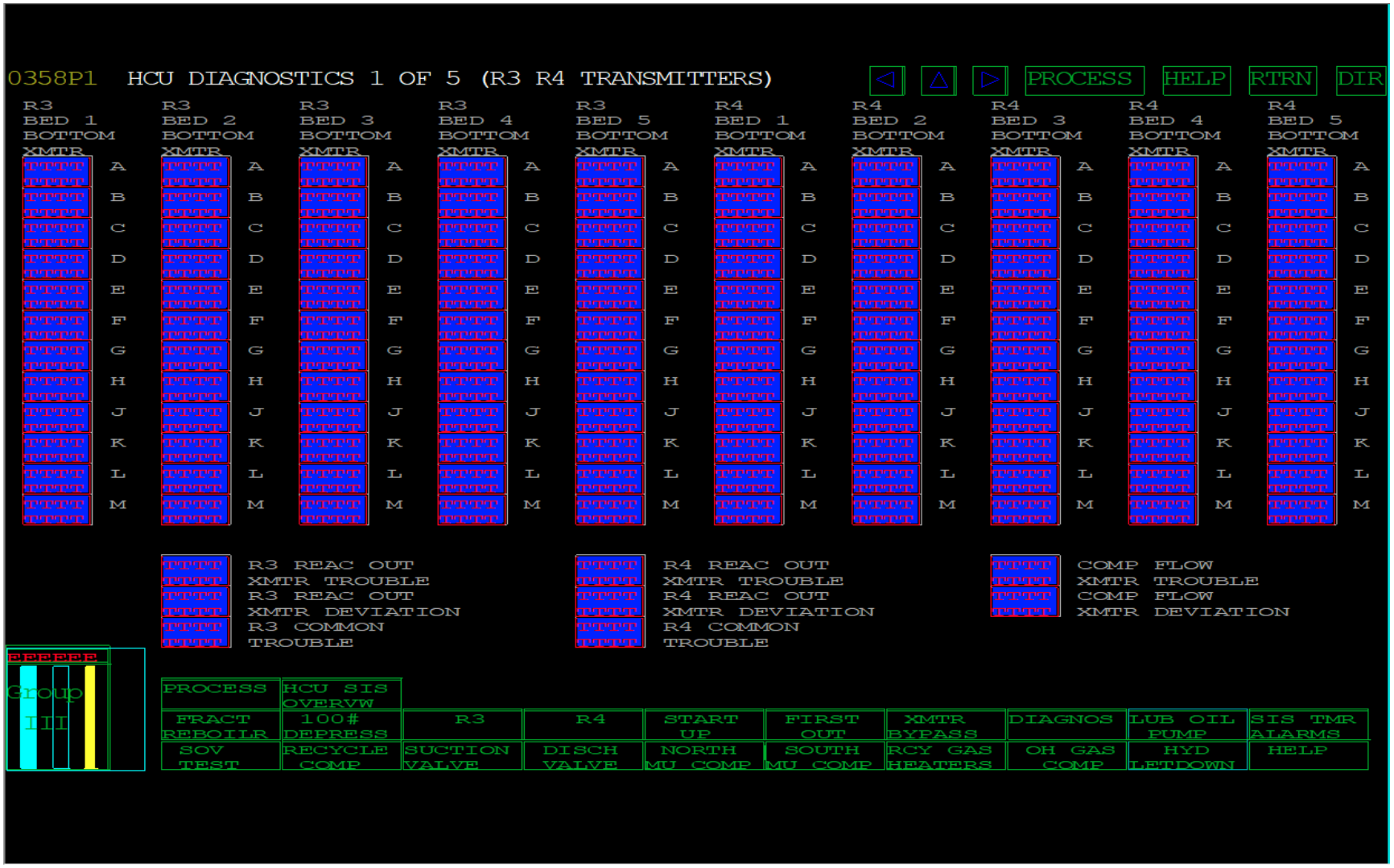


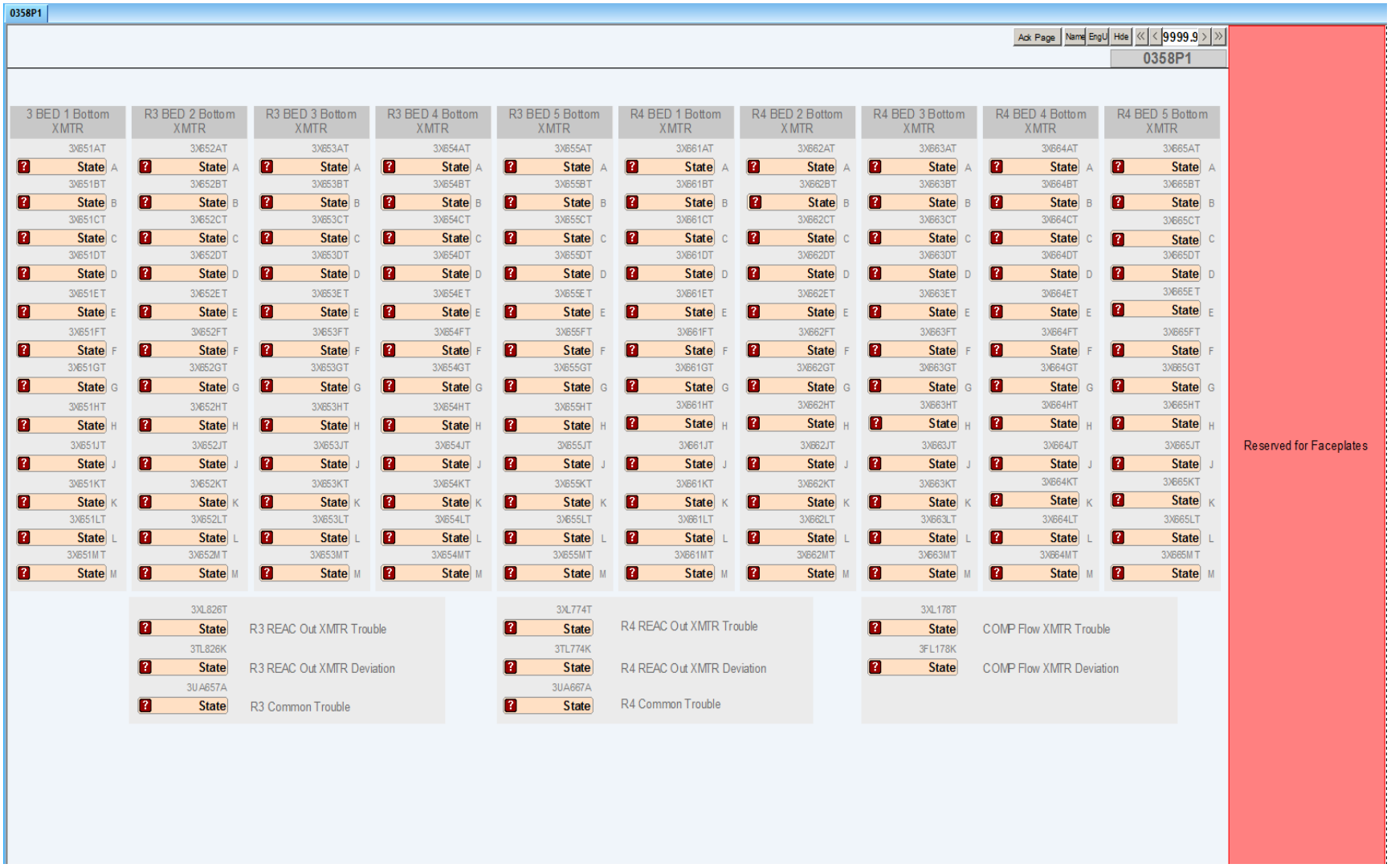

0357P4
HCU RCY GAS HEATERS (R4) 4 OF 4
PROCESS
HELP
RTRN
DIR
R4 FUEL GAS PRESSURE
PI566A
PI566B
LOW
HIGH
PRETRIP
TRIP
ARMING
TROUBLE
R4 RECYCLE GAS FLOW
FI165A (TRIP)
FI165B
R4 PILOT GAS PRESSURE
PI567
R4 HEATER MANUAL ESD
DCS
LOCAL
R4 COMMON ALARMS
R4 SYSTEM ALARMS
PURGE REQ'D
PG RDY2RST
FG RDY2RST
FUEL GAS VLV SOV TEST
PASS
OK
FAIL
AIR
PILOT GAS
FUEL GAS
XV283
XV284
XV286
XV287
R4 HEATER
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0357P4
Ack Page
Name
EngU
Hide
9999.9
0357P4
Process
Help
R4 Fuel Gas Pressure
PI566A
PI566B
Low
High
Pre Trip
Trip
Arming
Trouble
R4 Recycle Gas Flow
FI165A (Trip)
FI165B
Low
Pre Trip
Trip
Trouble
R4 Pilot Gas Pressure
PI567
Low
Pre Trip
Trip
Arming
Trouble
R4 Heater Manual ESD
DCS
Local
Fuel Gas VLV SOV Test
Pass
Fail
R4 Common Alarms
TRIP
Pre Trip
Trouble
R4 System Alarms
Purge REQ'D
PG RDY2RST
FG RDY2RST
Air
Pilot Gas
Fuel Gas
XV283
XV284
XV286
XV287
R4 Heater
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RECY Gas Heaters
OH Gas COMP
HYD Letdown
Help

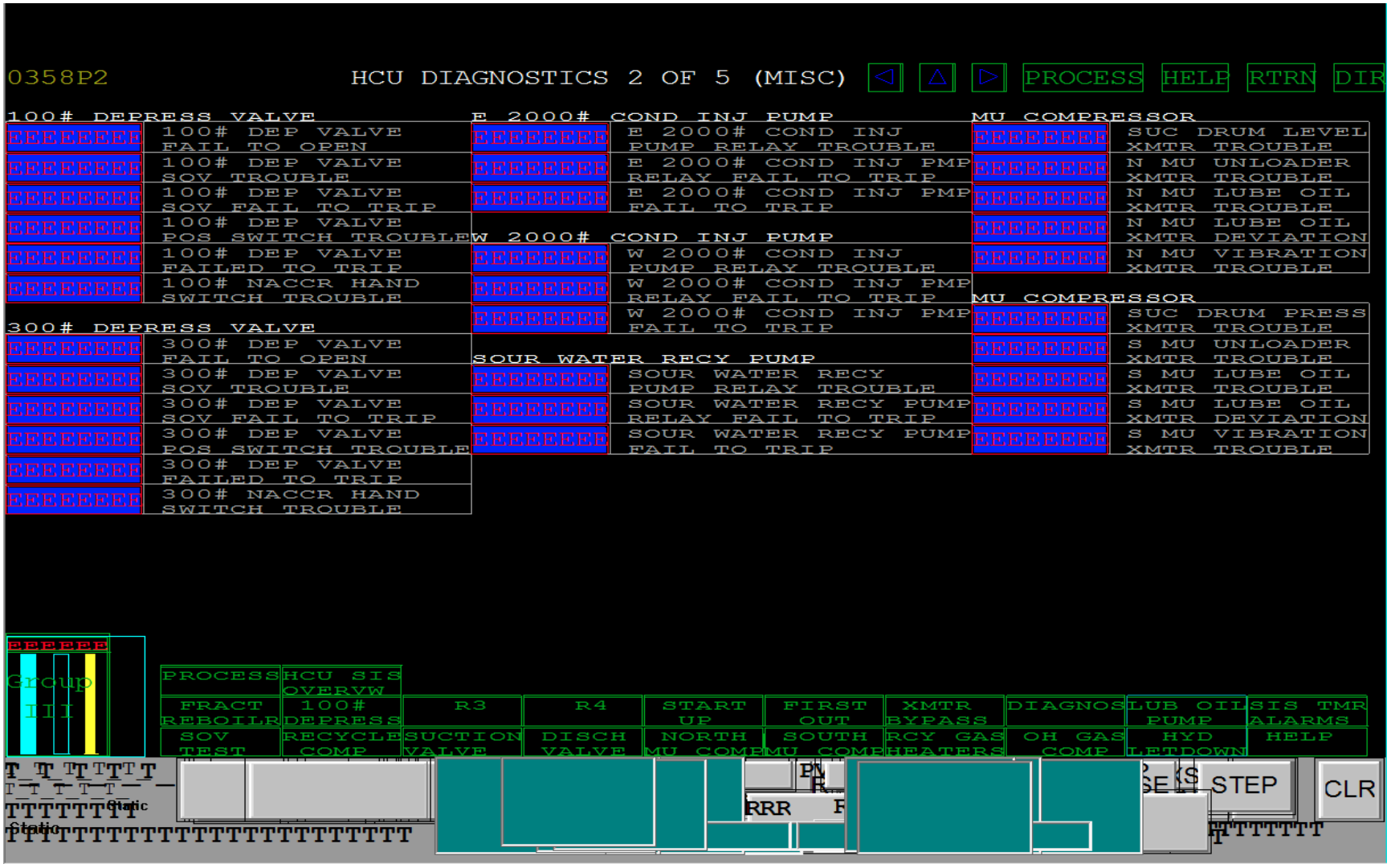
3.153 HCU DIAGNOSTICS 1 OF 5 (R3 R4 TRANSMITTERS) (0358P1.DS)

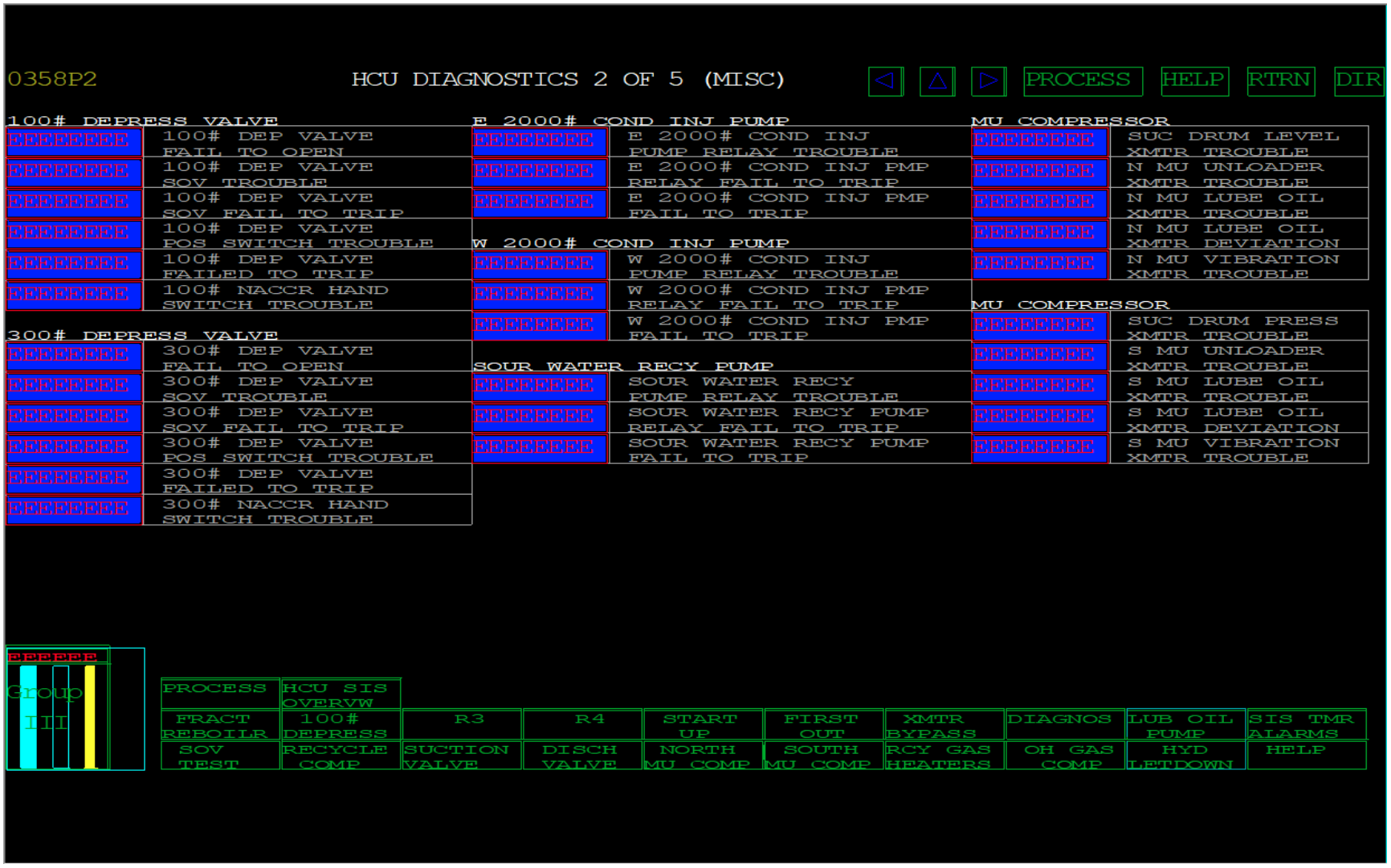


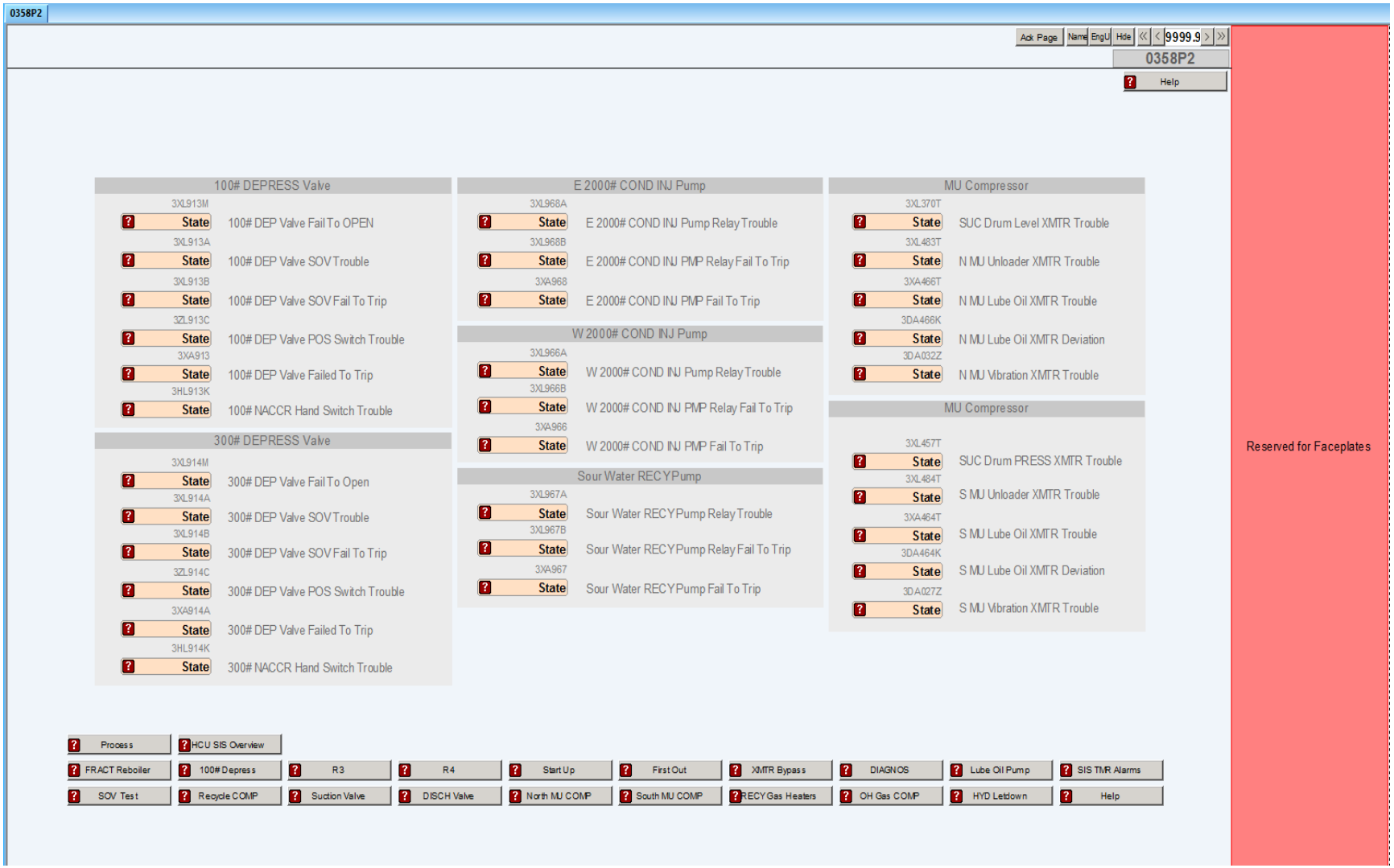

0358P1 HCU DIAGNOSTICS 1 OF 5 (R3 R4 TRANSMITTERS)
PROCESS
HELP
RTRN
DIR
R3 BED 1 BOTTOM XMTR
R3 BED 2 BOTTOM XMTR
R3 BED 3 BOTTOM XMTR
R3 BED 4 BOTTOM XMTR
R3 BED 5 BOTTOM XMTR
R4 BED 1 BOTTOM XMTR
R4 BED 2 BOTTOM XMTR
R4 BED 3 BOTTOM XMTR
R4 BED 4 BOTTOM XMTR
R4 BED 5 BOTTOM XMTR
A
B
C
D
E
F
G
H
J
K
L
M
R3 REAC OUT XMTR TROUBLE
R3 REAC OUT XMTR DEVIATION
R3 COMMON TROUBLE
R4 REAC OUT XMTR TROUBLE
R4 REAC OUT XMTR DEVIATION
R4 COMMON TROUBLE
COMP FLOW XMTR TROUBLE
COMP FLOW XMTR DEVIATION
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0358P1
Ack Page
Name
Eng U
Hide
9999.9
0358P1
3 BED 1 Bottom XMTR
R3 BED 2 Bottom XMTR
R3 BED 3 Bottom XMTR
R3 BED 4 Bottom XMTR
R3 BED 5 Bottom XMTR
R4 BED 1 Bottom XMTR
R4 BED 2 Bottom XMTR
R4 BED 3 Bottom XMTR
R4 BED 4 Bottom XMTR
R4 BED 5 Bottom XMTR
3X651AT 3X652AT 3X653AT 3X654AT 3X655AT 3X661AT 3X662AT 3X663AT 3X664AT 3X665AT
3X651BT 3X652BT 3X653BT 3X654BT 3X655BT 3X661BT 3X662BT 3X663BT 3X664BT 3X665BT
3X651CT 3X652CT 3X653CT 3X654CT 3X655CT 3X661CT 3X662CT 3X663CT 3X664CT 3X665CT
3X651DT 3X652DT 3X653DT 3X654DT 3X655DT 3X661DT 3X662DT 3X663DT 3X664DT 3X665DT
3X651ET 3X652ET 3X653ET 3X654ET 3X655ET 3X661ET 3X662ET 3X663ET 3X664ET 3X665ET
3X651FT 3X652FT 3X653FT 3X654FT 3X655FT 3X661FT 3X662FT 3X663FT 3X664FT 3X665FT
3X651GT 3X652GT 3X653GT 3X654GT 3X655GT 3X661GT 3X662GT 3X663GT 3X664GT 3X665GT
3X651HT 3X652HT 3X653HT 3X654HT 3X655HT 3X661HT 3X662HT 3X663HT 3X664HT 3X665HT
3X651JT 3X652JT 3X653JT 3X654JT 3X655JT 3X661JT 3X662JT 3X663JT 3X664JT 3X665JT
3X651KT 3X652KT 3X653KT 3X654KT 3X655KT 3X661KT 3X662KT 3X663KT 3X664KT 3X665KT
3X651LT 3X652LT 3X653LT 3X654LT 3X655LT 3X661LT 3X662LT 3X663LT 3X664LT 3X665LT
3X651MT 3X652MT 3X653MT 3X654MT 3X655MT 3X661MT 3X662MT 3X663MT 3X664MT 3X665MT
State
3XL826T
R3 REAC Out XMTR Trouble
3TL826K
R3 REAC Out XMTR Deviation
3UA657A
R3 Common Trouble
3XL774T
R4 REAC Out XMTR Trouble
3TL774K
R4 REAC Out XMTR Deviation
3UA667A
R4 Common Trouble
3XL178T
COMP Flow XMTR Trouble
3FL178K
COMP Flow XMTR Deviation
Reserved for Faceplates

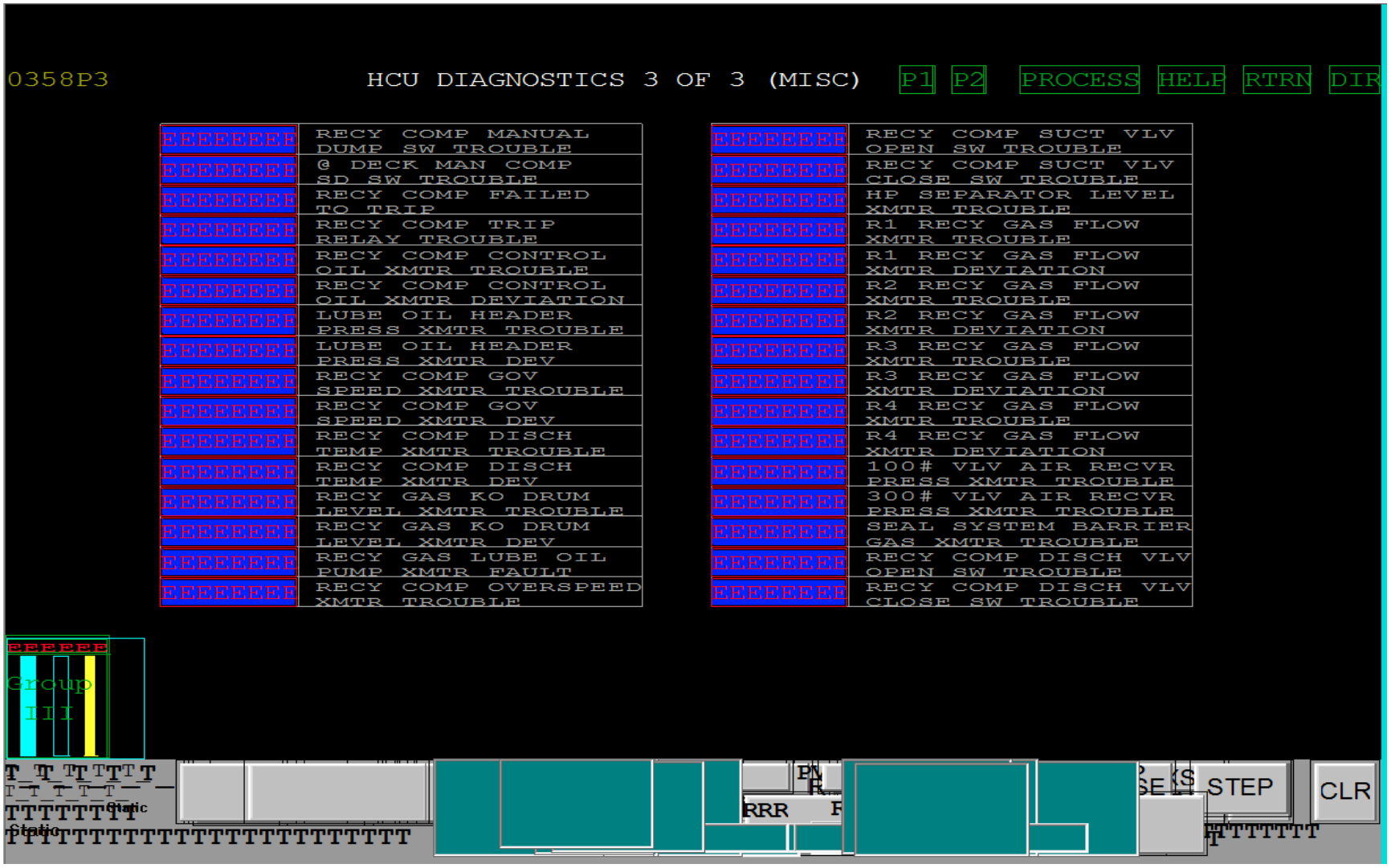
3.154 HCU DIAGNOSTICS 2 OF 5 (MISC) (0358P2.DS)

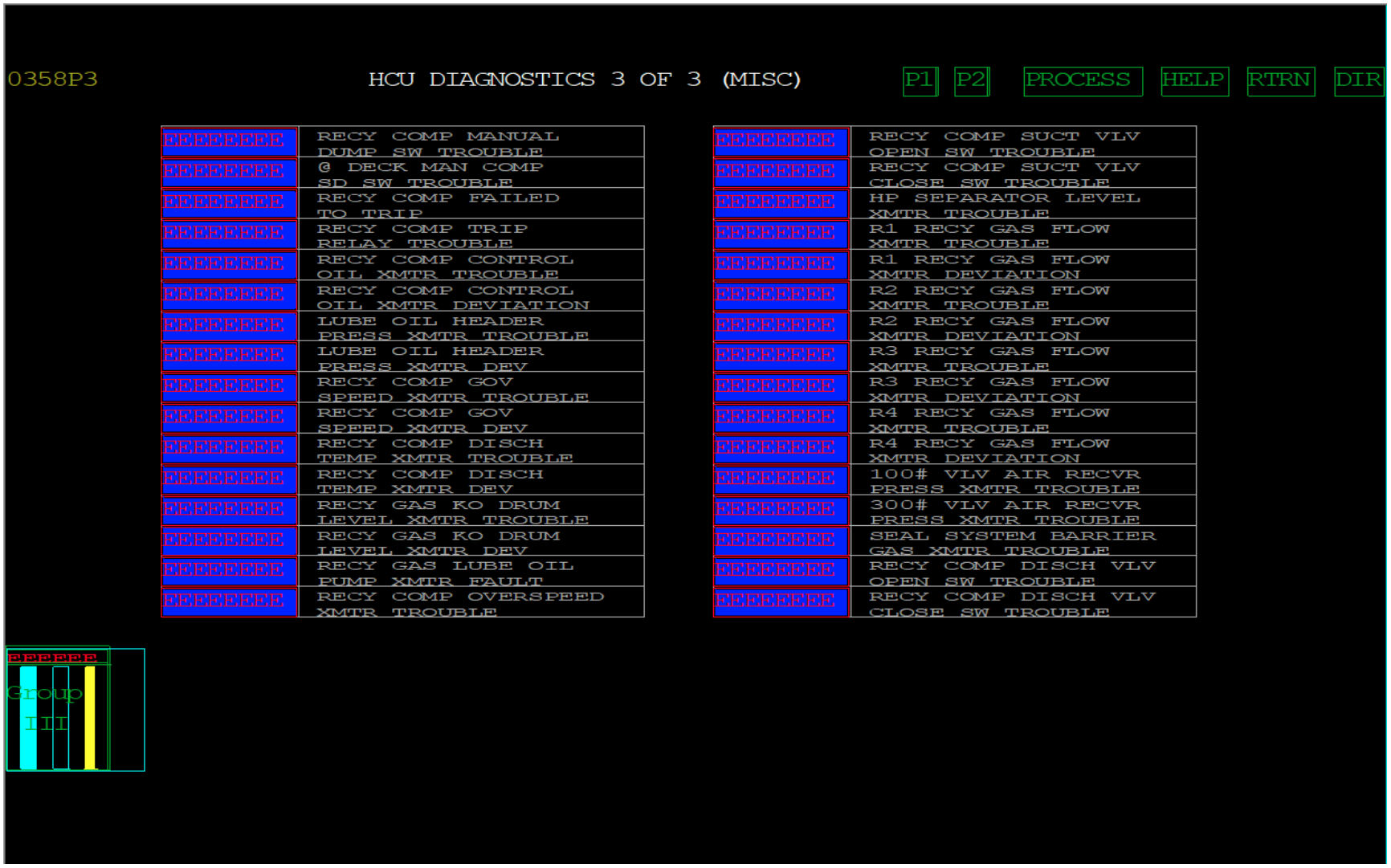


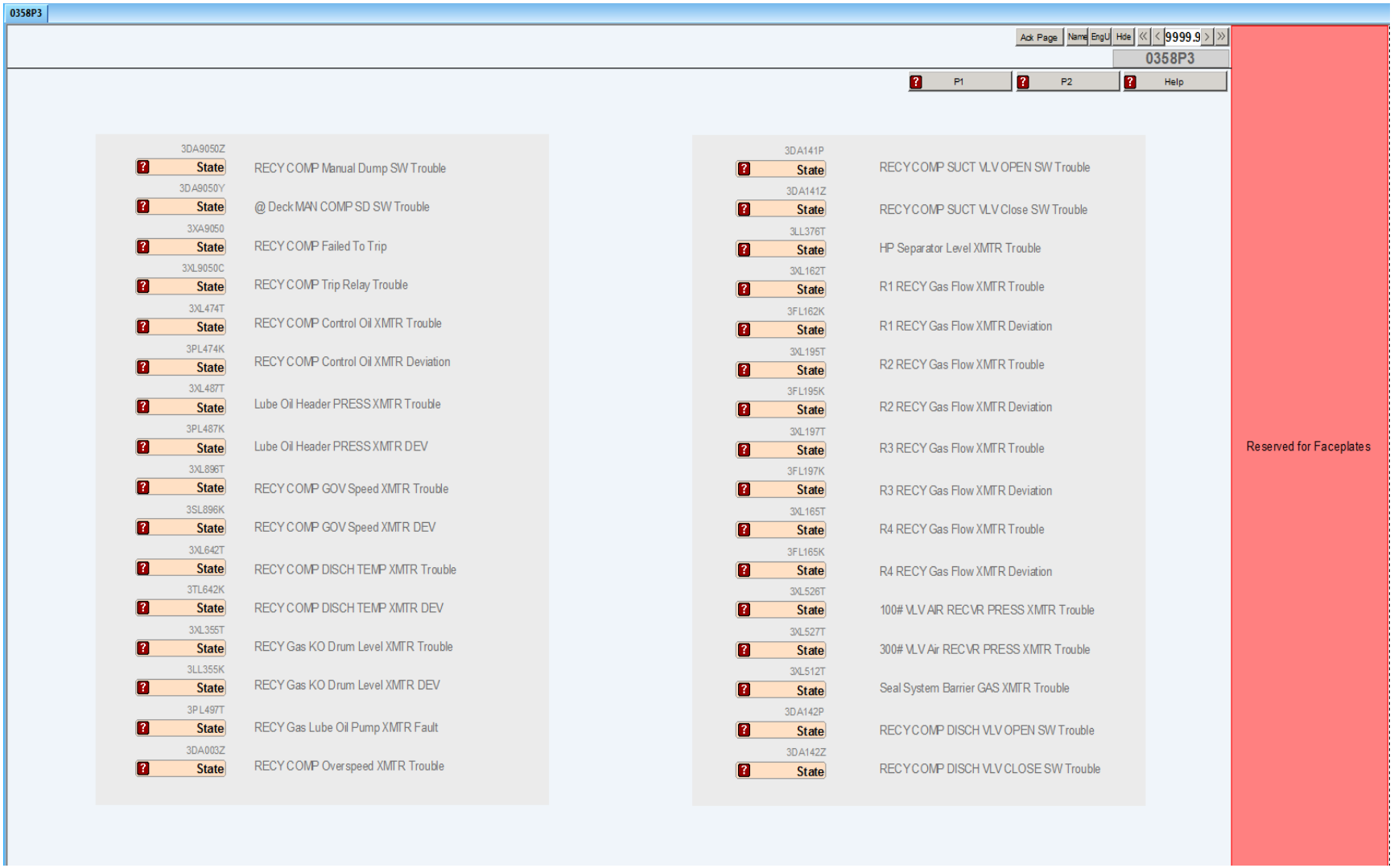

0358P2
HCU DIAGNOSTICS 2 OF 5 (MISC)
PROCESS
HELP
RTRN
DIR
100# DEPRESS VALVE
100# DEP VALVE FAIL TO OPEN
100# DEP VALVE SOV TROUBLE
100# DEP VALVE SOV FAIL TO TRIP
100# DEP VALVE POS SWITCH TROUBLE
100# DEP VALVE FAILED TO TRIP
100# NACCR HAND SWITCH TROUBLE
300# DEPRESS VALVE
300# DEP VALVE FAIL TO OPEN
300# DEP VALVE SOV TROUBLE
300# DEP VALVE SOV FAIL TO TRIP
300# DEP VALVE POS SWITCH TROUBLE
300# DEP VALVE FAILED TO TRIP
300# NACCR HAND SWITCH TROUBLE
E 2000# COND INJ PUMP
E 2000# COND INJ PUMP RELAY TROUBLE
E 2000# COND INJ PMP RELAY FAIL TO TRIP
E 2000# COND INJ PMP FAIL TO TRIP
W 2000# COND INJ PUMP
W 2000# COND INJ PUMP RELAY TROUBLE
W 2000# COND INJ PMP RELAY FAIL TO TRIP
W 2000# COND INJ PMP FAIL TO TRIP
SOUR WATER RECY PUMP
SOUR WATER RECY PUMP RELAY TROUBLE
SOUR WATER RECY PUMP RELAY FAIL TO TRIP
SOUR WATER RECY PUMP FAIL TO TRIP
MU COMPRESSOR
SUC DRUM LEVEL XMTR TROUBLE
N MU UNLOADER XMTR TROUBLE
N MU LUBE OIL XMTR TROUBLE
N MU LUBE OIL XMTR DEVIATION
N MU VIBRATION XMTR TROUBLE
MU COMPRESSOR
SUC DRUM PRESS XMTR TROUBLE
S MU UNLOADER XMTR TROUBLE
S MU LUBE OIL XMTR TROUBLE
S MU LUBE OIL XMTR DEVIATION
S MU VIBRATION XMTR TROUBLE
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0358P2
Ack Page
Name
Eng U
Hide
9999.9
0358P2
Help
100# DEPRESS Valve
3XL913M
State
100# DEP Valve Fail To OPEN
3XL913A
State
100# DEP Valve SOV Trouble
3XL913B
State
100# DEP Valve SOV Fail To Trip
3ZL913C
State
100# DEP Valve POS Switch Trouble
3XA913
State
100# DEP Valve Failed To Trip
3HL913K
State
100# NACCR Hand Switch Trouble
300# DEPRESS Valve
3XL914M
State
300# DEP Valve Fail To Open
3XL914A
State
300# DEP Valve SOV Trouble
3XL914B
State
300# DEP Valve SOV Fail To Trip
3ZL914C
State
300# DEP Valve POS Switch Trouble
3XA914A
State
300# DEP Valve Failed To Trip
3HL914K
State
300# NACCR Hand Switch Trouble
E 2000# COND INJ Pump
3XL968A
State
E 2000# COND INJ Pump Relay Trouble
3XL968B
State
E 2000# COND INJ PMP Relay Fail To Trip
3XA968
State
E 2000# COND INJ PMP Fail To Trip
W 2000# COND INJ Pump
3XL966A
State
W 2000# COND INJ Pump Relay Trouble
3XL966B
State
W 2000# COND INJ PMP Relay Fail To Trip
3XA966
State
W 2000# COND INJ PMP Fail To Trip
Sour Water RECY Pump
3XL967A
State
Sour Water RECY Pump Relay Trouble
3XL967B
State
Sour Water RECY Pump Relay Fail To Trip
3XA967
State
Sour Water RECY Pump Fail To Trip
MU Compressor
3XL370T
State
SUC Drum Level XMTR Trouble
3XL483T
State
N MU Unloader XMTR Trouble
3XA466T
State
N MU Lube Oil XMTR Trouble
3DA466K
State
N MU Lube Oil XMTR Deviation
3DA032Z
State
N MU Vibration XMTR Trouble
MU Compressor
3XL457T
State
SUC Drum PRESS XMTR Trouble
3XL484T
State
S MU Unloader XMTR Trouble
3XA464T
State
S MU Lube Oil XMTR Trouble
3DA464K
State
S MU Lube Oil XMTR Deviation
3DA027Z
State
S MU Vibration XMTR Trouble
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RECY Gas Heaters
OH Gas COMP
HYD Letdown
Help

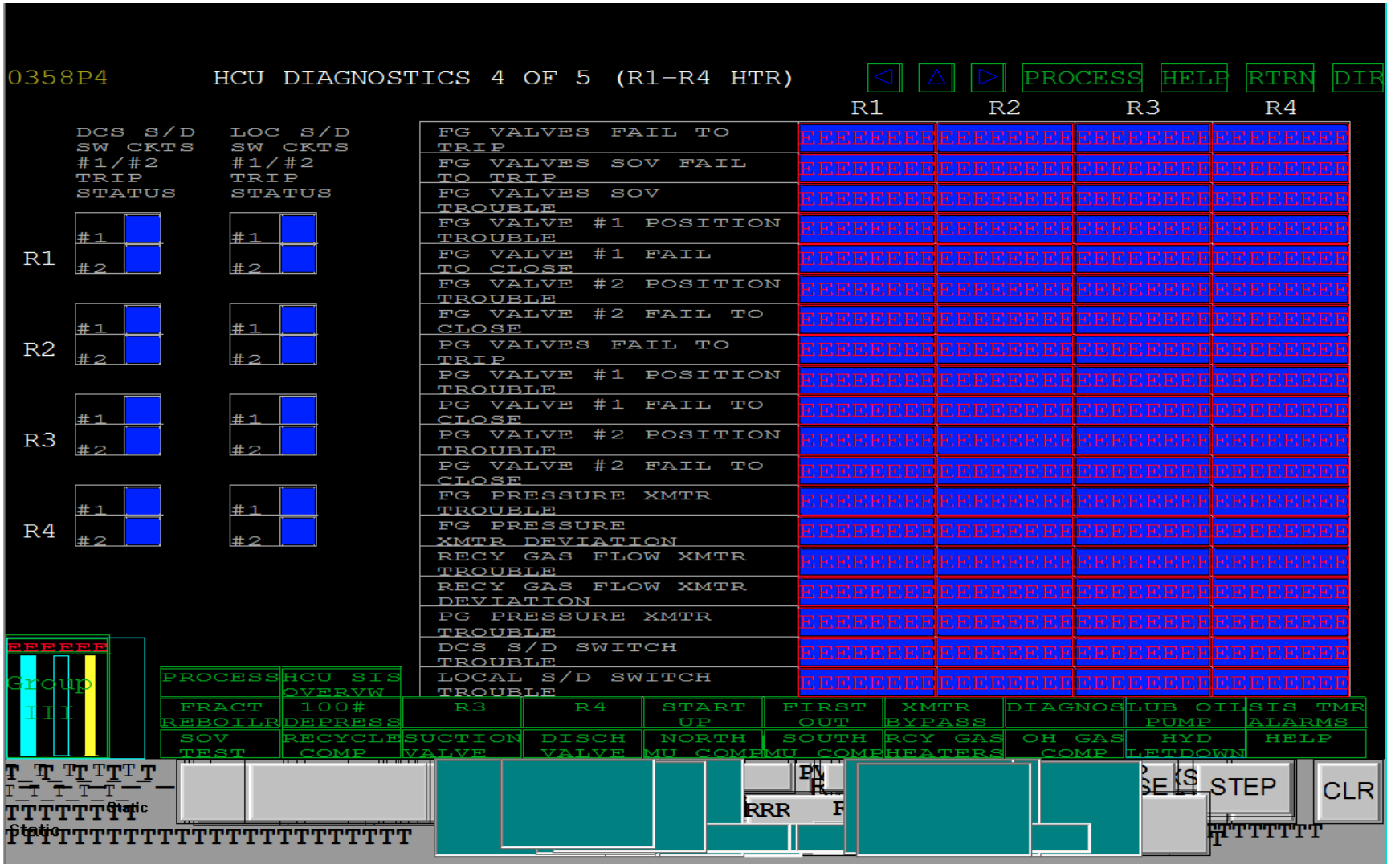
3.155 HCU DIAGNOSTICS 3 OF 3 (MISC) (0358P3.DS)

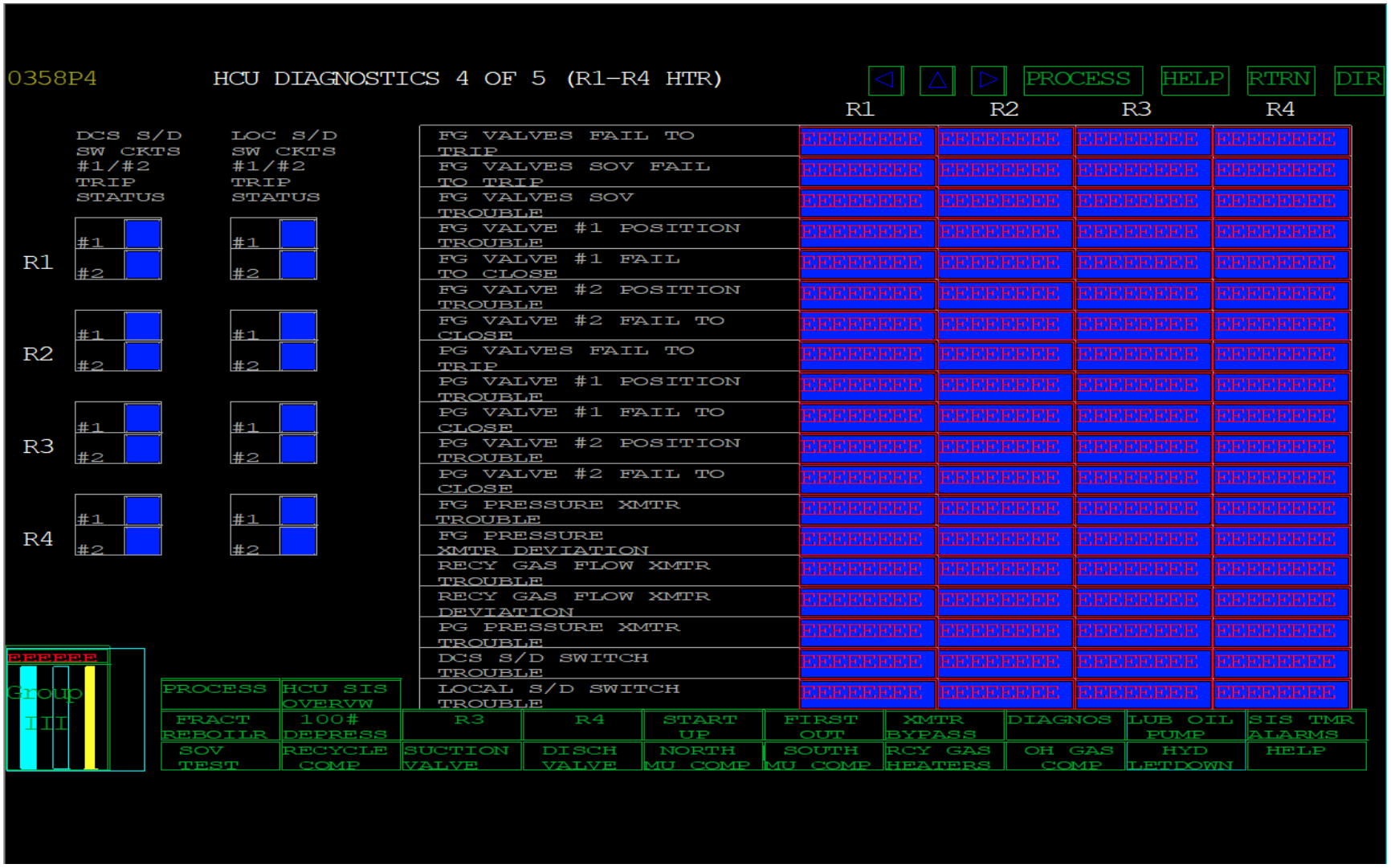


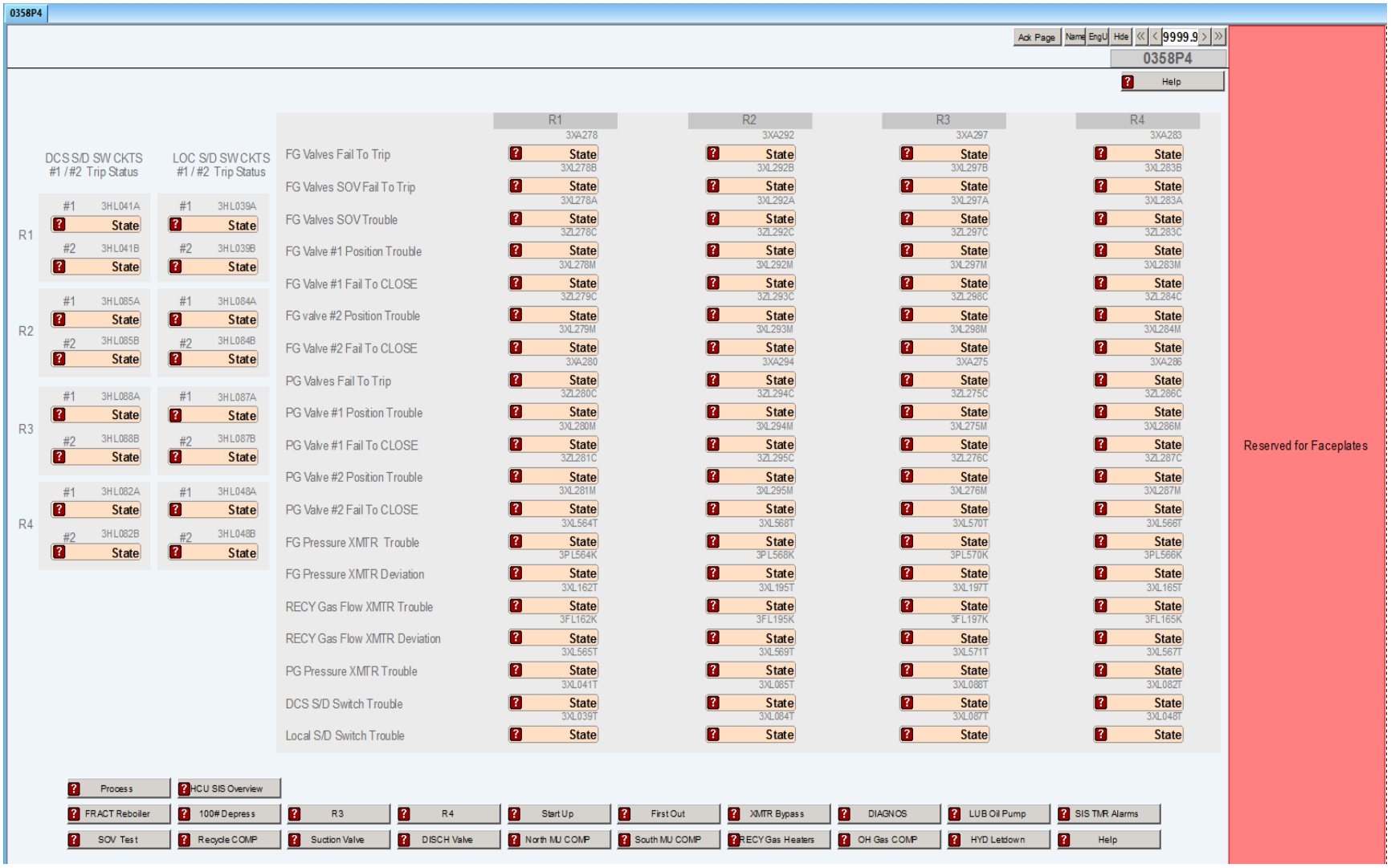

0358P3
HCU DIAGNOSTICS 3 OF 3 (MISC)
P1
P2
PROCESS
HELP
RTRN
DIR
RECY COMP MANUAL DUMP SW TROUBLE
@ DECK MAN COMP SD SW TROUBLE
RECY COMP FAILED TO TRIP
RECY COMP TRIP RELAY TROUBLE
RECY COMP CONTROL OIL XMTR TROUBLE
RECY COMP CONTROL OIL XMTR DEVIATION
LUBE OIL HEADER PRESS XMTR TROUBLE
LUBE OIL HEADER PRESS XMTR DEV
RECY COMP GOV SPEED XMTR TROUBLE
RECY COMP GOV SPEED XMTR DEV
RECY COMP DISCH TEMP XMTR TROUBLE
RECY COMP DISCH TEMP XMTR DEV
RECY GAS KO DRUM LEVEL XMTR TROUBLE
RECY GAS KO DRUM LEVEL XMTR DEV
RECY GAS LUBE OIL PUMP XMTR FAULT
RECY COMP OVERSPEED XMTR TROUBLE
RECY COMP SUCT VLV OPEN SW TROUBLE
RECY COMP SUCT VLV CLOSE SW TROUBLE
HP SEPARATOR LEVEL XMTR TROUBLE
R1 RECY GAS FLOW XMTR TROUBLE
R1 RECY GAS FLOW XMTR DEVIATION
R2 RECY GAS FLOW XMTR TROUBLE
R2 RECY GAS FLOW XMTR DEVIATION
R3 RECY GAS FLOW XMTR TROUBLE
R3 RECY GAS FLOW XMTR DEVIATION
R4 RECY GAS FLOW XMTR TROUBLE
R4 RECY GAS FLOW XMTR DEVIATION
100# VLV AIR RECVR PRESS XMTR TROUBLE
300# VLV AIR RECVR PRESS XMTR TROUBLE
SEAL SYSTEM BARRIER GAS XMTR TROUBLE
RECY COMP DISCH VLV OPEN SW TROUBLE
RECY COMP DISCH VLV CLOSE SW TROUBLE
Group III


0358P3
Ack Page
Name
EngU
Hide
9999.9
0358P3
P1
P2
Help
3DA9050Z
State
RECY COMP Manual Dump SW Trouble
3DA9050Y
State
@ Deck MAN COMP SD SW Trouble
3XA9050
State
RECY COMP Failed To Trip
3XL9050C
State
RECY COMP Trip Relay Trouble
3XL474T
State
RECY COMP Control Oil XMTR Trouble
3PL474K
State
RECY COMP Control Oil XMTR Deviation
3XL487T
State
Lube Oil Header PRESS XMTR Trouble
3PL487K
State
Lube Oil Header PRESS XMTR DEV
3XL896T
State
RECY COMP GOV Speed XMTR Trouble
3SL896K
State
RECY COMP GOV Speed XMTR DEV
3XL642T
State
RECY COMP DISCH TEMP XMTR Trouble
3TL642K
State
RECY COMP DISCH TEMP XMTR DEV
3XL355T
State
RECY Gas KO Drum Level XMTR Trouble
3LL355K
State
RECY Gas KO Drum Level XMTR DEV
3PL497T
State
RECY Gas Lube Oil Pump XMTR Fault
3DA003Z
State
RECY COMP Overspeed XMTR Trouble
3DA141P
State
RECY COMP SUCT VLV OPEN SW Trouble
3DA141Z
State
RECY COMP SUCT VLV Close SW Trouble
3LL376T
State
HP Separator Level XMTR Trouble
3XL162T
State
R1 RECY Gas Flow XMTR Trouble
3FL162K
State
R1 RECY Gas Flow XMTR Deviation
3XL195T
State
R2 RECY Gas Flow XMTR Trouble
3FL195K
State
R2 RECY Gas Flow XMTR Deviation
3XL197T
State
R3 RECY Gas Flow XMTR Trouble
3FL197K
State
R3 RECY Gas Flow XMTR Deviation
3XL165T
State
R4 RECY Gas Flow XMTR Trouble
3FL165K
State
R4 RECY Gas Flow XMTR Deviation
3XL526T
State
100# VLV AIR RECVR PRESS XMTR Trouble
3XL527T
State
300# VLV Air RECVR PRESS XMTR Trouble
3XL512T
State
Seal System Barrier GAS XMTR Trouble
3DA142P
State
RECY COMP DISCH VLV OPEN SW Trouble
3DA142Z
State
RECY COMP DISCH VLV CLOSE SW Trouble
Reserved for Faceplates

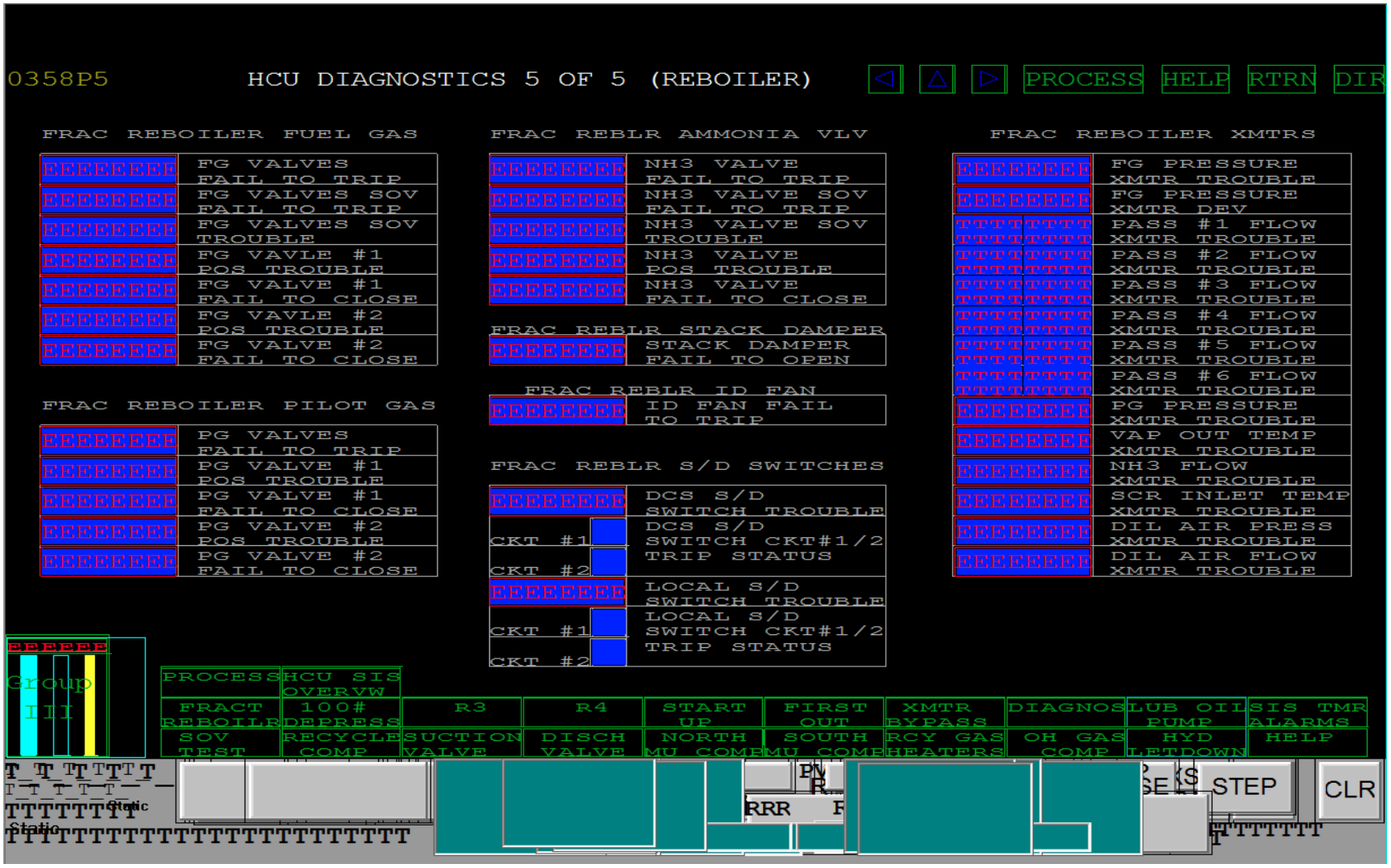
3.156 HCU DIAGNOSTICS 4 OF 5 (R1-R4 HTR) (0358P4.DS)

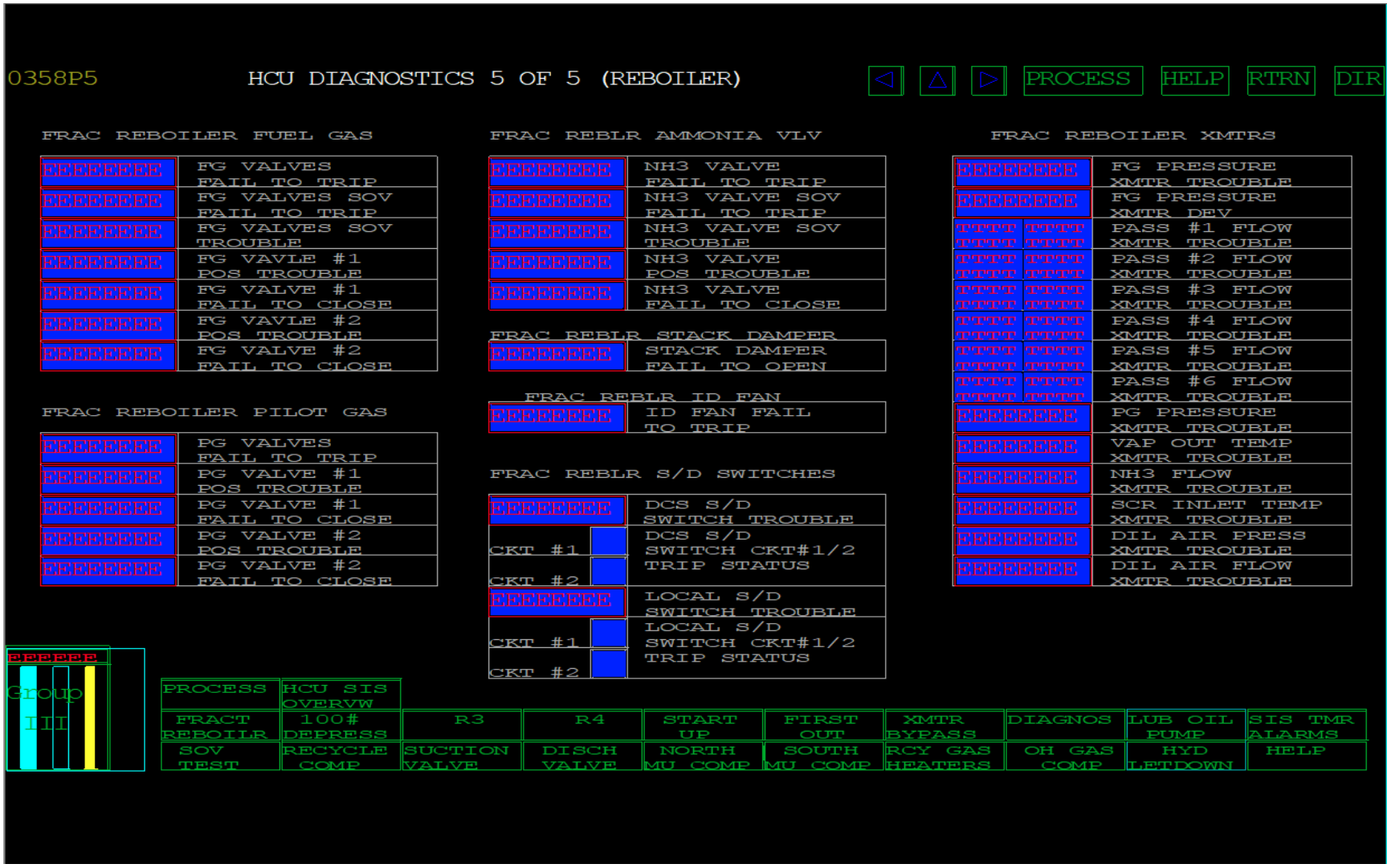


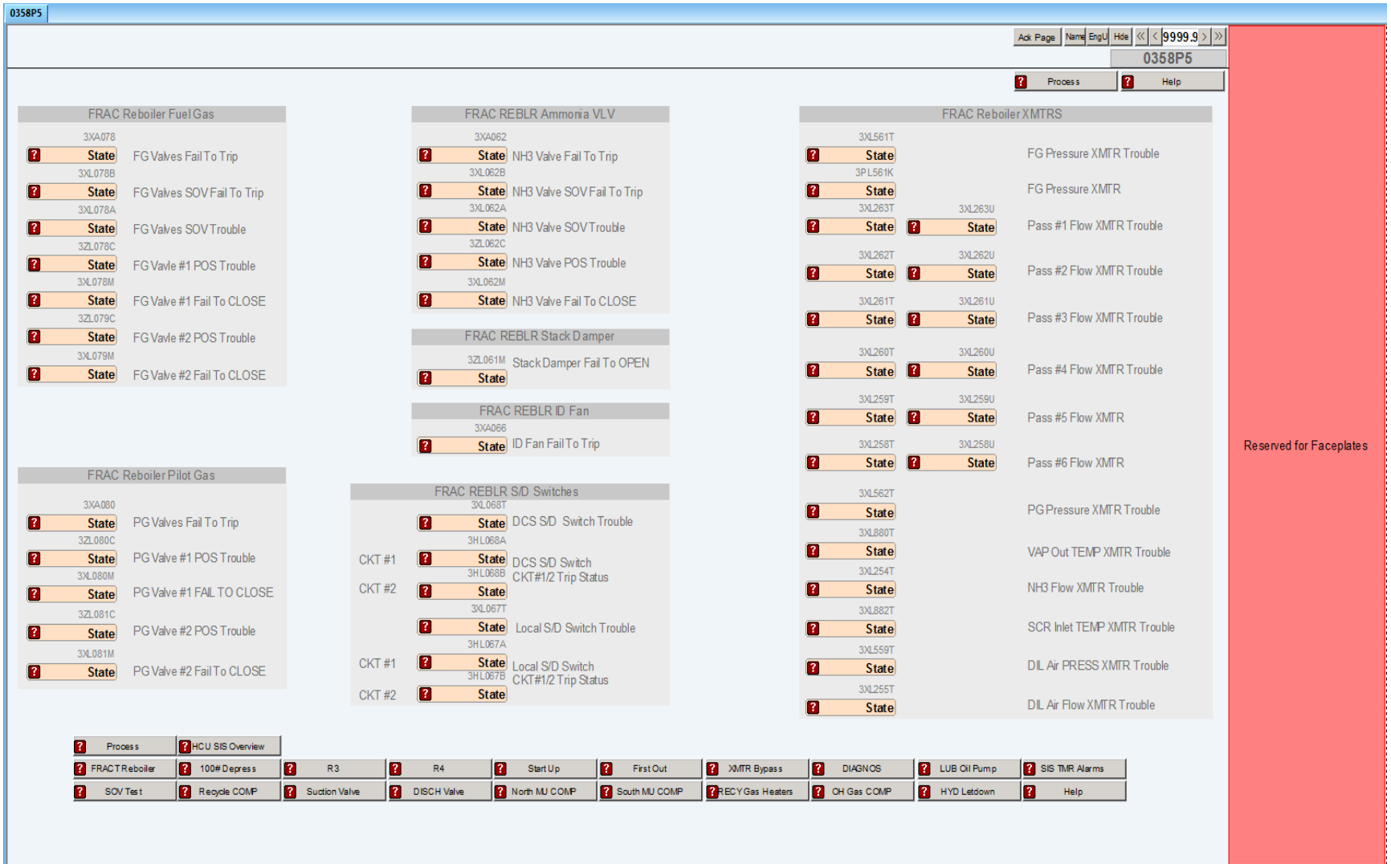

0358P4
HCU DIAGNOSTICS 4 OF 5 (R1-R4 HTR)
PROCESS
HELP
RTRN
DIR
R1
R2
R3
R4
DCS S/D SW CKTS #1/#2 TRIP STATUS
LOC S/D SW CKTS #1/#2 TRIP STATUS
#1
#2
FG VALVES FAIL TO TRIP
FG VALVES SOV FAIL TO TRIP
FG VALVES SOV TROUBLE
FG VALVE #1 POSITION TROUBLE
FG VALVE #1 FAIL TO CLOSE
FG VALVE #2 POSITION TROUBLE
FG VALVE #2 FAIL TO CLOSE
PG VALVES FAIL TO TRIP
PG VALVE #1 POSITION TROUBLE
PG VALVE #1 FAIL TO CLOSE
PG VALVE #2 POSITION TROUBLE
PG VALVE #2 FAIL TO CLOSE
FG PRESSURE XMTR TROUBLE
FG PRESSURE XMTR DEVIATION
RECY GAS FLOW XMTR TROUBLE
RECY GAS FLOW XMTR DEVIATION
PG PRESSURE XMTR TROUBLE
DCS S/D SWITCH TROUBLE
LOCAL S/D SWITCH TROUBLE
GROUP III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0358P4
Ack Page
Name
Eng'U
Hide
9999.9
0358P4
Help
DCS S/D SW CKTS #1 /#2 Trip Status
LOC S/D SW CKTS #1 / #2 Trip Status
R1
R2
R3
R4
3HL041A
3HL041B
3HL039A
3HL039B
3HL085A
3HL085B
3HL084A
3HL084B
3HL088A
3HL088B
3HL087A
3HL087B
3HL082A
3HL082B
3HL048A
3HL048B
State
R1
R2
R3
R4
3XA278
3XA292
3XA297
3XA283
FG Valves Fail To Trip
FG Valves SOV Fail To Trip
FG Valves SOV Trouble
FG Valve #1 Position Trouble
FG Valve #1 Fail To CLOSE
FG valve #2 Position Trouble
FG Valve #2 Fail To CLOSE
PG Valves Fail To Trip
PG Valve #1 Position Trouble
PG Valve #1 Fail To CLOSE
PG Valve #2 Position Trouble
PG Valve #2 Fail To CLOSE
FG Pressure XMTR Trouble
FG Pressure XMTR Deviation
RECY Gas Flow XMTR Trouble
RECY Gas Flow XMTR Deviation
PG Pressure XMTR Trouble
DCS S/D Switch Trouble
Local S/D Switch Trouble
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RECY Gas Heaters
OH Gas COMP
HYD Letdown
Help

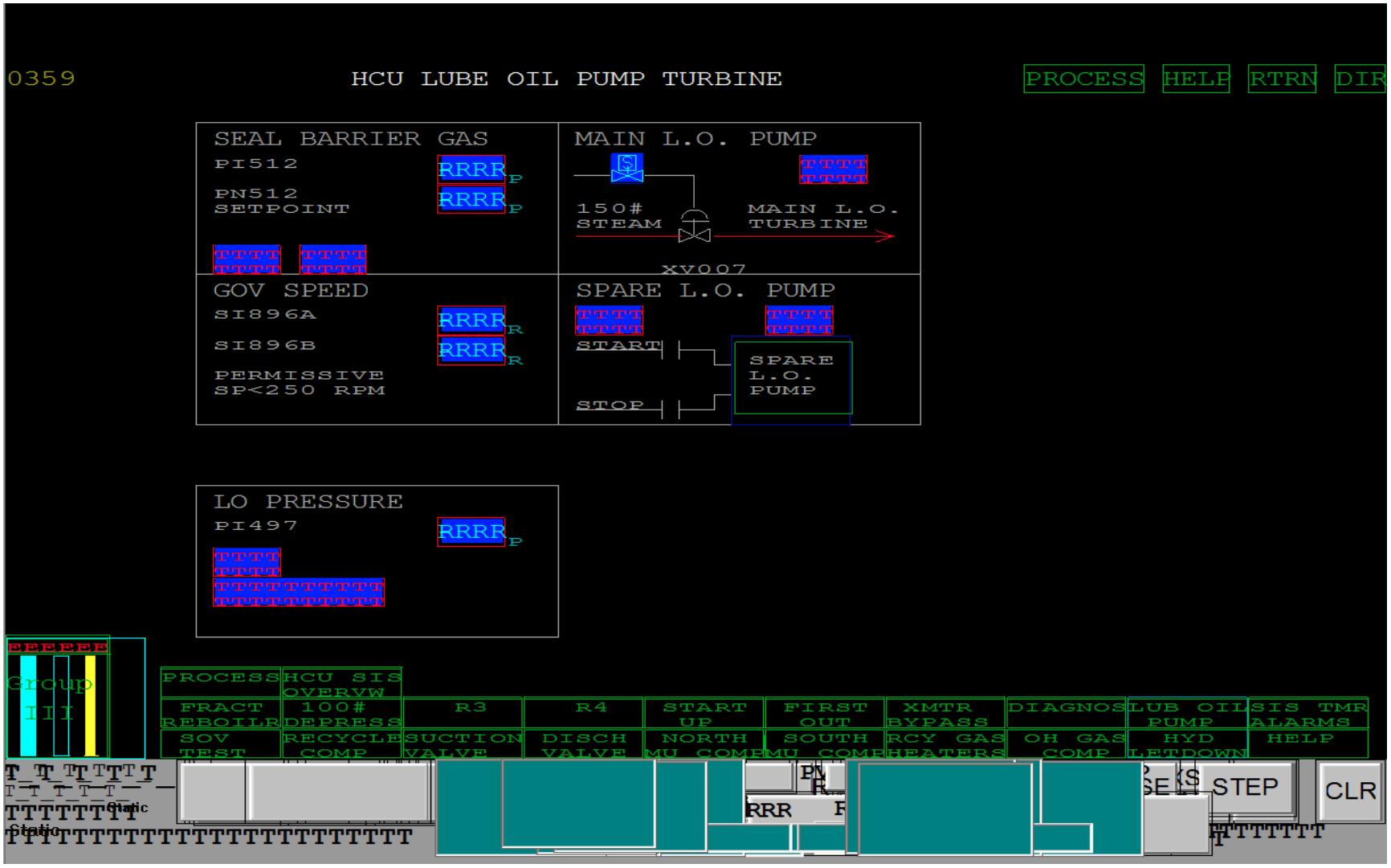
3.157 HCU DIAGNOSTICS 5 OF 5 (REBOILER) (0358P5.DS)

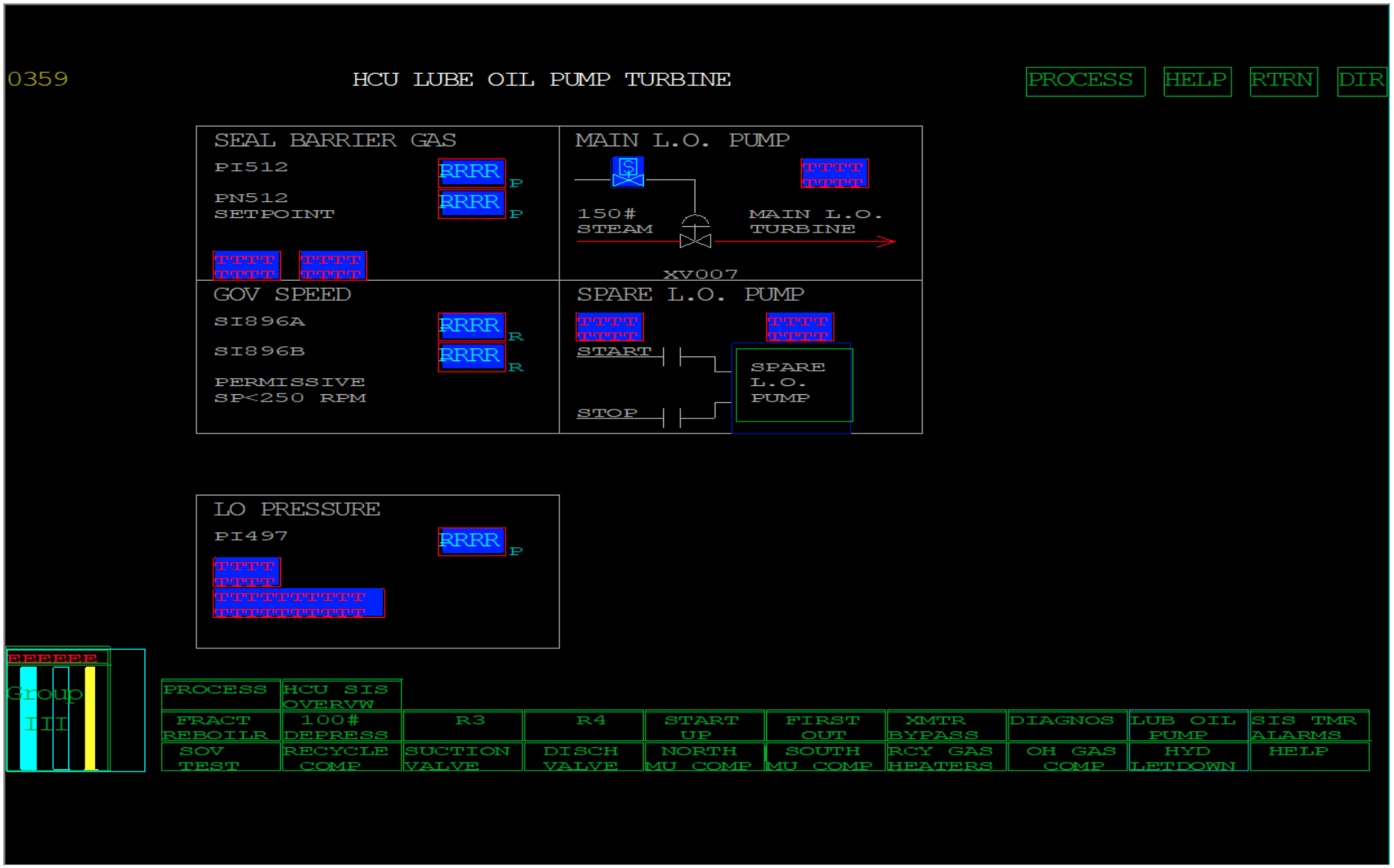


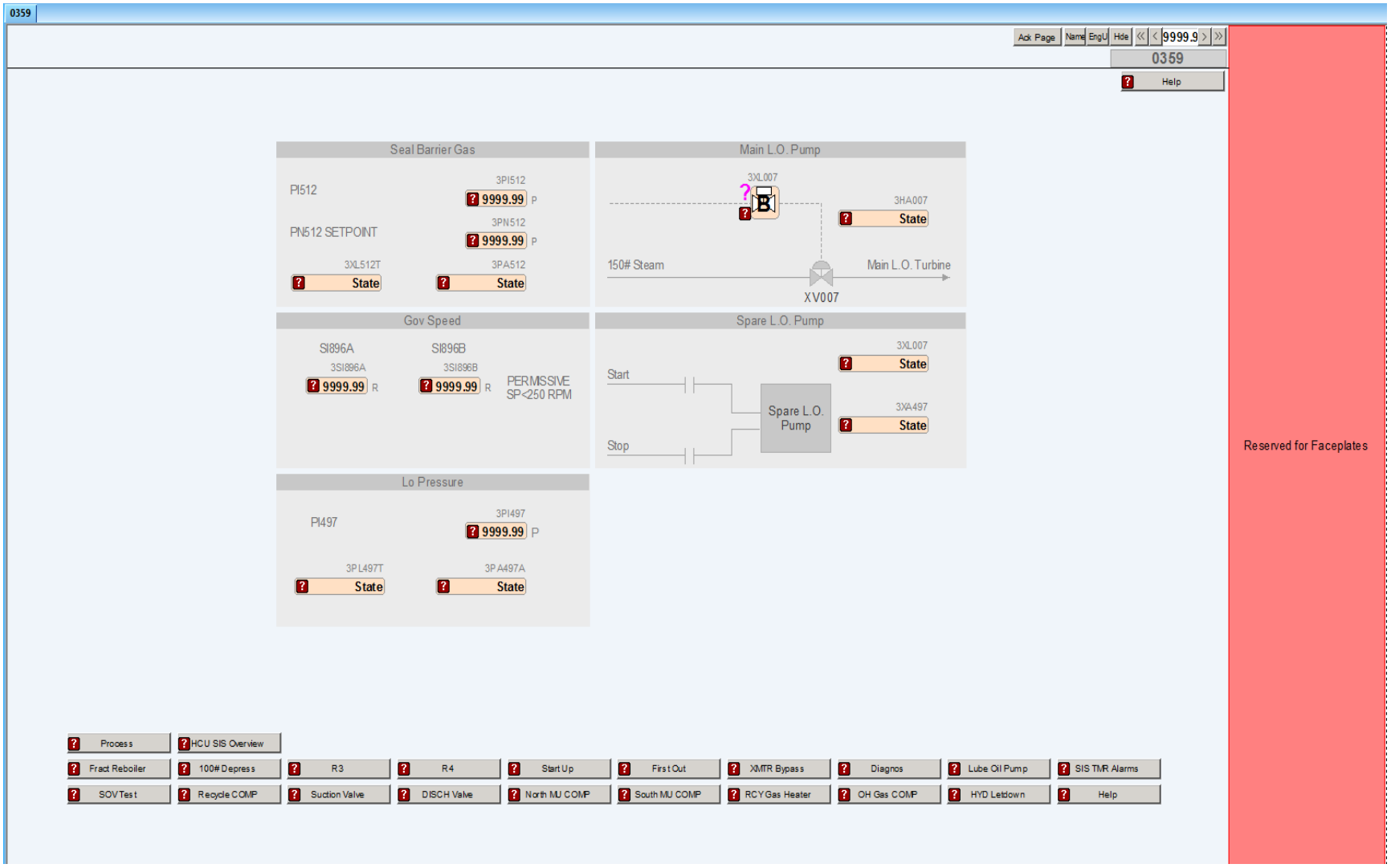

0358P5
HCU DIAGNOSTICS 5 OF 5 (REBOILER)
PROCESS
HELP
RTRN
DIR
FRAC REBOILER FUEL GAS
EEEEEEEE FG VALVES FAIL TO TRIP
EEEEEEEE FG VALVES SOV FAIL TO TRIP
EEEEEEEE FG VALVES SOV TROUBLE
EEEEEEEE FG VAVLE #1 POS TROUBLE
EEEEEEEE FG VALVE #1 FAIL TO CLOSE
EEEEEEEE FG VAVLE #2 POS TROUBLE
EEEEEEEE FG VALVE #2 FAIL TO CLOSE
FRAC REBOILER PILOT GAS
EEEEEEEE PG VALVES FAIL TO TRIP
EEEEEEEE PG VALVE #1 POS TROUBLE
EEEEEEEE PG VALVE #1 FAIL TO CLOSE
EEEEEEEE PG VALVE #2 POS TROUBLE
EEEEEEEE PG VALVE #2 FAIL TO CLOSE
FRAC REBLR AMMONIA VLV
EEEEEEEE NH3 VALVE FAIL TO TRIP
EEEEEEEE NH3 VALVE SOV FAIL TO TRIP
EEEEEEEE NH3 VALVE SOV TROUBLE
EEEEEEEE NH3 VALVE POS TROUBLE
EEEEEEEE NH3 VALVE FAIL TO CLOSE
FRAC REBLR STACK DAMPER
EEEEEEEE STACK DAMPER FAIL TO OPEN
FRAC REBLR ID FAN
EEEEEEEE ID FAN FAIL TO TRIP
FRAC REBLR S/D SWITCHES
EEEEEEEE DCS S/D SWITCH TROUBLE
CKT #1 CKT #2 DCS S/D SWITCH CKT#1/2 TRIP STATUS
EEEEEEEE LOCAL S/D SWITCH TROUBLE
CKT #1 CKT #2 LOCAL S/D SWITCH CKT#1/2 TRIP STATUS
FRAC REBOILER XMTRS
EEEEEEEE FG PRESSURE XMTR TROUBLE
EEEEEEEE FG PRESSURE XMTR DEV
TTTT TTTT PASS #1 FLOW XMTR TROUBLE
TTTT TTTT PASS #2 FLOW XMTR TROUBLE
TTTT TTTT PASS #3 FLOW XMTR TROUBLE
TTTT TTTT PASS #4 FLOW XMTR TROUBLE
TTTT TTTT PASS #5 FLOW XMTR TROUBLE
TTTT TTTT PASS #6 FLOW XMTR TROUBLE
EEEEEEEE PG PRESSURE XMTR TROUBLE
EEEEEEEE VAP OUT TEMP XMTR TROUBLE
EEEEEEEE NH3 FLOW XMTR TROUBLE
EEEEEEEE SCR INLET TEMP XMTR TROUBLE
EEEEEEEE DIL AIR PRESS XMTR TROUBLE
EEEEEEEE DIL AIR FLOW XMTR TROUBLE
EEEEEE
GROUP III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0358P5
Ack Page
Name
Eng U
Hide
9999.9
0358P5
Process
Help
FRAC Reboiler Fuel Gas
3XA078
State
FG Valves Fail To Trip
3XL078B
State
FG Valves SOV Fail To Trip
3XL078A
State
FG Valves SOV Trouble
3ZL078C
State
FG Vavle #1 POS Trouble
3XL078M
State
FG Valve #1 Fail To CLOSE
3ZL079C
State
FG Vavle #2 POS Trouble
3XL079M
State
FG Valve #2 Fail To CLOSE
FRAC Reboiler Pilot Gas
3XA080
State
PG Valves Fail To Trip
3ZL080C
State
PG Valve #1 POS Trouble
3XL080M
State
PG Valve #1 FAIL TO CLOSE
3ZL081C
State
PG Valve #2 POS Trouble
3XL081M
State
PG Valve #2 Fail To CLOSE
FRAC REBLR Ammonia VLV
3XA062
State
NH3 Valve Fail To Trip
3XL062B
State
NH3 Valve SOV Fail To Trip
3XL062A
State
NH3 Valve SOV Trouble
3ZL062C
State
NH3 Valve POS Trouble
3XL062M
State
NH3 Valve Fail To CLOSE
FRAC REBLR Stack Damper
3ZL061M
Stack Damper Fail To OPEN
State
FRAC REBLR ID Fan
3XA066
State
ID Fan Fail To Trip
FRAC REBLR S/D Switches
3XL068T
State
DCS S/D Switch Trouble
3HL068A
CKT #1
State
DCS S/D Switch
3HL068B
CKT#1/2 Trip Status
CKT #2
State
3XL067T
State
Local S/D Switch Trouble
3HL067A
CKT #1
State
Local S/D Switch
3HL067B
CKT#1/2 Trip Status
CKT #2
State
FRAC Reboiler XMTRS
3XL561T
State
FG Pressure XMTR Trouble
3PL561K
State
FG Pressure XMTR
3XL263T
State
3XL263U
State
Pass #1 Flow XMTR Trouble
3XL262T
State
3XL262U
State
Pass #2 Flow XMTR Trouble
3XL261T
State
3XL261U
State
Pass #3 Flow XMTR Trouble
3XL260T
State
3XL260U
State
Pass #4 Flow XMTR Trouble
3XL259T
State
3XL259U
State
Pass #5 Flow XMTR
3XL258T
State
3XL258U
State
Pass #6 Flow XMTR
3XL562T
State
PG Pressure XMTR Trouble
3XL880T
State
VAP Out TEMP XMTR Trouble
3XL254T
State
NH3 Flow XMTR Trouble
3XL882T
State
SCR Inlet TEMP XMTR Trouble
3XL559T
State
DIL Air PRESS XMTR Trouble
3XL255T
State
DIL Air Flow XMTR Trouble
Reserved for Faceplates
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
DIAGNOS
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RECY Gas Heaters
OH Gas COMP
HYD Letdown
Help

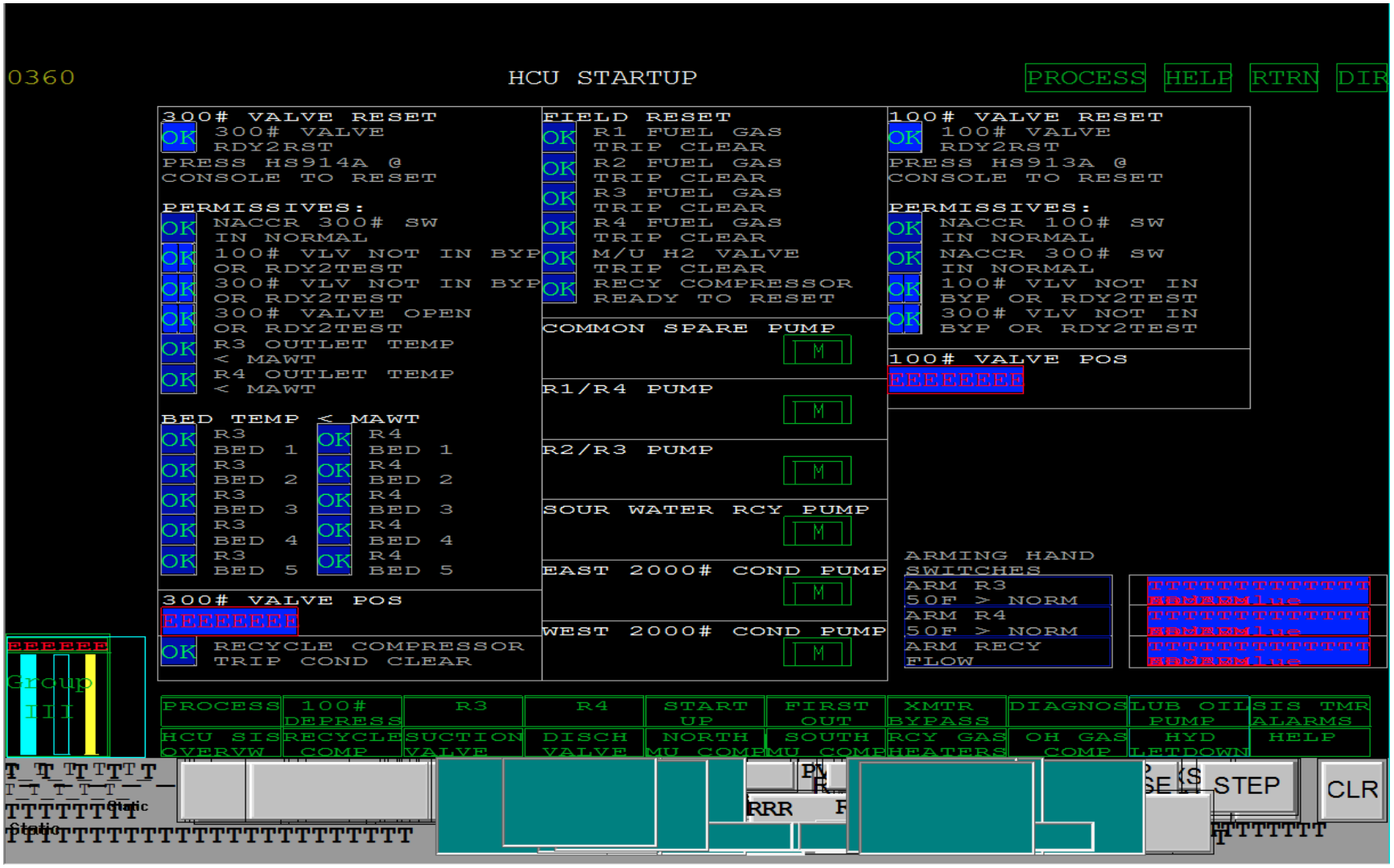
3.158 HCU LUBE OIL PUMP TURBINE (0359.DS)

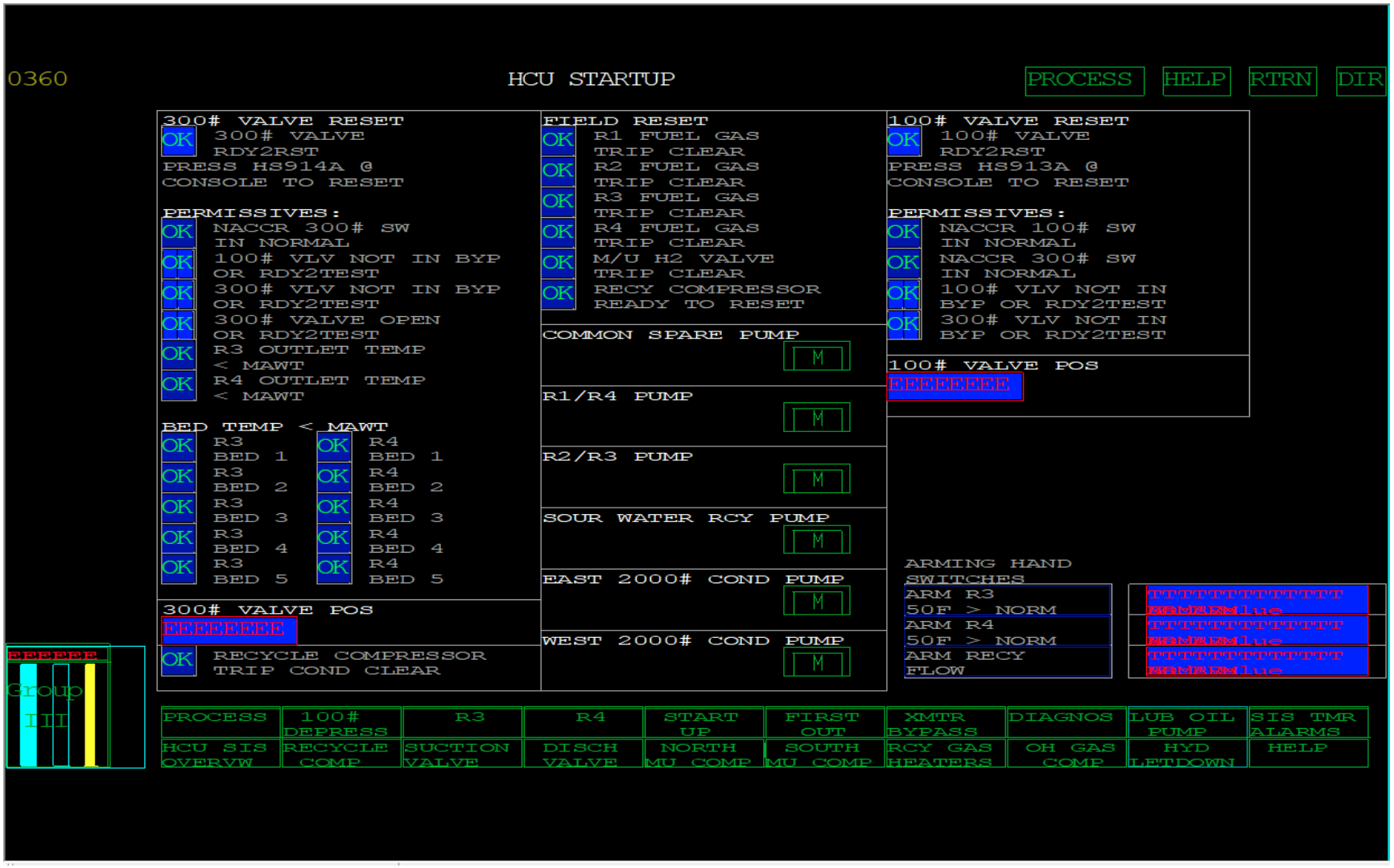


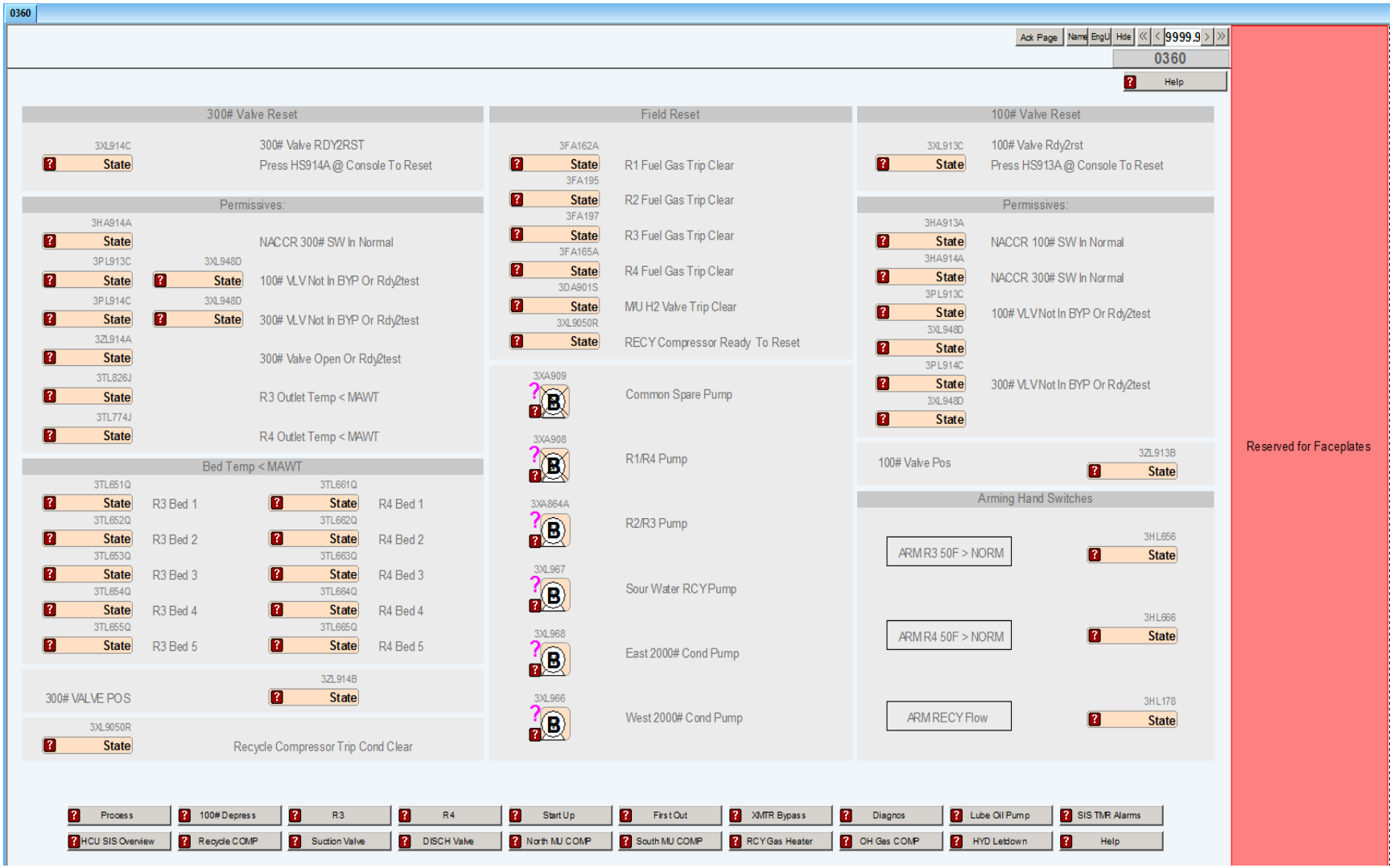

0359
HCU LUBE OIL PUMP TURBINE
PROCESS
HELP
RTRN
DIR
SEAL BARRIER GAS
PI512
RRRR
P
PN512
SETPOINT
RRRR
P
TTTT
TTTT
TTTT
TTTT
MAIN L.O. PUMP
TTTT
TTTT
150#
STEAM
MAIN L.O.
TURBINE
XV007
GOV SPEED
SI896A
RRRR
R
SI896B
RRRR
R
PERMISSIVE
SP<250 RPM
SPARE L.O. PUMP
TTTT
TTTT
TTTT
TTTT
START
STOP
SPARE
L.O.
PUMP
LO PRESSURE
PI497
RRRR
P
TTTT
TTTT
TTTTTTTTTTT
TTTTTTTTTTT
EEEEEE
Group
III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0359
Ack Page
Name
Eng'U
Hide
9999.9
0359
Help
Seal Barrier Gas
PI512
3PI512
9999.99
P
PN512 SETPOINT
3PN512
9999.99
P
3XL512T
State
3PA512
State
Main L.O. Pump
3XL007
B
3HA007
State
150# Steam
Main L.O. Turbine
XV007
Gov Speed
SI896A
3SI896A
9999.99
R
SI896B
3SI896B
9999.99
R
PERMISSIVE
SP<250 RPM
Spare L.O. Pump
3XL007
State
Start
Spare L.O. Pump
3XA497
State
Stop
Lo Pressure
PI497
3PI497
9999.99
P
3PL497T
State
3PA497A
State
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

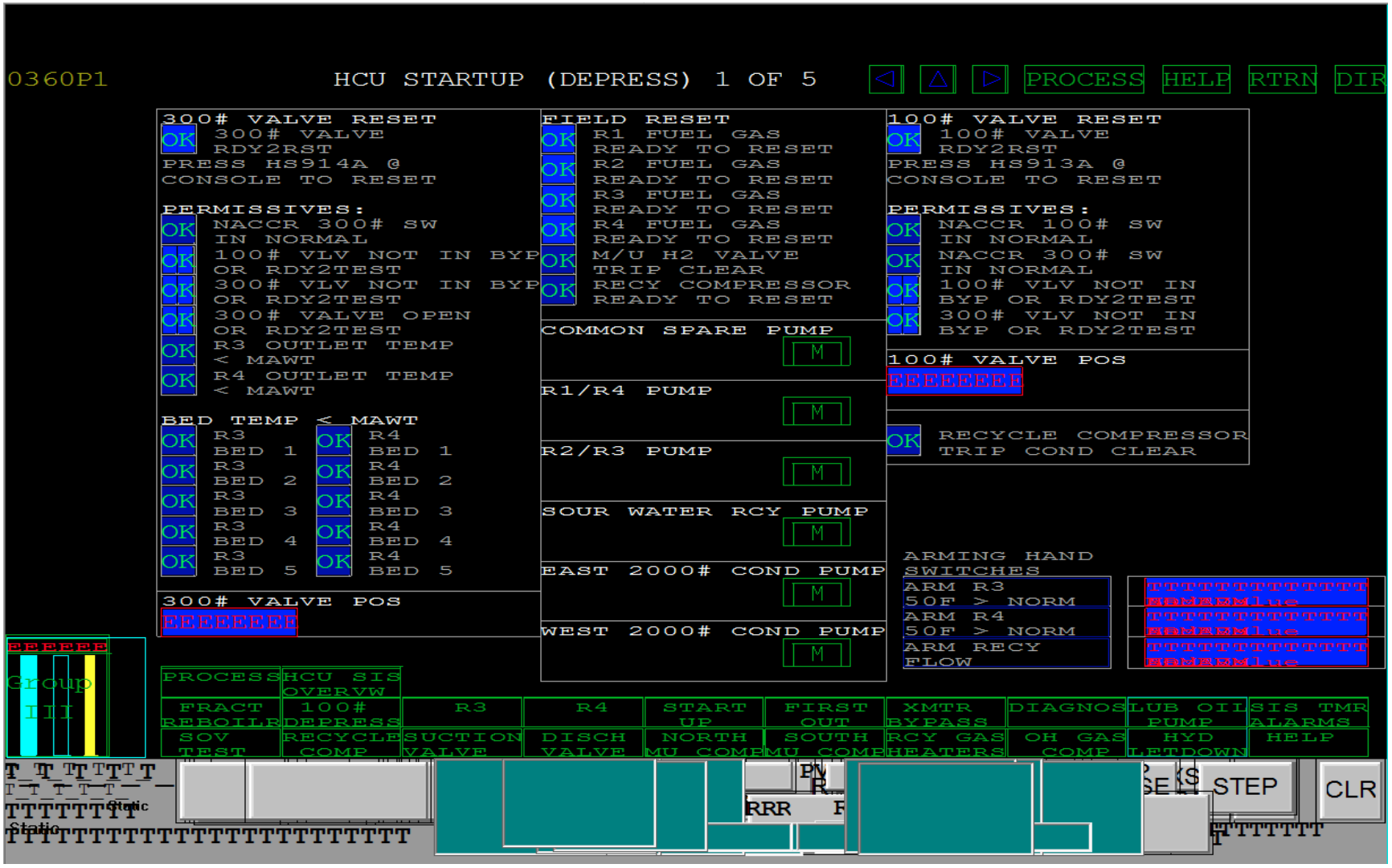
3.159 HCU STARTUP (0360.DS)

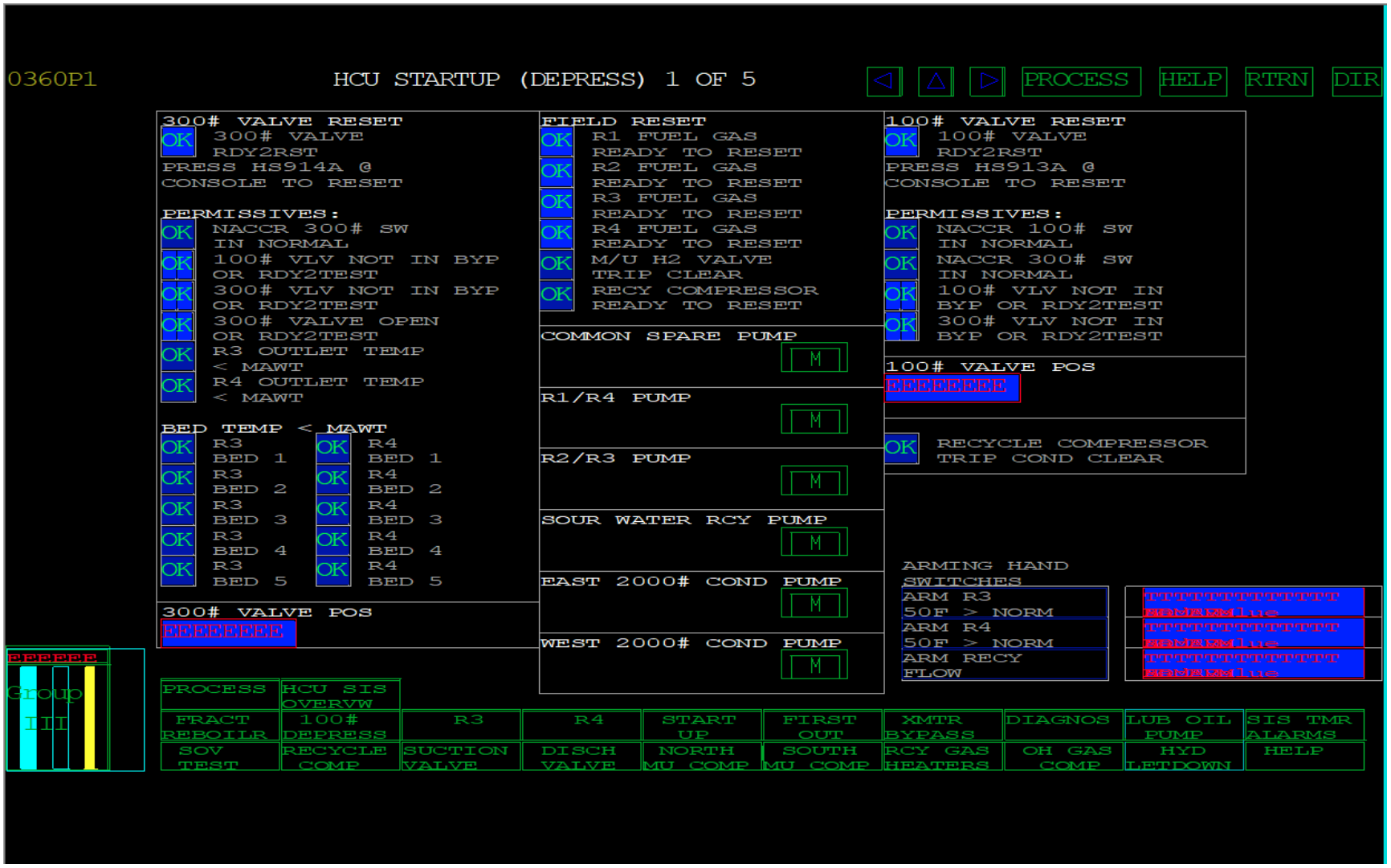


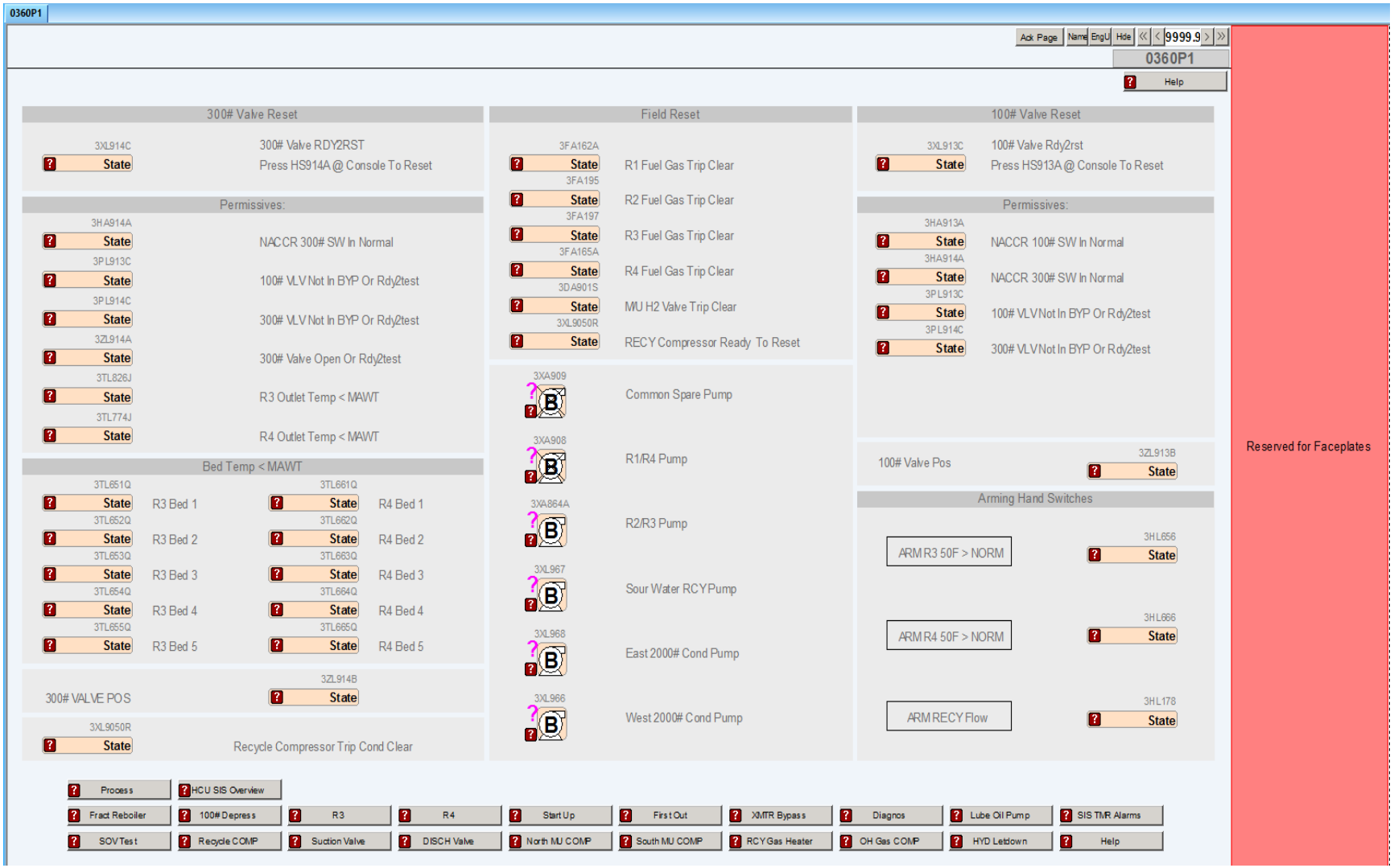

0360
HCU STARTUP
PROCESS
HELP
RTRN
DIR
300# VALVE RESET
OK 300# VALVE RDY2RST
PRESS HS914A @ CONSOLE TO RESET
PERMISSIVES:
OK NACCR 300# SW IN NORMAL
OK 100# VLV NOT IN BYP OR RDY2TEST
OK 300# VLV NOT IN BYP OR RDY2TEST
OK 300# VALVE OPEN OR RDY2TEST
OK R3 OUTLET TEMP < MAWT
OK R4 OUTLET TEMP < MAWT
BED TEMP < MAWT
OK R3 BED 1
OK R4 BED 1
OK R3 BED 2
OK R4 BED 2
OK R3 BED 3
OK R4 BED 3
OK R3 BED 4
OK R4 BED 4
OK R3 BED 5
OK R4 BED 5
300# VALVE POS
EEEEEEEE
OK RECYCLE COMPRESSOR TRIP COND CLEAR
FIELD RESET
OK R1 FUEL GAS TRIP CLEAR
OK R2 FUEL GAS TRIP CLEAR
OK R3 FUEL GAS TRIP CLEAR
OK R4 FUEL GAS TRIP CLEAR
OK M/U H2 VALVE TRIP CLEAR
OK RECY COMPRESSOR READY TO RESET
COMMON SPARE PUMP
M
R1/R4 PUMP
M
R2/R3 PUMP
M
SOUR WATER RCY PUMP
M
EAST 2000# COND PUMP
M
WEST 2000# COND PUMP
M
100# VALVE RESET
OK 100# VALVE RDY2RST
PRESS HS913A @ CONSOLE TO RESET
PERMISSIVES:
OK NACCR 100# SW IN NORMAL
OK NACCR 300# SW IN NORMAL
OK 100# VLV NOT IN BYP OR RDY2TEST
OK 300# VLV NOT IN BYP OR RDY2TEST
100# VALVE POS
EEEEEEEE
ARMING HAND SWITCHES
ARM R3 50F > NORM
ARM R4 50F > NORM
ARM RECY FLOW
EEEEEE
Group III
PROCESS
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
HCU SIS OVERVW
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0360
Ack Page
Name
Eng U
Hide
9999.9
0360
Help
300# Valve Reset
3XL914C
State
300# Valve RDY2RST
Press HS914A @ Console To Reset
Permissives:
3HA914A
State
NACCR 300# SW In Normal
3PL913C
State
3XL948D
State
100# VLV Not In BYP Or Rdy2test
3PL914C
State
3XL948D
State
300# VLV Not In BYP Or Rdy2test
3ZL914A
State
300# Valve Open Or Rdy2test
3TL826J
State
R3 Outlet Temp < MAWT
3TL774J
State
R4 Outlet Temp < MAWT
Bed Temp < MAWT
3TL651Q
State
R3 Bed 1
3TL661Q
State
R4 Bed 1
3TL652Q
State
R3 Bed 2
3TL662Q
State
R4 Bed 2
3TL653Q
State
R3 Bed 3
3TL663Q
State
R4 Bed 3
3TL654Q
State
R3 Bed 4
3TL664Q
State
R4 Bed 4
3TL655Q
State
R3 Bed 5
3TL665Q
State
R4 Bed 5
300# VALVE POS
3ZL914B
State
3XL9050R
State
Recycle Compressor Trip Cond Clear
Field Reset
3FA162A
State
R1 Fuel Gas Trip Clear
3FA195
State
R2 Fuel Gas Trip Clear
3FA197
State
R3 Fuel Gas Trip Clear
3FA165A
State
R4 Fuel Gas Trip Clear
3DA901S
State
MU H2 Valve Trip Clear
3XL9050R
State
RECY Compressor Ready To Reset
3XA909
Common Spare Pump
3XA908
R1/R4 Pump
3XA864A
R2/R3 Pump
3XL967
Sour Water RCY Pump
3XL968
East 2000# Cond Pump
3XL966
West 2000# Cond Pump
100# Valve Reset
3XL913C
State
100# Valve Rdy2rst
Press HS913A @ Console To Reset
Permissives:
3HA913A
State
NACCR 100# SW In Normal
3HA914A
State
NACCR 300# SW In Normal
3PL913C
State
100# VLV Not In BYP Or Rdy2test
3XL948D
State
3PL914C
State
300# VLV Not In BYP Or Rdy2test
3XL948D
State
100# Valve Pos
3ZL913B
State
Arming Hand Switches
ARM R3 50F > NORM
3HL656
State
ARM R4 50F > NORM
3HL666
State
ARM RECY Flow
3HL178
State
Reserved for Faceplates
Process
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
HCU SIS Overview
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

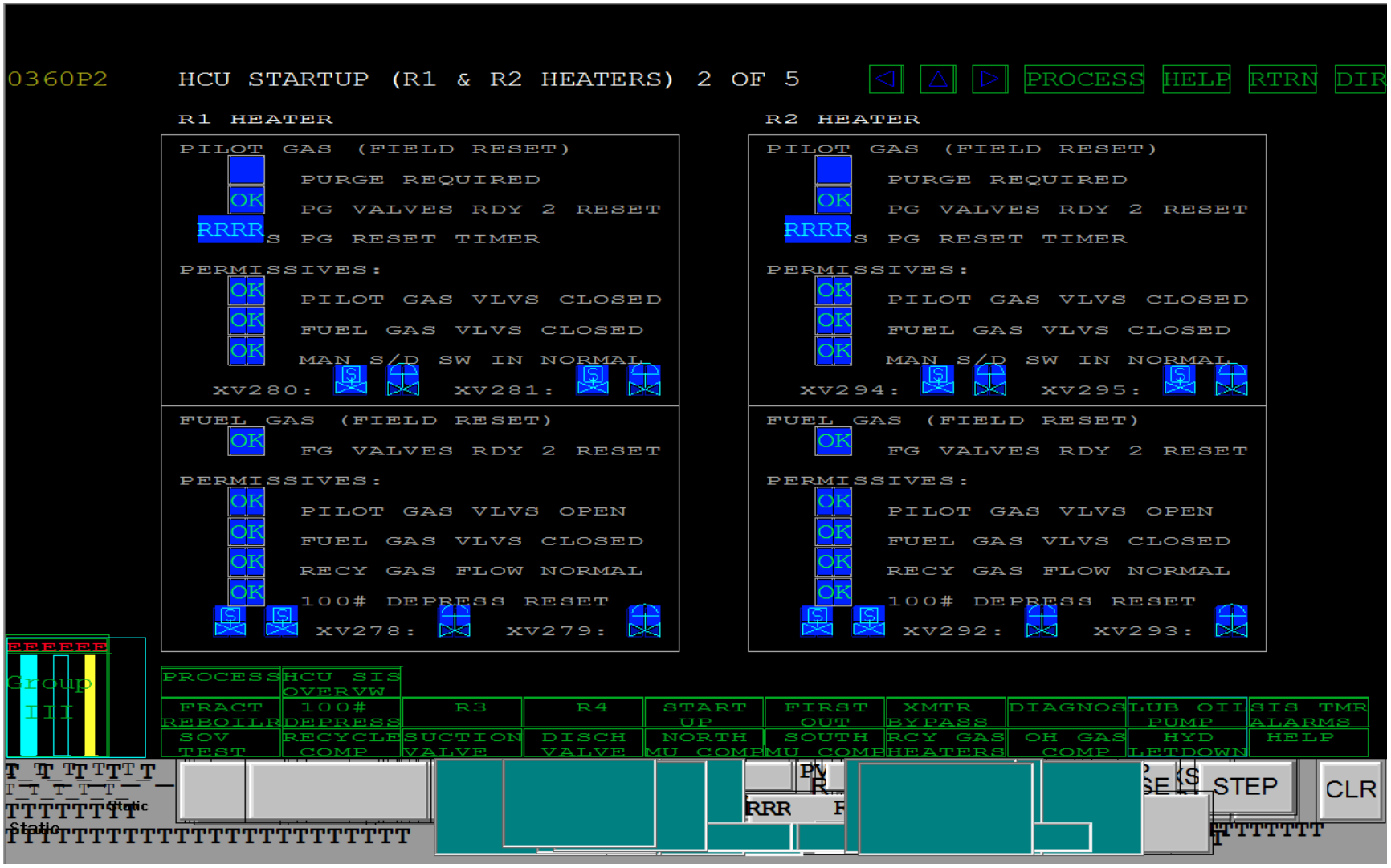
3.160 HCU STARTUP (DEPRESS) 1 OF 5 (0360P1.DS)

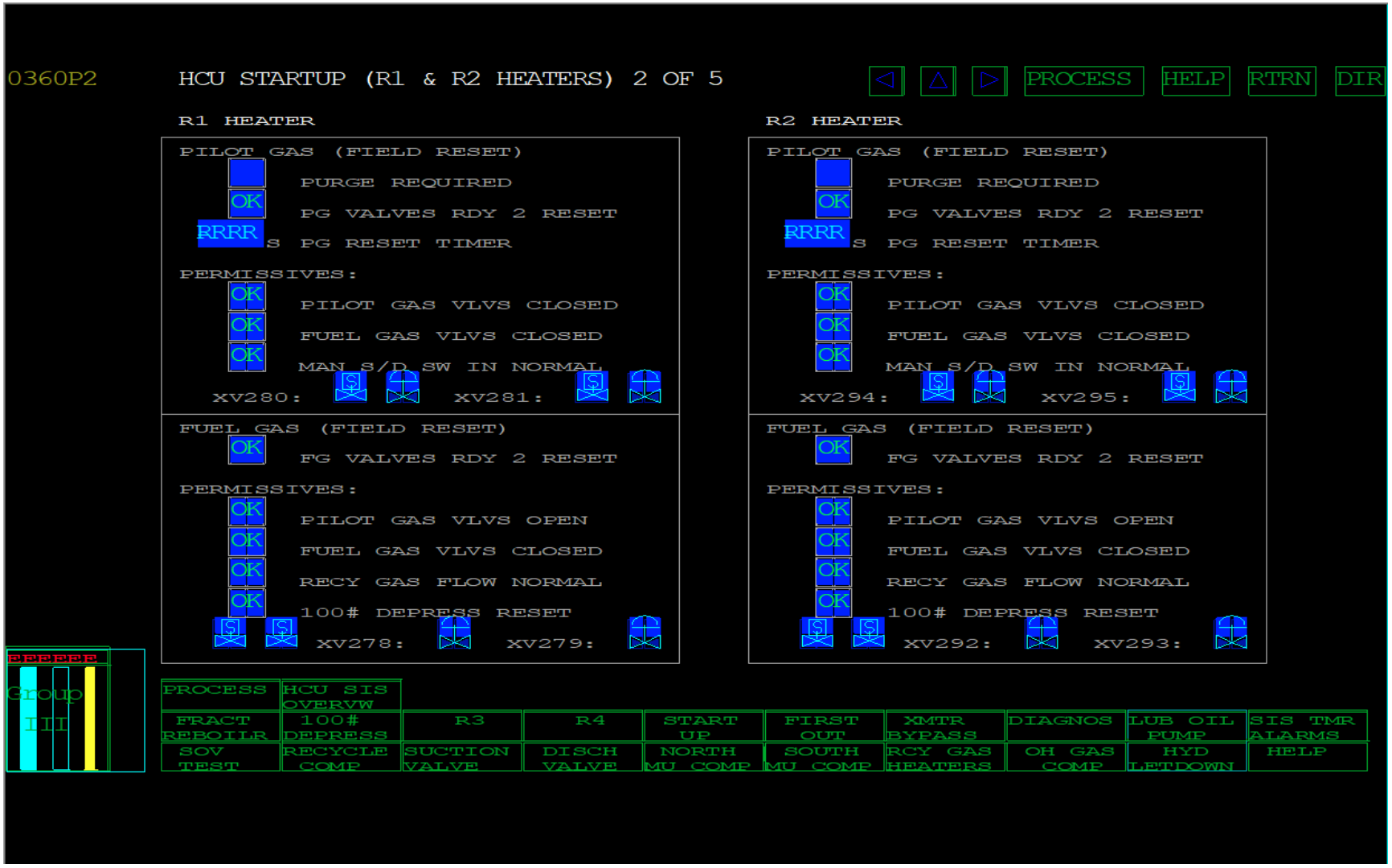


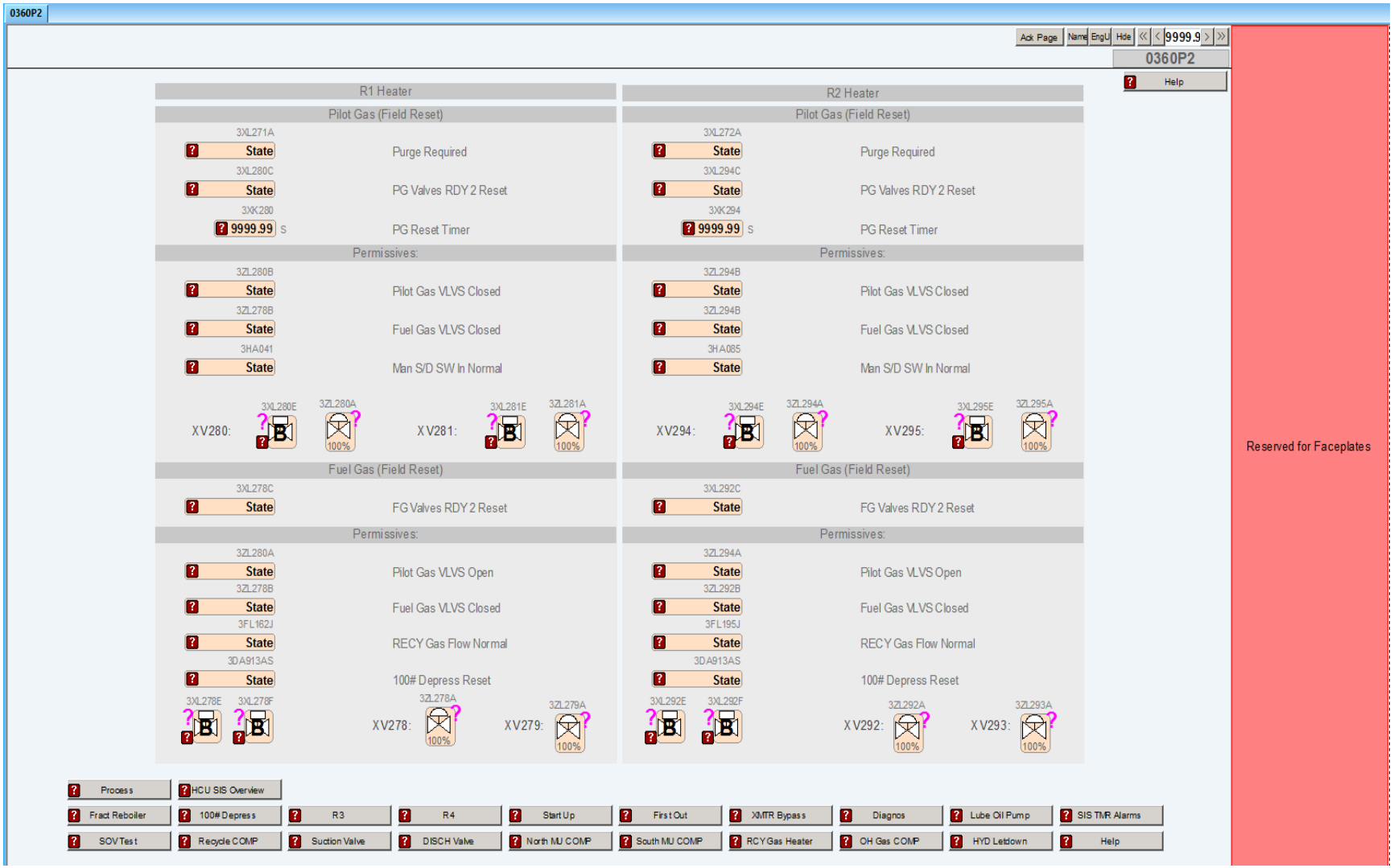

0360P1
HCU STARTUP (DEPRESS) 1 OF 5
PROCESS
HELP
RTRN
DIR
300# VALVE RESET
OK 300# VALVE RDY2RST
PRESS HS914A @ CONSOLE TO RESET
PERMISSIVES:
OK NACCR 300# SW IN NORMAL
OK 100# VLV NOT IN BYP OR RDY2TEST
OK 300# VLV NOT IN BYP OR RDY2TEST
OK 300# VALVE OPEN OR RDY2TEST
OK R3 OUTLET TEMP < MAWT
OK R4 OUTLET TEMP < MAWT
BED TEMP < MAWT
OK R3 BED 1
OK R4 BED 1
OK R3 BED 2
OK R4 BED 2
OK R3 BED 3
OK R4 BED 3
OK R3 BED 4
OK R4 BED 4
OK R3 BED 5
OK R4 BED 5
300# VALVE POS
EEEEEEEE
FIELD RESET
OK R1 FUEL GAS READY TO RESET
OK R2 FUEL GAS READY TO RESET
OK R3 FUEL GAS READY TO RESET
OK R4 FUEL GAS READY TO RESET
OK M/U H2 VALVE TRIP CLEAR
OK RECY COMPRESSOR READY TO RESET
COMMON SPARE PUMP
M
R1/R4 PUMP
M
R2/R3 PUMP
M
SOUR WATER RCY PUMP
M
EAST 2000# COND PUMP
M
WEST 2000# COND PUMP
M
100# VALVE RESET
OK 100# VALVE RDY2RST
PRESS HS913A @ CONSOLE TO RESET
PERMISSIVES:
OK NACCR 100# SW IN NORMAL
OK NACCR 300# SW IN NORMAL
OK 100# VLV NOT IN BYP OR RDY2TEST
OK 300# VLV NOT IN BYP OR RDY2TEST
100# VALVE POS
EEEEEEEE
OK RECYCLE COMPRESSOR TRIP COND CLEAR
ARMING HAND SWITCHES
ARM R3 50F > NORM
ARM R4 50F > NORM
ARM RECY FLOW
EEEEEE
GROUP III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0360P1
Ack Page
Name
Eng U
Hide
9999.9
0360P1
Help
300# Valve Reset
3XL914C
State
300# Valve RDY2RST
Press HS914A @ Console To Reset
Permissives:
3HA914A
State
NACCR 300# SW In Normal
3PL913C
State
100# VLV Not In BYP Or Rdy2test
3PL914C
State
300# VLV Not In BYP Or Rdy2test
3ZL914A
State
300# Valve Open Or Rdy2test
3TL826J
State
R3 Outlet Temp < MAWT
3TL774J
State
R4 Outlet Temp < MAWT
Bed Temp < MAWT
3TL651Q
State
R3 Bed 1
3TL661Q
State
R4 Bed 1
3TL652Q
State
R3 Bed 2
3TL662Q
State
R4 Bed 2
3TL653Q
State
R3 Bed 3
3TL663Q
State
R4 Bed 3
3TL654Q
State
R3 Bed 4
3TL664Q
State
R4 Bed 4
3TL655Q
State
R3 Bed 5
3TL665Q
State
R4 Bed 5
300# VALVE POS
3ZL914B
State
3XL9050R
State
Recycle Compressor Trip Cond Clear
Field Reset
3FA162A
State
R1 Fuel Gas Trip Clear
3FA195
State
R2 Fuel Gas Trip Clear
3FA197
State
R3 Fuel Gas Trip Clear
3FA165A
State
R4 Fuel Gas Trip Clear
3DA901S
State
MU H2 Valve Trip Clear
3XL9050R
State
RECY Compressor Ready To Reset
3XA909
B
Common Spare Pump
3XA908
B
R1/R4 Pump
3XA864A
B
R2/R3 Pump
3XL967
B
Sour Water RCY Pump
3XL968
B
East 2000# Cond Pump
3XL966
B
West 2000# Cond Pump
100# Valve Reset
3XL913C
State
100# Valve Rdy2rst
Press HS913A @ Console To Reset
Permissives:
3HA913A
State
NACCR 100# SW In Normal
3HA914A
State
NACCR 300# SW In Normal
3PL913C
State
100# VLV Not In BYP Or Rdy2test
3PL914C
State
300# VLV Not In BYP Or Rdy2test
100# Valve Pos
3ZL913B
State
Arming Hand Switches
ARM R3 50F > NORM
3HL656
State
ARM R4 50F > NORM
3HL666
State
ARM RECY Flow
3HL178
State
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

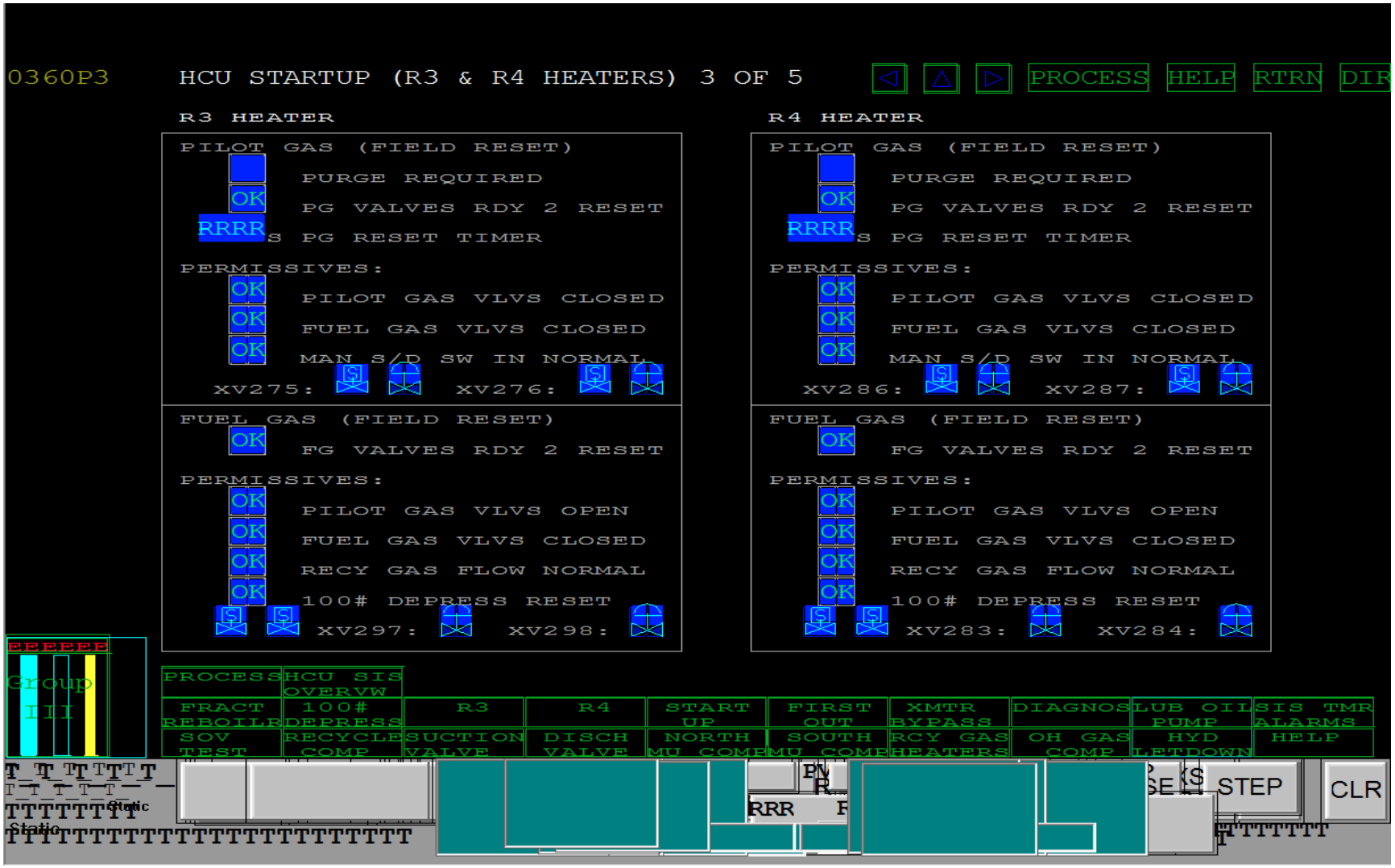
3.161 HCU STARTUP (R1 & R2 HEATERS) 2 OF 5 (0360P2.DS)

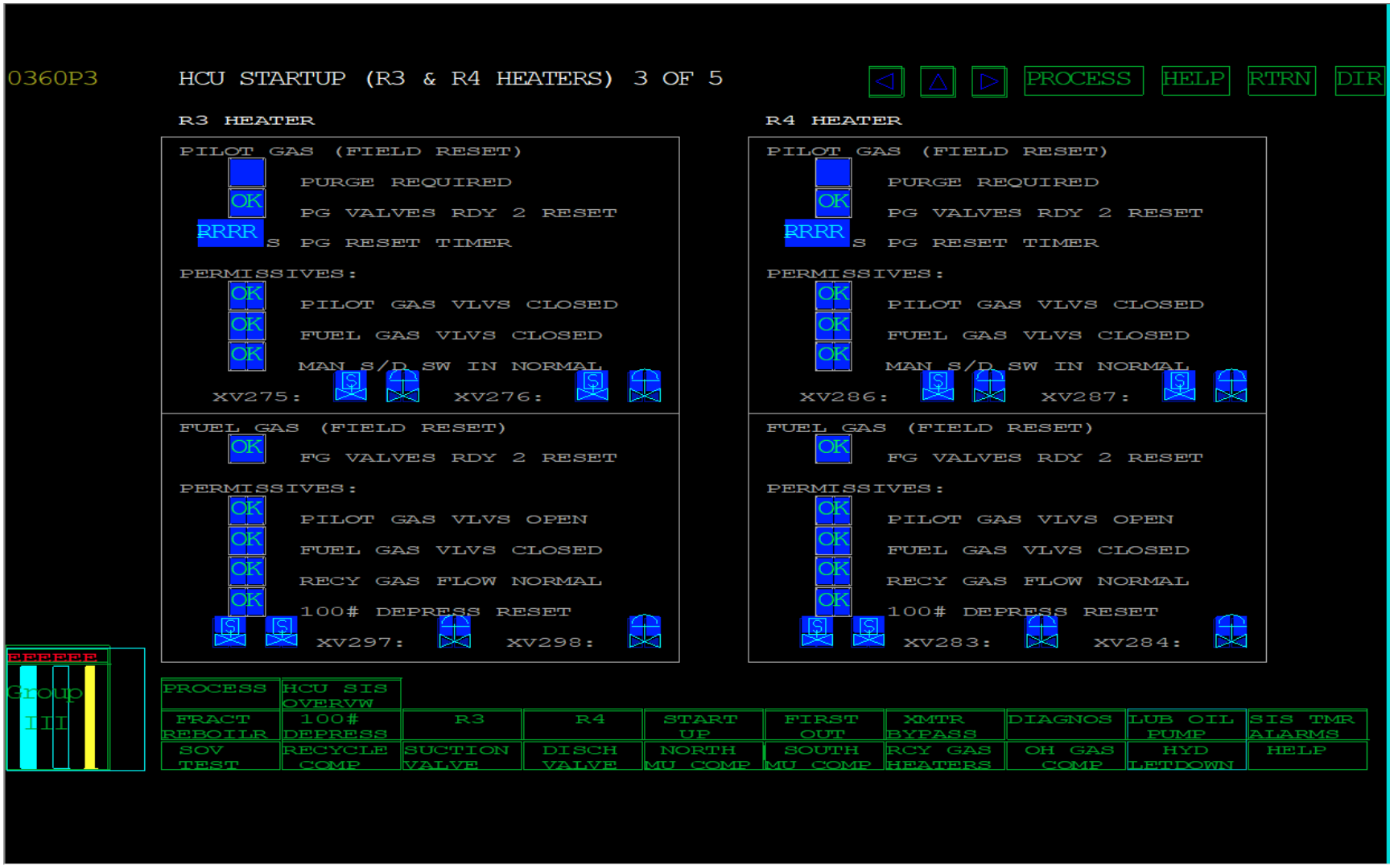


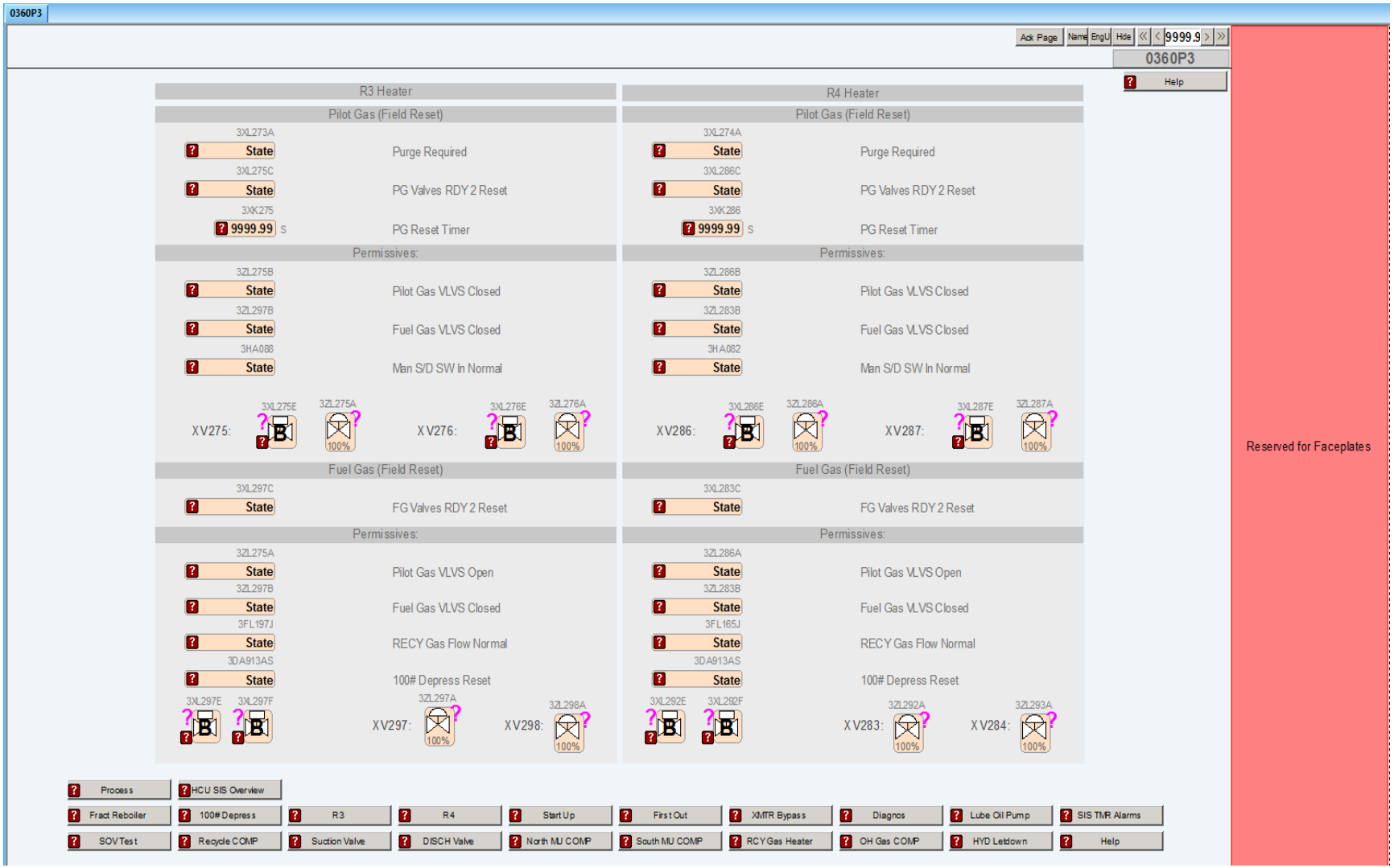

0360P2
HCU STARTUP (R1 & R2 HEATERS) 2 OF 5
PROCESS
HELP
RTRN
DIR
R1 HEATER
PILOT GAS (FIELD RESET)
PURGE REQUIRED
OK
PG VALVES RDY 2 RESET
RRRR
S PG RESET TIMER
PERMISSIVES:
OK
PILOT GAS VLVS CLOSED
OK
FUEL GAS VLVS CLOSED
OK
MAN S/D SW IN NORMAL
XV280:
XV281:
FUEL GAS (FIELD RESET)
OK
FG VALVES RDY 2 RESET
PERMISSIVES:
OK
PILOT GAS VLVS OPEN
OK
FUEL GAS VLVS CLOSED
OK
RECY GAS FLOW NORMAL
OK
100# DEPRESS RESET
XV278:
XV279:
R2 HEATER
PILOT GAS (FIELD RESET)
PURGE REQUIRED
OK
PG VALVES RDY 2 RESET
RRRR
S PG RESET TIMER
PERMISSIVES:
OK
PILOT GAS VLVS CLOSED
OK
FUEL GAS VLVS CLOSED
OK
MAN S/D SW IN NORMAL
XV294:
XV295:
FUEL GAS (FIELD RESET)
OK
FG VALVES RDY 2 RESET
PERMISSIVES:
OK
PILOT GAS VLVS OPEN
OK
FUEL GAS VLVS CLOSED
OK
RECY GAS FLOW NORMAL
OK
100# DEPRESS RESET
XV292:
XV293:
EEEEEE
GROUP
III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0360P2
Ack Page
Name
Eng U
Hide
9999.9
0360P2
Help
R1 Heater
Pilot Gas (Field Reset)
3XL271A
State
Purge Required
3XL280C
State
PG Valves RDY 2 Reset
3XK280
9999.99
S
PG Reset Timer
Permissives:
3ZL280B
State
Pilot Gas VLVS Closed
3ZL278B
State
Fuel Gas VLVS Closed
3HA041
State
Man S/D SW In Normal
XV280:
3XL280E
3ZL280A
100%
XV281:
3XL281E
3ZL281A
100%
Fuel Gas (Field Reset)
3XL278C
State
FG Valves RDY 2 Reset
Permissives:
3ZL280A
State
Pilot Gas VLVS Open
3ZL278B
State
Fuel Gas VLVS Closed
3FL162J
State
RECY Gas Flow Normal
3DA913AS
State
100# Depress Reset
3XL278E
3XL278F
XV278:
3ZL278A
100%
XV279:
3ZL279A
100%
R2 Heater
Pilot Gas (Field Reset)
3XL272A
State
Purge Required
3XL294C
State
PG Valves RDY 2 Reset
3XK294
9999.99
S
PG Reset Timer
Permissives:
3ZL294B
State
Pilot Gas VLVS Closed
3ZL294B
State
Fuel Gas VLVS Closed
3HA085
State
Man S/D SW In Normal
XV294:
3XL294E
3ZL294A
100%
XV295:
3XL295E
3ZL295A
100%
Fuel Gas (Field Reset)
3XL292C
State
FG Valves RDY 2 Reset
Permissives:
3ZL294A
State
Pilot Gas VLVS Open
3ZL292B
State
Fuel Gas VLVS Closed
3FL195J
State
RECY Gas Flow Normal
3DA913AS
State
100# Depress Reset
3XL292E
3XL292F
XV292:
3ZL292A
100%
XV293:
3ZL293A
100%
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

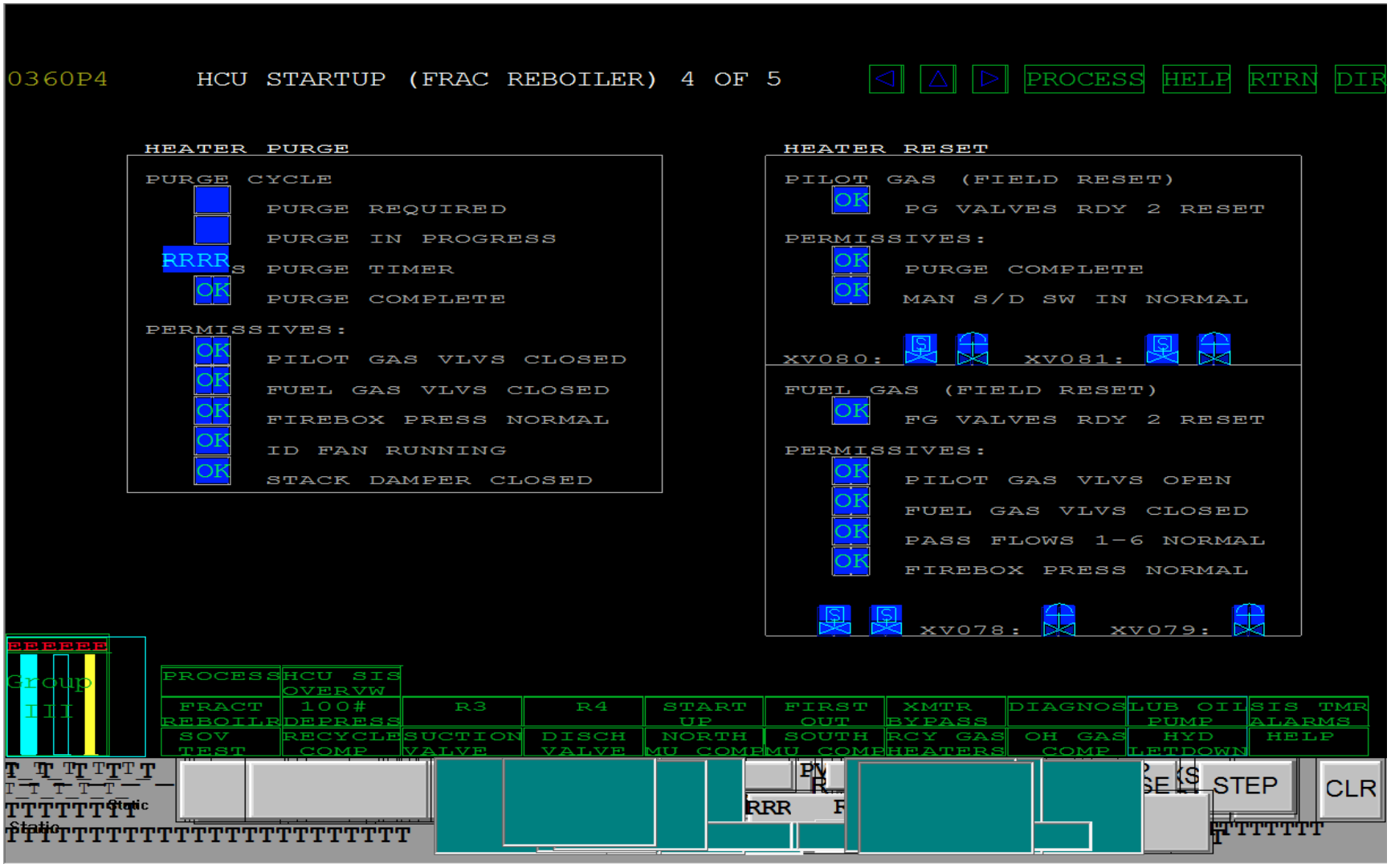
3.162 HCU STARTUP (R3 & R4 HEATERS) 3 OF 5 (0360P3.DS)

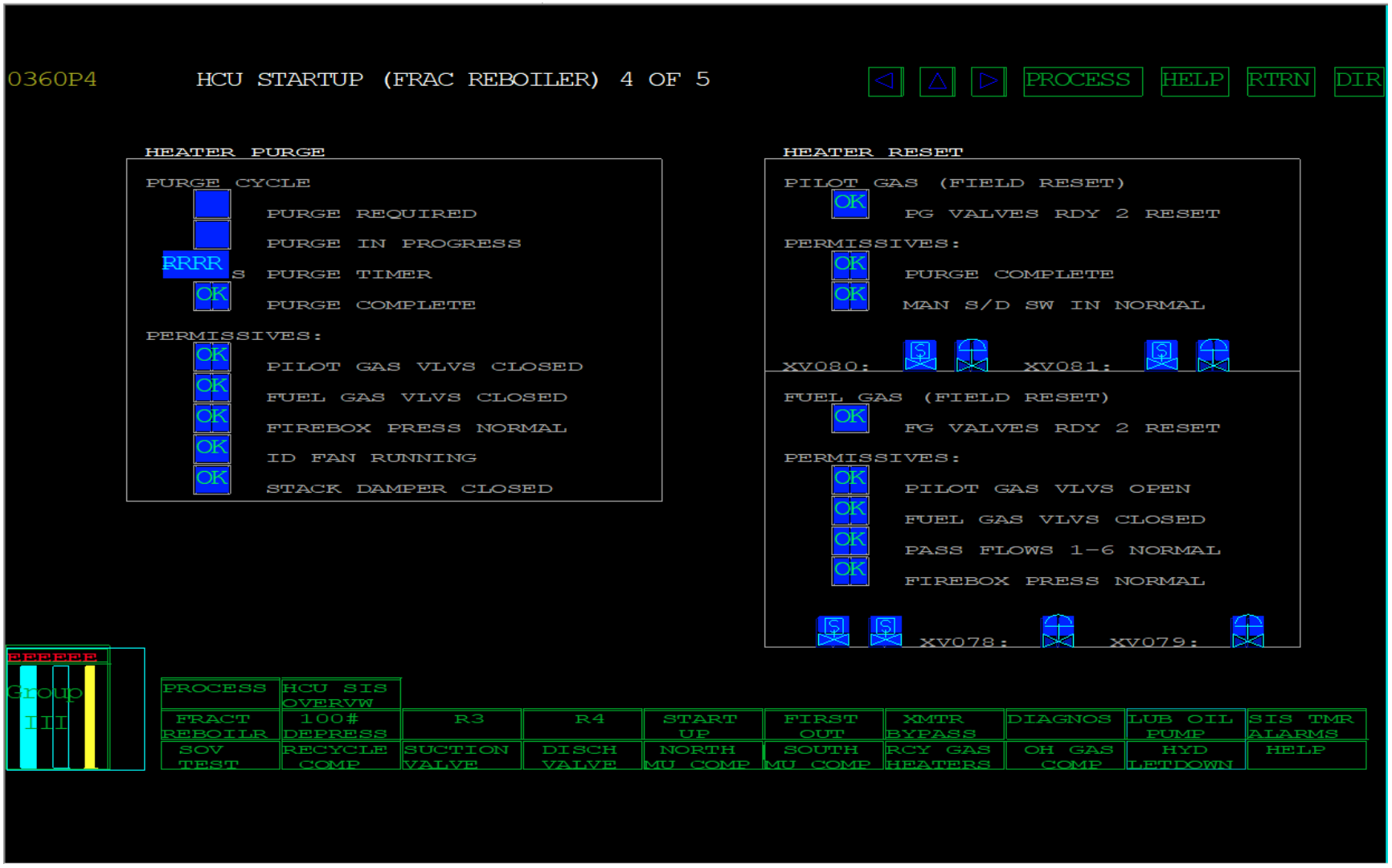


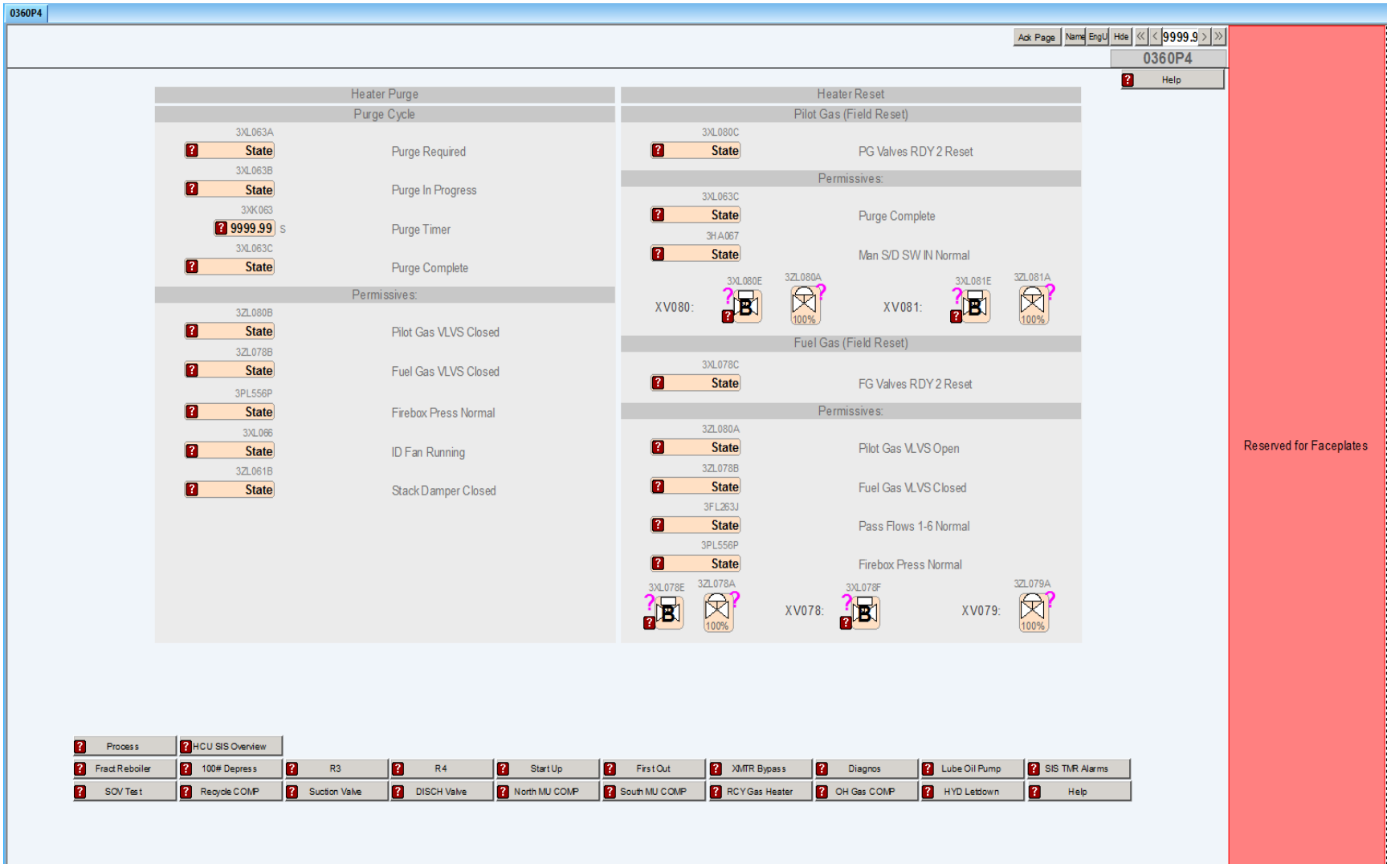

0360P3
HCU STARTUP (R3 & R4 HEATERS) 3 OF 5
PROCESS
HELP
RTRN
DIR
R3 HEATER
PILOT GAS (FIELD RESET)
PURGE REQUIRED
OK
PG VALVES RDY 2 RESET
RRRR
S PG RESET TIMER
PERMISSIVES:
OK
PILOT GAS VLVS CLOSED
OK
FUEL GAS VLVS CLOSED
OK
MAN S/D SW IN NORMAL
XV275:
XV276:
FUEL GAS (FIELD RESET)
OK
FG VALVES RDY 2 RESET
PERMISSIVES:
OK
PILOT GAS VLVS OPEN
OK
FUEL GAS VLVS CLOSED
OK
RECY GAS FLOW NORMAL
OK
100# DEPRESS RESET
XV297:
XV298:
R4 HEATER
PILOT GAS (FIELD RESET)
PURGE REQUIRED
OK
PG VALVES RDY 2 RESET
RRRR
S PG RESET TIMER
PERMISSIVES:
OK
PILOT GAS VLVS CLOSED
OK
FUEL GAS VLVS CLOSED
OK
MAN S/D SW IN NORMAL
XV286:
XV287:
FUEL GAS (FIELD RESET)
OK
FG VALVES RDY 2 RESET
PERMISSIVES:
OK
PILOT GAS VLVS OPEN
OK
FUEL GAS VLVS CLOSED
OK
RECY GAS FLOW NORMAL
OK
100# DEPRESS RESET
XV283:
XV284:
EEEEEE
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0360P3
Ack Page
Name
Eng U
Hide
9999.9
0360P3
Help
R3 Heater
Pilot Gas (Field Reset)
3XL273A
State
Purge Required
3XL275C
State
PG Valves RDY 2 Reset
3XK275
9999.99
S
PG Reset Timer
Permissives:
3ZL275B
State
Pilot Gas VLVS Closed
3ZL297B
State
Fuel Gas VLVS Closed
3HA088
State
Man S/D SW In Normal
XV275:
3XL275E
3ZL275A
100%
XV276:
3XL276E
3ZL276A
100%
Fuel Gas (Field Reset)
3XL297C
State
FG Valves RDY 2 Reset
Permissives:
3ZL275A
State
Pilot Gas VLVS Open
3ZL297B
State
Fuel Gas VLVS Closed
3FL197J
State
RECY Gas Flow Normal
3DA913AS
State
100# Depress Reset
3XL297E
3XL297F
XV297:
3ZL297A
100%
XV298:
3ZL298A
100%
R4 Heater
Pilot Gas (Field Reset)
3XL274A
State
Purge Required
3XL286C
State
PG Valves RDY 2 Reset
3XK286
9999.99
S
PG Reset Timer
Permissives:
3ZL286B
State
Pilot Gas VLVS Closed
3ZL283B
State
Fuel Gas VLVS Closed
3HA082
State
Man S/D SW In Normal
XV286:
3XL286E
3ZL286A
100%
XV287:
3XL287E
3ZL287A
100%
Fuel Gas (Field Reset)
3XL283C
State
FG Valves RDY 2 Reset
Permissives:
3ZL286A
State
Pilot Gas VLVS Open
3ZL283B
State
Fuel Gas VLVS Closed
3FL165J
State
RECY Gas Flow Normal
3DA913AS
State
100# Depress Reset
3XL292E
3XL292F
XV283:
3ZL292A
100%
XV284:
3ZL293A
100%
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

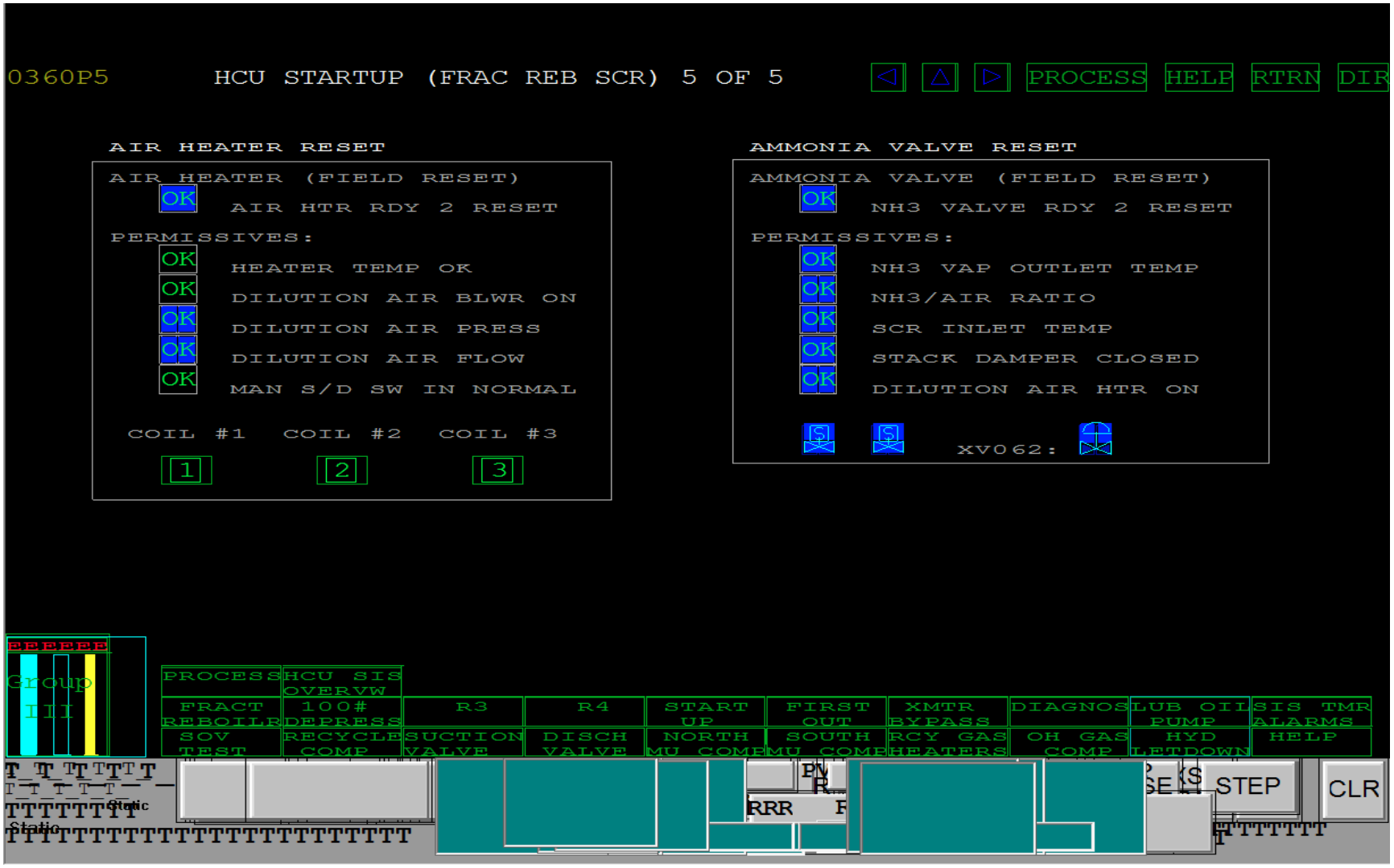
3.163 HCU STARTUP (FRAC REBOILER) 4 OF 5 (0360P4.DS)

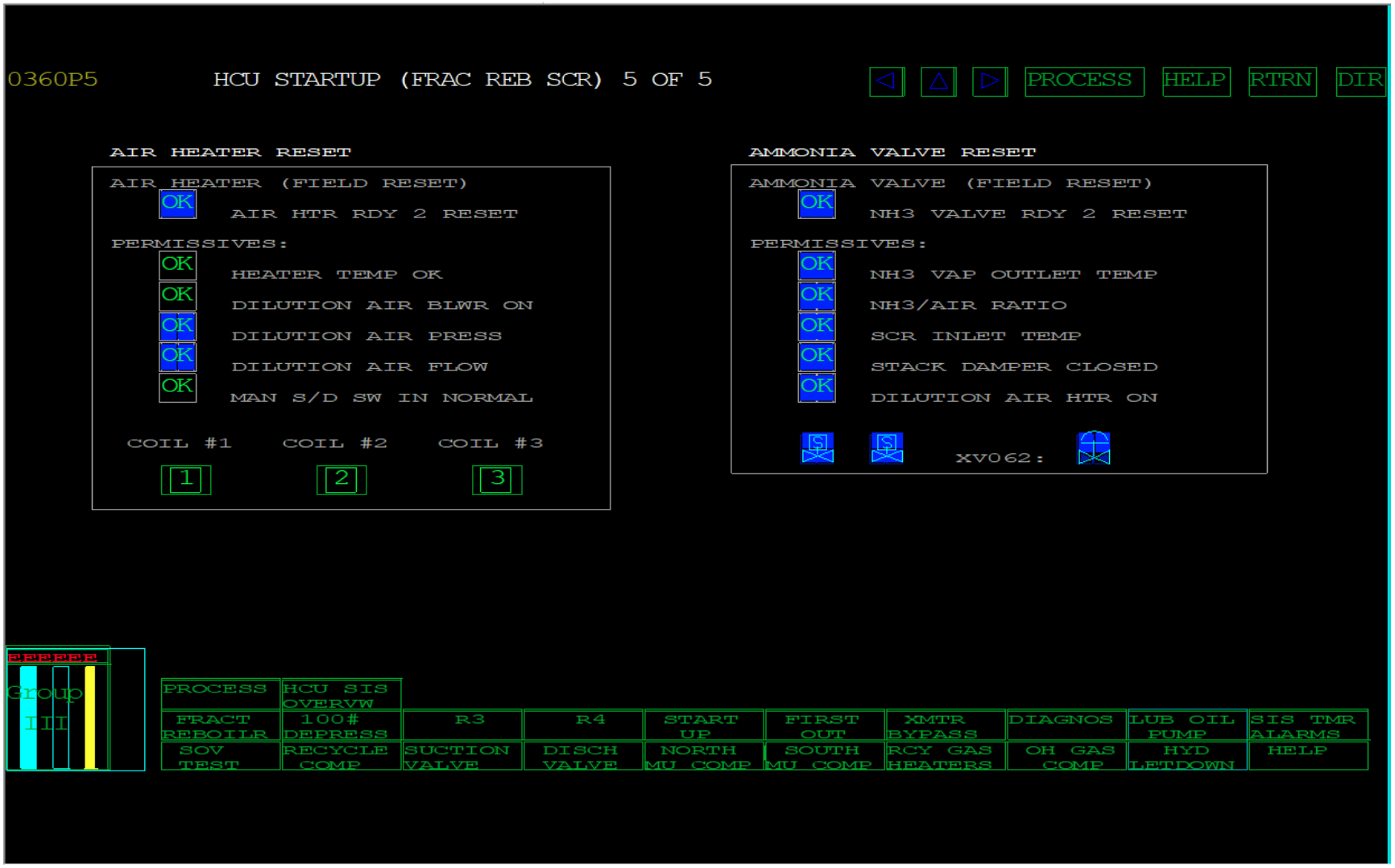


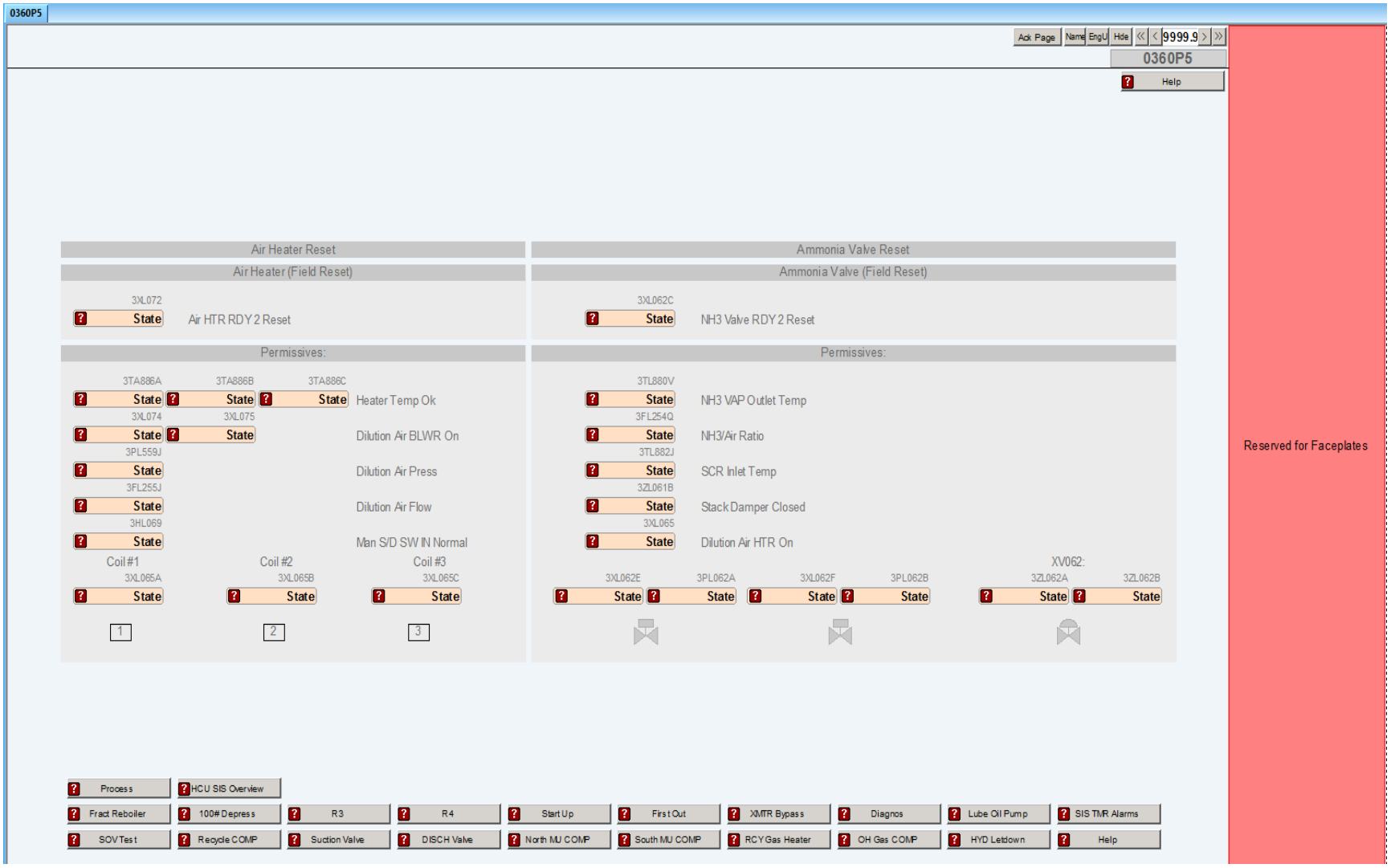

0360P4
HCU STARTUP (FRAC REBOILER) 4 OF 5
PROCESS
HELP
RTRN
DIR
HEATER PURGE
PURGE CYCLE
PURGE REQUIRED
PURGE IN PROGRESS
RRRR S PURGE TIMER
OK PURGE COMPLETE
PERMISSIVES:
OK PILOT GAS VLVS CLOSED
OK FUEL GAS VLVS CLOSED
OK FIREBOX PRESS NORMAL
OK ID FAN RUNNING
OK STACK DAMPER CLOSED
HEATER RESET
PILOT GAS (FIELD RESET)
OK PG VALVES RDY 2 RESET
PERMISSIVES:
OK PURGE COMPLETE
OK MAN S/D SW IN NORMAL
XV080:
XV081:
FUEL GAS (FIELD RESET)
OK FG VALVES RDY 2 RESET
PERMISSIVES:
OK PILOT GAS VLVS OPEN
OK FUEL GAS VLVS CLOSED
OK PASS FLOWS 1-6 NORMAL
OK FIREBOX PRESS NORMAL
XV078:
XV079:
EEEEEE
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0360P4
Ack Page
Name
Eng U
Hide
9999.9
0360P4
Help
Heater Purge
Purge Cycle
3XL063A
State
Purge Required
3XL063B
State
Purge In Progress
3XK063
9999.99
S
Purge Timer
3XL063C
State
Purge Complete
Permissives:
3ZL080B
State
Pilot Gas VLVS Closed
3ZL078B
State
Fuel Gas VLVS Closed
3PL556P
State
Firebox Press Normal
3XL066
State
ID Fan Running
3ZL061B
State
Stack Damper Closed
Heater Reset
Pilot Gas (Field Reset)
3XL080C
State
PG Valves RDY 2 Reset
Permissives:
3XL063C
State
Purge Complete
3HA067
State
Man S/D SW IN Normal
XV080:
3XL080E
3ZL080A
100%
XV081:
3XL081E
3ZL081A
100%
Fuel Gas (Field Reset)
3XL078C
State
FG Valves RDY 2 Reset
Permissives:
3ZL080A
State
Pilot Gas VLVS Open
3ZL078B
State
Fuel Gas VLVS Closed
3FL263J
State
Pass Flows 1-6 Normal
3PL556P
State
Firebox Press Normal
3XL078E
3ZL078A
100%
XV078:
3XL078F
XV079:
3ZL079A
100%
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

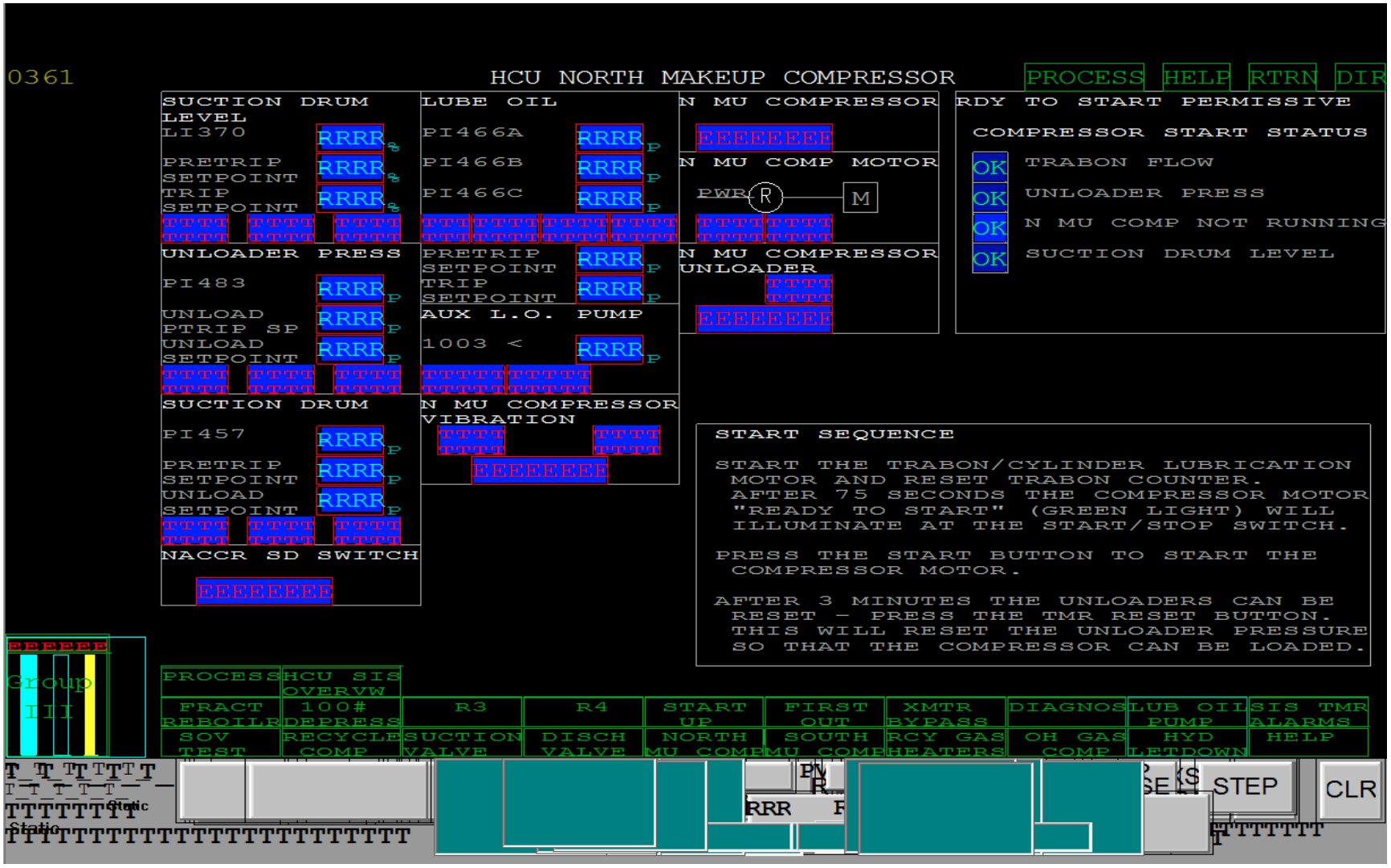
3.164 HCU STARTUP (FRAC REB SCR) 5 OF 5 (0360P5.DS)

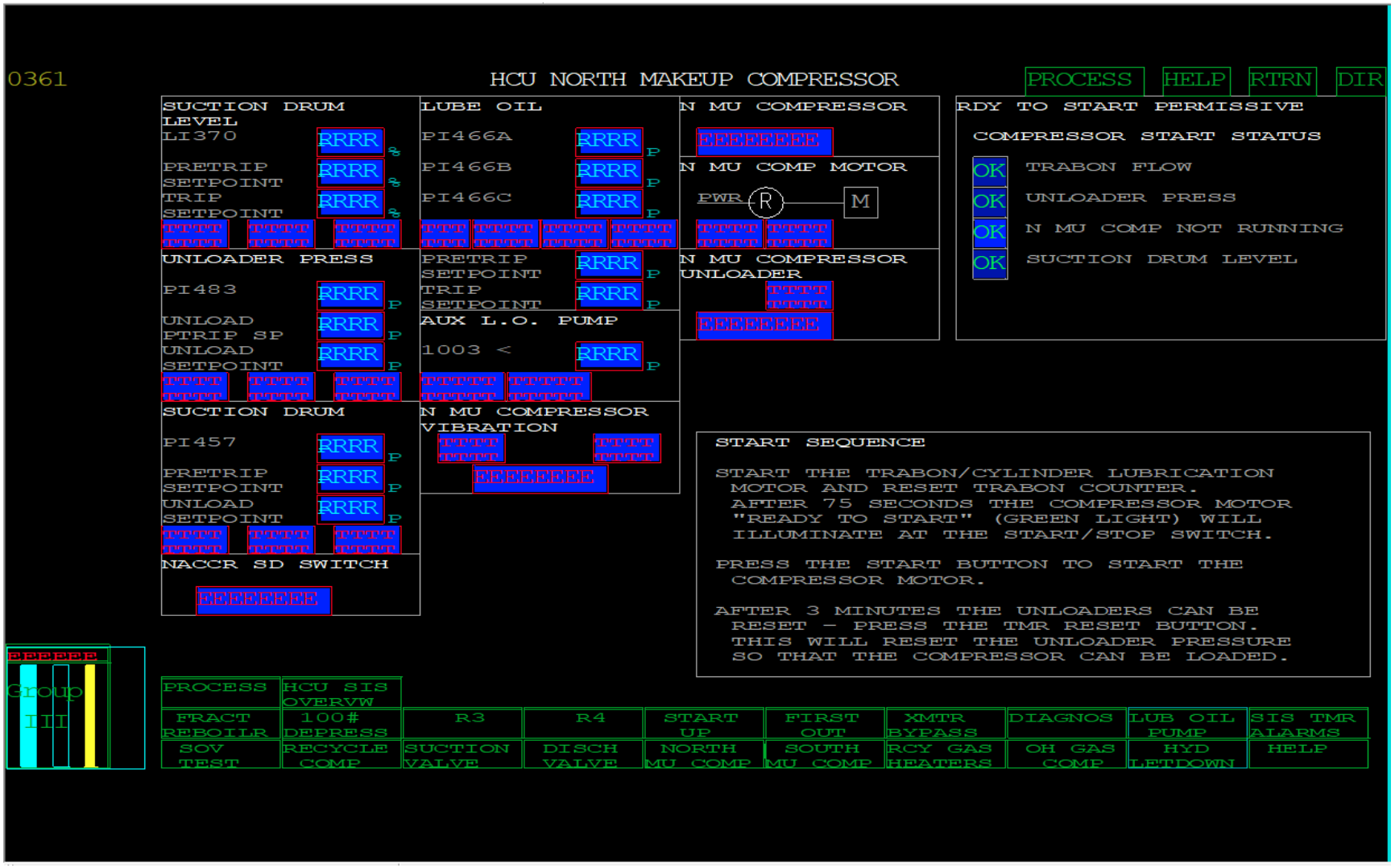


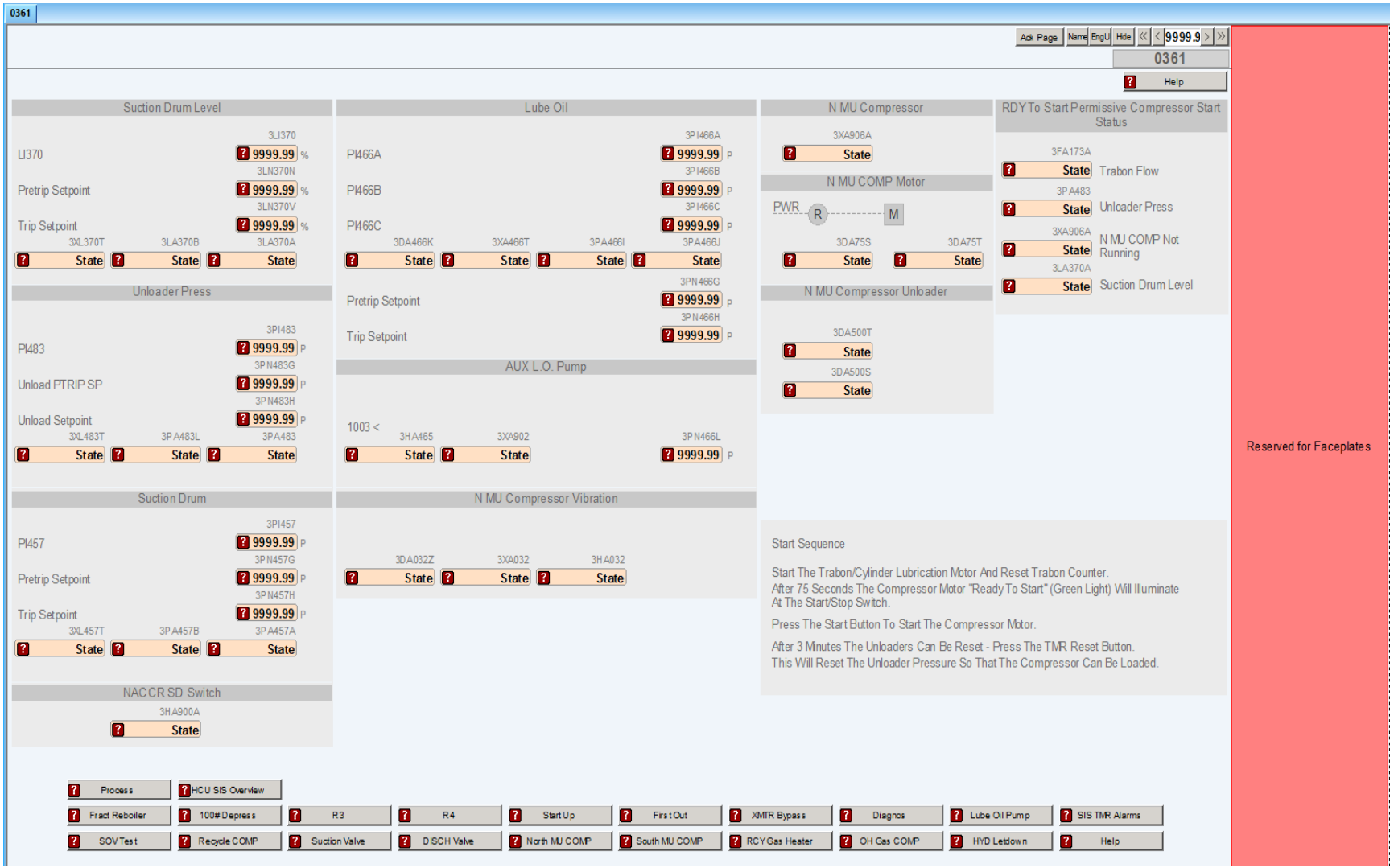

0360P5
HCU STARTUP (FRAC REB SCR) 5 OF 5
PROCESS
HELP
RTRN
DIR
AIR HEATER RESET
AIR HEATER (FIELD RESET)
OK
AIR HTR RDY 2 RESET
PERMISSIVES:
OK
HEATER TEMP OK
OK
DILUTION AIR BLWR ON
OK
DILUTION AIR PRESS
OK
DILUTION AIR FLOW
OK
MAN S/D SW IN NORMAL
COIL #1
COIL #2
COIL #3
1
2
3
AMMONIA VALVE RESET
AMMONIA VALVE (FIELD RESET)
OK
NH3 VALVE RDY 2 RESET
PERMISSIVES:
OK
NH3 VAP OUTLET TEMP
OK
NH3/AIR RATIO
OK
SCR INLET TEMP
OK
STACK DAMPER CLOSED
OK
DILUTION AIR HTR ON
XV062:
EEEEEE
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0360P5
Ack Page
Name
Eng'U
Hide
9999.9
0360P5
Help
Air Heater Reset
Air Heater (Field Reset)
3XL072
State
Air HTR RDY 2 Reset
Permissives:
3TA886A
State
3TA886B
State
3TA886C
State
Heater Temp Ok
3XL074
State
3XL075
State
Dilution Air BLWR On
3PL559J
State
Dilution Air Press
3FL255J
State
Dilution Air Flow
3HL069
State
Man S/D SW IN Normal
Coil #1
Coil #2
Coil #3
3XL065A
State
3XL065B
State
3XL065C
State
1
2
3
Ammonia Valve Reset
Ammonia Valve (Field Reset)
3XL062C
State
NH3 Valve RDY 2 Reset
Permissives:
3TL880V
State
NH3 VAP Outlet Temp
3FL254Q
State
NH3/Air Ratio
3TL882J
State
SCR Inlet Temp
3ZL061B
State
Stack Damper Closed
3XL065
State
Dilution Air HTR On
XV062:
3XL062E
State
3PL062A
State
3XL062F
State
3PL062B
State
3ZL062A
State
3ZL062B
State
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

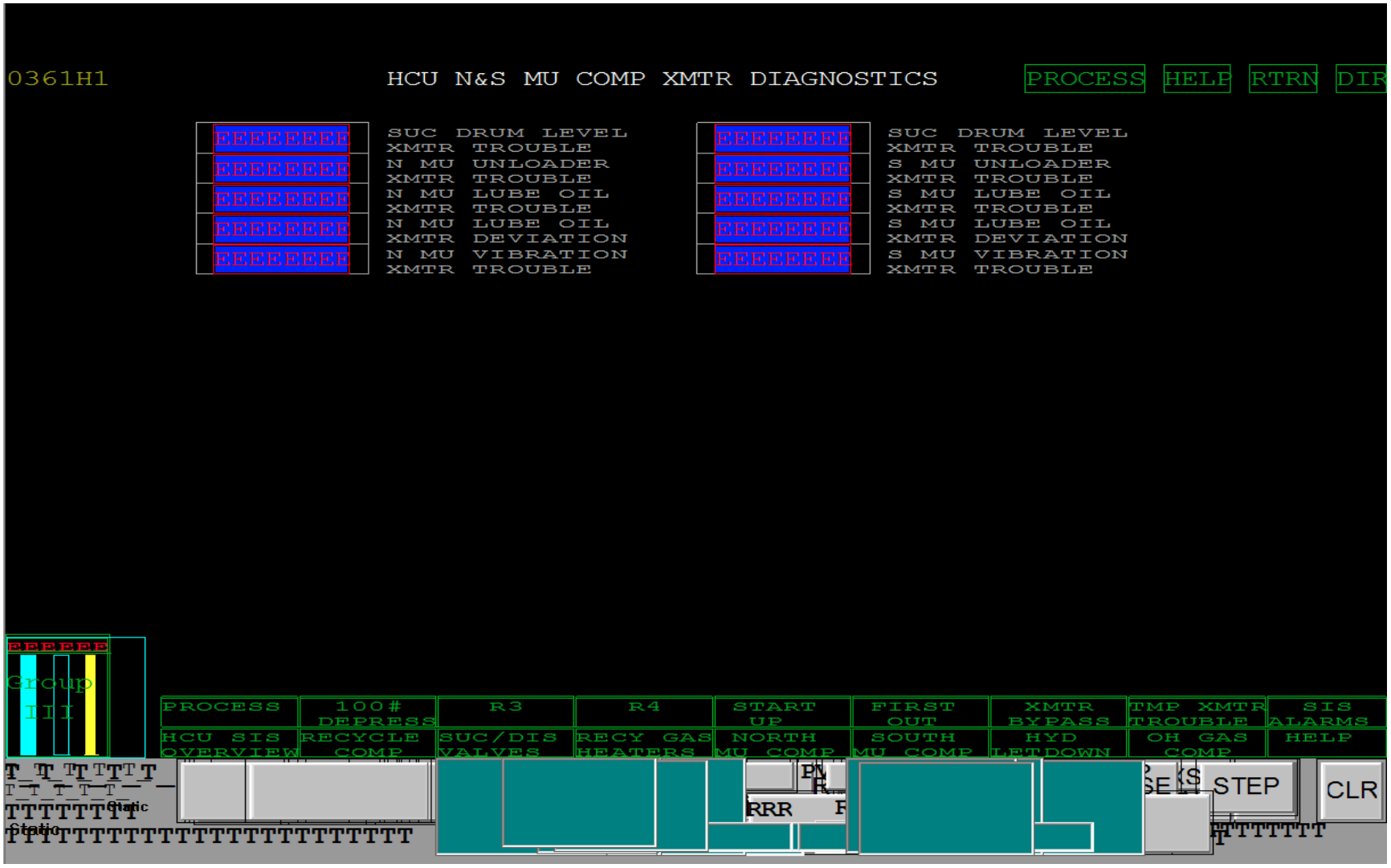
3.165 HCU NORTH MAKEUP COMPRESSOR (0361.DS)

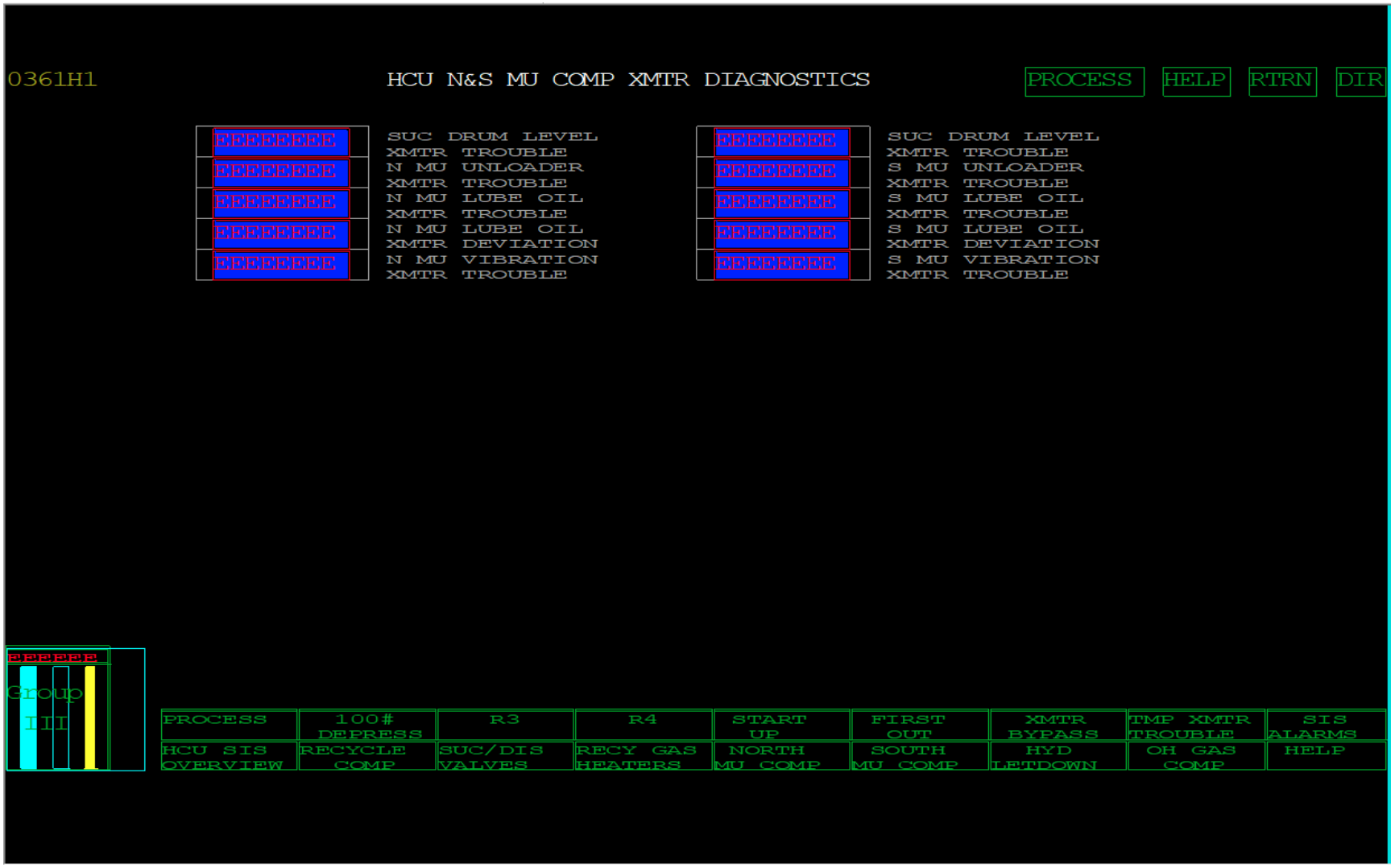


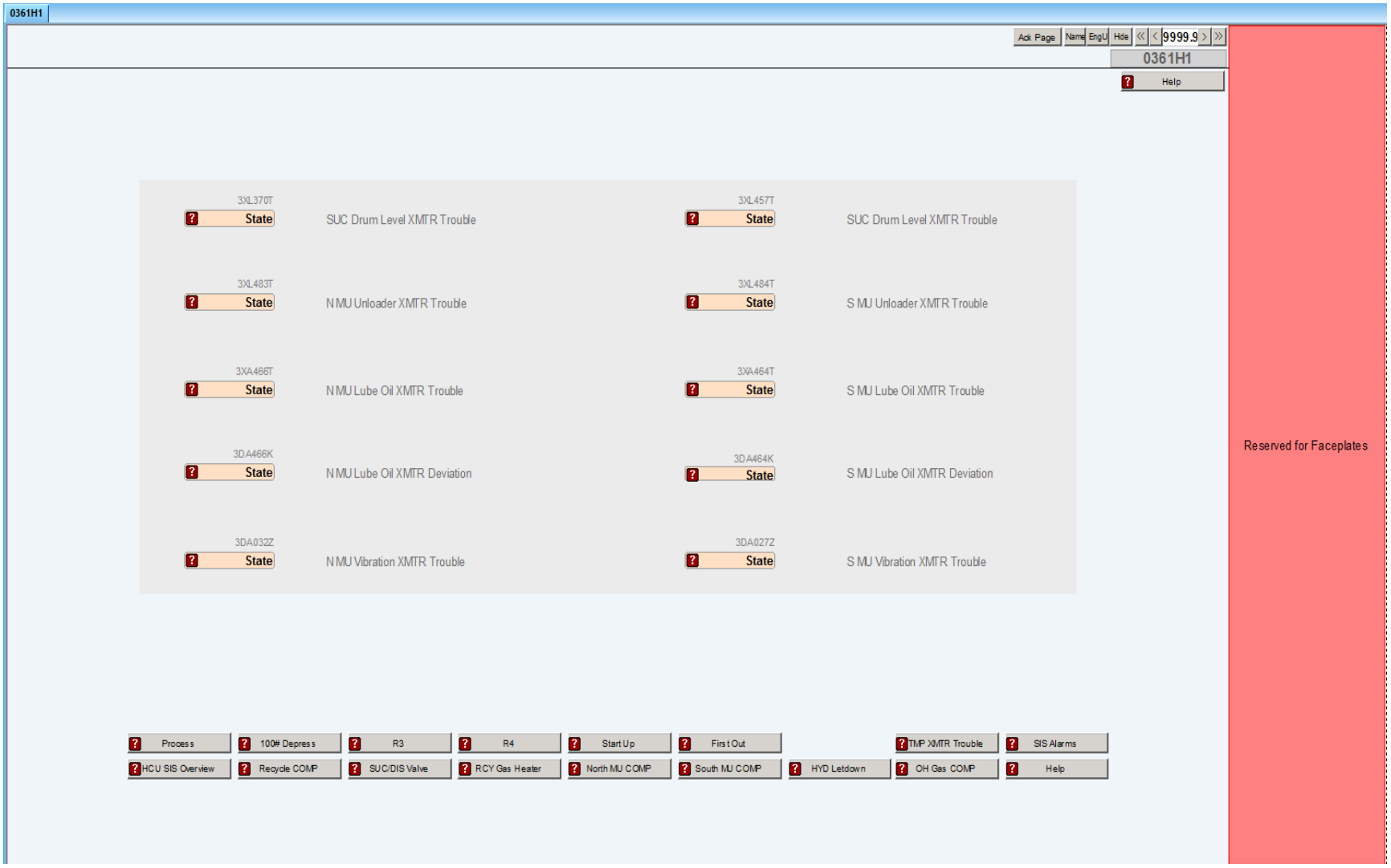

0361
HCU NORTH MAKEUP COMPRESSOR
PROCESS
HELP
RTRN
DIR
SUCTION DRUM LEVEL
LI370
PRETRIP SETPOINT
TRIP SETPOINT
LUBE OIL
PI466A
PI466B
PI466C
N MU COMPRESSOR
N MU COMP MOTOR
PWR
R
M
RDY TO START PERMISSIVE
COMPRESSOR START STATUS
OK TRABON FLOW
OK UNLOADER PRESS
OK N MU COMP NOT RUNNING
OK SUCTION DRUM LEVEL
UNLOADER PRESS
PI483
UNLOAD PTRIP SP
UNLOAD SETPOINT
PRETRIP SETPOINT
TRIP SETPOINT
AUX L.O. PUMP
1003 <
N MU COMPRESSOR UNLOADER
SUCTION DRUM
PI457
PRETRIP SETPOINT
UNLOAD SETPOINT
N MU COMPRESSOR VIBRATION
NACCR SD SWITCH
START SEQUENCE
START THE TRABON/CYLINDER LUBRICATION MOTOR AND RESET TRABON COUNTER. AFTER 75 SECONDS THE COMPRESSOR MOTOR "READY TO START" (GREEN LIGHT) WILL ILLUMINATE AT THE START/STOP SWITCH.
PRESS THE START BUTTON TO START THE COMPRESSOR MOTOR.
AFTER 3 MINUTES THE UNLOADERS CAN BE RESET - PRESS THE TMR RESET BUTTON. THIS WILL RESET THE UNLOADER PRESSURE SO THAT THE COMPRESSOR CAN BE LOADED.
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0361
Ack Page
Name
Eng U
Hide
9999.9
0361
Help
Suction Drum Level
3LI370
LI370
9999.99 %
3LN370N
Pretrip Setpoint
9999.99 %
3LN370V
Trip Setpoint
9999.99 %
3XL370T
3LA370B
3LA370A
State
State
State
Unloader Press
3PI483
PI483
9999.99 P
3PN483G
Unload PTRIP SP
9999.99 P
3PN483H
Unload Setpoint
9999.99 P
3XL483T
3PA483L
3PA483
State
State
State
Suction Drum
3PI457
PI457
9999.99 P
3PN457G
Pretrip Setpoint
9999.99 P
3PN457H
Trip Setpoint
9999.99 P
3XL457T
3PA457B
3PA457A
State
State
State
NAC CR SD Switch
3HA900A
State
Lube Oil
3PI466A
PI466A
9999.99 P
3PI466B
PI466B
9999.99 P
3PI466C
PI466C
9999.99 P
3DA466K
3XA466T
3PA466I
3PA466J
State
State
State
State
3PN466G
Pretrip Setpoint
9999.99 P
3PN466H
Trip Setpoint
9999.99 P
AUX L.O. Pump
1003 <
3HA465
3XA902
3PN466L
State
State
9999.99 P
N MU Compressor Vibration
3DA032Z
3XA032
3HA032
State
State
State
N MU Compressor
3XA906A
State
N MU COMP Motor
PWR
R
M
3DA75S
3DA75T
State
State
N MU Compressor Unloader
3DA500T
State
3DA500S
State
RDY To Start Permissive Compressor Start Status
3FA173A
State
Trabon Flow
3PA483
State
Unloader Press
3XA906A
State
N MU COMP Not Running
3LA370A
State
Suction Drum Level
Start Sequence
Start The Trabon/Cylinder Lubrication Motor And Reset Trabon Counter.
After 75 Seconds The Compressor Motor "Ready To Start" (Green Light) Will Illuminate At The Start/Stop Switch.
Press The Start Button To Start The Compressor Motor.
After 3 Minutes The Unloaders Can Be Reset - Press The TMR Reset Button.
This Will Reset The Unloader Pressure So That The Compressor Can Be Loaded.
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

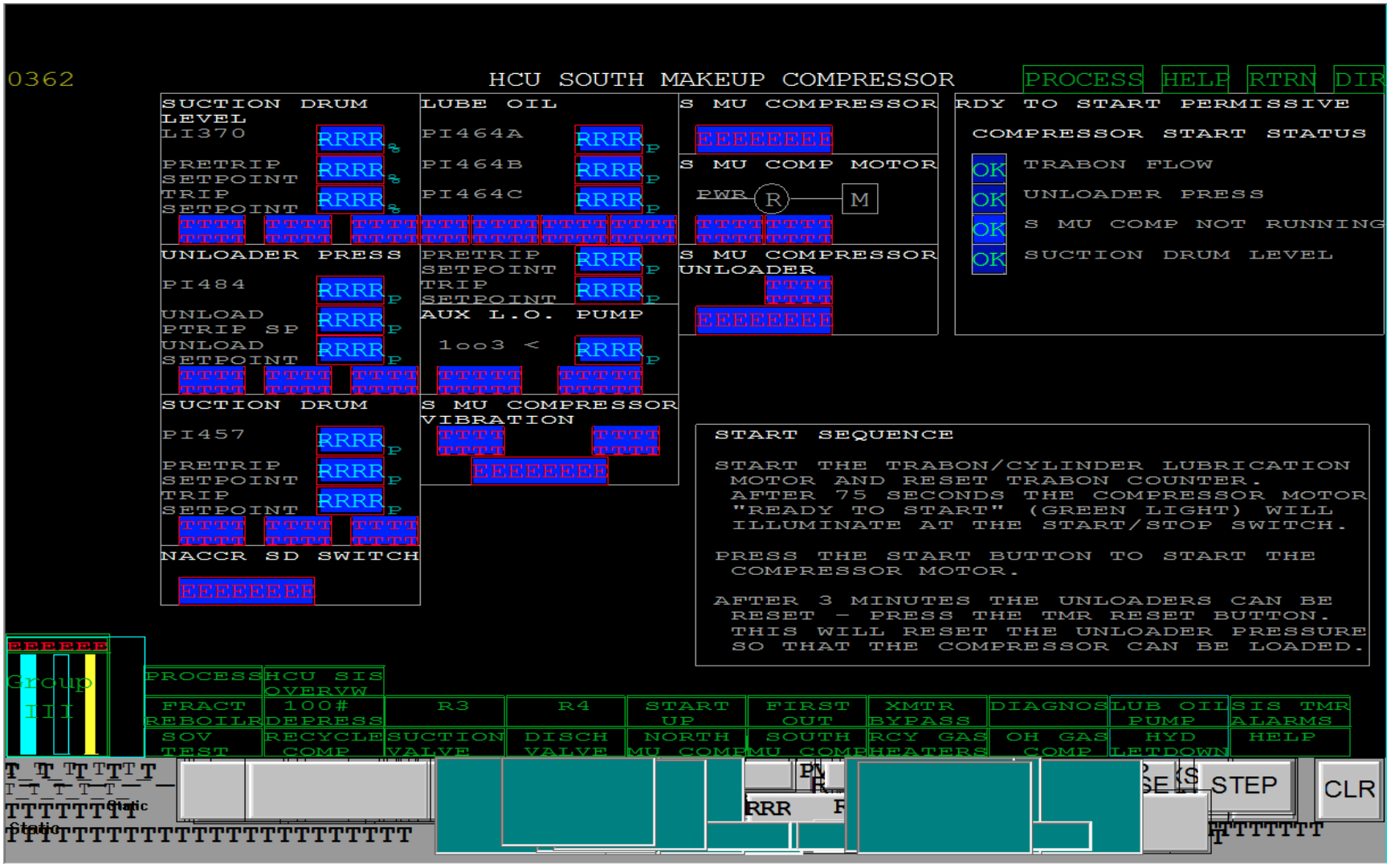
3.166 HCU N&S MU COMP XMTR DIAGNOSTICS (0361H1.DS)

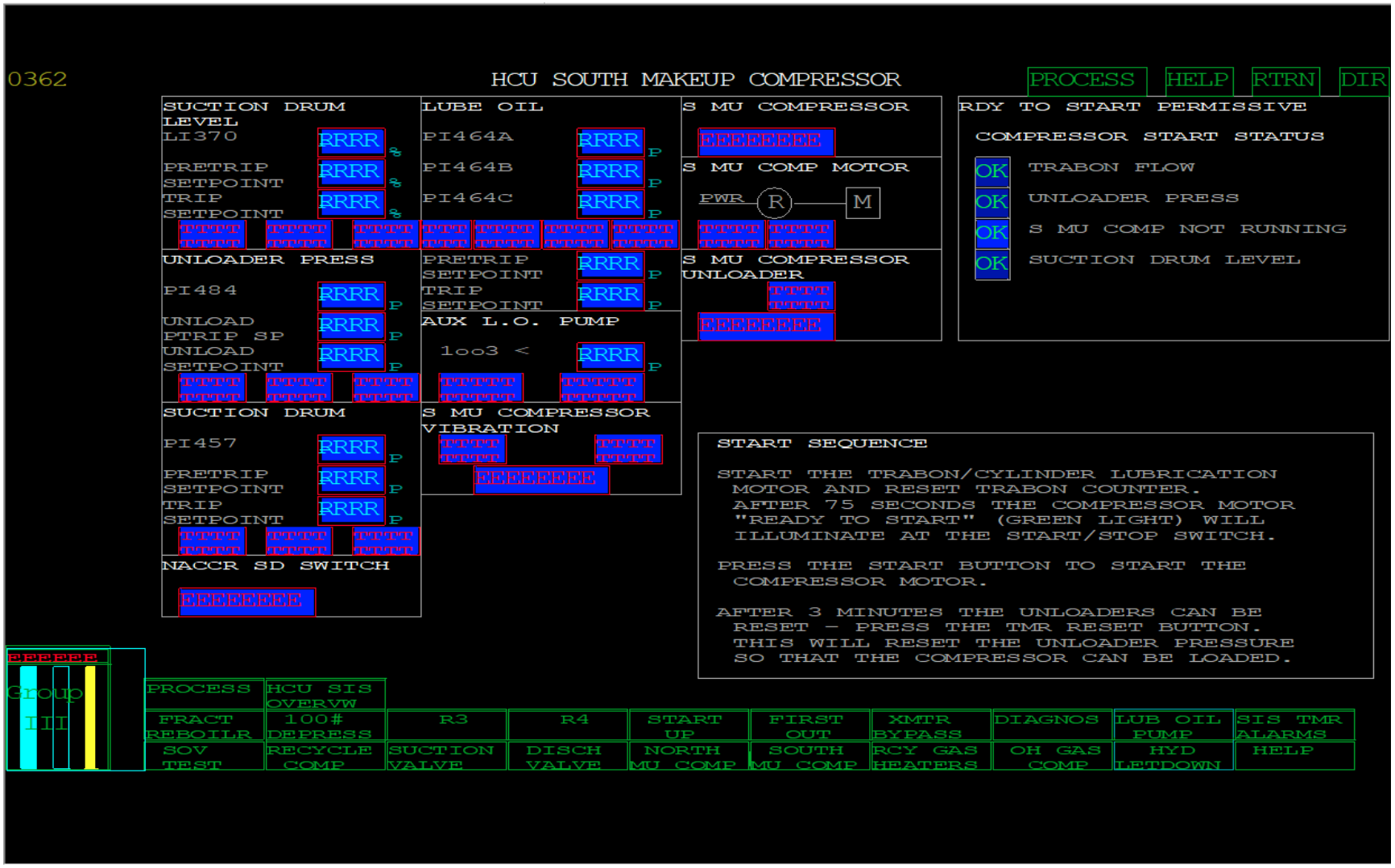


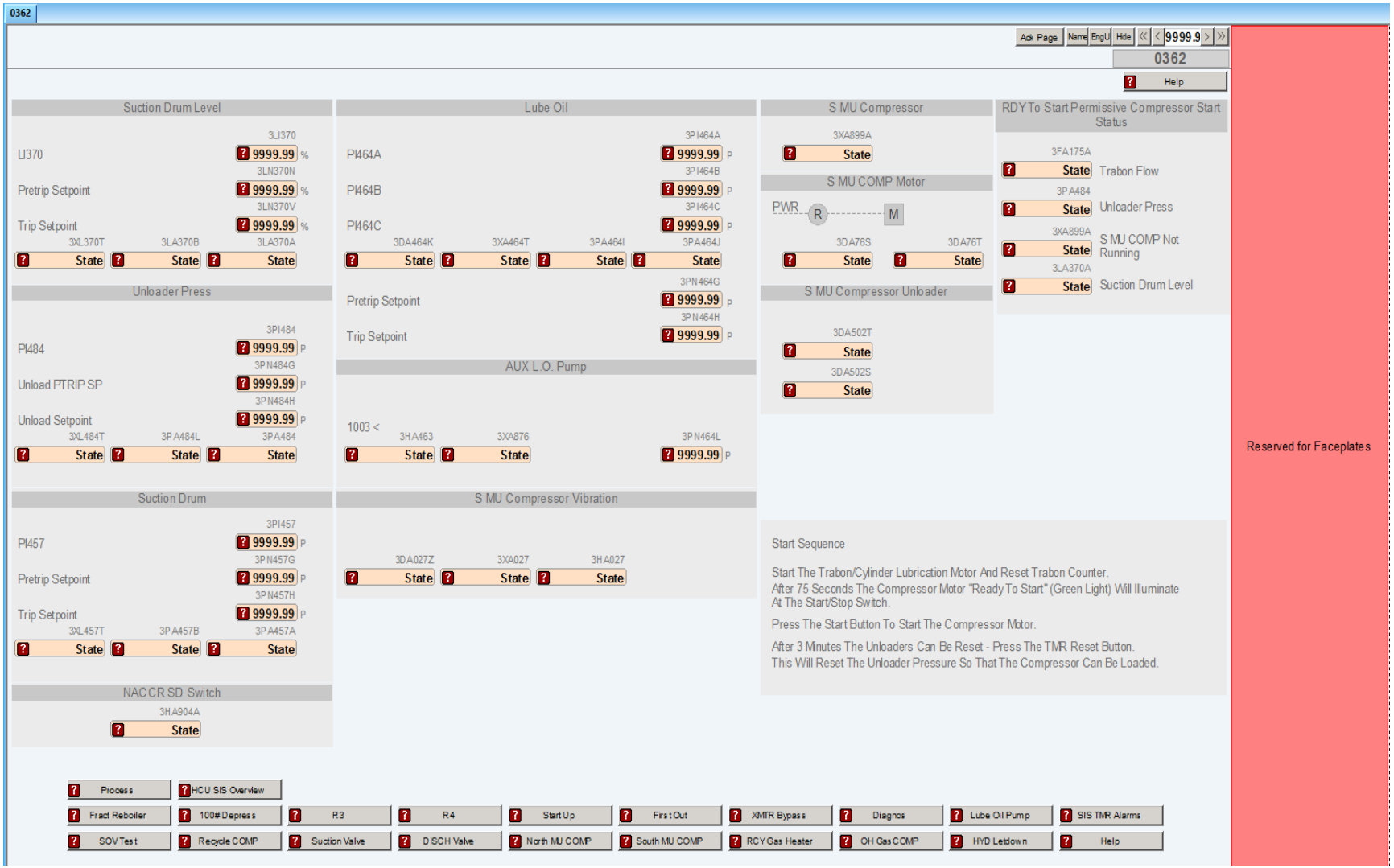

0361H1
HCU N&S MU COMP XMTR DIAGNOSTICS
PROCESS
HELP
RTRN
DIR
EEEEEEEE
SUC DRUM LEVEL XMTR TROUBLE
EEEEEEEE
N MU UNLOADER XMTR TROUBLE
EEEEEEEE
N MU LUBE OIL XMTR TROUBLE
EEEEEEEE
N MU LUBE OIL XMTR DEVIATION
EEEEEEEE
N MU VIBRATION XMTR TROUBLE
EEEEEEEE
SUC DRUM LEVEL XMTR TROUBLE
EEEEEEEE
S MU UNLOADER XMTR TROUBLE
EEEEEEEE
S MU LUBE OIL XMTR TROUBLE
EEEEEEEE
S MU LUBE OIL XMTR DEVIATION
EEEEEEEE
S MU VIBRATION XMTR TROUBLE
EEEEEE
Group III
PROCESS
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
TMP XMTR TROUBLE
SIS ALARMS
HCU SIS OVERVIEW
RECYCLE COMP
SUC/DIS VALVES
RECY GAS HEATERS
NORTH MU COMP
SOUTH MU COMP
HYD LETDOWN
OH GAS COMP
HELP


0361H1
Ack Page
Name
Eng U
Hide
9999.9
0361H1
Help
3XL370T
State
SUC Drum Level XMTR Trouble
3XL457T
State
SUC Drum Level XMTR Trouble
3XL483T
State
N MU Unloader XMTR Trouble
3XL484T
State
S MU Unloader XMTR Trouble
3XA466T
State
N MU Lube Oil XMTR Trouble
3XA464T
State
S MU Lube Oil XMTR Trouble
3DA466K
State
N MU Lube Oil XMTR Deviation
3DA464K
State
S MU Lube Oil XMTR Deviation
3DA032Z
State
N MU Vibration XMTR Trouble
3DA027Z
State
S MU Vibration XMTR Trouble
Reserved for Faceplates
Process
100# Depress
R3
R4
Start Up
First Out
TMP XMTR Trouble
SIS Alarms
HCU SIS Overview
Recycle COMP
SUC/DIS Valve
RCY Gas Heater
North MU COMP
South MU COMP
HYD Letdown
OH Gas COMP
Help

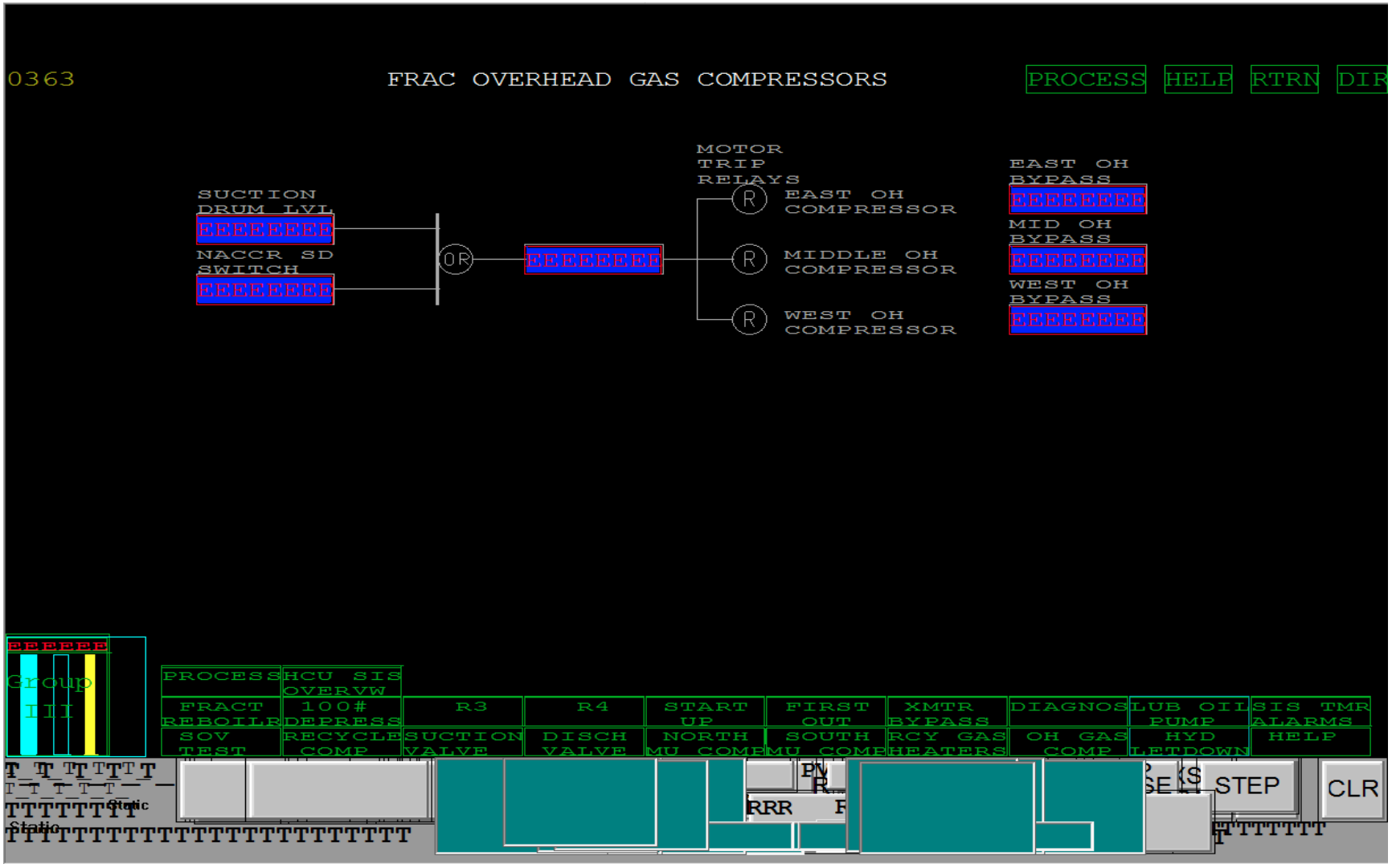
3.167 HCU SOUTH MAKEUP COMPRESSOR (0362.DS)

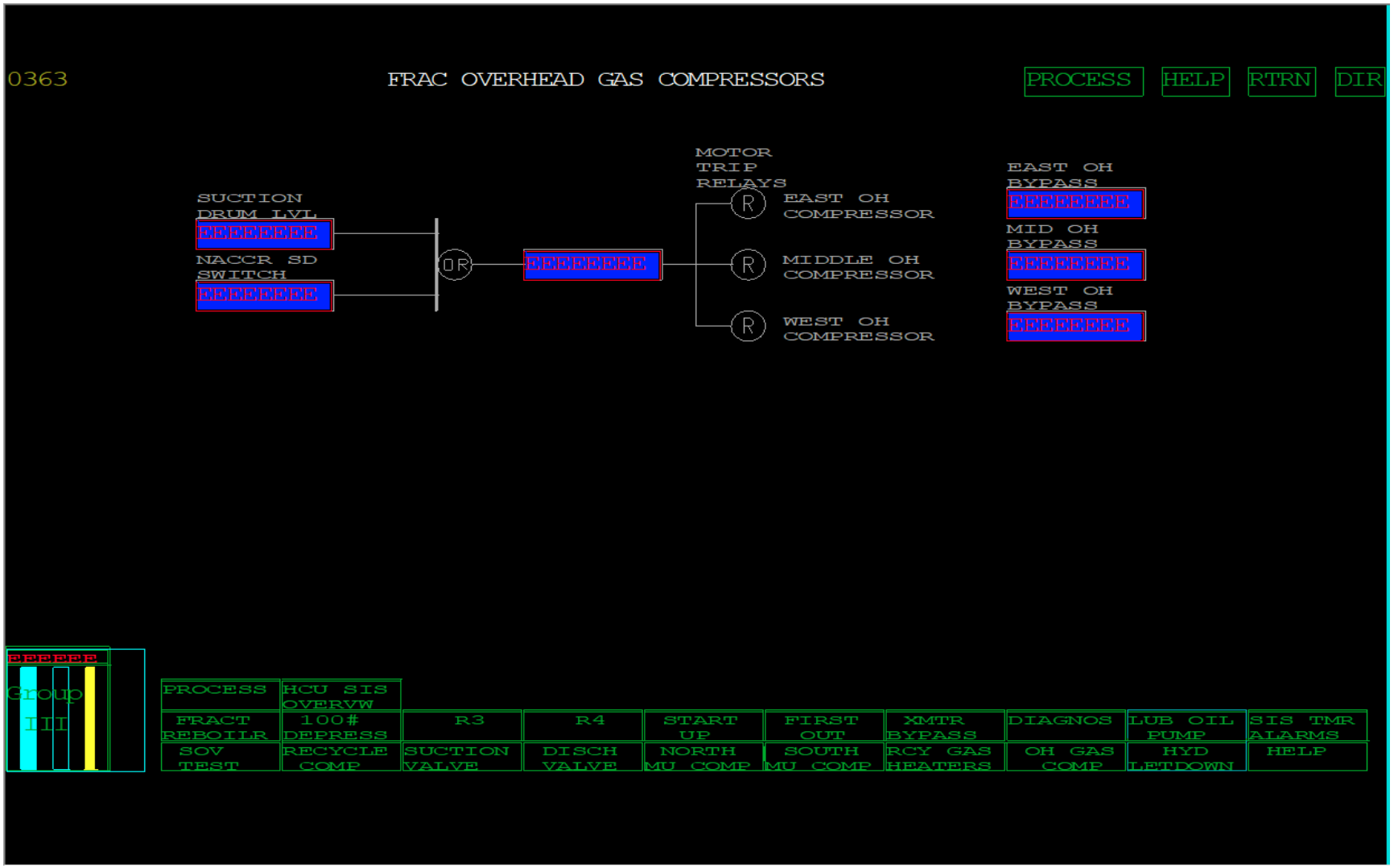


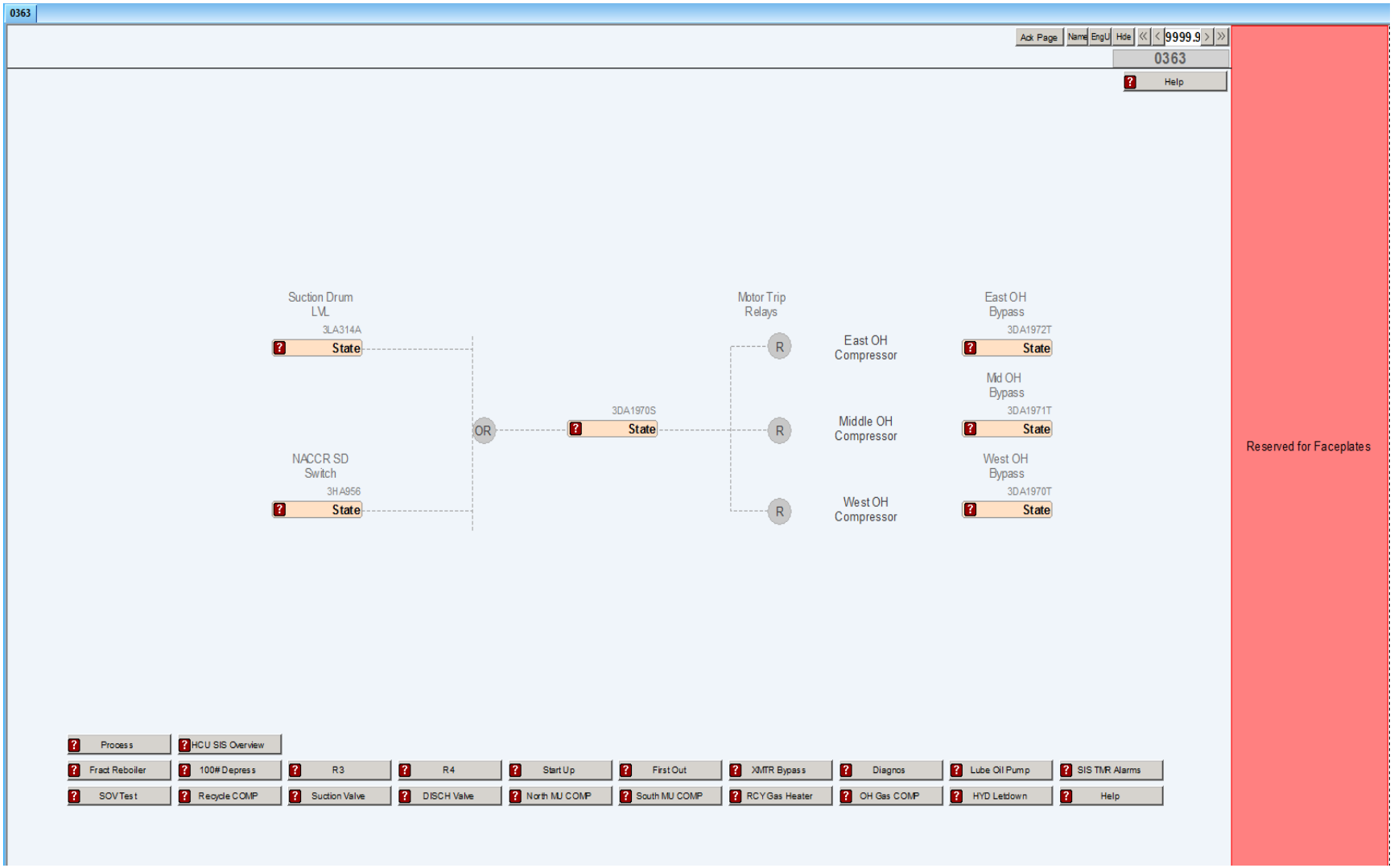

0362
HCU SOUTH MAKEUP COMPRESSOR
PROCESS
HELP
RTRN
DIR
SUCTION DRUM LEVEL
LI370
PRETRIP SETPOINT
TRIP SETPOINT
LUBE OIL
PI464A
PI464B
PI464C
S MU COMPRESSOR
S MU COMP MOTOR
PWR
R
M
RDY TO START PERMISSIVE
COMPRESSOR START STATUS
OK TRABON FLOW
OK UNLOADER PRESS
OK S MU COMP NOT RUNNING
OK SUCTION DRUM LEVEL
UNLOADER PRESS
PI484
UNLOAD PTRIP SP
UNLOAD SETPOINT
PRETRIP SETPOINT
TRIP SETPOINT
AUX L.O. PUMP
1oo3 <
S MU COMPRESSOR UNLOADER
SUCTION DRUM
PI457
PRETRIP SETPOINT
TRIP SETPOINT
S MU COMPRESSOR VIBRATION
NACCR SD SWITCH
START SEQUENCE
START THE TRABON/CYLINDER LUBRICATION MOTOR AND RESET TRABON COUNTER. AFTER 75 SECONDS THE COMPRESSOR MOTOR "READY TO START" (GREEN LIGHT) WILL ILLUMINATE AT THE START/STOP SWITCH.
PRESS THE START BUTTON TO START THE COMPRESSOR MOTOR.
AFTER 3 MINUTES THE UNLOADERS CAN BE RESET - PRESS THE TMR RESET BUTTON. THIS WILL RESET THE UNLOADER PRESSURE SO THAT THE COMPRESSOR CAN BE LOADED.
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0362
Ack Page
Name
Eng U
Hide
9999.9
0362
Help
Suction Drum Level
3LI370
LI370
9999.99 %
3LN370N
Pretrip Setpoint
9999.99 %
3LN370V
Trip Setpoint
9999.99 %
3XL370T
3LA370B
3LA370A
State
State
State
Unloader Press
3PI484
PI484
9999.99 P
3PN484G
Unload PTRIP SP
9999.99 P
3PN484H
Unload Setpoint
9999.99 P
3XL484T
3PA484L
3PA484
State
State
State
Suction Drum
3PI457
PI457
9999.99 P
3PN457G
Pretrip Setpoint
9999.99 P
3PN457H
Trip Setpoint
9999.99 P
3XL457T
3PA457B
3PA457A
State
State
State
NAC CR SD Switch
3HA904A
State
Lube Oil
3PI464A
PI464A
9999.99 P
3PI464B
PI464B
9999.99 P
3PI464C
PI464C
9999.99 P
3DA464K
3XA464T
3PA464I
3PA464J
State
State
State
State
3PN464G
Pretrip Setpoint
9999.99 P
3PN464H
Trip Setpoint
9999.99 P
AUX L.O. Pump
1003 <
3HA463
3XA876
3PN464L
State
State
9999.99 P
S MU Compressor Vibration
3DA027Z
3XA027
3HA027
State
State
State
S MU Compressor
3XA899A
State
S MU COMP Motor
PWR
R
M
3DA76S
3DA76T
State
State
S MU Compressor Unloader
3DA502T
State
3DA502S
State
RDY To Start Permissive Compressor Start Status
3FA175A
State
Trabon Flow
3PA484
State
Unloader Press
3XA899A
State
S MU COMP Not Running
3LA370A
State
Suction Drum Level
Start Sequence
Start The Trabon/Cylinder Lubrication Motor And Reset Trabon Counter.
After 75 Seconds The Compressor Motor "Ready To Start" (Green Light) Will Illuminate At The Start/Stop Switch.
Press The Start Button To Start The Compressor Motor.
After 3 Minutes The Unloaders Can Be Reset - Press The TMR Reset Button.
This Will Reset The Unloader Pressure So That The Compressor Can Be Loaded.
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

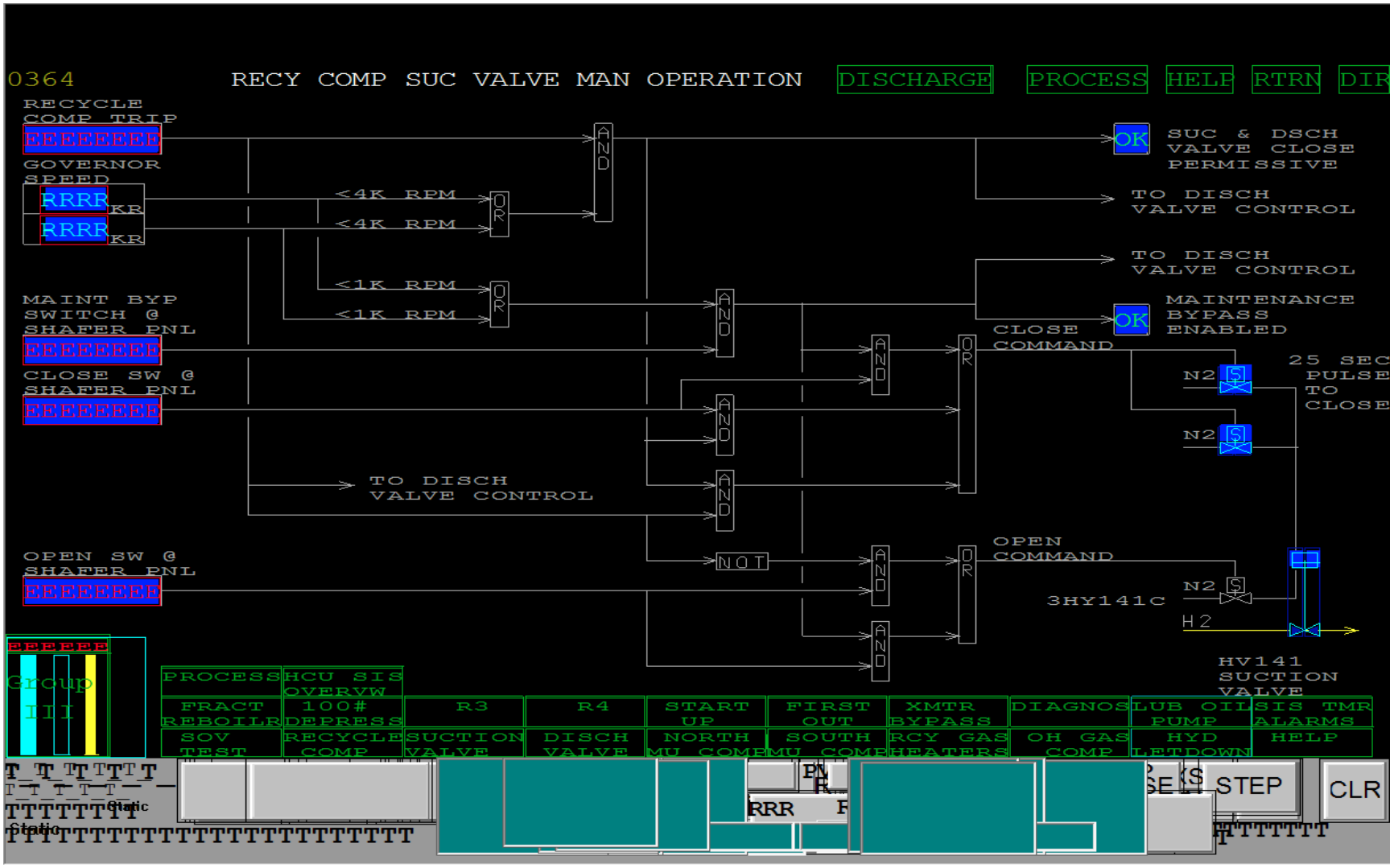
3.168 FRAC OVERHEAD GAS COMPRESSORS (0363.DS)

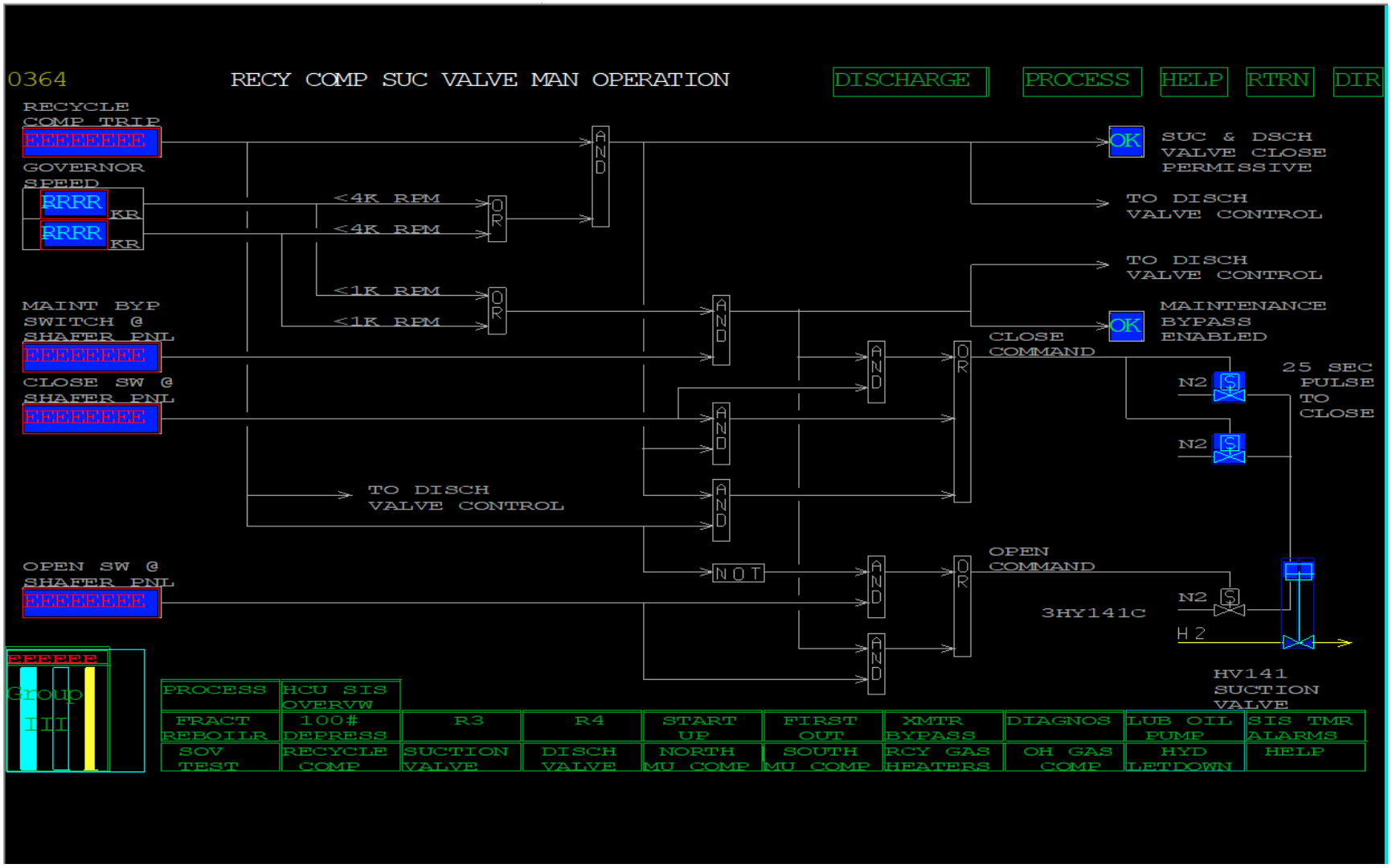


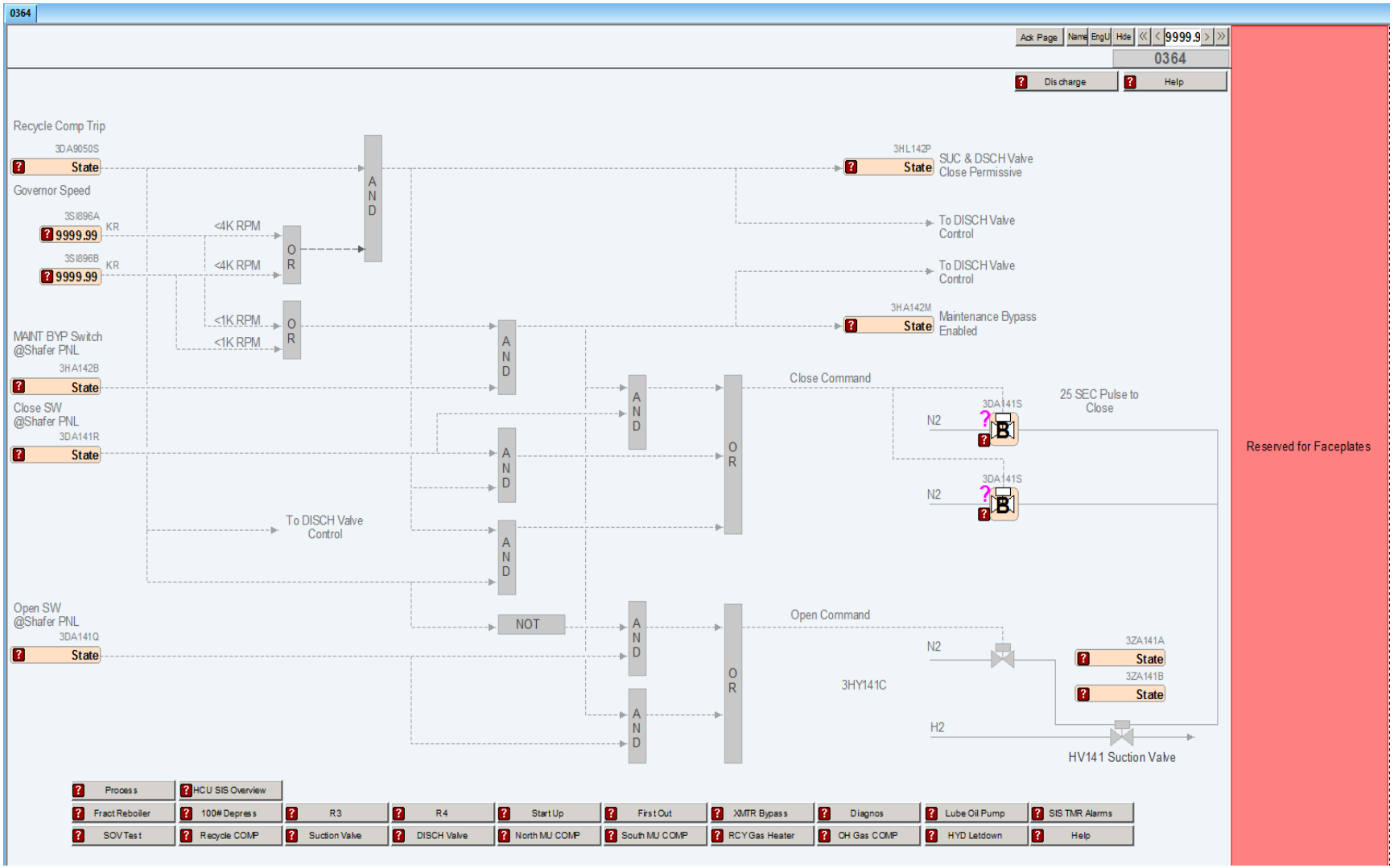

0363
FRAC OVERHEAD GAS COMPRESSORS
PROCESS
HELP
RTRN
DIR
SUCTION DRUM LVL
NACCR SD SWITCH
OR
MOTOR TRIP RELAYS
EAST OH COMPRESSOR
MIDDLE OH COMPRESSOR
WEST OH COMPRESSOR
EAST OH BYPASS
MID OH BYPASS
WEST OH BYPASS
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0363
Ack Page
Name
Eng'g
Hide
9999.9
0363
Help
Suction Drum LVL
3LA314A
State
NACCR SD Switch
3HA956
State
OR
3DA1970S
State
Motor Trip Relays
R
R
R
East OH Compressor
Middle OH Compressor
West OH Compressor
East OH Bypass
3DA1972T
State
Md OH Bypass
3DA1971T
State
West OH Bypass
3DA1970T
State
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

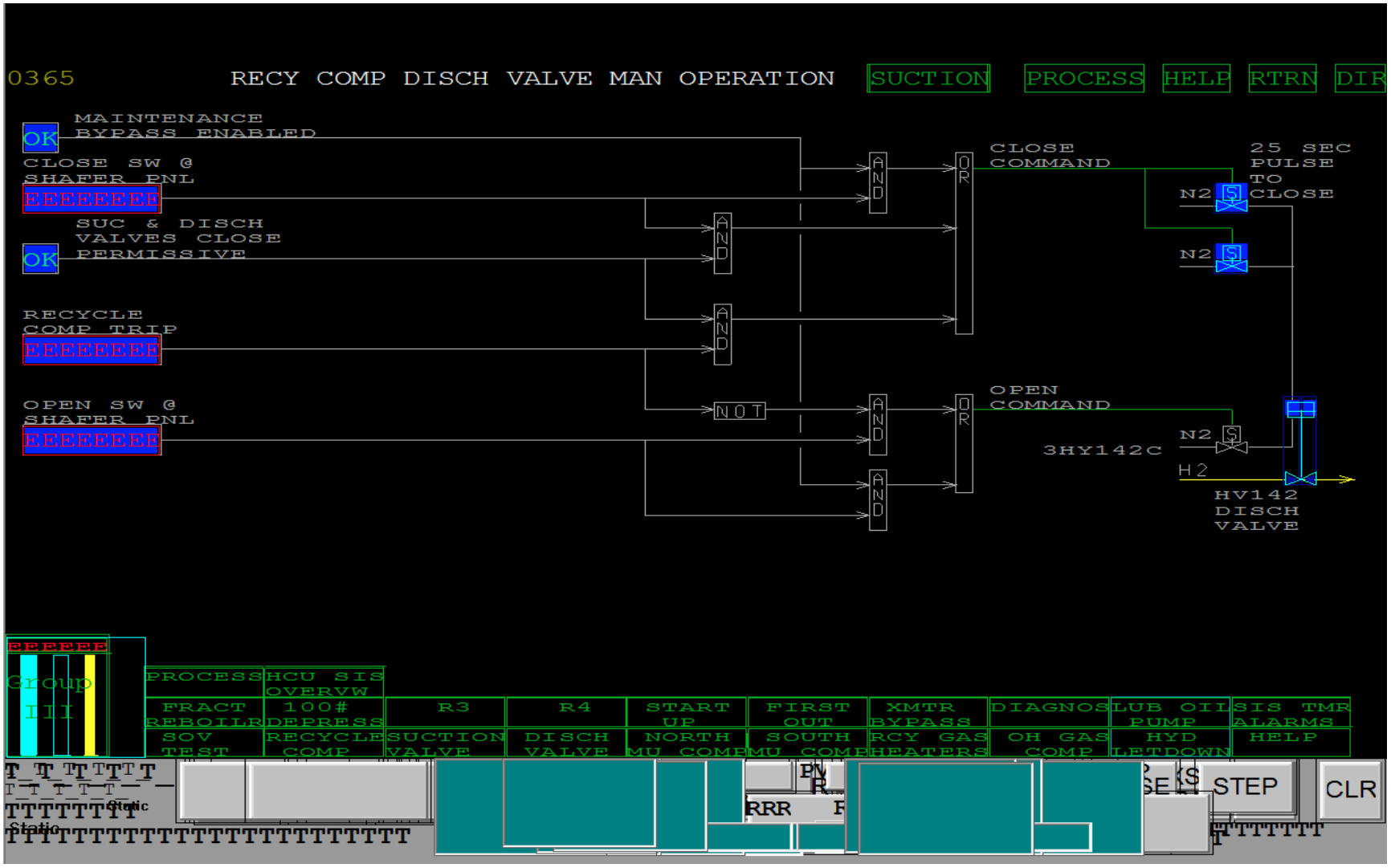
3.169 RECY COMP SUC VALVE MAN OPERATION (0364.DS)

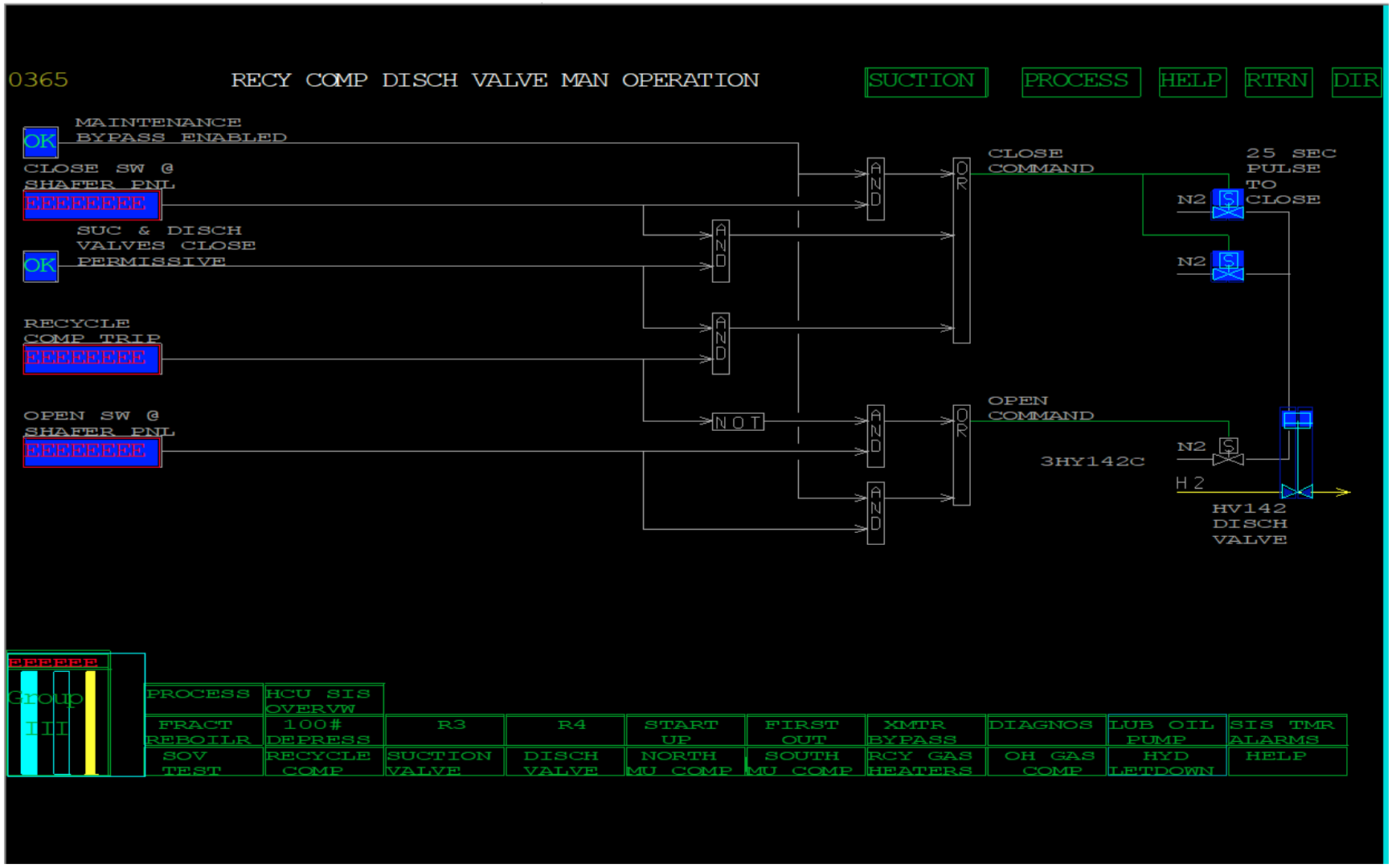


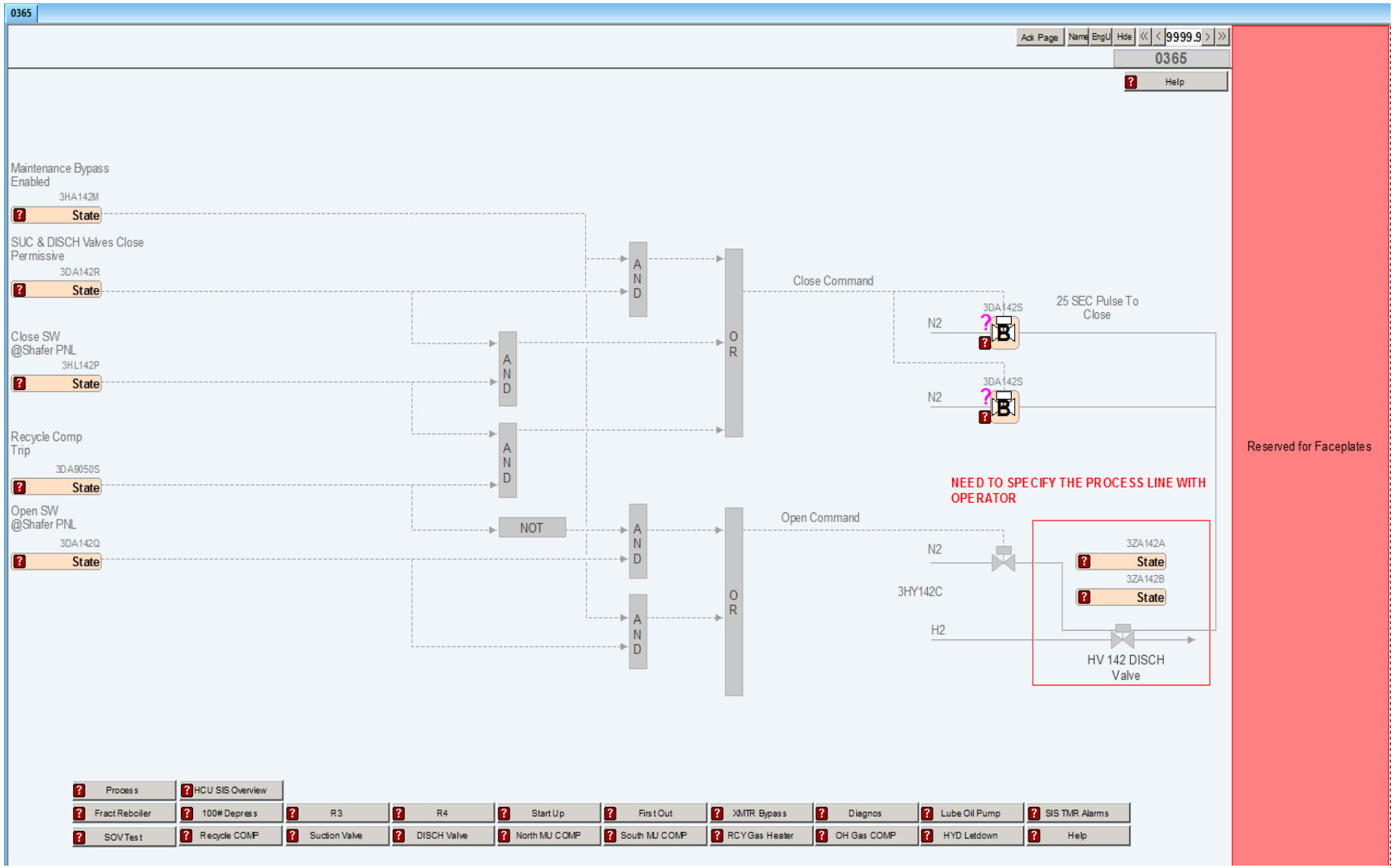

0364
RECY COMP SUC VALVE MAN OPERATION
DISCHARGE
PROCESS
HELP
RTRN
DIR
RECYCLE COMP TRIP
EEEEEEEE
GOVERNOR SPEED
RRRR
KR
RRRR
KR
<4K RPM
<4K RPM
<1K RPM
<1K RPM
AND
OR
OK
SUC & DSCH VALVE CLOSE PERMISSIVE
TO DISCH VALVE CONTROL
TO DISCH VALVE CONTROL
MAINT BYP SWITCH @ SHAFER PNL
EEEEEEEE
CLOSE SW @ SHAFER PNL
EEEEEEEE
OK
MAINTENANCE BYPASS ENABLED
CLOSE COMMAND
N2
25 SEC PULSE TO CLOSE
N2
TO DISCH VALVE CONTROL
OPEN SW @ SHAFER PNL
EEEEEEEE
NOT
OPEN COMMAND
3HY141C
N2
H2
HV141 SUCTION VALVE
EEEEEE
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0364
Ack Page
Name
Eng U
Hide
9999.9
0364
Discharge
Help
Recycle Comp Trip
3DA9050S
State
Governor Speed
3SI896A
9999.99
KR
3SI896B
9999.99
KR
<4K RPM
<4K RPM
<1K RPM
<1K RPM
OR
OR
AND
MAINT BYP Switch
@Shafer PNL
3HA142B
State
Close SW
@Shafer PNL
3DA141R
State
AND
AND
AND
OR
To DISCH Valve
Control
3HL142P
State
SUC & DSCH Valve
Close Permissive
To DISCH Valve
Control
To DISCH Valve
Control
3HA142M
State
Maintenance Bypass
Enabled
Close Command
25 SEC Pulse to
Close
N2
3DA141S
B
N2
3DA141S
B
Reserved for Faceplates
Open SW
@Shafer PNL
3DA141Q
State
NOT
AND
AND
OR
Open Command
N2
3HY141C
3ZA141A
State
3ZA141B
State
H2
HV141 Suction Valve
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

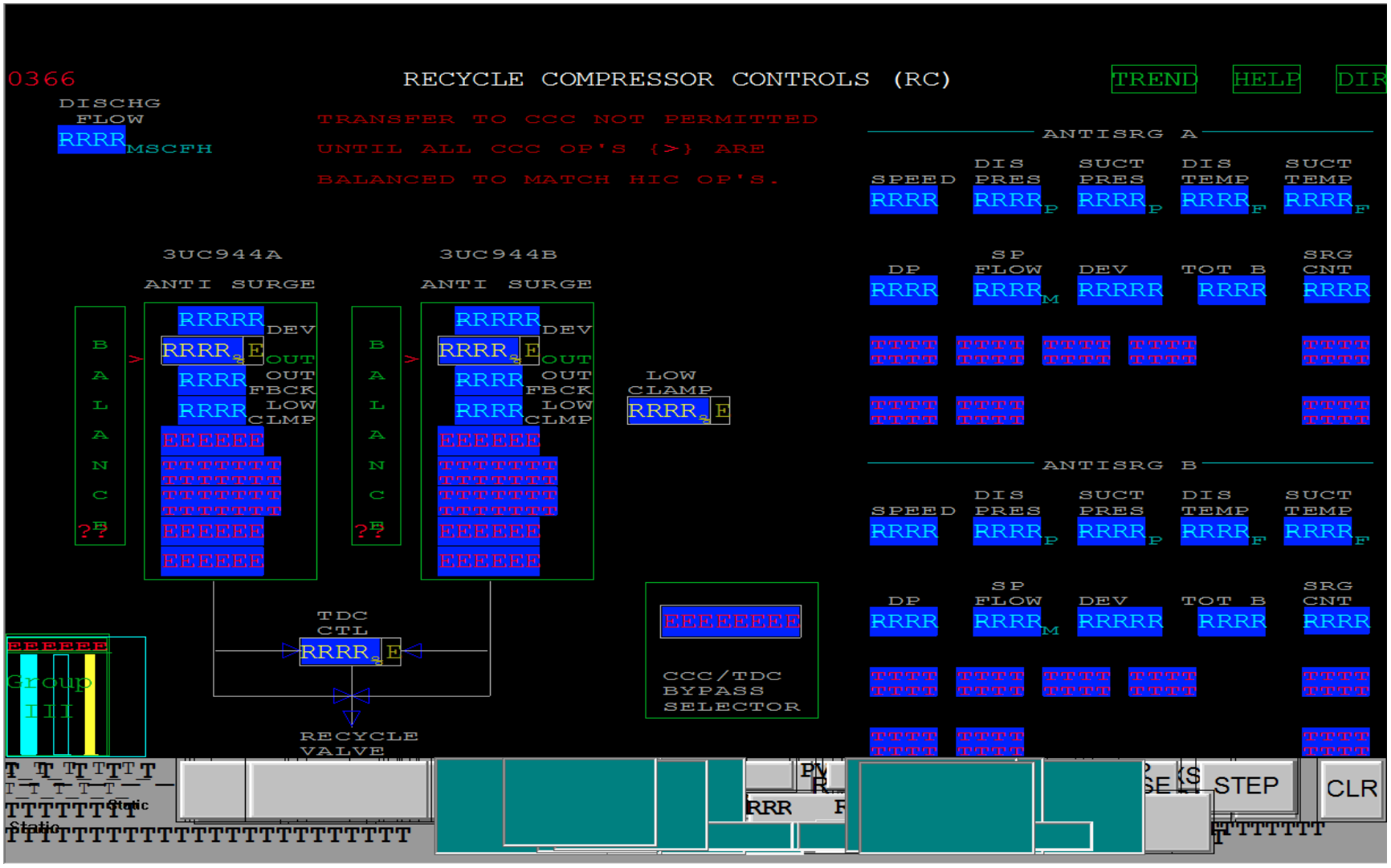
3.170 RECY COMP DISCH VALVE MAN OPERATION (0365.DS)

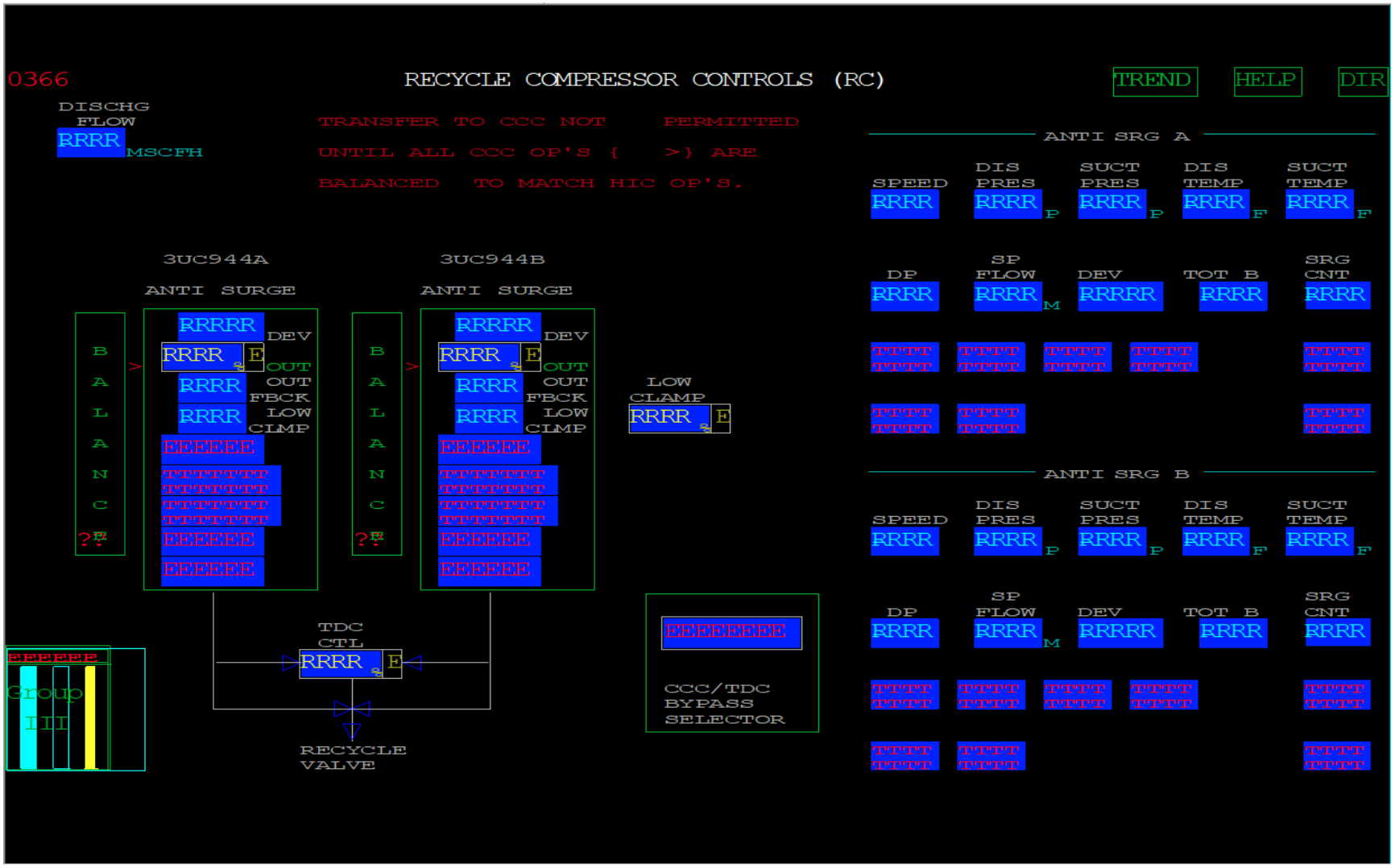


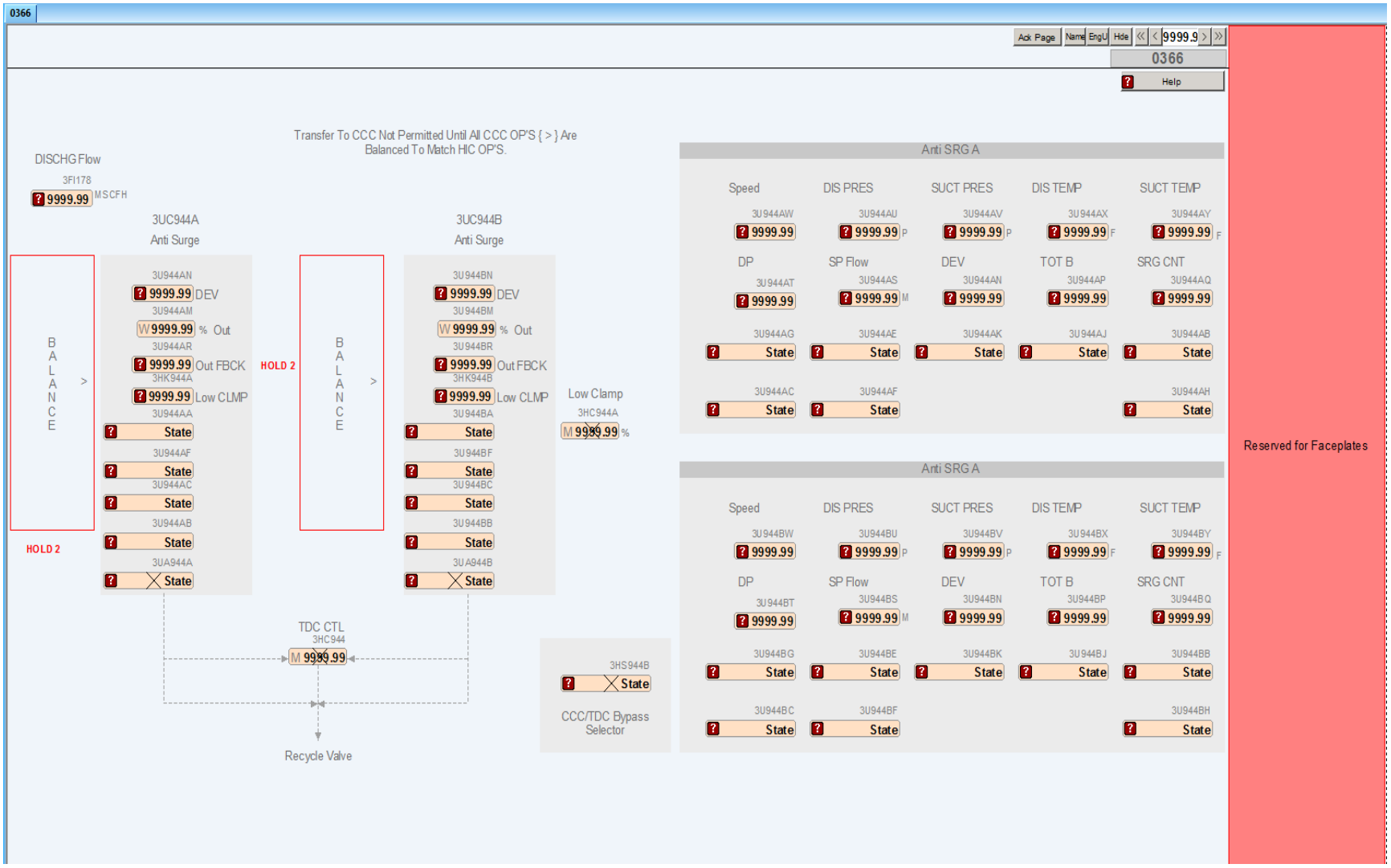

0365
RECY COMP DISCH VALVE MAN OPERATION
SUCTION
PROCESS
HELP
RTRN
DIR
MAINTENANCE BYPASS ENABLED
OK
CLOSE SW @ SHAFER PNL
EEEEEEEE
SUC & DISCH VALVES CLOSE PERMISSIVE
OK
RECYCLE COMP TRIP
EEEEEEEE
OPEN SW @ SHAFER PNL
EEEEEEEE
AND
AND
AND
NOT
AND
AND
OR
OR
CLOSE COMMAND
25 SEC PULSE TO CLOSE
N2
N2
OPEN COMMAND
N2
3HY142C
H2
HV142 DISCH VALVE
EEEEEE
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0365
Ack Page
Name
Engu
Hide
9999.9
0365
Help
Maintenance Bypass Enabled
3HA142M
State
SUC & DISCH Valves Close Permissive
3DA142R
State
Close SW @Shafer PNL
3HL142P
State
Recycle Comp Trip
3DA9050S
State
Open SW @Shafer PNL
3DA142Q
State
AND
AND
AND
NOT
AND
AND
OR
OR
Close Command
Open Command
N2
3DA142S
25 SEC Pulse To Close
N2
3DA142S
NEED TO SPECIFY THE PROCESS LINE WITH OPERATOR
N2
3HY142C
H2
3ZA142A
State
3ZA142B
State
HV 142 DISCH Valve
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heater
OH Gas COMP
HYD Letdown
Help

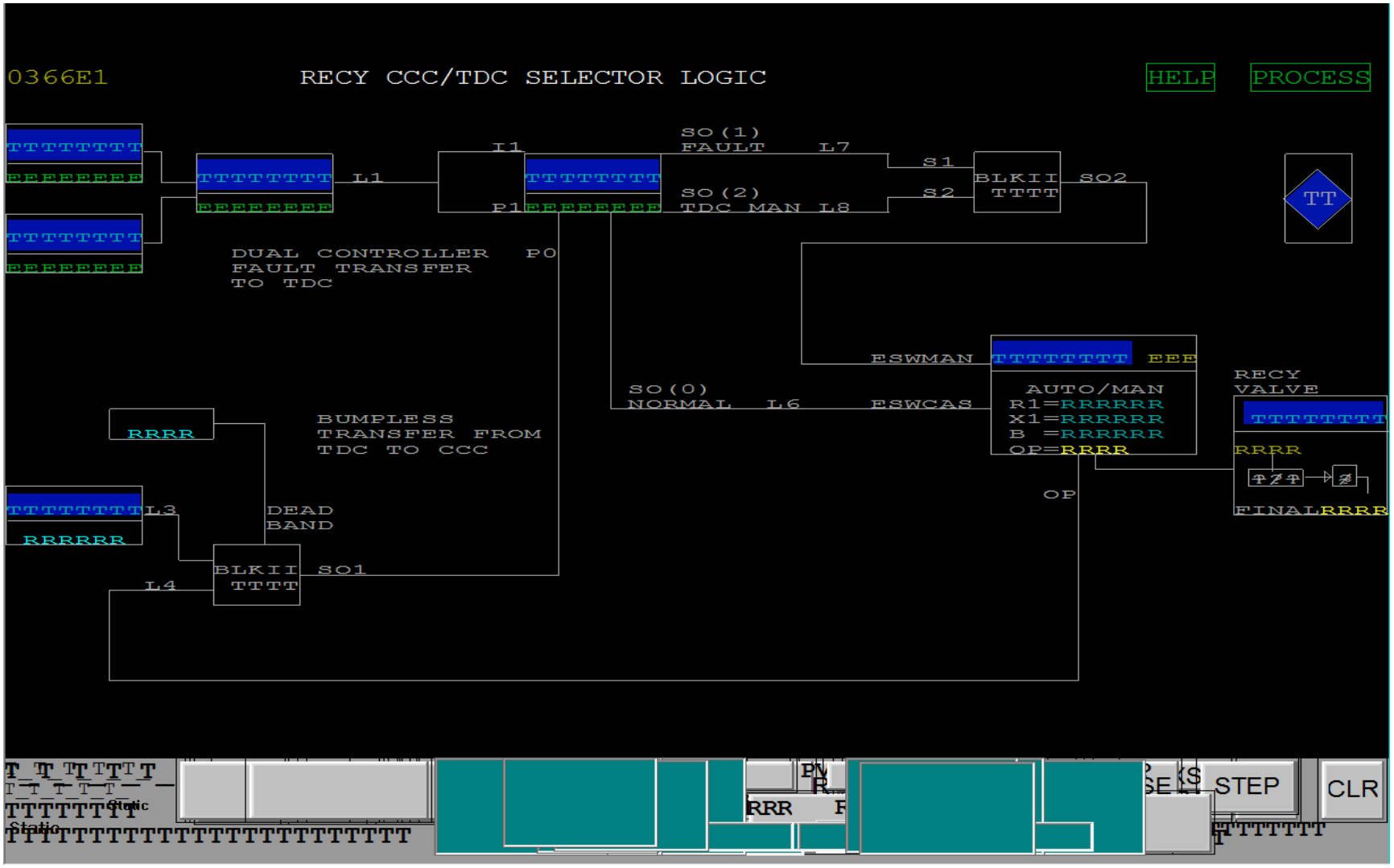
3.171 RECYCLE COMPRESSOR CONTROLS (RC) (0366.DS)

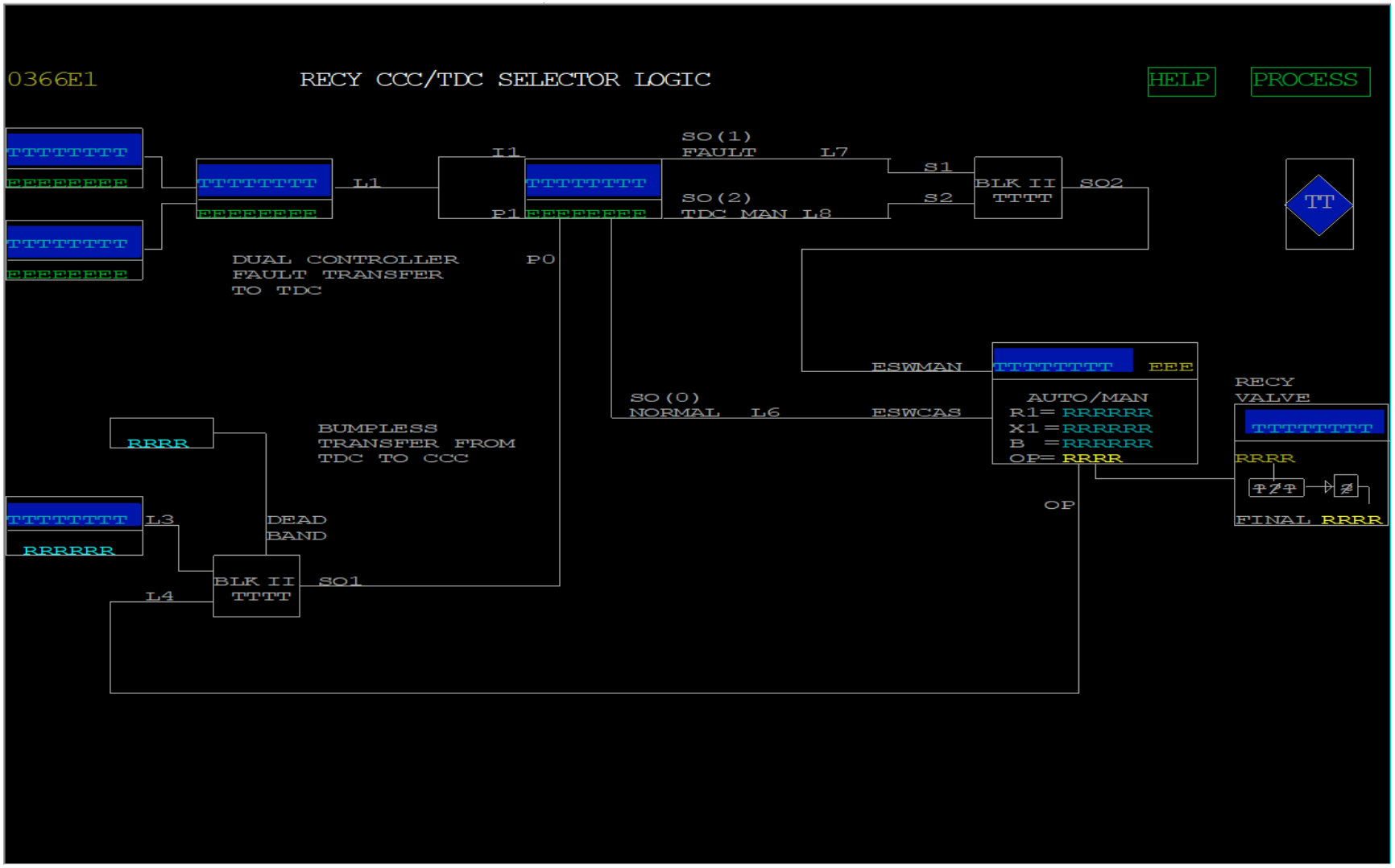


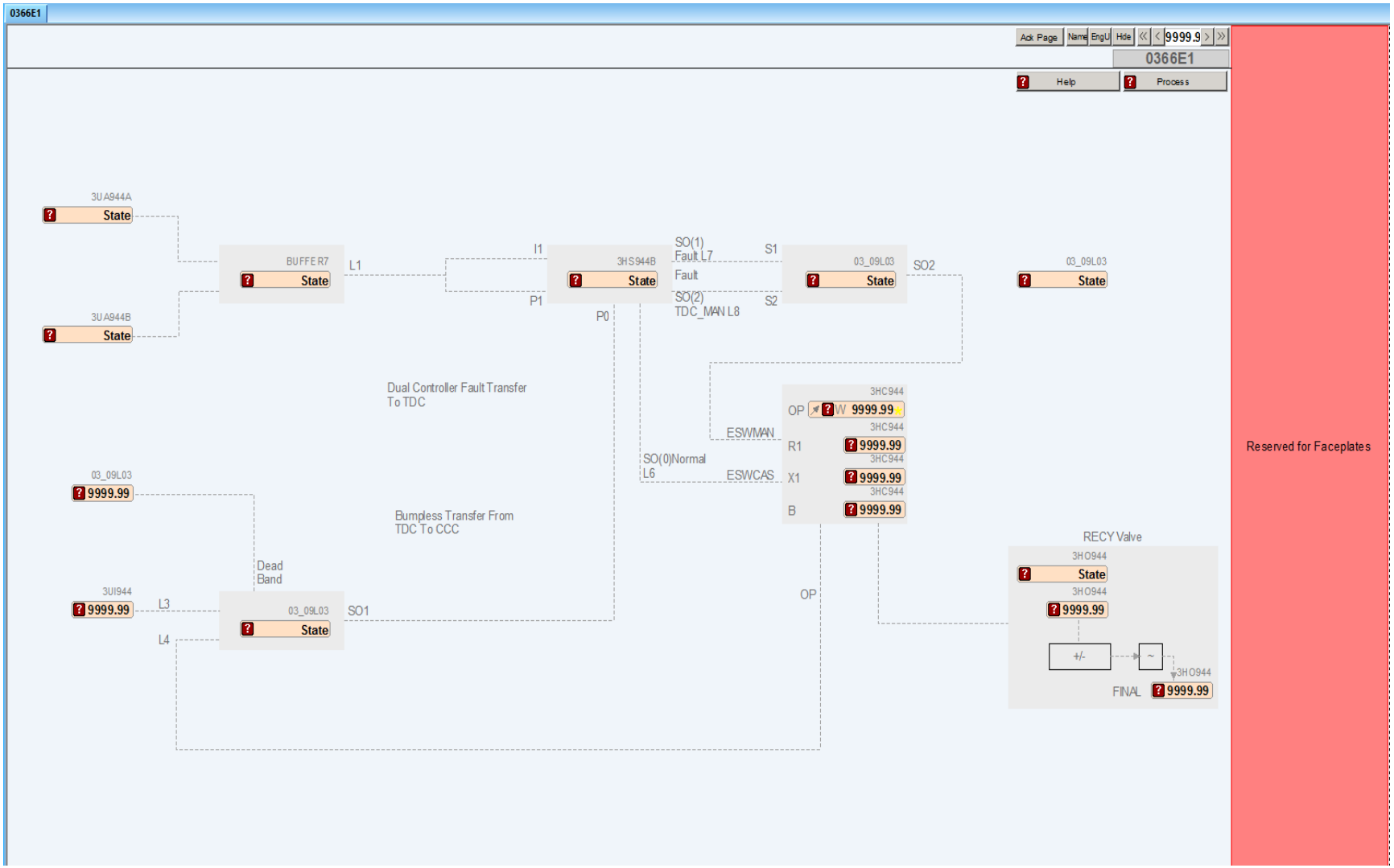

0366
RECYCLE COMPRESSOR CONTROLS (RC)
TREND
HELP
DIR
DISCHG FLOW
RRRR
MSCFH
TRANSFER TO CCC NOT PERMITTED
UNTIL ALL CCC OP'S { >} ARE
BALANCED TO MATCH HIC OP'S.
3UC944A
ANTI SURGE
3UC944B
ANTI SURGE
BALANC
DEV
OUT
FBCK
LOW CLMP
LOW CLAMP
TDC CTL
RECYCLE VALVE
CCC/TDC BYPASS SELECTOR
Group III
ANTI SRG A
ANTI SRG B
SPEED
DIS PRES
SUCT PRES
DIS TEMP
SUCT TEMP
DP
SP FLOW
DEV
TOT B
SRG CNT


0366
Ack Page
Name
Eng U
Hide
9999.9
0366
Help
Transfer To CCC Not Permitted Until All CCC OP'S { > } Are Balanced To Match HIC OP'S.
DISCHG Flow
3FI178
9999.99 MSCFH
3UC944A
Anti Surge
3UC944B
Anti Surge
BALANCE
HOLD 2
3U944AN
9999.99 DEV
3U944AM
9999.99 % Out
3U944AR
9999.99 Out FBCK
3HK944A
9999.99 Low CLMP
3U944AA
State
3U944AF
State
3U944AC
State
3U944AB
State
3UA944A
State
3U944BN
9999.99 DEV
3U944BM
9999.99 % Out
3U944BR
9999.99 Out FBCK
3HK944B
9999.99 Low CLMP
3U944BA
State
3U944BF
State
3U944BC
State
3U944BB
State
3UA944B
State
Low Clamp
3HC944A
M 9999.99 %
TDC CTL
3HC944
M 9999.99
Recycle Valve
3HS944B
State
CCC/TDC Bypass Selector
Anti SRG A
Speed
DIS PRES
SUCT PRES
DIS TEMP
SUCT TEMP
3U944AW 9999.99
3U944AU 9999.99 P
3U944AV 9999.99 P
3U944AX 9999.99 F
3U944AY 9999.99 F
DP
SP Flow
DEV
TOT B
SRG CNT
3U944AT 9999.99
3U944AS 9999.99 M
3U944AN 9999.99
3U944AP 9999.99
3U944AQ 9999.99
3U944AG State
3U944AE State
3U944AK State
3U944AJ State
3U944AB State
3U944AC State
3U944AF State
3U944AH State
Anti SRG A
Speed
DIS PRES
SUCT PRES
DIS TEMP
SUCT TEMP
3U944BW 9999.99
3U944BU 9999.99 P
3U944BV 9999.99 P
3U944BX 9999.99 F
3U944BY 9999.99 F
DP
SP Flow
DEV
TOT B
SRG CNT
3U944BT 9999.99
3U944BS 9999.99 M
3U944BN 9999.99
3U944BP 9999.99
3U944BQ 9999.99
3U944BG State
3U944BE State
3U944BK State
3U944BJ State
3U944BB State
3U944BC State
3U944BF State
3U944BH State
Reserved for Faceplates

3.172 RECY CCC/TDC SELECTOR LOGIC (0366E1.DS)

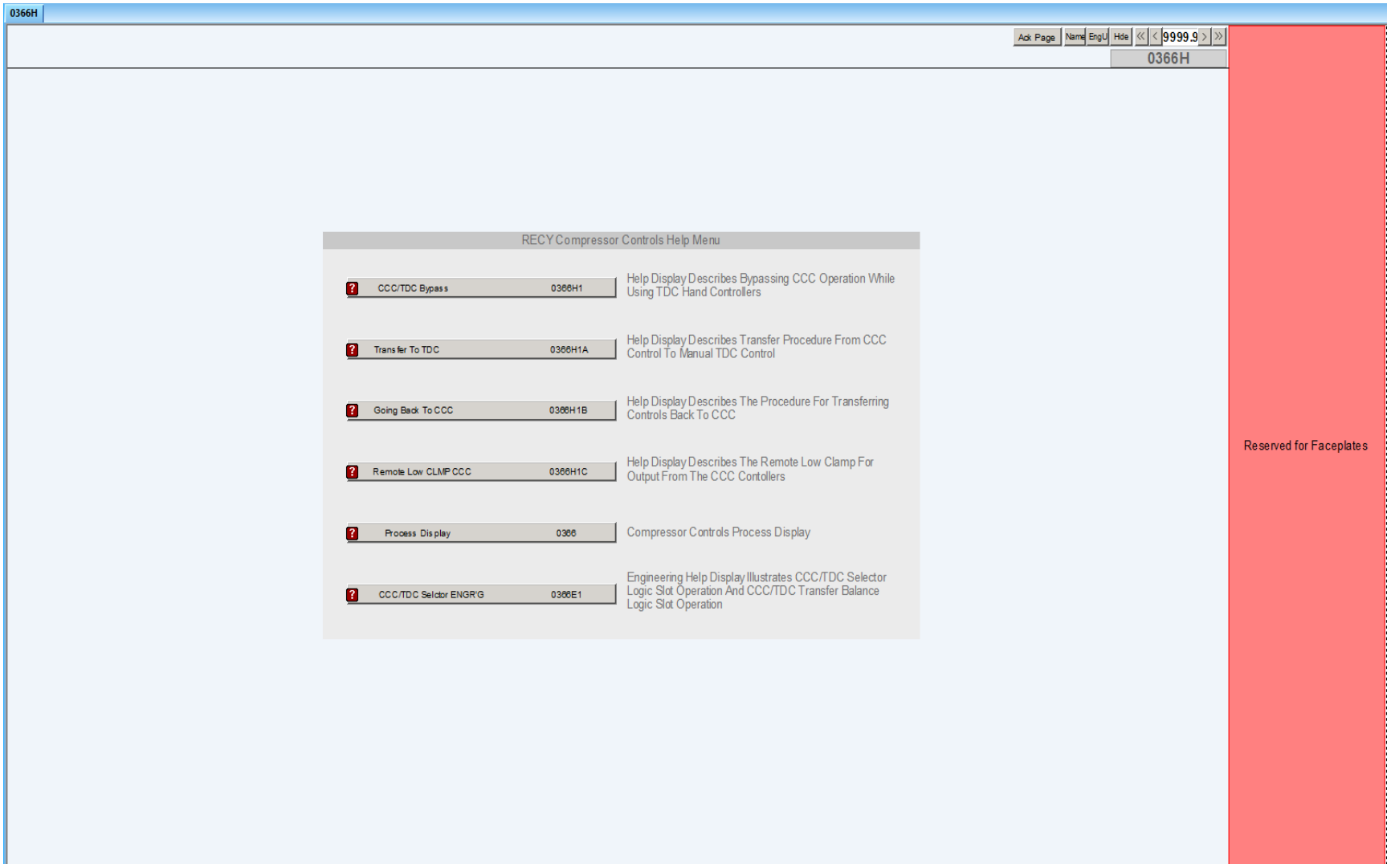



0366E1
RECY CCC/TDC SELECTOR LOGIC
HELP
PROCESS
TTTTTTTT
EEEEEEEE
L1
I1
P1
SO(1)
FAULT
L7
SO(2)
TDC MAN L8
S1
S2
BLK II
TTTT
SO2
TT
DUAL CONTROLLER
FAULT TRANSFER
TO TDC
P0
ESWMAN
EEE
SO(0)
NORMAL
L6
ESWCAS
AUTO/MAN
R1= RRRRRR
X1 =RRRRRR
B =RRRRRR
OP= RRRR
RECY
VALVE
RRRR
FINAL RRRR
OP
BUMPLESS
TRANSFER FROM
TDC TO CCC
RRRR
RRRRRR
L3
L4
DEAD
BAND
BLK II
TTTT
SO1


0366E1
Ack Page
Name
EngU
Hide
9999.9
0366E1
Help
Process
3UA944A
State
3UA944B
State
BUFFER7
State
L1
I1
P1
3HS944B
State
P0
SO(1)
Fault L7
Fault
SO(2)
TDC_MAN L8
S1
S2
03_09L03
State
SO2
03_09L03
State
Dual Controller Fault Transfer
To TDC
3HC944
OP
W 9999.99
ESWMAN
3HC944
R1
9999.99
SO(0)Normal
L6
ESWCAS
3HC944
X1
9999.99
3HC944
B
9999.99
03_09L03
9999.99
Bumpless Transfer From
TDC To CCC
Dead
Band
3UI944
9999.99
L3
L4
03_09L03
State
SO1
OP
RECY Valve
3HO944
State
3HO944
9999.99
+/-
~
3HO944
FINAL
9999.99
Reserved for Faceplates

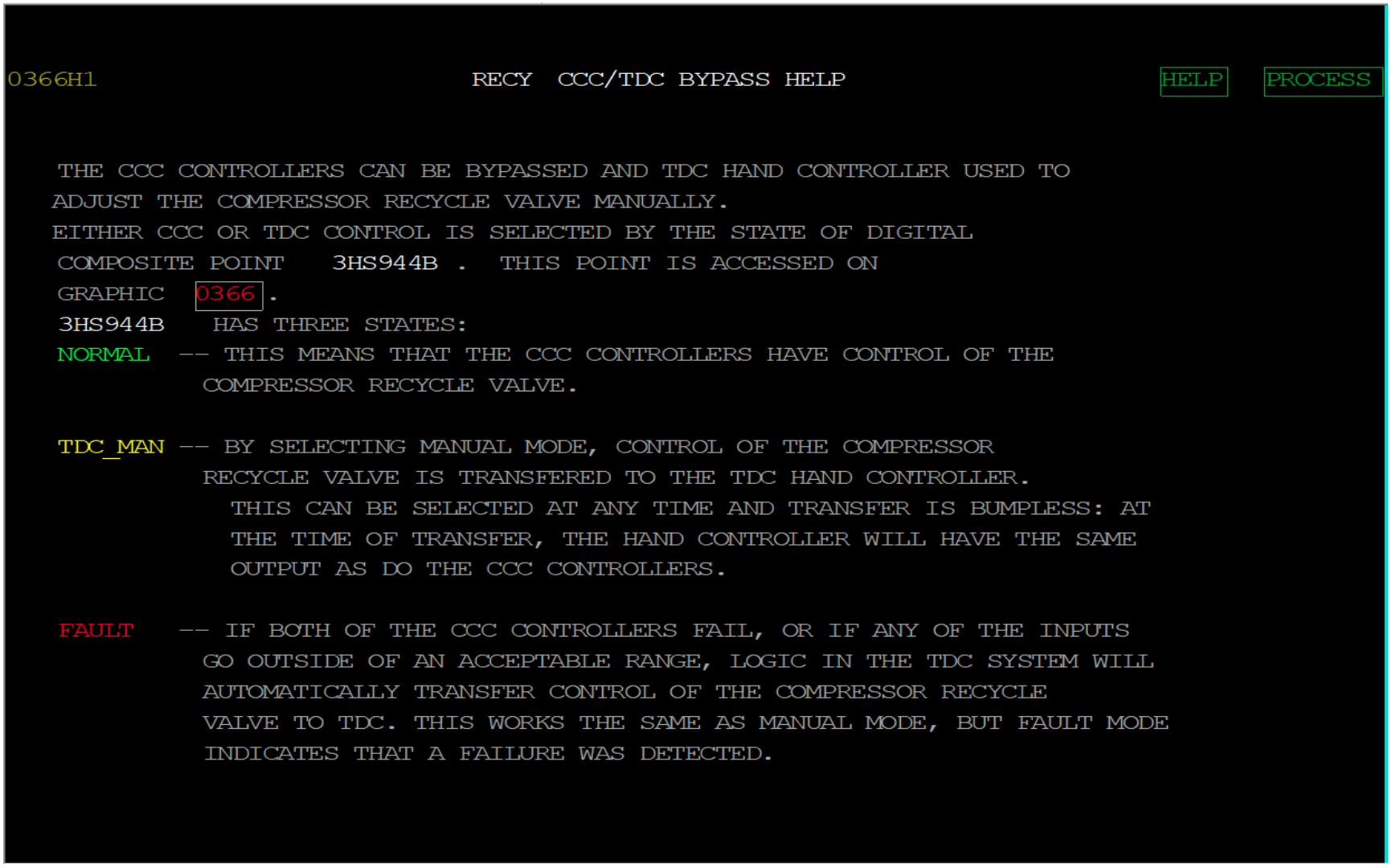
3.173 RECY COMPRESSOR CONTROLS HELP MENU (0366H.DS)

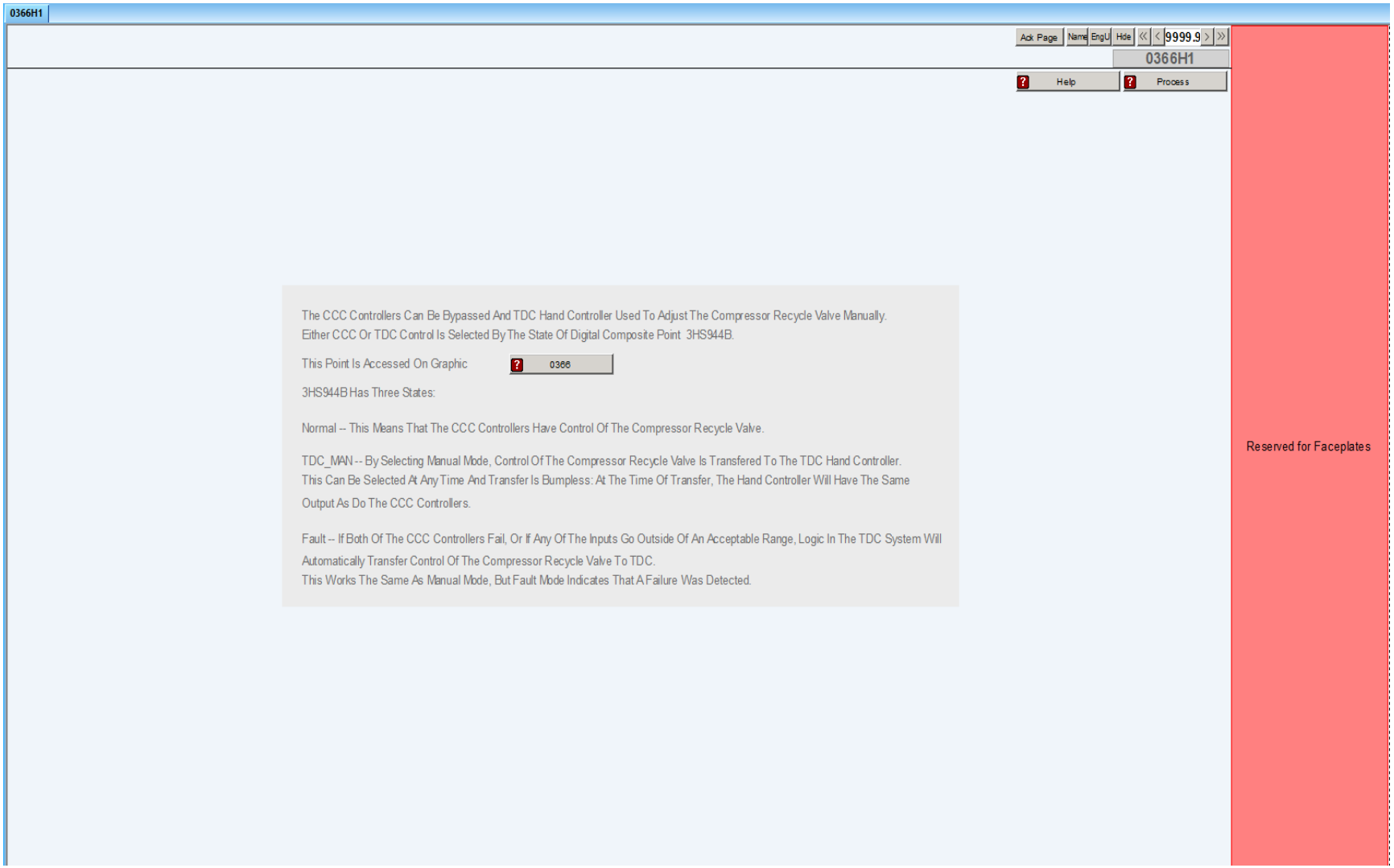
0366H
RECY COMPRESSOR CONTROLS HELP MENU
CCC/TDC BYPASS 0366H1
HELP DISPLAY DESCRIBES BYPASSING CCC OPERATION WHILE USING TDC HAND CONTROLLERS
TRANSFER TO TDC 0366H1A
HELP DISPLAY DESCRIBES TRANSFER PROCEDURE FROM CCC CONTROL TO MANUAL TDC CONTROL
GOING BACK TO CCC 0366H1B
HELP DISPLAY DESCRIBES THE PROCEDURE FOR TRANSFERRING CONTROLS BACK TO CCC
REMOTE LOW CLMP CCC 0366H1C
HELP DISPLAY DESCRIBES THE REMOTE LOW CLAMP FOR OUTPUT FROM THE CCC CONTOLLERS
PROCESS DISPLAY 0366
COMPRESSOR CONTROLS PROCESS DISPLAY
CCC/TDC SELCTOR ENGR'G 0366E1
ENGINEERING HELP DISPLAY ILLUSTRATES CCC/TDC SELECTOR LOGIC SLOT OPERATION AND CCC/TDC TRANSFER BALANCE LOGIC SLOT OPERATION


0366H
Ack Page
Name
EngU
Hide
9999.9
0366H
RECY Compressor Controls Help Menu
CCC/TDC Bypass
0366H1
Help Display Describes Bypassing CCC Operation While Using TDC Hand Controllers
Transfer To TDC
0366H1A
Help Display Describes Transfer Procedure From CCC Control To Manual TDC Control
Going Back To CCC
0366H1B
Help Display Describes The Procedure For Transferring Controls Back To CCC
Remote Low CLMP CCC
0366H1C
Help Display Describes The Remote Low Clamp For Output From The CCC Contollers
Process Display
0366
Compressor Controls Process Display
CCC/TDC Selctor ENGR'G
0366E1
Engineering Help Display Illustrates CCC/TDC Selector Logic Slot Operation And CCC/TDC Transfer Balance Logic Slot Operation
Reserved for Faceplates

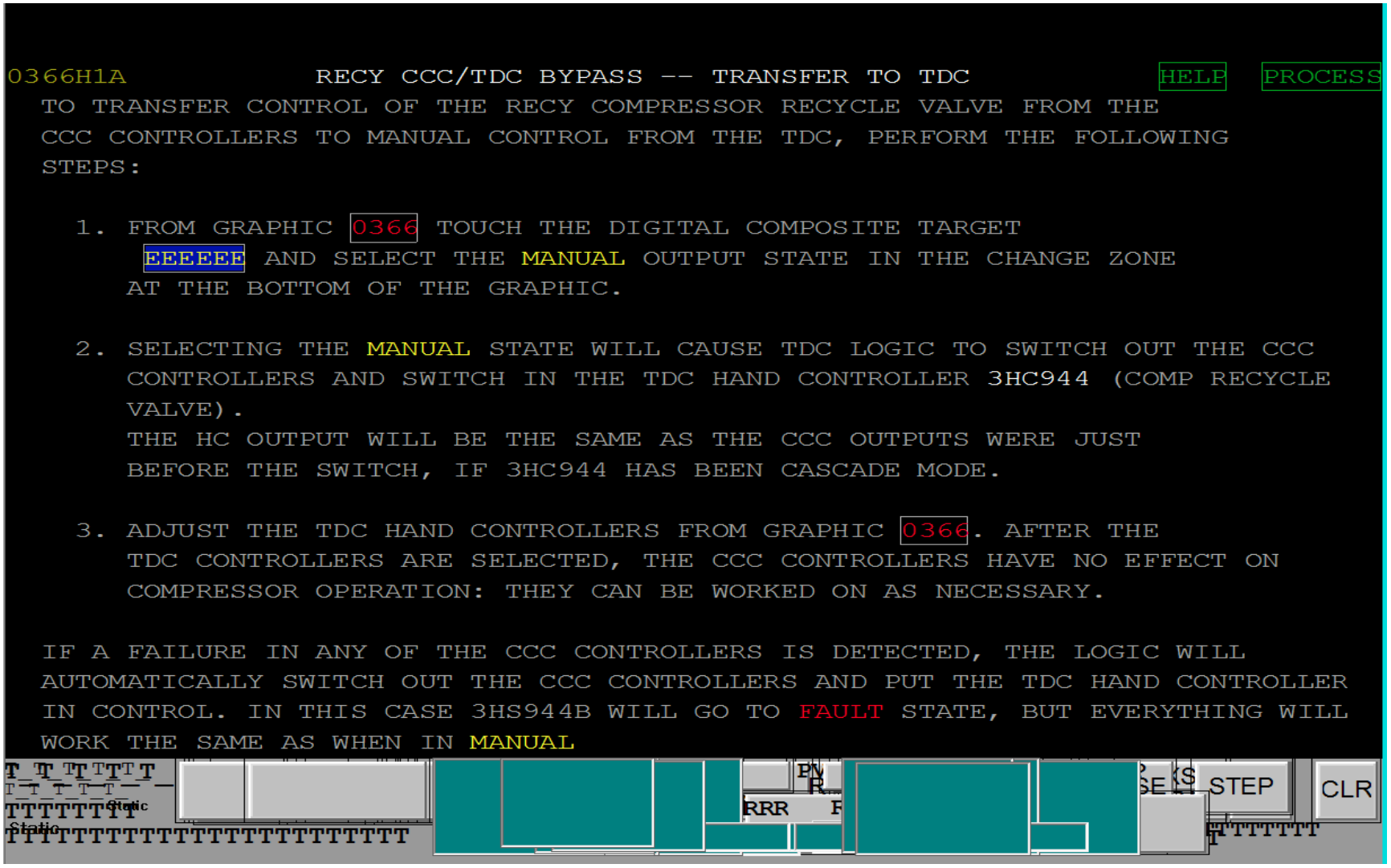
3.174 RECY CCC/TDC BYPASS HELP (0366H1.DS)

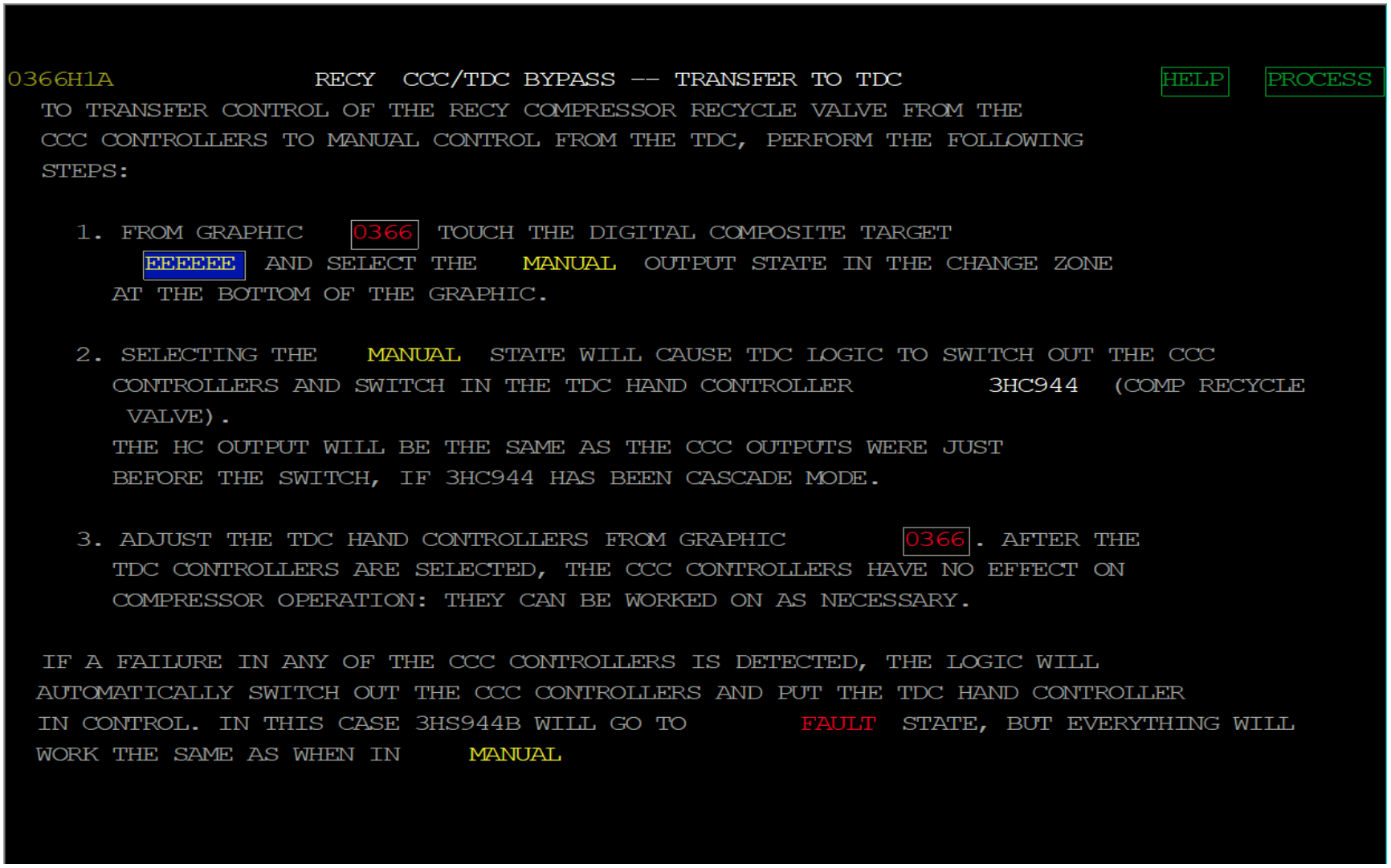
```
0366H1                      RECY CCC/TDC BYPASS HELP              HELP  PROCESS

   THE CCC CONTROLLERS CAN BE BYPASSED AND TDC HAND CONTROLLER USED TO
   ADJUST THE COMPRESSOR RECYCLE VALVE MANUALLY.
   EITHER CCC OR TDC CONTROL IS SELECTED BY THE STATE OF DIGITAL
   COMPOSITE POINT 3HS944B.  THIS POINT IS ACCESSED ON
   GRAPHIC 0366.
   3HS944B  HAS THREE STATES:
   NORMAL -- THIS MEANS THAT THE CCC CONTROLLERS HAVE CONTROL OF THE
             COMPRESSOR RECYCLE VALVE.

   TDC_MAN-- BY SELECTING MANUAL MODE, CONTROL OF THE COMPRESSOR
             RECYCLE VALVE IS TRANSFERED TO THE TDC HAND CONTROLLER.
             THIS CAN BE SELECTED AT ANY TIME AND TRANSFER IS BUMPLESS: AT
             THE TIME OF TRANSFER, THE HAND CONTROLLER WILL HAVE THE SAME
             OUTPUT AS DO THE CCC CONTROLLERS.

   FAULT  -- IF BOTH OF THE CCC CONTROLLERS FAIL, OR IF ANY OF THE INPUTS
             GO OUTSIDE OF AN ACCEPTABLE RANGE, LOGIC IN THE TDC SYSTEM WILL
             AUTOMATICALLY TRANSFER CONTROL OF THE COMPRESSOR RECYCLE
             VALVE TO TDC. THIS WORKS THE SAME AS MANUAL MODE, BUT FAULT MODE
             INDICATES THAT A FAILURE WAS DETECTED.
```

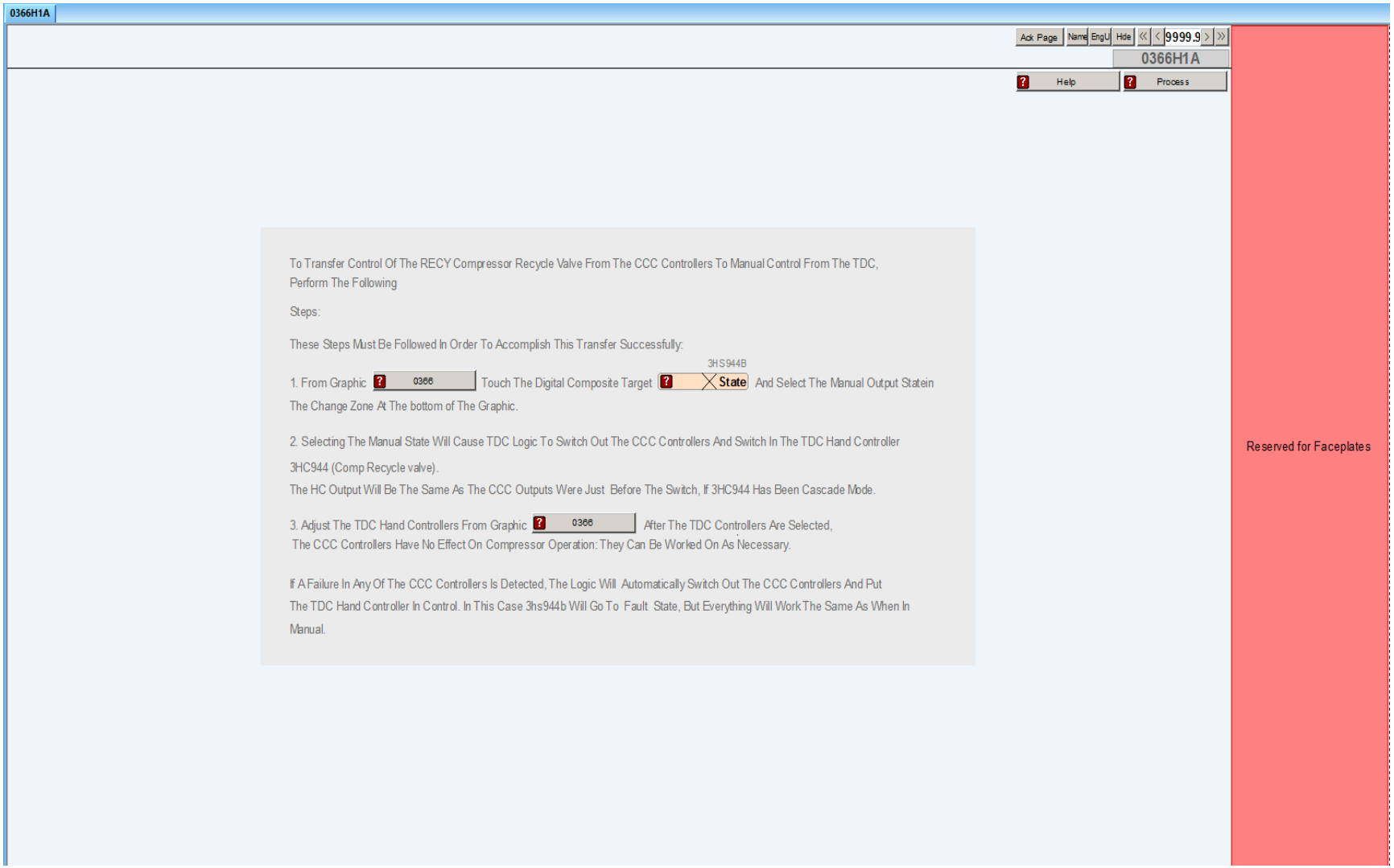

0366H1
RECY CCC/TDC BYPASS HELP
HELP
PROCESS
THE CCC CONTROLLERS CAN BE BYPASSED AND TDC HAND CONTROLLER USED TO
ADJUST THE COMPRESSOR RECYCLE VALVE MANUALLY.
EITHER CCC OR TDC CONTROL IS SELECTED BY THE STATE OF DIGITAL
COMPOSITE POINT 3HS944B . THIS POINT IS ACCESSED ON
GRAPHIC 0366 .
3HS944B HAS THREE STATES:
NORMAL -- THIS MEANS THAT THE CCC CONTROLLERS HAVE CONTROL OF THE
COMPRESSOR RECYCLE VALVE.
TDC_MAN -- BY SELECTING MANUAL MODE, CONTROL OF THE COMPRESSOR
RECYCLE VALVE IS TRANSFERED TO THE TDC HAND CONTROLLER.
THIS CAN BE SELECTED AT ANY TIME AND TRANSFER IS BUMPLESS: AT
THE TIME OF TRANSFER, THE HAND CONTROLLER WILL HAVE THE SAME
OUTPUT AS DO THE CCC CONTROLLERS.
FAULT -- IF BOTH OF THE CCC CONTROLLERS FAIL, OR IF ANY OF THE INPUTS
GO OUTSIDE OF AN ACCEPTABLE RANGE, LOGIC IN THE TDC SYSTEM WILL
AUTOMATICALLY TRANSFER CONTROL OF THE COMPRESSOR RECYCLE
VALVE TO TDC. THIS WORKS THE SAME AS MANUAL MODE, BUT FAULT MODE
INDICATES THAT A FAILURE WAS DETECTED.


0366H1
Ack Page
Name
EngU
Hide
9999.9
0366H1
Help
Process
The CCC Controllers Can Be Bypassed And TDC Hand Controller Used To Adjust The Compressor Recycle Valve Manually.
Either CCC Or TDC Control Is Selected By The State Of Digital Composite Point 3HS944B.
This Point Is Accessed On Graphic
0366
3HS944B Has Three States:
Normal -- This Means That The CCC Controllers Have Control Of The Compressor Recycle Valve.
TDC_MAN -- By Selecting Manual Mode, Control Of The Compressor Recycle Valve Is Transfered To The TDC Hand Controller.
This Can Be Selected At Any Time And Transfer Is Bumpless: At The Time Of Transfer, The Hand Controller Will Have The Same
Output As Do The CCC Controllers.
Fault -- If Both Of The CCC Controllers Fail, Or If Any Of The Inputs Go Outside Of An Acceptable Range, Logic In The TDC System Will
Automatically Transfer Control Of The Compressor Recycle Valve To TDC.
This Works The Same As Manual Mode, But Fault Mode Indicates That A Failure Was Detected.
Reserved for Faceplates

3.175 RECY CCC/TDC BYPASS -- TRANSFER TO TDC (0366H1A.DS)

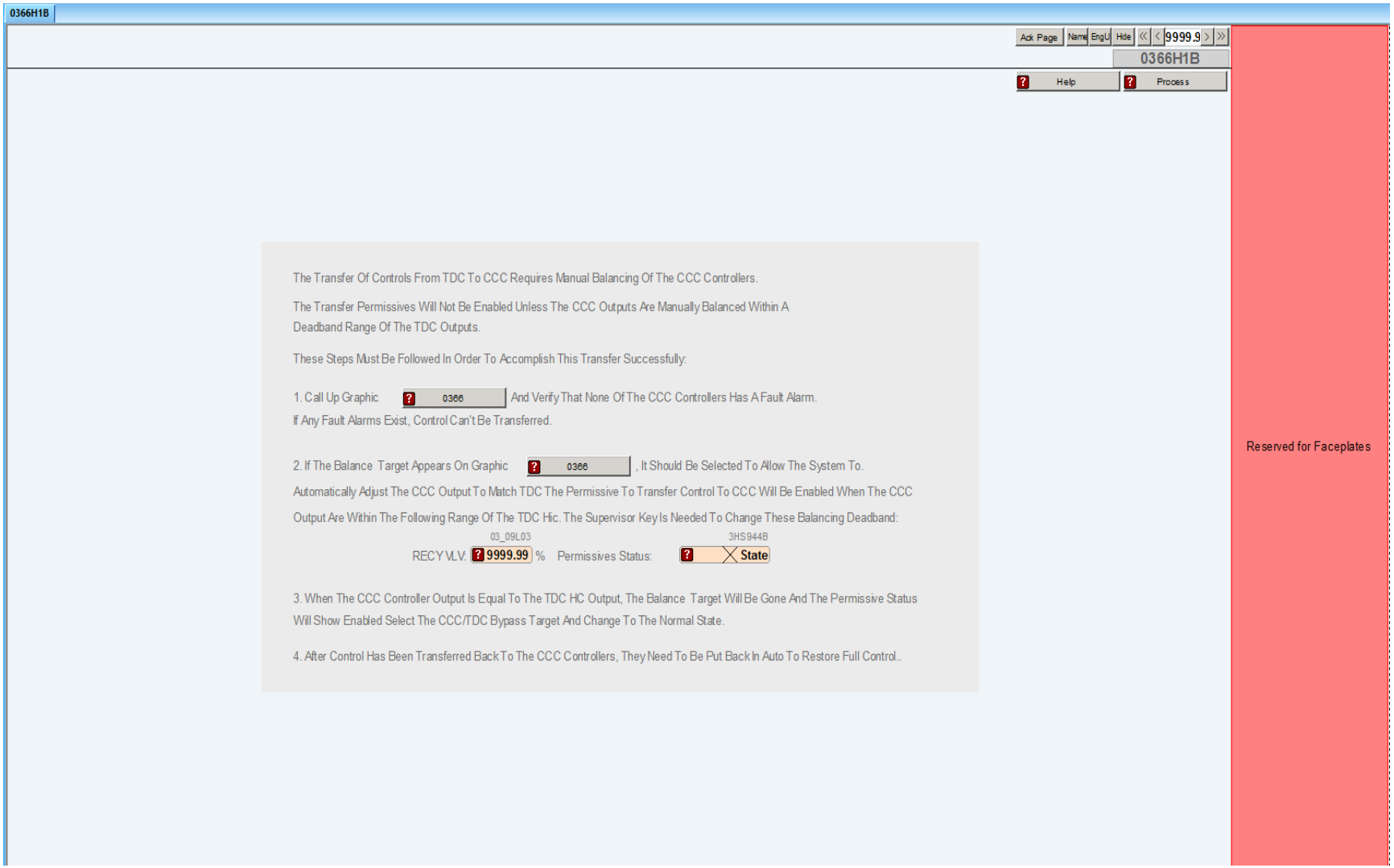



0366H1A
RECY CCC/TDC BYPASS -- TRANSFER TO TDC
HELP
PROCESS
TO TRANSFER CONTROL OF THE RECY COMPRESSOR RECYCLE VALVE FROM THE CCC CONTROLLERS TO MANUAL CONTROL FROM THE TDC, PERFORM THE FOLLOWING STEPS:
1. FROM GRAPHIC 0366 TOUCH THE DIGITAL COMPOSITE TARGET EEEEEE AND SELECT THE MANUAL OUTPUT STATE IN THE CHANGE ZONE AT THE BOTTOM OF THE GRAPHIC.
2. SELECTING THE MANUAL STATE WILL CAUSE TDC LOGIC TO SWITCH OUT THE CCC CONTROLLERS AND SWITCH IN THE TDC HAND CONTROLLER 3HC944 (COMP RECYCLE VALVE).
THE HC OUTPUT WILL BE THE SAME AS THE CCC OUTPUTS WERE JUST BEFORE THE SWITCH, IF 3HC944 HAS BEEN CASCADE MODE.
3. ADJUST THE TDC HAND CONTROLLERS FROM GRAPHIC 0366. AFTER THE TDC CONTROLLERS ARE SELECTED, THE CCC CONTROLLERS HAVE NO EFFECT ON COMPRESSOR OPERATION: THEY CAN BE WORKED ON AS NECESSARY.
IF A FAILURE IN ANY OF THE CCC CONTROLLERS IS DETECTED, THE LOGIC WILL AUTOMATICALLY SWITCH OUT THE CCC CONTROLLERS AND PUT THE TDC HAND CONTROLLER IN CONTROL. IN THIS CASE 3HS944B WILL GO TO FAULT STATE, BUT EVERYTHING WILL WORK THE SAME AS WHEN IN MANUAL

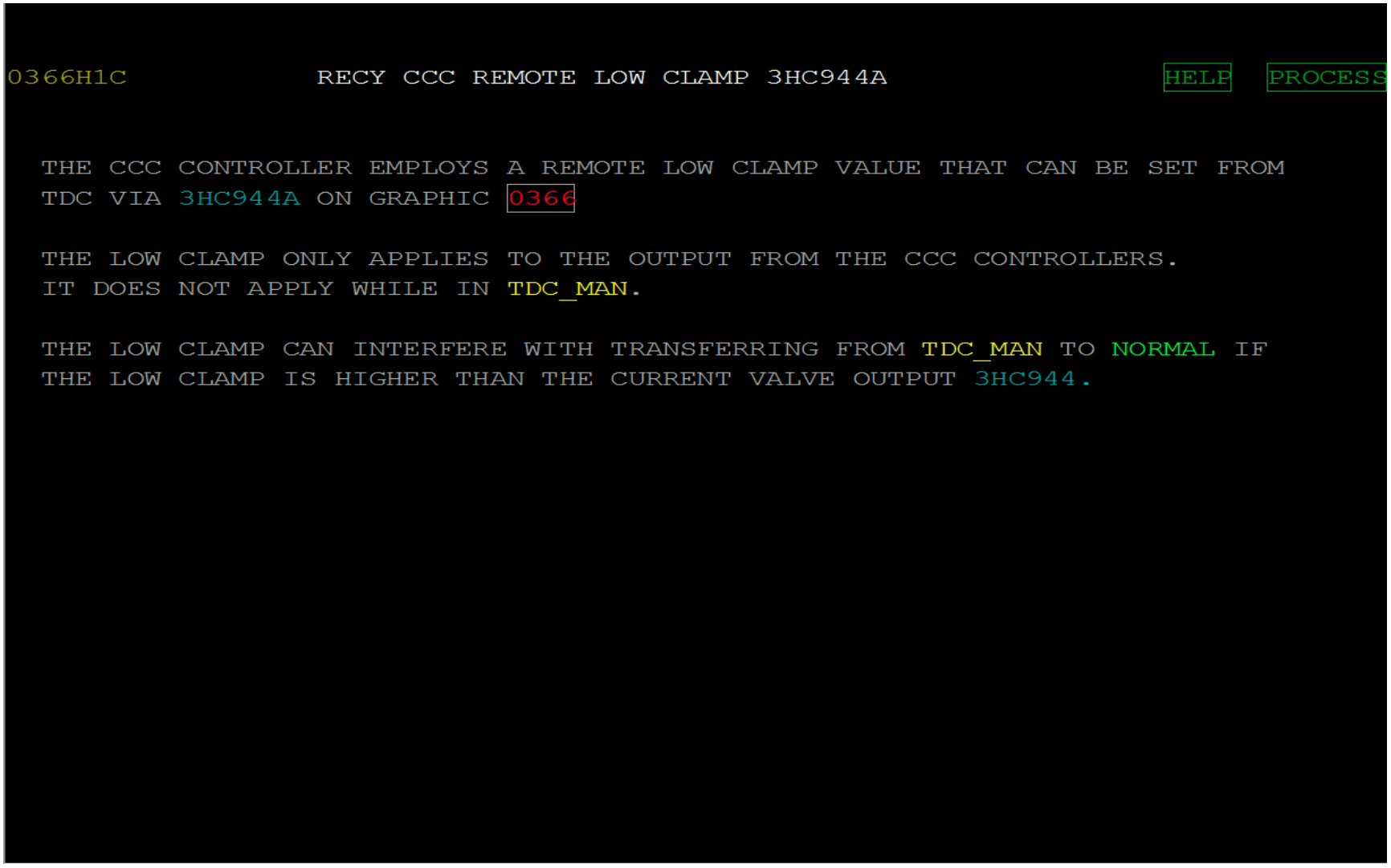

0366H1A
Ack Page
Name
Eng U
Hide
9999.9
0366H1A
Help
Process
To Transfer Control Of The RECY Compressor Recycle Valve From The CCC Controllers To Manual Control From The TDC, Perform The Following
Steps:
These Steps Must Be Followed In Order To Accomplish This Transfer Successfully:
1. From Graphic 0366 Touch The Digital Composite Target 3HS944B State And Select The Manual Output Statein The Change Zone At The bottom of The Graphic.
2. Selecting The Manual State Will Cause TDC Logic To Switch Out The CCC Controllers And Switch In The TDC Hand Controller 3HC944 (Comp Recycle valve).
The HC Output Will Be The Same As The CCC Outputs Were Just Before The Switch, If 3HC944 Has Been Cascade Mode.
3. Adjust The TDC Hand Controllers From Graphic 0366 After The TDC Controllers Are Selected, The CCC Controllers Have No Effect On Compressor Operation: They Can Be Worked On As Necessary.
If A Failure In Any Of The CCC Controllers Is Detected, The Logic Will Automatically Switch Out The CCC Controllers And Put The TDC Hand Controller In Control. In This Case 3hs944b Will Go To Fault State, But Everything Will Work The Same As When In Manual.
Reserved for Faceplates

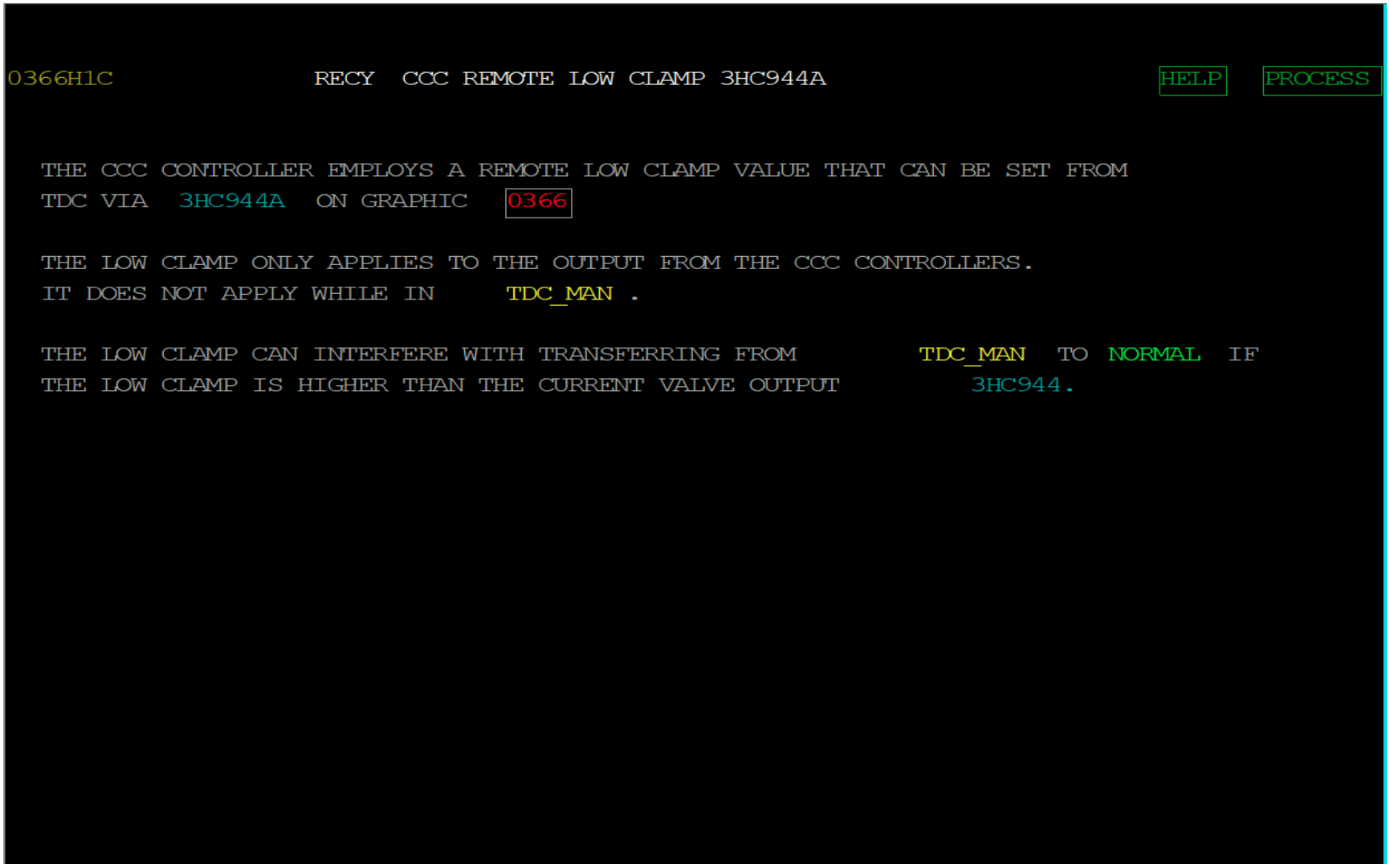
3.176 RECY CCC/TDC BYPASS -- GOING BACK TO CCC (0366H1B.DS)

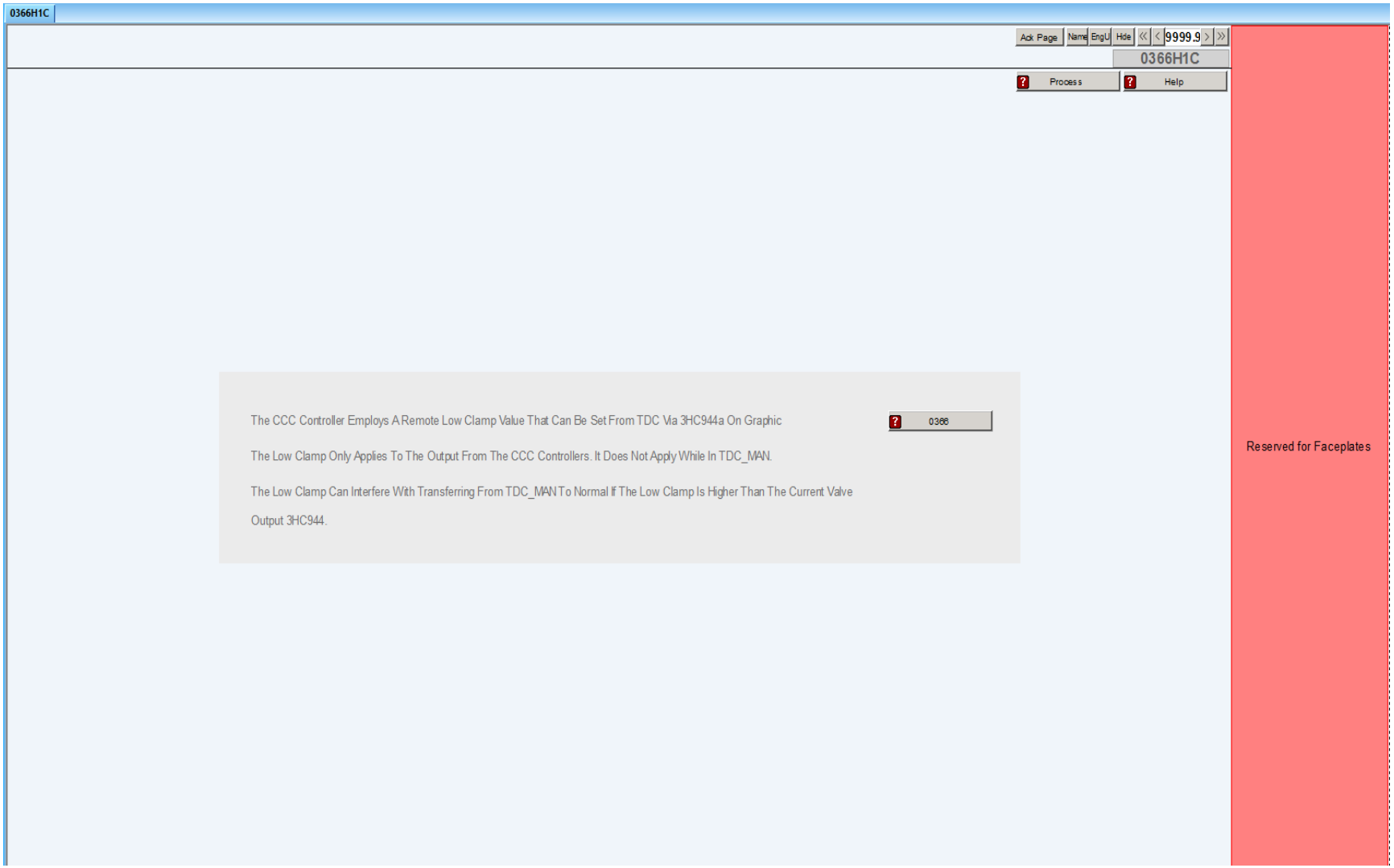
0366H1B
RECY CCC/TDC BYPASS -- GOING BACK TO CCC
HELP
PROCESS
THE TRANSFER OF CONTROLS FROM TDC TO CCC REQUIRES MANUAL BALANCING OF THE CCC CONTROLLERS. THE TRANSFER PERMISSIVES WILL NOT BE ENABLED UNLESS THE CCC OUPUTS ARE MANUALLY BALANCED WITHIN A DEADBAND RANGE OF THE TDC OUTPUTS. THESE STEPS MUST BE FOLLOWED IN ORDER TO ACCOMPLISH THIS TRANSFER SUCCESSFULLY:
1. CALL UP GRAPHIC 0366 AND VERIFY THAT NONE OF THE CCC CONTROLLERS HAS A FAULT ALARM. IF ANY FAULT ALARMS EXIST, CONTROL CAN'T BE TRANSFERRED .
2. IF THE BALANCE TARGET APPEARS ON GRAPHIC 0366 , IT SHOULD BE SELECTED TO ALLOW THE SYSTEM TO AUTOMATICALLY ADJUST THE CCC OUTPUT TO MATCH TDC. THE PERMISSIVE TO TRANSFER CONTROL TO CCC WILL BE ENABLED WHEN THE CCC OUTPUT ARE WITHIN THE FOLLOWING ANGE OF THE TDC HIC. THE SUPERVISOR KEY IS NEEDED TO CHANGE THES E BALANCING DEADBAND:
RECY VLV: RRRRR %
PERMISSIVES STATUS:
3. WHEN THE CCC CONTROLLER OUTPUT IS EQUAL TO THE TDC HC OUTPUT, THE BALANCE TARGET WILL BE GONE AND THE PERMISSIVE STATUS WILL SHOW ENABLED SELECT THE CCC/TDC BYPASS TARGET AND CHANGE TO THE NORMAL STATE. .
4. AFTER CONTROL HAS BEEN TRANSFERRED BACK TO THE CCC CONTROLLERS, THEY NEED TO BE PUT BACK IN AUTO TO RESTORE FULL CONTROL.


0366H1B
Ack Page
Name
Eng U
Hide
9999.9
0366H1B
Help
Process
The Transfer Of Controls From TDC To CCC Requires Manual Balancing Of The CCC Controllers.
The Transfer Permissives Will Not Be Enabled Unless The CCC Outputs Are Manually Balanced Within A Deadband Range Of The TDC Outputs.
These Steps Must Be Followed In Order To Accomplish This Transfer Successfully:
1. Call Up Graphic
0366
And Verify That None Of The CCC Controllers Has A Fault Alarm.
If Any Fault Alarms Exist, Control Can't Be Transferred.
2. If The Balance Target Appears On Graphic
0366
, It Should Be Selected To Allow The System To.
Automatically Adjust The CCC Output To Match TDC The Permissive To Transfer Control To CCC Will Be Enabled When The CCC Output Are Within The Following Range Of The TDC Hic. The Supervisor Key Is Needed To Change These Balancing Deadband:
03_09L03
RECY VLV:
9999.99
%
Permissives Status:
3HS944B
State
3. When The CCC Controller Output Is Equal To The TDC HC Output, The Balance Target Will Be Gone And The Permissive Status Will Show Enabled Select The CCC/TDC Bypass Target And Change To The Normal State.
4. After Control Has Been Transferred Back To The CCC Controllers, They Need To Be Put Back In Auto To Restore Full Control..
Reserved for Faceplates

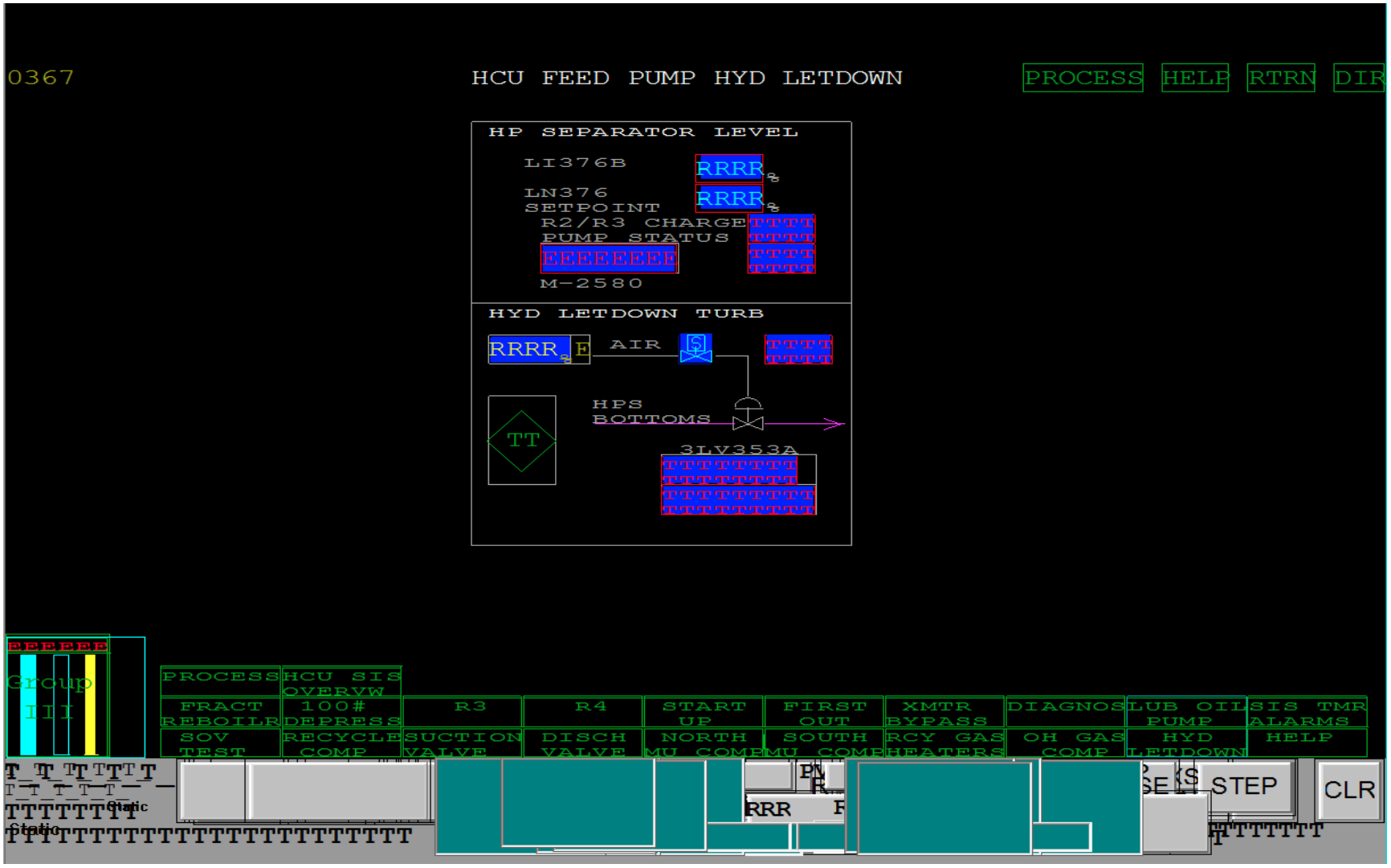
3.177 RECY CCC REMOTE LOW CLAMP 3HC944A (0366H1C.DS)

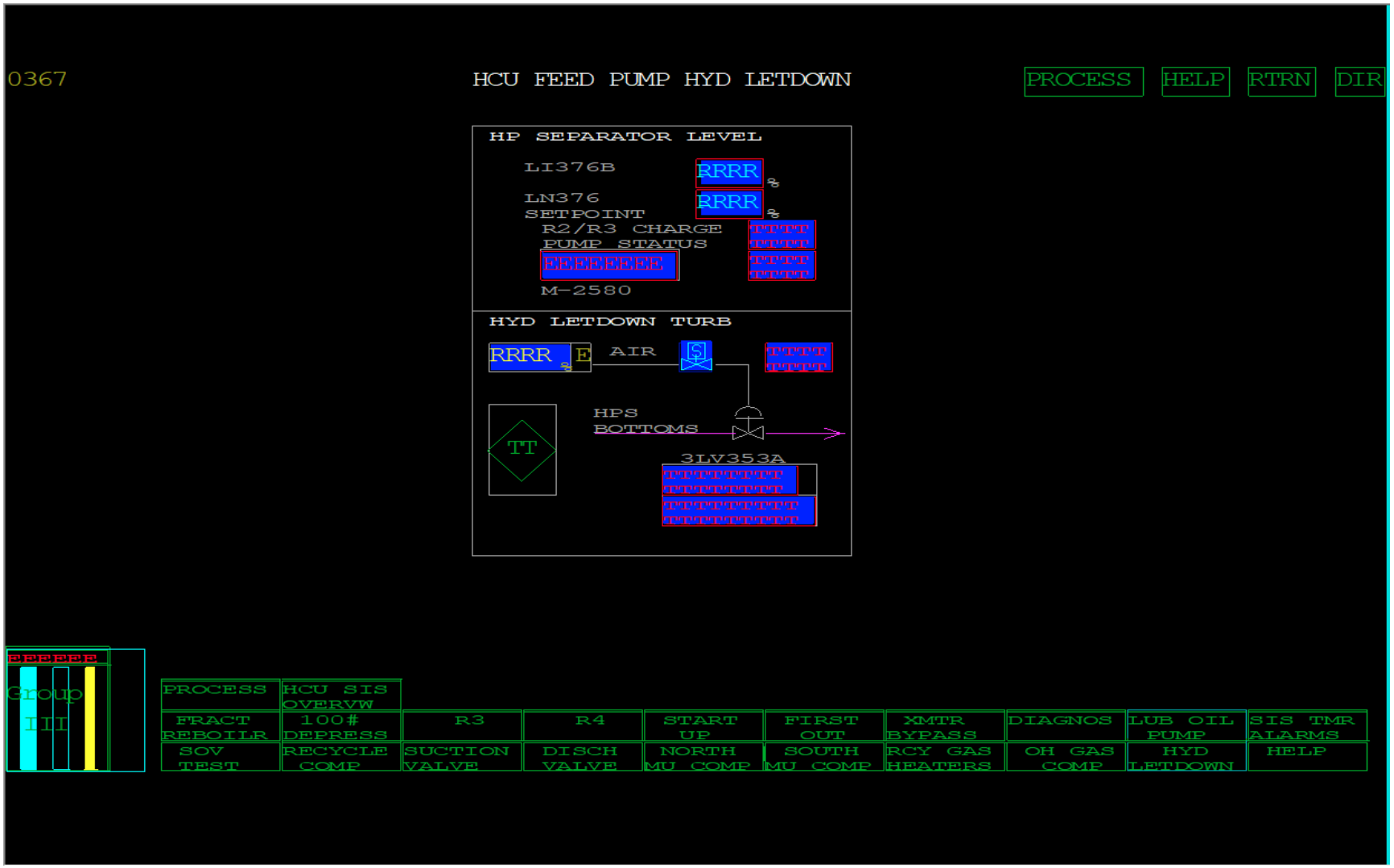


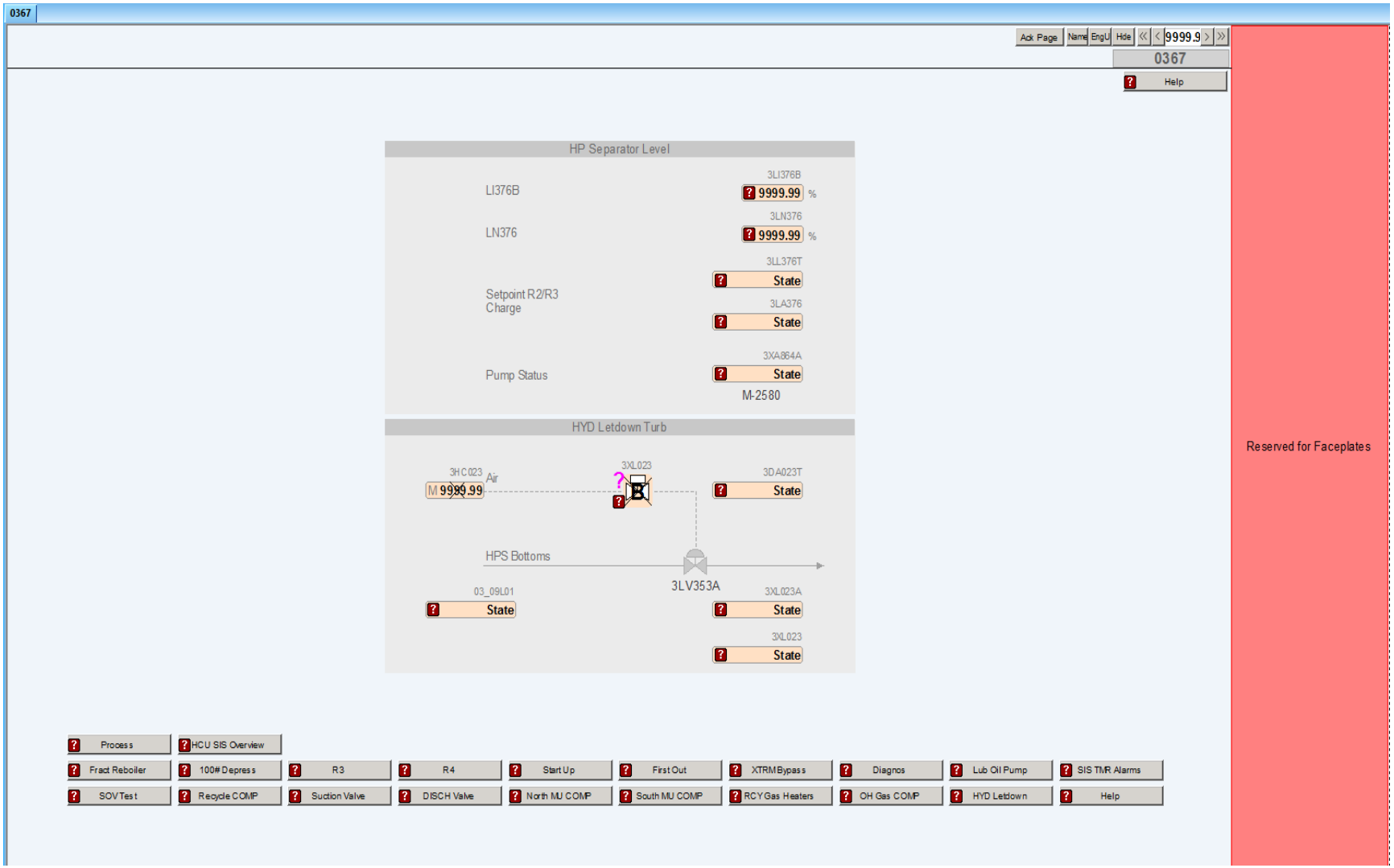

0366H1C
RECY CCC REMOTE LOW CLAMP 3HC944A
HELP
PROCESS
THE CCC CONTROLLER EMPLOYS A REMOTE LOW CLAMP VALUE THAT CAN BE SET FROM
TDC VIA 3HC944A ON GRAPHIC 0366
THE LOW CLAMP ONLY APPLIES TO THE OUTPUT FROM THE CCC CONTROLLERS.
IT DOES NOT APPLY WHILE IN TDC_MAN .
THE LOW CLAMP CAN INTERFERE WITH TRANSFERRING FROM TDC_MAN TO NORMAL IF
THE LOW CLAMP IS HIGHER THAN THE CURRENT VALVE OUTPUT 3HC944.


0366H1C
Ack Page
Name
EngU
Hide
9999.9
0366H1C
Process
Help
The CCC Controller Employs A Remote Low Clamp Value That Can Be Set From TDC Via 3HC944a On Graphic
0366
The Low Clamp Only Applies To The Output From The CCC Controllers. It Does Not Apply While In TDC_MAN.
The Low Clamp Can Interfere With Transferring From TDC_MAN To Normal If The Low Clamp Is Higher Than The Current Valve Output 3HC944.
Reserved for Faceplates

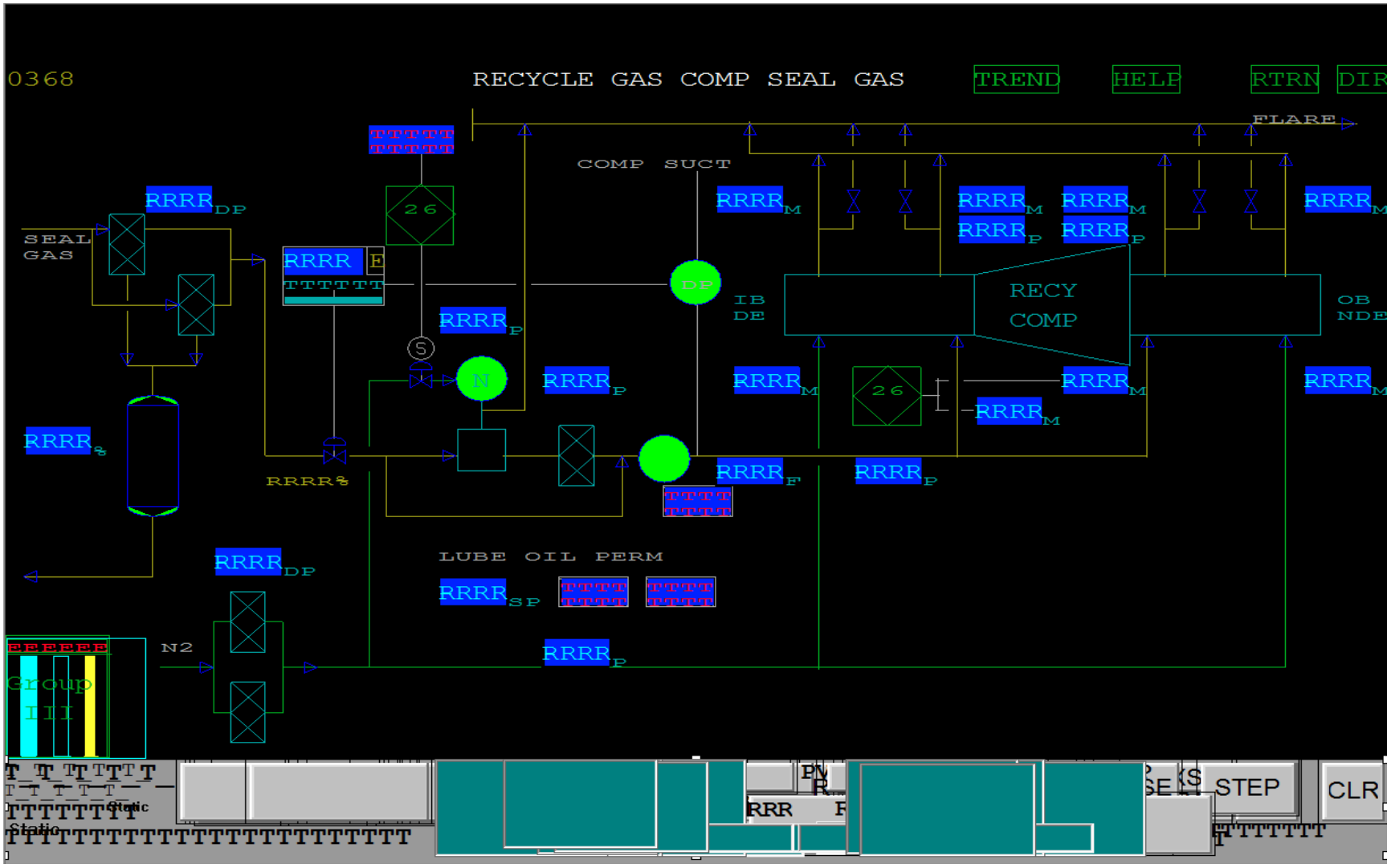
3.178 HCU FEED PUMP HYD LETDOWN (0367.DS)

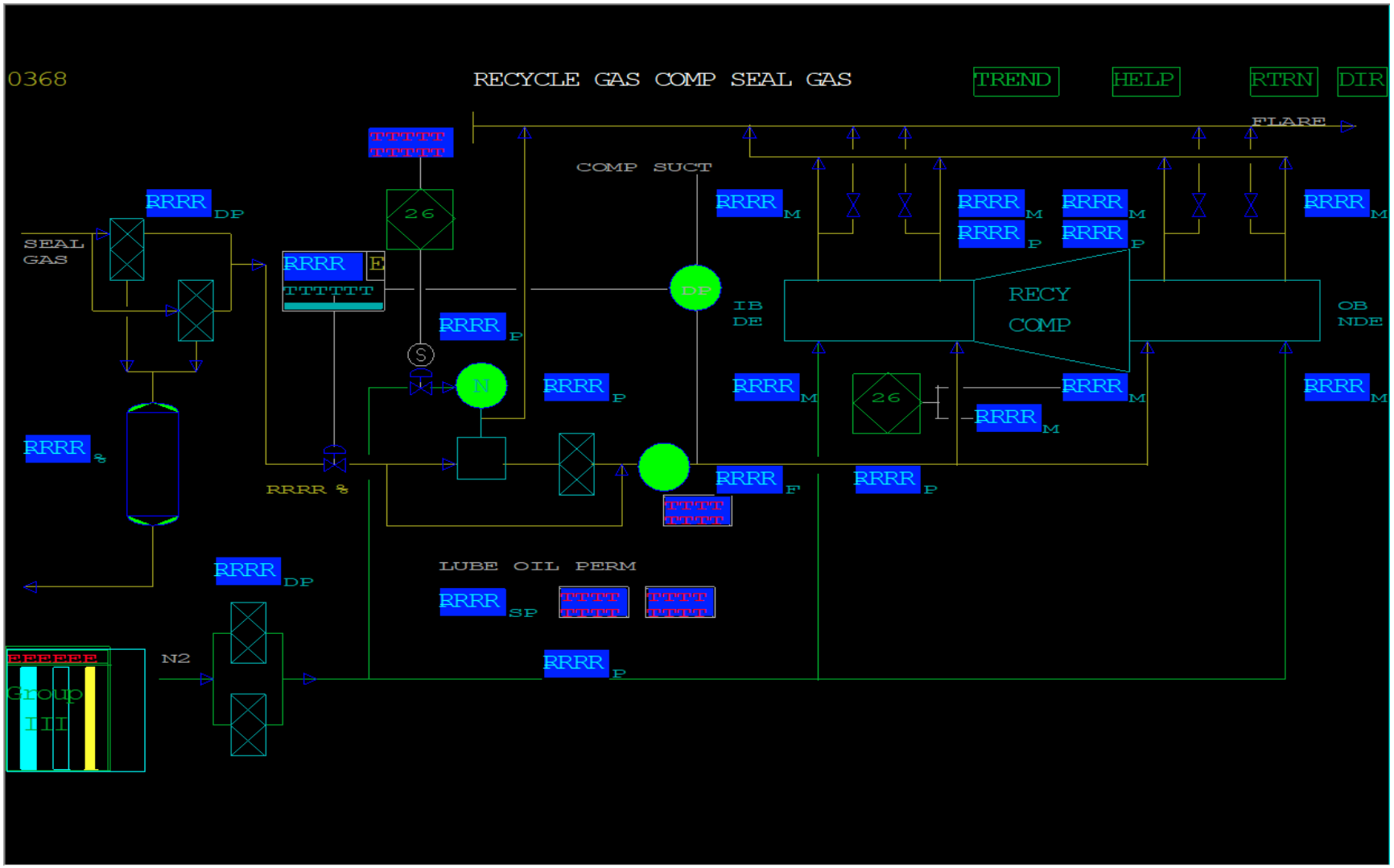


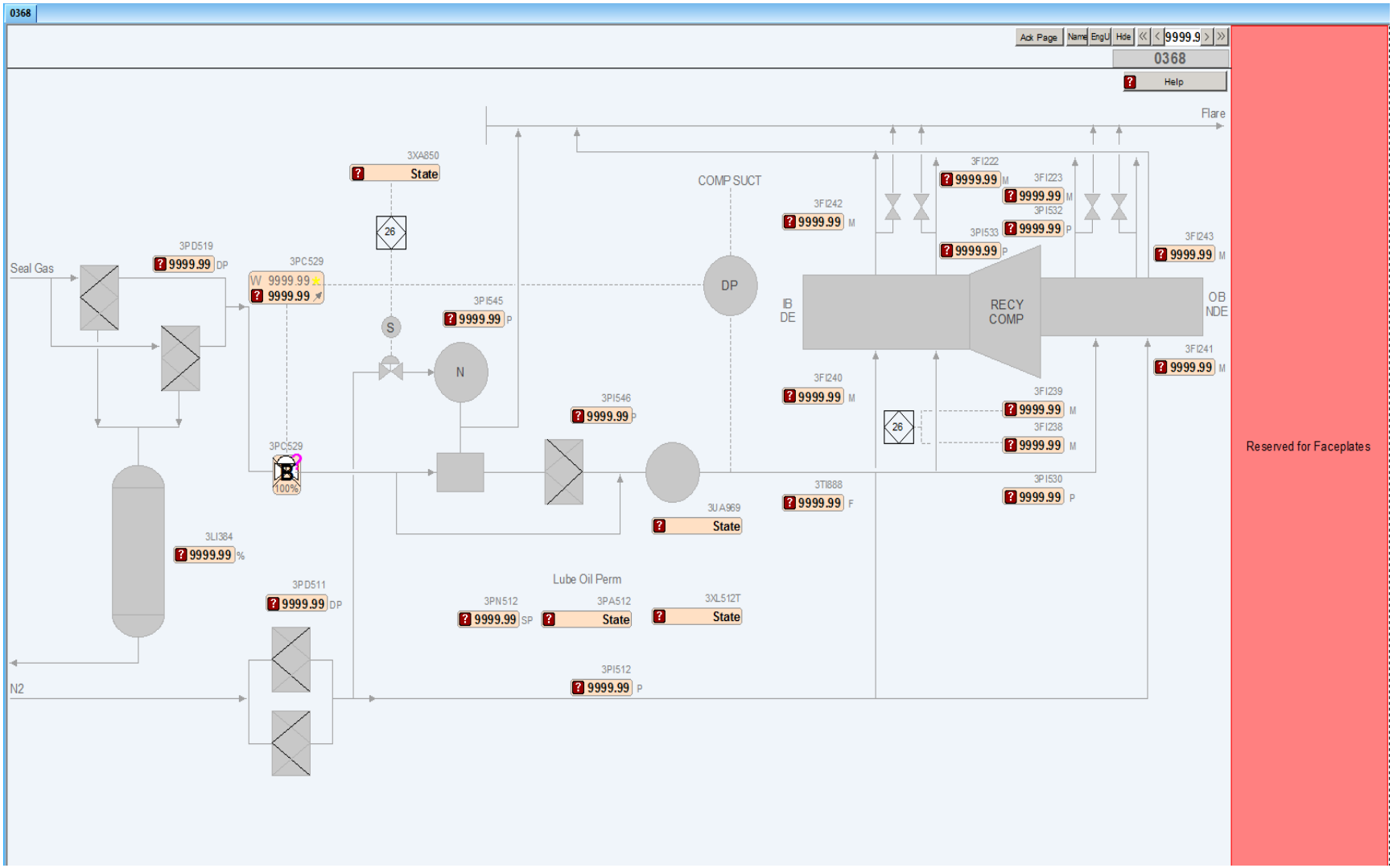

0367
HCU FEED PUMP HYD LETDOWN
PROCESS
HELP
RTRN
DIR
HP SEPARATOR LEVEL
LI376B
RRRR
%
LN376
SETPOINT
RRRR
%
R2/R3 CHARGE
PUMP STATUS
TTTT
TTTT
EEEEEEEE
TTTT
TTTT
M-2580
HYD LETDOWN TURB
RRRR
%
E
AIR
TTTT
TTTT
HPS
BOTTOMS
TT
3LV353A
TTTTTTTT
TTTTTTTT
TTTTTTTTT
TTTTTTTTT
EEEEEE
Group
III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0367
Ack Page
Name
Eng U
Hide
9999.9
0367
Help
HP Separator Level
LI376B
3LI376B
9999.99
%
LN376
3LN376
9999.99
%
3LL376T
State
Setpoint R2/R3 Charge
3LA376
State
3XA864A
Pump Status
State
M-2580
HYD Letdown Turb
3HC023
Air
M 9999.99
3XL023
3DA023T
State
HPS Bottoms
3LV353A
03_09L01
State
3XL023A
State
3XL023
State
Reserved for Faceplates
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XTRM Bypass
Diagnos
Lub Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

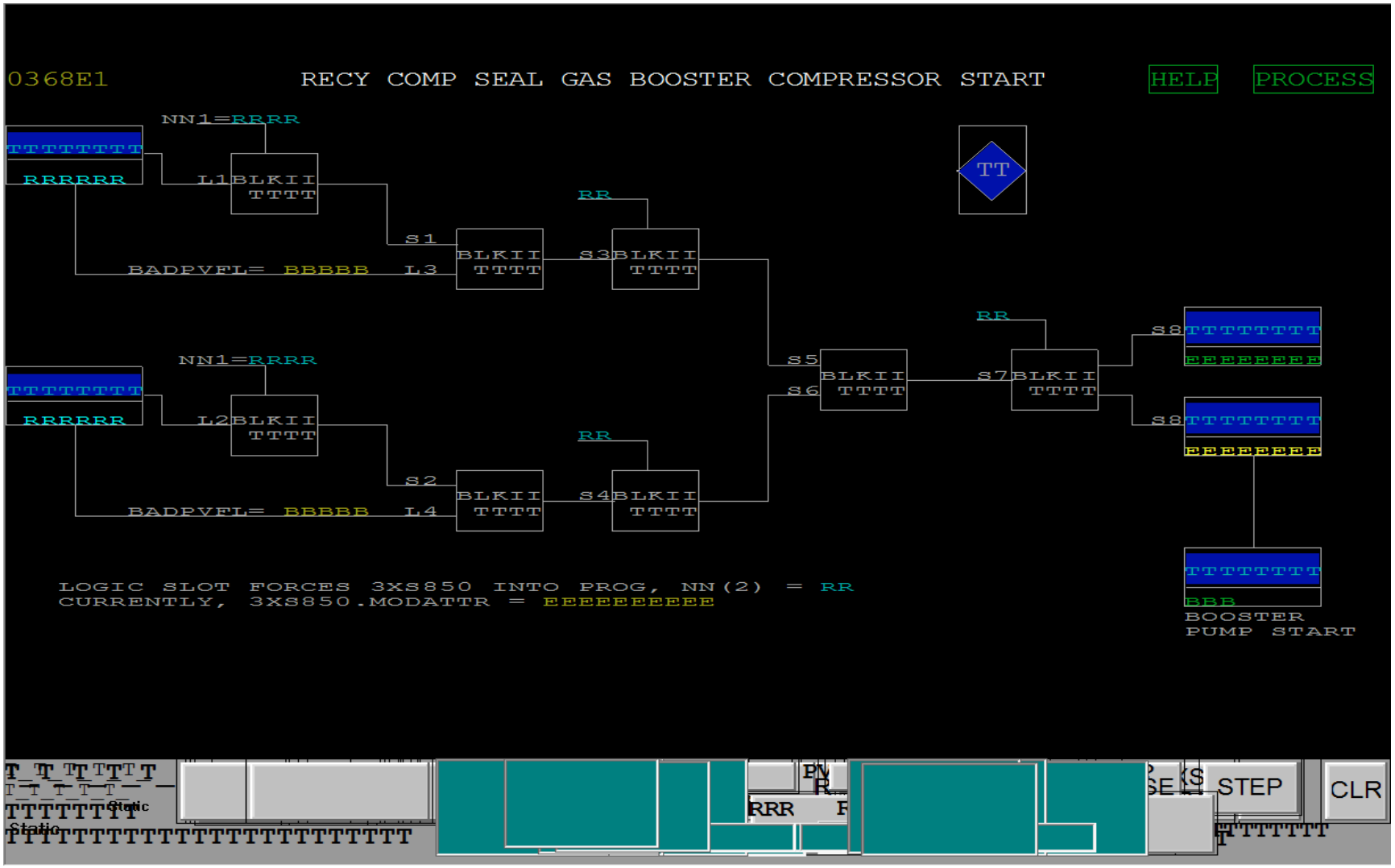
3.179 RECYCLE GAS COMP SEAL GAS (0368.DS)

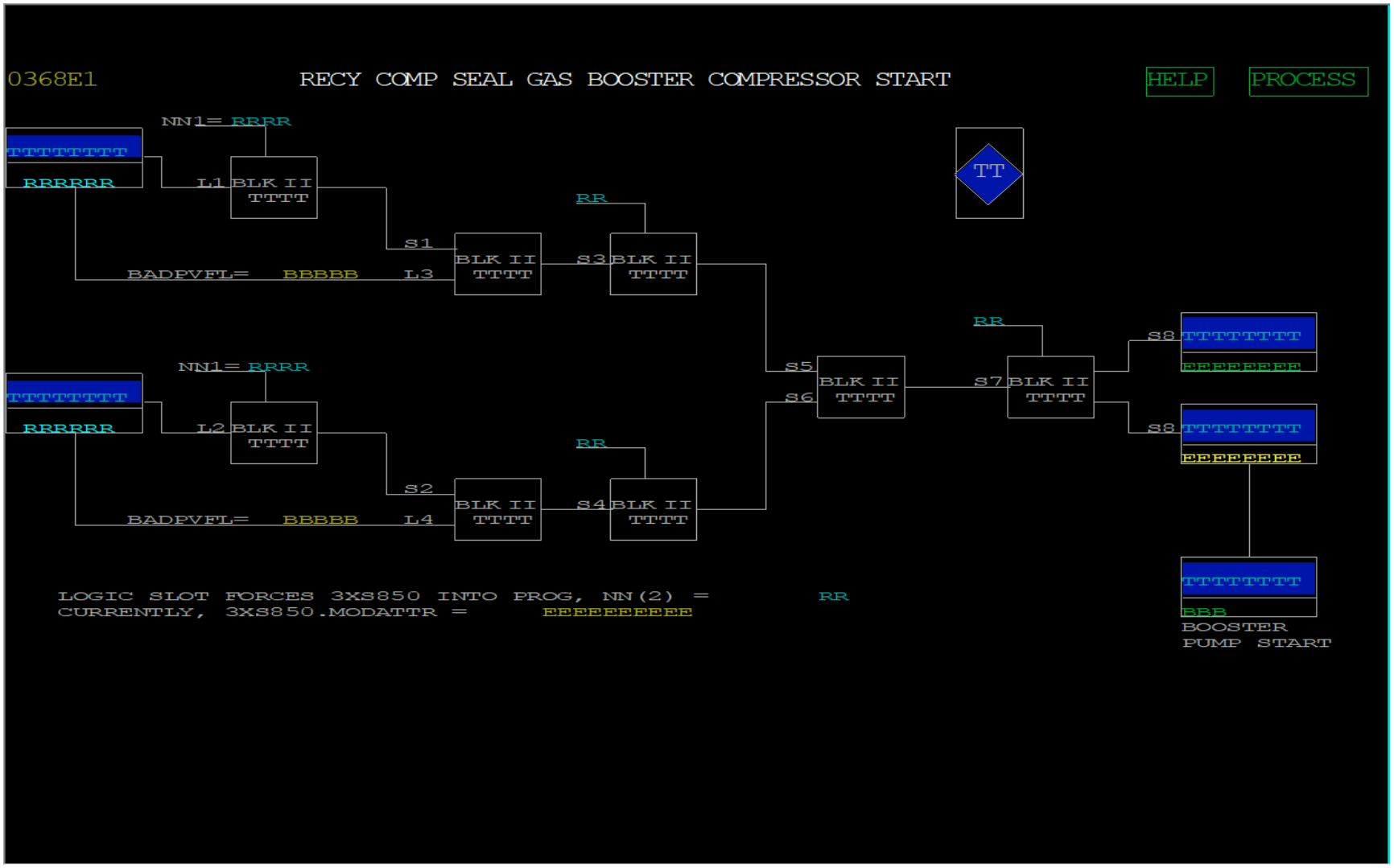


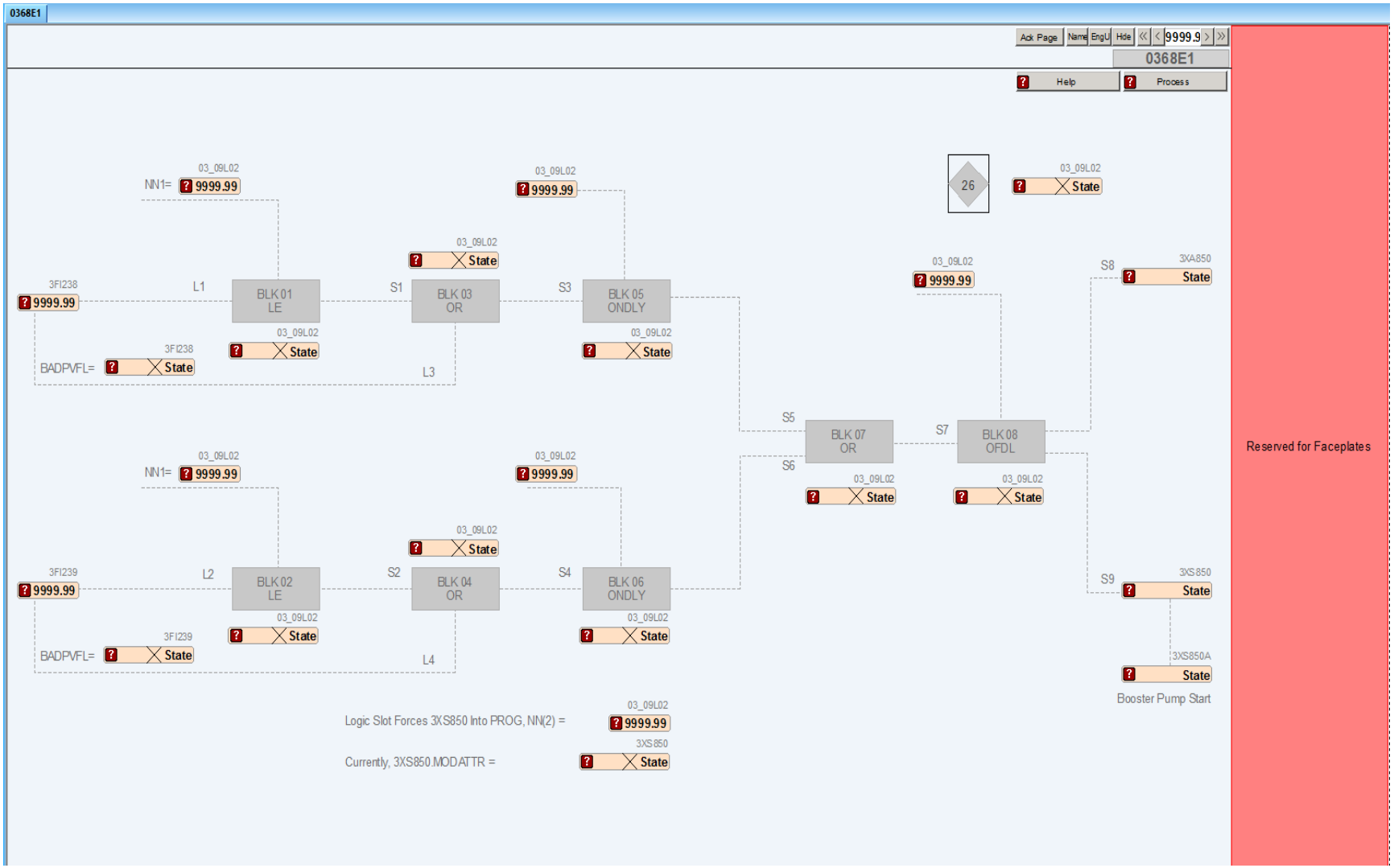

0368
RECYCLE GAS COMP SEAL GAS
TREND
HELP
RTRN
DIR
FLARE
COMP SUCT
SEAL GAS
RRRR DP
RRRR E
TTTTTT
RRRR P
RRRR M
RRRR P
RECY COMP
IB DE
OB NDE
RRRR &
RRRR F
LUBE OIL PERM
RRRR SP
N2
EEEEEE
Group III


0368
Ack Page
Name
Eng U
Hide
9999.9
0368
Help
Flare
3XA850
State
26
COMP SUCT
3FI222
9999.99 M
3FI223
9999.99 M
3FI242
9999.99 M
3PI532
9999.99 P
3PI533
9999.99 P
3FI243
9999.99 M
3PD519
9999.99 DP
Seal Gas
3PC529
W 9999.99
9999.99
3PI545
9999.99 P
S
N
DP
IB
DE
RECY
COMP
OB
NDE
3FI241
9999.99 M
3FI240
9999.99 M
3FI239
9999.99 M
3FI238
9999.99 M
26
3PI546
9999.99 P
3PC529
100%
3TI888
9999.99 F
3PI530
9999.99 P
3UA969
State
3LI384
9999.99 %
3PD511
9999.99 DP
Lube Oil Perm
3PN512
9999.99 SP
3PA512
State
3XL512T
State
3PI512
9999.99 P
N2
Reserved for Faceplates

3.180 RECY COMP SEAL GAS BOOSTER COMPRESSOR START (0368E1.DS)

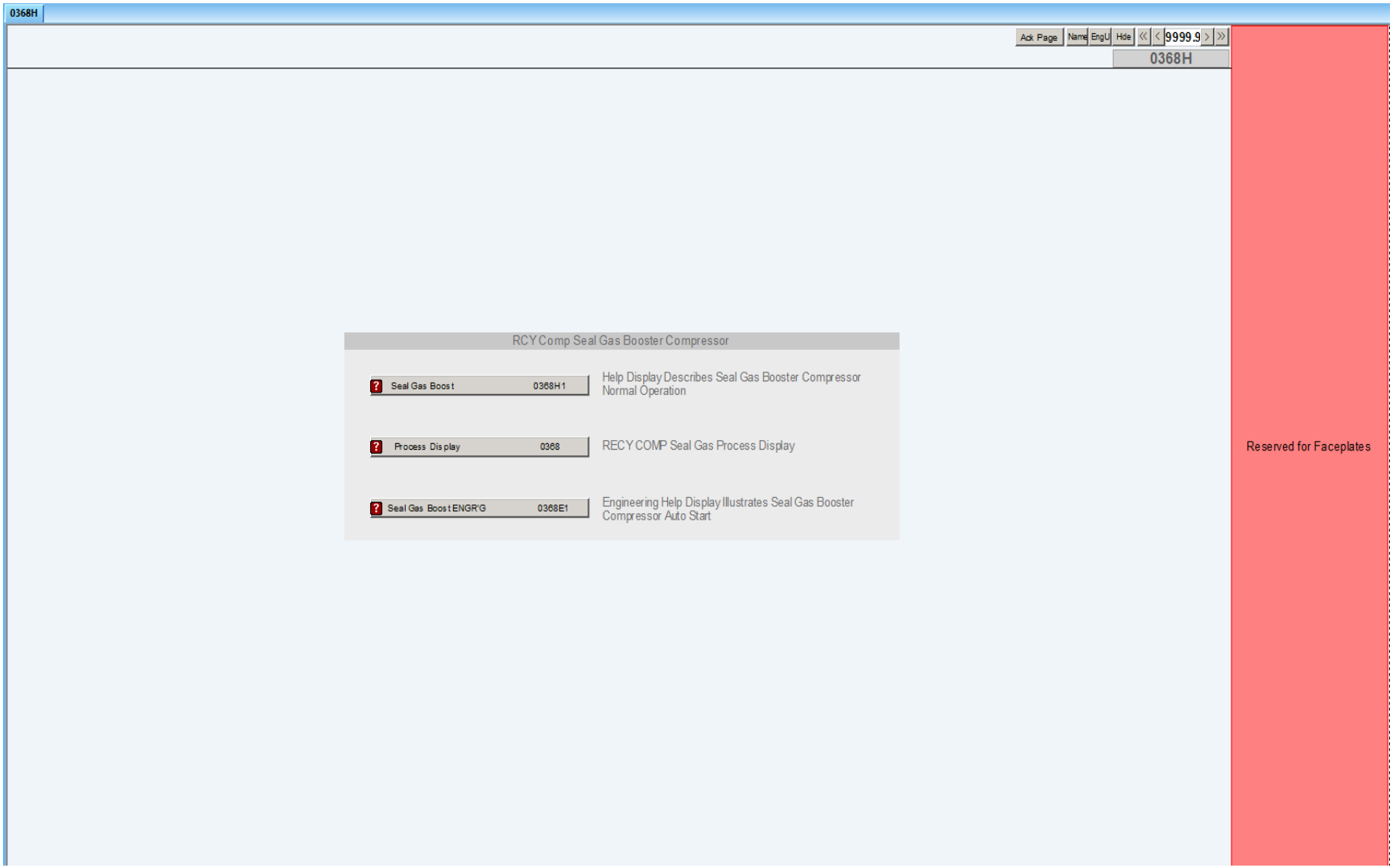



0368E1
RECY COMP SEAL GAS BOOSTER COMPRESSOR START
HELP
PROCESS
NN1= RRRR
TTTTTTTT
RRRRRR
L1
BLK II
TTTT
RR
S1
BLK II
TTTT
S3
BLK II
TTTT
BADPVFL= BBBBB
L3
TT
RR
S8
TTTTTTTT
EEEEEEEE
NN1= RRRR
S5
BLK II
TTTT
S7
BLK II
TTTT
S6
TTTTTTTT
RRRRRR
L2
BLK II
TTTT
RR
S8
TTTTTTTT
EEEEEEEE
S2
BLK II
TTTT
S4
BLK II
TTTT
BADPVFL= BBBBB
L4
LOGIC SLOT FORCES 3XS850 INTO PROG, NN(2) = RR
CURRENTLY, 3XS850.MODATTR = EEEEEEEEEE
TTTTTTTT
BBB
BOOSTER
PUMP START

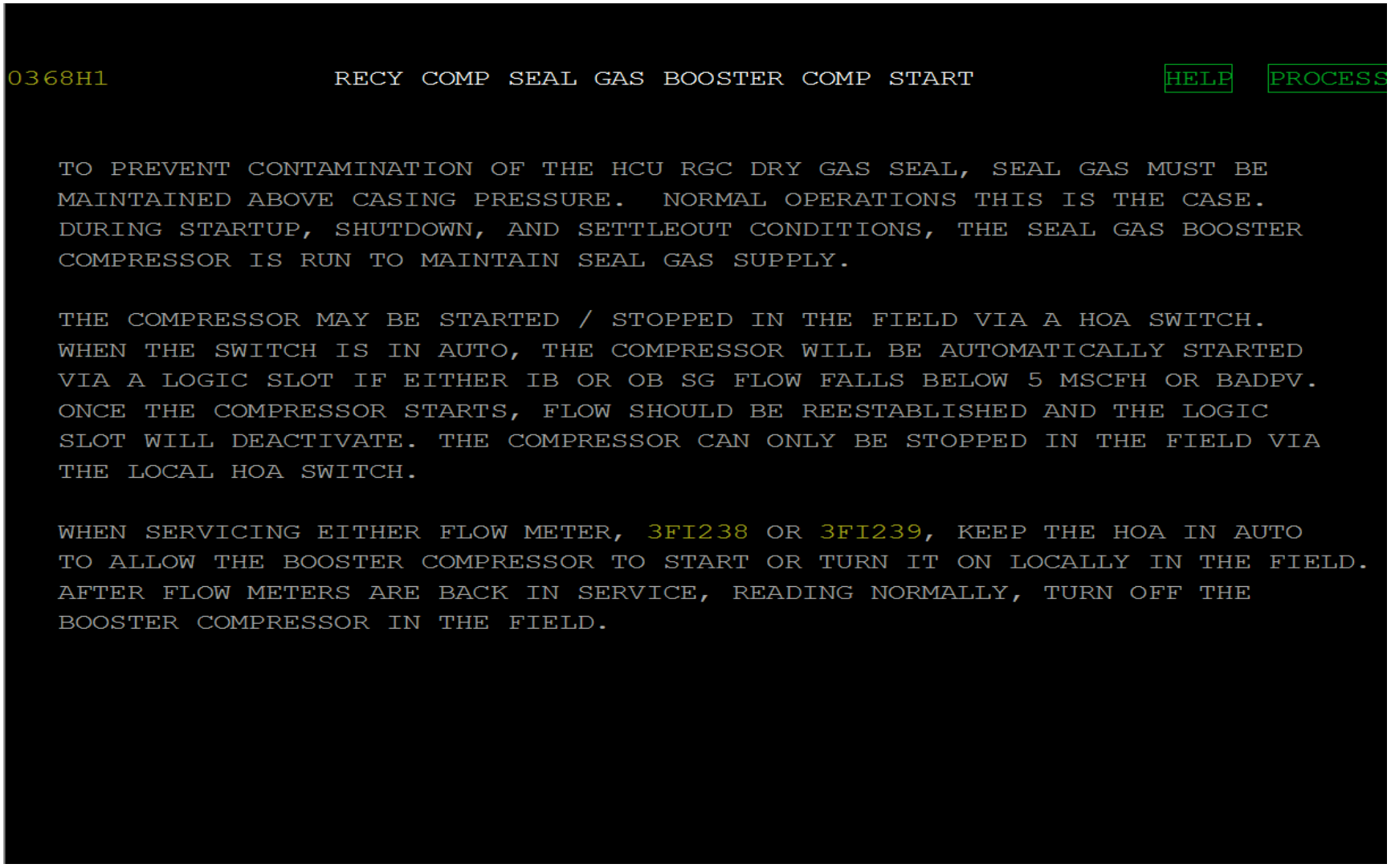

0368E1
Ack Page
Name
EngU
Hide
9999.9
0368E1
Help
Process
NN1=
9999.99
03_09L02
3FI238
L1
BLK 01
LE
S1
BLK 03
OR
S3
BLK 05
ONDLY
BADPVFL=
State
3FI238
L3
26
S5
BLK 07
OR
S7
BLK 08
OFDL
S8
3XA850
S6
3FI239
L2
BLK 02
LE
S2
BLK 04
OR
S4
BLK 06
ONDLY
S9
3XS850
3XS850A
Booster Pump Start
Logic Slot Forces 3XS850 Into PROG, NN(2) =
Currently, 3XS850.MOD.ATTR =
Reserved for Faceplates

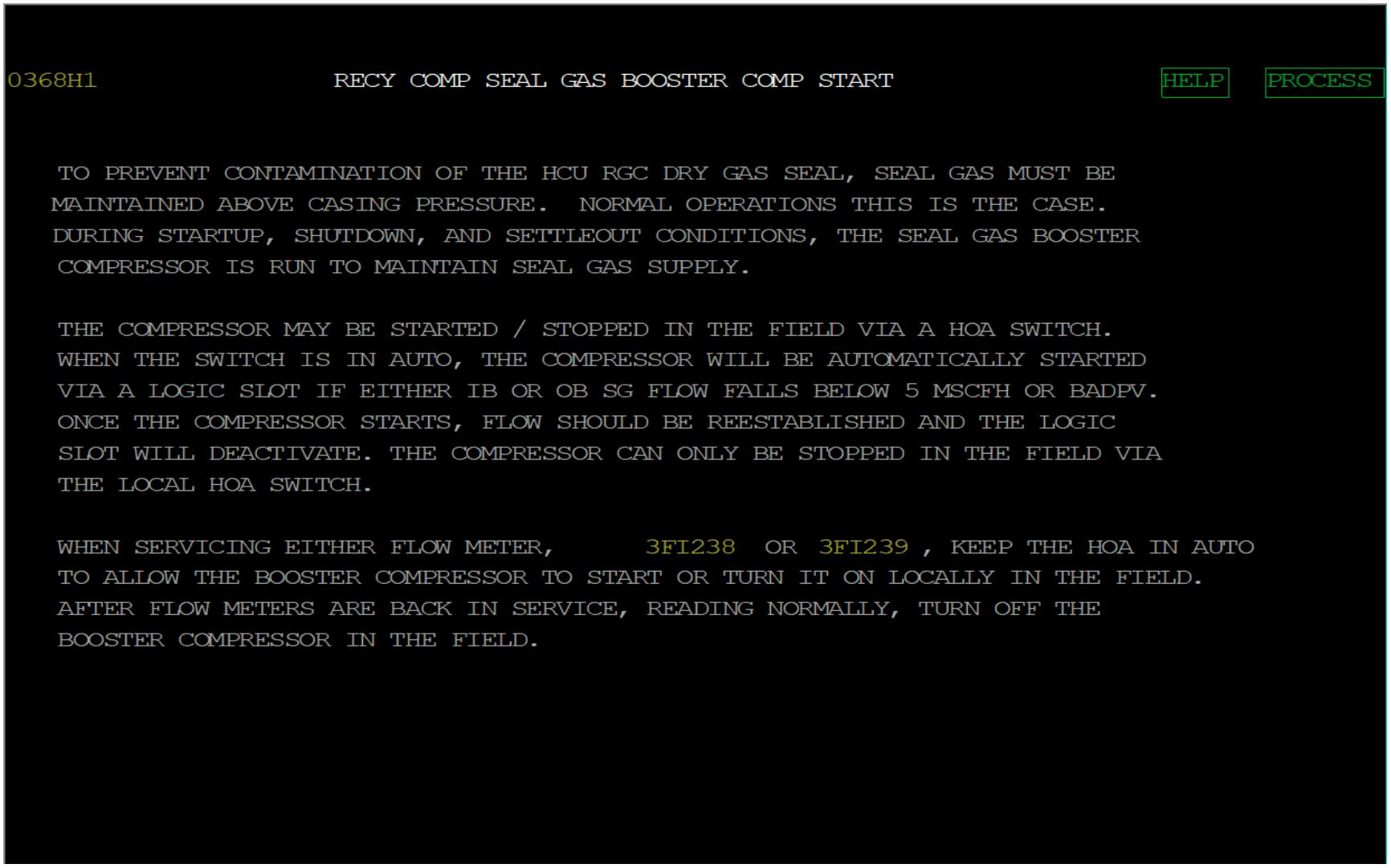
3.181 RCY COMP SEAL GAS BOOSTER COMPRESSOR (0368H.DS)

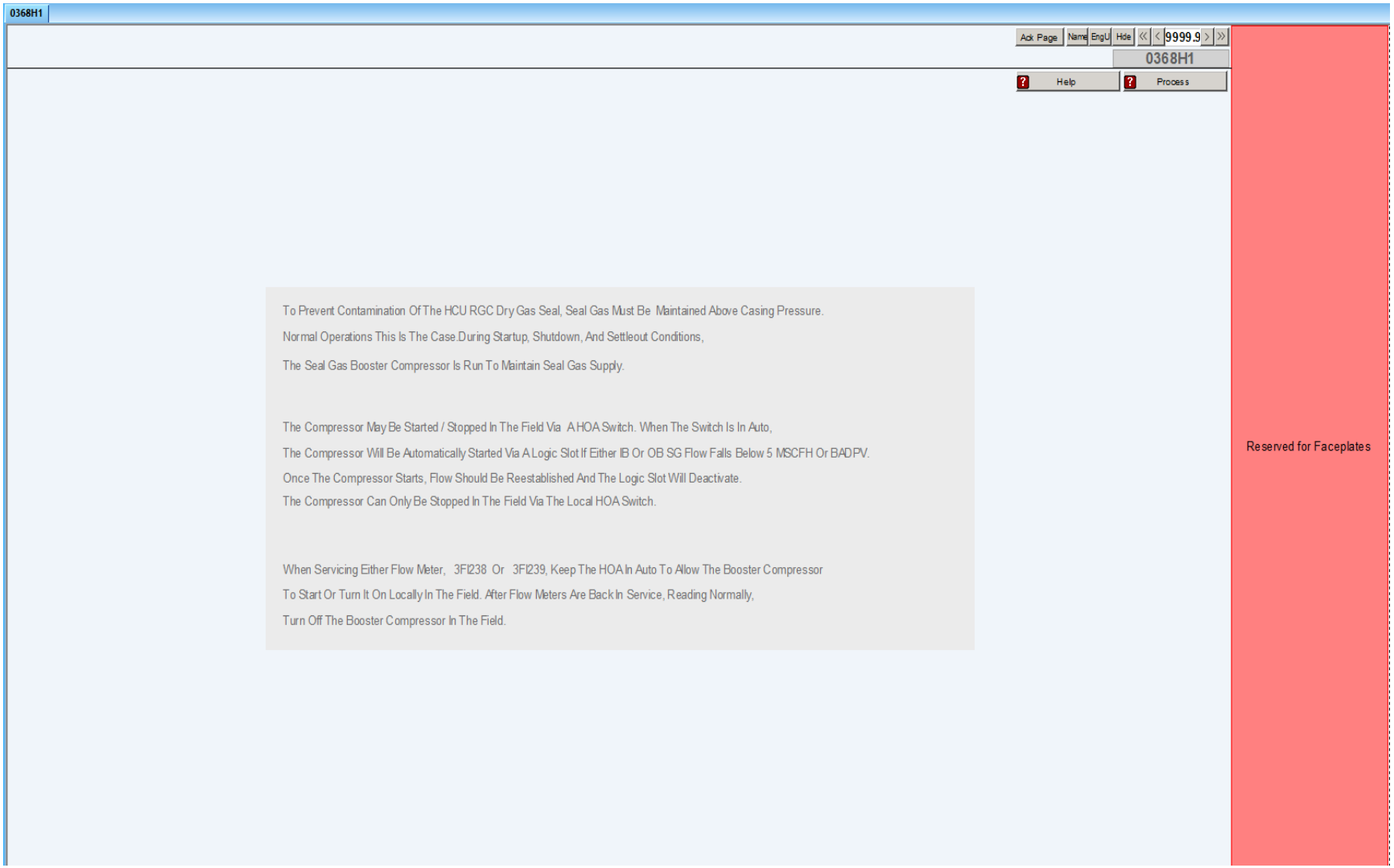
0368H
RCY COMP SEAL GAS BOOSTER COMPRESSOR
SEAL GAS BOOST
0368H1
HELP DISPLAY DESCRIBES SEAL GAS BOOSTER
COMPRESSOR NORMAL OPERATION
PROCESS
DISPLAY 0368
RECY COMP SEAL GAS PROCESS DISPLAY
SEAL GAS BOOST
ENGR'G 0368E1
ENGINEERING HELP DISPLAY ILLUSTRATES
SEAL GAS BOOSTER COMPRESSOR AUTO START


0368H
Ack Page
Name
EngU
Hide
9999.9
0368H
RCY Comp Seal Gas Booster Compressor
Seal Gas Boost
0368H1
Help Display Describes Seal Gas Booster Compressor Normal Operation
Process Display
0368
RECY COMP Seal Gas Process Display
Seal Gas Boost ENGR'G
0368E1
Engineering Help Display Illustrates Seal Gas Booster Compressor Auto Start
Reserved for Faceplates

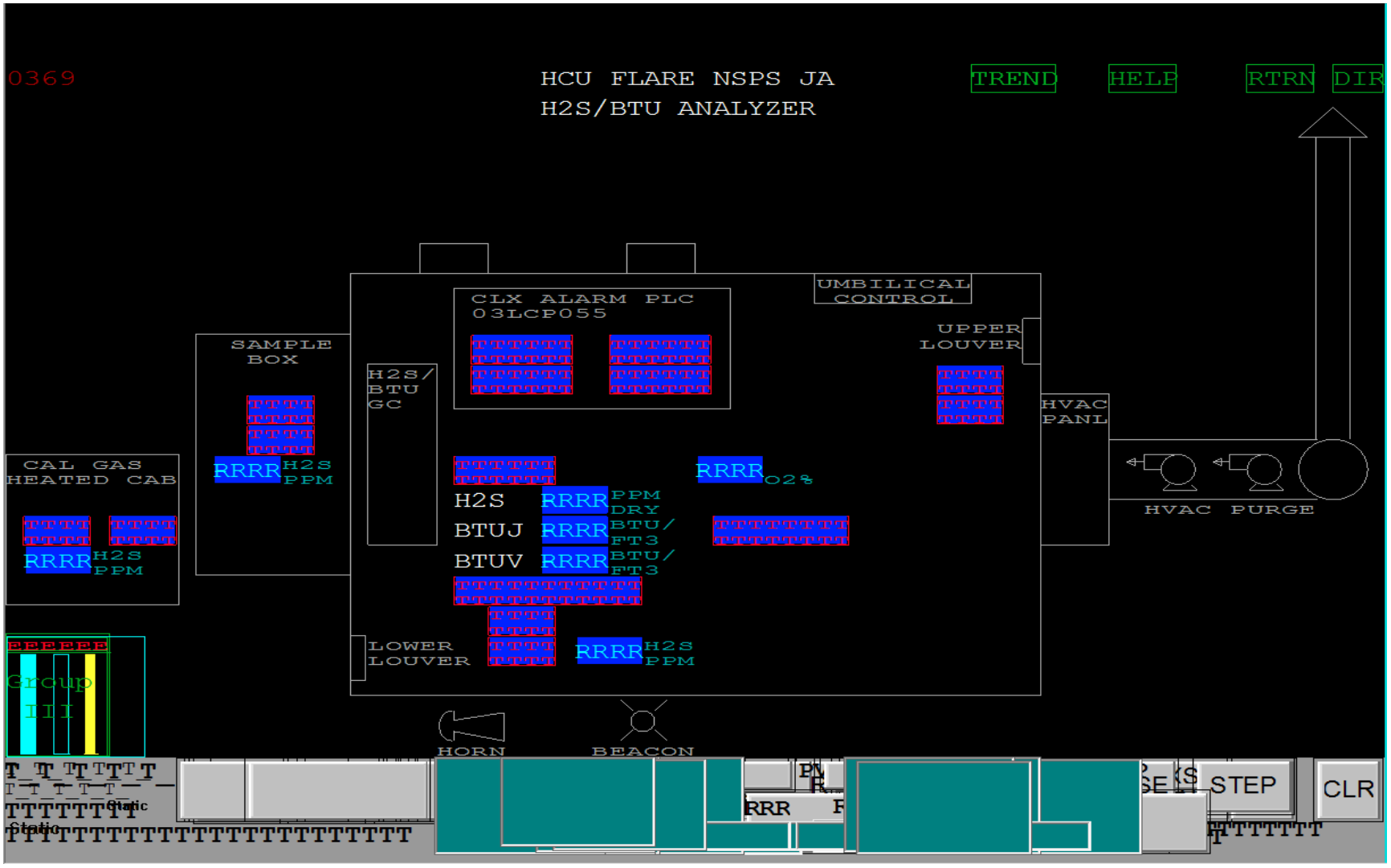
3.182 RECY COMP SEAL GAS BOOSTER COMP START (0368H1.DS)

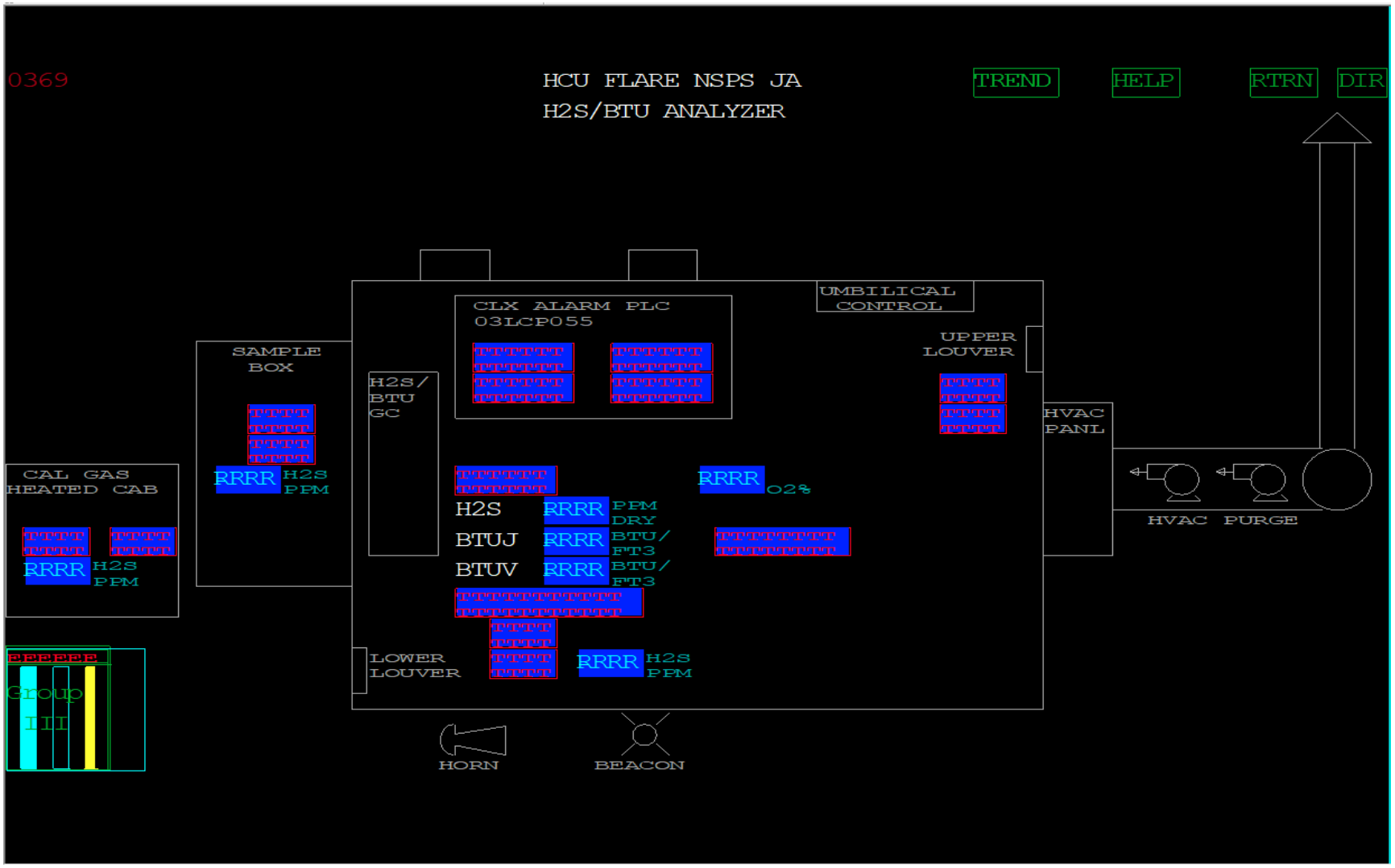


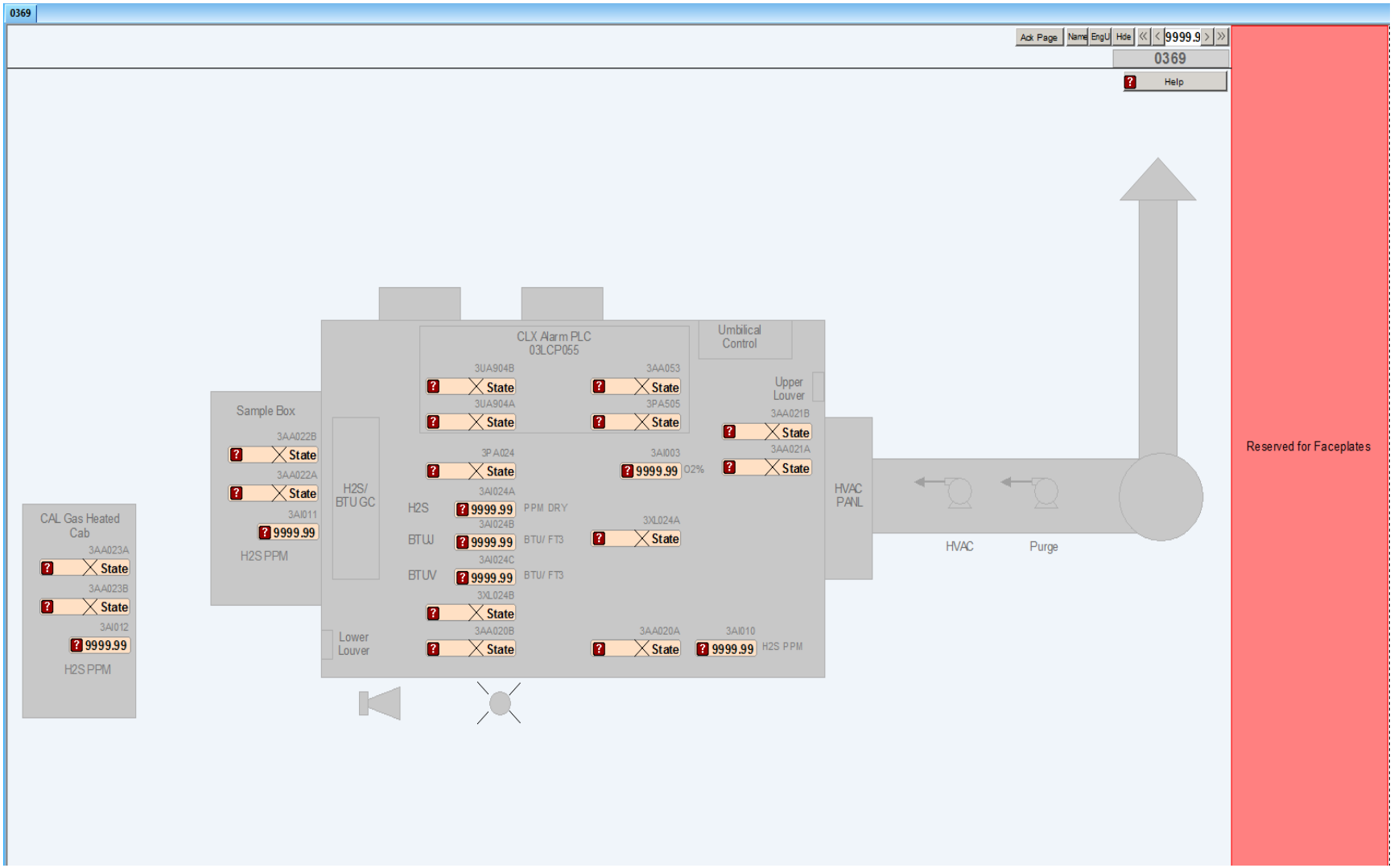

0368H1
RECY COMP SEAL GAS BOOSTER COMP START
HELP
PROCESS
TO PREVENT CONTAMINATION OF THE HCU RGC DRY GAS SEAL, SEAL GAS MUST BE MAINTAINED ABOVE CASING PRESSURE. NORMAL OPERATIONS THIS IS THE CASE. DURING STARTUP, SHUTDOWN, AND SETTLEOUT CONDITIONS, THE SEAL GAS BOOSTER COMPRESSOR IS RUN TO MAINTAIN SEAL GAS SUPPLY.
THE COMPRESSOR MAY BE STARTED / STOPPED IN THE FIELD VIA A HOA SWITCH. WHEN THE SWITCH IS IN AUTO, THE COMPRESSOR WILL BE AUTOMATICALLY STARTED VIA A LOGIC SLOT IF EITHER IB OR OB SG FLOW FALLS BELOW 5 MSCFH OR BADPV. ONCE THE COMPRESSOR STARTS, FLOW SHOULD BE REESTABLISHED AND THE LOGIC SLOT WILL DEACTIVATE. THE COMPRESSOR CAN ONLY BE STOPPED IN THE FIELD VIA THE LOCAL HOA SWITCH.
WHEN SERVICING EITHER FLOW METER, 3FI238 OR 3FI239 , KEEP THE HOA IN AUTO TO ALLOW THE BOOSTER COMPRESSOR TO START OR TURN IT ON LOCALLY IN THE FIELD. AFTER FLOW METERS ARE BACK IN SERVICE, READING NORMALLY, TURN OFF THE BOOSTER COMPRESSOR IN THE FIELD.


0368H1
Ack Page
Name
EngU
Hide
9999.9
0368H1
Help
Process
To Prevent Contamination Of The HCU RGC Dry Gas Seal, Seal Gas Must Be Maintained Above Casing Pressure.
Normal Operations This Is The Case.During Startup, Shutdown, And Settleout Conditions,
The Seal Gas Booster Compressor Is Run To Maintain Seal Gas Supply.
The Compressor May Be Started / Stopped In The Field Via A HOA Switch. When The Switch Is In Auto,
The Compressor Will Be Automatically Started Via A Logic Slot If Either IB Or OB SG Flow Falls Below 5 MSCFH Or BADPV.
Once The Compressor Starts, Flow Should Be Reestablished And The Logic Slot Will Deactivate.
The Compressor Can Only Be Stopped In The Field Via The Local HOA Switch.
When Servicing Either Flow Meter, 3FI238 Or 3FI239, Keep The HOA In Auto To Allow The Booster Compressor
To Start Or Turn It On Locally In The Field. After Flow Meters Are Back In Service, Reading Normally,
Turn Off The Booster Compressor In The Field.
Reserved for Faceplates

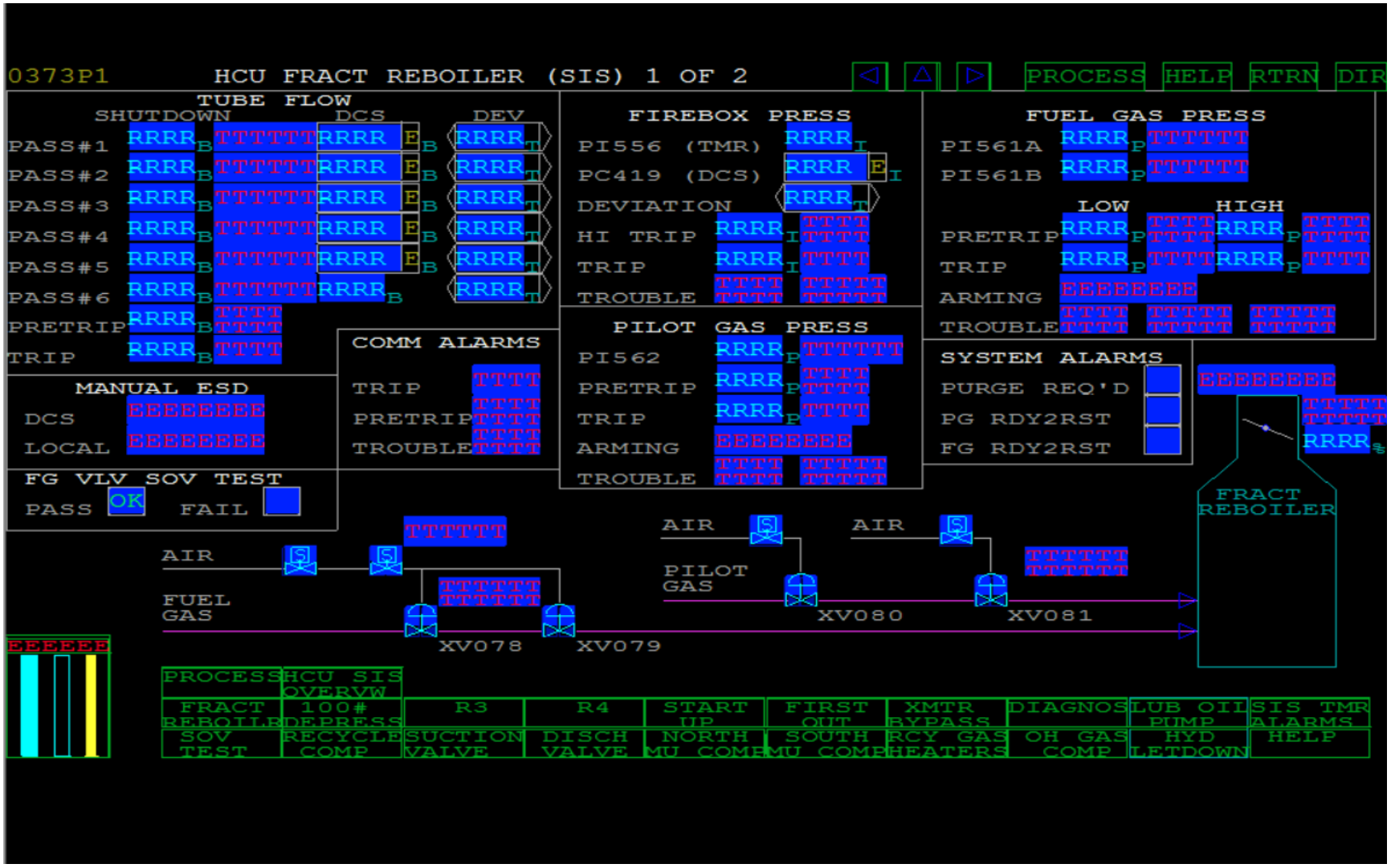
3.183 HCU FLARE NSPS JA H2S/BTU ANALYZER (0369.DS)

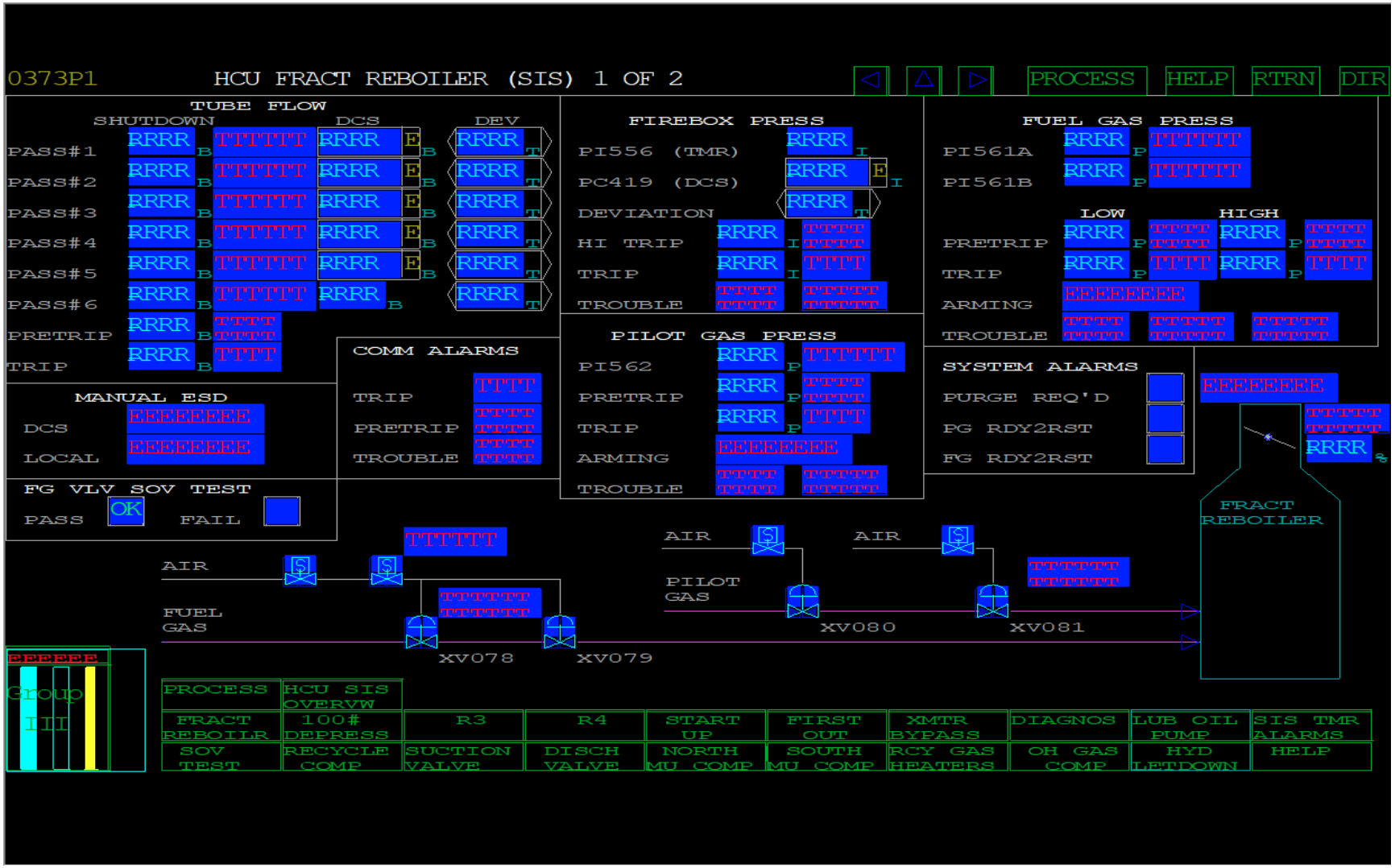


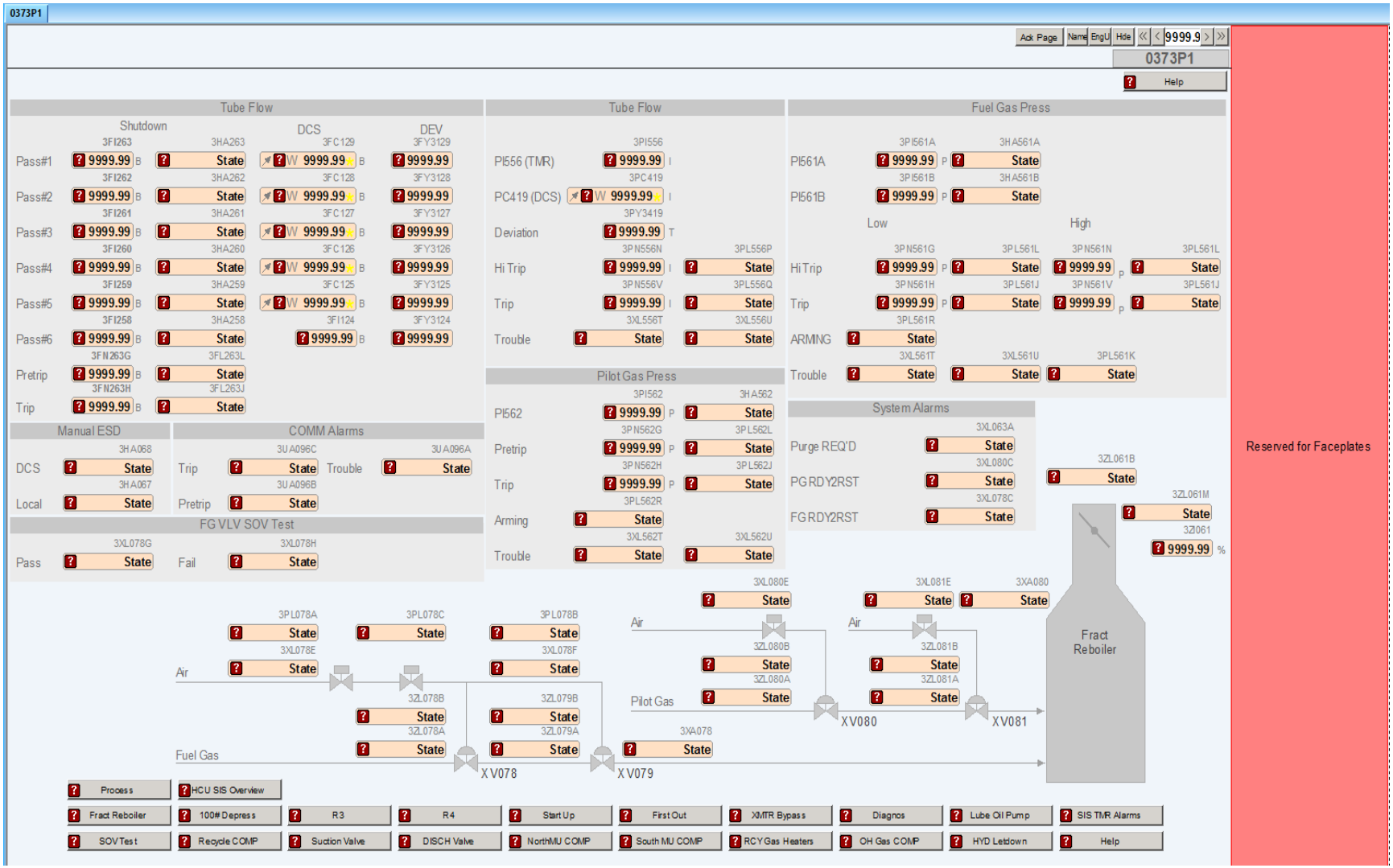

0369
HCU FLARE NSPS JA
H2S/BTU ANALYZER
TREND
HELP
RTRN
DIR
CLX ALARM PLC
03LCP055
UMBILICAL
CONTROL
UPPER
LOUVER
SAMPLE
BOX
H2S/
BTU
GC
HVAC
PANL
CAL GAS
HEATED CAB
RRRR H2S
PPM
H2S
BTUJ
BTUV
RRRR PPM
DRY
RRRR BTU/
FT3
RRRR BTU/
FT3
RRRR O2%
HVAC PURGE
LOWER
LOUVER
RRRR H2S
PPM
Group
III
HORN
BEACON


0369
Ack Page
Name
Eng U
Hide
9999.9
0369
Help
CLX Alarm PLC
03LCP055
Umbilical
Control
3UA904B
State
3AA053
State
3UA904A
State
3PA505
State
Upper
Louver
3AA021B
State
3AA021A
State
Sample Box
3AA022B
State
3AA022A
State
3AI011
9999.99
H2S PPM
H2S/
BTU GC
3PA024
State
3AI003
9999.99
O2%
3AI024A
H2S
9999.99
PPM DRY
3AI024B
BTUJ
9999.99
BTU/ FT3
3XL024A
State
3AI024C
BTUV
9999.99
BTU/ FT3
3XL024B
State
HVAC
PANL
CAL Gas Heated
Cab
3AA023A
State
3AA023B
State
3AI012
9999.99
H2S PPM
Lower
Louver
3AA020B
State
3AA020A
State
3AI010
9999.99
H2S PPM
HVAC
Purge
Reserved for Faceplates

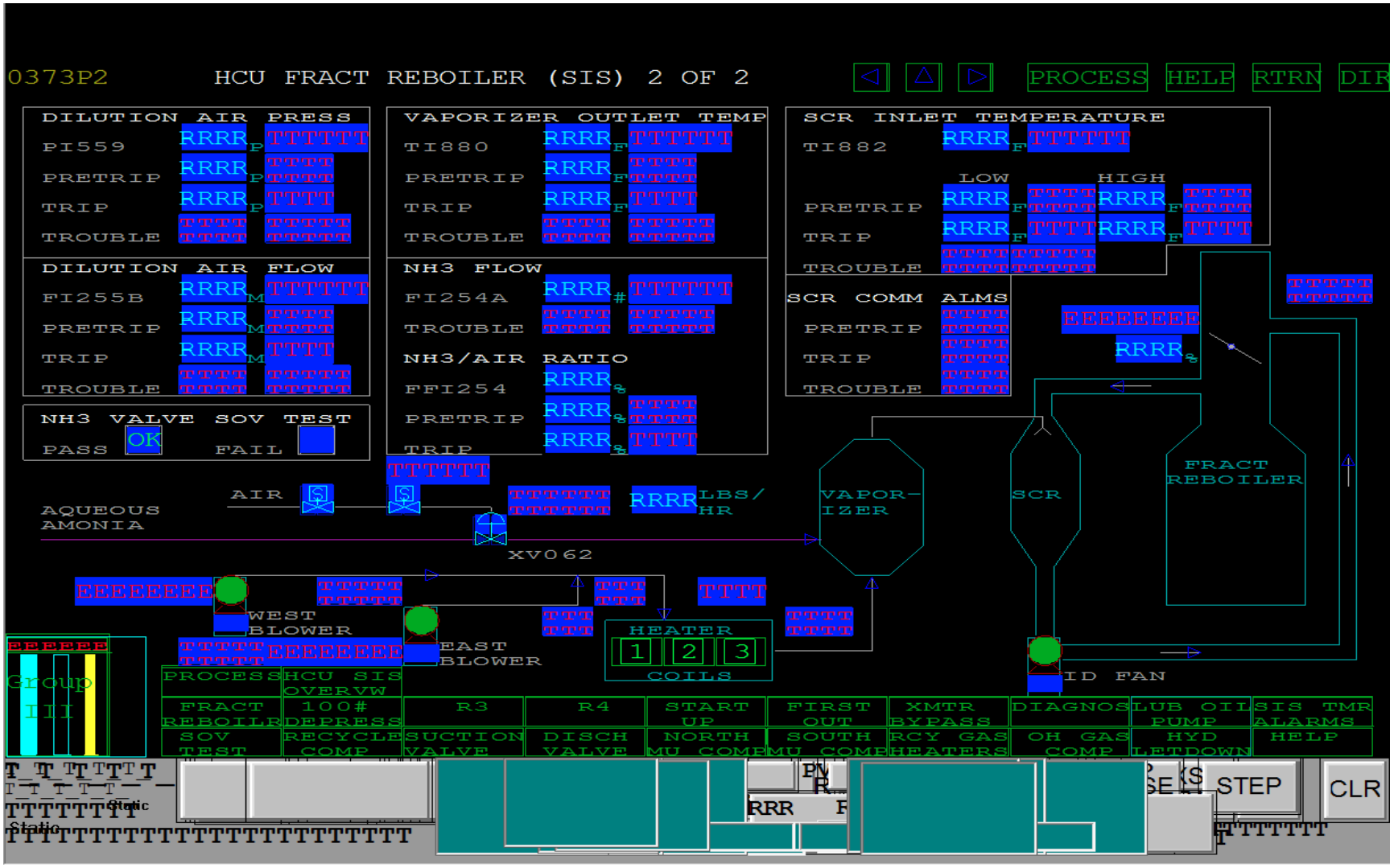
3.184 HCU FRACT REBOILER (SIS) 1 OF 2 (0373P1.DS)

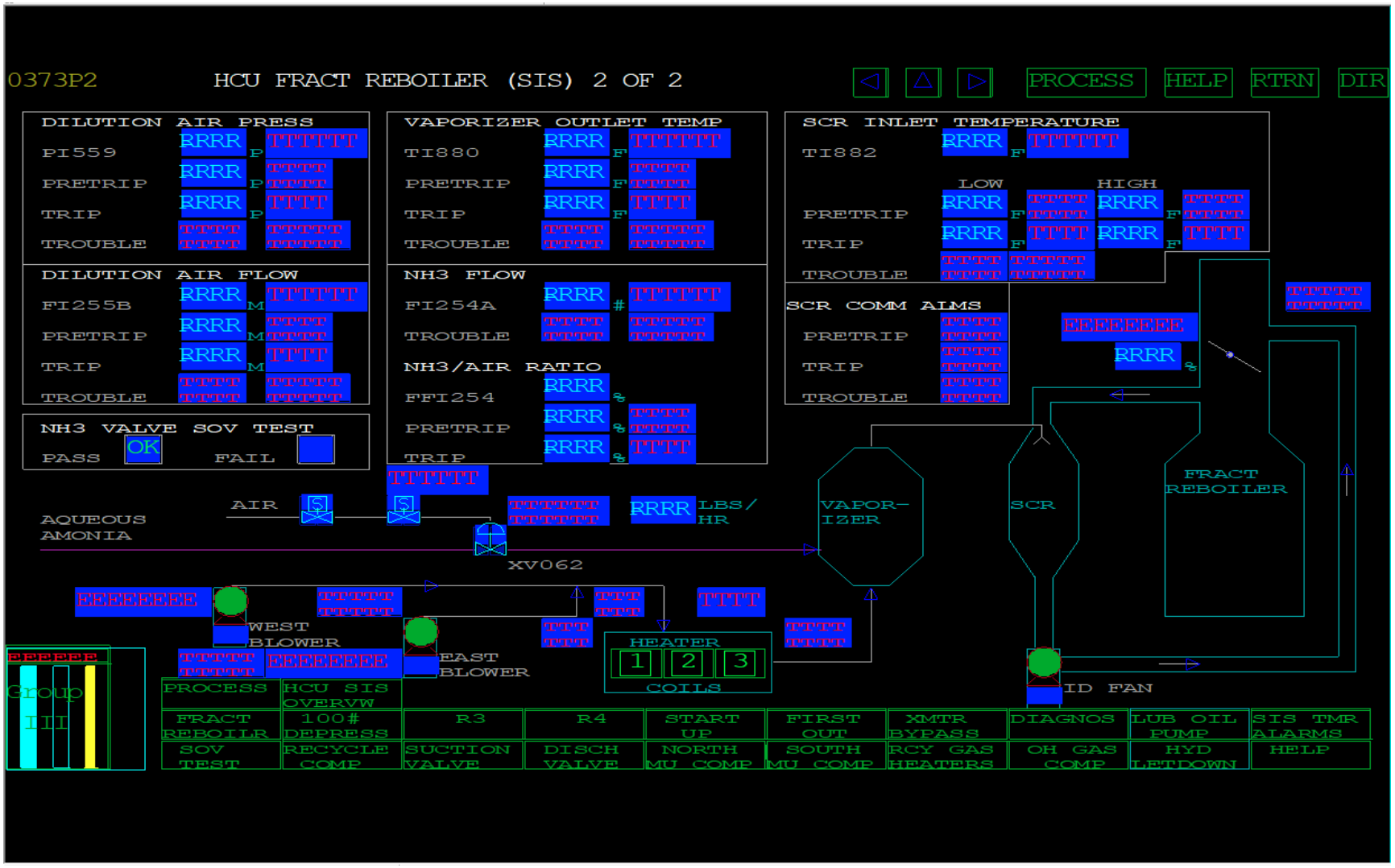


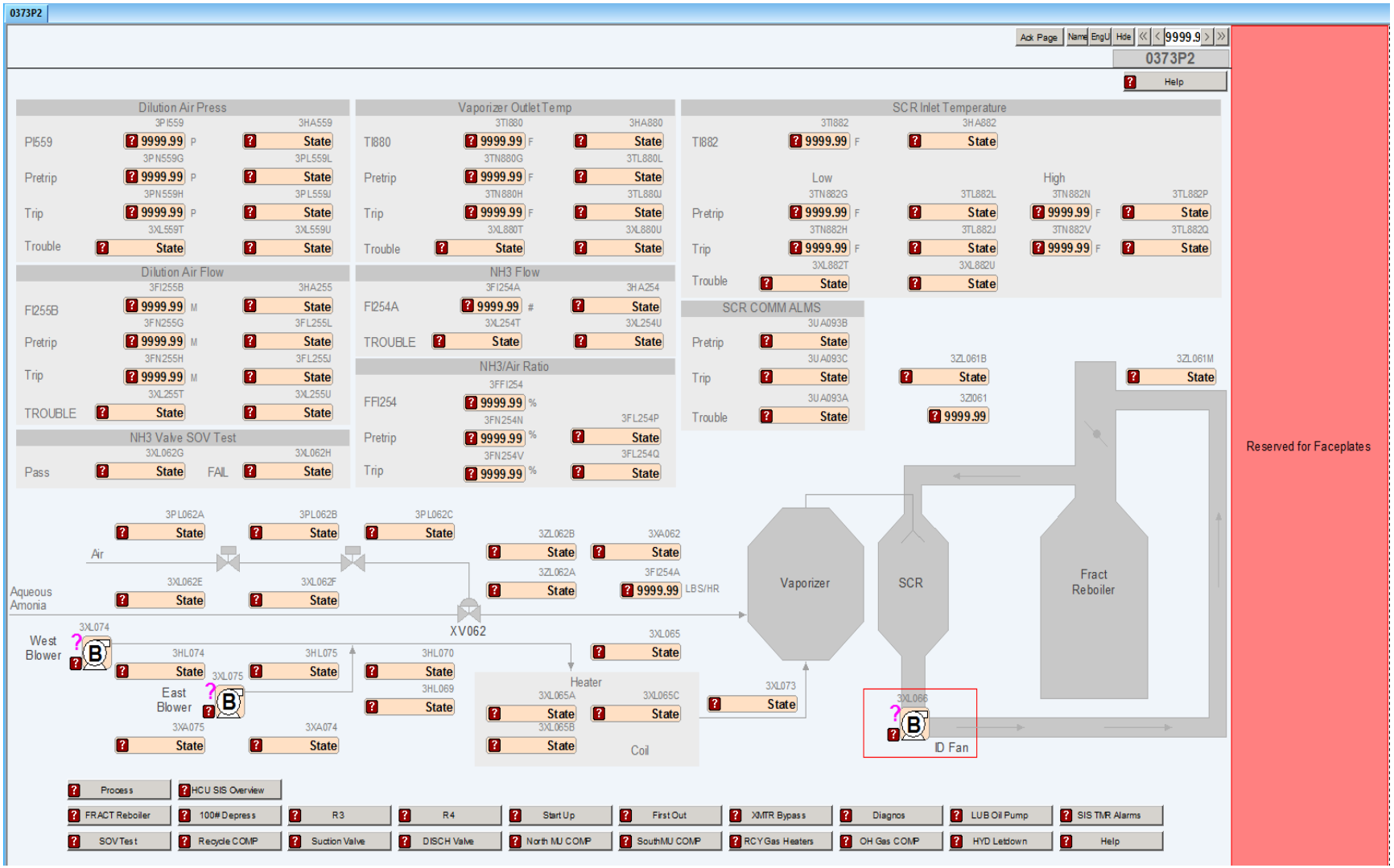

0373P1
HCU FRACT REBOILER (SIS) 1 OF 2
PROCESS
HELP
RTRN
DIR
TUBE FLOW
SHUTDOWN
DCS
DEV
PASS#1
PASS#2
PASS#3
PASS#4
PASS#5
PASS#6
PRETRIP
TRIP
FIREBOX PRESS
PI556 (TMR)
PC419 (DCS)
DEVIATION
HI TRIP
TRIP
TROUBLE
FUEL GAS PRESS
PI561A
PI561B
LOW
HIGH
PRETRIP
TRIP
ARMING
TROUBLE
COMM ALARMS
TRIP
PRETRIP
TROUBLE
PILOT GAS PRESS
PI562
PRETRIP
TRIP
ARMING
TROUBLE
MANUAL ESD
DCS
LOCAL
SYSTEM ALARMS
PURGE REQ'D
PG RDY2RST
FG RDY2RST
FG VLV SOV TEST
PASS
OK
FAIL
AIR
FUEL GAS
PILOT GAS
XV078
XV079
XV080
XV081
FRACT REBOILER
GROUP III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0373P1
Ack Page
Name
Eng'U
Hide
9999.9
0373P1
Help
Tube Flow
Shutdown
DCS
DEV
3FI263
3HA263
3FC129
3FY3129
Pass#1
9999.99 B
State
W 9999.99 B
9999.99
3FI262
3HA262
3FC128
3FY3128
Pass#2
9999.99 B
State
W 9999.99 B
9999.99
3FI261
3HA261
3FC127
3FY3127
Pass#3
9999.99 B
State
W 9999.99 B
9999.99
3FI260
3HA260
3FC126
3FY3126
Pass#4
9999.99 B
State
W 9999.99 B
9999.99
3FI259
3HA259
3FC125
3FY3125
Pass#5
9999.99 B
State
W 9999.99 B
9999.99
3FI258
3HA258
3FI124
3FY3124
Pass#6
9999.99 B
State
9999.99 B
9999.99
3FN263G
3FL263L
Pretrip
9999.99 B
State
3FN263H
3FL263J
Trip
9999.99 B
State
Manual ESD
3HA068
DCS
State
3HA067
Local
State
COMM Alarms
3UA096C
Trip
State
3UA096A
Trouble
State
3UA096B
Pretrip
State
FG VLV SOV Test
3XL078G
Pass
State
3XL078H
Fail
State
Tube Flow
3PI556
PI556 (TMR)
9999.99 I
3PC419
PC419 (DCS)
W 9999.99 I
3PY3419
Deviation
9999.99 T
3PN556N
3PL556P
Hi Trip
9999.99 I
State
3PN556V
3PL556Q
Trip
9999.99 I
State
3XL556T
3XL556U
Trouble
State
State
Pilot Gas Press
3PI562
3HA562
PI562
9999.99 P
State
3PN562G
3PL562L
Pretrip
9999.99 P
State
3PN562H
3PL562J
Trip
9999.99 P
State
3PL562R
Arming
State
3XL562T
3XL562U
Trouble
State
State
Fuel Gas Press
3PI561A
3HA561A
PI561A
9999.99 P
State
3PI561B
3HA561B
PI561B
9999.99 P
State
Low
High
3PN561G
3PL561L
3PN561N
3PL561L
Hi Trip
9999.99 P
State
9999.99 P
State
3PN561H
3PL561J
3PN561V
3PL561J
Trip
9999.99 P
State
9999.99 P
State
3PL561R
ARMING
State
3XL561T
3XL561U
3PL561K
Trouble
State
State
State
System Alarms
3XL063A
Purge REQ'D
State
3XL080C
PGRDY2RST
State
3XL078C
FGRDY2RST
State
3ZL061B
State
3ZL061M
State
3ZI061
9999.99 %
Reserved for Faceplates
3XL080E
State
3XL081E
State
3XA080
State
3PL078A
State
3PL078C
State
3PL078B
State
Air
3XL078E
State
3XL078F
State
Air
3ZL080B
State
Air
3ZL081B
State
3ZL080A
State
3ZL081A
State
Pilot Gas
3ZL078B
State
3ZL079B
State
3XA078
State
3ZL078A
State
3ZL079A
State
Fuel Gas
XV078
XV079
XV080
XV081
Fract Reboiler
Process
HCU SIS Overview
Fract Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
Lube Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
NorthMU COMP
South MU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

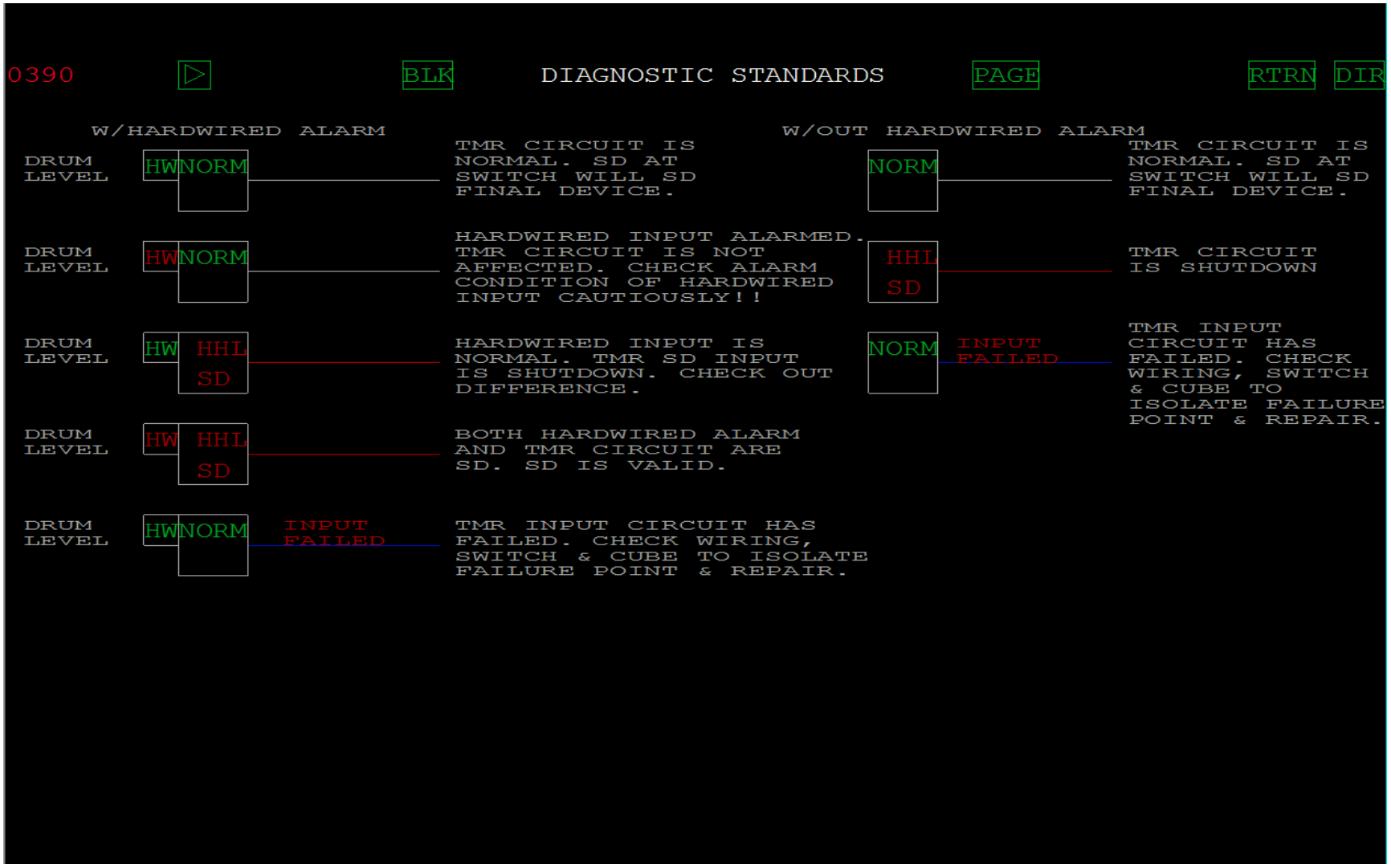
3.185 HCU FRACT REBOILER (SIS) 2 OF 2 (0373P2.DS)

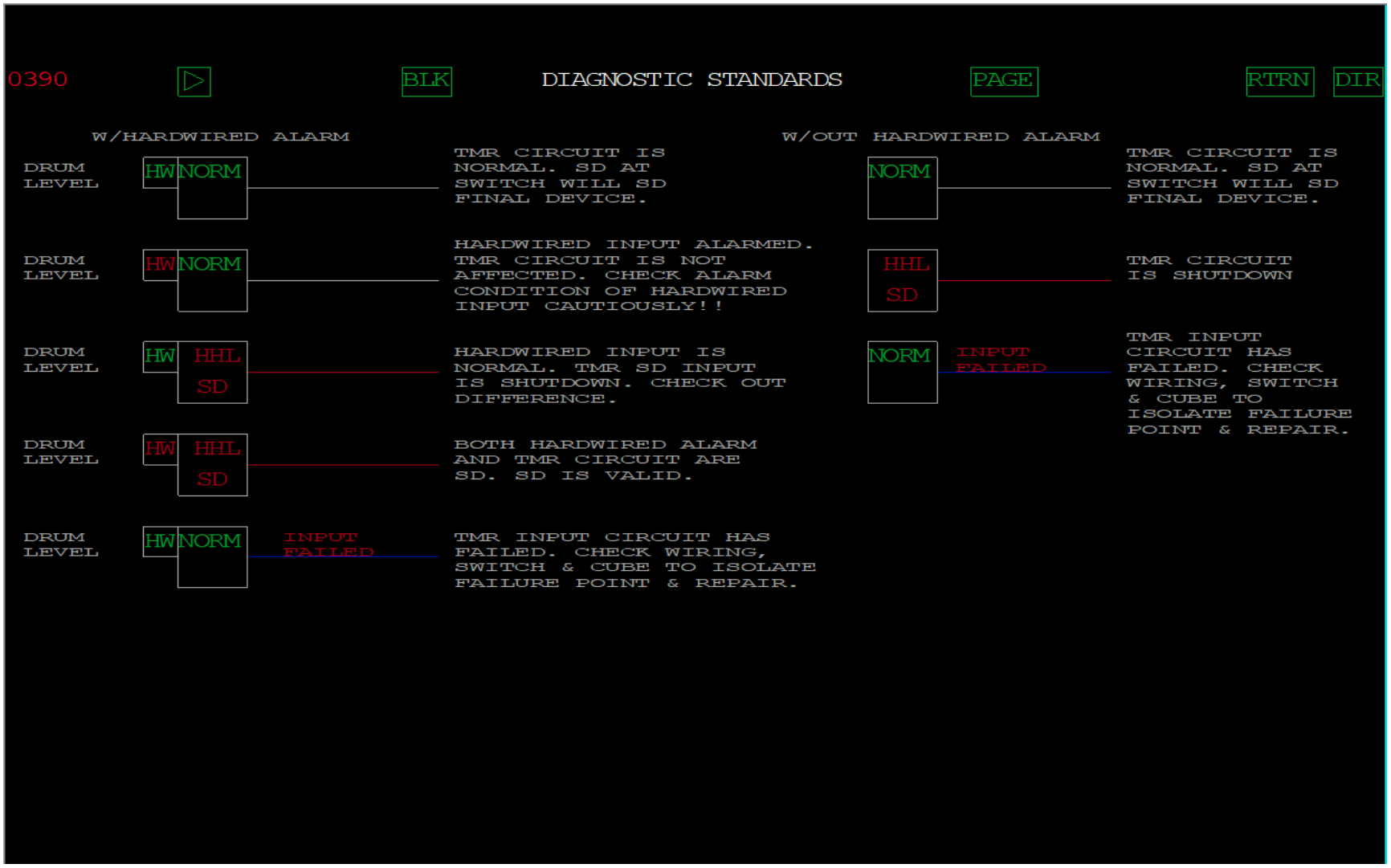


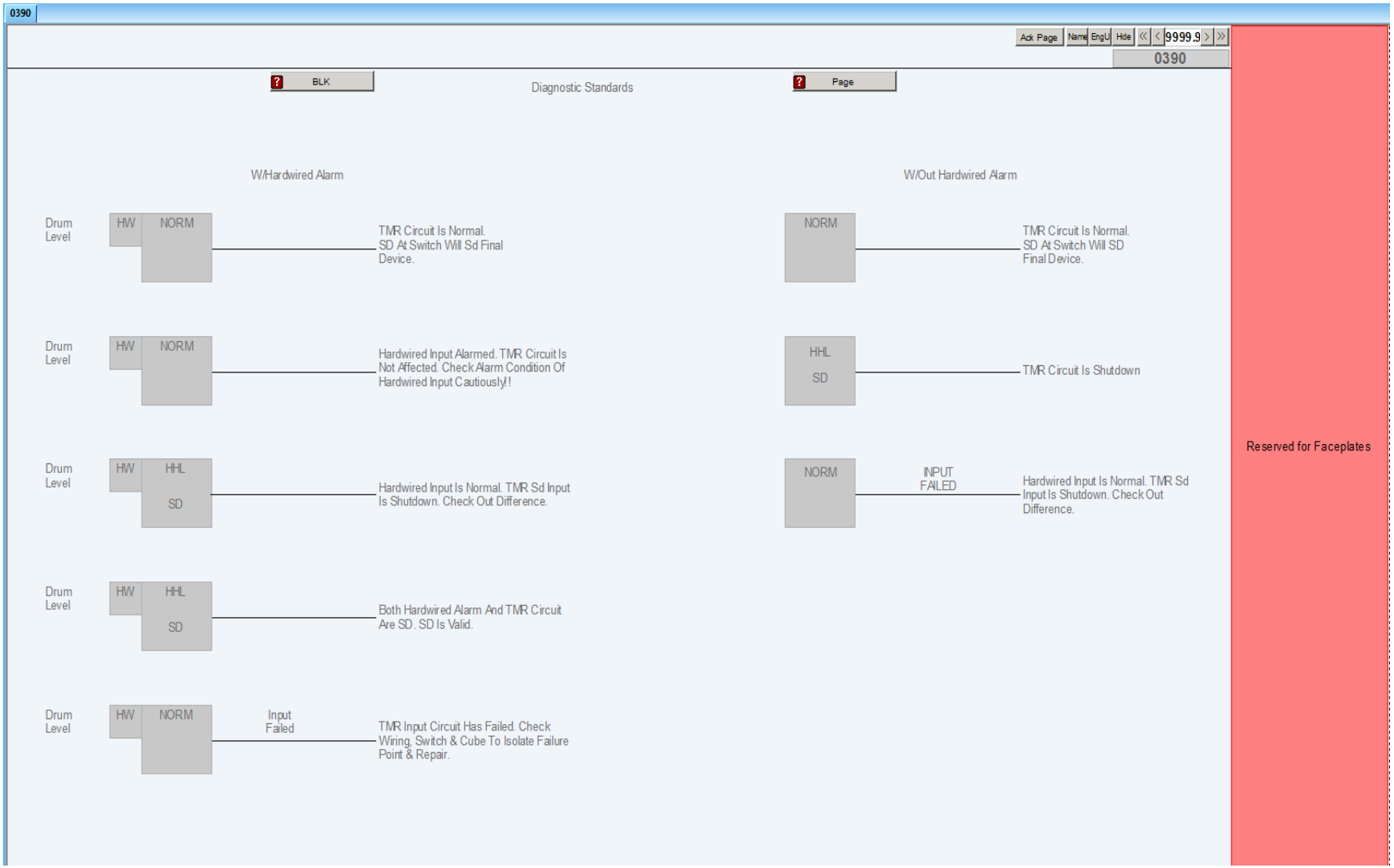

0373P2
HCU FRACT REBOILER (SIS) 2 OF 2
PROCESS
HELP
RTRN
DIR
DILUTION AIR PRESS
PI559
PRETRIP
TRIP
TROUBLE
VAPORIZER OUTLET TEMP
TI880
PRETRIP
TRIP
TROUBLE
SCR INLET TEMPERATURE
TI882
LOW
HIGH
PRETRIP
TRIP
TROUBLE
DILUTION AIR FLOW
FI255B
PRETRIP
TRIP
TROUBLE
NH3 FLOW
FI254A
TROUBLE
NH3/AIR RATIO
FFI254
PRETRIP
TRIP
SCR COMM AIMS
PRETRIP
TRIP
TROUBLE
NH3 VALVE SOV TEST
PASS
OK
FAIL
AQUEOUS AMONIA
AIR
LBS/ HR
XV062
VAPOR- IZER
SCR
FRACT REBOILER
WEST BLOWER
EAST BLOWER
HEATER
1
2
3
COILS
ID FAN
Group III
PROCESS
HCU SIS OVERVW
FRACT REBOILR
100# DEPRESS
R3
R4
START UP
FIRST OUT
XMTR BYPASS
DIAGNOS
LUB OIL PUMP
SIS TMR ALARMS
SOV TEST
RECYCLE COMP
SUCTION VALVE
DISCH VALVE
NORTH MU COMP
SOUTH MU COMP
RCY GAS HEATERS
OH GAS COMP
HYD LETDOWN
HELP


0373P2
Ack Page
Name
Eng U
Hide
9999.9
0373P2
Help
Dilution Air Press
PI559
Pretrip
Trip
Trouble
Vaporizer Outlet Temp
TI880
Pretrip
Trip
Trouble
SCR Inlet Temperature
TI882
Low
High
Pretrip
Trip
Trouble
Dilution Air Flow
FI255B
Pretrip
Trip
TROUBLE
NH3 Flow
FI254A
TROUBLE
NH3/Air Ratio
FFI254
Pretrip
Trip
SCR COMM ALMS
Pretrip
Trip
Trouble
NH3 Valve SOV Test
Pass
FAIL
Reserved for Faceplates
Air
Aqueous Amonia
West Blower
East Blower
XV062
Heater
Coil
Vaporizer
SCR
Fract Reboiler
ID Fan
Process
HCU SIS Overview
FRACT Reboiler
100# Depress
R3
R4
Start Up
First Out
XMTR Bypass
Diagnos
LUB Oil Pump
SIS TMR Alarms
SOV Test
Recycle COMP
Suction Valve
DISCH Valve
North MU COMP
SouthMU COMP
RCY Gas Heaters
OH Gas COMP
HYD Letdown
Help

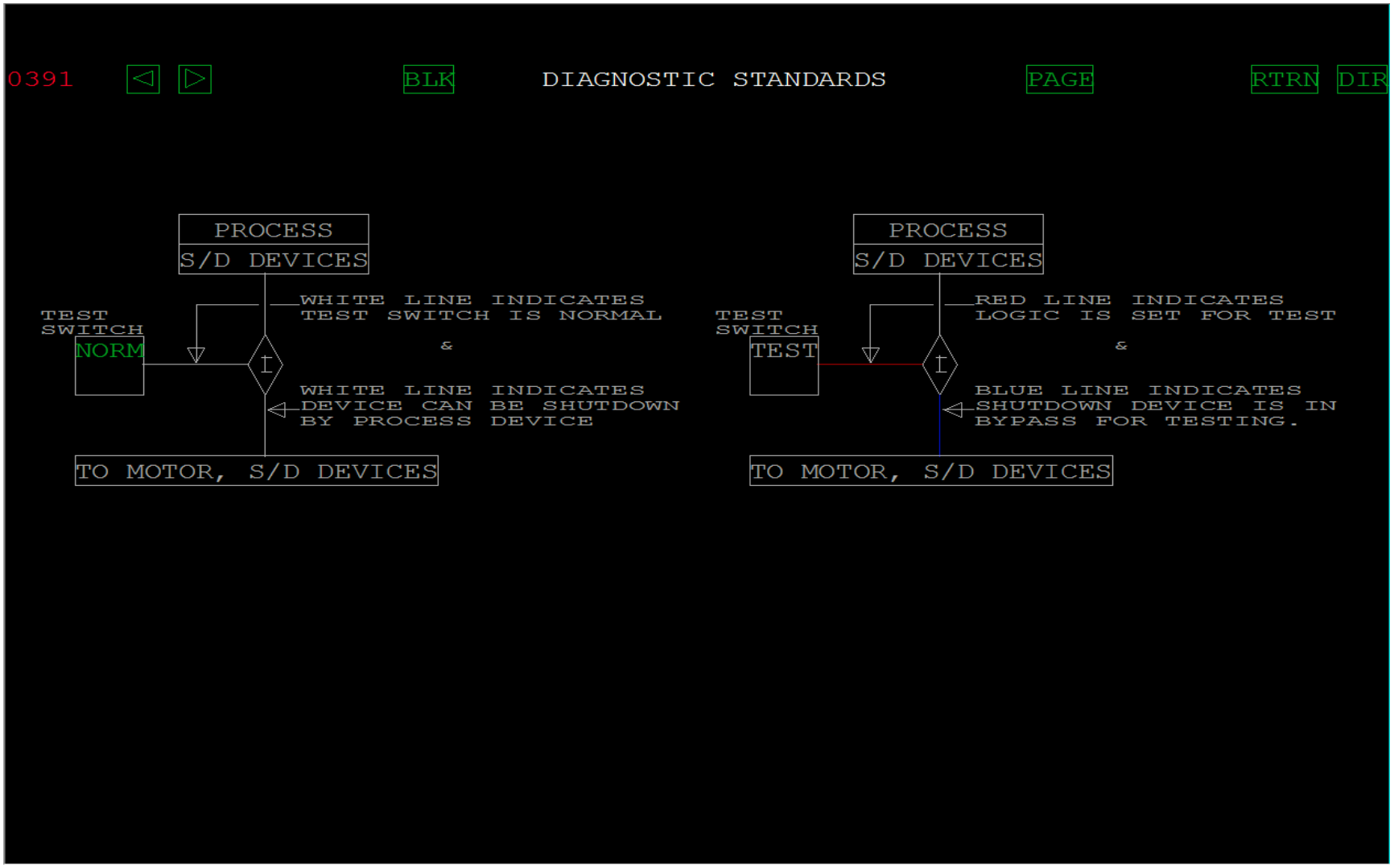
3.186 DIAGNOSTIC STANDARDS (0390.DS)

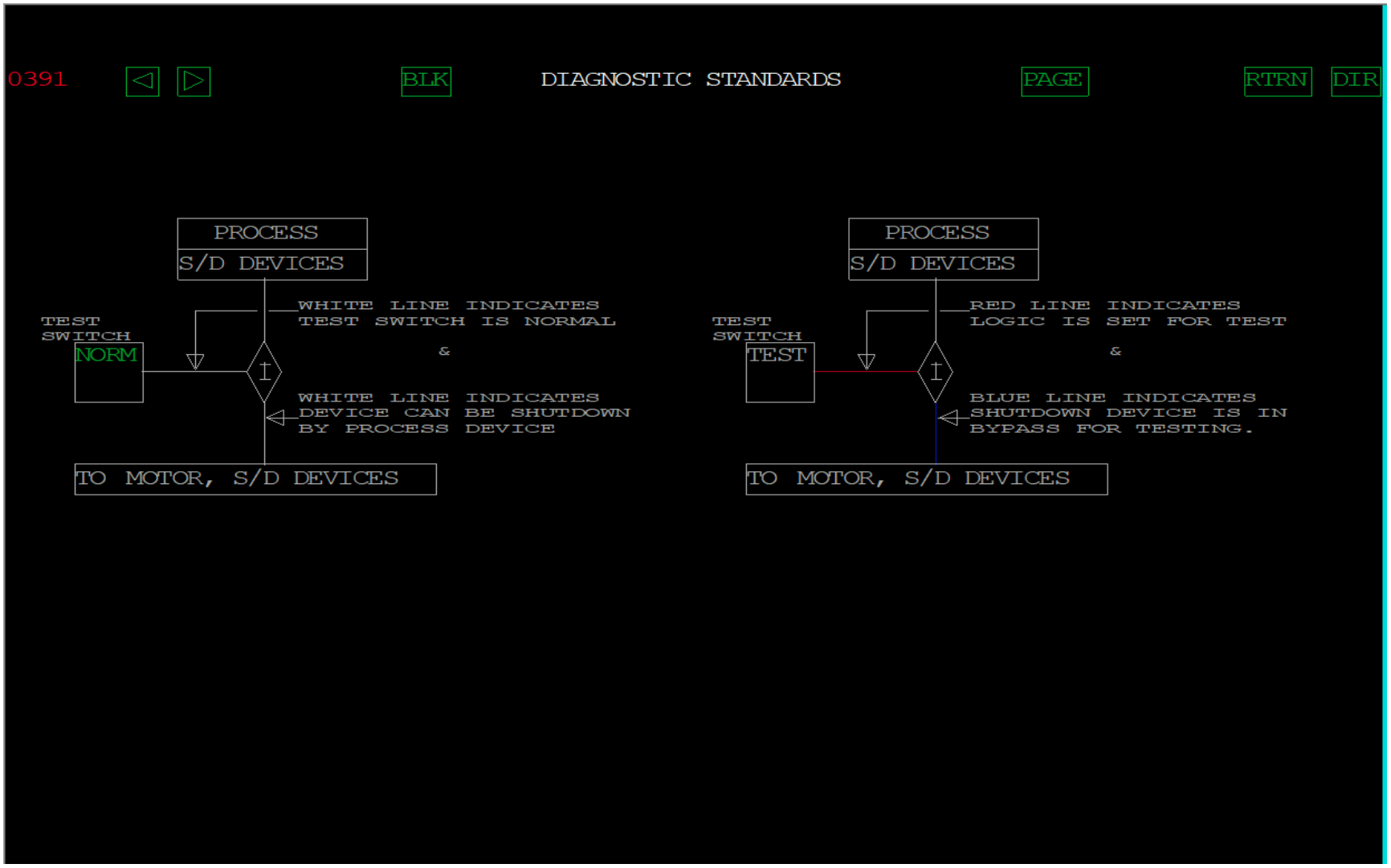


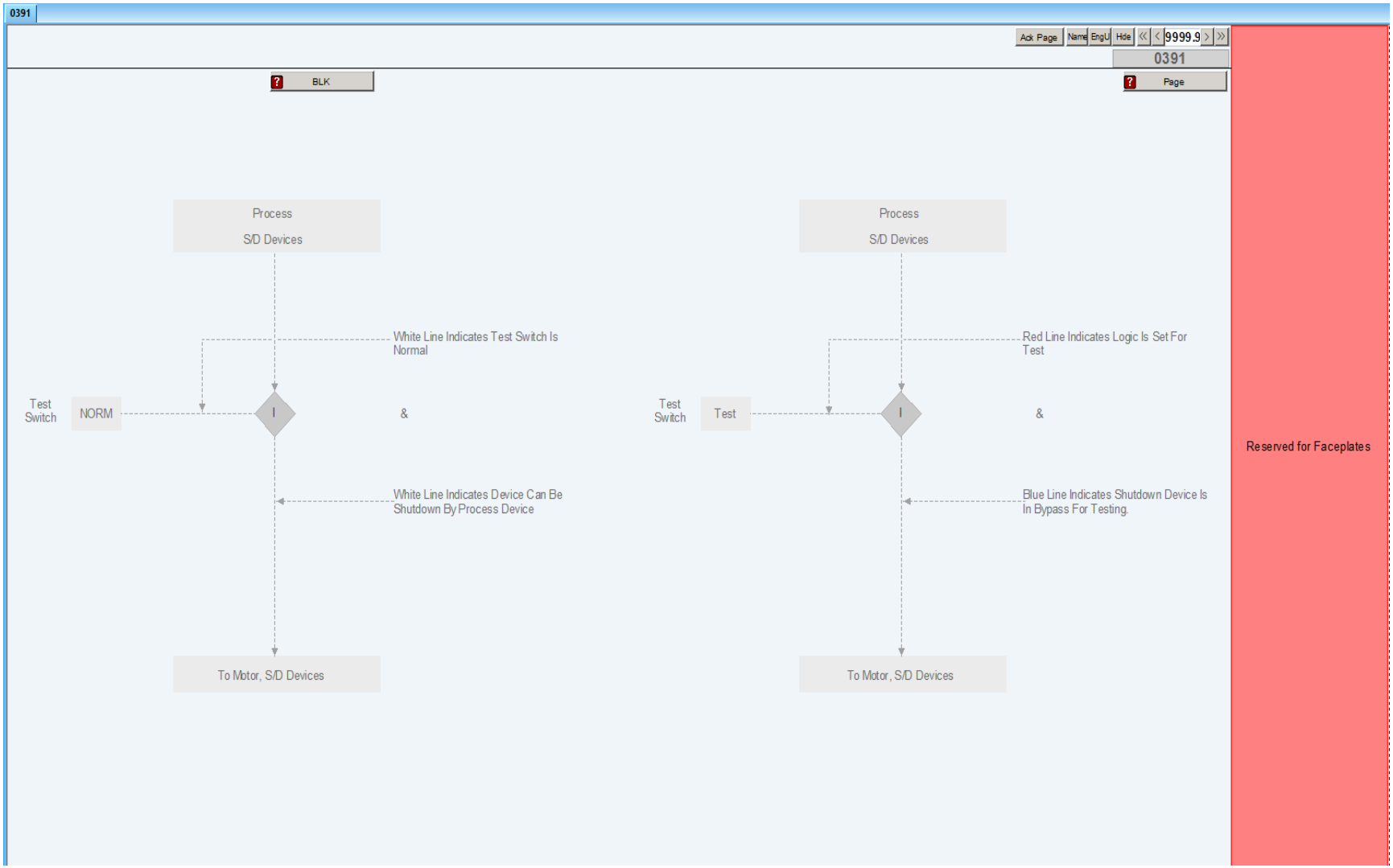

0390
BLK
DIAGNOSTIC STANDARDS
PAGE
RTRN
DIR
W/HARDWIRED ALARM
W/OUT HARDWIRED ALARM
DRUM LEVEL
HW NORM
TMR CIRCUIT IS NORMAL. SD AT SWITCH WILL SD FINAL DEVICE.
NORM
TMR CIRCUIT IS NORMAL. SD AT SWITCH WILL SD FINAL DEVICE.
DRUM LEVEL
HW NORM
HARDWIRED INPUT ALARMED. TMR CIRCUIT IS NOT AFFECTED. CHECK ALARM CONDITION OF HARDWIRED INPUT CAUTIOUSLY!!
HHL SD
TMR CIRCUIT IS SHUTDOWN
DRUM LEVEL
HW HHL SD
HARDWIRED INPUT IS NORMAL. TMR SD INPUT IS SHUTDOWN. CHECK OUT DIFFERENCE.
NORM
INPUT FAILED
TMR INPUT CIRCUIT HAS FAILED. CHECK WIRING, SWITCH & CUBE TO ISOLATE FAILURE POINT & REPAIR.
DRUM LEVEL
HW HHL SD
BOTH HARDWIRED ALARM AND TMR CIRCUIT ARE SD. SD IS VALID.
DRUM LEVEL
HW NORM
INPUT FAILED
TMR INPUT CIRCUIT HAS FAILED. CHECK WIRING, SWITCH & CUBE TO ISOLATE FAILURE POINT & REPAIR.


0390
Ack Page
Name
Eng'g
Hide
9999.9
0390
BLK
Diagnostic Standards
Page
W/Hardwired Alarm
W/Out Hardwired Alarm
Drum Level
HW
NORM
TMR Circuit Is Normal. SD At Switch Will Sd Final Device.
NORM
TMR Circuit Is Normal. SD At Switch Will SD Final Device.
Drum Level
HW
NORM
Hardwired Input Alarmed. TMR Circuit Is Not Affected. Check Alarm Condition Of Hardwired Input Cautiously!!
HHL
SD
TMR Circuit Is Shutdown
Drum Level
HW
HHL
SD
Hardwired Input Is Normal. TMR Sd Input Is Shutdown. Check Out Difference.
NORM
INPUT FAILED
Hardwired Input Is Normal. TMR Sd Input Is Shutdown. Check Out Difference.
Drum Level
HW
HHL
SD
Both Hardwired Alarm And TMR Circuit Are SD. SD Is Valid.
Drum Level
HW
NORM
Input Failed
TMR Input Circuit Has Failed. Check Wiring, Switch & Cube To Isolate Failure Point & Repair.
Reserved for Faceplates

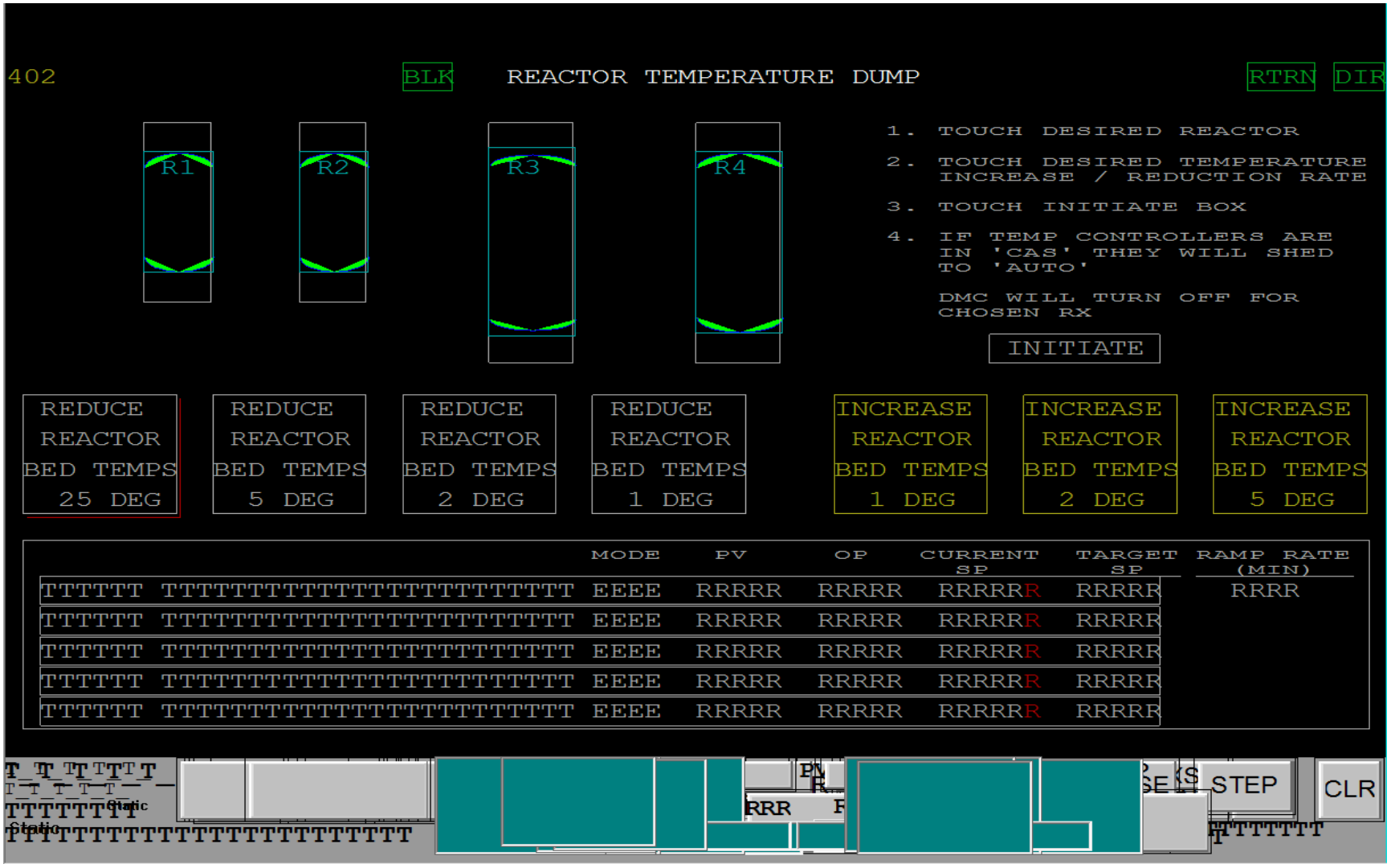
3.187 DIAGNOSTIC STANDARDS (0391.DS)




0391
BLK
DIAGNOSTIC STANDARDS
PAGE
RTRN
DIR
PROCESS
S/D DEVICES
TEST
SWITCH
NORM
WHITE LINE INDICATES
TEST SWITCH IS NORMAL
&
WHITE LINE INDICATES
DEVICE CAN BE SHUTDOWN
BY PROCESS DEVICE
TO MOTOR, S/D DEVICES
PROCESS
S/D DEVICES
TEST
SWITCH
TEST
RED LINE INDICATES
LOGIC IS SET FOR TEST
&
BLUE LINE INDICATES
SHUTDOWN DEVICE IS IN
BYPASS FOR TESTING.
TO MOTOR, S/D DEVICES

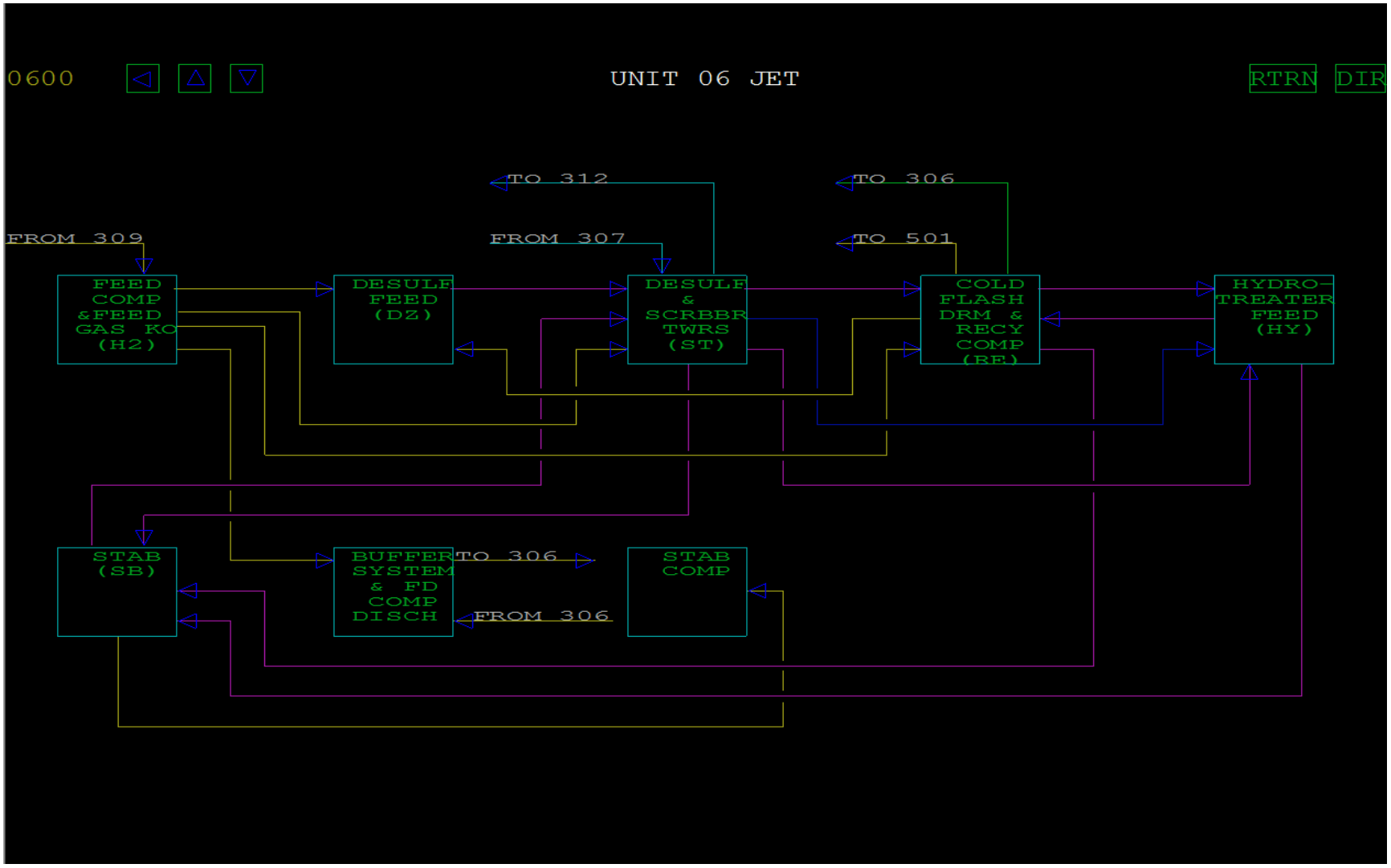

0391
Ack Page
Name
EngU
Hide
9999.9
0391
BLK
Page
Process
S/D Devices
White Line Indicates Test Switch Is Normal
Test Switch
NORM
I
&
White Line Indicates Device Can Be Shutdown By Process Device
To Motor, S/D Devices
Process
S/D Devices
Red Line Indicates Logic Is Set For Test
Test Switch
Test
I
&
Blue Line Indicates Shutdown Device Is In Bypass For Testing.
To Motor, S/D Devices
Reserved for Faceplates

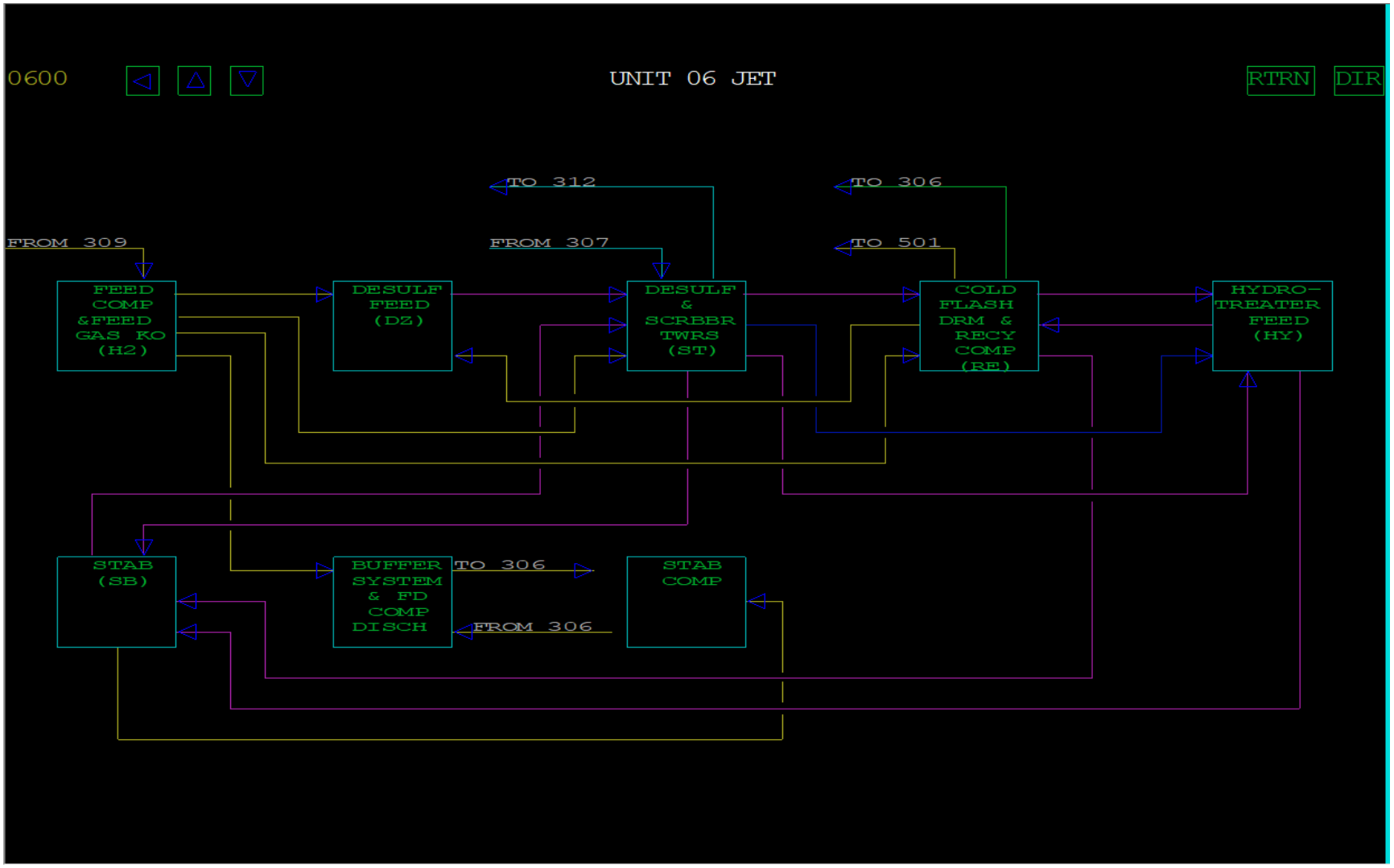
3.188 REACTOR TEMPERATURE DUMP (402.DS)

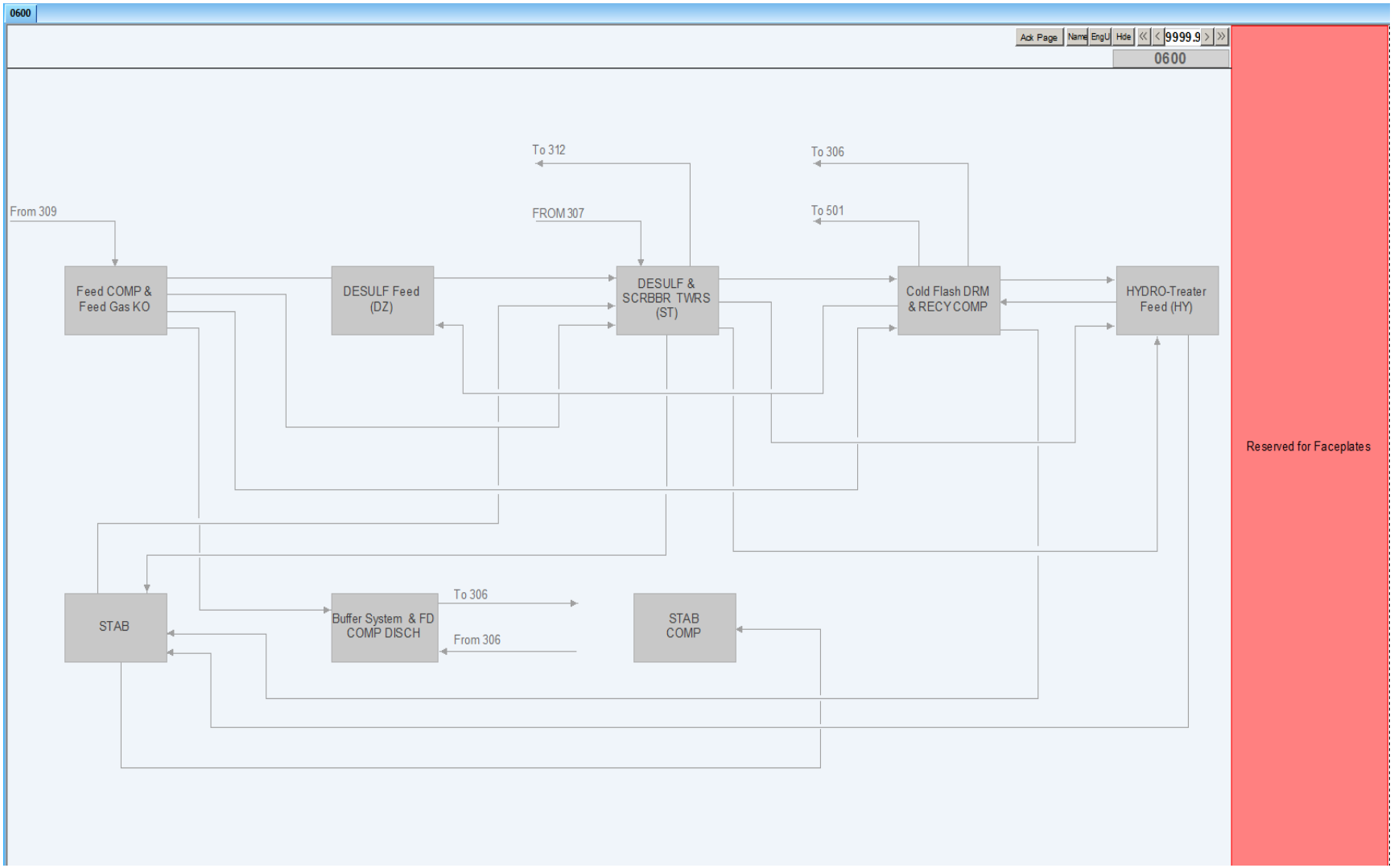


HOLD 2

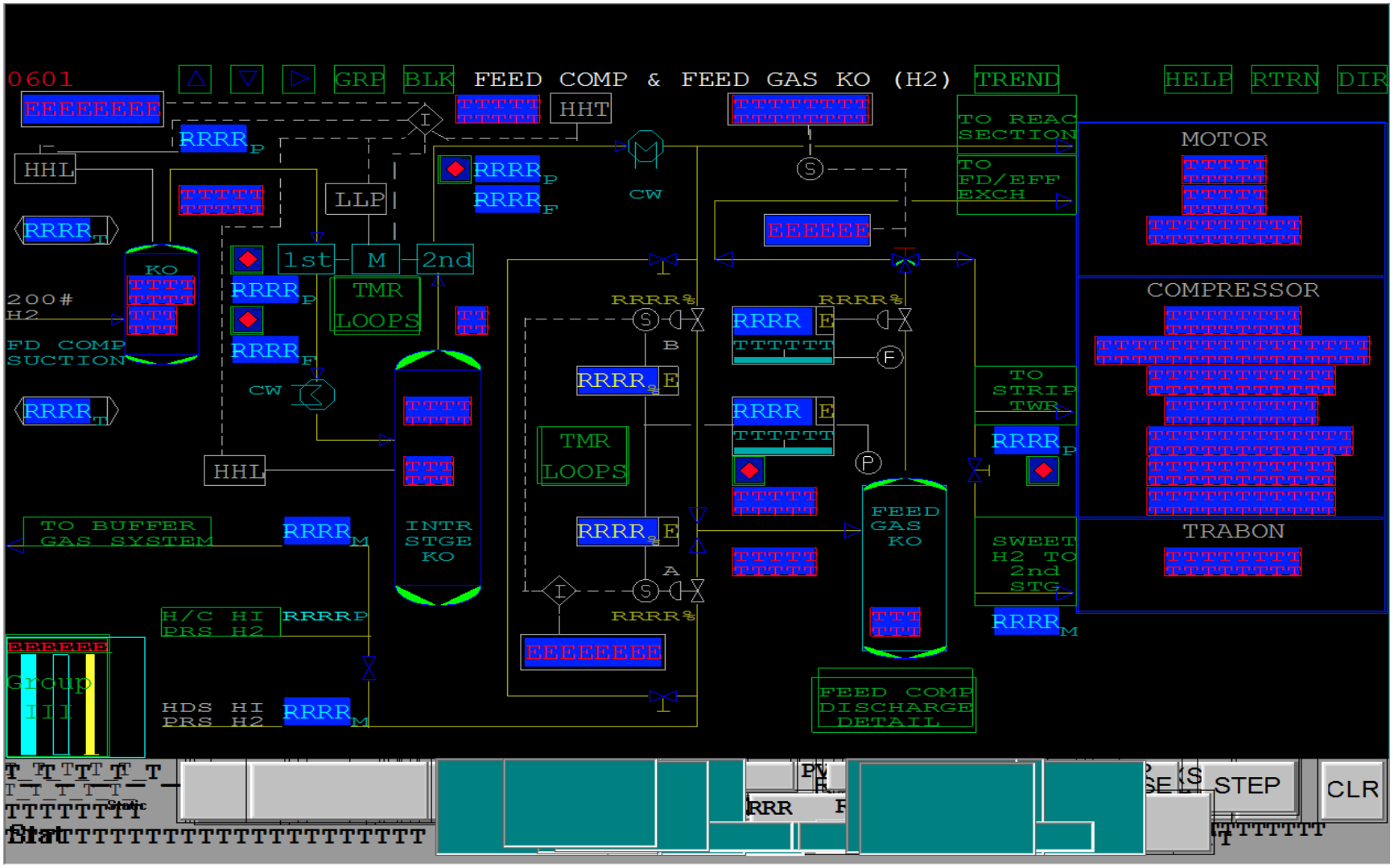
3.189 UNIT 06 JET (0600.DS)

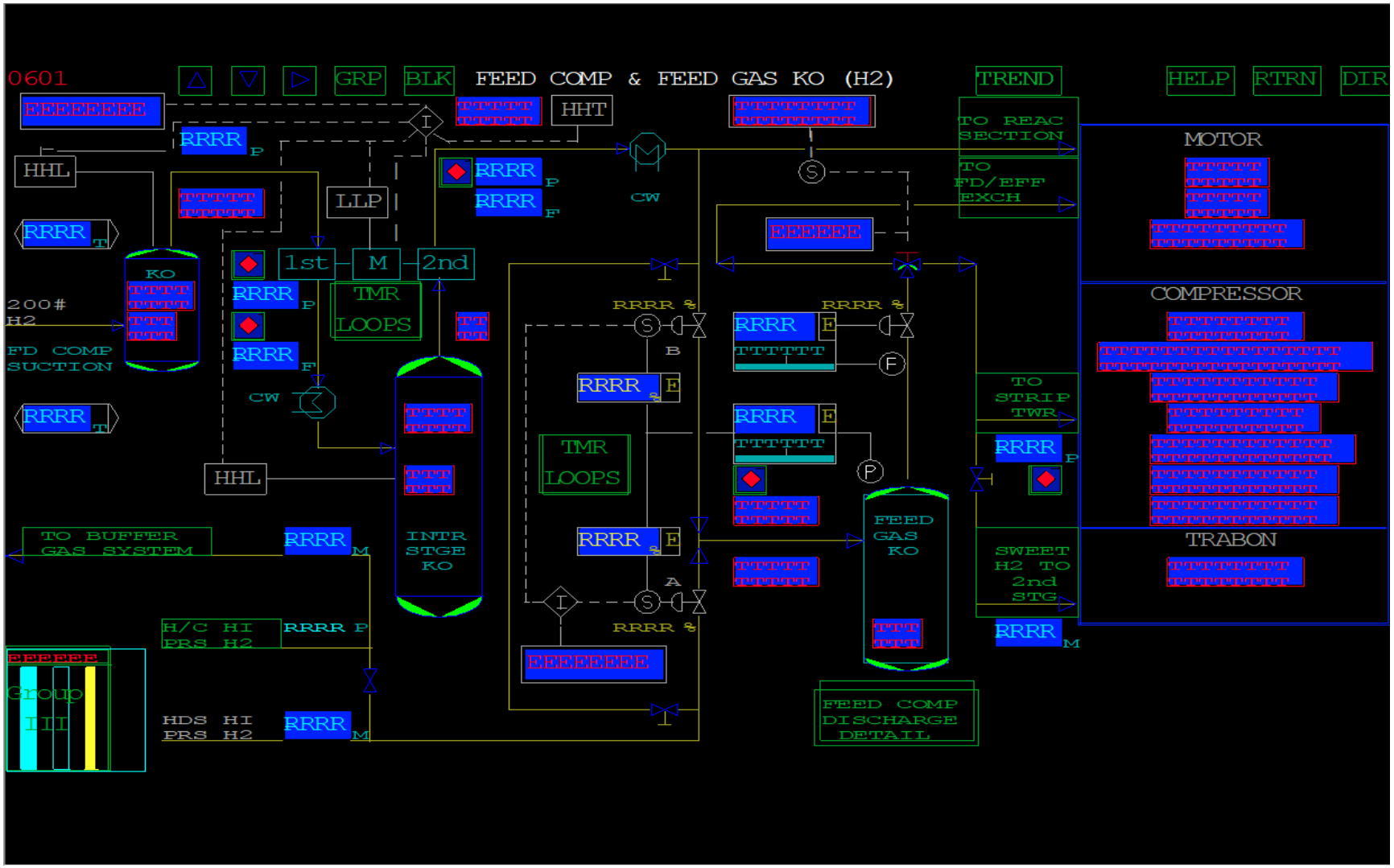


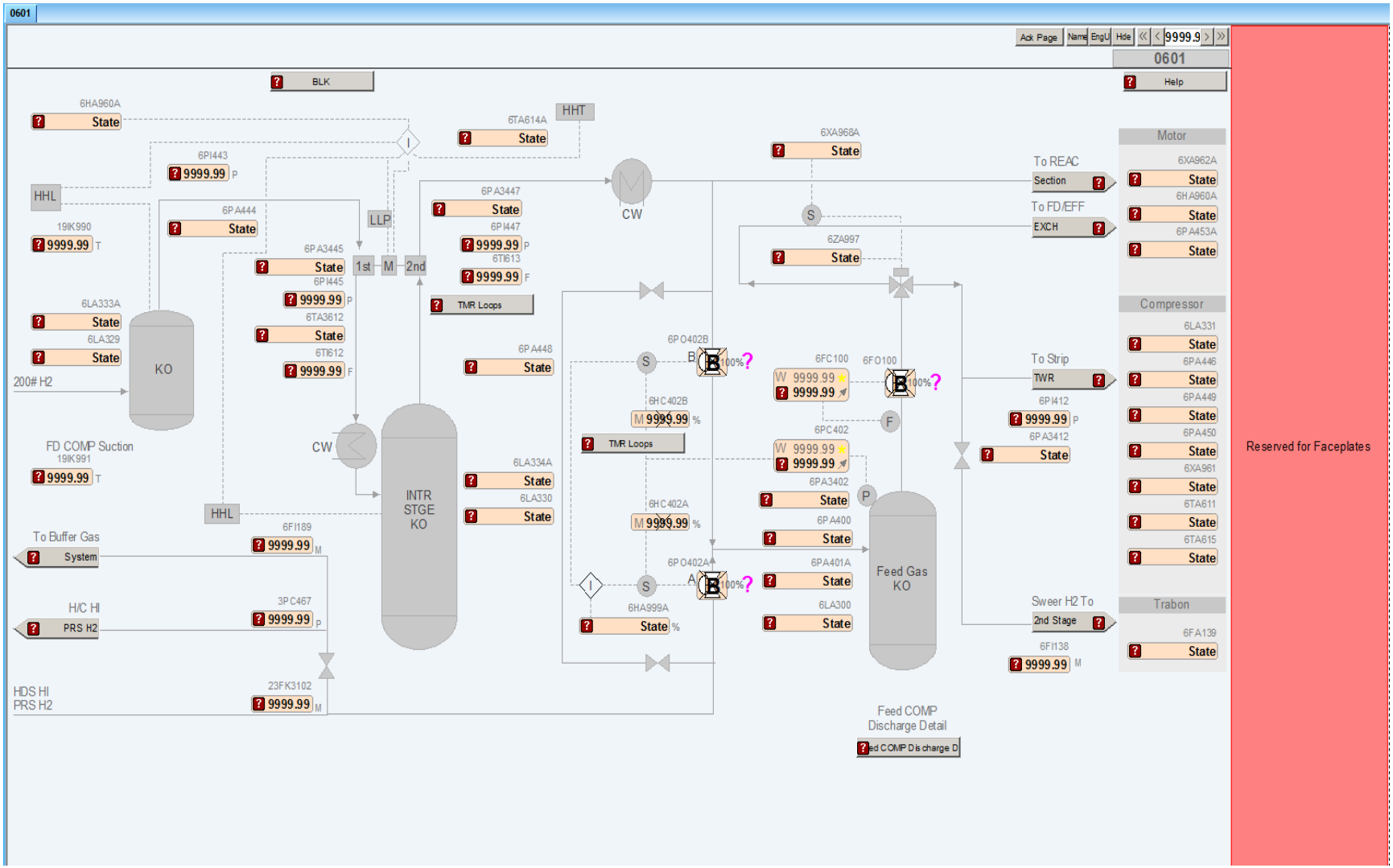

0600
UNIT 06 JET
RTRN
DIR
TO 312
TO 306
FROM 309
FROM 307
TO 501
FEED COMP &FEED GAS KO (H2)
DESULF FEED (DZ)
DESULF & SCRBBR TWRS (ST)
COLD FLASH DRM & RECY COMP (RE)
HYDRO-TREATER FEED (HY)
STAB (SB)
BUFFER SYSTEM & FD COMP DISCH
TO 306
FROM 306
STAB COMP


0600
Ack Page
Name
Eng U
Hide
9999.9
0600
To 312
To 306
From 309
FROM 307
To 501
Feed COMP & Feed Gas KO
DESULF Feed (DZ)
DESULF & SCRBBR TWRS (ST)
Cold Flash DRM & RECY COMP
HYDRO-Treater Feed (HY)
Reserved for Faceplates
STAB
Buffer System & FD COMP DISCH
To 306
From 306
STAB COMP

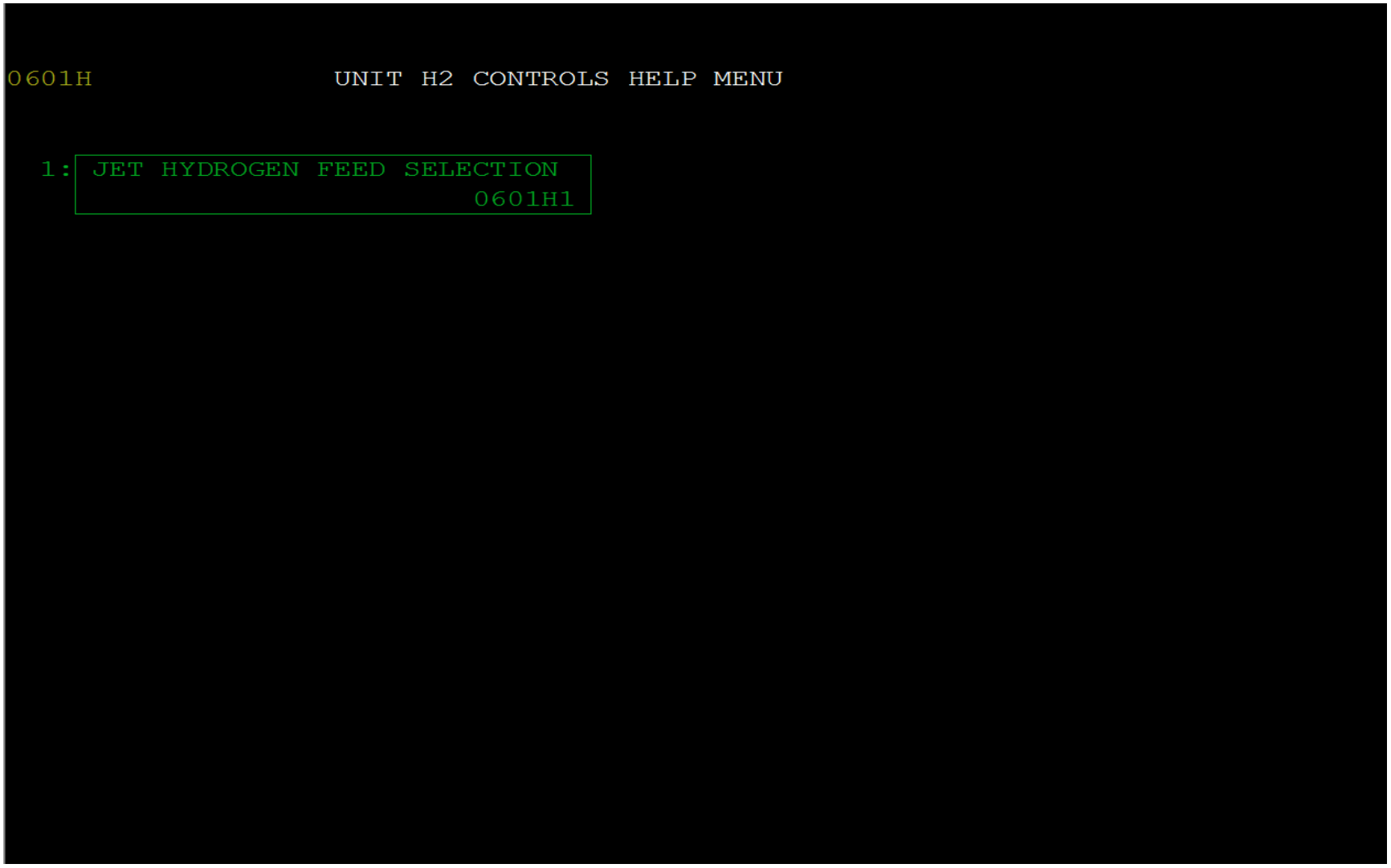
3.190 FEED COMP & FEED GAS KO (H2) (0601.DS)

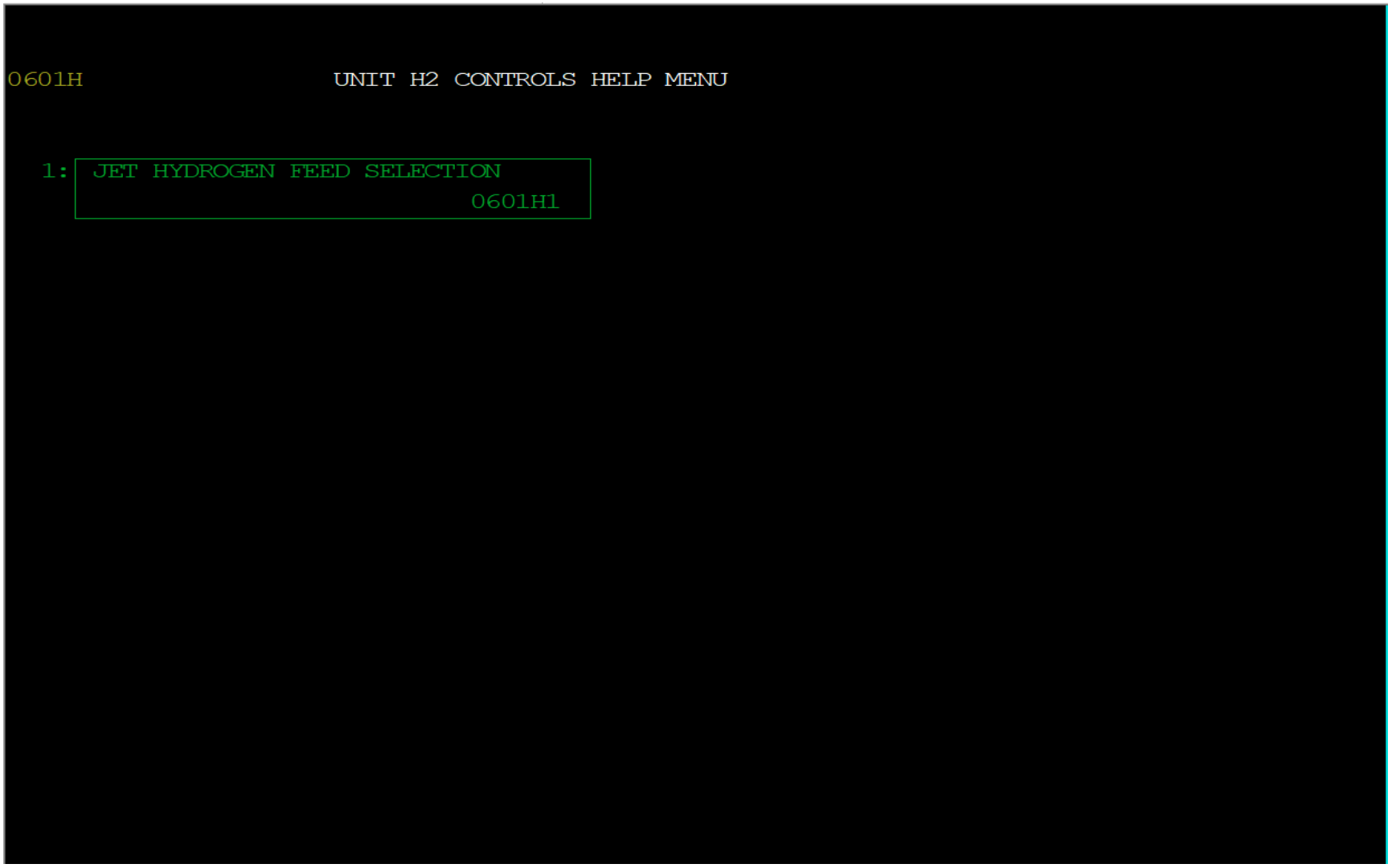


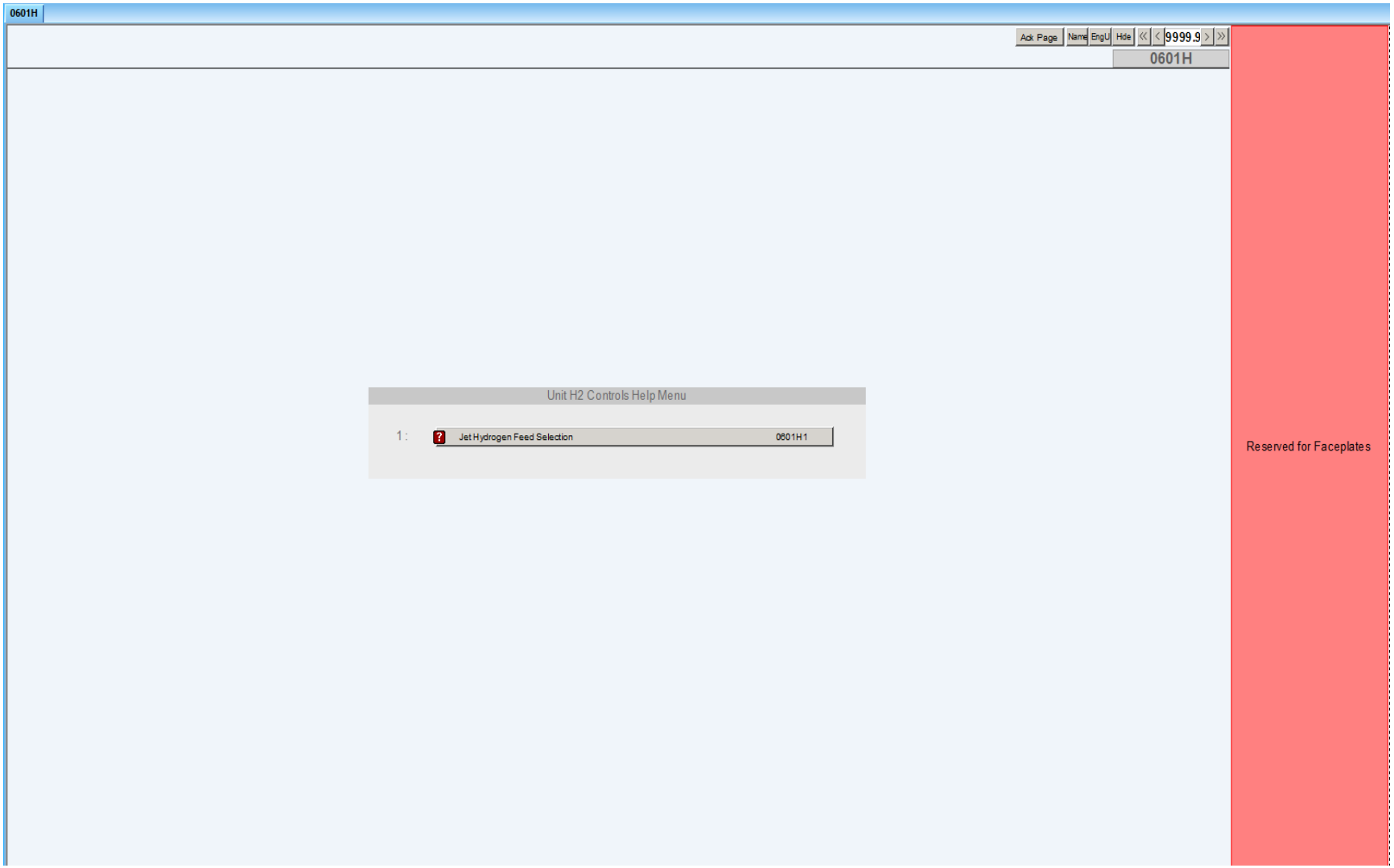

0601
GRP
BLK
FEED COMP & FEED GAS KO (H2)
TREND
HELP
RTRN
DIR
HHT
HHL
LLP
CW
1st
M
2nd
TMR LOOPS
KO
200# H2
FD COMP SUCTION
INTR STGE KO
TO BUFFER GAS SYSTEM
H/C HI PRS H2
HDS HI PRS H2
Group III
FEED GAS KO
FEED COMP DISCHARGE DETAIL
TO REAC SECTION
TO FD/EFF EXCH
TO STRIP TWR
SWEET H2 TO 2nd STG
MOTOR
COMPRESSOR
TRABON


0601
Ack Page
Name
EngU
Hide
9999.9
0601
Help
BLK
6HA960A
State
6TA614A
State
HHT
6PI443
9999.99
P
HHL
6PA444
State
LLP
19IK990
9999.99
T
6PA3445
State
1st
M
2nd
6PI445
9999.99
P
6TA3612
State
6TI612
9999.99
F
6LA333A
State
6LA329
State
200# H2
KO
FD COMP Suction
19IK991
9999.99
T
CW
INTR STGE KO
HHL
6FI189
9999.99
M
To Buffer Gas
System
H/C HI
PRS H2
3PC467
9999.99
P
HDS HI
PRS H2
23FK3102
9999.99
M
6PA3447
State
6PI447
9999.99
P
6TI613
9999.99
F
TMR Loops
6PA448
State
6LA334A
State
6LA330
State
CW
6XA968A
State
6ZA997
State
6PO402B
B
100%
6FC100
W 9999.99
9999.99
6FO100
B
100%
6HC402B
M 9999.99
%
TMR Loops
6PC402
W 9999.99
9999.99
6PA3402
State
6HC402A
M 9999.99
%
6PA400
State
6PO402A
A
B
100%
6HA999A
State
%
6PA401A
State
6LA300
State
Feed Gas KO
To REAC
Section
To FD/EFF
EXCH
To Strip
TWR
6PI412
9999.99
P
6PA3412
State
Sweer H2 To
2nd Stage
6FI138
9999.99
M
Feed COMP Discharge Detail
ed COMP Discharge D
Motor
6XA962A
State
6HA960A
State
6PA453A
State
Compressor
6LA331
State
6PA446
State
6PA449
State
6PA450
State
6XA961
State
6TA611
State
6TA615
State
Trabon
6FA139
State
Reserved for Faceplates

3.191 UNIT H2 CONTROLS HELP MENU (0601H.DS)




0601H
UNIT H2 CONTROLS HELP MENU
1:
JET HYDROGEN FEED SELECTION
0601H1

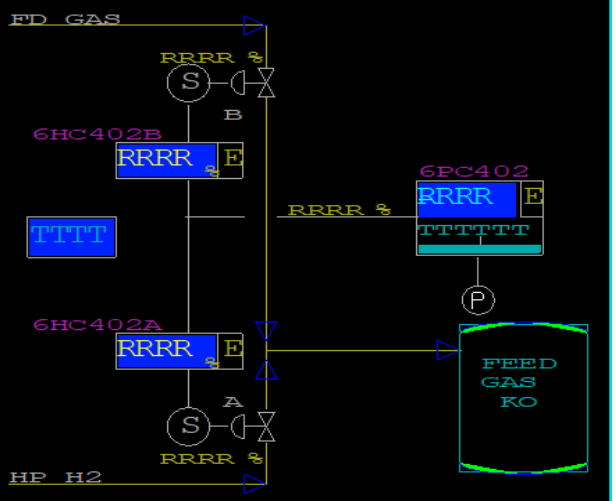

0601H
Ack Page
Name
EngU
Hide
9999.9
0601H
Unit H2 Controls Help Menu
1 :
Jet Hydrogen Feed Selection
0601H1
Reserved for Faceplates

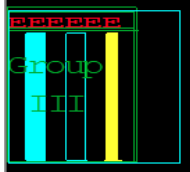
3.192 JET H2 FEED SELECTION HELP (0601H1.DS)

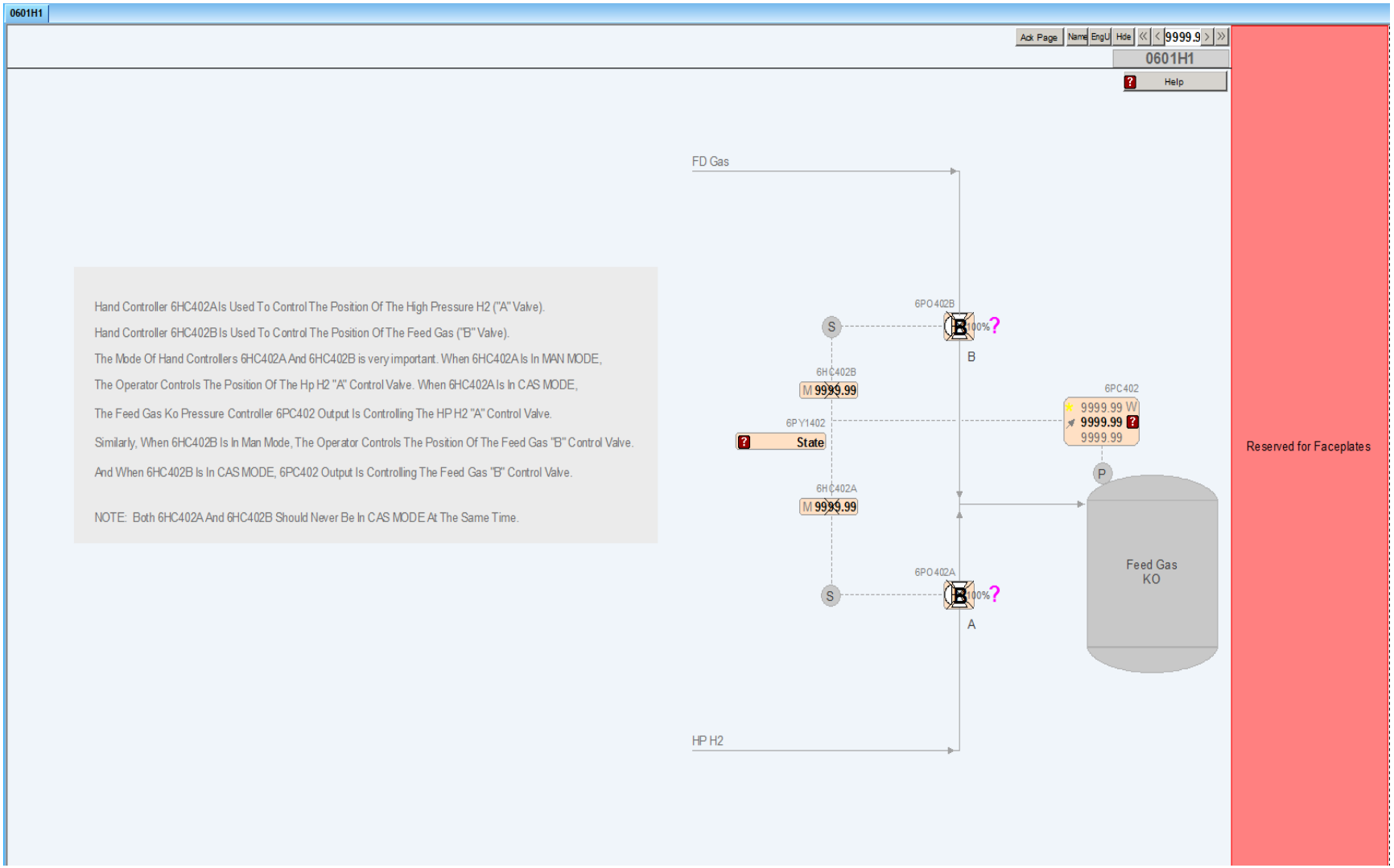
0601H1 JET H2 FEED SELECTION HELP TREND HELP RTRN DIR

Hand controller 6HC402A is used to control the position of the High Pressure H2 ("A" valve). Hand controller 6HC402B is used to control the position of the Feed Gas ("B" valve). The mode of hand controllers 6HC402A and 6HC402B is very important. When 6HC402A is in MAN mode, the Operator controls the position of the HP H2 "A" control valve. When 6HC402A is in CAS mode, the Feed Gas KO pressure controller 6PC402 output is controlling the HP H2 "A" control valve. Similarly, when 6HC402B is in MAN mode, the Operator controls the position of the Feed Gas "B" control valve. And when 6HC402B is in CAS mode, 6PC402 output is controlling the Feed Gas "B" control valve.

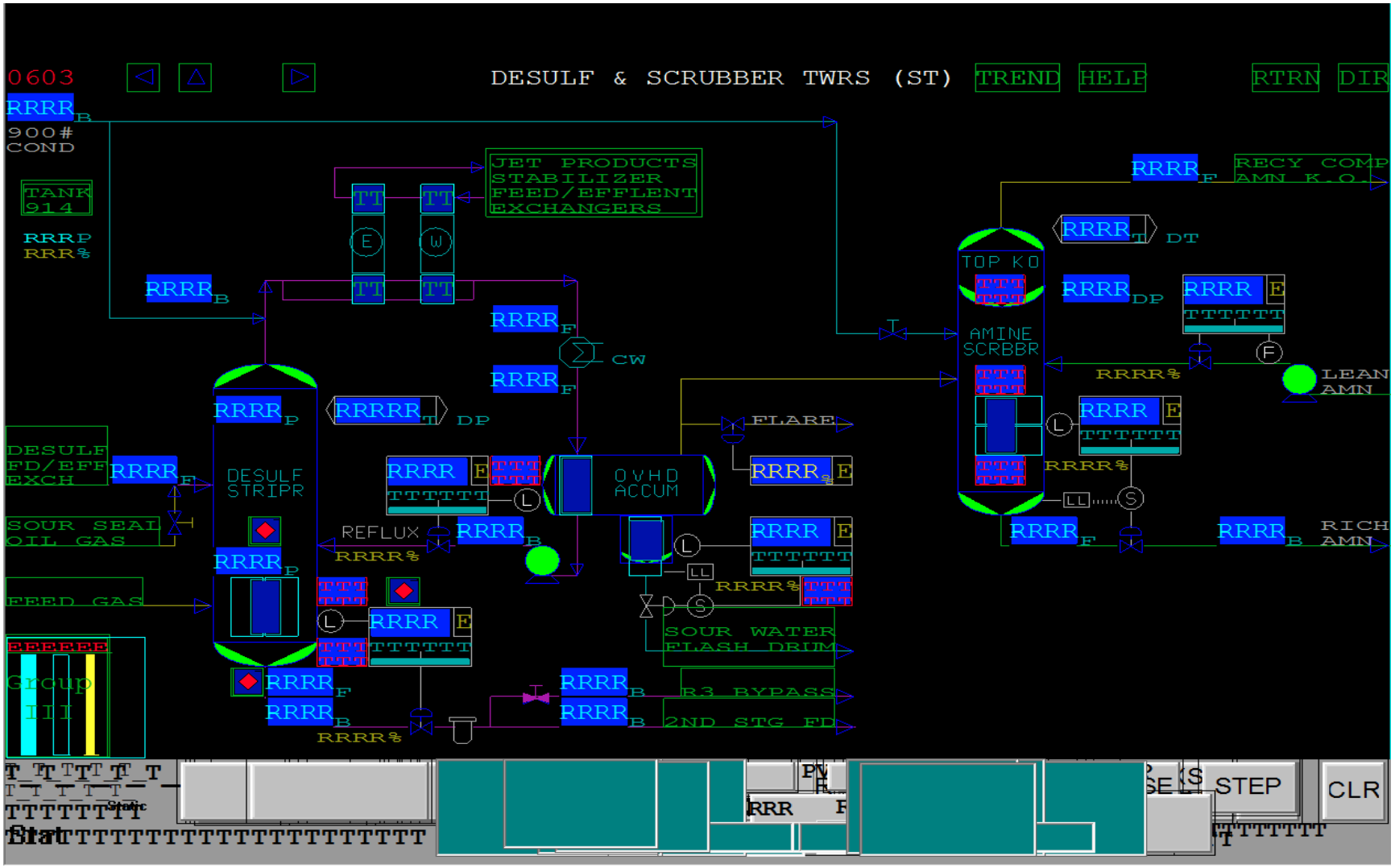
NOTE: Both 6HC402A and 6HC402B should never be in CAS mode at the same time.

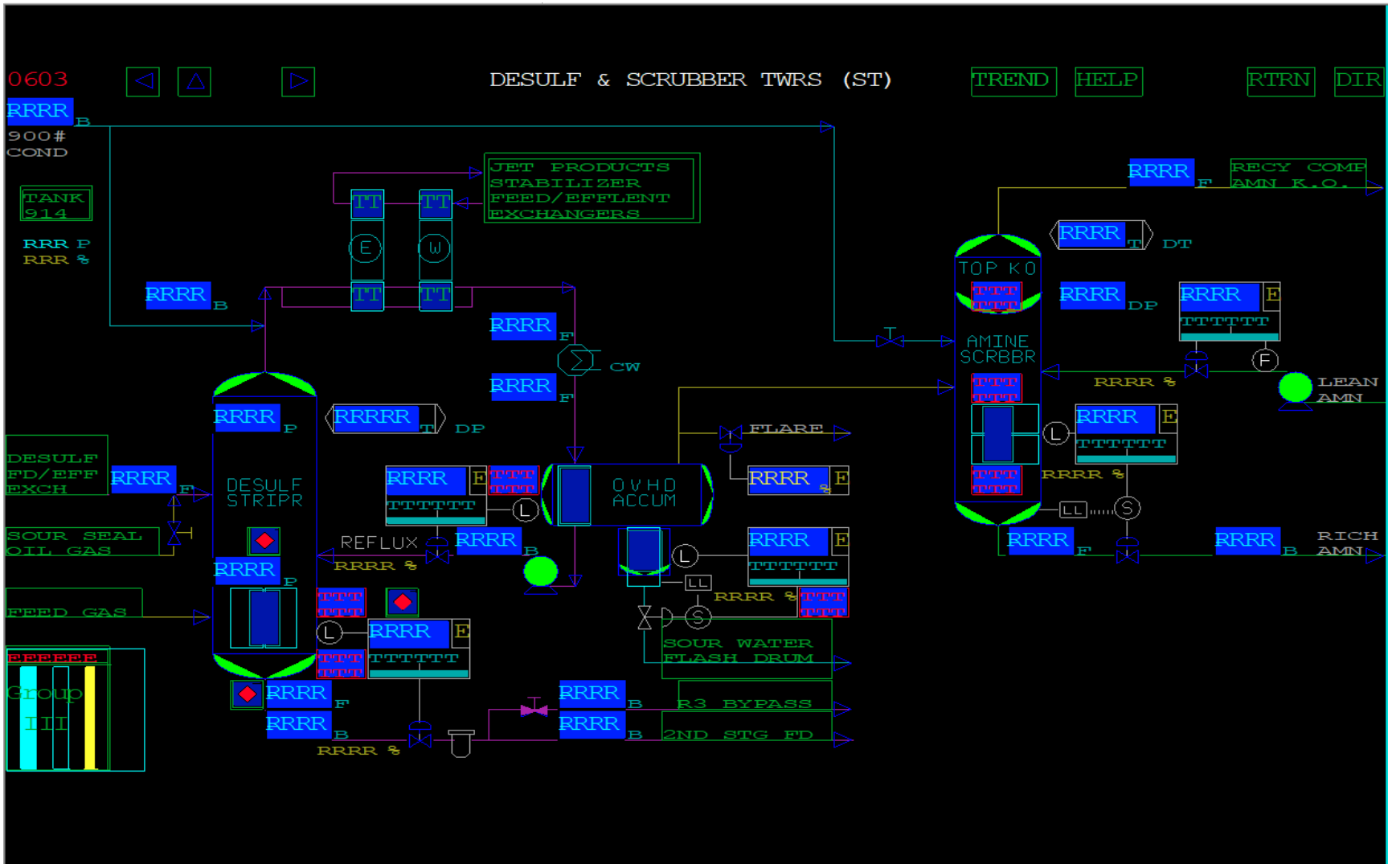


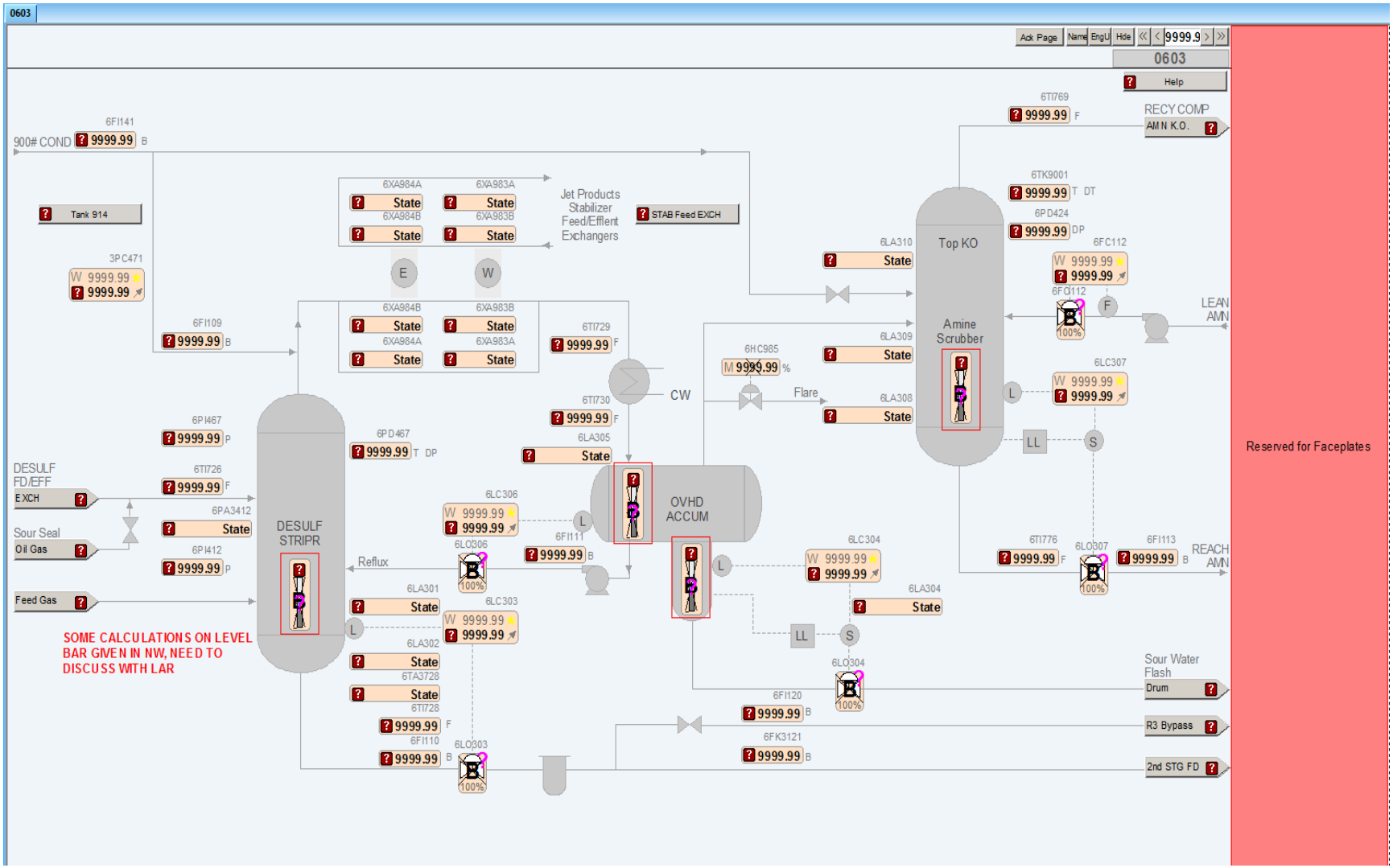



0601H1
Ack Page
Name
Eng U
Hide
9999.9
0601H1
Help
Hand Controller 6HC402A Is Used To Control The Position Of The High Pressure H2 ("A" Valve).
Hand Controller 6HC402B Is Used To Control The Position Of The Feed Gas ("B" Valve).
The Mode Of Hand Controllers 6HC402A And 6HC402B is very important. When 6HC402A Is In MAN MODE,
The Operator Controls The Position Of The Hp H2 "A" Control Valve. When 6HC402A Is In CAS MODE,
The Feed Gas Ko Pressure Controller 6PC402 Output Is Controlling The HP H2 "A" Control Valve.
Similarly, When 6HC402B Is In Man Mode, The Operator Controls The Position Of The Feed Gas "B" Control Valve.
And When 6HC402B Is In CAS MODE, 6PC402 Output Is Controlling The Feed Gas "B" Control Valve.
NOTE: Both 6HC402A And 6HC402B Should Never Be In CAS MODE At The Same Time.
FD Gas
6PO402B
S
B
100%
6HC402B
M 9999.99
6PC402
9999.99 W
9999.99
9999.99
6PY1402
State
P
6HC402A
M 9999.99
Feed Gas KO
6PO402A
S
A
100%
HP H2
Reserved for Faceplates

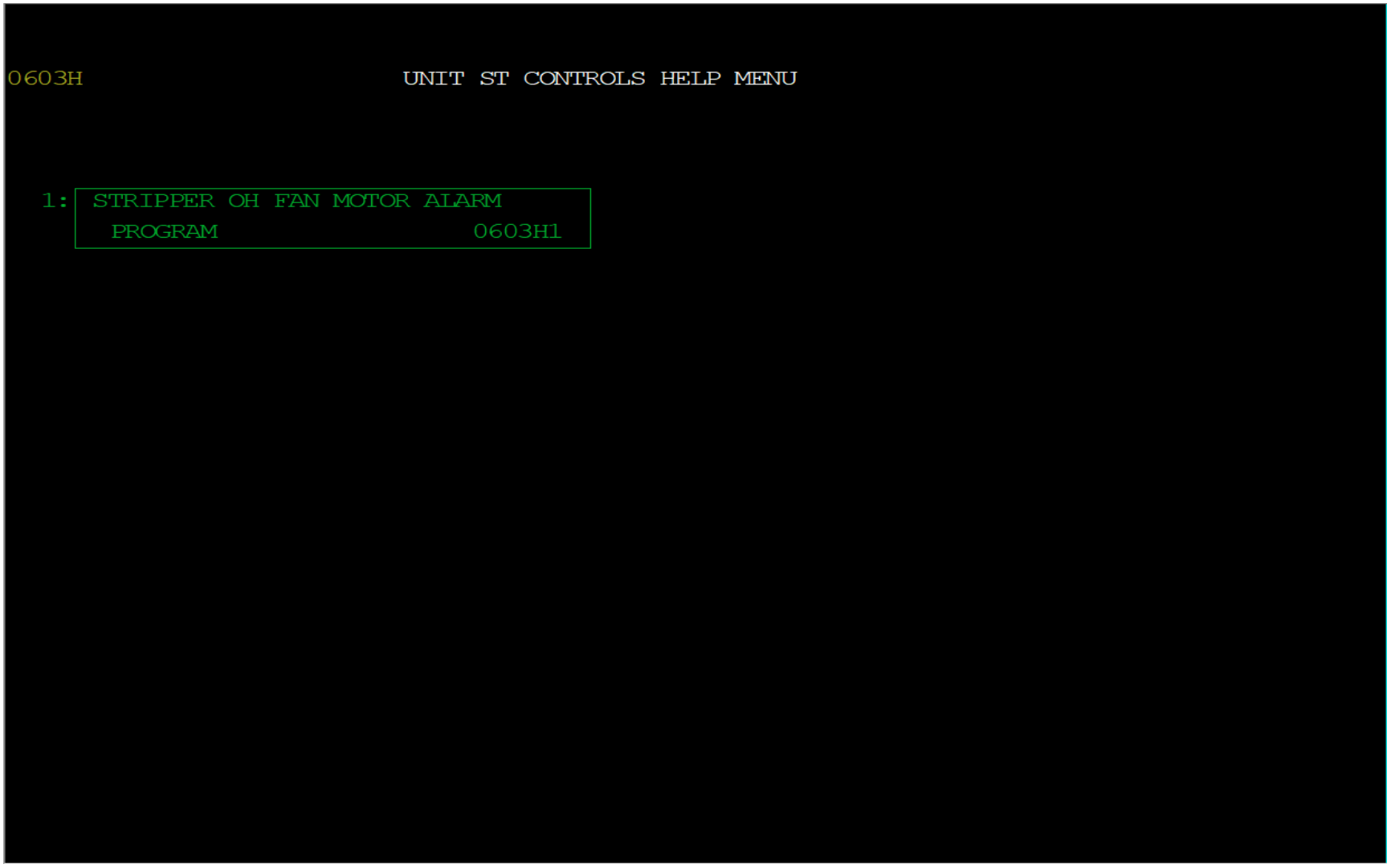
3.193 DESULF & SCRUBBER TWRS (ST) (0603.DS)

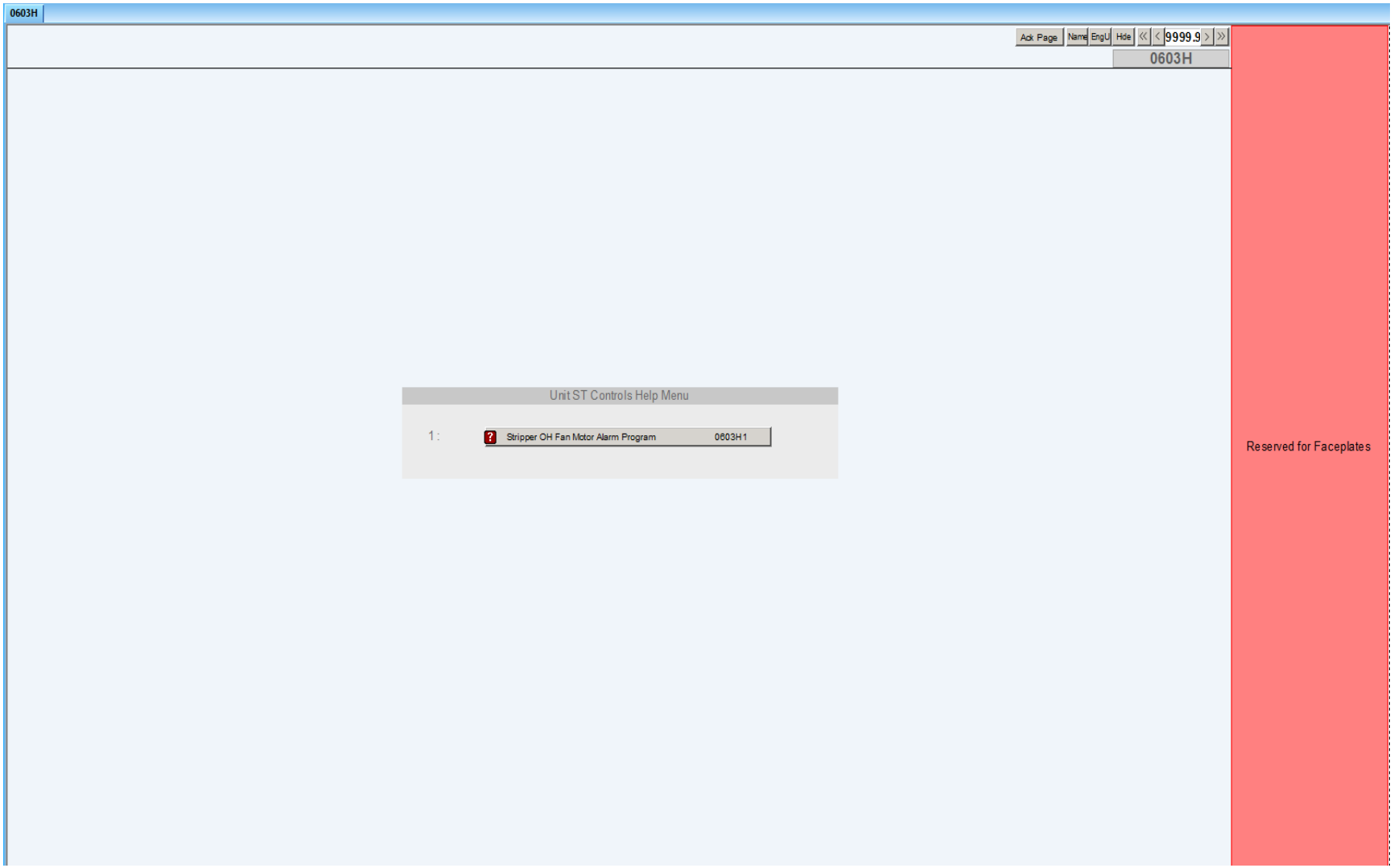



0603
DESULF & SCRUBBER TWRS (ST)
TREND
HELP
RTRN
DIR
900# COND
TANK 914
JET PRODUCTS STABILIZER FEED/EFFLENT EXCHANGERS
TOP KO
AMINE SCRBBR
RECY COMP AMN K.O.
LEAN AMN
RICH AMN
DESULF STRIPR
DESULF FD/EFF EXCH
SOUR SEAL OIL GAS
FEED GAS
GROUP III
CW
FLARE
OVHD ACCUM
REFLUX
SOUR WATER FLASH DRUM
R3 BYPASS
2ND STG FD

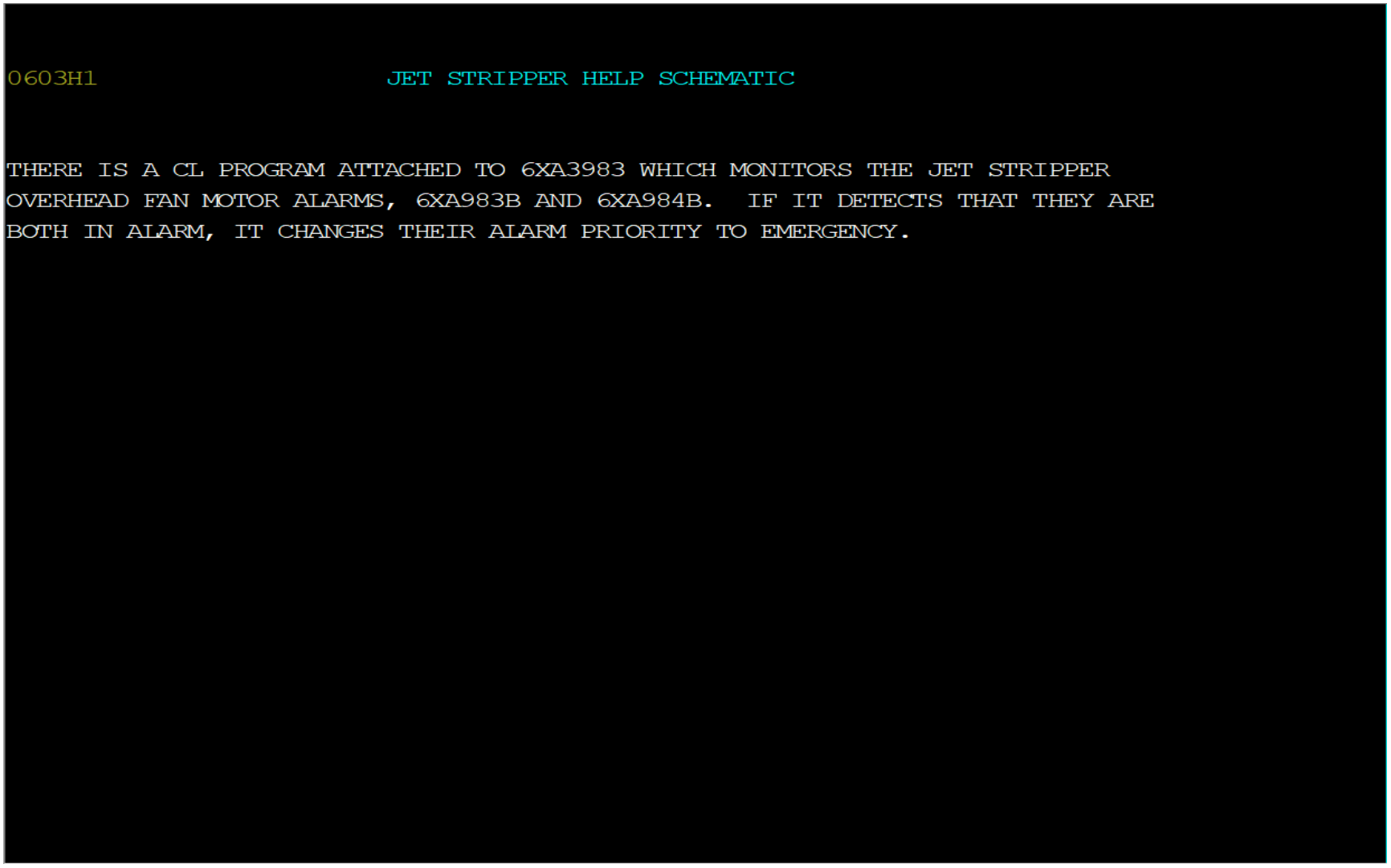

0603
Ack Page
Name
Eng U
Hide
9999.9
0603
Help
6FI141
900# COND
9999.99
B
Tank 914
3PC471
W 9999.99
9999.99
6FI109
9999.99
B
6XA984A
6XA983A
6XA984B
6XA983B
State
Jet Products Stabilizer Feed/Effluent Exchangers
STAB Feed EXCH
E
W
6TI729
9999.99
F
CW
6TI730
9999.99
F
6LA305
State
6HC985
M 9999.99
%
Flare
6LA310
State
6LA309
State
6LA308
State
Top KO
Amine Scrubber
6TI769
9999.99
F
RECY COMP
AMN K.O.
6TK9001
9999.99
T DT
6PD424
9999.99
DP
6FC112
W 9999.99
9999.99
6FQ112
100%
F
LEAN AMN
6LC307
W 9999.99
9999.99
L
LL
S
6PI467
9999.99
P
6PD467
9999.99
T DP
DESULF FD/EFF EXCH
6TI726
9999.99
F
6PA3412
State
Sour Seal Oil Gas
6PI412
9999.99
P
Feed Gas
DESULF STRIPR
SOME CALCULATIONS ON LEVEL BAR GIVEN IN NW, NEED TO DISCUSS WITH LAR
6LC306
W 9999.99
9999.99
6LO306
100%
Reflux
6FI111
9999.99
B
OVHD ACCUM
6LC304
W 9999.99
9999.99
6LA304
State
6LA301
State
6LC303
W 9999.99
9999.99
6LA302
State
6TA3728
State
6TI728
9999.99
F
6FI110
9999.99
B
6LO303
100%
6LO304
100%
6FI120
9999.99
B
6FK3121
9999.99
B
6TI776
9999.99
F
6LO307
100%
6FI113
9999.99
B
REACH AMN
Sour Water Flash Drum
R3 Bypass
2nd STG FD
Reserved for Faceplates

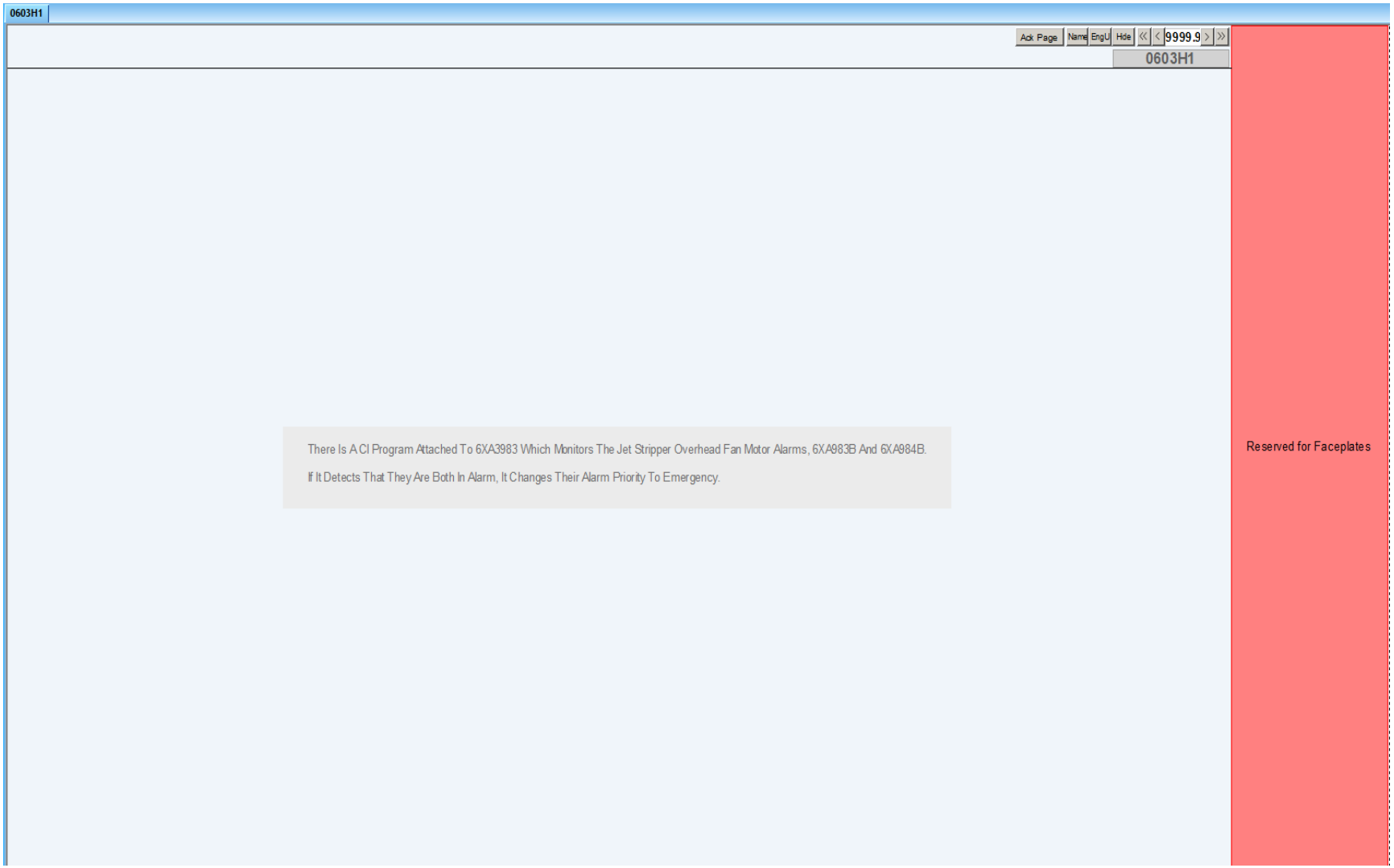
3.194 UNIT ST CONTROLS HELP MENU (0603H.DS)


0603H
UNIT ST CONTROLS HELP MENU
1:
STRIPPER OH FAN MOTOR ALARM
PROGRAM
0603H1

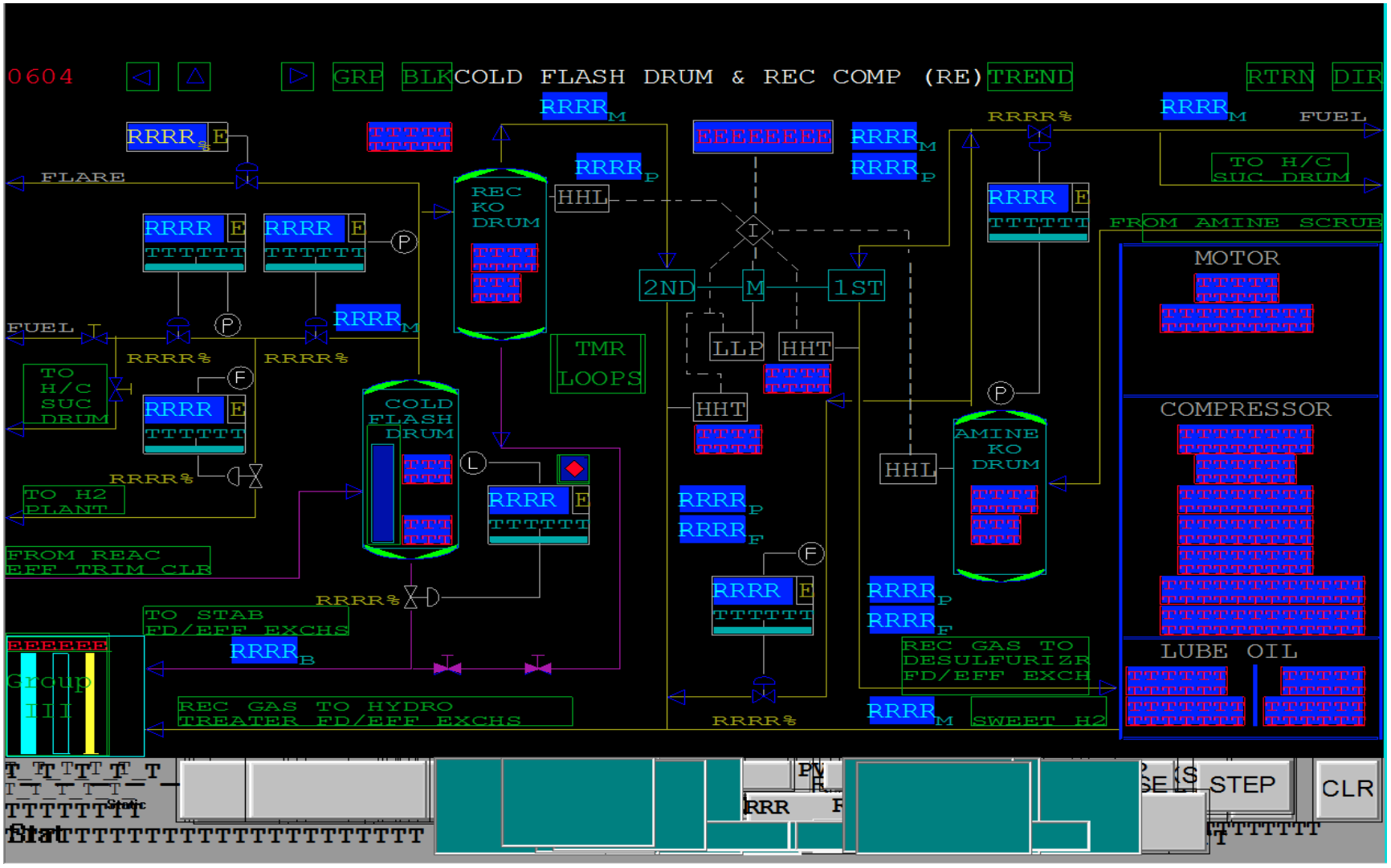

0603H
Ack Page
Name
EngU
Hide
9999.9
0603H
Unit ST Controls Help Menu
1 :
Stripper OH Fan Motor Alarm Program
0603H1
Reserved for Faceplates

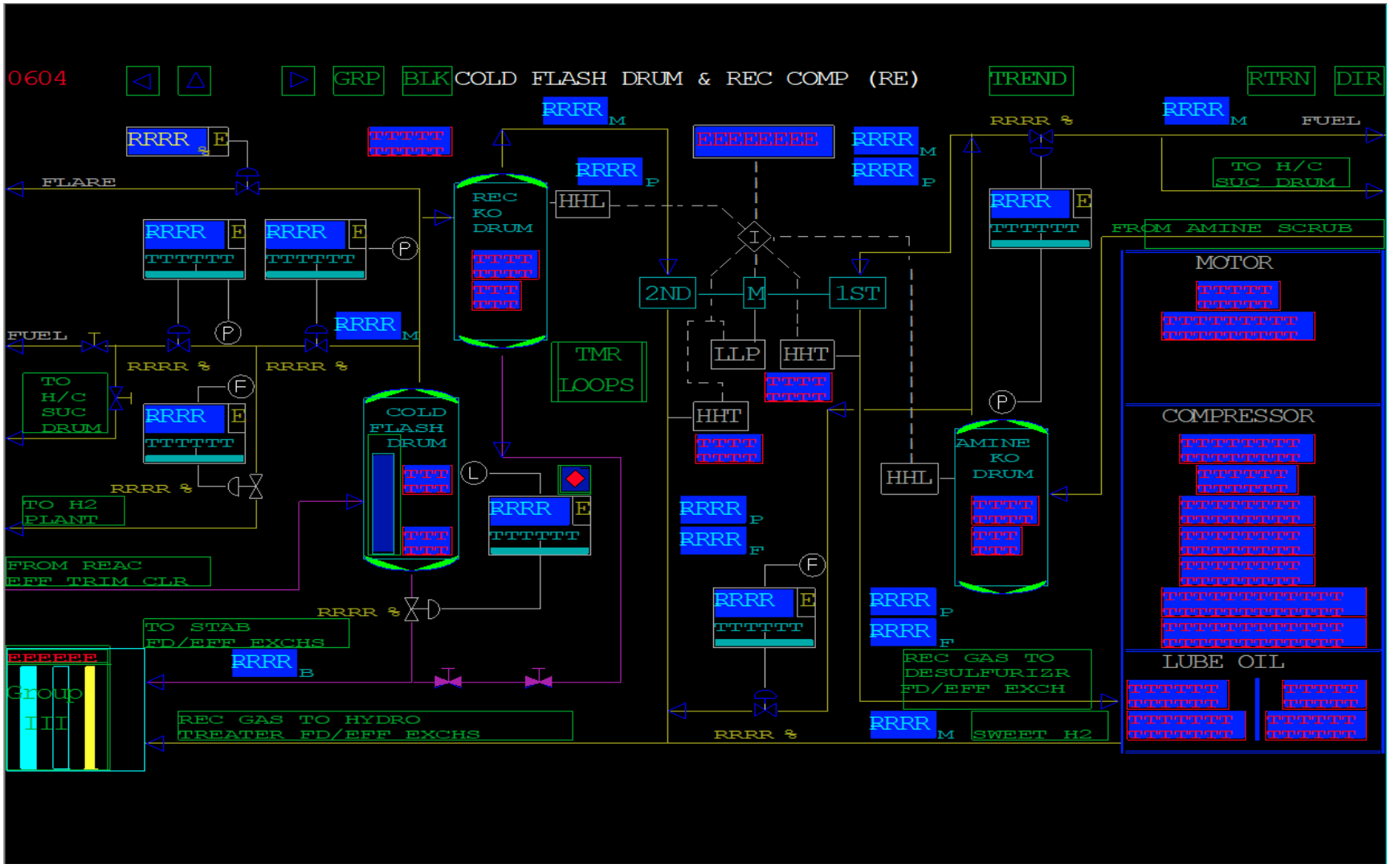
3.195 JET STRIPPER HELP SCHEMATIC (0603H1.DS)

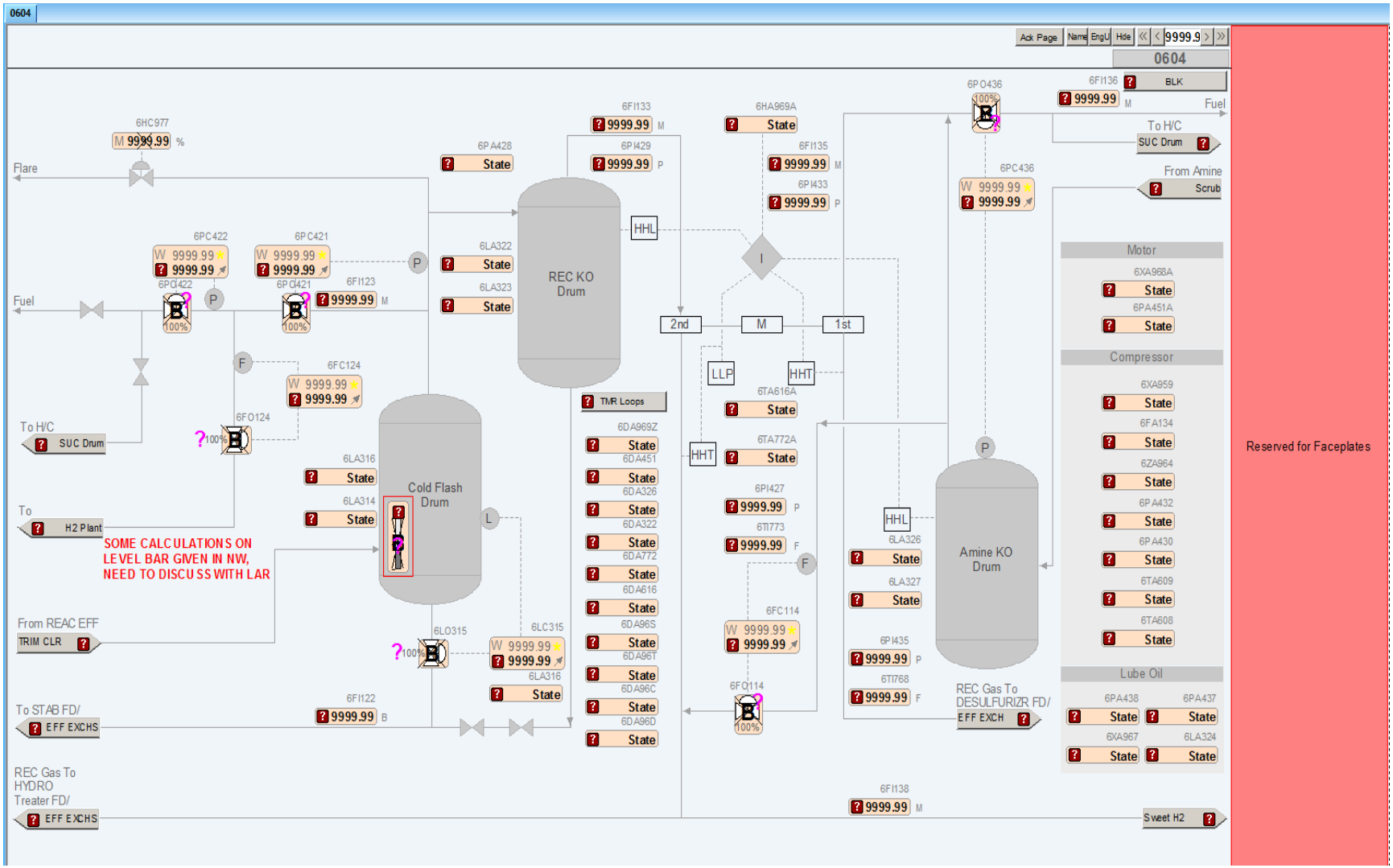

0603H1
JET STRIPPER HELP SCHEMATIC
THERE IS A CL PROGRAM ATTACHED TO 6XA3983 WHICH MONITORS THE JET STRIPPER
OVERHEAD FAN MOTOR ALARMS, 6XA983B AND 6XA984B. IF IT DETECTS THAT THEY ARE
BOTH IN ALARM, IT CHANGES THEIR ALARM PRIORITY TO EMERGENCY.


0603H1
Ack Page
Name
EngU
Hide
9999.9
0603H1
There Is A CI Program Attached To 6XA3983 Which Monitors The Jet Stripper Overhead Fan Motor Alarms, 6XA983B And 6XA984B.
If It Detects That They Are Both In Alarm, It Changes Their Alarm Priority To Emergency.
Reserved for Faceplates

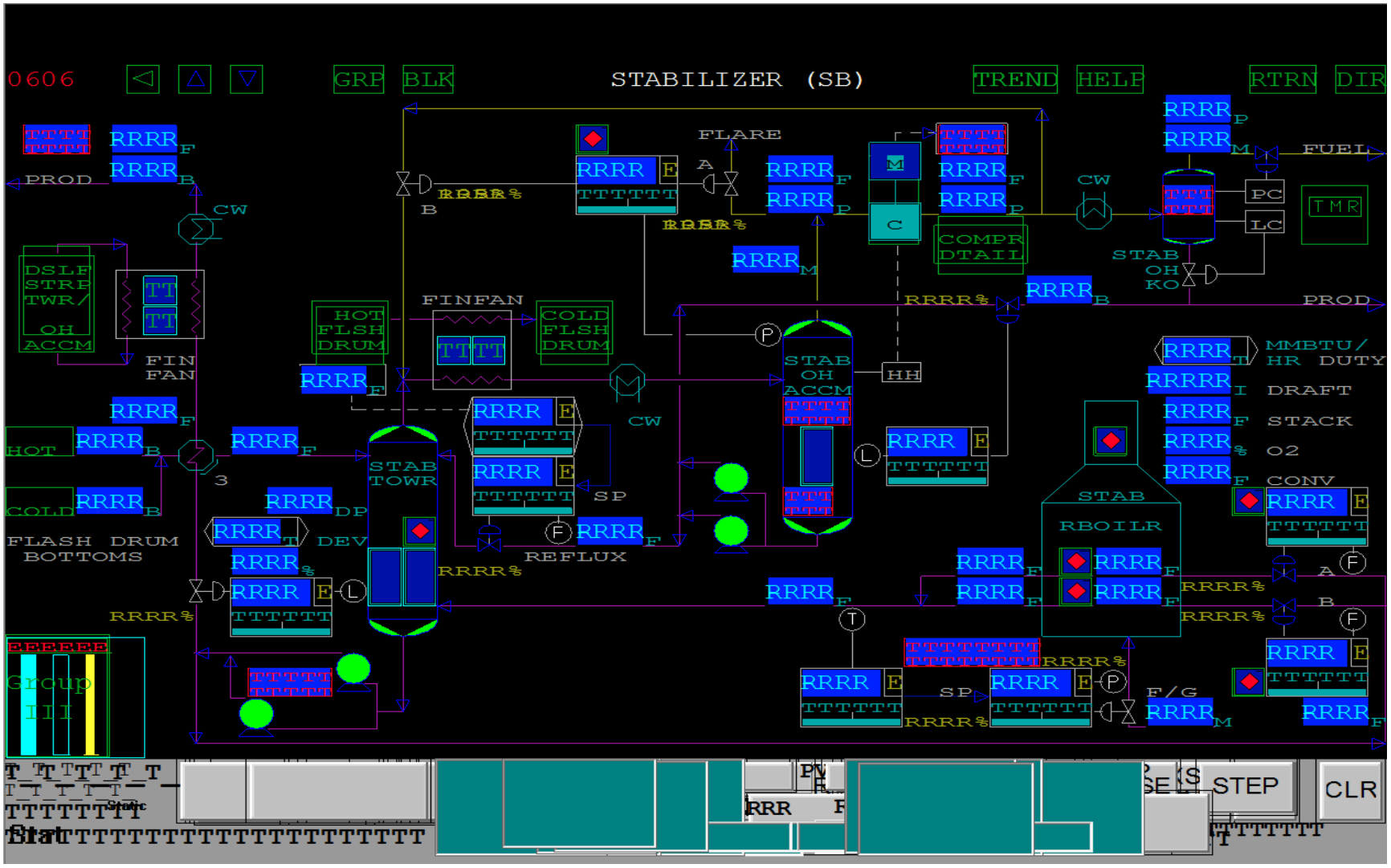
3.196 COLD FLASH DRUM & REC COMP (RE) (0604.DS)

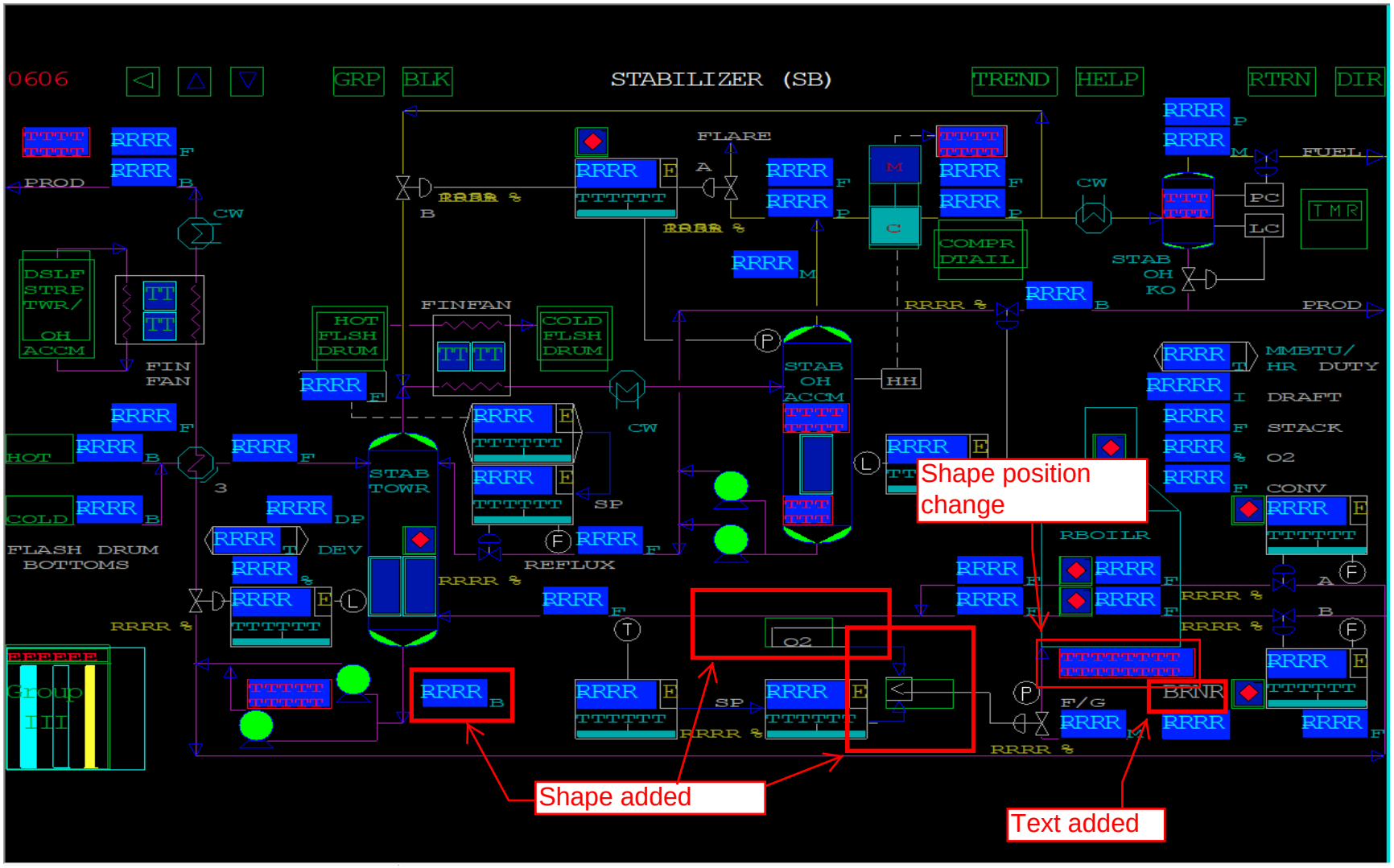


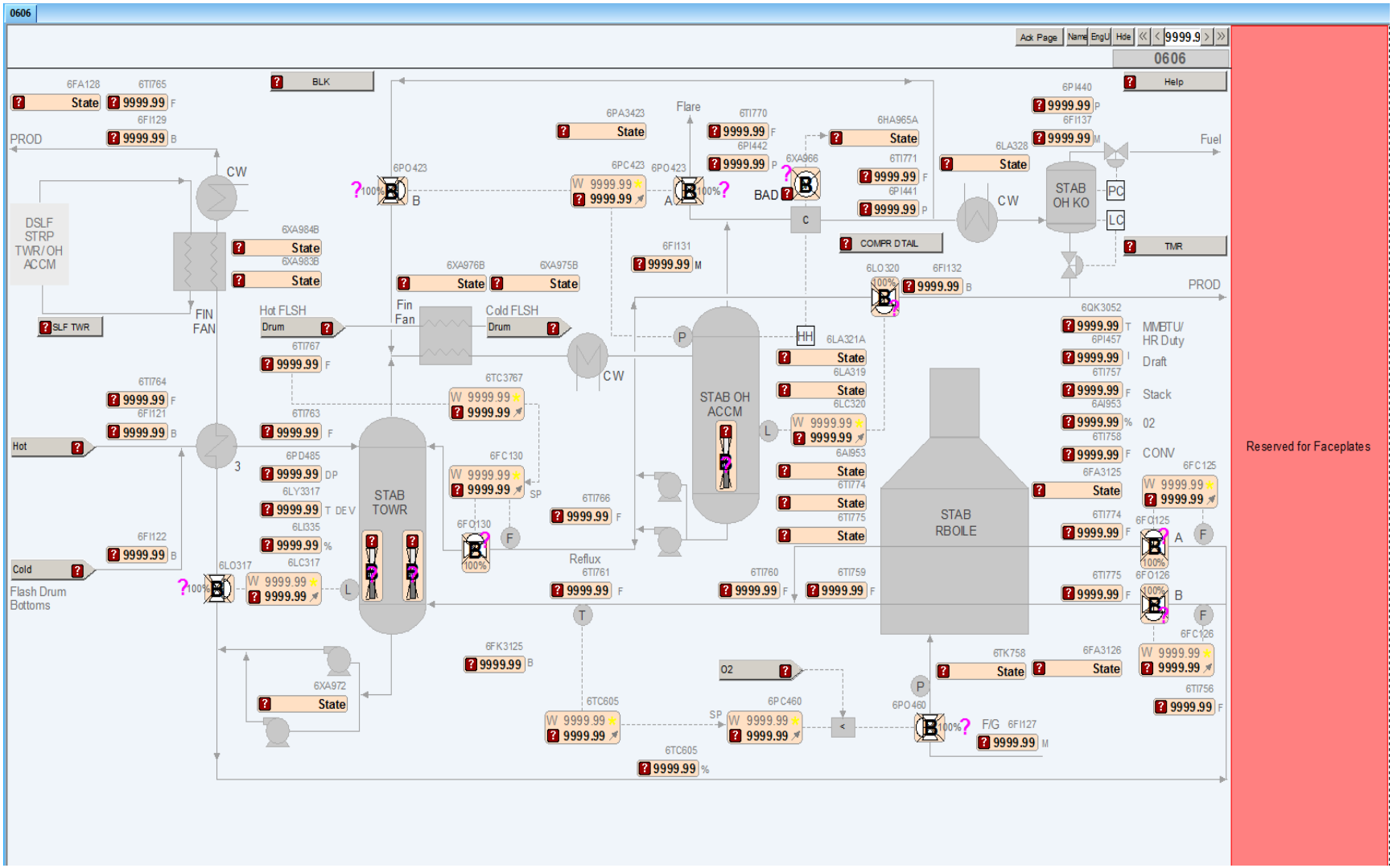

0604
GRP
BLK
COLD FLASH DRUM & REC COMP (RE)
TREND
RTRN
DIR
FLARE
FUEL
REC KO DRUM
HHL
2ND
M
1ST
LLP
HHT
TMR LOOPS
TO H/C SUC DRUM
FROM AMINE SCRUB
MOTOR
COMPRESSOR
LUBE OIL
COLD FLASH DRUM
AMINE KO DRUM
TO H2 PLANT
FROM REAC EFF TRIM CLR
TO STAB FD/EFF EXCHS
GROUP III
REC GAS TO HYDRO TREATER FD/EFF EXCHS
REC GAS TO DESULFURIZR FD/EFF EXCH
SWEET H2


0604
Ack Page
Name
EngU
Hide
0604
6HC977
M 9999.99 %
Flare
6PA428
State
6FI133
9999.99 M
6PI429
9999.99 P
6HA969A
State
6FI135
9999.99 M
6PI433
9999.99 P
6PO436
6FI136
BLK
9999.99 M
Fuel
To H/C
SUC Drum
From Amine
Scrub
6PC436
W 9999.99
9999.99
6PC422
W 9999.99
9999.99
6PC421
W 9999.99
9999.99
6LA322
State
6LA323
State
REC KO Drum
HHL
I
2nd
M
1st
LLP
HHT
6TA616A
State
6TA772A
State
HHT
6PI427
9999.99 P
6TI773
9999.99 F
F
6FC114
W 9999.99
9999.99
6FO114
6FI123
9999.99 M
Fuel
F
6FC124
W 9999.99
9999.99
6FO124
To H/C
SUC Drum
TMR Loops
6DA969Z
State
6DA451
State
6DA326
State
6DA322
State
6DA772
State
6DA616
State
6DA96S
State
6DA96T
State
6DA96C
State
6DA96D
State
6LA316
State
6LA314
State
Cold Flash Drum
L
To
H2 Plant
SOME CALCULATIONS ON LEVEL BAR GIVEN IN NW, NEED TO DISCUSS WITH LAR
From REAC EFF
TRIM CLR
6LO315
6LC315
W 9999.99
9999.99
6LA316
State
6FI122
9999.99 B
To STAB FD/
EFF EXCHS
REC Gas To HYDRO Treater FD/
EFF EXCHS
HHL
6LA326
State
6LA327
State
6PI435
9999.99 P
6TI768
9999.99 F
Amine KO Drum
P
REC Gas To DESULFURIZR FD/
EFF EXCH
6FI138
9999.99 M
Sweet H2
Motor
6XA968A
State
6PA451A
State
Compressor
6XA959
State
6FA134
State
6ZA964
State
6PA432
State
6PA430
State
6TA609
State
6TA608
State
Lube Oil
6PA438
State
6PA437
State
6XA967
State
6LA324
State
Reserved for Faceplates

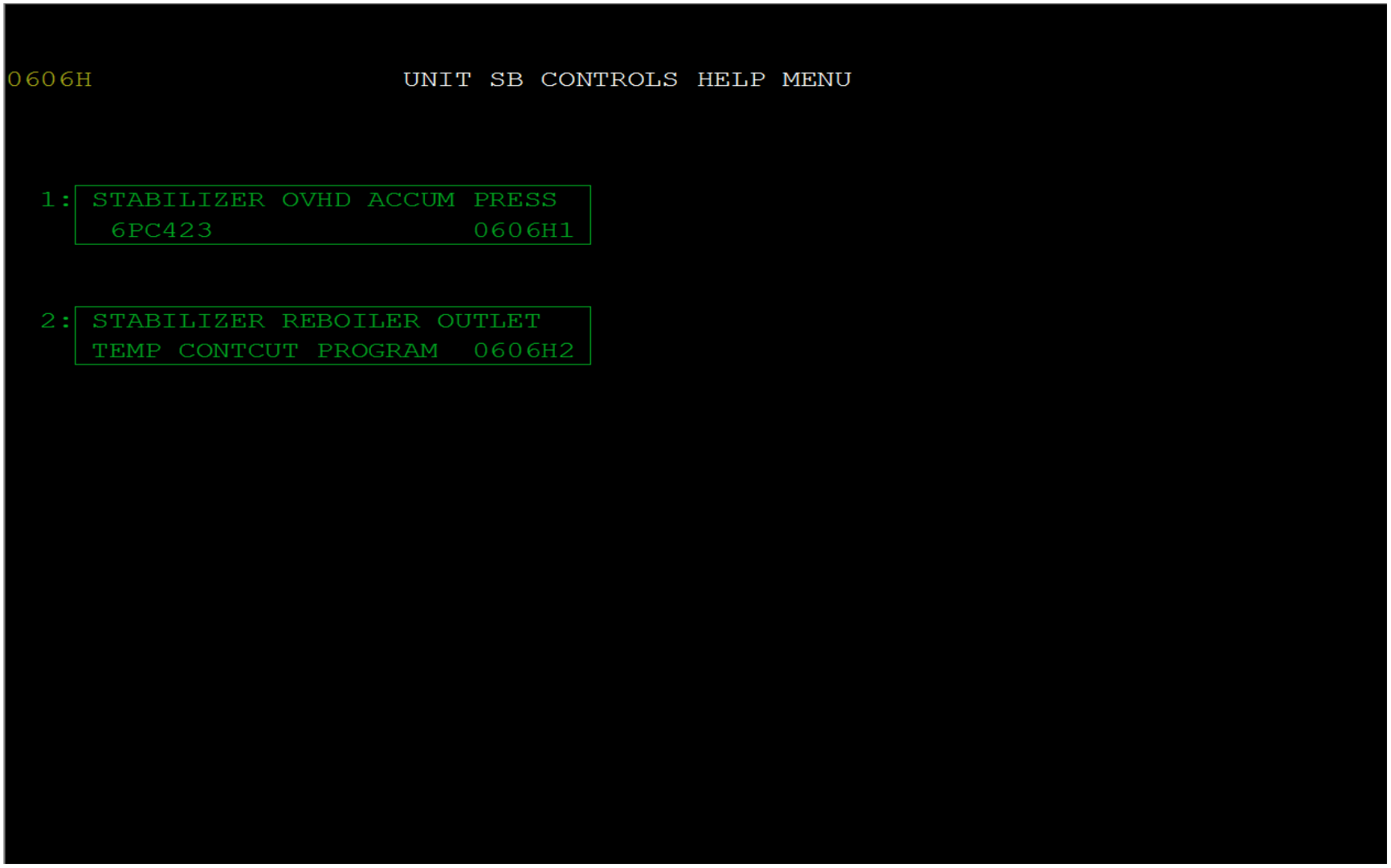
3.197 STABILIZER (SB) (0606.DS)

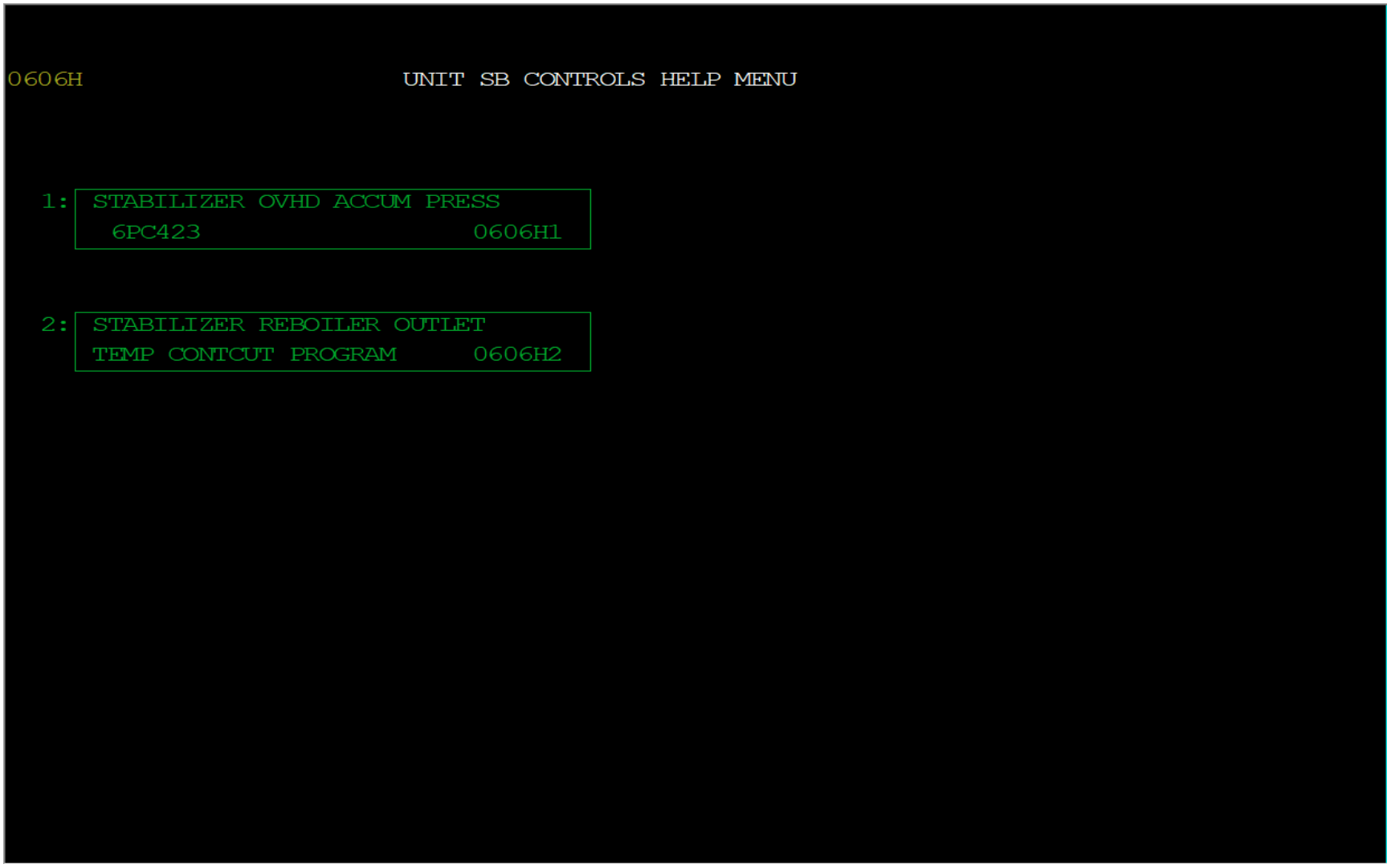


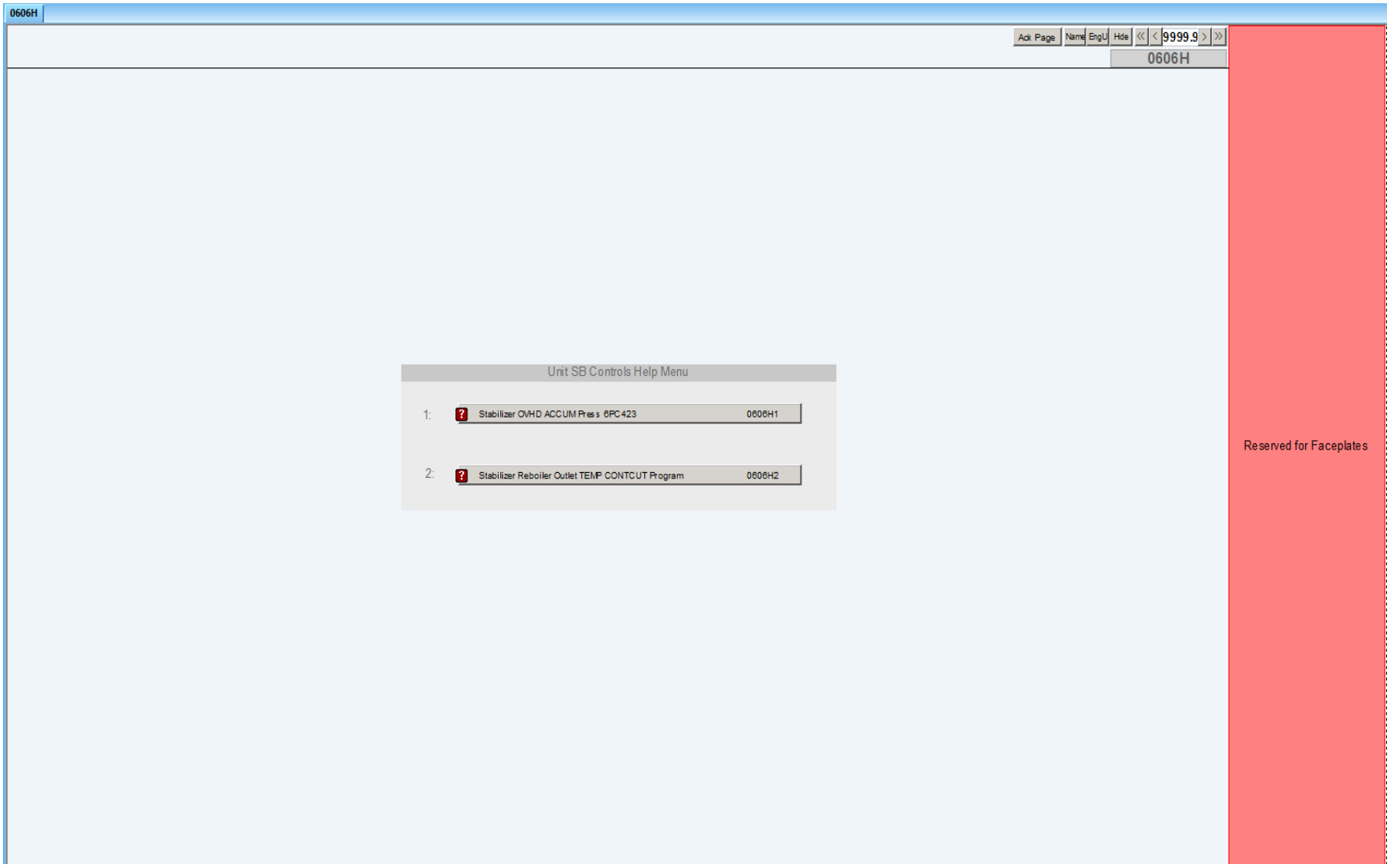

0606
GRP
BLK
STABILIZER (SB)
TREND
HELP
RTRN
DIR
PROD
CW
FLARE
FUEL
PC
LC
TMR
COMPR DTAIL
STAB OH KO
DSLF STRP TWR/ OH ACCM
FIN FAN
HOT FLSH DRUM
COLD FLSH DRUM
STAB OH ACCM
HH
MMBTU/ HR DUTY
DRAFT
STACK
O2
CONV
HOT
COLD
FLASH DRUM BOTTOMS
STAB TOWR
DEV
REFLUX
SP
RBOILR
F/G
BRNR
Group III
Shape position change
Shape added
Text added


0606
Ack Page
Name
Eng U
Hide
0606
Help
BLK
PROD
CW
DSLF STRP TWR/OH ACCM
SLF TWR
FIN FAN
Hot FLSH Drum
Cold FLSH Drum
Fin Fan
Hot
Cold
Flash Drum Bottoms
STAB TOWR
STAB OH ACCM
STAB RBOILE
STAB OH KO
Flare
Fuel
BAD
COMPR DTAIL
TMR
Reflux
Reserved for Faceplates

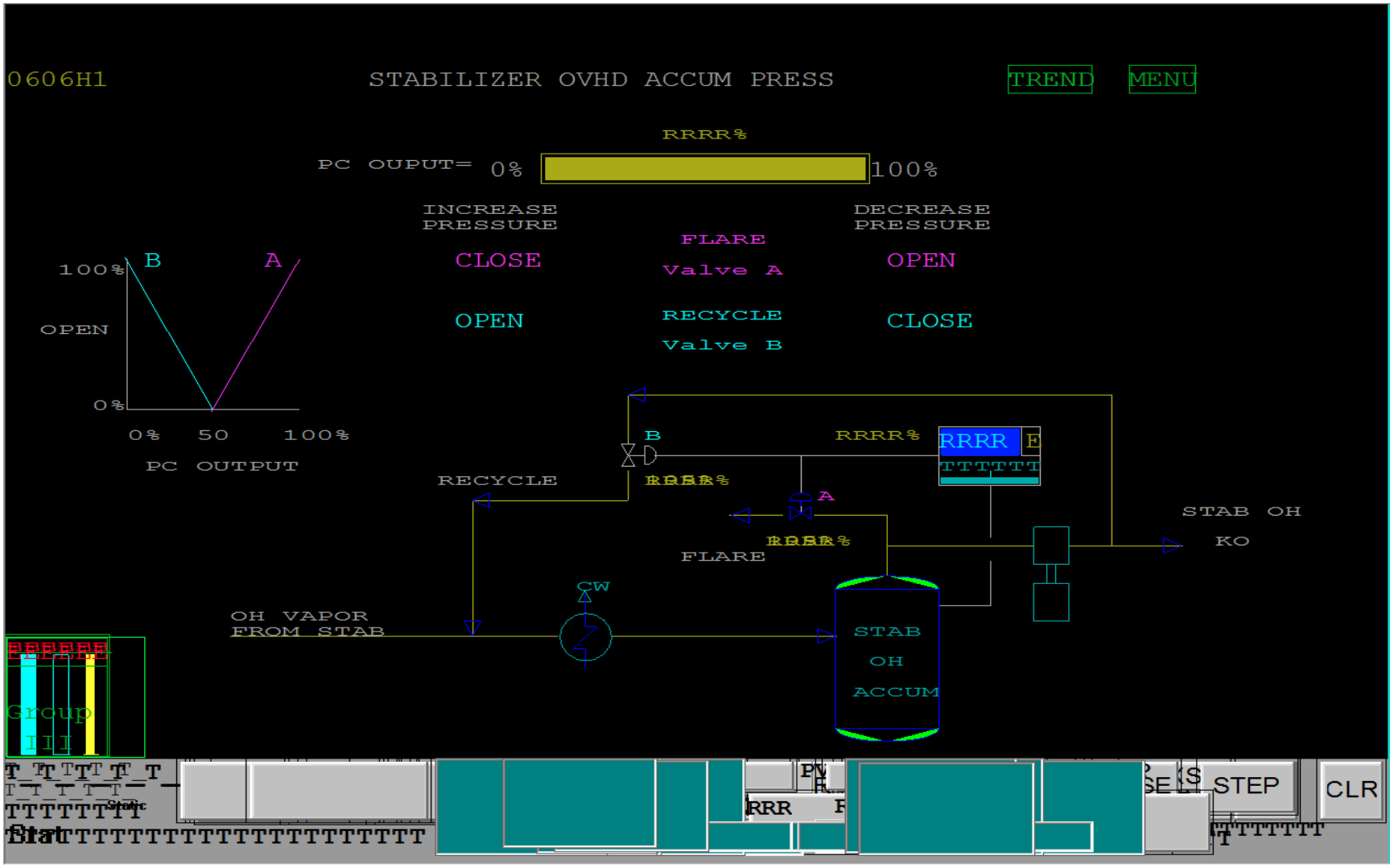
3.198 UNIT SB CONTROLS HELP MENU (0606H.DS)

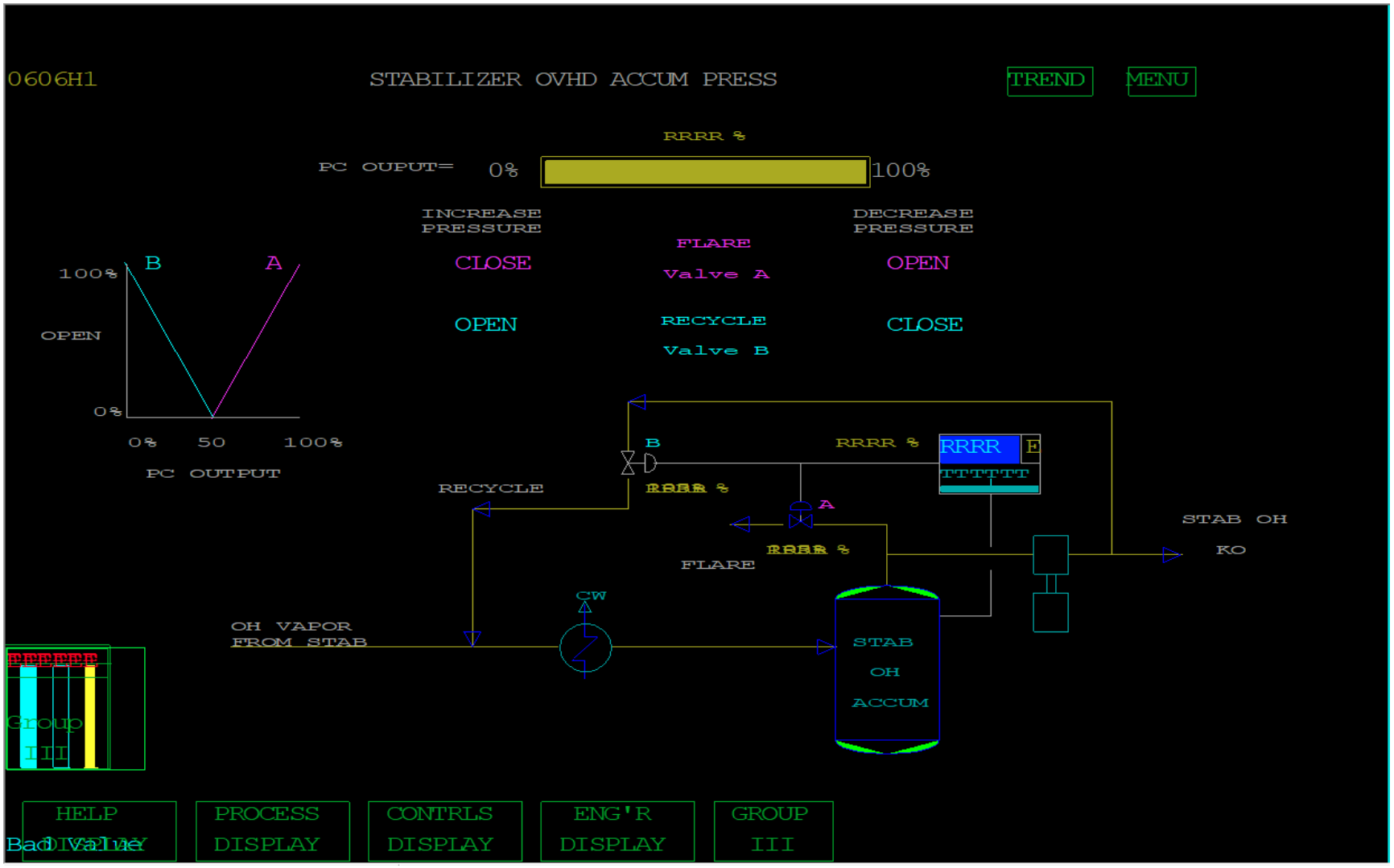


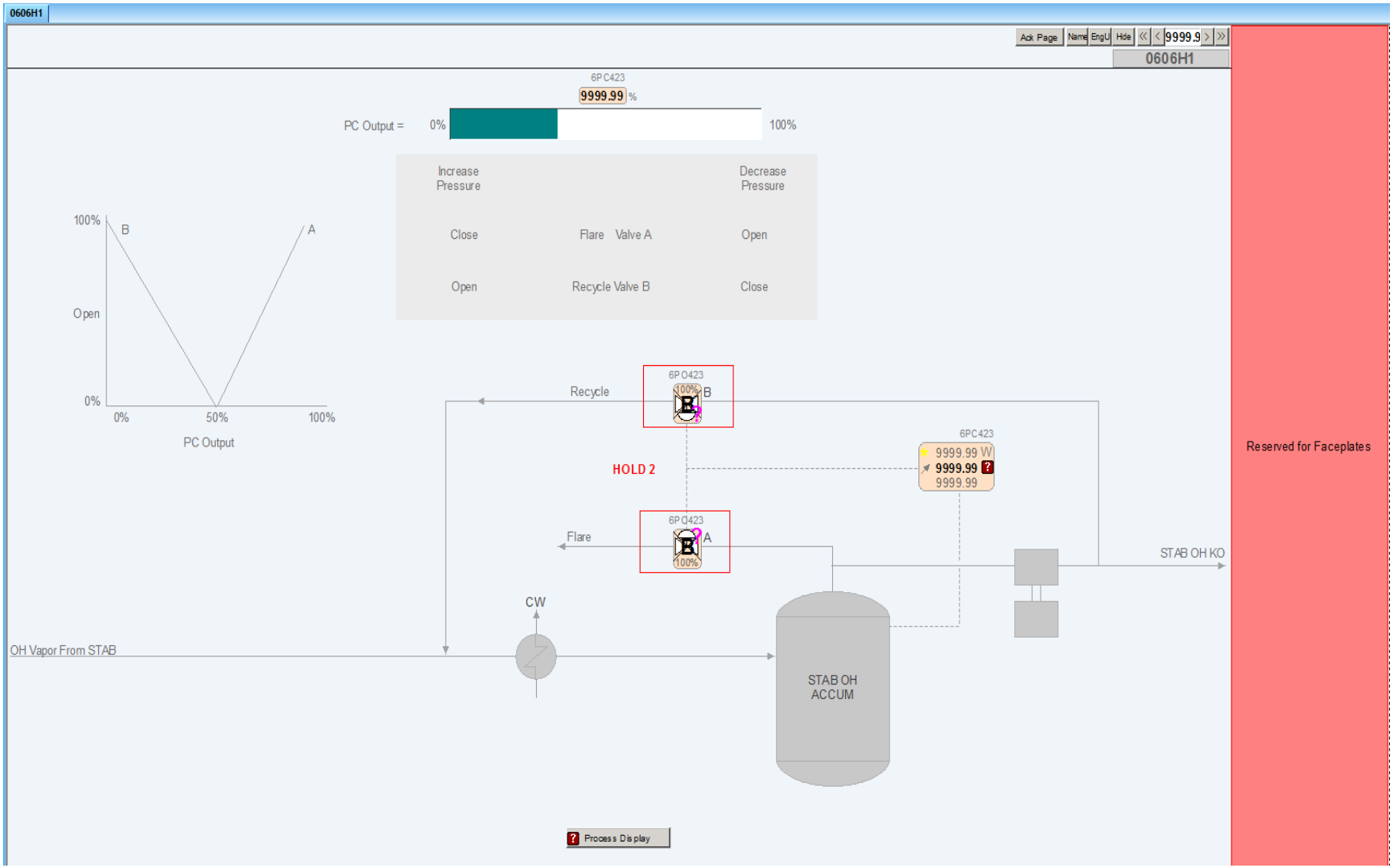

0606H
UNIT SB CONTROLS HELP MENU
1:
STABILIZER OVHD ACCUM PRESS
6PC423
0606H1
2:
STABILIZER REBOILER OUTLET
TEMP CONTCUT PROGRAM
0606H2


0606H
Ack Page
Name
EngU
Hide
9999.9
0606H
Unit SB Controls Help Menu
1:
Stabilizer OVHD ACCUM Press 6PC423
0606H1
2:
Stabilizer Reboiler Outlet TEMP CONTCUT Program
0606H2
Reserved for Faceplates

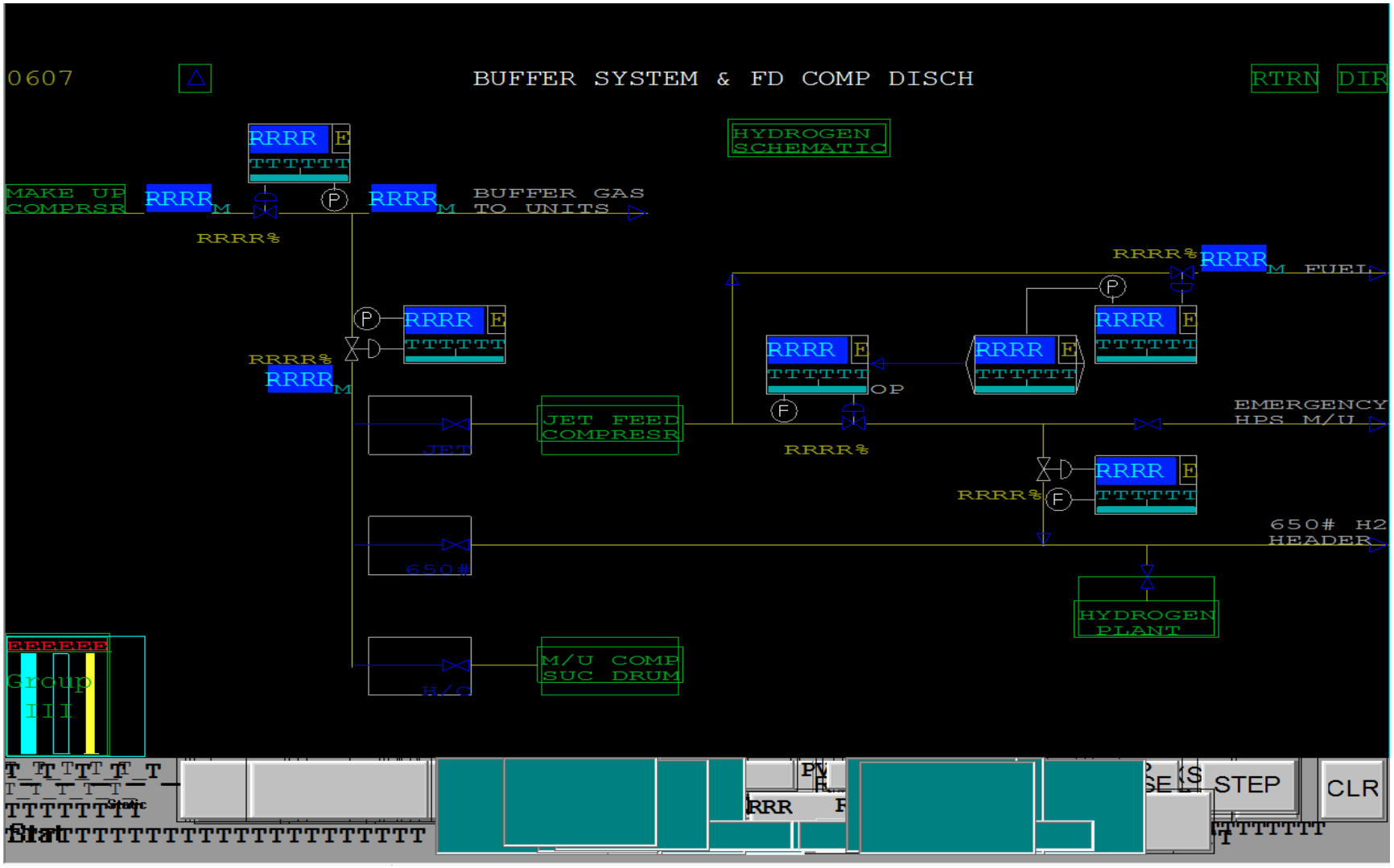
3.199 STABILIZER OVHD ACCUM PRESS (0606H1.DS)

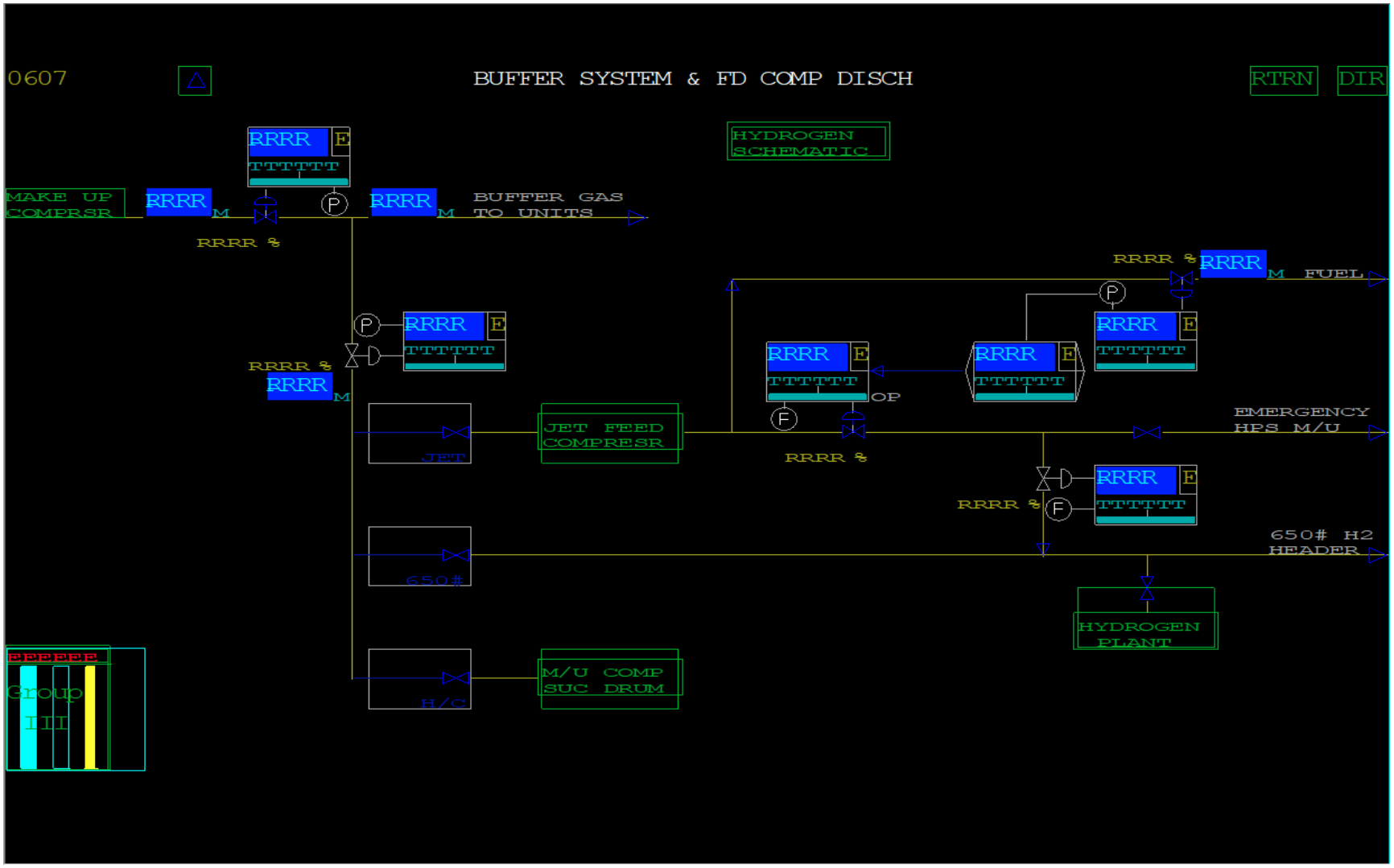


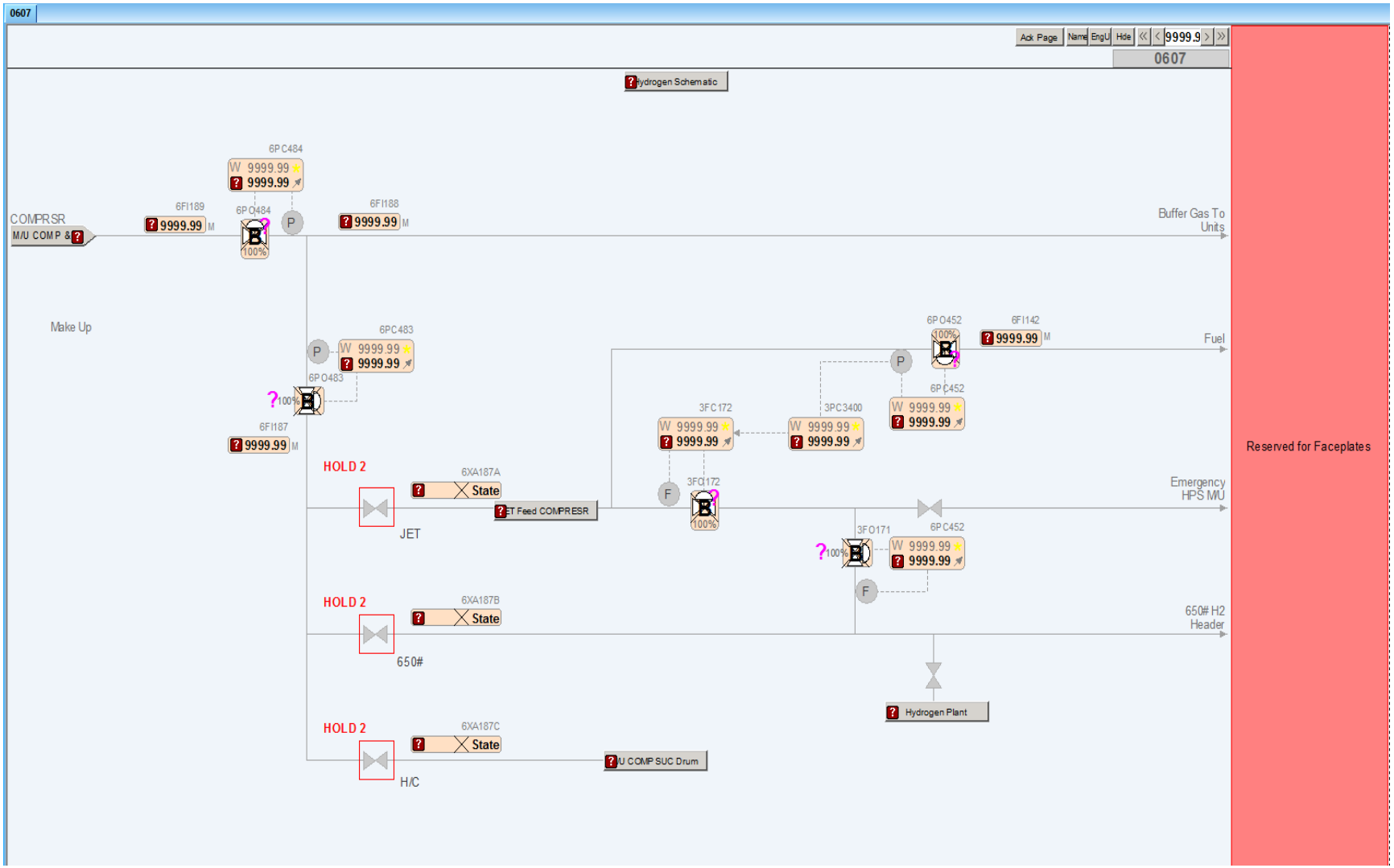

0606H1
STABILIZER OVHD ACCUM PRESS
TREND
MENU
RRRR %
PC OUPUT=
0%
100%
INCREASE PRESSURE
DECREASE PRESSURE
FLARE
Valve A
CLOSE
OPEN
OPEN
RECYCLE
Valve B
CLOSE
100%
OPEN
0%
B
A
0%
50
100%
PC OUTPUT
B
RRRR %
RRRR
TTTTTT
RECYCLE
A
FLARE
STAB OH
KO
CW
OH VAPOR
FROM STAB
STAB
OH
ACCUM
Group
III
HELP
DISPLAY
PROCESS
DISPLAY
CONTRLS
DISPLAY
ENG'R
DISPLAY
GROUP
III
Bad Value


0606H1
Ack Page
Name
Eng U
Hide
9999.9
0606H1
6PC423
9999.99 %
PC Output =
0%
100%
Increase Pressure
Decrease Pressure
Close
Flare Valve A
Open
Open
Recycle Valve B
Close
100%
Open
0%
B
A
0%
50%
100%
PC Output
Recycle
6PC423
100%
B
6PC423
9999.99 W
9999.99
9999.99
HOLD 2
6PC423
Flare
A
100%
STAB OH KO
CW
OH Vapor From STAB
STAB OH ACCUM
Process Display
Reserved for Faceplates

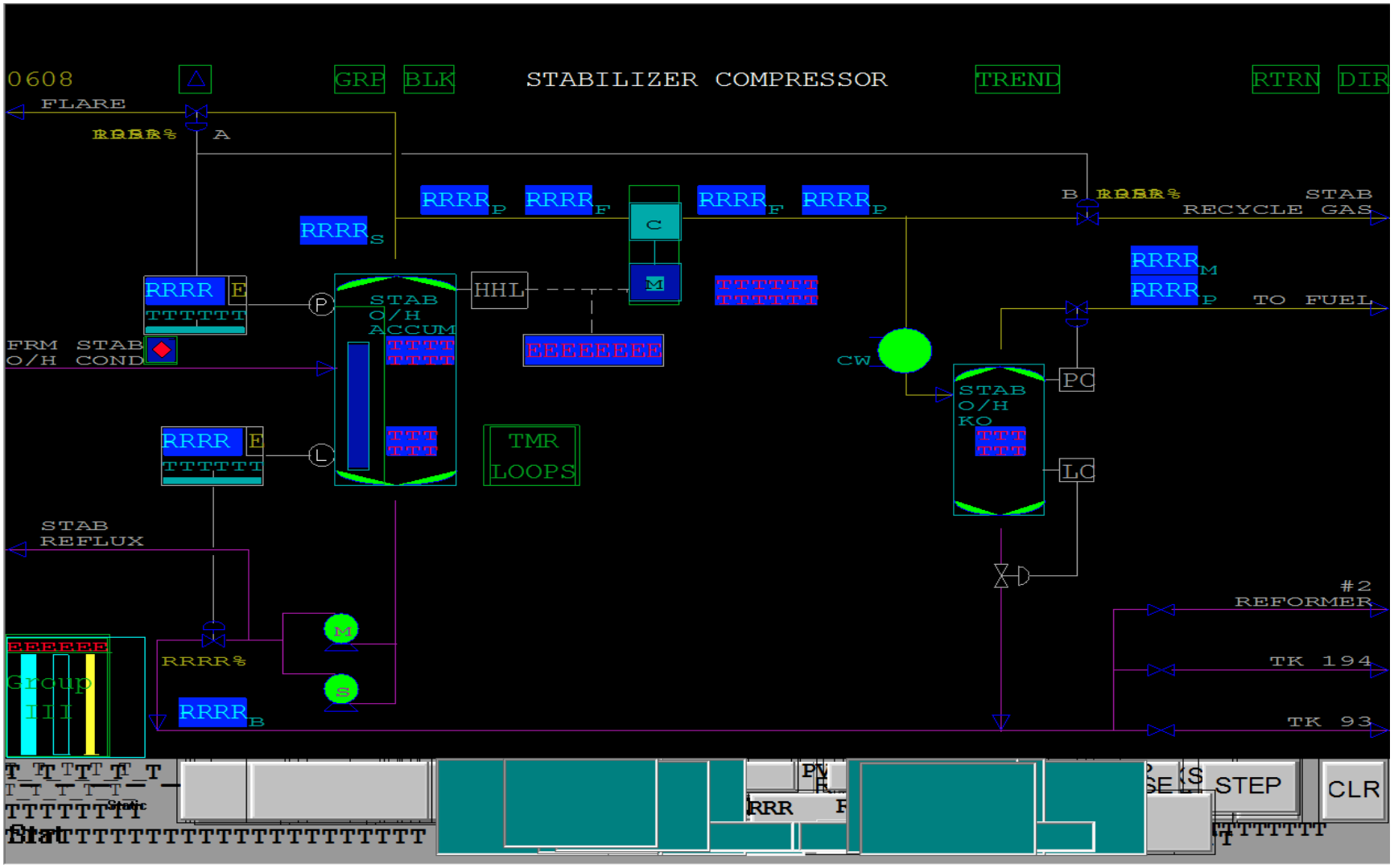
3.200 BUFFER SYSTEM & FD COMP DISCH (0607.DS)

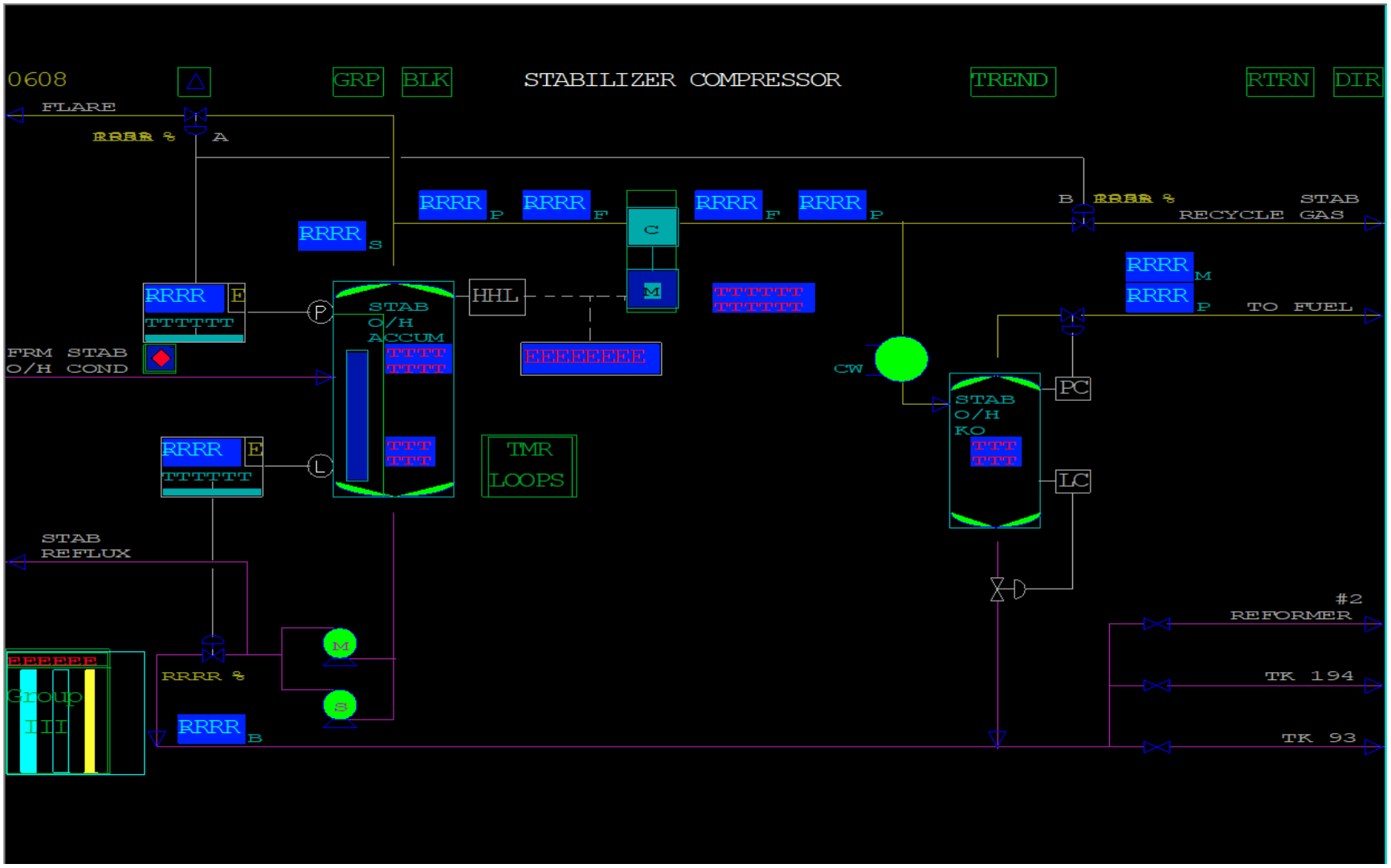


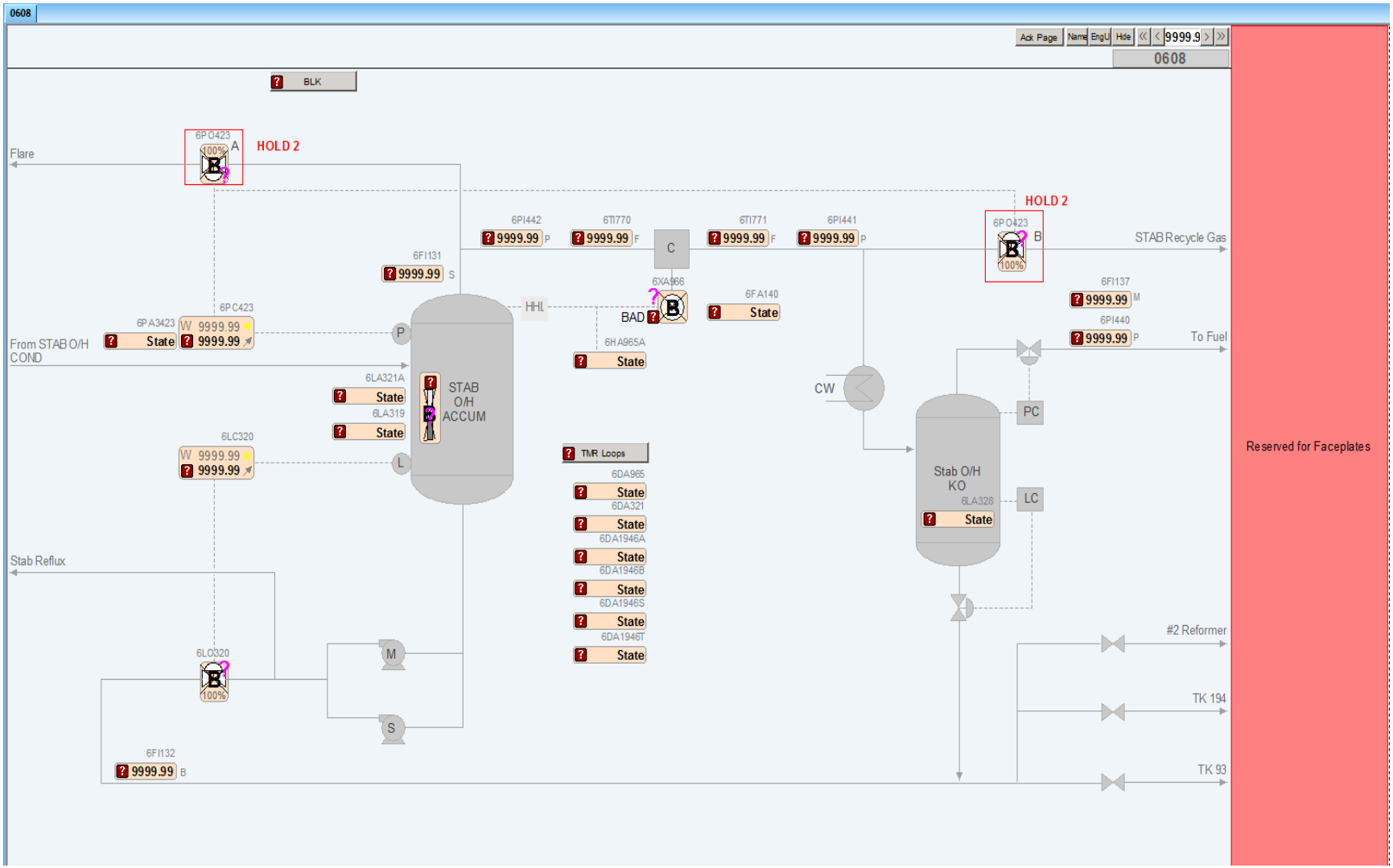

0607
BUFFER SYSTEM & FD COMP DISCH
RTRN
DIR
HYDROGEN SCHEMATIC
MAKE UP COMPRSR
BUFFER GAS TO UNITS
FUEL
JET FEED COMPRESR
JET
650#
H/C
M/U COMP SUC DRUM
EMERGENCY HPS M/U
650# H2 HEADER
HYDROGEN PLANT
GROUP III
OP


0607
Ack Page
Name
EngU
Hide
9999.9
0607
Hydrogen Schematic
6PC484
9999.99
9999.99
6FI189
9999.99
M
6PO484
100%
P
6FI188
9999.99
M
COMPRSR
M/U COMP &
Buffer Gas To Units
Make Up
6PC483
9999.99
9999.99
P
6PO483
100%
6FI187
9999.99
M
HOLD 2
6XA187A
State
JET
T Feed COMPRESR
6PO452
100%
6FI142
9999.99
M
Fuel
P
6PC452
9999.99
9999.99
3FC172
9999.99
9999.99
3PC3400
9999.99
9999.99
3FO172
100%
F
Emergency HPS MU
3FO171
100%
6PC452
9999.99
9999.99
F
HOLD 2
6XA187B
State
650#
650# H2 Header
Hydrogen Plant
HOLD 2
6XA187C
State
H/C
U COMP SUC Drum
Reserved for Faceplates

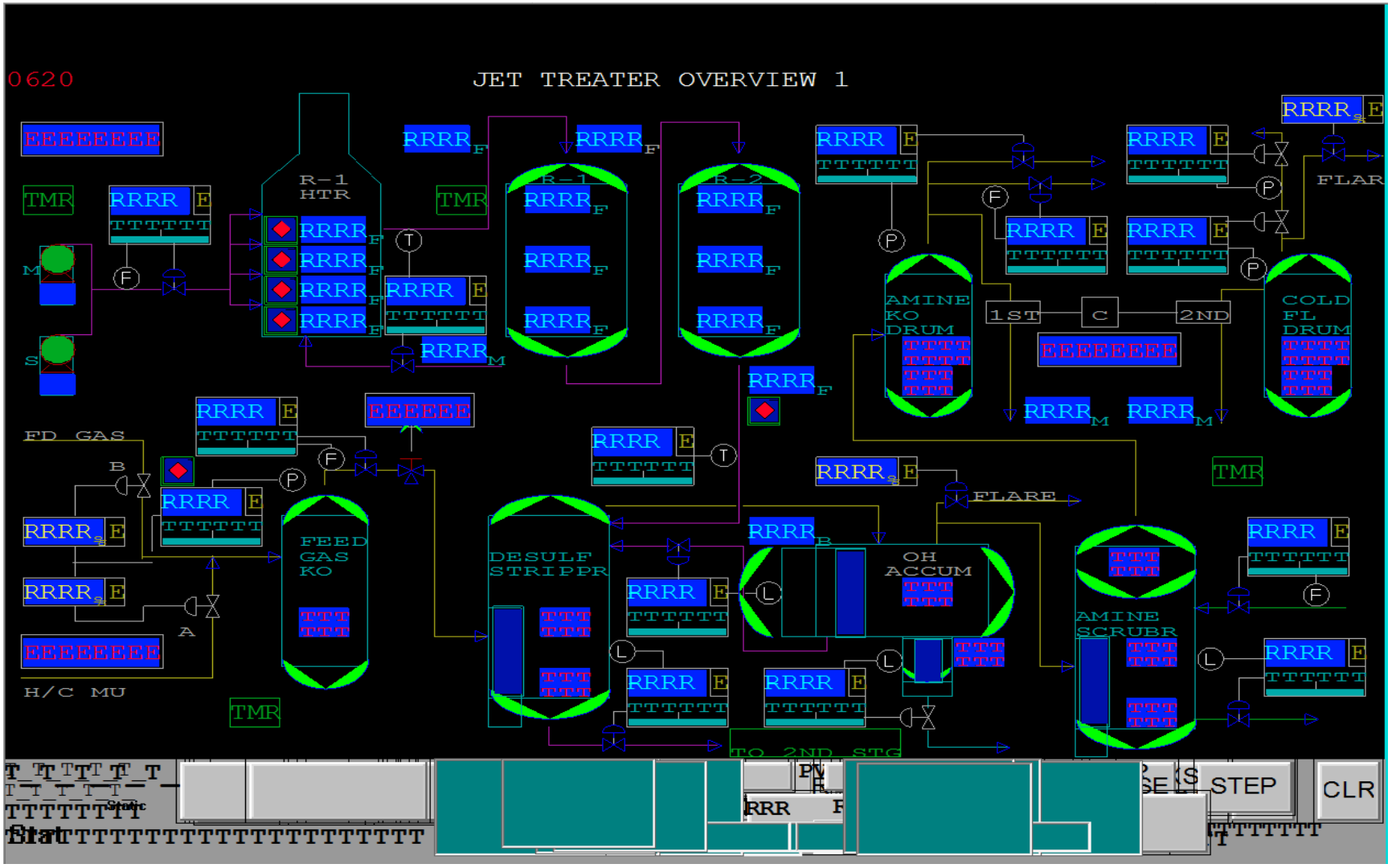
3.201 STABILIZER COMPRESSOR (0608.DS)

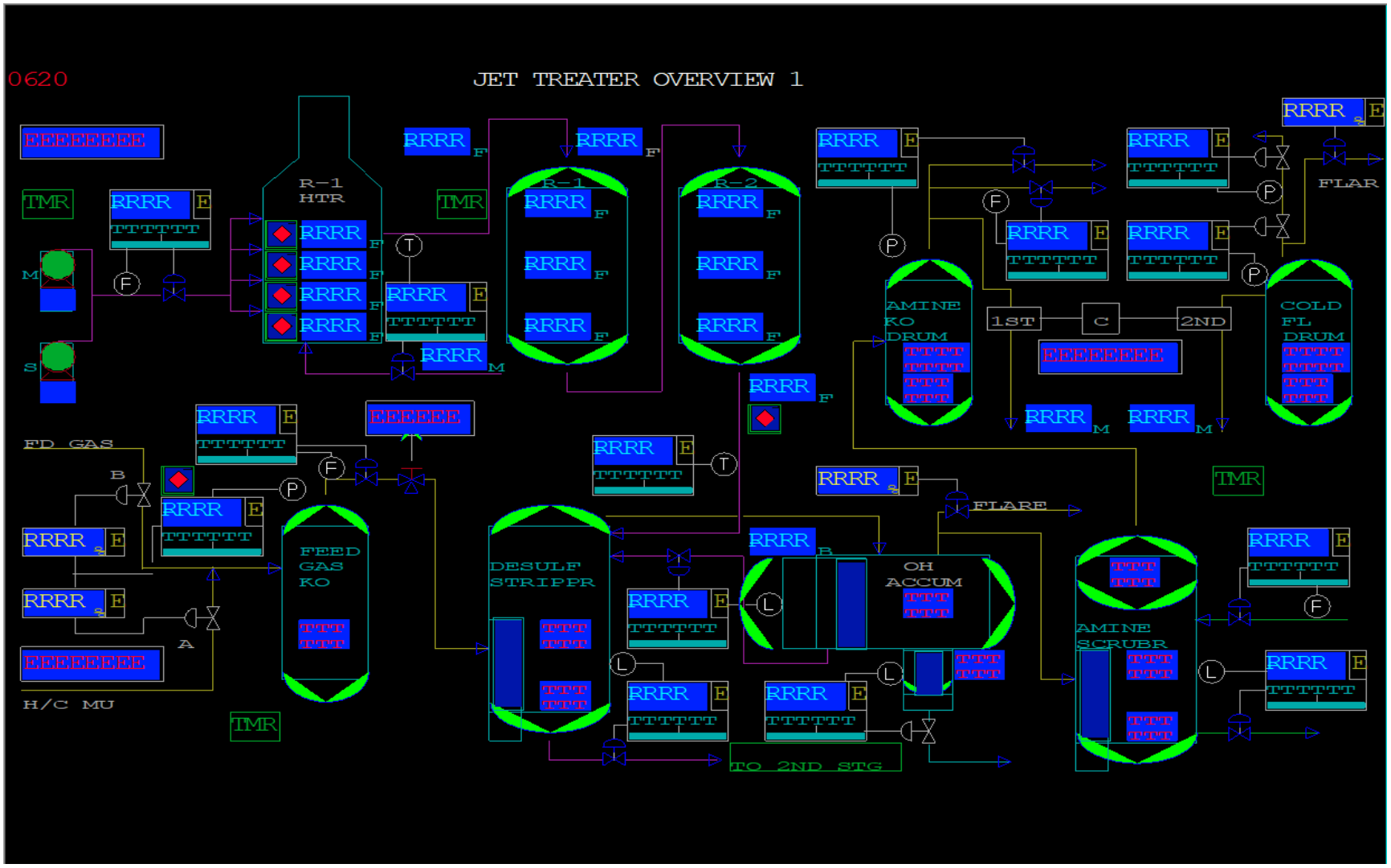


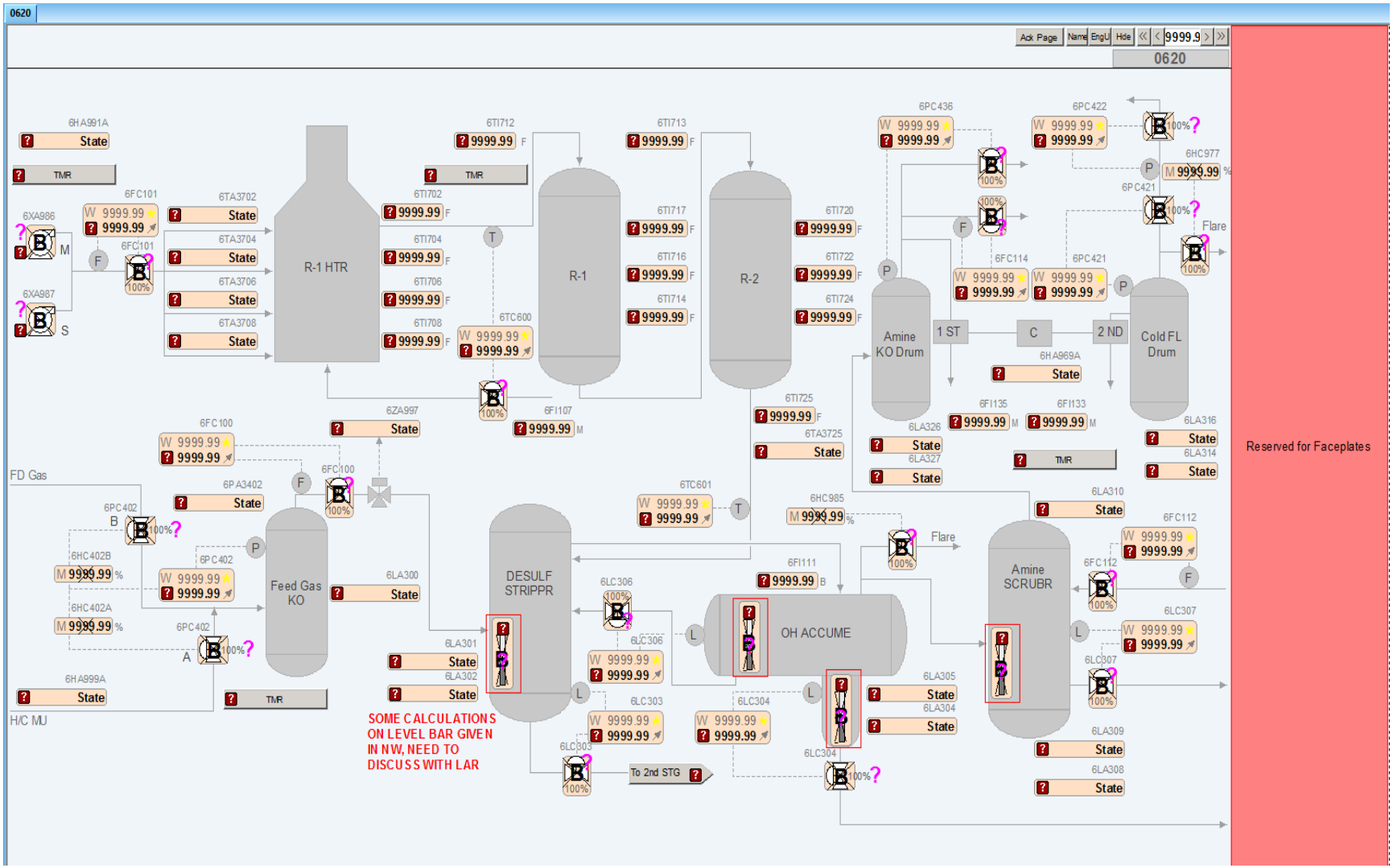

0608
GRP
BLK
STABILIZER COMPRESSOR
TREND
RTRN
DIR
FLARE
A
B
STAB
RECYCLE GAS
TO FUEL
FRM STAB
O/H COND
STAB
O/H
ACCUM
HHL
STAB
O/H
KO
CW
PC
LC
TMR
LOOPS
STAB
REFLUX
#2
REFORMER
TK 194
TK 93
Group
III


0608
Ack Page
Name
EngU
Hide
9999.9
0608
BLK
Flare
6PO423
A
HOLD 2
6PI442
9999.99
P
6TI770
9999.99
F
C
6TI771
9999.99
F
6PI441
9999.99
P
HOLD 2
6PO423
B
STAB Recycle Gas
6FI131
9999.99
S
6XA966
BAD
HHL
6FA140
State
6FI137
9999.99
M
6PI440
9999.99
P
To Fuel
6PA3423
State
6PC423
W 9999.99
9999.99
P
From STAB O/H COND
6HA965A
State
6LA321A
State
6LA319
State
STAB O/H ACCUM
CW
PC
6LC320
W 9999.99
9999.99
L
TMR Loops
6DA965
State
6DA321
State
6DA1946A
State
6DA1946B
State
6DA1946S
State
6DA1946T
State
Stab O/H KO
6LA328
State
LC
Reserved for Faceplates
Stab Reflux
6LO320
100%
M
S
#2 Reformer
TK 194
TK 93
6FI132
9999.99
B

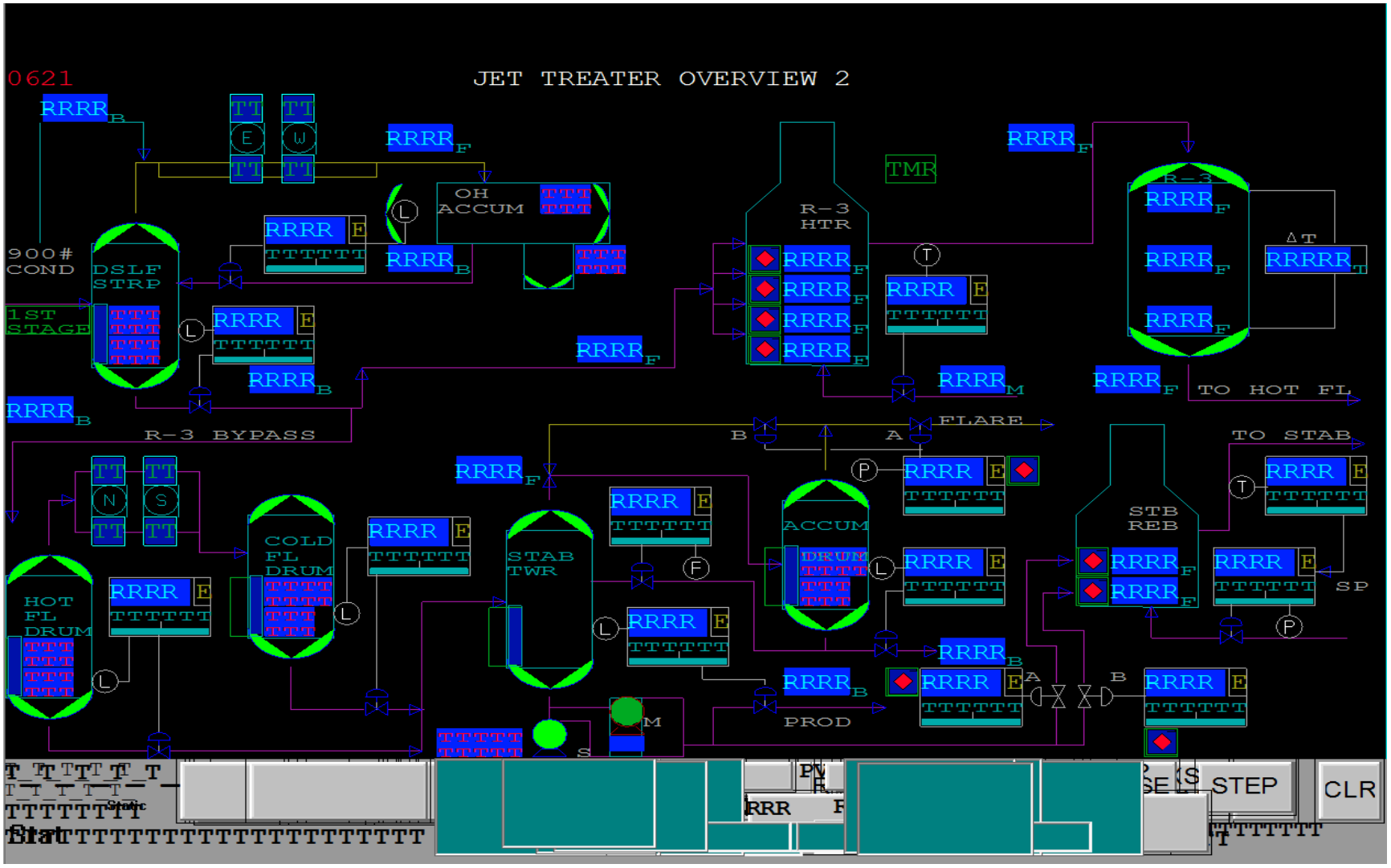
3.202 JET TREATER OVERVIEW 1 (0620.DS)

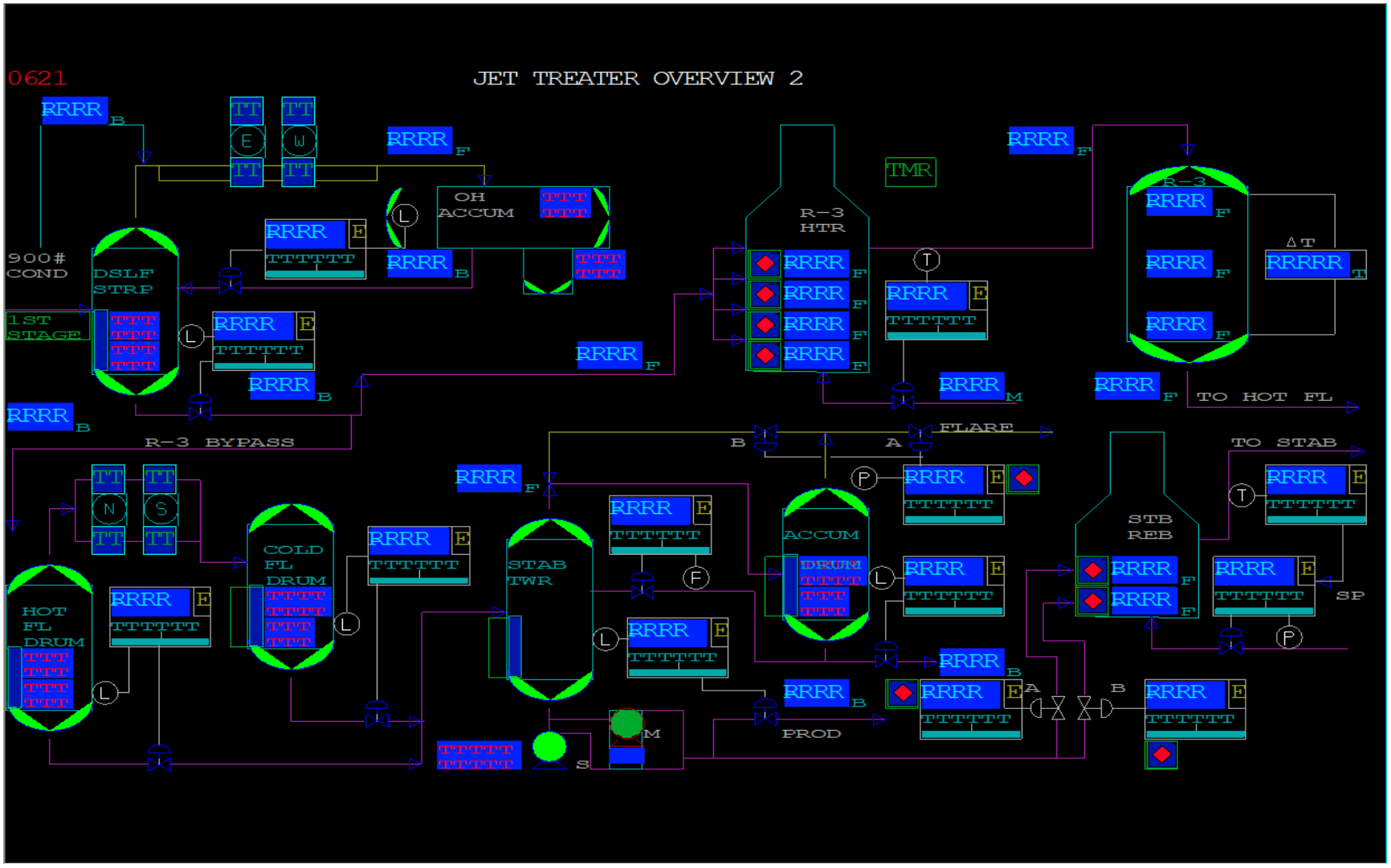


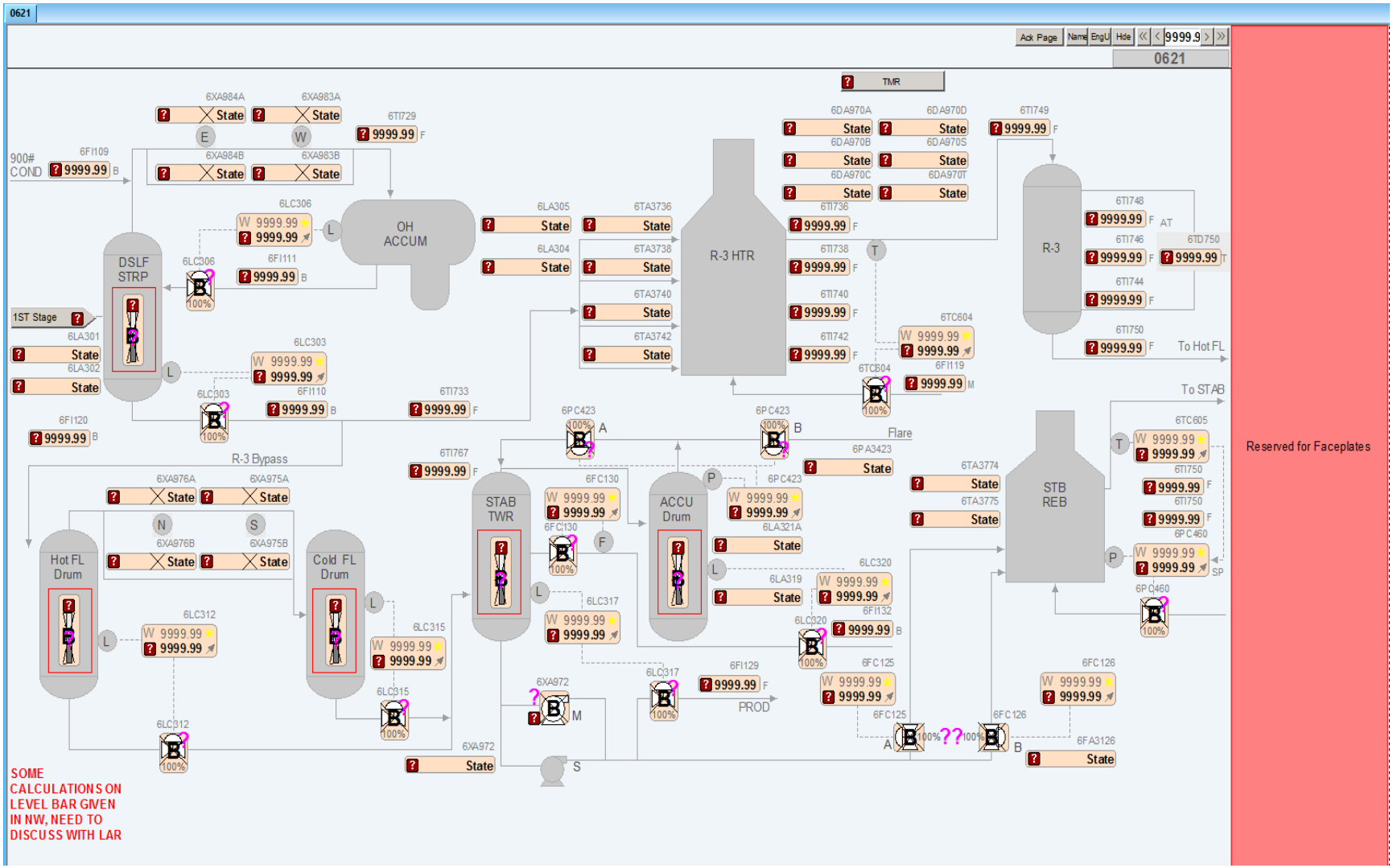

0620
JET TREATER OVERVIEW 1
EEEEEEEE
TMR
RRRR
TTTTTT
R-1
HTR
R-1
R-2
M
S
FD GAS
B
A
H/C MU
FEED
GAS
KO
DESULF
STRIPPR
TO 2ND STG
AMINE
KO
DRUM
1ST
C
2ND
COLD
FL
DRUM
FLARE
OH
ACCUM
AMINE
SCRUBR


0620
Ack Page
Name
Eng U
Hide
0620
R-1 HTR
R-1
R-2
Amine KO Drum
1 ST
C
2 ND
Cold FL Drum
Feed Gas KO
DESULF STRIPPR
OH ACCUME
Amine SCRUBR
Flare
FD Gas
H/C MJ
To 2nd STG
SOME CALCULATIONS ON LEVEL BAR GIVEN IN NW, NEED TO DISCUSS WITH LAR
Reserved for Faceplates

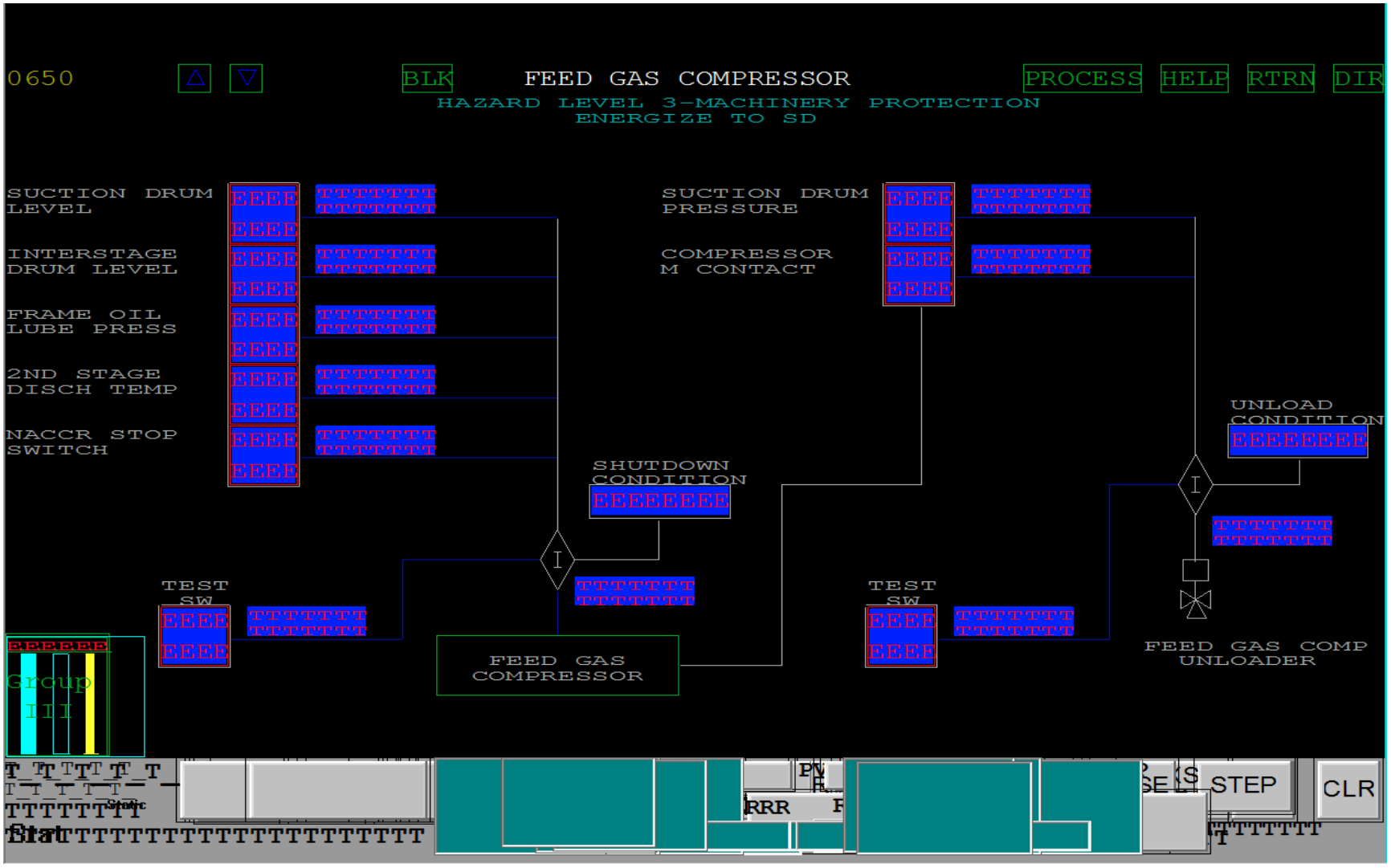
3.203 JET TREATER OVERVIEW 2 (0621.DS)

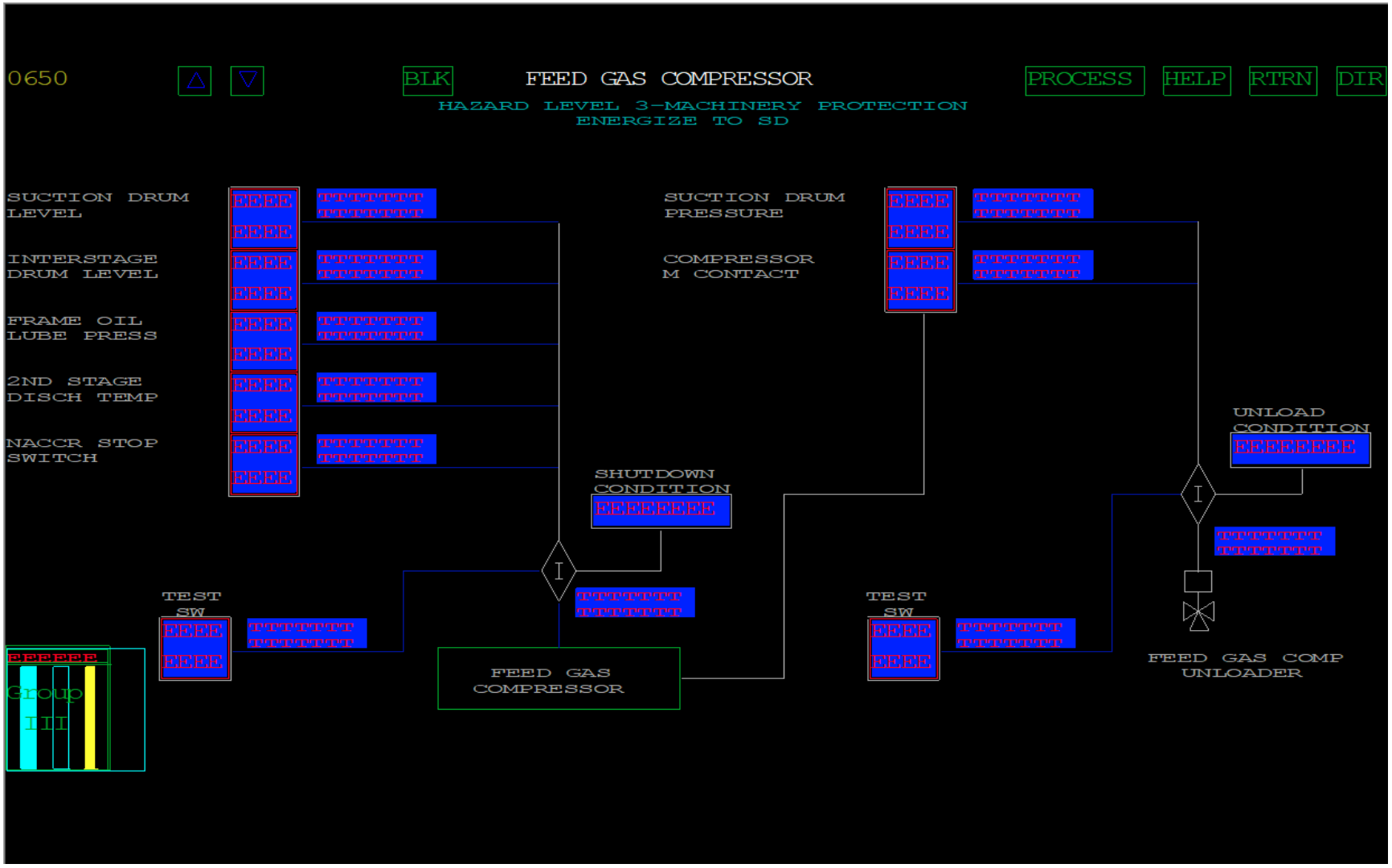


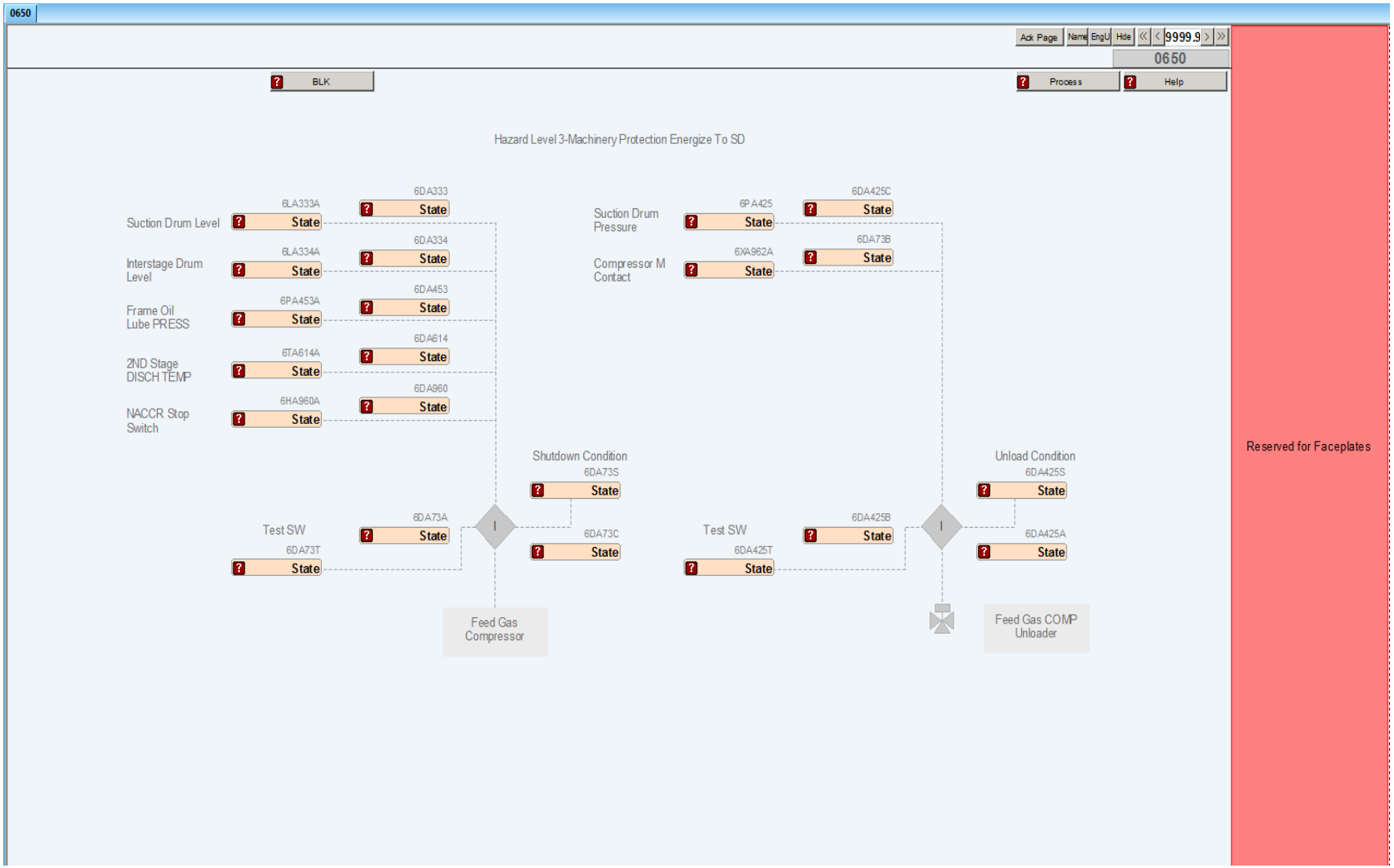

0621
JET TREATER OVERVIEW 2
900# COND
DSLF STRP
1ST STAGE
R-3 BYPASS
OH ACCUM
R-3 HTR
TMR
TO HOT FL
FLARE
TO STAB
COLD FL DRUM
HOT FL DRUM
STAB TWR
ACCUM
STB REB
PROD
SP


0621
Ack Page
Name
Eng'U
Hide
0621
TMR
6XA984A
6XA983A
6TI729
9999.99
900# COND
6FI109
6XA984B
6XA983B
6LC306
OH ACCUM
6LA305
6LA304
6TA3736
6TA3738
6TA3740
6TA3742
R-3 HTR
6DA970A
6DA970D
6DA970B
6DA970S
6DA970C
6DA970T
6TI736
6TI738
6TI740
6TI742
6TI749
R-3
6TI748
6TI746
6TI744
6TD750
AT
6TI750
To Hot FL
DSLF STRP
6LC306
6FI111
1ST Stage
6LA301
6LA302
6LC303
6FI110
6FI120
6TI733
6TC604
6FI119
To STAB
R-3 Bypass
6PC423
Flare
6PA3423
6TI767
STAB TWR
6FC130
ACCU Drum
6LA321A
6LC320
6FI132
6TA3774
6TA3775
STB REB
6TC605
6TI750
6PC460
6XA976A
6XA975A
6XA976B
6XA975B
Hot FL Drum
Cold FL Drum
6LC312
6LC315
6LC317
6XA972
6FI129
PROD
6FC125
6FC126
6FA3126
Reserved for Faceplates
SOME CALCULATIONS ON LEVEL BAR GIVEN IN NW, NEED TO DISCUSS WITH LAR

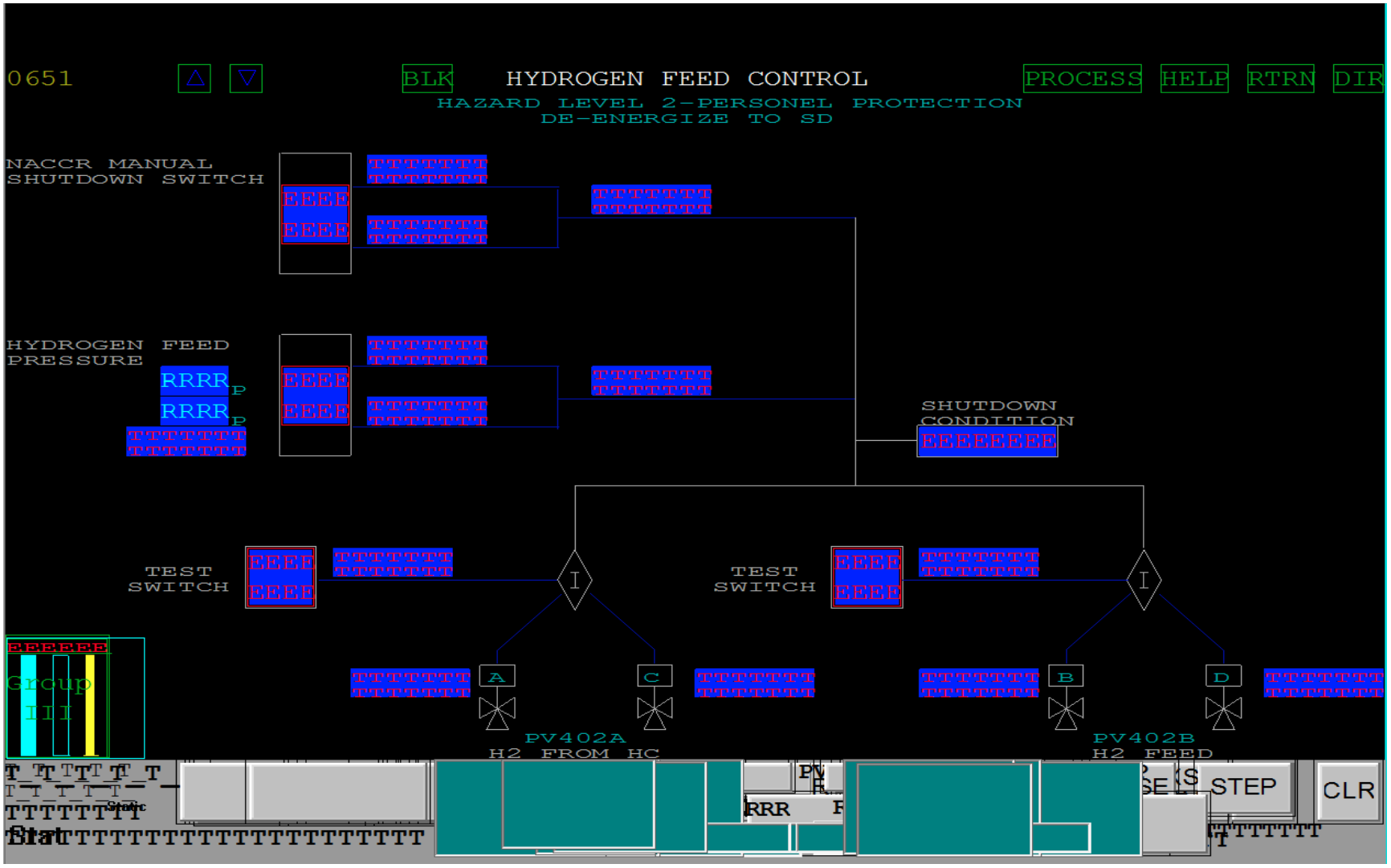
3.204 FEED GAS COMPRESSOR (0650.DS)

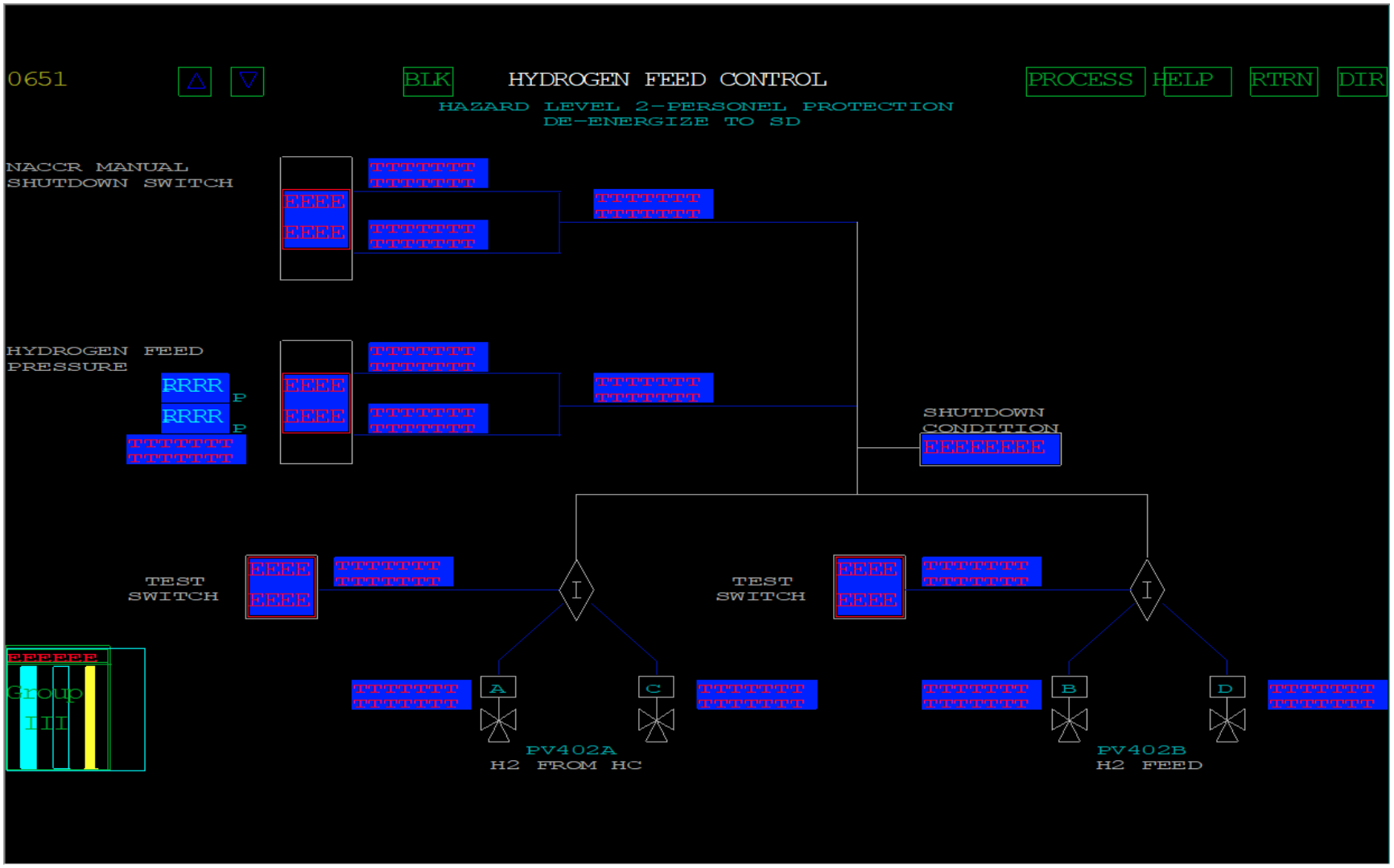


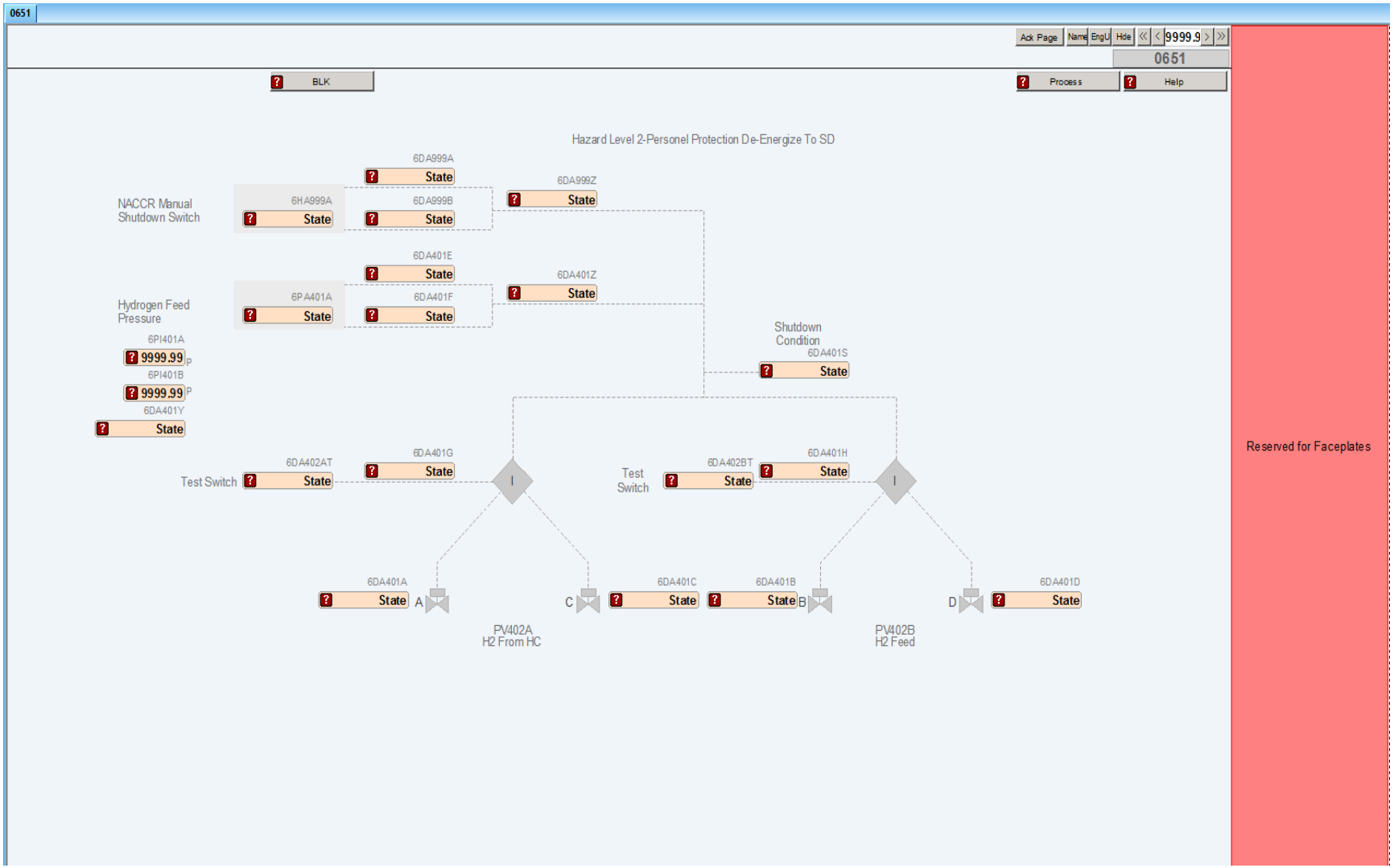

0650
BLK
FEED GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
HAZARD LEVEL 3-MACHINERY PROTECTION
ENERGIZE TO SD
SUCTION DRUM LEVEL
INTERSTAGE DRUM LEVEL
FRAME OIL LUBE PRESS
2ND STAGE DISCH TEMP
NACCR STOP SWITCH
SUCTION DRUM PRESSURE
COMPRESSOR M CONTACT
SHUTDOWN CONDITION
UNLOAD CONDITION
TEST SW
TEST SW
FEED GAS COMPRESSOR
FEED GAS COMP UNLOADER
Group III


0650
Ack Page
Name
Eng U
Hide
9999.9
0650
BLK
Process
Help
Hazard Level 3-Machinery Protection Energize To SD
Suction Drum Level
6LA333A
State
6DA333
State
Interstage Drum Level
6LA334A
State
6DA334
State
Frame Oil Lube PRESS
6PA453A
State
6DA453
State
2ND Stage DISCH TEMP
6TA614A
State
6DA614
State
NACCR Stop Switch
6HA960A
State
6DA960
State
Suction Drum Pressure
6PA425
State
6DA425C
State
Compressor M Contact
6XA962A
State
6DA73B
State
Shutdown Condition
6DA73S
State
Test SW
6DA73A
State
6DA73T
State
6DA73C
State
Feed Gas Compressor
Unload Condition
6DA425S
State
Test SW
6DA425B
State
6DA425T
State
6DA425A
State
Feed Gas COMP Unloader
Reserved for Faceplates

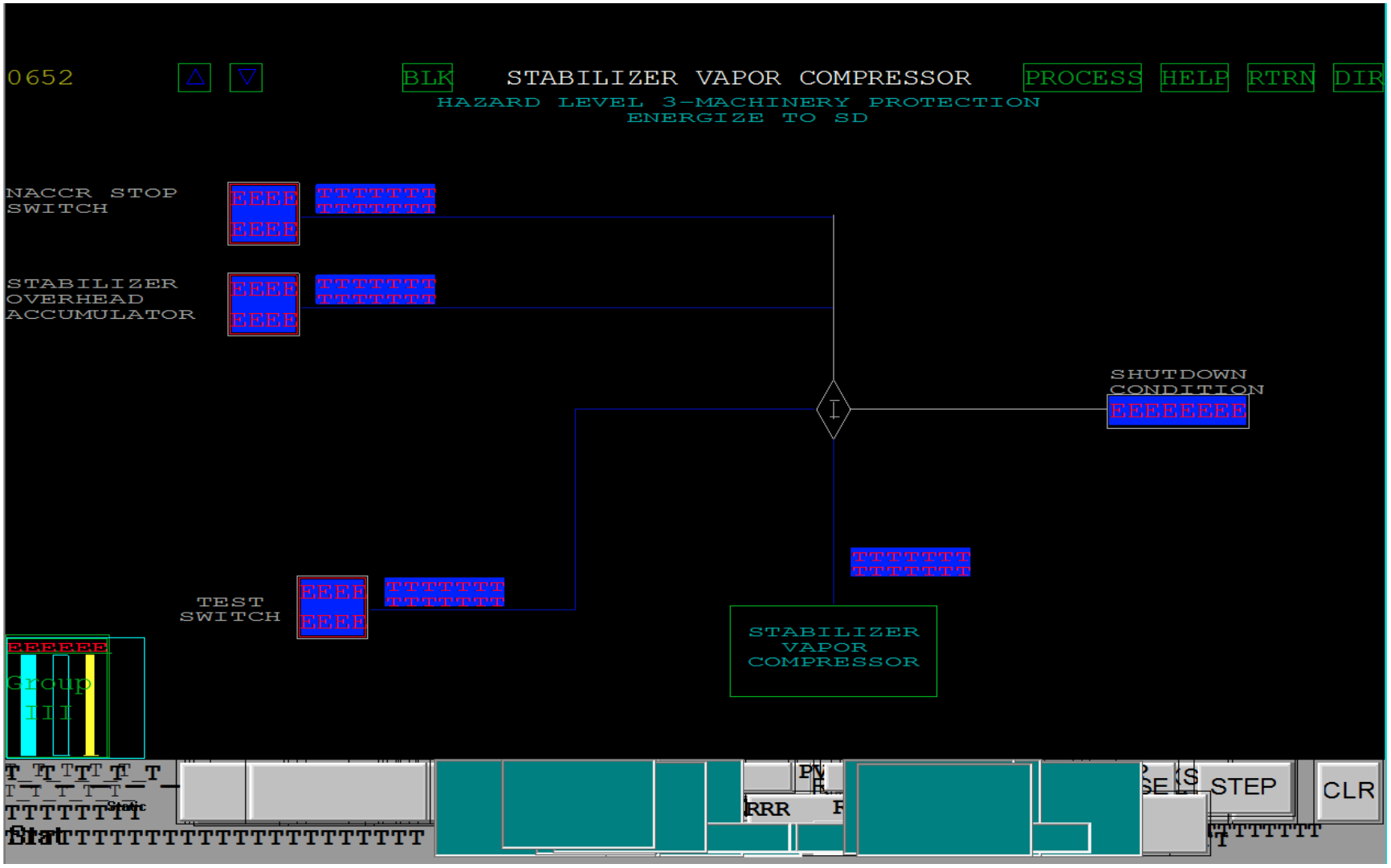
3.205 HYDROGEN FEED CONTROL (0651.DS)

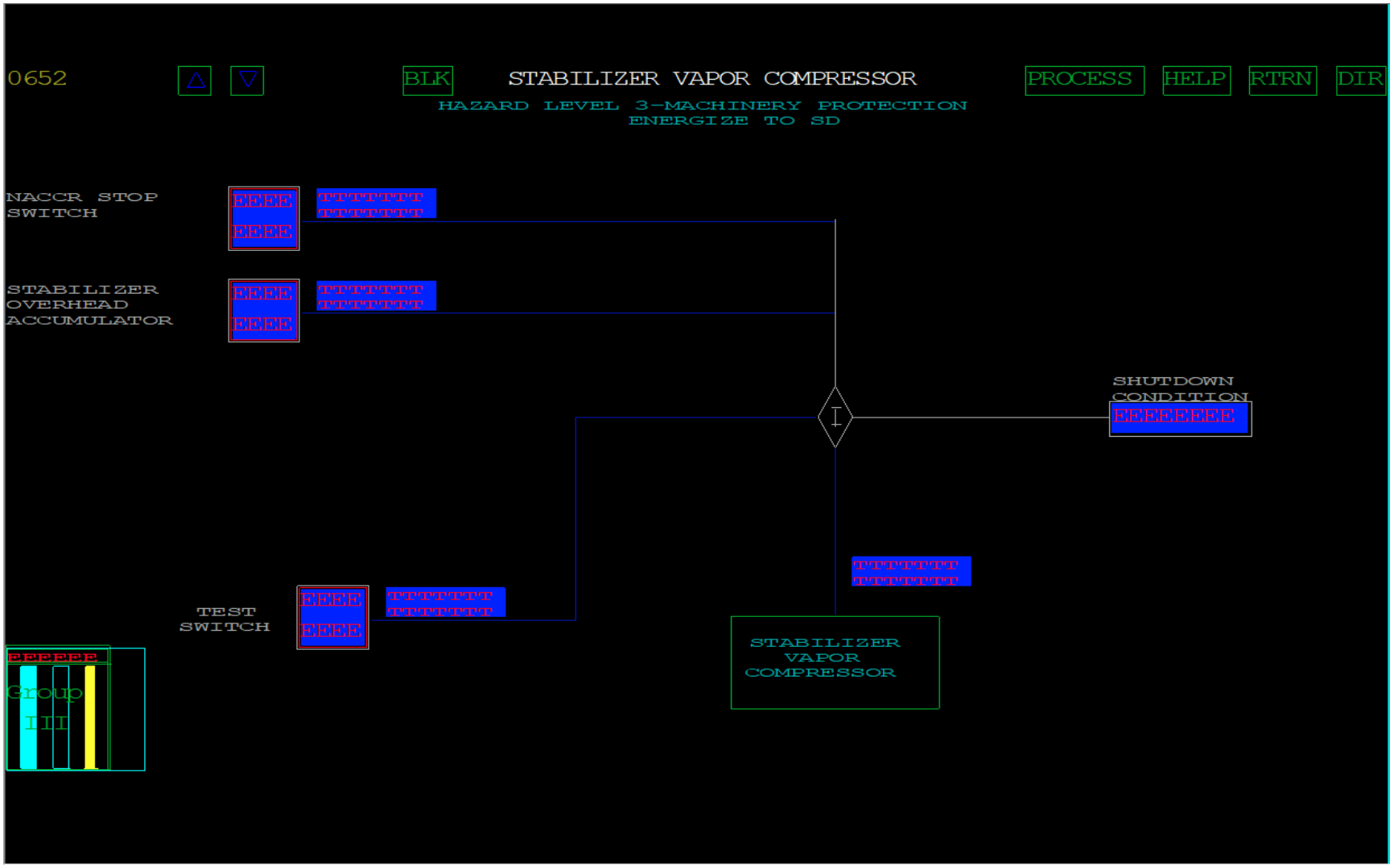


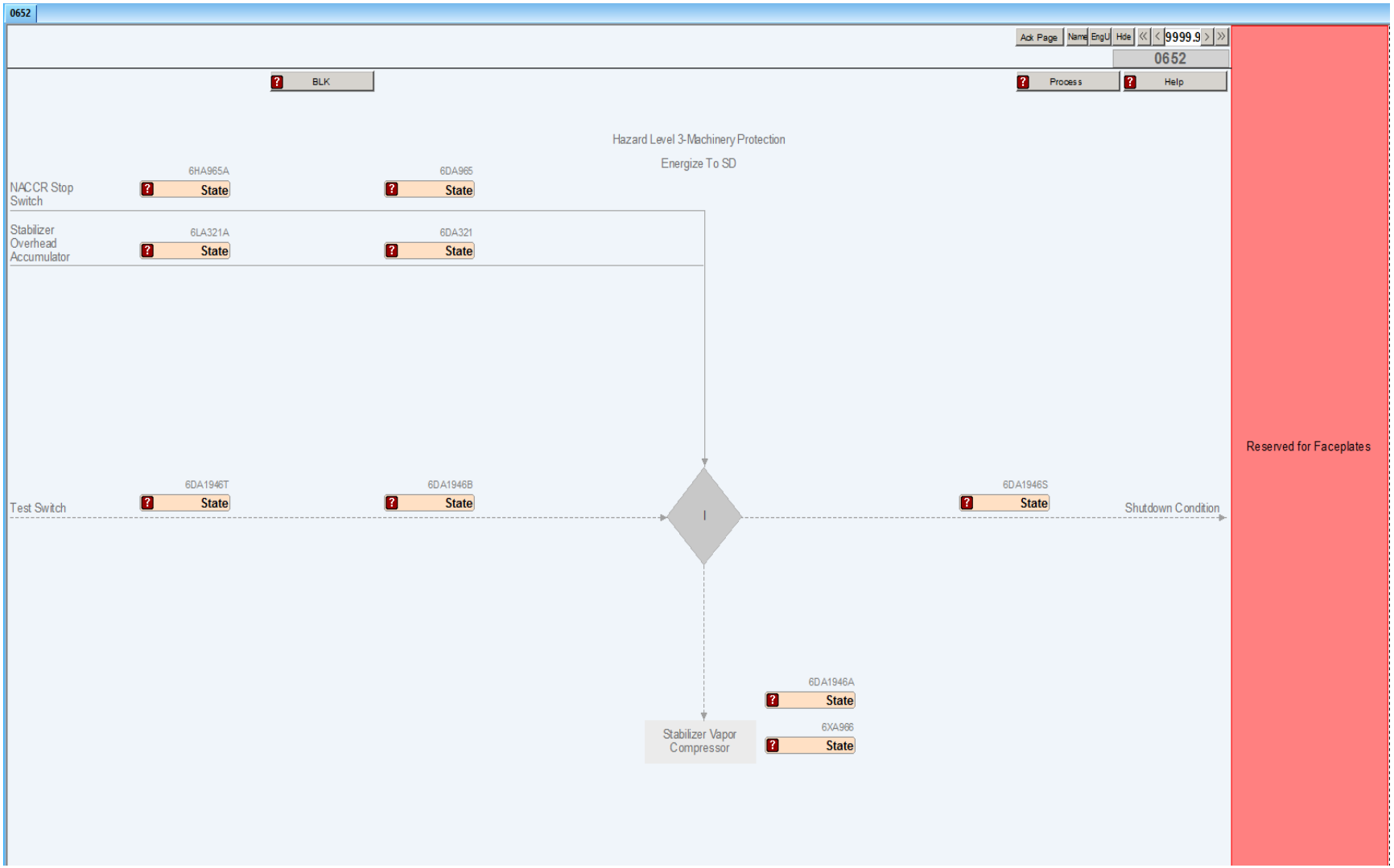

0651
BLK
HYDROGEN FEED CONTROL
PROCESS
HELP
RTRN
DIR
HAZARD LEVEL 2-PERSONEL PROTECTION
DE-ENERGIZE TO SD
NACCR MANUAL SHUTDOWN SWITCH
HYDROGEN FEED PRESSURE
SHUTDOWN CONDITION
TEST SWITCH
TEST SWITCH
Group III
A
C
B
D
PV402A
H2 FROM HC
PV402B
H2 FEED


0651
Ack Page
Name
Eng'U
Hide
9999.9
0651
BLK
Process
Help
Hazard Level 2-Personel Protection De-Energize To SD
6DA999A
State
6DA999Z
State
NACCR Manual Shutdown Switch
6HA999A
State
6DA999B
State
6DA401E
State
6DA401Z
State
Hydrogen Feed Pressure
6PA401A
State
6DA401F
State
6PI401A
9999.99
P
6PI401B
9999.99
P
6DA401Y
State
Shutdown Condition
6DA401S
State
Test Switch
6DA402AT
State
6DA401G
State
I
Test Switch
6DA402BT
State
6DA401H
State
I
Reserved for Faceplates
6DA401A
State
A
C
6DA401C
State
6DA401B
State
B
D
6DA401D
State
PV402A
H2 From HC
PV402B
H2 Feed

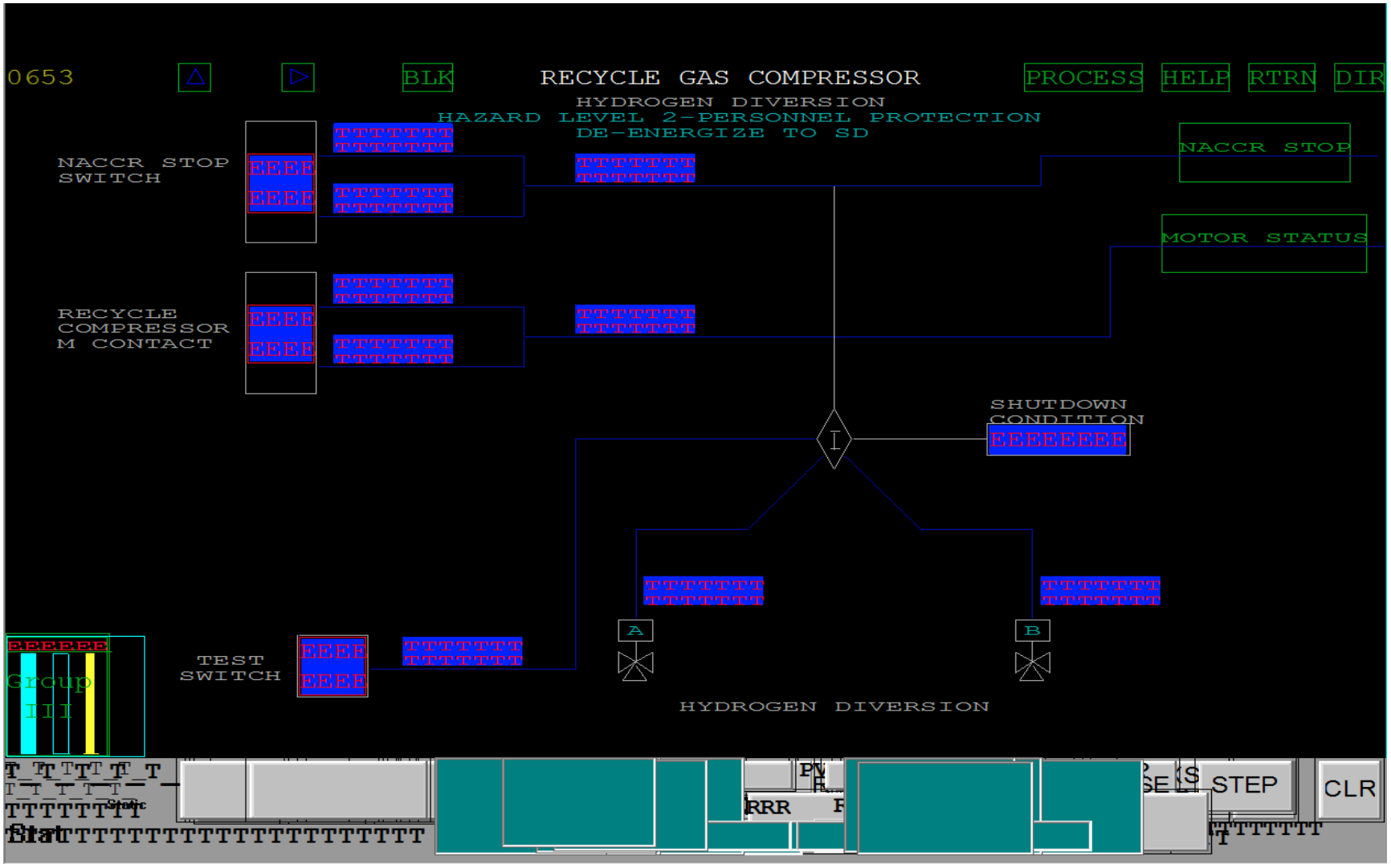
3.206 STABILIZER VAPOR COMPRESSOR (0652.DS)

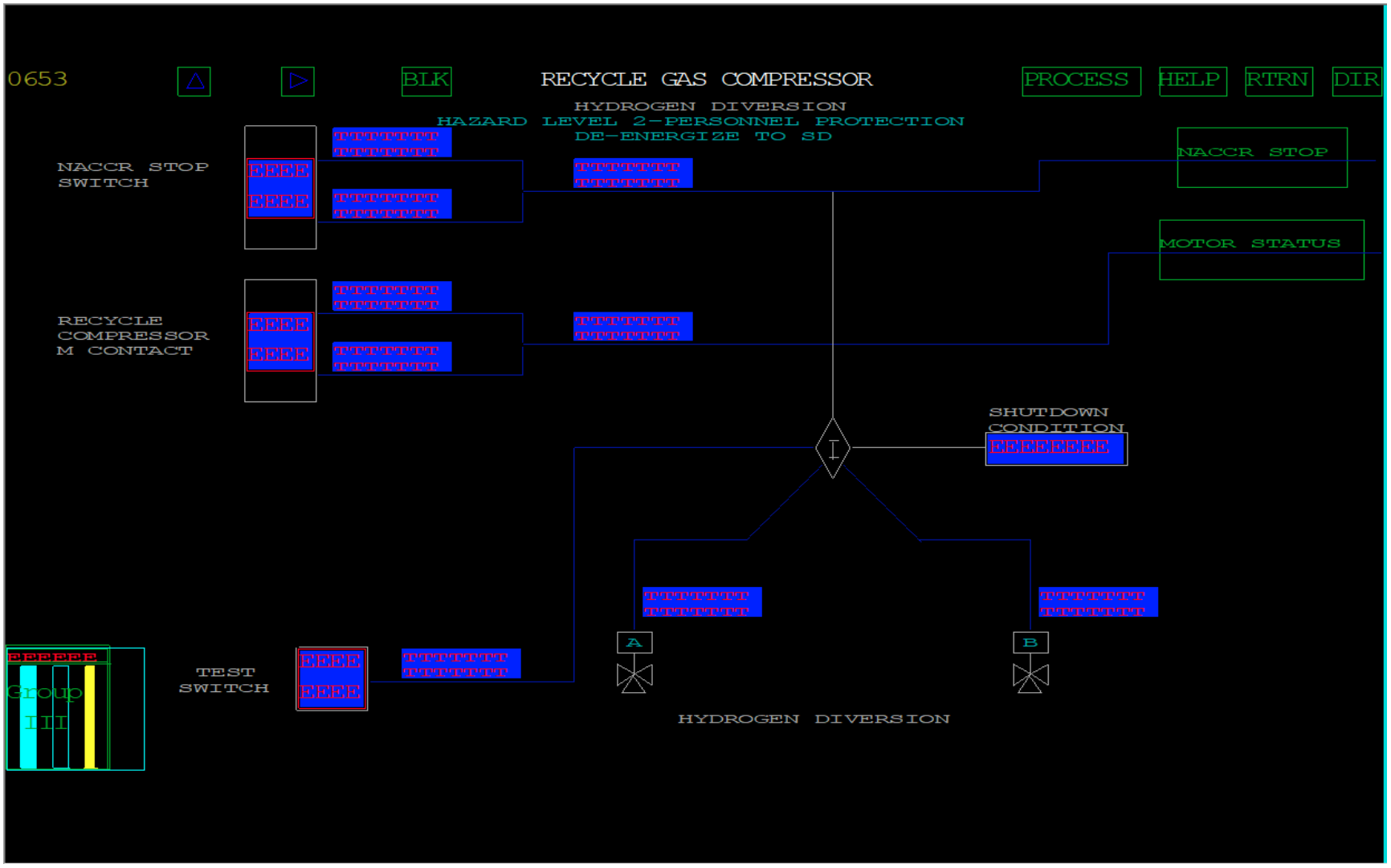


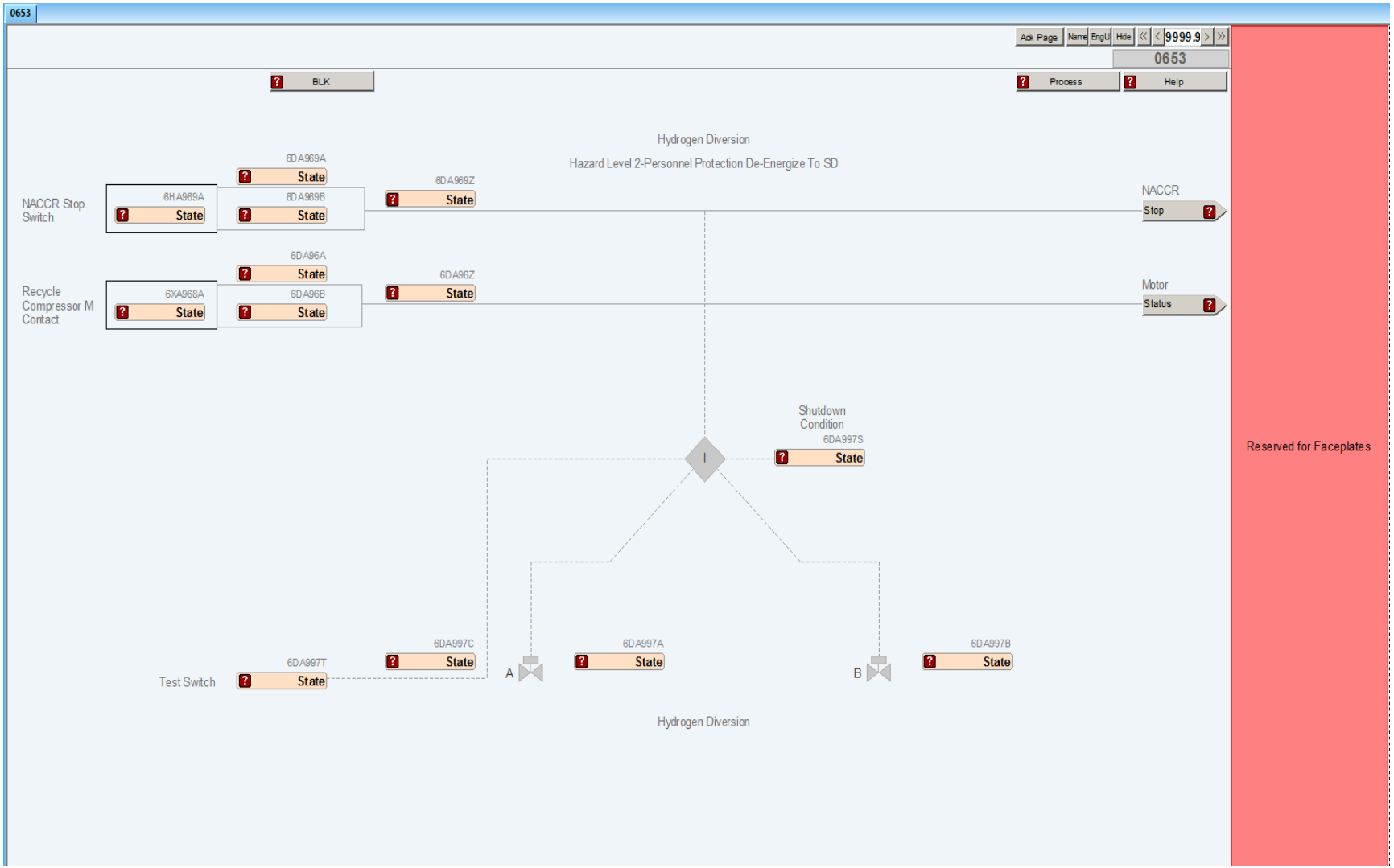

0652
BLK
STABILIZER VAPOR COMPRESSOR
PROCESS
HELP
RTRN
DIR
HAZARD LEVEL 3-MACHINERY PROTECTION
ENERGIZE TO SD
NACCR STOP SWITCH
STABILIZER OVERHEAD ACCUMULATOR
SHUTDOWN CONDITION
TEST SWITCH
STABILIZER VAPOR COMPRESSOR
Group III


0652
Ack Page
Name
EngU
Hide
9999.9
0652
BLK
Process
Help
Hazard Level 3-Machinery Protection
Energize To SD
NACCR Stop Switch
6HA965A
State
6DA965
State
Stabilizer Overhead Accumulator
6LA321A
State
6DA321
State
Test Switch
6DA1946T
State
6DA1946B
State
I
6DA1946S
State
Shutdown Condition
6DA1946A
State
Stabilizer Vapor Compressor
6XA966
State
Reserved for Faceplates

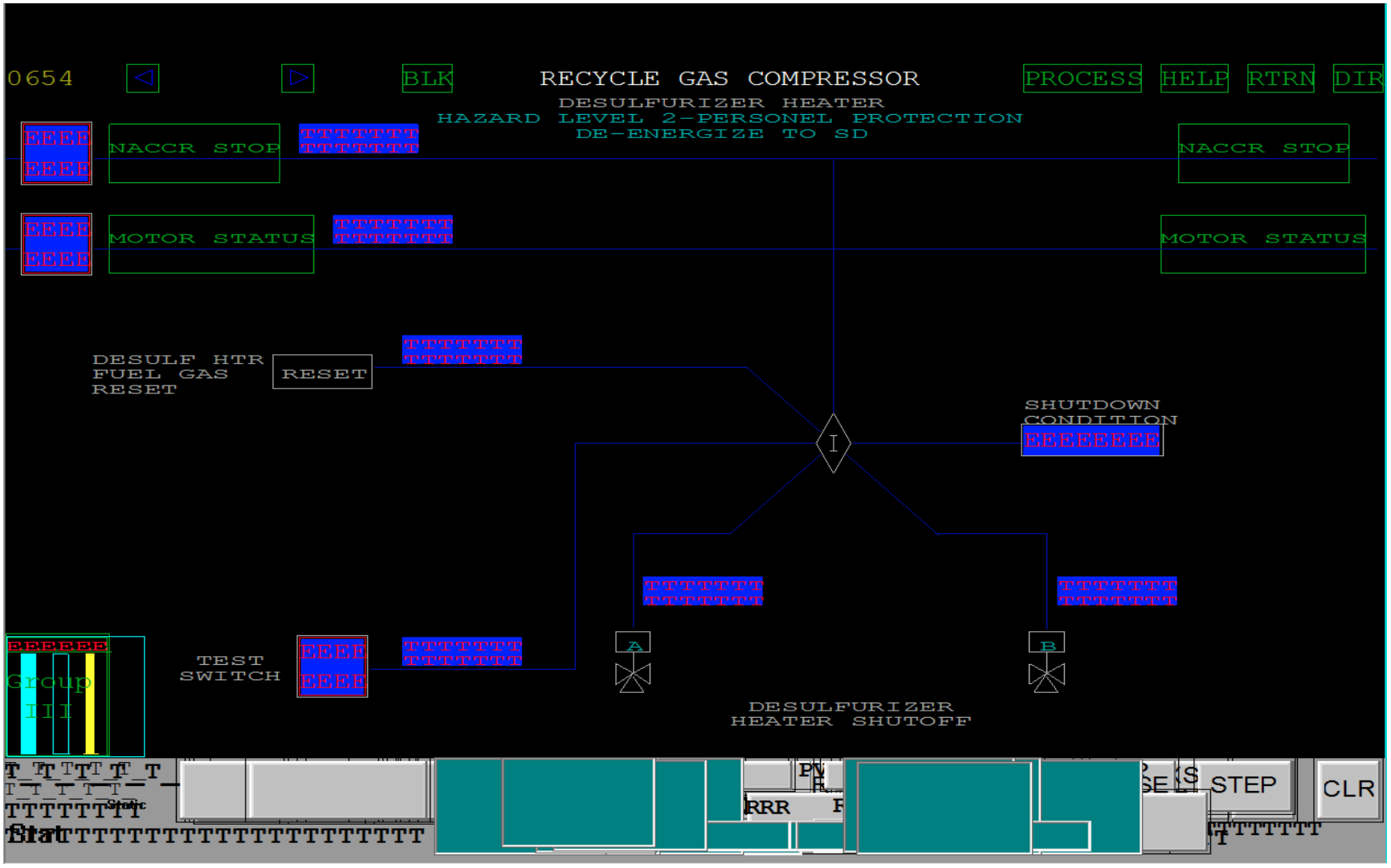
3.207 RECYCLE GAS COMPRESSOR (0653.DS)

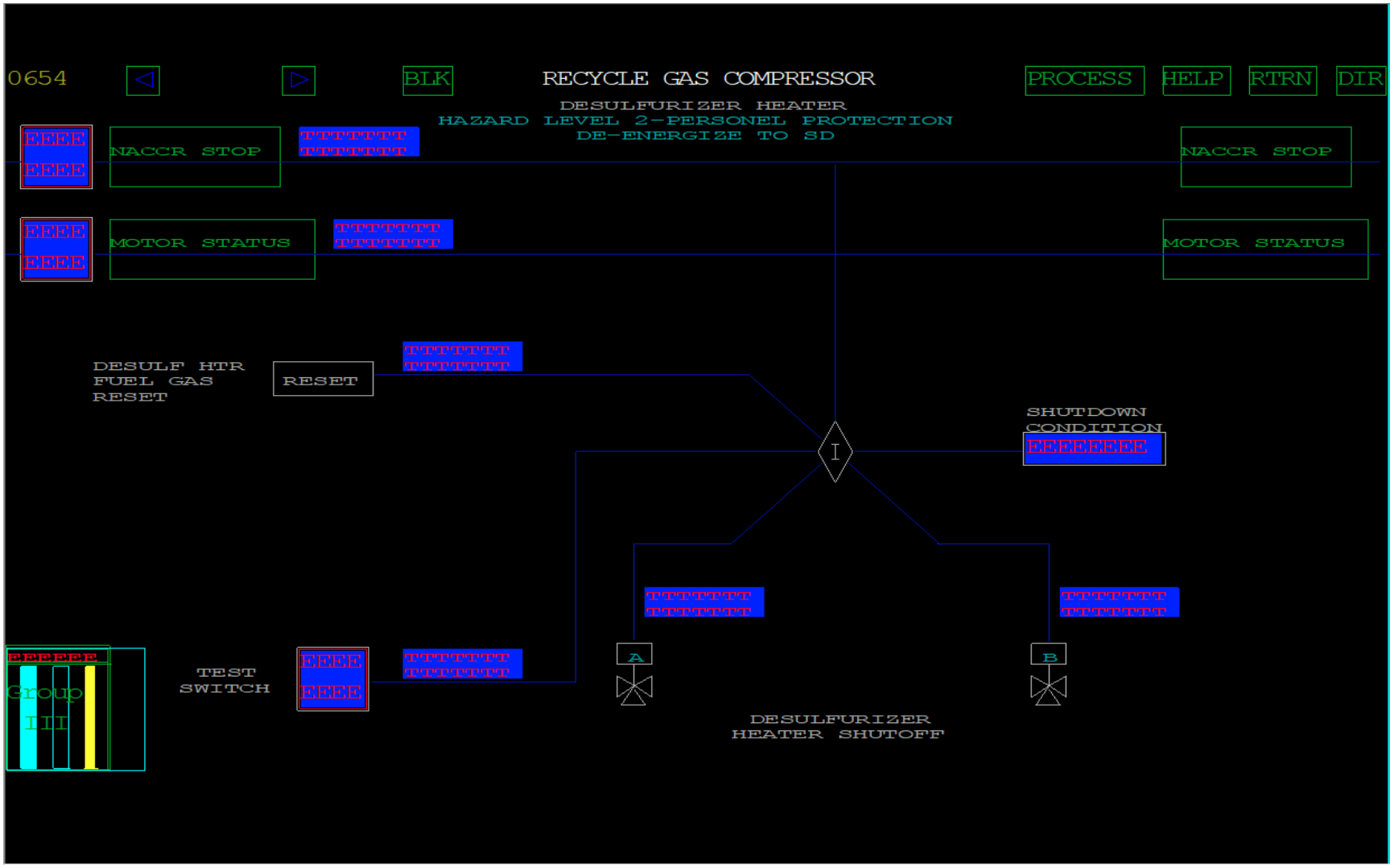


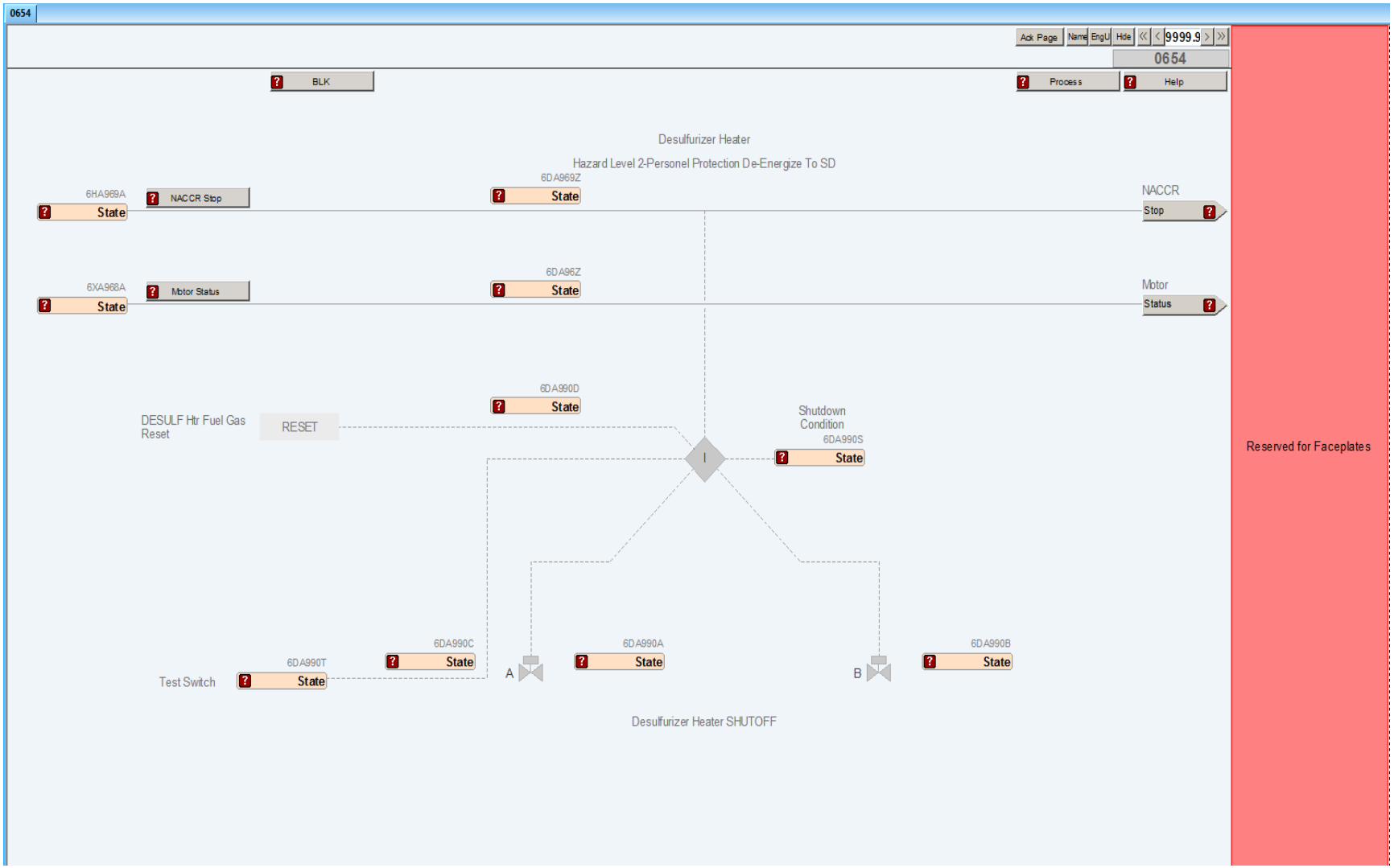

0653
BLK
RECYCLE GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
HYDROGEN DIVERSION
HAZARD LEVEL 2-PERSONNEL PROTECTION
DE-ENERGIZE TO SD
NACCR STOP SWITCH
NACCR STOP
MOTOR STATUS
RECYCLE COMPRESSOR M CONTACT
SHUTDOWN CONDITION
TEST SWITCH
Group III
A
B
HYDROGEN DIVERSION


0653
Ack Page
Name
Eng U
Hide
9999.9
0653
BLK
Process
Help
Hydrogen Diversion
Hazard Level 2-Personnel Protection De-Energize To SD
NACCR Stop Switch
6HA969A
State
6DA969A
State
6DA969B
State
6DA969Z
State
NACCR
Stop
Recycle Compressor M Contact
6XA968A
State
6DA96A
State
6DA96B
State
6DA96Z
State
Motor
Status
Shutdown Condition
6DA997S
State
I
Reserved for Faceplates
Test Switch
6DA997T
State
6DA997C
State
A
6DA997A
State
B
6DA997B
State
Hydrogen Diversion

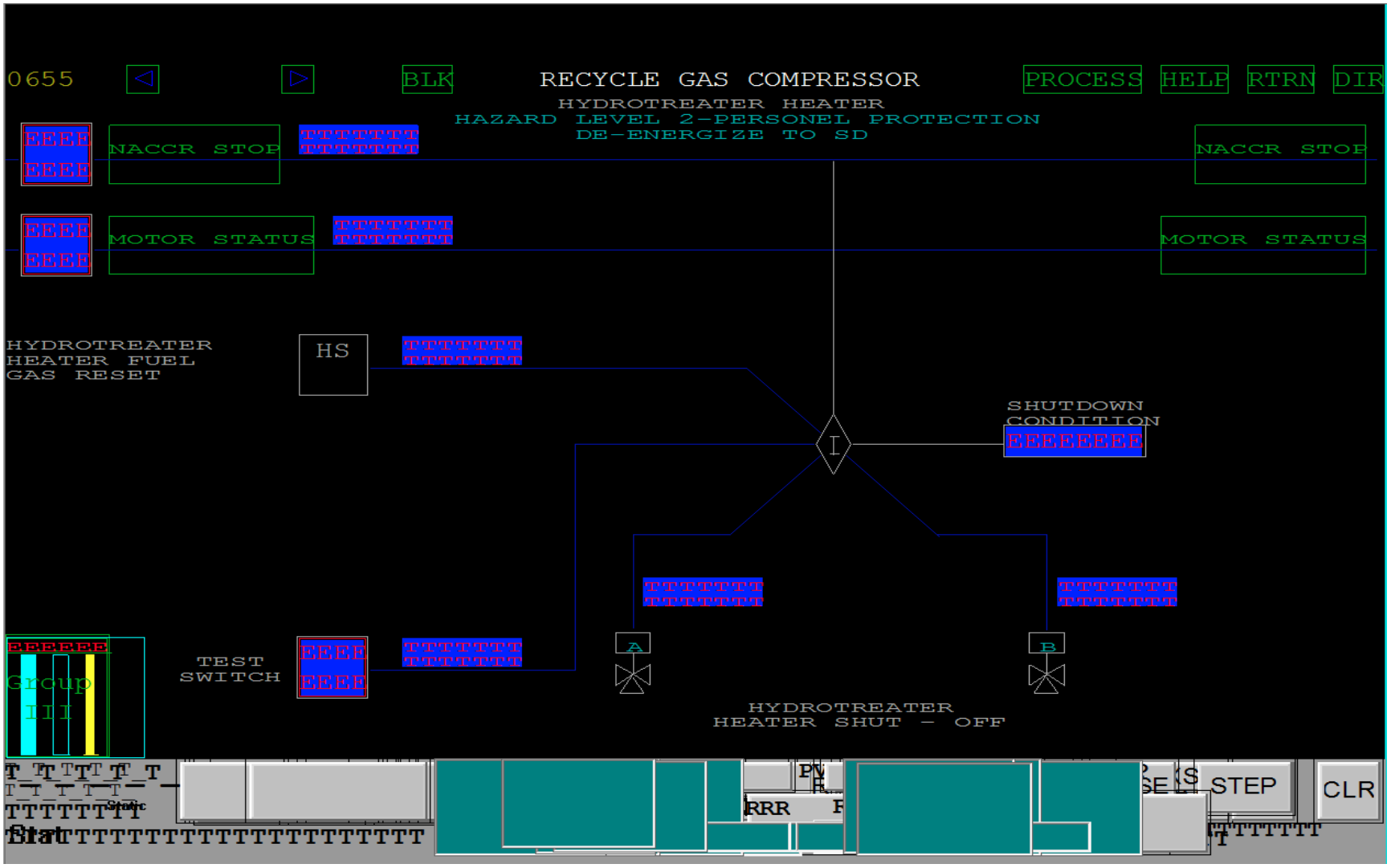
3.208 RECYCLE GAS COMPRESSOR (0654.DS)

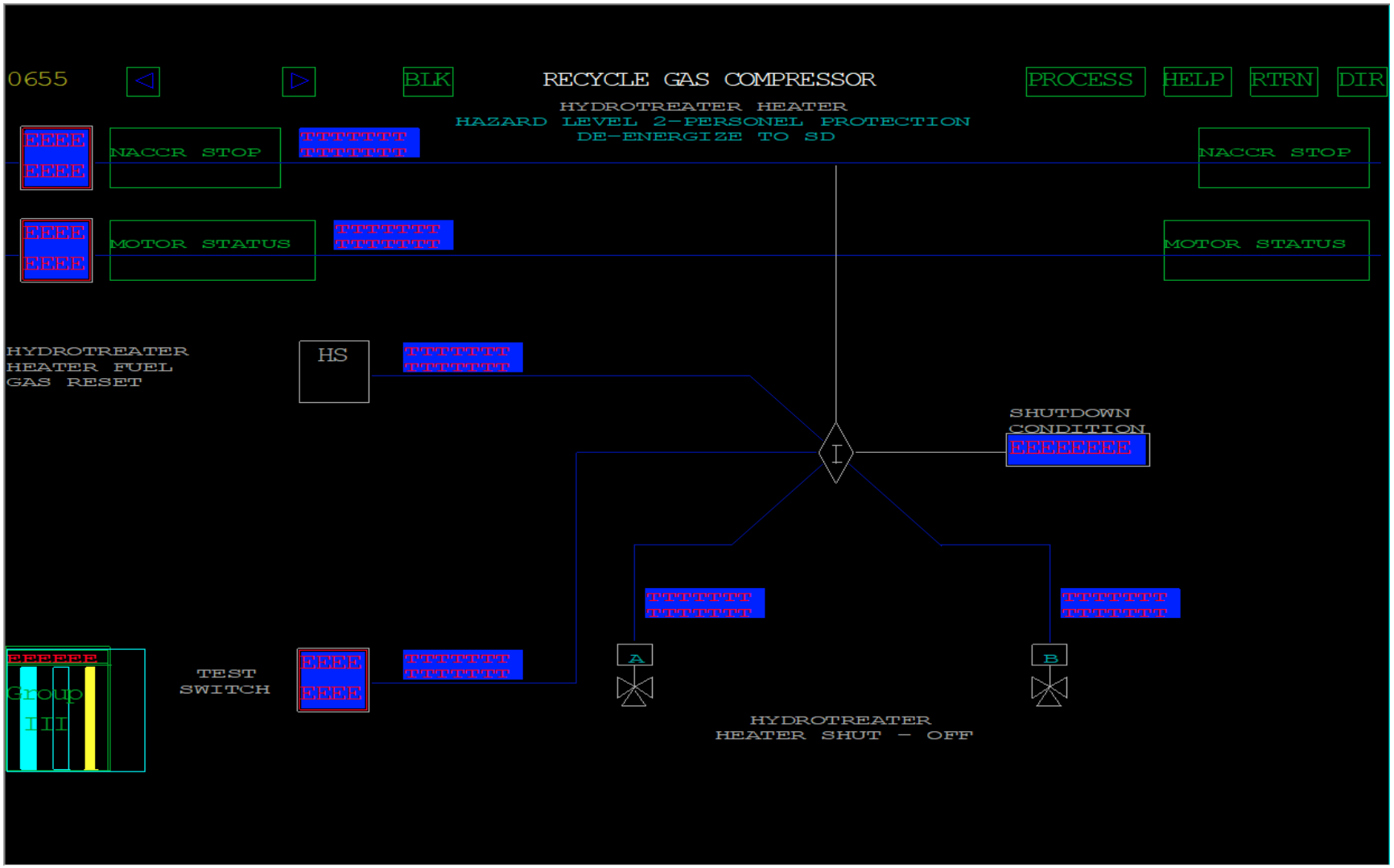


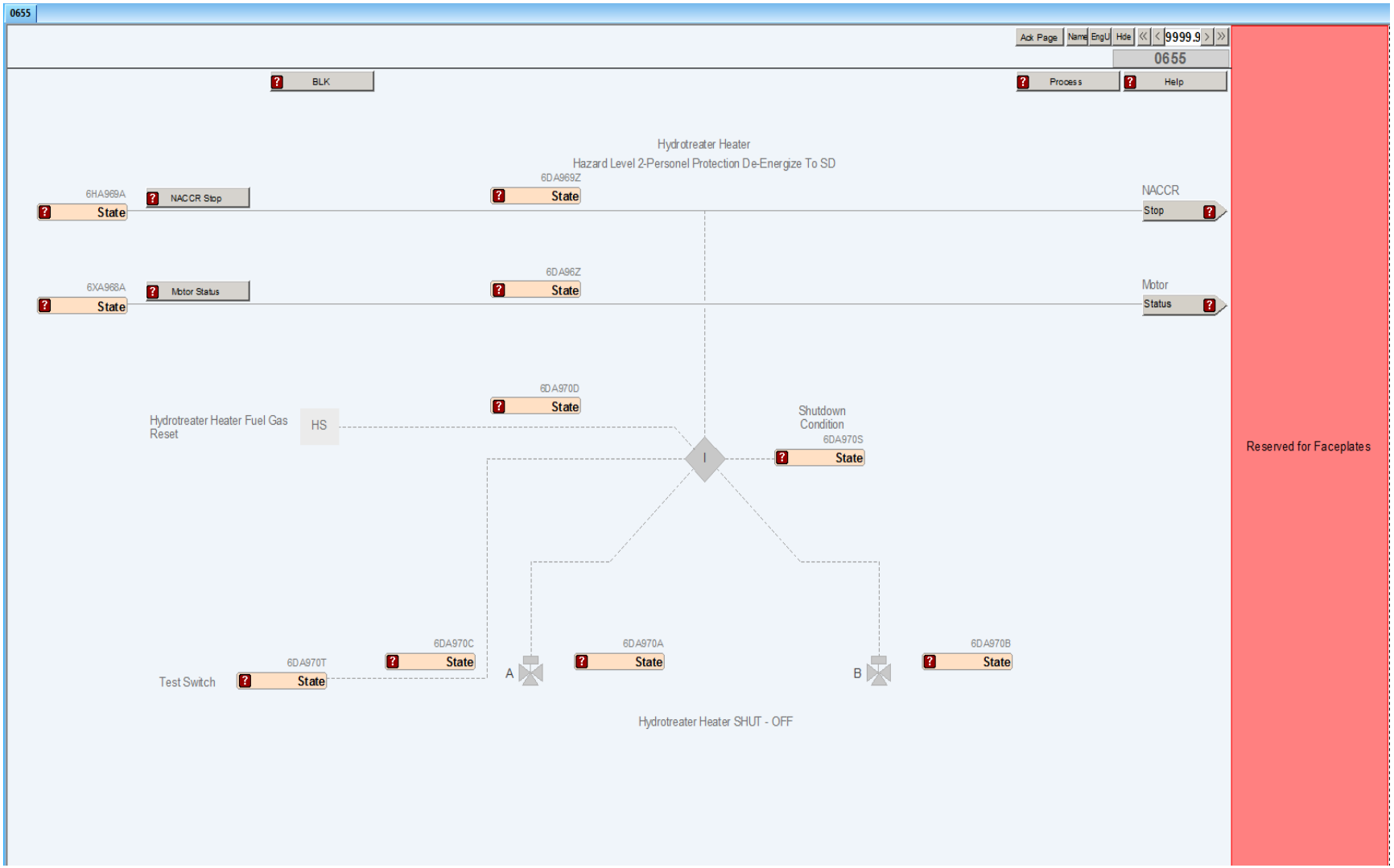

0654
BLK
RECYCLE GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
DESULFURIZER HEATER
HAZARD LEVEL 2-PERSONEL PROTECTION
DE-ENERGIZE TO SD
NACCR STOP
NACCR STOP
MOTOR STATUS
MOTOR STATUS
DESULF HTR
FUEL GAS
RESET
RESET
SHUTDOWN
CONDITION
I
TEST
SWITCH
Group
III
A
B
DESULFURIZER
HEATER SHUTOFF


0654
Ack Page
Name
Eng U
Hide
9999.9
0654
BLK
Process
Help
Desulfurizer Heater
Hazard Level 2-Personel Protection De-Energize To SD
6HA969A
State
NACCR Stop
6DA969Z
State
NACCR
Stop
6XA968A
State
Motor Status
6DA96Z
State
Motor
Status
6DA990D
State
DESULF Htr Fuel Gas Reset
RESET
Shutdown Condition
6DA990S
State
I
Reserved for Faceplates
6DA990C
State
6DA990A
State
6DA990B
State
6DA990T
State
Test Switch
A
B
Desulfurizer Heater SHUTOFF

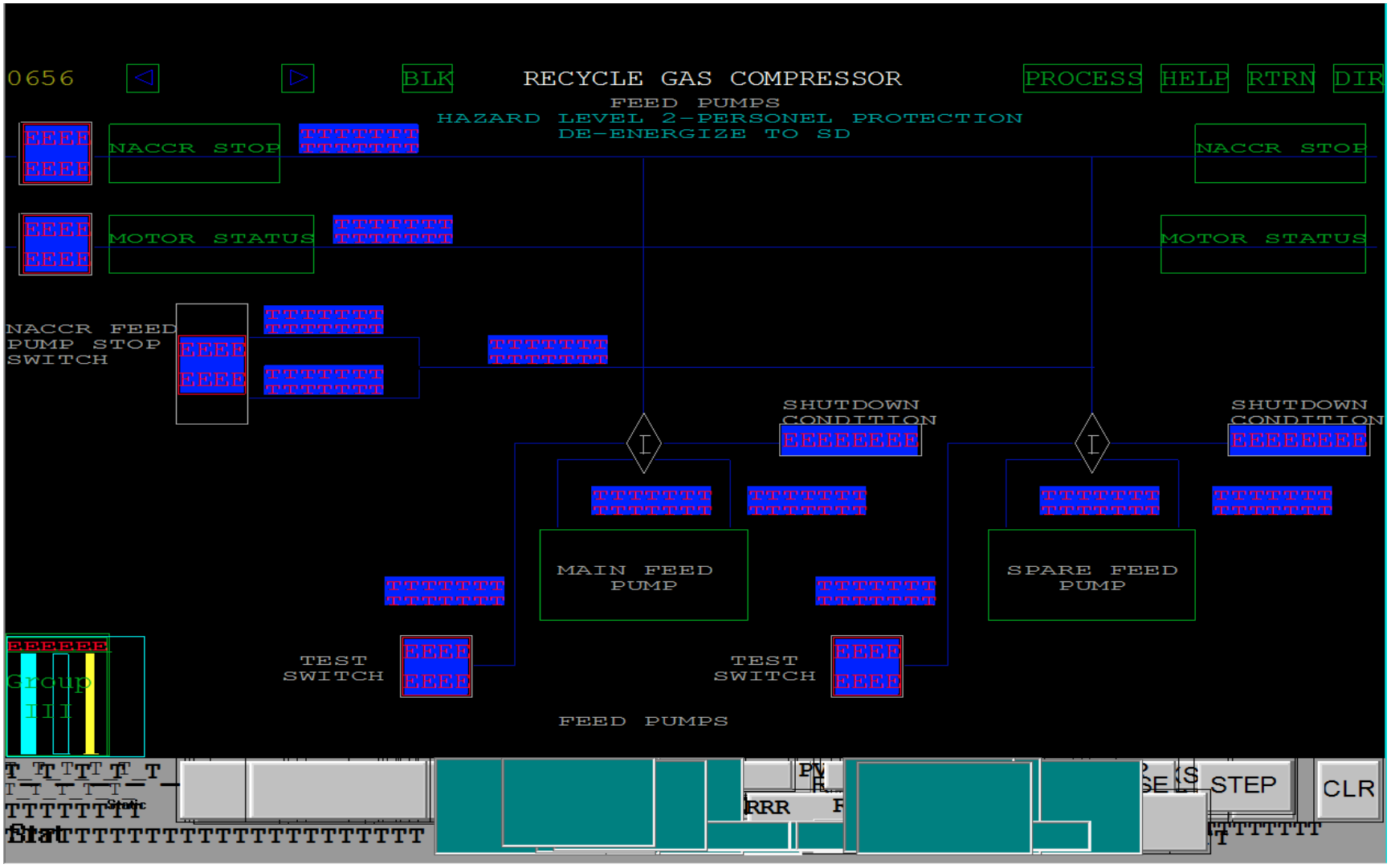
3.209 RECYCLE GAS COMPRESSOR (0655.DS)

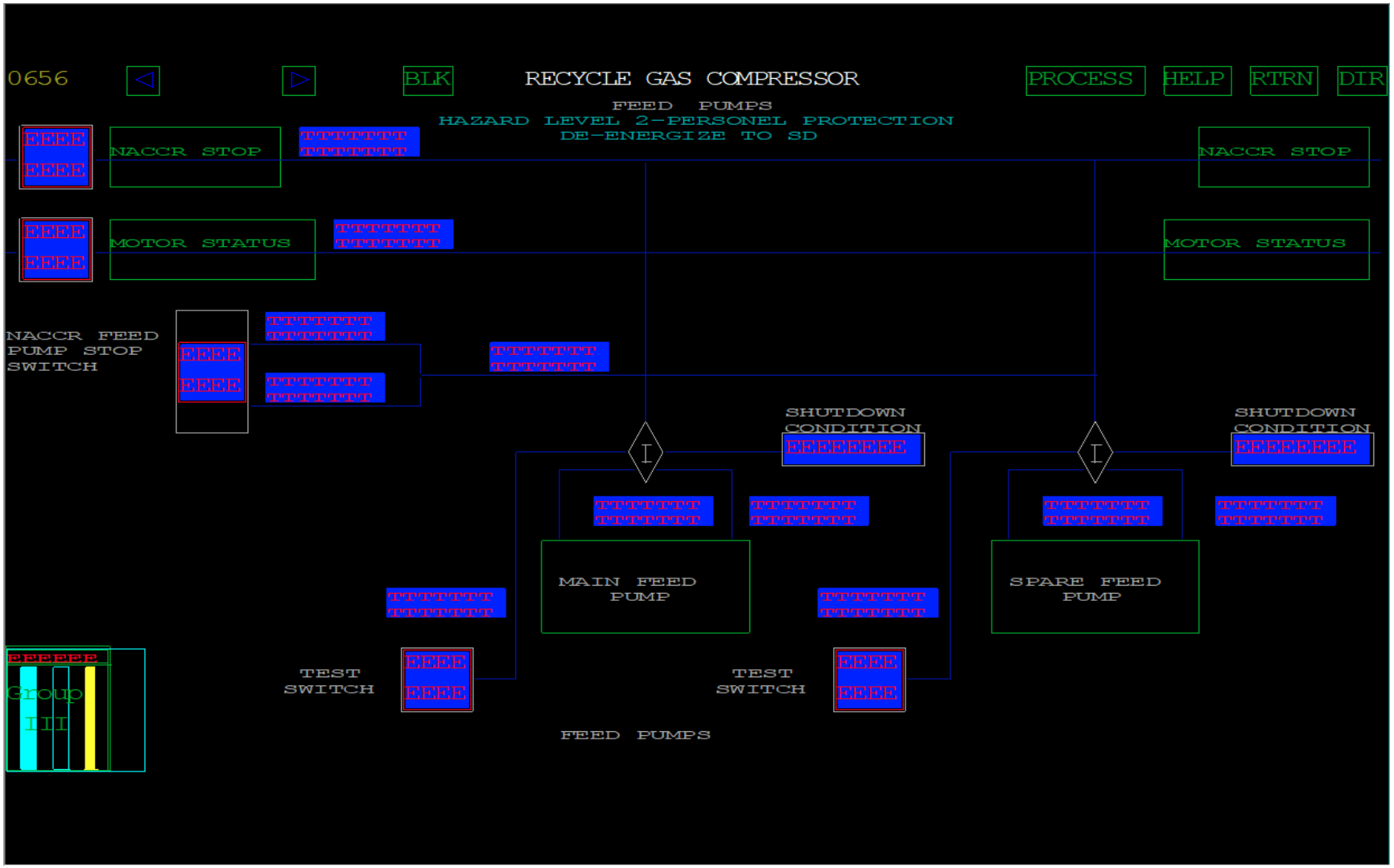


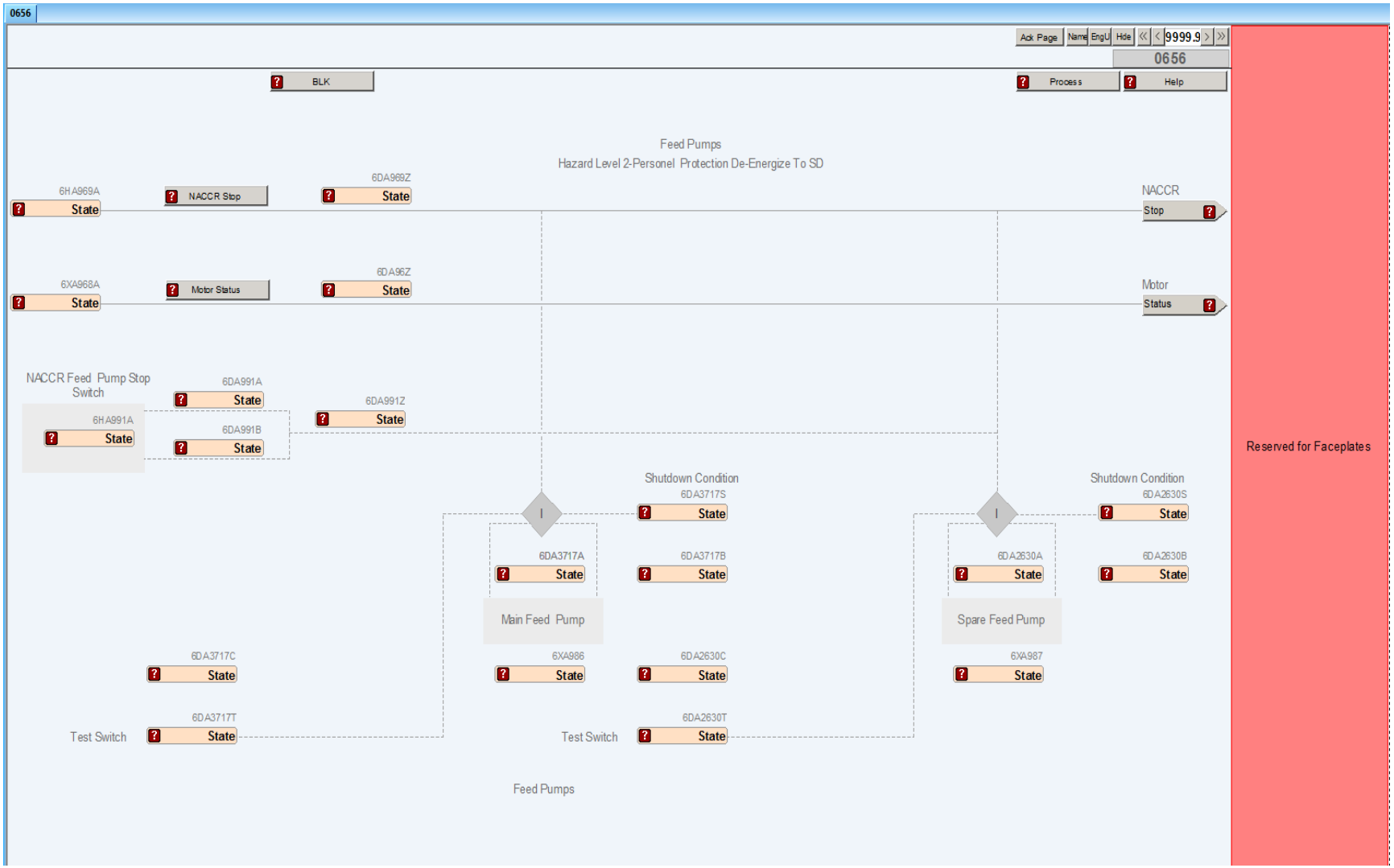

0655
BLK
RECYCLE GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
HYDROTREATER HEATER
HAZARD LEVEL 2-PERSONEL PROTECTION
DE-ENERGIZE TO SD
NACCR STOP
NACCR STOP
MOTOR STATUS
MOTOR STATUS
HYDROTREATER
HEATER FUEL
GAS RESET
HS
SHUTDOWN
CONDITION
Group
III
TEST
SWITCH
A
B
HYDROTREATER
HEATER SHUT - OFF


0655
Ack Page
Name
Eng U
Hide
9999.9
0655
BLK
Process
Help
Hydrotreater Heater
Hazard Level 2-Personel Protection De-Energize To SD
6HA969A
State
NACCR Stop
6DA969Z
State
NACCR
Stop
6XA968A
State
Motor Status
6DA96Z
State
Motor
Status
6DA970D
State
Hydrotreater Heater Fuel Gas Reset
HS
Shutdown Condition
6DA970S
State
I
Reserved for Faceplates
6DA970C
State
6DA970A
State
6DA970B
State
6DA970T
State
Test Switch
A
B
Hydrotreater Heater SHUT - OFF

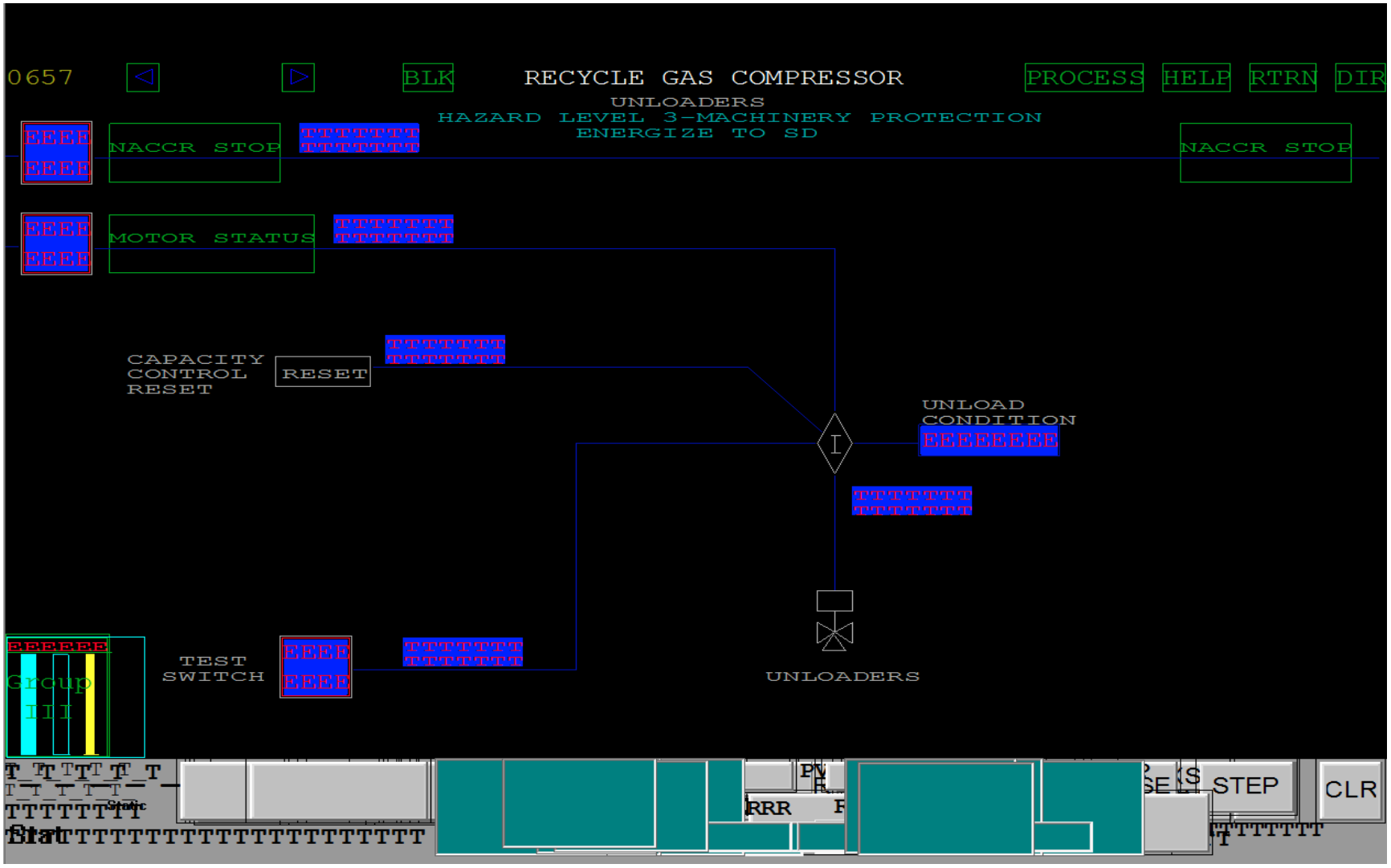
3.210 RECYCLE GAS COMPRESSOR (0656.DS)

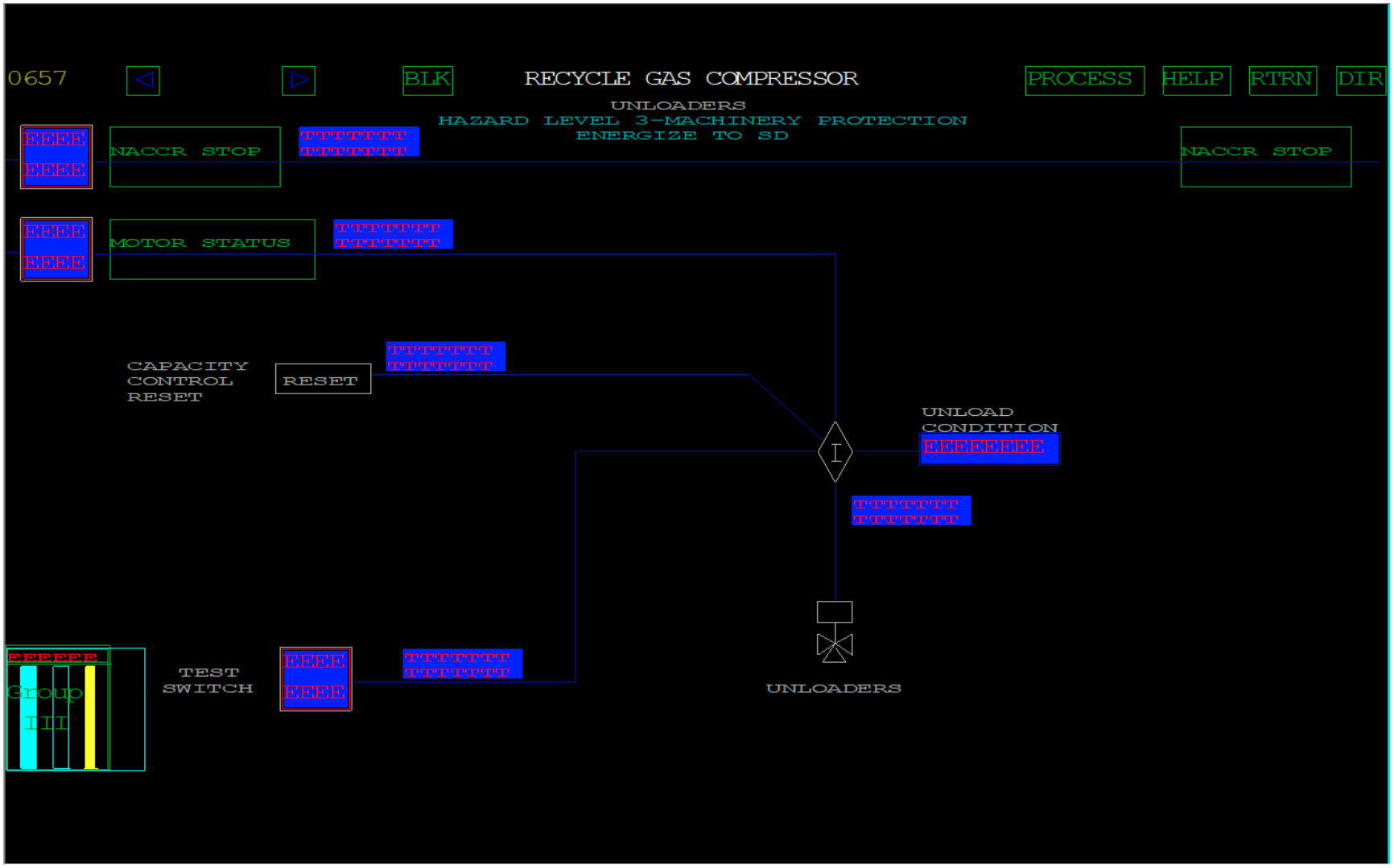


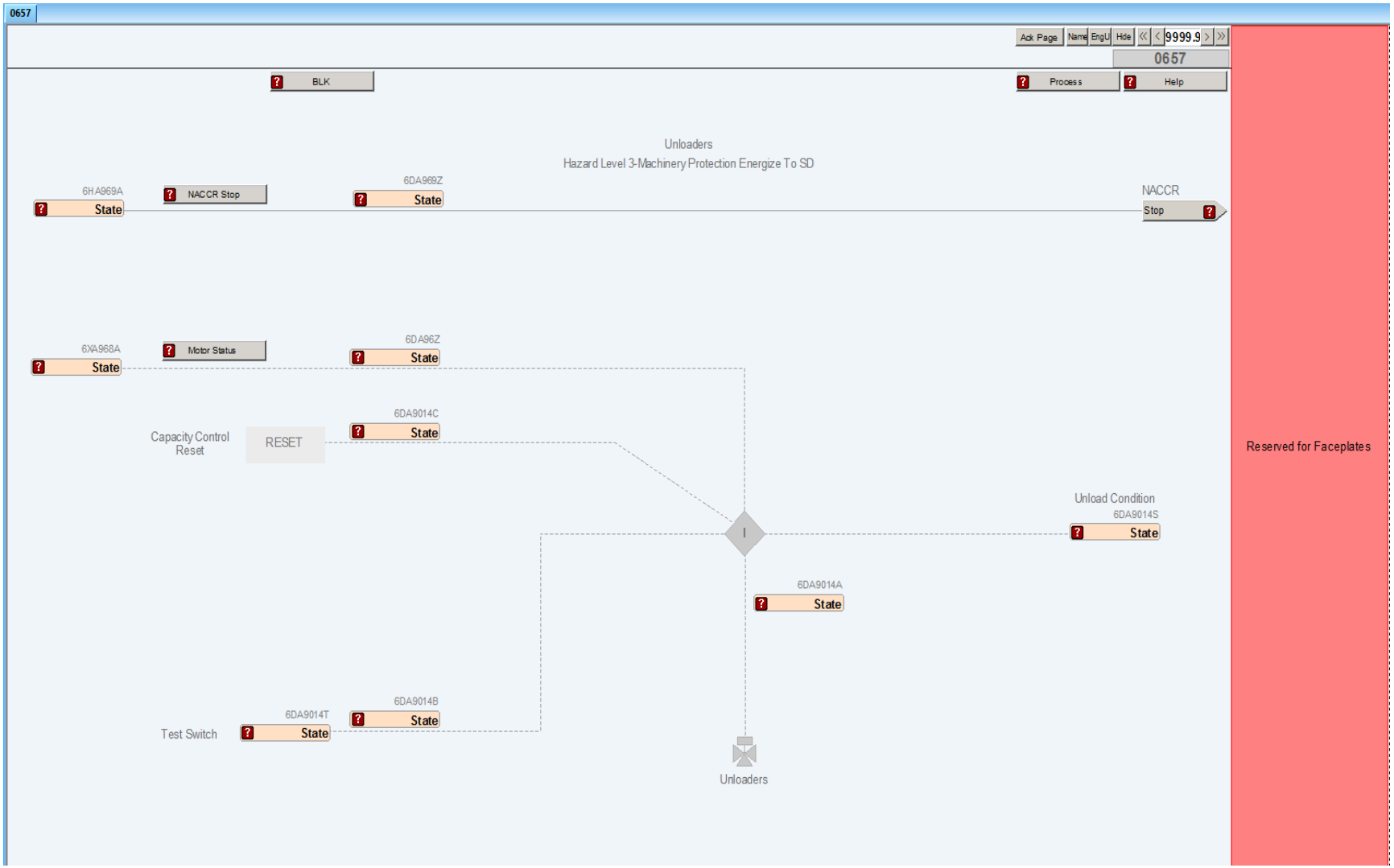

0656
BLK
RECYCLE GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
FEED PUMPS
HAZARD LEVEL 2-PERSONEL PROTECTION
DE-ENERGIZE TO SD
NACCR STOP
MOTOR STATUS
NACCR FEED PUMP STOP SWITCH
SHUTDOWN CONDITION
MAIN FEED PUMP
SPARE FEED PUMP
TEST SWITCH
TEST SWITCH
Group III
FEED PUMPS


0656
Ack Page
Name
EngU
Hide
9999.9
0656
BLK
Process
Help
Feed Pumps
Hazard Level 2-Personel Protection De-Energize To SD
6HA969A
State
NACCR Stop
6DA969Z
State
NACCR
Stop
6XA968A
State
Motor Status
6DA96Z
State
Motor
Status
NACCR Feed Pump Stop Switch
6HA991A
State
6DA991A
State
6DA991B
State
6DA991Z
State
Reserved for Faceplates
Shutdown Condition
6DA3717S
State
Shutdown Condition
6DA2630S
State
6DA3717A
State
6DA3717B
State
6DA2630A
State
6DA2630B
State
Main Feed Pump
Spare Feed Pump
6DA3717C
State
6XA986
State
6DA2630C
State
6XA987
State
Test Switch
6DA3717T
State
Test Switch
6DA2630T
State
Feed Pumps

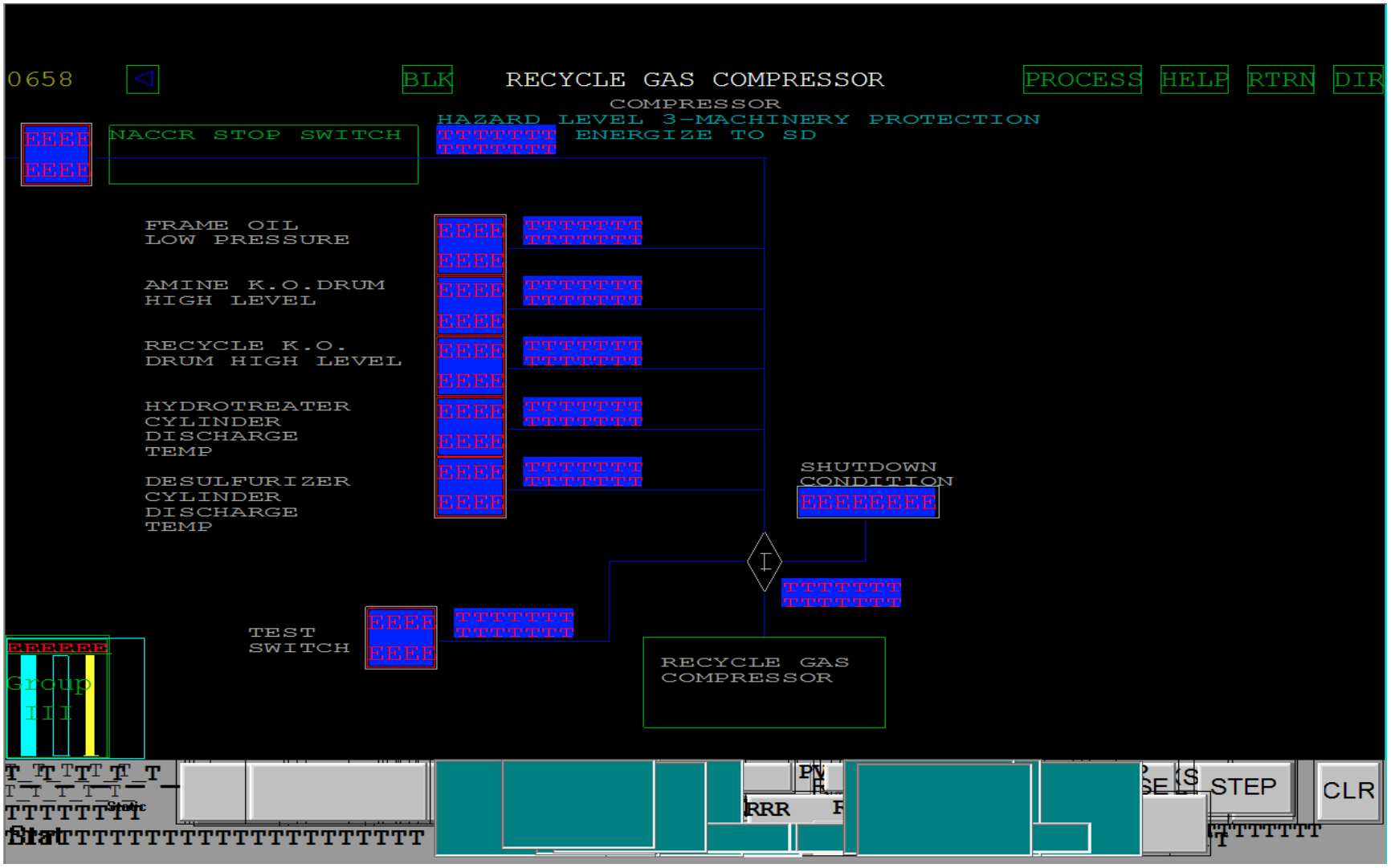
3.211 RECYCLE GAS COMPRESSOR (0657.DS)

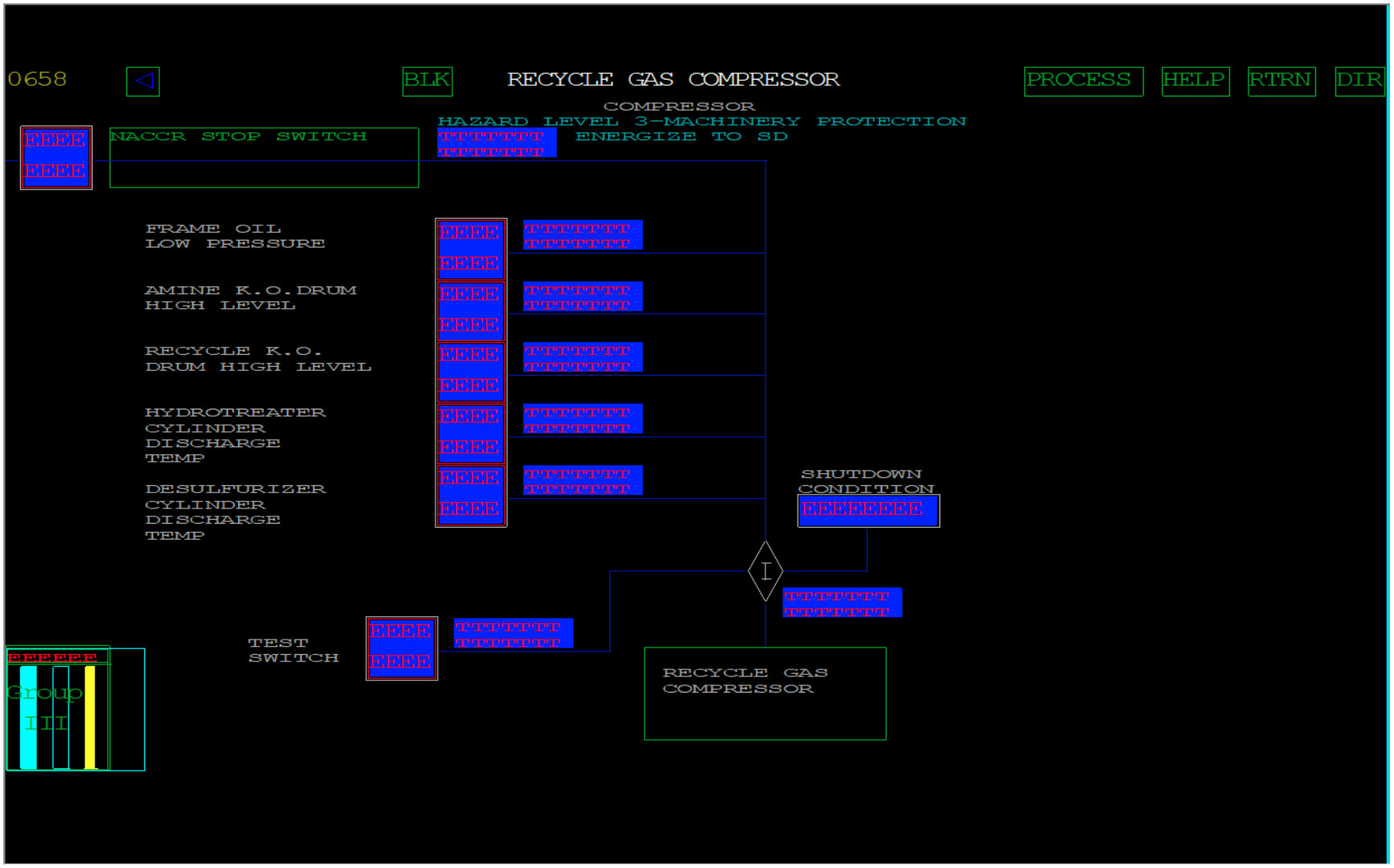


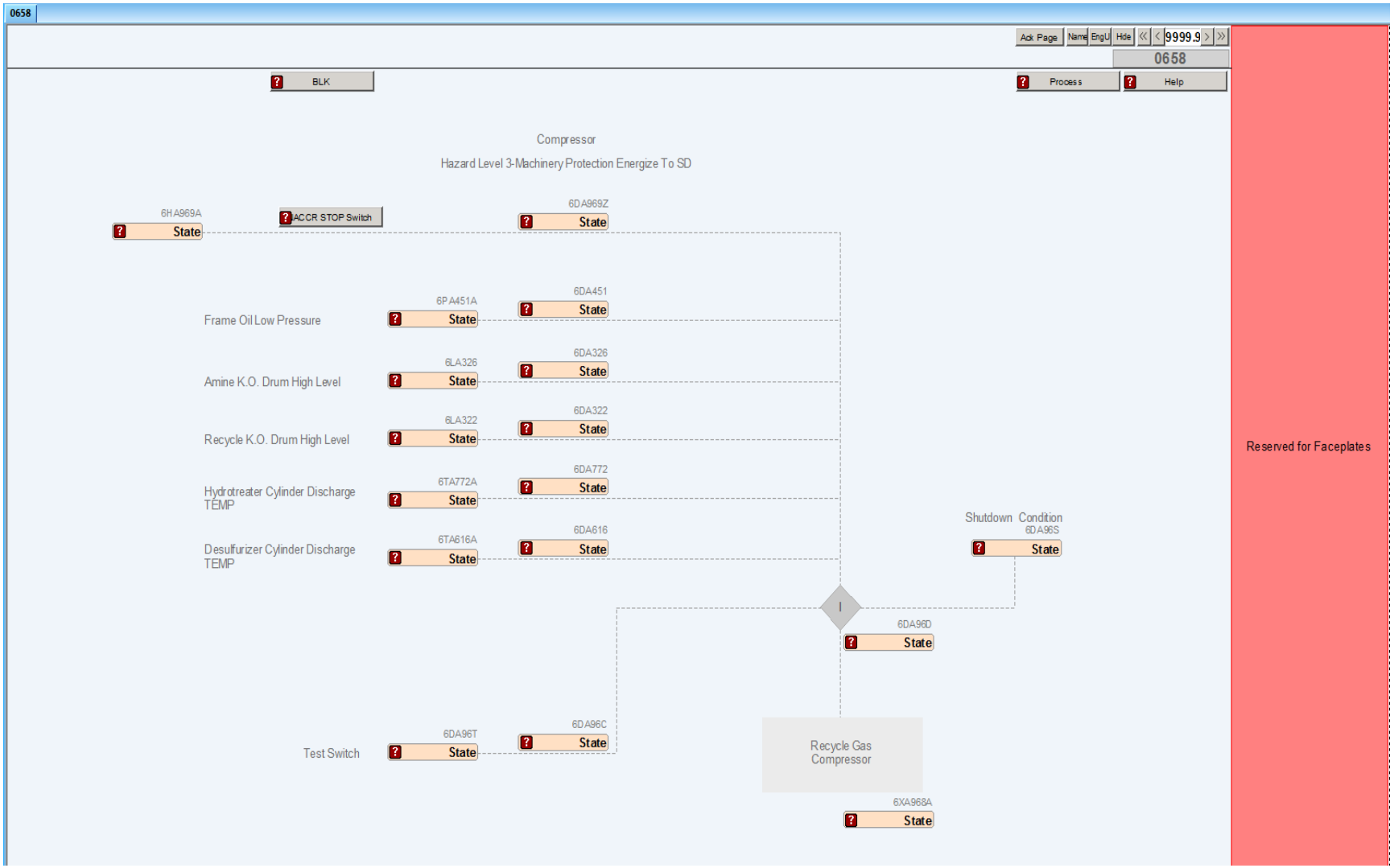

0657
BLK
RECYCLE GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
UNLOADERS
HAZARD LEVEL 3-MACHINERY PROTECTION
ENERGIZE TO SD
EEEE
EEEE
NACCR STOP
TTTTTTTT
TTTTTTTT
NACCR STOP
EEEE
EEEE
MOTOR STATUS
TTTTTTTT
TTTTTTTT
CAPACITY
CONTROL
RESET
RESET
TTTTTTTT
TTTTTTTT
UNLOAD
CONDITION
EEEEEEEE
TTTTTTTT
TTTTTTTT
EEEEEE
Group
III
TEST
SWITCH
EEEE
EEEE
TTTTTTTT
TTTTTTTT
UNLOADERS


0657
Ack Page
Name
EngU
Hide
9999.9
0657
BLK
Process
Help
Unloaders
Hazard Level 3-Machinery Protection Energize To SD
6HA969A
State
NACCR Stop
6DA969Z
State
NACCR
Stop
6XA968A
State
Motor Status
6DA96Z
State
6DA9014C
State
Capacity Control Reset
RESET
Unload Condition
6DA9014S
State
6DA9014A
State
6DA9014T
State
6DA9014B
State
Test Switch
Unloaders
Reserved for Faceplates

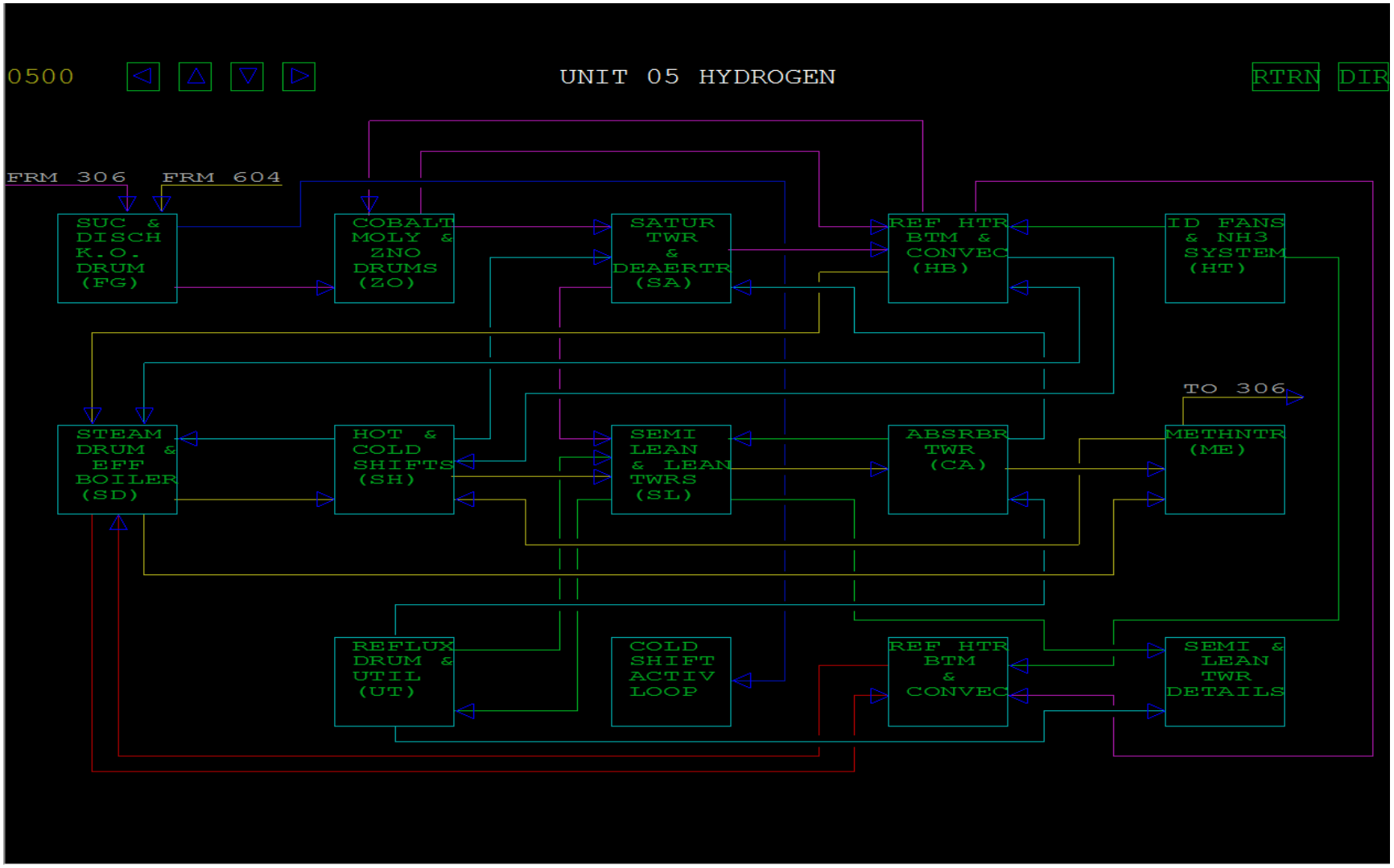
3.212 RECYCLE GAS COMPRESSOR (0658.DS)

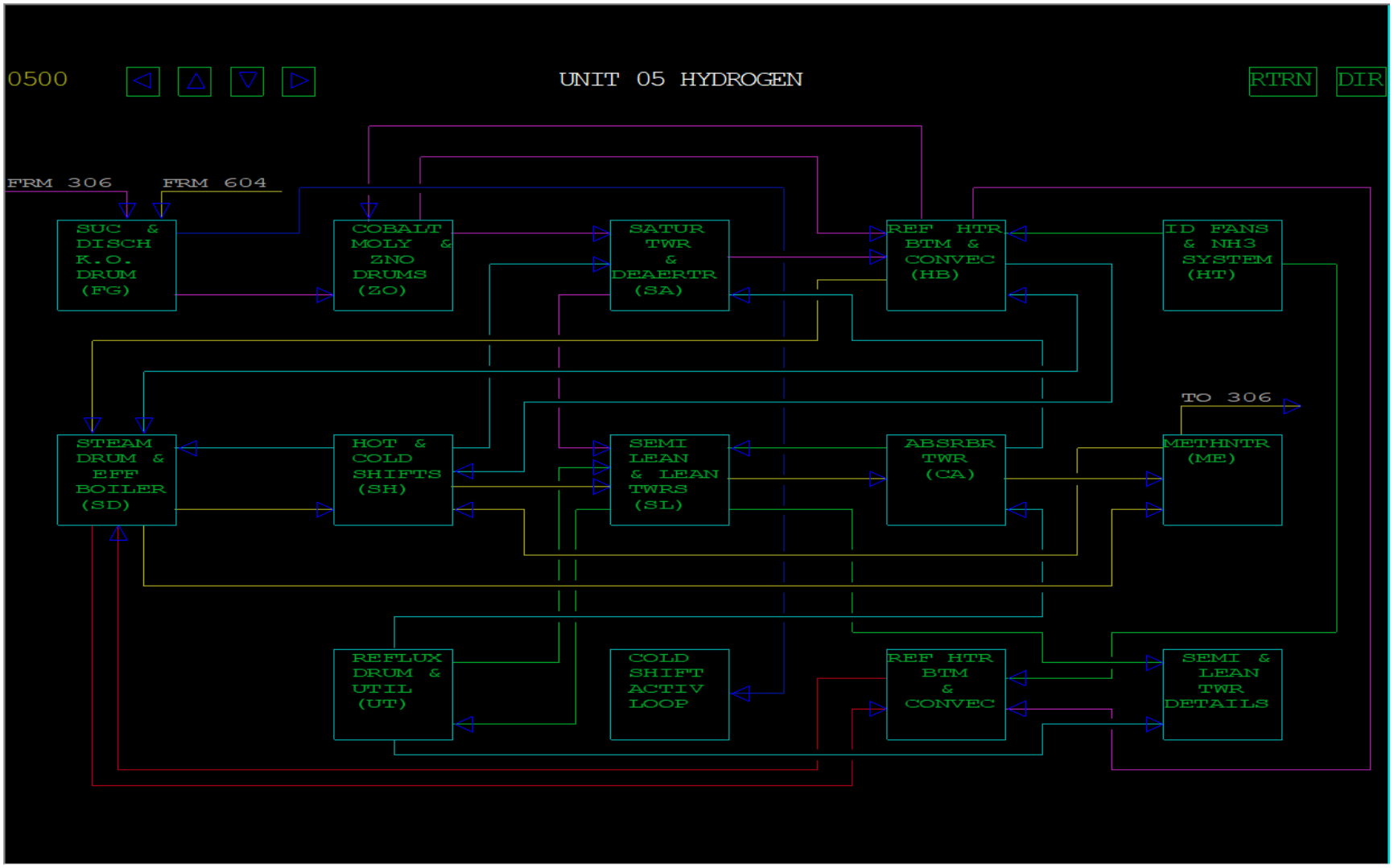


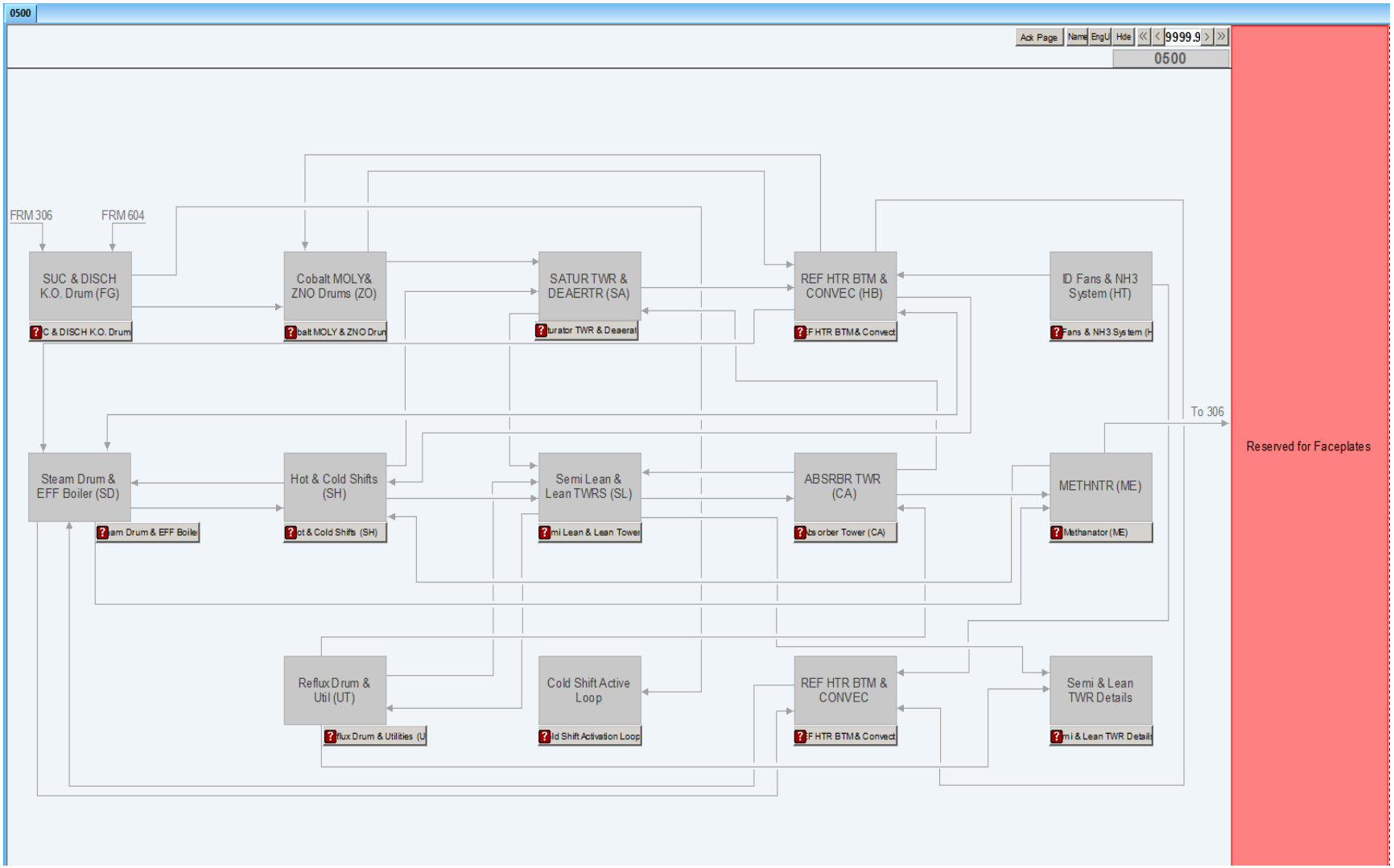

0658
BLK
RECYCLE GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
COMPRESSOR
HAZARD LEVEL 3-MACHINERY PROTECTION
ENERGIZE TO SD
NACCR STOP SWITCH
FRAME OIL
LOW PRESSURE
AMINE K.O.DRUM
HIGH LEVEL
RECYCLE K.O.
DRUM HIGH LEVEL
HYDROTREATER
CYLINDER
DISCHARGE
TEMP
DESULFURIZER
CYLINDER
DISCHARGE
TEMP
SHUTDOWN
CONDITION
TEST
SWITCH
Group
III
RECYCLE GAS
COMPRESSOR


0658
Ack Page
Name
Eng U
Hide
9999.9
0658
BLK
Process
Help
Compressor
Hazard Level 3-Machinery Protection Energize To SD
6HA969A
State
ACCR STOP Switch
6DA969Z
State
Frame Oil Low Pressure
6PA451A
State
6DA451
State
Amine K.O. Drum High Level
6LA326
State
6DA326
State
Recycle K.O. Drum High Level
6LA322
State
6DA322
State
Hydrotreater Cylinder Discharge TEMP
6TA772A
State
6DA772
State
Desulfurizer Cylinder Discharge TEMP
6TA616A
State
6DA616
State
Shutdown Condition
6DA96S
State
6DA96D
State
Test Switch
6DA96T
State
6DA96C
State
Recycle Gas Compressor
6XA968A
State
Reserved for Faceplates

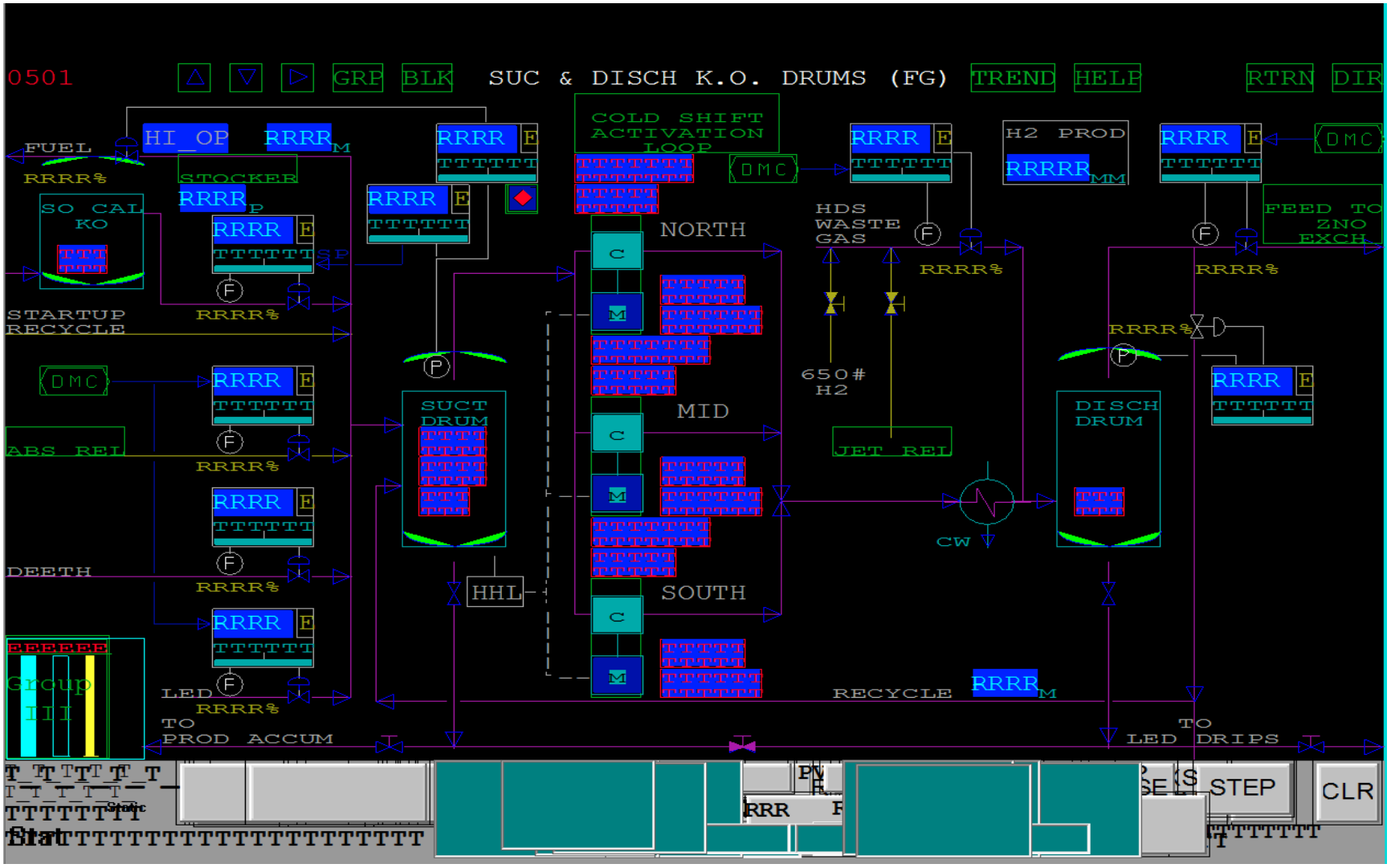
3.213 UNIT 05 HYDROGEN (0500.DS)

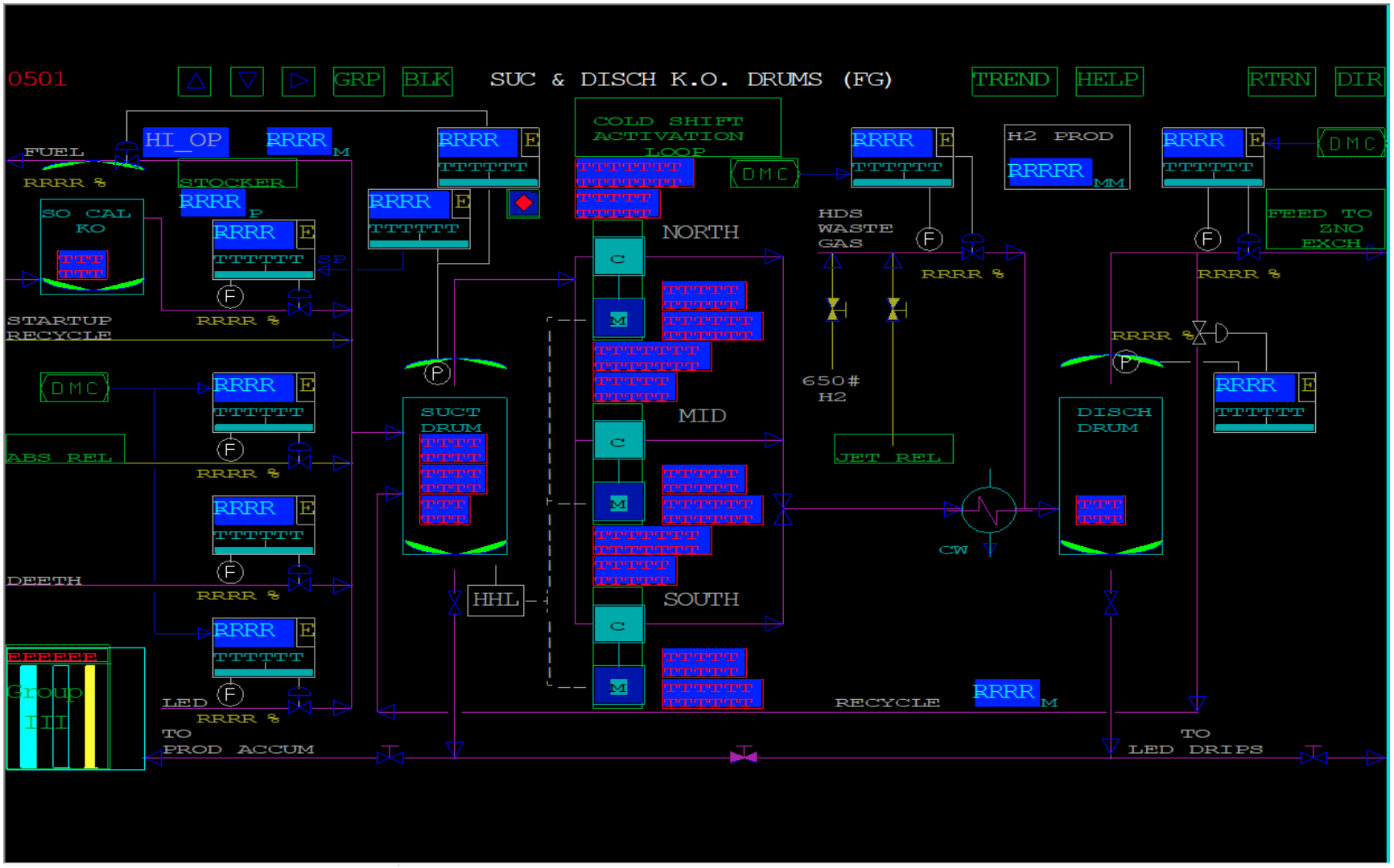


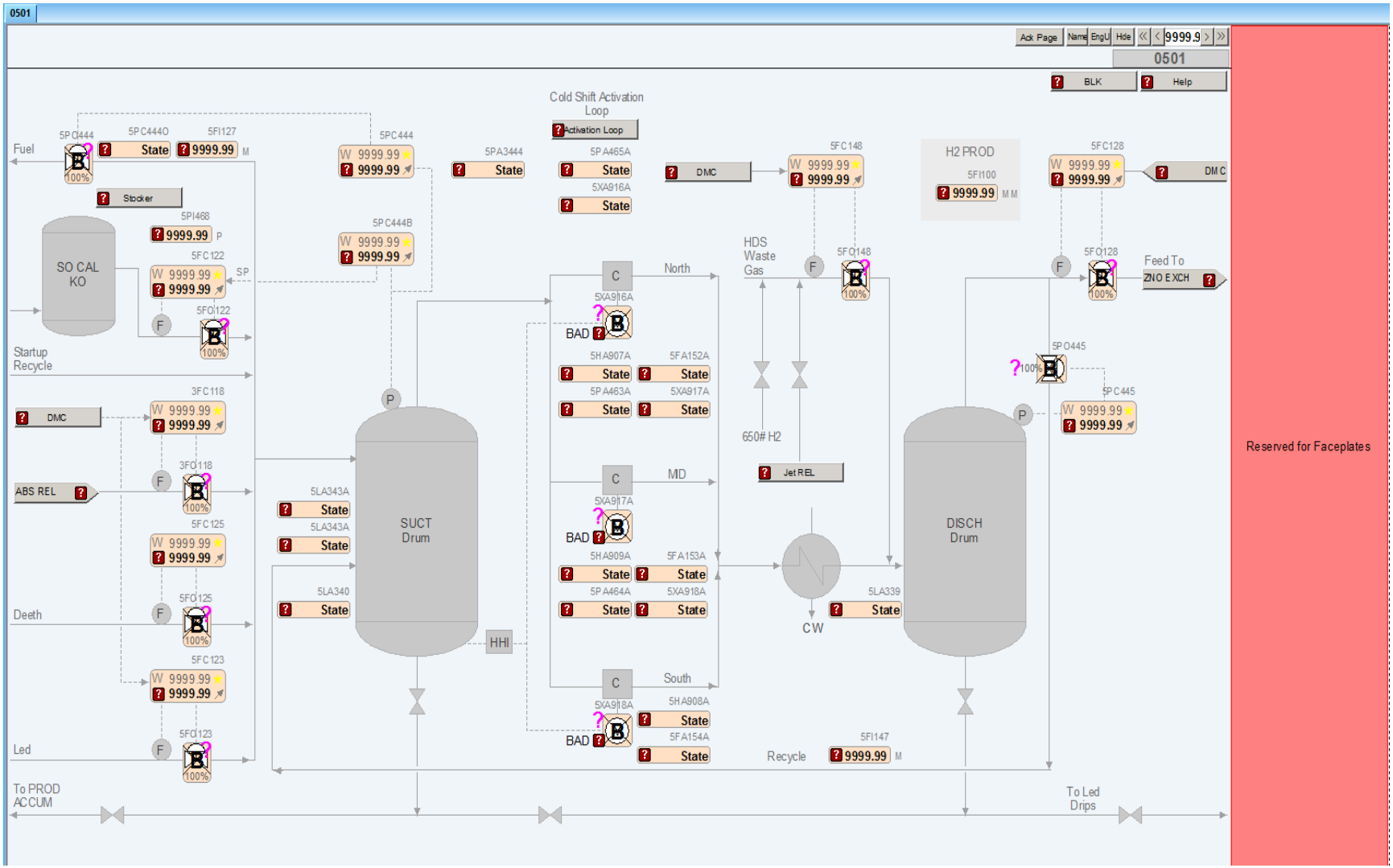

0500
UNIT 05 HYDROGEN
RTRN
DIR
FRM 306
FRM 604
SUC & DISCH K.O. DRUM (FG)
COBALT MOLY & ZNO DRUMS (ZO)
SATUR TWR & DEAERTR (SA)
REF HTR BTM & CONVEC (HB)
ID FANS & NH3 SYSTEM (HT)
TO 306
STEAM DRUM & EFF BOILER (SD)
HOT & COLD SHIFTS (SH)
SEMI LEAN & LEAN TWRS (SL)
ABSRBR TWR (CA)
METHNTR (ME)
REFLUX DRUM & UTIL (UT)
COLD SHIFT ACTIV LOOP
REF HTR BTM & CONVEC
SEMI & LEAN TWR DETAILS


0500
Ack Page
Name
Eng U
Hide
9999.9
0500
FRM 306
FRM 604
SUC & DISCH K.O. Drum (FG)
Cobalt MOLY& ZNO Drums (ZO)
SATUR TWR & DEAERTR (SA)
REF HTR BTM & CONVEC (HB)
ID Fans & NH3 System (HT)
To 306
Reserved for Faceplates
Steam Drum & EFF Boiler (SD)
Hot & Cold Shifts (SH)
Semi Lean & Lean TWRS (SL)
ABSRBR TWR (CA)
METHNTR (ME)
Reflux Drum & Util (UT)
Cold Shift Active Loop
REF HTR BTM & CONVEC
Semi & Lean TWR Details

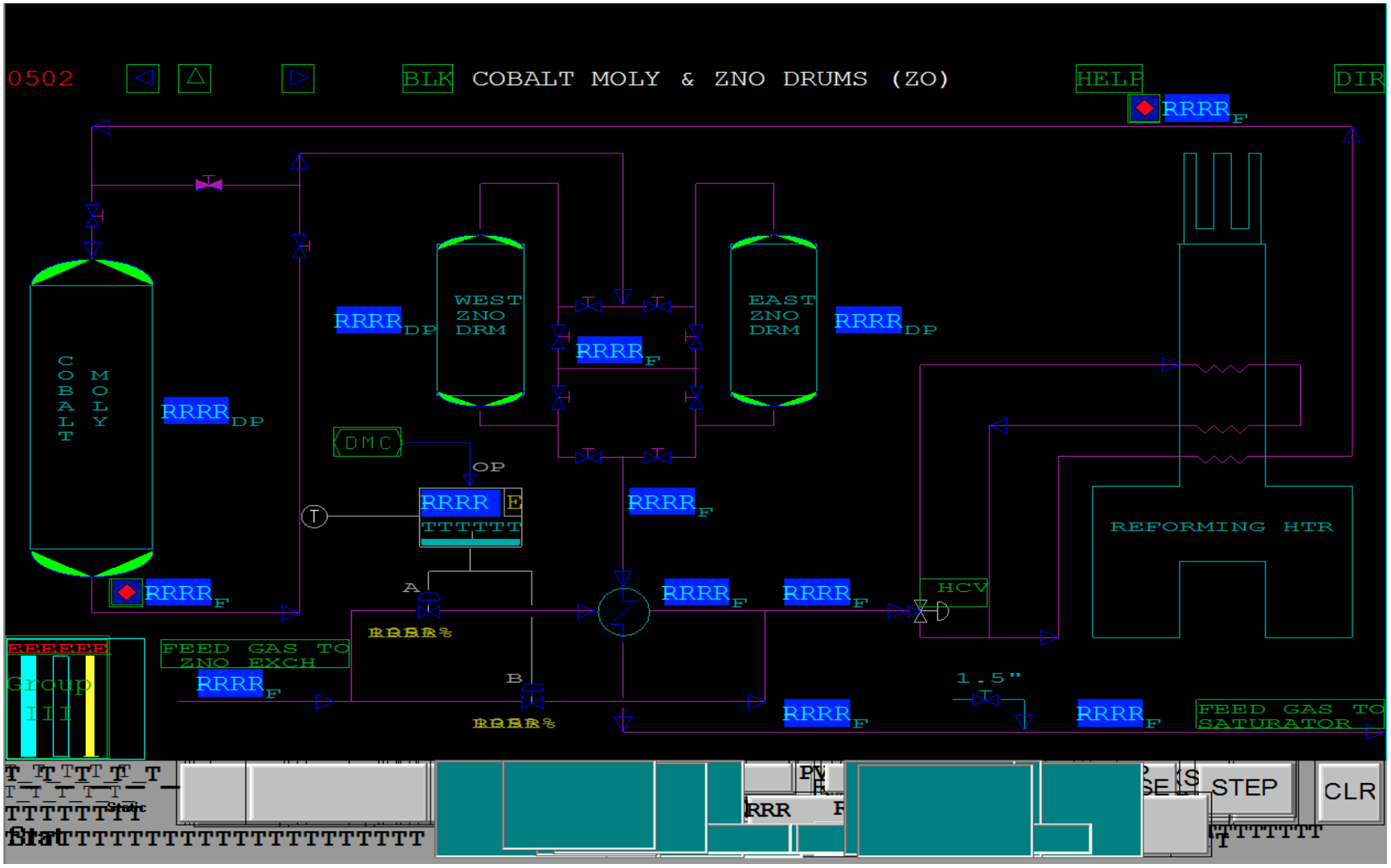
3.214 SUC & DISCH K.O. DRUMS (FG) (0501.DS)

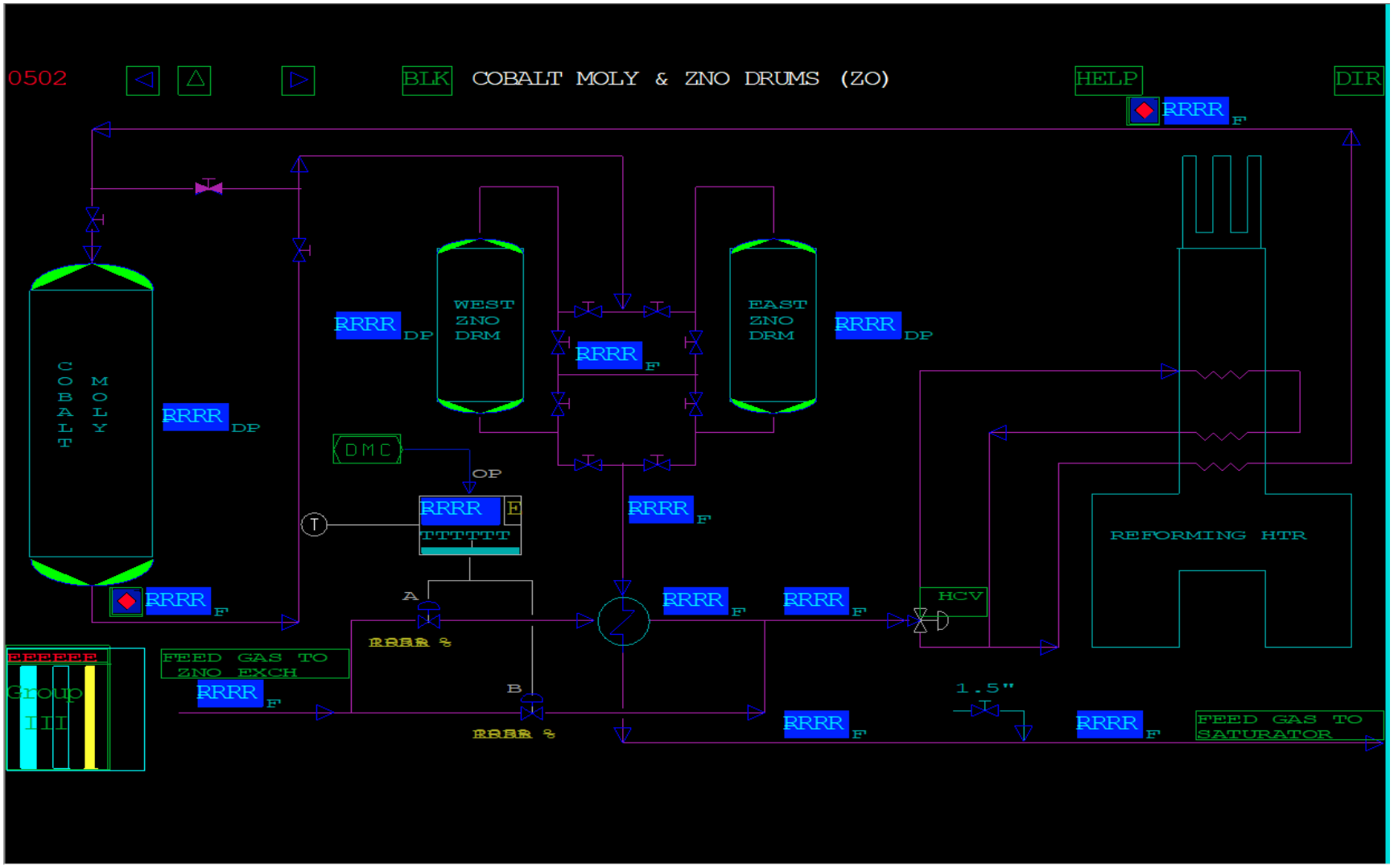


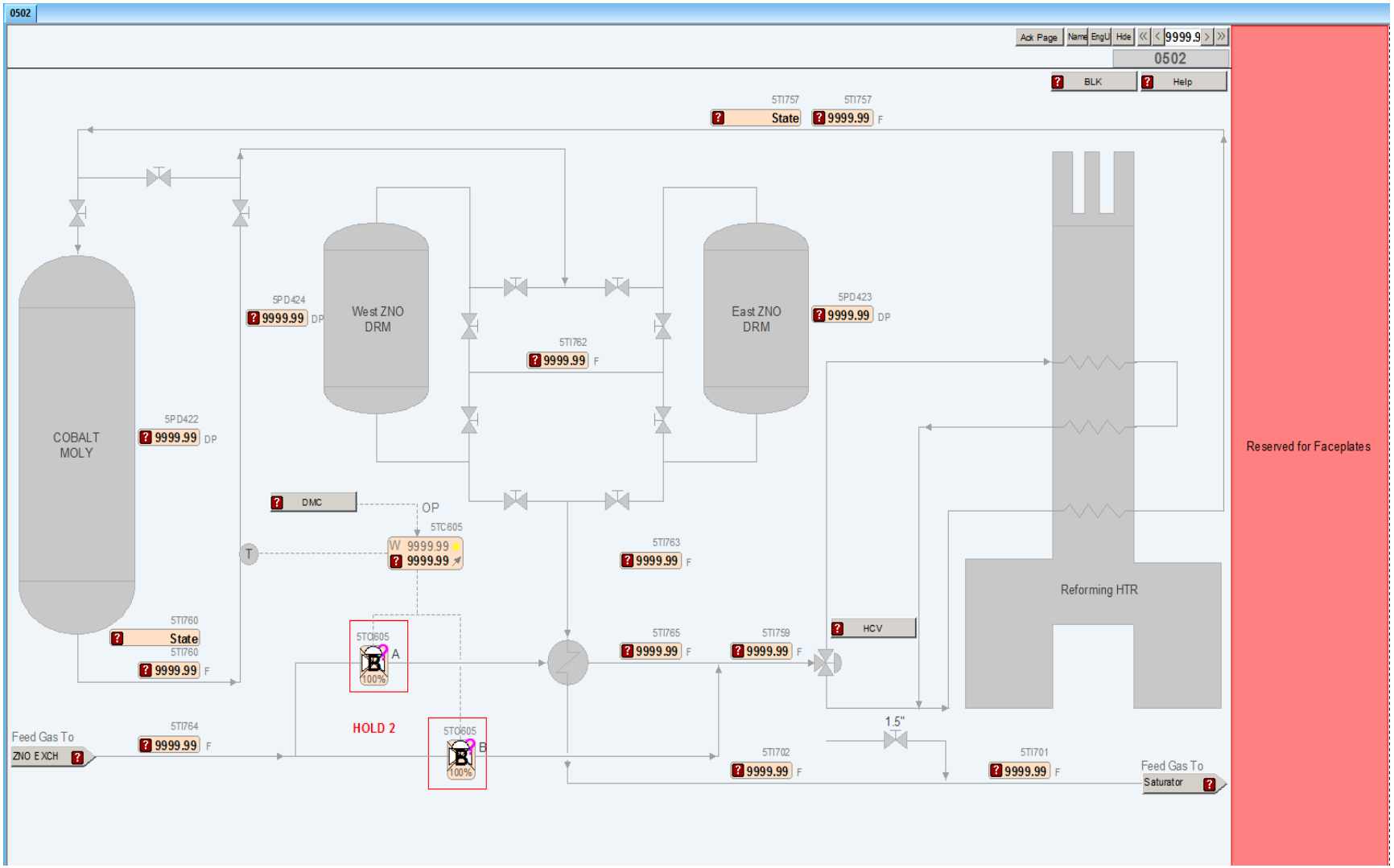

0501
GRP
BLK
SUC & DISCH K.O. DRUMS (FG)
TREND
HELP
RTRN
DIR
HI_OP
FUEL
STOCKER
SO CAL KO
STARTUP
RECYCLE
DMC
ABS REL
DEETH
GROUP III
LED
TO PROD ACCUM
COLD SHIFT ACTIVATION LOOP
NORTH
MID
SOUTH
SUCT DRUM
HHL
HDS WASTE GAS
650# H2
JET REL
CW
DISCH DRUM
H2 PROD
RECYCLE
TO LED DRIPS
FEED TO ZNO EXCH


0501
Ack Page
Name
EngU
Hide
9999.9
0501
BLK
Help
Cold Shift Activation Loop
Activation Loop
5PC444
5PC444O
5FI127
Fuel
State
9999.99
M
Stocker
5PC444
W 9999.99
9999.99
5PA3444
State
5PA465A
State
5XA916A
State
DMC
5FC148
W 9999.99
9999.99
H2 PROD
5FI100
9999.99
M M
5FC128
W 9999.99
9999.99
DMC
5PI468
9999.99
P
5PC444B
W 9999.99
9999.99
SO CAL KO
5FC122
W 9999.99
9999.99
SP
5FO122
100%
Startup Recycle
HDS Waste Gas
5FO148
100%
5FO128
100%
Feed To ZNO EXCH
C
North
5XA916A
BAD
5HA907A
State
5FA152A
State
5PA463A
State
5XA917A
State
5PO445
100%
5PC445
W 9999.99
9999.99
3FC118
W 9999.99
9999.99
DMC
3FO118
100%
ABS REL
650# H2
Jet REL
C
MD
5XA917A
BAD
5HA909A
State
5FA153A
State
5PA464A
State
5XA918A
State
5LA343A
State
5LA343A
State
SUCT Drum
5LA340
State
HHI
5FC125
W 9999.99
9999.99
5FO125
100%
Deeth
CW
5LA339
State
DISCH Drum
C
South
5XA918A
BAD
5HA908A
State
5FA154A
State
5FC123
W 9999.99
9999.99
5FO123
100%
Led
Recycle
5FI147
9999.99
M
To PROD ACCUM
To Led Drips
Reserved for Faceplates

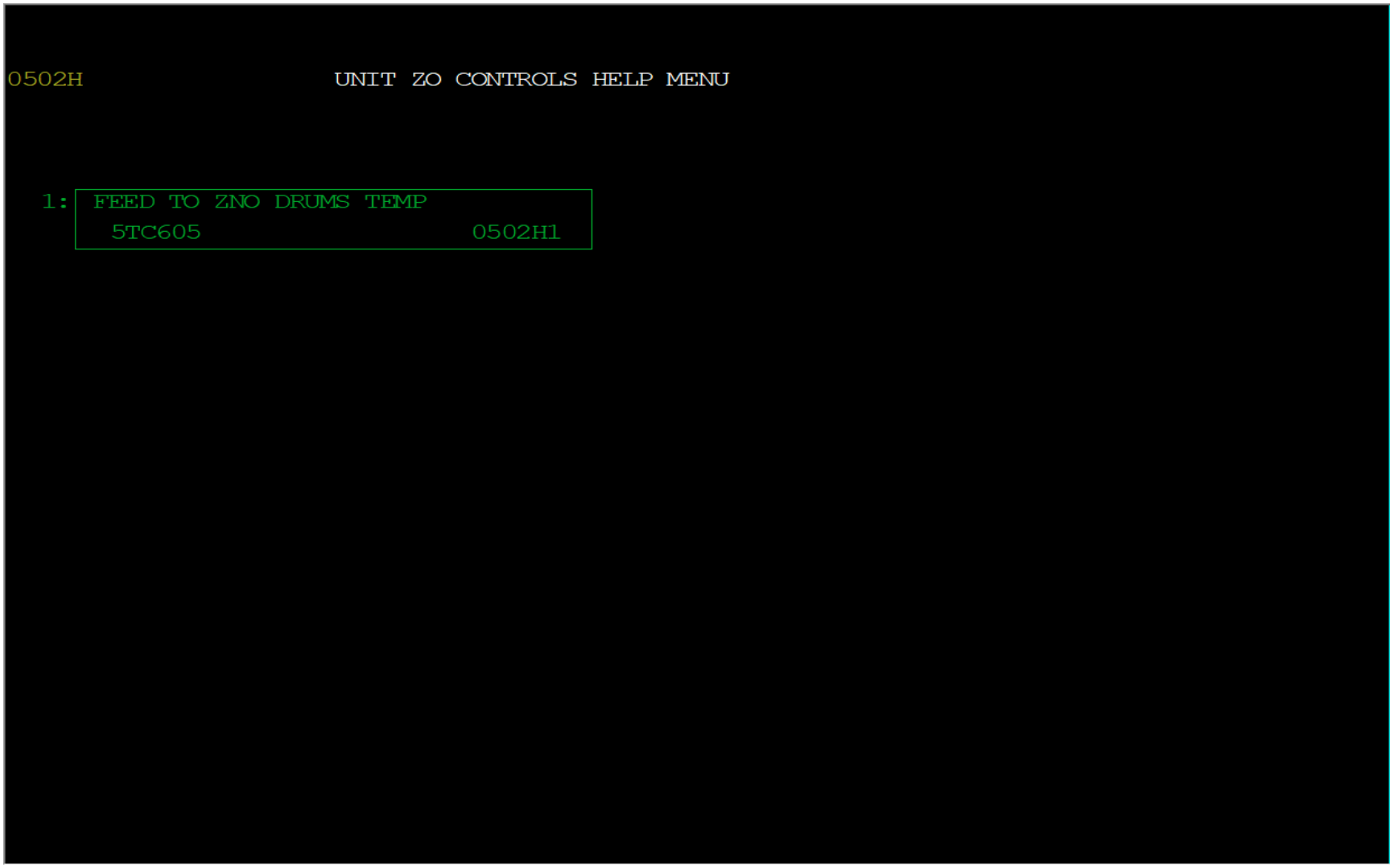
3.215 COBALT MOLY & ZNO DRUMS (ZO) (0502.DS)

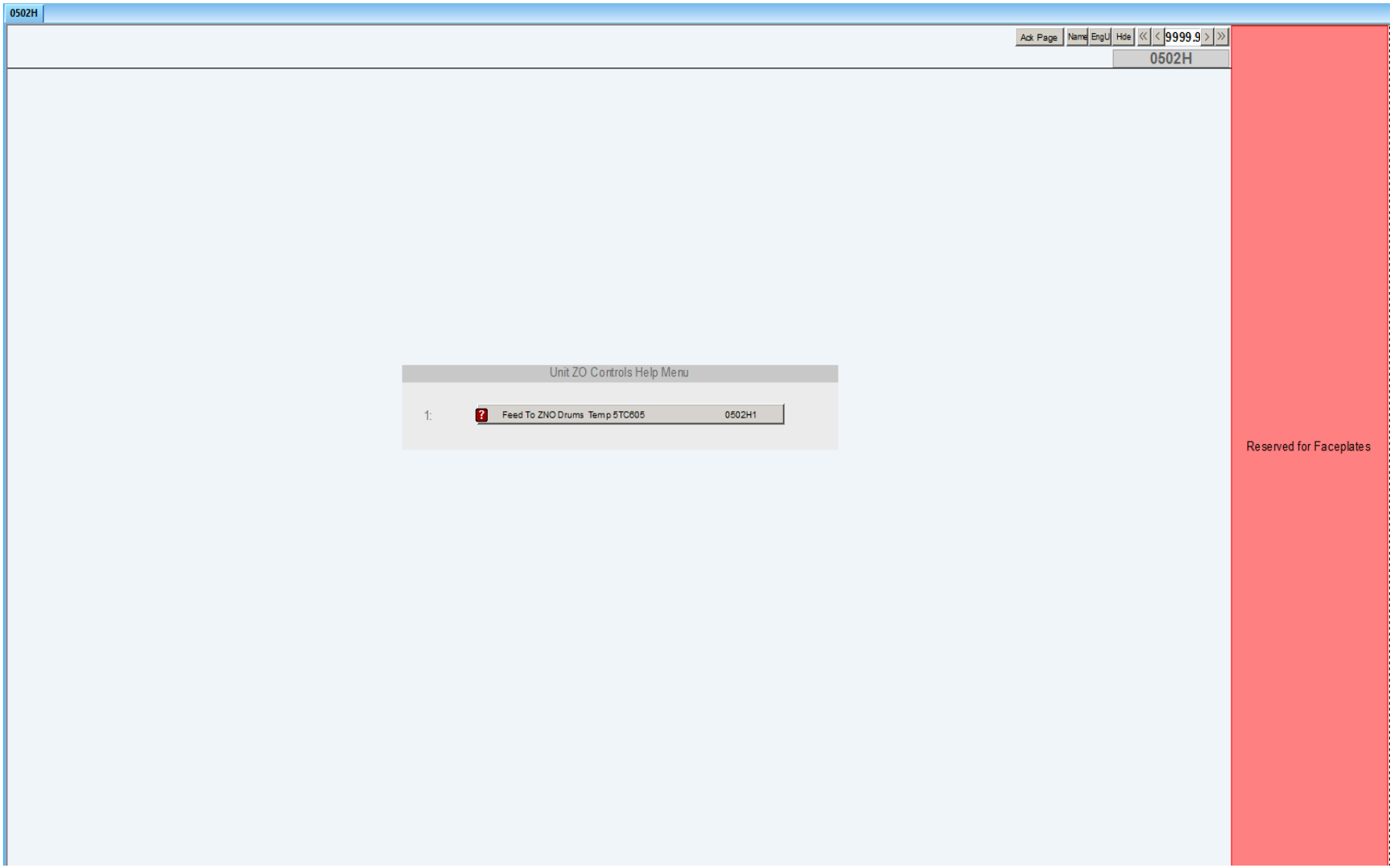



0502
BLK
COBALT MOLY & ZNO DRUMS (ZO)
HELP
DIR
RRRR F
WEST ZNO DRM
EAST ZNO DRM
RRRR DP
RRRR F
COBALT MOLY
RRRR DP
DMC
OP
RRRR F
TTTTTT
REFORMING HTR
RRRR F
A
RRRR %
RRRR F
RRRR F
HCV
FEED GAS TO ZNO EXCH
RRRR F
B
RRRR %
1.5"
RRRR F
RRRR F
FEED GAS TO SATURATOR
Group III

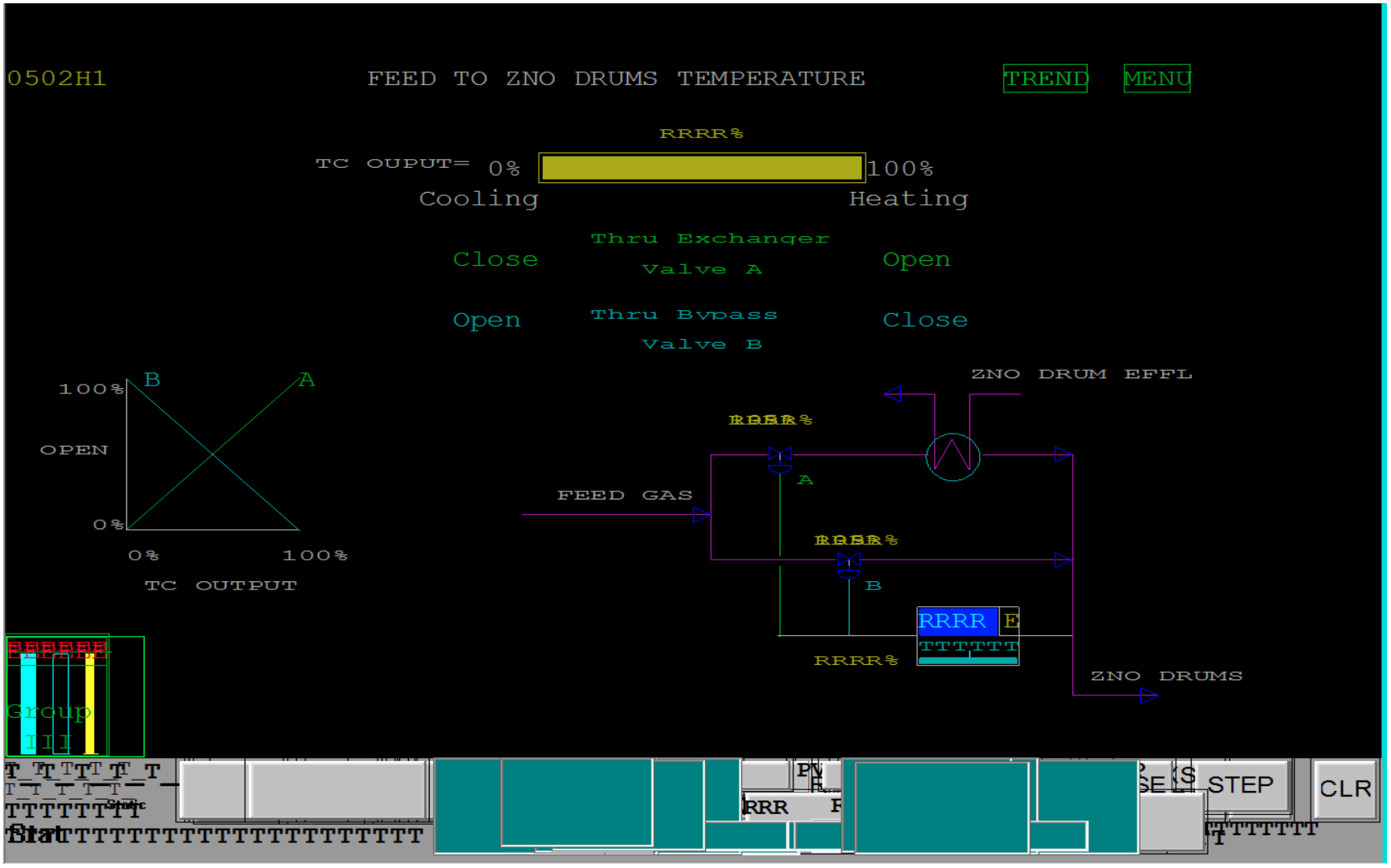

0502
Ack Page
Name
Eng U
Hide
9999.9
0502
BLK
Help
5TI757
State
5TI757
9999.99
F
5PD424
9999.99
DP
West ZNO DRM
East ZNO DRM
5PD423
9999.99
DP
5TI762
9999.99
F
COBALT MOLY
5PD422
9999.99
DP
DMC
OP
5TC605
W 9999.99
9999.99
T
5TI763
9999.99
F
Reforming HTR
5TI760
State
5TI760
9999.99
F
5TO605
A
100%
5TI765
9999.99
F
5TI759
9999.99
F
HCV
HOLD 2
5TO605
B
100%
1.5"
Feed Gas To
ZNO EXCH
5TI764
9999.99
F
5TI702
9999.99
F
5TI701
9999.99
F
Feed Gas To
Saturator
Reserved for Faceplates

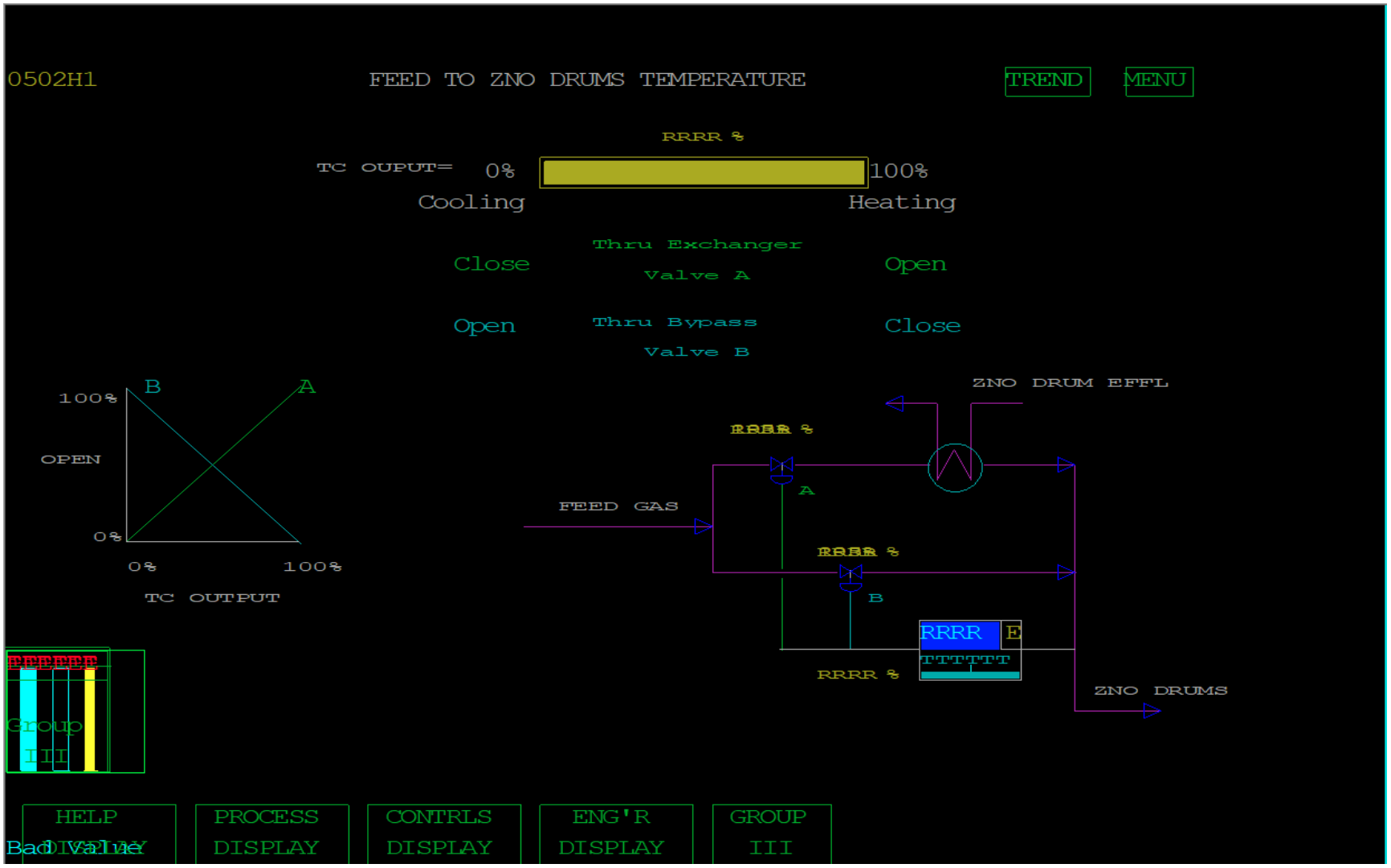
3.216 UNIT ZO CONTROLS HELP MENU (0502H.DS)

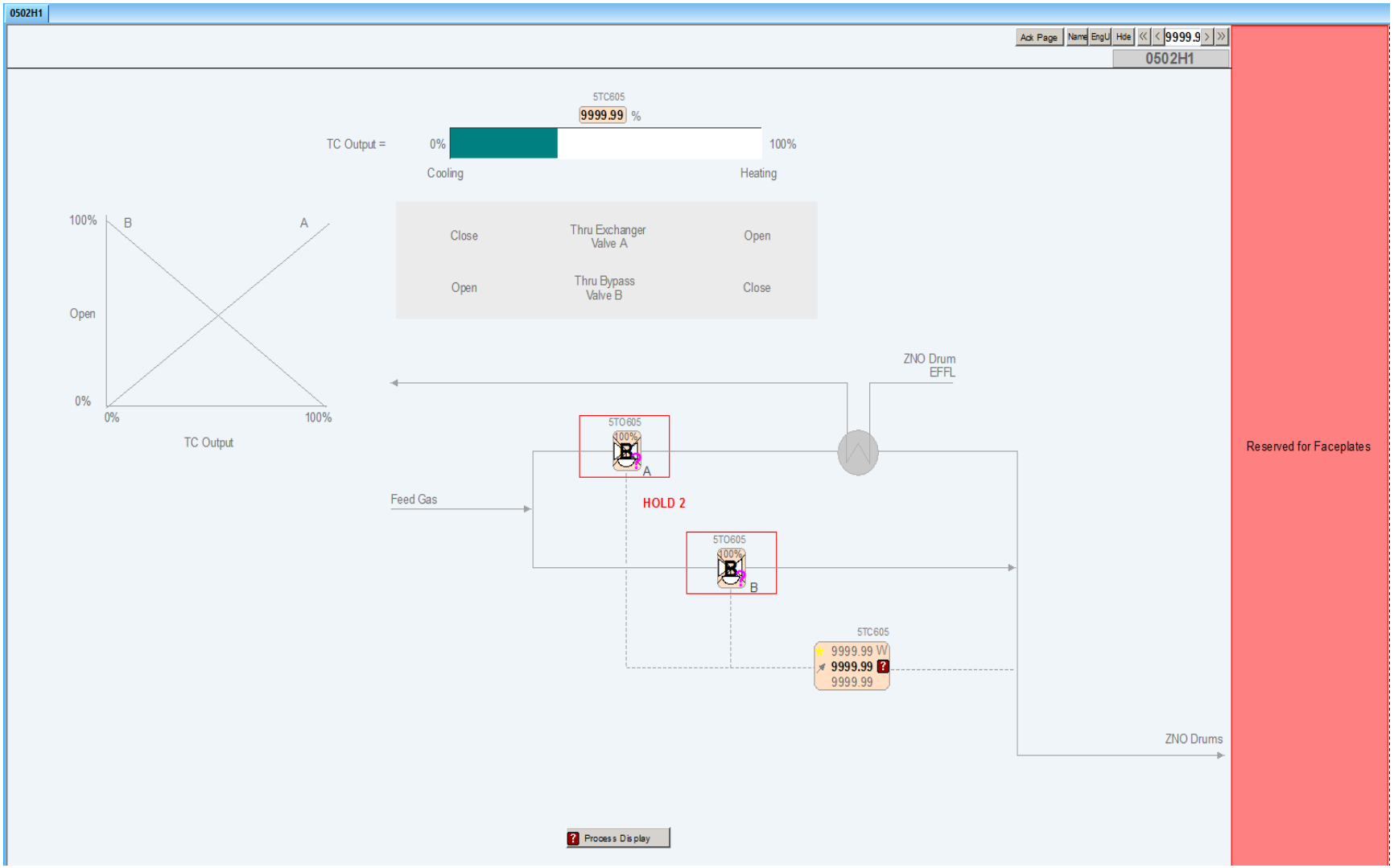

0502H
UNIT ZO CONTROLS HELP MENU
1:
FEED TO ZNO DRUMS TEMP
5TC605
0502H1


0502H
Ack Page
Name
EngU
Hide
9999.9
0502H
Unit ZO Controls Help Menu
1:
Feed To ZNO Drums Temp 5TC605
0502H1
Reserved for Faceplates

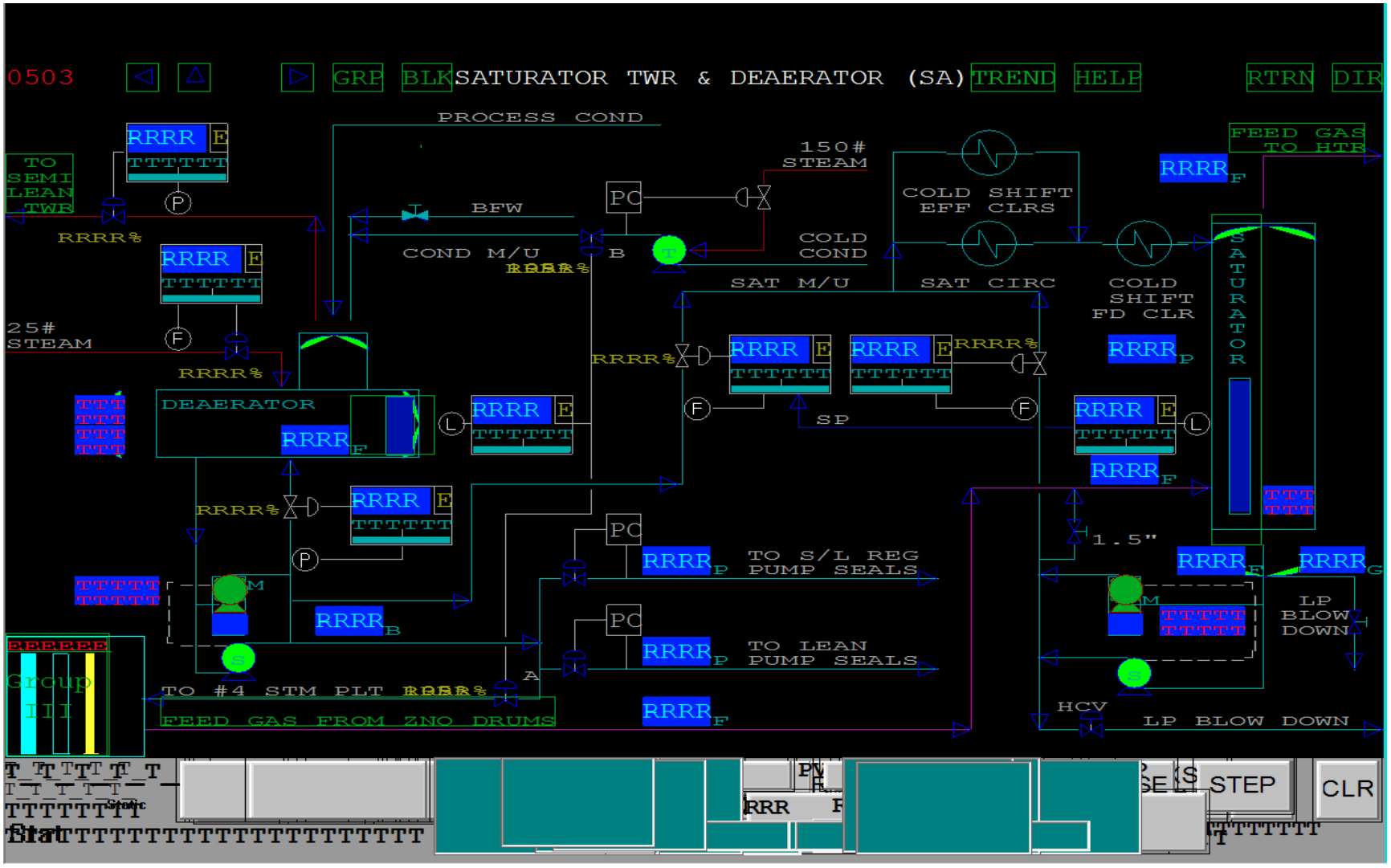
3.217 FEED TO ZNO DRUMS TEMPERATURE (0502H1.DS)

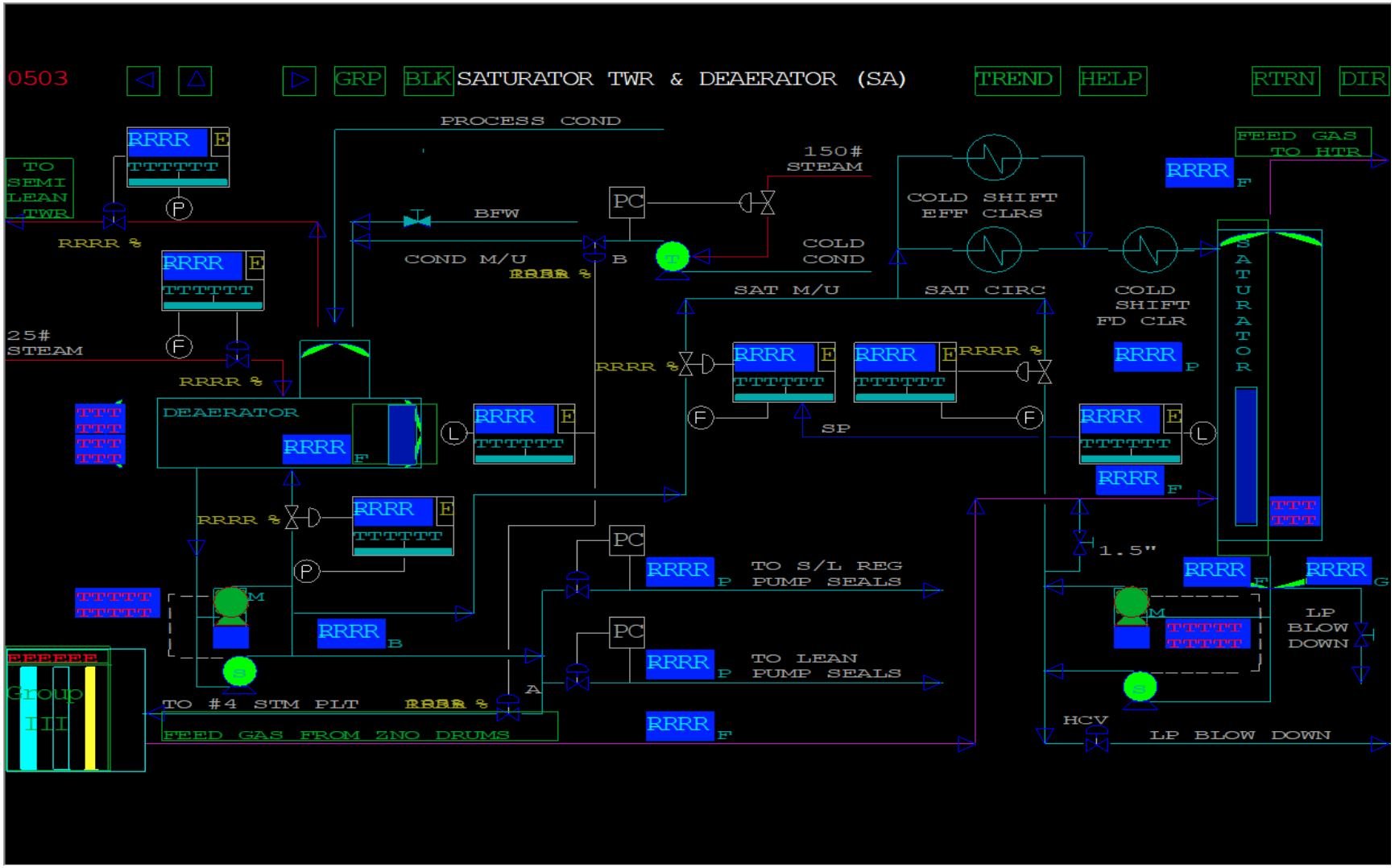


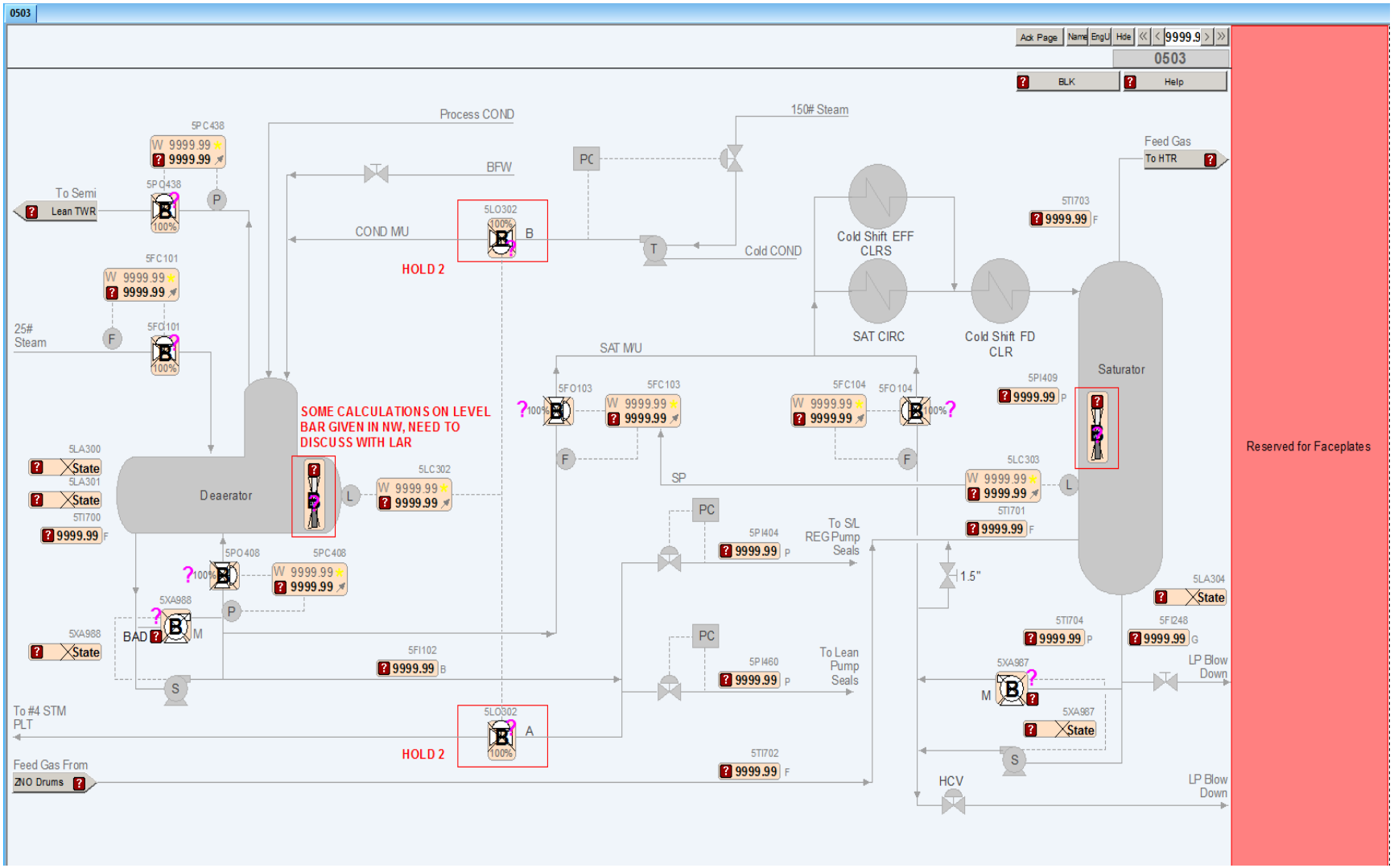

0502H1
FEED TO ZNO DRUMS TEMPERATURE
TREND
MENU
RRRR %
TC OUPUT=
0%
100%
Cooling
Heating
Thru Exchanger
Close
Valve A
Open
Open
Thru Bypass
Valve B
Close
100%
B
A
OPEN
0%
0%
100%
TC OUTPUT
ZNO DRUM EFFL
RRRR %
A
FEED GAS
RRRR %
B
RRRR
E
TTTTTT
RRRR %
ZNO DRUMS
Group
III
HELP
DISPLAY
PROCESS
DISPLAY
CONTRLS
DISPLAY
ENG'R
DISPLAY
GROUP
III


0502H1
Ack Page
Name
EngU
Hide
9999.9
0502H1
5TC605
9999.99 %
TC Output =
0%
100%
Cooling
Heating
100%
B
A
Open
0%
0%
100%
TC Output
Close
Thru Exchanger Valve A
Open
Open
Thru Bypass Valve B
Close
ZNO Drum EFFL
5TO605
100%
B
A
HOLD 2
Feed Gas
5TO605
100%
B
B
5TC605
9999.99 W
9999.99
9999.99
ZNO Drums
Reserved for Faceplates
Process Display

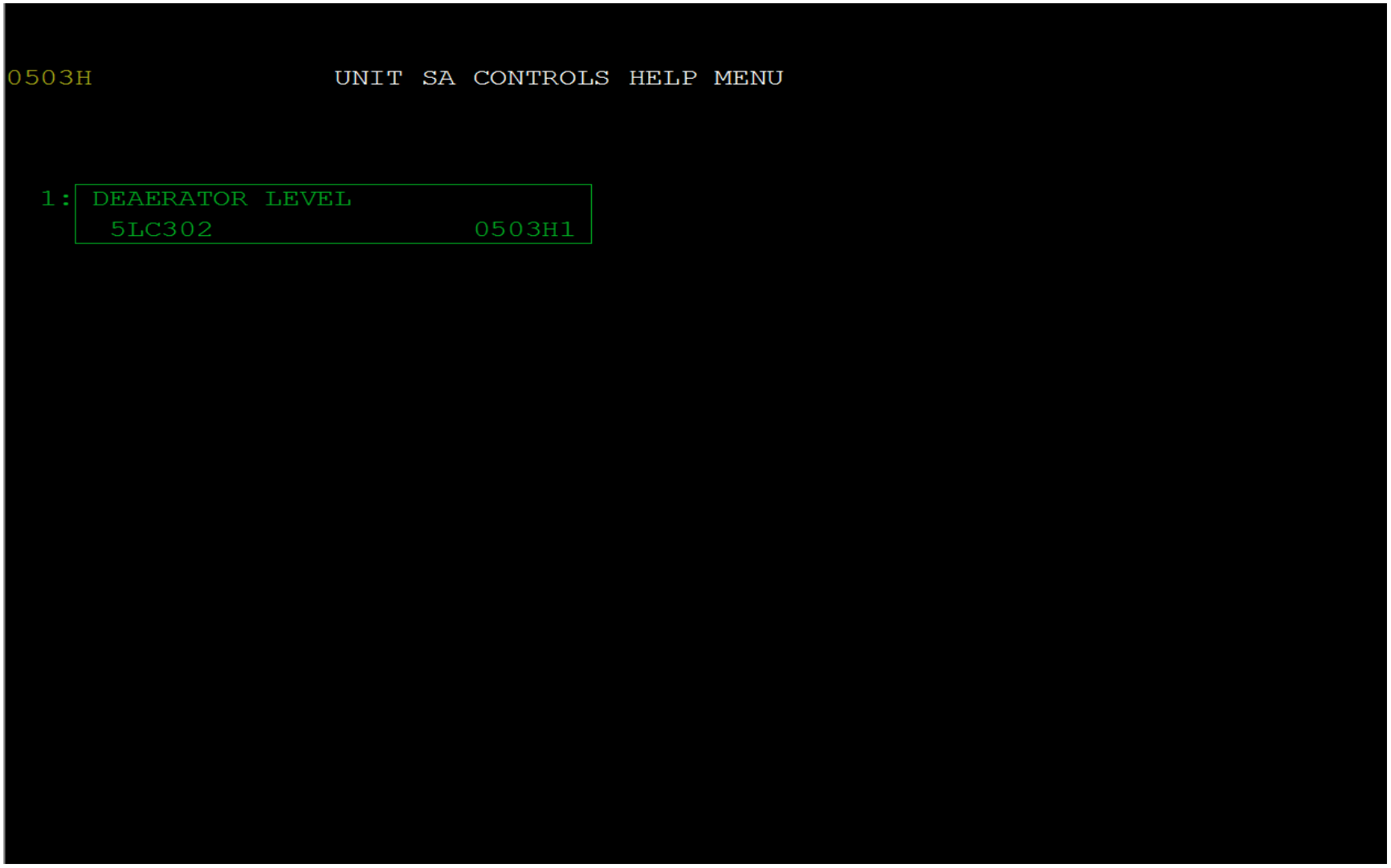
3.218 SATURATOR TWR & DEAERATOR (SA) (0503.DS)

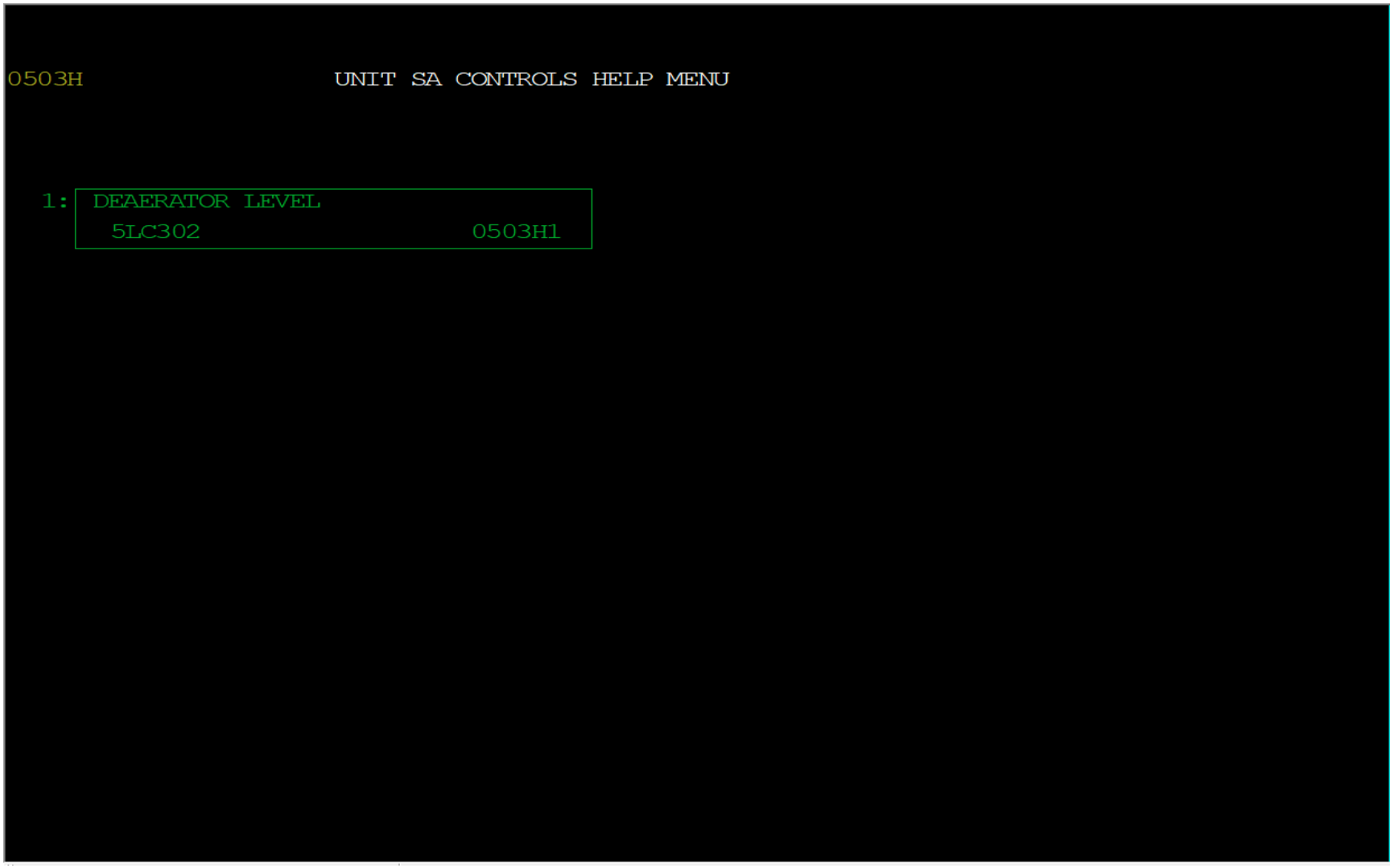


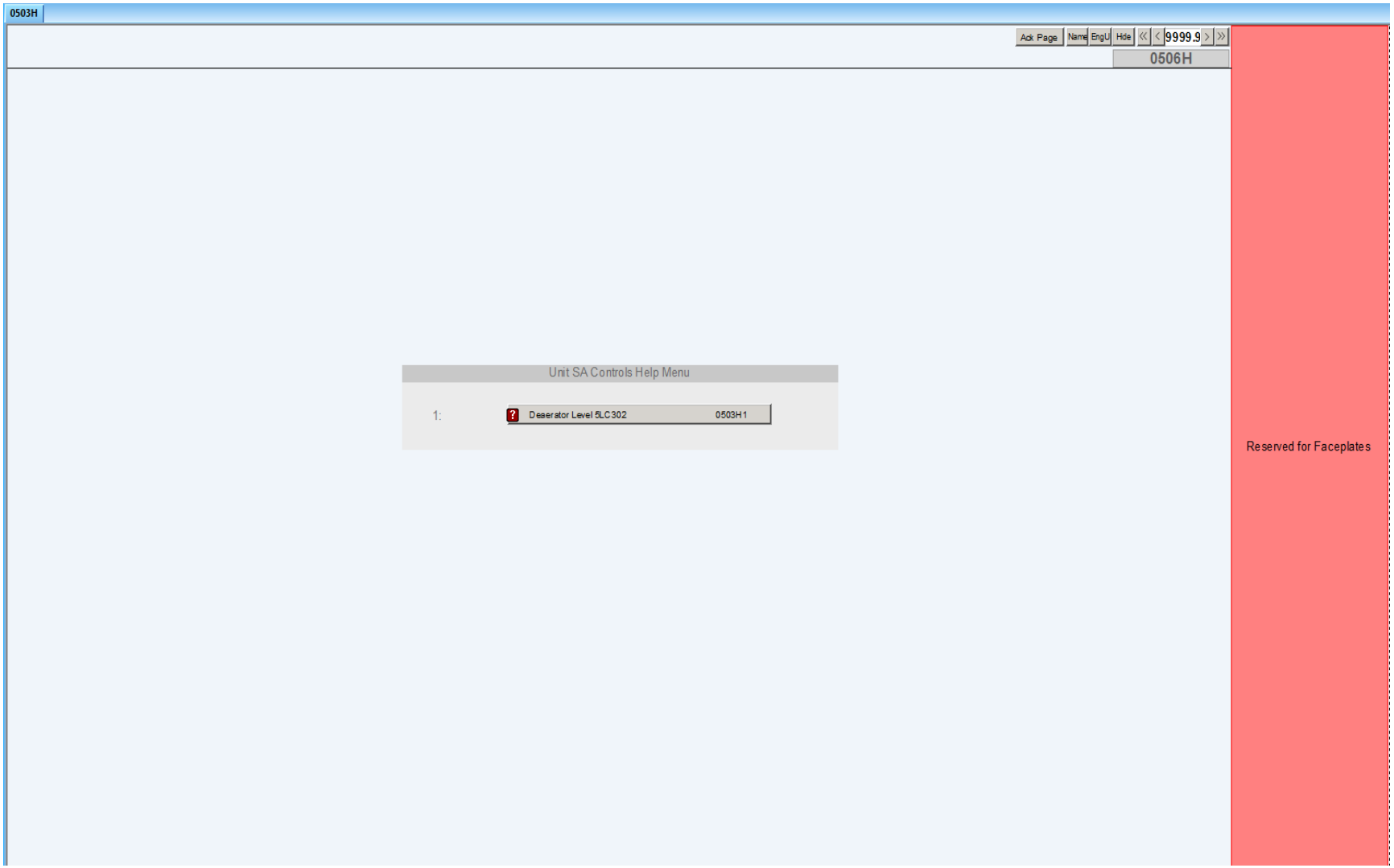

0503
GRP
BLK
SATURATOR TWR & DEAERATOR (SA)
TREND
HELP
RTRN
DIR
PROCESS COND
TO SEMI LEAN TWR
150# STEAM
BFW
COND M/U
COLD COND
COLD SHIFT EFF CLRS
FEED GAS TO HTR
SATURATOR
SAT M/U
SAT CIRC
COLD SHIFT FD CLR
25# STEAM
DEAERATOR
SP
TO S/L REG PUMP SEALS
TO LEAN PUMP SEALS
1.5"
LP BLOW DOWN
HCV
TO #4 STM PLT
FEED GAS FROM ZNO DRUMS
GROUP III


0503
Ack Page
Name
Eng U
Hide
9999.9
0503
BLK
Help
Process COND
150# Steam
BFW
PC
Feed Gas
To HTR
5PC438
W 9999.99
9999.99
5PQ438
To Semi
Lean TWR
P
COND MU
5LO302
100%
B
HOLD 2
T
Cold COND
Cold Shift EFF
CLRS
5TI703
9999.99 F
5FC101
W 9999.99
9999.99
25#
Steam
F
5FC101
100%
SAT MU
SAT CIRC
Cold Shift FD
CLR
Saturator
5PI409
9999.99 P
SOME CALCULATIONS ON LEVEL
BAR GIVEN IN NW, NEED TO
DISCUSS WITH LAR
5FO103
5FC103
W 9999.99
9999.99
5FC104
5FO104
5LA300
State
5LA301
State
Deaerator
L
5LC302
W 9999.99
9999.99
SP
5LC303
W 9999.99
9999.99
5TI700
9999.99 F
PC
5PI404
9999.99 P
To S/L
REG Pump
Seals
5TI701
9999.99 F
5PO408
5PC408
W 9999.99
9999.99
1.5"
5LA304
State
5XA988
BAD
M
5XA988
State
5FI102
9999.99 B
PC
5PI460
9999.99 P
To Lean
Pump
Seals
5TI704
9999.99 P
5FI248
9999.99 G
LP Blow
Down
5XA987
M
5XA987
State
S
To #4 STM
PLT
5LO302
100%
A
HOLD 2
5TI702
9999.99 F
Feed Gas From
ZNO Drums
HCV
LP Blow
Down
Reserved for Faceplates

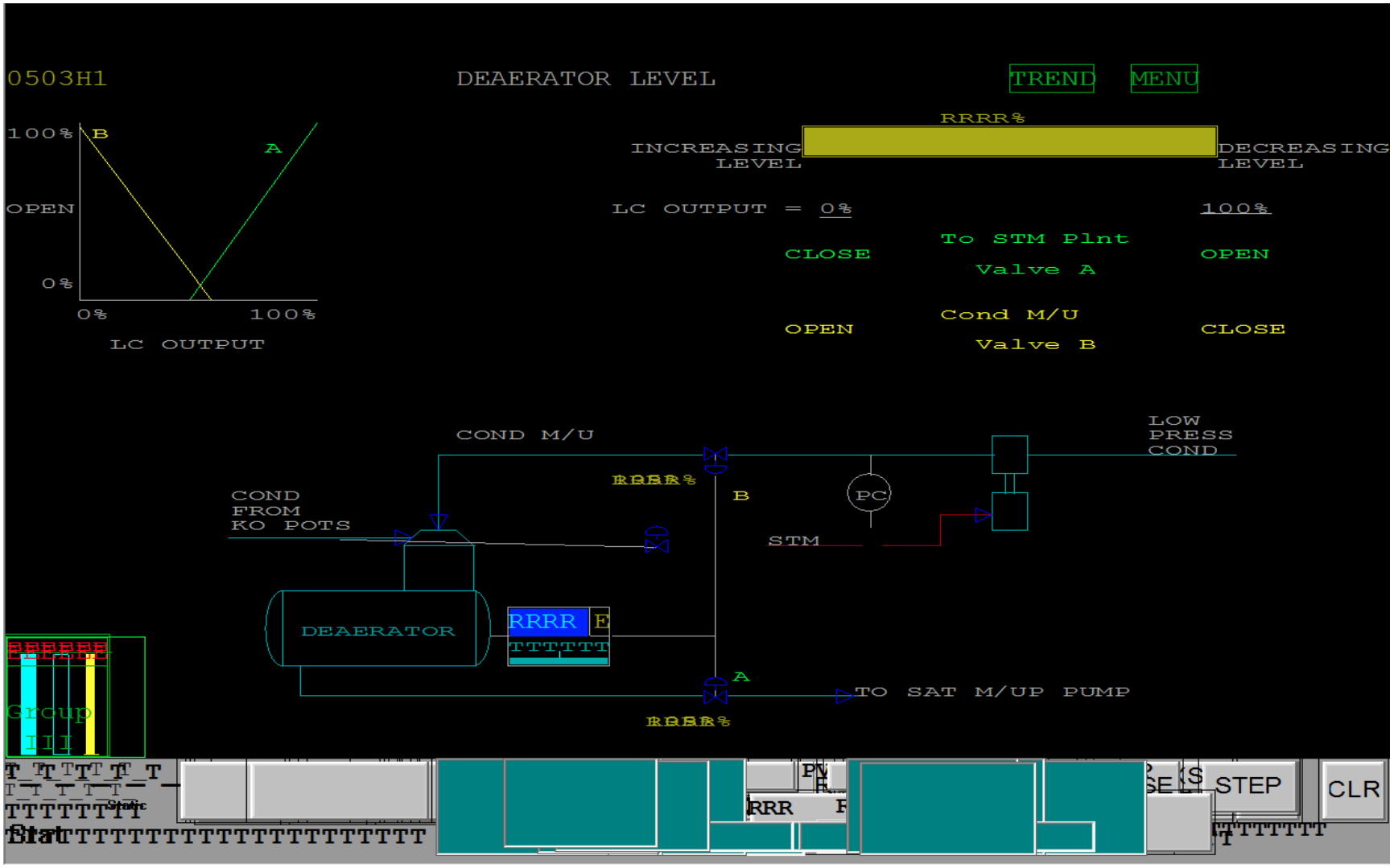
3.219 UNIT SA CONTROLS HELP MENU (0503H.DS)

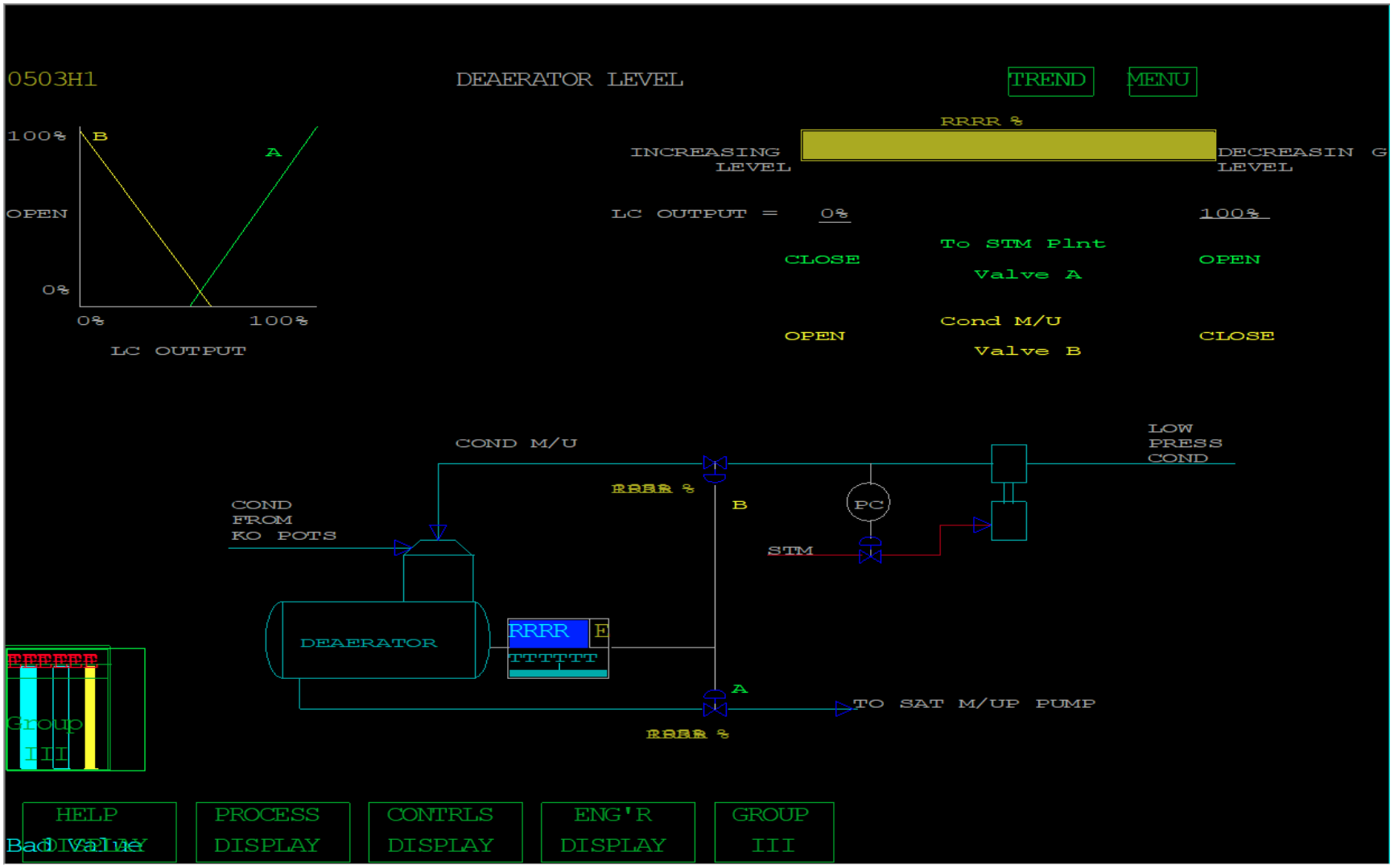


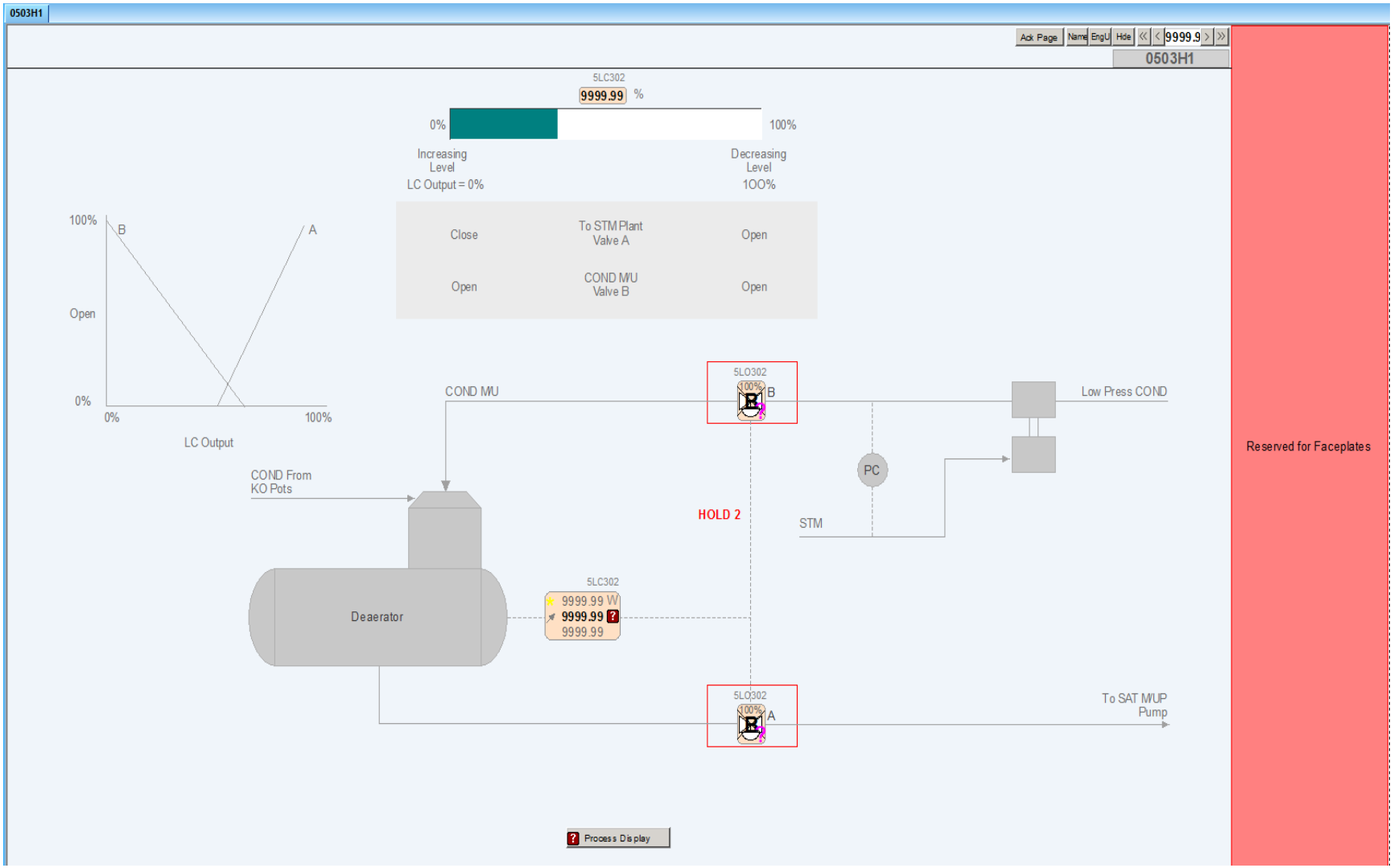

0503H
UNIT SA CONTROLS HELP MENU
1:
DEAERATOR LEVEL
5LC302
0503H1


0503H
Ack Page
Name
EngU
Hide
9999.9
0506H
Unit SA Controls Help Menu
1:
Deaerator Level 5LC302
0503H1
Reserved for Faceplates

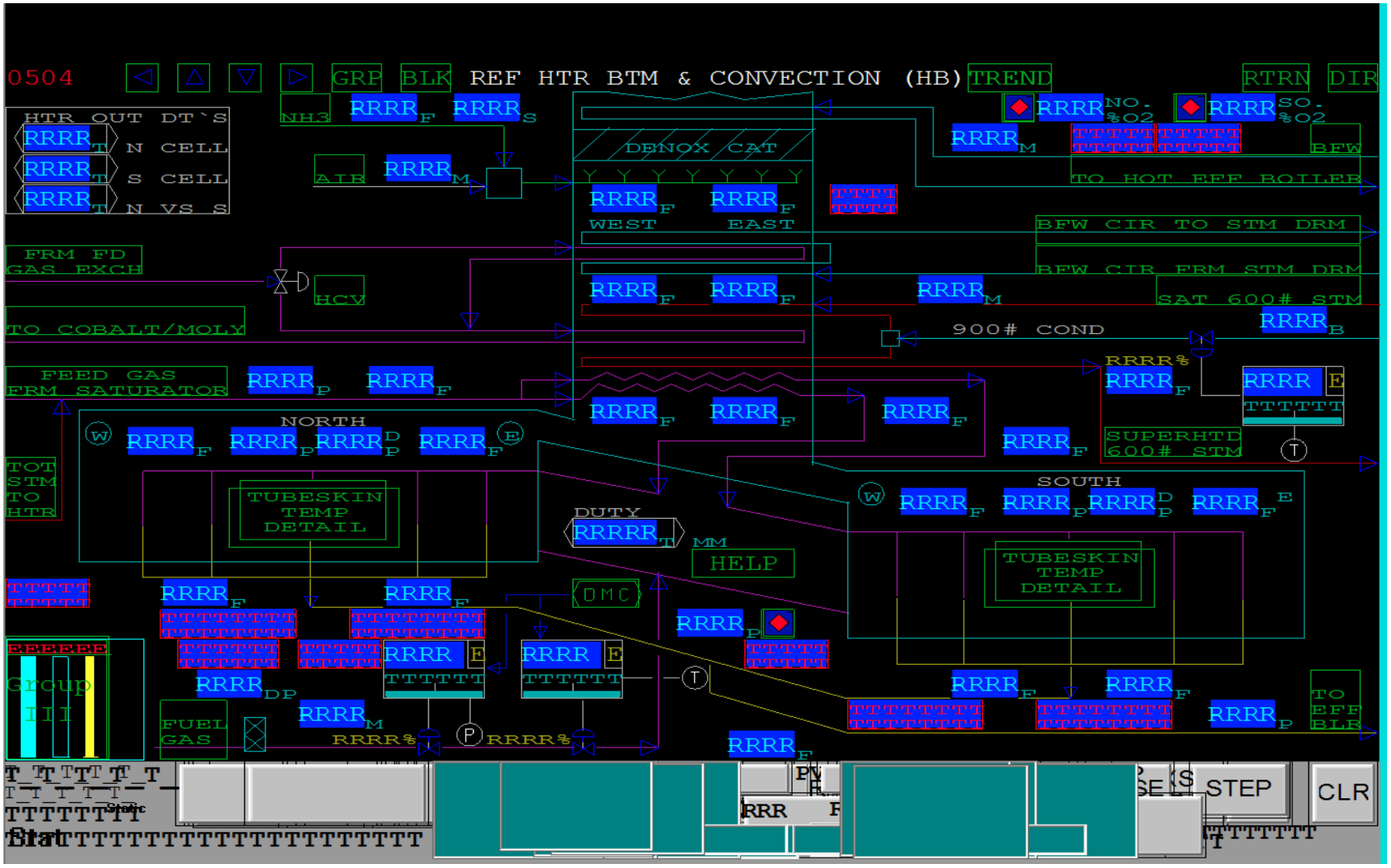
3.220 DEAERATOR LEVEL (0503H1.DS)

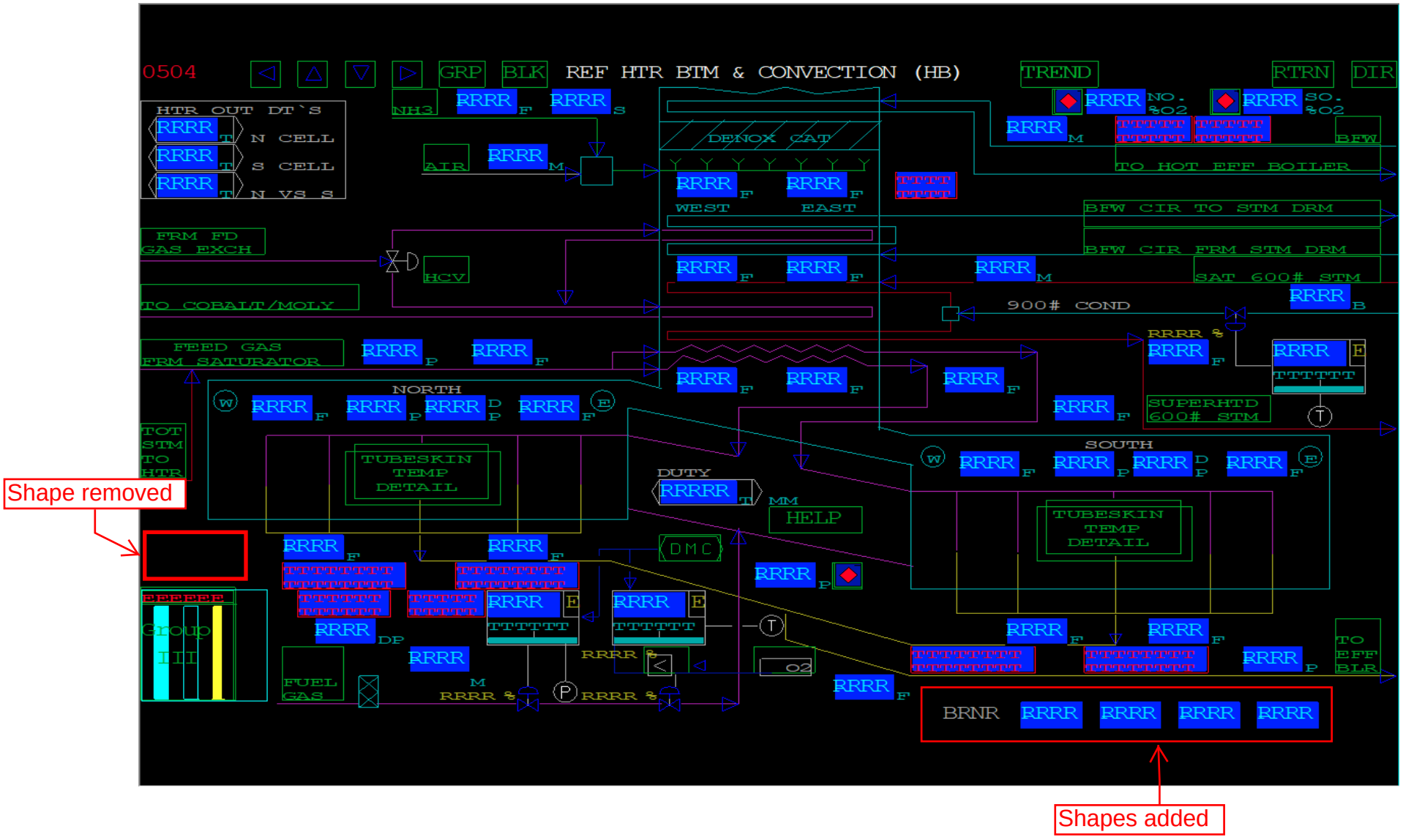


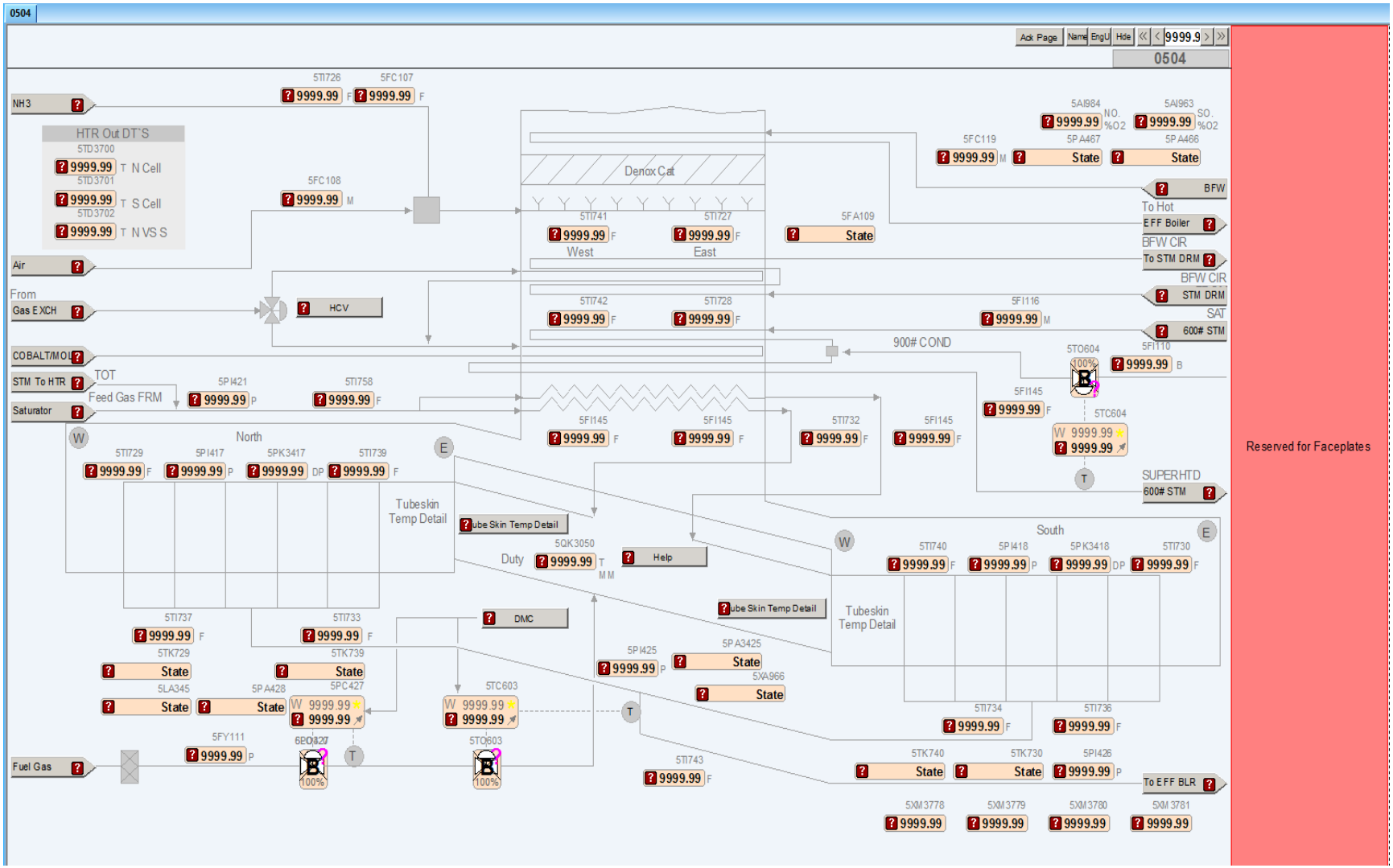

0503H1
DEAERATOR LEVEL
TREND
MENU
100%
B
A
OPEN
0%
0%
100%
LC OUTPUT
RRRR %
INCREASING LEVEL
DECREASIN G LEVEL
LC OUTPUT =
0%
100%
To STM Plnt
CLOSE
Valve A
OPEN
Cond M/U
OPEN
Valve B
CLOSE
COND M/U
LOW PRESS COND
RRRR %
B
PC
COND FROM KO POTS
STM
DEAERATOR
RRRR
E
TTTTTT
A
TO SAT M/UP PUMP
RRRR %
Group III
HELP DISPLAY
PROCESS DISPLAY
CONTRLS DISPLAY
ENG'R DISPLAY
GROUP III
Bad Value


0503H1
Ack Page
Name
Eng U
Hide
9999.9
0503H1
5LC302
9999.99
%
0%
100%
Increasing Level
LC Output = 0%
Decreasing Level
100%
100%
B
A
Open
0%
0%
100%
LC Output
Close
To STM Plant Valve A
Open
Open
COND M/U Valve B
Open
5LO302
100%
B
COND M/U
Low Press COND
PC
COND From KO Pots
HOLD 2
STM
Deaerator
5LC302
9999.99 W
9999.99
9999.99
5LO302
100%
A
To SAT M/UP Pump
Reserved for Faceplates
Process Display

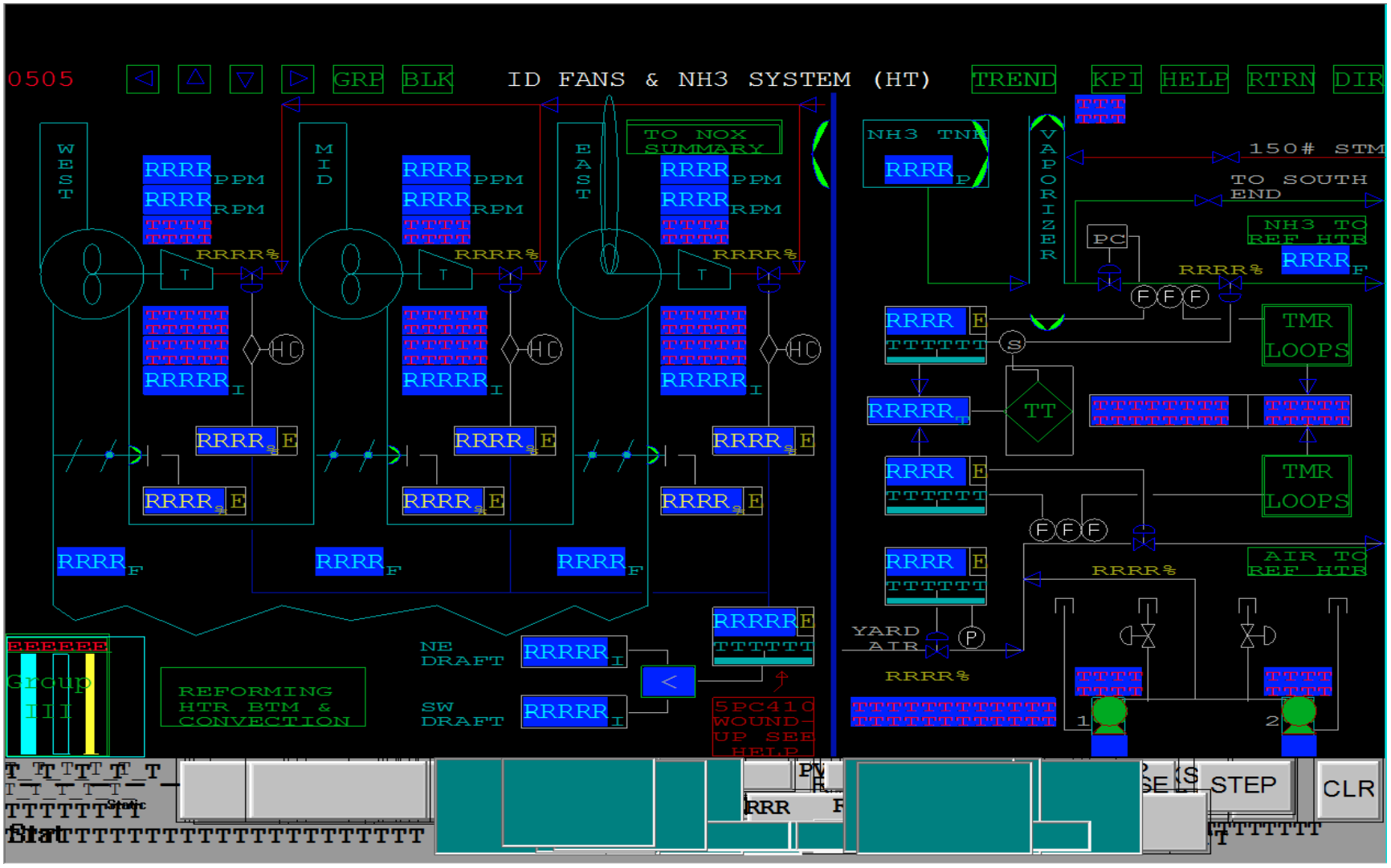
3.221 REF HTR BTM & CONVECTION (HB) (0504.DS)

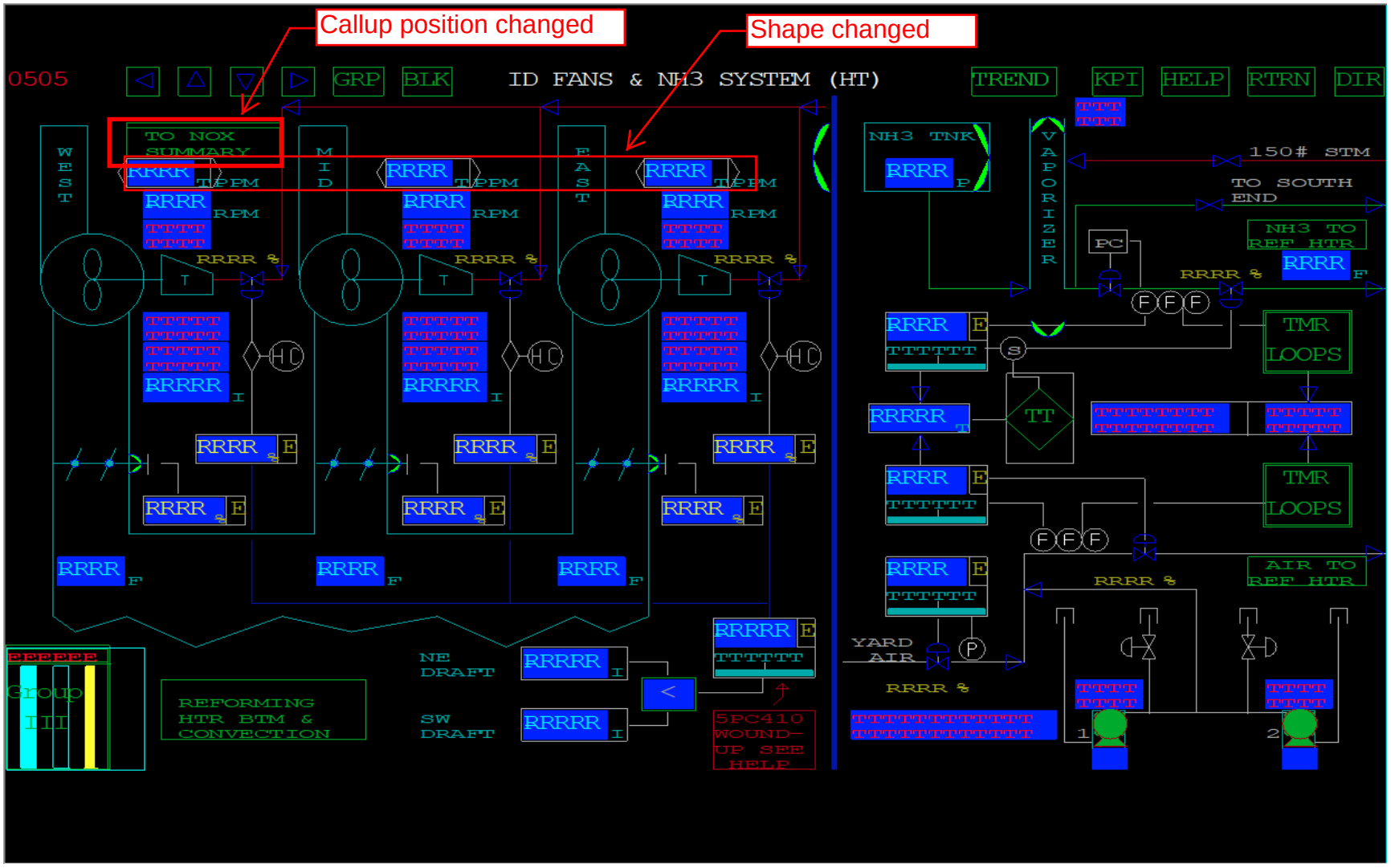


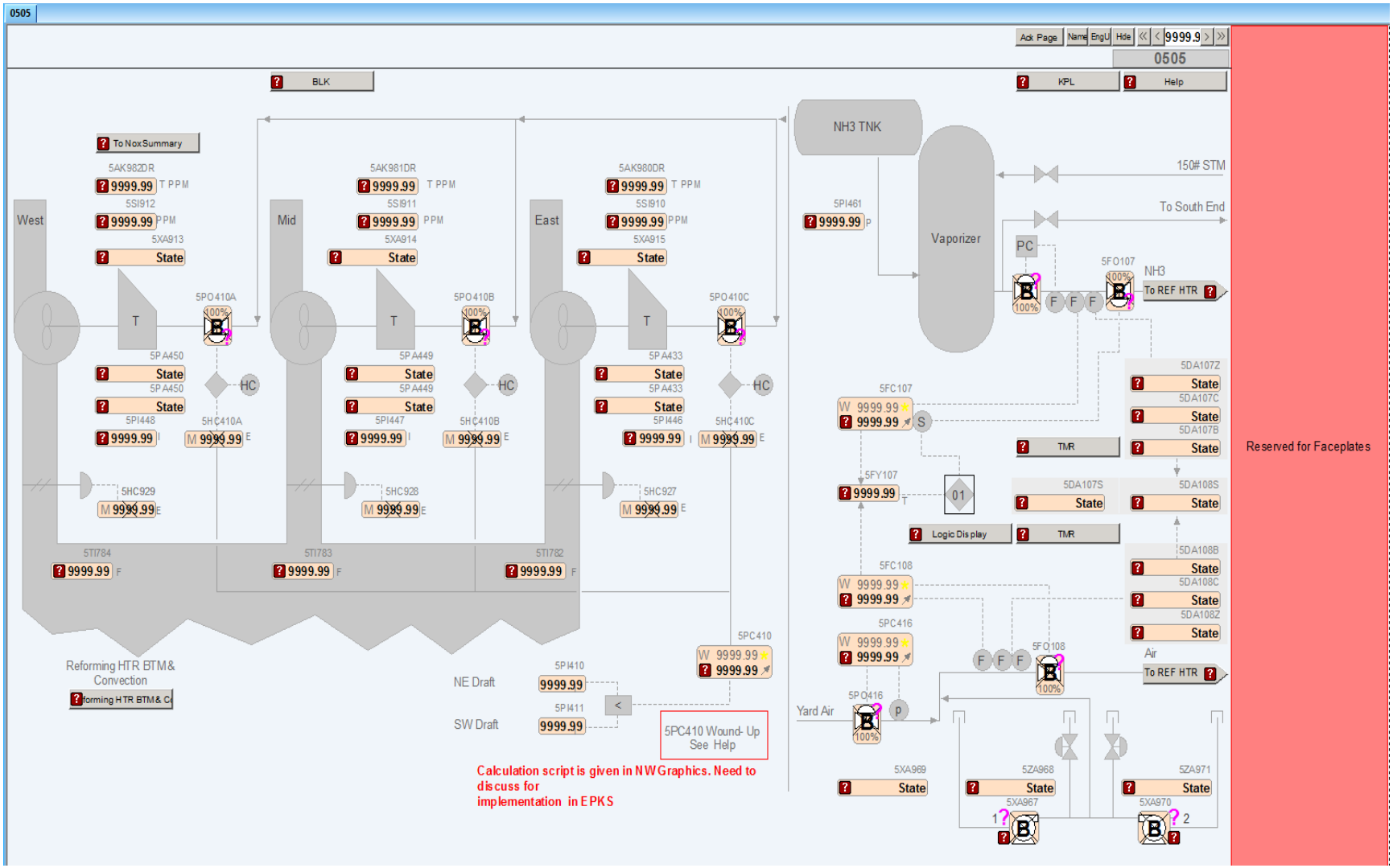

0504
GRP
BLK
REF HTR BTM & CONVECTION (HB)
TREND
RTRN
DIR
HTR OUT DT`S
N CELL
S CELL
N VS S
NH3
AIR
DENOX CAT
WEST
EAST
BFW
TO HOT EFF BOILER
BFW CIR TO STM DRM
BFW CIR FRM STM DRM
SAT 600# STM
FRM FD GAS EXCH
HCV
TO COBALT/MOLY
900# COND
FEED GAS FRM SATURATOR
NORTH
SOUTH
SUPERHTD 600# STM
TOT STM TO HTR
TUBESKIN TEMP DETAIL
DUTY
HELP
DMC
GROUP III
FUEL GAS
TO EFF BLR
BRNR
Shape removed
Shapes added


0504
Ack Page
Name
EngU
Hide
0504
Reserved for Faceplates
NH3
HTR Out DT'S
5TD3700
T N Cell
5TD3701
T S Cell
5TD3702
T N VS S
Air
From
Gas EXCH
COBALT/MOLY
STM To HTR
Saturator
Fuel Gas
HCV
TOT
Feed Gas FRM
Denox Cat
West
East
North
South
Tubeskin Temp Detail
Duty
Help
DMC
900# COND
BFW
To Hot
EFF Boiler
BFW CIR
To STM DRM
STM DRM
SAT
600# STM
SUPERHTD
600# STM
To EFF BLR

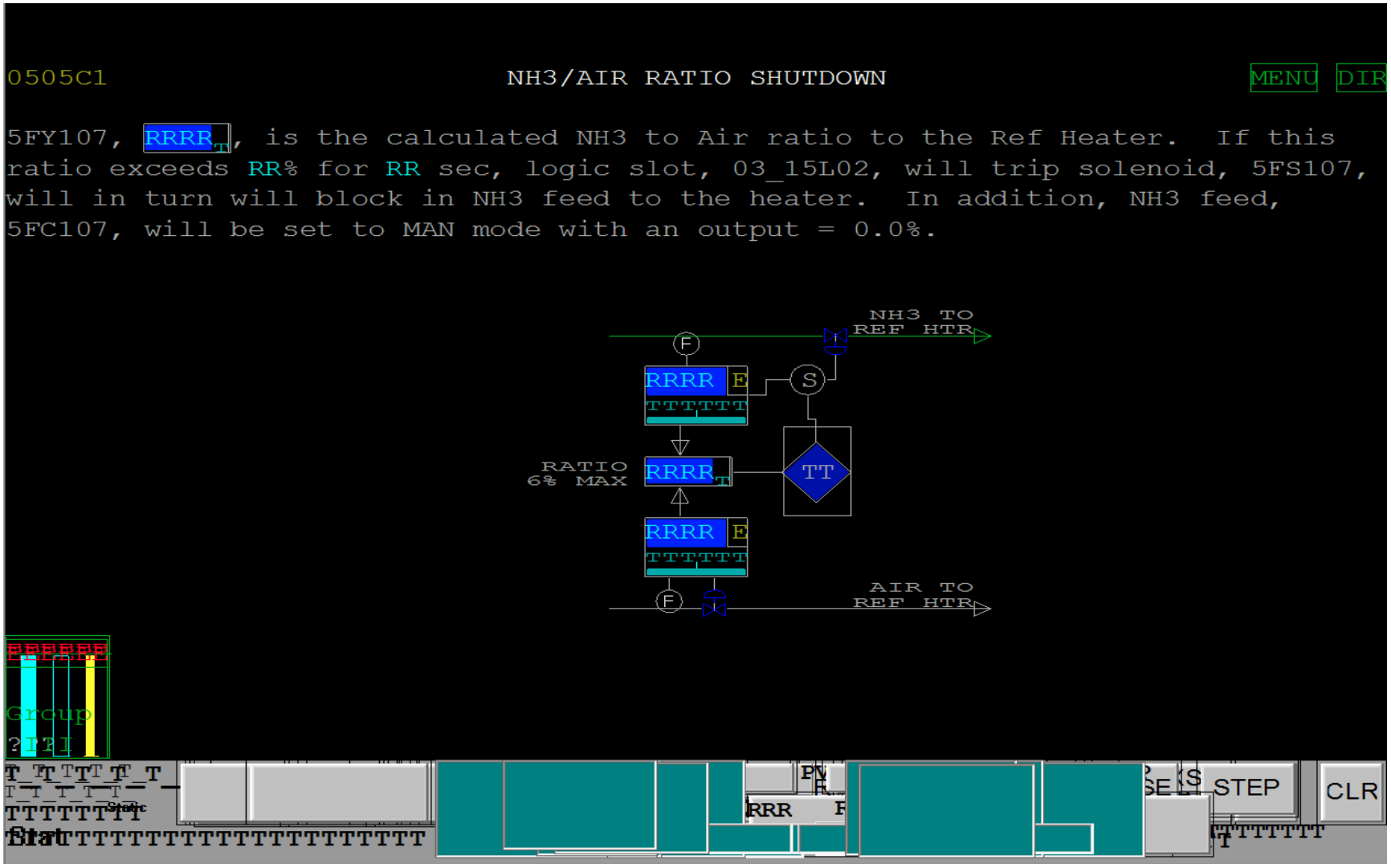
3.222 ID FANS & NH3 SYSTEM (HT) (0505.DS)




Callup position changed
Shape changed
0505
GRP
BLK
ID FANS & NH3 SYSTEM (HT)
TREND
KPI
HELP
RTRN
DIR
TO NOX SUMMARY
WEST
MID
EAST
RPM
NH3 TNK
VAPORIZER
150# STM
TO SOUTH END
NH3 TO REF HTR
PC
TMR LOOPS
TMR LOOPS
TT
AIR TO REF HTR
YARD AIR
NE DRAFT
SW DRAFT
REFORMING HTR BTM & CONVECTION
Group III
5PC410 WOUND-UP SEE HELP

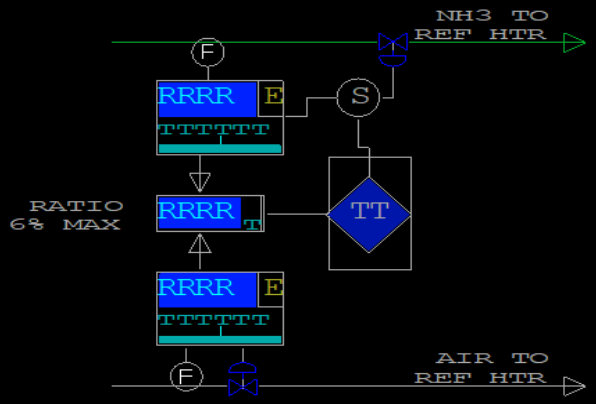

0505
Ack Page
Name
Eng U
Hide
9999.9
0505
BLK
KPL
Help
To NoxSummary
5AK982DR
9999.99 T PPM
5SI912
9999.99 PPM
5XA913
State
West
5PO410A
5PA450
State
5PA450
State
5PI448
9999.99
5HC410A
M 9999.99 E
5HC929
M 9999.99 E
5TI784
9999.99 F
5AK981DR
9999.99 T PPM
5SI911
9999.99 PPM
5XA914
State
Mid
5PO410B
5PA449
State
5PA449
State
5PI447
9999.99
5HC410B
M 9999.99 E
5HC928
M 9999.99 E
5TI783
9999.99 F
5AK980DR
9999.99 T PPM
5SI910
9999.99 PPM
5XA915
State
East
5PO410C
5PA433
State
5PA433
State
5PI446
9999.99
5HC410C
M 9999.99 E
5HC927
M 9999.99 E
5TI782
9999.99 F
Reforming HTR BTM& Convection
NE Draft
5PI410
9999.99
SW Draft
5PI411
9999.99
5PC410
W 9999.99
9999.99
5PC410 Wound- Up See Help
Calculation script is given in NW Graphics. Need to discuss for implementation in EPKS
NH3 TNK
5PI461
9999.99 P
Vaporizer
150# STM
To South End
PC
5FO107
NH3
To REF HTR
5FC107
W 9999.99
9999.99
S
TMR
5FY107
9999.99
01
Logic Dis play
TMR
5DA107Z
State
5DA107C
State
5DA107B
State
5DA107S
State
5DA108S
State
5DA108B
State
5DA108C
State
5DA108Z
State
5FC108
W 9999.99
9999.99
5PC416
W 9999.99
9999.99
5FO108
Air
To REF HTR
Yard Air
5PO416
5XA969
State
5ZA968
State
5ZA971
State
5XA967
5XA970
Reserved for Faceplates

3.223 NH3/AIR RATIO SHUTDOWN (0505C1.DS)



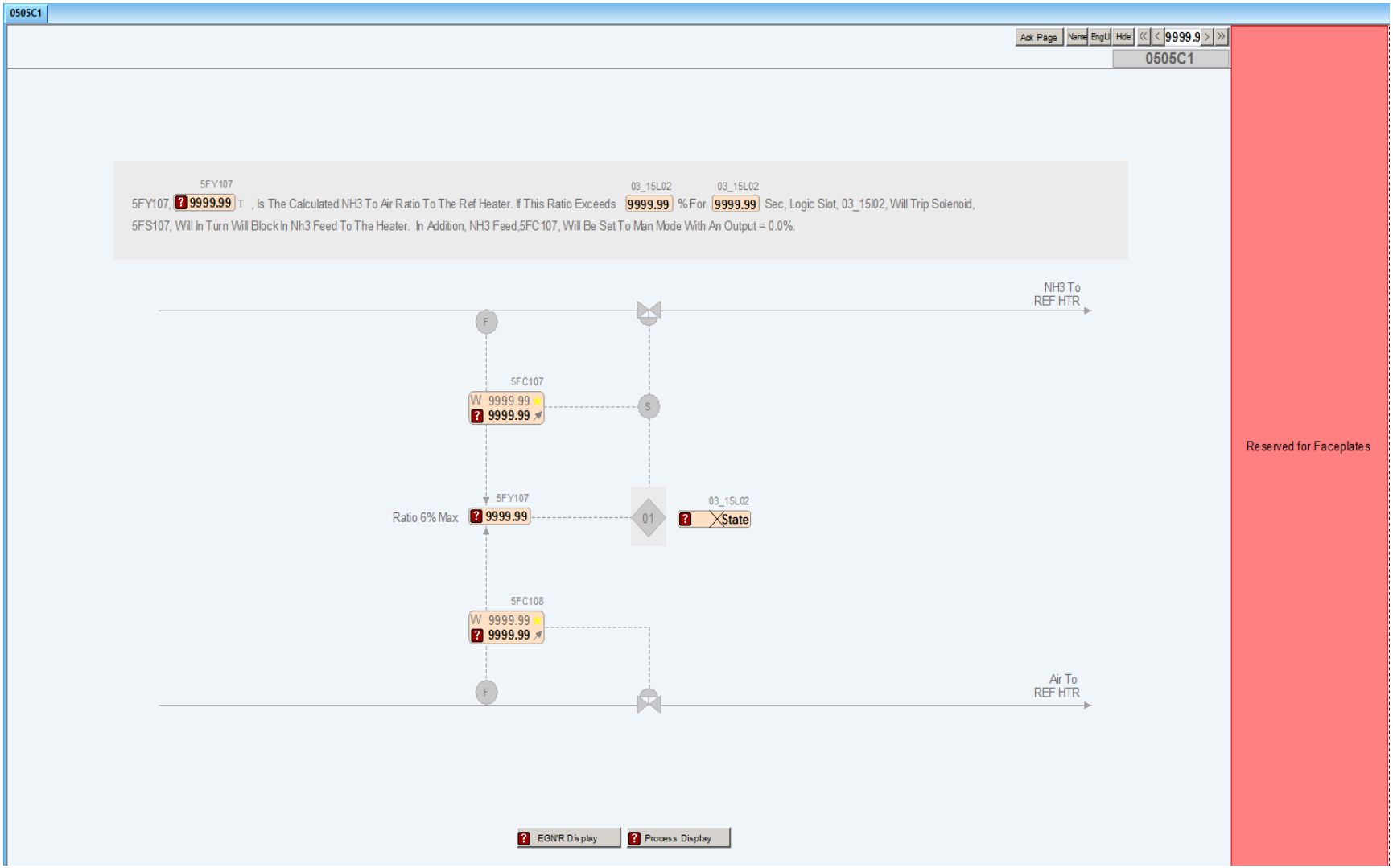
0505C1 NH3/AIR RATIO SHUTDOWN MENU DIR

5FY107, RRRR T, is the calculated NH3 to Air ratio to the Ref Heater. If this ratio exceeds RR% for RR sec, logic slot, 03_15L02, will trip solenoid, 5FS107, will in turn will block in NH3 feed to the heater. In addition, NH3 feed, 5FC107, will be set to MAN mode with an output = 0.0%.

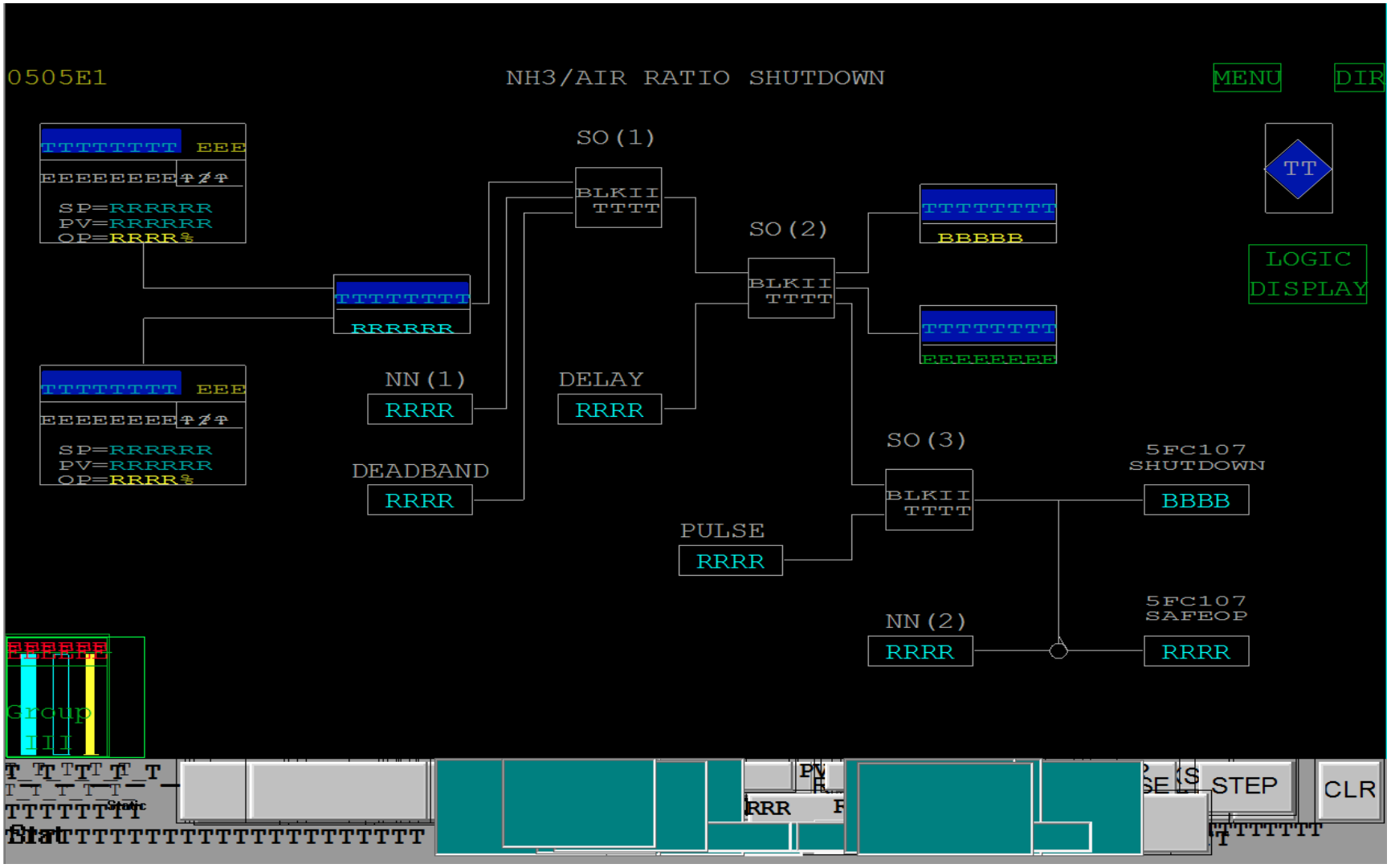


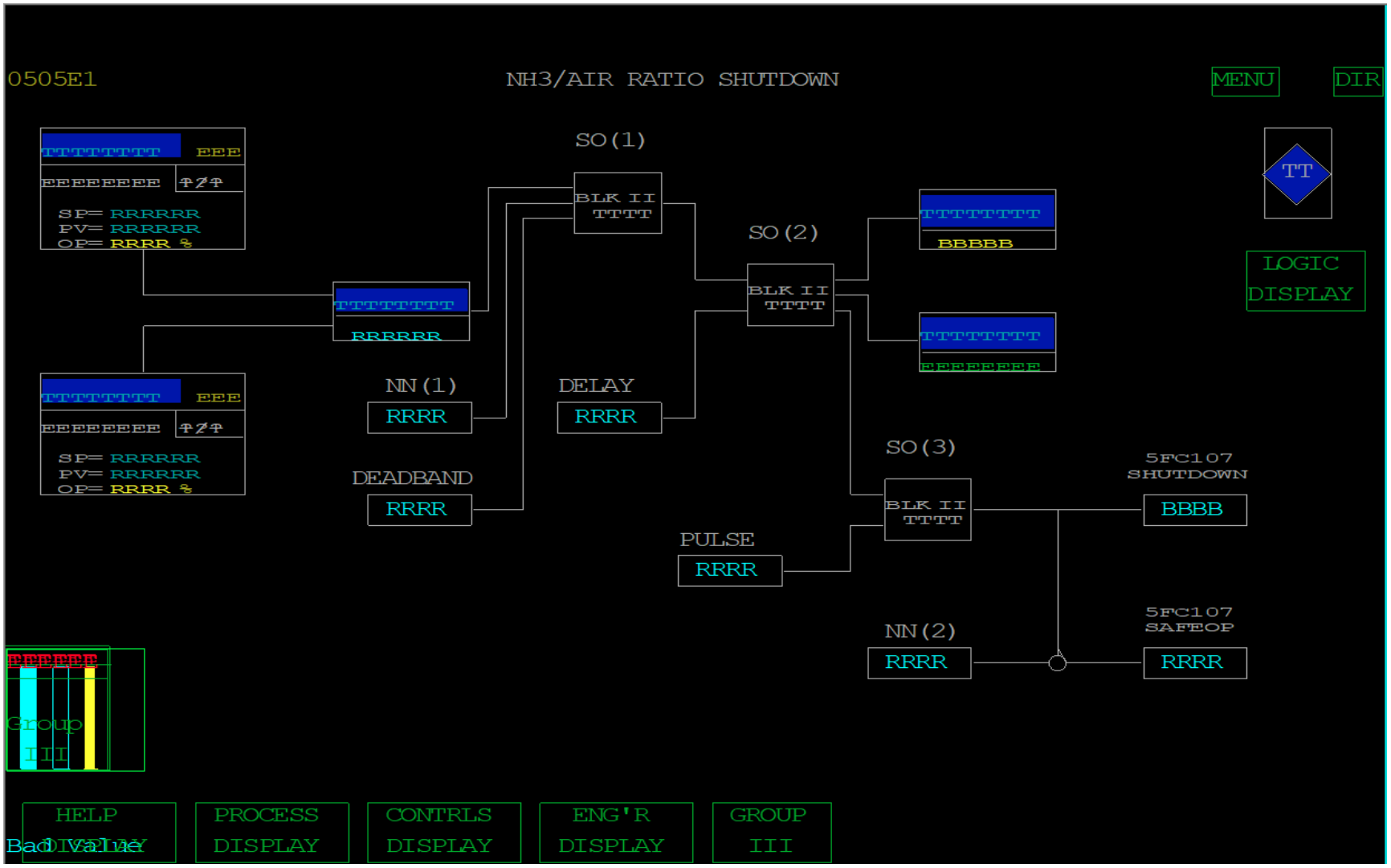
Group
?I?II

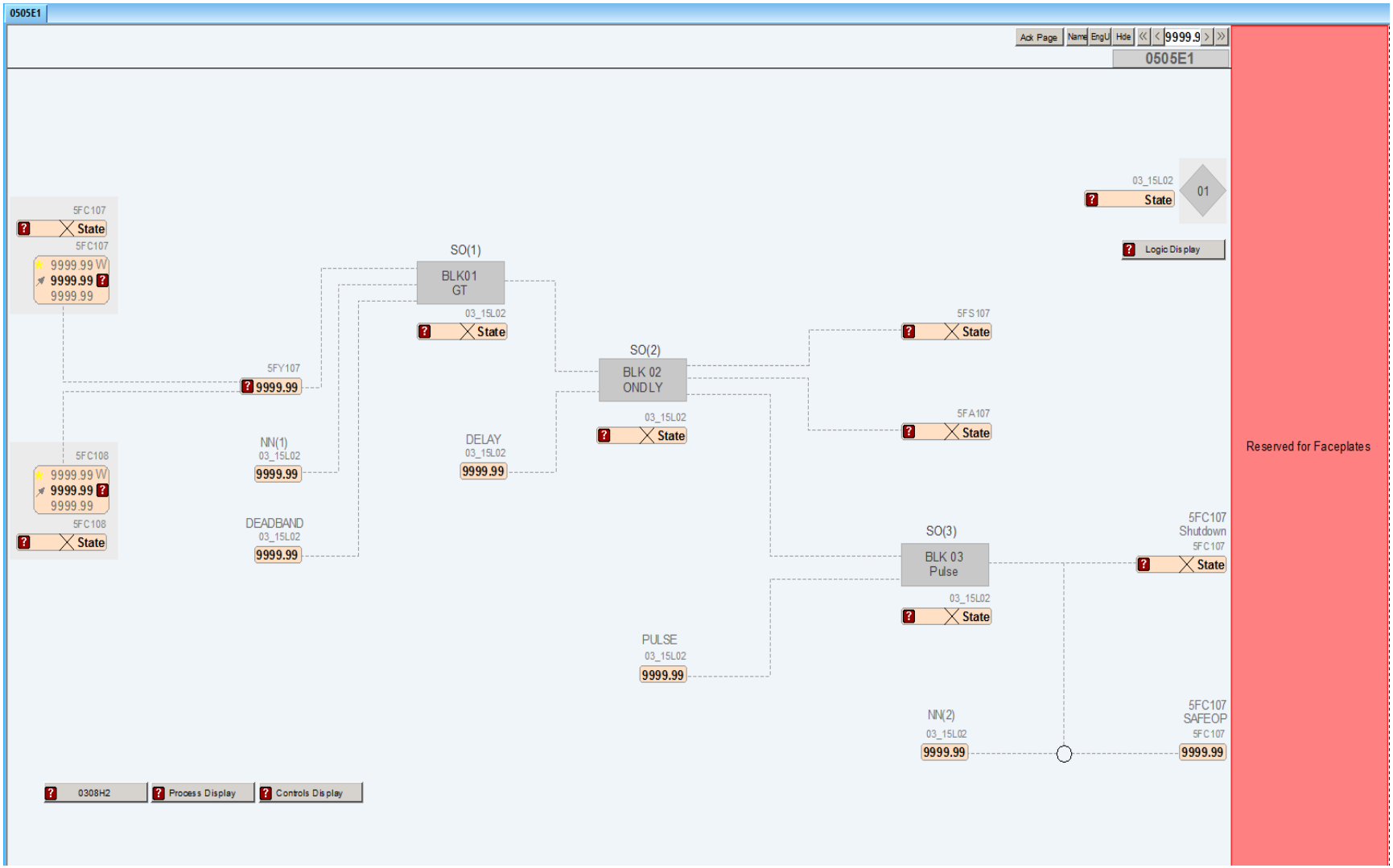
HELP ??DISPLAY | PROCESS DISPLAY | CONTRLS DISPLAY | ENG'R DISPLAY | GROUP III


0505C1
Ack Page
Name
Eng'U
Hide
9999.9
0505C1
5FY107
5FY107, 9999.99 T , Is The Calculated NH3 To Air Ratio To The Ref Heater. If This Ratio Exceeds 9999.99 % For 9999.99 Sec, Logic Slot, 03_15I02, Will Trip Solenoid, 5FS107, Will In Turn Will Block In Nh3 Feed To The Heater. In Addition, NH3 Feed,5FC107, Will Be Set To Man Mode With An Output = 0.0%.
03_15L02
03_15L02
NH3 To REF HTR
F
5FC107
W 9999.99
9999.99
S
Reserved for Faceplates
5FY107
Ratio 6% Max
9999.99
01
03_15L02
State
5FC108
W 9999.99
9999.99
F
Air To REF HTR
EGN'R Display
Process Display

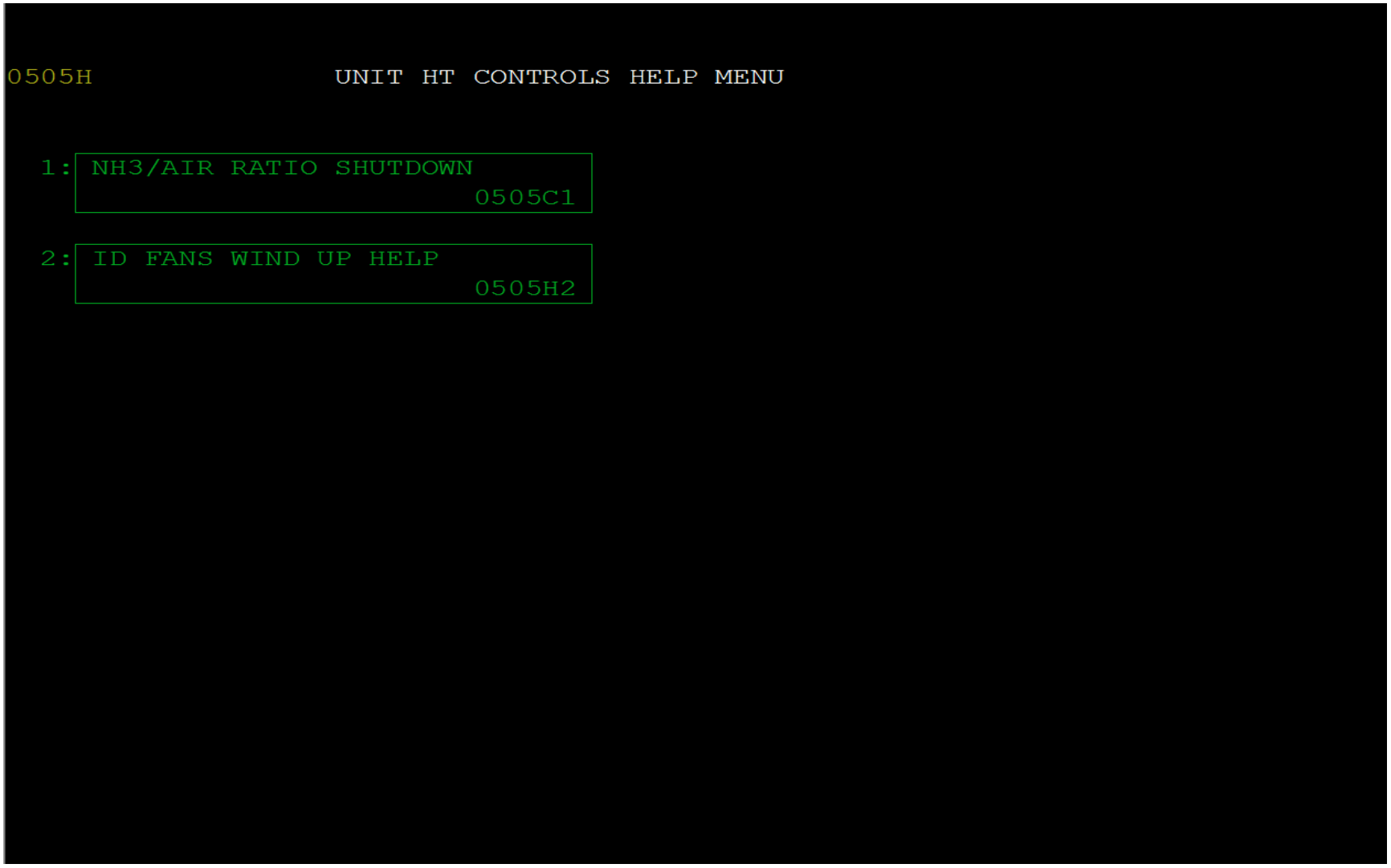
3.224 NH3/AIR RATIO SHUTDOWN (0505E1.DS)

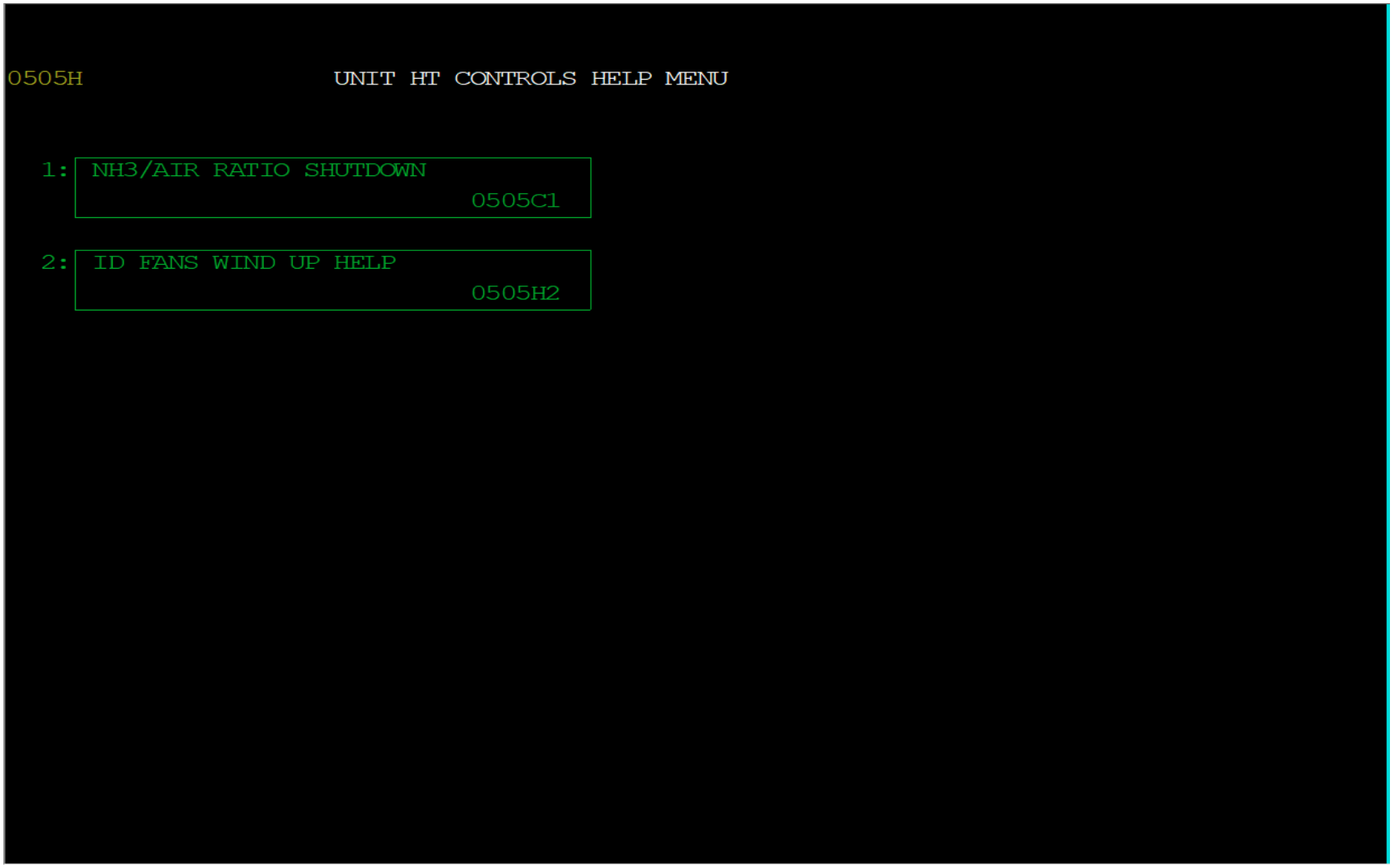


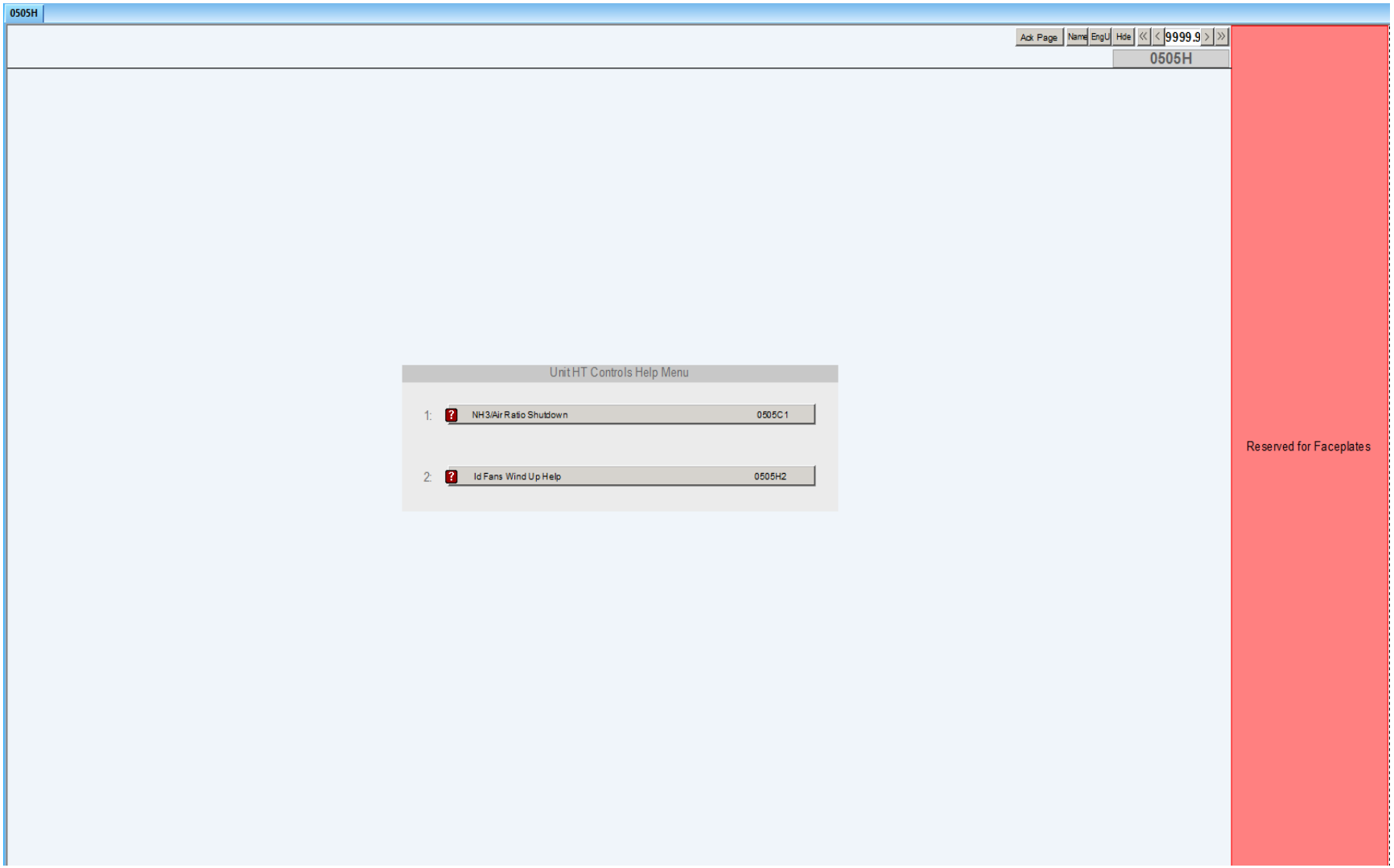

0505E1
NH3/AIR RATIO SHUTDOWN
MENU
DIR
SO(1)
BLK II
TTTT
SO(2)
BLK II
TTTT
TTTTTTTT
BBBBB
TTTTTTTT
EEEEEEEE
TT
LOGIC
DISPLAY
TTTTTTTT
EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRR %
TTTTTTTT
RRRRRR
NN(1)
RRRR
DELAY
RRRR
DEADBAND
RRRR
SO(3)
BLK II
TTTT
5FC107
SHUTDOWN
BBBB
PULSE
RRRR
NN(2)
RRRR
5FC107
SAFEOP
RRRR
Group
III
HELP
DISPLAY
PROCESS
DISPLAY
CONTRLS
DISPLAY
ENG'R
DISPLAY
GROUP
III


0505E1
Ack Page
Name
EngU
Hide
9999.9
0505E1
03_15L02
State
01
Logic Display
5FC107
State
5FC107
9999.99 W
9999.99
9999.99
SO(1)
BLK01
GT
03_15L02
State
5FS107
State
SO(2)
BLK 02
ONDLY
5FY107
9999.99
03_15L02
State
5FA107
State
NN(1)
03_15L02
9999.99
DELAY
03_15L02
9999.99
Reserved for Faceplates
5FC108
9999.99 W
9999.99
9999.99
5FC108
State
DEADBAND
03_15L02
9999.99
SO(3)
BLK 03
Pulse
5FC107
Shutdown
5FC107
State
03_15L02
State
PULSE
03_15L02
9999.99
NN(2)
03_15L02
9999.99
5FC107
SAFEOP
5FC107
9999.99
0308H2
Process Display
Controls Display

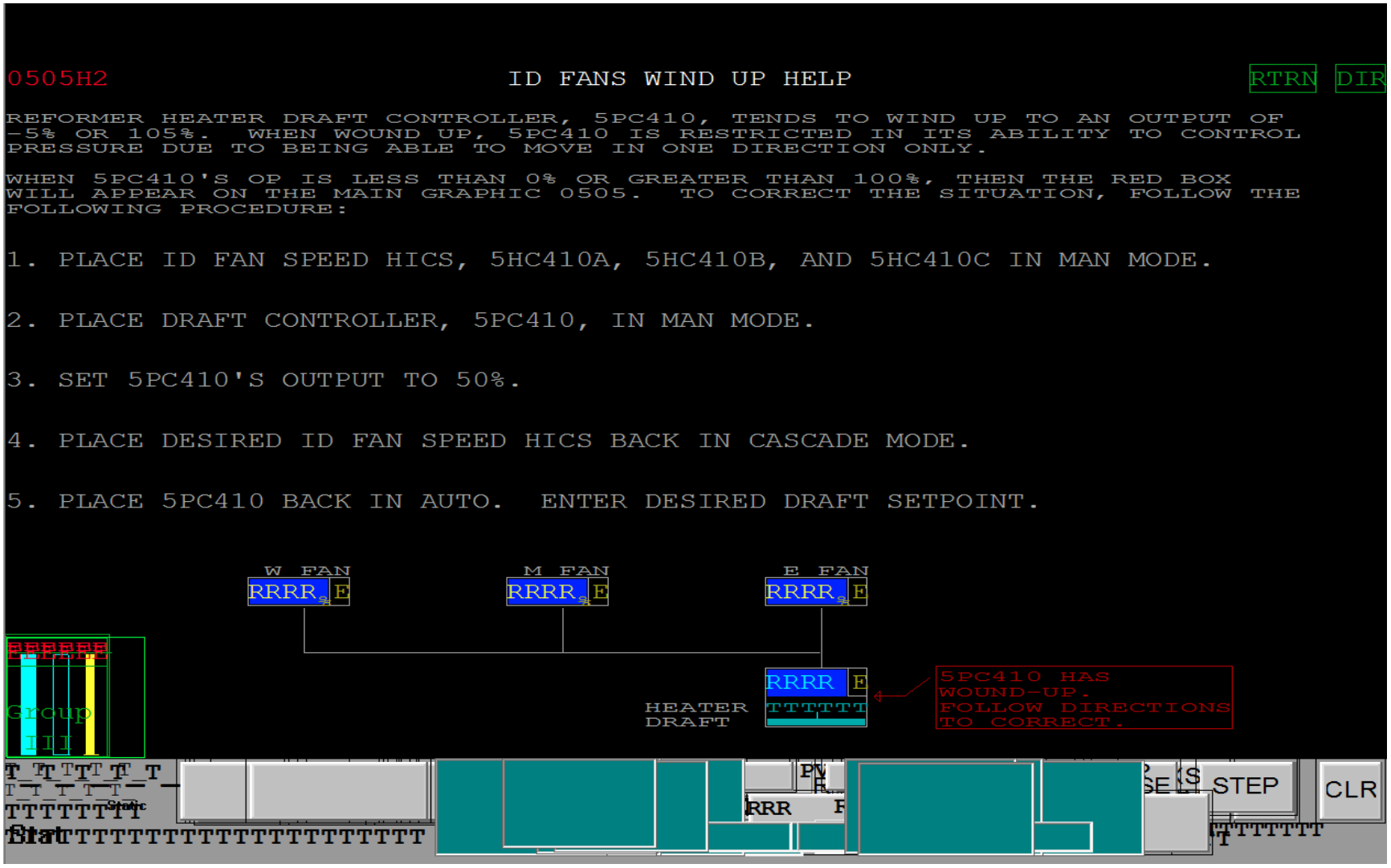
3.225 UNIT HT CONTROLS HELP MENU (0505H.DS)




0505H
UNIT HT CONTROLS HELP MENU
1:
NH3/AIR RATIO SHUTDOWN
0505C1
2:
ID FANS WIND UP HELP
0505H2


0505H
Ack Page
Name
EngU
Hide
9999.9
0505H
Unit HT Controls Help Menu
1:
NH3/Air Ratio Shutdown
0505C1
2:
Id Fans Wind Up Help
0505H2
Reserved for Faceplates

3.226 ID FANS WIND UP HELP (0505H2.DS)



0505H2

ID FANS WIND UP HELP

RTRN DIR

REFORMER HEATER DRAFT CONTROLLER, 5PC410, TENDS TO WIND UP TO AN OUTPUT OF -5% OR 105%. WHEN WOUND UP, 5PC410 IS RESTRICTED IN ITS ABILITY TO CONTROL PRESSURE DUE TO BEING ABLE TO MOVE IN ONE DIRECTION ONLY.

WHEN 5PC410'S OP IS LESS THAN 0% OR GREATER THAN 100%, THEN THE RED BOX WILL APPEAR ON THE MAIN GRAPHIC 0505. TO CORRECT THE SITUATION, FOLLOW THE FOLLOWING PROCEDURE:

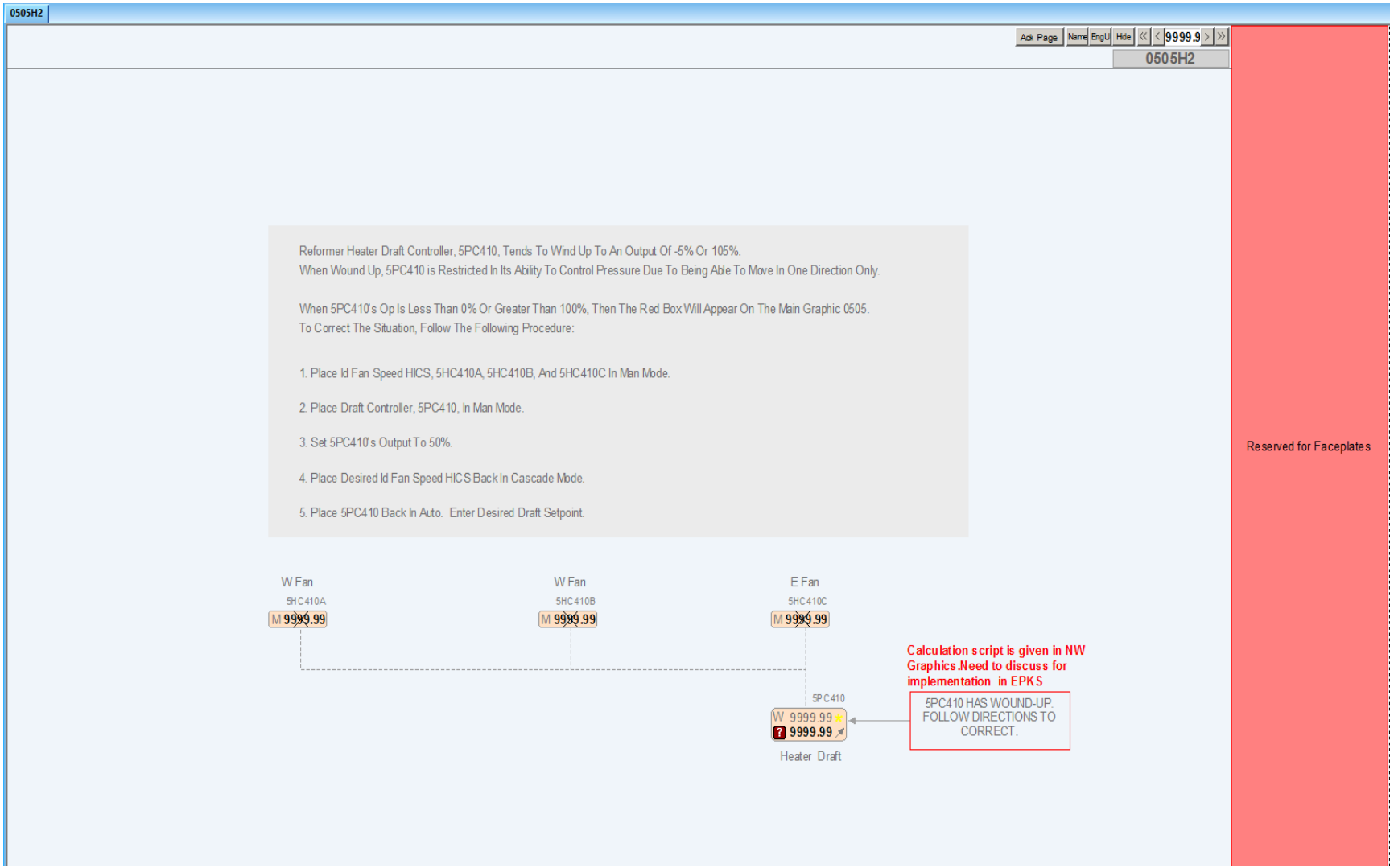
1. PLACE ID FAN SPEED HICS, 5HC410A, 5HC410B, AND 5HC410C IN MAN MODE.

2. PLACE DRAFT CONTROLLER, 5PC410, IN MAN MODE.

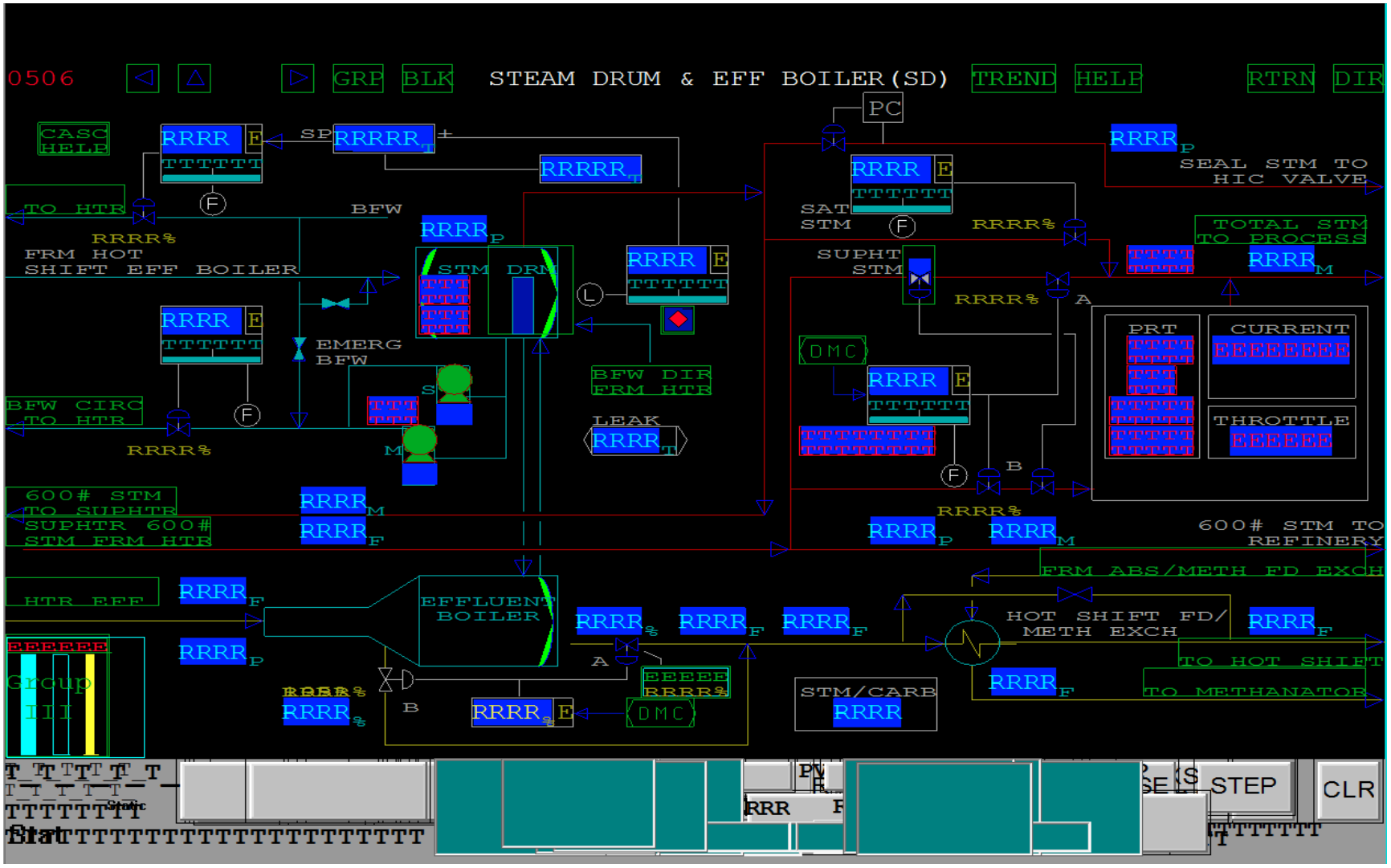
3. SET 5PC410'S OUTPUT TO 50%.

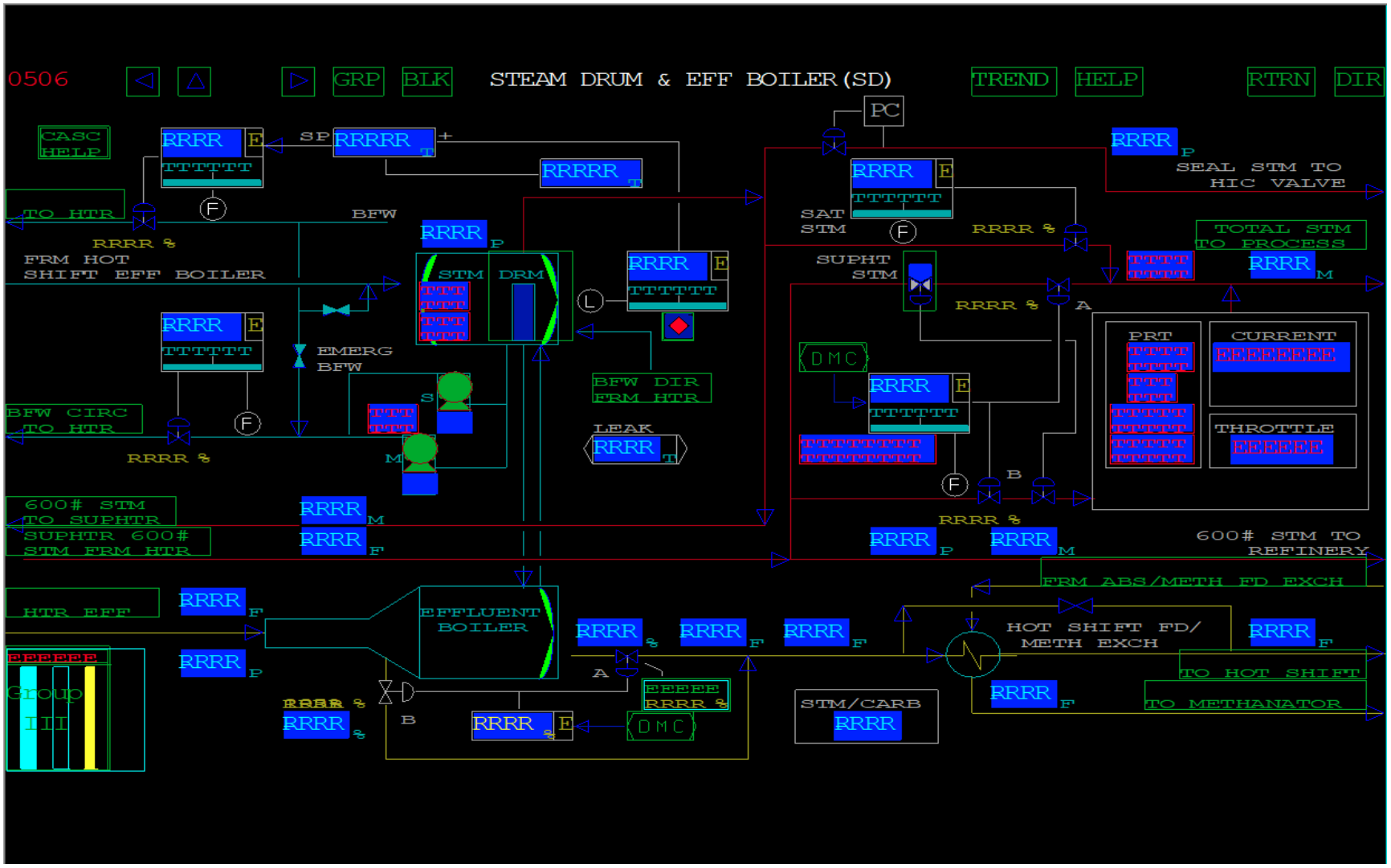
4. PLACE DESIRED ID FAN SPEED HICS BACK IN CASCADE MODE.

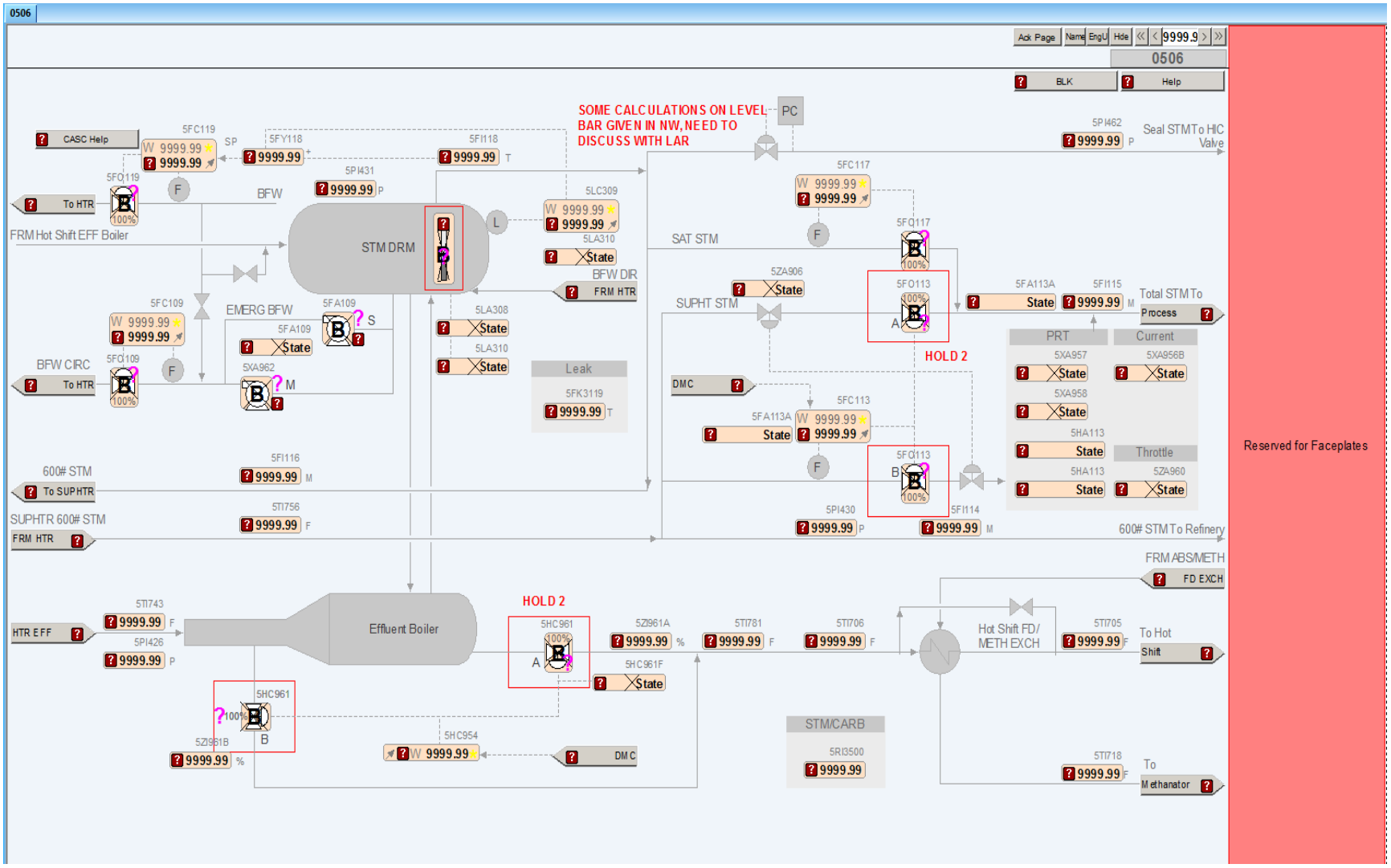
5. PLACE 5PC410 BACK IN AUTO. ENTER DESIRED DRAFT SETPOINT.


0505H2
Ack Page
Name
Eng U
Hide
9999.9
0505H2
Reformer Heater Draft Controller, 5PC410, Tends To Wind Up To An Output Of -5% Or 105%.
When Wound Up, 5PC410 is Restricted In Its Ability To Control Pressure Due To Being Able To Move In One Direction Only.
When 5PC410's Op Is Less Than 0% Or Greater Than 100%, Then The Red Box Will Appear On The Main Graphic 0505.
To Correct The Situation, Follow The Following Procedure:
1. Place Id Fan Speed HICS, 5HC410A, 5HC410B, And 5HC410C In Man Mode.
2. Place Draft Controller, 5PC410, In Man Mode.
3. Set 5PC410's Output To 50%.
4. Place Desired Id Fan Speed HICS Back In Cascade Mode.
5. Place 5PC410 Back In Auto. Enter Desired Draft Setpoint.
Reserved for Faceplates
W Fan
5HC410A
M 9999.99
W Fan
5HC410B
M 9999.99
E Fan
5HC410C
M 9999.99
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
5PC410
W 9999.99
9999.99
Heater Draft
5PC410 HAS WOUND-UP. FOLLOW DIRECTIONS TO CORRECT.

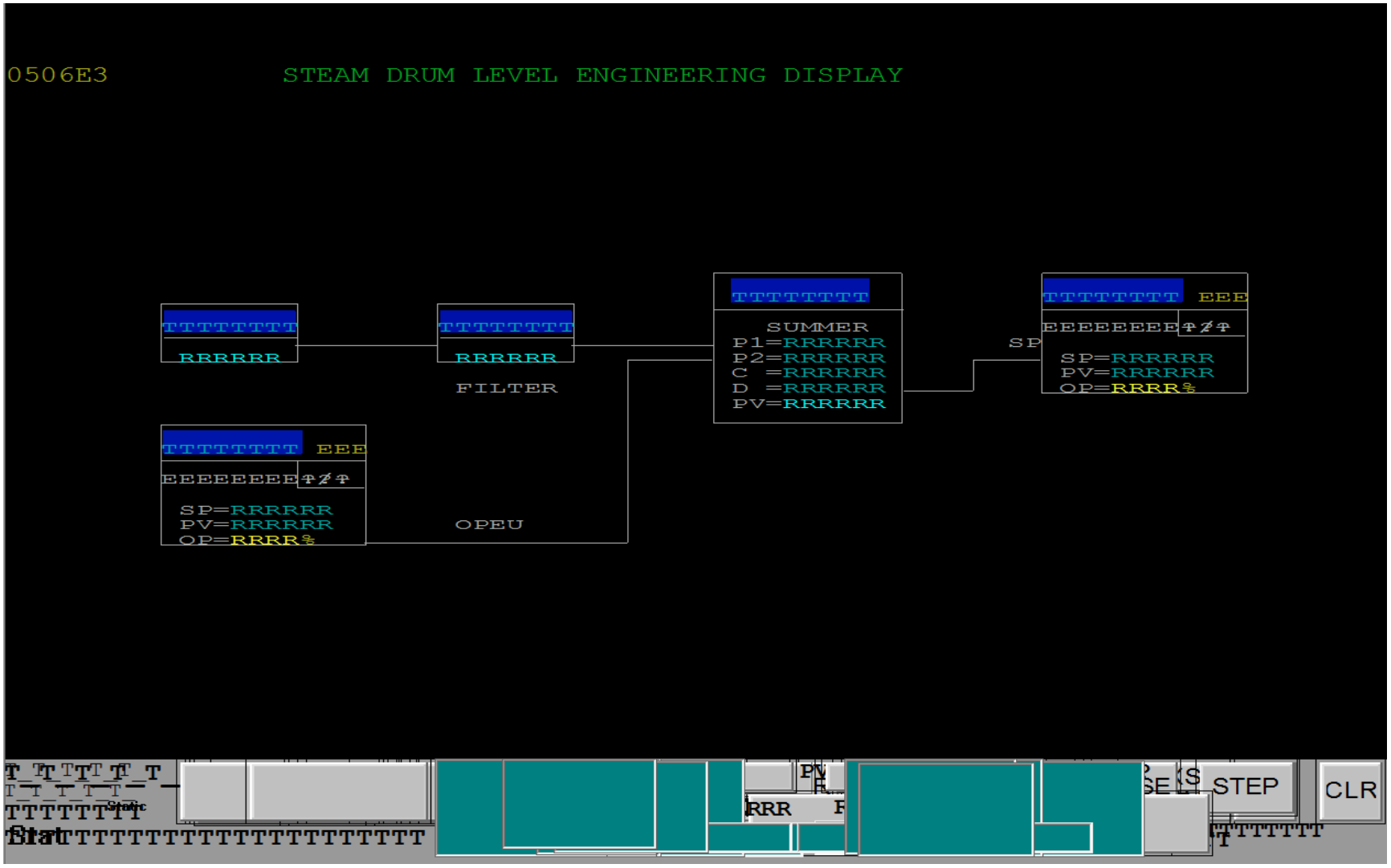
3.227 STEAM DRUM & EFF BOILER(SD) (0506.DS)

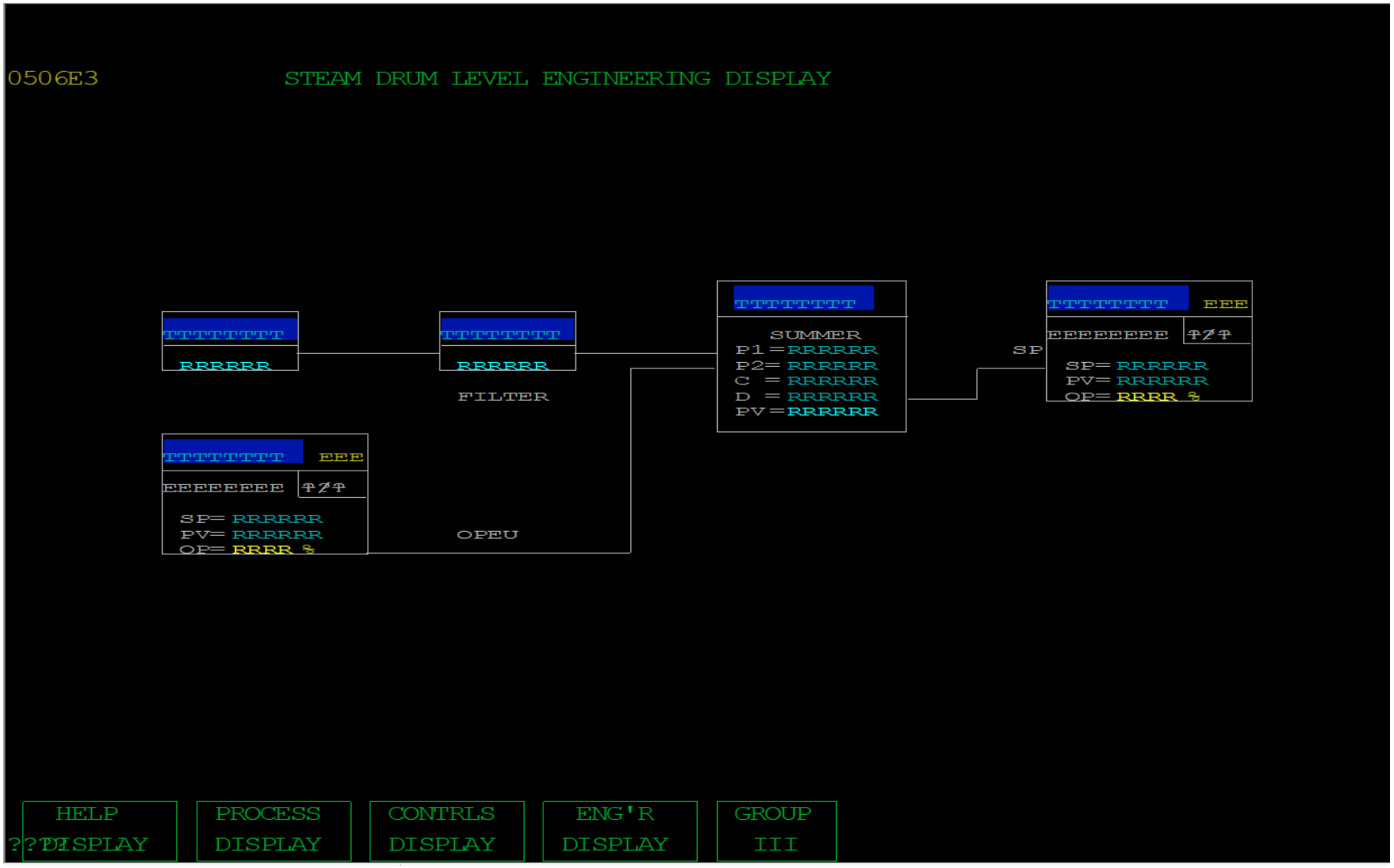


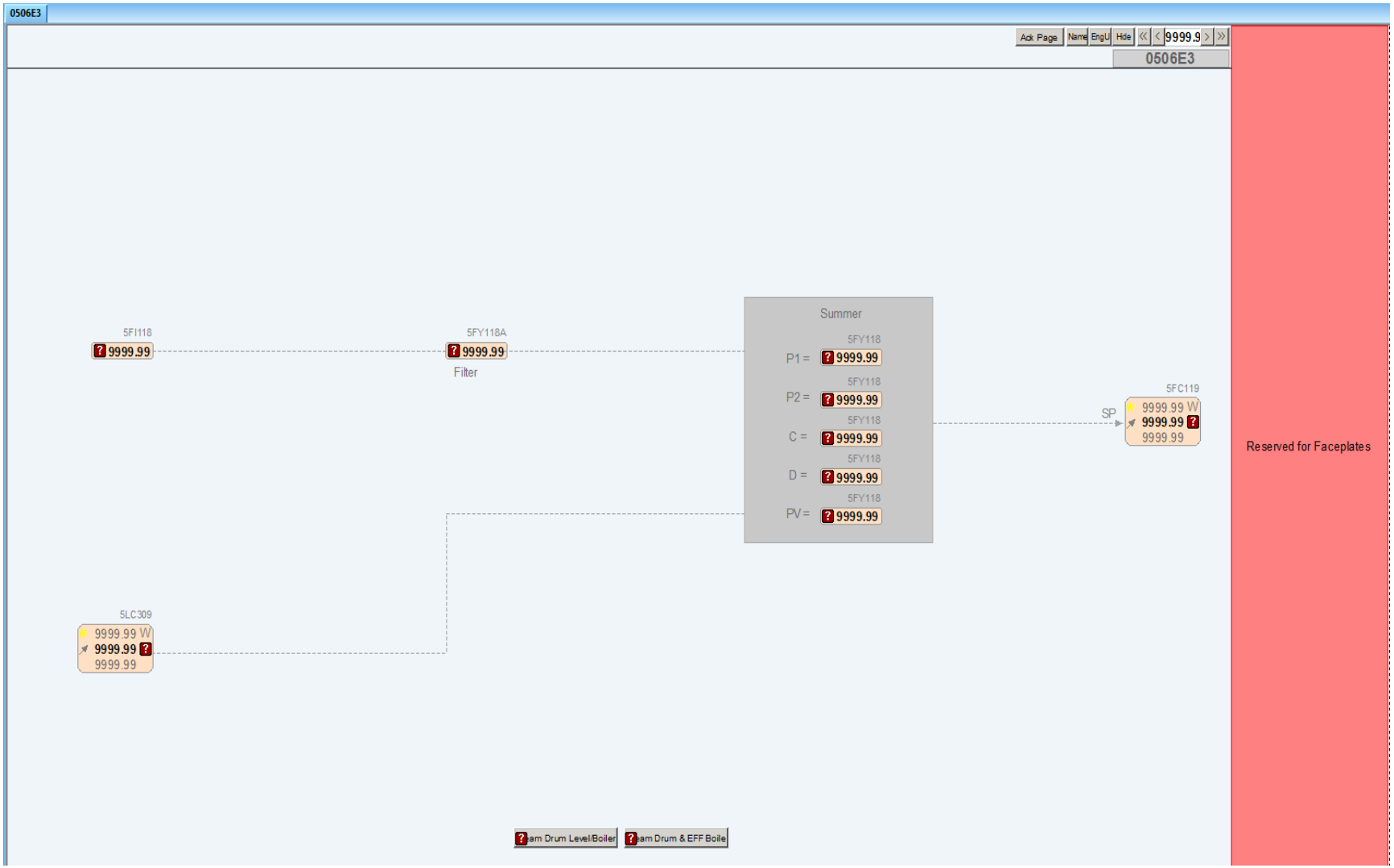

0506
GRP
BLK
STEAM DRUM & EFF BOILER (SD)
TREND
HELP
RTRN
DIR
CASC HELP
SP
TO HTR
BFW
FRM HOT SHIFT EFF BOILER
STM
DRM
EMERG BFW
BFW DIR FRM HTR
LEAK
BFW CIRC TO HTR
PC
SAT STM
SUPHT STM
SEAL STM TO HIC VALVE
TOTAL STM TO PROCESS
PRT
CURRENT
THROTTLE
DMC
600# STM TO SUPHTR
SUPHTR 600# STM FRM HTR
600# STM TO REFINERY
FRM ABS/METH FD EXCH
HTR EFF
EFFLUENT BOILER
HOT SHIFT FD/ METH EXCH
TO HOT SHIFT
TO METHANATOR
STM/CARB
GROUP III


0506
Ack Page
Name
Eng U
Hide
0506
BLK
Help
SOME CALCULATIONS ON LEVEL BAR GIVEN IN NW, NEED TO DISCUSS WITH LAR
PC
CASC Help
5FC119
SP
5FY118
5FI118
5PI462
Seal STM To HIC Valve
To HTR
BFW
5PI431
5LC309
FRM Hot Shift EFF Boiler
STM DRM
5LA310
BFW DIR
FRM HTR
5FC117
SAT STM
5FQ117
5ZA906
SUPHT STM
5FQ113
5FA113A
5FI115
Total STM To Process
HOLD 2
PRT
Current
5XA957
5XA956B
5XA958
5HA113
Throttle
5ZA960
5FC109
EMERG BFW
5FA109
5XA962
5LA308
5LA310
Leak
5FK3119
BFW CIRC
DMC
5FC113
5FA113A
600# STM
To SUPHTR
5FI116
SUPHTR 600# STM
FRM HTR
5TI756
5PI430
5FI114
600# STM To Refinery
FRM ABS/METH
FD EXCH
5TI743
HTR EFF
5PI426
Effluent Boiler
HOLD 2
5HC961
5ZI961A
5TI781
5TI706
Hot Shift FD/ METH EXCH
5TI705
To Hot Shift
5HC961F
5ZI961B
5HC954
DMC
STM/CARB
5RI3500
5TI718
To Methanator
Reserved for Faceplates

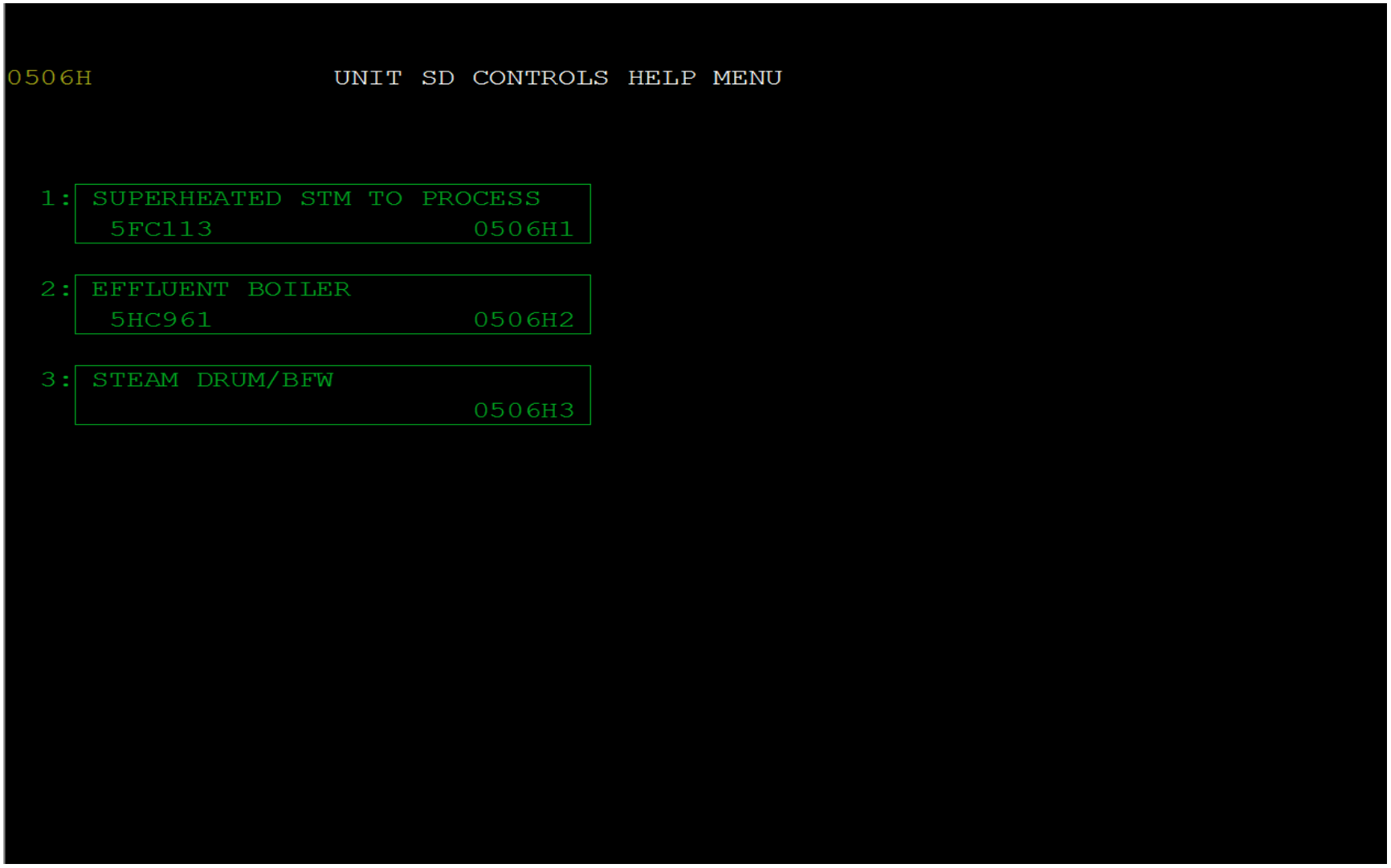
3.228 STEAM DRUM LEVEL ENGINEERING DISPLAY (0506E3.DS)

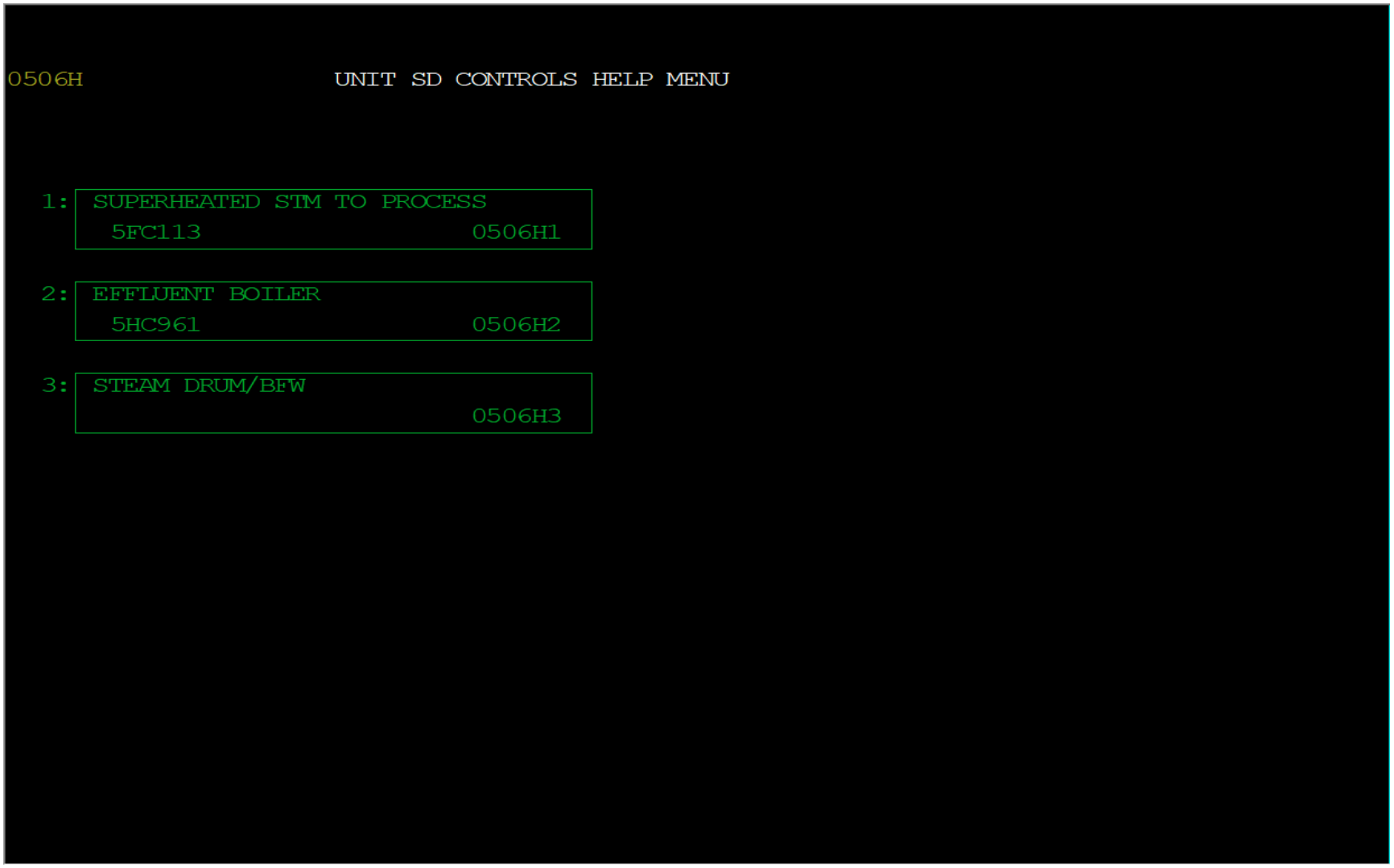


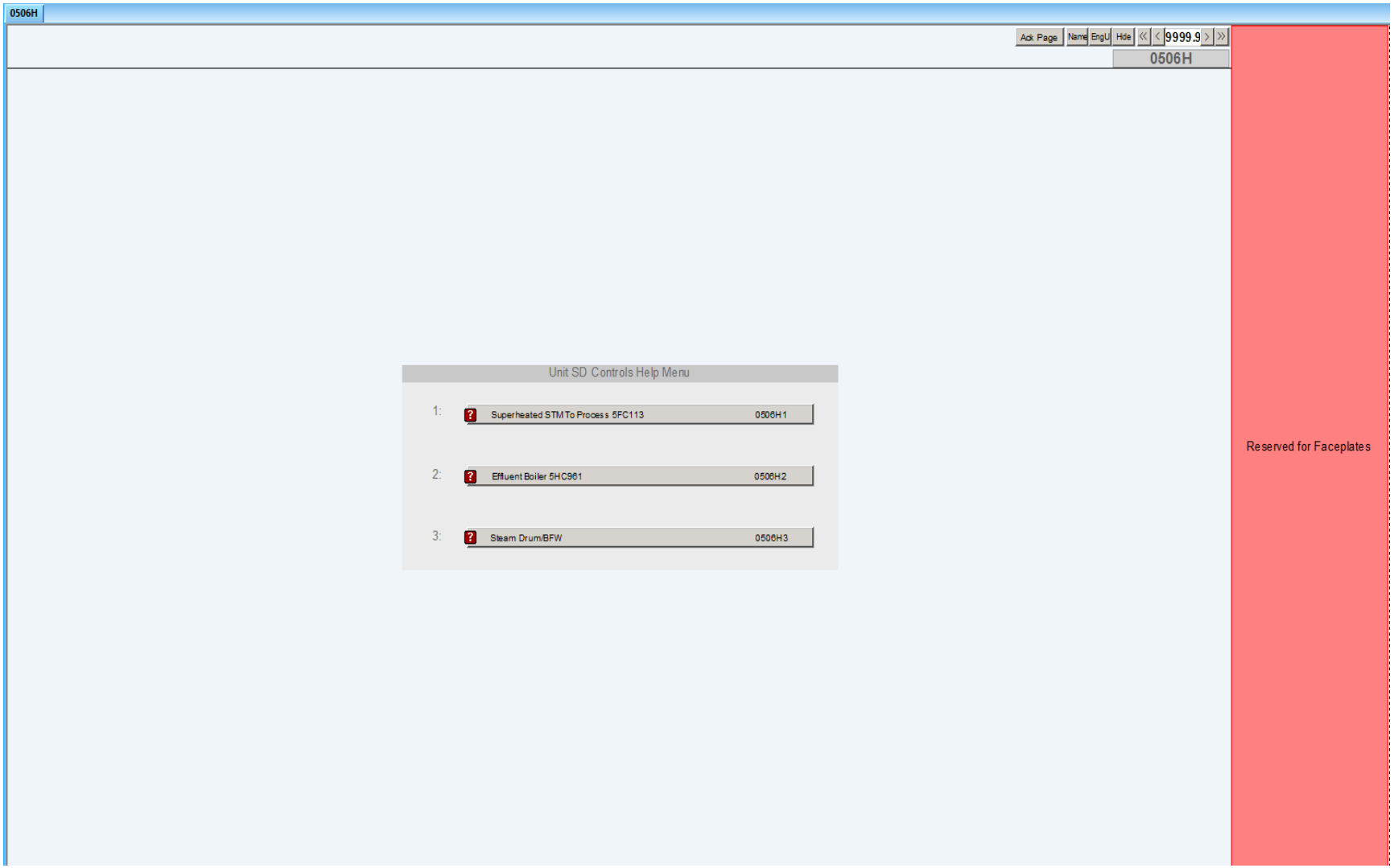

0506E3
STEAM DRUM LEVEL ENGINEERING DISPLAY
TTTTTTTT
RRRRRR
TTTTTTTT
RRRRRR
FILTER
TTTTTTTT
SUMMER
P1 =RRRRRR
P2= RRRRRR
C = RRRRRR
D = RRRRRR
PV =RRRRRR
SP
TTTTTTTT EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRR %
TTTTTTTT EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRR %
OPEU
HELP
??DISPLAY
PROCESS
DISPLAY
CONTRLS
DISPLAY
ENG'R
DISPLAY
GROUP
III


0506E3
Ack Page
Name
EngU
Hide
9999.9
0506E3
5FI118
9999.99
5FY118A
9999.99
Filter
Summer
5FY118
P1 =
9999.99
5FY118
P2 =
9999.99
5FY118
C =
9999.99
5FY118
D =
9999.99
5FY118
PV =
9999.99
5FC119
SP
9999.99 W
9999.99
9999.99
5LC309
9999.99 W
9999.99
9999.99
Reserved for Faceplates
am Drum Level/Boiler
am Drum & EFF Boile

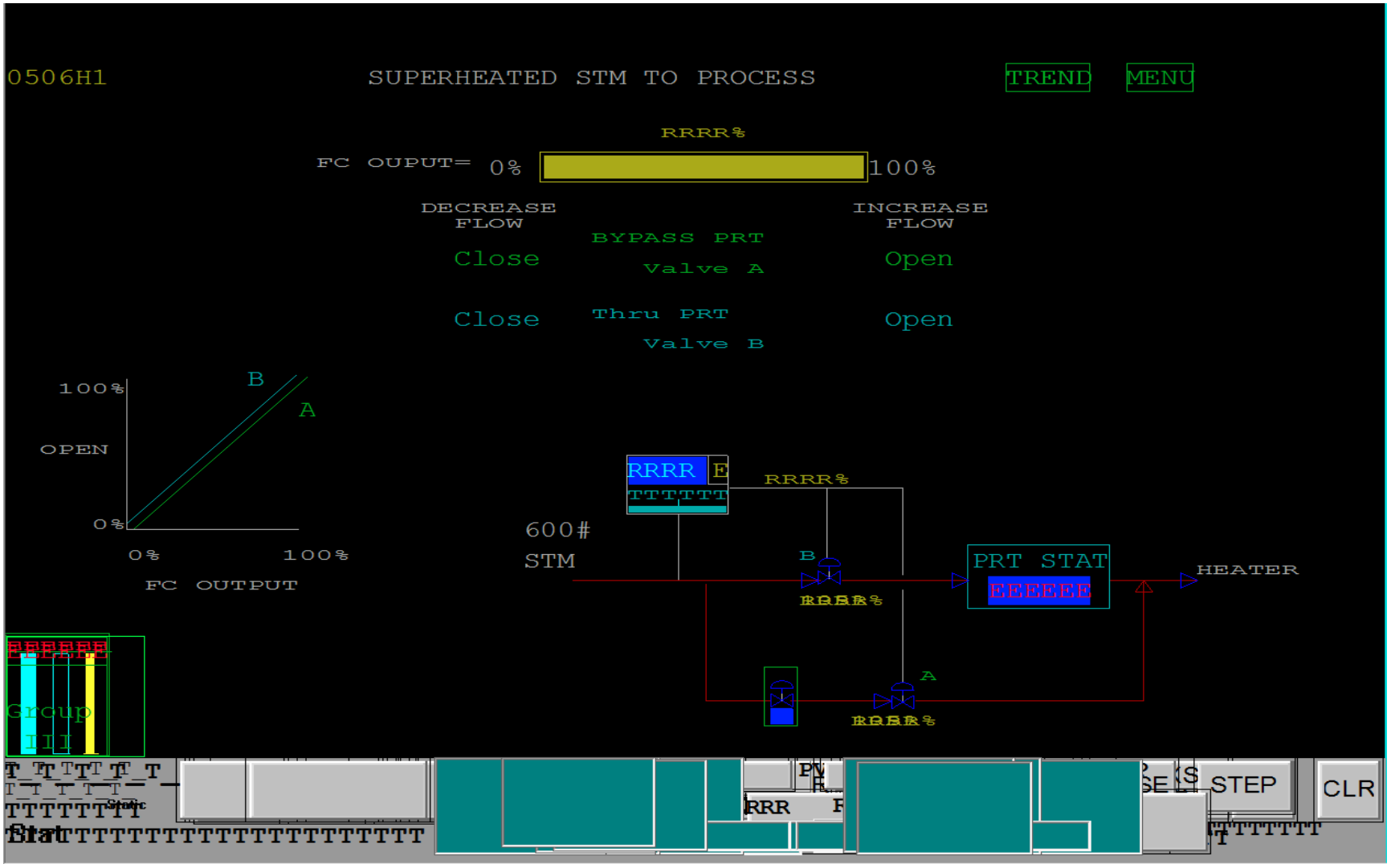
3.229 UNIT SD CONTROLS HELP MENU (0506H.DS)

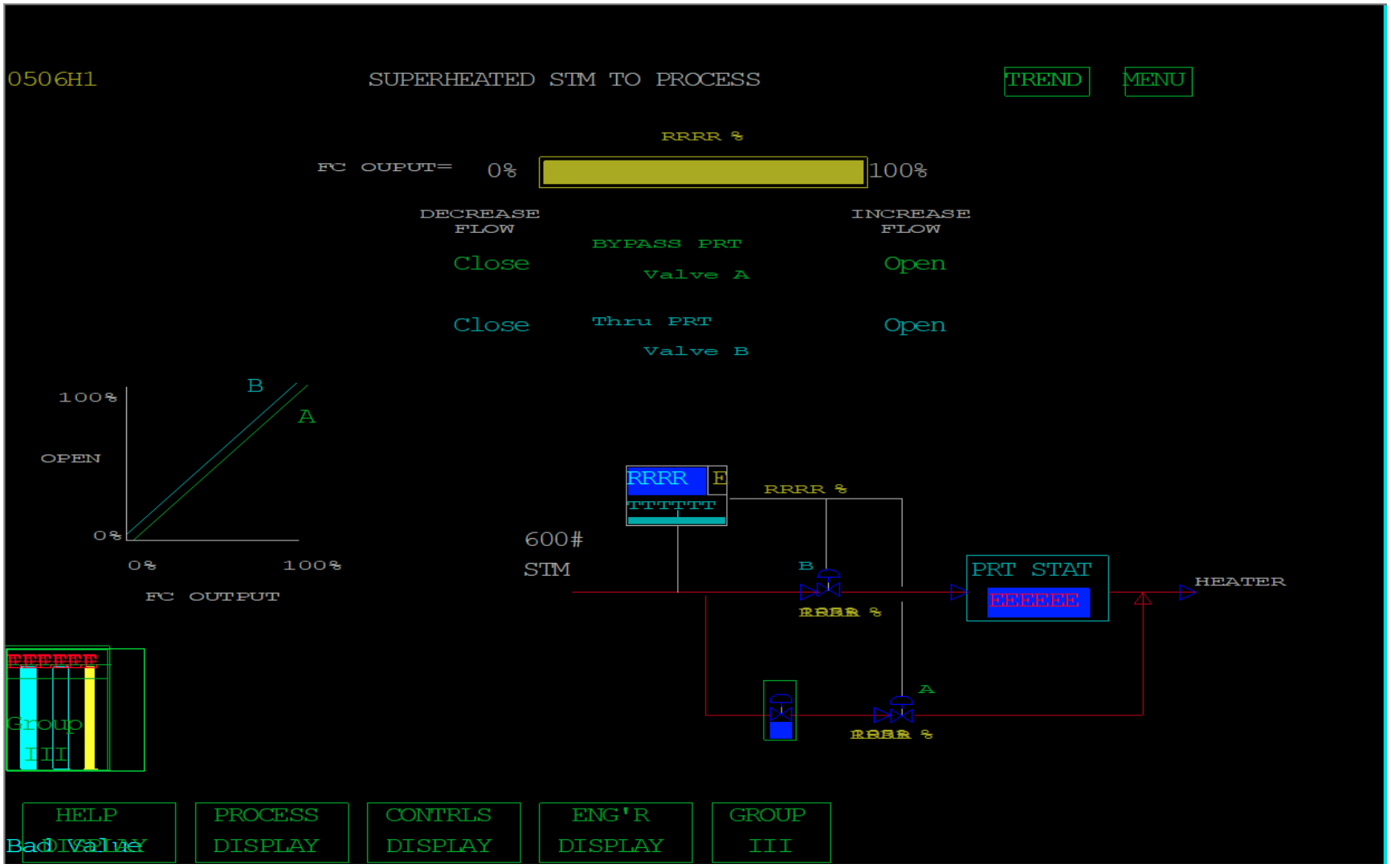


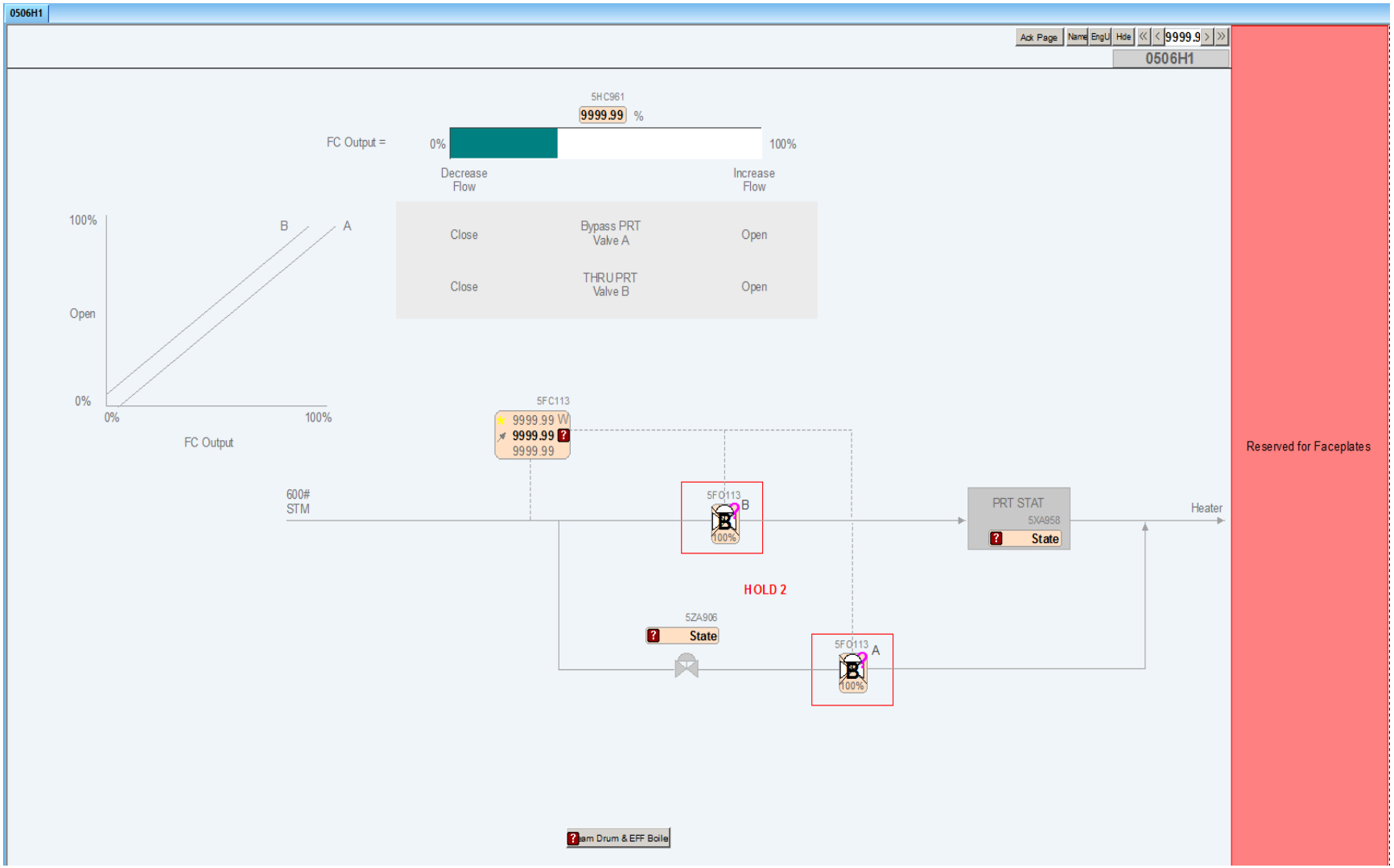

0506H
UNIT SD CONTROLS HELP MENU
1:
SUPERHEATED STM TO PROCESS
5FC113
0506H1
2:
EFFLUENT BOILER
5HC961
0506H2
3:
STEAM DRUM/BFW
0506H3


0506H
Ack Page
Name
Eng U
Hide
9999.9
0506H
Unit SD Controls Help Menu
1:
Superheated STM To Process 5FC113
0506H1
2:
Effluent Boiler 5HC961
0506H2
3:
Steam Drum/BFW
0506H3
Reserved for Faceplates

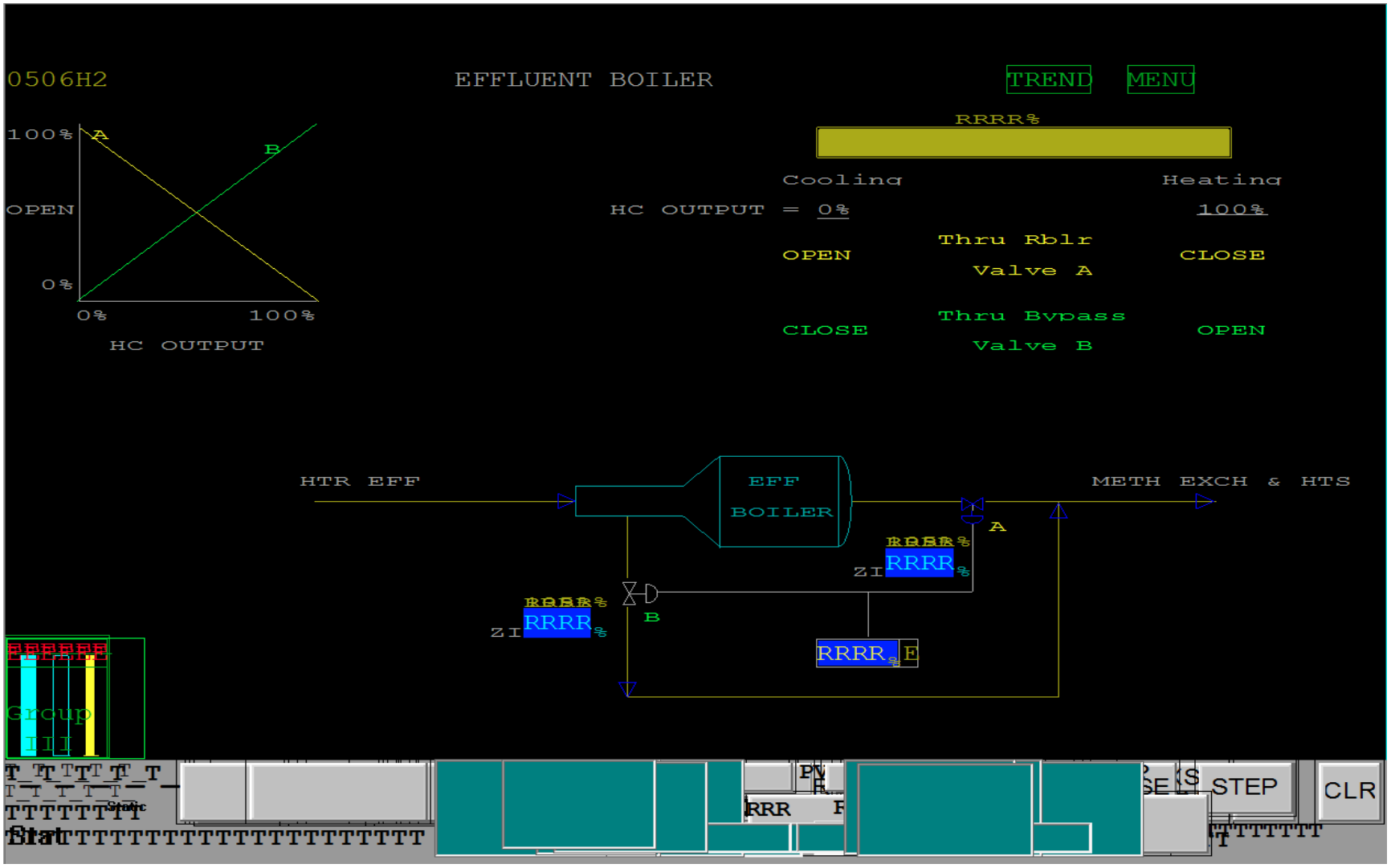
3.230 SUPERHEATED STM TO PROCESS (0506H1.DS)

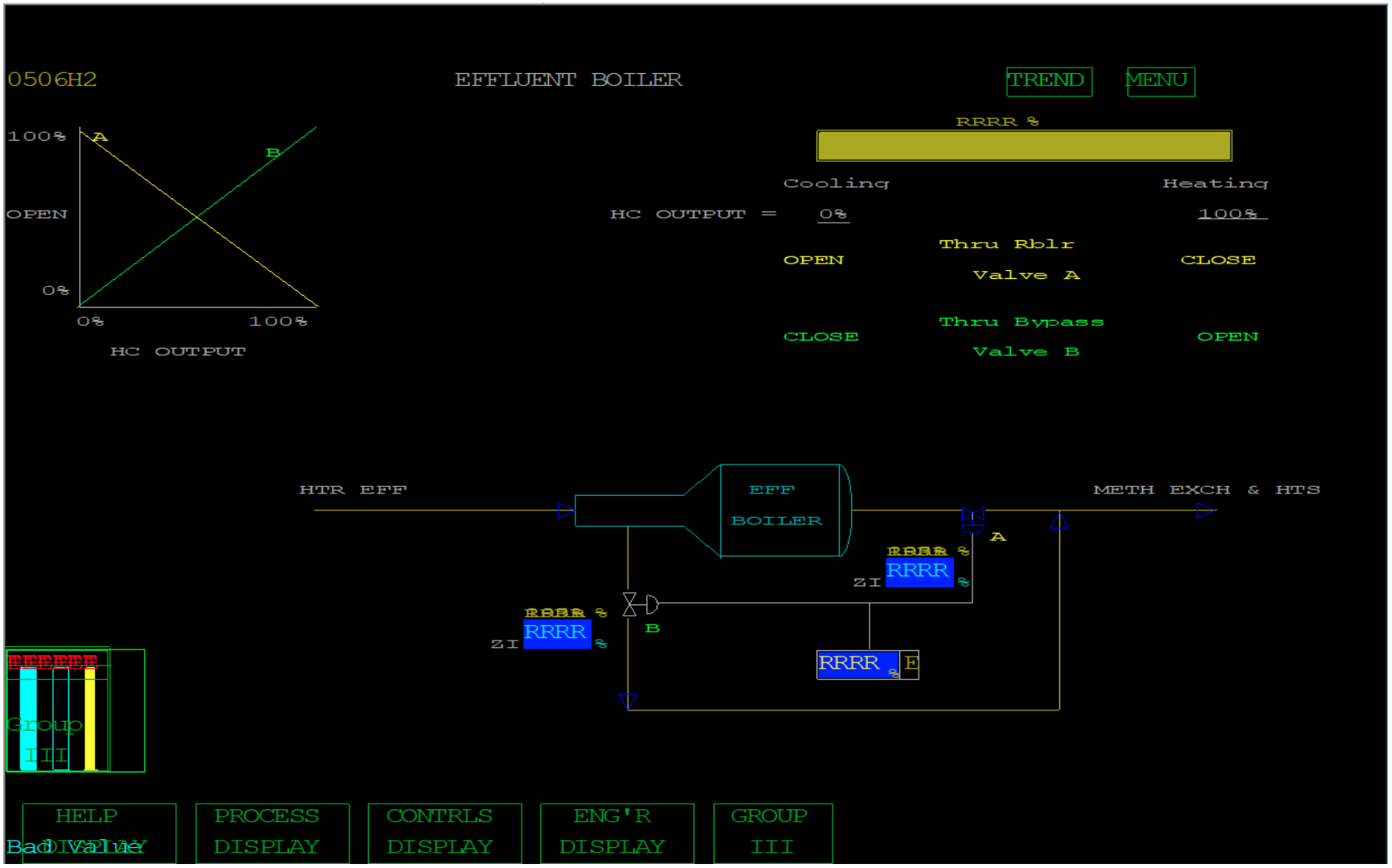


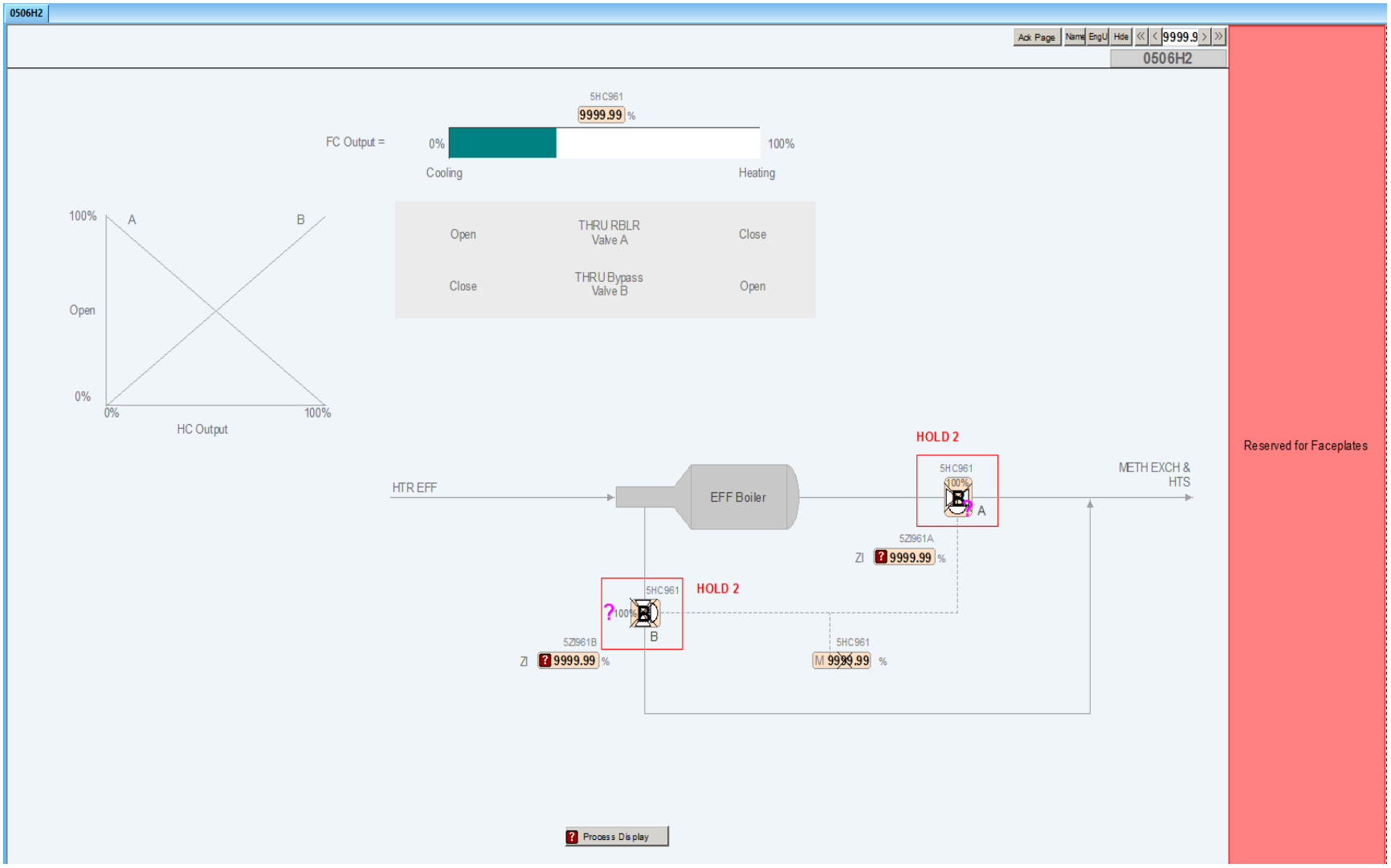

0506H1
SUPERHEATED STM TO PROCESS
TREND
MENU
RRRR %
FC OUPUT=
0%
100%
DECREASE FLOW
INCREASE FLOW
BYPASS PRT
Close
Valve A
Open
Close
Thru PRT
Valve B
Open
100%
OPEN
0%
0%
100%
FC OUTPUT
B
A
RRRR
E
TTTTTT
RRRR %
600#
STM
B
RRRR %
PRT STAT
EEEEEE
HEATER
A
RRRR %
EEEEEE
Group
III
Bad Value
HELP
PROCESS DISPLAY
CONTRLS DISPLAY
ENG'R DISPLAY
GROUP III


0506H1
Ack Page
Name
Eng U
Hide
9999.9
0506H1
5HC961
9999.99 %
FC Output =
0%
100%
Decrease Flow
Increase Flow
100%
Open
0%
0%
100%
FC Output
B
A
Close
Bypass PRT Valve A
Open
Close
THRU PRT Valve B
Open
5FC113
9999.99 W
9999.99
9999.99
600# STM
5FO113 B
100%
PRT STAT
5XA958
State
Heater
HOLD 2
5ZA906
State
5FO113 A
100%
Reserved for Faceplates
eam Drum & EFF Boile

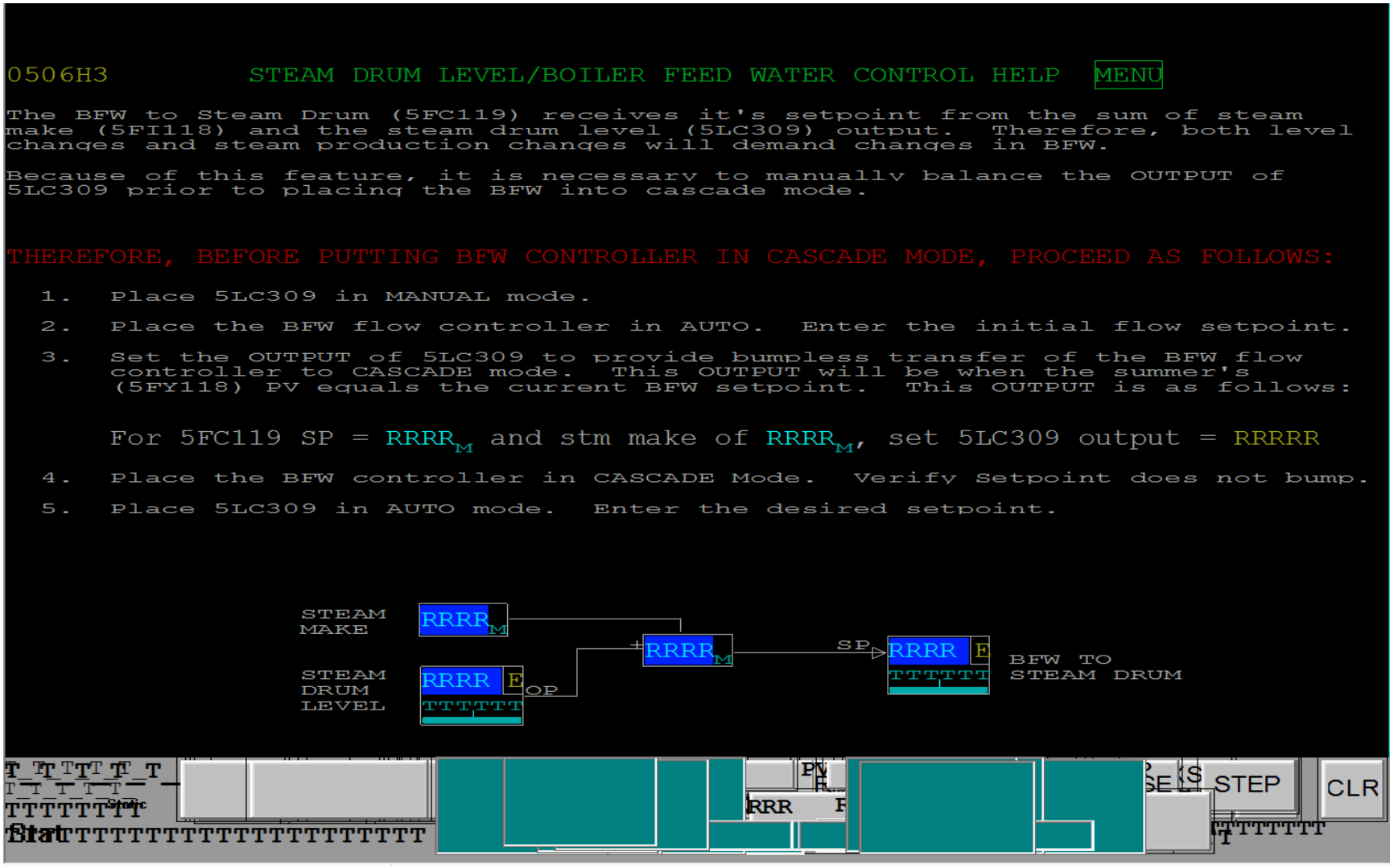
3.231 EFFLUENT BOILER (0506H2.DS)




0506H2
EFFLUENT BOILER
TREND
MENU
100%
A
B
OPEN
0%
0%
100%
HC OUTPUT
RRRR %
Cooling
Heating
HC OUTPUT =
0%
100%
Thru Rblr
OPEN
Valve A
CLOSE
Thru Bypass
CLOSE
Valve B
OPEN
HTR EFF
EFF
BOILER
METH EXCH & HTS
A
RRRR %
ZI
RRRR %
B
RRRR %
ZI
RRRR %
RRRR %
E
Group
III
HELP
PROCESS
DISPLAY
CONTRLS
DISPLAY
ENG'R
DISPLAY
GROUP
III
Bad Value


0506H2
Ack Page
Name
EngU
Hide
9999.9
0506H2
5HC961
9999.99 %
FC Output =
0%
100%
Cooling
Heating
100%
A
B
Open
0%
0%
100%
HC Output
Open
THRU RBLR Valve A
Close
Close
THRU Bypass Valve B
Open
HOLD 2
5HC961
100%
A
HTR EFF
EFF Boiler
METH EXCH & HTS
5ZI961A
ZI
9999.99 %
HOLD 2
5HC961
100%
B
5ZI961B
ZI
9999.99 %
5HC961
M 9999.99 %
Process Display
Reserved for Faceplates

3.232 STEAM DRUM LEVEL/BOILER FEED WATER CONTROL HELP (0506H3.DS)



0506H3 STEAM DRUM LEVEL/BOILER FEED WATER CONTROL HELP MENU

The BFW to Steam Drum (5FC119) receives it's setpoint from the sum of steam make (5FI118) and the steam drum level (5LC309) output. Therefore, both level changes and steam production changes will demand changes in BFW.

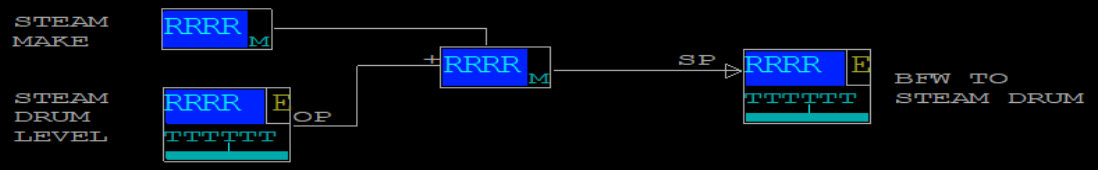
Because of this feature, it is necessary to manually balance the OUTPUT of 5LC309 prior to placing the BFW into cascade mode.

THEREFORE, BEFORE PUTTING BFW CONTROLLER IN CASCADE MODE, PROCEED AS FOLLOWS:

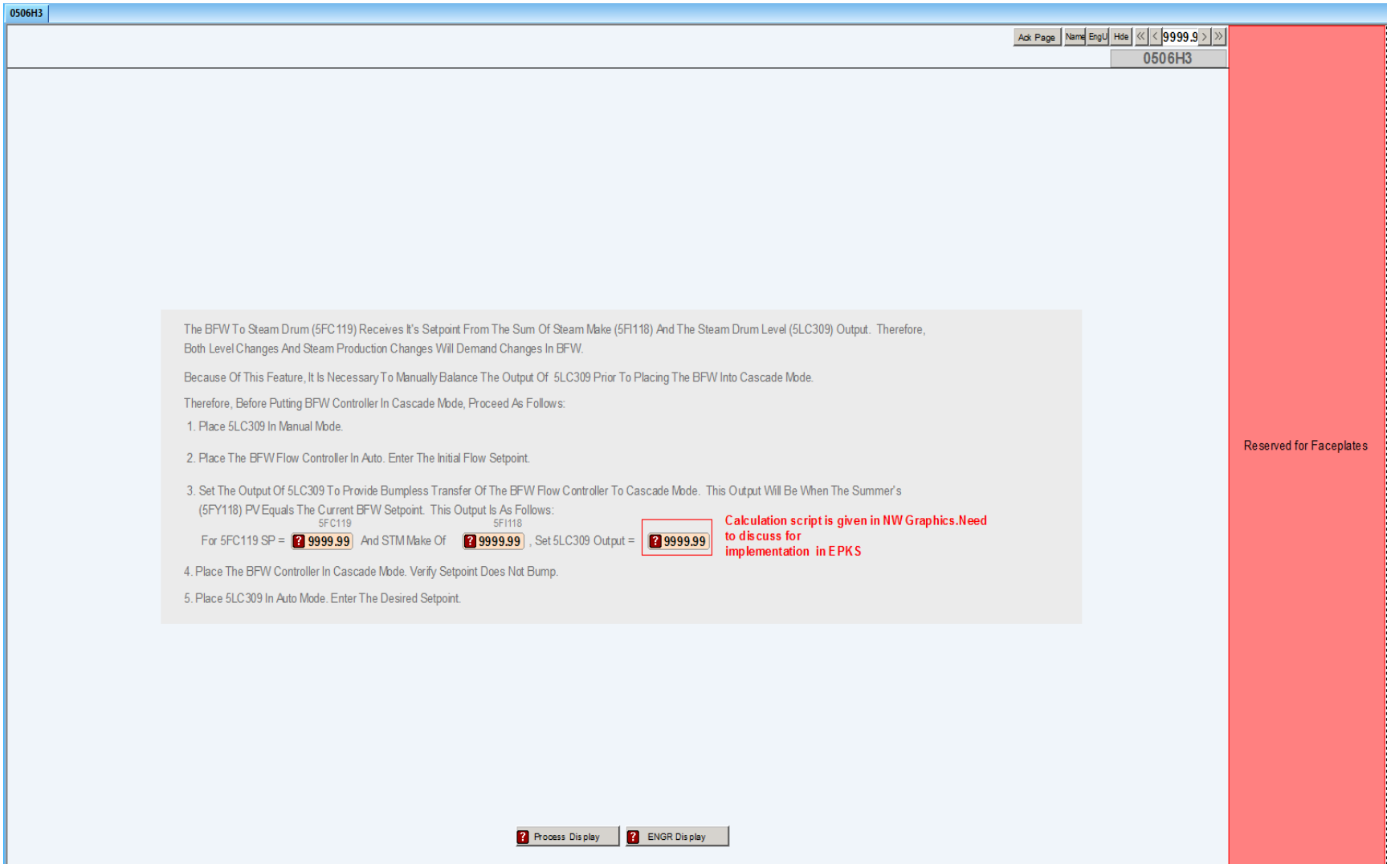
1. Place 5LC309 in MANUAL mode.
2. Place the BFW flow controller in AUTO. Enter the initial flow setpoint.
3. Set the OUTPUT of 5LC309 to provide bumpless transfer of the BFW flow controller to CASCADE mode. This OUTPUT will be when the summer's (5FY118) PV equals the current BFW setpoint. This OUTPUT is as follows:

   For 5FC119 SP = RRRR$_M$ and stm make of RRRR$_M$, set 5LC309 output = RRRRR

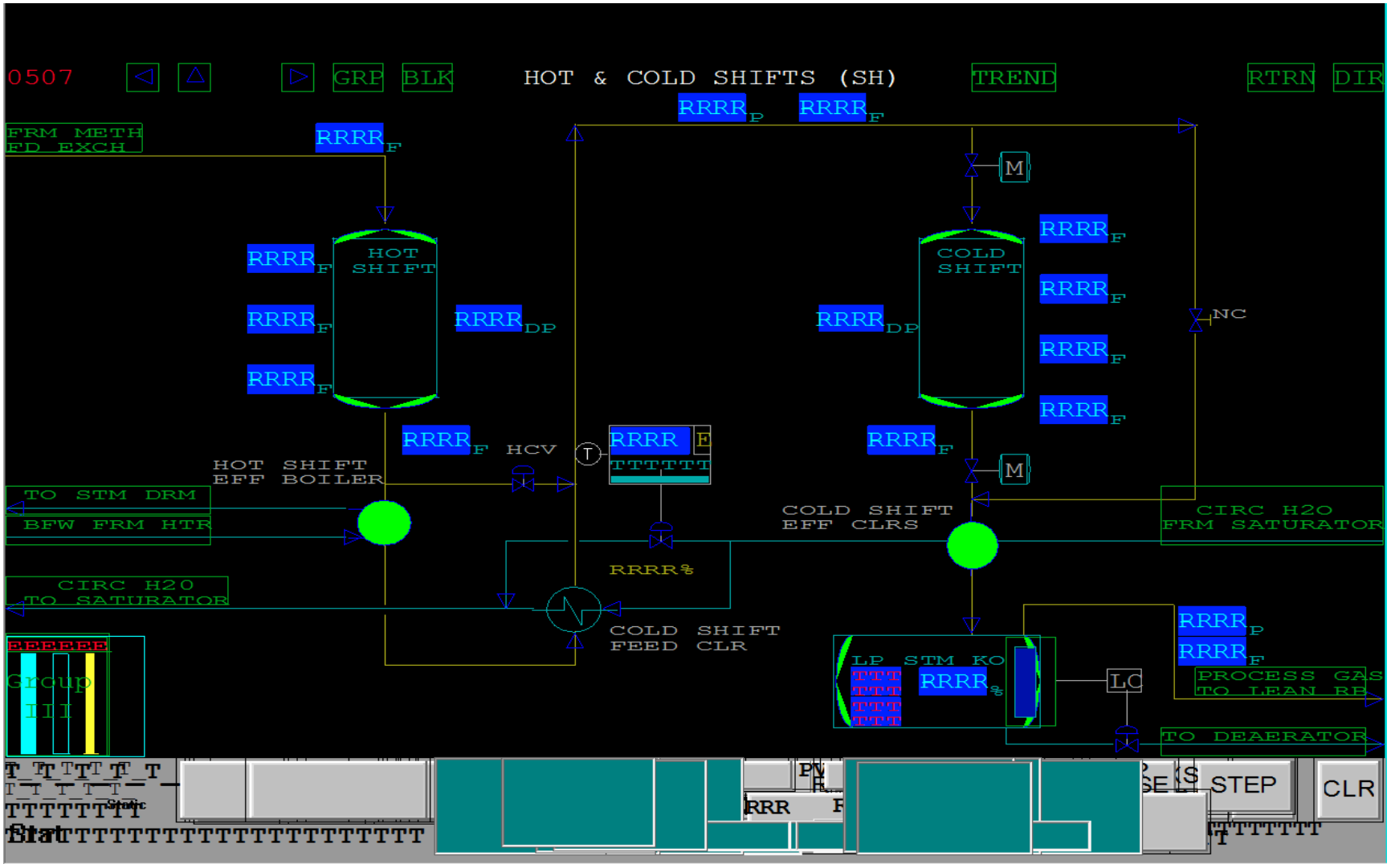
4. Place the BFW controller in CASCADE Mode. Verify Setpoint does not bump.
5. Place 5LC309 in AUTO mode. Enter the desired setpoint.

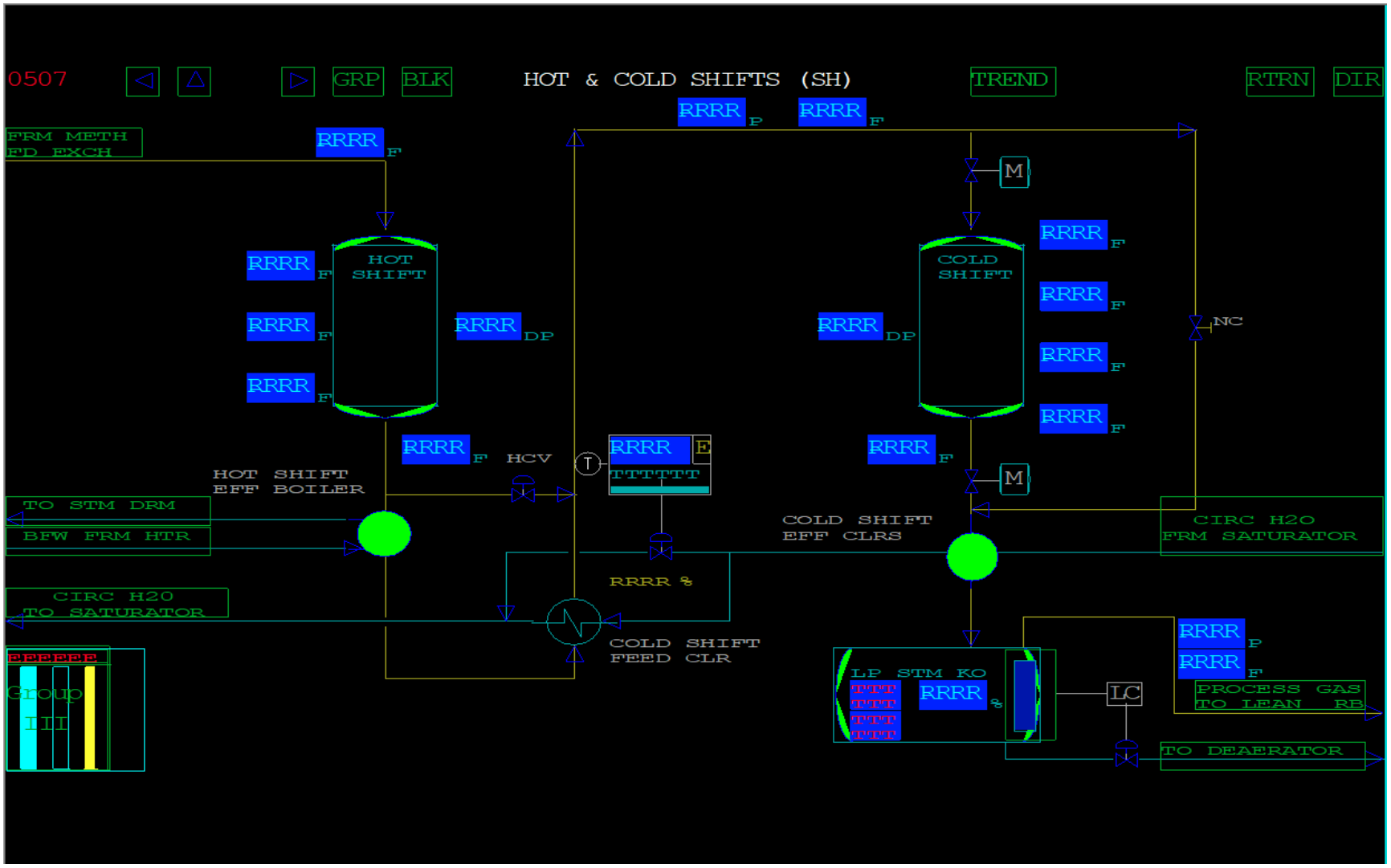


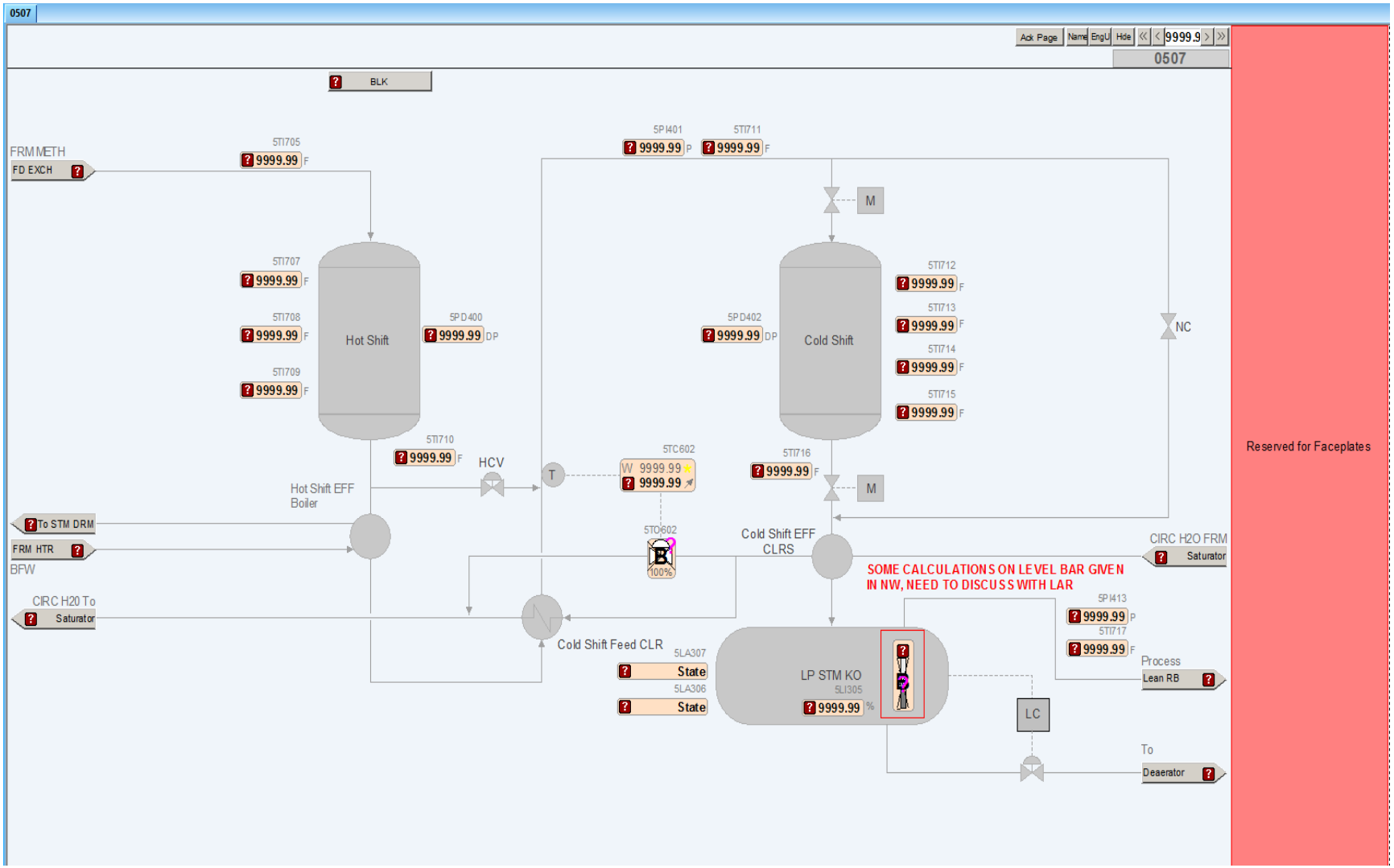
HELP ??DISPLAY | PROCESS DISPLAY | CONTRLS DISPLAY | ENG'R DISPLAY | GROUP III


0506H3
Ack Page
Name
Eng U
Hide
9999.9
0506H3
The BFW To Steam Drum (5FC119) Receives It's Setpoint From The Sum Of Steam Make (5FI118) And The Steam Drum Level (5LC309) Output. Therefore, Both Level Changes And Steam Production Changes Will Demand Changes In BFW.
Because Of This Feature, It Is Necessary To Manually Balance The Output Of 5LC309 Prior To Placing The BFW Into Cascade Mode.
Therefore, Before Putting BFW Controller In Cascade Mode, Proceed As Follows:
1. Place 5LC309 In Manual Mode.
2. Place The BFW Flow Controller In Auto. Enter The Initial Flow Setpoint.
3. Set The Output Of 5LC309 To Provide Bumpless Transfer Of The BFW Flow Controller To Cascade Mode. This Output Will Be When The Summer's (5FY118) PV Equals The Current BFW Setpoint. This Output Is As Follows:
5FC119
For 5FC119 SP = ? 9999.99
And STM Make Of
5FI118
? 9999.99
, Set 5LC309 Output = ? 9999.99
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
4. Place The BFW Controller In Cascade Mode. Verify Setpoint Does Not Bump.
5. Place 5LC309 In Auto Mode. Enter The Desired Setpoint.
Process Display
ENGR Display
Reserved for Faceplates

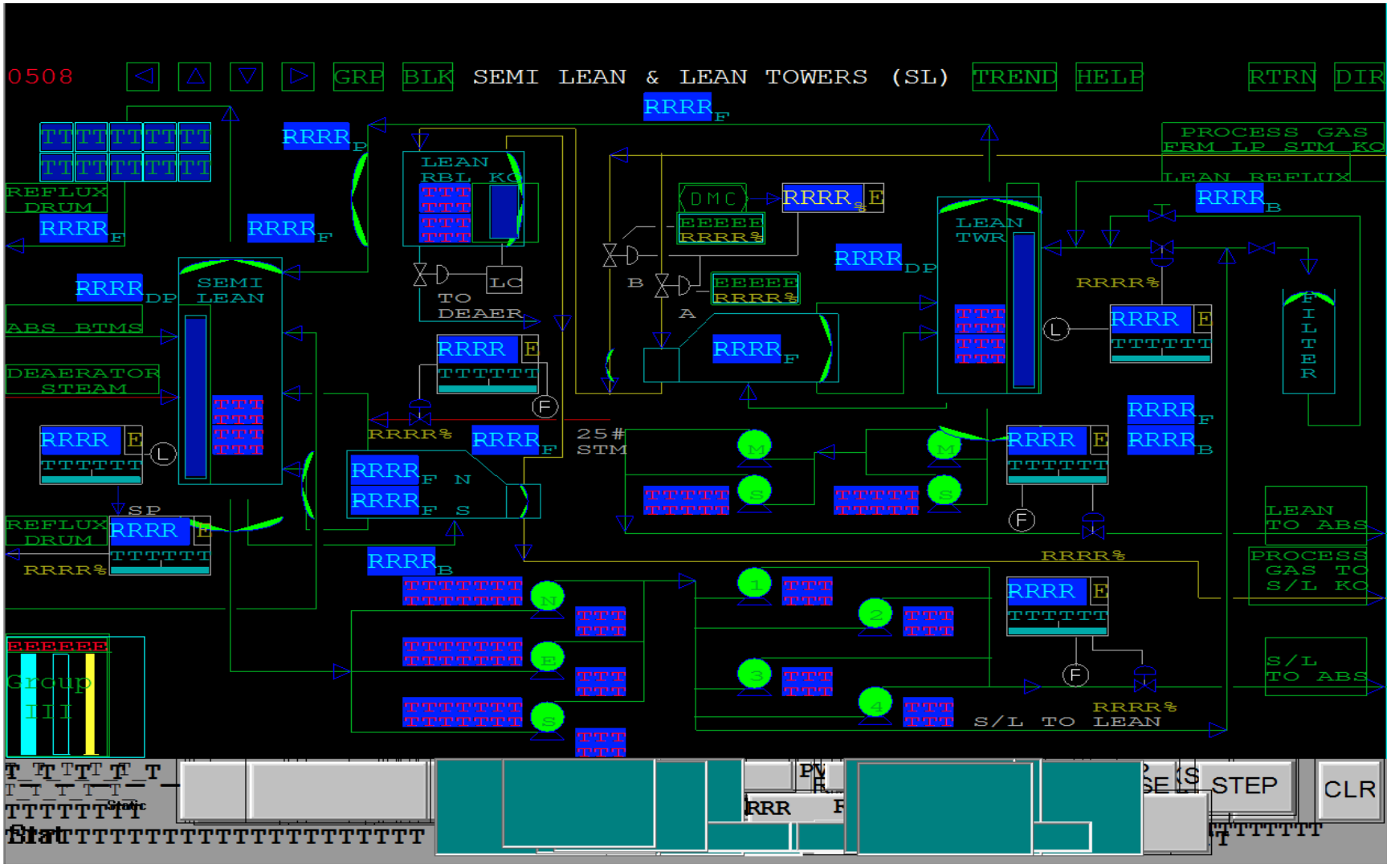
3.233 HOT & COLD SHIFTS (SH) (0507.DS)

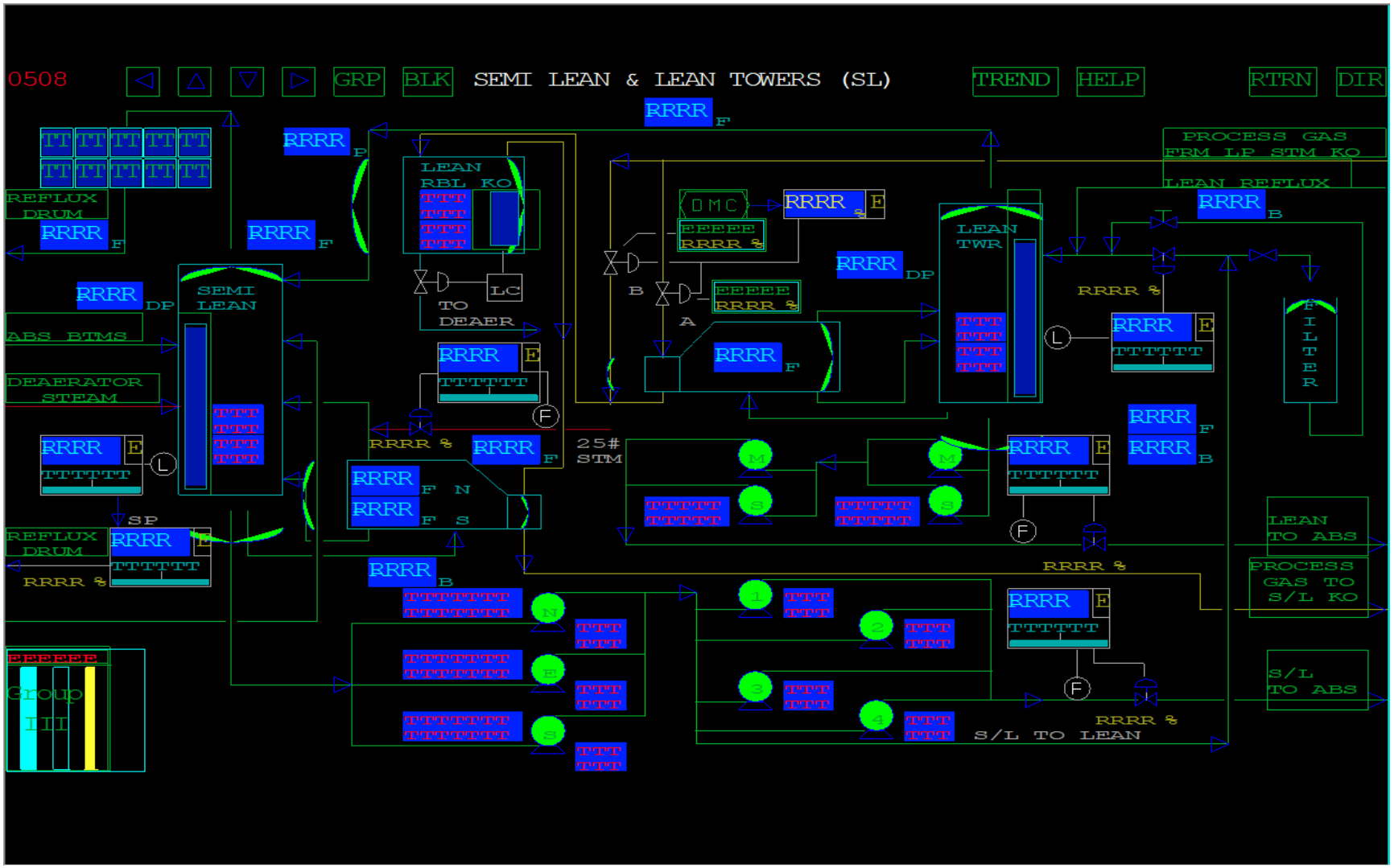


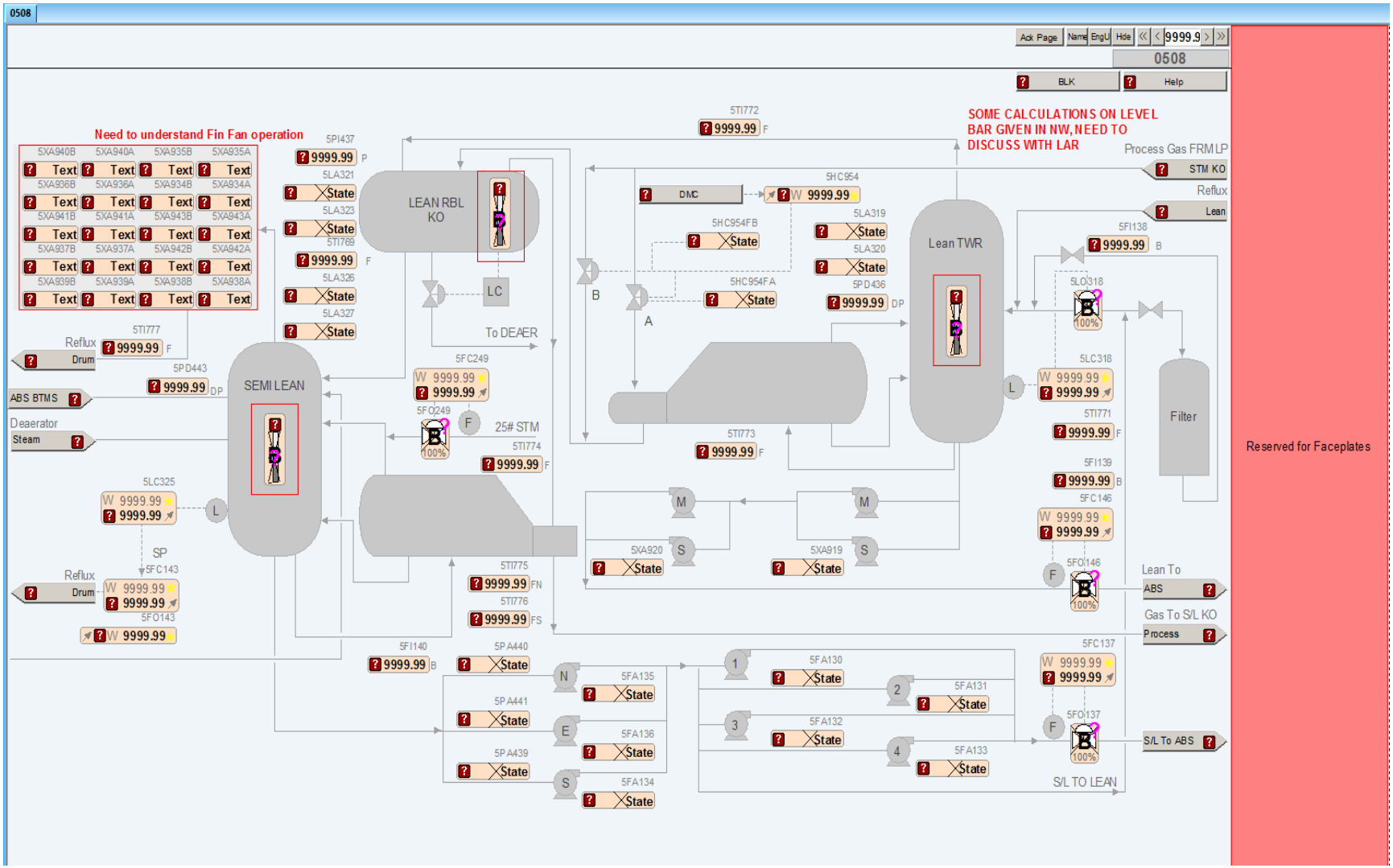

0507
GRP
BLK
HOT & COLD SHIFTS (SH)
TREND
RTRN
DIR
FRM METH
FD EXCH
RRRR P
RRRR F
HOT
SHIFT
RRRR DP
COLD
SHIFT
NC
HCV
HOT SHIFT
EFF BOILER
TO STM DRM
BFW FRM HTR
COLD SHIFT
EFF CLRS
CIRC H2O
FRM SATURATOR
CIRC H2O
TO SATURATOR
RRRR %
COLD SHIFT
FEED CLR
LP STM KO
PROCESS GAS
TO LEAN RB
TO DEAERATOR
LC
GROUP
III


0507
Ack Page
Name
EngU
Hide
9999.9
0507
BLK
FRM METH
FD EXCH
5TI705
9999.99 F
5PI401
9999.99 P
5TI711
9999.99 F
M
5TI707
9999.99 F
5TI708
9999.99 F
5TI709
9999.99 F
Hot Shift
5PD400
9999.99 DP
5PD402
9999.99 DP
Cold Shift
5TI712
9999.99 F
5TI713
9999.99 F
5TI714
9999.99 F
5TI715
9999.99 F
NC
5TI710
9999.99 F
HCV
T
5TC602
W 9999.99
9999.99
5TI716
9999.99 F
M
Hot Shift EFF
Boiler
To STM DRM
FRM HTR
BFW
5TO602
100%
Cold Shift EFF
CLRS
CIRC H2O FRM
Saturator
SOME CALCULATIONS ON LEVEL BAR GIVEN
IN NW, NEED TO DISCUSS WITH LAR
CIRC H20 To
Saturator
5PI413
9999.99 P
5TI717
9999.99 F
Process
Lean RB
Cold Shift Feed CLR
5LA307
State
5LA306
State
LP STM KO
5LI305
9999.99 %
LC
To
Deaerator
Reserved for Faceplates

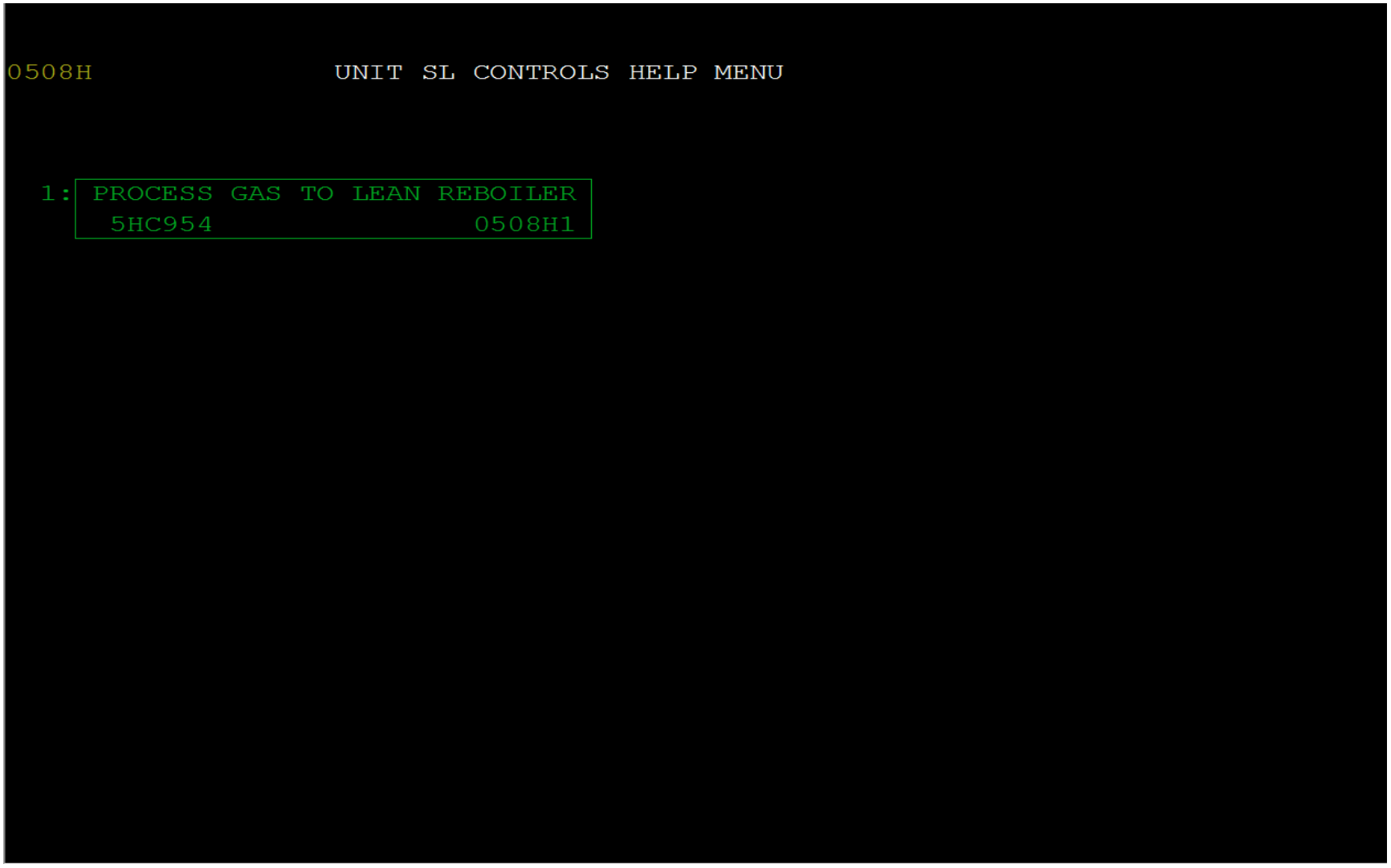
3.234 SEMI LEAN & LEAN TOWERS (SL) (0508.DS)

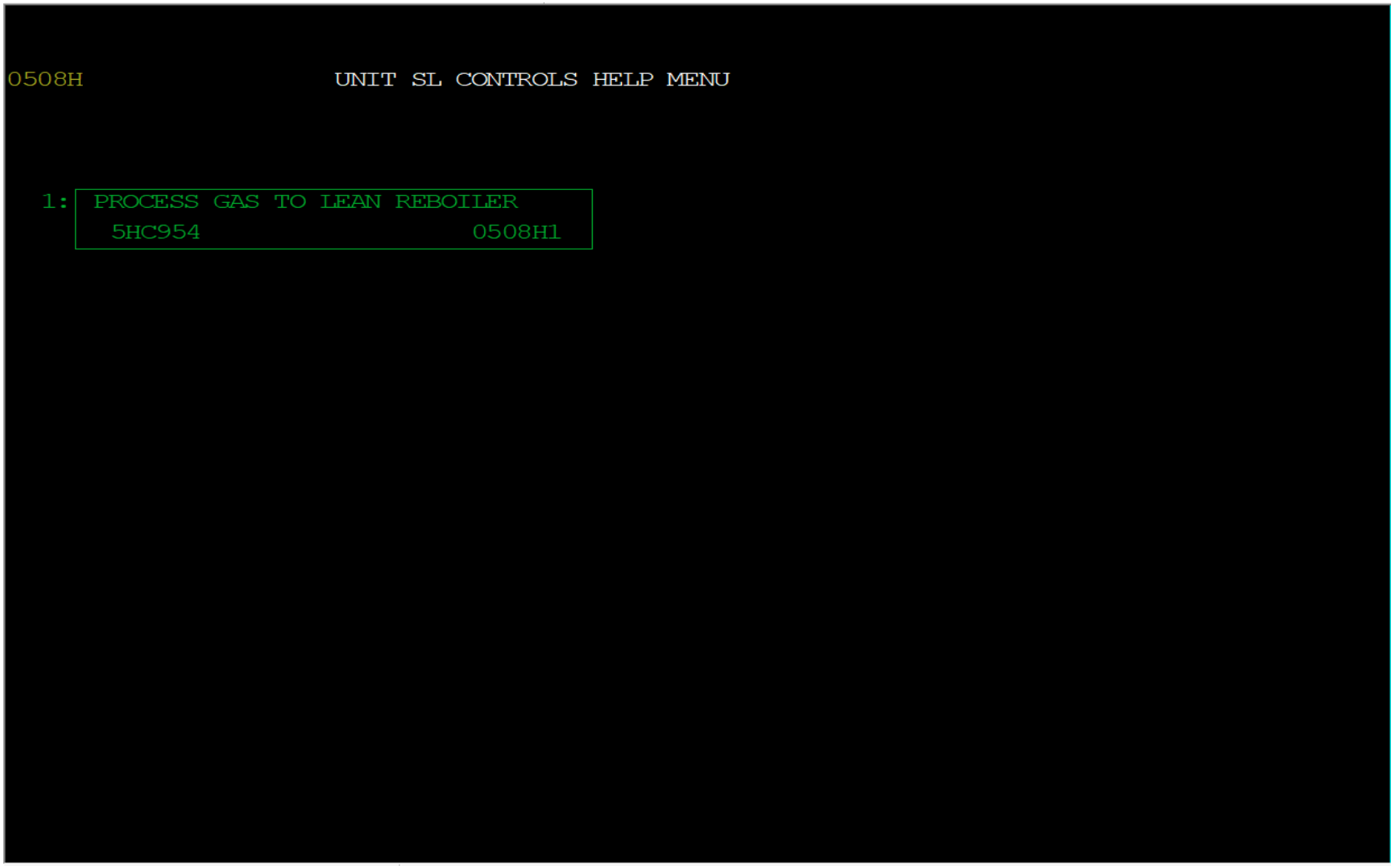


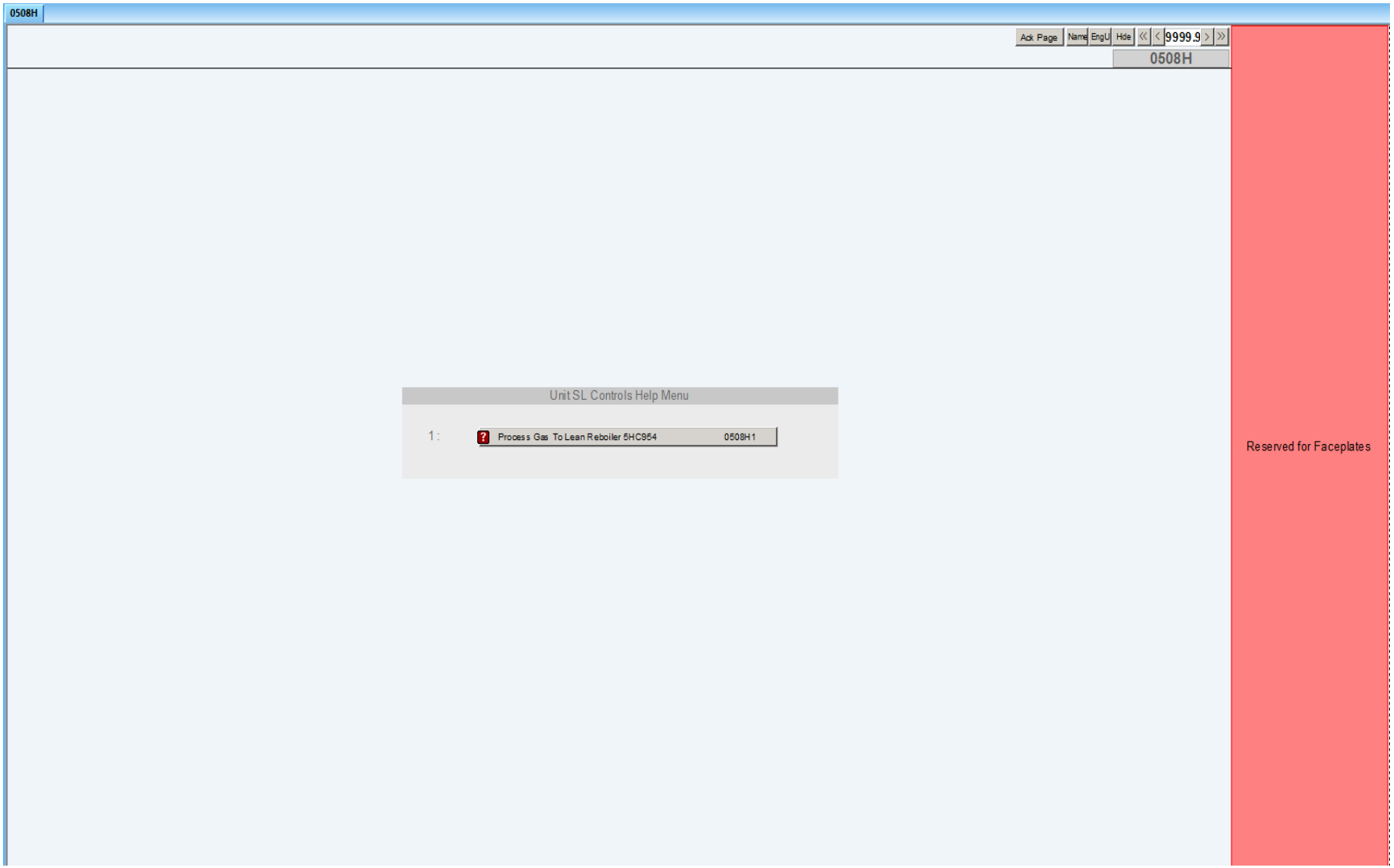

0508
GRP
BLK
SEMI LEAN & LEAN TOWERS (SL)
TREND
HELP
RTRN
DIR
REFLUX DRUM
LEAN RBL KO
TO DEAER
LC
SEMI LEAN
ABS BTMS
DEAERATOR STEAM
25# STM
DMC
LEAN TWR
PROCESS GAS FRM LP STM KO
LEAN REFLUX
FILTER
LEAN TO ABS
PROCESS GAS TO S/L KO
S/L TO ABS
S/L TO LEAN
GROUP III


0508
Ack Page
Name
Eng U
Hide
9999.9
0508
BLK
Help
Need to understand Fin Fan operation
SOME CALCULATIONS ON LEVEL BAR GIVEN IN NW, NEED TO DISCUSS WITH LAR
LEAN RBL KO
SEMI LEAN
Lean TWR
Filter
LC
To DEAER
Process Gas FRM LP
STM KO
Reflux
Lean
Drum
ABS BTMS
Deaerator
Steam
25# STM
Lean To ABS
Gas To S/L KO
Process
S/L To ABS
S/L TO LEAN
Reserved for Faceplates

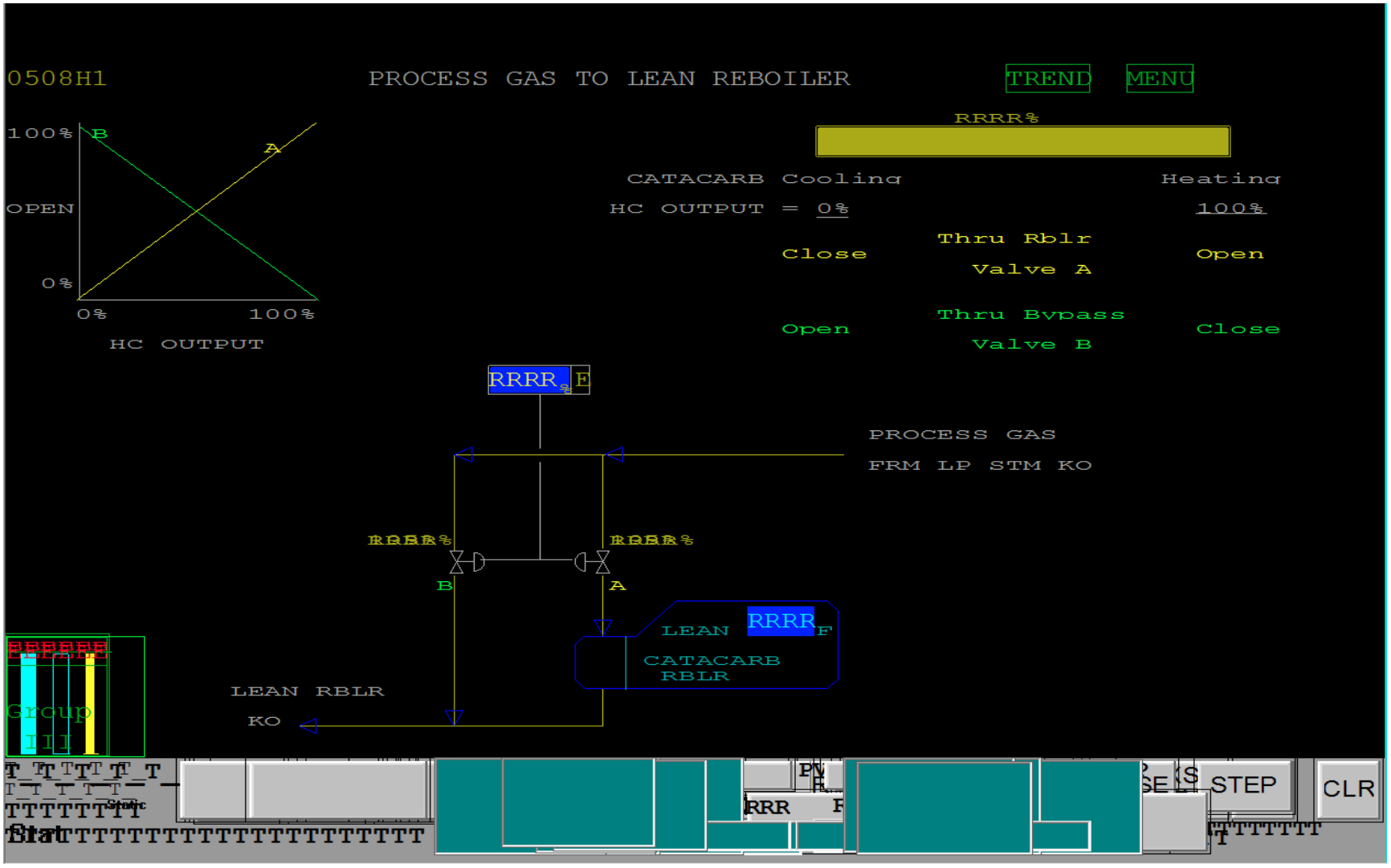
3.235 UNIT SL CONTROLS HELP MENU (0508H.DS)

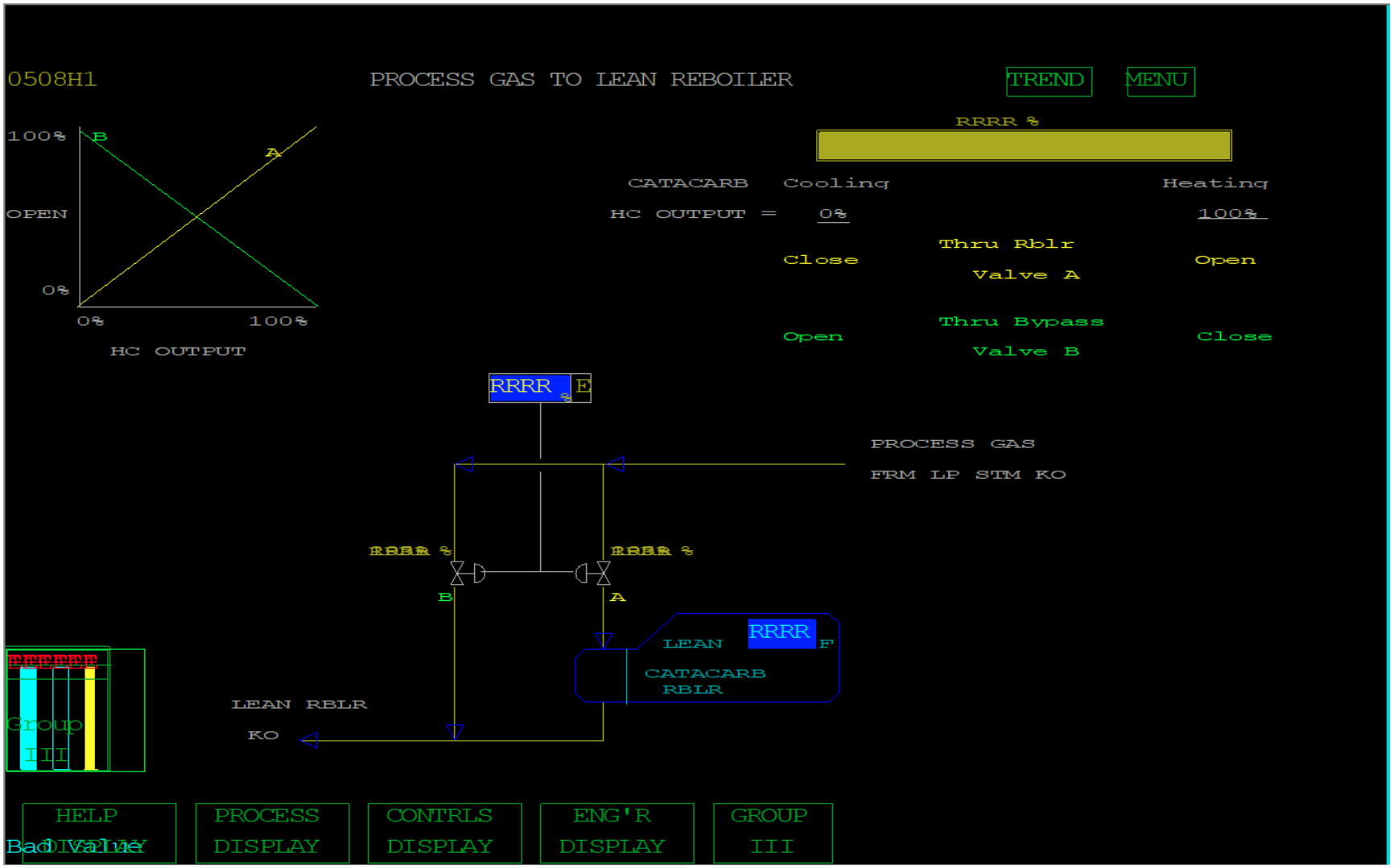


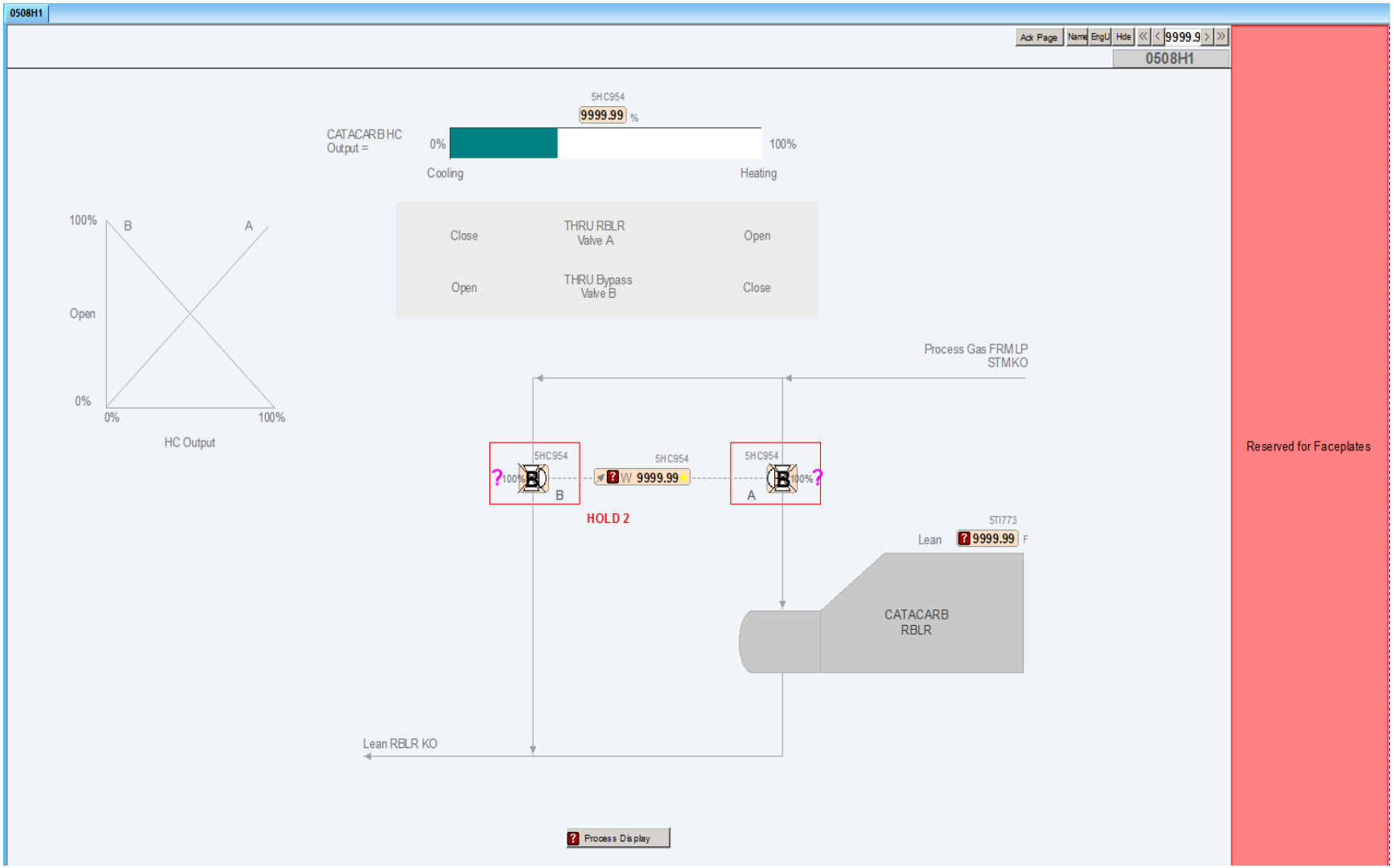

0508H
UNIT SL CONTROLS HELP MENU
1:
PROCESS GAS TO LEAN REBOILER
5HC954
0508H1


0508H
Ack Page
Name
EngU
Hide
9999.9
0508H
Unit SL Controls Help Menu
1 :
Process Gas To Lean Reboiler 5HC954
0508H1
Reserved for Faceplates

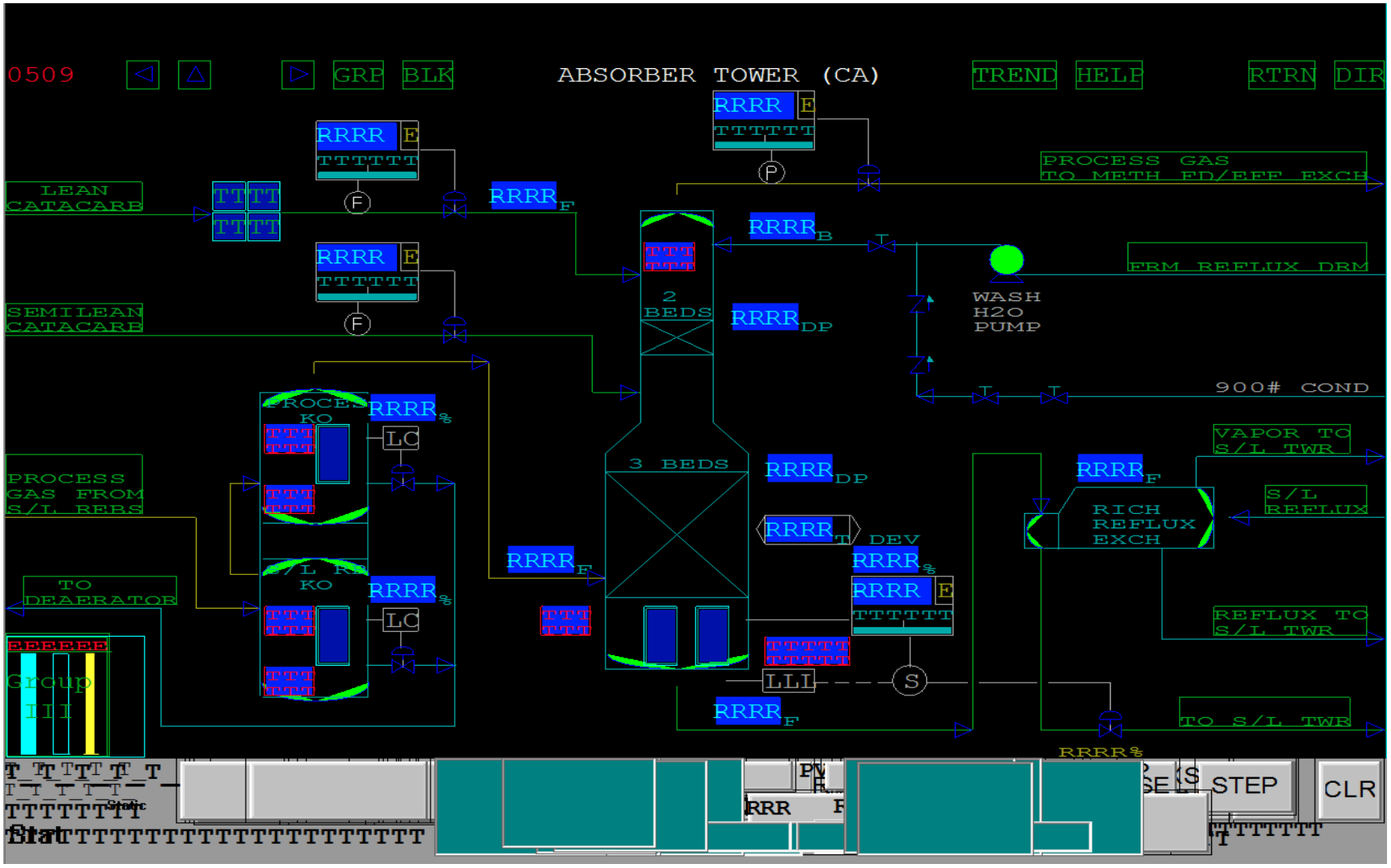
3.236 PROCESS GAS TO LEAN REBOILER (0508H1.DS)

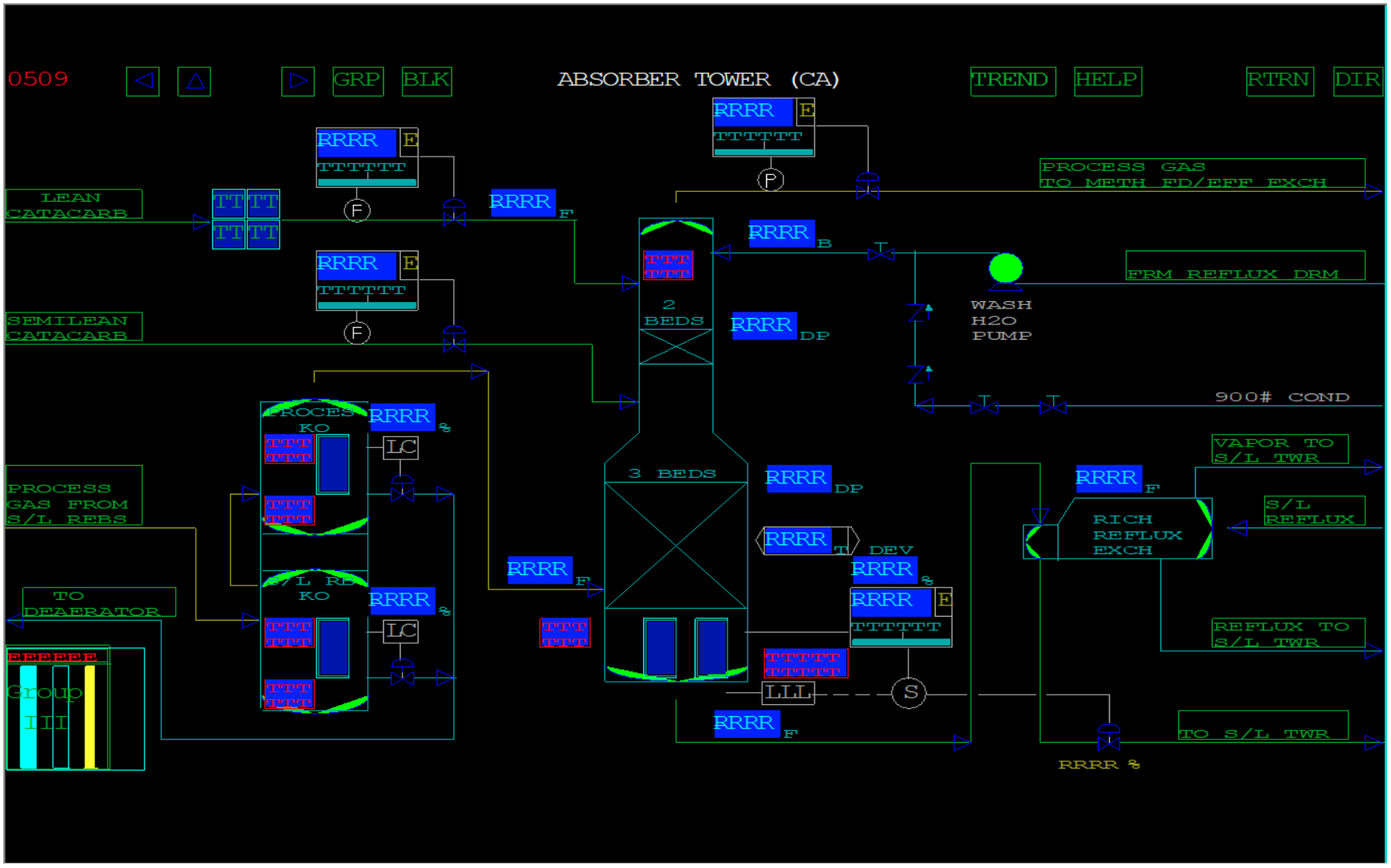


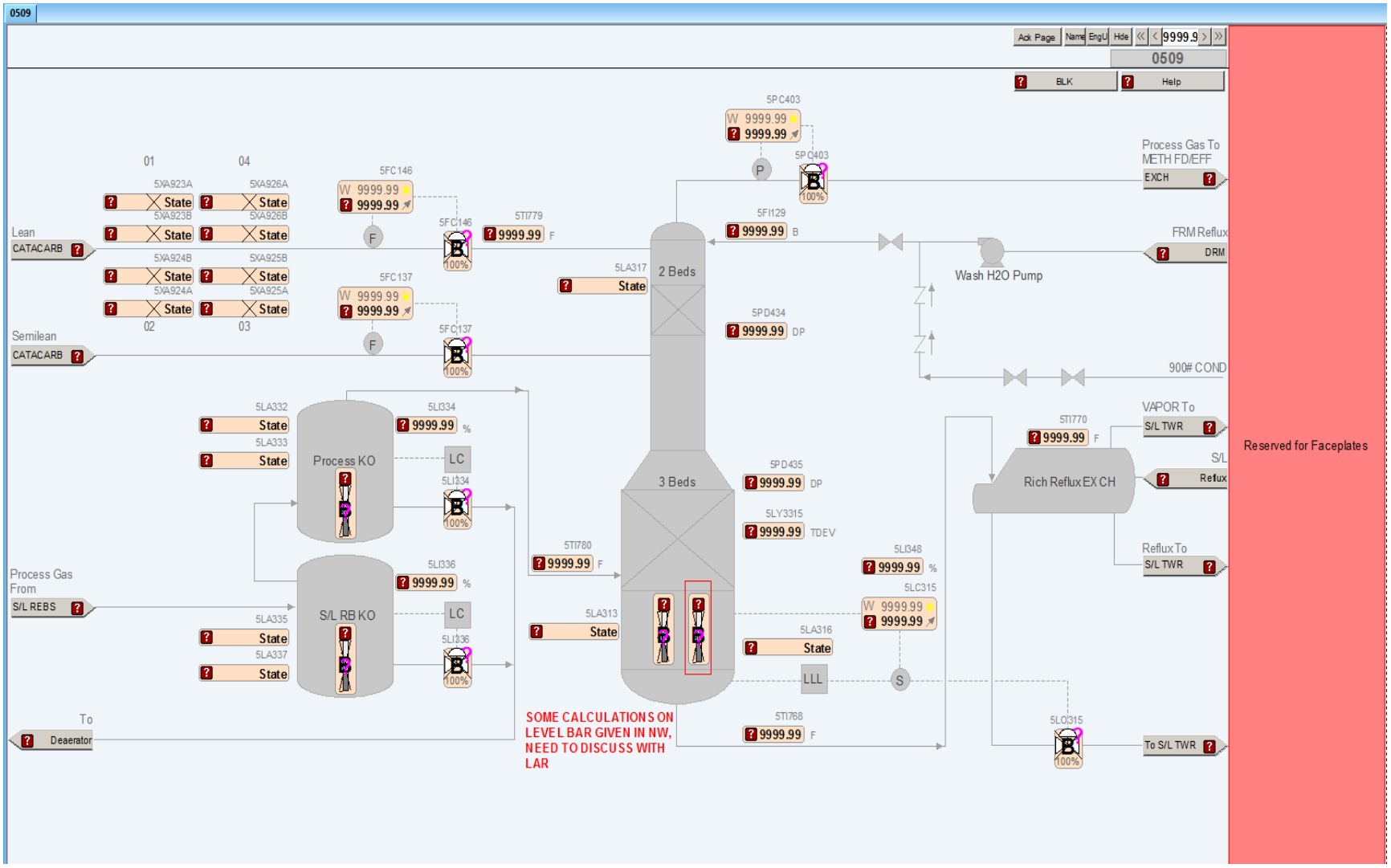

0508H1
PROCESS GAS TO LEAN REBOILER
TREND
MENU
RRRR %
CATACARB
Cooling
Heating
HC OUTPUT =
0%
100%
Thru Rblr
Close
Valve A
Open
Thru Bypass
Open
Valve B
Close
100%
B
A
OPEN
0%
0%
100%
HC OUTPUT
RRRR F
%
PROCESS GAS
FRM LP STM KO
RRRR %
RRRR %
B
A
LEAN
RRRR F
CATACARB
RBLR
LEAN RBLR
KO
Group
III
HELP
PROCESS
DISPLAY
CONTRLS
DISPLAY
ENG'R
DISPLAY
GROUP
III
Bad Value


0508H1
Ack Page
Name
Eng U
Hide
9999.9
0508H1
5HC954
9999.99 %
CATACARB HC Output =
0%
100%
Cooling
Heating
100%
B
A
Open
0%
0%
100%
HC Output
Close
THRU RBLR Valve A
Open
Open
THRU Bypass Valve B
Close
Process Gas FRM LP STMKO
5HC954
100%
B
5HC954
W 9999.99
5HC954
100%
A
HOLD 2
5TI773
Lean
9999.99
F
CATACARB RBLR
Lean RBLR KO
Process Display
Reserved for Faceplates

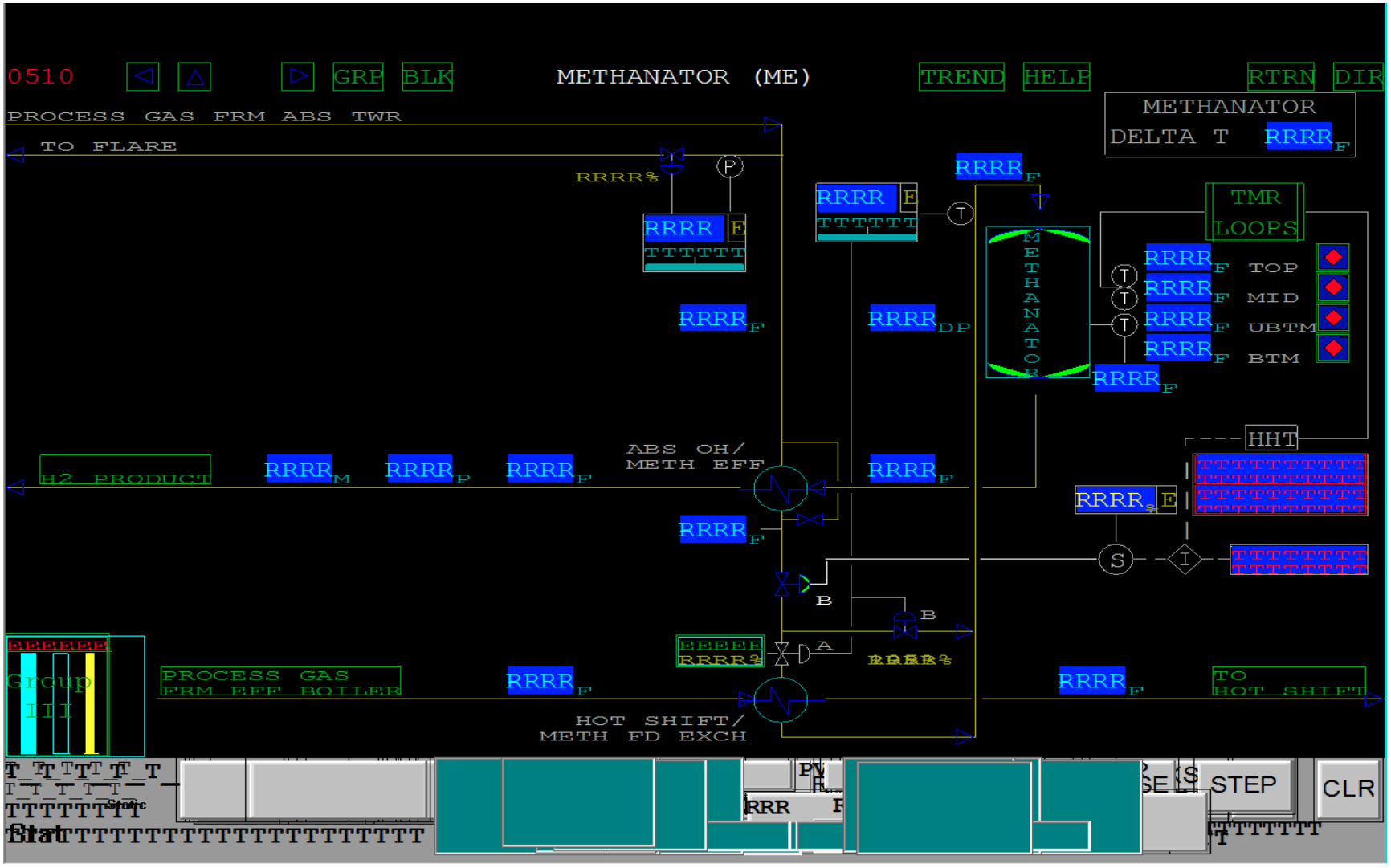
3.237 ABSORBER TOWER (CA) (0509.DS)

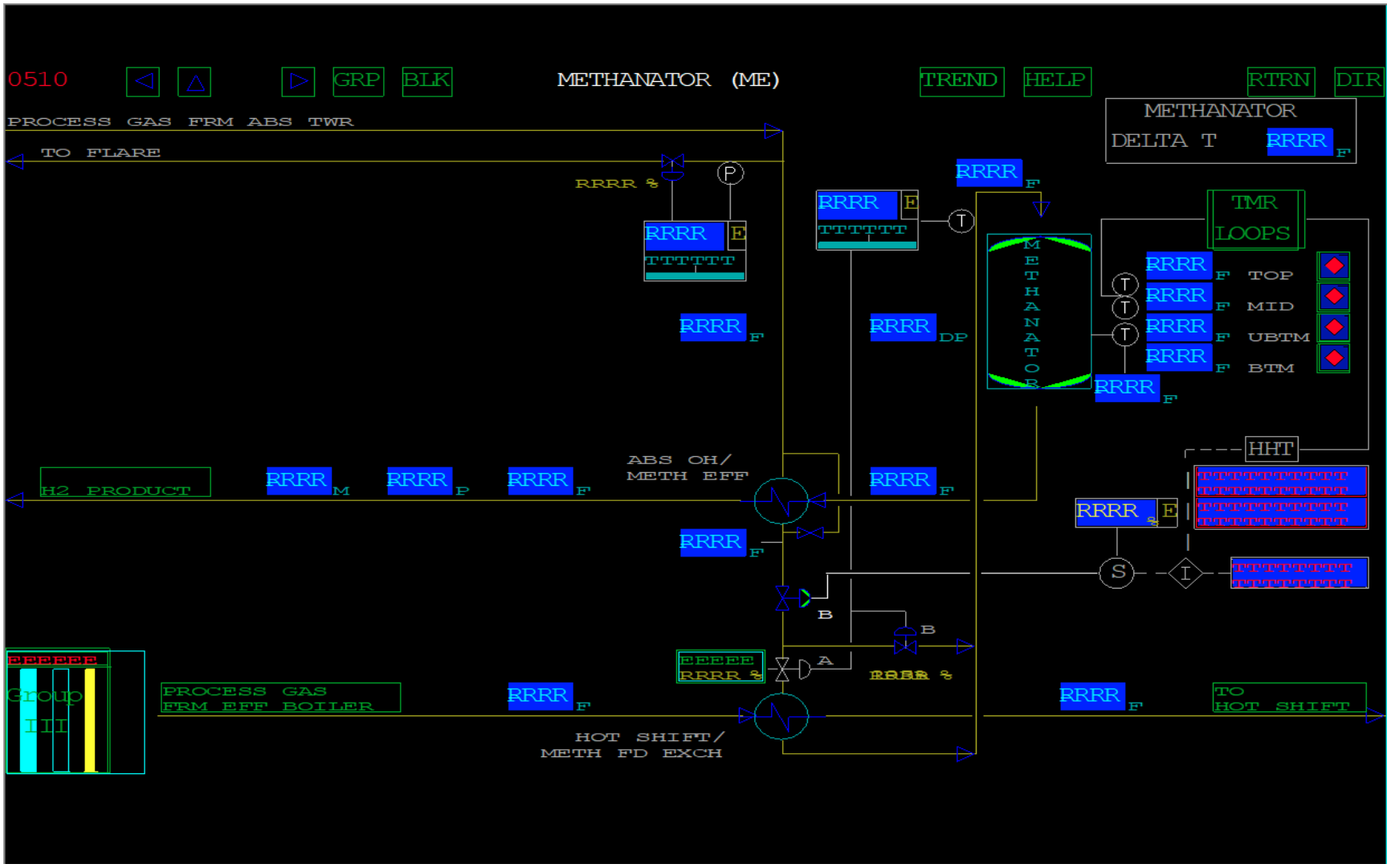


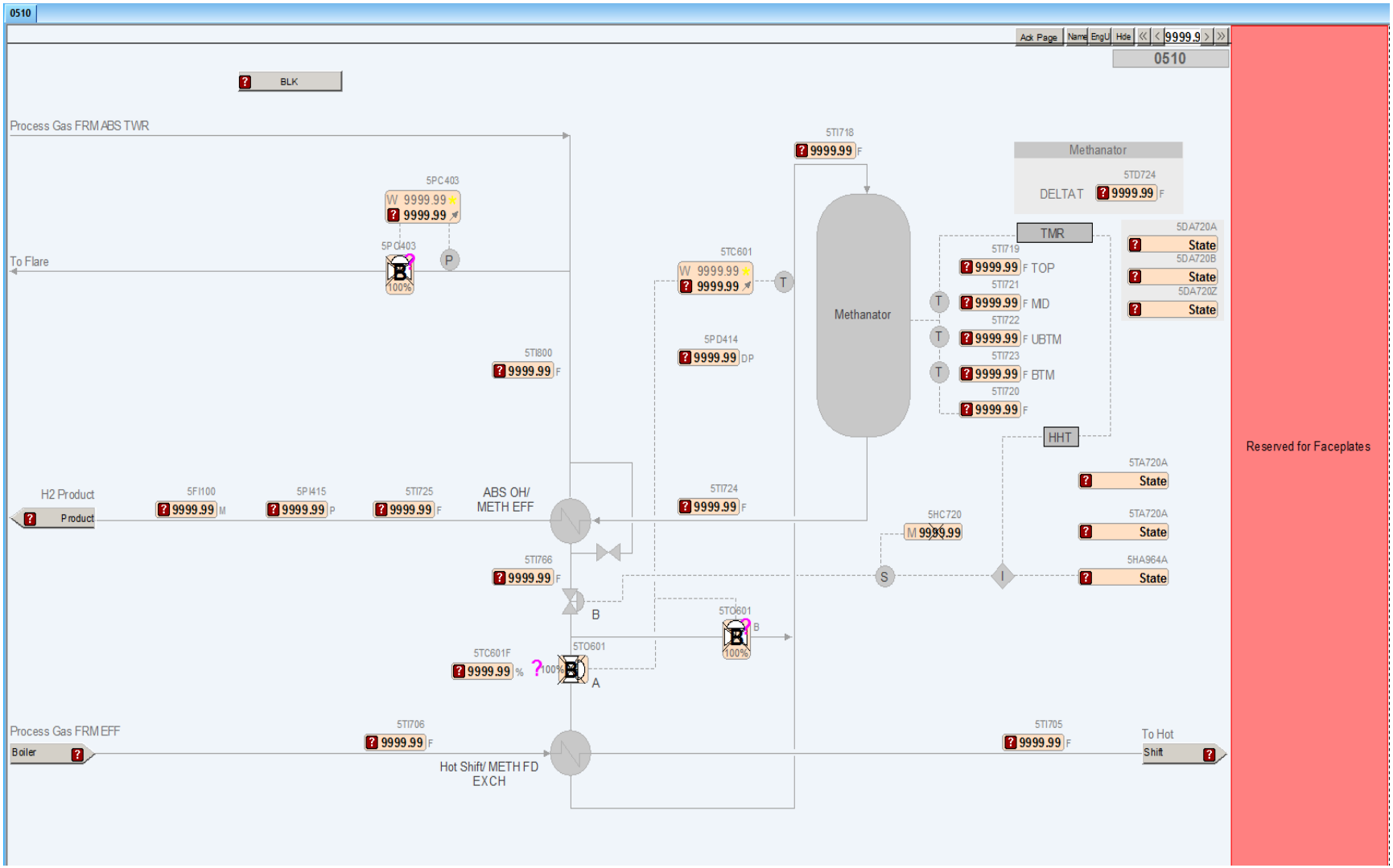

0509
GRP
BLK
ABSORBER TOWER (CA)
TREND
HELP
RTRN
DIR
LEAN CATACARB
SEMILEAN CATACARB
PROCESS GAS TO METH FD/EFF EXCH
FRM REFLUX DRM
WASH H2O PUMP
900# COND
2 BEDS
3 BEDS
PROCESS GAS FROM S/L REBS
TO DEAERATOR
VAPOR TO S/L TWR
S/L REFLUX
RICH REFLUX EXCH
REFLUX TO S/L TWR
TO S/L TWR
GROUP III
RRRR
TTTTTT
LLL


0509
Ack Page
Name
Eng U
Hide
9999.9
0509
BLK
Help
5PC403
W 9999.99
9999.99
P
5PC403
100%
Process Gas To
METH FD/EFF
EXCH
01
04
5XA923A
5XA926A
State
5XA923B
5XA926B
5XA924B
5XA925B
5XA924A
5XA925A
02
03
Lean
CATACARB
Semilean
CATACARB
5FC146
W 9999.99
9999.99
F
5FC146
100%
5TI779
9999.99
F
5FC137
W 9999.99
9999.99
F
5FC137
100%
5LA317
State
2 Beds
5FI129
9999.99
B
FRM Reflux
DRM
Wash H2O Pump
5PD434
9999.99
DP
900# COND
5LA332
State
5LA333
State
Process KO
5LI334
9999.99
%
LC
5LI334
100%
3 Beds
5PD435
9999.99
DP
5LY3315
9999.99
TDEV
5TI770
9999.99
F
VAPOR To
S/L TWR
Rich Reflux EX CH
S/L
Reflux
Reserved for Faceplates
Process Gas
From
S/L REBS
5LA335
State
5LA337
State
S/L RB KO
5LI336
9999.99
%
LC
5LI336
100%
5TI780
9999.99
F
5LA313
State
5LA316
State
LLL
5LI348
9999.99
%
5LC315
W 9999.99
9999.99
S
Reflux To
S/L TWR
To
Deaerator
SOME CALCULATIONS ON
LEVEL BAR GIVEN IN NW,
NEED TO DISCUSS WITH
LAR
5TI768
9999.99
F
5LO315
100%
To S/L TWR

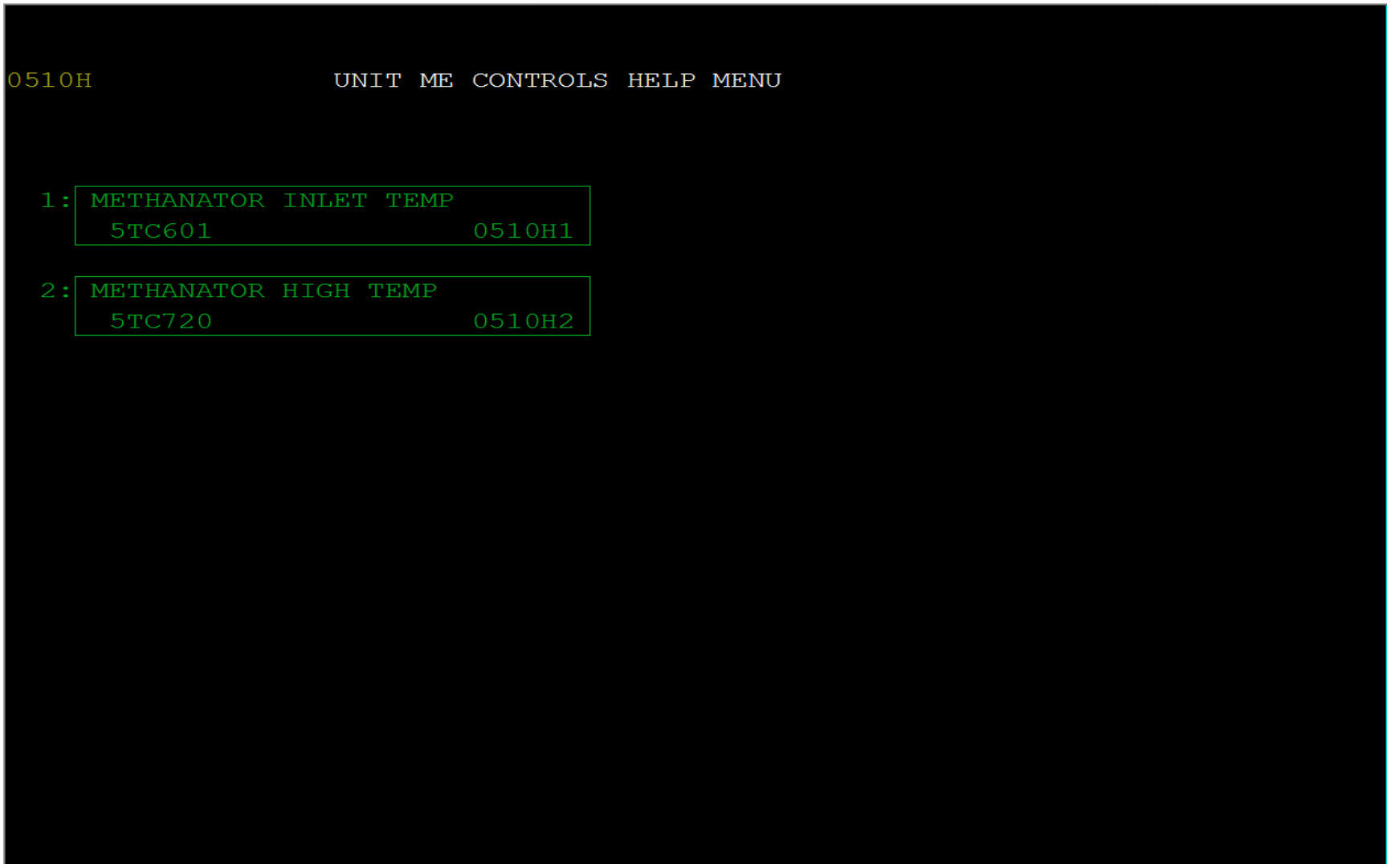
3.238 METHANATOR (ME) (0510.DS)

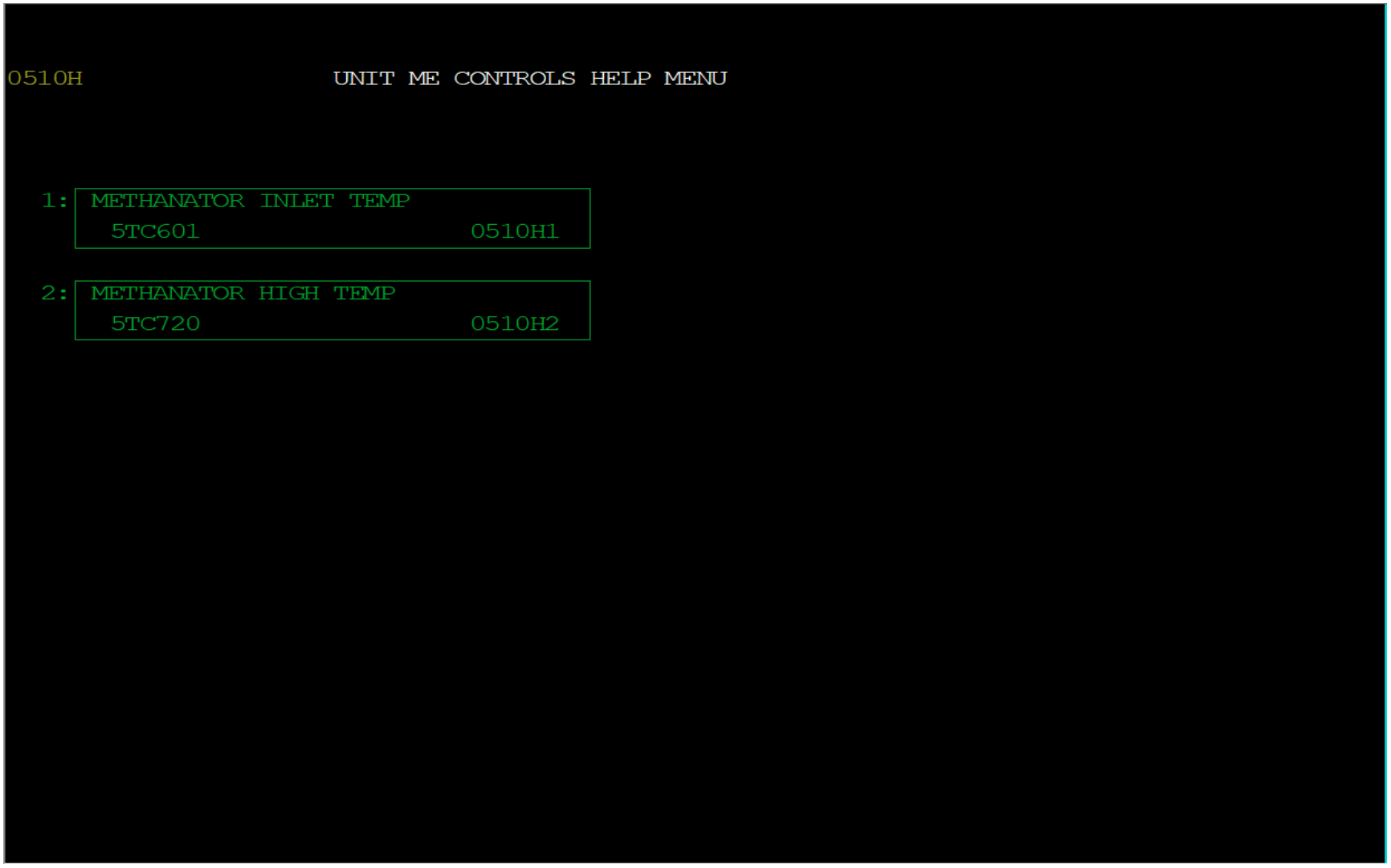


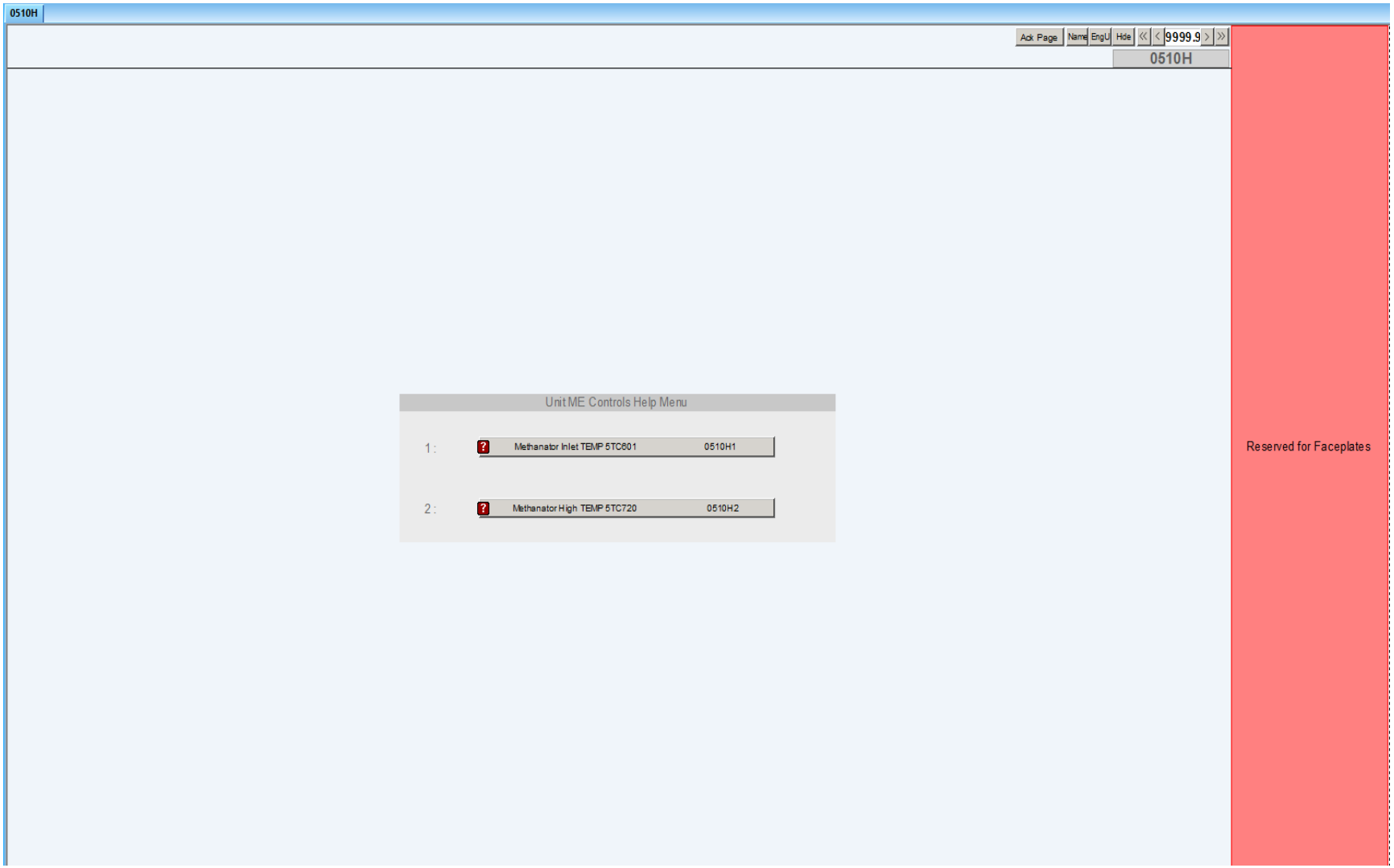

0510
GRP
BLK
METHANATOR (ME)
TREND
HELP
RTRN
DIR
METHANATOR
DELTA T
RRRR F
PROCESS GAS FRM ABS TWR
TO FLARE
RRRR %
RRRR E
TTTTTT
RRRR F
RRRR DP
RRRR E
TTTTTT
RRRR F
METHANATOR
TMR
LOOPS
RRRR F TOP
RRRR F MID
RRRR F UBTM
RRRR F BTM
RRRR F
HHT
H2 PRODUCT
RRRR M
RRRR P
RRRR F
ABS OH/
METH EFF
RRRR F
RRRR F
RRRR E
B
B
A
EEEEE
RRRR %
RRRR %
EEEEEE
Group
III
PROCESS GAS
FRM EFF BOILER
RRRR F
HOT SHIFT/
METH FD EXCH
RRRR F
TO
HOT SHIFT


0510
Ack Page
Name
EngU
Hide
9999.9
0510
BLK
Process Gas FRM ABS TWR
5PC403
W 9999.99
9999.99
To Flare
5PC403
100%
P
5TI718
9999.99 F
Methanator
5TD724
DELTAT
9999.99 F
TMR
5TC601
W 9999.99
9999.99
T
Methanator
5TI719
9999.99 F TOP
5TI721
9999.99 F MD
5TI722
9999.99 F UBTM
5TI723
9999.99 F BTM
5TI720
9999.99 F
5DA720A
State
5DA720B
State
5DA720Z
State
5PD414
9999.99 DP
5TI800
9999.99 F
HHT
5TA720A
State
H2 Product
Product
5FI100
9999.99 M
5PI415
9999.99 P
5TI725
9999.99 F
ABS OH/
METH EFF
5TI724
9999.99 F
5HC720
M 9999.99
5TA720A
State
5TI766
9999.99 F
B
5TO601
B
100%
5HA964A
State
5TC601F
9999.99 %
5TO601
100%
A
Process Gas FRM EFF
Boiler
5TI706
9999.99 F
Hot Shift/ METH FD
EXCH
5TI705
9999.99 F
To Hot
Shift
Reserved for Faceplates

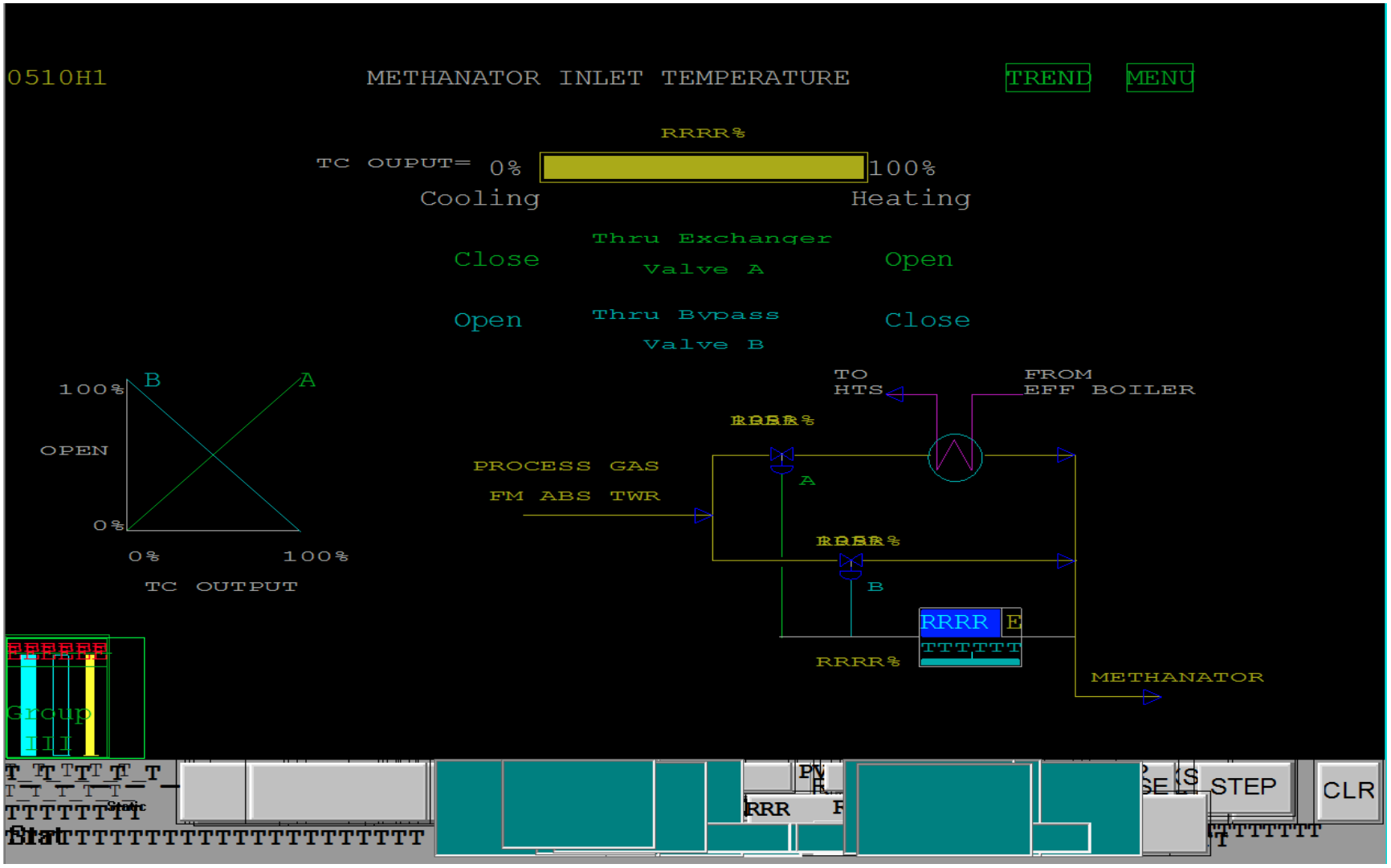
3.239 UNIT ME CONTROLS HELP MENU (0510H.DS)

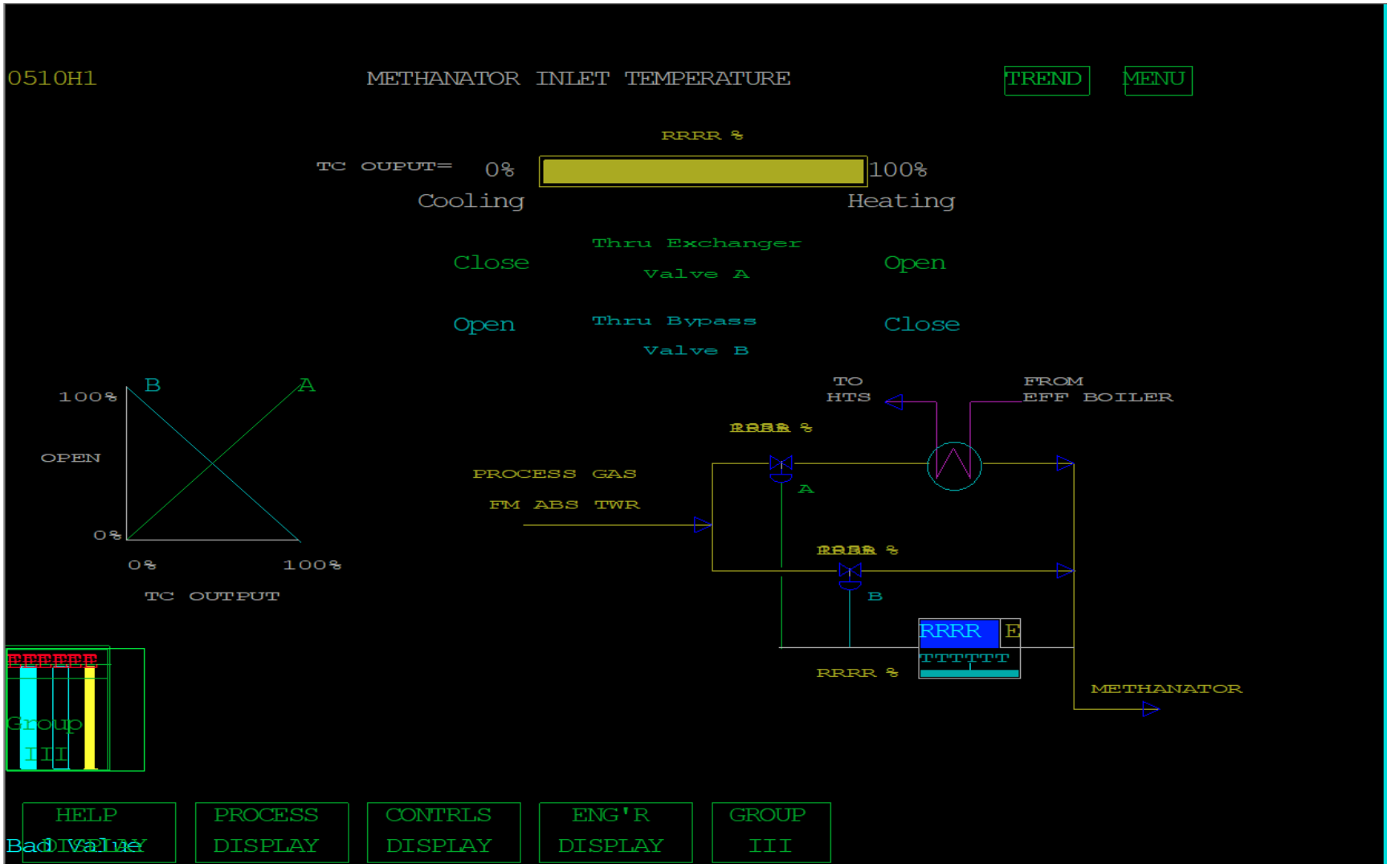


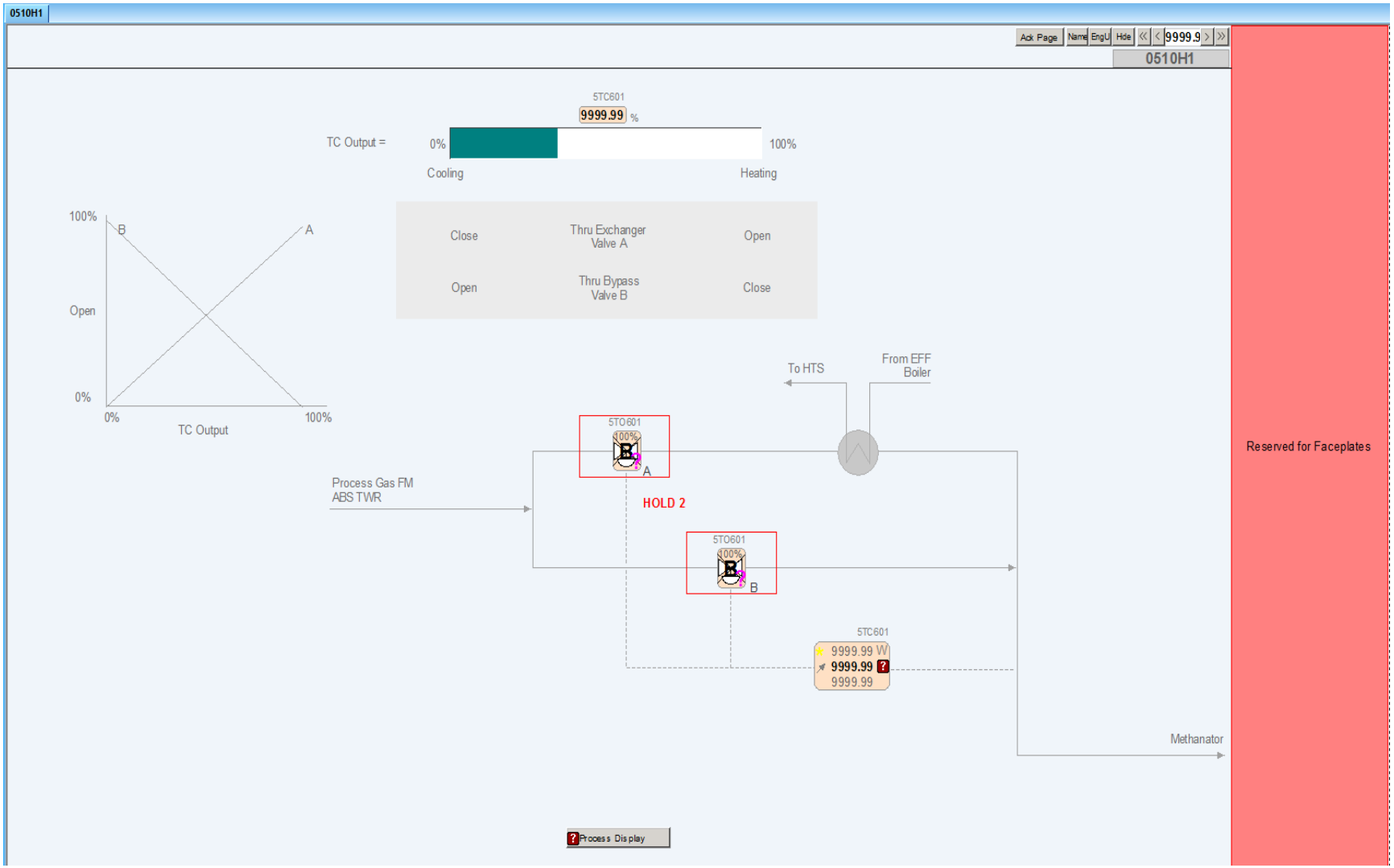

0510H
UNIT ME CONTROLS HELP MENU
1:
METHANATOR INLET TEMP
5TC601
0510H1
2:
METHANATOR HIGH TEMP
5TC720
0510H2


0510H
Ack Page
Name
Eng U
Hide
9999.9
0510H
Unit ME Controls Help Menu
1 :
Methanator Inlet TEMP 5TC601
0510H1
2 :
Methanator High TEMP 5TC720
0510H2
Reserved for Faceplates

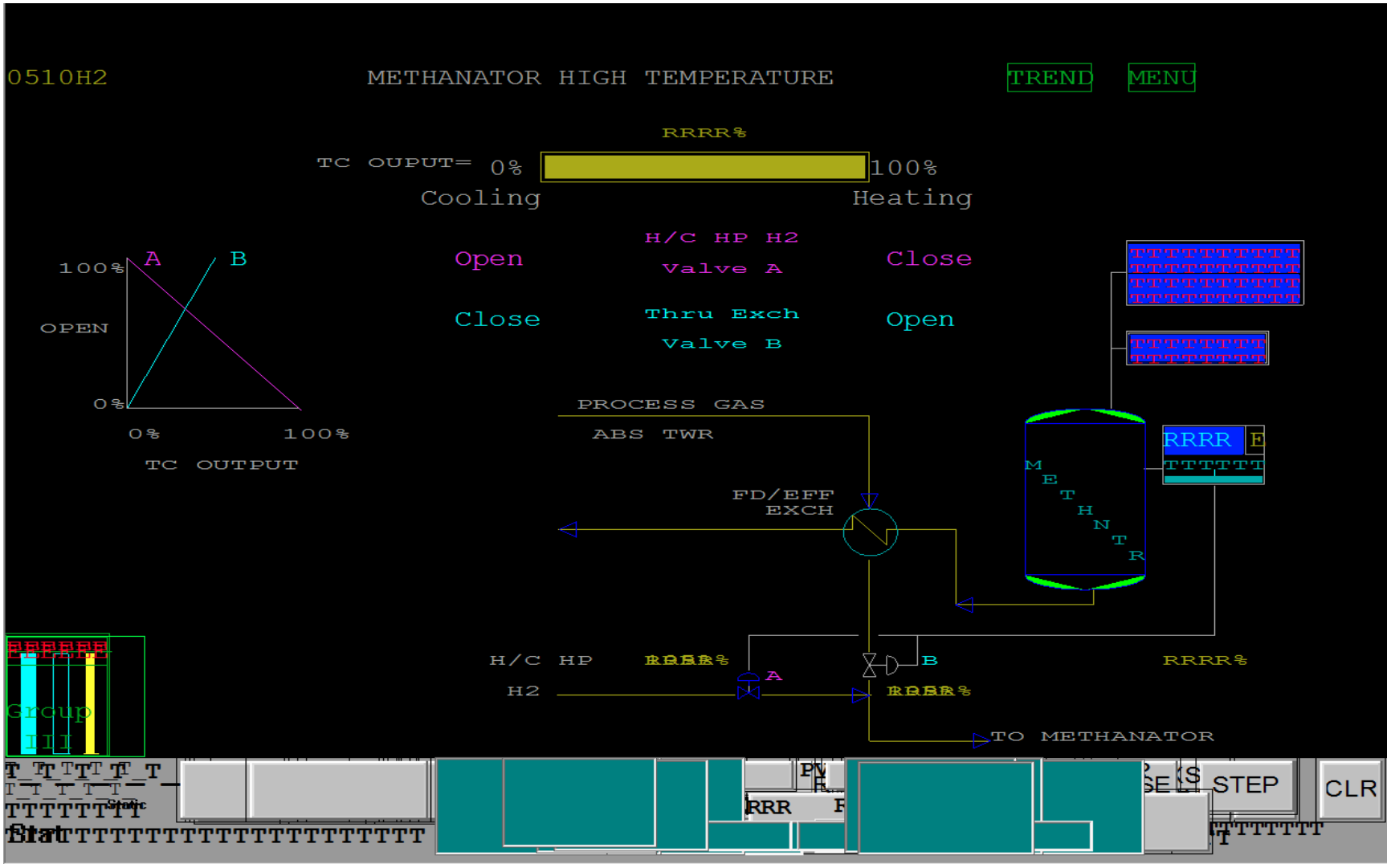
3.240 METHANATOR INLET TEMPERATURE (0510H1.DS)

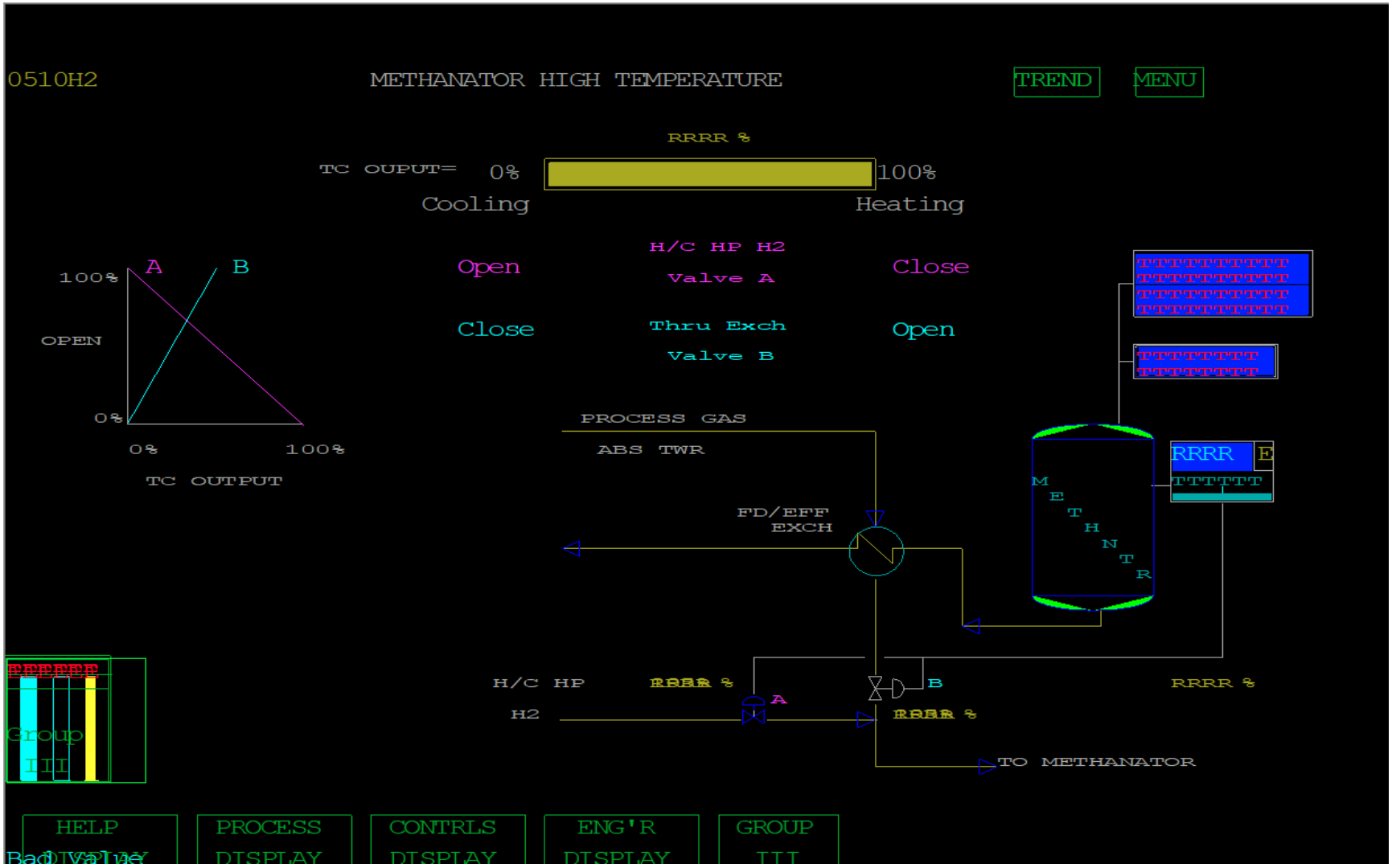


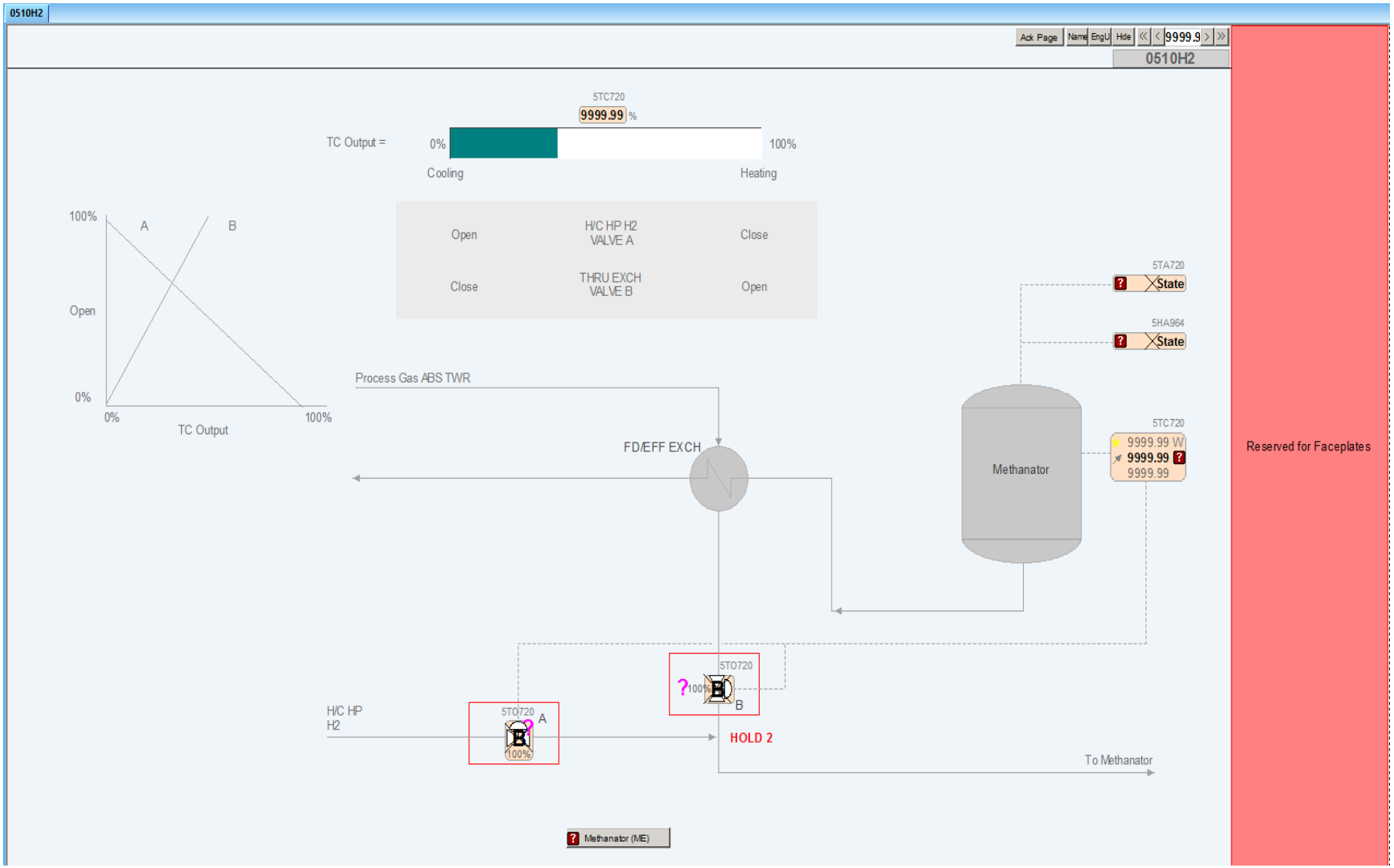

0510H1
METHANATOR INLET TEMPERATURE
TREND
MENU
RRRR %
TC OUPUT=
0%
100%
Cooling
Heating
Thru Exchanger
Close
Valve A
Open
Open
Thru Bypass
Valve B
Close
100%
B
A
OPEN
0%
0%
100%
TC OUTPUT
TO
HTS
FROM
EFF BOILER
PROCESS GAS
FM ABS TWR
A
B
RRRR
E
TTTTTT
METHANATOR
Group
III
HELP
PROCESS
DISPLAY
CONTRLS
DISPLAY
ENG'R
DISPLAY
GROUP
III


0510H1
Ack Page
Name
EngU
Hide
9999.9
0510H1
5TC601
9999.99 %
TC Output =
0%
100%
Cooling
Heating
100%
B
A
Open
0%
0%
100%
TC Output
Close
Thru Exchanger Valve A
Open
Open
Thru Bypass Valve B
Close
To HTS
From EFF Boiler
5TO601
100%
B
A
Process Gas FM ABS TWR
HOLD 2
5TO601
100%
B
B
5TC601
9999.99 W
9999.99
9999.99
Methanator
Reserved for Faceplates
Process Display

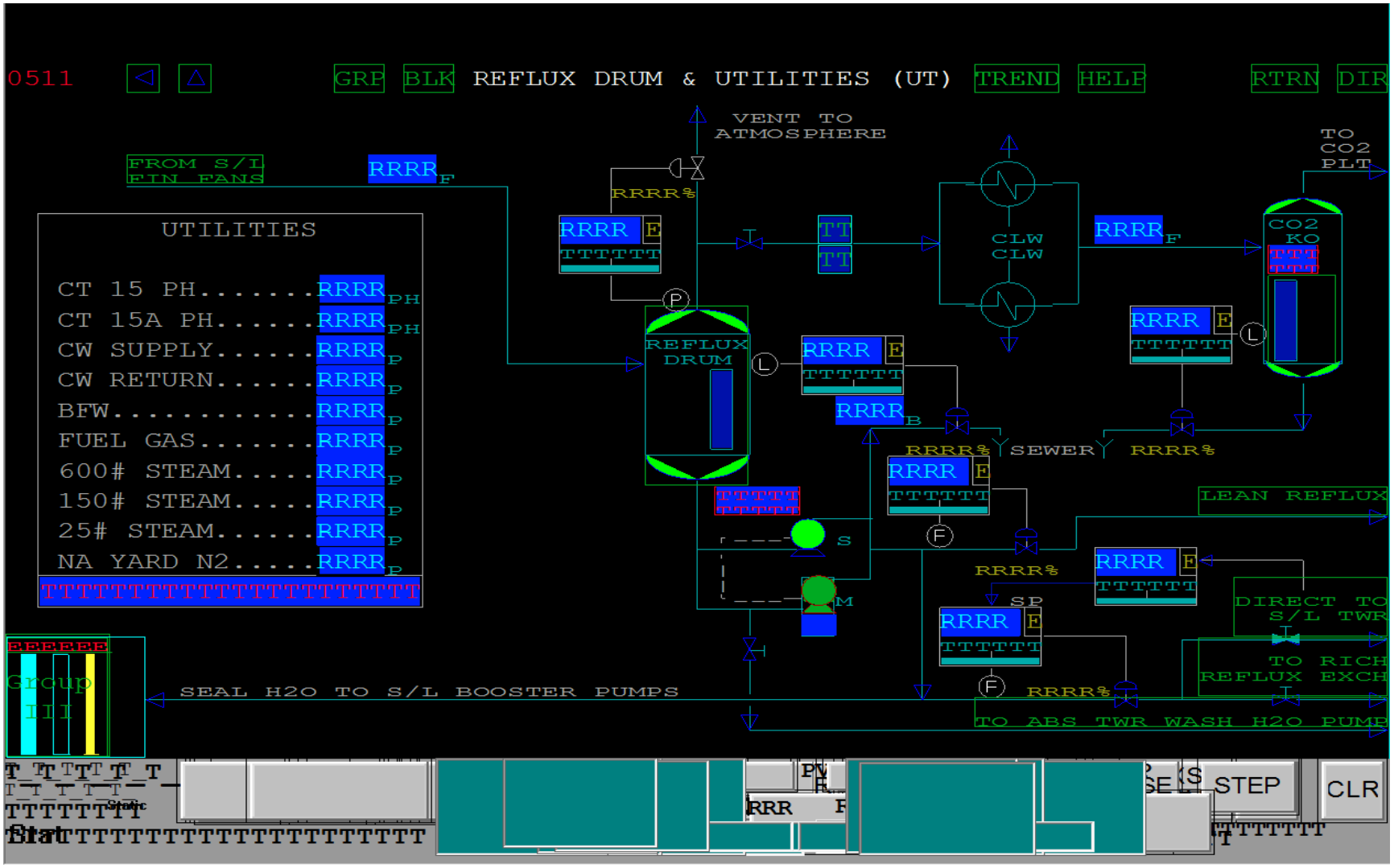
3.241 METHANATOR HIGH TEMPERATURE (0510H2.DS)

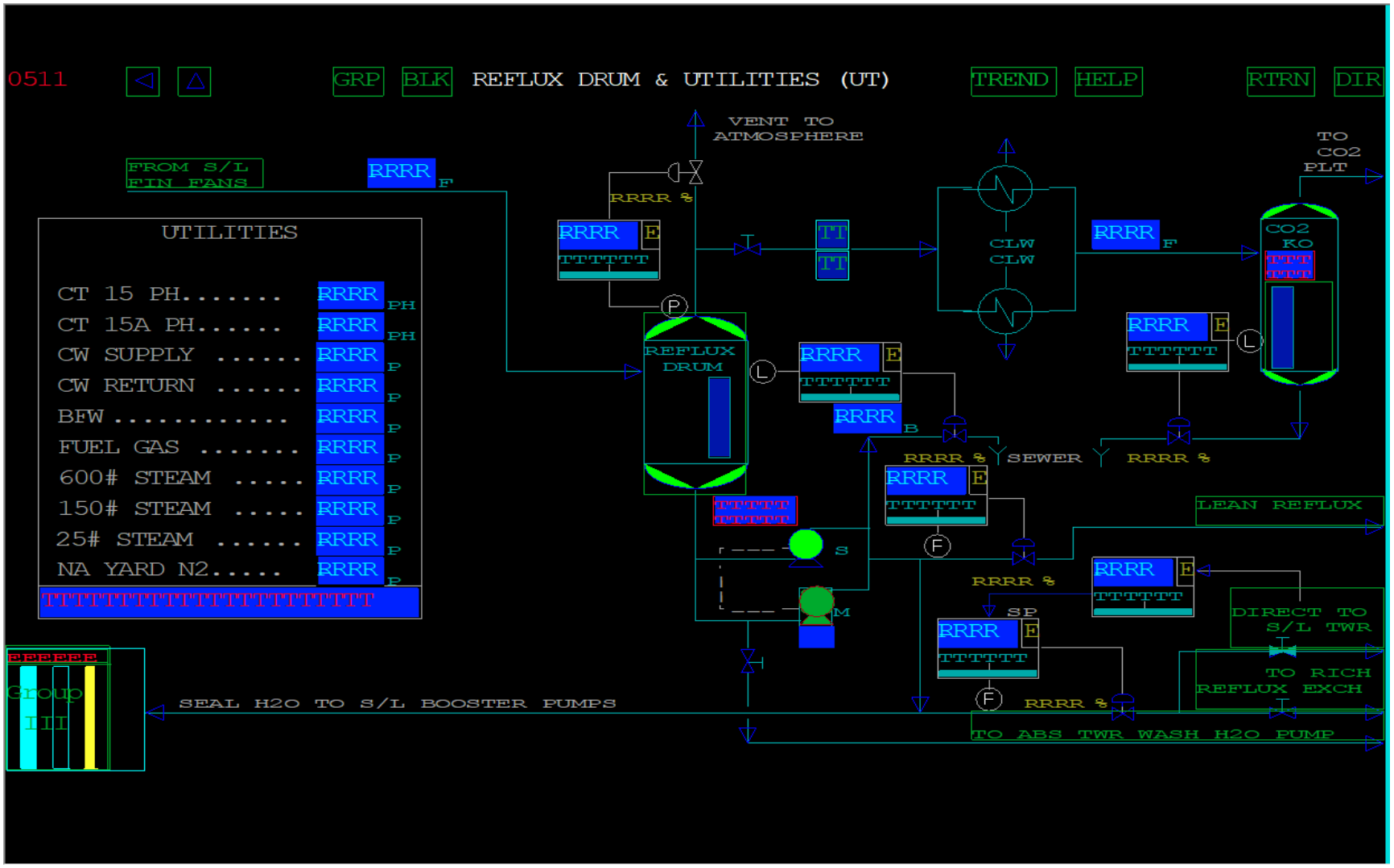


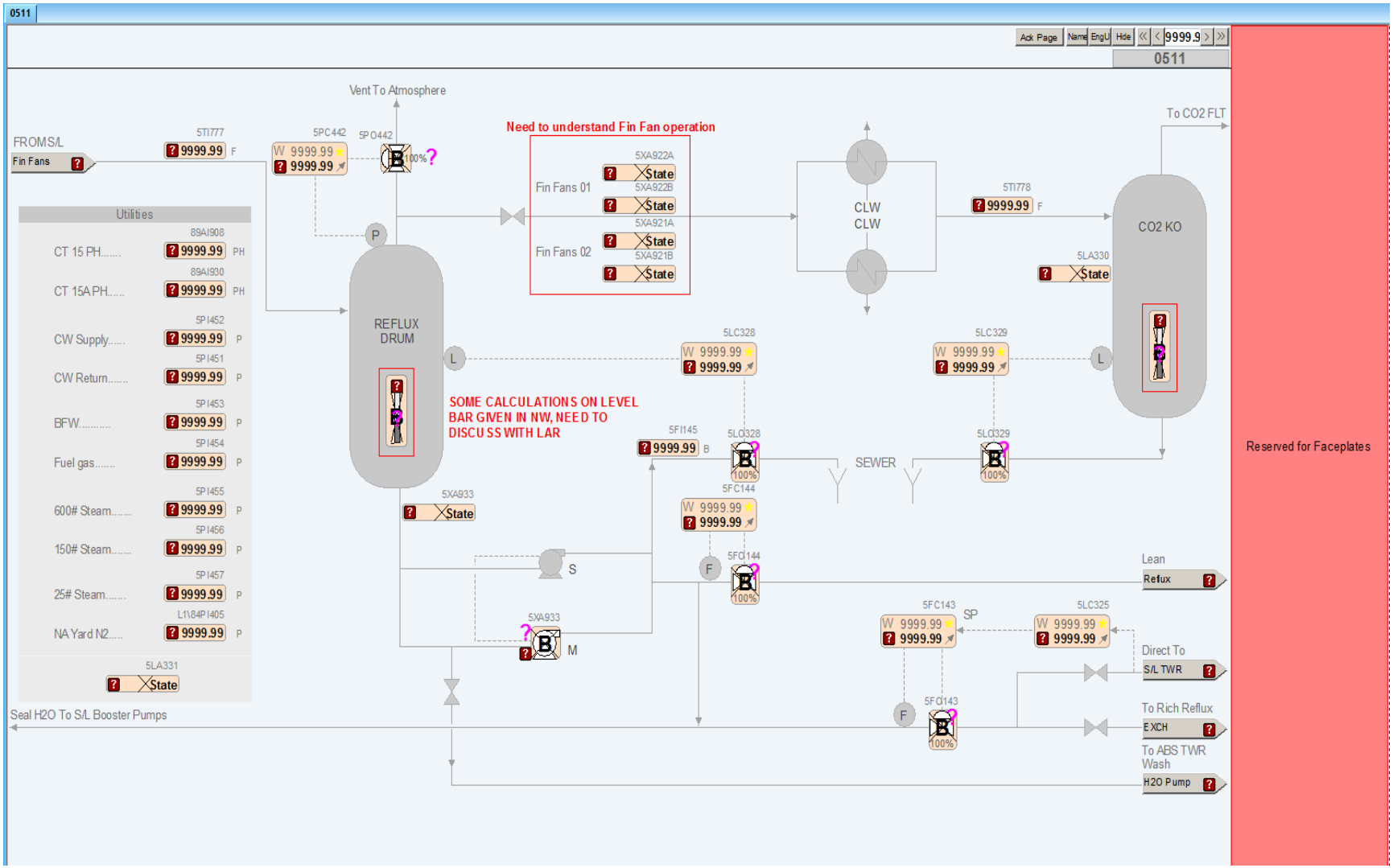

0510H2
METHANATOR HIGH TEMPERATURE
TREND
MENU
RRRR %
TC OUPUT=
0%
100%
Cooling
Heating
H/C HP H2
Valve A
Open
Close
Thru Exch
Valve B
Close
Open
100%
OPEN
0%
A
B
0%
100%
TC OUTPUT
PROCESS GAS
ABS TWR
FD/EFF
EXCH
METHANATOR
RRRR
E
TTTTTT
H/C HP
H2
RRRR %
A
B
RRRR %
RRRR %
TO METHANATOR
Group
III
HELP
DISPLAY
PROCESS
DISPLAY
CONTRLS
DISPLAY
ENG'R
DISPLAY
GROUP
III


0510H2
Ack Page
Name
Eng U
Hide
9999.9
0510H2
5TC720
9999.99 %
TC Output =
0%
100%
Cooling
Heating
100%
A
B
Open
0%
0%
100%
TC Output
Open
H/C HP H2 VALVE A
Close
Close
THRU EXCH VALVE B
Open
5TA720
State
5HA964
State
Process Gas ABS TWR
FD/EFF EXCH
Methanator
5TC720
9999.99 W
9999.99
9999.99
Reserved for Faceplates
5TO720
100%
B
H/C HP H2
5TO720
A
100%
HOLD 2
To Methanator
Methanator (ME)

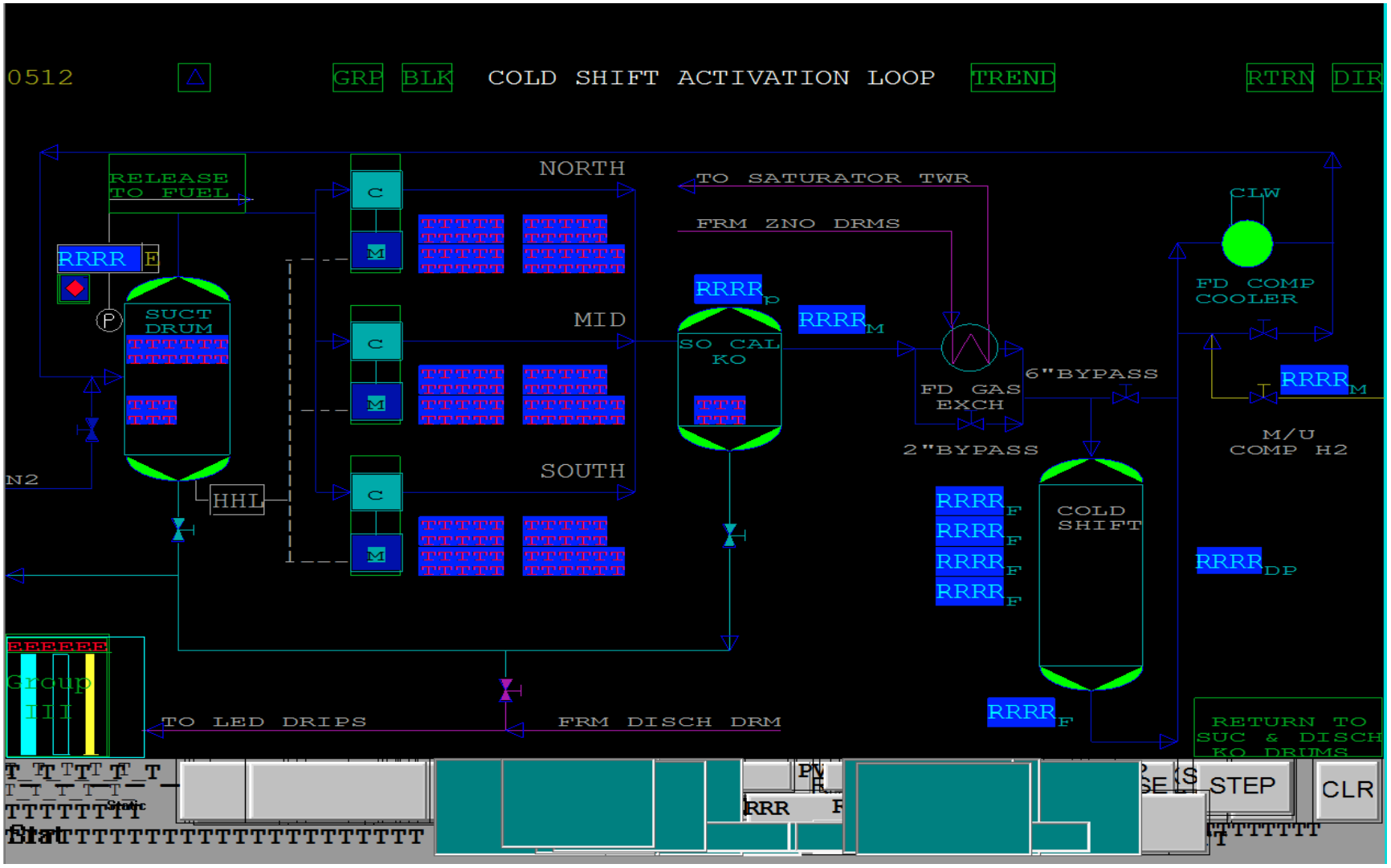
3.242 REFLUX DRUM & UTILITIES (UT) (0511.DS)

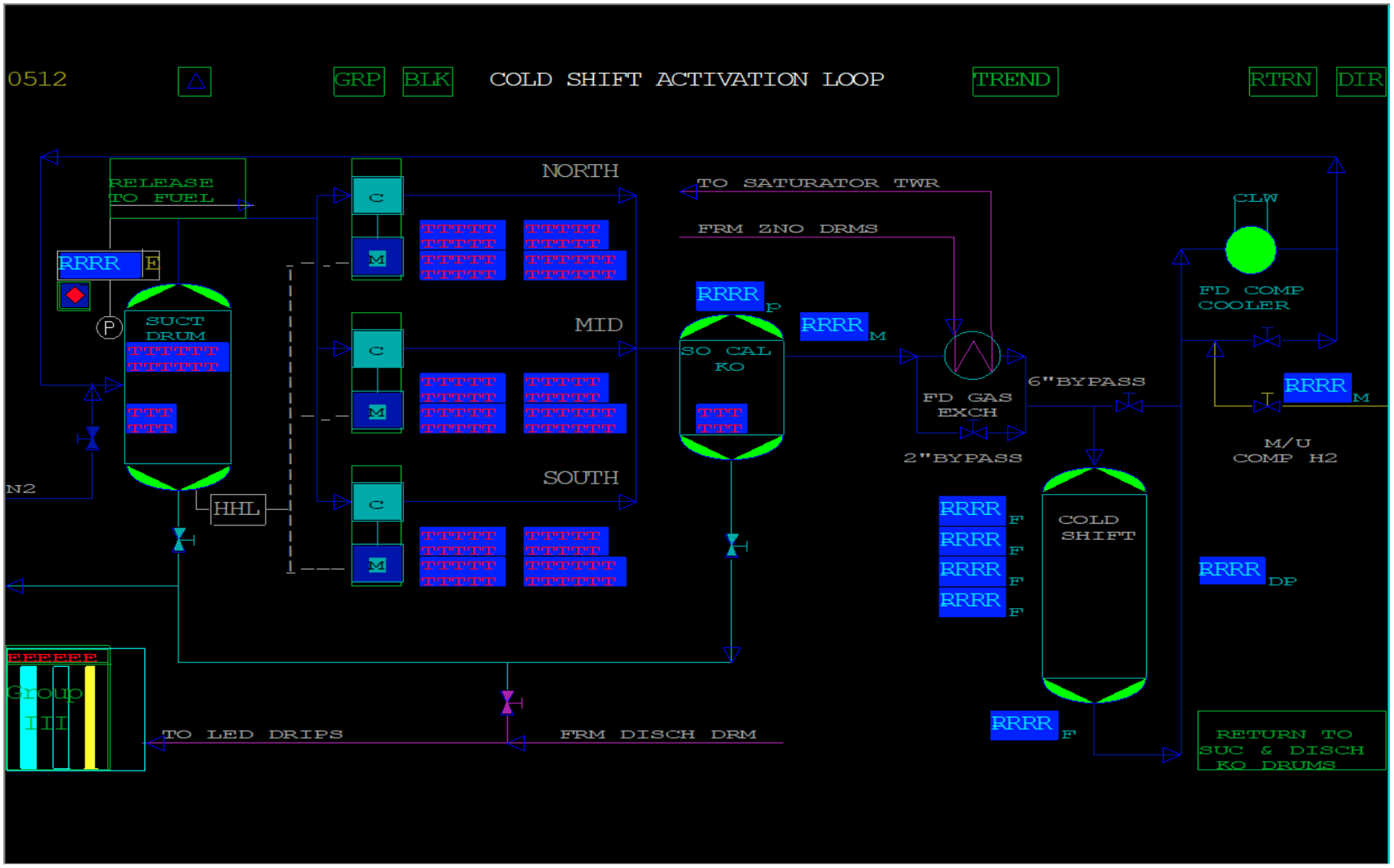


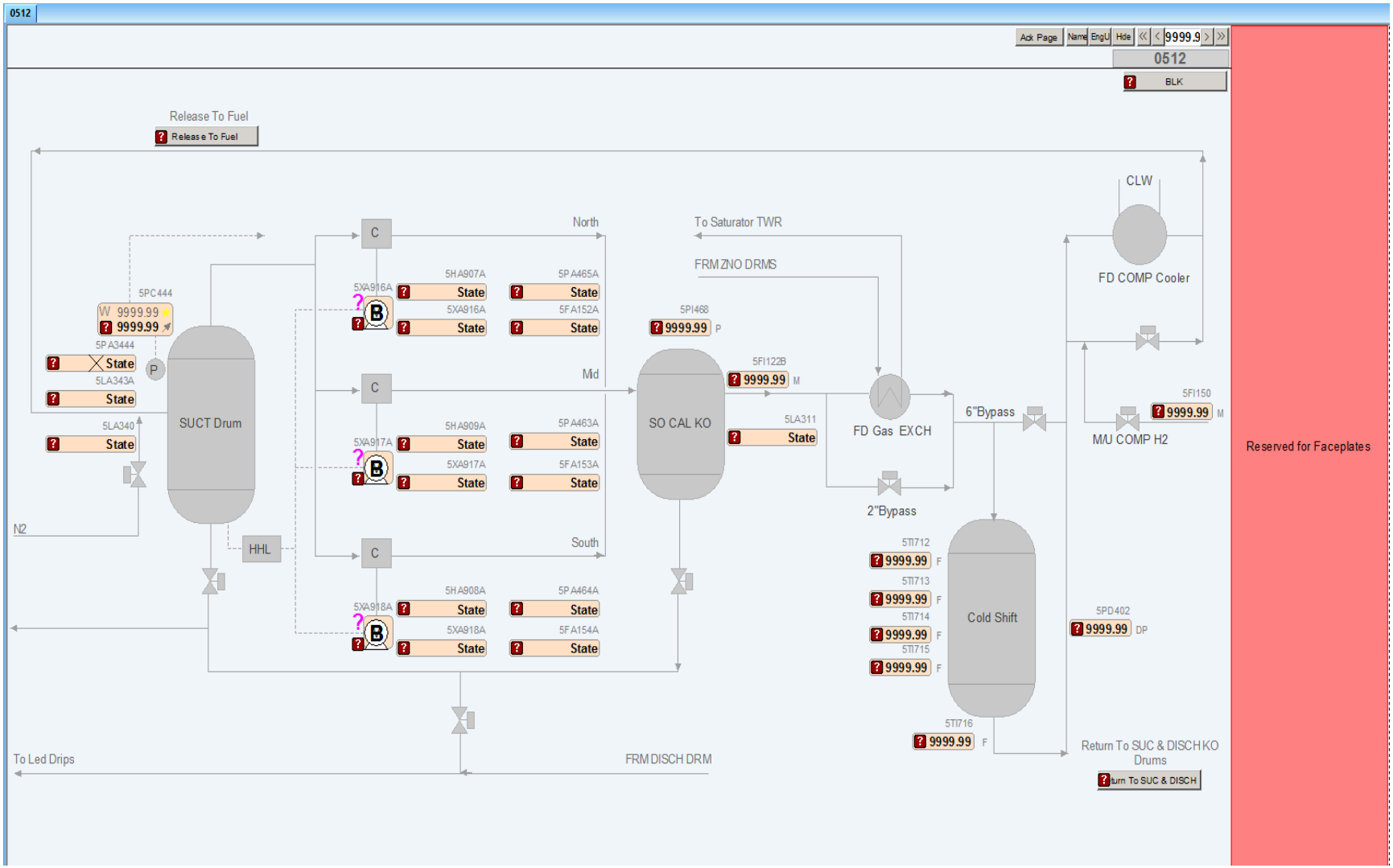

0511
GRP
BLK
REFLUX DRUM & UTILITIES (UT)
TREND
HELP
RTRN
DIR
VENT TO ATMOSPHERE
FROM S/L FIN FANS
RRRR F
UTILITIES
CT 15 PH.....
CT 15A PH.....
CW SUPPLY .....
CW RETURN .....
BFW .....
FUEL GAS .....
600# STEAM .....
150# STEAM .....
25# STEAM .....
NA YARD N2.....
TTTTTTTTTTTTTTTTTTTTTT
REFLUX DRUM
CLW
CLW
TO CO2 PLT
CO2 KO
SEWER
LEAN REFLUX
DIRECT TO S/L TWR
TO RICH REFLUX EXCH
SEAL H2O TO S/L BOOSTER PUMPS
Group III
TO ABS TWR WASH H2O PUMP


0511
Ack Page
Name
Eng U
Hide
9999.9
0511
Vent To Atmosphere
FROM S/L
Fin Fans
5TI777
9999.99
F
5PC442
5PO442
100%
Need to understand Fin Fan operation
5XA922A
State
Fin Fans 01
5XA922B
State
5XA921A
State
Fin Fans 02
5XA921B
State
CLW
CLW
To CO2 FLT
5TI778
9999.99
F
CO2 KO
5LA330
State
Utilities
89AI908
CT 15 PH.....
9999.99
PH
89AI930
CT 15A PH.....
9999.99
PH
5PI452
CW Supply.....
9999.99
P
5PI451
CW Return.....
9999.99
P
5PI453
BFW.....
9999.99
P
5PI454
Fuel gas.....
9999.99
P
5PI455
600# Steam.....
9999.99
P
5PI456
150# Steam.....
9999.99
P
5PI457
25# Steam.....
9999.99
P
L1\84PI405
NA Yard N2.....
9999.99
P
5LA331
State
REFLUX
DRUM
P
L
SOME CALCULATIONS ON LEVEL
BAR GIVEN IN NW, NEED TO
DISCUSS WITH LAR
5LC328
W 9999.99
9999.99
5LC329
W 9999.99
9999.99
5FI145
9999.99
B
5LO328
100%
SEWER
5LO329
100%
5XA933
State
5FC144
W 9999.99
9999.99
5FO144
100%
S
F
5XA933
M
5FC143
W 9999.99
9999.99
SP
5LC325
W 9999.99
9999.99
5FO143
100%
F
Lean
Reflux
Direct To
S/L TWR
To Rich Reflux
EXCH
To ABS TWR
Wash
H2O Pump
Seal H2O To S/L Booster Pumps
Reserved for Faceplates

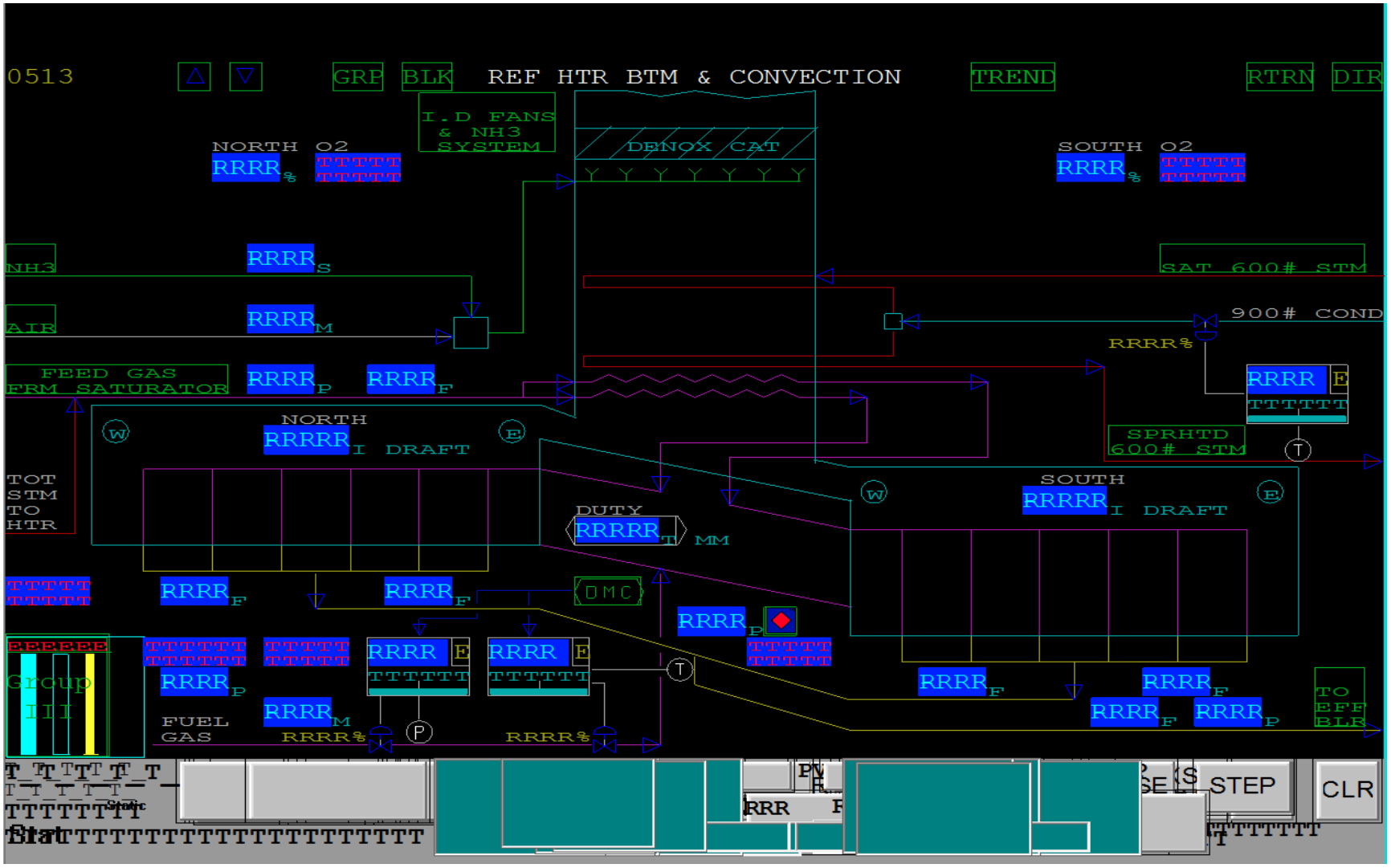
3.243 COLD SHIFT ACTIVATION LOOP (0512.DS)

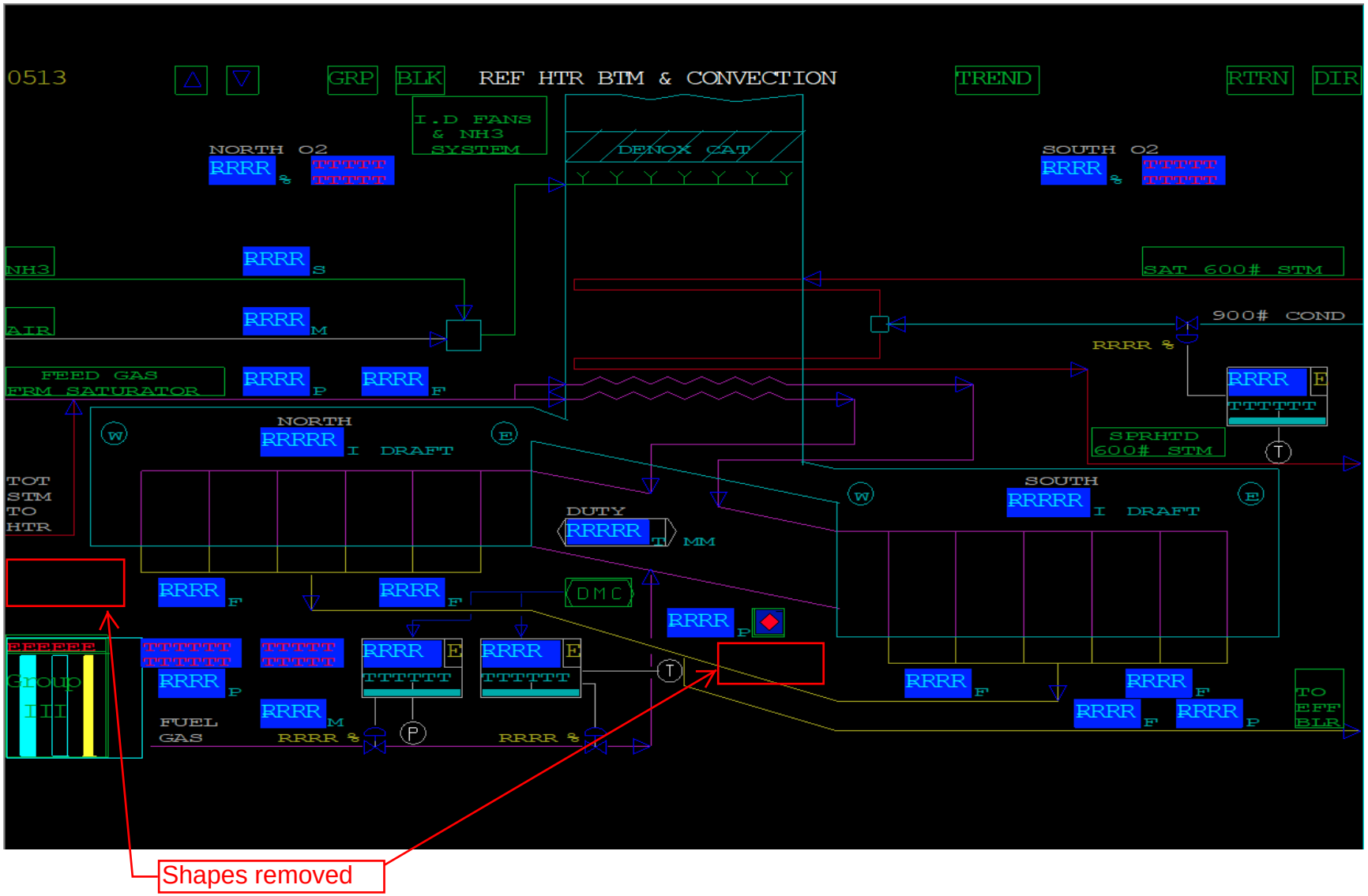


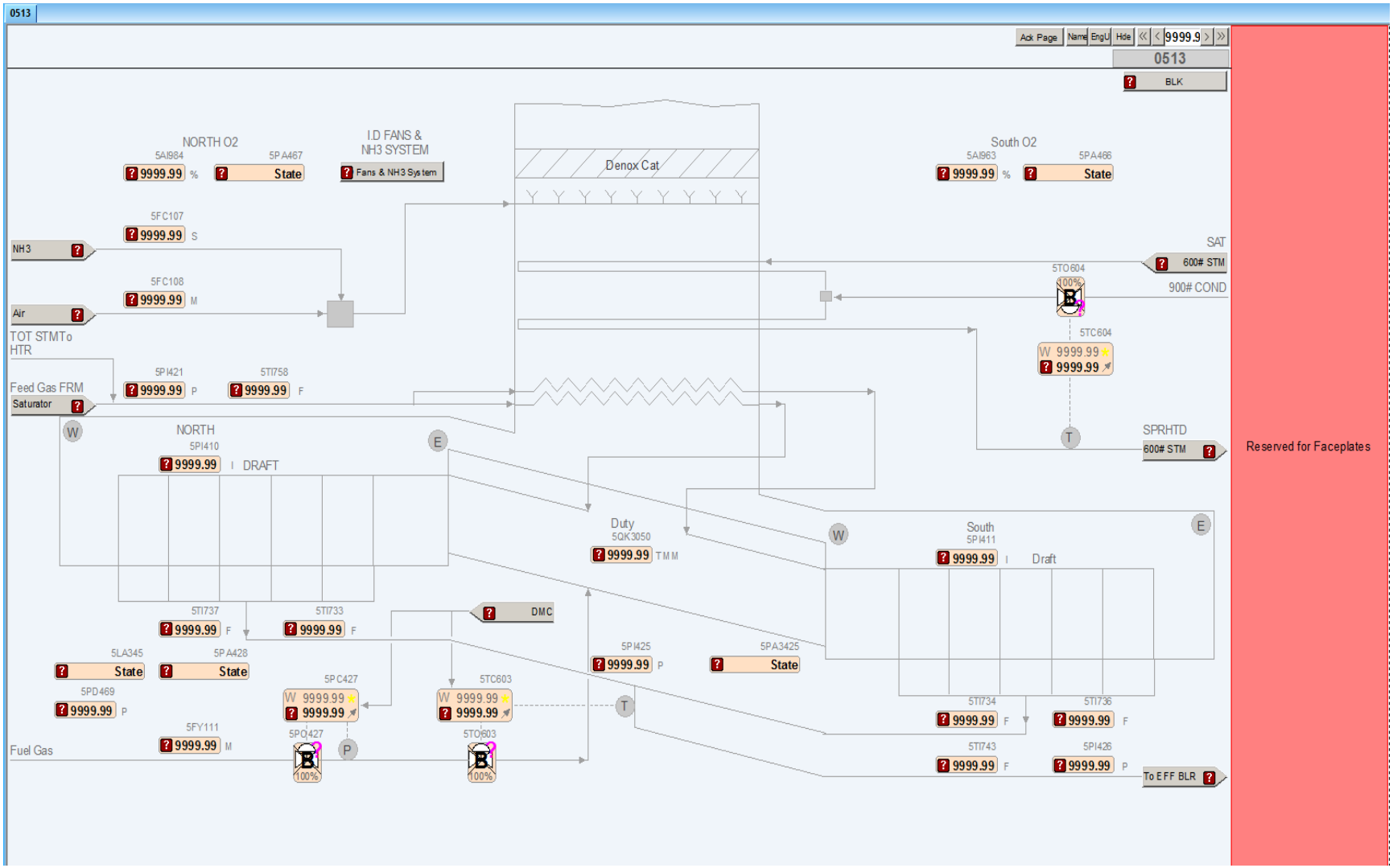

0512
GRP
BLK
COLD SHIFT ACTIVATION LOOP
TREND
RTRN
DIR
RELEASE TO FUEL
RRRR
F
SUCT DRUM
TTTTTT
TTTTTT
TTT
TTT
N2
HHL
NORTH
MID
SOUTH
C
M
TTTTT
TTTTT
TTTTT
TTTTT
TTTTTT
TTTTTT
TO SATURATOR TWR
FRM ZNO DRMS
RRRR P
RRRR M
SO CAL KO
TTT
TTT
FD GAS EXCH
6"BYPASS
2"BYPASS
RRRR F
RRRR F
RRRR F
RRRR F
COLD SHIFT
RRRR F
CLW
FD COMP COOLER
RRRR M
M/U COMP H2
RRRR DP
RETURN TO SUC & DISCH KO DRUMS
EEEEEE
GROUP III
TO LED DRIPS
FRM DISCH DRM


0512
Ack Page
Name
Eng U
Hide
9999.9
0512
BLK
Release To Fuel
Release To Fuel
CLW
FD COMP Cooler
North
To Saturator TWR
FRM ZNO DRMS
5PC444
W 9999.99
9999.99
5PA3444
State
5LA343A
State
5LA340
State
SUCT Drum
N2
HHL
C
5XA916A
5HA907A
State
5XA916A
State
5PA465A
State
5FA152A
State
Mid
5XA917A
5HA909A
State
5XA917A
State
5PA463A
State
5FA153A
State
South
5XA918A
5HA908A
State
5XA918A
State
5PA464A
State
5FA154A
State
5PI468
9999.99
P
SO CAL KO
5FI122B
9999.99
M
5LA311
State
FD Gas EXCH
6"Bypass
2"Bypass
5FI150
9999.99
M
MU COMP H2
5TI712
9999.99
F
5TI713
9999.99
F
5TI714
9999.99
F
5TI715
9999.99
F
Cold Shift
5TI716
9999.99
F
5PD402
9999.99
DP
Return To SUC & DISCH KO Drums
turn To SUC & DISCH
To Led Drips
FRM DISCH DRM
Reserved for Faceplates

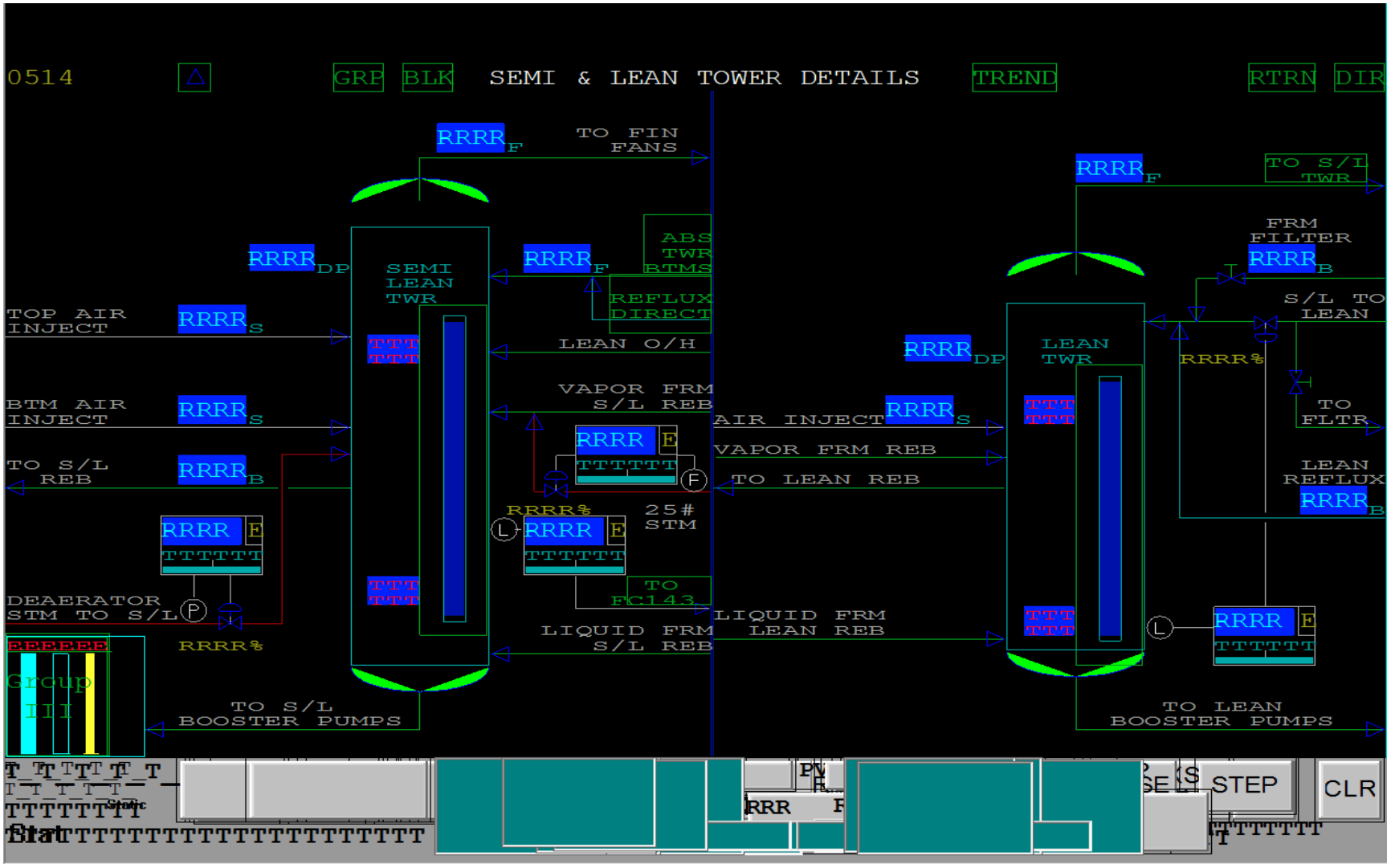
3.244 REF HTR BTM & CONVECTION (0513.DS)

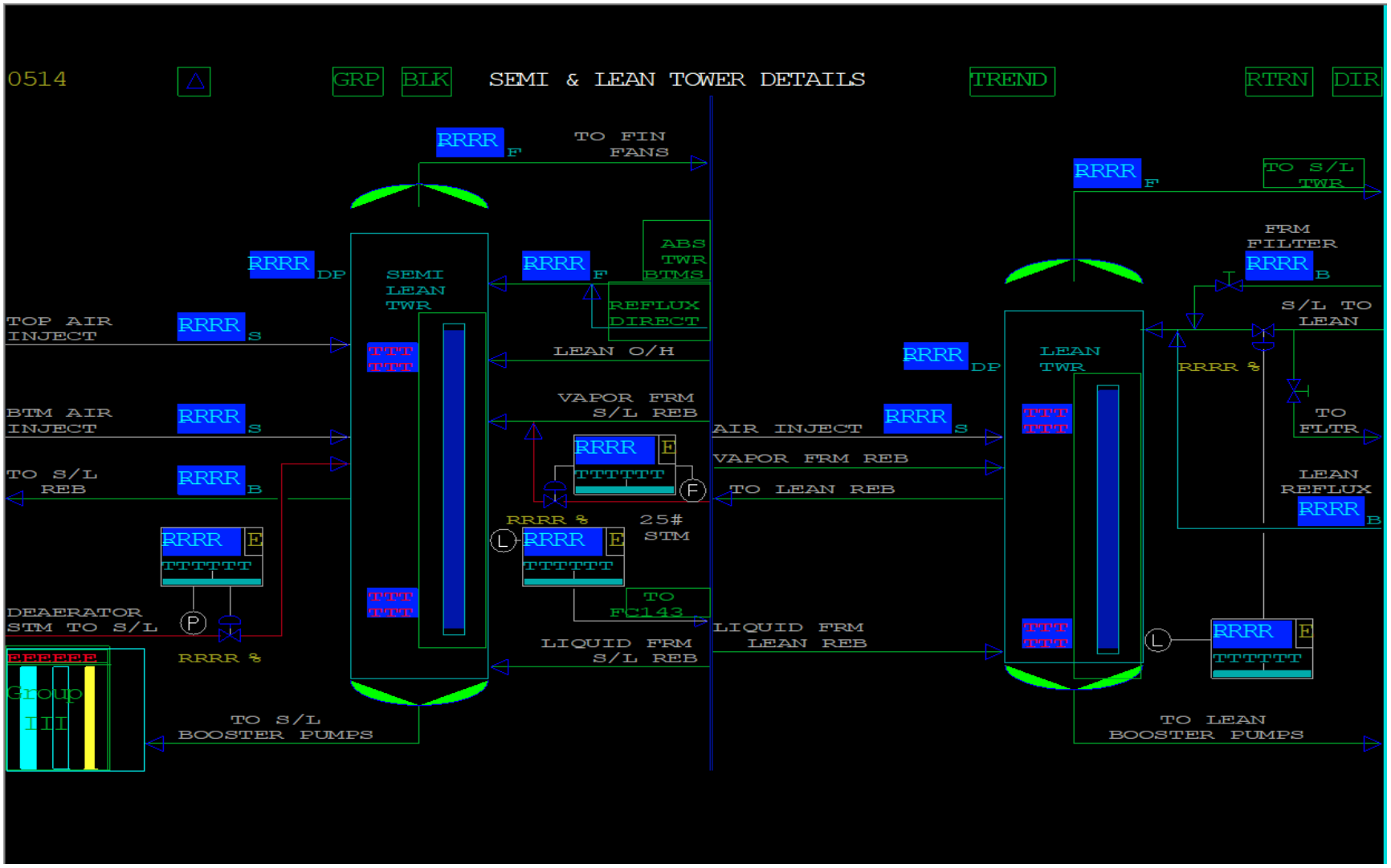


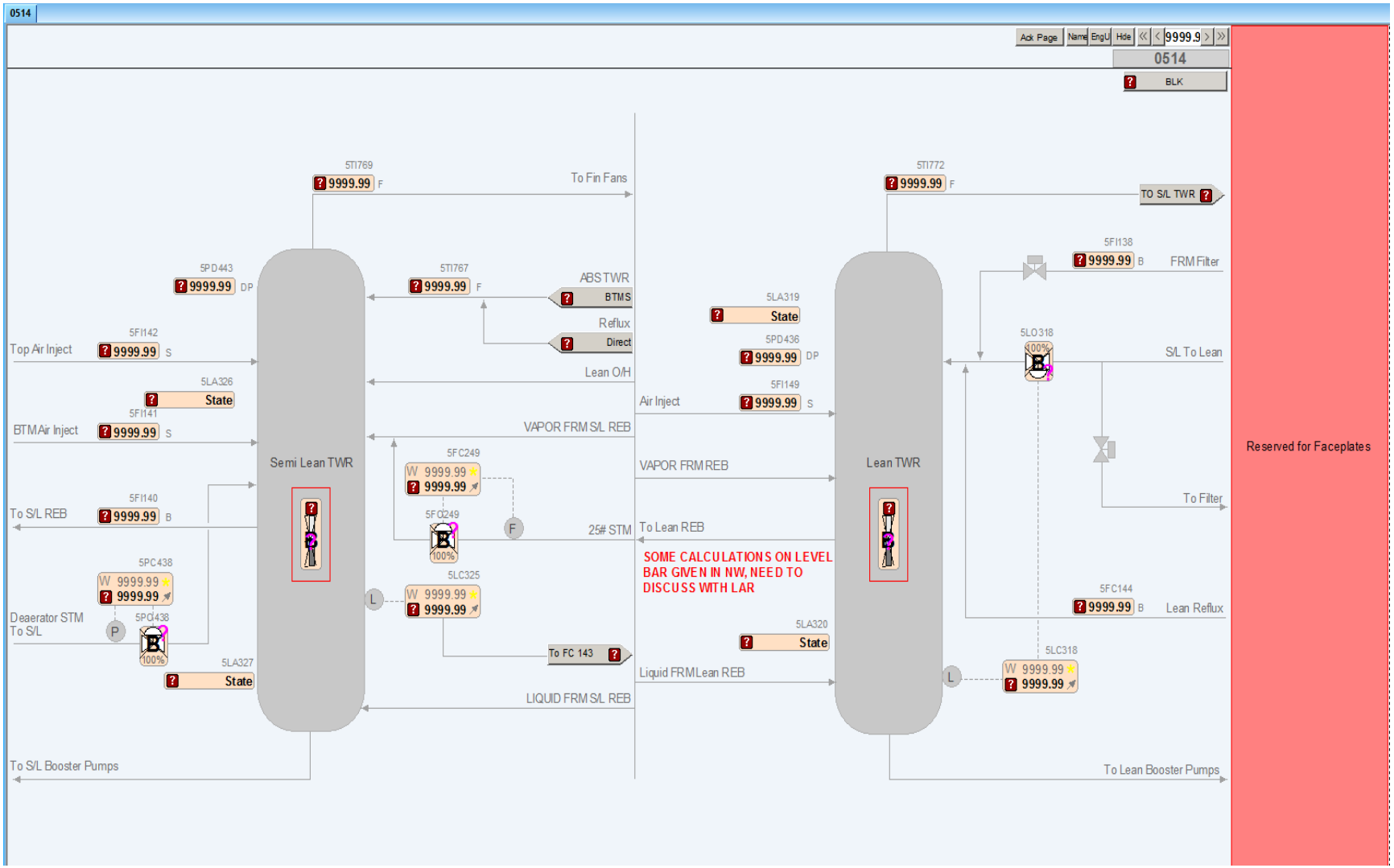

0513
GRP
BLK
REF HTR BTM & CONVECTION
TREND
RTRN
DIR
I.D FANS & NH3 SYSTEM
DENOX CAT
NORTH O2
SOUTH O2
NH3
AIR
SAT 600# STM
900# COND
FEED GAS FRM SATURATOR
NORTH
DRAFT
SOUTH
DRAFT
SPRHTD 600# STM
TOT STM TO HTR
DUTY
MM
DMC
GROUP III
FUEL GAS
TO EFF BLR
Shapes removed


0513
Ack Page
Name
EngU
Hide
9999.9
0513
BLK
NORTH O2
5AI984
9999.99 %
5PA467
State
I.D FANS &
NH3 SYSTEM
Fans & NH3 System
Denox Cat
South O2
5AI963
9999.99 %
5PA466
State
5FC107
9999.99 S
NH3
5FC108
9999.99 M
Air
TOT STMTo
HTR
SAT
600# STM
5TO604
100%
900# COND
5TC604
W 9999.99
9999.99
Feed Gas FRM
Saturator
5PI421
9999.99 P
5TI758
9999.99 F
SPRHTD
600# STM
NORTH
5PI410
9999.99 I DRAFT
Duty
5QK3050
9999.99 TMM
South
5PI411
9999.99 I Draft
DMC
5TI737
9999.99 F
5TI733
9999.99 F
5LA345
State
5PA428
State
5PD469
9999.99 P
5PC427
W 9999.99
9999.99
5PQ427
100%
5TC603
W 9999.99
9999.99
5TO603
100%
5PI425
9999.99 P
5PA3425
State
5FY111
9999.99 M
Fuel Gas
5TI734
9999.99 F
5TI736
9999.99 F
5TI743
9999.99 F
5PI426
9999.99 P
To EFF BLR
Reserved for Faceplates

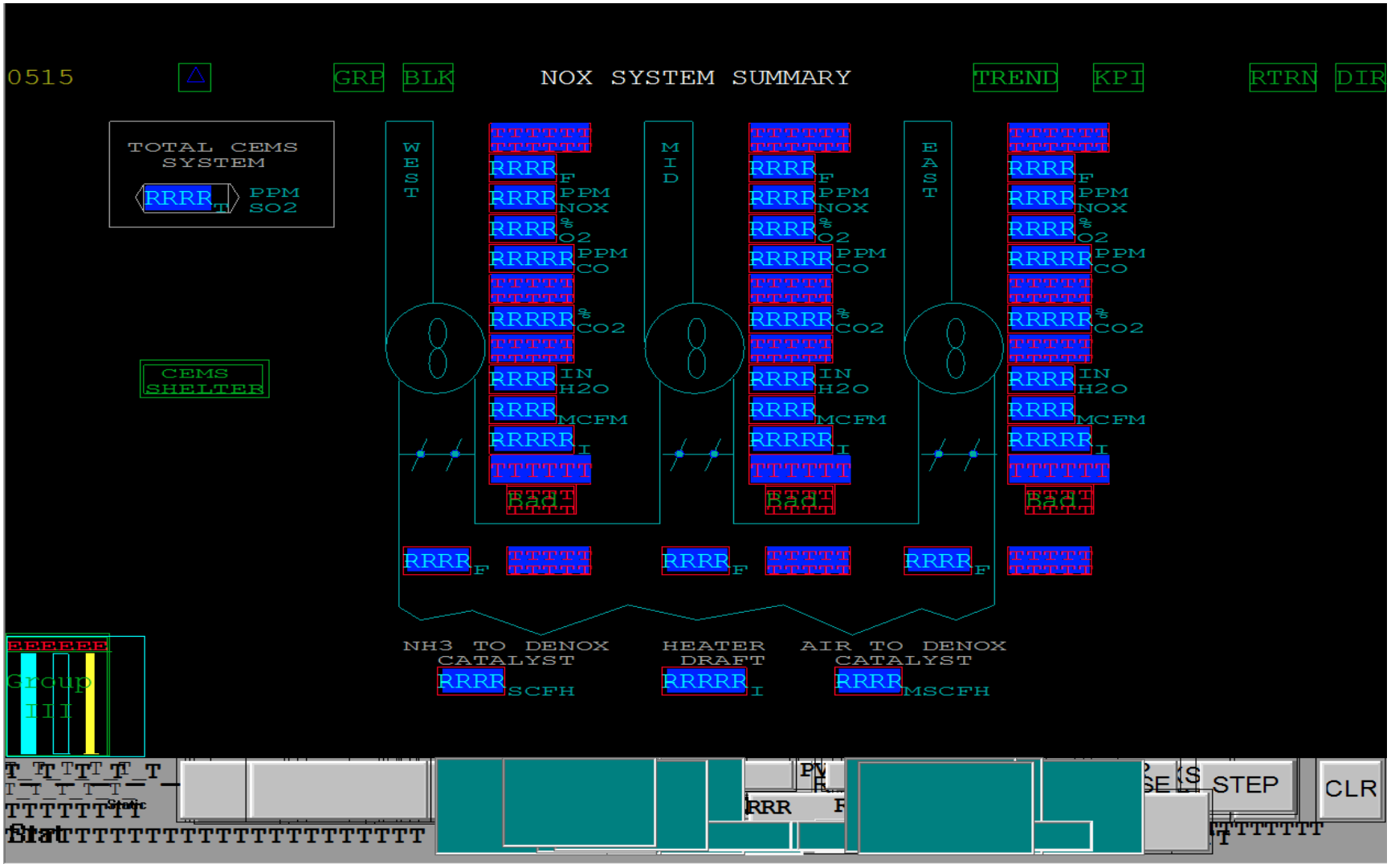
3.245 SEMI & LEAN TOWER DETAILS (0514.DS)

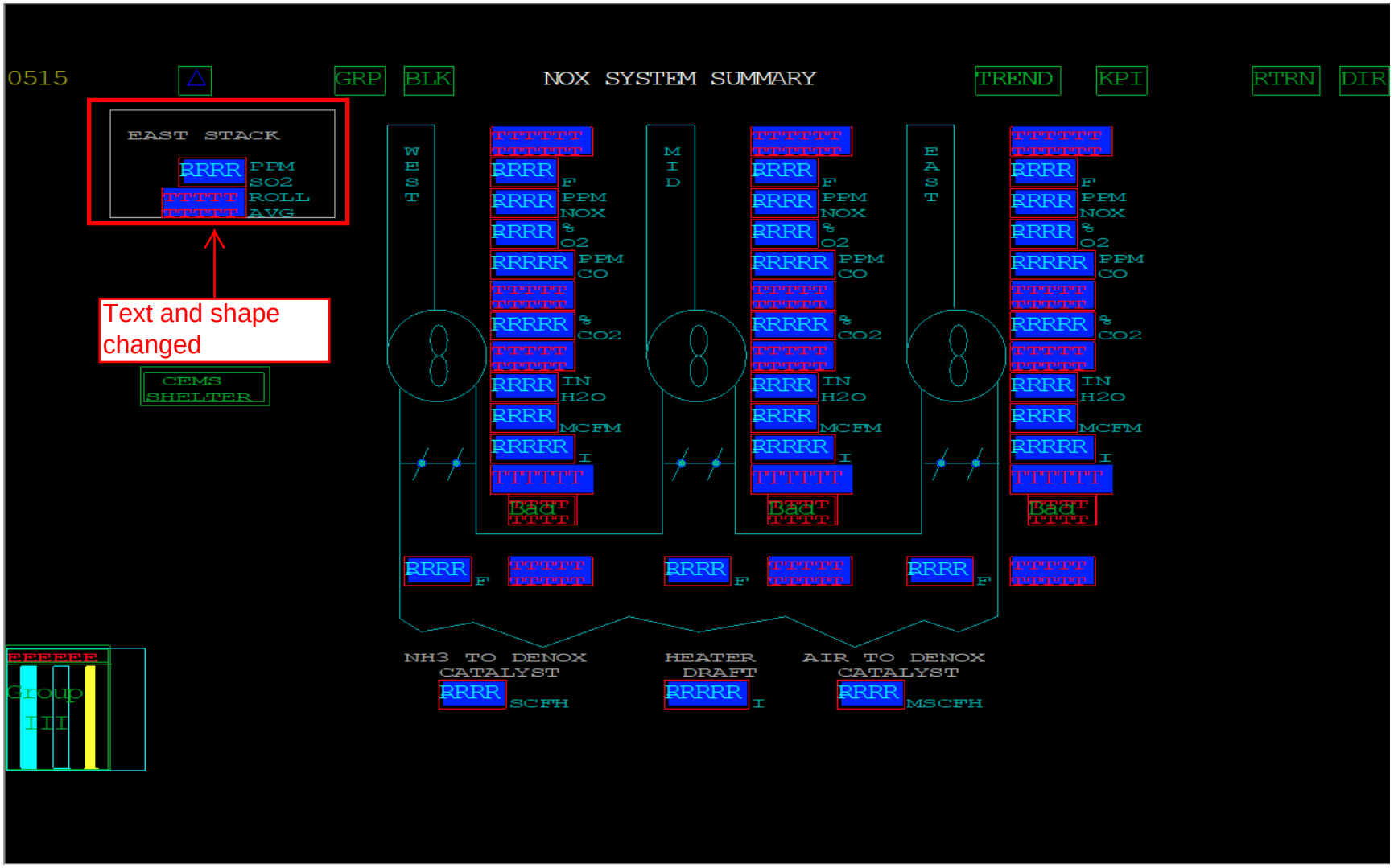


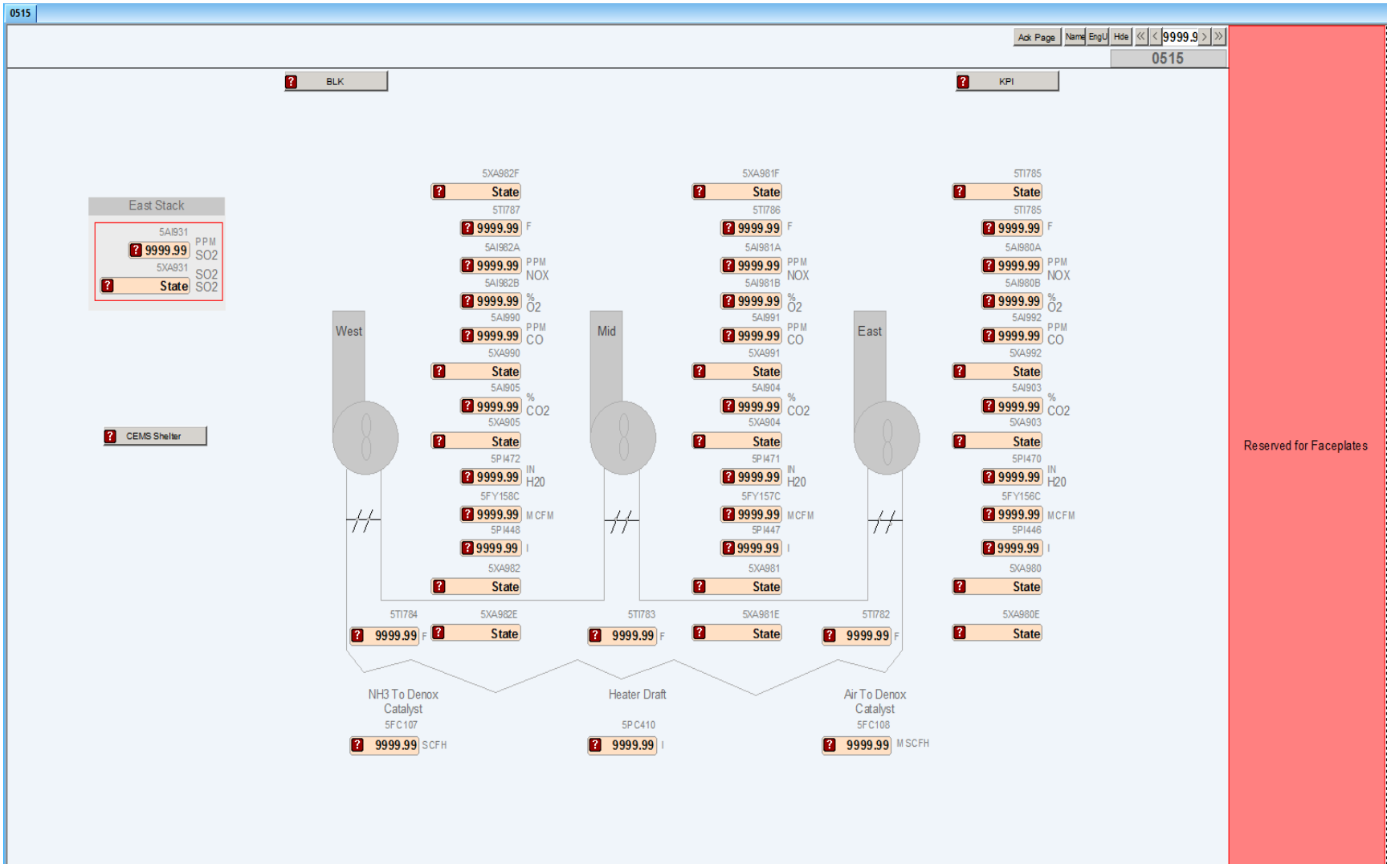

0514
GRP
BLK
SEMI & LEAN TOWER DETAILS
TREND
RTRN
DIR
RRRR F
TO FIN FANS
RRRR DP
SEMI LEAN TWR
RRRR F
ABS TWR BTMS
REFLUX DIRECT
TOP AIR INJECT
RRRR S
LEAN O/H
BTM AIR INJECT
RRRR S
VAPOR FRM S/L REB
TO S/L REB
RRRR B
RRRR E
TTTTTT
RRRR %
RRRR E
TTTTTT
25# STM
TO FC143
DEAERATOR STM TO S/L
RRRR %
LIQUID FRM S/L REB
TO S/L BOOSTER PUMPS
Group III
RRRR F
TO S/L TWR
FRM FILTER
RRRR B
S/L TO LEAN
RRRR %
TO FLTR
RRRR DP
LEAN TWR
AIR INJECT
RRRR S
VAPOR FRM REB
TO LEAN REB
LEAN REFLUX
RRRR B
LIQUID FRM LEAN REB
RRRR E
TTTTTT
TO LEAN BOOSTER PUMPS


0514
Ack Page
Name
EngU
Hide
9999.9
0514
BLK
5TI769
9999.99 F
To Fin Fans
5TI772
9999.99 F
TO S/L TWR
5PD443
9999.99 DP
5TI767
9999.99 F
ABS TWR
BTMS
Reflux
Direct
5LA319
State
5PD436
9999.99 DP
5FI138
9999.99 B
FRM Filter
5FI142
Top Air Inject
9999.99 S
Lean O/H
Air Inject
5FI149
9999.99 S
5LO318
100%
S/L To Lean
5LA326
State
5FI141
BTM Air Inject
9999.99 S
VAPOR FRM S/L REB
VAPOR FRM REB
Semi Lean TWR
Lean TWR
Reserved for Faceplates
5FC249
W 9999.99
9999.99
5FI140
To S/L REB
9999.99 B
5FC249
100%
25# STM
To Lean REB
To Filter
SOME CALCULATIONS ON LEVEL BAR GIVEN IN NW, NEED TO DISCUSS WITH LAR
5PC438
W 9999.99
9999.99
5LC325
W 9999.99
9999.99
5FC144
9999.99 B
Lean Reflux
Deaerator STM To S/L
5PC438
100%
To FC 143
5LA320
State
5LC318
W 9999.99
9999.99
5LA327
State
Liquid FRM Lean REB
LIQUID FRM S/L REB
To S/L Booster Pumps
To Lean Booster Pumps

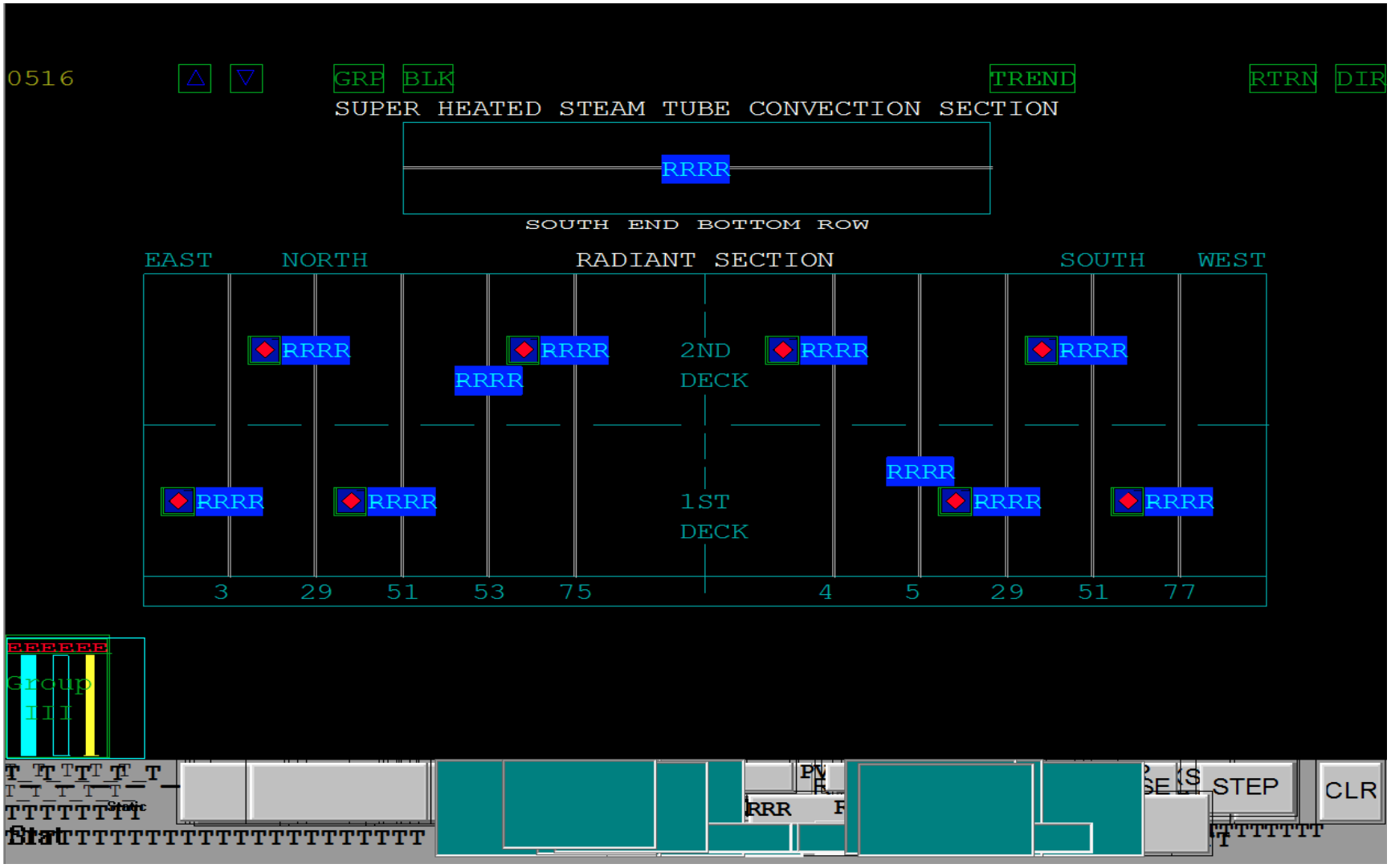
3.246 NOX SYSTEM SUMMARY (0515.DS)

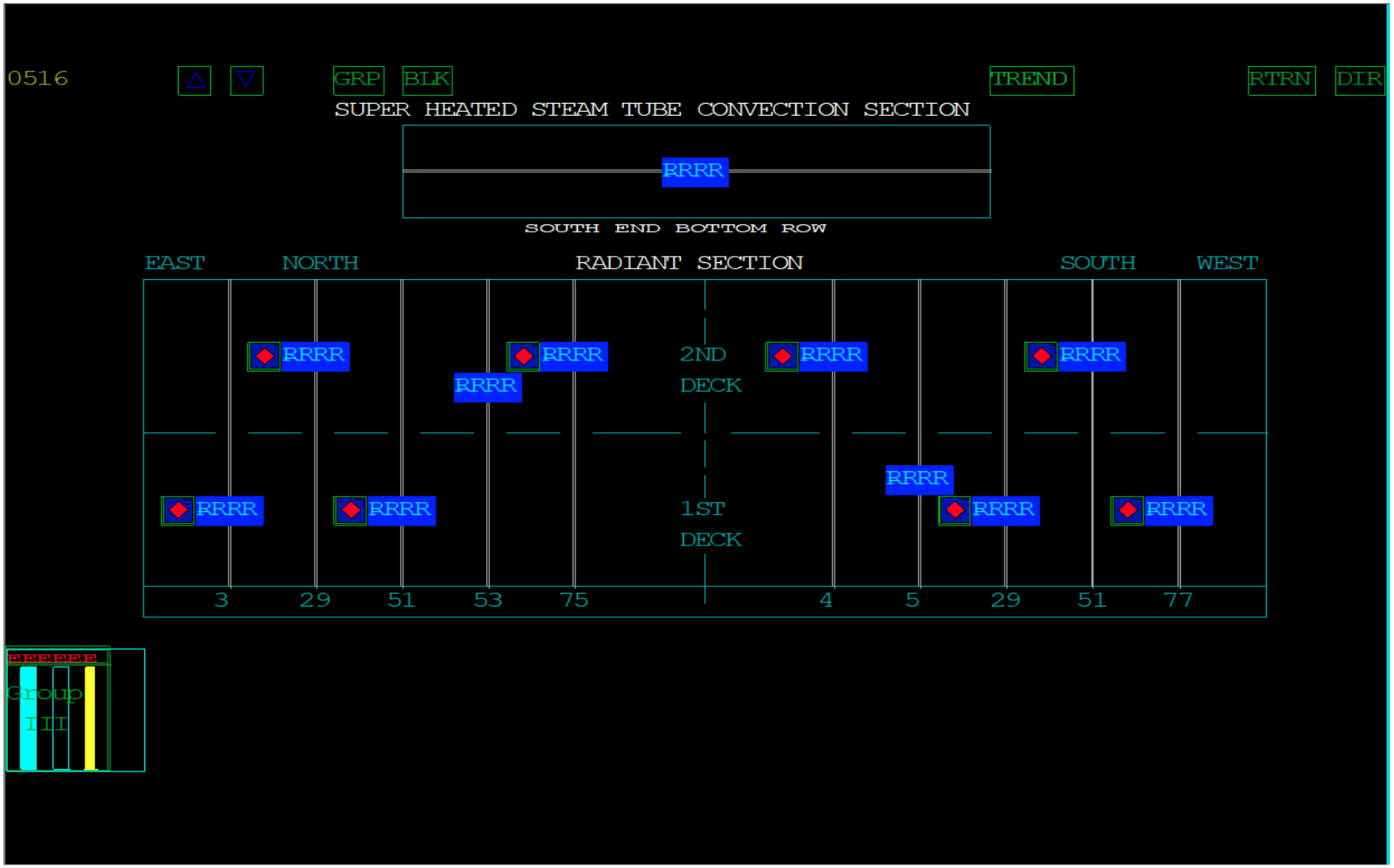


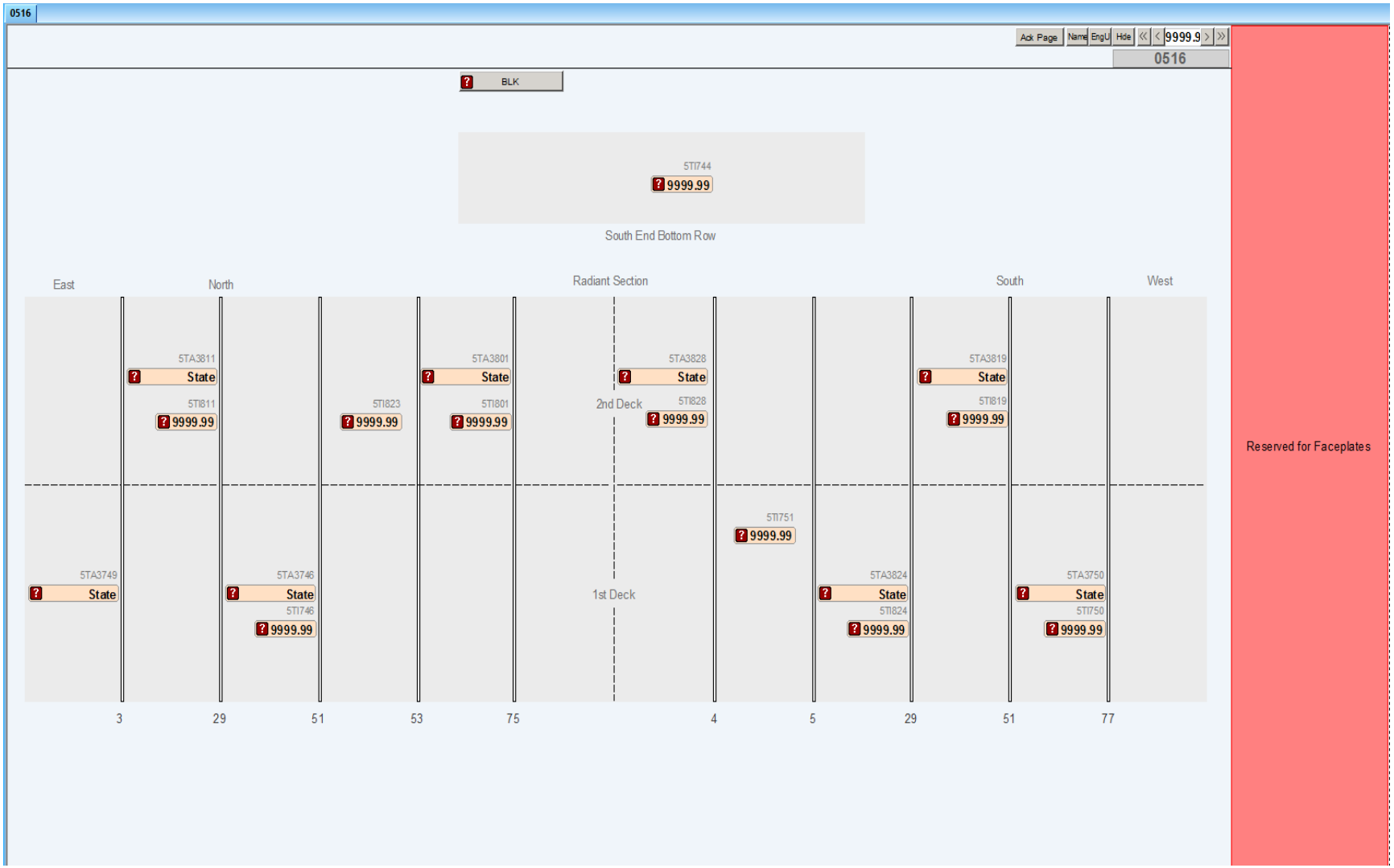

0515
GRP
BLK
NOX SYSTEM SUMMARY
TREND
KPI
RTRN
DIR
EAST STACK
RRRR PPM SO2
TTTTT ROLL AVG
Text and shape changed
CEMS SHELTER
WEST
MID
EAST
RRRR F
RRRR PPM NOX
RRRR % O2
RRRRR PPM CO
RRRRR % CO2
RRRR IN H2O
RRRR MCFM
RRRRR I
TTTTTT
Bad
NH3 TO DENOX CATALYST
RRRR SCFH
HEATER DRAFT
RRRRR I
AIR TO DENOX CATALYST
RRRR MSCFH
Group III


0515
Ack Page
Name
EngU
Hide
9999.9
0515
BLK
KPI
East Stack
5AI931
9999.99
PPM
SO2
5XA931
State
SO2
CEMS Shelter
West
Mid
East
5XA982F
State
5TI787
9999.99
F
5AI982A
9999.99
PPM
NOX
5AI982B
9999.99
%
O2
5AI990
9999.99
PPM
CO
5XA990
State
5AI905
9999.99
%
CO2
5XA905
State
5PI472
9999.99
IN
H20
5FY158C
9999.99
MCFM
5PI448
9999.99
I
5XA982
State
5TI784
9999.99
F
5XA982E
State
5XA981F
State
5TI786
9999.99
F
5AI981A
9999.99
PPM
NOX
5AI981B
9999.99
%
O2
5AI991
9999.99
PPM
CO
5XA991
State
5AI904
9999.99
%
CO2
5XA904
State
5PI471
9999.99
IN
H20
5FY157C
9999.99
MCFM
5PI447
9999.99
I
5XA981
State
5TI783
9999.99
F
5XA981E
State
5TI785
State
5TI785
9999.99
F
5AI980A
9999.99
PPM
NOX
5AI980B
9999.99
%
O2
5AI992
9999.99
PPM
CO
5XA992
State
5AI903
9999.99
%
CO2
5XA903
State
5PI470
9999.99
IN
H20
5FY156C
9999.99
MCFM
5PI446
9999.99
I
5XA980
State
5TI782
9999.99
F
5XA980E
State
NH3 To Denox Catalyst
5FC107
9999.99
SCFH
Heater Draft
5PC410
9999.99
I
Air To Denox Catalyst
5FC108
9999.99
MSCFH
Reserved for Faceplates

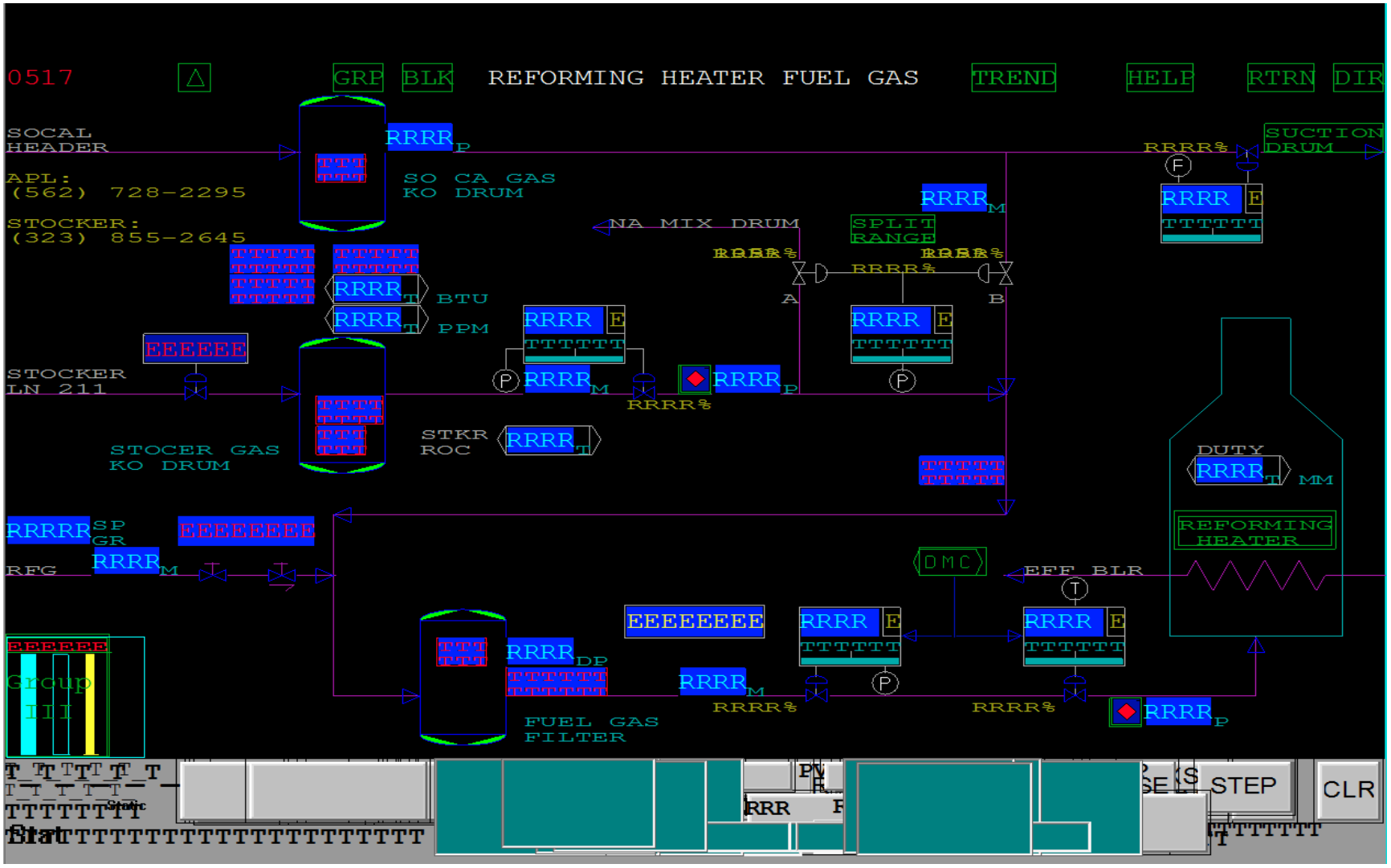
3.247 SUPER HEATED STEAM TUBE CONVECTION SECTION (0516.DS)

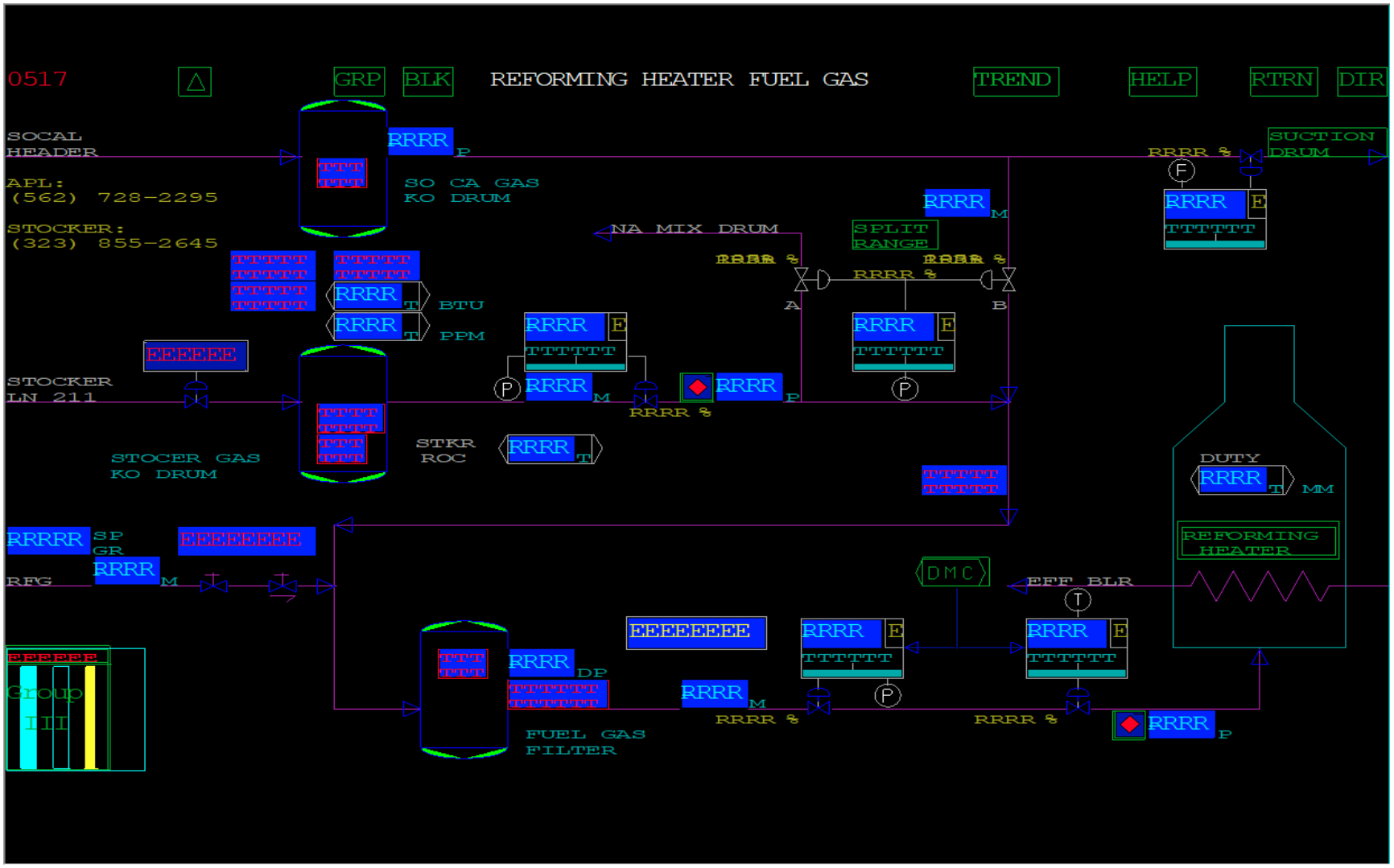


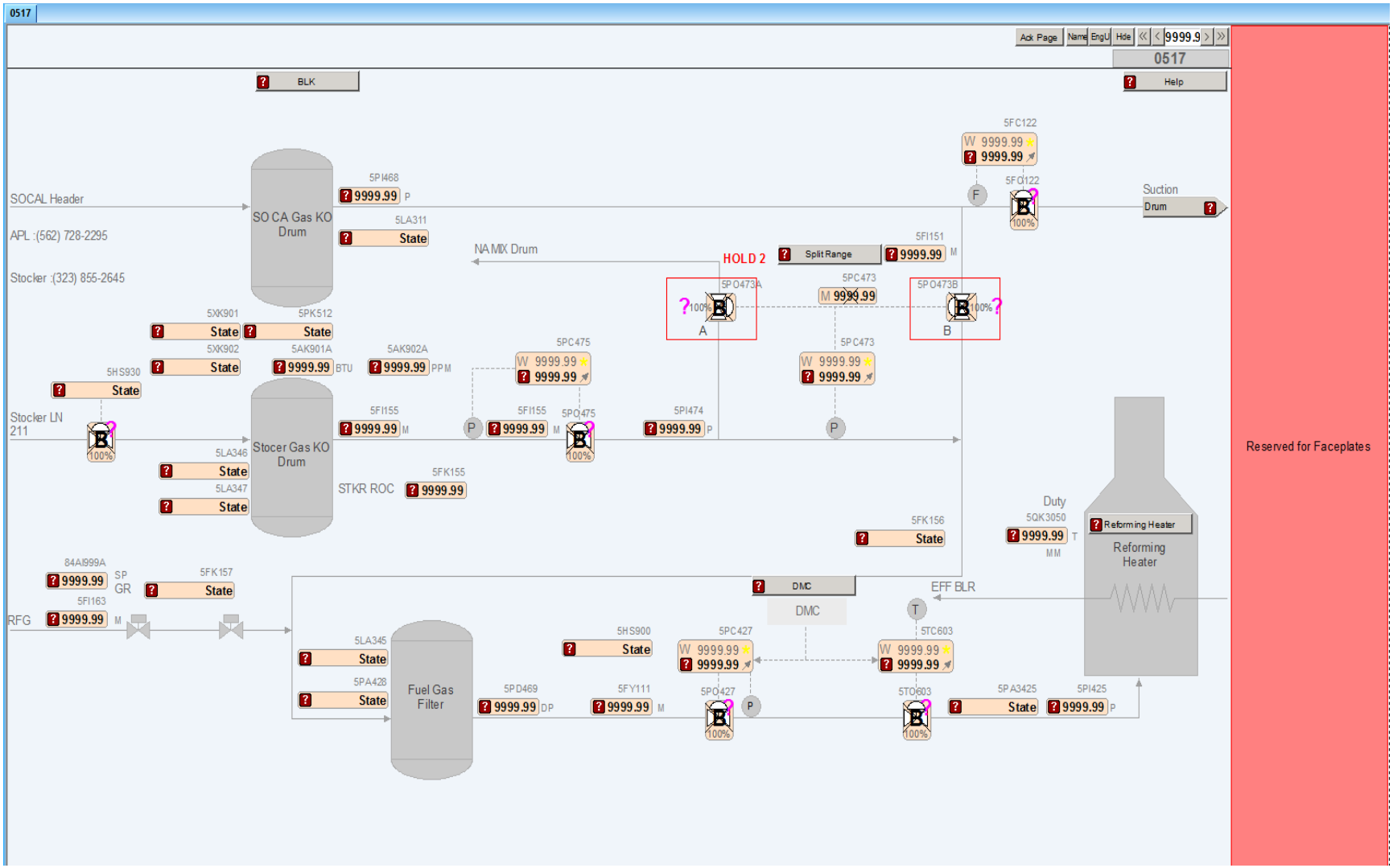

0516
GRP
BLK
TREND
RTRN
DIR
SUPER HEATED STEAM TUBE CONVECTION SECTION
RRRR
SOUTH END BOTTOM ROW
EAST
NORTH
RADIANT SECTION
SOUTH
WEST
RRRR
RRRR
RRRR
RRRR
RRRR
RRRR
RRRR
RRRR
RRRR
2ND
DECK
1ST
DECK
3
29
51
53
75
4
5
29
51
77
Group
III


0516
Ack Page
Name
Eng U
Hide
9999.9
0516
BLK
5TI744
9999.99
South End Bottom Row
East
North
Radiant Section
South
West
5TA3811
State
5TI811
9999.99
5TI823
9999.99
5TA3801
State
5TI801
9999.99
5TA3828
State
2nd Deck
5TI828
9999.99
5TA3819
State
5TI819
9999.99
Reserved for Faceplates
5TI751
9999.99
5TA3749
State
5TA3746
State
5TI746
9999.99
1st Deck
5TA3824
State
5TI824
9999.99
5TA3750
State
5TI750
9999.99
3
29
51
53
75
4
5
29
51
77

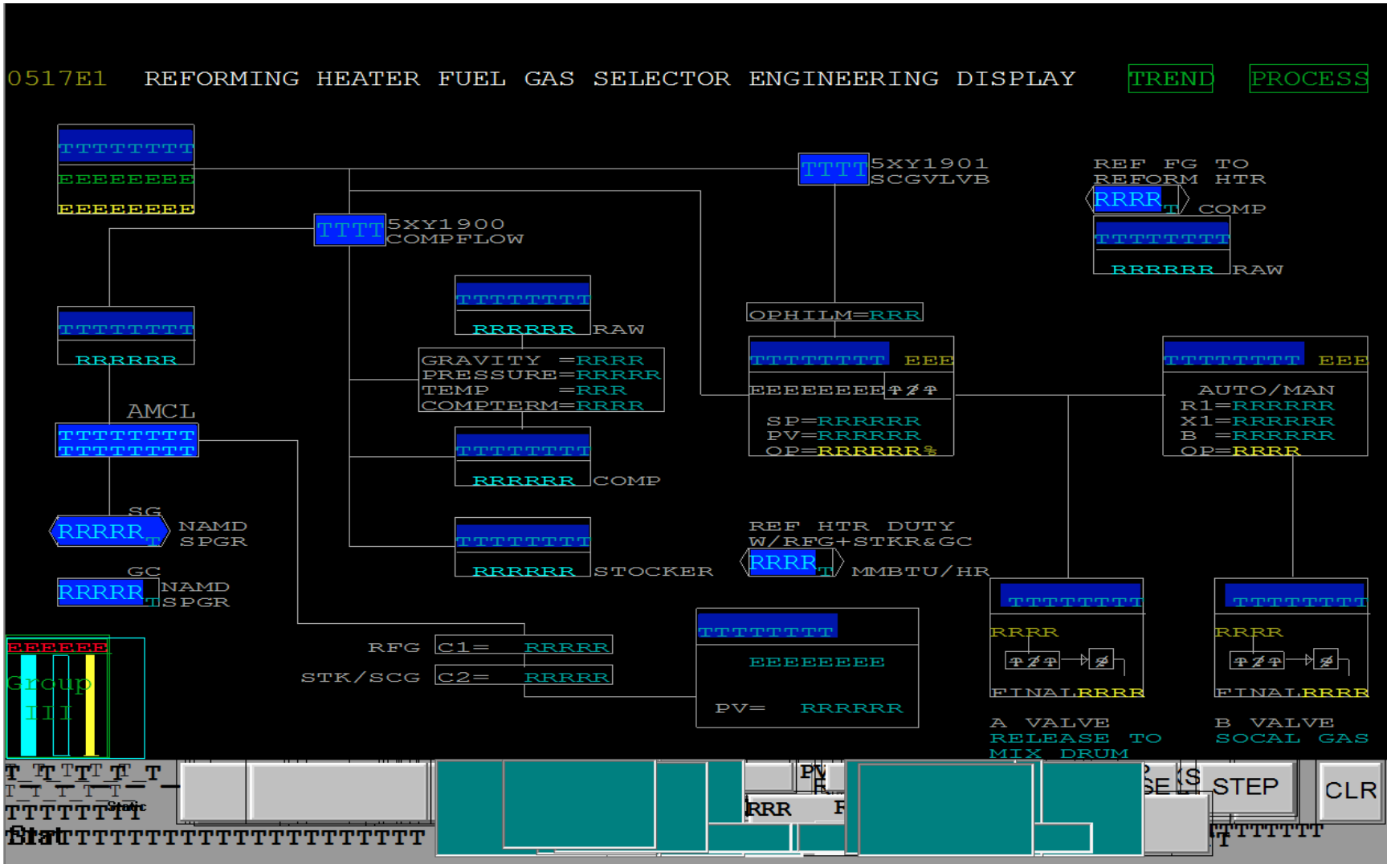
3.248 REFORMING HEATER FUEL GAS (0517.DS)

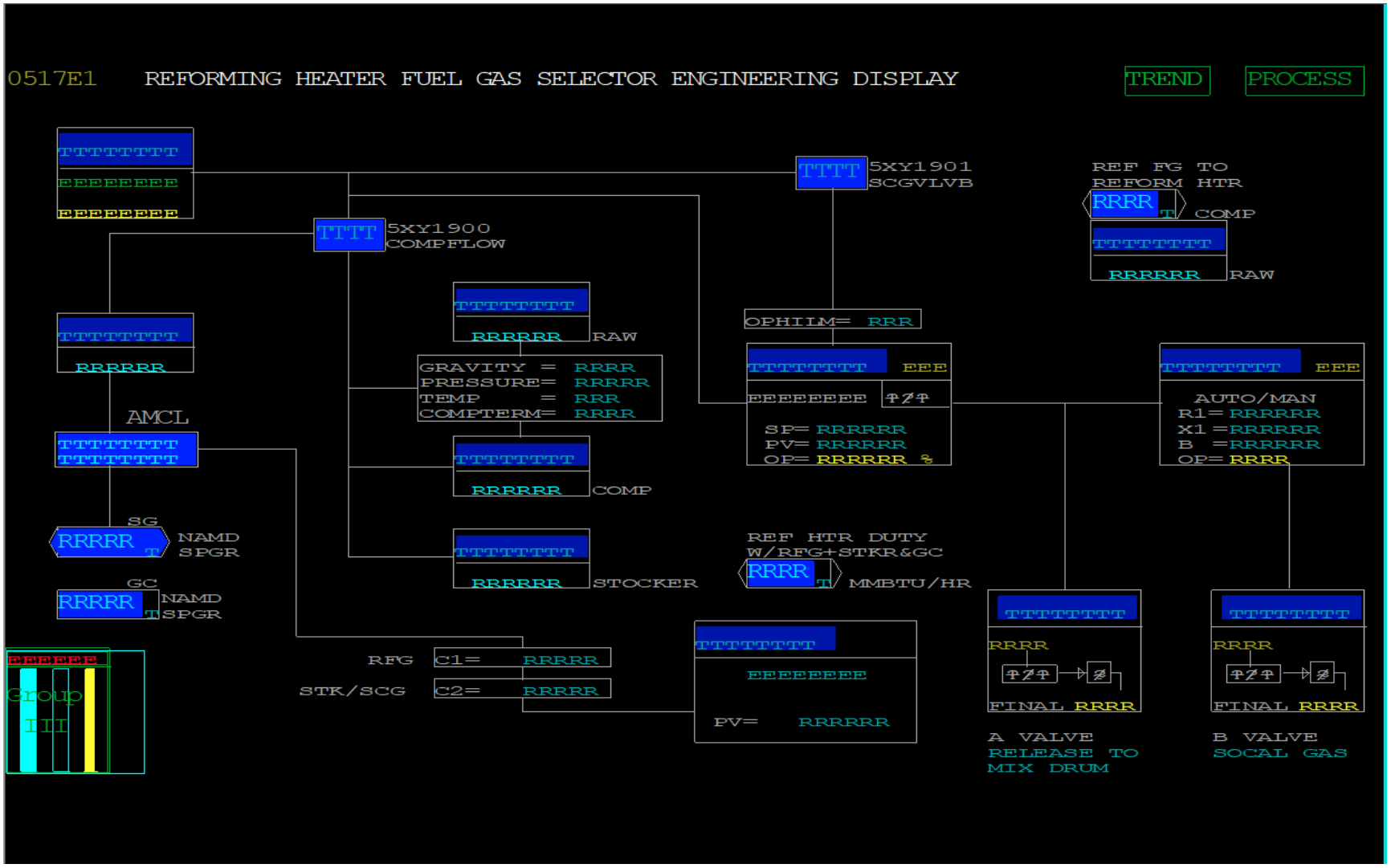


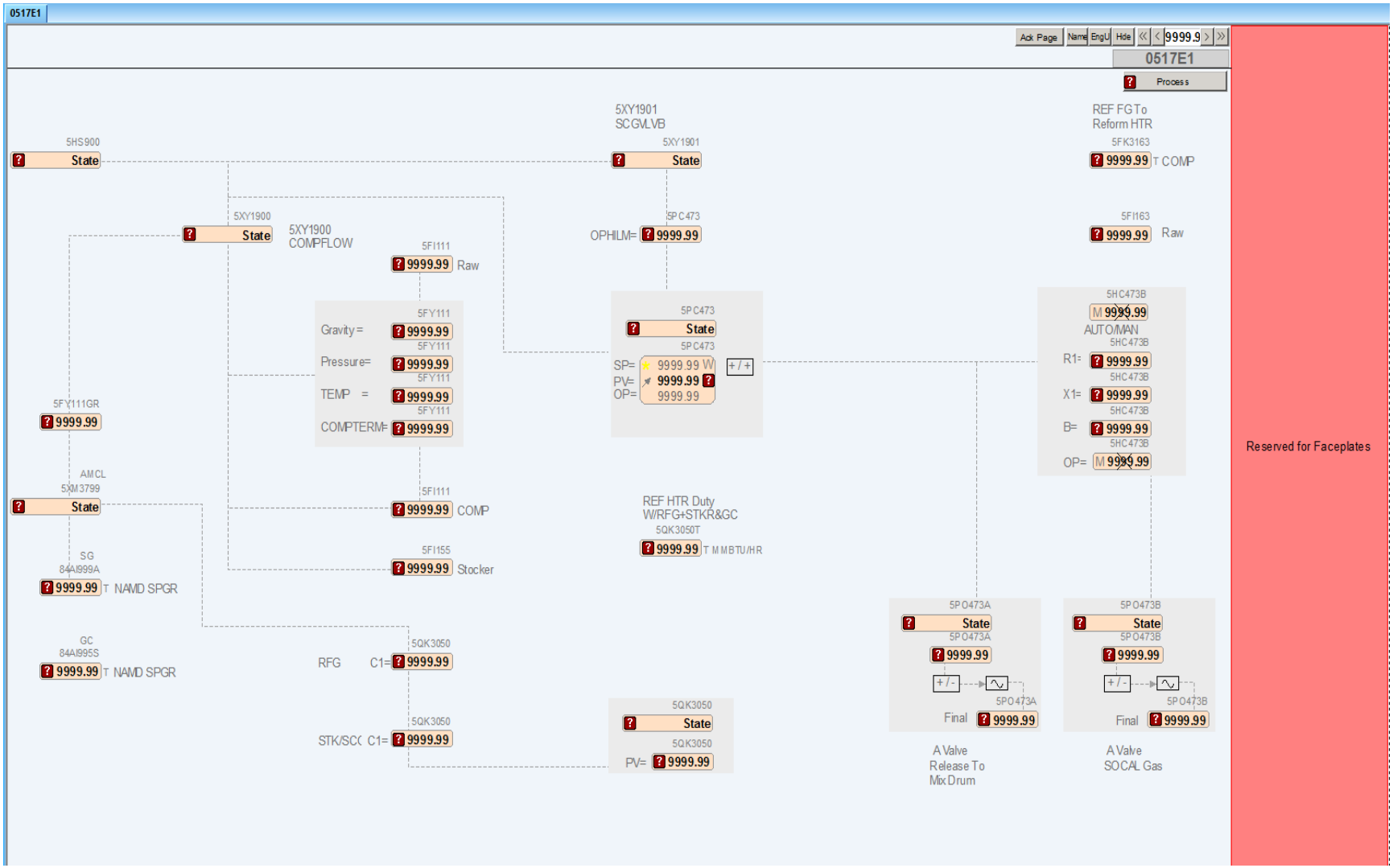

0517
GRP
BLK
REFORMING HEATER FUEL GAS
TREND
HELP
RTRN
DIR
SOCAL HEADER
APL: (562) 728-2295
STOCKER: (323) 855-2645
SO CA GAS KO DRUM
SUCTION DRUM
NA MIX DRUM
SPLIT RANGE
BTU
PPM
STOCKER LN 211
STOCER GAS KO DRUM
STKR ROC
DUTY
MM
REFORMING HEATER
DMC
EFF BLR
RFG
SP GR
FUEL GAS FILTER
Group III


0517
Ack Page
Name
EngU
Hide
9999.9
0517
BLK
Help
SOCAL Header
APL :(562) 728-2295
Stocker :(323) 855-2645
SO CA Gas KO Drum
5PI468
9999.99
P
5LA311
State
NA MIX Drum
HOLD 2
Split Range
5FI151
9999.99
M
5FC122
W 9999.99
9999.99
5FO122
100%
Suction Drum
5PO473A
A
5PC473
M 9999.99
5PO473B
B
5XK901
State
5PK512
State
5XK902
State
5AK901A
9999.99
BTU
5AK902A
9999.99
PPM
5HS930
State
5PC475
W 9999.99
9999.99
5PC473
W 9999.99
9999.99
Stocker LN 211
100%
Stocer Gas KO Drum
5FI155
9999.99
M
5FI155
9999.99
M
5PO475
100%
5PI474
9999.99
P
5LA346
State
5LA347
State
STKR ROC
5FK155
9999.99
Reserved for Faceplates
Duty
5QK3050
9999.99
T
MM
Reforming Heater
Reforming Heater
5FK156
State
84AI999A
9999.99
SP
GR
5FK157
State
5FI163
9999.99
M
RFG
DMC
DMC
EFF BLR
T
5LA345
State
5PA428
State
Fuel Gas Filter
5PD469
9999.99
DP
5FY111
9999.99
M
5HS900
State
5PC427
W 9999.99
9999.99
5PO427
100%
P
5TC603
W 9999.99
9999.99
5TO603
100%
5PA3425
State
5PI425
9999.99
P

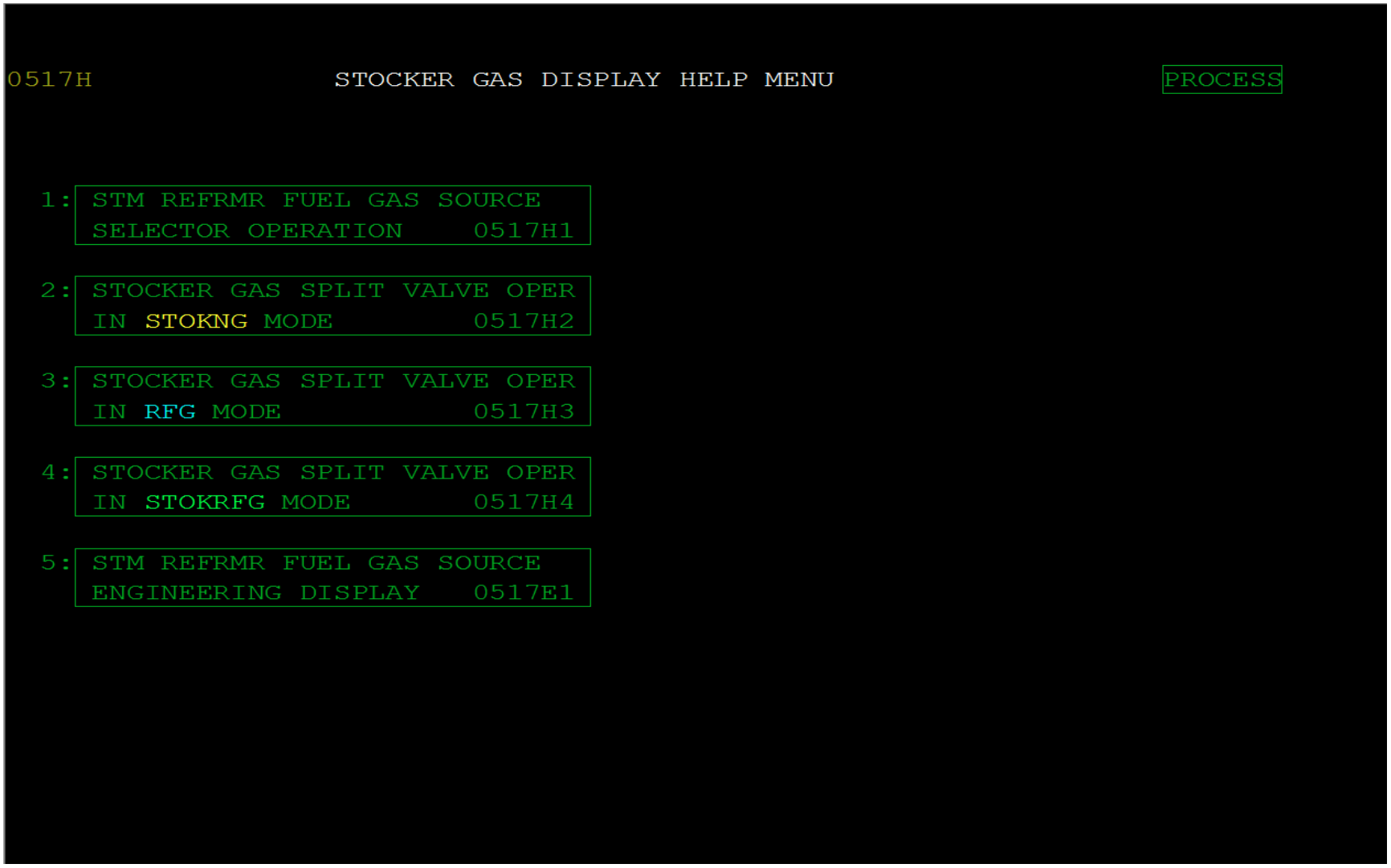
3.249 REFORMING HEATER FUEL GAS SELECTOR ENGINEERING DISPLAY (0517E1.DS)

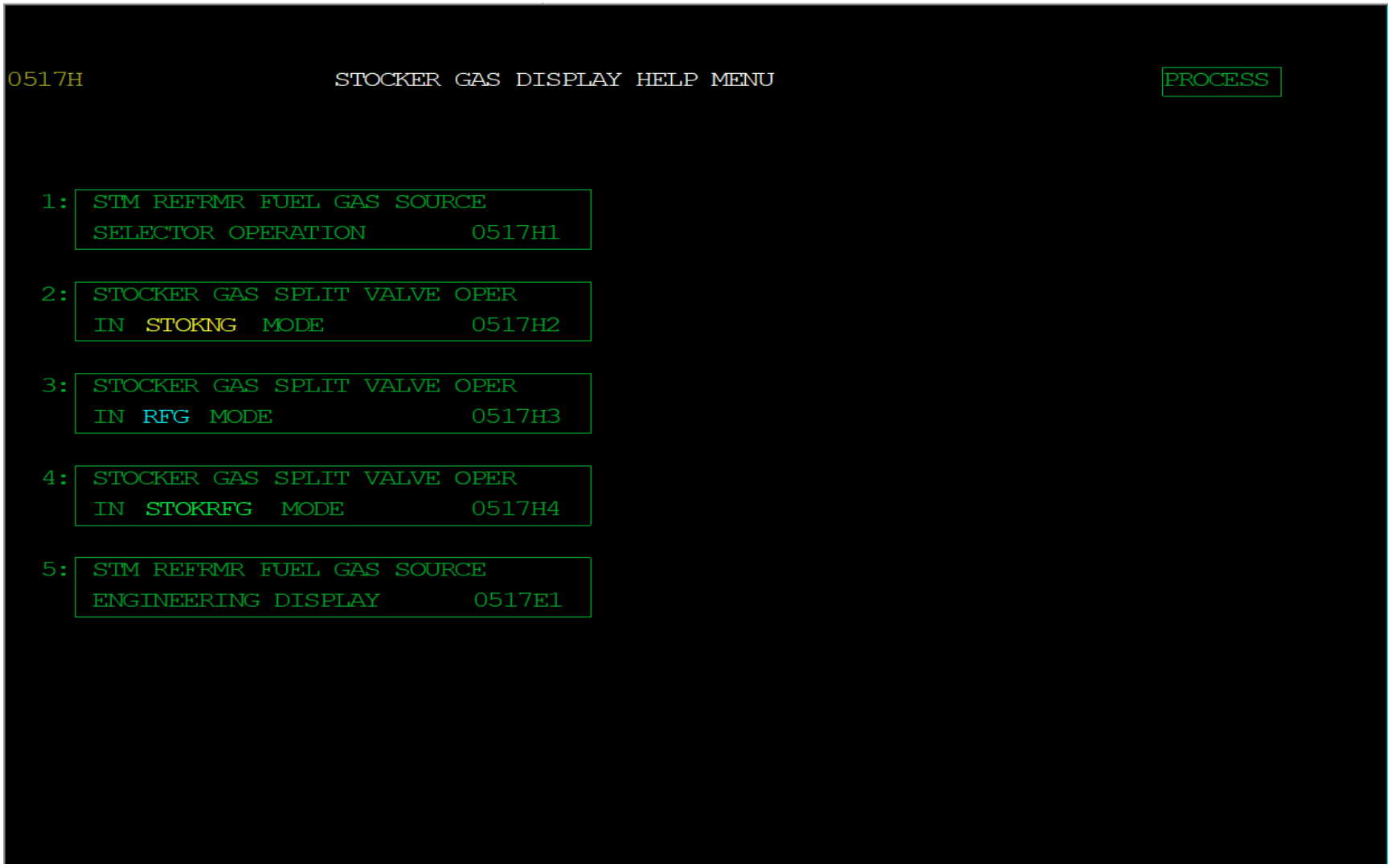


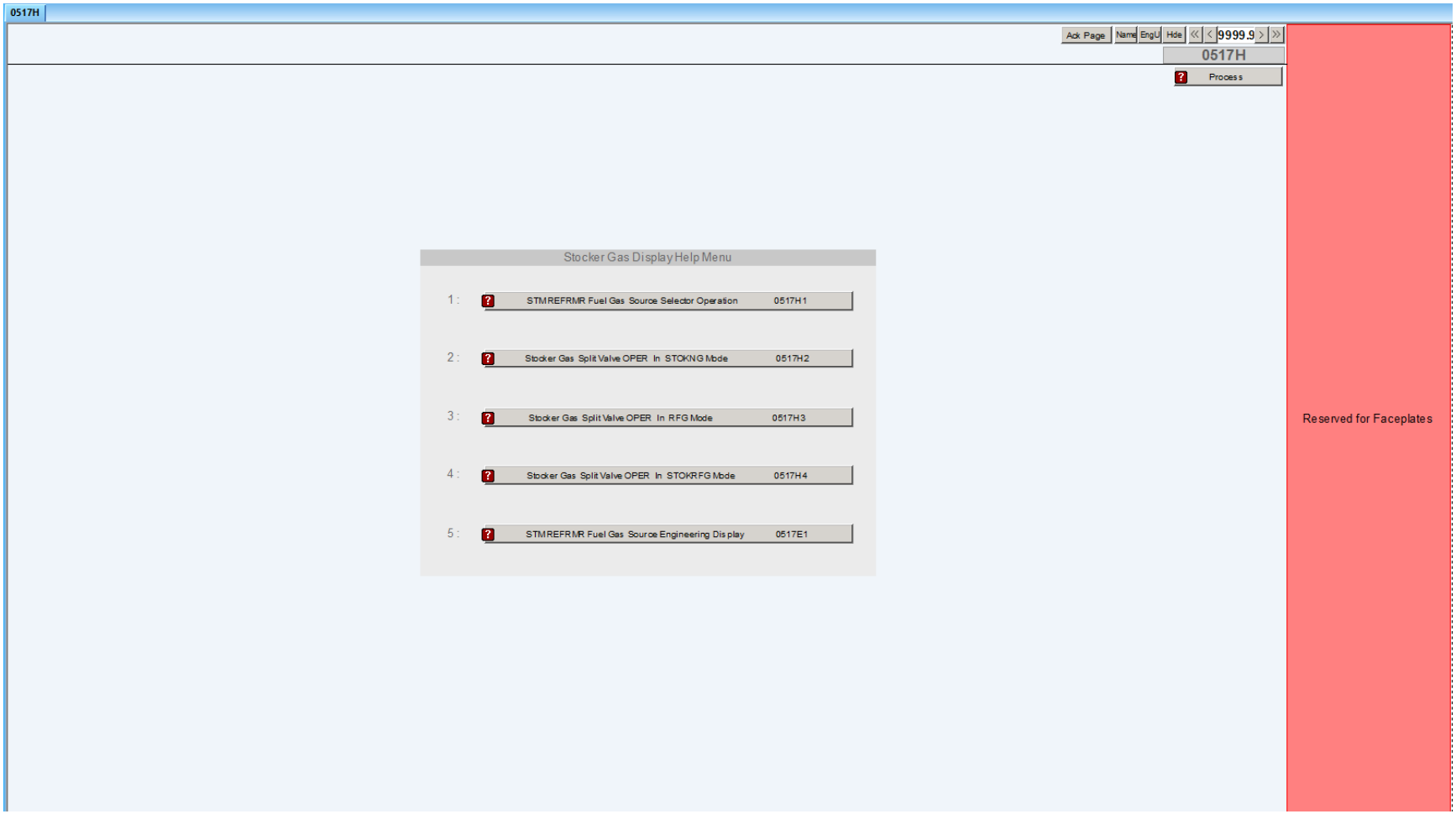

0517E1 REFORMING HEATER FUEL GAS SELECTOR ENGINEERING DISPLAY
TREND
PROCESS
TTTTTTTT
EEEEEEEE
EEEEEEEE
TTTT 5XY1901
SCGVLVB
TTT 5XY1900
COMPFLOW
REF FG TO
REFORM HTR
RRRR T COMP
TTTTTTTT
RRRRRR RAW
TTTTTTTT
RRRRRR
TTTTTTTT
RRRRRR RAW
GRAVITY = RRRR
PRESSURE= RRRRR
TEMP = RRR
COMPTERM= RRRR
OPHILM= RRR
TTTTTTTT EEE
EEEEEEEE
SP= RRRRRR
PV= RRRRRR
OP= RRRRRR %
TTTTTTTT EEE
AUTO/MAN
R1= RRRRRR
X1 =RRRRRR
B =RRRRRR
OP= RRRR
AMCL
TTTTTTTT
TTTTTTTT
TTTTTTTT
RRRRRR COMP
SG
RRRRR T NAMD
SPGR
GC
RRRRR T NAMD
SPGR
TTTTTTTT
RRRRRR STOCKER
REF HTR DUTY
W/RFG+STKR&GC
RRRR T MMBTU/HR
EEEEEE
Group
III
RFG C1= RRRRR
STK/SCG C2= RRRRR
TTTTTTTT
EEEEEEEE
PV= RRRRRR
TTTTTTTT
RRRR
FINAL RRRR
A VALVE
RELEASE TO
MIX DRUM
TTTTTTTT
RRRR
FINAL RRRR
B VALVE
SOCAL GAS


0517E1
Ack Page
Name
Eng U
Hide
9999.9
0517E1
Process
5XY1901
SCGVLVB
REF FG To
Reform HTR
5HS900
State
5XY1901
State
5FK3163
9999.99
T COMP
5XY1900
State
5XY1900
COMPFLOW
5PC473
OPHILM=
9999.99
5FI163
9999.99
Raw
5FI111
9999.99
Raw
5FY111
Gravity =
9999.99
5FY111
Pressure=
9999.99
5FY111
TEMP =
9999.99
5FY111
COMPTERM=
9999.99
5PC473
State
5PC473
SP=
9999.99
PV=
9999.99
OP=
9999.99
+/+
5HC473B
M
9999.99
AUTO/MAN
5HC473B
R1=
9999.99
5HC473B
X1=
9999.99
5HC473B
B=
9999.99
5HC473B
OP=
M
9999.99
5FY111GR
9999.99
AMCL
5XM3799
State
5FI111
9999.99
COMP
REF HTR Duty
W/RFG+STKR&GC
5QK3050T
9999.99
T MMBTU/HR
SG
84AI999A
9999.99
T NAMD SPGR
5FI155
9999.99
Stocker
GC
84AI995S
9999.99
T NAMD SPGR
RFG
C1=
5QK3050
9999.99
5QK3050
STK/SCC
C1=
9999.99
5QK3050
State
5QK3050
PV=
9999.99
5PO473A
State
5PO473A
9999.99
+/-
5PO473A
Final
9999.99
A Valve
Release To
Mix Drum
5PO473B
State
5PO473B
9999.99
+/-
5PO473B
Final
9999.99
A Valve
SOCAL Gas
Reserved for Faceplates

3.250 STOCKER GAS DISPLAY HELP MENU (0517H.DS)

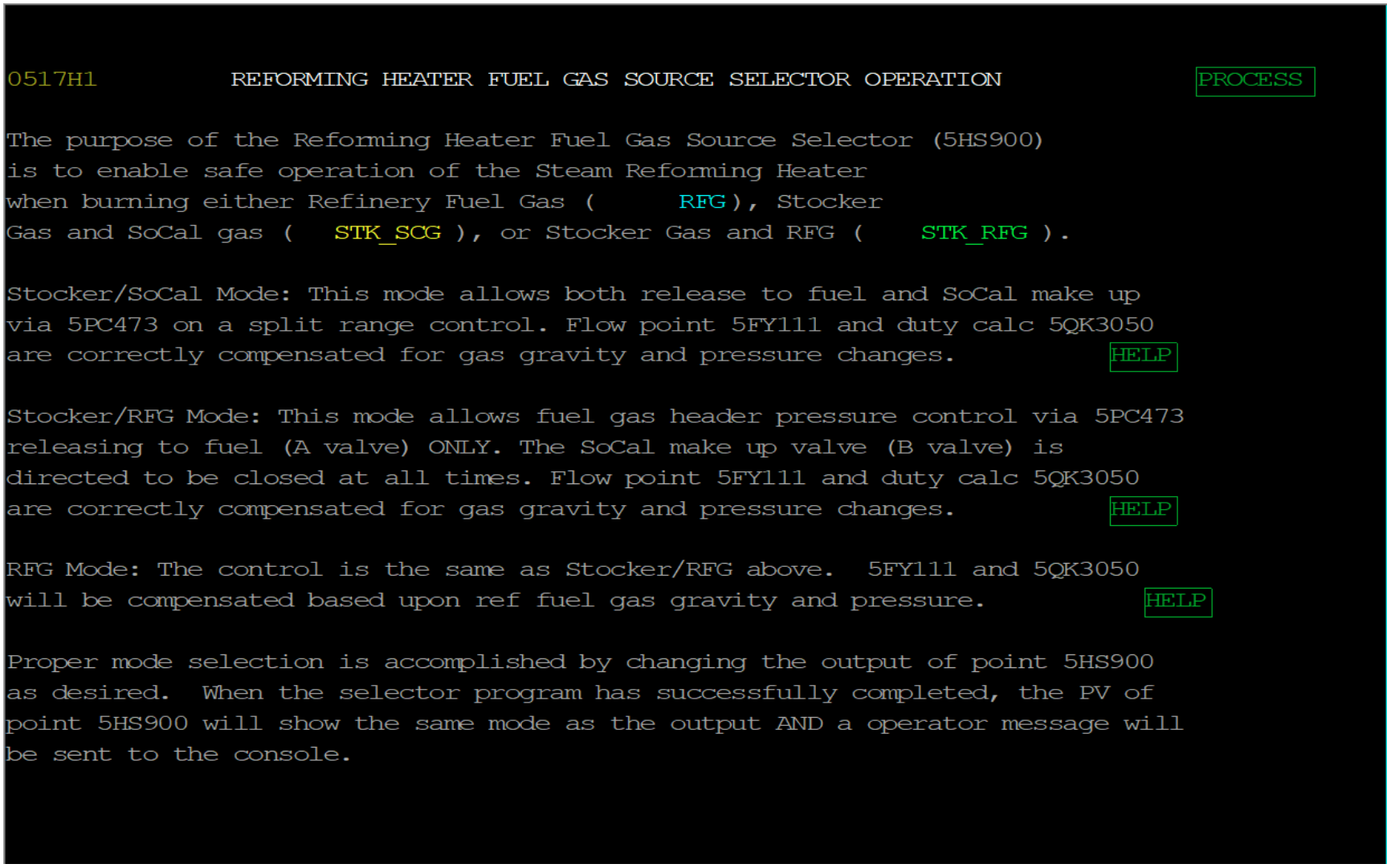


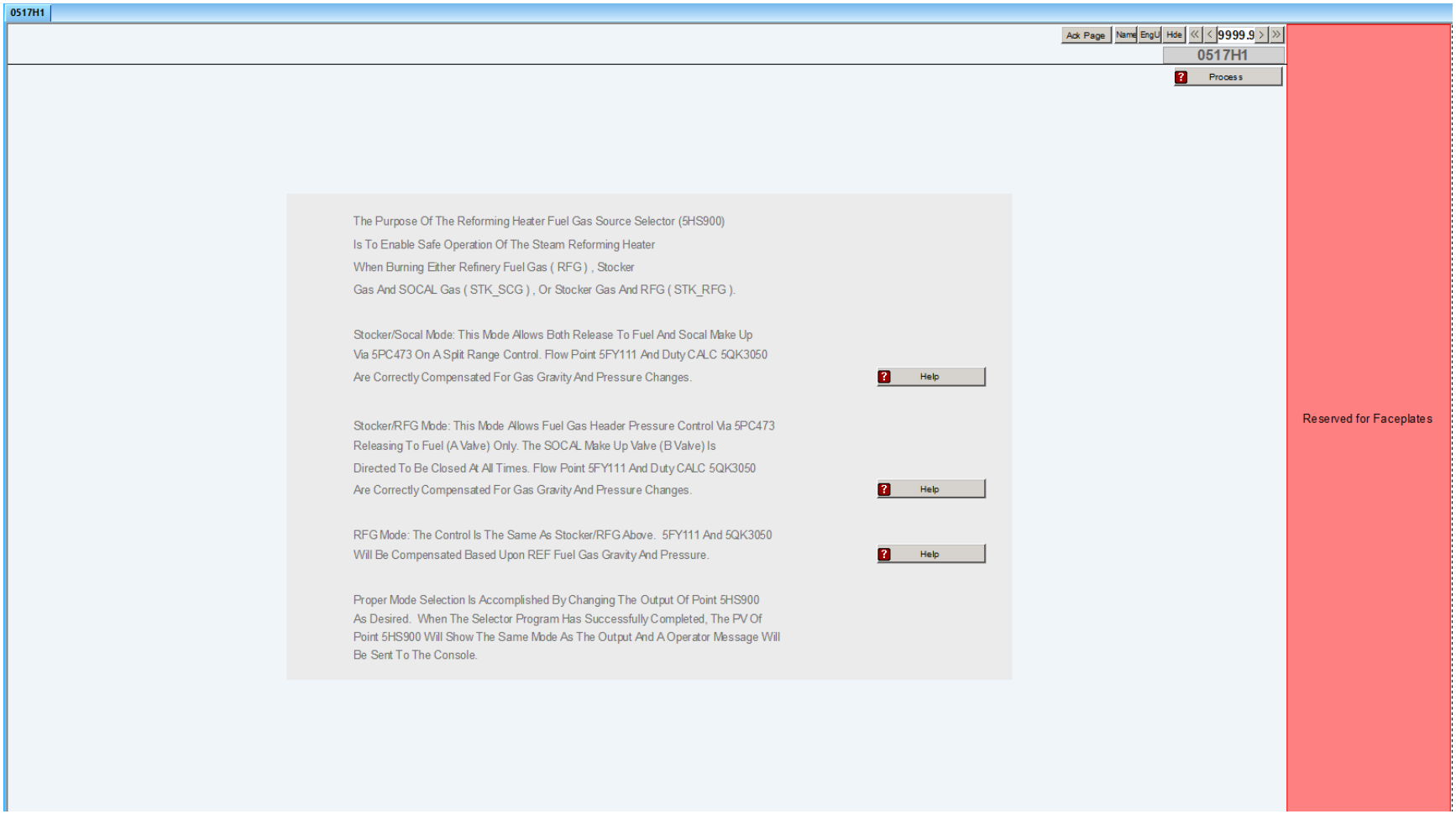

0517H
STOCKER GAS DISPLAY HELP MENU
PROCESS
1:
STM REFRMR FUEL GAS SOURCE
SELECTOR OPERATION 0517H1
2:
STOCKER GAS SPLIT VALVE OPER
IN STOKNG MODE 0517H2
3:
STOCKER GAS SPLIT VALVE OPER
IN RFG MODE 0517H3
4:
STOCKER GAS SPLIT VALVE OPER
IN STOKRFG MODE 0517H4
5:
STM REFRMR FUEL GAS SOURCE
ENGINEERING DISPLAY 0517E1


0517H
Ack Page
Name
EngU
Hde
9999.9
0517H
Process
Stocker Gas Display Help Menu
1 :
STMREFRMR Fuel Gas Source Selector Operation
0517H1
2 :
Stocker Gas Split Valve OPER In STOKNG Mode
0517H2
3 :
Stocker Gas Split Valve OPER In RFG Mode
0517H3
4 :
Stocker Gas Split Valve OPER In STOKRFG Mode
0517H4
5 :
STMREFRMR Fuel Gas Source Engineering Display
0517E1
Reserved for Faceplates

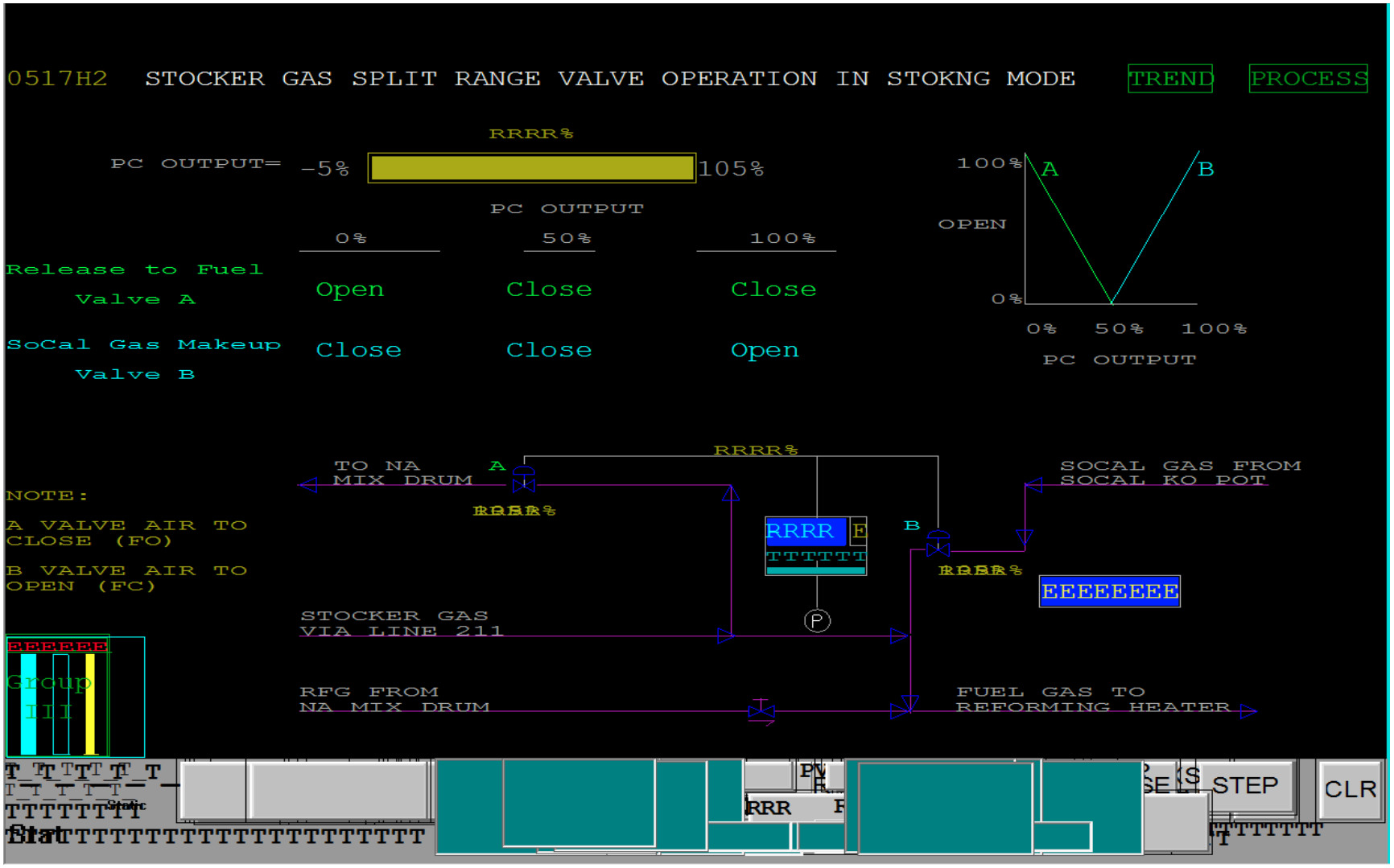
3.251 REFORMING HEATER FUEL GAS SOURCE SELECTOR OPERATION (0517H1.DS)

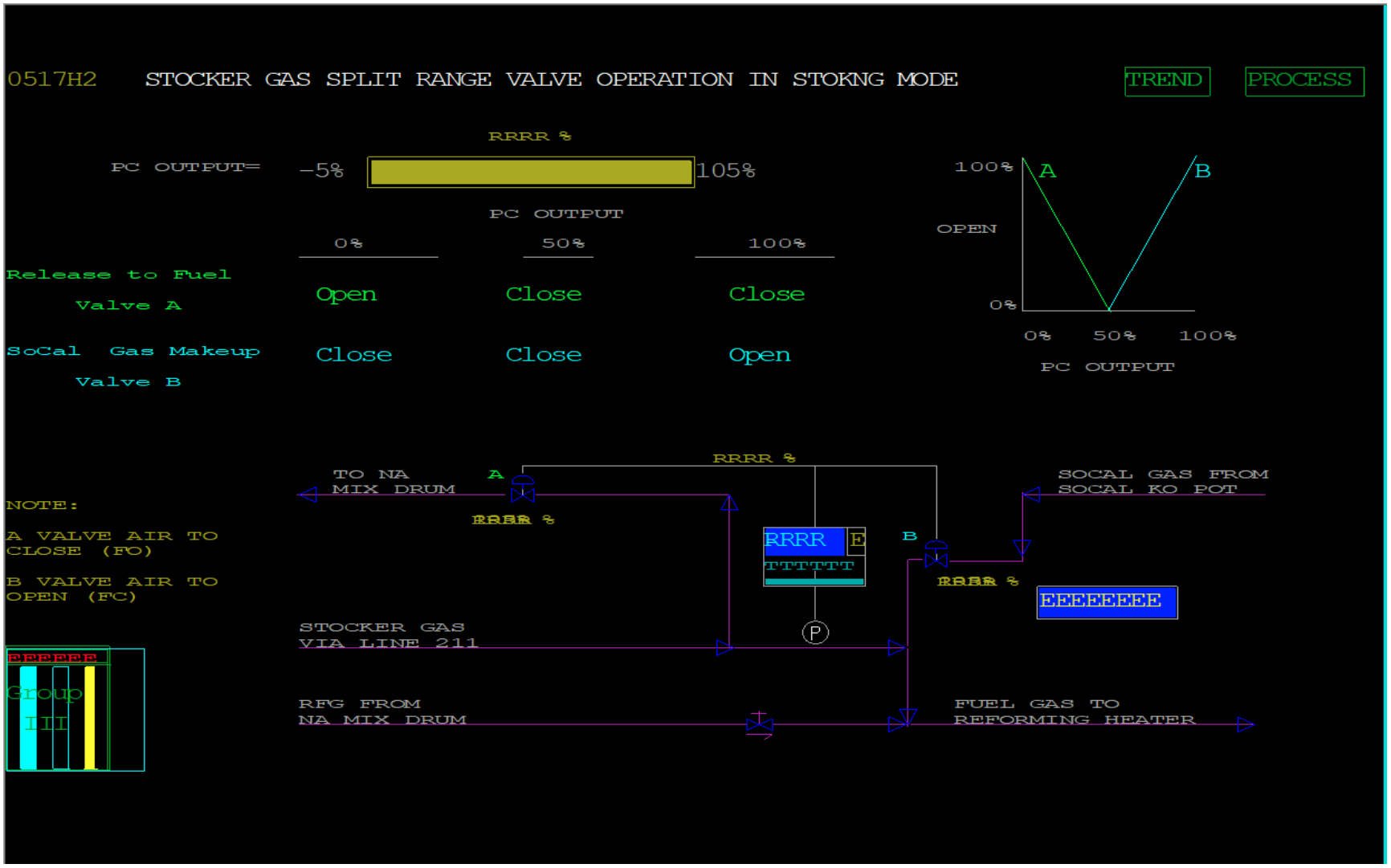
```
0517H1        REFORMING HEATER FUEL GAS SOURCE SELECTOR OPERATION      PROCESS

The purpose of the Reforming Heater Fuel Gas Source Selector (5HS900)
is to enable safe operation of the Steam Reforming Heater
when burning either Refinery Fuel Gas (RFG), Stocker
Gas and SoCal gas (STK_SCG), or Stocker Gas and RFG (STK_RFG).

Stocker/SoCal Mode: This mode allows both release to fuel and SoCal make up
via 5PC473 on a split range control. Flow point 5FY111 and duty calc 5QK3050
are correctly compensated for gas gravity and pressure changes. HELP

Stocker/RFG Mode: This mode allows fuel gas header pressure control via 5PC473
releasing to fuel (A valve) ONLY. The SoCal make up valve (B valve) is
directed to be closed at all times. Flow point 5FY111 and duty calc 5QK3050
are correctly compensated for gas gravity and pressure changes. HELP

RFG Mode: The control is the same as Stocker/RFG above.  5FY111 and 5QK3050
will be compensated based upon ref fuel gas gravity and pressure. HELP

Proper mode selection is accomplished by changing the output of point 5HS900
as desired.  When the selector program has successfully completed, the PV of
point 5HS900 will show the same mode as the output AND a operator message will
be sent to the console.
```

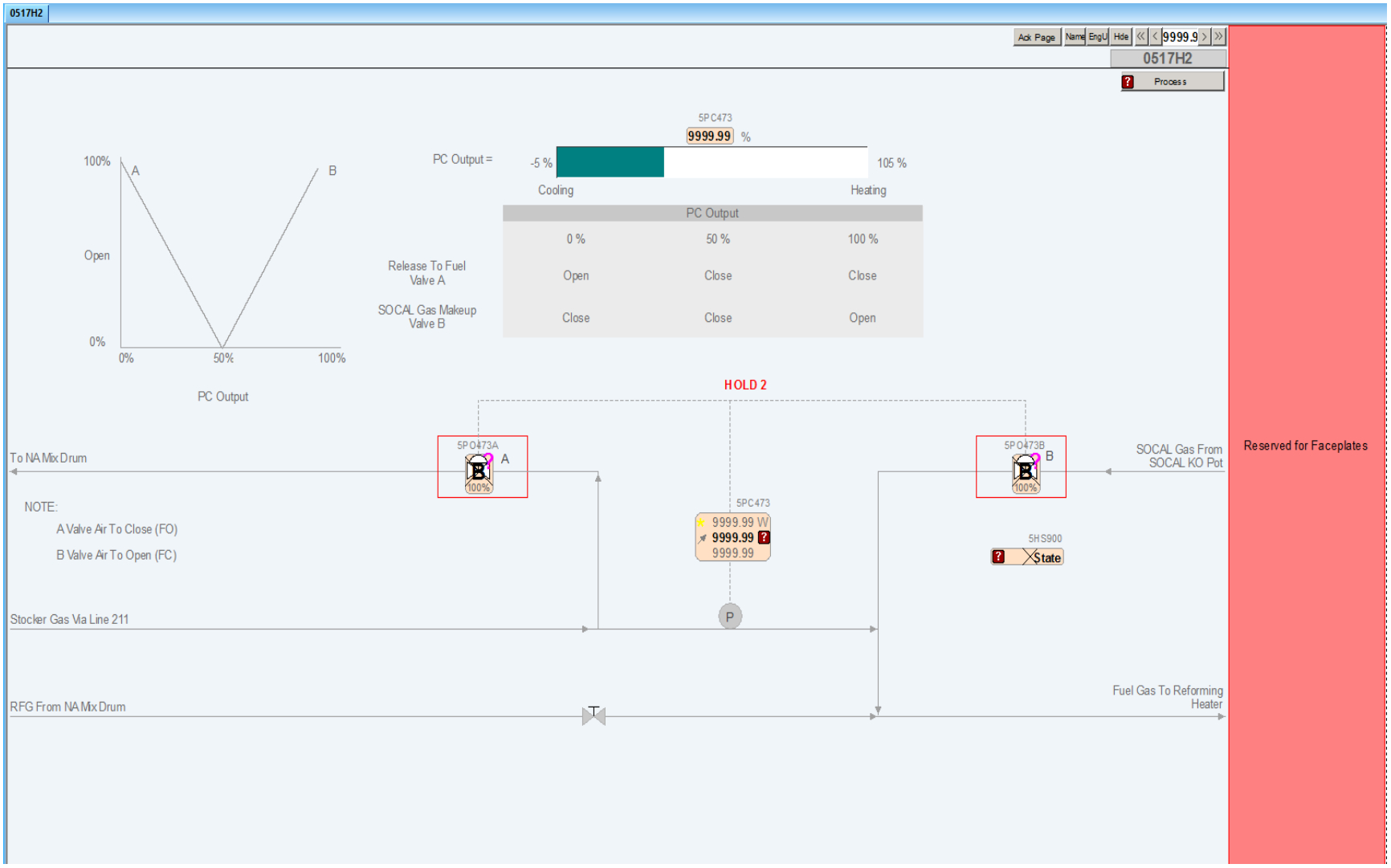

0517H1
REFORMING HEATER FUEL GAS SOURCE SELECTOR OPERATION
PROCESS
The purpose of the Reforming Heater Fuel Gas Source Selector (5HS900)
is to enable safe operation of the Steam Reforming Heater
when burning either Refinery Fuel Gas (RFG), Stocker
Gas and SoCal gas (STK_SCG), or Stocker Gas and RFG (STK_RFG).
Stocker/SoCal Mode: This mode allows both release to fuel and SoCal make up
via 5PC473 on a split range control. Flow point 5FY111 and duty calc 5QK3050
are correctly compensated for gas gravity and pressure changes.
HELP
Stocker/RFG Mode: This mode allows fuel gas header pressure control via 5PC473
releasing to fuel (A valve) ONLY. The SoCal make up valve (B valve) is
directed to be closed at all times. Flow point 5FY111 and duty calc 5QK3050
are correctly compensated for gas gravity and pressure changes.
HELP
RFG Mode: The control is the same as Stocker/RFG above. 5FY111 and 5QK3050
will be compensated based upon ref fuel gas gravity and pressure.
HELP
Proper mode selection is accomplished by changing the output of point 5HS900
as desired. When the selector program has successfully completed, the PV of
point 5HS900 will show the same mode as the output AND a operator message will
be sent to the console.


0517H1
Ack Page
Name
EngU
Hde
9999.9
0517H1
Process
The Purpose Of The Reforming Heater Fuel Gas Source Selector (5HS900)
Is To Enable Safe Operation Of The Steam Reforming Heater
When Burning Either Refinery Fuel Gas (RFG) , Stocker
Gas And SOCAL Gas (STK_SCG) , Or Stocker Gas And RFG (STK_RFG).
Stocker/Socal Mode: This Mode Allows Both Release To Fuel And Socal Make Up
Via 5PC473 On A Split Range Control. Flow Point 5FY111 And Duty CALC 5QK3050
Are Correctly Compensated For Gas Gravity And Pressure Changes.
Help
Stocker/RFG Mode: This Mode Allows Fuel Gas Header Pressure Control Via 5PC473
Releasing To Fuel (A Valve) Only. The SOCAL Make Up Valve (B Valve) Is
Directed To Be Closed At All Times. Flow Point 5FY111 And Duty CALC 5QK3050
Are Correctly Compensated For Gas Gravity And Pressure Changes.
Help
RFG Mode: The Control Is The Same As Stocker/RFG Above. 5FY111 And 5QK3050
Will Be Compensated Based Upon REF Fuel Gas Gravity And Pressure.
Help
Proper Mode Selection Is Accomplished By Changing The Output Of Point 5HS900
As Desired. When The Selector Program Has Successfully Completed, The PV Of
Point 5HS900 Will Show The Same Mode As The Output And A Operator Message Will
Be Sent To The Console.
Reserved for Faceplates

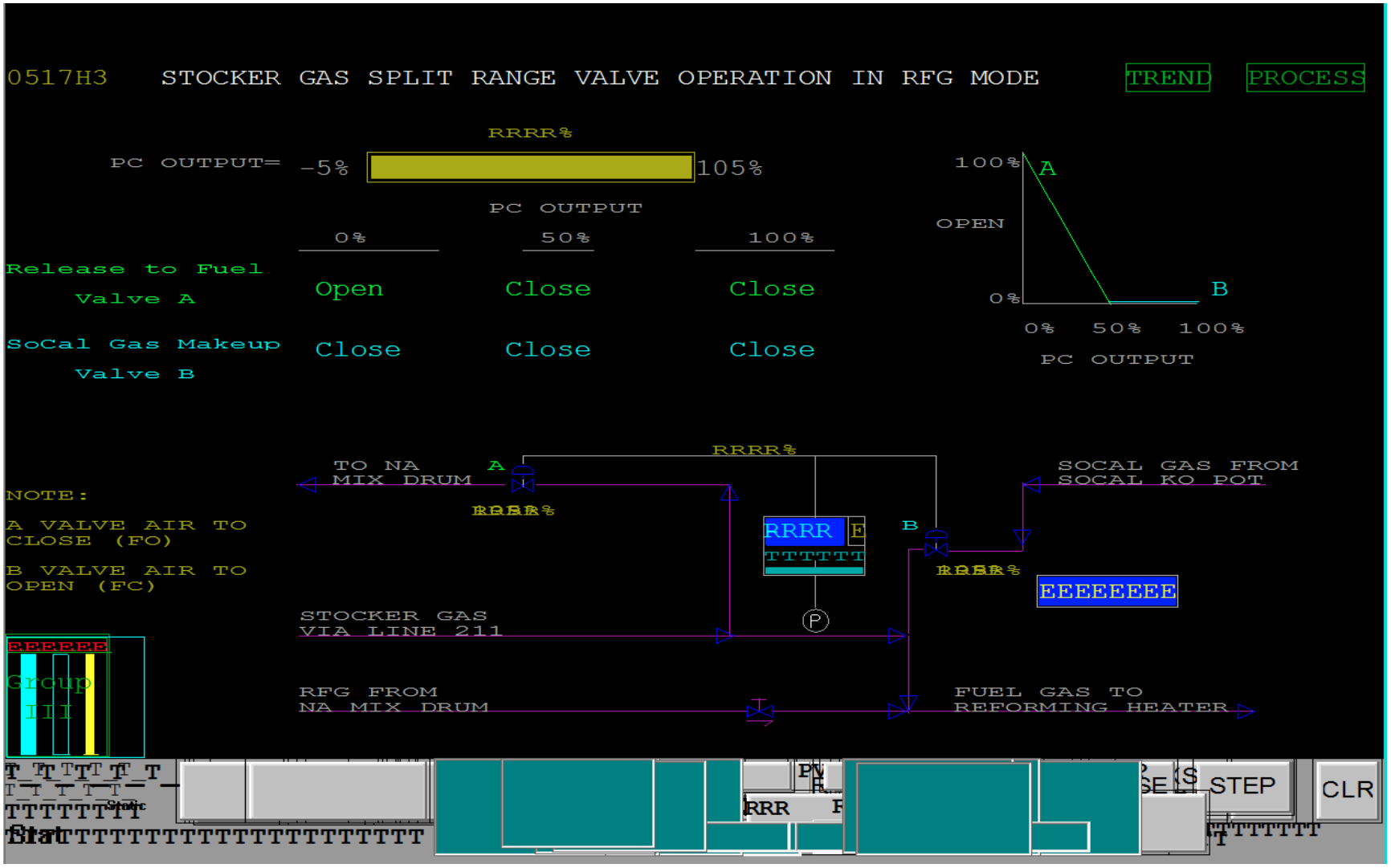
3.252 STOCKER GAS SPLIT RANGE VALVE OPERATION IN STOKNG MODE (0517H2.DS)

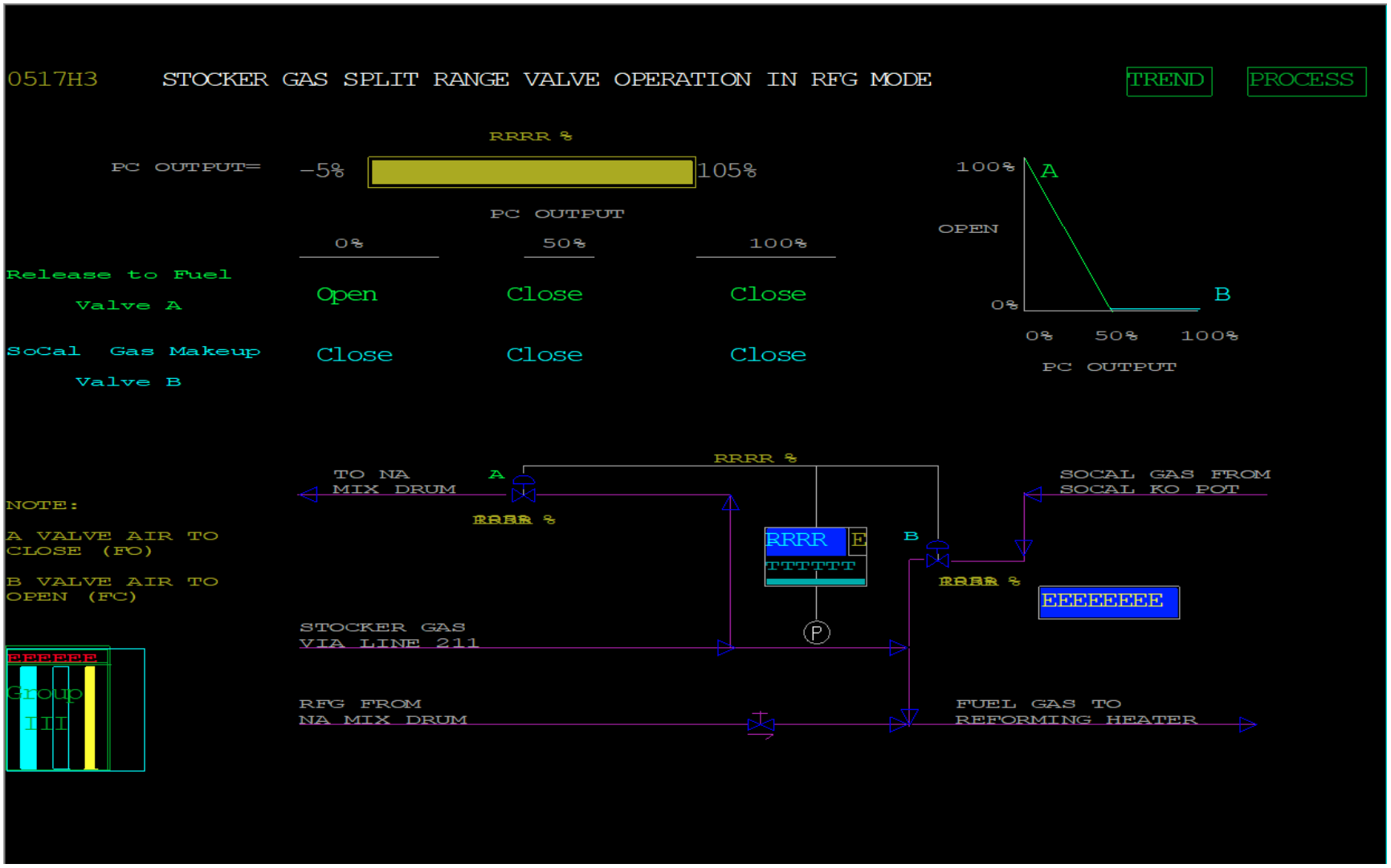


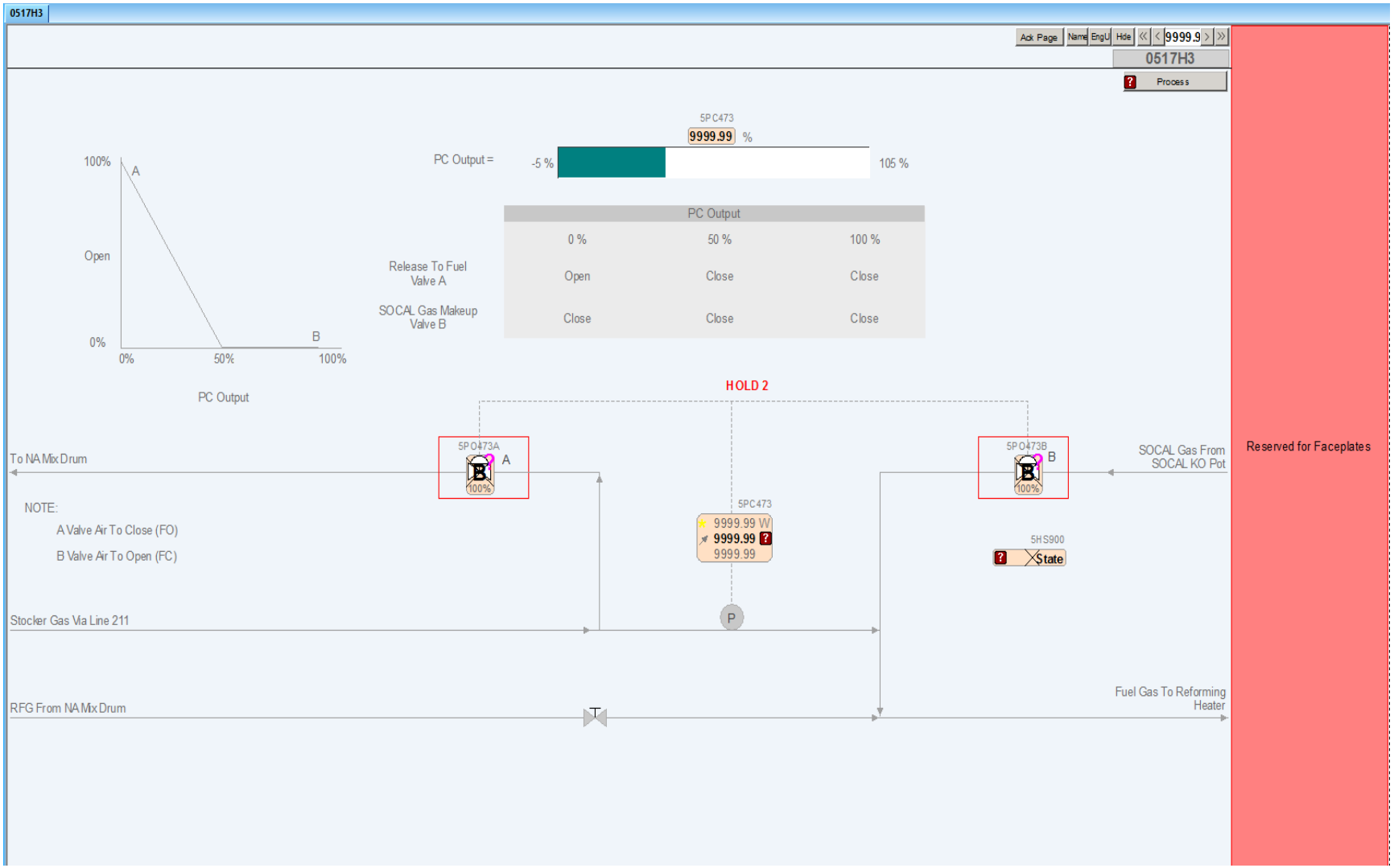

0517H2 STOCKER GAS SPLIT RANGE VALVE OPERATION IN STOKNG MODE
TREND
PROCESS
RRRR %
PC OUTPUT=
-5%
105%
PC OUTPUT
0%
50%
100%
Release to Fuel Valve A
Open
Close
Close
SoCal Gas Makeup Valve B
Close
Close
Open
100%
A
B
OPEN
0%
0%
50%
100%
PC OUTPUT
NOTE:
A VALVE AIR TO CLOSE (FC)
B VALVE AIR TO OPEN (FO)
TO NA MIX DRUM
A
RRRR %
RRRR
E
TTTTTT
B
SOCAL GAS FROM SOCAL KO POT
RRRR %
EEEEEEEE
STOCKER GAS VIA LINE 211
P
RFG FROM NA MIX DRUM
FUEL GAS TO REFORMING HEATER
EEEEEE
Group III


0517H2
Ack Page
Name
Eng U
Hide
9999.9
0517H2
Process
5PC473
9999.99 %
PC Output =
-5 %
105 %
Cooling
Heating
100%
Open
0%
A
B
0%
50%
100%
PC Output
PC Output
0 %
50 %
100 %
Release To Fuel Valve A
Open
Close
Close
SOCAL Gas Makeup Valve B
Close
Close
Open
HOLD 2
5PO473A
A
100%
5PO473B
B
100%
To NA Mix Drum
SOCAL Gas From SOCAL KO Pot
Reserved for Faceplates
NOTE:
A Valve Air To Close (FO)
B Valve Air To Open (FC)
5PC473
9999.99 W
9999.99
9999.99
5HS900
State
P
Stocker Gas Via Line 211
RFG From NA Mix Drum
Fuel Gas To Reforming Heater

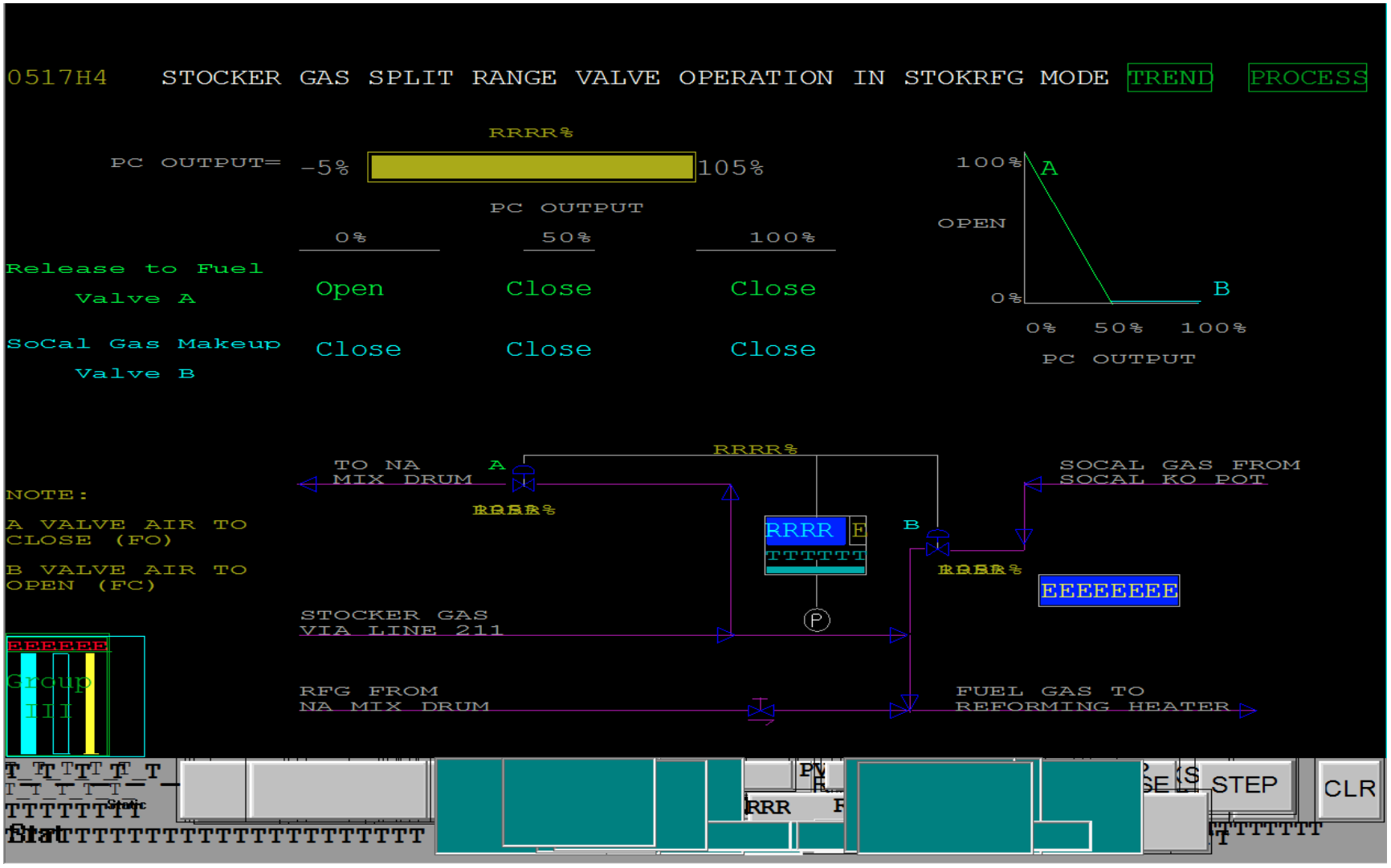
3.253 STOCKER GAS SPLIT RANGE VALVE OPERATION IN RFG MODE (0517H3.DS)

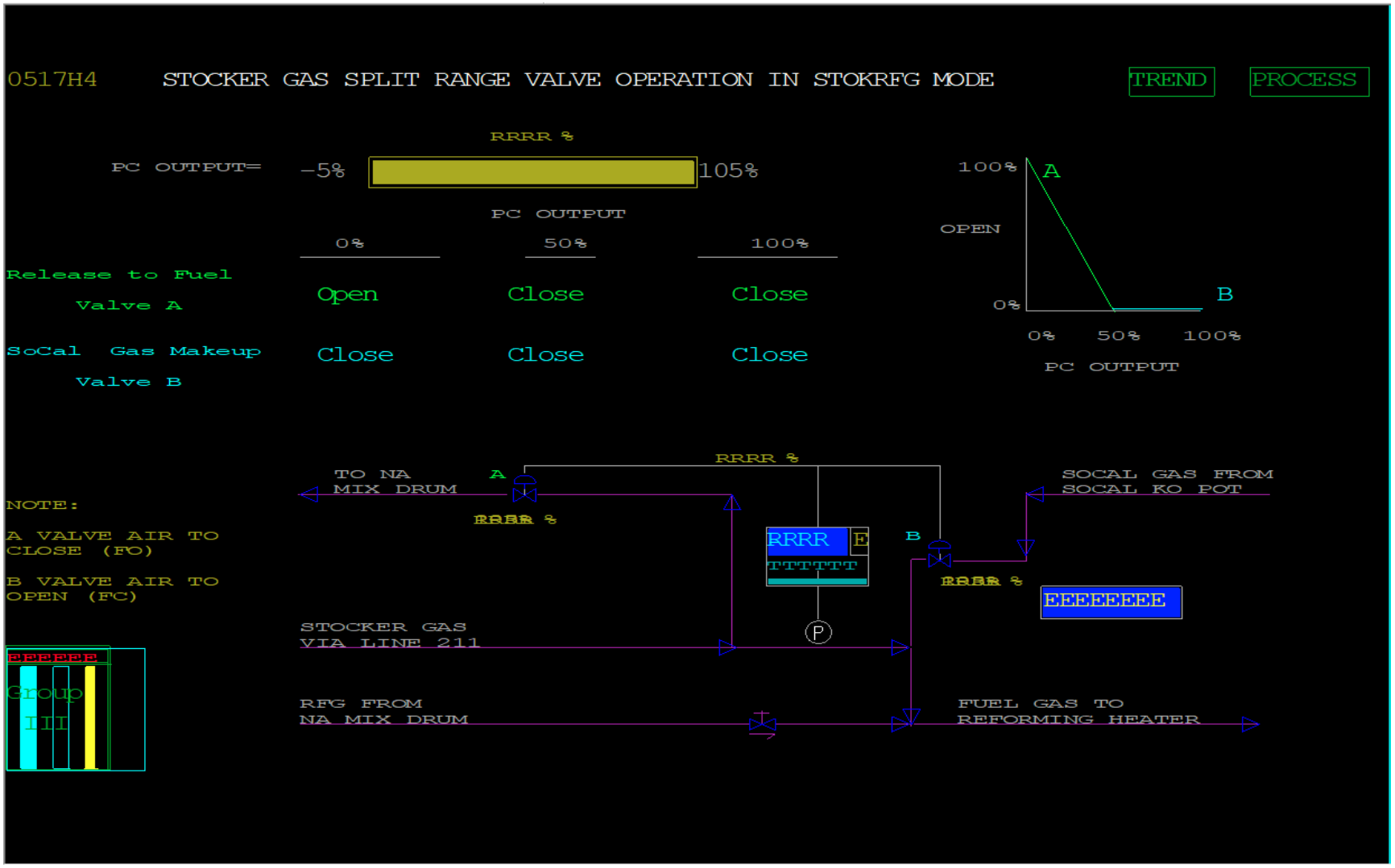


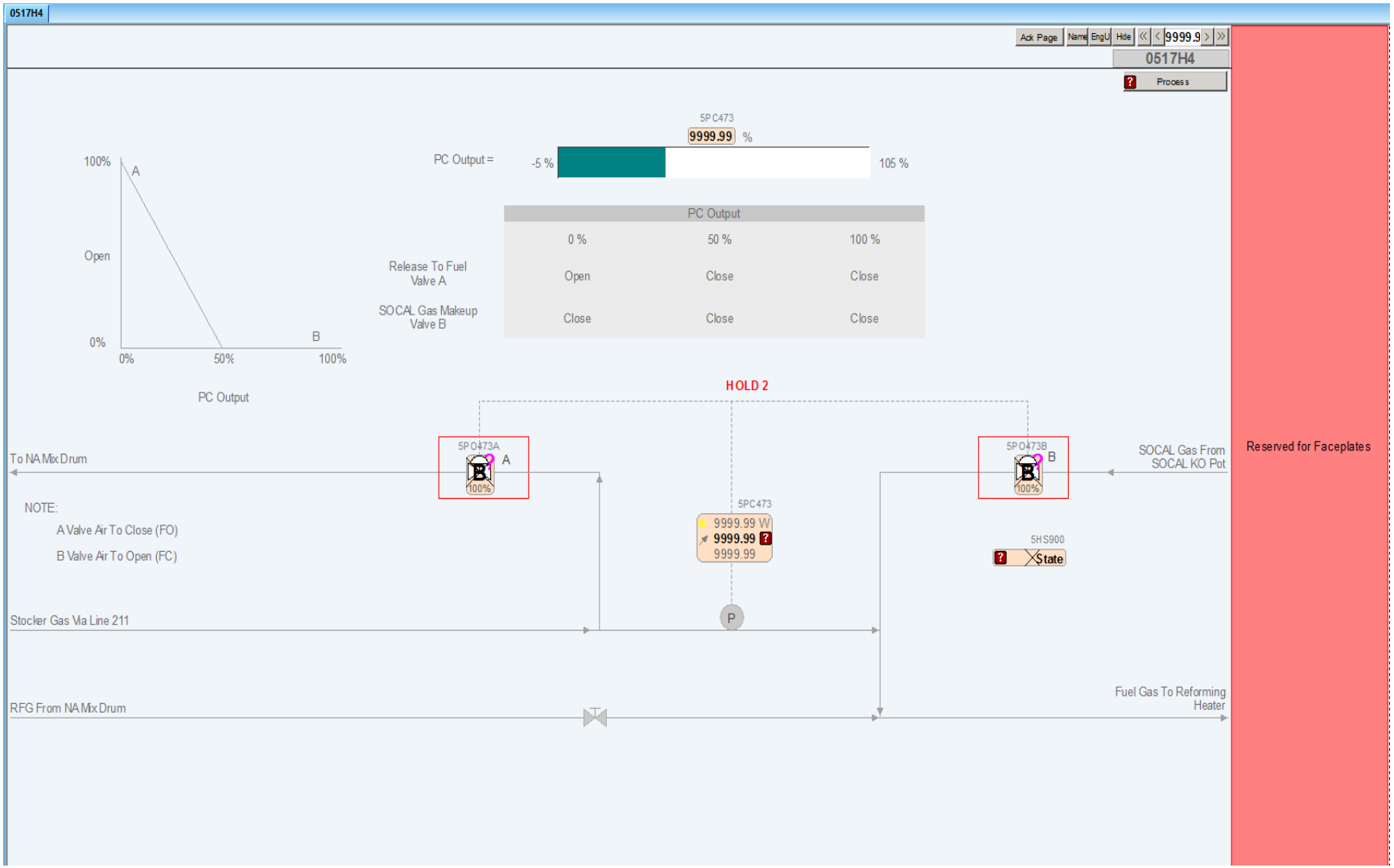

0517H3
STOCKER GAS SPLIT RANGE VALVE OPERATION IN RFG MODE
TREND
PROCESS
RRRR %
PC OUTPUT=
-5%
105%
PC OUTPUT
0%
50%
100%
Release to Fuel Valve A
Open
Close
Close
SoCal Gas Makeup Valve B
Close
Close
Close
100%
A
OPEN
0%
B
0%
50%
100%
PC OUTPUT
NOTE:
A VALVE AIR TO CLOSE (FO)
B VALVE AIR TO OPEN (FC)
TO NA MIX DRUM
A
RRRR %
RRRR
E
TTTTTT
B
SOCAL GAS FROM SOCAL KO POT
RRRR %
EEEEEEEE
STOCKER GAS VIA LINE 211
P
RFG FROM NA MIX DRUM
FUEL GAS TO REFORMING HEATER
EEEEEE
Group III


0517H3
Ack Page
Name
Eng U
Hide
9999.9
0517H3
Process
5PC473
9999.99 %
PC Output =
-5 %
105 %
100%
Open
0%
A
B
0%
50%
100%
PC Output
PC Output
0 %
50 %
100 %
Release To Fuel Valve A
Open
Close
Close
SOCAL Gas Makeup Valve B
Close
Close
Close
HOLD 2
5PO473A
A
100%
5PO473B
B
100%
To NA Mix Drum
SOCAL Gas From SOCAL KO Pot
NOTE:
A Valve Air To Close (FO)
B Valve Air To Open (FC)
5PC473
9999.99 W
9999.99
9999.99
5HS900
State
P
Stocker Gas Via Line 211
RFG From NA Mix Drum
Fuel Gas To Reforming Heater
Reserved for Faceplates

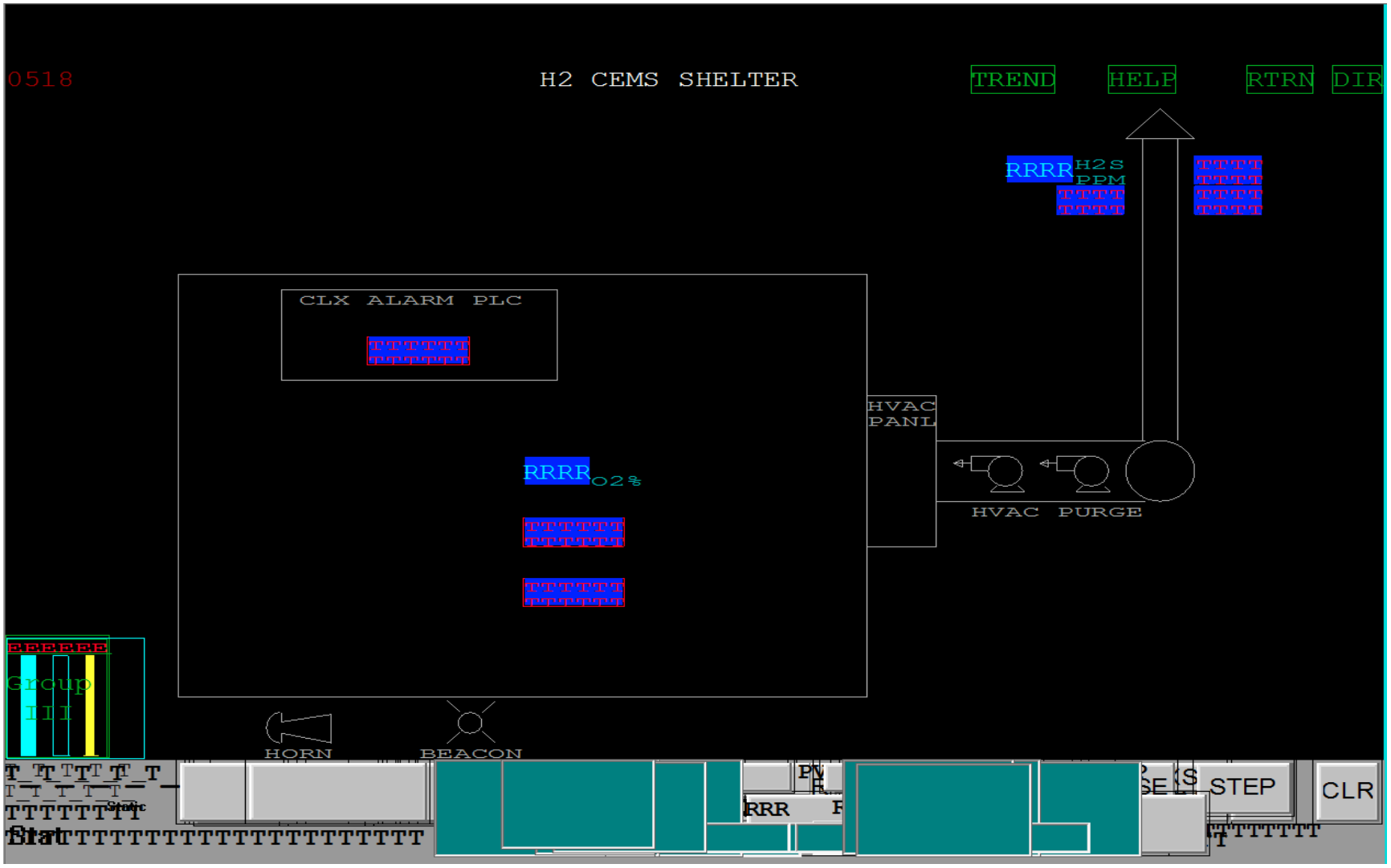
3.254 STOCKER GAS SPLIT RANGE VALVE OPERATION IN STOKRFG MODE (0517H4.DS)

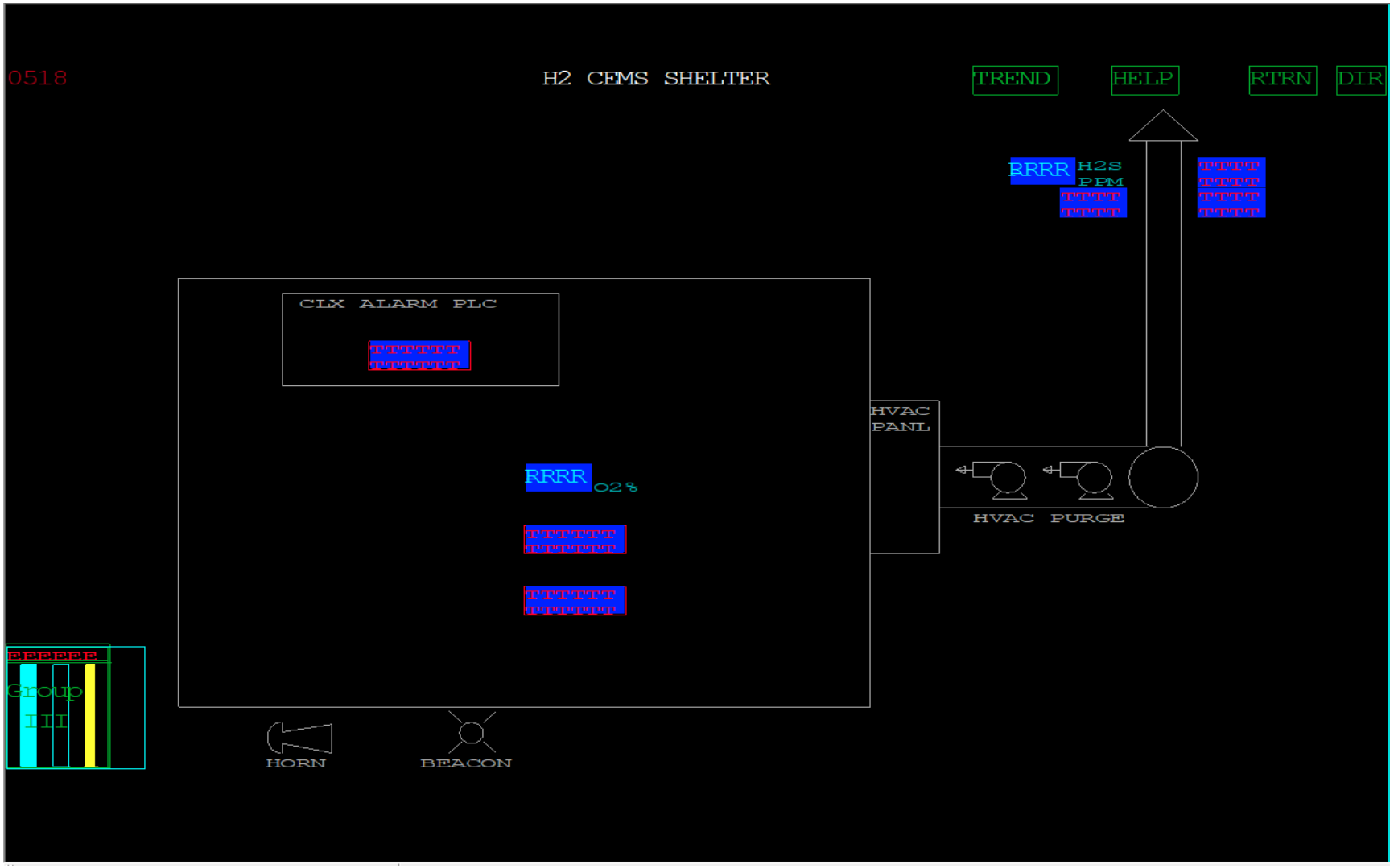


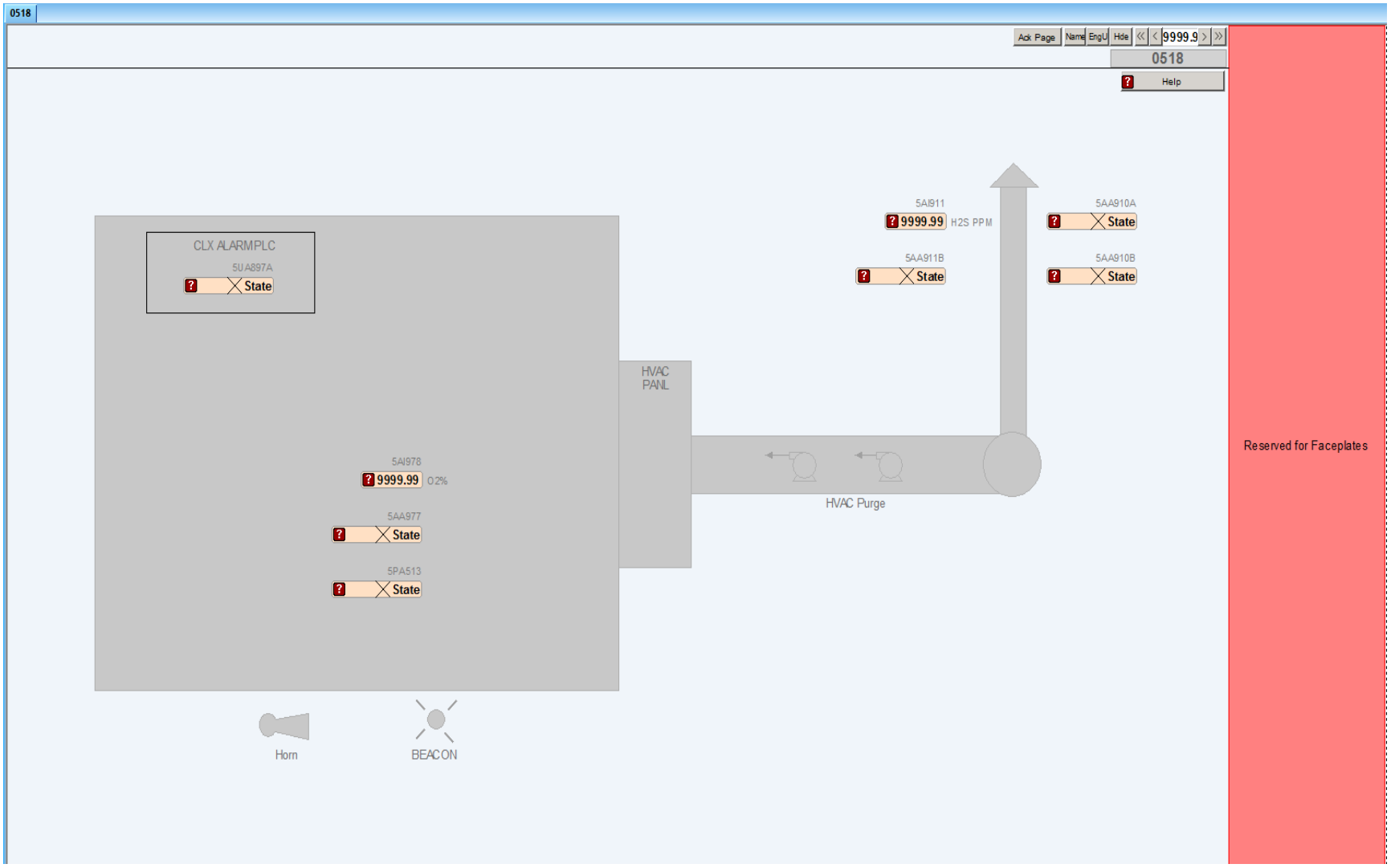

0517H4
STOCKER GAS SPLIT RANGE VALVE OPERATION IN STOKRFG MODE
TREND
PROCESS
RRRR %
PC OUTPUT=
-5%
105%
PC OUTPUT
0%
50%
100%
Release to Fuel Valve A
Open
Close
Close
SoCal Gas Makeup Valve B
Close
Close
Close
100%
A
OPEN
0%
B
0%
50%
100%
PC OUTPUT
NOTE:
A VALVE AIR TO CLOSE (FC)
B VALVE AIR TO OPEN (FO)
TO NA MIX DRUM
A
RRRR %
RRRR %
RRRR
E
TTTTTT
B
SOCAL GAS FROM SOCAL KO POT
RRRR %
EEEEEEEE
STOCKER GAS VIA LINE 211
P
RFG FROM NA MIX DRUM
FUEL GAS TO REFORMING HEATER
EEEEEE
Group III


0517H4
Ack Page
Name
EngU
Hide
9999.9
0517H4
Process
5PC473
9999.99 %
PC Output =
-5 %
105 %
100%
A
Open
0%
B
0%
50%
100%
PC Output
PC Output
0 %
50 %
100 %
Release To Fuel Valve A
Open
Close
Close
SOCAL Gas Makeup Valve B
Close
Close
Close
HOLD 2
5PO473A
A
100%
5PO473B
B
100%
To NA Mix Drum
SOCAL Gas From SOCAL KO Pot
NOTE:
A Valve Air To Close (FO)
B Valve Air To Open (FC)
5PC473
9999.99 W
9999.99
9999.99
5HS900
State
P
Stocker Gas Via Line 211
RFG From NA Mix Drum
Fuel Gas To Reforming Heater
Reserved for Faceplates

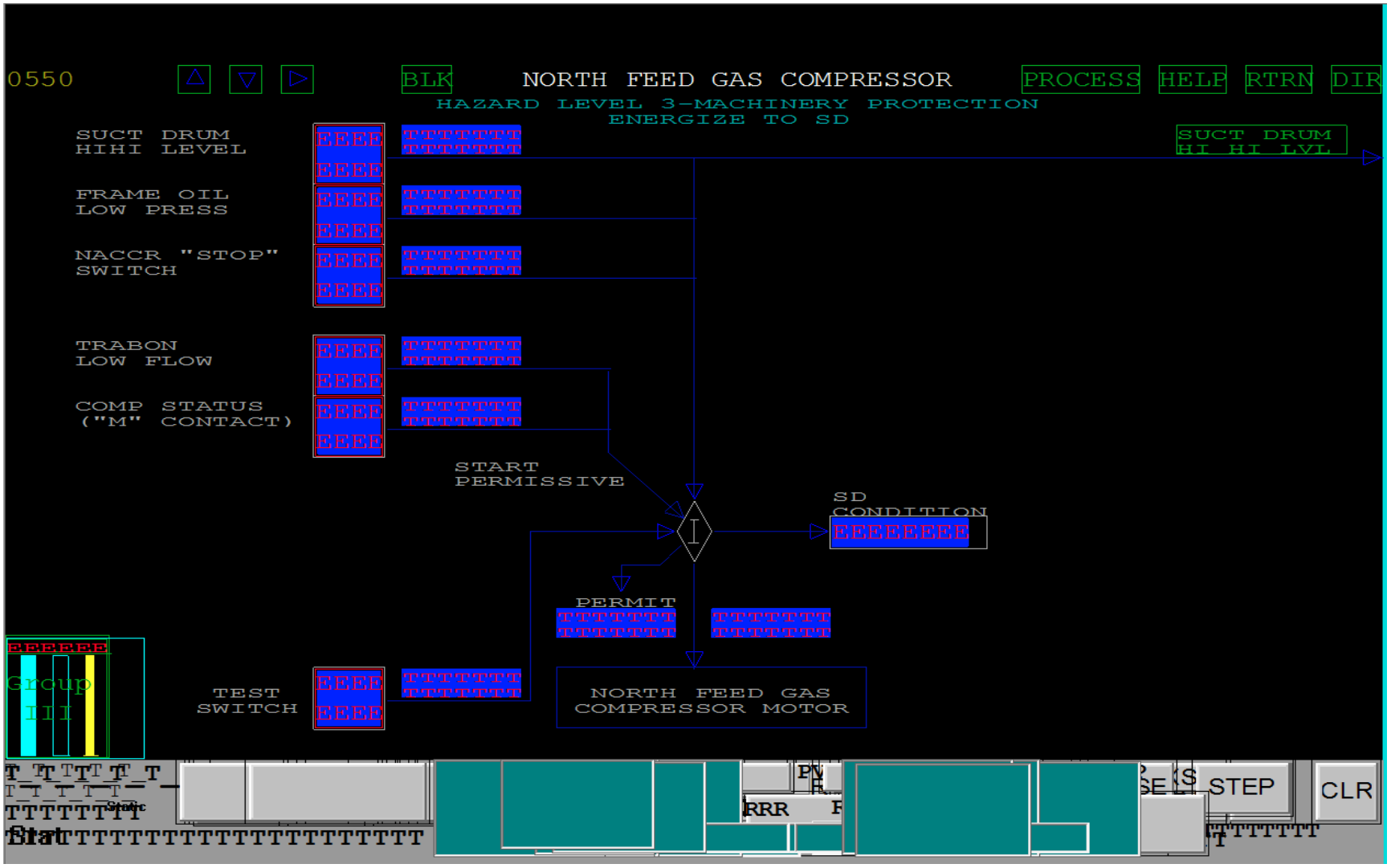
3.255 H2 CEMS SHELTER (0518.DS)

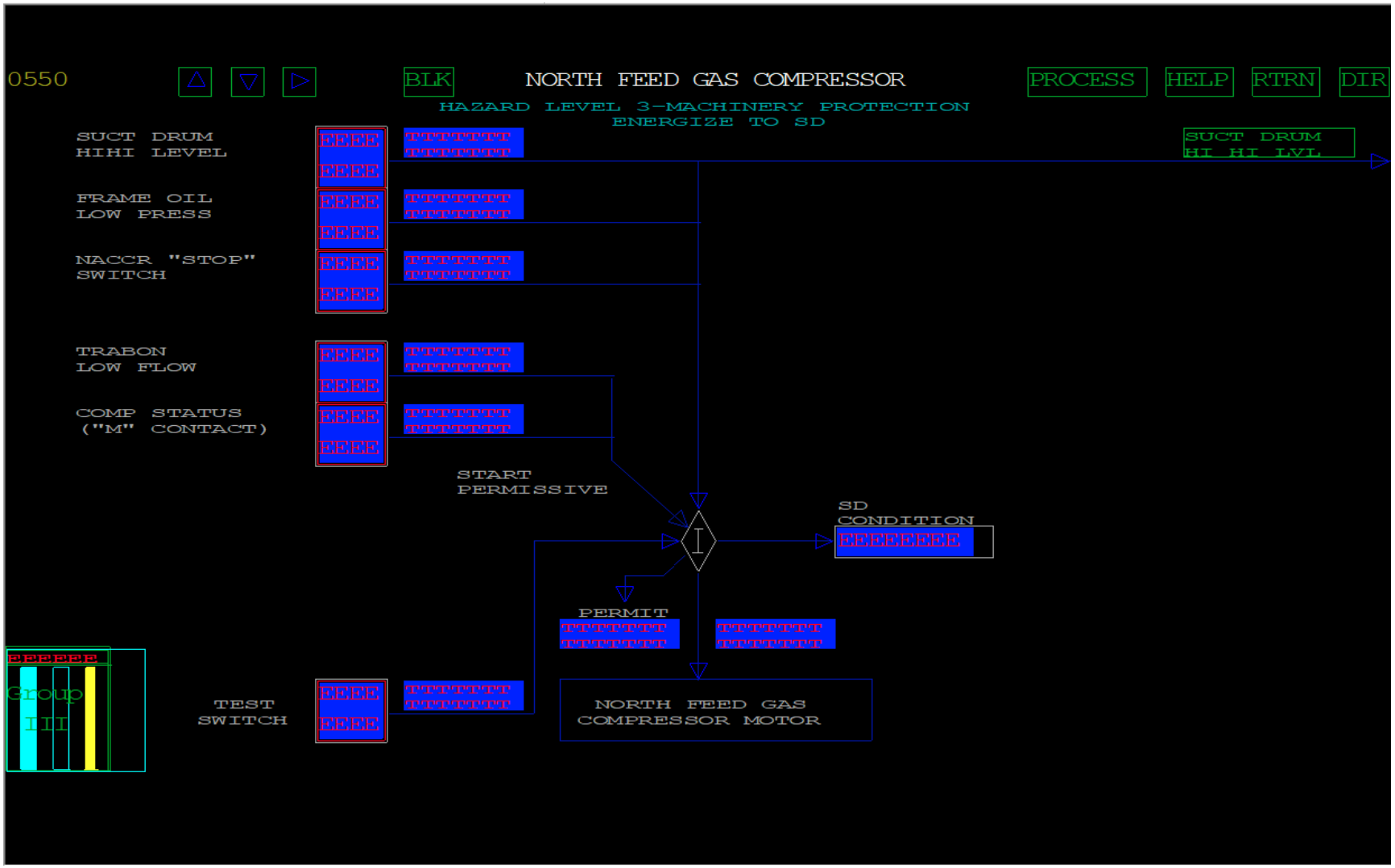


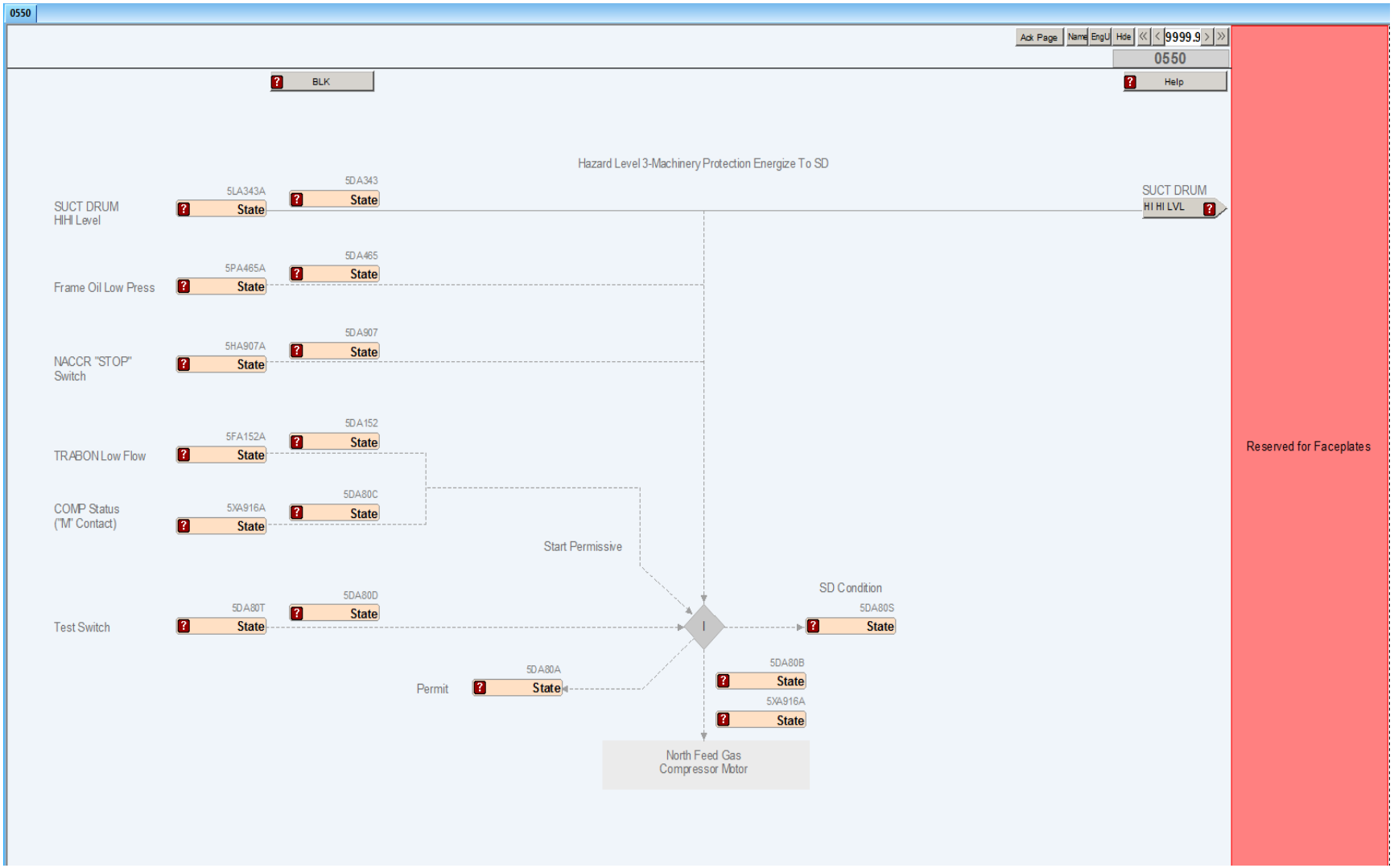

0518
H2 CEMS SHELTER
TREND
HELP
RTRN
DIR
RRRR
H2S
PPM
CLX ALARM PLC
HVAC
PANL
RRRR
O2%
HVAC PURGE
Group
III
HORN
BEACON


0518
Ack Page
Name
EngU
Hide
9999.9
0518
Help
CLX ALARMPLC
5UA897A
State
5AI911
9999.99
H2S PPM
5AA911B
State
5AA910A
State
5AA910B
State
HVAC
PANL
5AI978
9999.99
O2%
5AA977
State
5PA513
State
HVAC Purge
Horn
BEACON
Reserved for Faceplates

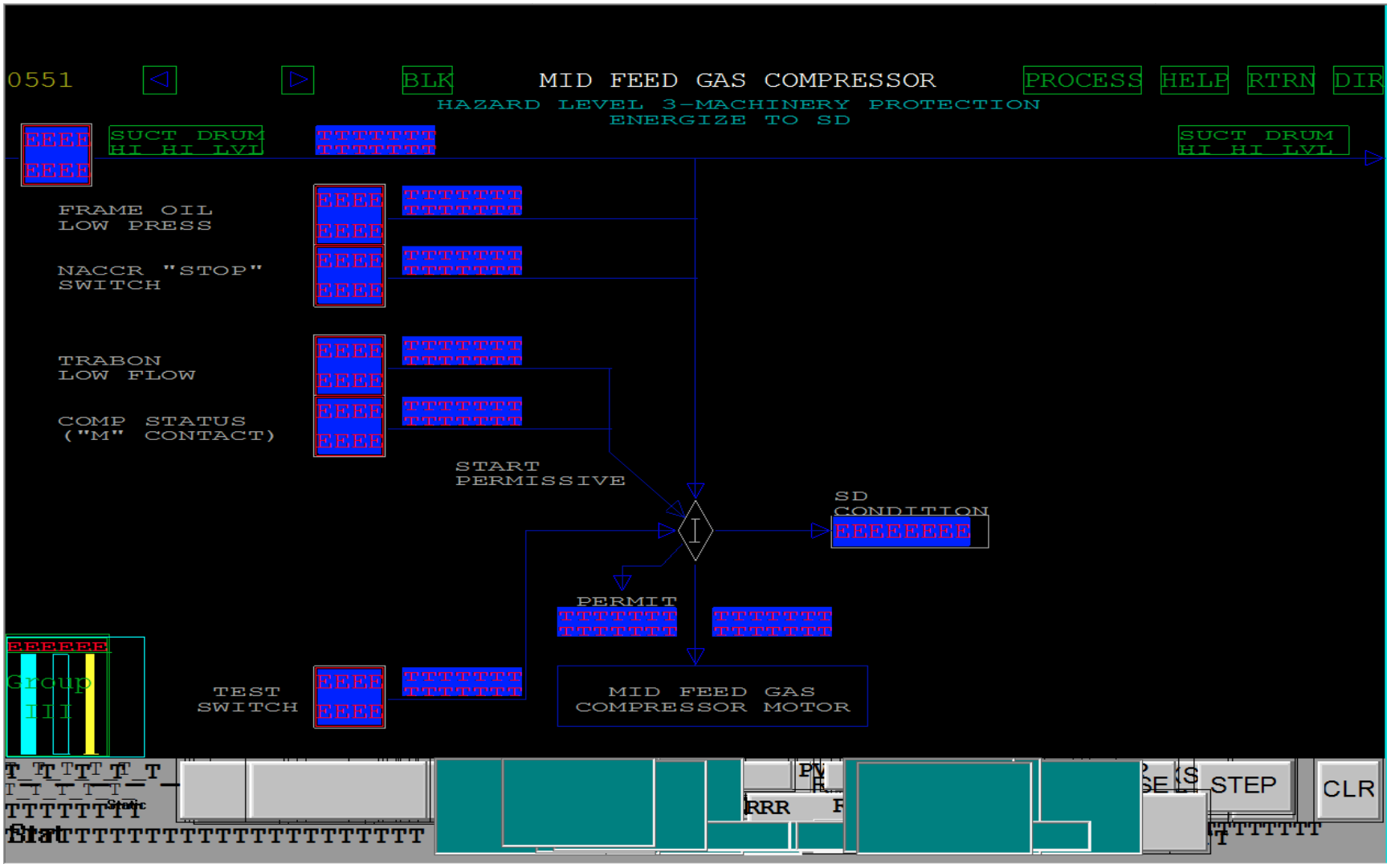
3.256 NORTH FEED GAS COMPRESSOR (0550.DS)

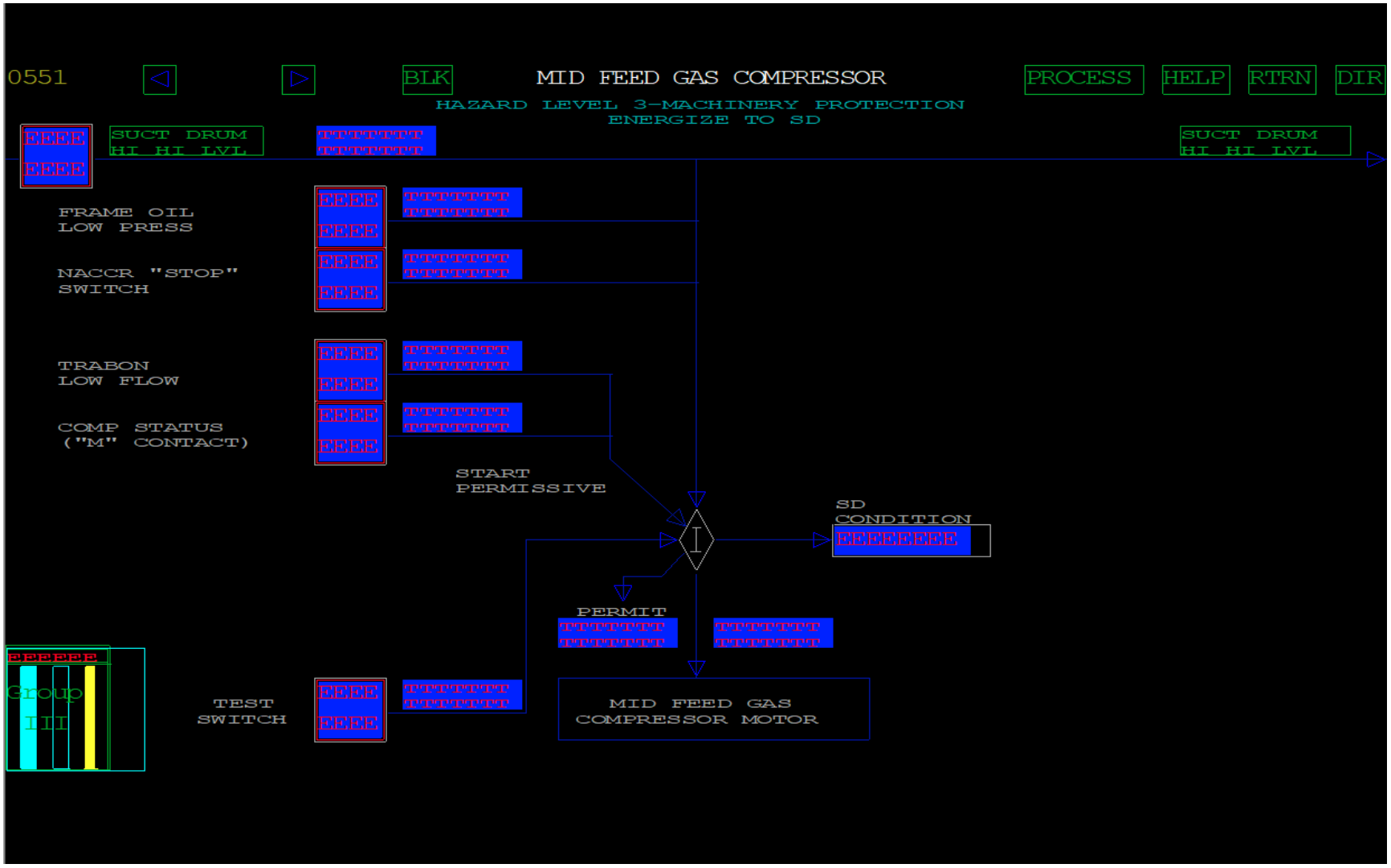


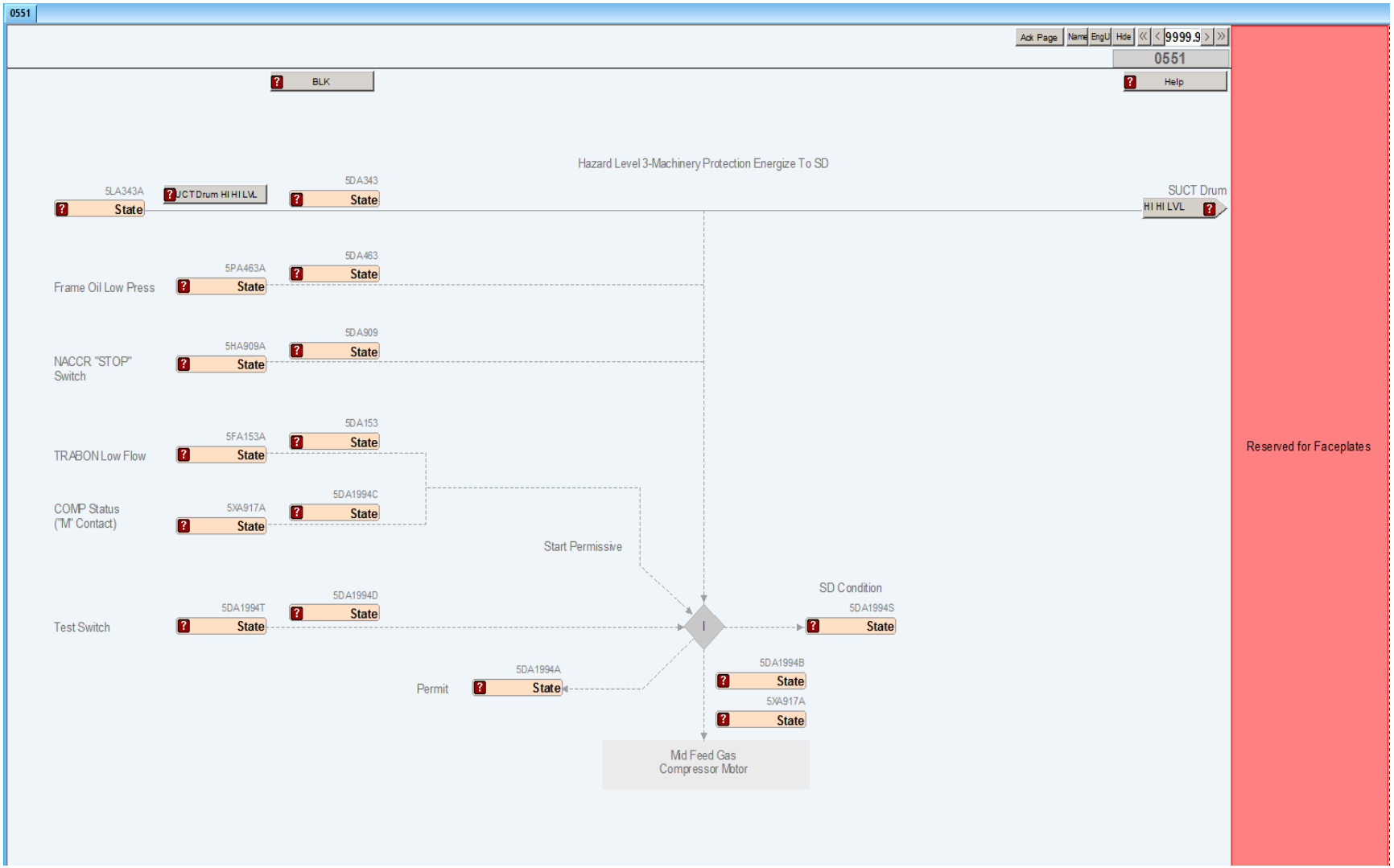

0550
BLK
NORTH FEED GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
HAZARD LEVEL 3-MACHINERY PROTECTION
ENERGIZE TO SD
SUCT DRUM
HIHI LEVEL
FRAME OIL
LOW PRESS
NACCR "STOP"
SWITCH
TRABON
LOW FLOW
COMP STATUS
("M" CONTACT)
SUCT DRUM
HI HI LVL
START
PERMISSIVE
SD
CONDITION
PERMIT
Group
III
TEST
SWITCH
NORTH FEED GAS
COMPRESSOR MOTOR


0550
Ack Page
Name
Eng'U
Hide
9999.9
0550
BLK
Help
Hazard Level 3-Machinery Protection Energize To SD
SUCT DRUM HIHI Level
5LA343A
State
5DA343
State
SUCT DRUM
HI HI LVL
Frame Oil Low Press
5PA465A
State
5DA465
State
NACCR "STOP" Switch
5HA907A
State
5DA907
State
TRABON Low Flow
5FA152A
State
5DA152
State
COMP Status ("M" Contact)
5XA916A
State
5DA80C
State
Start Permissive
Test Switch
5DA80T
State
5DA80D
State
SD Condition
5DA80S
State
Permit
5DA80A
State
5DA80B
State
5XA916A
State
North Feed Gas Compressor Motor
Reserved for Faceplates

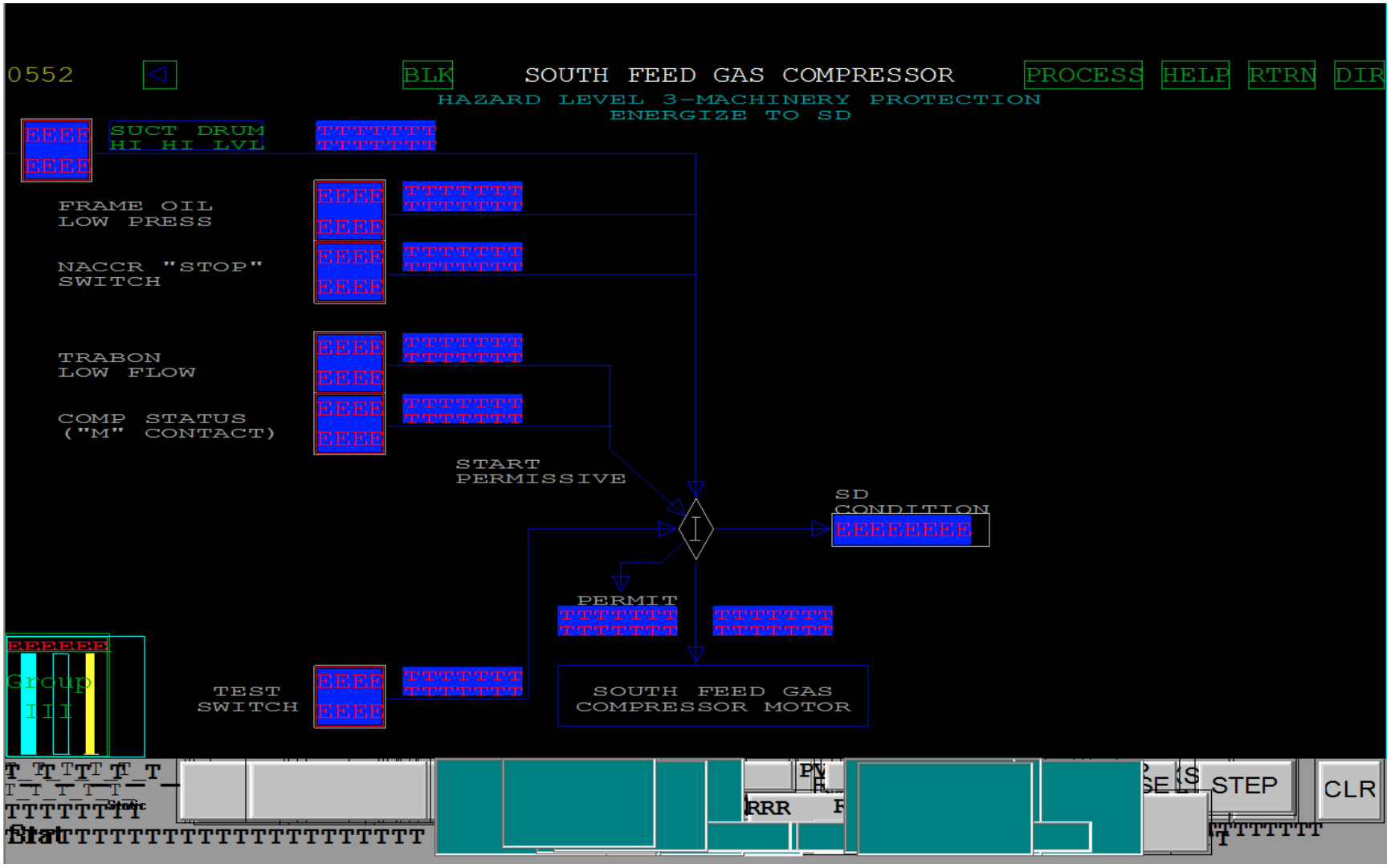
3.257 MID FEED GAS COMPRESSOR (0551.DS)

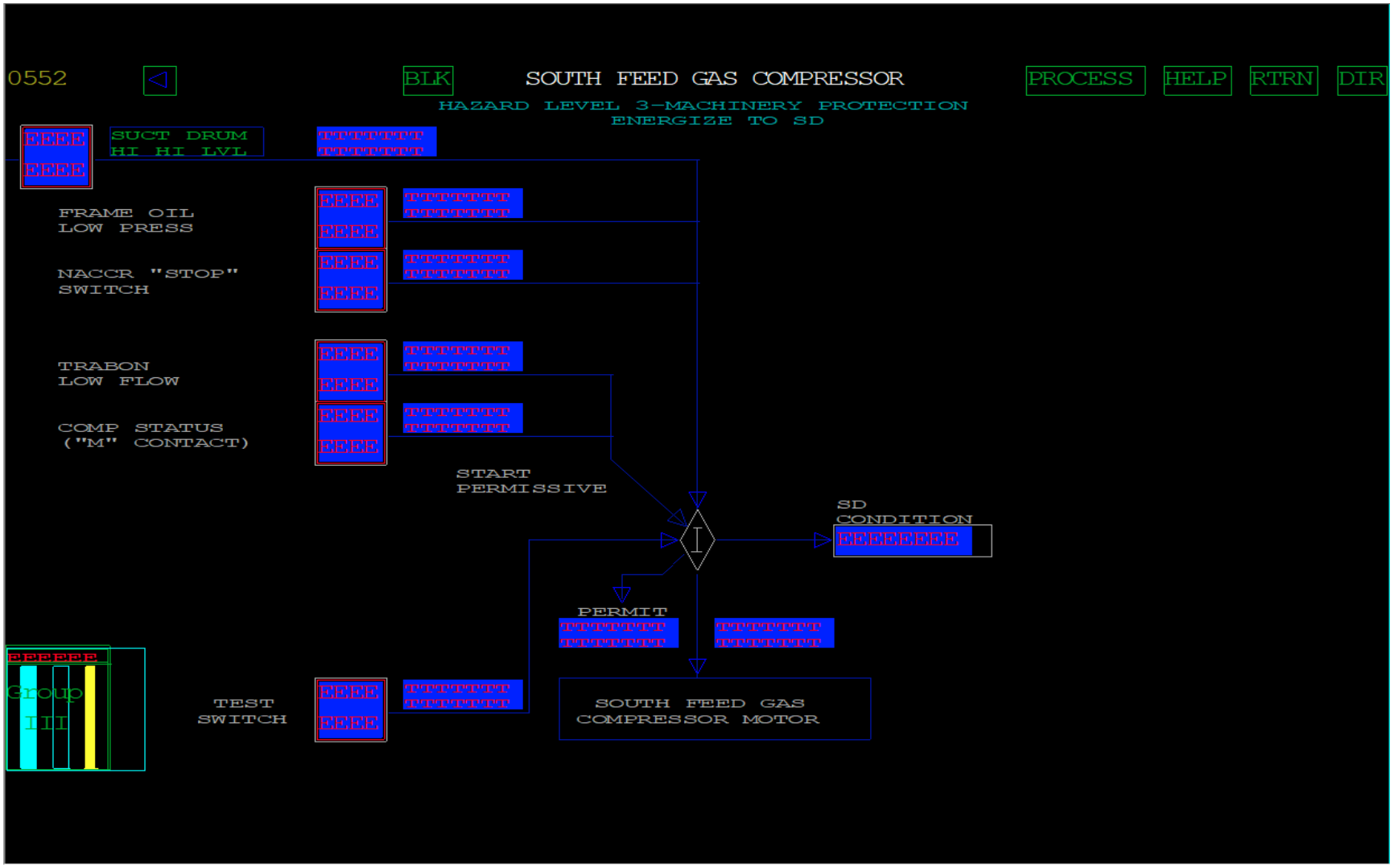


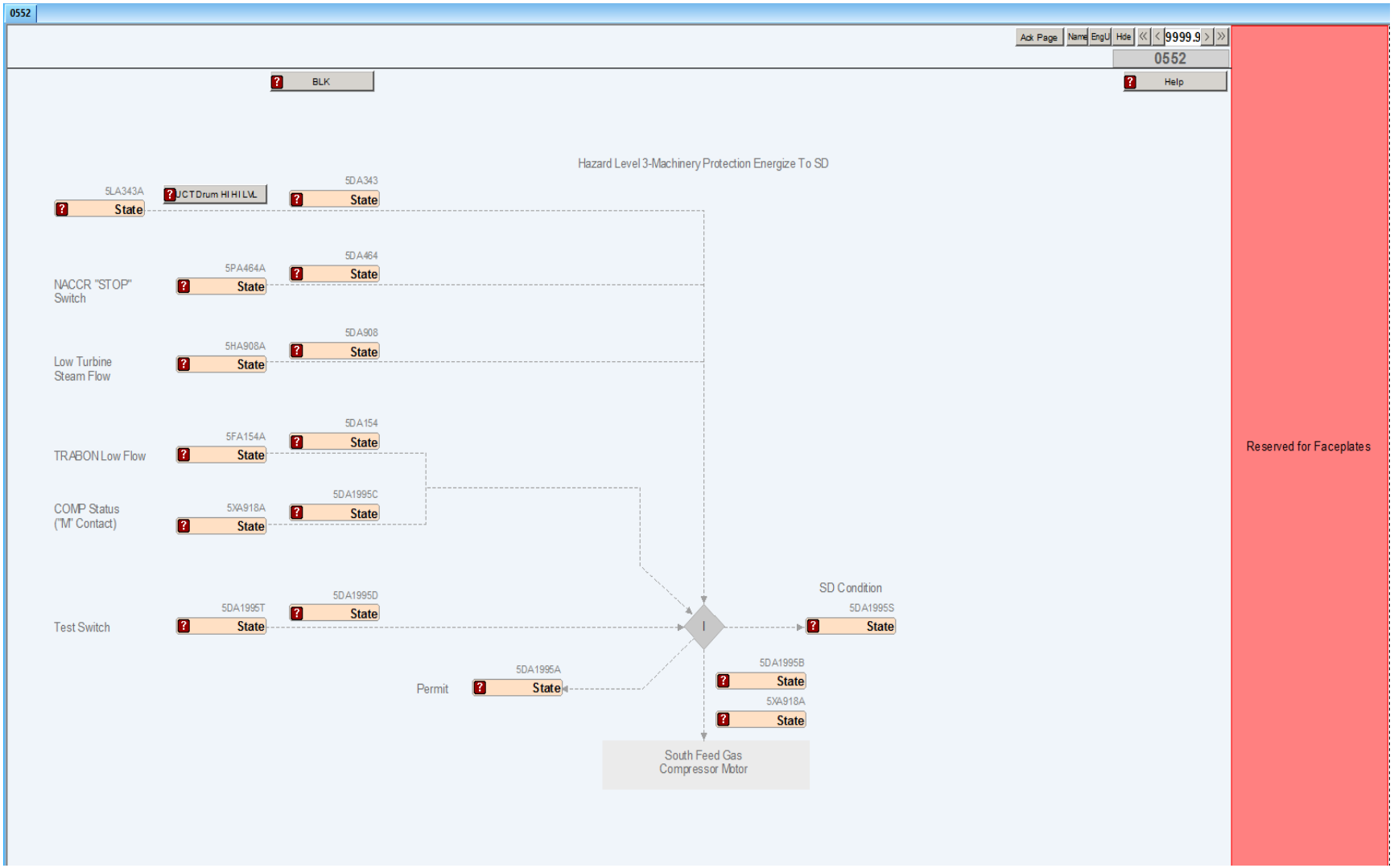

0551
BLK
MID FEED GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
HAZARD LEVEL 3-MACHINERY PROTECTION
ENERGIZE TO SD
SUCT DRUM
HI HI LVL
SUCT DRUM
HI HI LVL
FRAME OIL
LOW PRESS
NACCR "STOP"
SWITCH
TRABON
LOW FLOW
COMP STATUS
("M" CONTACT)
START
PERMISSIVE
SD
CONDITION
PERMIT
Group
III
TEST
SWITCH
MID FEED GAS
COMPRESSOR MOTOR


0551
Ack Page
Name
EngU
Hide
9999.9
0551
BLK
Help
Hazard Level 3-Machinery Protection Energize To SD
5LA343A
State
SUCT Drum HI HI LVL
5DA343
State
SUCT Drum
HI HI LVL
Frame Oil Low Press
5PA463A
State
5DA463
State
NACCR "STOP" Switch
5HA909A
State
5DA909
State
TRABON Low Flow
5FA153A
State
5DA153
State
COMP Status ("M" Contact)
5XA917A
State
5DA1994C
State
Start Permissive
Test Switch
5DA1994T
State
5DA1994D
State
SD Condition
5DA1994S
State
Permit
5DA1994A
State
5DA1994B
State
5XA917A
State
Mid Feed Gas Compressor Motor
Reserved for Faceplates

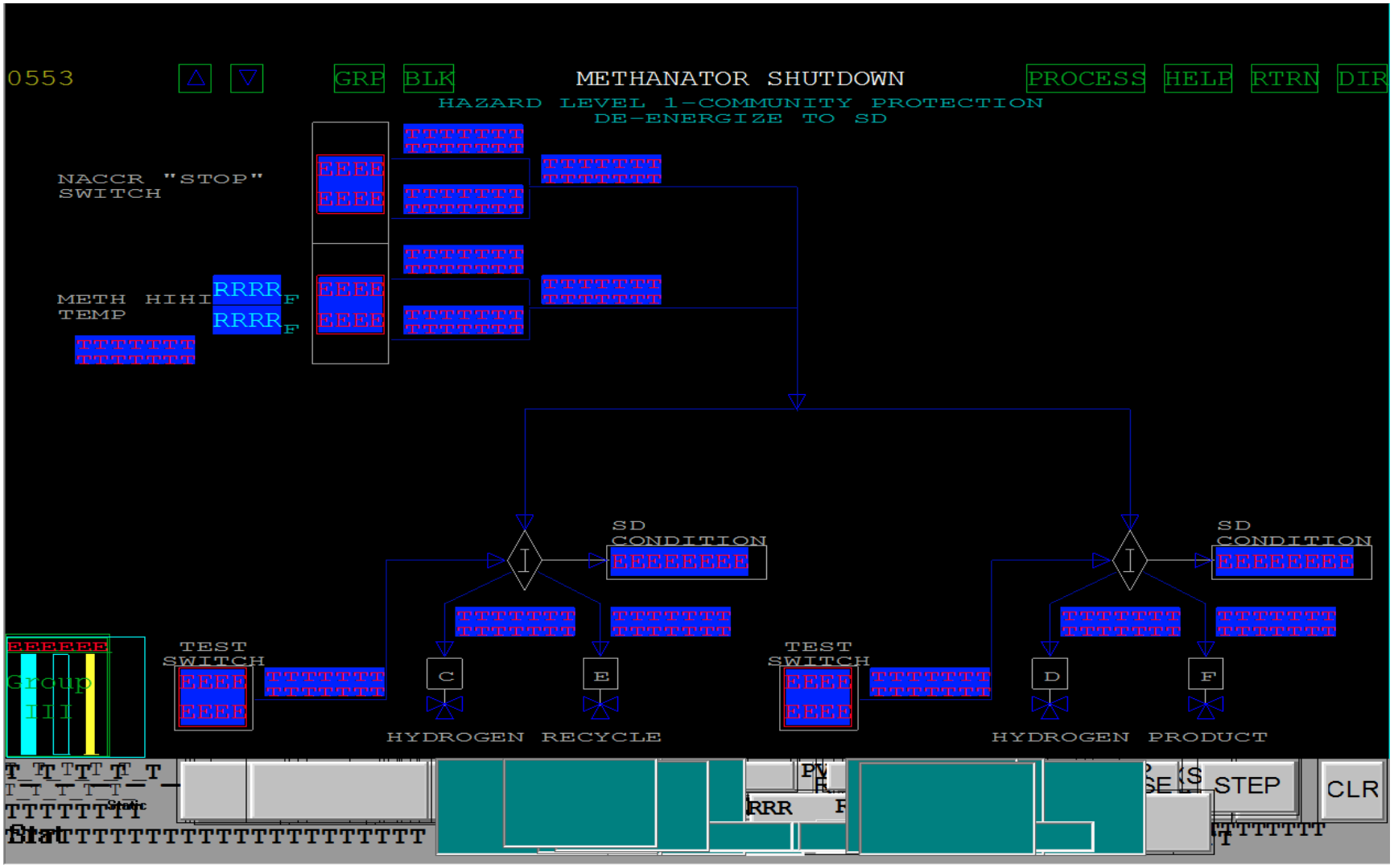
3.258 SOUTH FEED GAS COMPRESSOR (0552.DS)

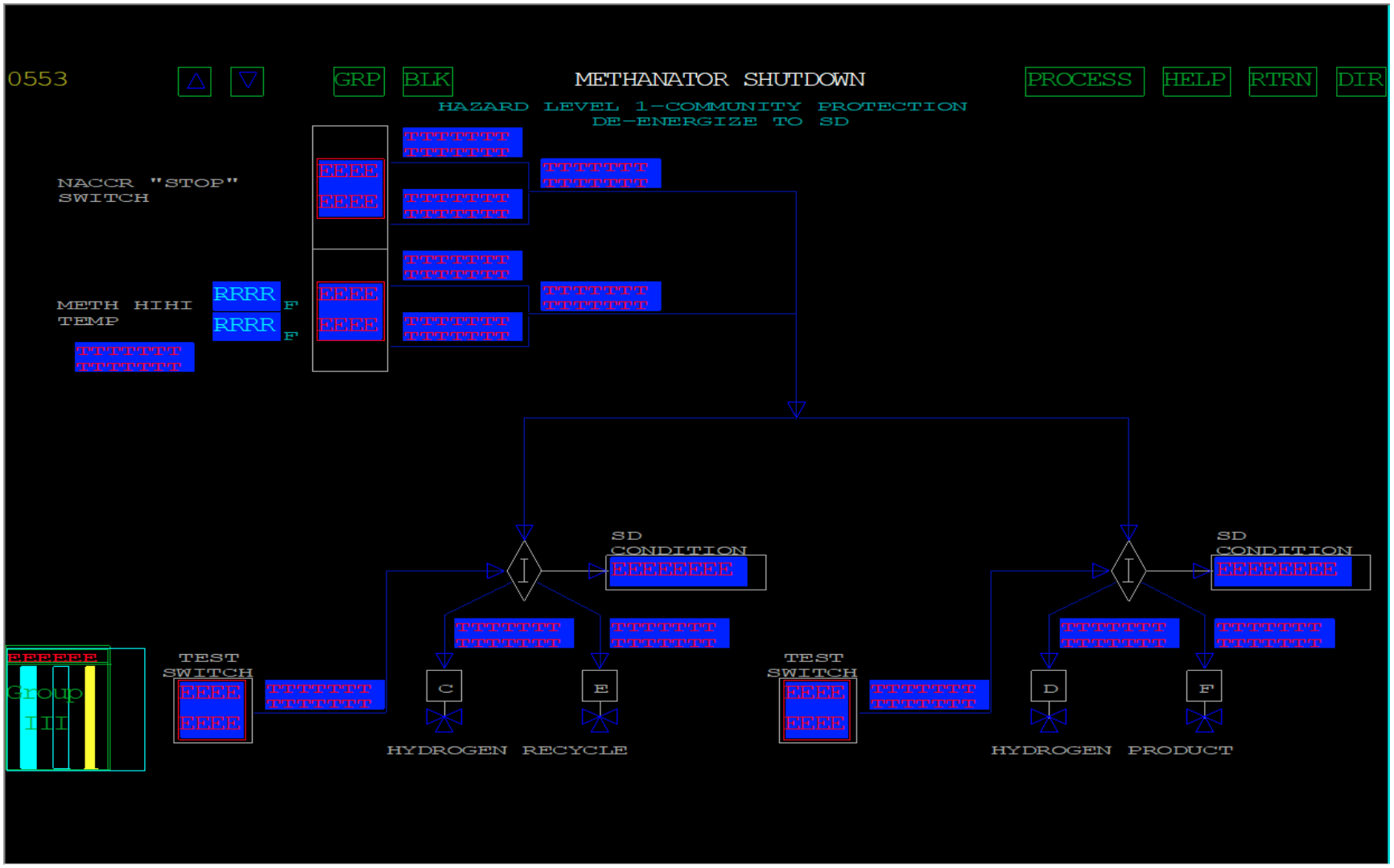


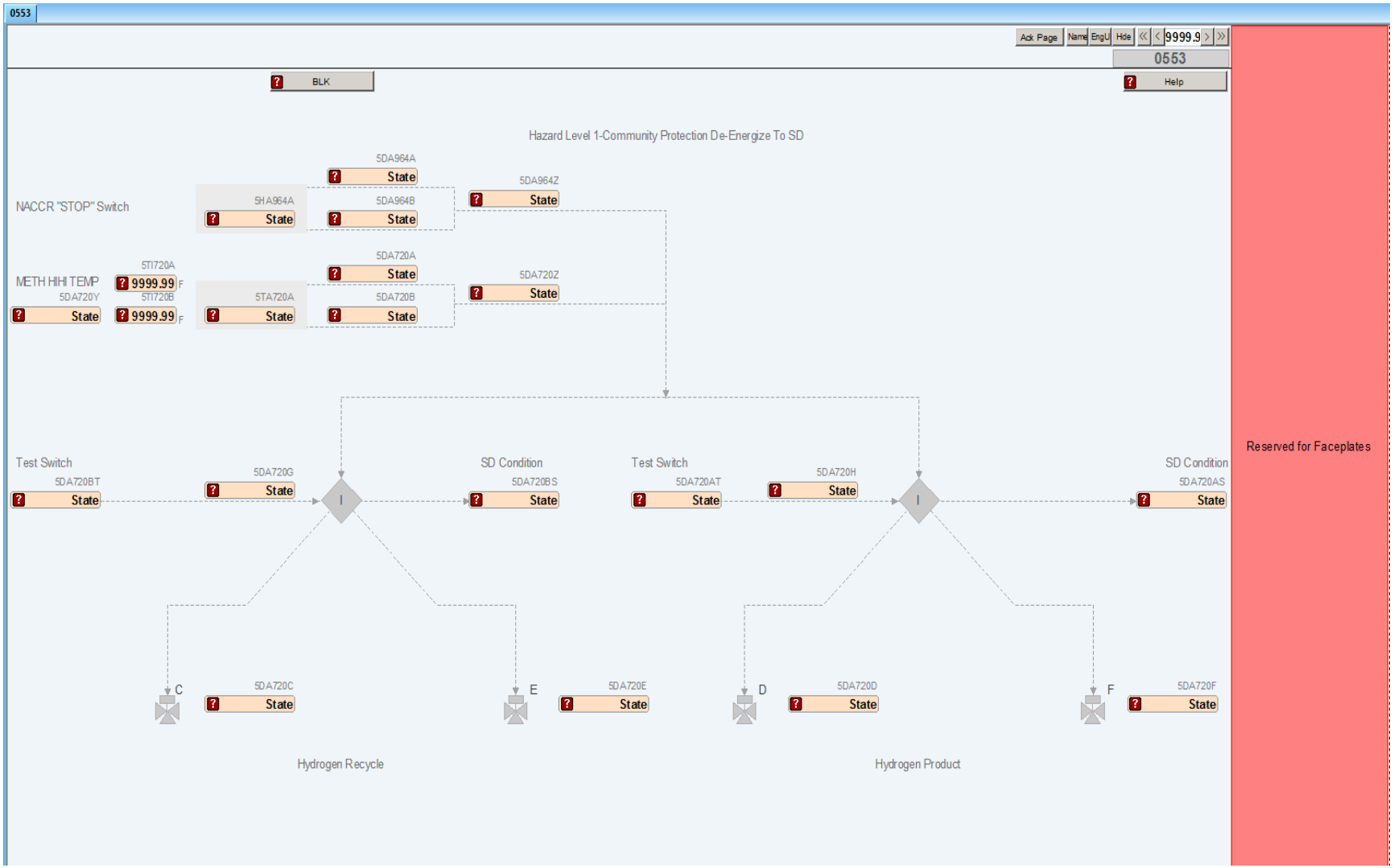

0552
BLK
SOUTH FEED GAS COMPRESSOR
PROCESS
HELP
RTRN
DIR
HAZARD LEVEL 3-MACHINERY PROTECTION
ENERGIZE TO SD
EEEE
EEEE
SUCT DRUM
HI HI LVL
TTTTTTT
TTTTTTT
FRAME OIL
LOW PRESS
NACCR "STOP"
SWITCH
TRABON
LOW FLOW
COMP STATUS
("M" CONTACT)
START
PERMISSIVE
SD
CONDITION
EEEEEEEE
PERMIT
TEST
SWITCH
SOUTH FEED GAS
COMPRESSOR MOTOR
Group
III


0552
Ack Page
Name
EngU
Hide
9999.9
0552
BLK
Help
Hazard Level 3-Machinery Protection Energize To SD
5LA343A
State
UCT Drum HI HI LVL
5DA343
State
NACCR "STOP" Switch
5PA464A
State
5DA464
State
Low Turbine Steam Flow
5HA908A
State
5DA908
State
TRABON Low Flow
5FA154A
State
5DA154
State
COMP Status ("M" Contact)
5XA918A
State
5DA1995C
State
Test Switch
5DA1995T
State
5DA1995D
State
SD Condition
5DA1995S
State
Permit
5DA1995A
State
5DA1995B
State
5XA918A
State
South Feed Gas Compressor Motor
Reserved for Faceplates

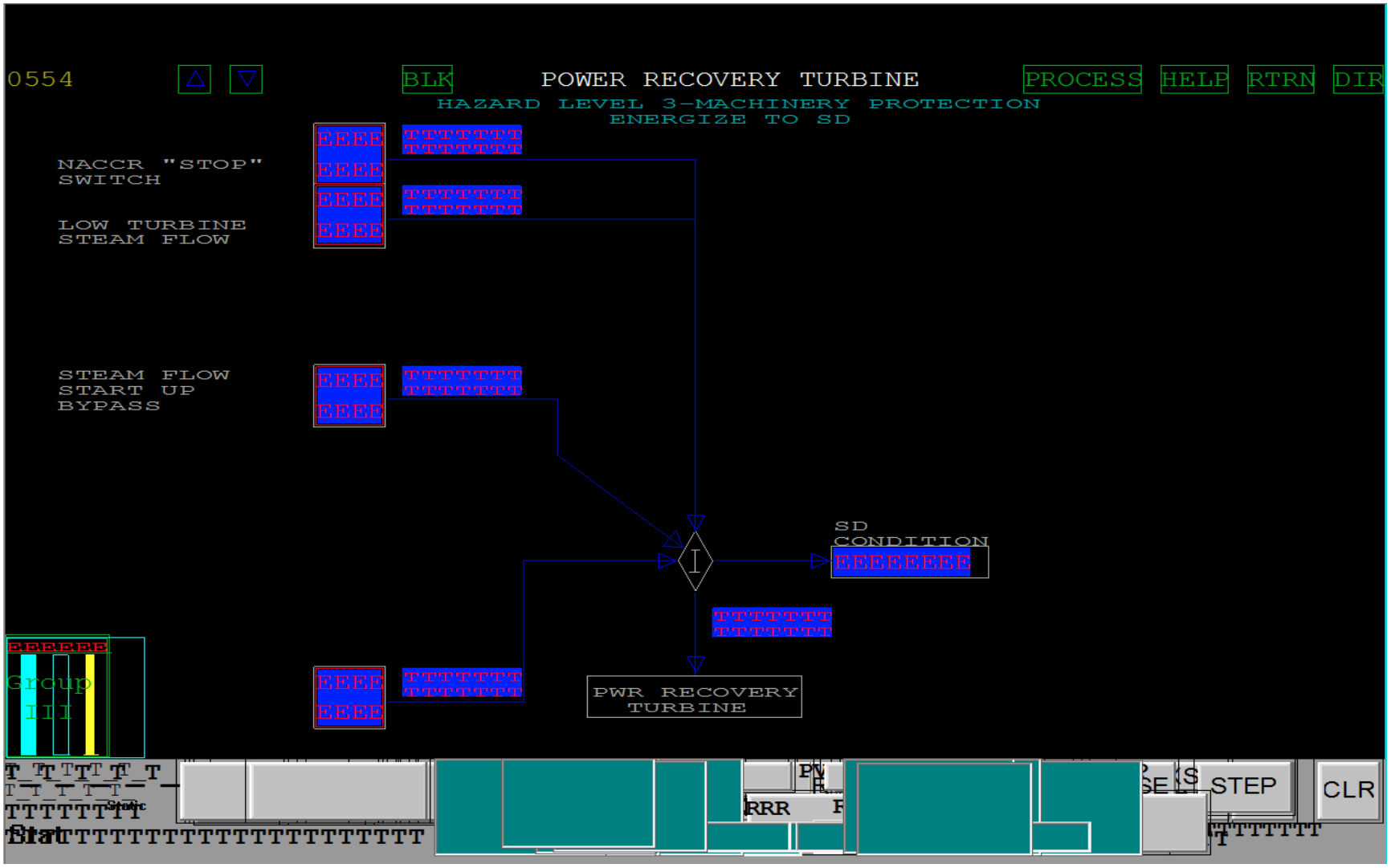
3.259 METHANATOR SHUTDOWN (0553.DS)

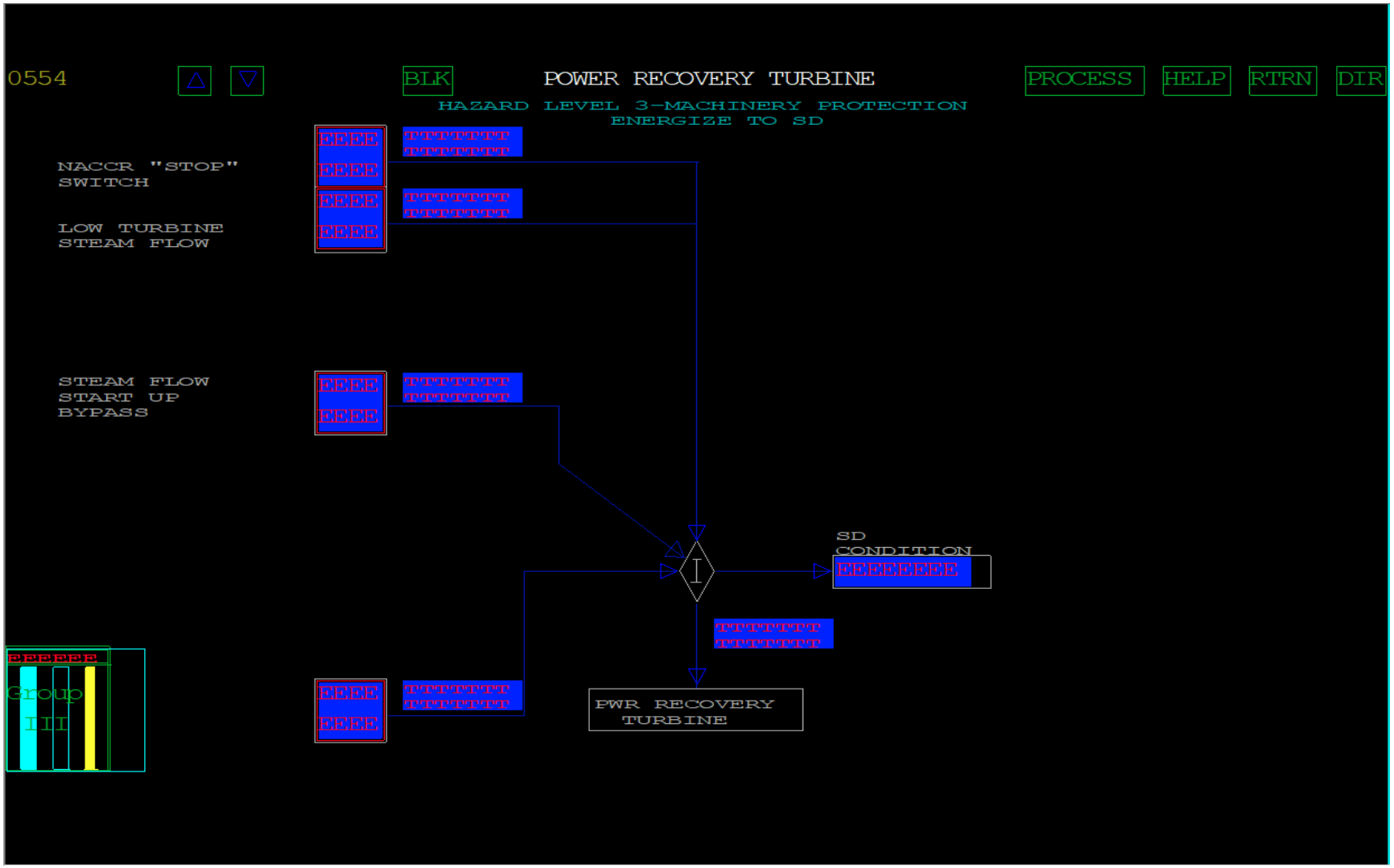


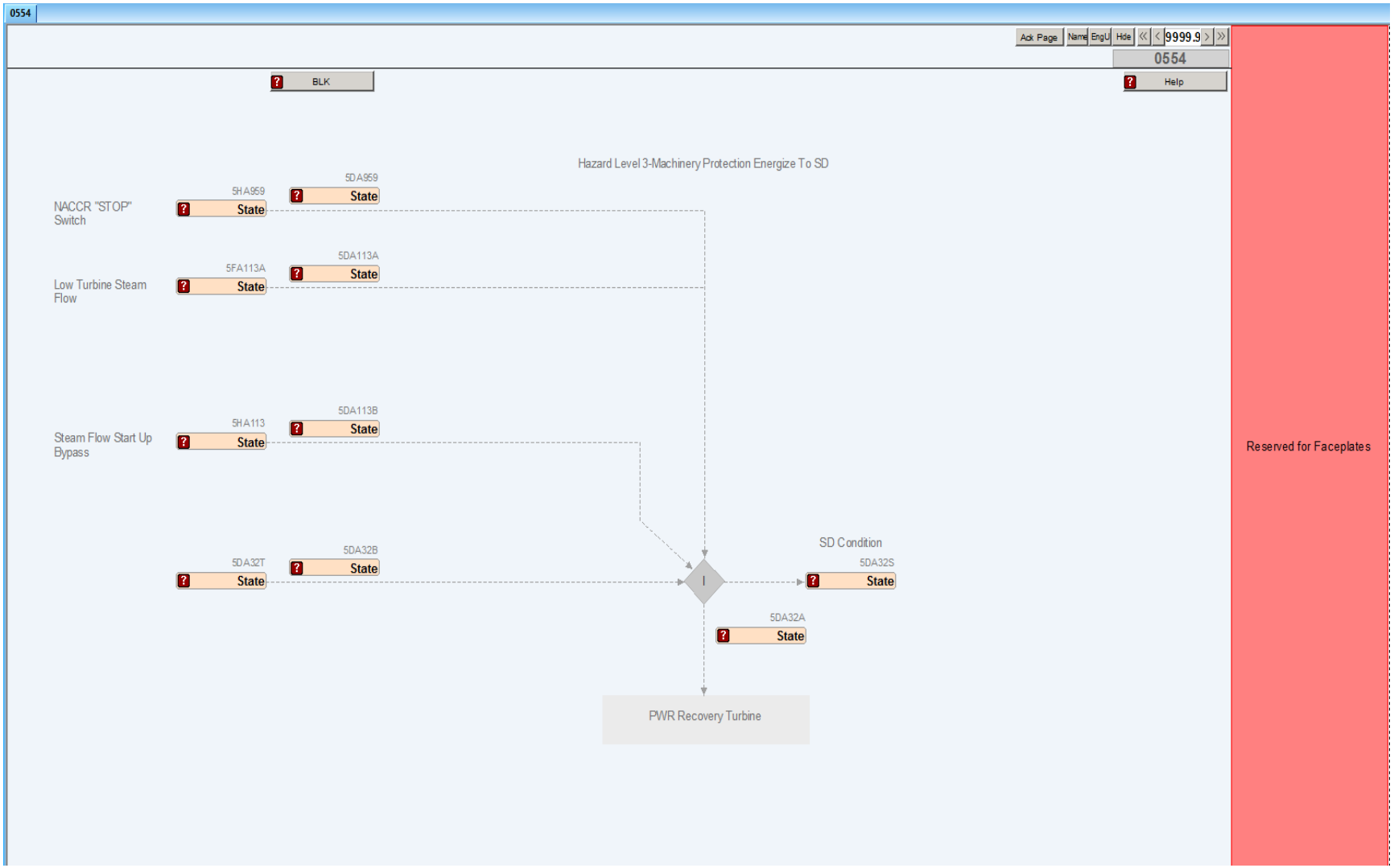

0553
GRP
BLK
METHANATOR SHUTDOWN
PROCESS
HELP
RTRN
DIR
HAZARD LEVEL 1-COMMUNITY PROTECTION
DE-ENERGIZE TO SD
NACCR "STOP" SWITCH
METH HIHI TEMP
SD CONDITION
SD CONDITION
TEST SWITCH
TEST SWITCH
Group III
C
E
D
F
HYDROGEN RECYCLE
HYDROGEN PRODUCT


0553
Ack Page
Name
EngU
Hide
9999.9
0553
BLK
Help
Hazard Level 1-Community Protection De-Energize To SD
5DA964A
State
NACCR "STOP" Switch
5HA964A
State
5DA964B
State
5DA964Z
State
5DA720A
State
METH HIHI TEMP
5TI720A
9999.99 F
5DA720Y
State
5TI720B
9999.99 F
5TA720A
State
5DA720B
State
5DA720Z
State
Test Switch
5DA720BT
State
5DA720G
State
SD Condition
5DA720BS
State
Test Switch
5DA720AT
State
5DA720H
State
SD Condition
5DA720AS
State
Reserved for Faceplates
C
5DA720C
State
E
5DA720E
State
D
5DA720D
State
F
5DA720F
State
Hydrogen Recycle
Hydrogen Product

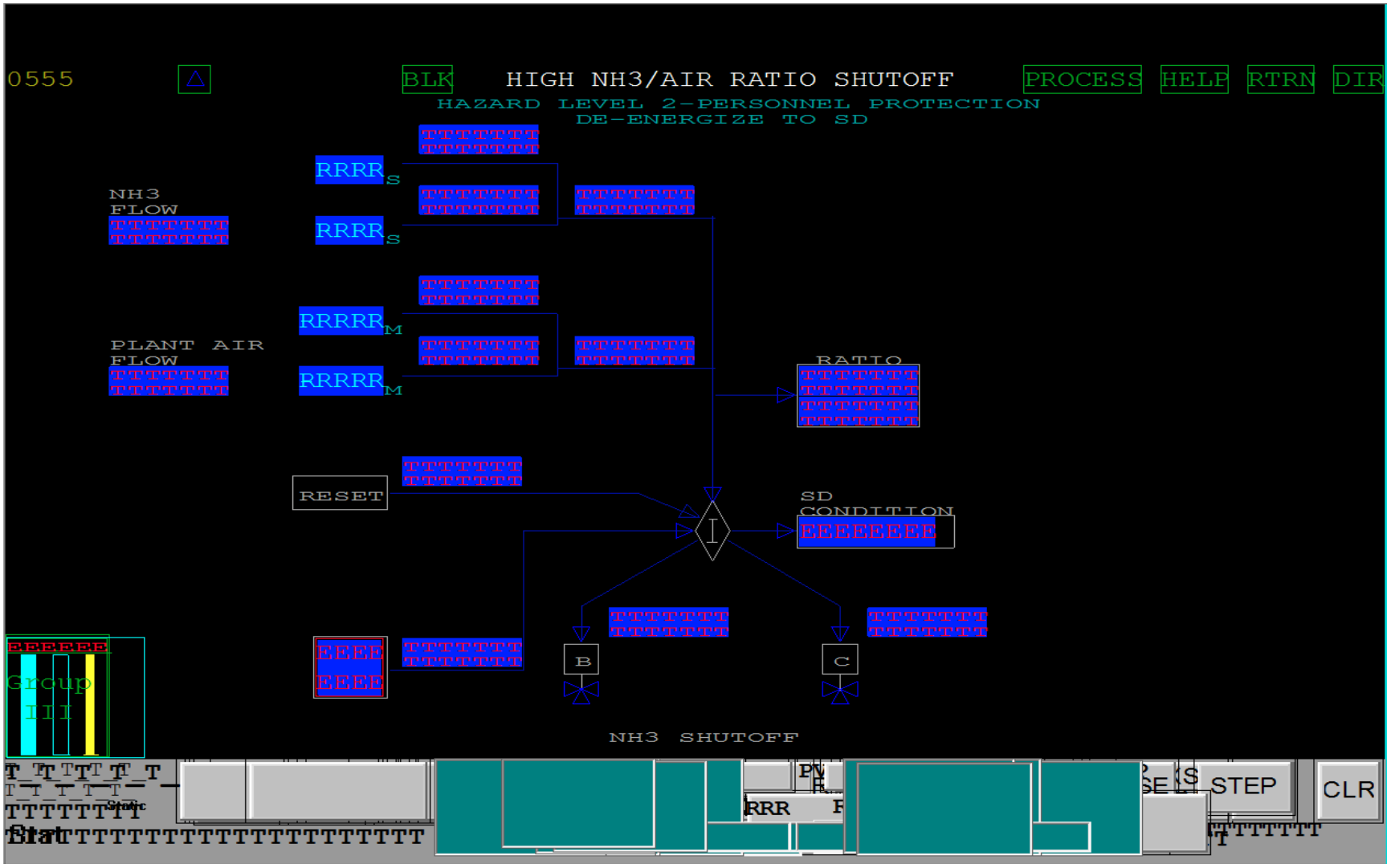
3.260 POWER RECOVERY TURBINE (0554.DS)

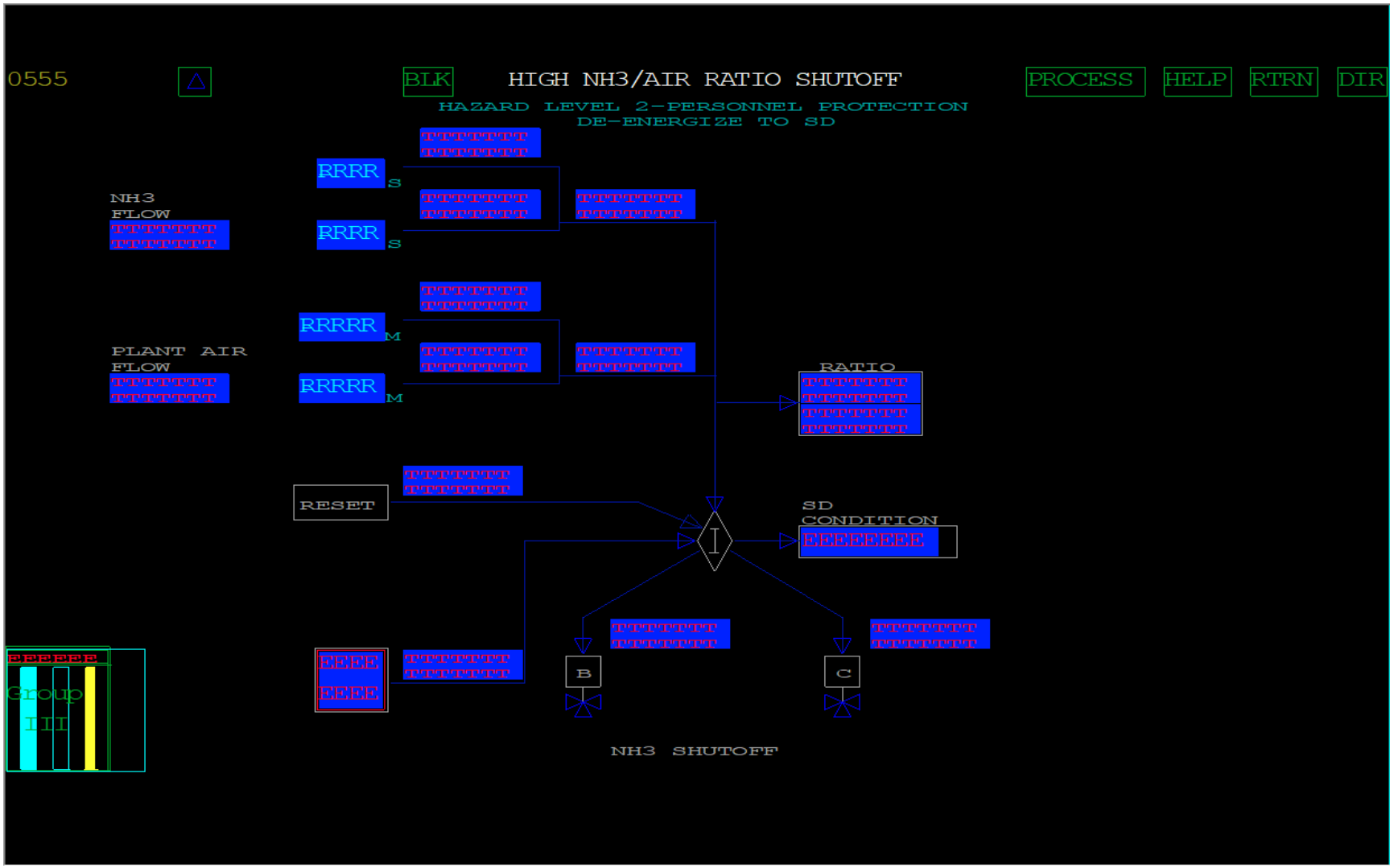


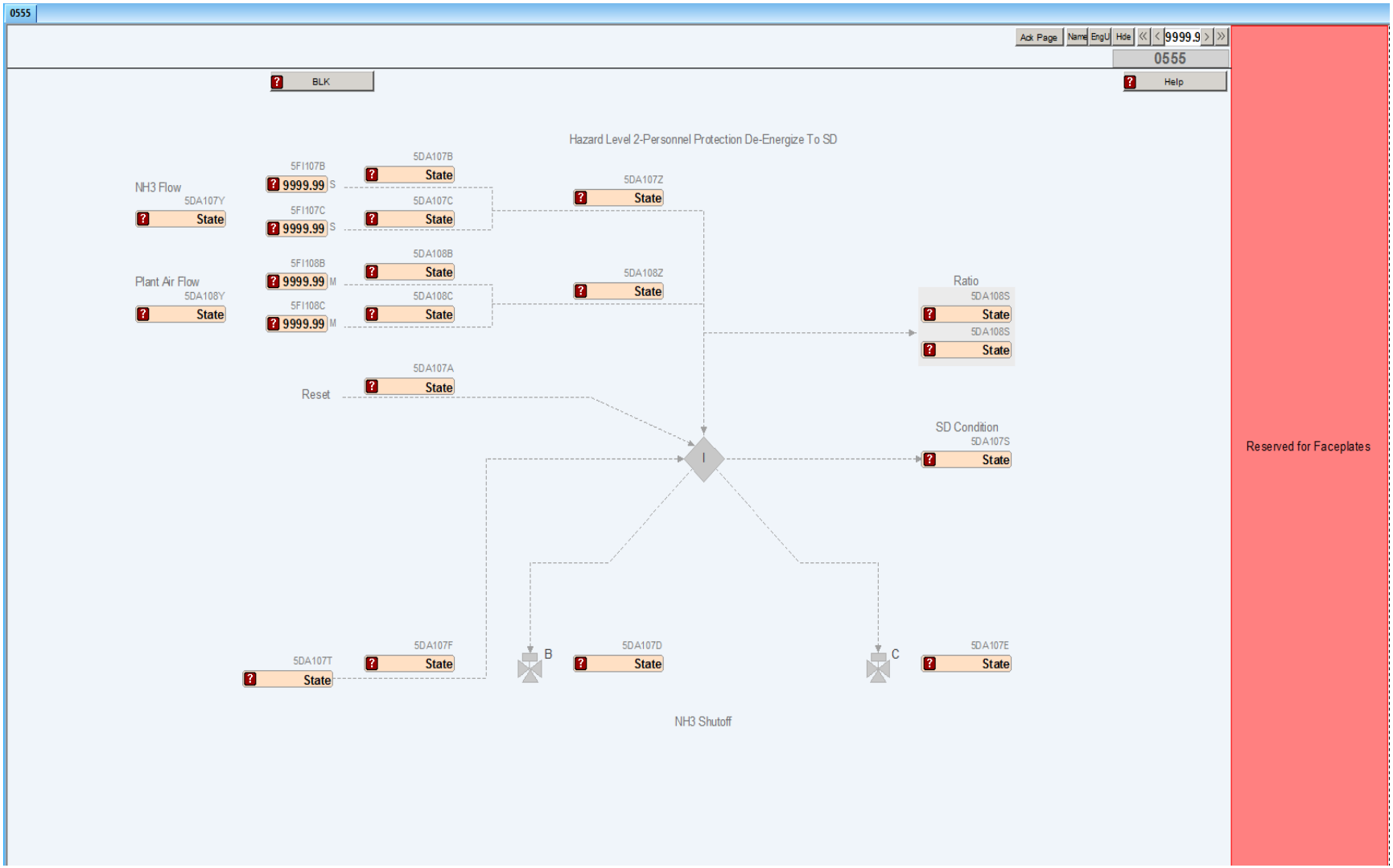

0554
BLK
POWER RECOVERY TURBINE
PROCESS
HELP
RTRN
DIR
HAZARD LEVEL 3-MACHINERY PROTECTION
ENERGIZE TO SD
NACCR "STOP" SWITCH
LOW TURBINE STEAM FLOW
STEAM FLOW START UP BYPASS
SD CONDITION
PWR RECOVERY TURBINE
Group III


0554
Ack Page
Name
EngU
Hide
9999.9
0554
BLK
Help
Hazard Level 3-Machinery Protection Energize To SD
NACCR "STOP" Switch
5HA959
State
5DA959
State
Low Turbine Steam Flow
5FA113A
State
5DA113A
State
Steam Flow Start Up Bypass
5HA113
State
5DA113B
State
5DA32T
State
5DA32B
State
SD Condition
5DA32S
State
5DA32A
State
PWR Recovery Turbine
Reserved for Faceplates

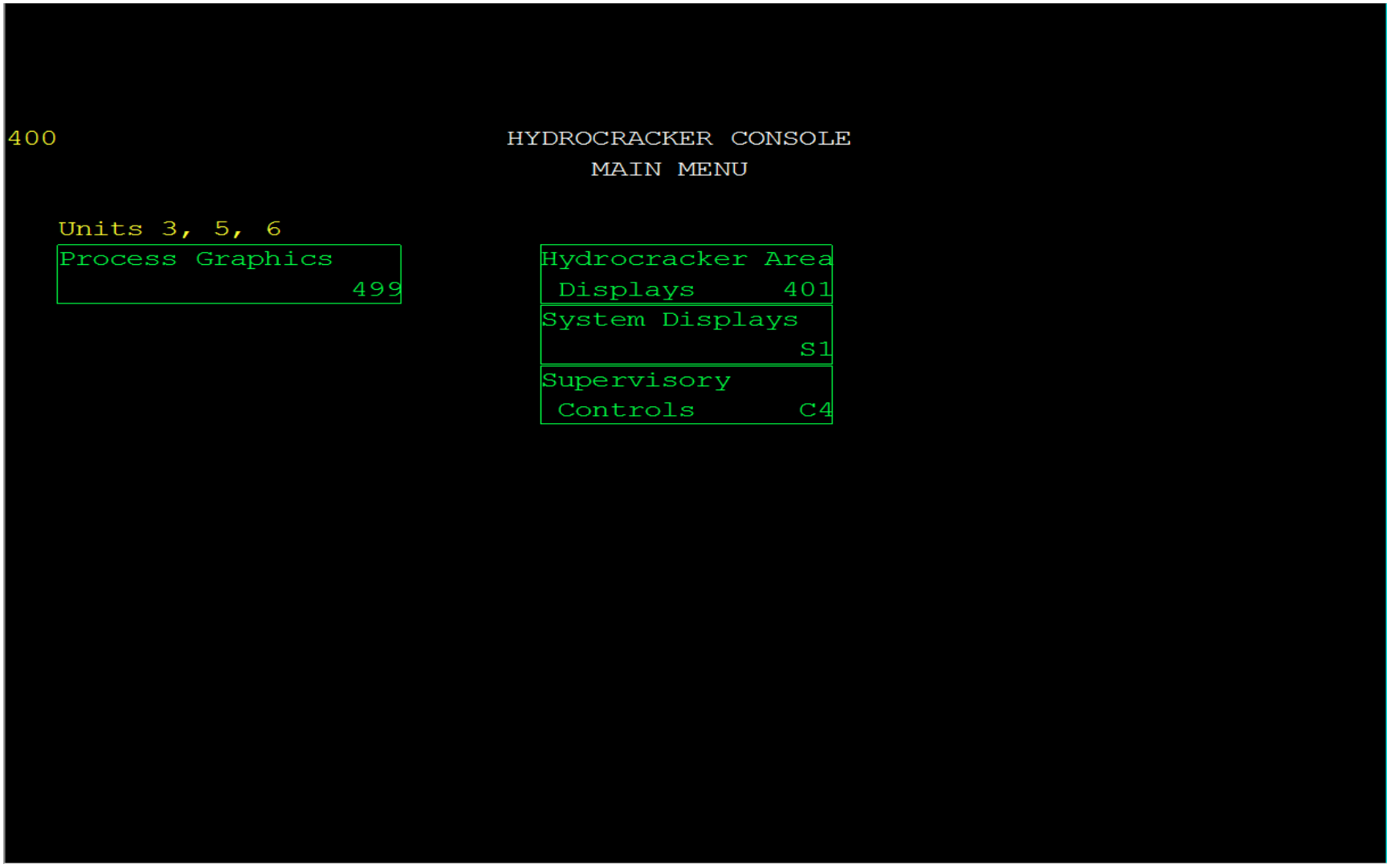
3.261 HIGH NH3/AIR RATIO SHUTOFF (0555.DS)

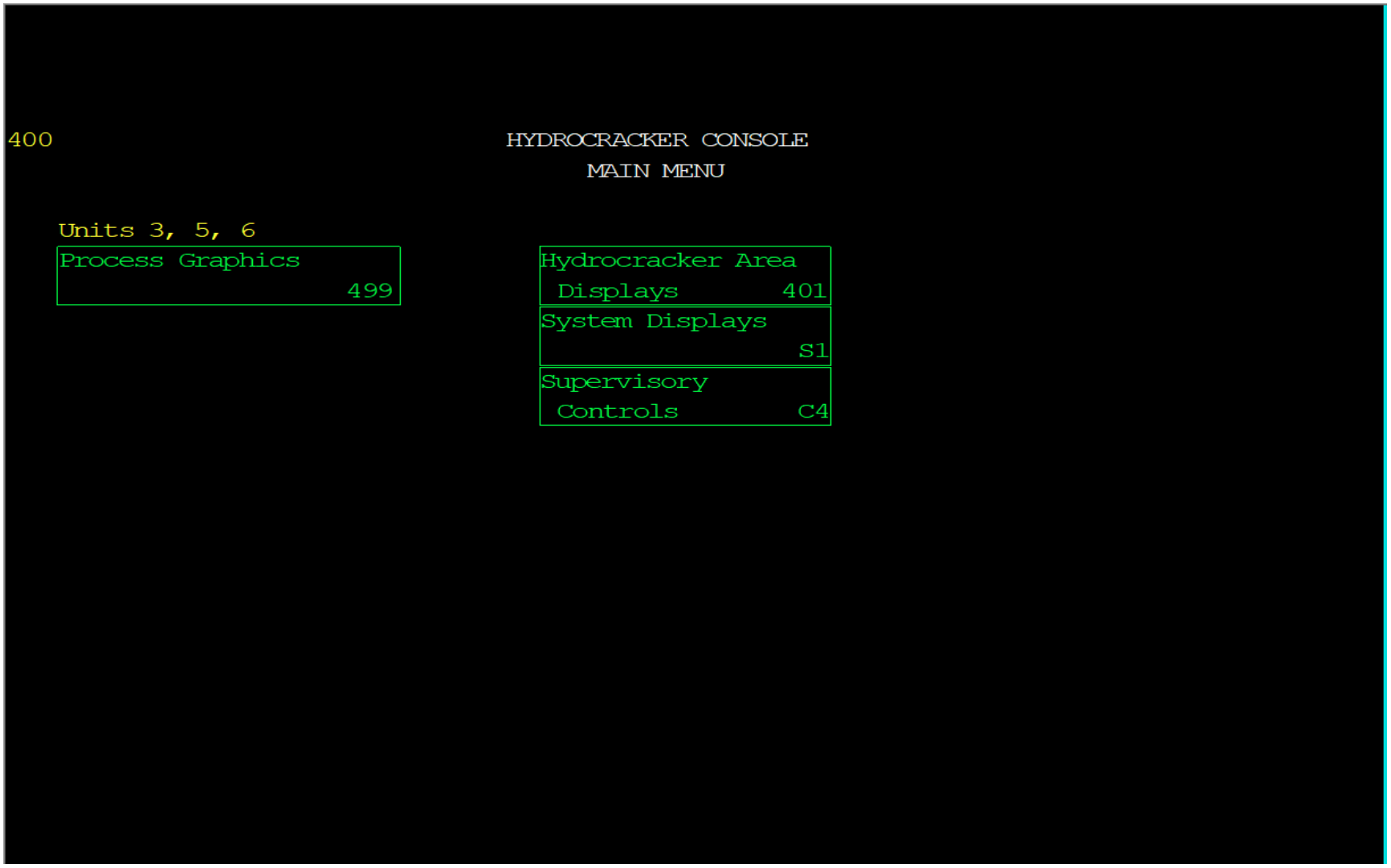


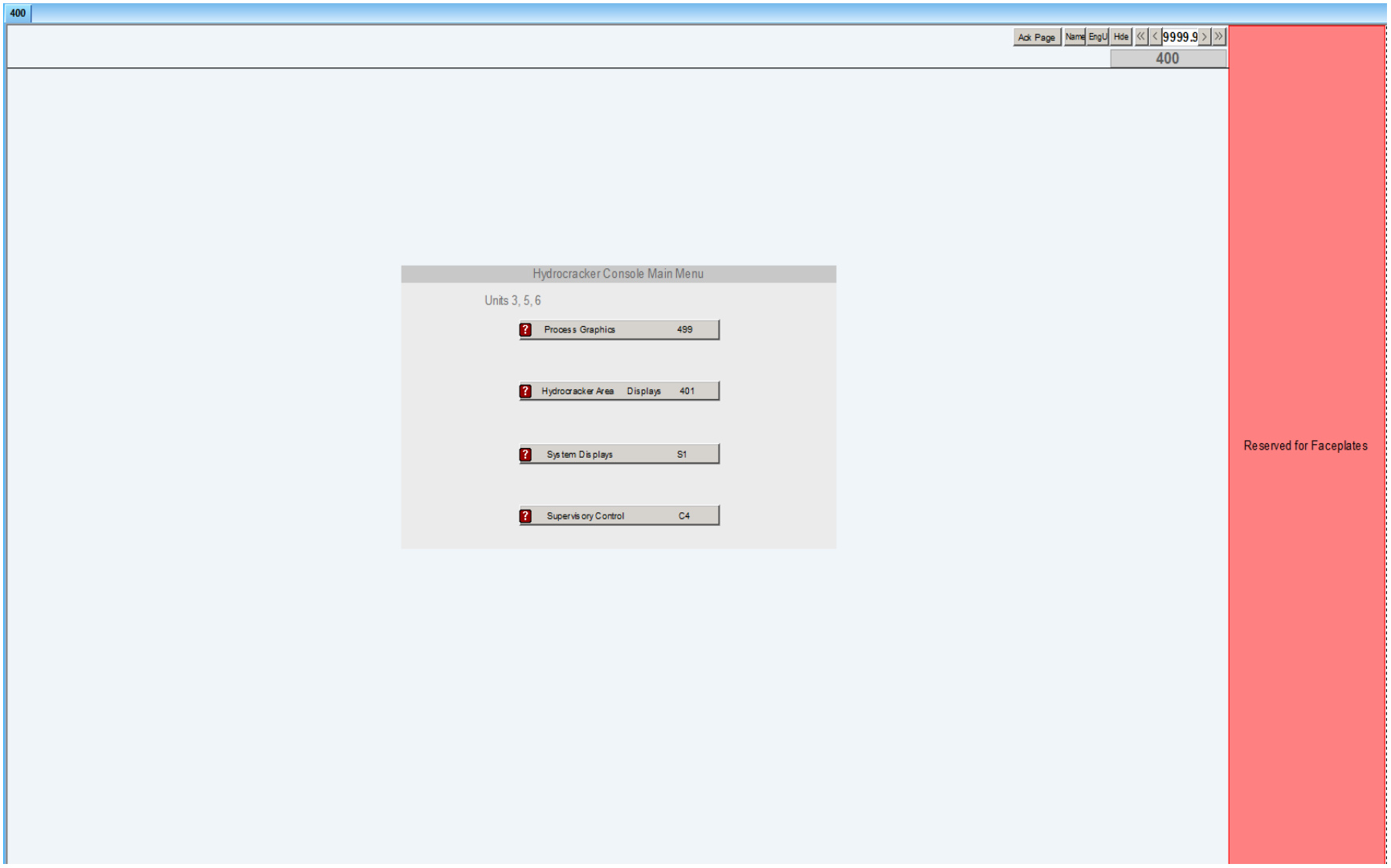

0555
BLK
HIGH NH3/AIR RATIO SHUTOFF
PROCESS
HELP
RTRN
DIR
HAZARD LEVEL 2-PERSONNEL PROTECTION
DE-ENERGIZE TO SD
NH3
FLOW
PLANT AIR
FLOW
RRRR
S
RRRRR
M
RATIO
RESET
SD
CONDITION
B
C
Group
III
NH3 SHUTOFF


0555
Ack Page
Name
EngU
Hide
9999.9
0555
BLK
Help
Hazard Level 2-Personnel Protection De-Energize To SD
NH3 Flow
5DA107Y
State
5FI107B
9999.99
S
5DA107B
State
5FI107C
9999.99
S
5DA107C
State
5DA107Z
State
Plant Air Flow
5DA108Y
State
5FI108B
9999.99
M
5DA108B
State
5FI108C
9999.99
M
5DA108C
State
5DA108Z
State
Ratio
5DA108S
State
5DA108S
State
Reset
5DA107A
State
SD Condition
5DA107S
State
I
5DA107T
State
5DA107F
State
B
5DA107D
State
C
5DA107E
State
NH3 Shutoff
Reserved for Faceplates

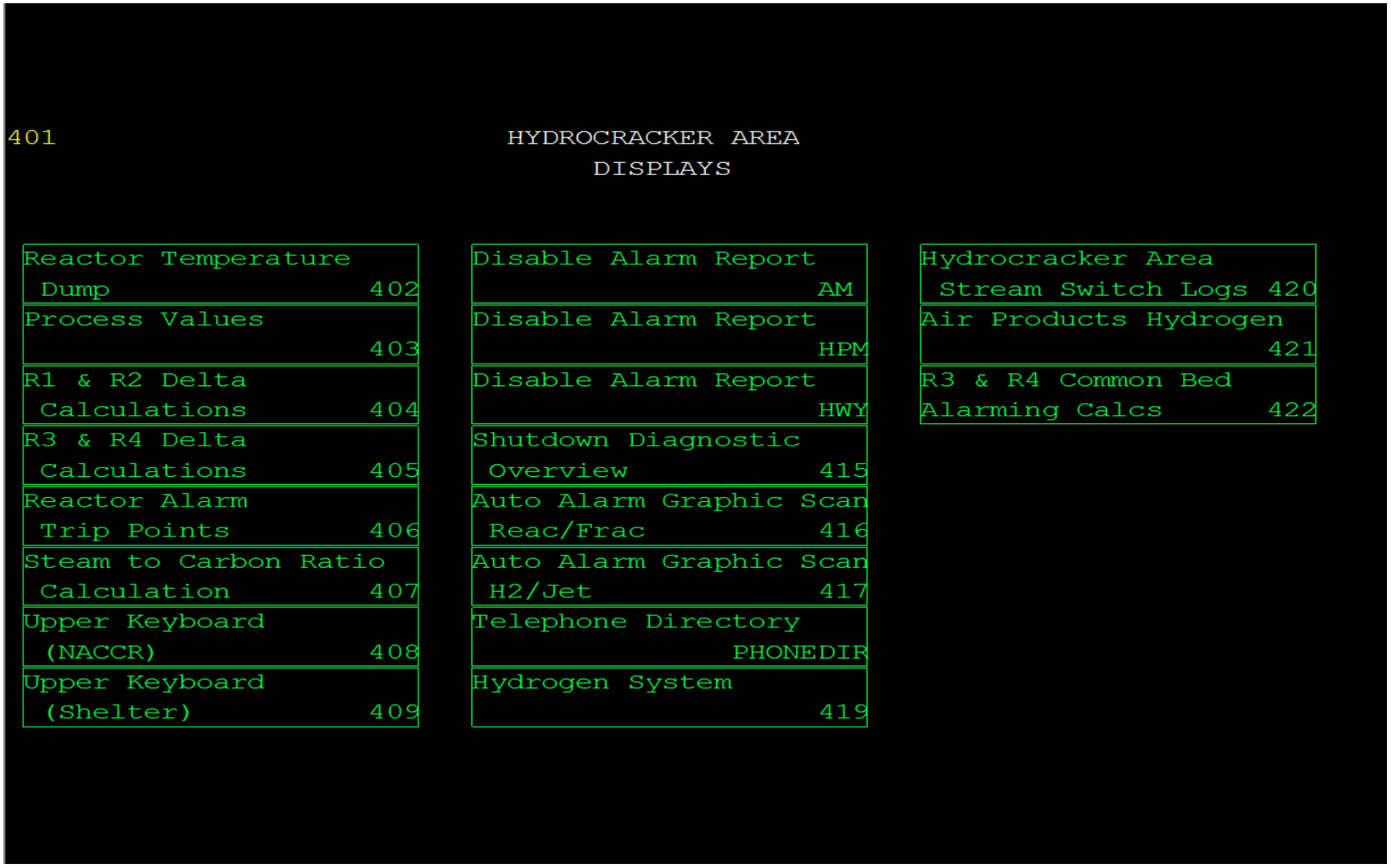
3.262 HYDROCRACKER CONSOLE MAIN MENU (400.DS)



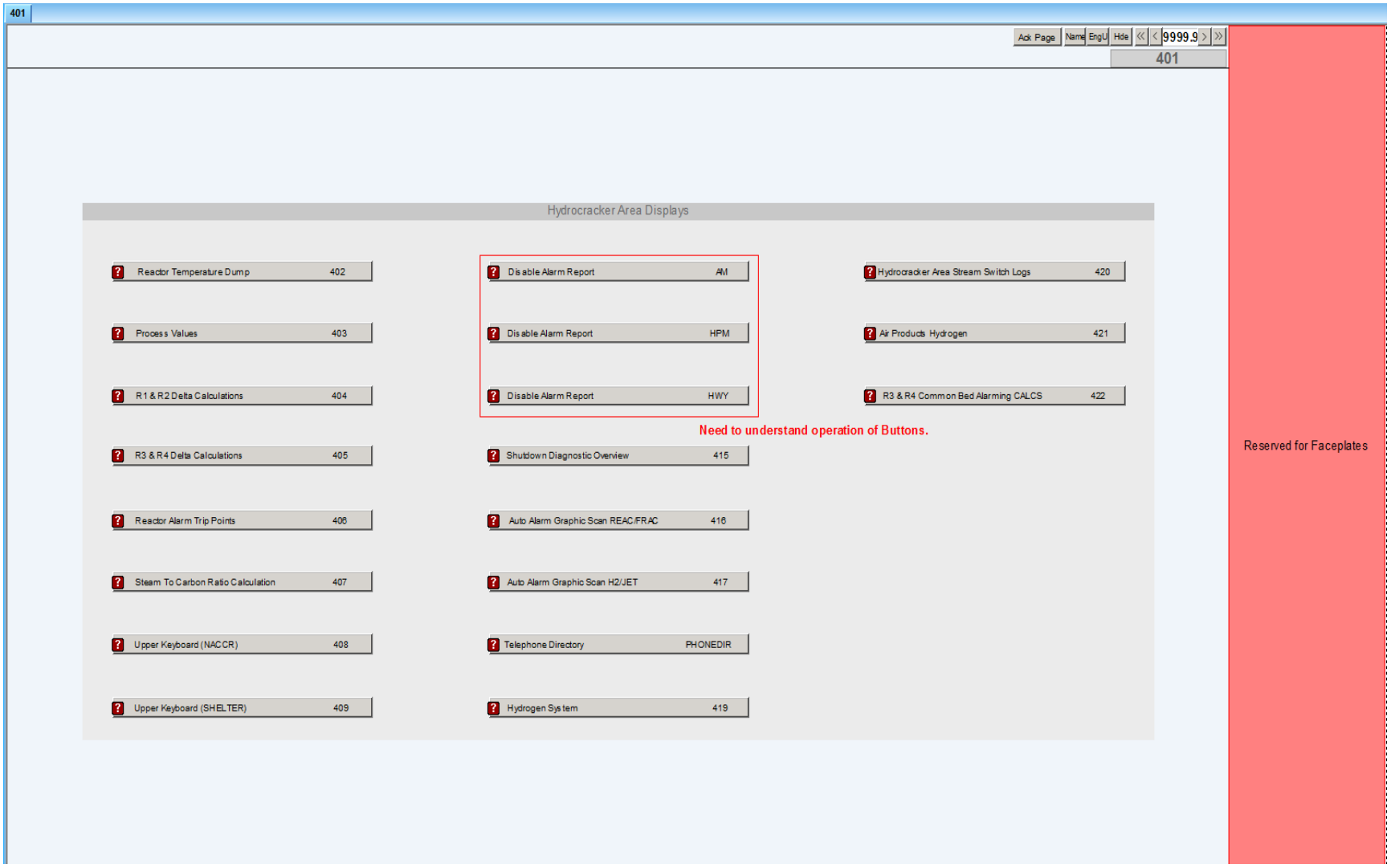

400
HYDROCRACKER CONSOLE
MAIN MENU
Units 3, 5, 6
Process Graphics 499
Hydrocracker Area Displays 401
System Displays S1
Supervisory Controls C4


400
Ack Page
Name
Eng U
Hide
9999.9
400
Hydrocracker Console Main Menu
Units 3, 5, 6
Process Graphics 499
Hydrocracker Area Displays 401
System Displays S1
Supervisory Control C4
Reserved for Faceplates

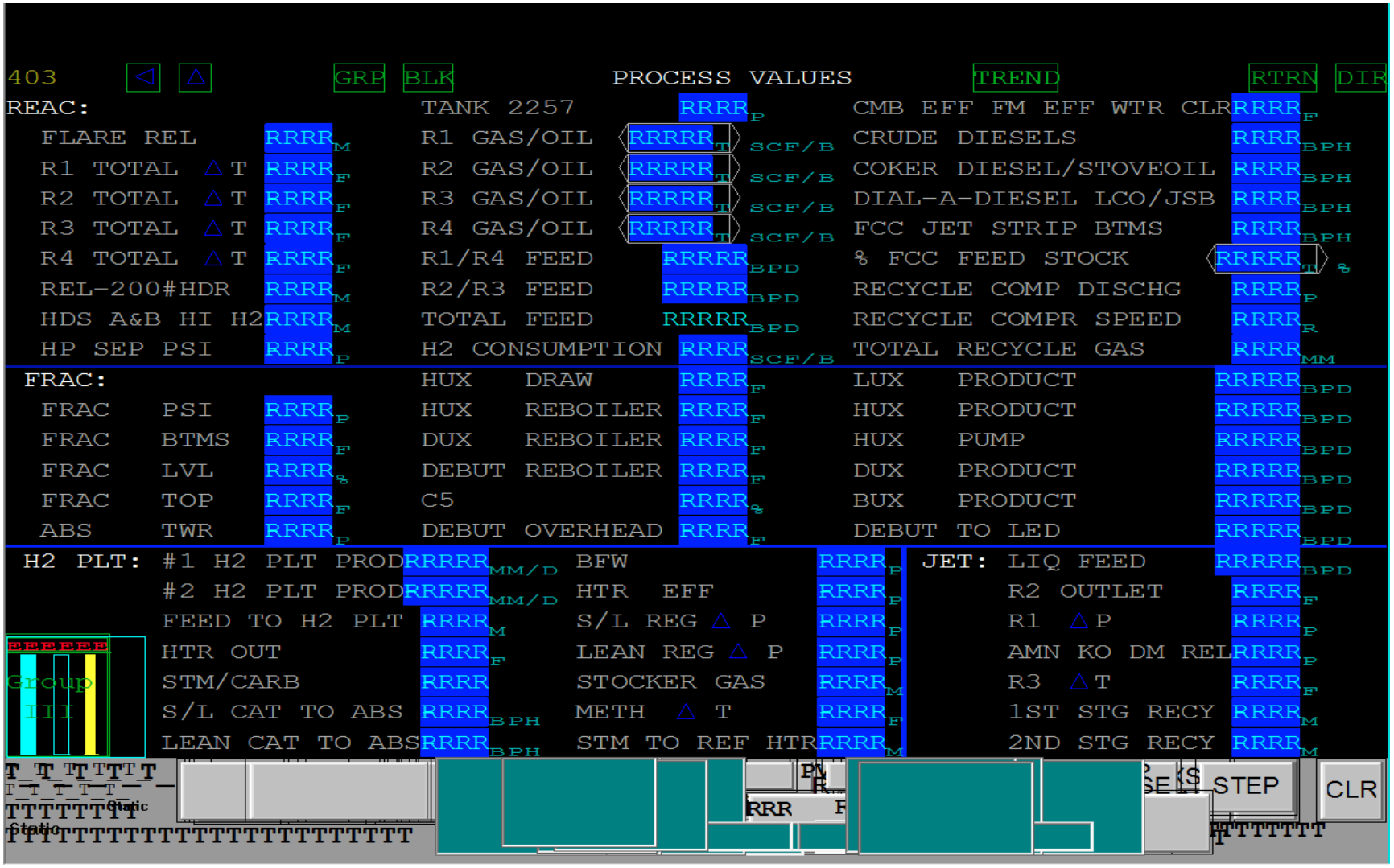
3.263 HYDROCRACKER AREA DISPLAYS (401.DS)

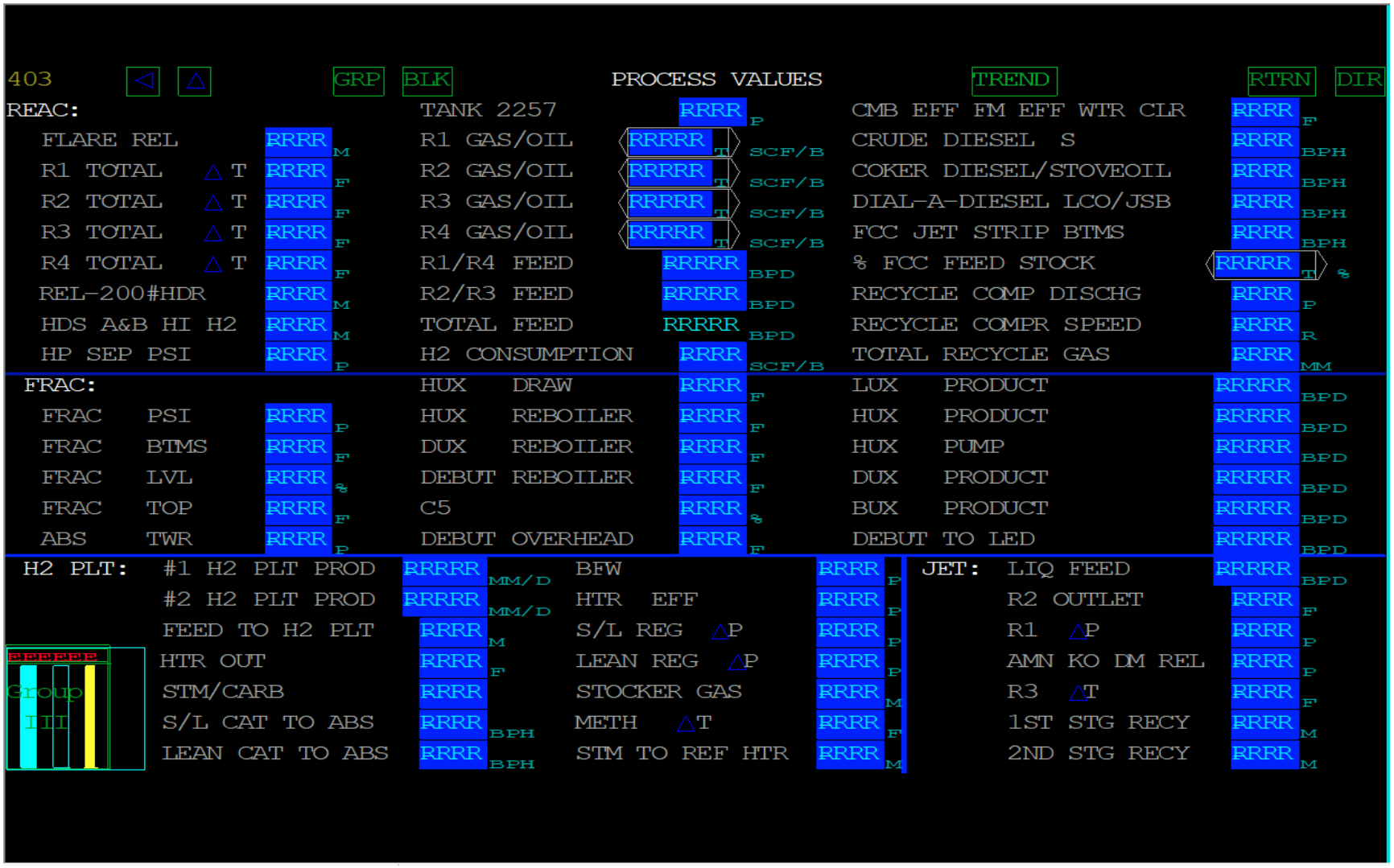


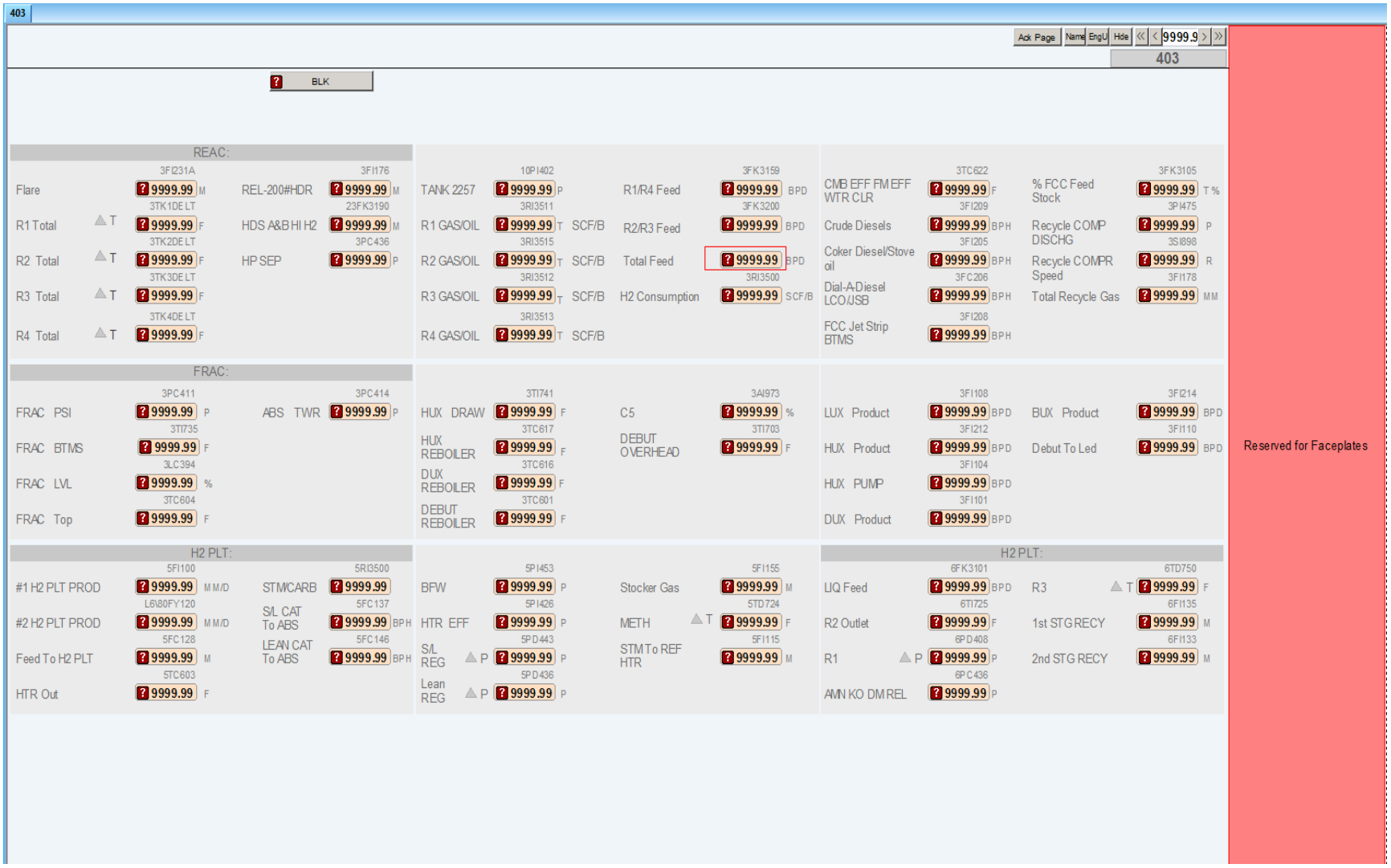
401
HYDROCRACKER AREA
DISPLAYS
Reactor Temperature Dump 402
Process Values 403
R1 & R2 Delta Calculations 404
R3 & R4 Delta Calculations 405
Reactor Alarm Trip Points 406
Steam to Carbon Ratio Calculation 407
Upper Keyboard (NACCR) 408
Upper Keyboard (Shelter) 409
Disable Alarm Report AM
Disable Alarm Report HPM
Disable Alarm Report HWY
Shutdown Diagnostic Overview 415
Auto Alarm Graphic Scan Reac/Frac 416
Auto Alarm Graphic Scan H2/Jet 417
Telephone Directory PHONEDIR
Hydrogen System 419
Hydrocracker Area Stream Switch Logs 420
Air Products Hydrogen 421
R3 & R4 Common Bed Alarming Calcs 422


401
Ack Page
Name
Eng U
Hide
9999.9
401
Hydrocracker Area Displays
Reactor Temperature Dump 402
Process Values 403
R1 & R2 Delta Calculations 404
R3 & R4 Delta Calculations 405
Reactor Alarm Trip Points 406
Steam To Carbon Ratio Calculation 407
Upper Keyboard (NACCR) 408
Upper Keyboard (SHELTER) 409
Disable Alarm Report AM
Disable Alarm Report HPM
Disable Alarm Report HWY
Shutdown Diagnostic Overview 415
Auto Alarm Graphic Scan REAC/FRAC 416
Auto Alarm Graphic Scan H2/JET 417
Telephone Directory PHONEDIR
Hydrogen System 419
Hydrocracker Area Stream Switch Logs 420
Air Products Hydrogen 421
R3 & R4 Common Bed Alarming CALCS 422
Need to understand operation of Buttons.
Reserved for Faceplates

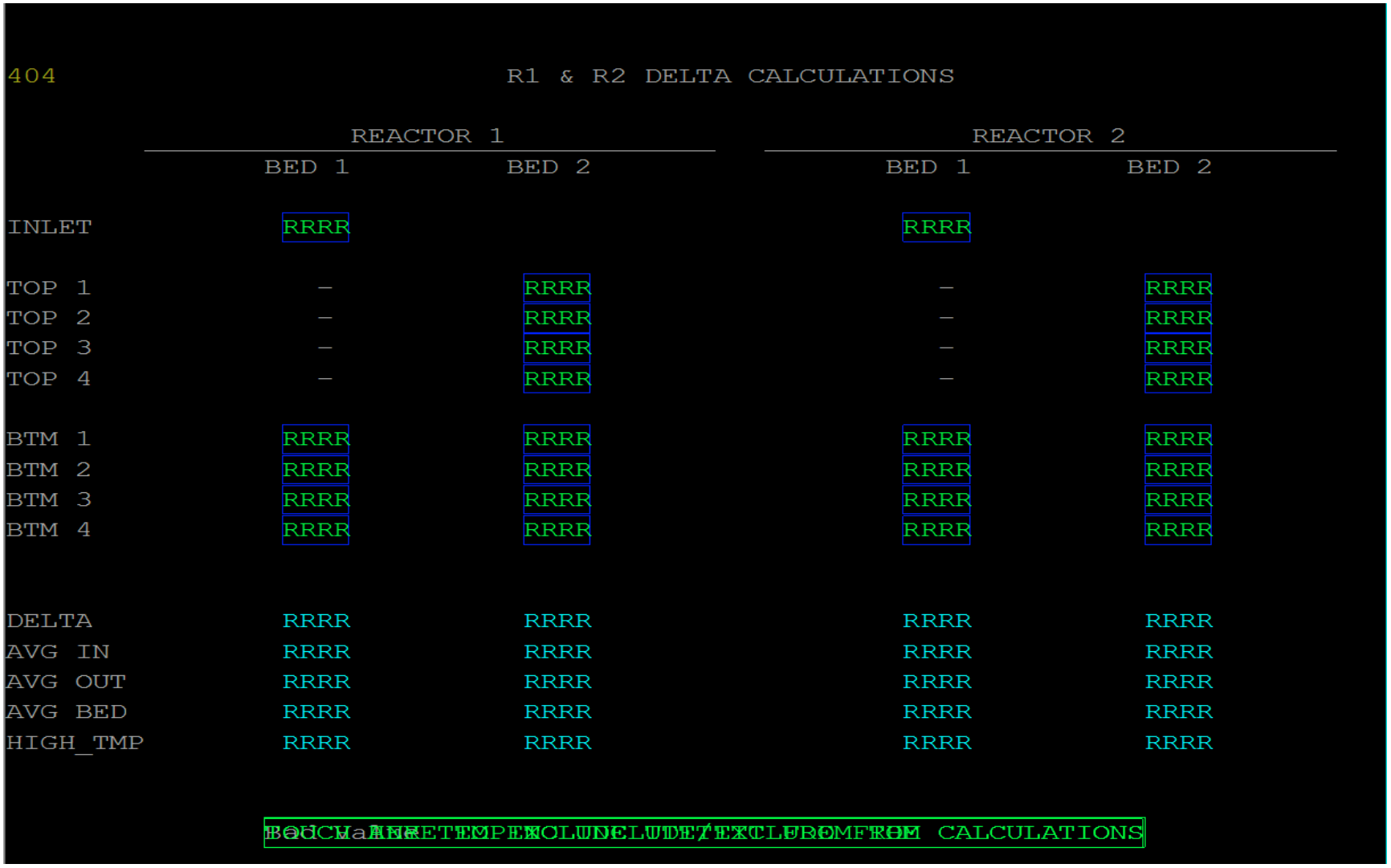
3.264 PROCESS VALUES (403.DS)

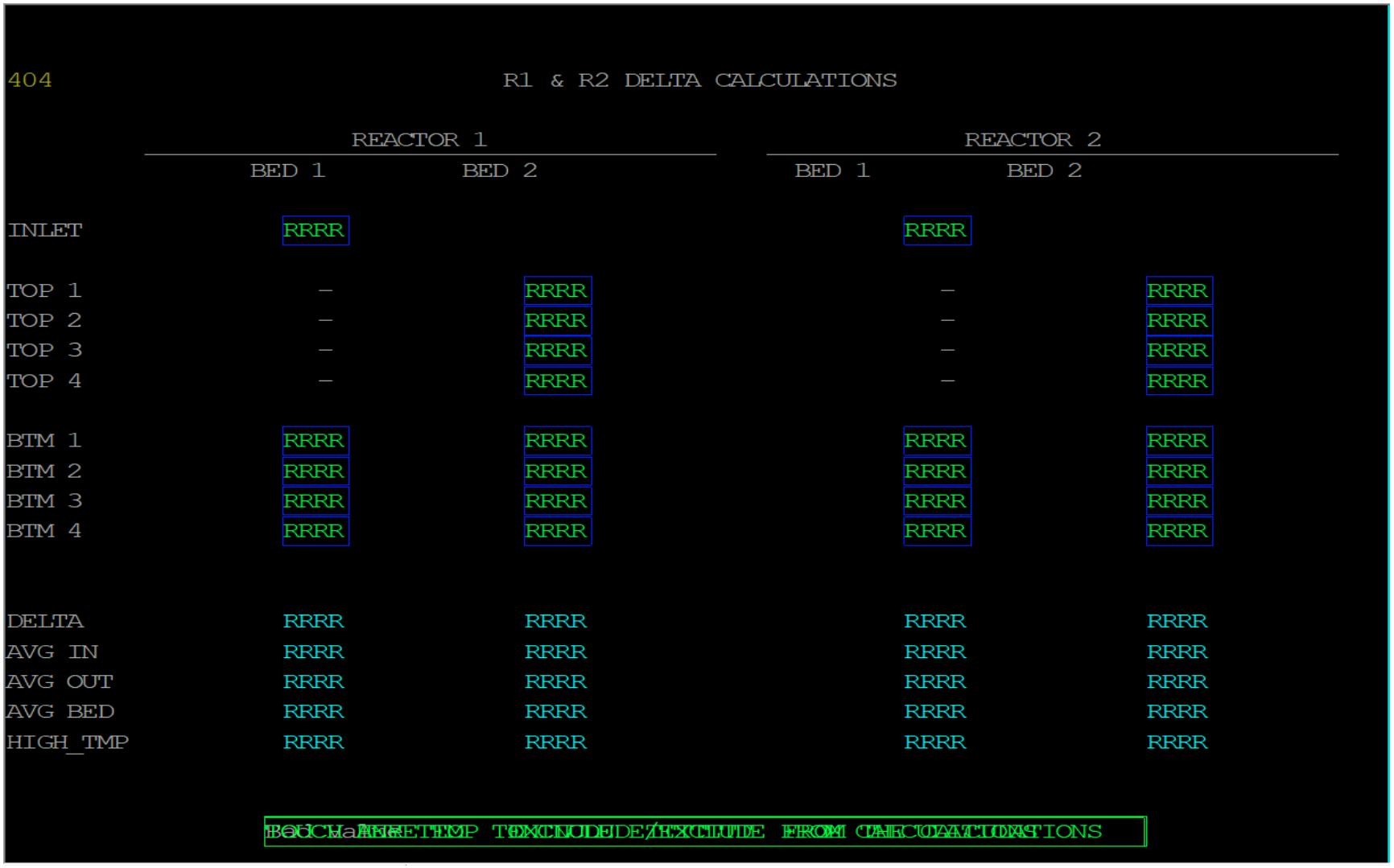


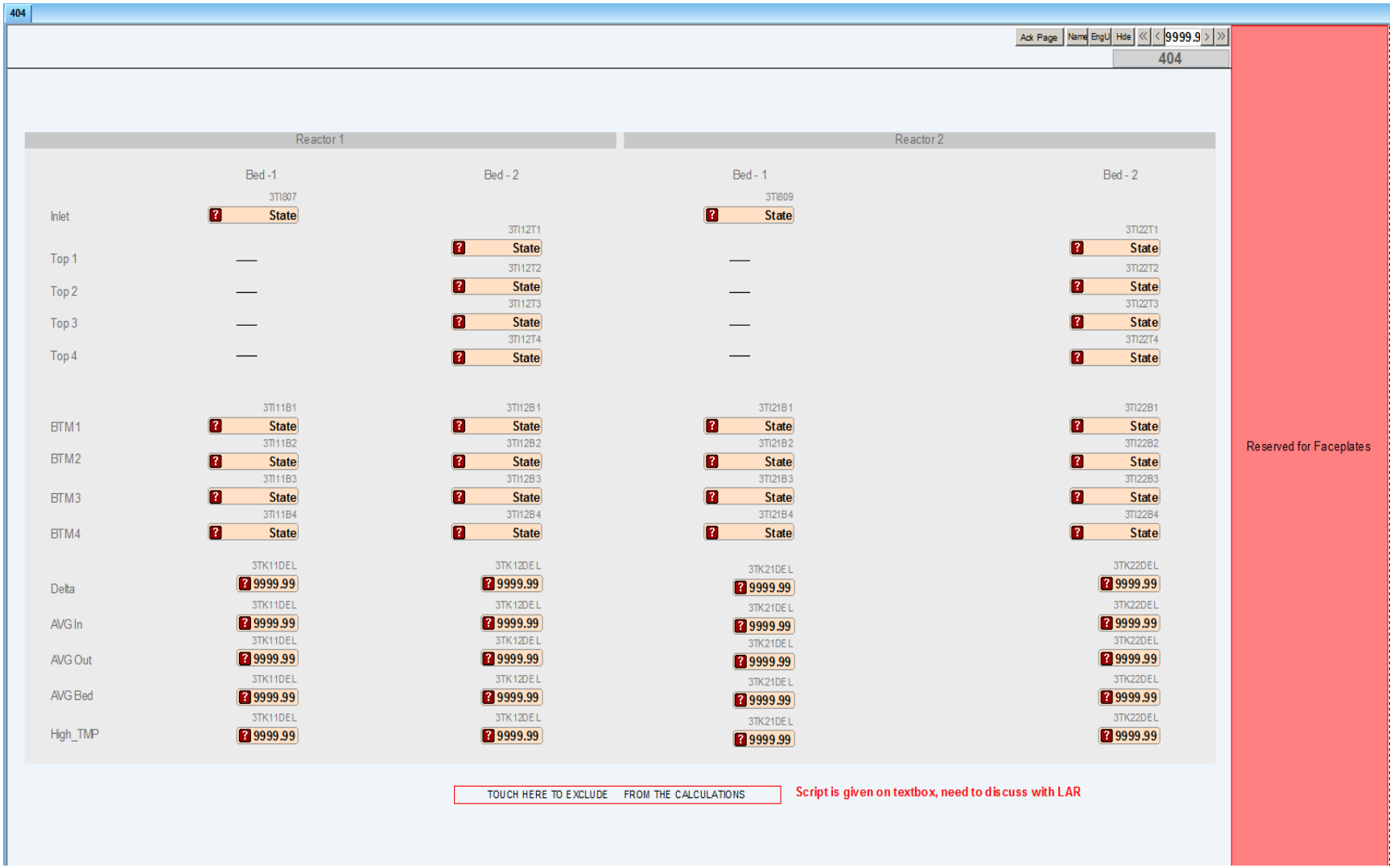

403
GRP
BLK
PROCESS VALUES
TREND
RTRN
DIR
REAC:
FLARE REL
R1 TOTAL △T
R2 TOTAL △T
R3 TOTAL △T
R4 TOTAL △T
REL-200#HDR
HDS A&B HI H2
HP SEP PSI
TANK 2257
R1 GAS/OIL
R2 GAS/OIL
R3 GAS/OIL
R4 GAS/OIL
R1/R4 FEED
R2/R3 FEED
TOTAL FEED
H2 CONSUMPTION
CMB EFF FM EFF WTR CLR
CRUDE DIESEL S
COKER DIESEL/STOVEOIL
DIAL-A-DIESEL LCO/JSB
FCC JET STRIP BTMS
% FCC FEED STOCK
RECYCLE COMP DISCHG
RECYCLE COMPR SPEED
TOTAL RECYCLE GAS
FRAC:
FRAC PSI
FRAC BTMS
FRAC LVL
FRAC TOP
ABS TWR
HUX DRAW
HUX REBOILER
DUX REBOILER
DEBUT REBOILER
C5
DEBUT OVERHEAD
LUX PRODUCT
HUX PRODUCT
HUX PUMP
DUX PRODUCT
BUX PRODUCT
DEBUT TO LED
H2 PLT:
#1 H2 PLT PROD
#2 H2 PLT PROD
FEED TO H2 PLT
HTR OUT
STM/CARB
S/L CAT TO ABS
LEAN CAT TO ABS
BFW
HTR EFF
S/L REG △P
LEAN REG △P
STOCKER GAS
METH △T
STM TO REF HTR
JET:
LIQ FEED
R2 OUTLET
R1 △P
AMN KO DM REL
R3 △T
1ST STG RECY
2ND STG RECY
Group III


403
Ack Page
Name
Eng U
Hide
9999.9
403
BLK
REAC:
Flare
R1 Total
R2 Total
R3 Total
R4 Total
REL-200#HDR
HDS A&B HI H2
HP SEP
TANK 2257
R1 GAS/OIL
R2 GAS/OIL
R3 GAS/OIL
R4 GAS/OIL
R1/R4 Feed
R2/R3 Feed
Total Feed
H2 Consumption
CMB EFF FM EFF WTR CLR
Crude Diesels
Coker Diesel/Stove oil
Dial-A-Diesel LCO/JSB
FCC Jet Strip BTMS
% FCC Feed Stock
Recycle COMP DISCHG
Recycle COMPR Speed
Total Recycle Gas
FRAC:
FRAC PSI
FRAC BTMS
FRAC LVL
FRAC Top
ABS TWR
HUX DRAW
HUX REBOILER
DUX REBOILER
DEBUT REBOILER
C5
DEBUT OVERHEAD
LUX Product
HUX Product
HUX PUMP
DUX Product
BUX Product
Debut To Led
H2 PLT:
#1 H2 PLT PROD
#2 H2 PLT PROD
Feed To H2 PLT
HTR Out
STM/CARB
S/L CAT To ABS
LEAN CAT To ABS
BFW
HTR EFF
S/L REG
Lean REG
Stocker Gas
METH
STM To REF HTR
H2 PLT:
LIQ Feed
R2 Outlet
R1
AMN KO DM REL
R3
1st STG RECY
2nd STG RECY
Reserved for Faceplates

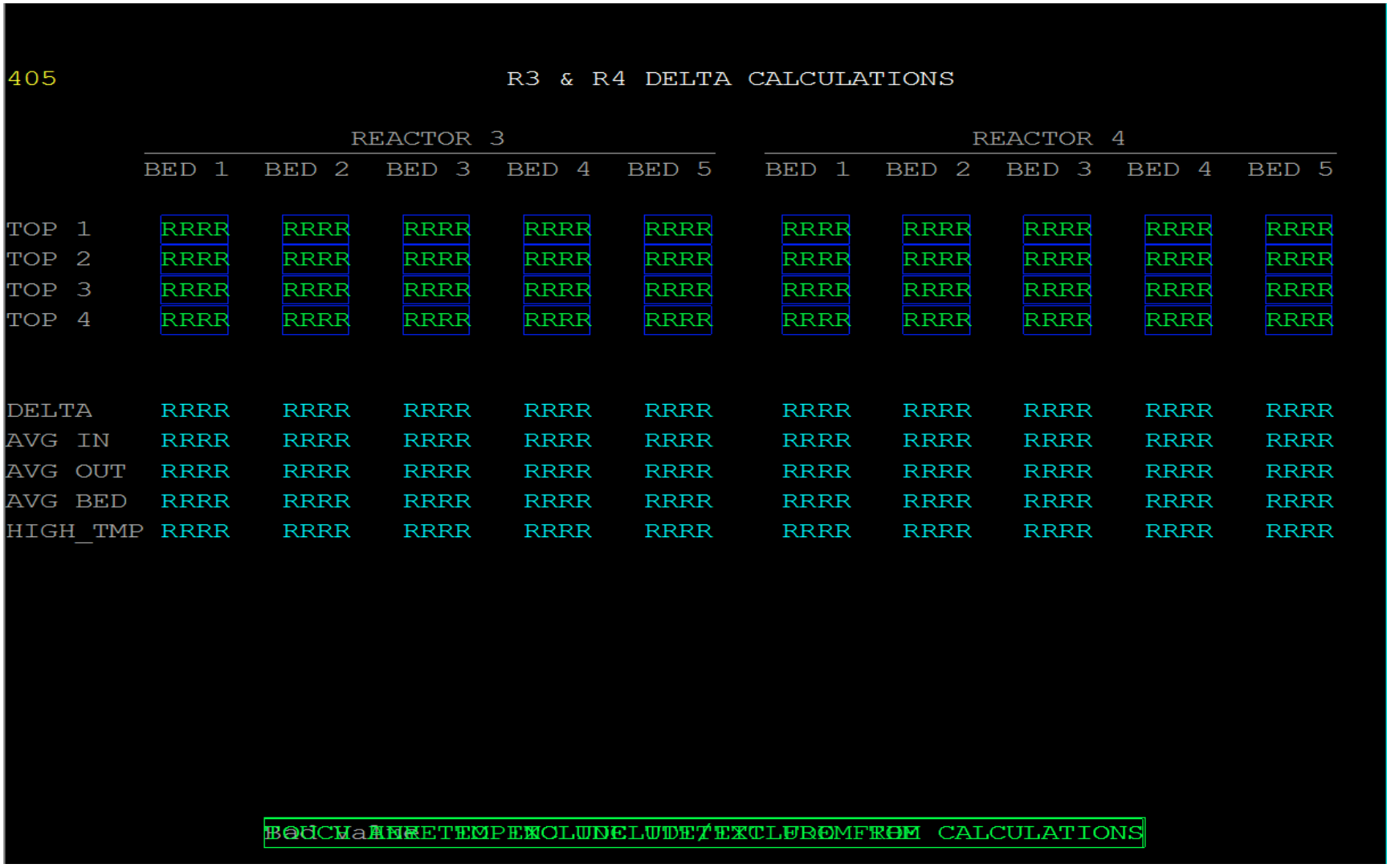
3.265 R1 & R2 DELTA CALCULATIONS (404.DS)

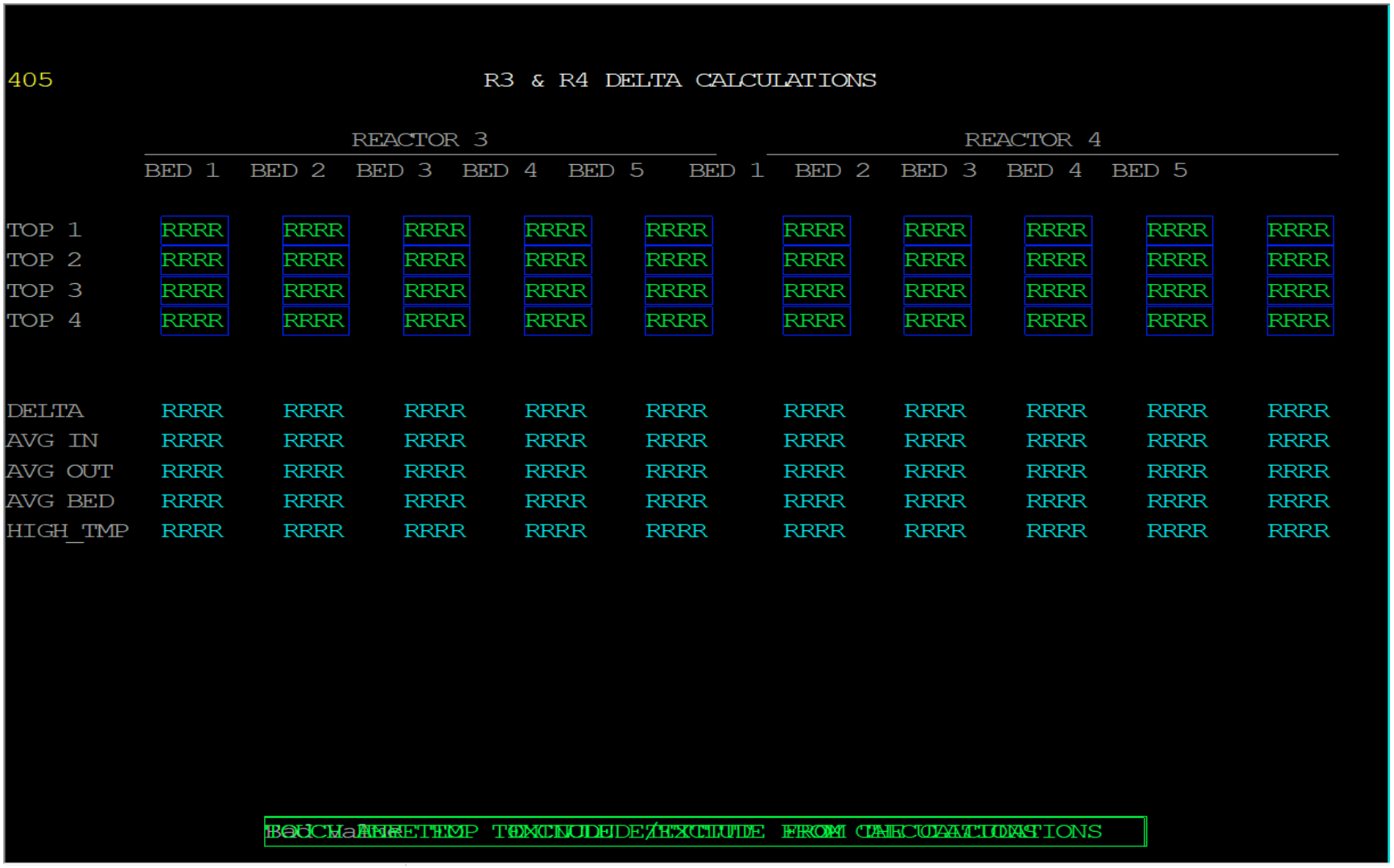


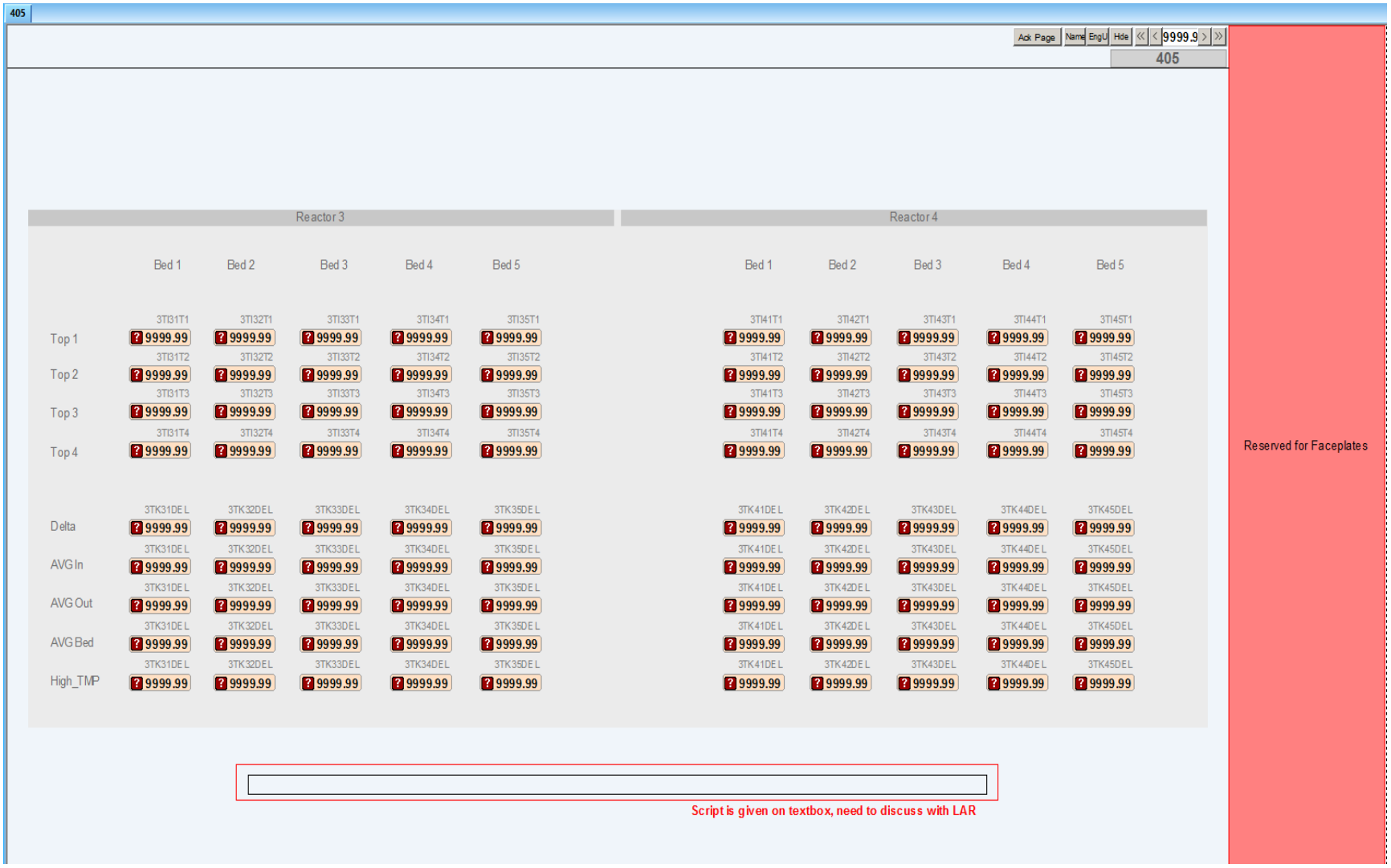

404
R1 & R2 DELTA CALCULATIONS
REACTOR 1
REACTOR 2
BED 1
BED 2
BED 1
BED 2
INLET
RRRR
RRRR
TOP 1
TOP 2
TOP 3
TOP 4
–
RRRR
BTM 1
BTM 2
BTM 3
BTM 4
DELTA
AVG IN
AVG OUT
AVG BED
HIGH_TMP
RRRR
BED TEMP TO INCLUDE/EXCLUDE FROM CALCULATIONS


404
Ack Page
Name
EngU
Hide
9999.9
404
Reactor 1
Reactor 2
Bed -1
Bed - 2
Bed - 1
Bed - 2
Inlet
Top 1
Top 2
Top 3
Top 4
BTM1
BTM2
BTM3
BTM4
Delta
AVG In
AVG Out
AVG Bed
High_TMP
3TI807
3TI809
3TI12T1
3TI12T2
3TI12T3
3TI12T4
3TI22T1
3TI22T2
3TI22T3
3TI22T4
3TI11B1
3TI11B2
3TI11B3
3TI11B4
3TI12B1
3TI12B2
3TI12B3
3TI12B4
3TI21B1
3TI21B2
3TI21B3
3TI21B4
3TI22B1
3TI22B2
3TI22B3
3TI22B4
3TK11DEL
3TK12DEL
3TK21DEL
3TK22DEL
State
9999.99
TOUCH HERE TO EXCLUDE FROM THE CALCULATIONS
Script is given on textbox, need to discuss with LAR
Reserved for Faceplates

3.266 R3 & R4 DELTA CALCULATIONS (405.DS)



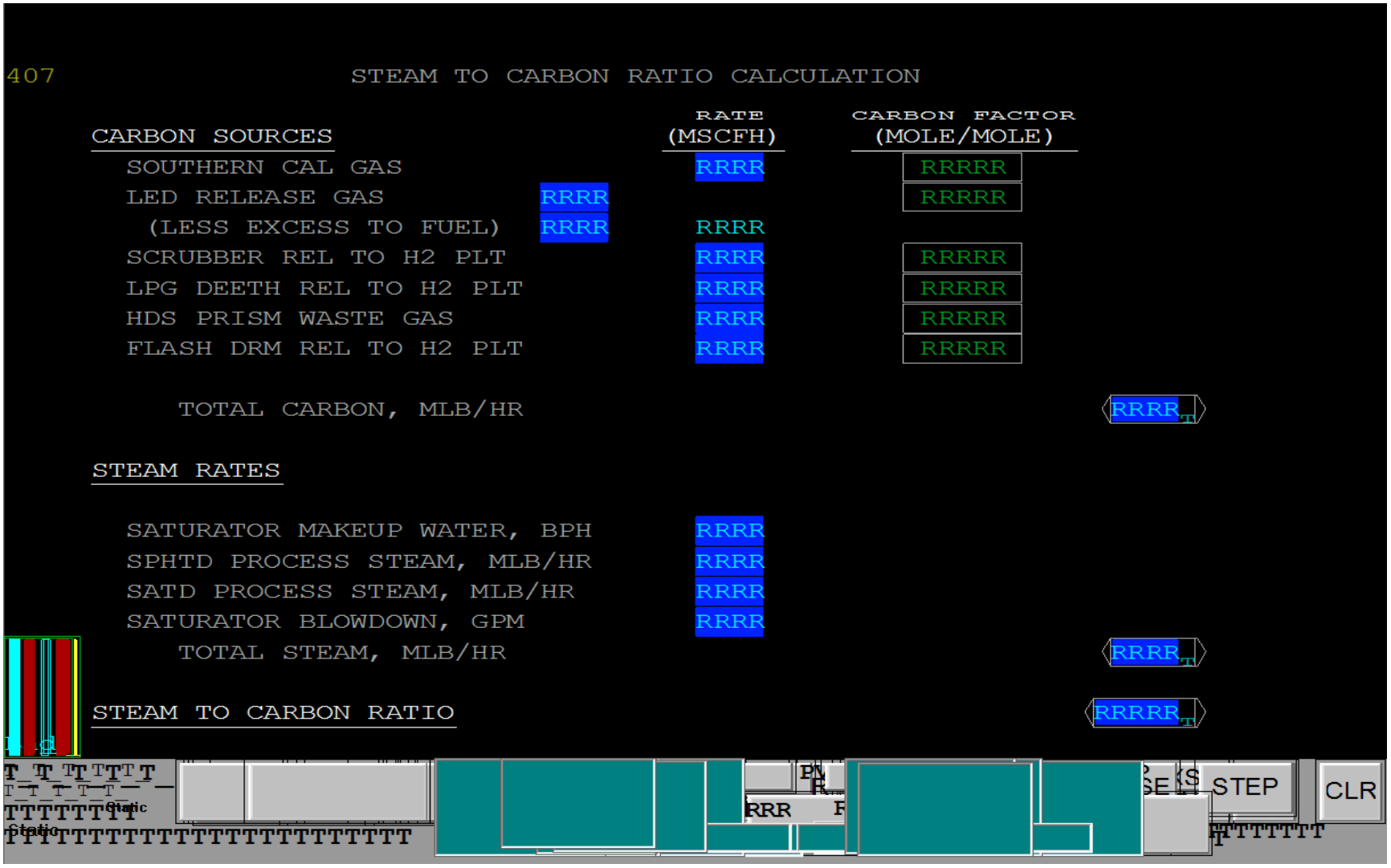

405
R3 & R4 DELTA CALCULATIONS
REACTOR 3
REACTOR 4
BED 1 BED 2 BED 3 BED 4 BED 5 BED 1 BED 2 BED 3 BED 4 BED 5
TOP 1 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
TOP 2 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
TOP 3 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
TOP 4 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
DELTA RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
AVG IN RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
AVG OUT RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
AVG BED RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
HIGH_TMP RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR

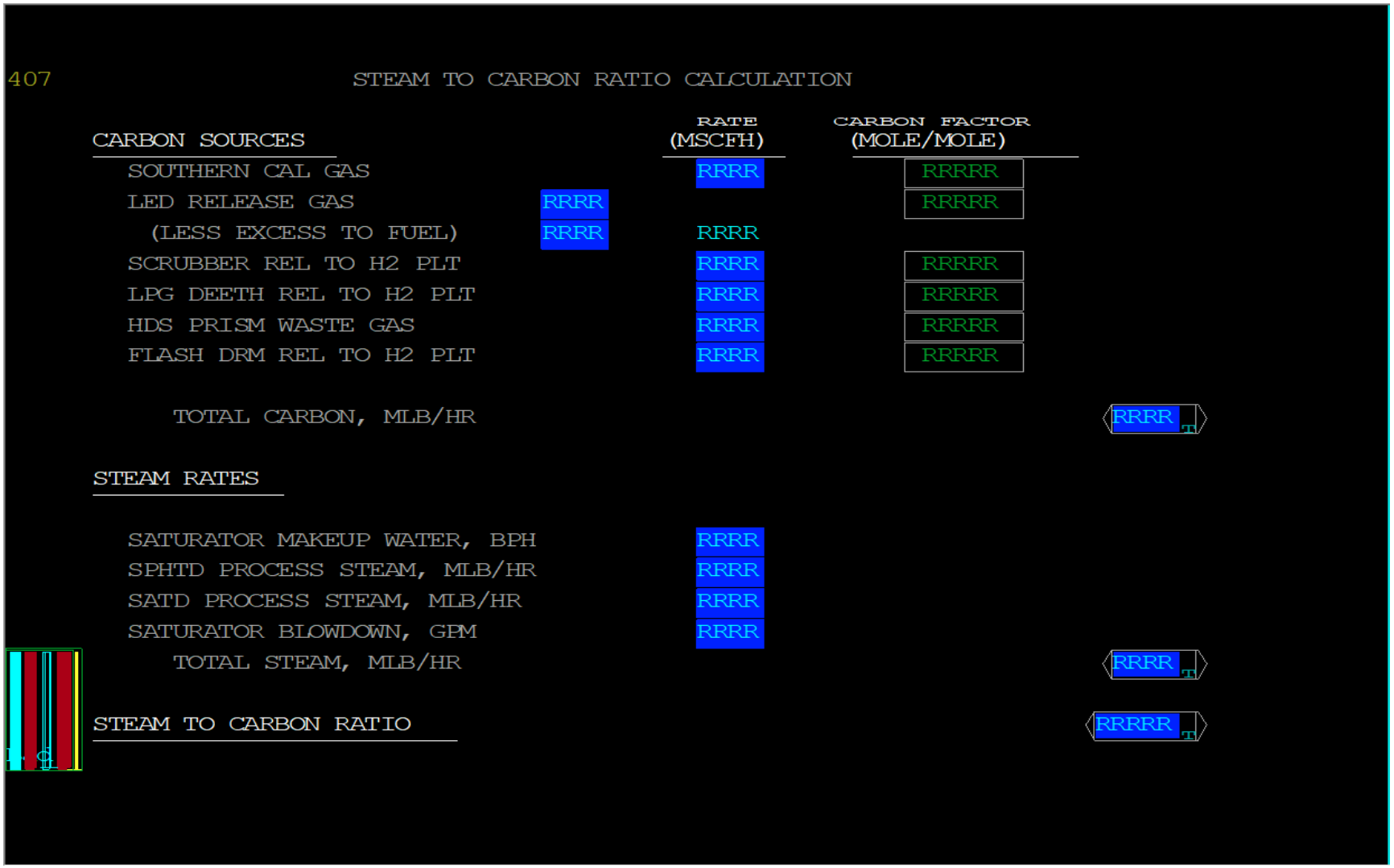

405
Ack Page
Name
Eng U
Hide
9999.9
405
Reactor 3
Reactor 4
Bed 1
Bed 2
Bed 3
Bed 4
Bed 5
Top 1
Top 2
Top 3
Top 4
Delta
AVG In
AVG Out
AVG Bed
High_TMP
3TI31T1
3TI32T1
3TI33T1
3TI34T1
3TI35T1
3TI41T1
3TI42T1
3TI43T1
3TI44T1
3TI45T1
3TI31T2
3TI32T2
3TI33T2
3TI34T2
3TI35T2
3TI41T2
3TI42T2
3TI43T2
3TI44T2
3TI45T2
3TI31T3
3TI32T3
3TI33T3
3TI34T3
3TI35T3
3TI41T3
3TI42T3
3TI43T3
3TI44T3
3TI45T3
3TI31T4
3TI32T4
3TI33T4
3TI34T4
3TI35T4
3TI41T4
3TI42T4
3TI43T4
3TI44T4
3TI45T4
3TK31DEL
3TK32DEL
3TK33DEL
3TK34DEL
3TK35DEL
3TK41DEL
3TK42DEL
3TK43DEL
3TK44DEL
3TK45DEL
9999.99
Reserved for Faceplates
Script is given on textbox, need to discuss with LAR

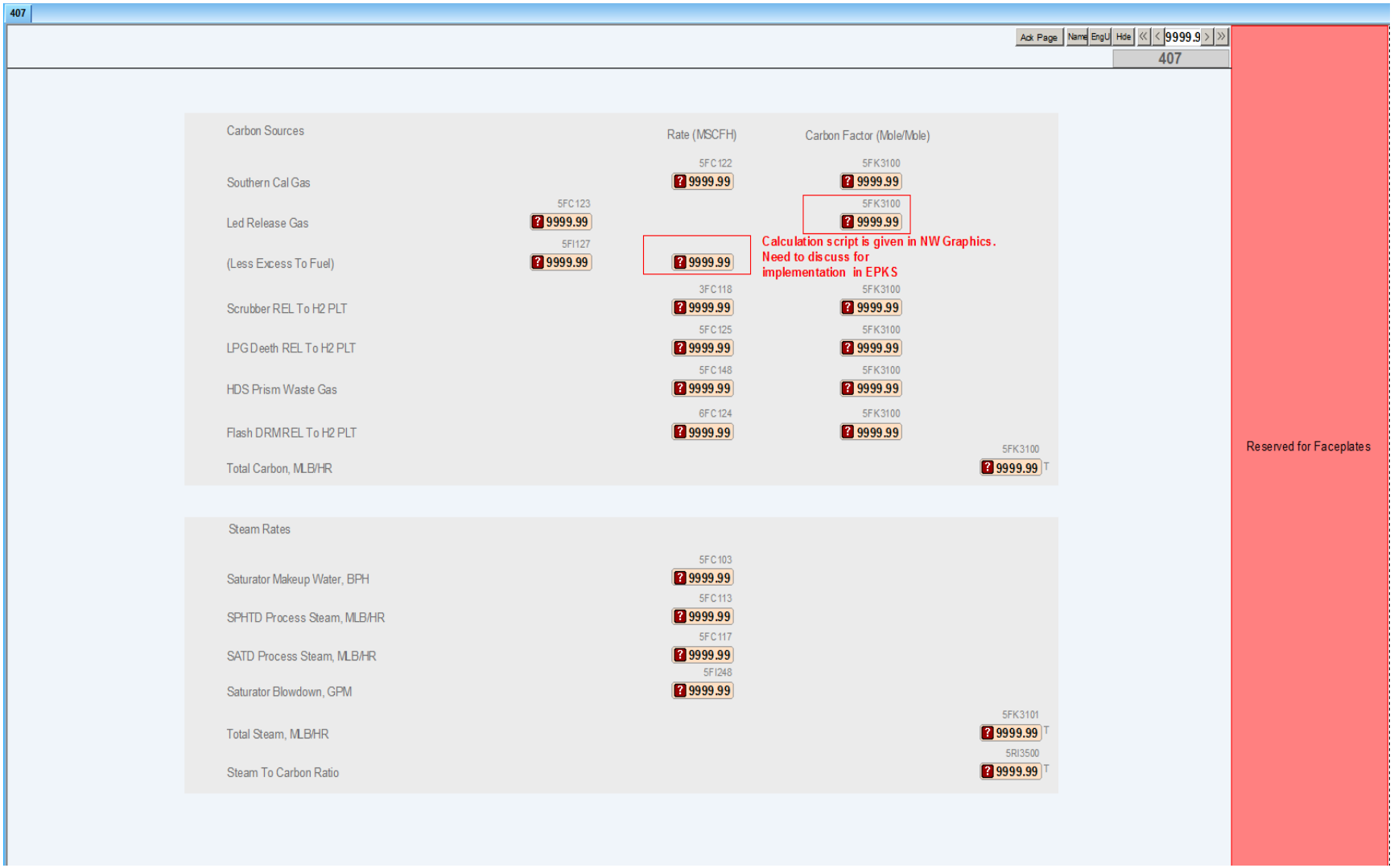
3.267 REACTOR ALARMING TRIP POINTS (406.DS)

HOLD 2

3.268 STEAM TO CARBON RATIO CALCULATION (407.DS)



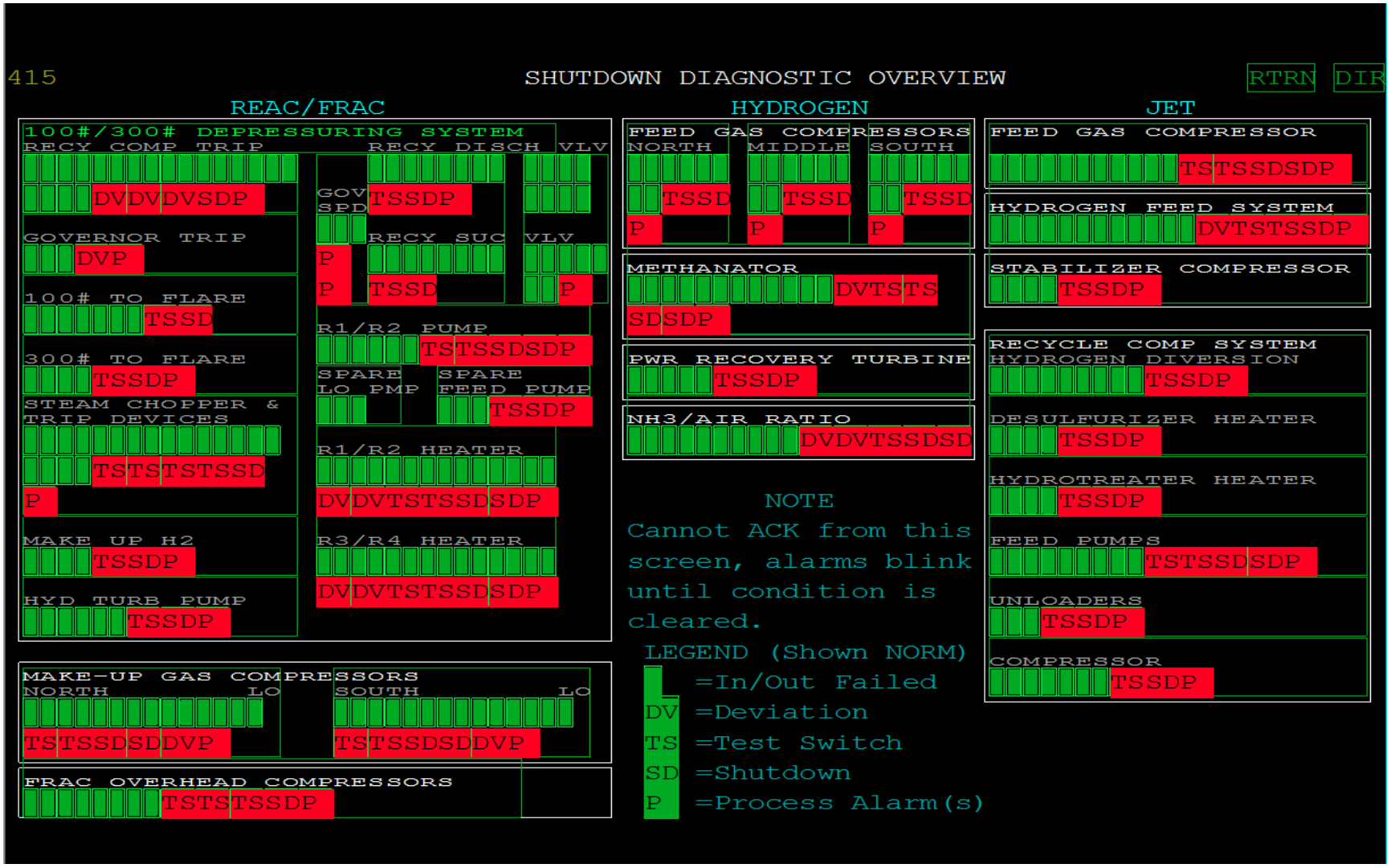

407
STEAM TO CARBON RATIO CALCULATION
CARBON SOURCES
RATE (MSCFH)
CARBON FACTOR (MOLE/MOLE)
SOUTHERN CAL GAS
RRRR
RRRRR
LED RELEASE GAS
RRRR
RRRRR
(LESS EXCESS TO FUEL)
RRRR
RRRR
SCRUBBER REL TO H2 PLT
RRRR
RRRRR
LPG DEETH REL TO H2 PLT
RRRR
RRRRR
HDS PRISM WASTE GAS
RRRR
RRRRR
FLASH DRM REL TO H2 PLT
RRRR
RRRRR
TOTAL CARBON, MLB/HR
RRRR
STEAM RATES
SATURATOR MAKEUP WATER, BPH
RRRR
SPHTD PROCESS STEAM, MLB/HR
RRRR
SATD PROCESS STEAM, MLB/HR
RRRR
SATURATOR BLOWDOWN, GPM
RRRR
TOTAL STEAM, MLB/HR
RRRR
STEAM TO CARBON RATIO
RRRRR

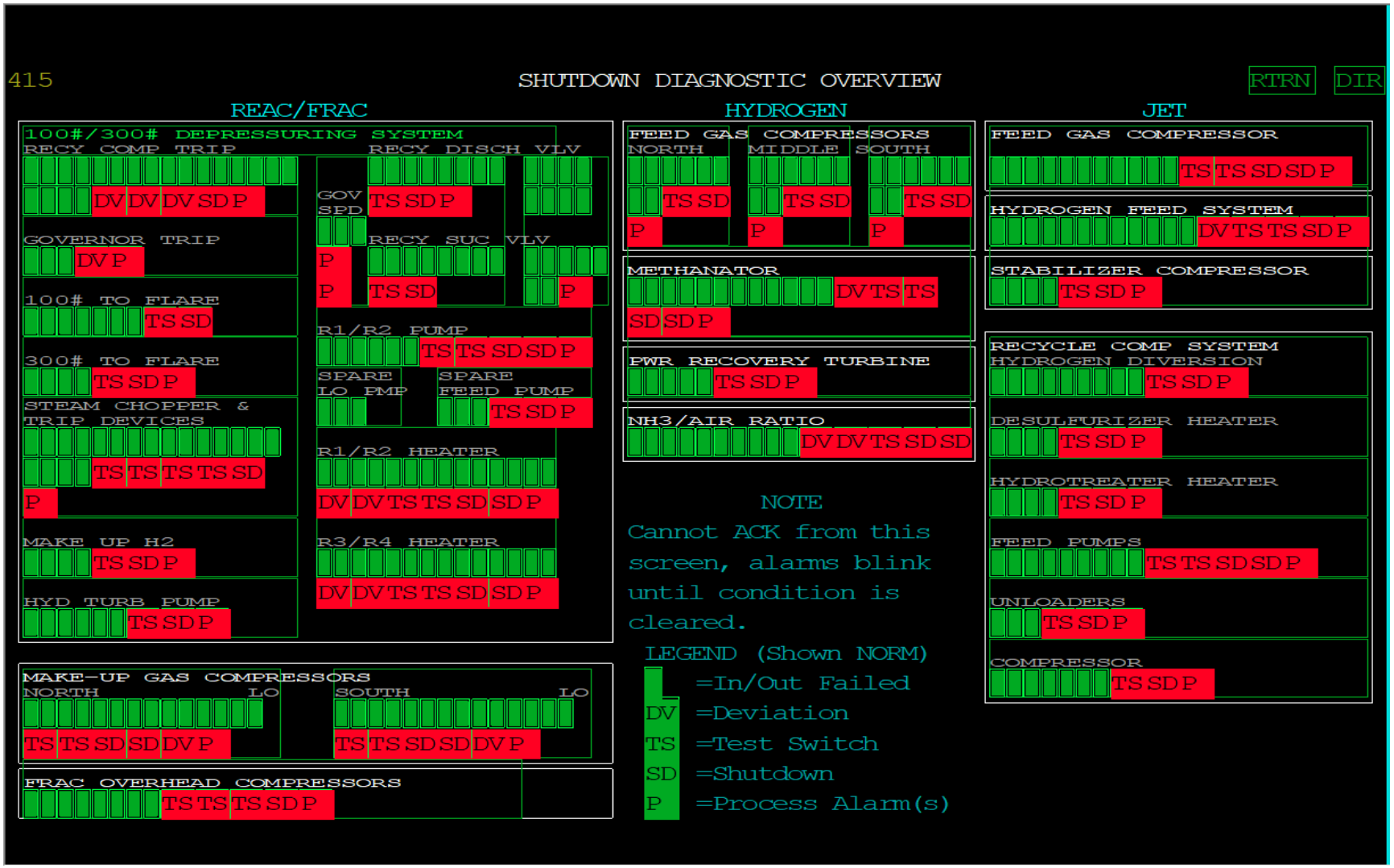

407
Ack Page
Name
Eng U
Hide
9999.9
407
Carbon Sources
Rate (MSCFH)
Carbon Factor (Mole/Mole)
Southern Cal Gas
5FC122
9999.99
5FK3100
9999.99
Led Release Gas
5FC123
9999.99
5FK3100
9999.99
(Less Excess To Fuel)
5FI127
9999.99
9999.99
Calculation script is given in NW Graphics. Need to discuss for implementation in EPKS
Scrubber REL To H2 PLT
3FC118
9999.99
5FK3100
9999.99
LPG Deeth REL To H2 PLT
5FC125
9999.99
5FK3100
9999.99
HDS Prism Waste Gas
5FC148
9999.99
5FK3100
9999.99
Flash DRM REL To H2 PLT
6FC124
9999.99
5FK3100
9999.99
Total Carbon, MLB/HR
5FK3100
9999.99
T
Steam Rates
Saturator Makeup Water, BPH
5FC103
9999.99
SPHTD Process Steam, MLB/HR
5FC113
9999.99
SATD Process Steam, MLB/HR
5FC117
9999.99
Saturator Blowdown, GPM
5FI248
9999.99
Total Steam, MLB/HR
5FK3101
9999.99
T
Steam To Carbon Ratio
5RI3500
9999.99
T
Reserved for Faceplates

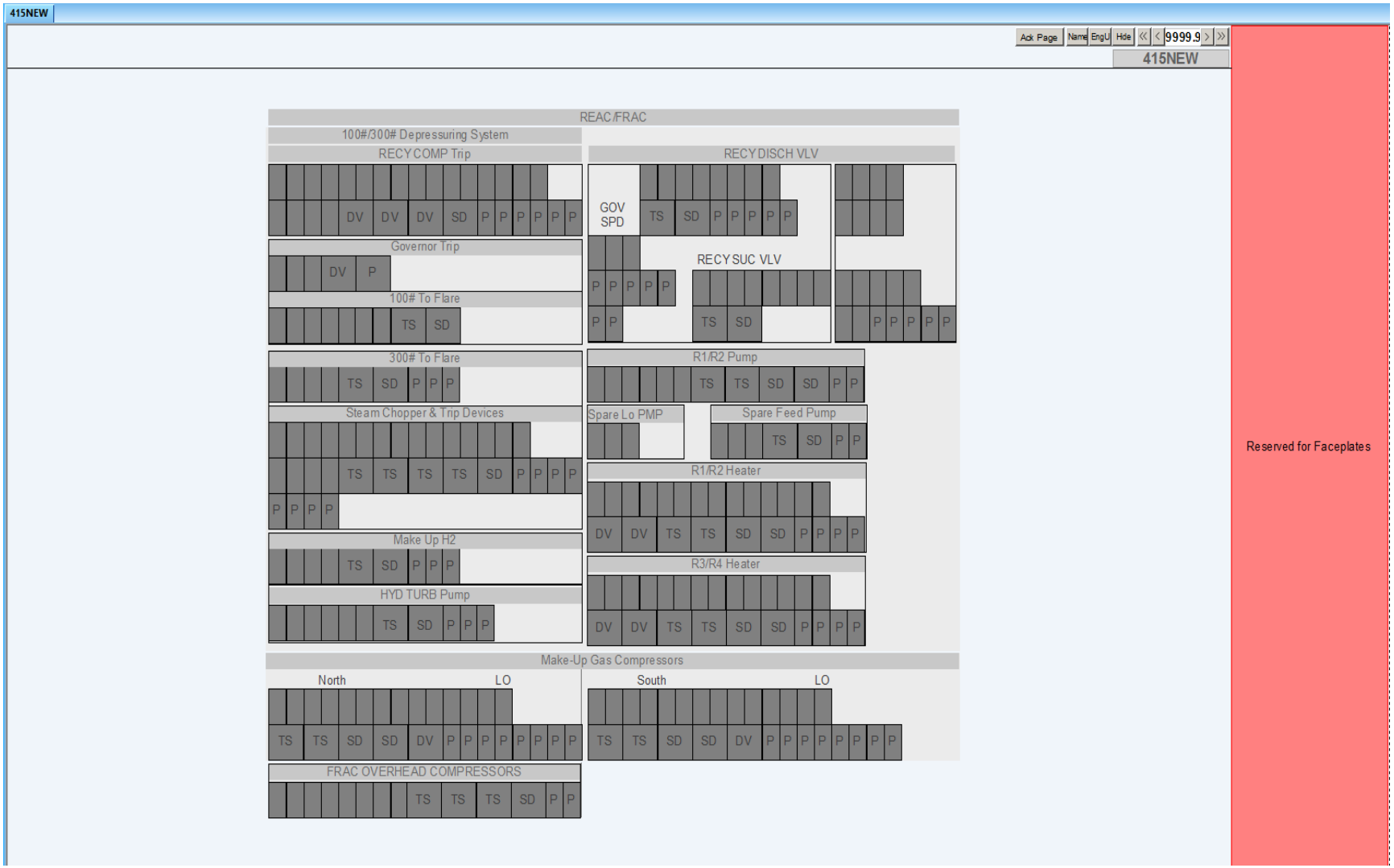
3.269 SNAPSHOTS(MENU) (412.DS)

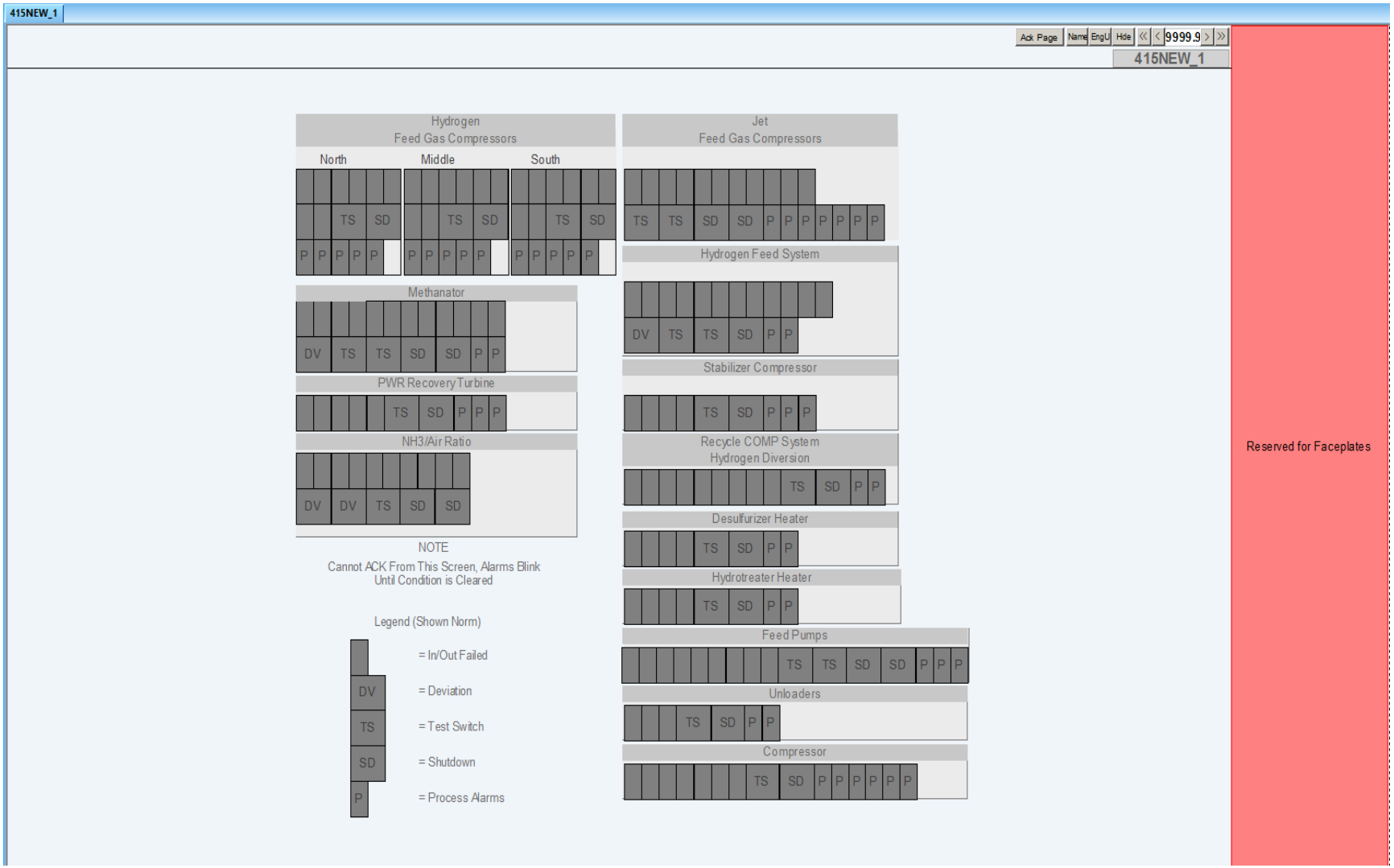
HOLD 2

3.270 SHUTDOWN DIAGNOSTIC OVERVIEW (415NEW.DS)

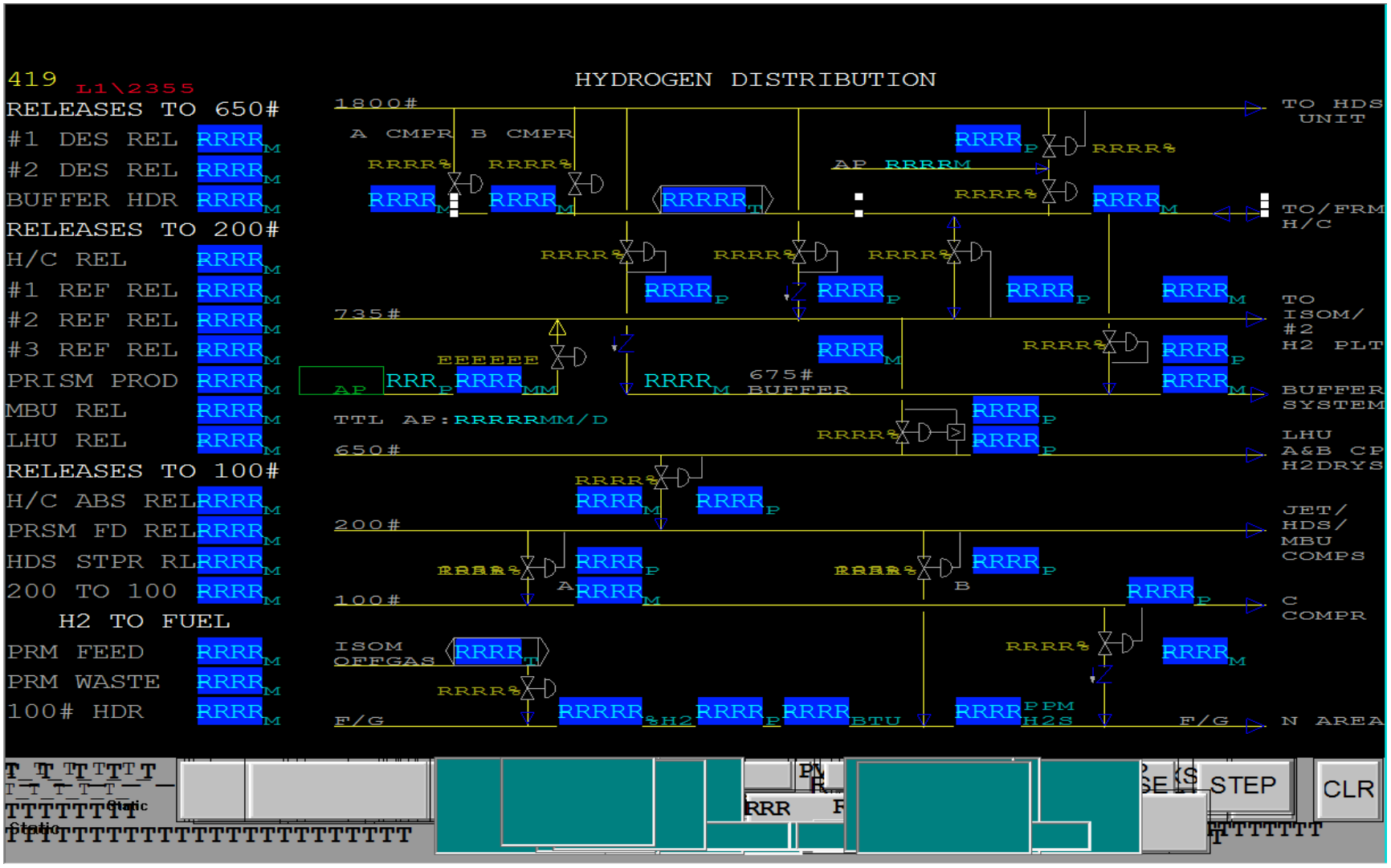


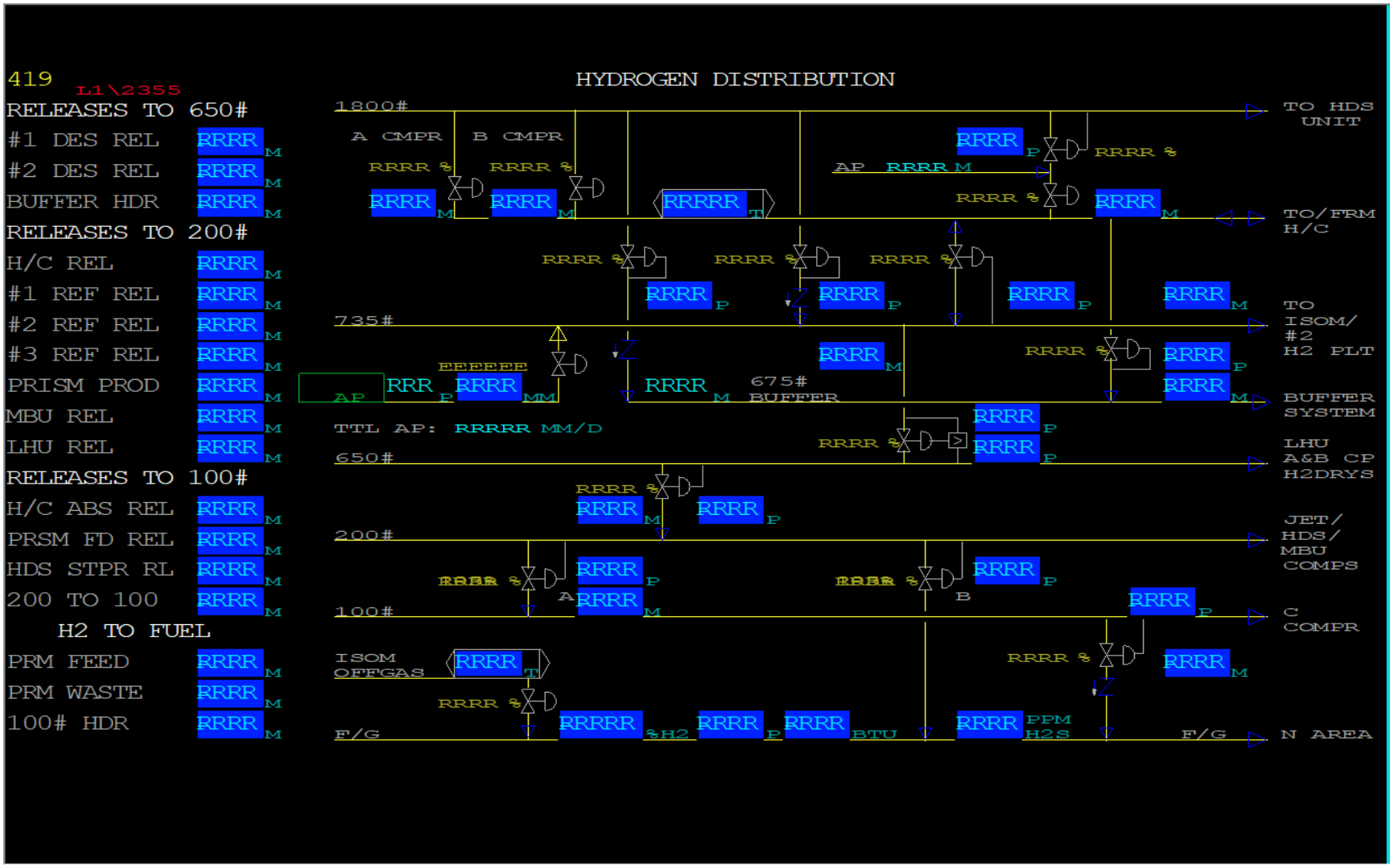

415
SHUTDOWN DIAGNOSTIC OVERVIEW
RTRN
DIR
REAC/FRAC
100#/300# DEPRESSURING SYSTEM
RECY COMP TRIP
DV DV DV SD P
GOVERNOR TRIP
DV P
100# TO FLARE
TS SD
300# TO FLARE
TS SD P
STEAM CHOPPER & TRIP DEVICES
TS TS TS TS SD
P
MAKE UP H2
TS SD P
HYD TURB PUMP
TS SD P
RECY DISCH VLV
GOV SPD
TS SD P
RECY SUC VLV
P
P
TS SD
P
R1/R2 PUMP
TS TS SD SD P
SPARE LO PMP
SPARE FEED PUMP
TS SD P
R1/R2 HEATER
DV DV TS TS SD SD P
R3/R4 HEATER
DV DV TS TS SD SD P
MAKE-UP GAS COMPRESSORS
NORTH
LO
TS TS SD SD DV P
SOUTH
LO
TS TS SD SD DV P
FRAC OVERHEAD COMPRESSORS
TS TS TS SD P
HYDROGEN
FEED GAS COMPRESSORS
NORTH
TS SD
P
MIDDLE
TS SD
P
SOUTH
TS SD
P
METHANATOR
DV TS TS
SD SD P
PWR RECOVERY TURBINE
TS SD P
NH3/AIR RATIO
DV DV TS SD SD
NOTE
Cannot ACK from this screen, alarms blink until condition is cleared.
LEGEND (Shown NORM)
=In/Out Failed
DV =Deviation
TS =Test Switch
SD =Shutdown
P =Process Alarm(s)
JET
FEED GAS COMPRESSOR
TS TS SD SD P
HYDROGEN FEED SYSTEM
DV TS TS SD P
STABILIZER COMPRESSOR
TS SD P
RECYCLE COMP SYSTEM
HYDROGEN DIVERSION
TS SD P
DESULFURIZER HEATER
TS SD P
HYDROTREATER HEATER
TS SD P
FEED PUMPS
TS TS SD SD P
UNLOADERS
TS SD P
COMPRESSOR
TS SD P

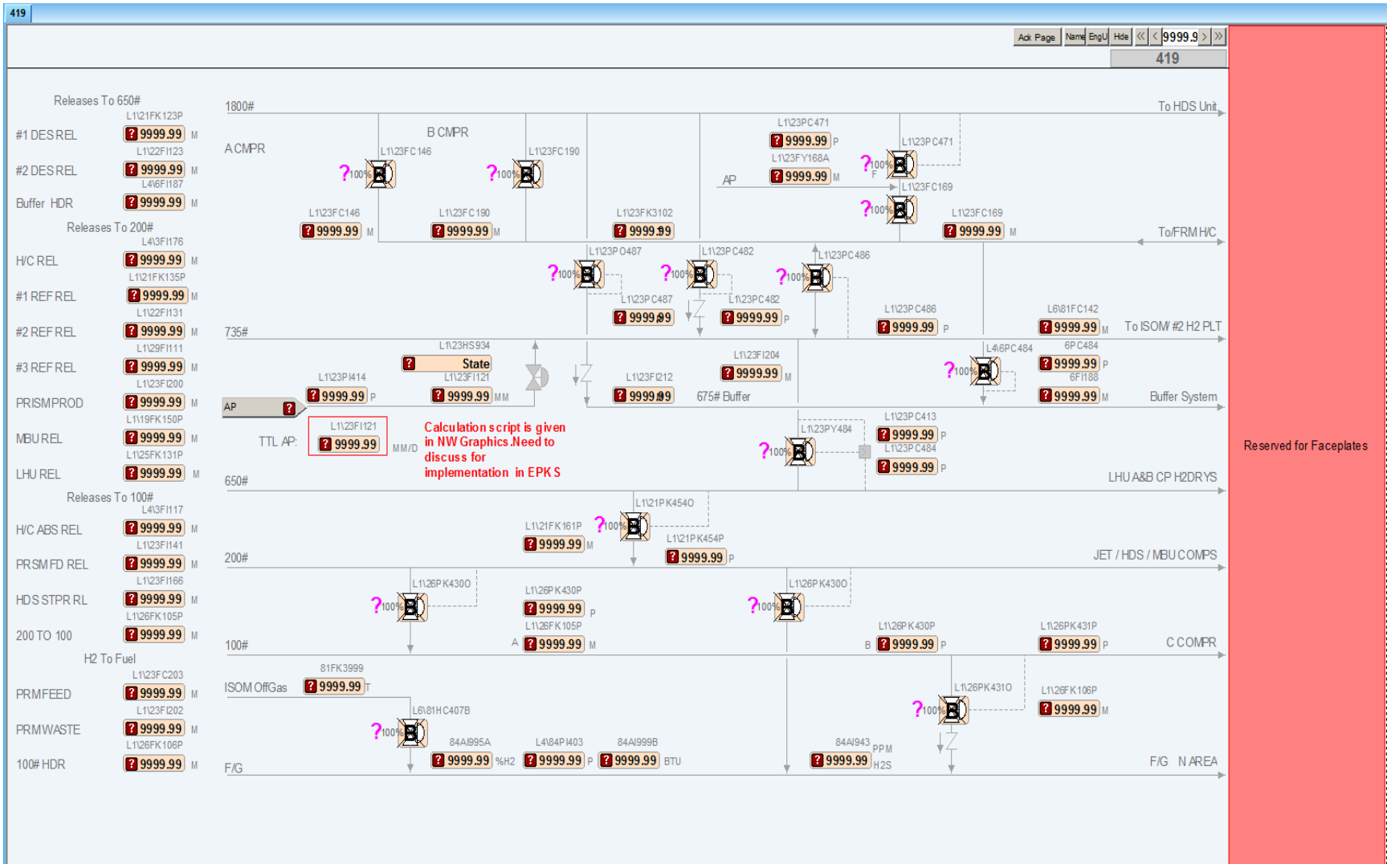

415NEW
Ack Page
Name
Eng U
Hide
9999.9
415NEW
REAC/FRAC
100#/300# Depressuring System
RECY COMP Trip
DV DV DV SD P P P P P P
Governor Trip
DV P
100# To Flare
TS SD
300# To Flare
TS SD P P P
Steam Chopper & Trip Devices
TS TS TS TS SD P P P P P P P P
Make Up H2
TS SD P P P
HYD TURB Pump
TS SD P P P
RECY DISCH VLV
GOV SPD
TS SD P P P P P
RECY SUC VLV
P P P P P P P
TS SD
P P P P P
R1/R2 Pump
TS TS SD SD P P
Spare Lo PMP
Spare Feed Pump
TS SD P P
R1/R2 Heater
DV DV TS TS SD SD P P P P
R3/R4 Heater
DV DV TS TS SD SD P P P P
Make-Up Gas Compressors
North
LO
TS TS SD SD DV P P P P P P P P
South
LO
TS TS SD SD DV P P P P P P P P
FRAC OVERHEAD COMPRESSORS
TS TS TS SD P P
Reserved for Faceplates


415NEW_1
Ack Page
Name
Eng U
Hide
9999.9
415NEW_1
Hydrogen
Feed Gas Compressors
North
Middle
South
TS
SD
P
Jet
Feed Gas Compressors
Hydrogen Feed System
DV
Methanator
PWR Recovery Turbine
NH3/Air Ratio
Stabilizer Compressor
Recycle COMP System
Hydrogen Diversion
Desulfurizer Heater
Hydrotreater Heater
Feed Pumps
Unloaders
Compressor
NOTE
Cannot ACK From This Screen, Alarms Blink
Until Condition is Cleared
Legend (Shown Norm)
= In/Out Failed
= Deviation
= Test Switch
= Shutdown
= Process Alarms
Reserved for Faceplates

3.271 HYDROGEN DISTRIBUTION (419.DS)



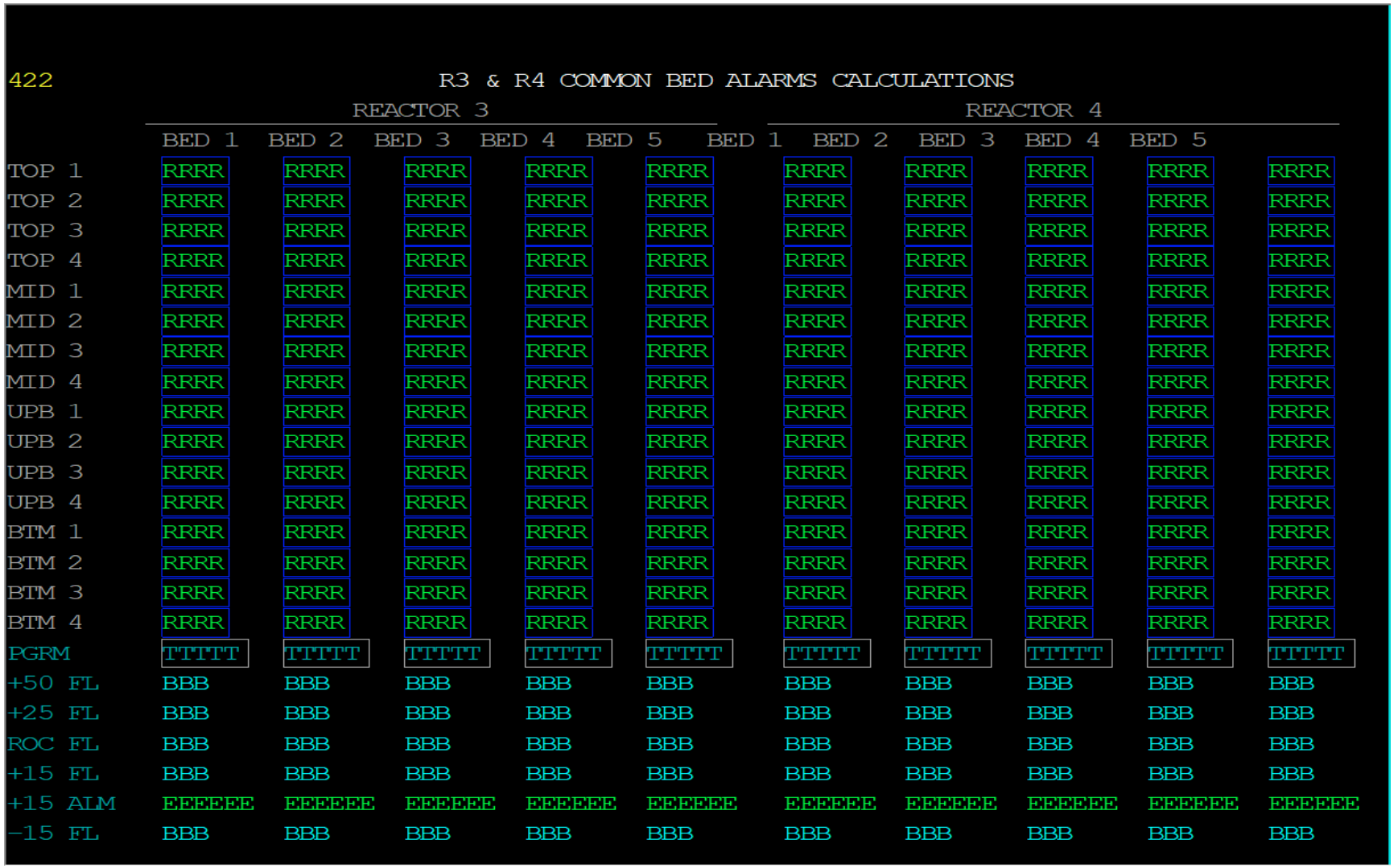

419
L1\2355
HYDROGEN DISTRIBUTION
RELEASES TO 650#
#1 DES REL
#2 DES REL
BUFFER HDR
RELEASES TO 200#
H/C REL
#1 REF REL
#2 REF REL
#3 REF REL
PRISM PROD
MBU REL
LHU REL
RELEASES TO 100#
H/C ABS REL
PRSM FD REL
HDS STPR RL
200 TO 100
H2 TO FUEL
PRM FEED
PRM WASTE
100# HDR
1800#
A CMPR
B CMPR
TO HDS UNIT
TO/FRM H/C
735#
TO ISOM/ #2 H2 PLT
675# BUFFER
BUFFER SYSTEM
TTL AP: RRRRR MM/D
650#
LHU A&B CP H2DRYS
200#
JET/ HDS/ MBU COMPS
100#
C COMPR
ISOM OFFGAS
F/G
%H2
BTU
PPM H2S
N AREA

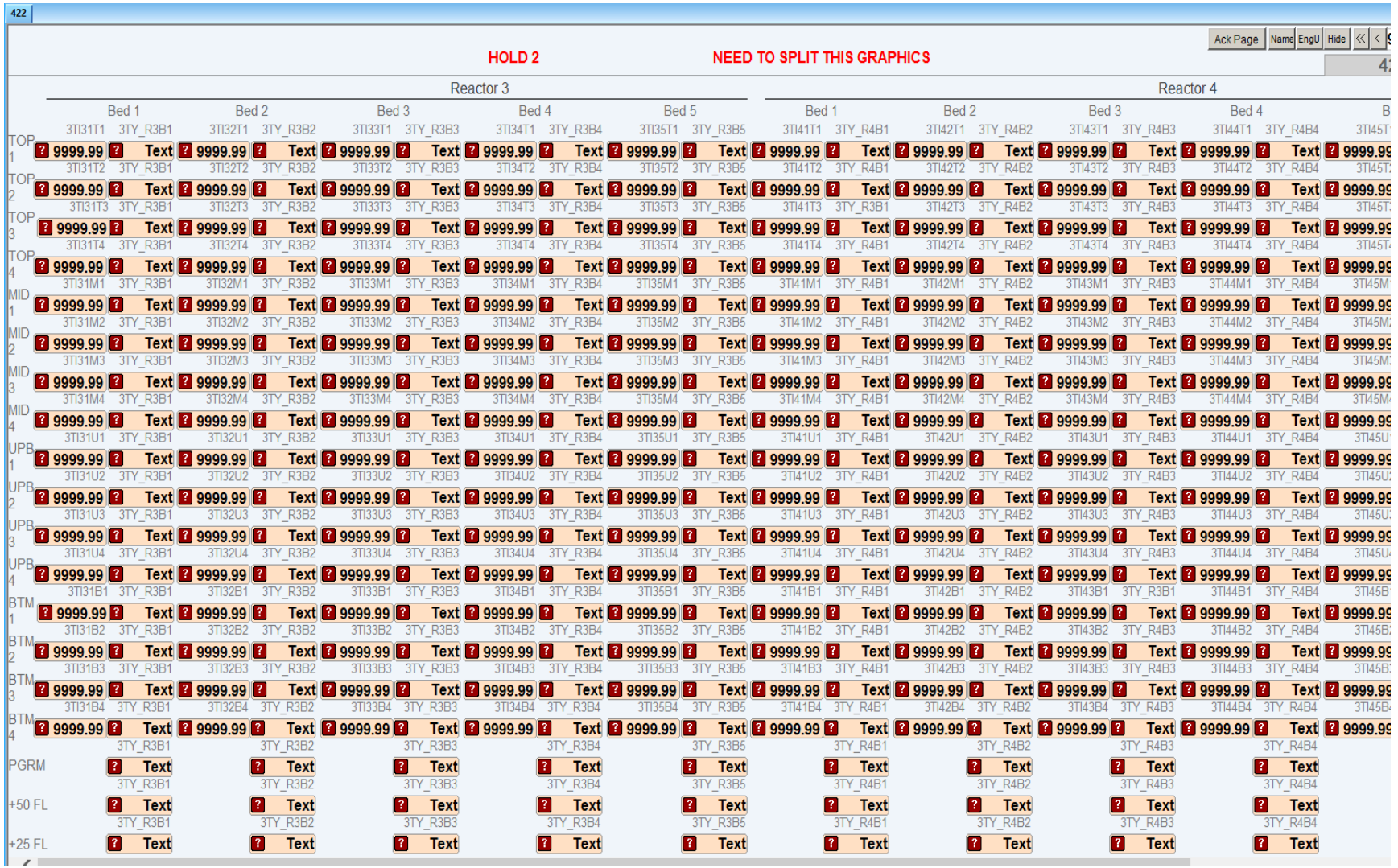

419
Ack Page
Name
Eng U
Hide
9999.9
419
Releases To 650#
#1 DES REL
#2 DES REL
Buffer HDR
Releases To 200#
H/C REL
#1 REF REL
#2 REF REL
#3 REF REL
PRISM PROD
MBU REL
LHU REL
Releases To 100#
H/C ABS REL
PRSM FD REL
HDS STPR RL
200 TO 100
H2 To Fuel
PRM FEED
PRM WASTE
100# HDR
1800#
To HDS Unit
A CMPR
B CMPR
AP
To/FRM H/C
735#
To ISOM/ #2 H2 PLT
675# Buffer
Buffer System
TTL AP:
Calculation script is given in NW Graphics .Need to discuss for implementation in EPKS
650#
LHU A&B CP H2DRYS
200#
JET / HDS / MBU COMPS
100#
C COMPR
ISOM OffGas
F/G
F/G N AREA
Reserved for Faceplates

3.272 R3 & R4 COMMON BED ALARMS CALCULATIONS (422.DS)

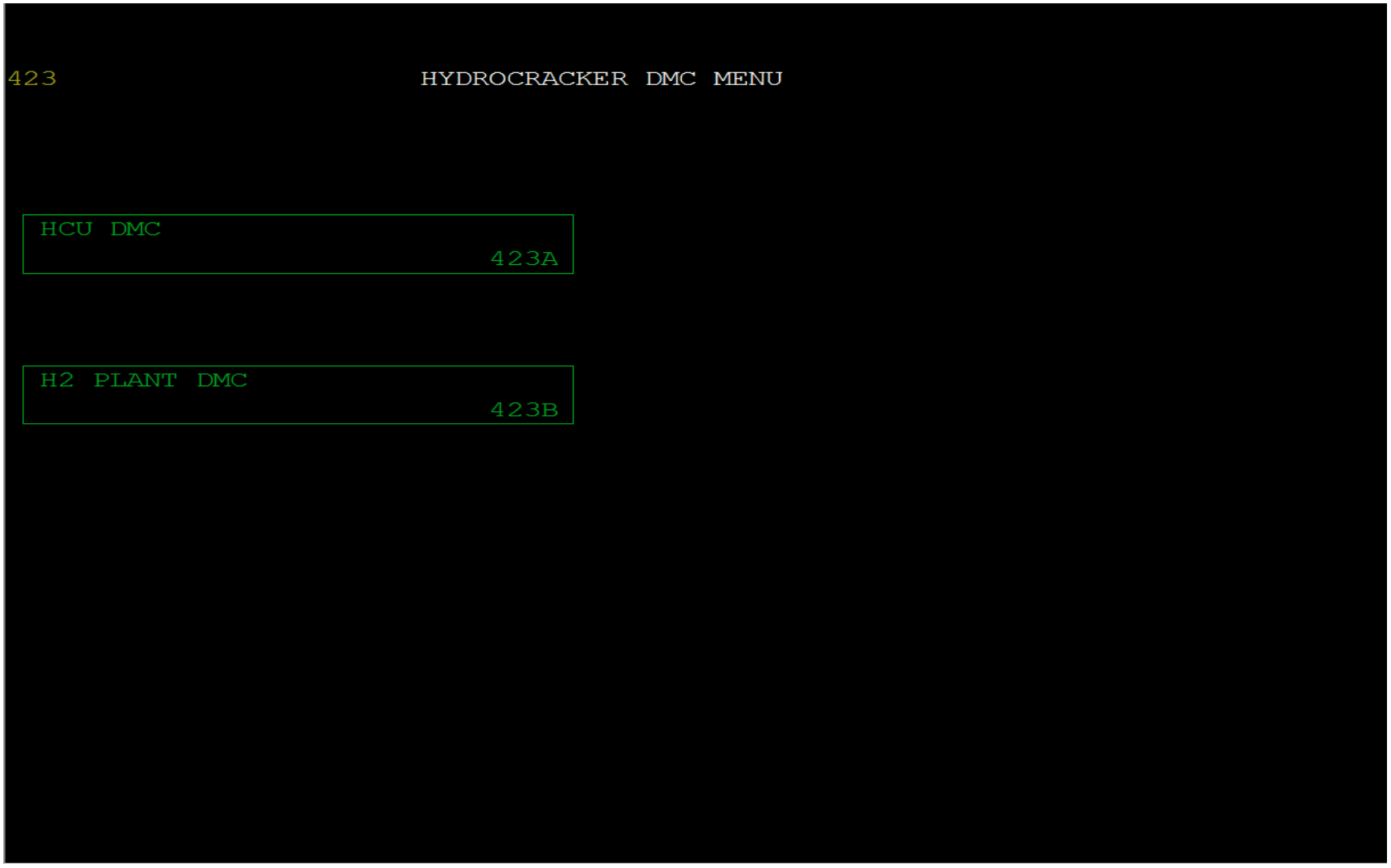
422 R3 & R4 COMMON BED ALARMS CALCULATIONS

	REACTOR 3					REACTOR 4				
	BED 1	BED 2	BED 3	BED 4	BED 5	BED 1	BED 2	BED 3	BED 4	BED 5
TOP 1	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
TOP 2	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
TOP 3	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
TOP 4	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
MID 1	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
MID 2	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
MID 3	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
MID 4	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
UPB 1	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
UPB 2	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
UPB 3	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
UPB 4	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
BTM 1	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
BTM 2	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
BTM 3	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
BTM 4	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR	RRRR
PGRM	TTTTT	TTTTT	TTTTT	TTTTT	TTTTT	TTTTT	TTTTT	TTTTT	TTTTT	TTTTT
+50 FL	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB
+25 FL	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB
ROC FL	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB
+15 FL	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB
+15 ALM	EEEEEE	EEEEEE	EEEEEE	EEEEEE	EEEEEE	EEEEEE	EEEEEE	EEEEEE	EEEEEE	EEEEEE
-15 FL	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB	BBB

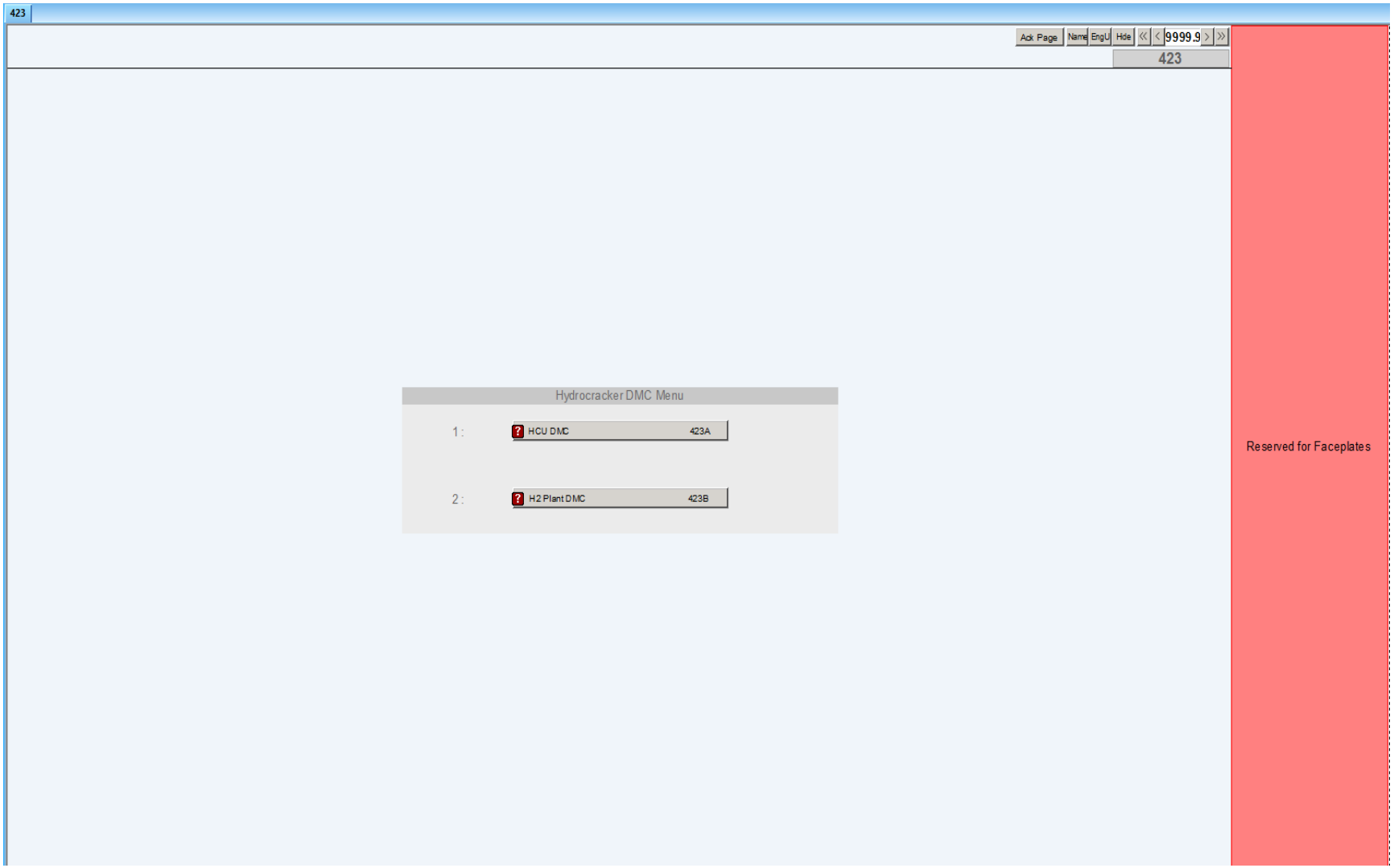

422
R3 & R4 COMMON BED ALARMS CALCULATIONS
REACTOR 3
REACTOR 4
BED 1 BED 2 BED 3 BED 4 BED 5 BED 1 BED 2 BED 3 BED 4 BED 5
TOP 1 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
TOP 2 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
TOP 3 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
TOP 4 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
MID 1 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
MID 2 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
MID 3 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
MID 4 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
UPB 1 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
UPB 2 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
UPB 3 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
UPB 4 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
BTM 1 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
BTM 2 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
BTM 3 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
BTM 4 RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR RRRR
PGRM TTTTT TTTTT TTTTT TTTTT TTTTT TTTTT TTTTT TTTTT TTTTT TTTTT
+50 FL BBB BBB BBB BBB BBB BBB BBB BBB BBB BBB
+25 FL BBB BBB BBB BBB BBB BBB BBB BBB BBB BBB
ROC FL BBB BBB BBB BBB BBB BBB BBB BBB BBB BBB
+15 FL BBB BBB BBB BBB BBB BBB BBB BBB BBB BBB
+15 ALM EEEEEE EEEEEE EEEEEE EEEEEE EEEEEE EEEEEE EEEEEE EEEEEE EEEEEE EEEEEE
-15 FL BBB BBB BBB BBB BBB BBB BBB BBB BBB BBB


422
Ack Page
Name
EngU
Hide
HOLD 2
NEED TO SPLIT THIS GRAPHICS
Reactor 3
Reactor 4
Bed 1
Bed 2
Bed 3
Bed 4
Bed 5
TOP 1
TOP 2
TOP 3
TOP 4
MID 1
MID 2
MID 3
MID 4
UPB 1
UPB 2
UPB 3
UPB 4
BTM 1
BTM 2
BTM 3
BTM 4
PGRM
+50 FL
+25 FL
9999.99
Text

3.273 HYDROCRACKER DMC MENU (423.DS)

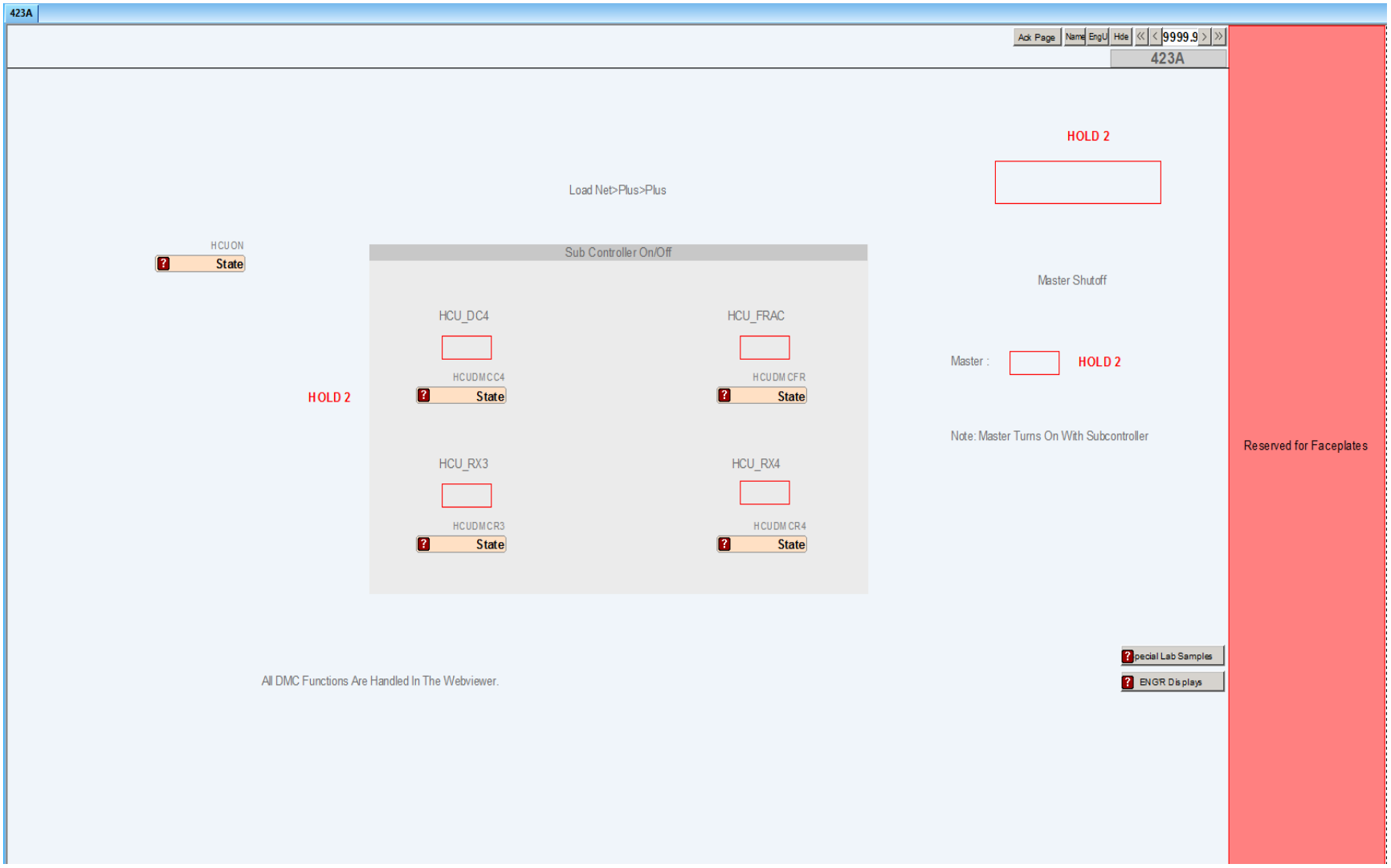


423
HYDROCRACKER DMC MENU
HCU DMC
423A
H2 PLANT DMC
423B

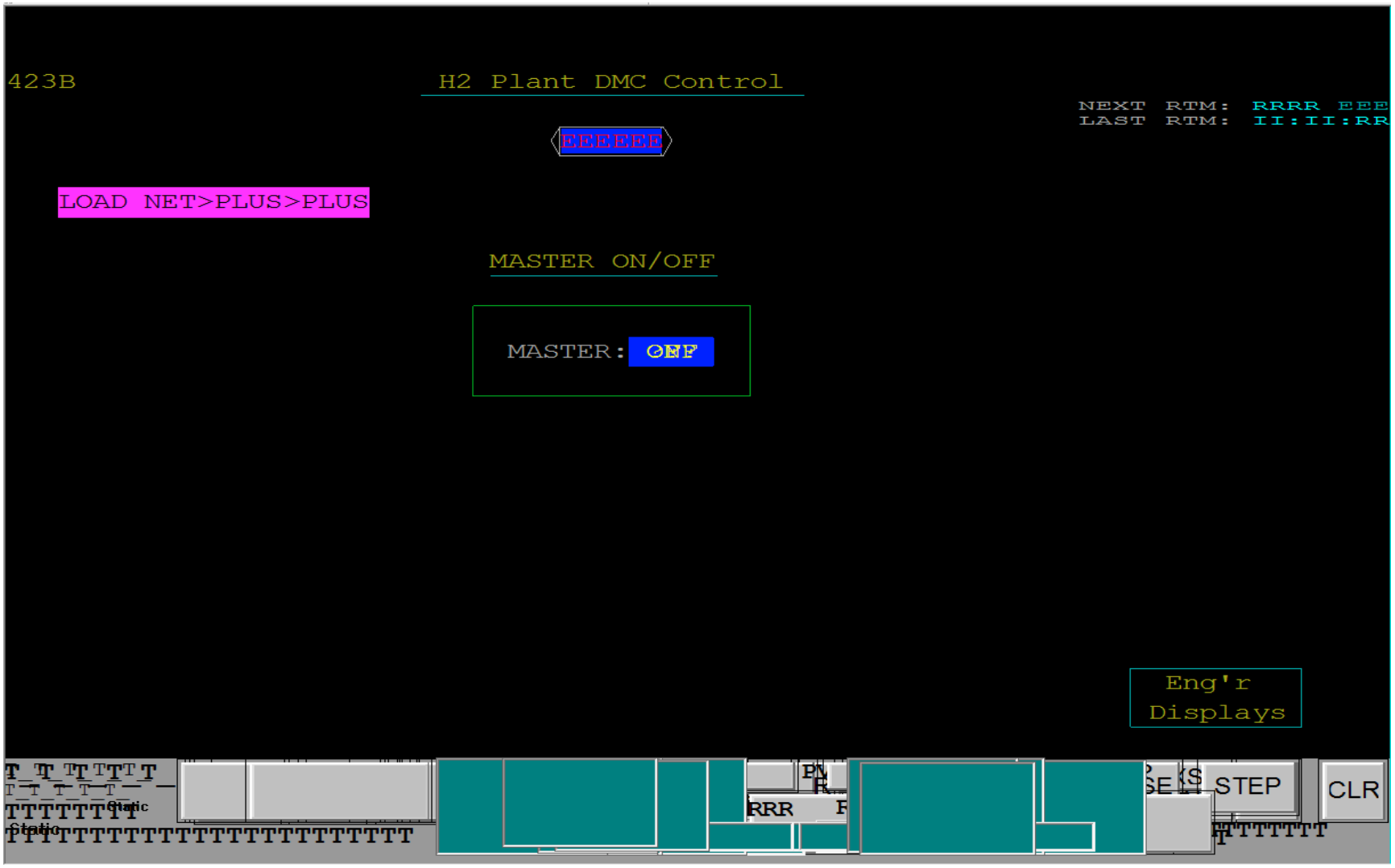

423
Ack Page
Name
EngU
Hide
9999.9
423
Hydrocracker DMC Menu
1 :
HCU DMC
423A
2 :
H2 Plant DMC
423B
Reserved for Faceplates

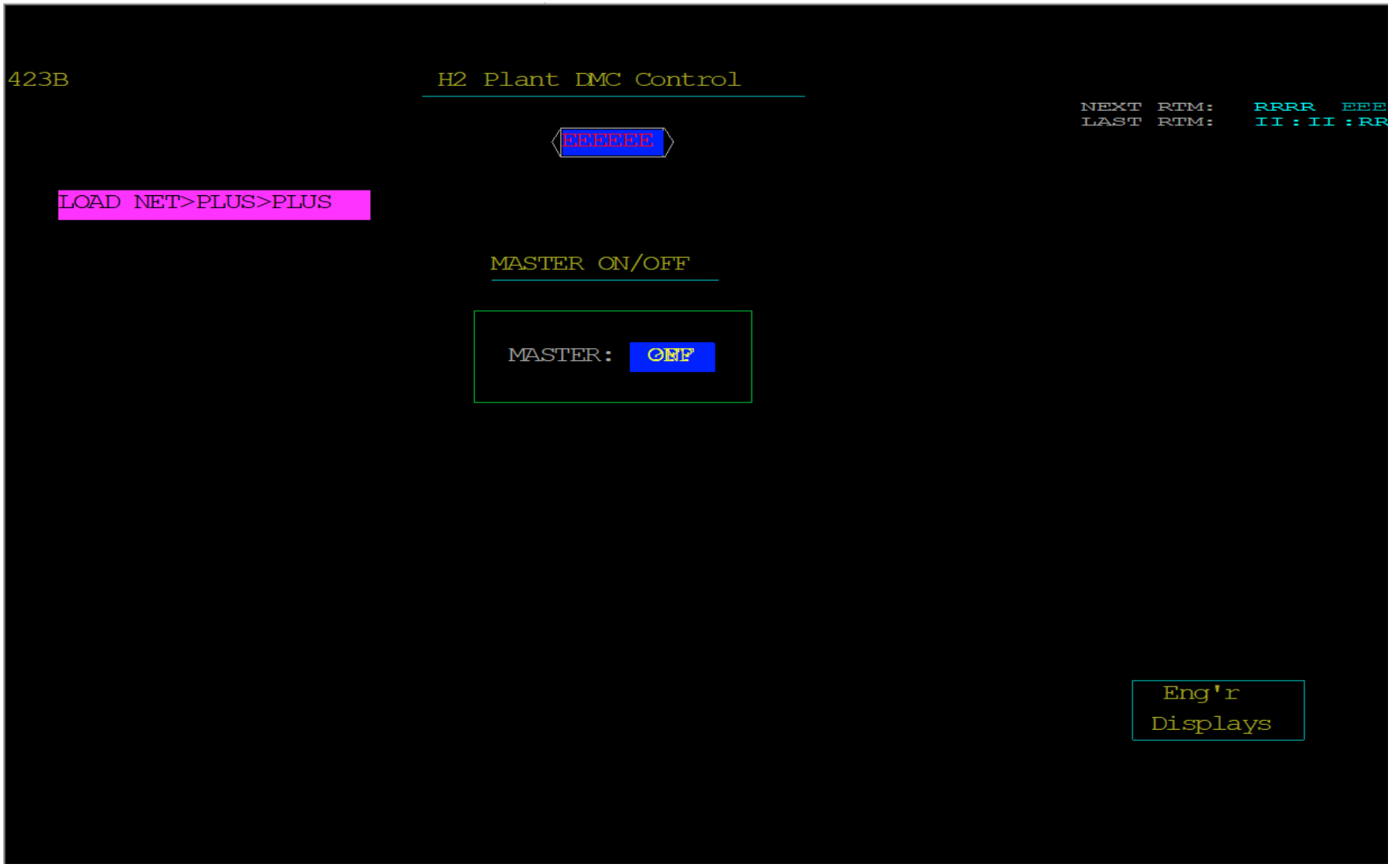
3.274 HCU DMC Control (423A.DS)

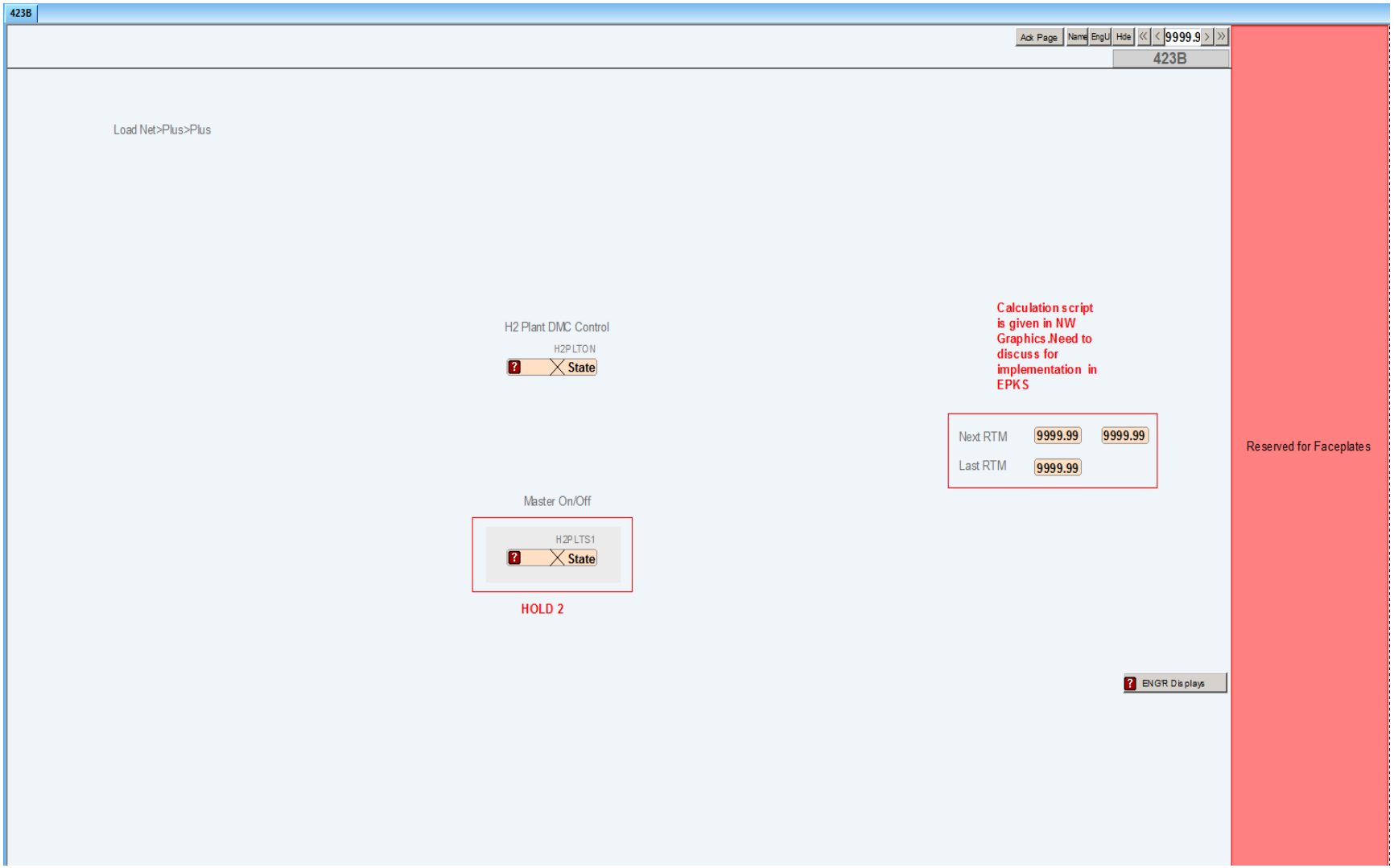
423A
HCU
DMC Control
EEEEEE
LOAD NET>PLUS>PLUS
NEXT RTM: RRRR EEE
LAST RTM: II:II:RR
MASTER SHUTOFF
MASTER: OFF
NOTE: MASTER TURNS ON WITH SUBCONTROLLER
SUB CONTROLLER ON/OFF
HCU_DC4
OFF
HCU_FRAC
OFF
HCU_RX3
OFF
HCU_RX4
OFF
SPECIAL LAB SAMPLES
Eng'r Displays
ALL DMC FUNCTIONS ARE HANDLED IN THE WEBVIEWER.


423A
Ack Page
Name
Eng U
Hide
9999.9
423A
HOLD 2
Load Net>Plus>Plus
HCUON
State
Sub Controller On/Off
HCU_DC4
HCU_FRAC
HCUDMCC4
State
HCUDMCFR
State
HOLD 2
HCU_RX3
HCU_RX4
HCUDMCR3
State
HCUDMCR4
State
Master Shutoff
Master :
HOLD 2
Note: Master Turns On With Subcontroller
Reserved for Faceplates
All DMC Functions Are Handled In The Webviewer.
pecial Lab Samples
ENGR Displays

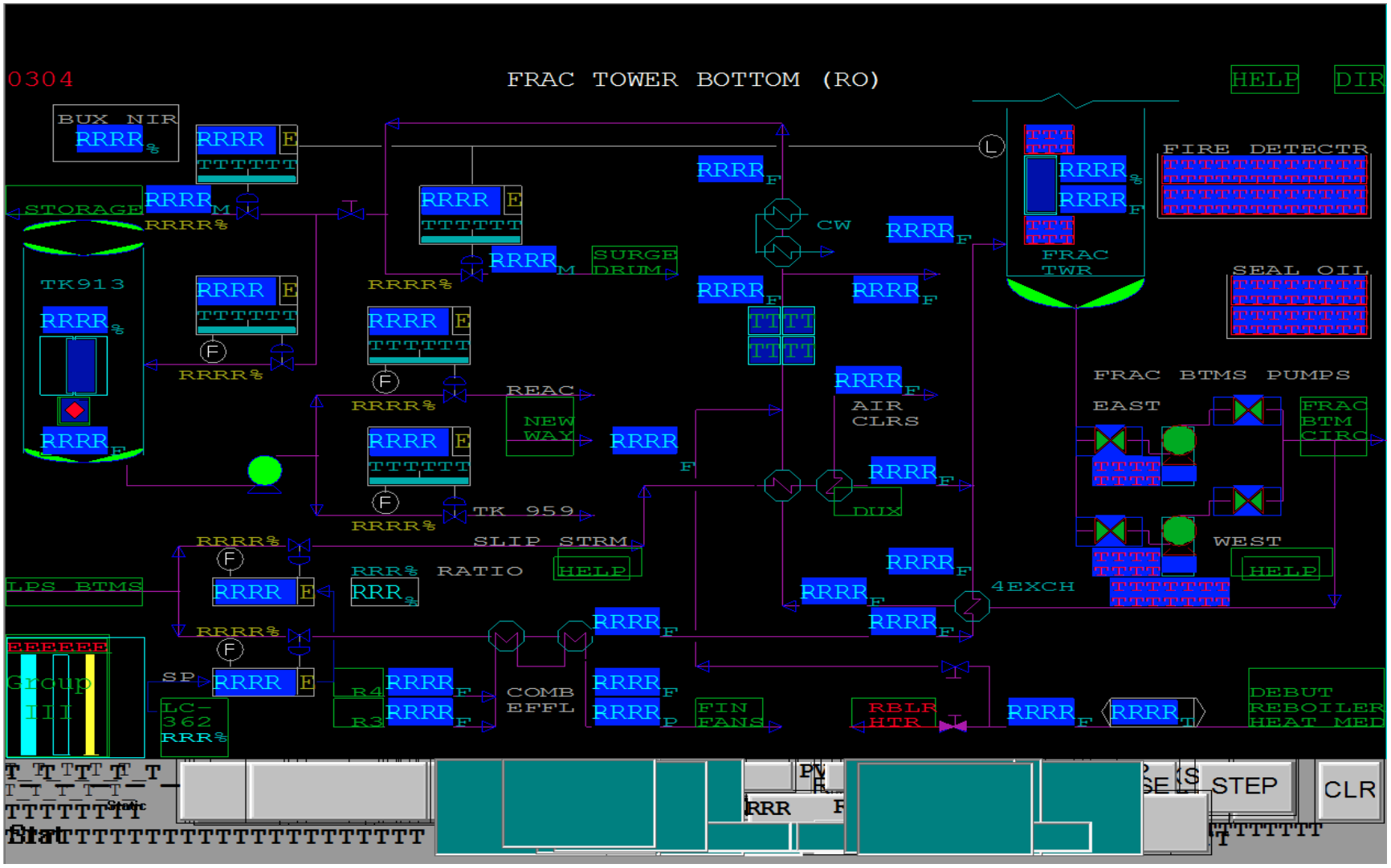
3.275 H2 Plant DMC Control (423B.DS)

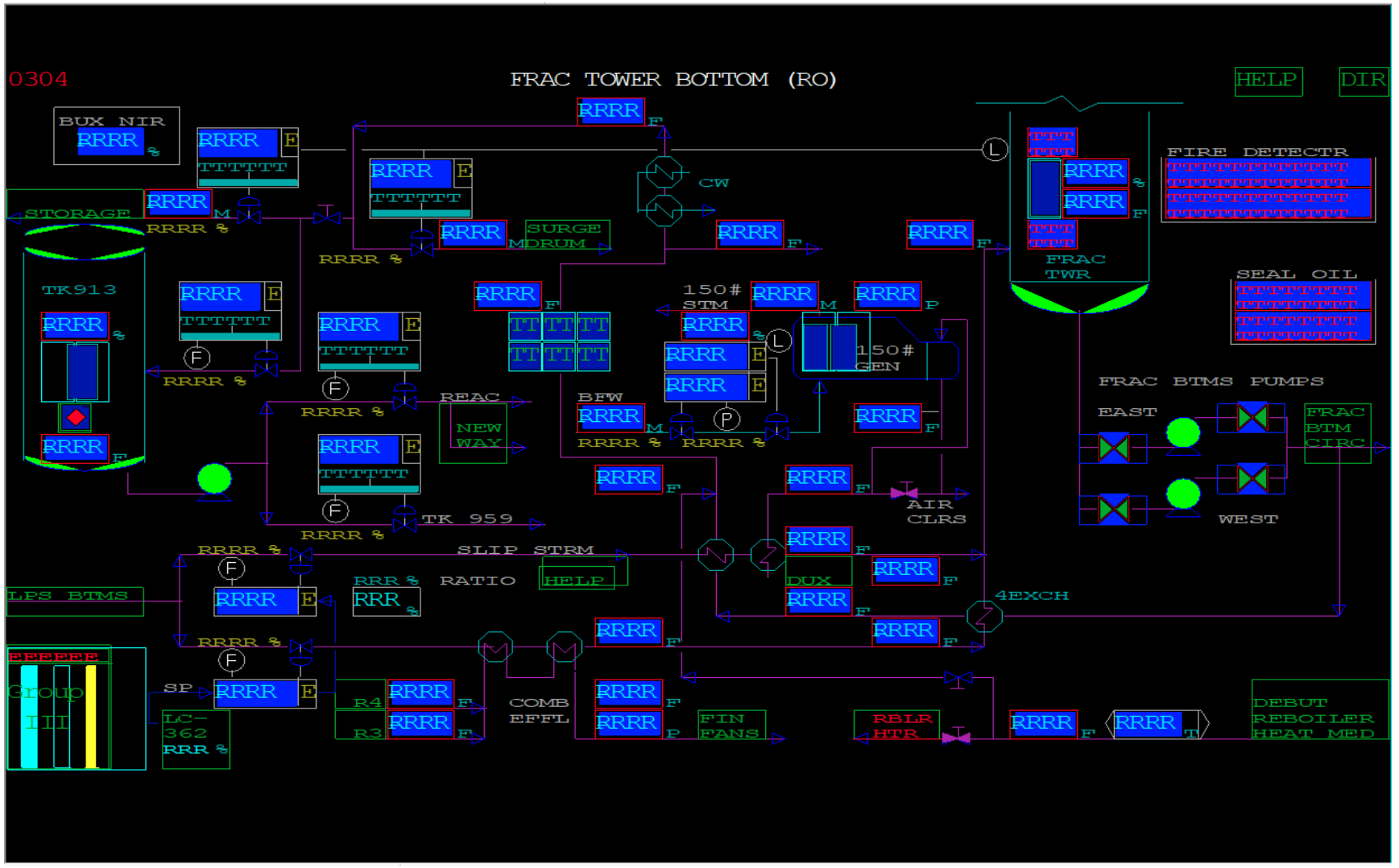


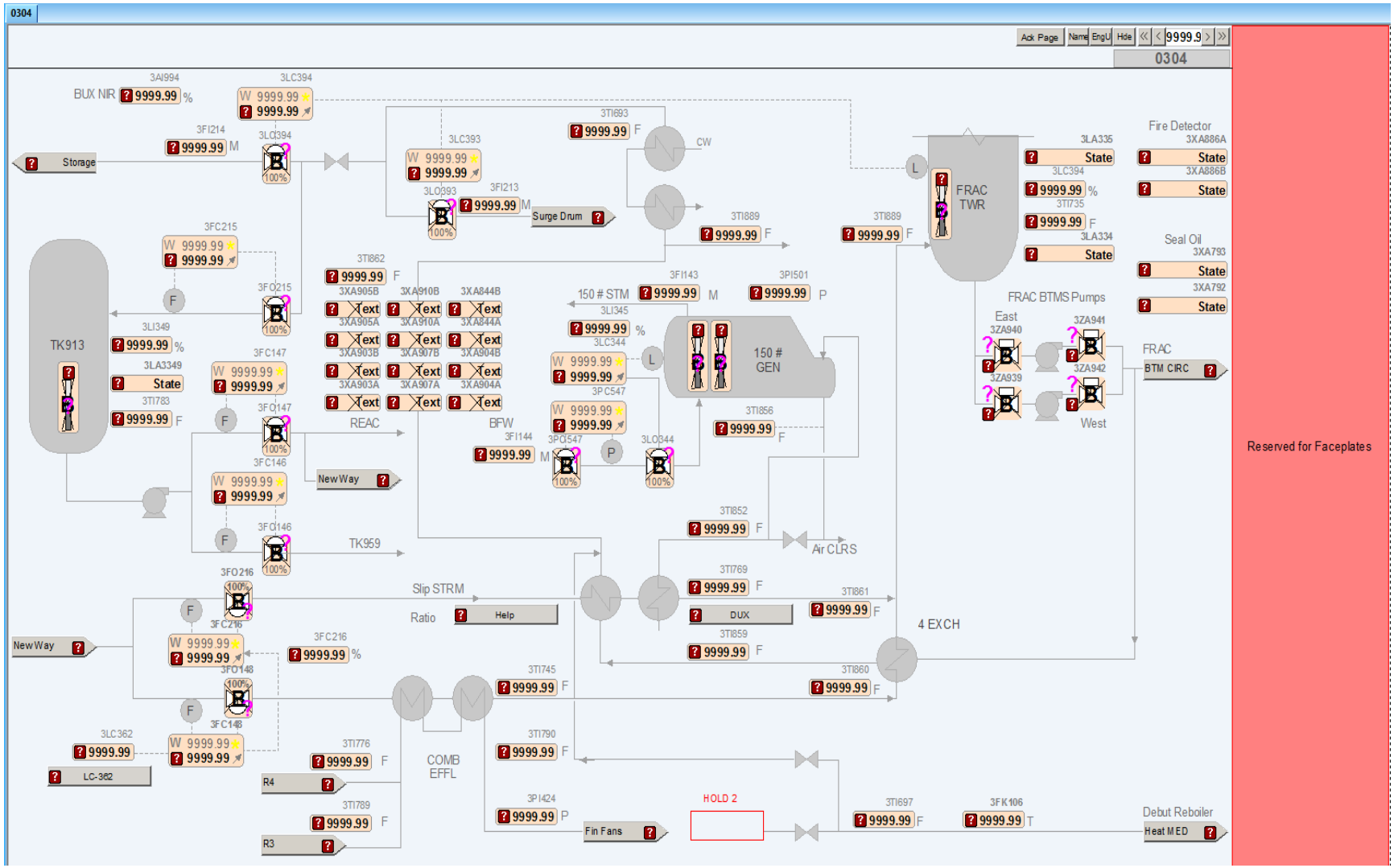

423B
H2 Plant DMC Control
NEXT RTM: RRRR EEE
LAST RTM: II:II:RR
EEEEEE
LOAD NET>PLUS>PLUS
MASTER ON/OFF
MASTER: OFF
Eng'r
Displays


423B
Ack Page
Name
EngU
Hide
9999.9
423B
Load Net>Plus>Plus
H2 Plant DMC Control
H2P LTON
State
Calculation script is given in NW Graphics.Need to discuss for implementation in EPKS
Next RTM
9999.99
9999.99
Last RTM
9999.99
Reserved for Faceplates
Master On/Off
H2P LTS1
State
HOLD 2
ENGR Displays

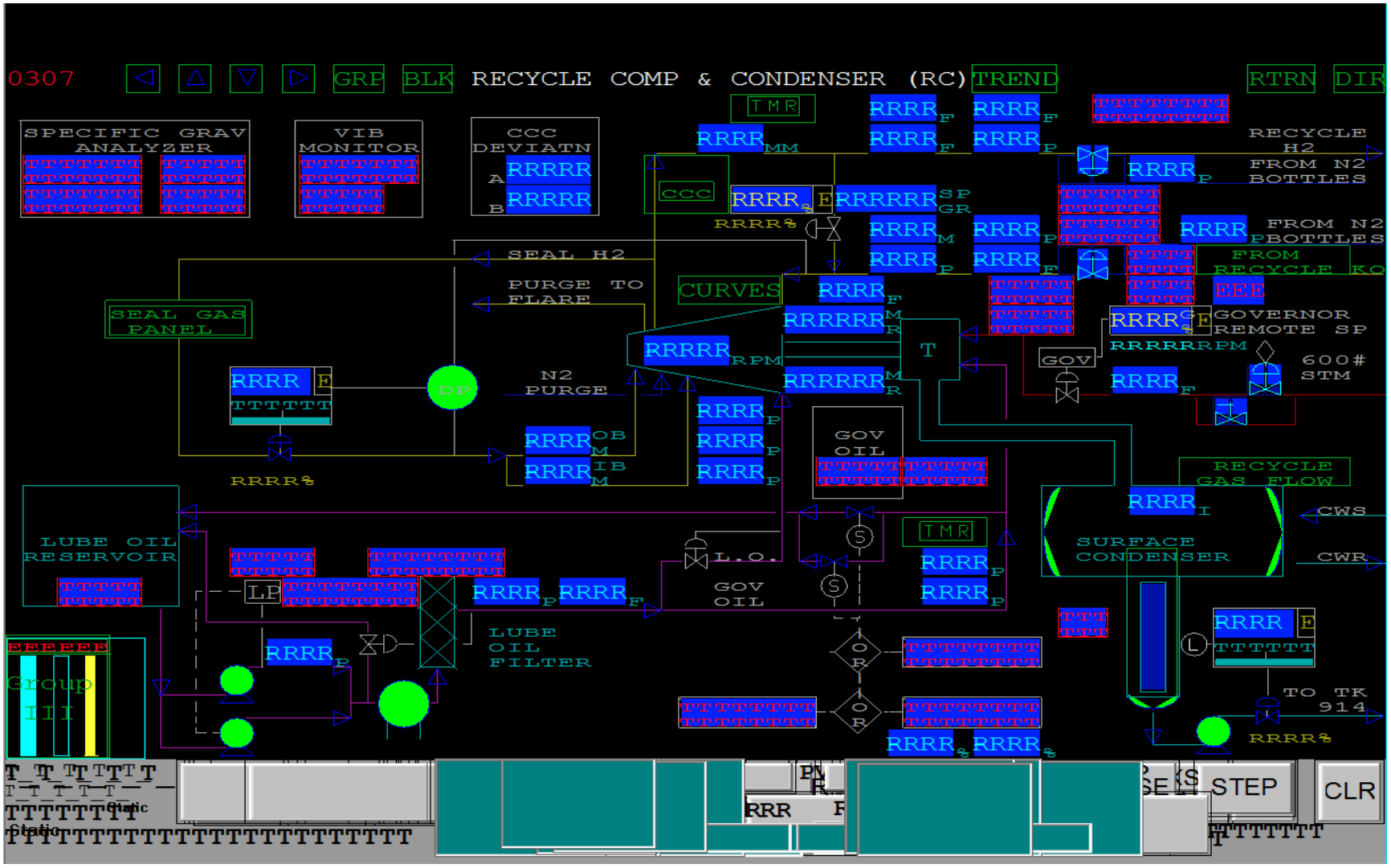
3.276 FRAC TOWER BOTTOM (RO) (0304.DS)

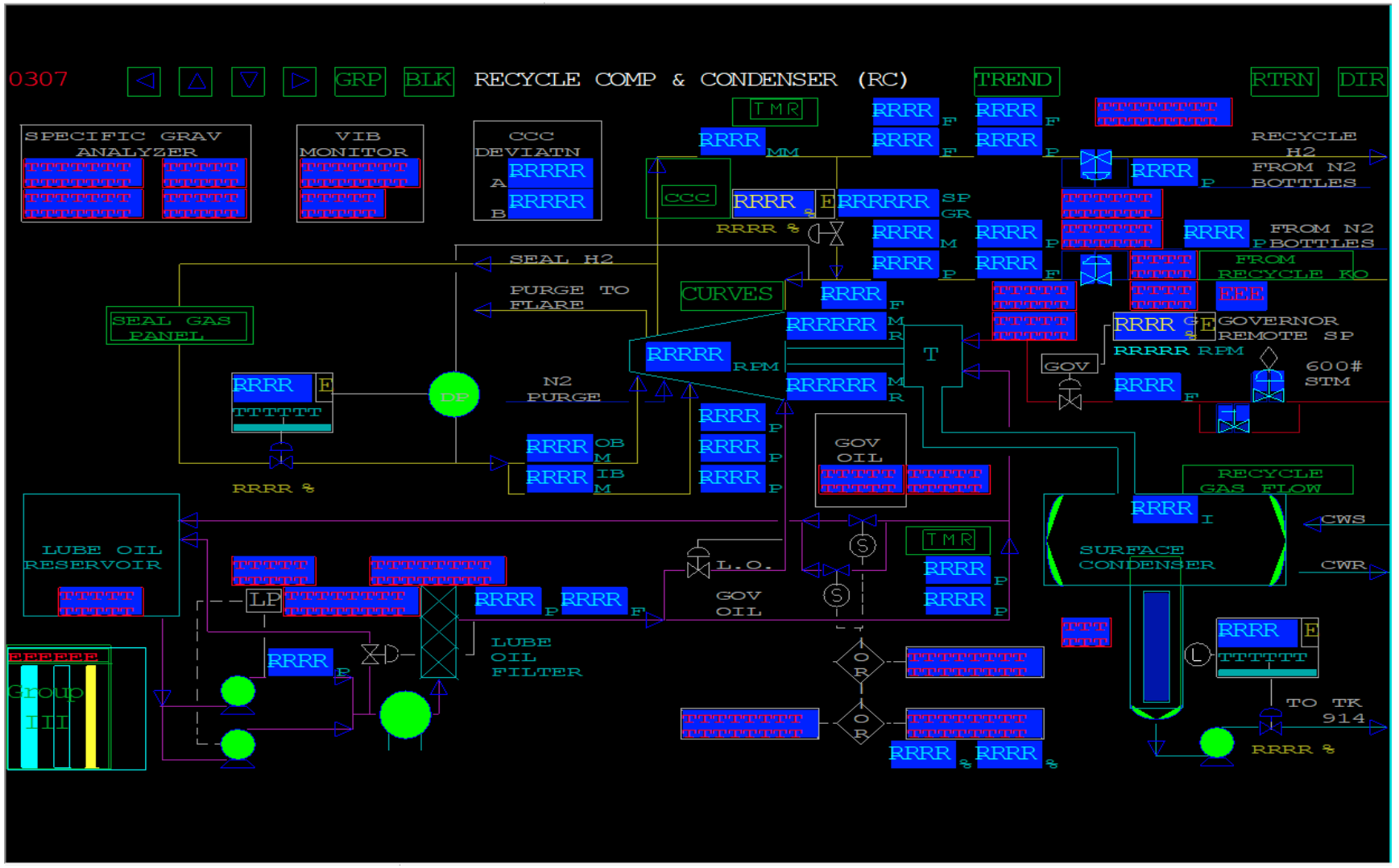


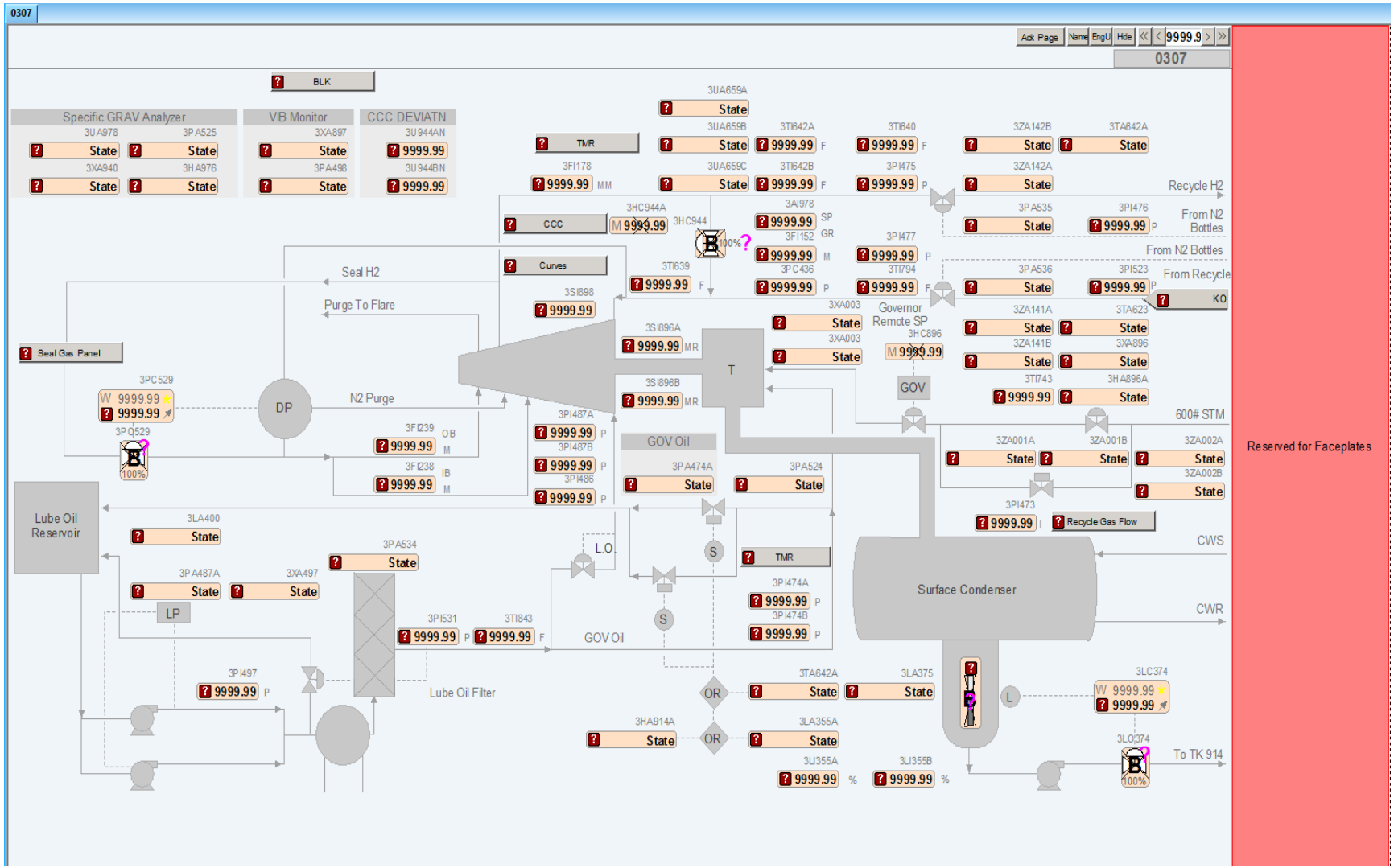

0304
FRAC TOWER BOTTOM (RO)
HELP
DIR
BUX NIR
RRRR
STORAGE
TK913
CW
SURGE
DRUM
FRAC
TWR
FIRE DETECTR
SEAL OIL
150#
STM
150#
GEN
FRAC BTMS PUMPS
EAST
WEST
FRAC
BTM
CIRC
REAC
NEW
WAY
BFW
TK 959
AIR
CLRS
SLIP STRM
RATIO
HELP
DUX
4EXCH
LPS BTMS
Group
III
LC-
362
SP
R4
R3
COMB
EFFL
FIN
FANS
RBLR
HTR
DEBUT
REBOILER
HEAT MED


0304
Ack Page
Name
EngU
Hde
0304
BUX NIR
Storage
TK913
REAC
BFW
150 # STM
150 # GEN
FRAC TWR
FRAC BTMS Pumps
East
West
FRAC BTM CIRC
Fire Detector
Seal Oil
Air CLRS
4 EXCH
Slip STRM
Ratio
Help
DUX
New Way
TK959
COMB EFFL
Surge Drum
Fin Fans
HOLD 2
Debut Reboiler
Heat MED
LC-362
R4
R3
Reserved for Faceplates

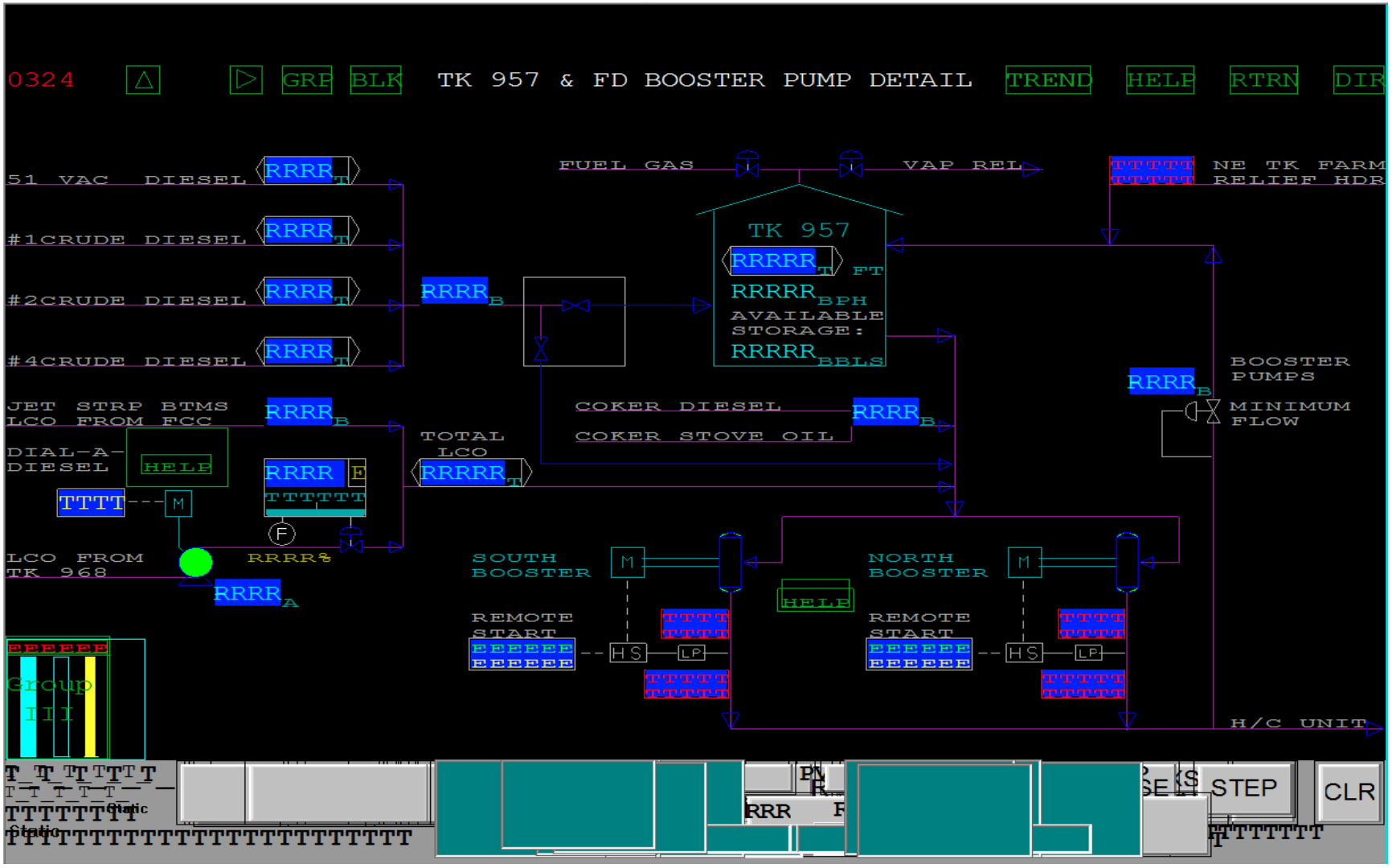
3.277 RECYCLE COMP & CONDENSER (RC) (0307.DS)

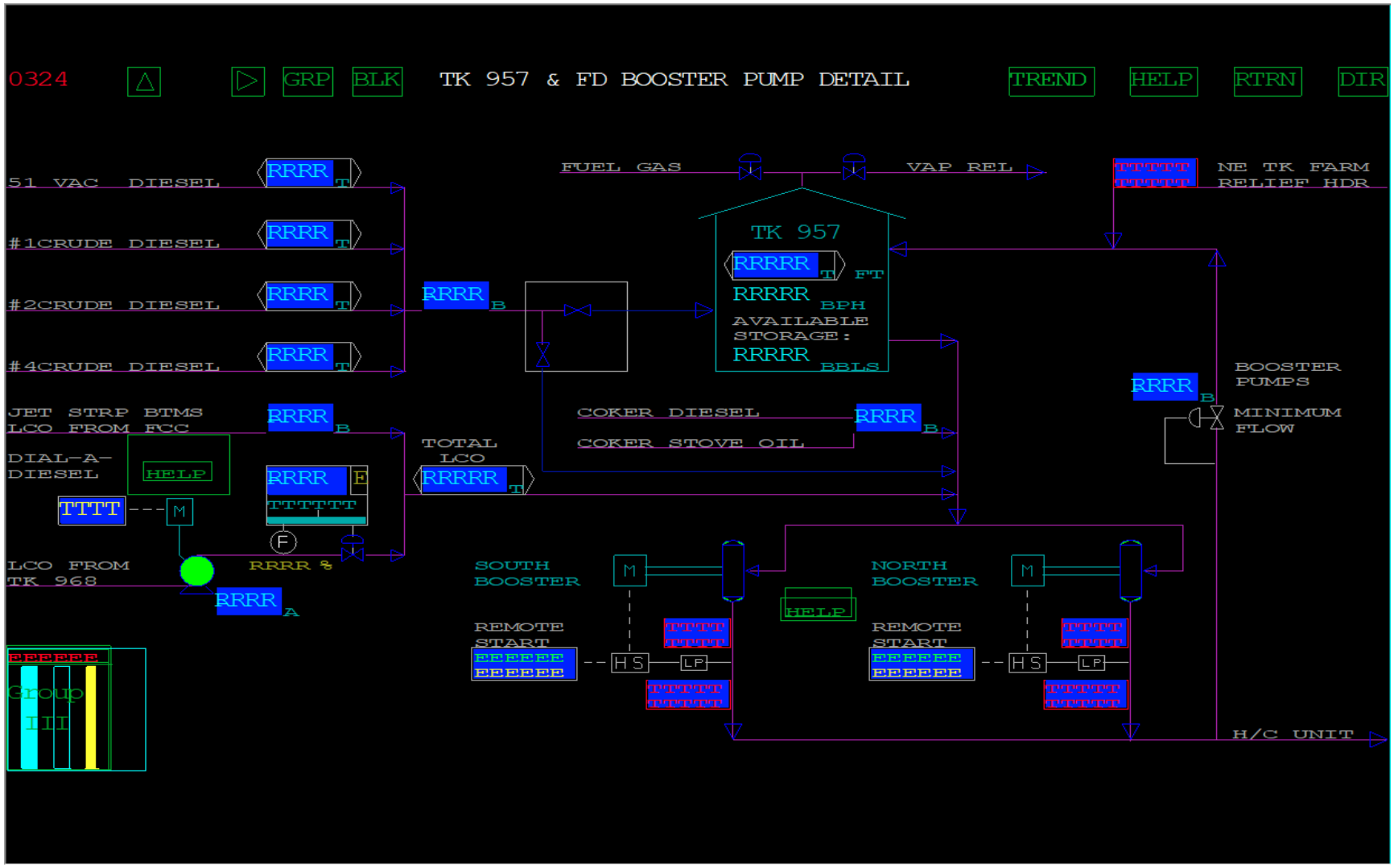



0307
GRP
BLK
RECYCLE COMP & CONDENSER (RC)
TREND
RTRN
DIR
SPECIFIC GRAV ANALYZER
VIB MONITOR
CCC DEVIATN
TMR
CCC
SEAL H2
PURGE TO FLARE
CURVES
SEAL GAS PANEL
N2 PURGE
RPM
GOV OIL
RECYCLE H2
FROM N2 BOTTLES
FROM N2 BOTTLES
FROM RECYCLE KO
GOVERNOR REMOTE SP
600# STM
RECYCLE GAS FLOW
CWS
CWR
SURFACE CONDENSER
LUBE OIL RESERVOIR
LUBE OIL FILTER
L.O.
GOV OIL
Group III
TO TK 914


0307
Ack Page
Name
Engl
Hde
0307
BLK
Specific GRAV Analyzer
3UA978
State
3PA525
State
3XA940
State
3HA976
State
VIB Monitor
3XA897
State
3PA498
State
CCC DEVIATN
3U944AN
9999.99
3U944BN
9999.99
3UA659A
State
3UA659B
State
3UA659C
State
TMR
CCC
Curves
3FI178
9999.99
MM
3HC944A
3HC944
3TI642A
9999.99
F
3TI642B
9999.99
F
3TI639
9999.99
F
3AI978
9999.99
SP
3FI152
GR
9999.99
M
3PC436
9999.99
P
3TI640
9999.99
F
3PI475
9999.99
P
3PI477
9999.99
P
3TI794
9999.99
F
3ZA142B
State
3TA642A
State
3ZA142A
State
Recycle H2
3PA535
State
3PI476
9999.99
P
From N2 Bottles
From N2 Bottles
3PA536
State
3PI523
9999.99
P
From Recycle
KO
3ZA141A
State
3TA623
State
3ZA141B
State
3XA896
State
3TI743
9999.99
3HA896A
State
600# STM
3ZA001A
State
3ZA001B
State
3ZA002A
State
3ZA002B
State
3PI473
9999.99
Recycle Gas Flow
Seal Gas Panel
3PC529
W 9999.99
9999.99
3PQ529
100%
DP
Seal H2
Purge To Flare
N2 Purge
3SI898
9999.99
3SI896A
9999.99
MR
3SI896B
9999.99
MR
T
3XA003
State
3XA003
State
Governor
Remote SP
3HC896
9999.99
GOV
3FI239
9999.99
OB
M
3FI238
9999.99
IB
M
3PI487A
9999.99
P
3PI487B
9999.99
P
3PI486
9999.99
P
GOV Oil
3PA474A
State
3PA524
State
Lube Oil
Reservoir
3LA400
State
3PA534
State
3PA487A
State
3XA497
State
LP
LO
S
S
TMR
3PI474A
9999.99
P
3PI474B
9999.99
P
3PI531
9999.99
P
3TI843
9999.99
F
GOV Oil
Surface Condenser
CWS
CWR
3PI497
9999.99
P
Lube Oil Filter
OR
OR
3TA642A
State
3LA375
State
3HA914A
State
3LA355A
State
3LI355A
9999.99
%
3LI355B
9999.99
%
L
3LC374
W 9999.99
9999.99
3LO374
100%
To TK 914
Reserved for Faceplates

3.278 TK 957 & FD BOOSTER PUMP DETAIL (0324.DS)




0324
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TK 957 & FD BOOSTER PUMP DETAIL
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HELP
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DIR
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#4CRUDE DIESEL
JET STRP BTMS
LCO FROM FCC
DIAL-A-
DIESEL
HELP
TTTT
M
LCO FROM
TK 968
RRRR
A
RRRR
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VAP REL
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NE TK FARM
RELIEF HDR
TK 957
RRRRR
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FT
RRRRR
BPH
AVAILABLE
STORAGE:
RRRRR
BBLS
COKER DIESEL
COKER STOVE OIL
BOOSTER
PUMPS
MINIMUM
FLOW
SOUTH
BOOSTER
NORTH
BOOSTER
REMOTE
START
EEEEEE
EEEEEE
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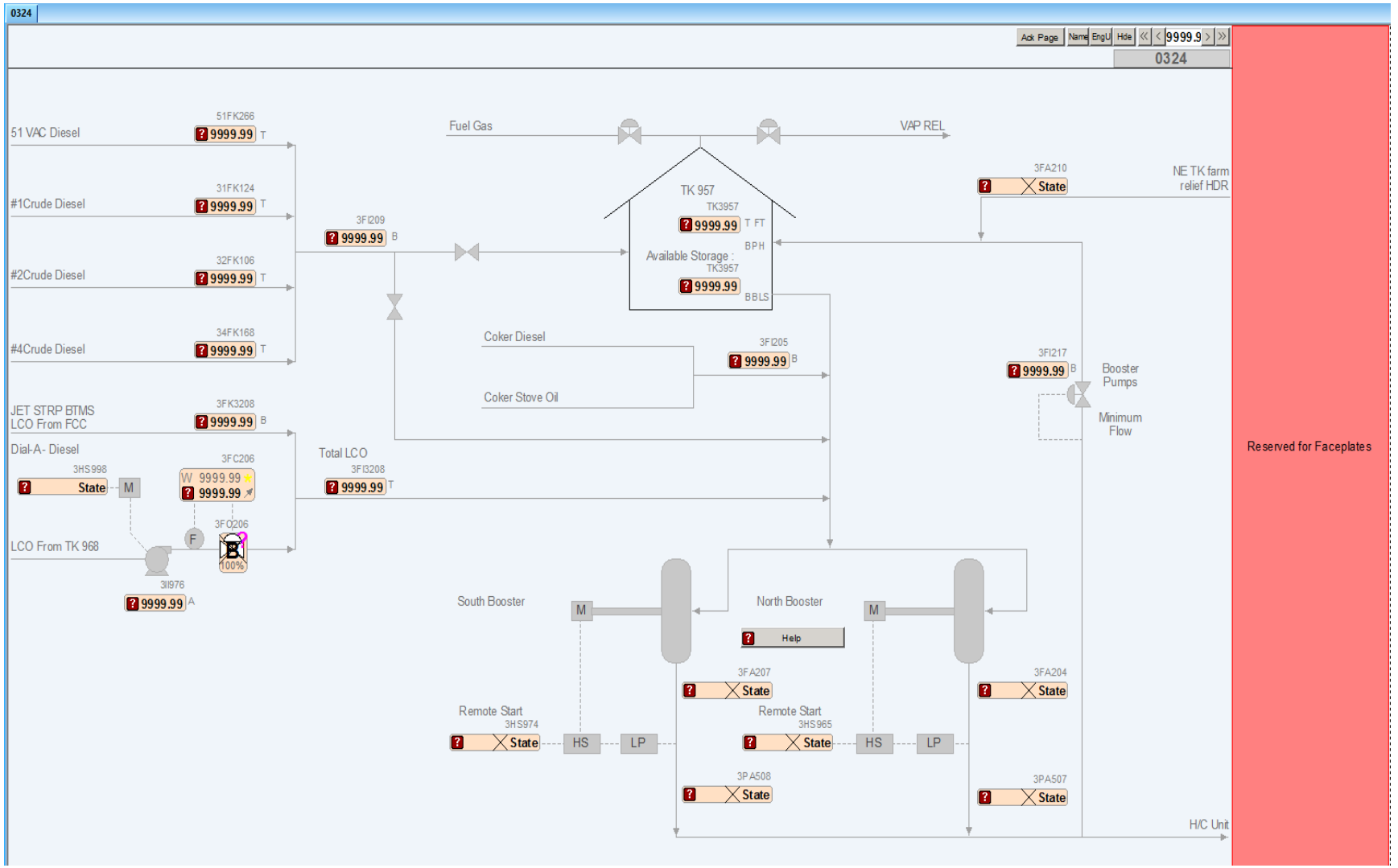
LP
HELP
H/C UNIT
Group
III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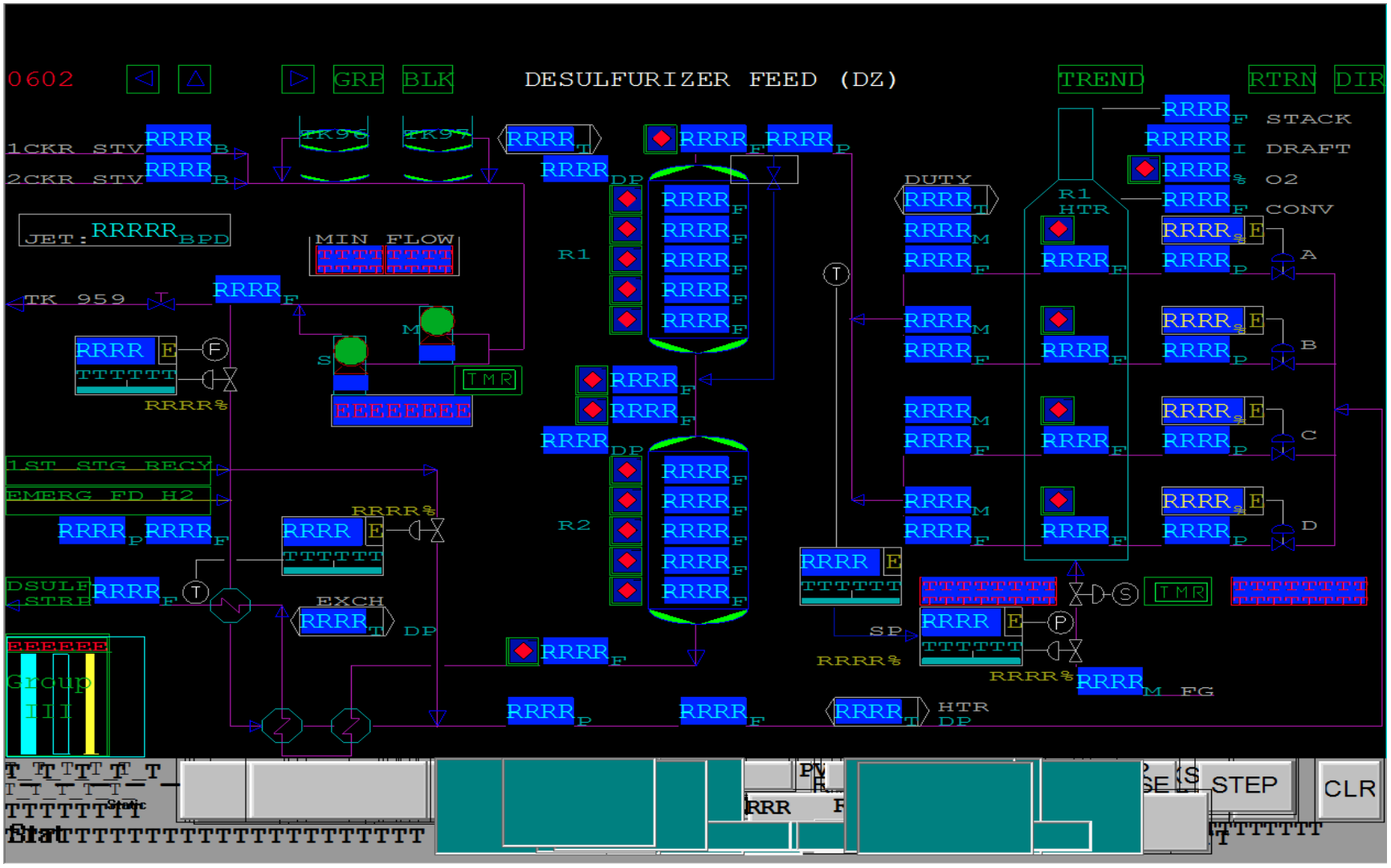
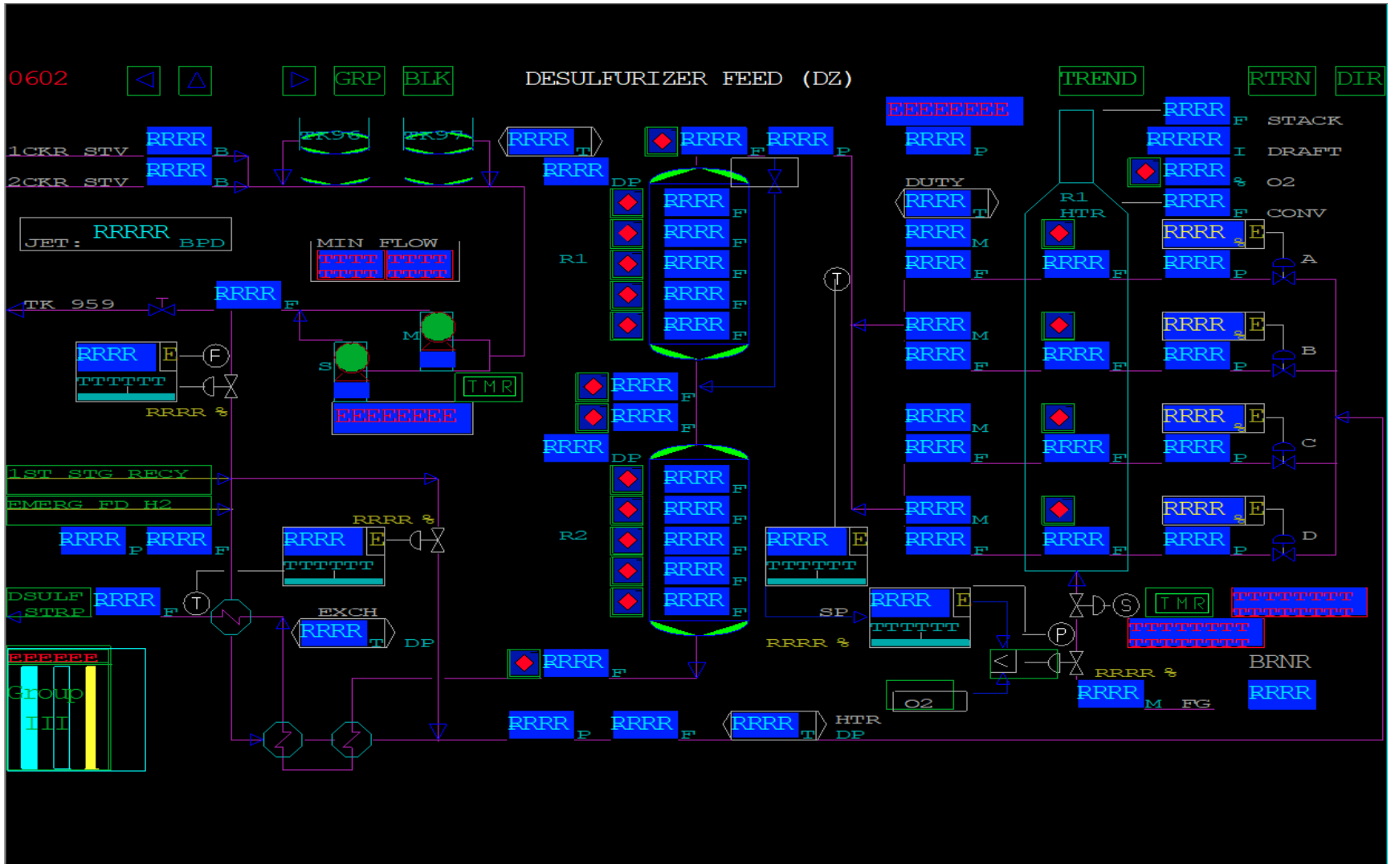
32FK106
#4Crude Diesel
34FK168
JET STRP BTMS
LCO From FCC
3FK3208
Dial-A- Diesel
LCO From TK 968
3HS998
State
3FC206
3FQ206
3FI976
Fuel Gas
VAP REL
TK 957
TK3957
Available Storage :
3FI209
3FI205
Coker Diesel
Coker Stove Oil
Total LCO
3FI3208
3FA210
NE TK farm
relief HDR
3FI217
Booster
Pumps
Minimum
Flow
Reserved for Faceplates
South Booster
North Booster
Help
3FA207
3FA204
Remote Start
3HS974
3HS965
HS
LP
3PA508
3PA507
H/C Unit

3.279 DESULFURIZER FEED (DZ) (0602.DS)

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DESULFURIZER FEED (DZ)
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DIR
1CKR STV
2CKR STV
JET:
BPD
MIN FLOW
TK 959
TMR
1ST STG RECY
EMERG FD H2
DSULF STRP
EXCH
DUTY
R1
R2
HTR
SP
STACK
DRAFT
O2
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A
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C
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BRNR
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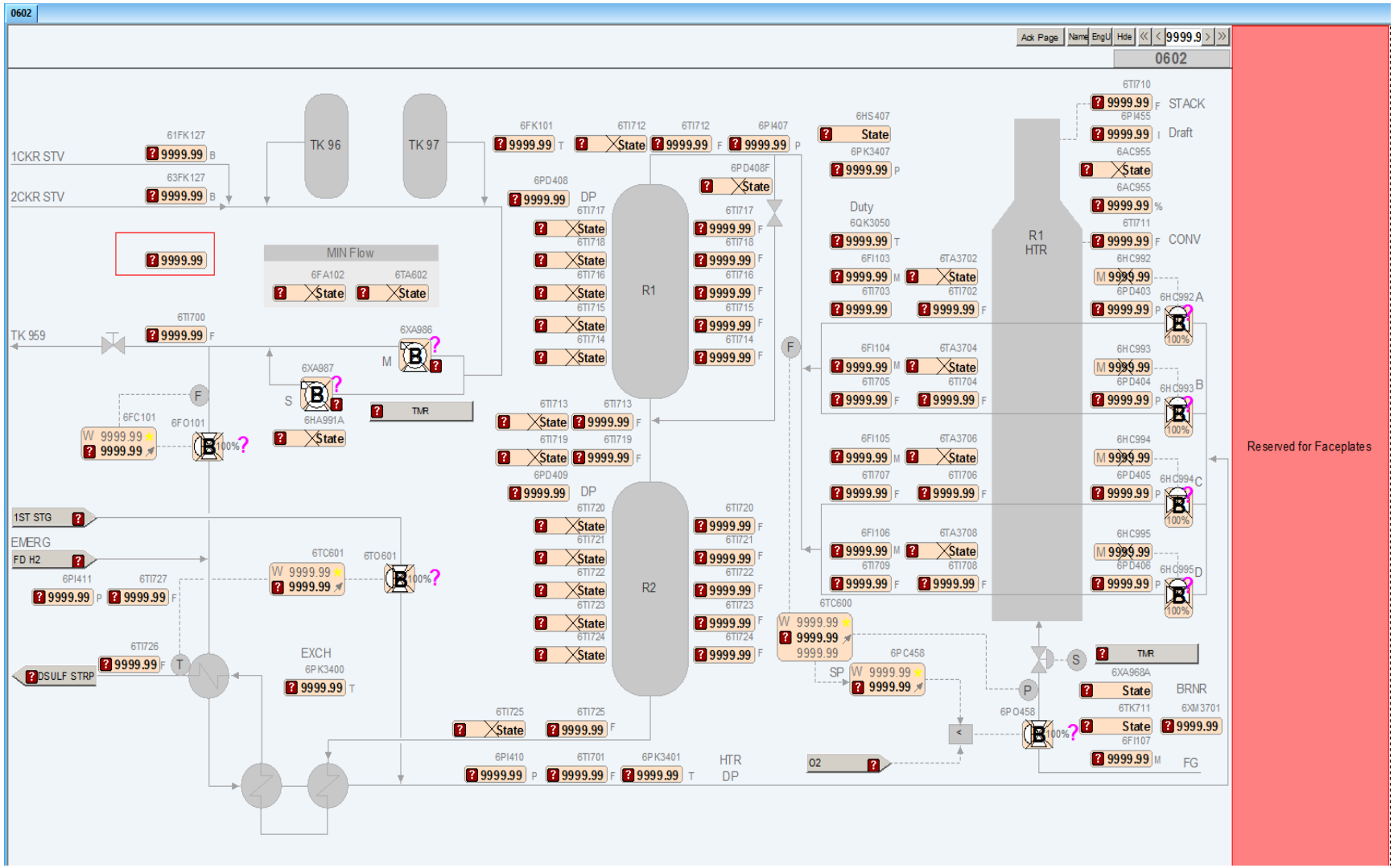
III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0602
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MIN Flow
6FA102
6TA602
TK 959
6TI700
6XA986
6XA987
6HA991A
TMR
6FC101
6FO101
1ST STG
EMERG
FD H2
6PI411
6TI727
6TC601
6TO601
6TI726
DSULF STRP
EXCH
6PK3400
6FK101
6TI712
6PI407
6PD408
DP
6TI717
6TI718
6TI716
6TI715
6TI714
6PD408F
R1
6TI713
6TI719
6PD409
6TI720
6TI721
6TI722
6TI723
6TI724
6TI725
R2
6PI410
6TI701
6PK3401
HTR
DP
6HS407
6PK3407
Duty
6QK3050
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6TC600
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SP
R1
HTR
6TI710
STACK
6PI455
Draft
6AC955
6TI711
CONV
6HC992
6PD403
6HC992 A
6HC993
6PD404
6HC993 B
6HC994
6PD405
6HC994 C
6HC995
6PD406
6HC995 D
6XA968A
BRNR
6TK711
6XM3701
6FI107
FG
02

Appendix E. AM Tag List for Modification

There are 31 changes identified in the Modpack gap analysis report (refer to Appendix I) and the PAS Integrity Cross Reference Report for AM points migrating in LAR1C, as listed in Table E.1.

Table E.1 Standard AM Tag List for Modification

Tag Name	Description	Node Name	Change Details	Summary of Impact	LAR Review Status
22T4710A	2DES DEWPT CALC PT1	25	Tag added in the new backup. AM tag has a cross-reference with two HG tags. i.e., 22FI119 and 22FC105.	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22T4710B	2DES DEWPT CALC PT2	25	Tag added in the new backup. AM tag has a cross-reference with two HG tags. i.e., 22FI119 and 22FC105.	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22TK3710	2DES HTR INLET-DEWPT DT	25	Tag added in the new backup. AM tag has a cross-reference with one HG tags. i.e., 22TI710	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22AC3902	2A DES HTR O2	25	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22AC3903	2B DES HTR O2	25	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22AC3962	2REF-1 HTR O2	25	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22AC3990	2REF-3A HTR O2	25	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22AC3991	2REF-3B HTR O2	25	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22AC3996	2REF-2 HTR O2	25	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	

Tag Name	Description	Node Name	Change Details	Summary of Impact	LAR Review Status
			PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup		
22AK3961	MID REF HTR O2	25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22FK3100	2REF TOTAL FEED	25	$ALDLOPT Parameter value found updated from ONDLYHI to NONE in the new backup DLYTIME Parameter value found updated from 300 to 0 in the new backup PVEUHI Parameter value found updated from 1330.000 to 1000.000 in the new backup PVEXEUHI Parameter value found updated from 1500.000 to 1250.000 in the new backup PVHIPR Parameter value found updated from HIGH to NOACTION in the new backup PVHITP Parameter value found updated from 1257.000 to -------- in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22FK3114	COMP FUEL FLW DS HTR 2B	25	G Parameter value found updated from 0.779297 to 0.842783 in the new backup T Parameter value found updated from 70.44170 to 67.97810 in the new backup	None	
22FK3119	RECYC CMPR FORWARD FLOW	25	BADPVPR Parameter value found updated from EMERGNCY to NOACTION in the new backup PVLLPR Parameter value found updated from EMERGNCY to NOACTION in the new backup PVLOPR Parameter value found updated from HIGH to NOACTION in the new backup PVLOTP Parameter value found updated from 2.700000 to -------- in the new backup	None	
22FK3129	REF RECY GAS (CORRECTED)	25	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup PVLOPR Parameter value found updated from EMERGNCY to NOACTION in the new backup PVLOTP Parameter value found updated from 2.000000 to -------- in the new backup T Parameter value found updated from 147.7440 to 124.1200 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22FK3133	OP POINT #2 REF RCY CMPR	25	ACFM Parameter value found updated from 4097.330000000000000000000000000000 to 4469.700000000000000000000000000000 in the new backup BADPVPR Parameter value found updated from HIGH to EMERGNCY in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	

Tag Name	Description	Node Name	Change Details	Summary of Impact	LAR Review Status
			COMPFLOW Parameter value found updated from 4955670.000000000000000000000000000 to 5555280.000000000000000000000000000 in the new backup OPPT Parameter value found updated from 81.592300000000000000000000000000 to 96.795800000000000000000000000000 in the new backup POLYHD Parameter value found updated from 42194.900000000000000000000000000 to 36512.200000000000000000000000000 in the new backup PVLLPR Parameter value found updated from HIGH to EMERGNCY in the new backup PVLLTP Parameter value found updated from 68.00000 to 85.00000 in the new backup PVLOTP Parameter value found updated from 72.00000 to 95.00000 in the new backup REDHD Parameter value found updated from 0.299732000000000000000000000000 to 0.265529000000000000000000000000 in the new backup		
22PC3457	2REF-3B FUEL GAS PRESS	25	K Parameter value found updated from 0.500000 to 0.200000 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22PK3431	DES HTR 2B FUEL GAS PRES	25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup	None	
22PK3439	PVHH 2DES 2A CONV DRAFT	25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	None	
22PK3440	PVHH 2DES 2B CONV DRAFT	25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	None	
22PK3452	#2REF HTRCELL 1 FG-SHDW	25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup	None	
22PK3453	#2REF HTRCELL 2 FG-SHDW	25	BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup	None	

Tag Name	Description	Node Name	Change Details	Summary of Impact	LAR Review Status
22PK3454	#2REF HTRCELL 3A FG-SHDW	25	BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22PK3457	#2REF HTRCELL 3B FG-SHDW	25	BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22PK3458	DES HTR 2A FG PRES -SHDW	25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22TA3692	2A DES HTR C#3TB4SKN-SDL	25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22TC3604	#1 HTR OUTLET RAMP PRGRM	25	SOAKV1 Parameter value found updated from 900.0000 to 725.0000 in the new backup SOAKV2 Parameter value found updated from 900.0000 to 725.0000 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22TC3607	#2 HTR OUTLET RAMP PRGRM	25	SOAKV1 Parameter value found updated from 900.0000 to 725.0000 in the new backup SOAKV2 Parameter value found updated from 900.0000 to 725.0000 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22TC3610	#3A HTR OUTLT RAMP PRGRM	25	SOAKV1 Parameter value found updated from 900.0000 to 725.0000 in the new backup SOAKV2 Parameter value found updated from 900.0000 to 725.0000 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_23	
22TC3613	#3B HTR OUTLT RAMP PRGRM	25	SOAKV1 Parameter value found updated from 900.0000 to 725.0000 in the new backup SOAKV2 Parameter value found updated from 900.0000 to 725.0000 in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22TC3623	2REF-3B HTR OUTLET TEMP	25	ASSOCDSP Parameter value found updated from 2217 to BLANK in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	
22TK692	2A DES HTR C#3 TUBE4 SKN	25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup	Parameter value will be updated in the CM and the CM will be reloaded in the C300 controller REF2_C300_21	

Appendix F. BPCS and Safety System Interface

There are no hardwired signals identified between the BPCS and safety system in the Modpack gap analysis report (refer to Appendix I).

Appendix G. Controller Loading

The changes identified in the Modpack gap report (refer to Appendix I) do not affect the C300 controller loading.

Appendix H. Hardware Impact (BOM)

The changes identified in the Modpack gap report (refer to Appendix I) do not affect the hardware requirements.

Appendix I. Gap Analysis Report

This section provides the comparison results between the baseline EB backup from March 2022 and the new baseline backup from May 2023. The analysis results are captured in the file 747002-LAR1C-AUT-SPC-0151_ Appendix I.

LAR1C(LCN 1) HWY MARCH 2022 EB I/O Details								
HWY No.	ANLCMPHG	ANLINHG	ANLOUTHG	REGHG	DIGCMPHG	DIGINHG	DIGOUTHG	Total
HWY 7		592		158	3	234	9	996
							Total	996

LAR1C(LCN 1) Modpack HWY MAY 2023 EB I/O Details												
HWY No.	ANLCMPHG	ANLINHG	ANLOUTHG	REGHG	DIGCMPHG	DIGINHG	DIGOUTHG	Total	New Tags Introduced	Tags Deleted	Total impacted Tags	Scope impact
HWY 7		592		158	3	233	9	995	2	3	95	59
							Total	995	2	3	95	59

LAR1C(LCN 1) AM EB MARCH 2022 EB I/O Details							
Node No.	CUSTOMAM	FLAGAM	NUMERCAM	REGAM	SWITCHAM	TIMERAM	Total
AM-24	28	90	14	400	2	6	540
AM-25	46	64	6	392	4	2	514
AM-33	13	7	1	50	0	0	71
AM-35	41	7	4	74	0	0	126
					Total		1251

LAR1C(LCN 1) Modpack AM HPM MAY 2023 EB I/O Details											
Node No.	CUSTOMAM	FLAGAM	NUMERCAM	REGAM	SWITCHAM	TIMERAM	Total	New Tags Introduced	Tags Deleted	Total impacted Tag	Scope impact
AM-24	28	90	15	404	2	6	545	6	1	194	0
AM-25	46	64	12	397	4	2	525	11	0	102	28
AM-33	20	7	1	50	0	0	78	7	0	37	0
AM-35	41	7	4	78	0	0	130	4	0	16	0
					Total		1278	28	1	349	28

&T	&N	HWYNUM	PTDESC	KEYWORD	ASSOCDSP	Equipment Name	CM/Point Name	C300 Controller Name	Change Details
DIGINHG	22XA909	07	NACCR UPS #7 ON BYPASS	UPS #7	2235	2 Reformer, Appendix A	22XA909	REF2_C300_23	Tag not found in the new backup
DIGINHG	22XA910	07	NACCR UPS #7 ON BATTERY	UPS #7	2235	2 Reformer, Appendix A	22XA910	REF2_C300_23	Tag not found in the new backup
DIGINHG	22XA911	07	NACCR UPS #7 FAULT	UPS #7	2235	2 Reformer, Appendix A	22XA911	REF2_C300_23	Tag not found in the new backup
DIGINHG	22UA967	07	NACCR UPS #4 COM TROUBL	UPS #4	2235				Tag added in the new backup
DIGINHG	22UA965	07	NACCR UPS #2 COM TROUBL	UPS #2	2235				Tag added in the new backup
ANLINHG	22AI961	07	PVLL MIDREF HTR O2-SRA	REF HTR	2217	#2 Reformer Heater RW 0032.214.02, Appendix A	22AI961	REF2_C300_21	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup EUDESC Parameter value found updated from % O2 E to % O2 M in the new backup SLOTNUM Parameter value found updated from 16 to 17 in the new backup PVLOTP Parameter value found updated from 79.915 to 1.9999 in the new backup PVHITP Parameter value found updated from 279.72 to 6.9999 in the new backup PVEUHI Parameter value found updated from 399.99 to 10.010 in the new backup
ANLINHG	22AI964	07	2REF RECY COMP MOISTURE	MOISTURE	2220	#2 Ref Recycle Gas Comp RW 0007.087.06, Appendix A	22AI964	REF2_C300_21	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup PVEUHI Parameter value found updated from 50.049 to 199.89 in the new backup PVLOTP Parameter value found updated from 4.9997 to 4.9972 in the new backup
REGHG	22FC105	07	TOTAL DESULFURIZER FEED	TOTAL FD	2201	2 Reformer, Appendix A	22FC105	REF2_C300_21	PVLOTP Parameter value found updated from 625.00 to 292.01 in the new backup
REGHG	22FC125	07	REFORMER INCREASING GAS	INCR GAS	2206	#2 DeSulf Feed/Recycle 0009/0010.087.03, Appendix A	22FC125	REF2_C300_21	PVHIPR Parameter value found updated from LOW to NOACTION in the new backup PVHITP Parameter value found updated from 349.99 to 450.00 in the new backup
REGHG	22FC137	07	STEAM TO STAB REBOILER	STAB RBL	2222	2 Reformer, Appendix A	22FC137	REF2_C300_21	K Parameter value found updated from 2.0000 to 1.0000 in the new backup T1 Parameter value found updated from 2.0005 to 0.4001 in the new backup OPHITP Parameter value found updated from 100.00 to 80.000 in the new backup TD Parameter value found updated from 0.1999 to 0.1000 in the new backup PVEUHI Parameter value found updated from 39.999 to 60.000 in the new backup PVHITP Parameter value found updated from 38.999 to 39.000 in the new backup PVLOTP Parameter value found updated from 9.9998 to 10.000 in the new backup
ANLINHG	22FI129	07	REF RECYCLE GAS	RECYCLE	2211	#2 Ref Recycle Gas Comp RW 0007.087.06, Appendix A	22FI129	REF2_C300_21	PVLOPR Parameter value found updated from HIGH to LOW in the new backup PVLOTP Parameter value found updated from 3.9000 to 3.4997 in the new backup
ANLINHG	22FI133	07	2REF RECY CMPR SUCTION	SUCTFLOW	2220	#2 Ref Recycle Gas Comp RW 0007.087.06, Appendix A		---	PVHITP Parameter value found updated from 9.9999 to 10.001 in the new backup
ANLINHG	22II900	07	2DES RECYCLE COMPR MOTO	2DES RCY	2205	#2 DeSulf Feed/Recycle RW 0010.087.03, Appendix A	22II900	REF2_C300_21	PVHITP Parameter value found updated from 279.72 to 256 in the new backup
DIGINHG	22LA322	07	REF RECY SEAL OIL HI LO	SEAL OIL	2206	#2 Ref Recycle Gas Comp RW 0007.087.06, Appendix A	---	---	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
DIGINHG	22PA408	07	SWITCH ROOM LO PRESS	SWTCH RM	2235	2 Reformer, Appendix A	22PA408	REF2_C300_23	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
DIGINHG	22PA442	07	NORTH 969 PMP SUCT	NO SUCT		2 Reformer, Appendix A	22PA442	REF2_C300_23	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup
REGHG	22PC428	07	REF FLASH DRUM PSI	FLSH DRM	2219	2 Reformer, Appendix A	22PC428	REF2_C300_21	PVHIPR Parameter value found updated from JOURNAL to HIGH in the new backup
ANLINHG	22PI439	07	2DES HTR 2A CONV DRAFT	2A DRAFT	2202	2A Desulfurizer Heater RW 0033.214.09, Appendix A	22PI439	REF2_C300_21	UNREASPR Parameter value found updated from HIGH to LOW in the new backup
ANLINHG	22PI440	07	2DES HTR 2B CONV DRAFT	2B DRAFT	2202	2B Desulfurizer Heater RW 0034.214.09, Appendix A	22PI440	REF2_C300_21	PVHITP Parameter value found updated from -0.05 to 0 in the new backup UNREASPR Parameter value found updated from HIGH to LOW in the new backup
ANLINHG	22PI472	07	NO2 REF EAST STK DRAFT	EAST STK	2226	#2 Reformer Heater RW 0032.214.02, Appendix A	22PI472	REF2_C300_21	PVHITP Parameter value found updated from -0.05 to 0 in the new backup UNREASPR Parameter value found updated from NOACTION to LOW in the new backup
ANLINHG	22PI473	07	NO2 REF WEST STK DRAFT	WEST STK	2226	#2 Reformer Heater RW 0032.214.02, Appendix A	22PI473	REF2_C300_21	PVHITP Parameter value found updated from -0.05 to 0 in the new backup UNREASPR Parameter value found updated from NOACTION to LOW in the new backup
ANLINHG	22PI480	07	REF HTR BELOW CONV DRFT	DRFT CON	2226	#2 Reformer Heater RW 0032.214.02, Appendix A	22PI480	REF2_C300_21	PVHITP Parameter value found updated from -0.05 to 0 in the new backup
ANLINHG	22PR431	07	DES HTR 2B FUEL GAS PRES	FUEL GAS	2202	2B Desulfurizer Heater RW 0034.214.09, Appendix A	22PR431	REF2_C300_21	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup
ANLINHG	22PR452	07	#2REF HTR CELL 1 FG PRES	#1 FUELG	2213	#2 Reformer Heater RW 0032.214.02, Appendix A	---	---	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup
ANLINHG	22PR453	07	#2REF HTR CELL 2 FG PRES	#2 FUELG	2215	#2 Reformer Heater RW 0032.214.02, Appendix A	---	---	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup
ANLINHG	22PR454	07	#2REF HTR CELL3A FG PRES	3A FUELG	2217	#2 Reformer Heater RW 0032.214.02, Appendix A	---	---	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup
ANLINHG	22PR457	07	#2REF HTR CELL3B FG PRES	3B FUELG	2217	#2 Reformer Heater RW 0032.214.02, Appendix A	---	---	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup
ANLINHG	22PR458	07	#2REF DESULF HTR2A FG P	FUEL GAS	2202	2A Desulfurizer Heater RW 0033.214.09, Appendix A	---	---	PVHIPR Parameter value found updated from HIGH to EMERGNCY in the new backup PVHITP Parameter value found updated from 34.000 to 35.000 in the new backup
ANLINHG	22TI692	07	2A DES HTR C#3 TUBE4 SKN	2A 3C T4	2202	2A Desulfurizer Heater RW 0033.214.09, Appendix A	22TI692	REF2_C300_23	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup
ANLINHG	22TI695	07	2B DES HTR C#1 TUBE4 SKN	2B 1C T4	2202	2B Desulfurizer Heater RW 0034.214.09, Appendix A	22TI695	REF2_C300_23	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup
ANLINHG	22TI696	07	2B DES HTR C#2 TUBE4 SKN	2B 2C T4	2202	2B Desulfurizer Heater RW 0034.214.09, Appendix A	22TI696	REF2_C300_23	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup
ANLINHG	22TI697	07	2B DES HTR C#3 TUBE3 SKN	2B 3C T3	2202	2B Desulfurizer Heater RW 0034.214.09, Appendix A	22TI697	REF2_C300_23	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup
ANLINHG	22TI698	07	2B DES HTR C#4 TUBE4 SKN	2B 4C T4	2202	2B Desulfurizer Heater RW 0034.214.09, Appendix A	22TI698	REF2_C300_23	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup
ANLINHG	22TI699	07	2B DES HTR C#5 TUBE4 SKN	2B 5C T4	2202	2B Desulfurizer Heater RW 0034.214.09, Appendix A	22TI699	REF2_C300_23	PVHITP Parameter value found updated from 989.98 to 969.98 in the new backup
ANLINHG	22TI710	07	DESULF FEED TO HEATER	DES HTR	2202	2A Desulfurizer Heater RW 0033.214.09, Appendix A	22TI710	REF2_C300_23	PVLOPR Parameter value found updated from HIGH to NOACTION in the new backup PVLOTP Parameter value found updated from 500.02 to 0.0000 in the new backup UNREASPR Parameter value found updated from HIGH to NOACTION in the new backup
ANLINHG	22TI721	07	DESULF REACTOR OUTLET	REAC OUT	2202	2 Reformer, Appendix A	22TI721	REF2_C300_23	PVLOPR Parameter value found updated from LOW to NOACTIONin the new backup PVLOTP Parameter value found updated from 675.01 to 0.0000 in the new backup

&T	&N	HWYNUM	PTDESC	KEYWORD	ASSOCDSP	Equipment Name	CM/Point Name	C300 Controller Name	Change Details
ANLINHG	22TI790	07	REFORMATE TO STORAGE	STORAGE		2 Reformer, Appendix A	22TI790	REF2_C300_23	PVHIPR Parameter value found updated from NOACTION to HIGH in the new backup PVHITP Parameter value found updated from 1199.0 to 164.99 in the new backup
ANLINHG	22TI795	07	DESULF REACTOR TOP NW	TOP NW	2203	2 Reformer, Appendix A	22TI795	REF2_C300_23	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
ANLINHG	22TI796	07	DESULF REACTOR MID NW	MID NW	2203	2 Reformer, Appendix A	22TI796	REF2_C300_23	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
ANLINHG	22TI797	07	DESULF REACTOR BTMS NW	BTMS NW	2203	2 Reformer, Appendix A	22TI797	REF2_C300_23	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
ANLINHG	22TI799	07	DESULF REACTOR MID NE	MID NE	2203	2 Reformer, Appendix A	22TI799	REF2_C300_23	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
ANLINHG	22TI823	07	3A REACTOR MID NE	MID NE	2227	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI823	REF2_C300_23	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup
ANLINHG	22TI871	07	#1 HTR NORTH #5 COIL SKN	1HN 5C S	2213	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI871	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
ANLINHG	22TI872	07	#1 HTR NORTH #6 COIL SKN	1HN 6C S	2213	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI872	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
ANLINHG	22TI877	07	#1 HTR SOUTH #5 COIL SKN	H1S 5C S	2213	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI877	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
ANLINHG	22TI878	07	#1 HTR SOUTH #6 COIL SKN	1HS 6C S	2213	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI878	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
ANLINHG	22TI901	07	2 HEATER #14 COIL SKIN	2H 14 SK	2215	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI901	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
ANLINHG	22TI902	07	2 HEATER #15 COIL SKIN	2H 15 SK	2215	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI902	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
ANLINHG	22TI913	07	3A HEATER #5 COIL SKIN	3A #5 SK	2217	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI913	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
ANLINHG	22TI914	07	3A HEATER #6 COIL SKIN	3A #6 SK	2217	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI914	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
ANLINHG	22TI922	07	2REF 3B HTR #5 COIL SKIN	3B #5 SK	2217	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI922	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
ANLINHG	22TI923	07	2REF 3B HTR #6 COIL SKIN	3B #6 SK	2217	#2 Reformer Heater RW 0032.214.02, Appendix A	22TI923	REF2_C300_23	PVHIPR Parameter value found updated from JOURNAL to LOW in the new backup
DIGINHG	22XA941	07	NACCR UPS #2 LOW BATTERY	UPS #2	2235	2 Reformer, Appendix A	22XA941	REF2_C300_23	INPTDIR Parameter value found updated from DIRECT to REVERSE in the new backup STATE2 Parameter value found updated from BYPASS to LOW BATT in the new backup PTDESC Parameter value found updated from NACCR UPS #2 ON BYPASS to NACCR UPS #2 LOW BATTERY in the new backup OFFNRMPR Parameter value found updated from HIGH to LOW in the new backup
DIGINHG	22XA943	07	NACCR UPS #2 ON BYPASS	UPS #2	2235	2 Reformer, Appendix A	22XA943	REF2_C300_23	INPTDIR Parameter value found updated from DIRECT to REVERSE in the new backup STATE2 Parameter value found updated from FAULT to BYPASS in the new backup PTDESC Parameter value found updated from NACCR UPS #2 FAULT to NACCR UPS #2 ON BYPASS in the new backup
DIGINHG	22XA955	07	#2 RACK RM H2S AIR WRNG	H2S WARN	2235	2 Reformer, Appendix A	22XA955	REF2_C300_23	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
DIGINHG	22XA971C	07	2REF BENTLY COMM HARDW	BENTLY	2220C2	#2 Ref Recycle Gas Comp RW 0007.087.06, Appendix A	22XA971C	REF2_C300_23	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
DIGINHG	22XA982	07	NACCR UPS #4 LOW BATTERY	UPS #4	2235	2 Reformer, Appendix A	22XA982	REF2_C300_23	INPTDIR Parameter value found updated from DIRECT to REVERSE in the new backup STATE2 Parameter value found updated from BYPASS to LOW BATT in the new backup PTDESC Parameter value found updated from NACCR UPS #2 ON BYPASS to NACCR UPS #2 LOW BATTERY in the new backup OFFNRMPR Parameter value found updated from HIGH to LOW in the new backup
DIGINHG	22XA984	07	NACCR UPS #4 ON BYPASS	UPS #4	2235	2 Reformer, Appendix A	22XA984	REF2_C300_23	INPTDIR Parameter value found updated from DIRECT to REVERSE in the new backup STATE2 Parameter value found updated from FAULT to BYPASS in the new backup PTDESC Parameter value found updated from NACCR UPS #2 FAULT to NACCR UPS #2 ON BYPASS in the new backup
ANLINHG	27FI191	07	LED FEED PMP DISCHARGE	LED FEED	2701	General, Appendix A	27FI191	LEDDIB_C300_25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
ANLINHG	27FI192	07	DEPROP REFLUX PUMP	DEPROP	2701	General, Appendix A	27FI192	LEDDIB_C300_25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
REGHG	27LC321	07	SRD FEED SURGE DRM LEVEL	FEED DRM	2711	SRD, Appendix A	27LC321	SRD_C300_27	PVHITP Parameter value found updated from 59.999 to 55 in the new backup
ANLINHG	27LI312	07	LED FLASH DRUM	FLASH DR	2701	LED, Appendix A	27LI312	LEDDIB_C300_25	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
ANLINHG	27LI317	07	SRD FEED SURGE DRUM-SRA	FD SURGE	2711	SRD, Appendix A	27LI317	SRD_C300_27	PVHITP Parameter value found updated from 70.001 to 65 in the new backup
DIGINHG	27PA405	07	N FEED COMPR LUBE OIL	LUBE OIL		LED, Appendix A	27PA405	LEDDIB_C300_25	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup
REGHG	27PC438	07	LED CONTACTOR PRESSURE	AMN CNTR	2702	LED, Appendix A	27PC438	LEDDIB_C300_25	K Parameter value found updated from 10.000 to 15.000 in the new backup T1 Parameter value found updated from 0.5001 to 2.0005 in the new backup
ANLINHG	27TI702	07	SRD BTMS CLR OUTLET	CLR OUT	2712	SRD, Appendix A	27TI702	SRD_C300_27	PVHITP Parameter value found updated from 89.996 to 99.996 in the new backup
DIGINHG	27XA900	07	NORTH LED COMP MOTOR O	N COMP		LED, Appendix A	27XA900	LEDDIB_C300_25	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup
REGHG	28FC108	07	25# STEAM TO LPG REBOILR	25# STM		---	---	---	PVHITP Parameter value found updated from 2 to 1.98 in the new backup
REGHG	29LC301	07	#3 REF FLASH DRUM LEVEL	DRUM LVL		---	---	---	PVHITP Parameter value found updated from -6.862 to 0 in the new backup
REGHG	29LC353	07	RECY COMP EXHAUST COND	EXH COND		---	---	---	ITLOLM Parameter value found updated from 0.0972 to BLANK in the new backup OPLOLM Parameter value found updated from 0.0000 to 34.469 in the new backup
ANLINHG	29LI306	07	SOUTH LIQUID N2 TANK	N2 TANK	2925	---	---	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup
ANLINHG	29LI307	07	NORTH LIQUID N2 TANK	N2 TANK	2925	---	---	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup
ANLINHG	29LI313	07	FFHDS CONDENSATE TK935	TK 935		---	---	---	PVLOTP Parameter value found updated from 110 to 109 in the new backup PVHITP Parameter value found updated from 0.0009 to 0.0197 in the new backup

&T	&N	HWYNUM	PTDESC	KEYWORD	ASSOCDSP	Equipment Name	CM/Point Name	C300 Controller Name	Change Details
ANLINHG	29LI319	07	RAFFINATE H20 WASH LEVEL	H2O WASH		---	---	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup PVCHAR Parameter value found updated from LINEAR to RADIAMAT in the new backup PVEUHI Parameter value found updated from 99.975 to 1050.5 in the new backup PVEULO Parameter value found updated from 0.0000 to 593.32 in the new backup PVFORMAT Parameter value found updated from D1 to BLANK in the new backup PVHITP Parameter value found updated from 100.00 to 1050.5 in the new backup PVLOTP Parameter value found updated from 0.0000 to 593.32 in the new backup PVTEMP Parameter value found updated from BLANK to DEGREESC in the new backup
ANLINHG	29LI324	07	EXTRACT RECEIVER LEVEL	RECEIVER		---	---	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup
ANLINHG	29LI326	07	STRIP BOTTOMS LEVEL	BOTTOMS		---	---	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup PVEUHI Parameter value found updated from 99.975 to 999.75 in the new backup PVFORMAT Parameter value found updated from D1 to D0 in the new backup PVHITP Parameter value found updated from 100.00 to 100.01 in the new backup
REGHG	29PC423	07	STRIP FLASH DRUM PSIG	STRIPPER		---	---	---	K Parameter value found updated from 5.0000 to BLANK in the new backup T1 Parameter value found updated from 2.0005 to BLANK in the new backup PVEUHI Parameter value found updated from 59.997 to 74.94 in the new backup PVHITP Parameter value found updated from 60.000 to 74.95 in the new backup
REGHG	29PC438	07	SOLVENT REGENERATION	PSI		---	---	---	INPTCOND Parameter value found updated from LINEAR to SQRROOT in the new backup T1 Parameter value found updated from 0.0100 to 0.0390 in the new backup TD Parameter value found updated from 0.0000 to 0.0128 in the new backup PVSIGNAL Parameter value found updated from PV to RV in the new backup PVSLTSRC Parameter value found updated from 29PC438 to 29LI319 in the new backup SPSIGNAL Parameter value found updated from LSP to OUTPUT in the new backup SPSLTSRC Parameter value found updated from 29PC438 to BLANK in the new backup
ANLINHG	29PI447	07	RECY COMP EXHAUST COND	EXH COND		---	---	---	PVHITP Parameter value found updated from 30 to 29.9 in the new backup
ANLINHG	29TI736	07	3REF SULFTRAP TOP NW	TOP		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI737	07	3REF SULFTRAP MID NW	MID		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI738	07	3REF SULFTRAP BTM NW	BTM		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI739	07	3REF SULFTRAP TOP NE	TOP		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI740	07	3REF SULFTRAP MID NE	MID		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI741	07	3REF SULFTRAP BTM NE	BTM		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI742	07	3REF SULFTRAP TOP SE	TOP		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI743	07	3REF SULFTRAP MID SE	MID		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI744	07	3REF SULFTRAP BTM SE	BTM		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI745	07	3REF SULFTRAP TOP SW	TOP		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI746	07	3REF SULFTRAP MID SW	MID		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	29TI747	07	3REF SULFTRAP BTM SW	BTM		---	---	---	PVLOTP Parameter value found updated from -68.34 to 0.0000 in the new backup
ANLINHG	89AI932	07	CT13 ORP ANALYZR/CONTRLR	CT13 ORP	2924	2 Reformer, Appendix A	89AI932	REF2_C300_21	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
REGHG	89FC105	07	CT14 RO WATER	RO WTR	2229	2 Reformer, Appendix A	89FC105	REF2_C300_21	RATIO Parameter value found updated from 0.2212 to 0.8838 in the new backup
ANLINHG	89FI100	07	14 WATER WELL	H2O WELL	8708	2 Reformer, Appendix A	89FI100	REF2_C300_21	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup
REGHG	89LC304	07	CT14 BASIN LEVEL	BASIN	2229	2 Reformer, Appendix A	89LC304	REF2_C300_21	PVCHAR Parameter value found updated from JTHERM to LINEAR in the new backup PVEUHI Parameter value found updated from 78.959 to 100.10 in the new backup PVEULO Parameter value found updated from 1.432 to 0.0000 in the new backup PVFORMAT Parameter value found updated from BLANK to D0 in the new backup PVHITP Parameter value found updated from 63.303 to 80.001 in the new backup PVLOTP Parameter value found updated from 14.867 to 19.999 in the new backup PVTEMP Parameter value found updated from DEGREESC to BLANK in the new backup

The tags are added and deleted in the new backup these tags are having impact due to the migrating nodes. Cross references were verified from the Pas integrity on 07th June 2023.
There are changes at parameter level for the AM tags migrating to new C300 controller

&T	&N	AM Node	PTDESC	KEYWORD	ASSOCDSP	Change Details
REGAM	23P452N	24	NTE-HDS STRP REL POT PRE	REL KO	2322	Tag added in the new backup
REGAM	23LY349A	24	FLR EVNT STATUS CTL MODE	OPCI	2309	Tag added in the new backup
NUMERCAM	23QN035A	24	PV FROM 23QK035A FLR STM	FLARE	2308	Tag added in the new backup
REGAM	23FK227	24	FFHDS STM/FIR RATE RATIO	FLARE	2308	Tag added in the new backup
REGAM	23FFC227	24	FFHDS STM/FIR RATE RATIO	FLARE	2308	Tag added in the new backup
REGAM	23F3227	24	23FFC227 STM CNTRL TRIGR	FLARE	2308	Tag added in the new backup
REGAM	22CK3004	25	#2 REFORMER BTMS C4	BTMS C4		Tag added in the new backup
REGAM	22T4710A	25	2DES DEWPT CALC PT1		2202	Tag added in the new backup. AM tag has a cross-reference with two HG tags. i.e., 22FI119 and 22FC105.
REGAM	22T4710B	25	2DES DEWPT CALC PT2		2202	Tag added in the new backup. AM tag has a cross-reference with two HG tags. i.e., 22FI119 and 22FC105.
REGAM	22TK4710	25	2DES HTR DEWPOINT		2202	Tag added in the new backup
REGAM	22TK3710	25	2DES HTR INLET-DEWPT DT	DEWPT	2202	Tag added in the new backup. AM tag has a cross-reference with one HG tags. i.e., 22TI710
NUMERCAM	22XM3707	25	2A DESULF HTR BURNER CT	BURNERCT	2202	Tag added in the new backup
NUMERCAM	22XM3708	25	2B DESULF HTR BURNER CT	BURNERCT	2202	Tag added in the new backup
NUMERCAM	22XM3709	25	2REF-1HTR BURNER COUNT	BURNERCT	2213	Tag added in the new backup
NUMERCAM	22XM3710	25	2REF-2HTR BURNER COUNT	BURNERCT	2215	Tag added in the new backup
NUMERCAM	22XM3711	25	2REF-3AHTR BURNER COUNT	BURNERCT	2217	Tag added in the new backup
NUMERCAM	22XM3712	25	2REF-3BHTR BURNER COUNT	BURNERCT	2217	Tag added in the new backup
CUSTOMAM	8314OPCI	33	SHADOW TAGS DISPLAY ONLY	OPCI		Tag added in the new backup
CUSTOMAM	8406OPCI	33	SHADOW TAGS DISPLAY ONLY	OPCI	8406	Tag added in the new backup
CUSTOMAM	87CC3700	33	1-LIFT STN ALARM CUTOUT	CUTOUT		Tag added in the new backup
CUSTOMAM	87CC3702	33	7-LIFT STN ALARM CUTOUT	CUTOUT		Tag added in the new backup
CUSTOMAM	87CC3701	33	4-LIFT STN ALARM CUTOUT	CUTOUT		Tag added in the new backup
CUSTOMAM	87CC3703	33	9-LIFT STN ALARM CUTOUT	CUTOUT		Tag added in the new backup
CUSTOMAM	87CC3704	33	SURGE TXFR ALARM CUTOUT	CUTOUT		Tag added in the new backup
REGAM	NM45PARS	35	PARSEC ANALYSIS NM 45	NM 45		Tag added in the new backup
REGAM	NM46PARS	35	PARSEC ANALYSIS NM 46	NM 46		Tag added in the new backup
REGAM	NM45CPUF	35	CPU FREE ANALYSIS NM 45	NM 45		Tag added in the new backup
REGAM	NM46CPUF	35	CPU FREE ANALYSIS NM 46	NM 46		Tag added in the new backup
REGAM	21TK3705	24	1 DESULF HTR INLET	HTR IN T		Tag not found in the new backup
REGAM	22AC3902	25	2A DES HTR O2	2A-O2	2202H3	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup
REGAM	22AC3903	25	2B DES HTR O2	2B-O2	2202H4	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup
REGAM	22AC3962	25	2REF-1 HTR O2	#1-O2	2213H1	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup
REGAM	22AC3990	25	2REF-3A HTR O2	3A-O2	2217H1	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup
REGAM	22AC3991	25	2REF-3B HTR O2	3B-O2	2217H2	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup

&T	&N	AM Node	PTDESC	KEYWORD	ASSOCDSP	Change Details
REGAM	22AC3996	25	2REF-2 HTR O2	#2-O2	2215H1	PVLOPR Parameter value found updated from JOURNAL to NOACTION in the new backup PVLOTP Parameter value found updated from 2.500000 to -------- in the new backup
REGAM	22AK3961	25	MID REF HTR O2	REFHTRO2	2215	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
REGAM	22FK3100	25	2REF TOTAL FEED	TOT FEED		$ALDLOPT Parameter value found updated from ONDLYHI to NONE in the new backup DLYTIME Parameter value found updated from 300 to 0 in the new backup PVEUHI Parameter value found updated from 1330.000 to 1000.000 in the new backup PVEXEUHI Parameter value found updated from 1500.000 to 1250.000 in the new backup PVHIPR Parameter value found updated from HIGH to NOACTION in the new backup PVHITP Parameter value found updated from 1257.000 to -------- in the new backup
REGAM	22FK3114	25	COMP FUEL FLW DS HTR 2B	FUELFLOW	2202	G Parameter value found updated from 0.779297 to 0.842783 in the new backup T Parameter value found updated from 70.44170 to 67.97810 in the new backup
REGAM	22FK3119	25	RECYC CMPR FORWARD FLOW	RECYFLOW	2220	BADPVPR Parameter value found updated from EMERGNCY to NOACTION in the new backup PVLLPR Parameter value found updated from EMERGNCY to NOACTION in the new backup PVLOPR Parameter value found updated from HIGH to NOACTION in the new backup PVLOTP Parameter value found updated from 2.700000 to -------- in the new backup
REGAM	22FK3129	25	REF RECY GAS (CORRECTED)	RECYCLE	2220	ALENBST Parameter value found updated from DISABLE to ENABLE in the new backup PVLOPR Parameter value found updated from EMERGNCY to NOACTION in the new backup PVLOTP Parameter value found updated from 2.000000 to -------- in the new backup T Parameter value found updated from 147.7440 to 124.1200 in the new backup
REGAM	22FK3133	25	OP POINT #2 REF RCY CMPR	OP POINT		ACFM Parameter value found updated from 4097.330000000000000000000000000 to 4469.700000000000000000000000000 in the new backup BADPVPR Parameter value found updated from HIGH to EMERGNCY in the new backup COMPFLOW Parameter value found updated from 4955670.000000000000000000000000 to 5555280.00000000000000000000000 in the new backup OPPT Parameter value found updated from 81.592300000000000000000000000000 to 96.795800000000000000000000000000 in the new backup POLYHD Parameter value found updated from 42194.900000000000000000000000000 to 36512.20000000000000000000000000 in the new backup PVLLPR Parameter value found updated from HIGH to EMERGNCY in the new backup PVLLTP Parameter value found updated from 68.00000 to 85.00000 in the new backup PVLOTP Parameter value found updated from 72.00000 to 95.00000 in the new backup REDHD Parameter value found updated from 0.29973200000000000000000000000 to 0.26552900000000000000000000000 in the new backup
REGAM	22PC3457	25	2REF-3B FUEL GAS PRESS	3B-FUELG	2217H2	K Parameter value found updated from 0.500000 to 0.200000 in the new backup
REGAM	22PK3431	25	DES HTR 2B FUEL GAS PRES	FUEL GAS	2202	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup
REGAM	22PK3439	25	PVHH 2DES 2A CONV DRAFT	2A DRAFT	2202	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
REGAM	22PK3440	25	PVHH 2DES 2B CONV DRAFT	2B DRAFT	2202	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
REGAM	22PK3452	25	#2REF HTRCELL 1 FG-SHDW	FUEL GAS	2213	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup
REGAM	22PK3453	25	#2REF HTRCELL 2 FG-SHDW	FUEL GAS	2215	BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup

&T	&N	AM Node	PTDESC	KEYWORD	ASSOCDSP	Change Details
REGAM	22PK3454	25	#2REF HTRCELL 3A FG-SHDW	FUEL GAS	2217	BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup
REGAM	22PK3457	25	#2REF HTRCELL 3B FG-SHDW	FUEL GAS	2217	BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup
REGAM	22PK3458	25	DES HTR 2A FG PRES -SHDW	FUEL GAS	2202	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup BADPVPR Parameter value found updated from EMERGNCY to HIGH in the new backup PVLOPR Parameter value found updated from LOW to HIGH in the new backup
REGAM	22TA3692	25	2A DES HTR C#3TB4SKN-SDL	SOL/SDL	2202	ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup
REGAM	22TC3604	25	#1 HTR OUTLET RAMP PRGRM	#1 RAMP		SOAKV1 Parameter value found updated from 900.0000 to 725.0000 in the new backup SOAKV2 Parameter value found updated from 900.0000 to 725.0000 in the new backup
REGAM	22TC3607	25	#2 HTR OUTLET RAMP PRGRM	#2 RAMP		SOAKV1 Parameter value found updated from 900.0000 to 725.0000 in the new backup SOAKV2 Parameter value found updated from 900.0000 to 725.0000 in the new backup
REGAM	22TC3610	25	#3A HTR OUTLT RAMP PRGRM	#3A RAMP		SOAKV1 Parameter value found updated from 900.0000 to 725.0000 in the new backup SOAKV2 Parameter value found updated from 900.0000 to 725.0000 in the new backup
REGAM	22TC3613	25	#3B HTR OUTLT RAMP PRGRM	#3B RAMP		SOAKV1 Parameter value found updated from 900.0000 to 725.0000 in the new backup SOAKV2 Parameter value found updated from 900.0000 to 725.0000 in the new backup
REGAM	22TC3623	25	2REF-3B HTR OUTLET TEMP	3B T_OUT	2217	ASSOCDSP Parameter value found updated from 2217 to BLANK in the new backup
REGAM	22TK692	25	2A DES HTR C#3 TUBE4 SKN	C#3 SKIN		ALENBST Parameter value found updated from ENABLE to DISABLE in the new backup

Appendix J. Modpack Logs

Not Applicable.

Appendix K. Modpack Test Procedure

Appendix K1. Identity of Test Personnel

Not Applicable.

Appendix K2. Application Functional Check

Not Applicable.

Appendix K3. HMI Check

Not Applicable.

Appendix K4. FAT Acceptance Certificate

Not Applicable.