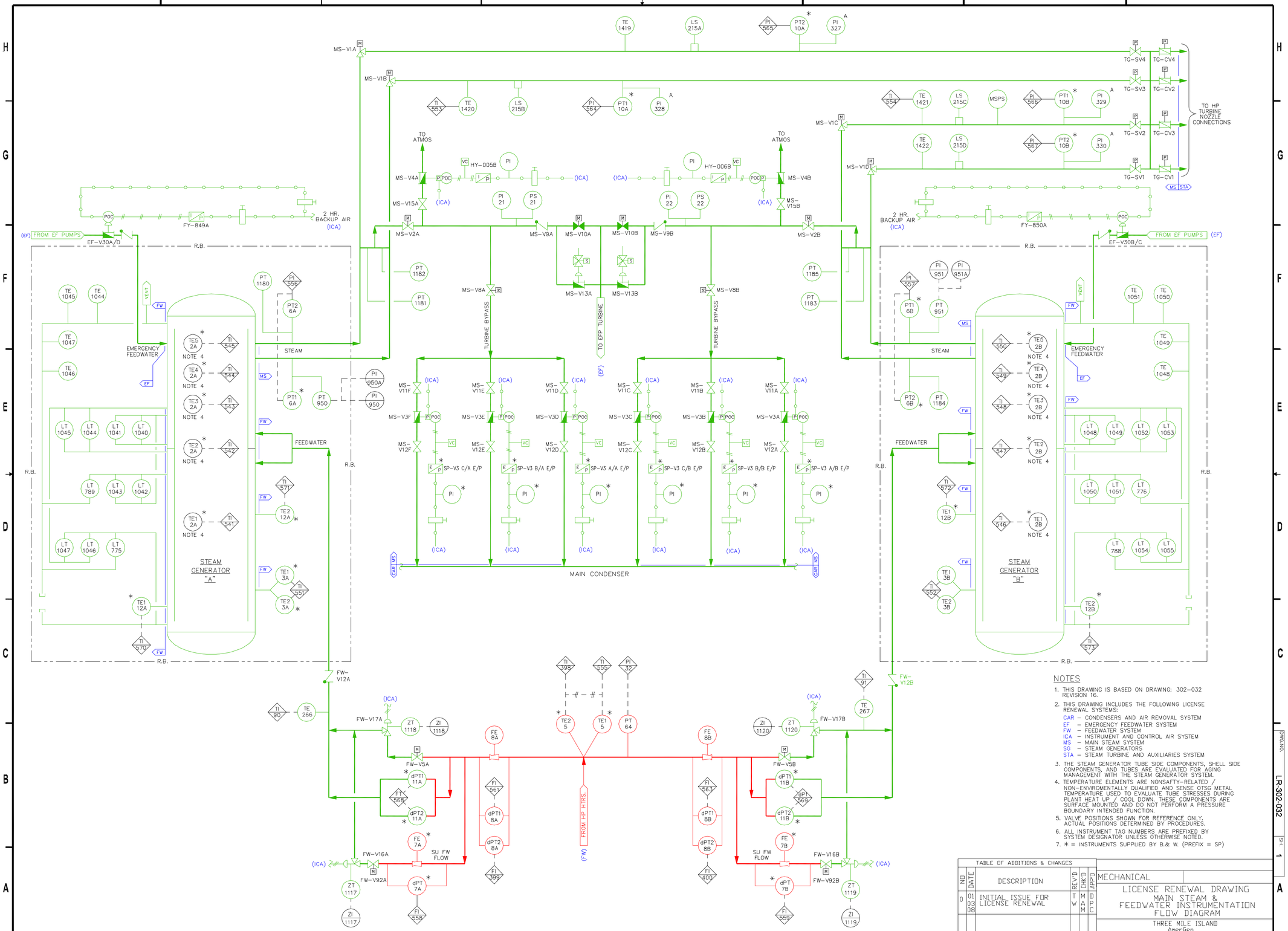


NOTES

1. THIS DRAWING IS BASED ON DRAWING: 302-032 REVISION 16.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CAR – CONDENSER AND AIR REMOVAL SYSTEM
   - EF – EMERGENCY FEEDWATER SYSTEM
   - FW – FEEDWATER SYSTEM
   - ICA – INSTRUMENT AND CONTROL AIR SYSTEM
   - MS – MAIN STEAM SYSTEM
   - SG – STEAM GENERATORS
   - STA – STEAM TURBINE AND AUXILIARIES SYSTEM
3. THE STEAM GENERATOR TUBE SIDE COMPONENTS, SHELL SIDE COMPONENTS, AND TUBES ARE EVALUATED FOR AGING MANAGEMENT WITH THE STEAM GENERATOR SYSTEM.
4. TEMPERATURE ELEMENTS ARE NONSAFTY-RELATED / NON-ENVIROMENTALLY QUALIFIED AND SENSE OTSG METAL TEMPERATURE USED TO EVALUATE TUBE STRESSES DURING PLANT HEAT UP / COOL DOWN. THESE COMPONENTS ARE SURFACE MOUNTED AND DO NOT PERFORM A PRESSURE BOUNDARY INTENDED FUNCTION.
5. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS DETERMINED BY PROCEDURES.
6. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
7. * = INSTRUMENTS SUPPLIED BY B.& W. (PREFIX = SP)

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	TW	MAM	DPC

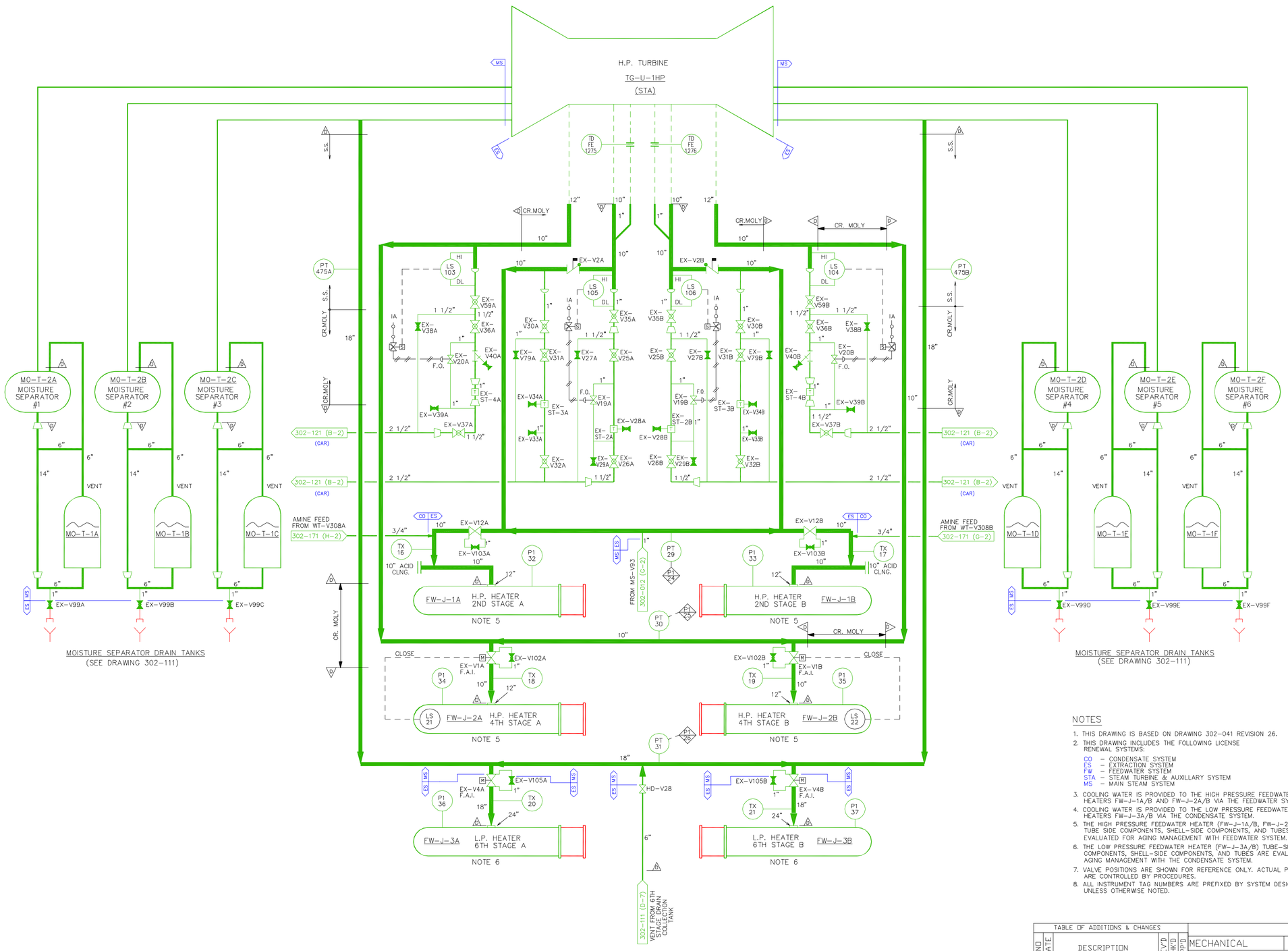
MECHANICAL

LICENSE RENEWAL DRAWING
MAIN STEAM & FEEDWATER INSTRUMENTATION FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-032 | REV 0

DWG.NO. LR-302-032 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-041 REVISION 26.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CO – CONDENSATE SYSTEM
   - ES – EXTRACTION STEAM SYSTEM
   - FW – FEEDWATER SYSTEM
   - STA – STEAM TURBINE & AUXILLARY SYSTEM
   - MS – MAIN STEAM SYSTEM
3. COOLING WATER IS PROVIDED TO THE HIGH PRESSURE FEEDWATER HEATERS FW-J-1A/B AND FW-J-2A/B VIA THE FEEDWATER SYSTEM.
4. COOLING WATER IS PROVIDED TO THE LOW PRESSURE FEEDWATER HEATERS FW-J-3A/B VIA THE CONDENSATE SYSTEM.
5. THE HIGH PRESSURE FEEDWATER HEATER (FW-J-1A/B, FW-J-2A/B) TUBE SIDE COMPONENTS, SHELL-SIDE COMPONENTS, AND TUBES ARE EVALUATED FOR AGING MANAGEMENT WITH FEEDWATER SYSTEM.
6. THE LOW PRESSURE FEEDWATER HEATER (FW-J-3A/B) TUBE-SIDE COMPONENTS, SHELL-SIDE COMPONENTS, AND TUBES ARE EVALUATED FOR AGING MANAGEMENT WITH THE CONDENSATE SYSTEM.
7. VALVE POSITIONS ARE SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS ARE CONTROLLED BY PROCEDURES.
8. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	D P C	M A M

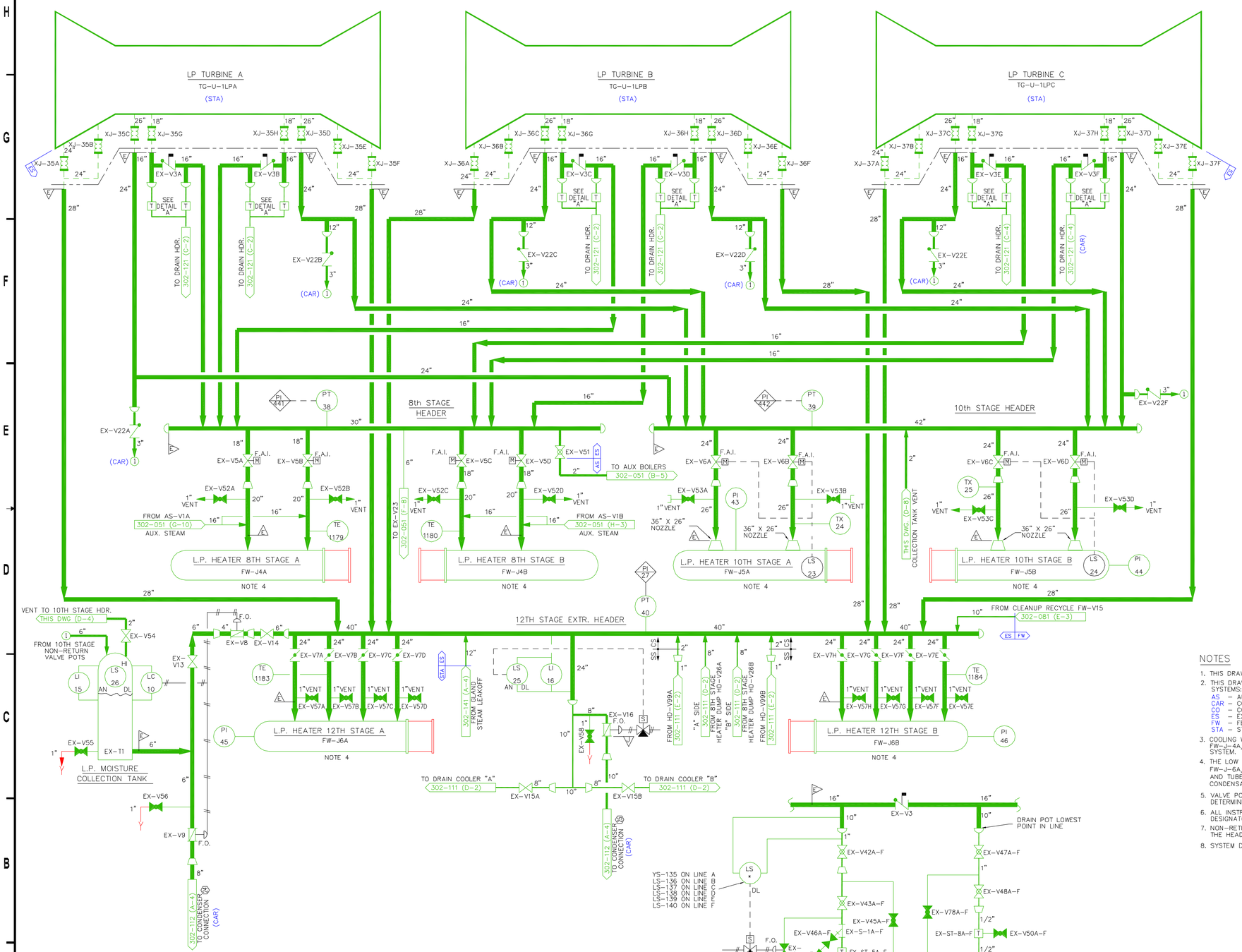
MECHANICAL

LICENSE RENEWAL DRAWING
H.P. EXTRACTION STEAM
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-041 | REV 0

DWG.NO. LR-302-041 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-042, REVISION 20.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - AS – AUXILIARY STEAM SYSTEM
   - CAR – CONDENSATE & AIR REMOVAL SYSTEM
   - CO – CONDENSATE SYSTEM
   - ES – EXTRACTION STEAM SYSTEM
   - FW – FEEDWATER SYSTEM
   - STA – STEAM TUBINE & AUXILIARY SYSTEM
3. COOLING WATER IS PROVIDED TO LOW PRESSURE FEEDWATER HEATERS FW-J-4A/B, FW-J-5A/B, AND FW-J-6A/B VIA THE CONDENSATE SYSTEM.
4. THE LOW PRESSURE FEEDWATER HEATERS (FW-J-4A/B, FW-J-5A/B, FW-J-6A/B) TUBE-SIDE COMPONENTS, SHELL-SIDE COMPONENTS, AND AND TUBES ARE EVALUATED FOR AGING MANAGEMENT WITH THE CONDENSATE SYSTEM.
5. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS DETERMINED BY PROCEDURES.
6. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
7. NON-RETURN VALVES ARE LOWEST POINT IN 8TH EXTRACTION LINES. THE HEADER IS LOWEST POINT IN 12TH EXTRACTION.
8. SYSTEM DESIGN BASIS-SEISMIC CLASS III.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	TW	DPC	MAM

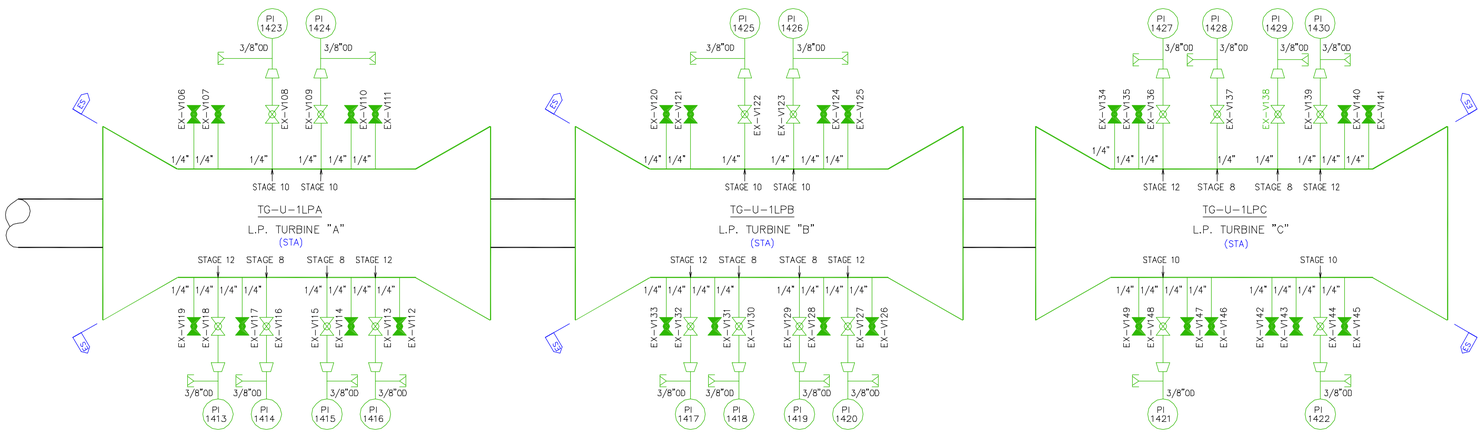
MECHANICAL

LICENSE RENEWAL DRAWING
LP. TURBINE
EXTRACTION STEAM
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-042 REV 0

DWG.NO. LR-302-042 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-043, REVISION 3.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   ES – EXTRACTION STEAM SYSTEM
   STA – STEAM TURBINE & AUXILIARY SYSTEM
3. VALVE POSITION SHOWN FOR REFERENCE ONLY. ACTUAL POSITION DETERMINED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 03	INITIAL ISSUE FOR LICENSE RENEWAL	T W	D P C	M A M

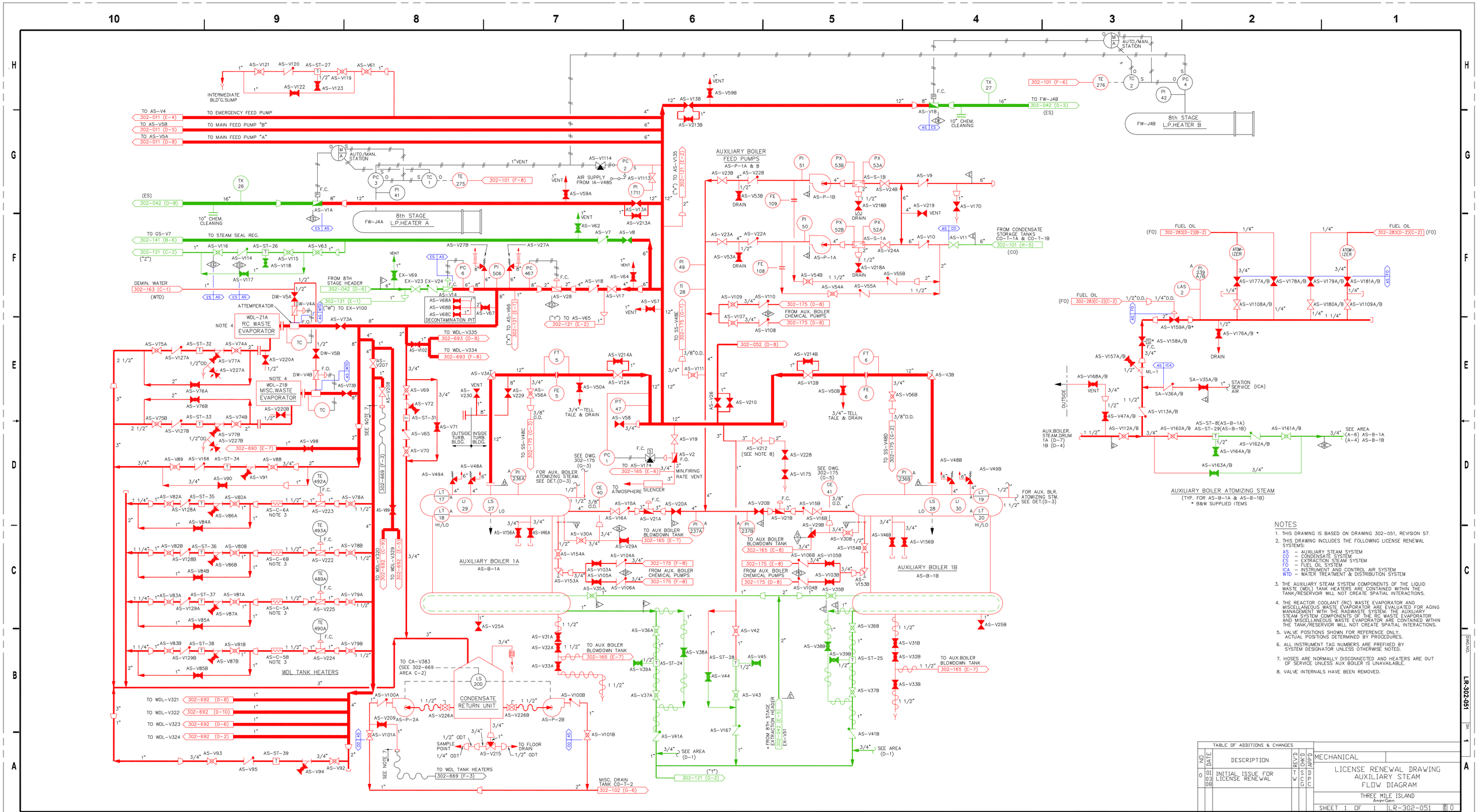
MECHANICAL

LICENSE RENEWAL DRAWING
L.P. EXTRACTION STEAM
SECONDARY PERFORMANCE MONITORING
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-043 | REV 0

DWG NO. LR-302-043 | SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-051, REVISION 57.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - AS – AUXILIARY STEAM SYSTEM
   - CO – CONDENSATE SYSTEM
   - ES – EXTRACTION STEAM SYSTEM
   - FO – FUEL OIL SYSTEM
   - ICA – INSTRUMENT AND CONTROL AIR SYSTEM
   - WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. THE AUXILIARY STEAM SYSTEM COMPONENTS OF THE LIQUID WASTE (WDL) TANK HEATERS ARE CONTAINED WITHIN THE TANK/RESERVOIR WILL NOT CREATE SPATIAL INTERACTIONS.
4. THE REACTOR COOLANT (RC) WASTE EVAPORATOR AND MISCELLANEOUS WASTE EVAPORATOR ARE EVALUATED FOR AGING MANAGEMENT WITH THE RADWASTE SYSTEM. THE AUXILIARY STEAM SYSTEM COMPONENTS OF THE RC WASTE EVAPORATOR AND MISCELLANEOUS WASTE EVAPORATOR ARE CONTAINED WITHIN THE TANK/RESERVOIR WILL NOT CREATE SPATIAL INTERACTIONS.
5. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS DETERMINED BY PROCEDURES.
6. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
7. HOSES ARE NORMALLY DISCONNECTED AND HEATERS ARE OUT OF SERVICE UNLESS AUX BOILER IS UNAVAILABLE.
8. VALVE INTERNALS HAVE BEEN REMOVED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	S C G	D P C

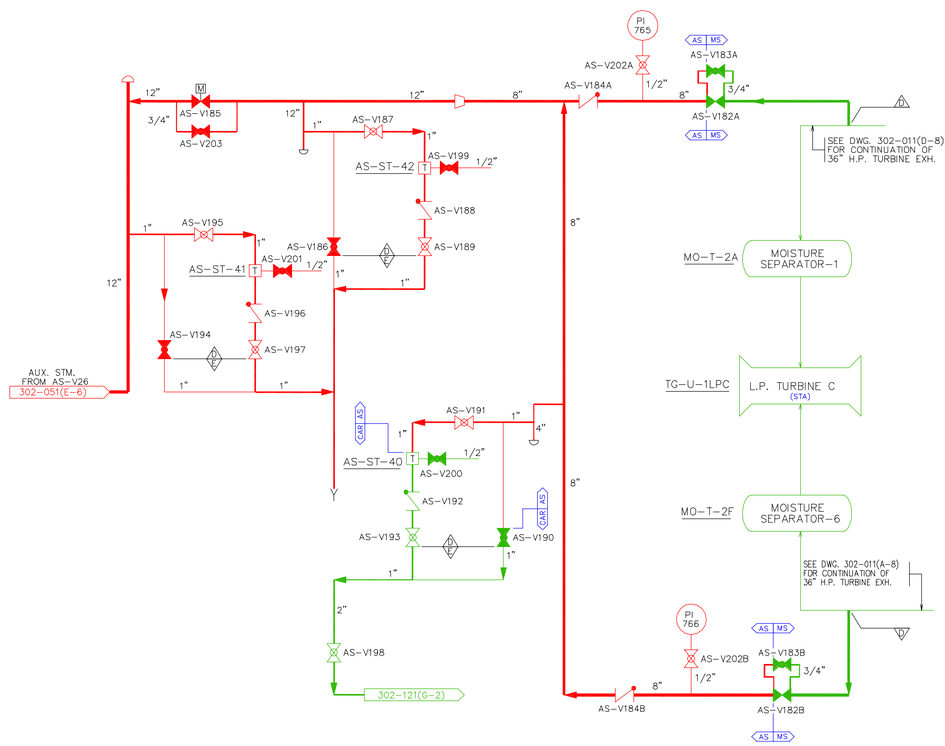
MECHANICAL

LICENSE RENEWAL DRAWING
AUXILIARY STEAM
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-051 REV 0

DWG.NO. LR-302-051 SH. 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-052, REVISION 11.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   AS – AUXILIARY STEAM SYSTEM
   CAR – CONDENSERS AND AIR REMOVAL SYSTEM
   MS – MAIN STEAM SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	S C G	D P C

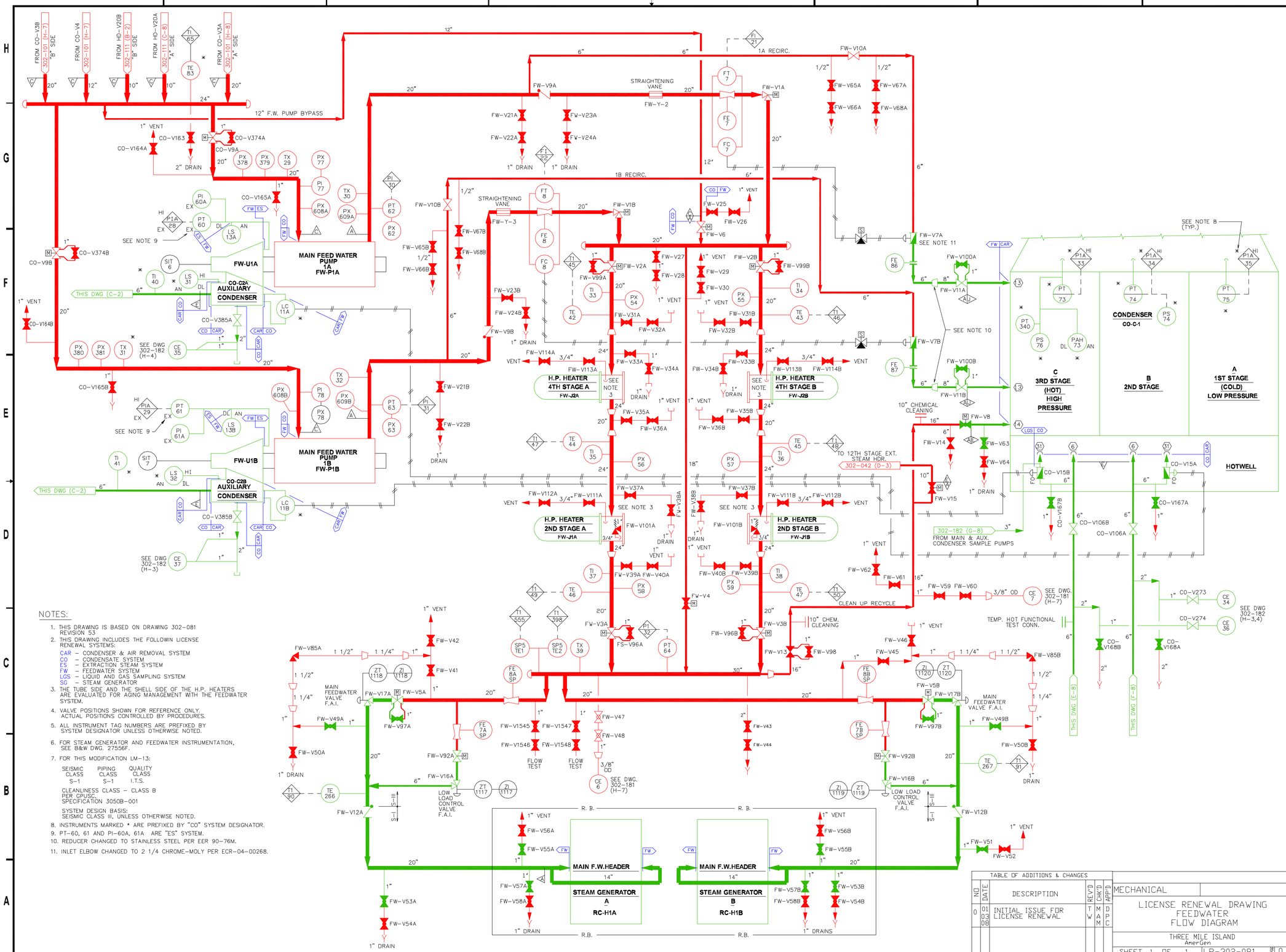
MECHANICAL

LICENSE RENEWAL DRAWING
AUXILIARY STEAM
CROSS CONNECT – UNITS 1&2
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-052 | REV 0

DWG.NO. LR-302-052 SH. 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-081 REVISION 53
2. THIS DRAWING INCLUDES THE FOLLOWIN LICENSE RENEWAL SYSTEMS:
   - CAR – CONDENSER & AIR REMOVAL SYSTEM
   - CO – CONDENSATE SYSTEM
   - ES – EXTRACTION STEAM SYSTEM
   - FW – FEEDWATER SYSTEM
   - LGS – LIQUID AND GAS SAMPLING SYSTEM
   - SG – STEAM GENERATOR
3. THE TUBE SIDE AND THE SHELL SIDE OF THE H.P. HEATERS ARE EVALUATED FOR AGING MANAGEMENT WITH THE FEEDWATER SYSTEM.
4. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
5. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
6. FOR STEAM GENERATOR AND FEEDWATER INSTRUMENTATION, SEE B&W DWG. 27556F.
7. FOR THIS MODIFICATION LM-13:

SEISMIC CLASS	PIPING CLASS	QUALITY CLASS
S-I	S-I	I.T.S.

   CLEANLINESS CLASS – CLASS B PER GPUSC, SPECIFICATION 3050B-001

   SYSTEM DESIGN BASIS: SEISMIC CLASS III, UNLESS OTHERWISE NOTED.
8. INSTRUMENTS MARKED * ARE PREFIXED BY "CO" SYSTEM DESIGNATOR.
9. PT-60, 61 AND PI-60A, 61A ARE "ES" SYSTEM.
10. REDUCER CHANGED TO STAINLESS STEEL PER EER 90-76M.
11. INLET ELBOW CHANGED TO 2 1/4 CHROME-MOLY PER ECR-04-00268.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	M A M	D P C

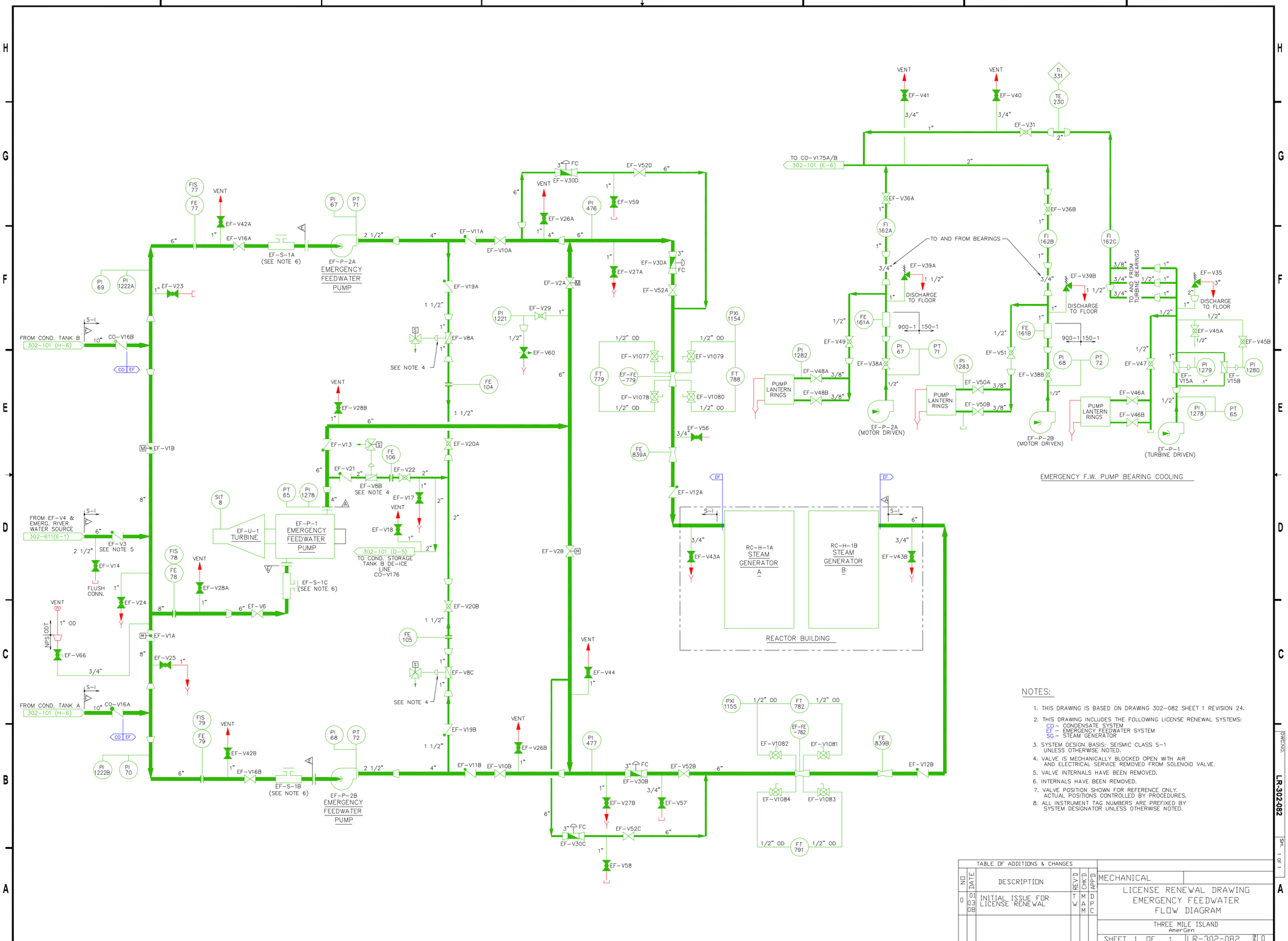
MECHANICAL

LICENSE RENEWAL DRAWING
FEEDWATER
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-081 | REV 0

DWG.NO. LR-302-081 | SH. 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-082 SHEET 1 REVISION 24.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   CO – CONDENSATE SYSTEM
   EF – EMERGENCY FEEDWATER SYSTEM
   SG – STEAM GENERATOR
3. SYSTEM DESIGN BASIS: SEISMIC CLASS S-1 UNLESS OTHERWISE NOTED.
4. VALVE IS MECHANICALLY BLOCKED OPEN WITH AIR AND ELECTRICAL SERVICE REMOVED FROM SOLENOID VALVE.
5. VALVE INTERNALS HAVE BEEN REMOVED.
6. INTERNALS HAVE BEEN REMOVED.
7. VALVE POSITION SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
8. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	M A M	D P C

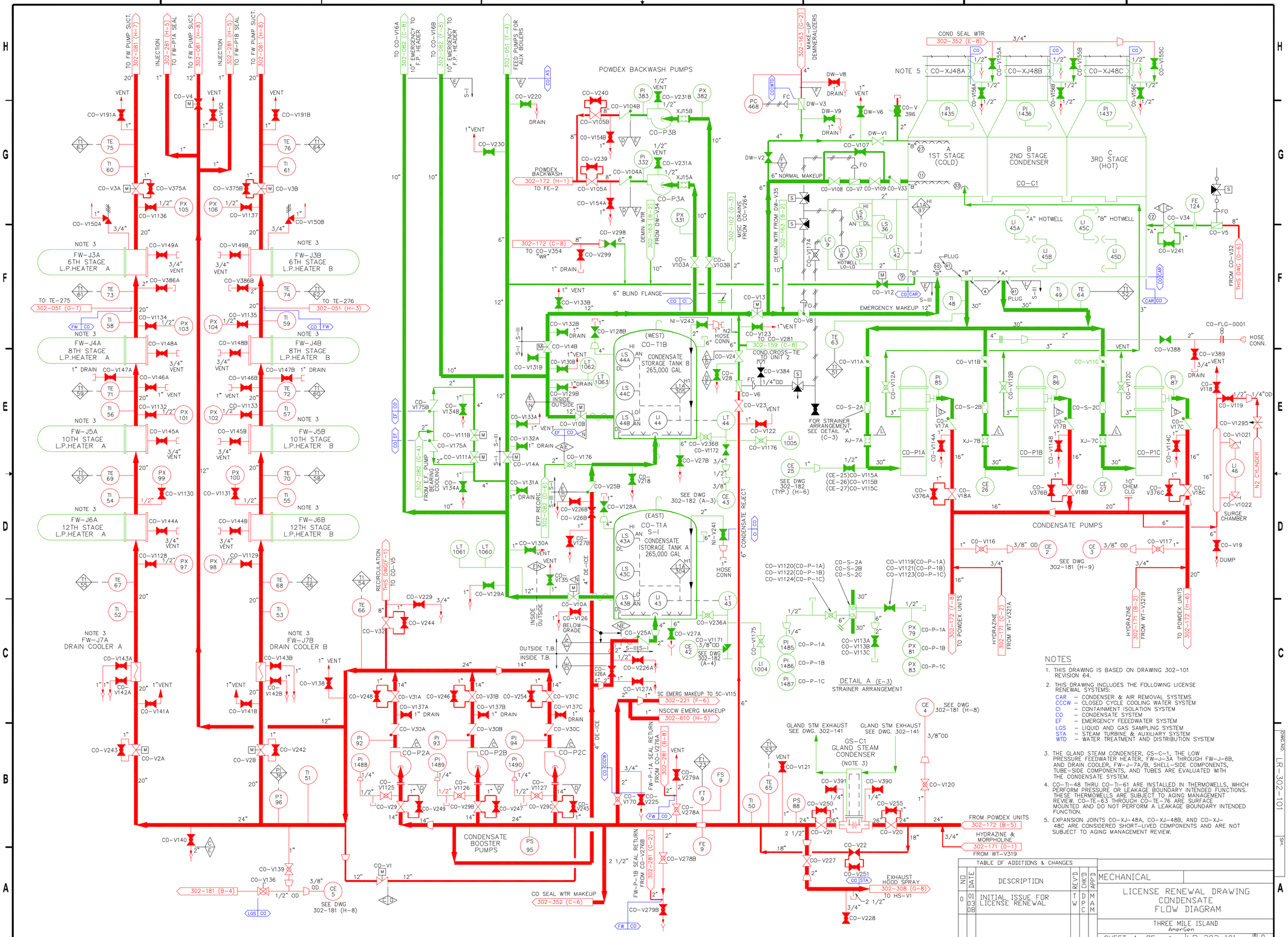
MECHANICAL

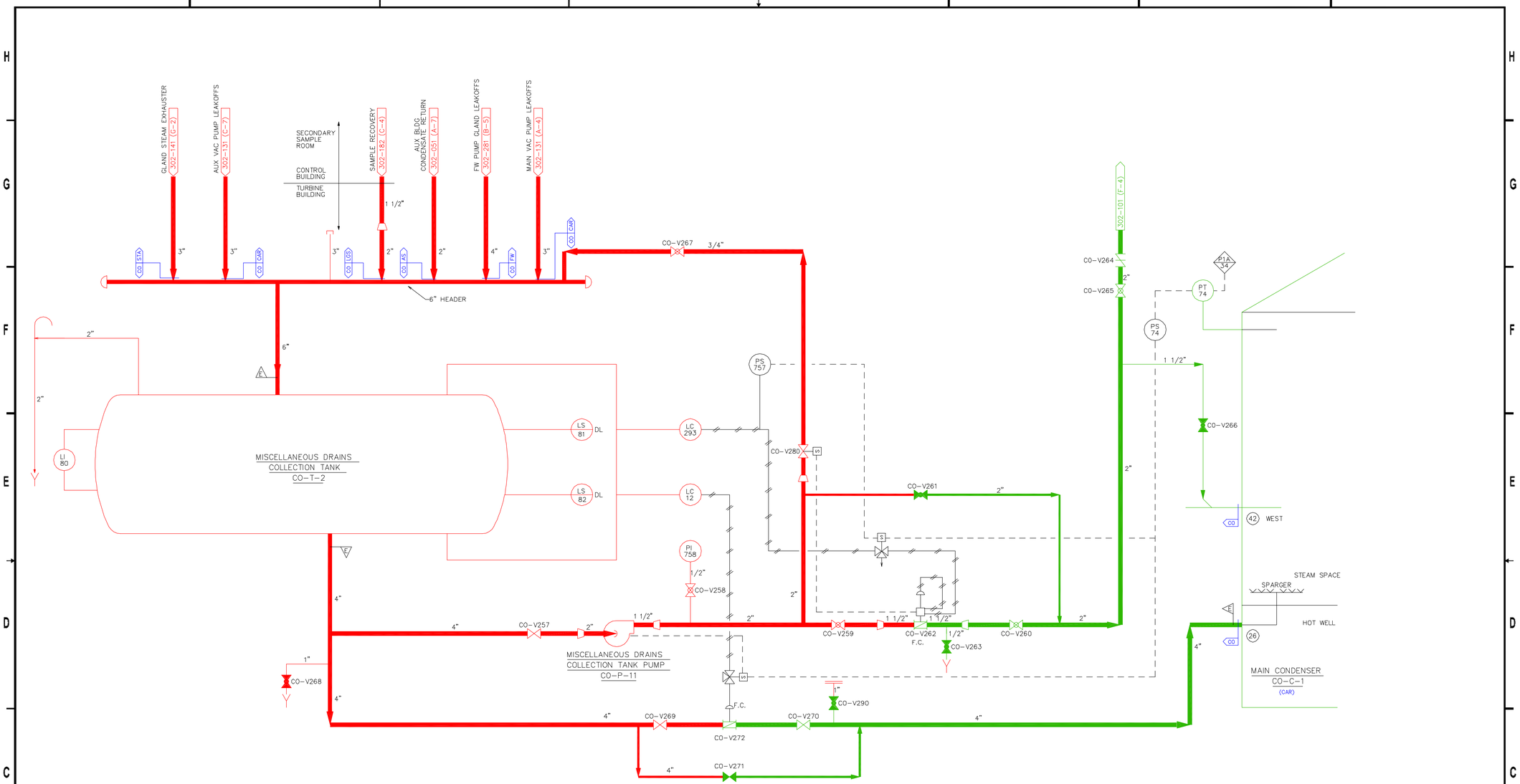
LICENSE RENEWAL DRAWING
EMERGENCY FEEDWATER
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-082 | REV 0

DWG.NO. LR-302-082 | SH. 1 OF 1


POWDEX BACKWASH PUMPS
CO-P3B
CO-P3A
(WEST) CO-T1B
CONDENSATE STORAGE TANK B 265,000 GAL
(EAST) CO-T1A S-I
CONDENSATE ISTORAGE TANK A 265,000 GAL
A 1ST STAGE (COLD)
B 2ND STAGE CONDENSER
C 3RD STAGE (HOT)
CO-C1
CONDENSATE PUMPS
CO-P1A
CO-P1B
CO-P1C
CONDENSATE BOOSTER PUMPS
CO-P2A
CO-P2B
CO-P2C
FW-J3A 6TH STAGE L.P.HEATER A
FW-J3B 6TH STAGE L.P.HEATER B
FW-J4A 8TH STAGE L.P.HEATER A
FW-J4B 8TH STAGE L.P.HEATER B
FW-J5A 10TH STAGE L.P.HEATER A
FW-J5B 10TH STAGE L.P.HEATER B
FW-J6A 12TH STAGE L.P.HEATER A
FW-J6B 12TH STAGE L.P.HEATER B
FW-J7A DRAIN COOLER A
FW-J7B DRAIN COOLER B
DETAIL A (E-3) STRAINER ARRANGEMENT
CS-C1 GLAND STEAM CONDENSER (NOTE 3)
NOTES
1. THIS DRAWING IS BASED ON DRAWING 302-101 REVISION 64.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
CAR – CONDENSER & AIR REMOVAL SYSTEMS
CCCW – CLOSED CYCLE COOLING WATER SYSTEM
CI – CONTAINMENT ISOLATION SYSTEM
CO – CONDENSATE SYSTEM
EF – EMERGENCY FEEEDWATER SYSTEM
LGS – LIQUID AND GAS SAMPLING SYSTEM
STA – STEAM TURBINE & AUXILIARY SYSTEM
WTD – WATER TREATMENT AND DISTRIBUTION SYSTEM
3. THE GLAND STEAM CONDENSER, CS-C-1, THE LOW PRESSURE FEEDWATER HEATER, FW-J-3A THROUGH FW-J-6B, AND DRAIN COOLER, FW-J-7A/B, SHELL-SIDE COMPONENTS, TUBE-SIDE COMPONENTS, AND TUBES ARE EVALUATED WITH THE CONDENSATE SYSTEM.
4. CO-TI-48 THRU CO-TI-61 ARE INSTALLED IN THERMOWELLS, WHICH PERFORM PRESSURE OR LEAKAGE BOUNDARY INTENDED FUNCTIONS. THESE THERMOWELLS ARE SUBJECT TO AGING MANAGEMENT REVIEW. CO-TE-63 THROUGH CO-TE-76 ARE SURFACE MOUNTED AND DO NOT PERFORM A LEAKAGE BOUNDARY INTENDED FUNCTION.
5. EXPANSION JOINTS CO-XJ-48A, CO-XJ-48B, AND CO-XJ-48C ARE CONSIDERED SHORT-LIVED COMPONENTS AND ARE NOT SUBJECT TO AGING MANAGEMENT REVIEW.
TABLE OF ADDITIONS & CHANGES
NO | DATE | DESCRIPTION | REV'D | CHK'D | APP'D
0 | 01 03 08 | INITIAL ISSUE FOR LICENSE RENEWAL | TW | DPC | MAM
MECHANICAL
LICENSE RENEWAL DRAWING CONDENSATE FLOW DIAGRAM
THREE MILE ISLAND AmerGen
SHEET 1 OF 1 LR-302-101 REV 0
DWG NO. LR-302-101



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-102, REVISION 10
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:

   AS – AUXILIARY STEAM SYSTEM
   CAR – CONDENSER & AIR REMOVAL SYSTEM
   CO – CONDENSATE SYSTEM
   FW – FEEDWATER SYSTEM
   LGS – LIQUID AND GAS SAMPLE SYSTEM
   STA – STEAM TURBINE AND AUXILIARY SYSTEM

3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY; ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
5. SYSTEM DESIGN BASIS SEISMIC CLASS III.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	D P C	M A M

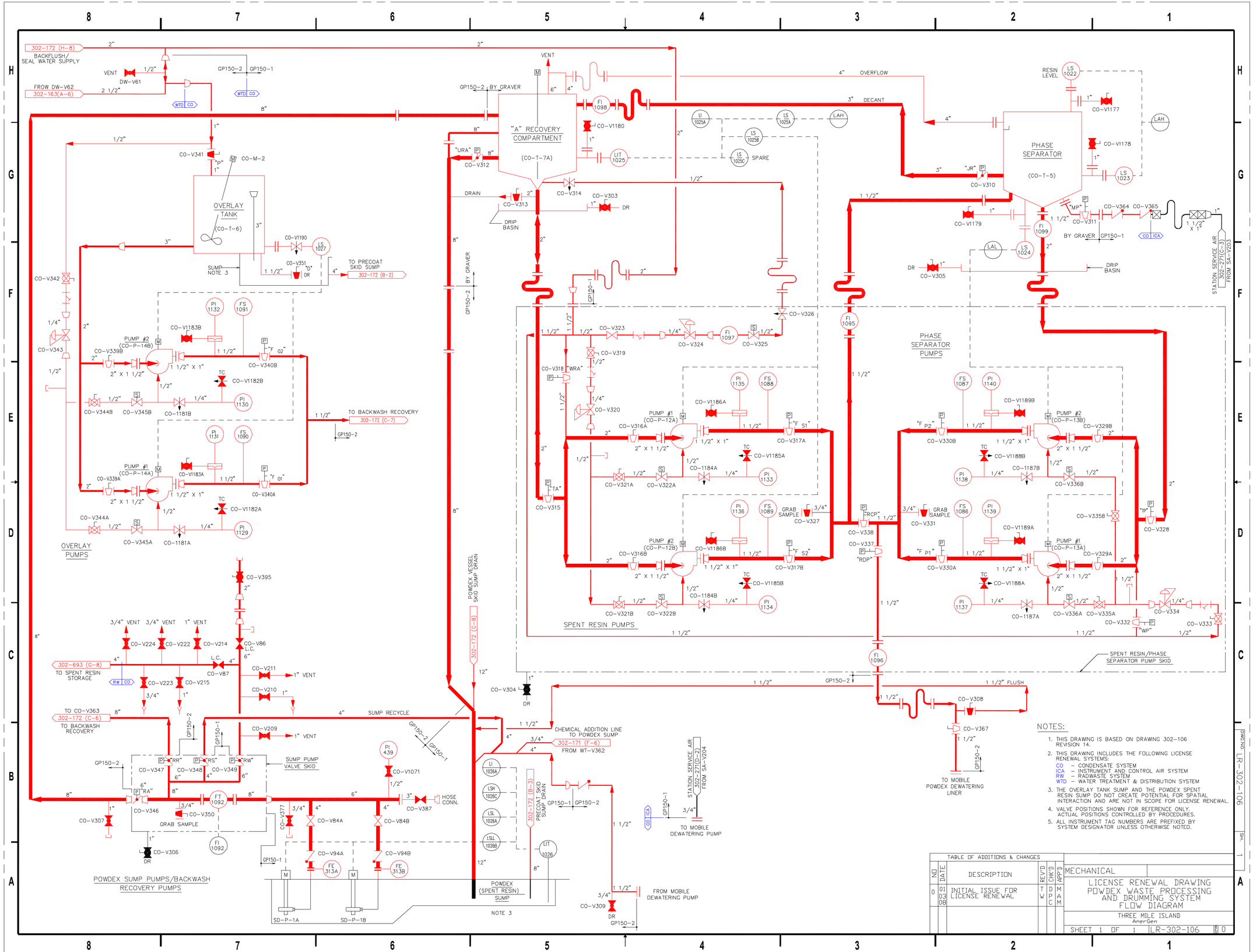
MECHANICAL

LICENSE RENEWAL DRAWING
MISC CONDENSATE DRAINS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-102 | REV. 0

DWG.NO. LR-302-102 | SH. 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-106 REVISION 14.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CO – CONDENSATE SYSTEM
   - ICA – INSTRUMENT AND CONTROL AIR SYSTEM
   - RW – RADWASTE SYSTEM
   - WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. THE OVERLAY TANK SUMP AND THE POWDEX SPENT RESIN SUMP DO NOT CREATE POTENTIAL FOR SPATIAL INTERACTION AND ARE NOT IN SCOPE FOR LICENSE RENEWAL.
4. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
5. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	D P C	M A M

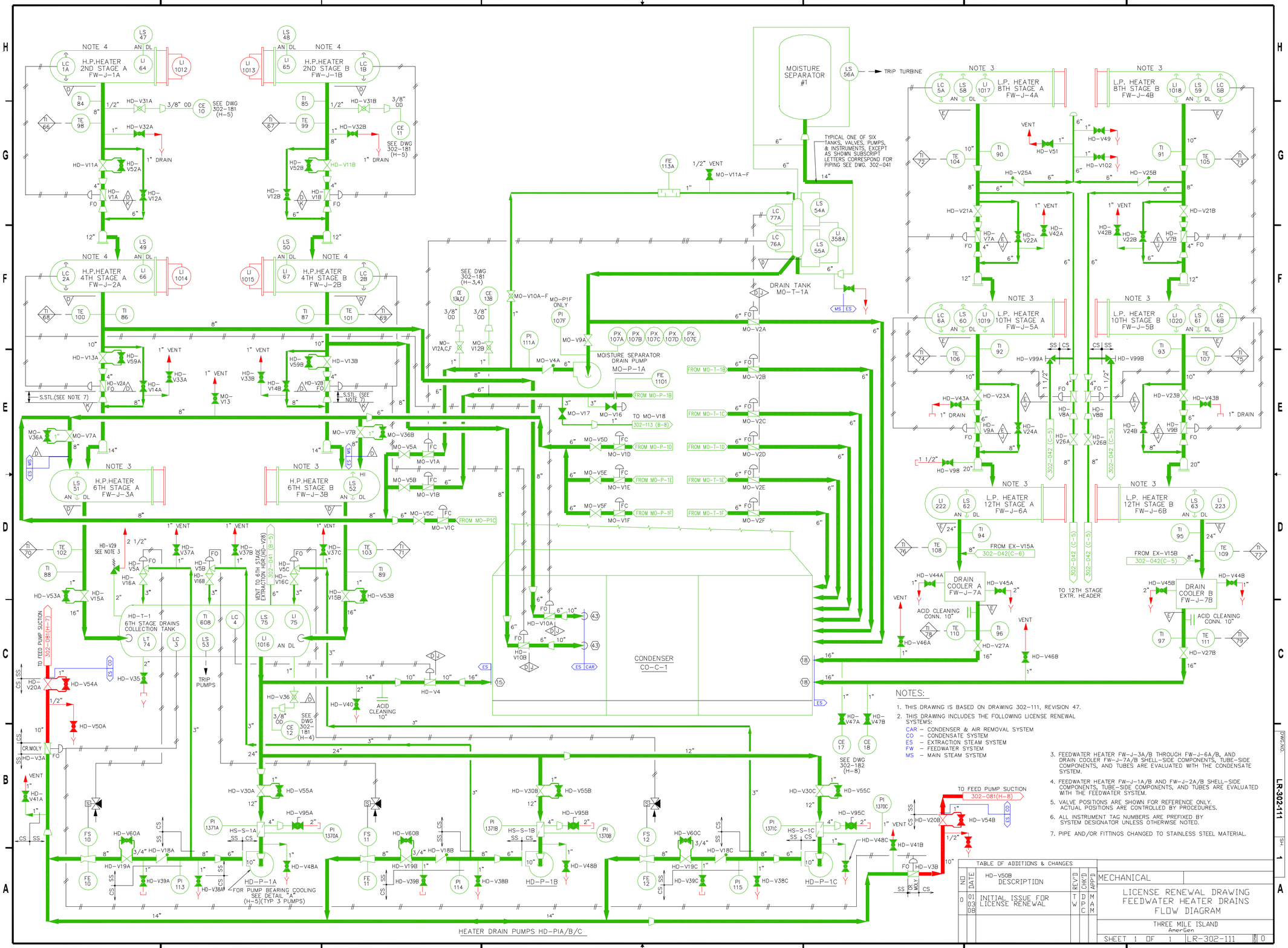
MECHANICAL

LICENSE RENEWAL DRAWING
POWDEX WASTE PROCESSING AND DRUMMING SYSTEM
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-106 | REV 0

DWG NO. LR-302-106 SH. 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-111, REVISION 47.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CAR – CONDENSER & AIR REMOVAL SYSTEM
   - CO – CONDENSATE SYSTEM
   - ES – EXTRACTION STEAM SYSTEM
   - FW – FEEDWATER SYSTEM
   - MS – MAIN STEAM SYSTEM
3. FEEDWATER HEATER FW-J-3A/B THROUGH FW-J-6A/B, AND DRAIN COOLER FW-J-7A/B SHELL-SIDE COMPONENTS, TUBE-SIDE COMPONENTS, AND TUBES ARE EVALUATED WITH THE CONDENSATE SYSTEM.
4. FEEDWATER HEATER FW-J-1A/B AND FW-J-2A/B SHELL-SIDE COMPONENTS, TUBE-SIDE COMPONENTS, AND TUBES ARE EVALUATED WITH THE FEEDWATER SYSTEM.
5. VALVE POSITIONS ARE SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS ARE CONTROLLED BY PROCEDURES.
6. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
7. PIPE AND/OR FITTINGS CHANGED TO STAINLESS STEEL MATERIAL.

TABLE OF ADDITIONS & CHANGES

NO	DATE	HD-V50B DESCRIPTION	REV'D TW	DRC	CHK'D	APP'D MAM
0	01 03 88	INITIAL ISSUE FOR LICENSE RENEWAL				

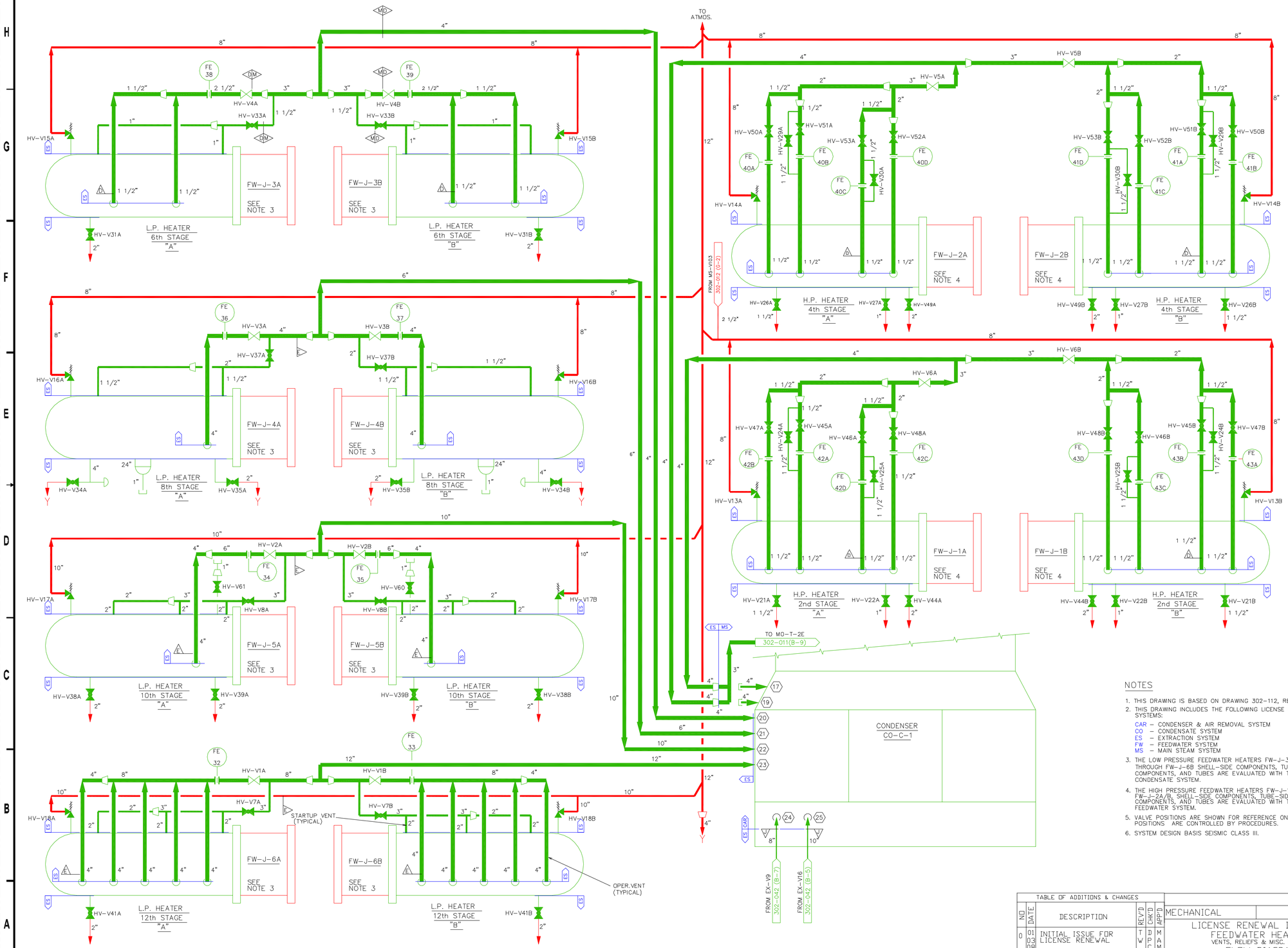
MECHANICAL

LICENSE RENEWAL DRAWING
FEEDWATER HEATER DRAINS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-111 | REV 0

DWG.NO. LR-302-111 SH 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-112, REVISION 23.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CAR – CONDENSER & AIR REMOVAL SYSTEM
   - CO – CONDENSATE SYSTEM
   - ES – EXTRACTION SYSTEM
   - FW – FEEDWATER SYSTEM
   - MS – MAIN STEAM SYSTEM
3. THE LOW PRESSURE FEEDWATER HEATERS FW-J-3A THROUGH FW-J-6B SHELL-SIDE COMPONENTS, TUBE-SIDE COMPONENTS, AND TUBES ARE EVALUATED WITH THE CONDENSATE SYSTEM.
4. THE HIGH PRESSURE FEEDWATER HEATERS FW-J-1A/B AND FW-J-2A/B, SHELL-SIDE COMPONENTS, TUBE-SIDE COMPONENTS, AND TUBES ARE EVALUATED WITH THE FEEDWATER SYSTEM.
5. VALVE POSITIONS ARE SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS ARE CONTROLLED BY PROCEDURES.
6. SYSTEM DESIGN BASIS SEISMIC CLASS III.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	D P C	M A M

MECHANICAL

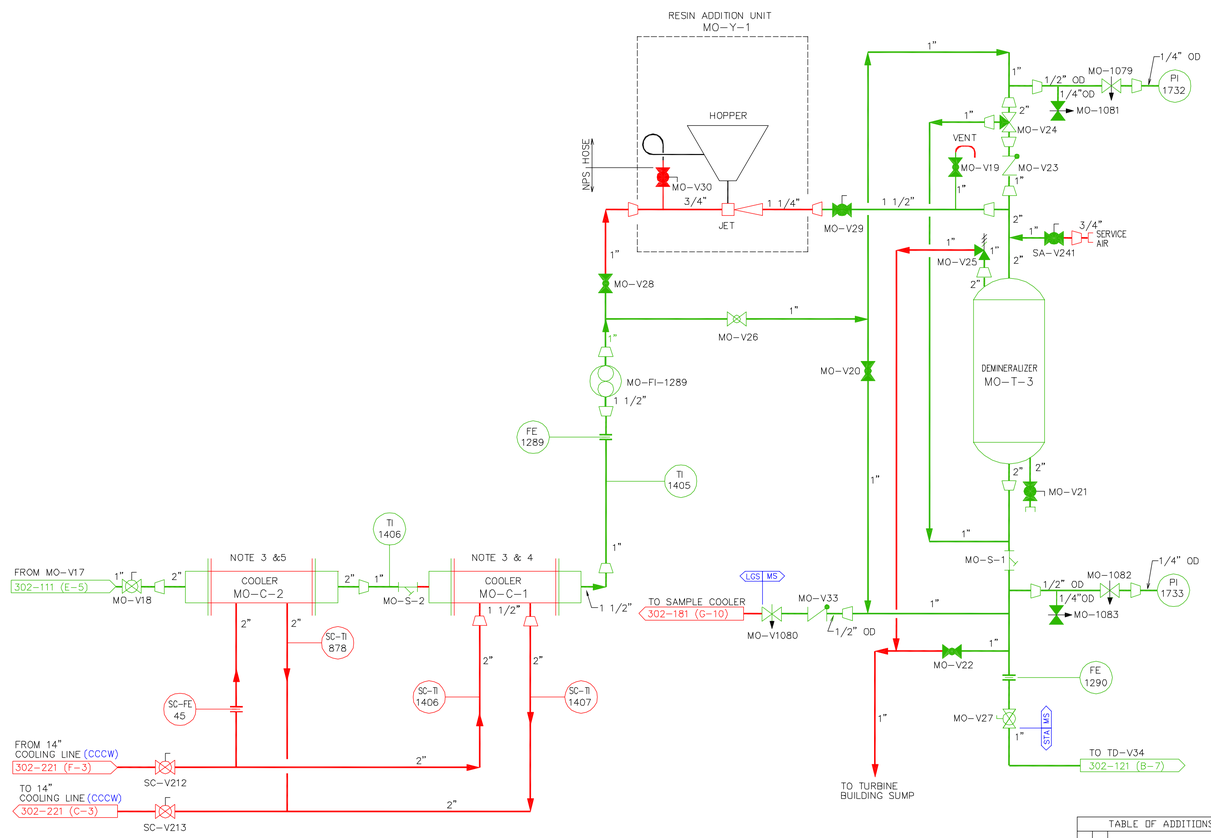
LICENSE RENEWAL DRAWING
FEEDWATER HEATER
VENTS, RELIEFS & MISC. DRAINS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-112 | REV 0

DWG.NO. LR-302-112 SH. 1

DWG.NO. LR-302-113 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-113 REVISION 1.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CCCW – CLOSED CYCLE COOLING WATER SYSTEM
   - LGS – LIQUID AND GAS SAMPLING SAMPLING
   - MS – MAIN STEAM SYSTEM
   - STA – STEAM TURBINE & AUXILIARY SYSTEM
3. COOLING WATER IS PROVIDED TO THE MOISTURE SEPARATOR COOLER, MO-C-1, AND THE MOISTURE SEPARATOR PRECOOLER, MO-C-2, VIA THE CLOSED CYCLE COOLING WATER SYSTEM.
4. THE MOISTURE SEPARATOR COOLER, MO-C-1, IS A PLATE HEAT EXCHANGER. BOTH PROCESS AND COOLING WATER SIDES OF THE HEAT EXCHANGER ARE EVALUATED FOR AGING MANAGEMENT WITH THE MAIN STEAM SYSTEM.
5. THE MOISTURE SEPARATOR PRECOOLER, MO-C-2, IS A TUBE-IN-SHELL HEAT EXCHANGER. THE SHELL-SIDE COMPONENTS, AND TUBE SIDE COMPONENTS AND TUBES ARE EVALUATED FOR AGING MANAGEMENT WITH THE MAIN STEAM SYSTEM.
6. VALVE POSITIONS ARE SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
7. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

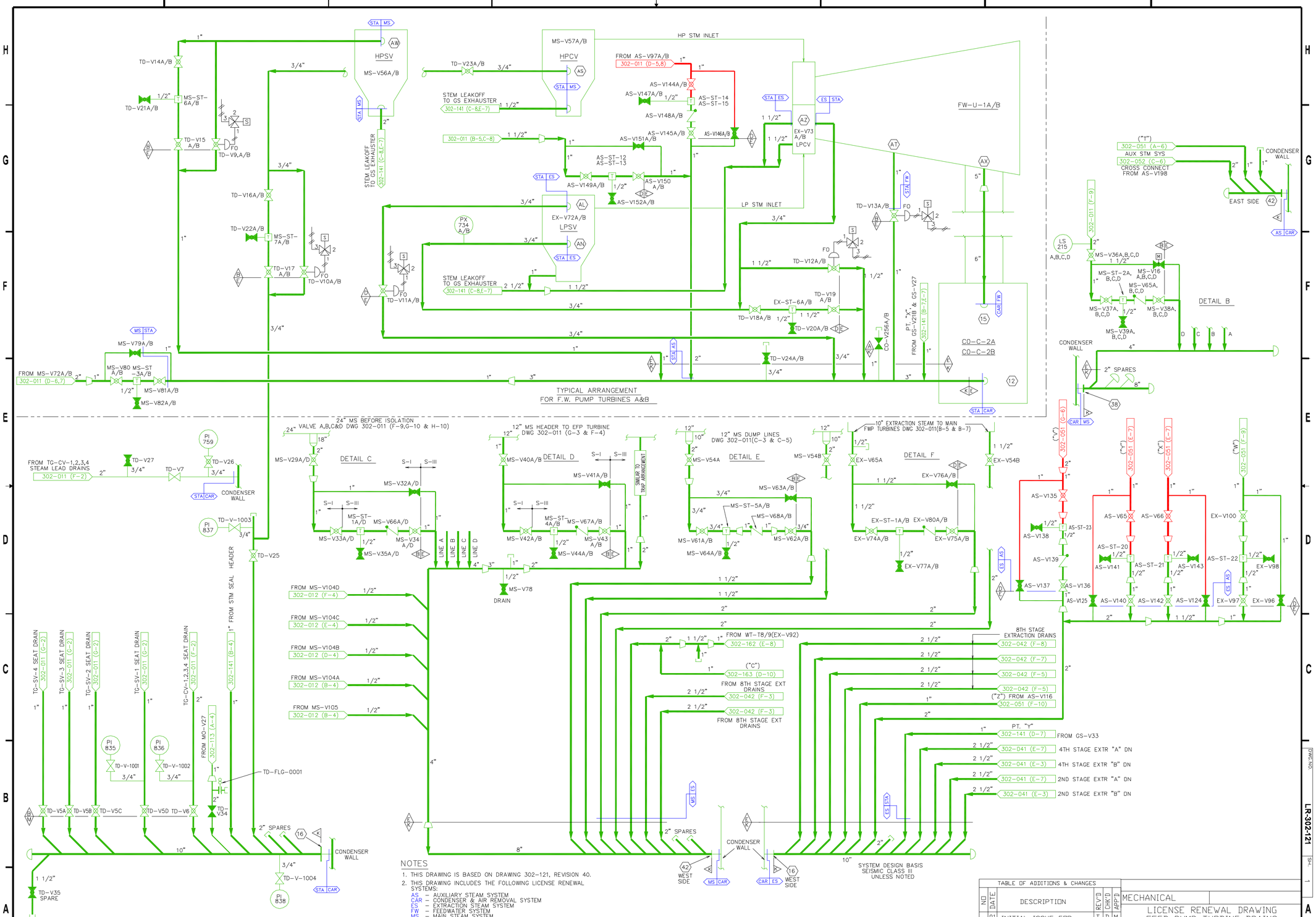
NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	TW	DPC	MAM

MECHANICAL

LICENSE RENEWAL DRAWING
MOISURE SEPARATORS
FLOW DIAGRAM
DEMINERALIZER SYSTEM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-113 0



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-121, REVISION 40.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - AS – AUXILIARY STEAM SYSTEM
   - CAR – CONDENSER & AIR REMOVAL SYSTEM
   - ES – EXTRACTION STEAM SYSTEM
   - FW – FEEDWATER SYSTEM
   - MS – MAIN STEAM SYSTEM
   - STA – STEAM TURBINE & AUXILIARY SYSTEM
3. VALVE POSITIONS ARE SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS ARE CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	D P C	M A M

MECHANICAL

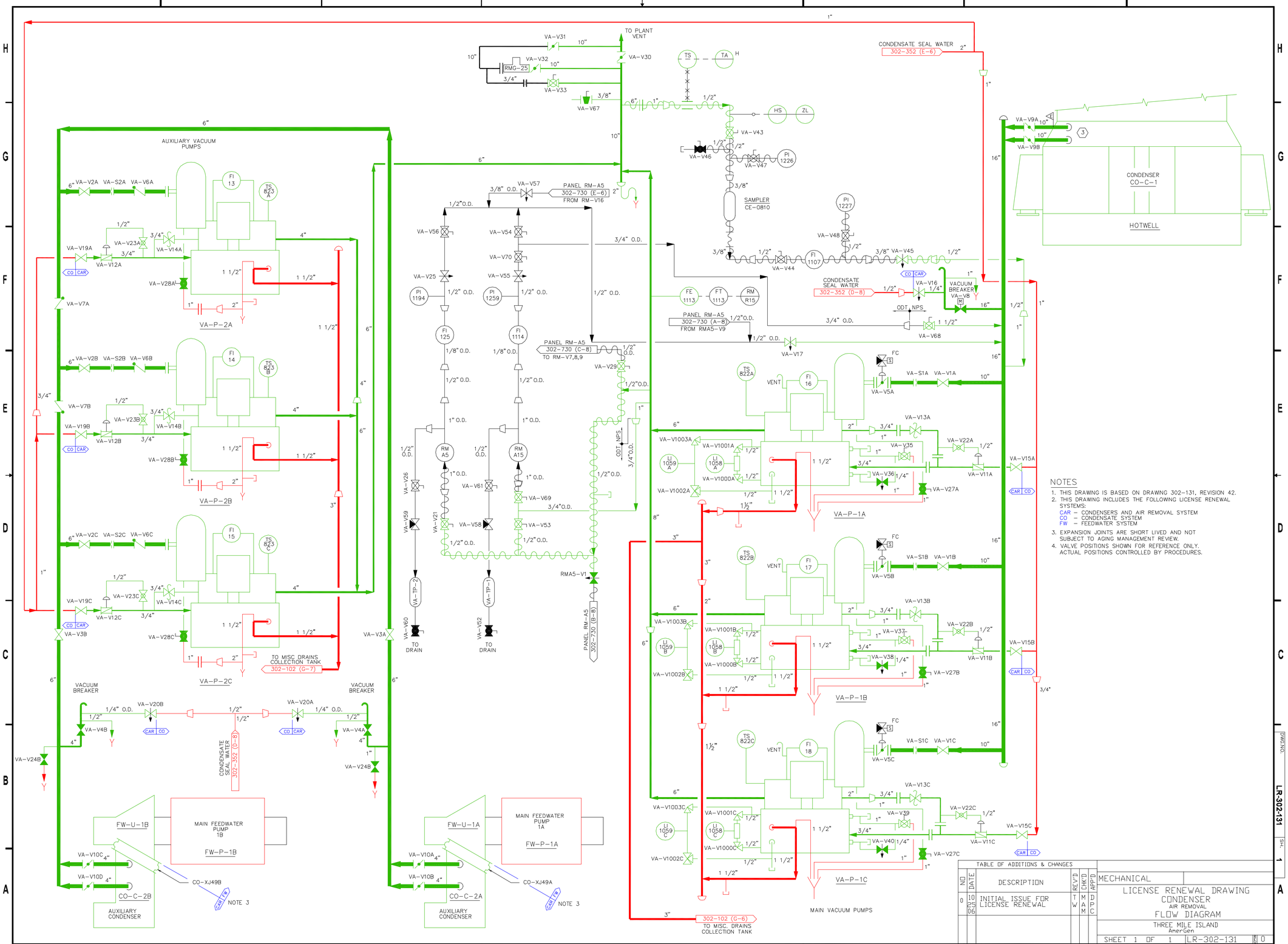
LICENSE RENEWAL DRAWING
FEED PUMP TURBINE DRAINS

FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-121 | REV 0

DWG. NO. LR-302-121 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-131, REVISION 42.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   CAR – CONDENSERS AND AIR REMOVAL SYSTEM
   CO – CONDENSATE SYSTEM
   FW – FEEDWATER SYSTEM
3. EXPANSION JOINTS ARE SHORT LIVED AND NOT SUBJECT TO AGING MANAGEMENT REVIEW.
4. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	10 25 06	INITIAL ISSUE FOR LICENSE RENEWAL	TW	MAM	DPC

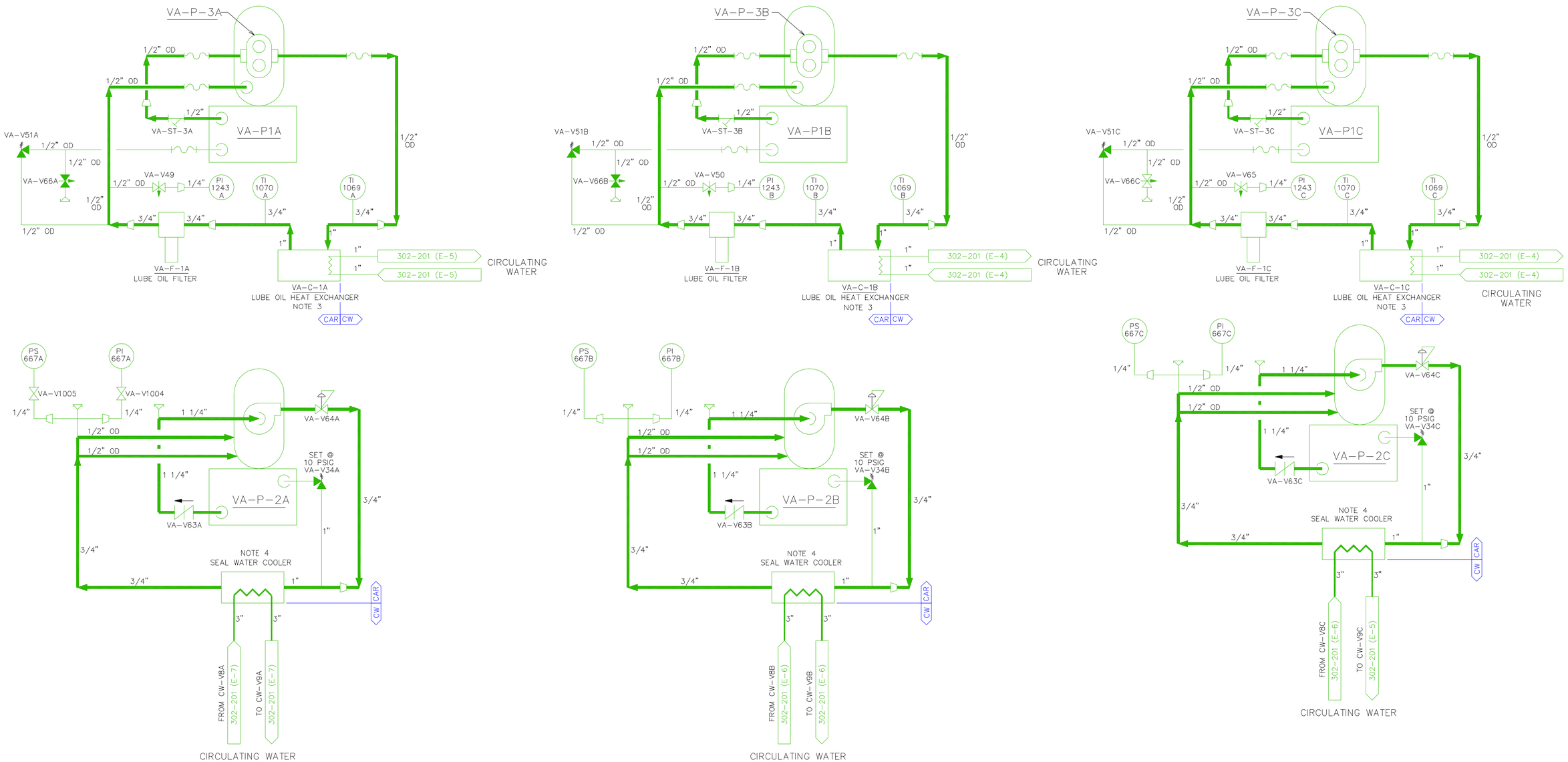
MECHANICAL

LICENSE RENEWAL DRAWING
CONDENSER
AIR REMOVAL
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-131 REV 0

DWG.NO. LR-302-131 SH. 1



NOTES:

1. THIS DRAWING IS BASED ON DWG. 302-132 SHEET 1 REVISION 1
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   CAR – CONDENSERS AND AIR REMOVAL SYSTEMS
   CW – CIRCULATING WATER SYSTEM
3. THE SHELL AND TUBE SIDES OF THE MAIN VACUUM PUMP LUBE OIL HEAT EXCHANGERS ARE EVALUATED FOR AGING MANAGEMENT WITH THE CIRCULATING WATER SYSTEM.
4. THE SHELL AND TUBE SIDES OF THE AUXILIARY VACUUM PUMP SEAL WATER COOLERS ARE EVALUATED FOR AGING MANAGEMENT WITH THE CIRCULATING WATER SYSTEM.
5. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
6. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

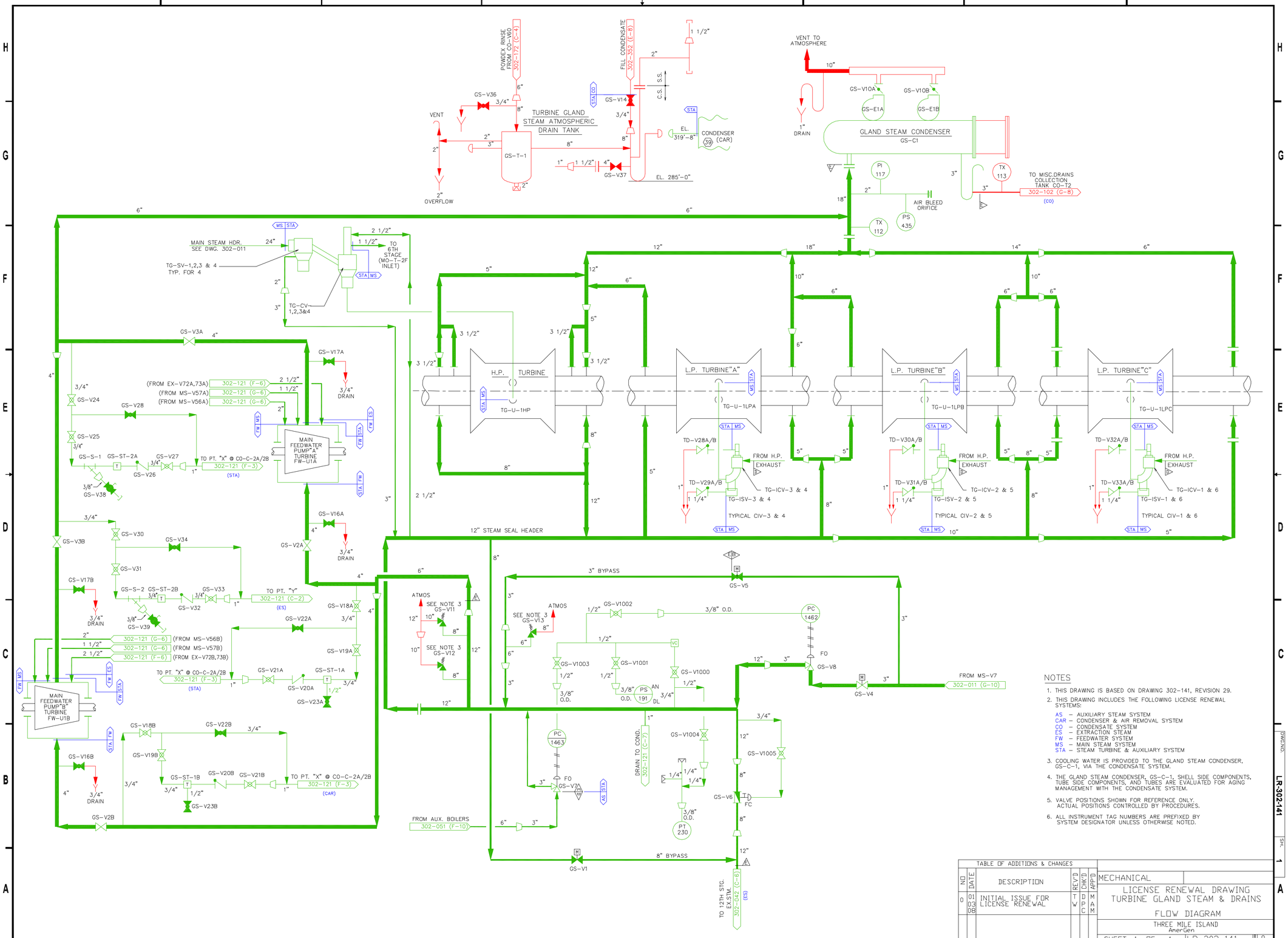
NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	TW	MAM	DPC

MECHANICAL

LICENSE RENEWAL DRAWING
MAIN/AUX CONDENSER AIR REMOVAL
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-132 | REV 0



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-141, REVISION 29.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - AS – AUXILIARY STEAM SYSTEM
   - CAR – CONDENSER & AIR REMOVAL SYSTEM
   - CO – CONDENSATE SYSTEM
   - ES – EXTRACTION STEAM
   - FW – FEEDWATER SYSTEM
   - MS – MAIN STEAM SYSTEM
   - STA – STEAM TURBINE & AUXILIARY SYSTEM
3. COOLING WATER IS PROVIDED TO THE GLAND STEAM CONDENSER, GS-C-1, VIA THE CONDENSATE SYSTEM.
4. THE GLAND STEAM CONDENSER, GS-C-1, SHELL SIDE COMPONENTS, TUBE SIDE COMPONENTS, AND TUBES ARE EVALUATED FOR AGING MANAGEMENT WITH THE CONDENSATE SYSTEM.
5. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
6. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	TW	DPC	MAM

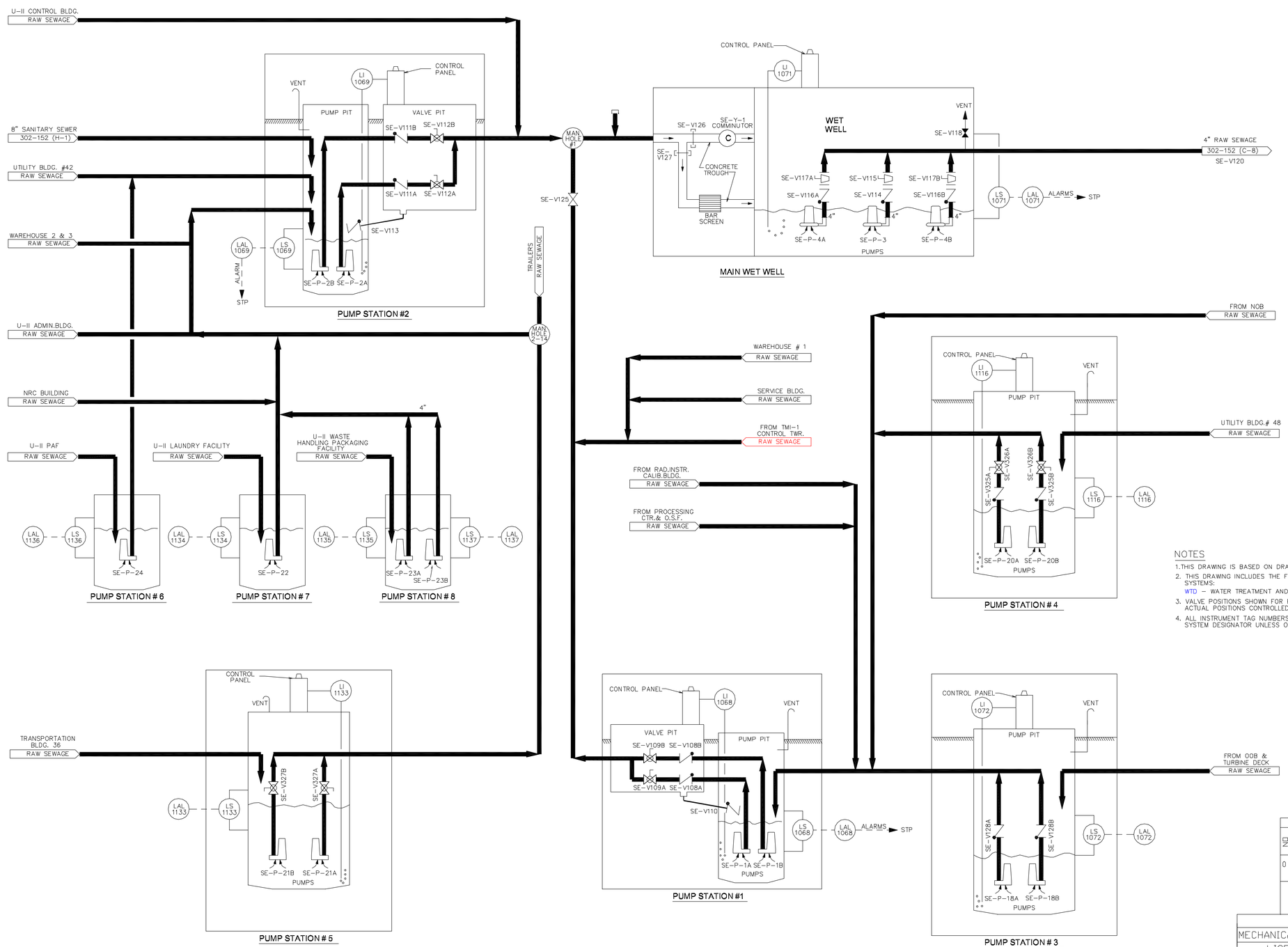
MECHANICAL

LICENSE RENEWAL DRAWING
TURBINE GLAND STEAM & DRAINS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-141 | REV 0

DWG.NO. LR-302-141 | SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-151, REVISION 7
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   WTD – WATER TREATMENT AND DISTRIBUTION
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	M A M	E D C

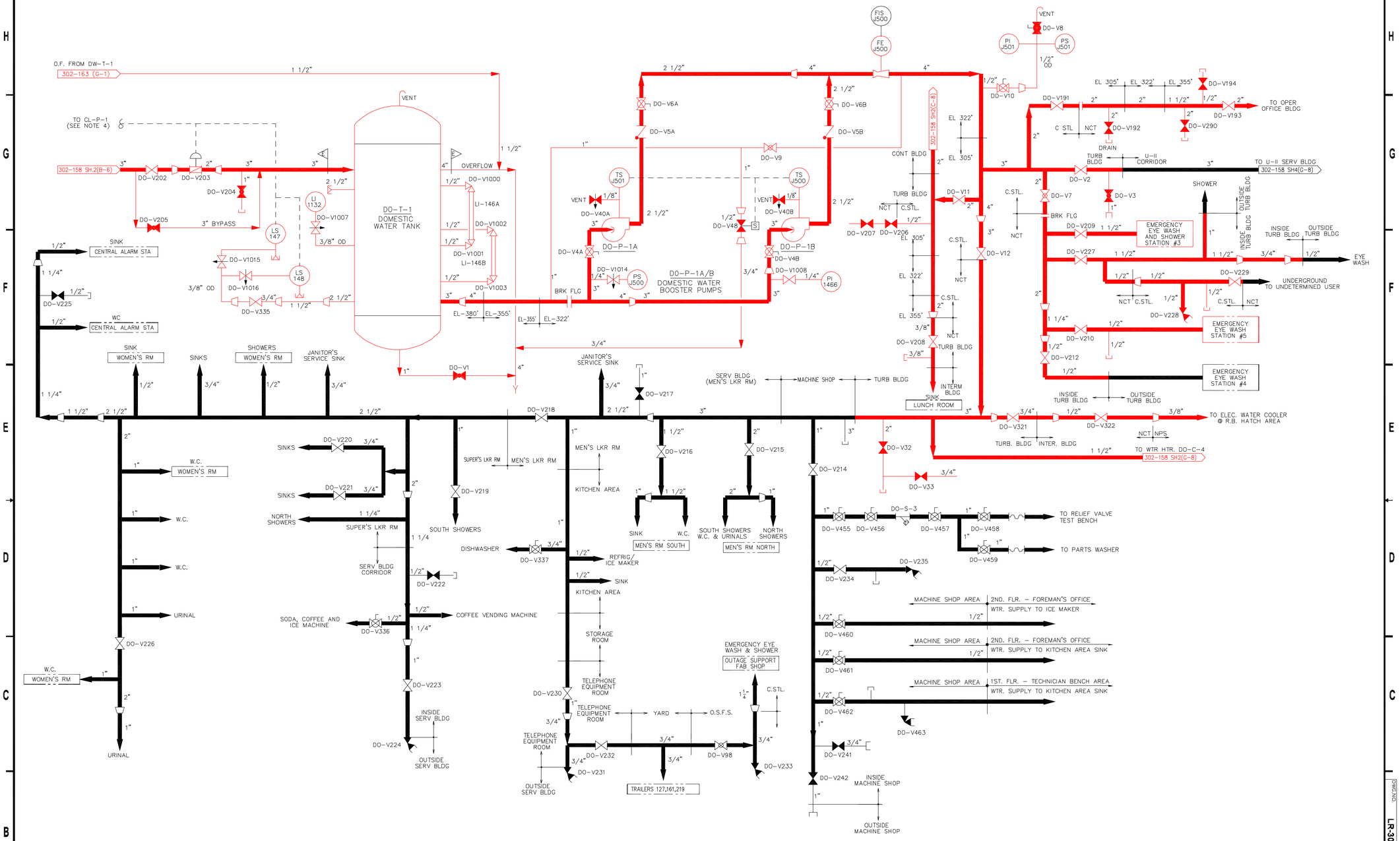
MECHANICAL

LICENSE RENEWAL DRAWING
SEWAGE TREATMENT PLANT
PLANT UPGRADE AND EXPANSION
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-151 0

DWG.NO. LR-302-151 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-158, SHEET 1, REVISION 14.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
5. CL-P-1 IS NORMALLY OFF AND OUT OF SERVICE.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	TW	MAM	DPC

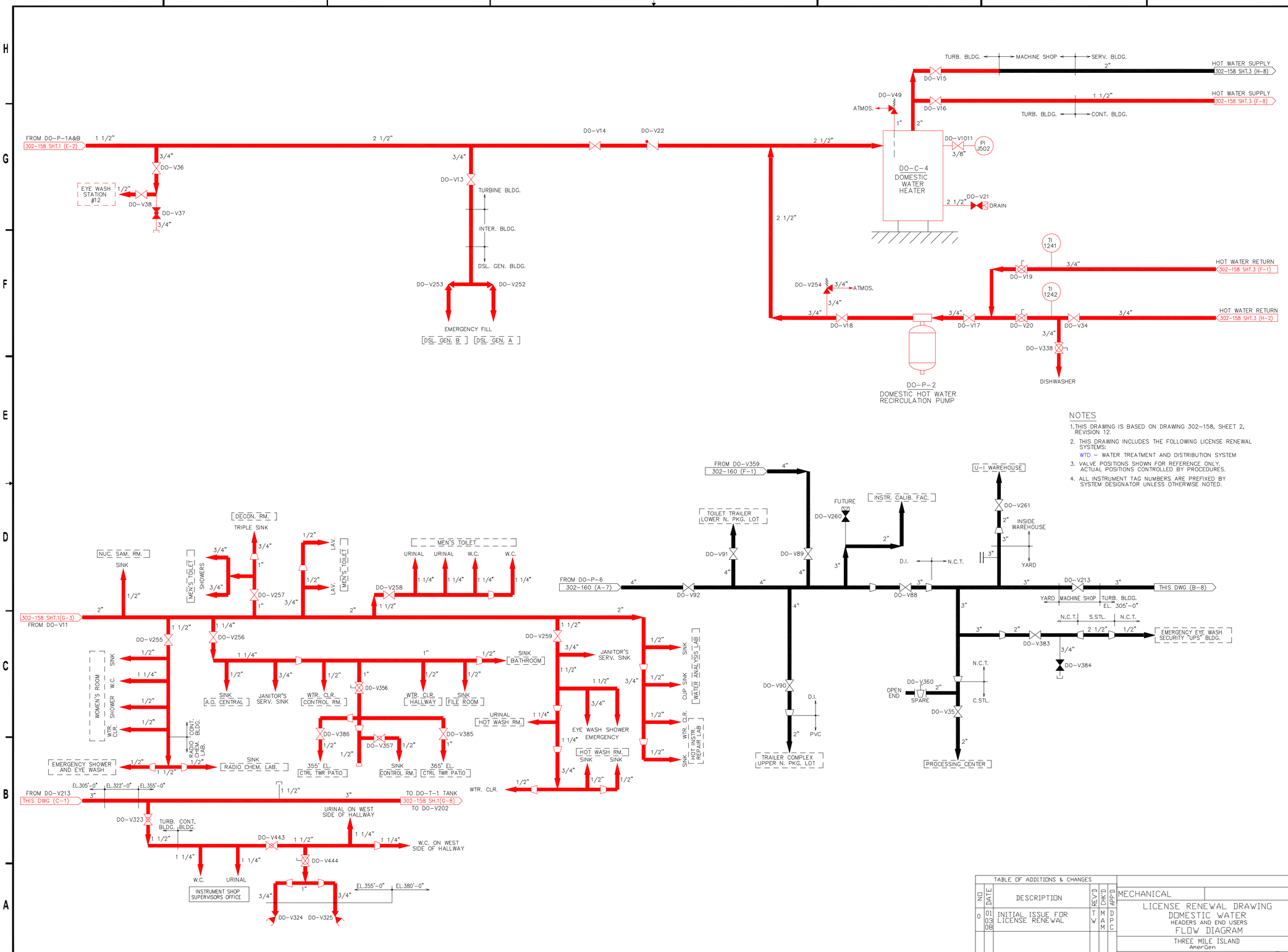
MECHANICAL

LICENSE RENEWAL DRAWING
DOMESTIC WATER
HEADERS AND END USERS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 4 | LR-302-158 | REV 0

DWG.NO. LR-302-158 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-158, SHEET 2, REVISION 12.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   WTD – WATER TREATMENT AND DISTRIBUTION SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 00	INITIAL ISSUE FOR LICENSE RENEWAL	T W	M A M	D P C

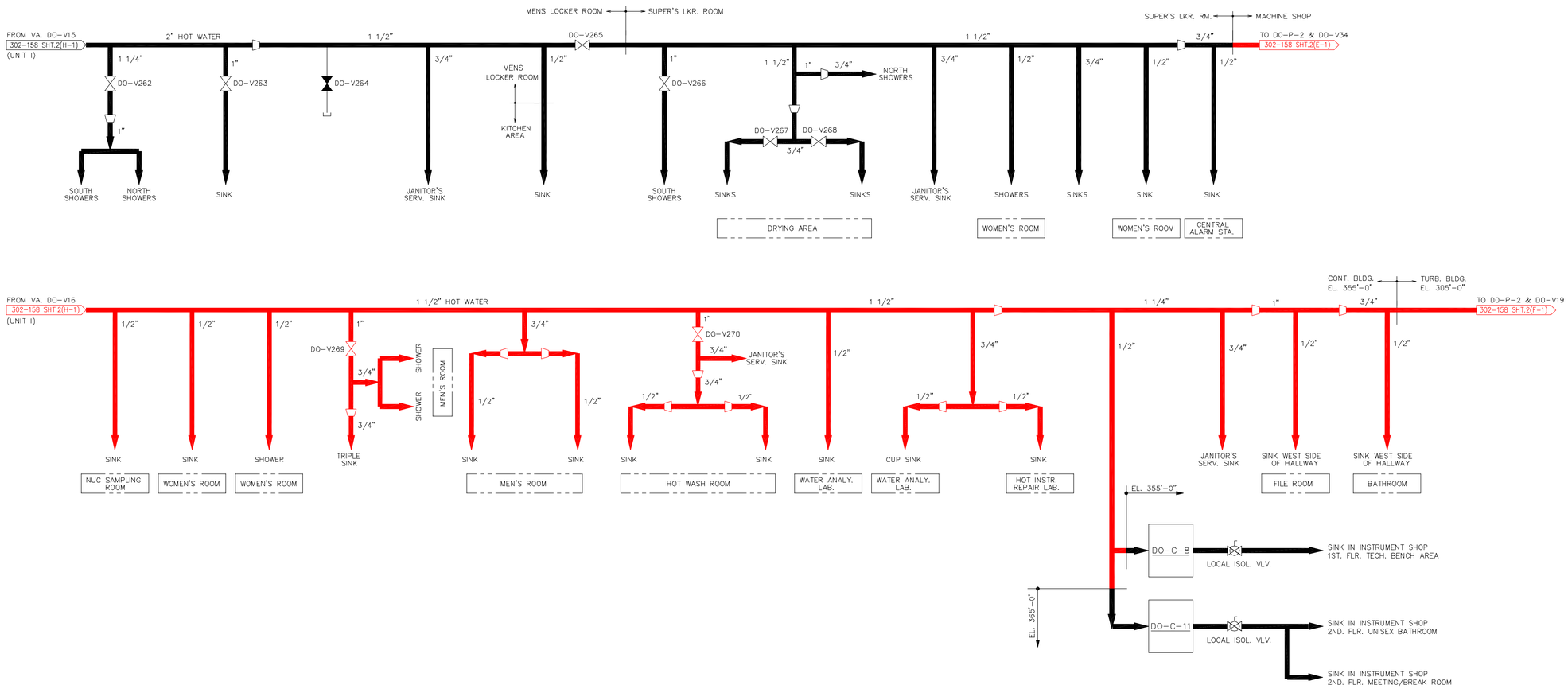
MECHANICAL

LICENSE RENEWAL DRAWING
DOMESTIC WATER
HEADERS AND END USERS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 2 OF 4 LR-302-158 REV. 0

DWG.NO. LR-302-158 SH. 2



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-158, SHEET 3, REVISION 5.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 00	INITIAL ISSUE FOR LICENSE RENEWAL	T W	M A M	D P C

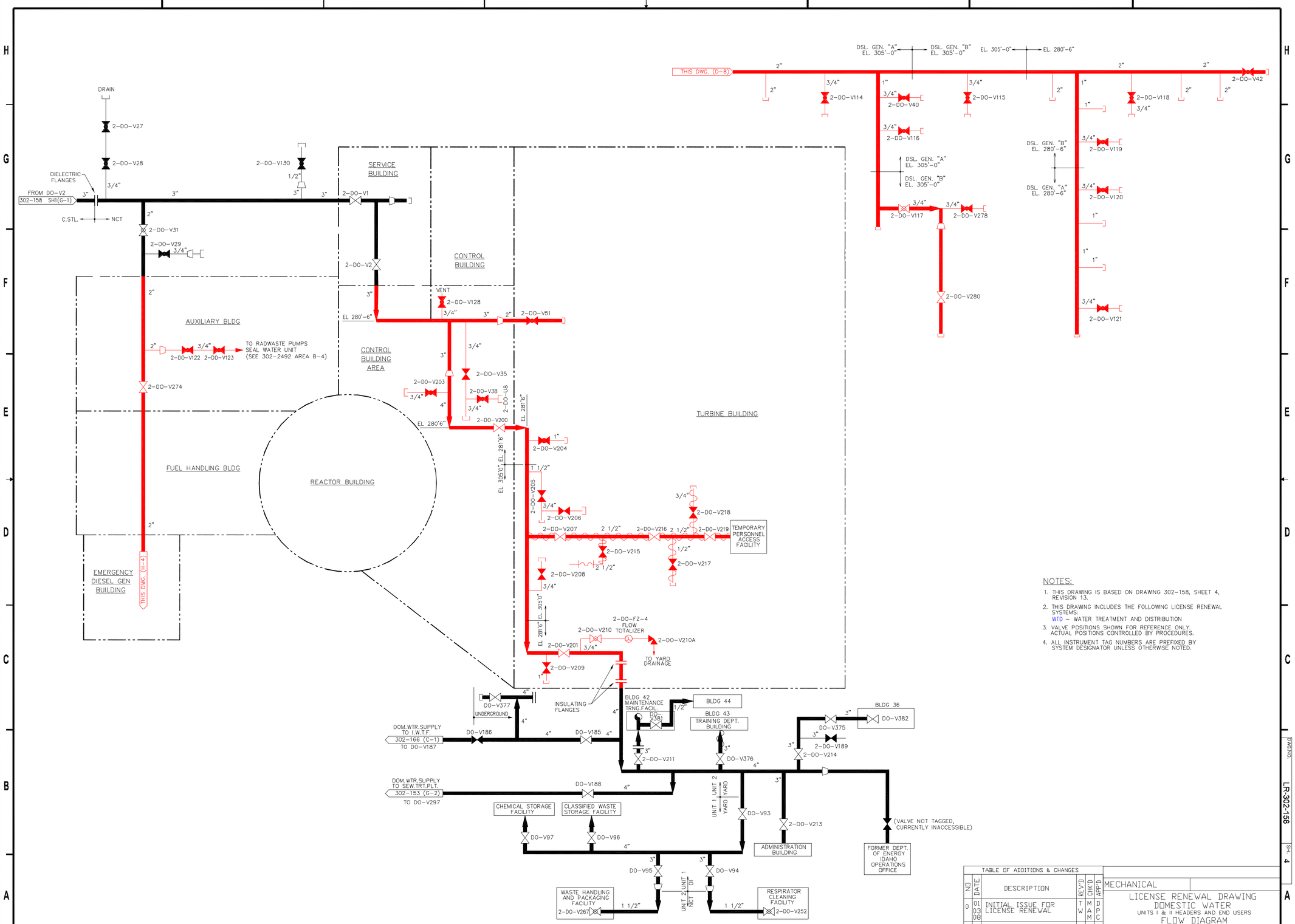
MECHANICAL

LICENSE RENEWAL DRAWING
DOMESTIC WATER
UNITS I & II HEADERS AND END USERS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 3 OF 4 LR-302-158 0

DWG.NO. LR-302-158 SH. 3



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-158, SHEET 4, REVISION 13.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   WTD – WATER TREATMENT AND DISTRIBUTION
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 98	INITIAL ISSUE FOR LICENSE RENEWAL	TW	MAM	DPC

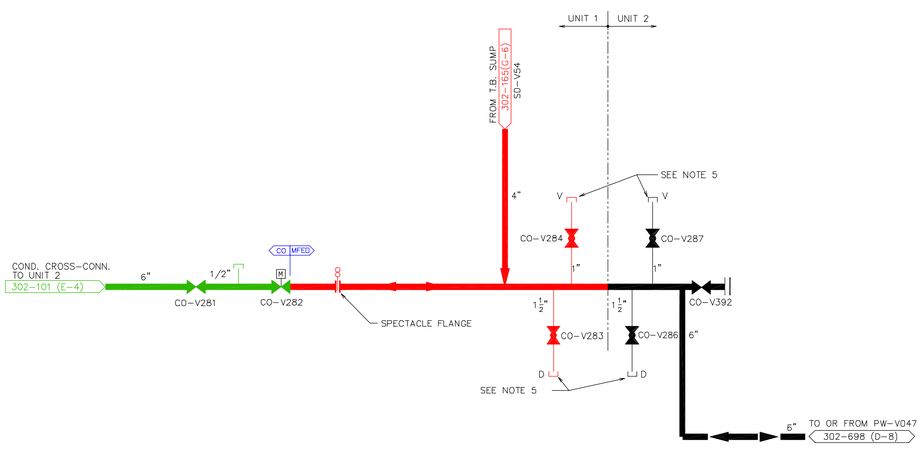
MECHANICAL

LICENSE RENEWAL DRAWING
DOMESTIC WATER
UNITS I & II HEADERS AND END USERS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 4 OF 4 | LR-302-158 | REV 0

DWG.NO. LR-302-158 SH. 4



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-159, REVISION 10.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   CO – CONDENSATE SYSTEM
   MFED – MISCELLANEOUS FLOOR AND EQUIPMENT DRAINS SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
5. THREADED CAPS FOR VENTS AND DRAINS UNIT CROSS-TIE (B-5)(B-6).
6. (*) INDICATES UNIT 2 VALVES & EQUIPMENT SHOWN ON B & R LISTS. ALSO, ALL UNIT 2 EQUIPMENT, INSTRUMENT, AND VALVE NUMBERS CONTAIN A "2" PREFIX THAT DOES NOT APPEAR ON THIS DRAWING.
7. ALL PIPE ON THIS DRAWING IS "E".

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	TW	DPC	MAM

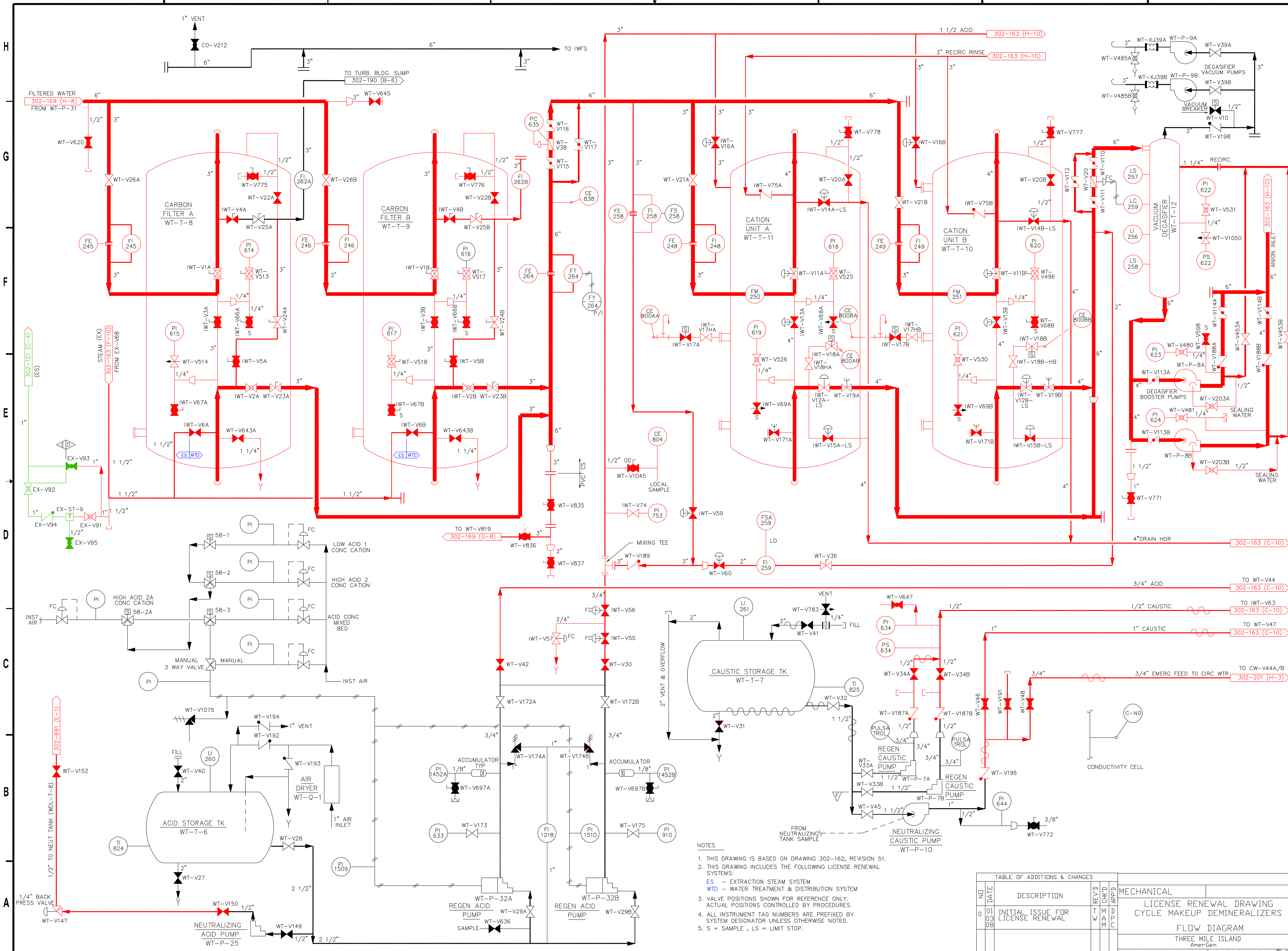
MECHANICAL

LICENSE RENEWAL DRAWING
TURBINE BUILDING SUMP
WATER STORAGE
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-159 | REV 0

DWG.NO. LR-302-159 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-162, REVISION 51.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   ES – EXTRACTION STEAM SYSTEM
   WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
5. S = SAMPLE , LS = LIMIT STOP.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	TW	MAM	DPC

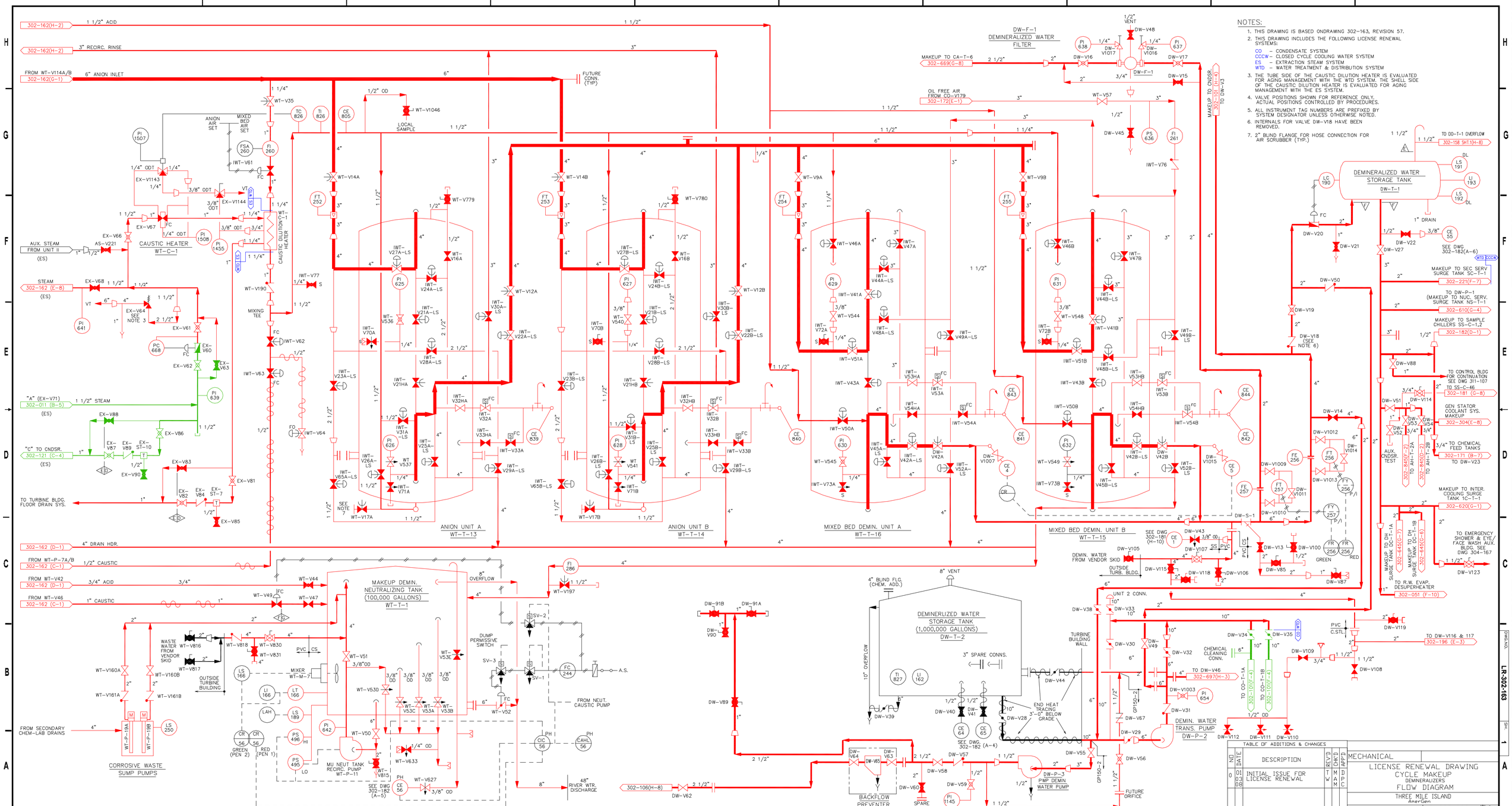
MECHANICAL

LICENSE RENEWAL DRAWING
CYCLE MAKEUP DEMINERALIZERS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-162 | REV 0

DWG.NO. LR-302-162 SH. 1



NOTES:

1. THIS DRAWING IS BASED ONDRAWING 302-163, REVISION 57.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   CO – CONDENSATE SYSTEM
   CCCW – CLOSED CYCLE COOLING WATER SYSTEM
   ES – EXTRACTION STEAM SYSTEM
   WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. THE TUBE SIDE OF THE CAUSTIC DILUTION HEATER IS EVALUATED FOR AGING MANAGEMENT WITH THE WTD SYSTEM. THE SHELL SIDE OF THE CAUSTIC DILUTION HEATER IS EVALUATED FOR AGING MANAGEMENT WITH THE ES SYSTEM.
4. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
5. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
6. INTERNALS FOR VALVE DW-V18 HAVE BEEN REMOVED.
7. 2" BLIND FLANGE FOR HOSE CONNECTION FOR AIR SCRUBBER (TYP.)

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 03	INITIAL ISSUE FOR LICENSE RENEWAL	TW	MAM	DPC

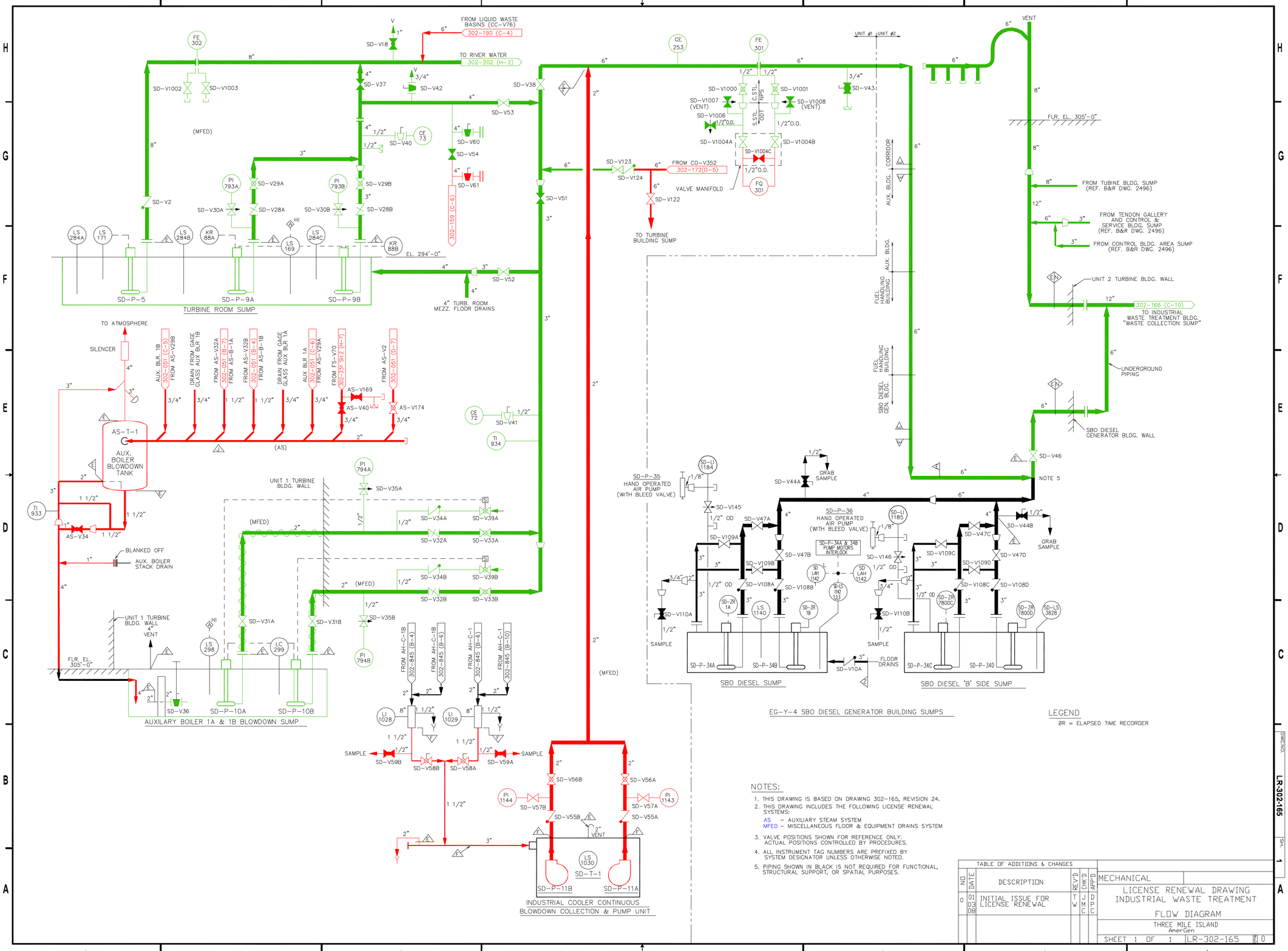
MECHANICAL

LICENSE RENEWAL DRAWING
CYCLE MAKEUP
DEMINERALIZERS
FLOW DIAGRAM

THREE MILE ISLAND
AnerGen

SHEET 1 OF 1 LR-302-163 R 0

DWG NO. LR-302-163 SH 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-165, REVISION 24.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   AS – AUXILIARY STEAM SYSTEM
   MFED – MISCELLANEOUS FLOOR & EQUIPMENT DRAINS SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
5. PIPING SHOWN IN BLACK IS NOT REQUIRED FOR FUNCTIONAL, STRUCTURAL SUPPORT, OR SPATIAL PURPOSES.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 03	INITIAL ISSUE FOR LICENSE RENEWAL	T W	J M C	D P C

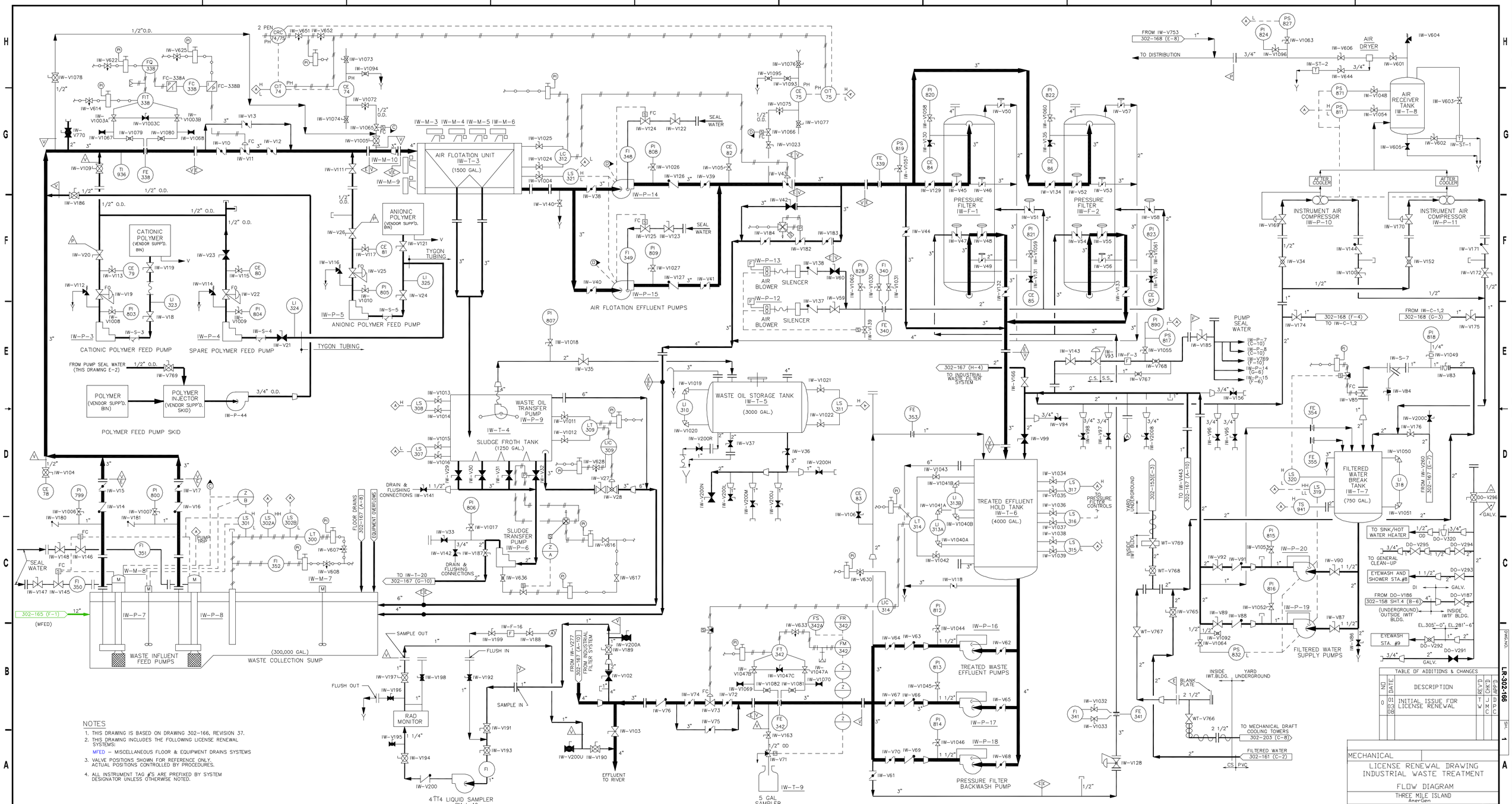
MECHANICAL

LICENSE RENEWAL DRAWING
INDUSTRIAL WASTE TREATMENT
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-165 REV 0

DWG.NO. LR-302-165 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-166, REVISION 37.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   MFED – MISCELLANEOUS FLOOR & EQUIPMENT DRAINS SYSTEMS
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG #'S ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	J M C	D P C

MECHANICAL

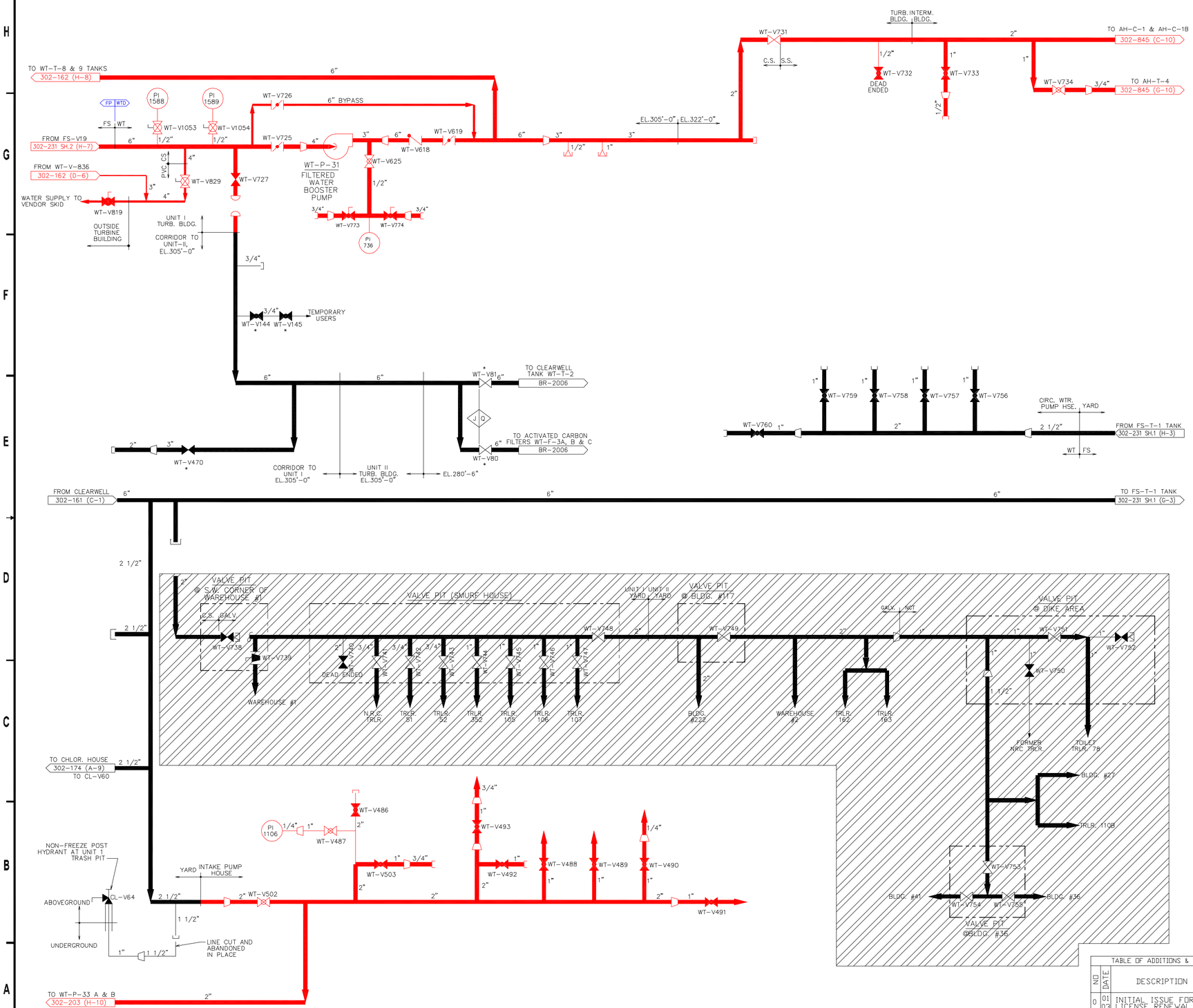
LICENSE RENEWAL DRAWING
INDUSTRIAL WASTE TREATMENT

FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-166 REV 0

DWG.NO. LR-302-166 SH. 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-169, REVISION 15.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENCE RENEWAL SYSTEMS:
   FP – FIRE PROTECTION SYSTEM
   WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS UNLESS OTHERWISE NOTED.
5. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	M A M	D P C

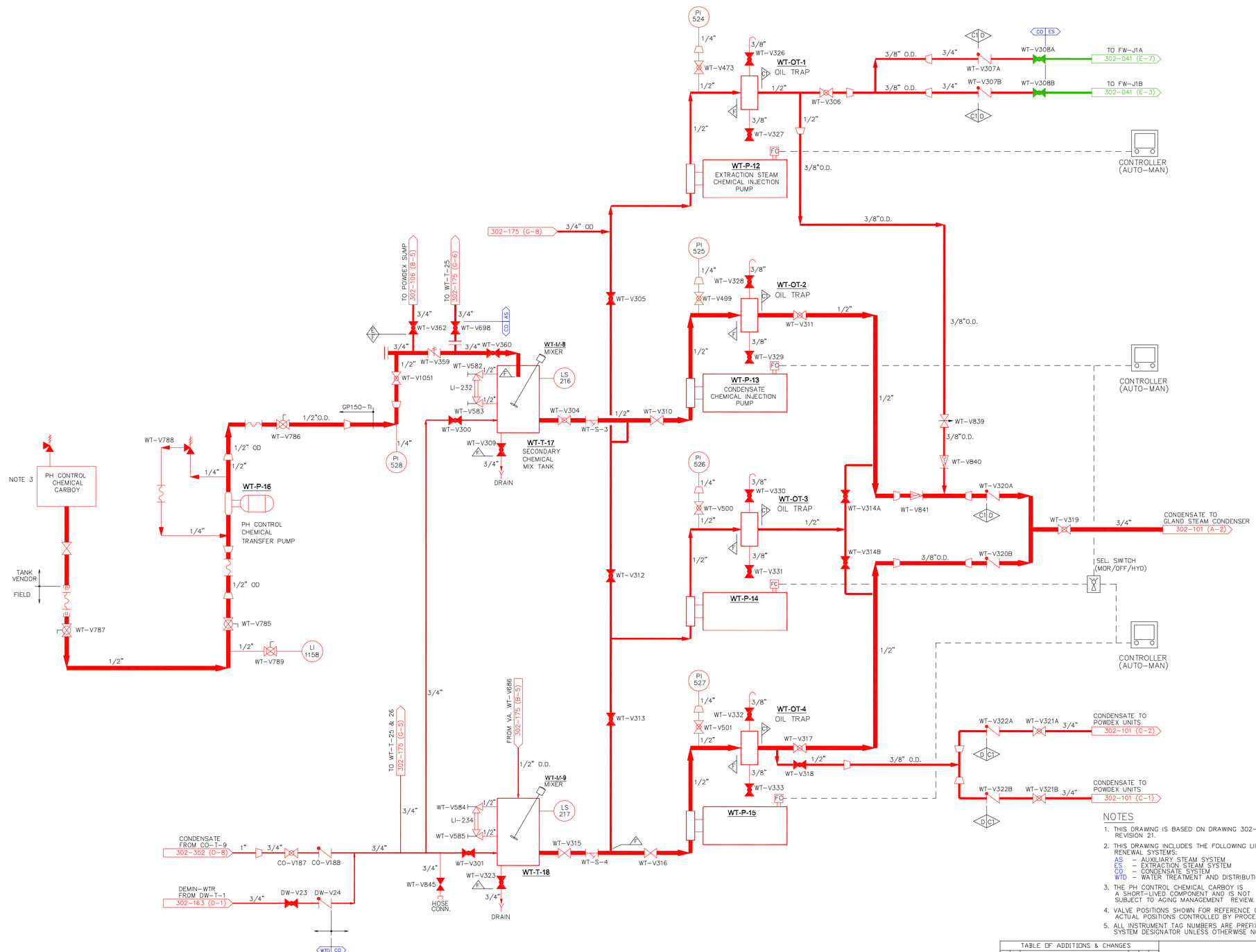
MECHANICAL

LICENSE RENEWAL DRAWING
FILTERED WATER
UNITS 1 AND 2 HEADERS AND END USERS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-169 REV 0

DWG.NO. LR-302-169 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-171 REVISION 21.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - AS – AUXILIARY STEAM SYSTEM
   - ES – EXTRACTION STEAM SYSTEM
   - CO – CONDENSATE SYSTEM
   - WTD – WATER TREATMENT AND DISTRIBUTION SYSTEM
3. THE PH CONTROL CHEMICAL CARBOY IS A SHORT-LIVED COMPONENT AND IS NOT SUBJECT TO AGING MANAGEMENT REVIEW.
4. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
5. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	D P C	M A M

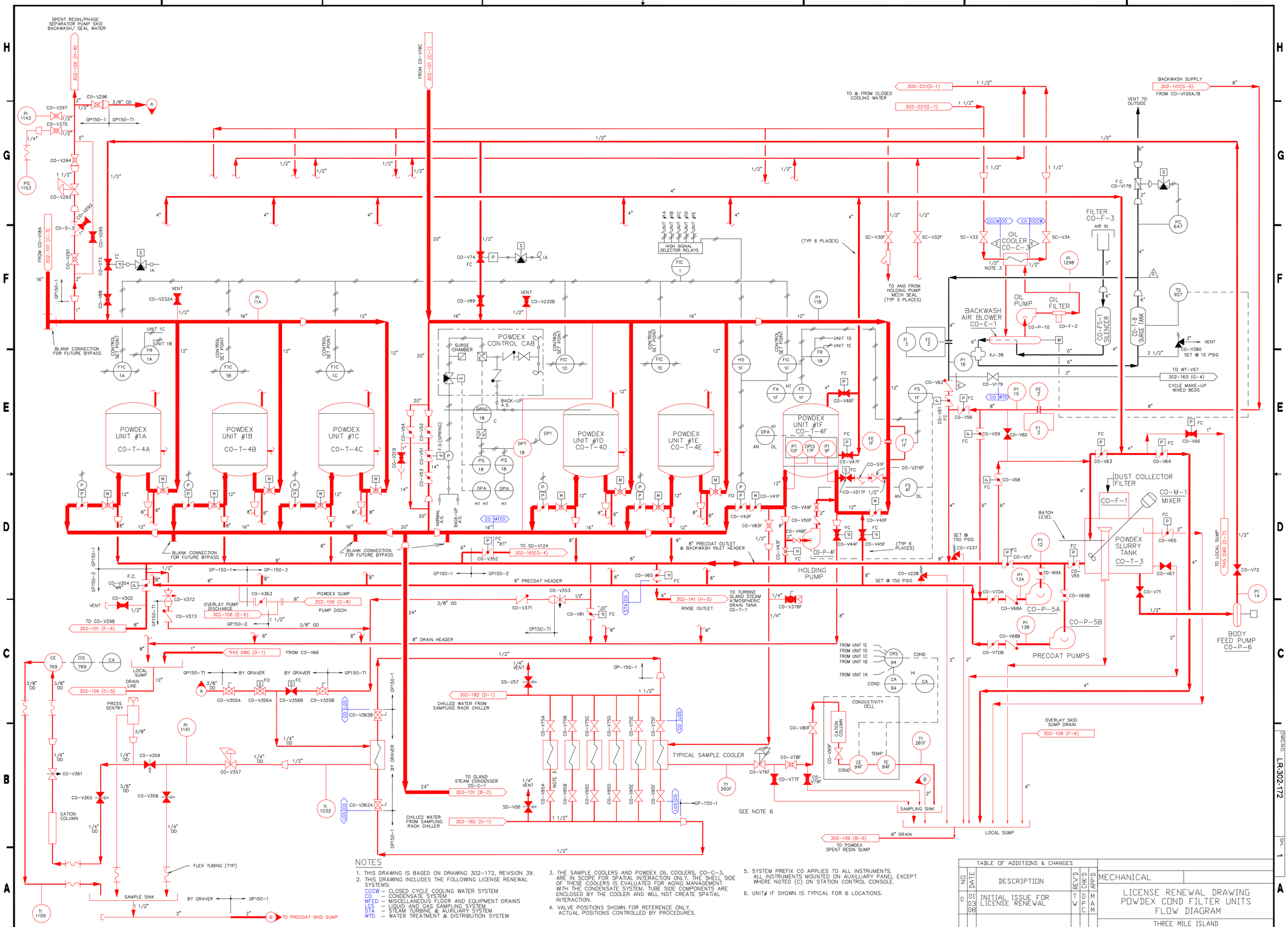
MECHANICAL

LICENSE RENEWAL DRAWING
CONDENSATE CHEMICAL FEED
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-171 | REV 0

DWG.NO. LR-302-171 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-172, REVISION 39.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CCCW – CLOSED CYCLE COOLING WATER SYSTEM
   - CO – CONDENSATE SYSTEM
   - MFED – MISCELLANEOUS FLOOR AND EQUIPMENT DRAINS
   - LGS – LIQUID AND GAS SAMPLING SYSTEM
   - STA – STEAM TURBINE & AUXILIARY SYSTEM
   - WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. THE SAMPLE COOLERS AND POWDEX OIL COOLERS, CO-C-3, ARE IN SCOPE FOR SPATIAL INTERACTION ONLY. THE SHELL SIDE OF THESE COOLERS IS EVALUATED FOR AGING MANAGEMENT WITH THE CONDENSATE SYSTEM. TUBE SIDE COMPONENTS ARE ENCLOSED BY THE COOLER AND WILL NOT CREATE SPATIAL INTERACTION.
4. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
5. SYSTEM PREFIX CO APPLIES TO ALL INSTRUMENTS. ALL INSTRUMENTS MOUNTED ON AUXILLIARY PANEL EXCEPT WHERE NOTED (C) ON STATION CONTROL CONSOLE.
6. UNIT# IF SHOWN IS TYPICAL FOR 6 LOCATIONS.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 03	INITIAL ISSUE FOR LICENSE RENEWAL	TW	DPC	MAM

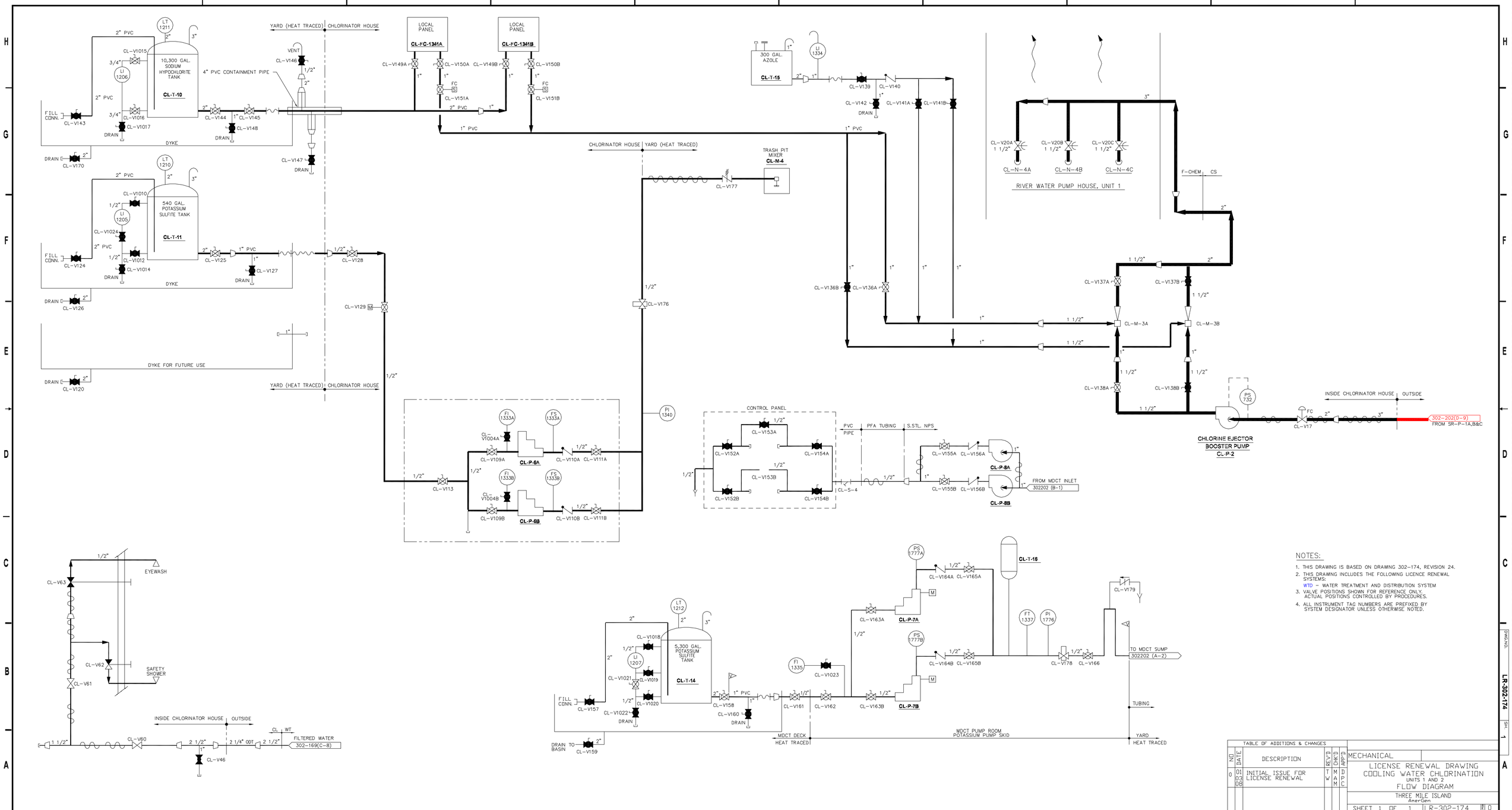
MECHANICAL

LICENSE RENEWAL DRAWING
POWDEX COND FILTER UNITS
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-172 REV 0

DWG.NO. LR-302-172 SH. 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-174, REVISION 24.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENCE RENEWAL SYSTEMS:
   WTD – WATER TREATMENT AND DISTRIBUTION SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	M A M	D P C

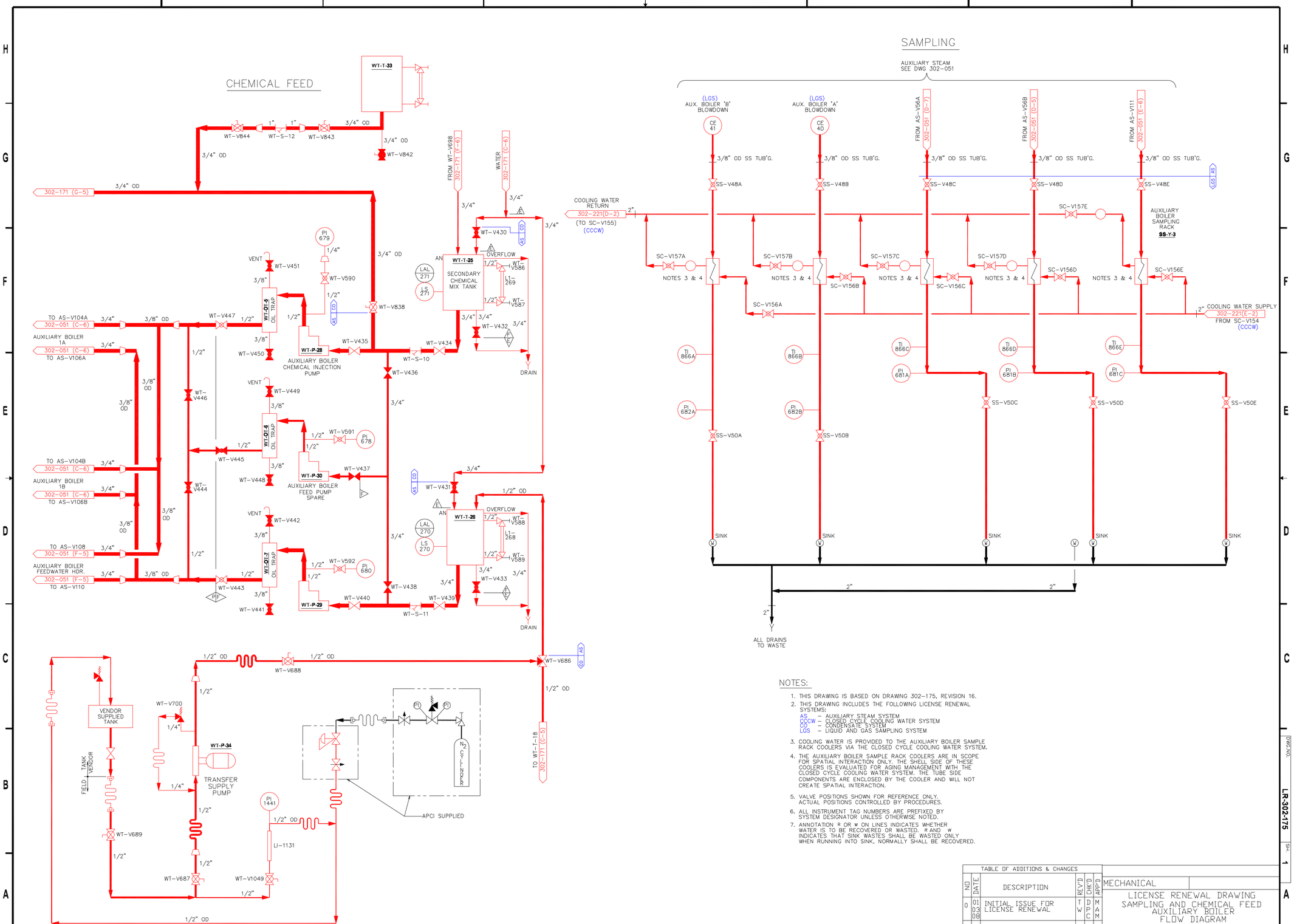
MECHANICAL

LICENSE RENEWAL DRAWING
COOLING WATER CHLORINATION
UNITS 1 AND 2
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-174 REV 0

DWG NO. LR-302-174 SH. 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-175, REVISION 16.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   AS – AUXILIARY STEAM SYSTEM
   CCCW – CLOSED CYCLE COOLING WATER SYSTEM
   CO – CONDENSATE SYSTEM
   LGS – LIQUID AND GAS SAMPLING SYSTEM
3. COOLING WATER IS PROVIDED TO THE AUXILIARY BOILER SAMPLE RACK COOLERS VIA THE CLOSED CYCLE COOLING WATER SYSTEM.
4. THE AUXILIARY BOILER SAMPLE RACK COOLERS ARE IN SCOPE FOR SPATIAL INTERACTION ONLY. THE SHELL SIDE OF THESE COOLERS IS EVALUATED FOR AGING MANAGEMENT WITH THE CLOSED CYCLE COOLING WATER SYSTEM. THE TUBE SIDE COMPONENTS ARE ENCLOSED BY THE COOLER AND WILL NOT CREATE SPATIAL INTERACTION.
5. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
6. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
7. ANNOTATION R OR w ON LINES INDICATES WHETHER WATER IS TO BE RECOVERED OR WASTED. R AND w INDICATES THAT SINK WASTES SHALL BE WASTED ONLY WHEN RUNNING INTO SINK, NORMALLY SHALL BE RECOVERED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	TW	DPC	MAM

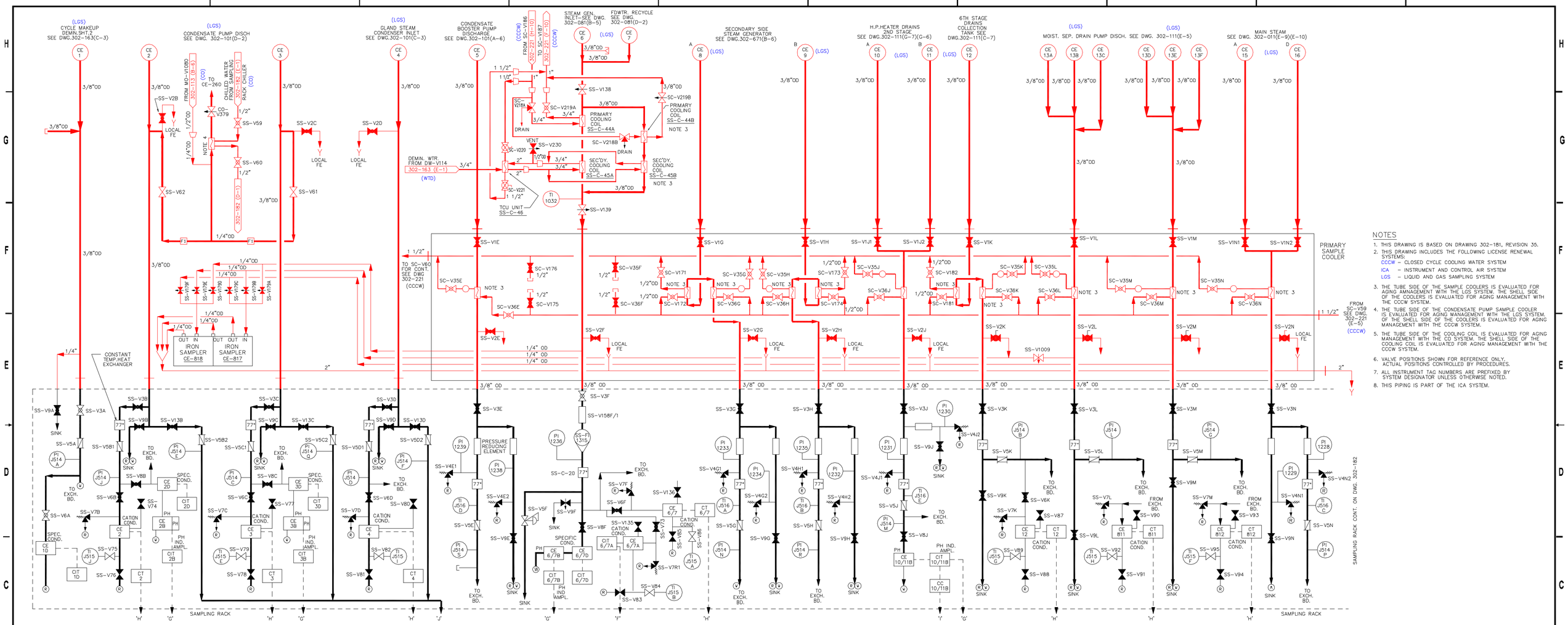
MECHANICAL

LICENSE RENEWAL DRAWING
SAMPLING AND CHEMICAL FEED
AUXILIARY BOILER
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-175 | REV 0

DWG.NO. LR-302-175 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-181, REVISION 35.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CCCW – CLOSED CYCLE COOLING WATER SYSTEM
   - ICA – INSTRUMENT AND CONTROL AIR SYSTEM
   - LGS – LIQUID AND GAS SAMPLING SYSTEM
3. THE TUBE SIDE OF THE SAMPLE COOLERS IS EVALUATED FOR AGING AMNAGEMENT WITH THE LGS SYSTEM. THE SHELL SIDE OF THE COOLERS IS EVALUATED FOR AGING MANAGEMENT WITH THE CCCW SYSTEM.
4. THE TUBE SIDE OF THE CONDENSATE PUMP SAMPLE COOLER IS EVALUATED FOR AGING MANAGEMENT WITH THE LGS SYSTEM. OF THE SHELL SIDE OF THE COOLERS IS EVALUATED FOR AGING MANAGEMENT WITH THE CCCW SYSTEM.
5. THE TUBE SIDE OF THE COOLING COIL IS EVALUATED FOR AGING MANAGEMENT WITH THE CO SYSTEM. THE SHELL SIDE OF THE COOLING COIL IS EVALUATED FOR AGING MANAGEMENT WITH THE CCCW SYSTEM.
6. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
7. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
8. THIS PIPING IS PART OF THE ICA SYSTEM.

TABLE OF ADDITIONS & CHANGES						
DN	DATE	DESCRIPTION	REV'D	DWN	CHK'D	APP'D
0	01 03 03	INITIAL ISSUE FOR LICENSE RENEWAL	A B	W H T	T	D P C

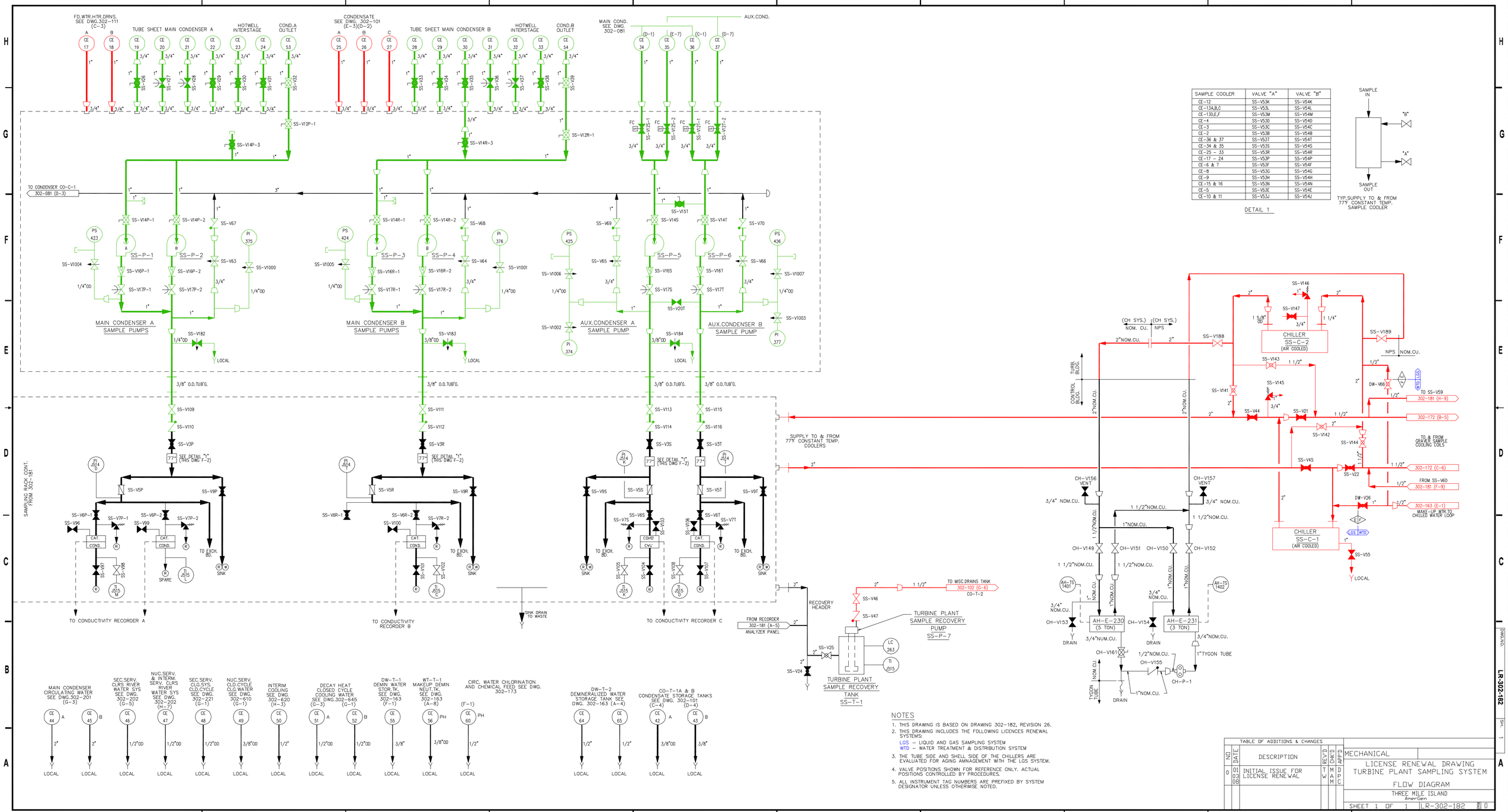
MECHANICAL

LICENSE RENEWAL DRAWING
TURBINE PLANT SAMPLING
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-181 0

DWG NO. LR-302-181 SH. 1



SAMPLE COOLER	VALVE "A"	VALVE "B"
CE-12	SS-V53K	SS-V54K
CE-13A,B,C	SS-V53L	SS-V54L
CE-13D,E,F	SS-V53M	SS-V54M
CE-4	SS-V53D	SS-V54D
CE-3	SS-V53C	SS-V54C
CE-2	SS-V53B	SS-V54B
CE-36 & 37	SS-V53T	SS-V54T
CE-34 & 35	SS-V53S	SS-V54S
CE-25 – 33	SS-V53R	SS-V54R
CE-17 – 24	SS-V53P	SS-V54P
CE-6 & 7	SS-V53F	SS-V54F
CE-8	SS-V53G	SS-V54G
CE-9	SS-V53H	SS-V54H
CE-15 & 16	SS-V53N	SS-V54N
CE-5	SS-V53E	SS-V54E
CE-10 & 11	SS-V53J	SS-V54J

DETAIL 1

NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-182, REVISION 26.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENCES RENEWAL SYSTEMS:
   LGS – LIQUID AND GAS SAMPLING SYSTEM
   WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. THE TUBE SIDE AND SHELL SIDE OF THE CHILLERS ARE EVALUATED FOR AGING AMNAGEMENT WITH THE LGS SYSTEM.
4. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
5. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W A M

CHK'D M A M — APP'D D P C

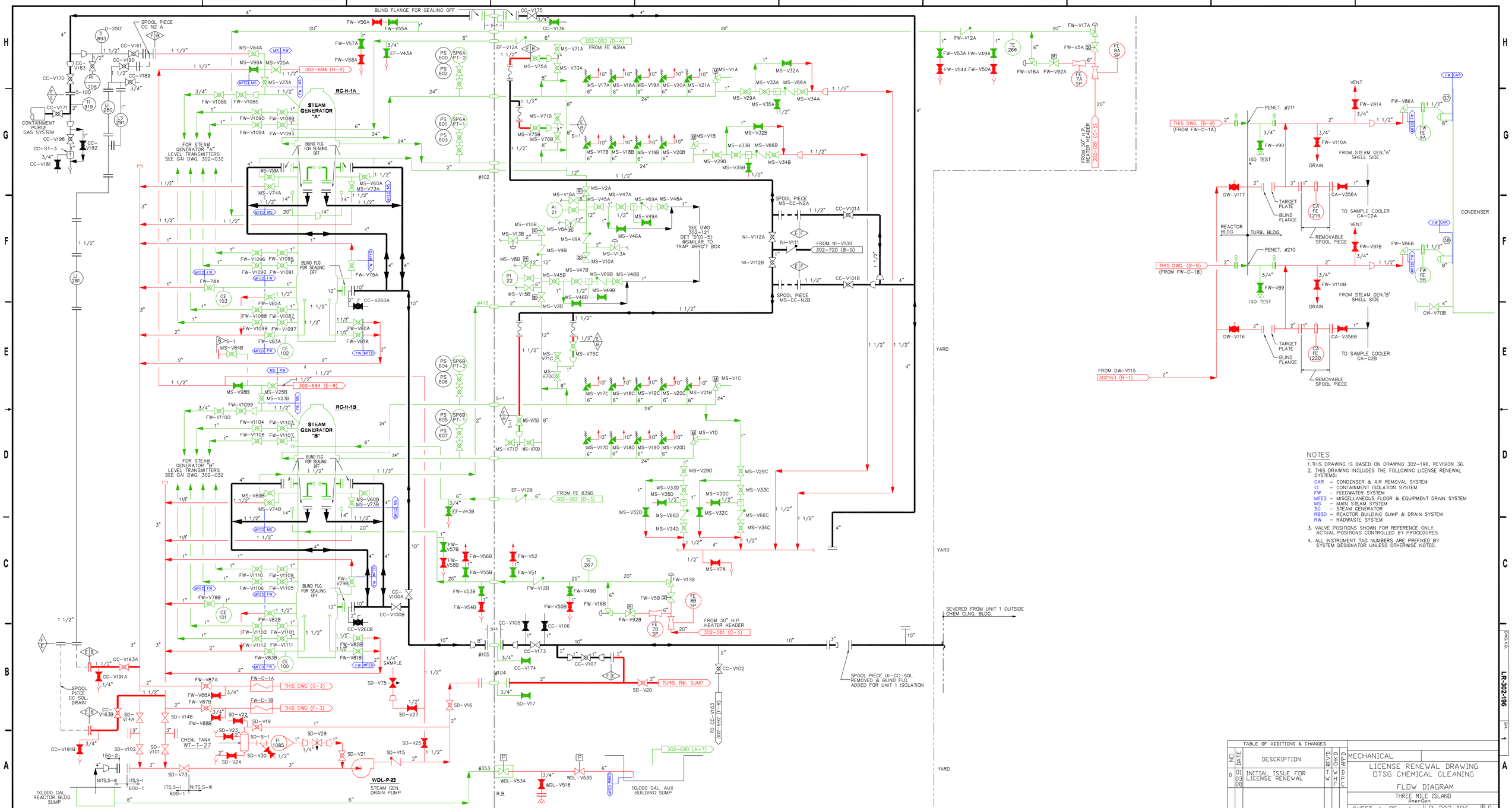
MECHANICAL

LICENSE RENEWAL DRAWING
TURBINE PLANT SAMPLING SYSTEM
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-182 REV 0

DWG.NO. LR-302-182 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-196, REVISION 36.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CAR – CONDENSER & AIR REMOVAL SYSTEM
   - CI – CONTAINMENT ISOLATION SYSTEM
   - FW – FEEDWATER SYSTEM
   - MFED – MISCELLANEOUS FLOOR & EQUIPMENT DRAIN SYSTEM
   - MS – MAIN STEAM SYSTEM
   - SG – STEAM GENERATOR
   - RBSD – REACTOR BUILDING SUMP & DRAIN SYSTEM
   - RW – RADWASTE SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 83	INITIAL ISSUE FOR LICENSE RENEWAL	T W	W H F	D P C

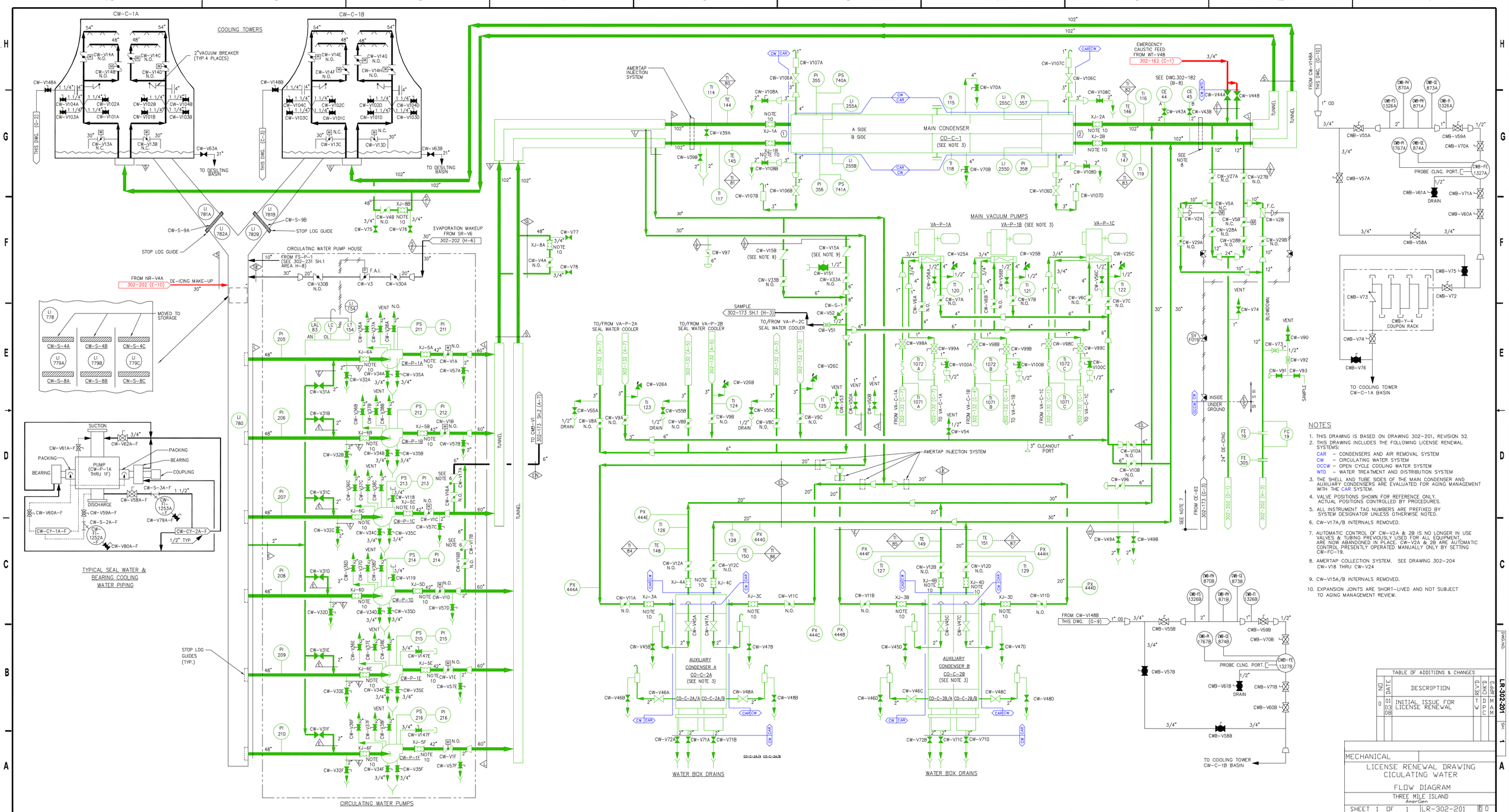
MECHANICAL

LICENSE RENEWAL DRAWING
OTSG CHEMICAL CLEANING
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-196 | REV 0

DWG NO. LR-302-196 | SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-201, REVISION 52.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CAR – CONDENSERS AND AIR REMOVAL SYSTEM
   - CW – CIRCULATING WATER SYSTEM
   - OCCW – OPEN CYCLE COOLING WATER SYSTEM
   - WTD – WATER TREATMENT AND DISTRIBUTION SYSTEM
3. THE SHELL AND TUBE SIDES OF THE MAIN CONDENSER AND AUXILIARY CONDENSERS ARE EVALUATED FOR AGING MANAGEMENT WITH THE CAR SYSTEM.
4. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
5. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
6. CW-V17A/B INTERNALS REMOVED.
7. AUTOMATIC CONTROL OF CW-V2A & 2B IS NO LONGER IN USE VALVES & TUBING PREVIOUSLY USED FOR ALL EQUIPMENT, ARE NOW ABANDONED IN PLACE. CW-V2A & 2B ARE AUTOMATIC CONTROL PRESENTLY OPERATED MANUALLY ONLY BY SETTING CW-FC-19.
8. AMERTAP COLLECTION SYSTEM. SEE DRAWING 302-204 CW-V18 THRU CW-V24
9. CW-V15A/B INTERNALS REMOVED.
10. EXPANSION JOINTS ARE SHORT-LIVED AND NOT SUBJECT TO AGING MANAGEMENT REVIEW.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	D P C	M A M

MECHANICAL

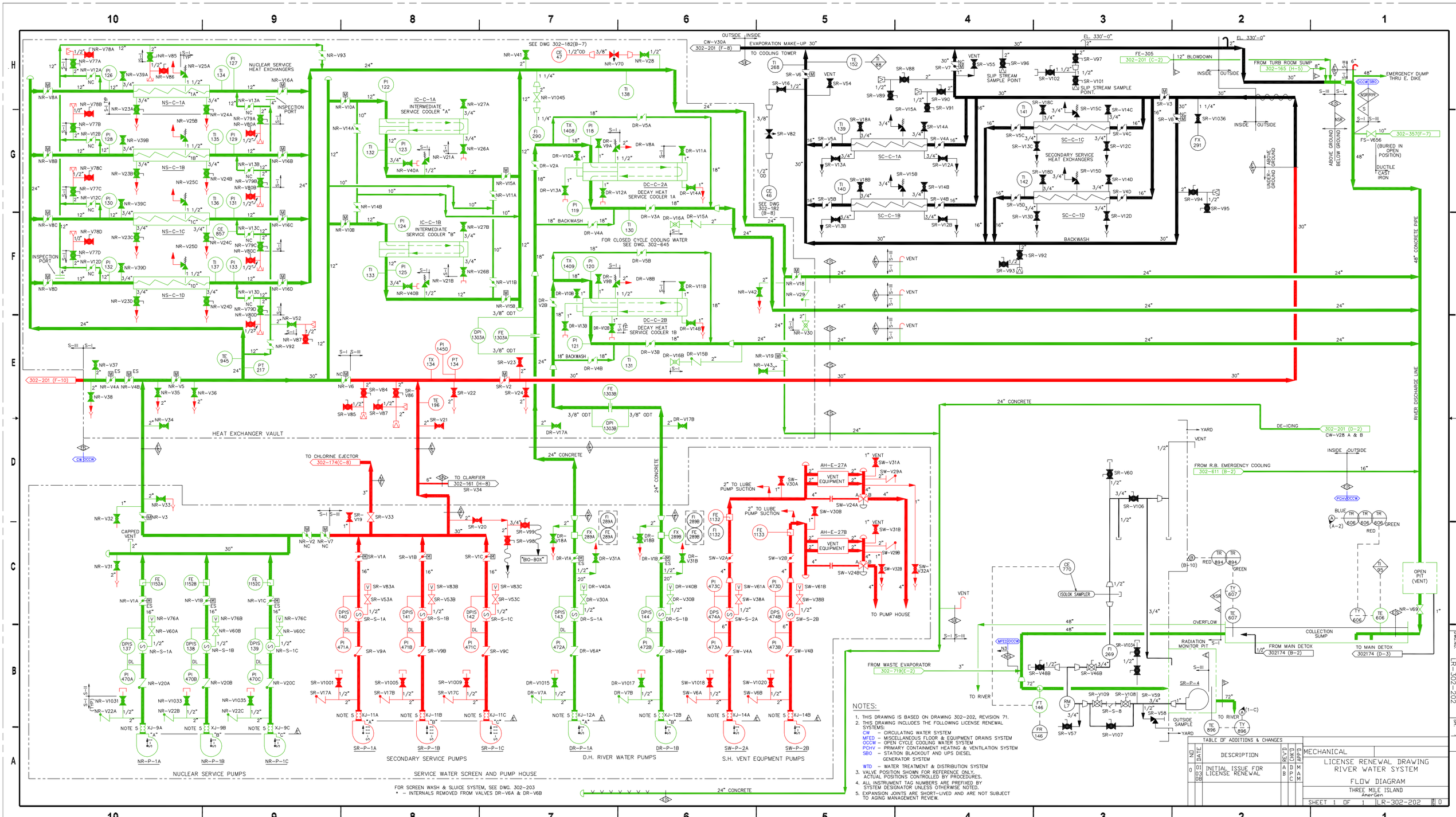
LICENSE RENEWAL DRAWING
CICULATING WATER

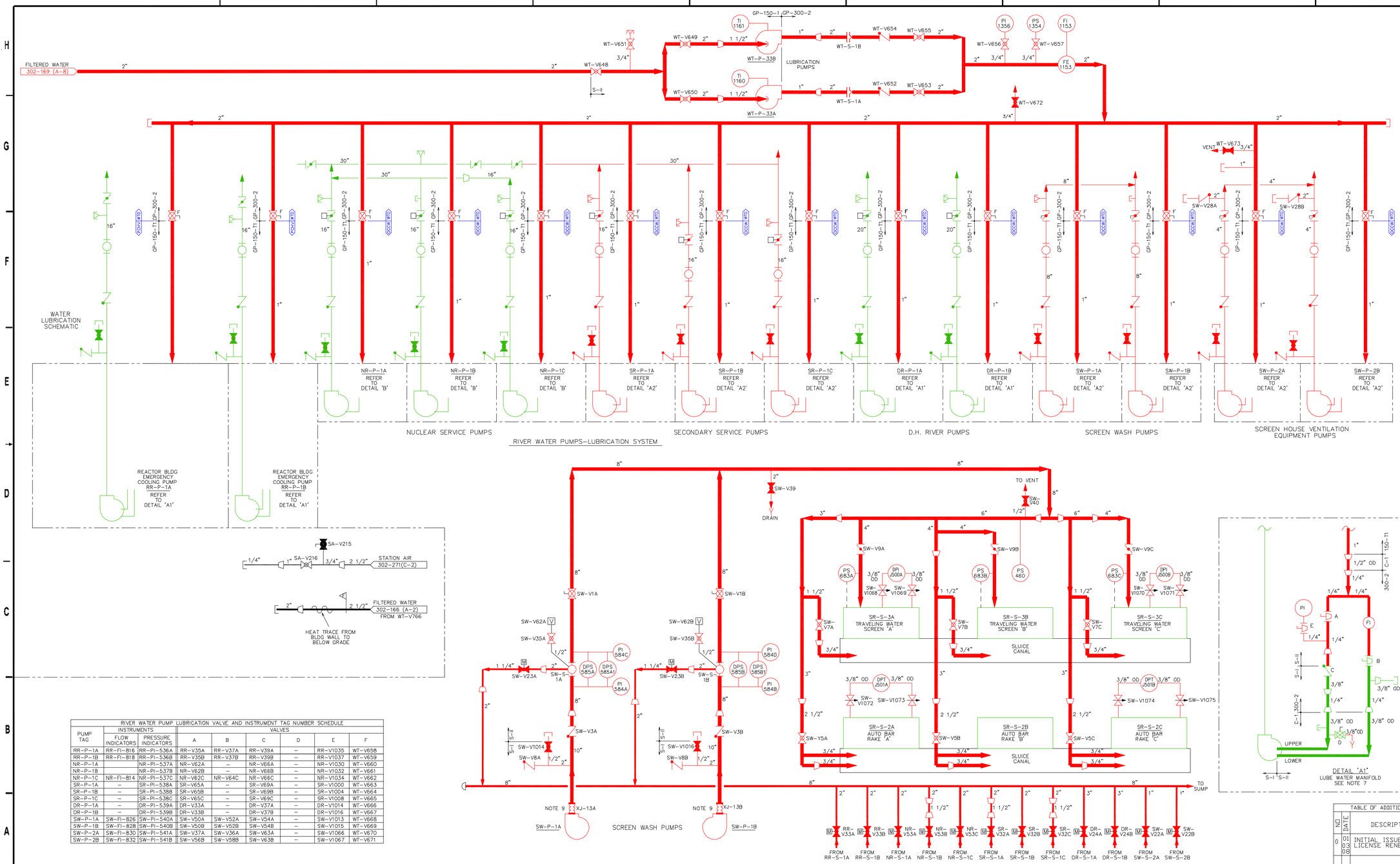
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 LR-302-201 REV 0

DWG.NO. LR-302-201 SH. 1


NUCLEAR SERVICE HEAT EXCHANGERS
INTERMEDIATE SERVICE COOLER "A"
INTERMEDIATE SERVICE COOLER "B"
DECAY HEAT SERVICE COOLER 1A
DECAY HEAT SERVICE COOLER 1B
FOR CLOSED CYCLE COOLING WATER SEE DWG. 302-645
EVAPORATION MAKE-UP 30"
TO COOLING TOWER
SLIP STREAM SAMPLE POINT
SECONDARY SERVICE HEAT EXCHANGERS
BACKWASH
FROM TURB ROOM SUMP
EMERGENCY DUMP THRU E. DIKE
HEAT EXCHANGER VAULT
TO CHLORINE EJECTOR
TO CLARIFIER
24" CONCRETE
RIVER DISCHARGE LINE
48" CONCRETE PIPE
DE-ICING
FROM R.B. EMERGENCY COOLING
ISOLOK SAMPLER
COLLECTION SUMP
FROM MAIN DETOX
TO MAIN DETOX
FROM WASTE EVAPORATOR
TO RIVER
OUTSIDE SAMPLE
OPEN PIT (VENT)
TO PUMP HOUSE
SECONDARY SERVICE PUMPS
D.H. RIVER WATER PUMPS
S.H. VENT EQUPMENT PUMPS
NUCLEAR SERVICE PUMPS
SERVICE WATER SCREEN AND PUMP HOUSE
FOR SCREEN WASH & SLUICE SYSTEM, SEE DWG. 302-203
* – INTERNALS REMOVED FROM VALVES DR-V6A & DR-V6B
NOTES:
1. THIS DRAWING IS BASED ON DRAWING 302-202, REVISION 71.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
CW – CIRCULATING WATER SYSTEM
MFED – MISCELLANEOUS FLOOR & EQUIPMENT DRAINS SYSTEM
OCCW – OPEN CYCLE COOLING WATER SYSTEM
PCHV – PRIMARY CONTAINMENT HEATING & VENTILATION SYSTEM
SBO – STATION BLACKOUT AND UPS DIESEL GENERATOR SYSTEM
WTD – WATER TREATMENT & DISTRIBUTION SYSTEM
3. VALVE POSITION SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
5. EXPANSION JOINTS ARE SHORT-LIVED AND ARE NOT SUBJECT TO AGING MANAGEMENT REVIEW.
TABLE OF ADDITIONS & CHANGES
NO. DATE DESCRIPTION REV'D CHK'D APP'D
0 01 03 08 INITIAL ISSUE FOR LICENSE RENEWAL A B D C M A M
MECHANICAL
LICENSE RENEWAL DRAWING
RIVER WATER SYSTEM
FLOW DIAGRAM
THREE MILE ISLAND
AmerGen
SHEET 1 OF 1
LR-302-202
0
DWG.NO. LR-302-202
SH. 1



NOTES:

1. THIS DRAWING ISBASED ON DRAWING 302-203, REVISION 67.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   OCCW – OPEN CYCLE COOLING WATER SYSTEM
   PCHV – PRIMARY CONTAINMENT HEATING AND VENTILATION SYSTEM
   WTD – WATER TREATMENT AND DISTRIBUTION SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
5. ALL PIPING ON THIS DRAWING LINE SPECIFICATION E, EXCEPT AS NOTED.
6. ALL PIPING ON THIS DRAWING SEISMIC CLASS I, EXCEPT SECONDARY SERVICE, SCREENWASH, STRAINER BLOWDOWN AND SERVICE WATER POST COOLING TOWER PUMPS WHICH ARE SEISMIC CLASS III.
7. ALL SEISMIC CLASS S-I-NRS.
8. SAFETY AND SEISMIC CLASSES TYPICAL FOR PUMPS RR-P-1A/B NR-P-1A/B/C AND DR-P-1A/B ONLY.
9. EXPANSION JOINTS ARE SHORT-LIVED AND NOT SUBJECT TO AGING MANAGEMENT REVIEW.

RIVER WATER PUMP LUBRICATION VALVE AND INSTRUMENT TAG NUMBER SCHEDULE

PUMP TAG	INSTRUMENTS		VALVES					
	FLOW INDICATORS	PRESSURE INDICATORS	A	B	C	D	E	F
RR-P-1A	RR-FI-816	RR-PI-536A	RR-V35A	RR-V37A	RR-V39A	–	RR-V1035	WT-V658
RR-P-1B	RR-FI-818	RR-PI-536B	RR-V35B	RR-V37B	RR-V39B	–	RR-V1037	WT-V659
NR-P-1A		NR-PI-537A	NR-V62A	–	NR-V66A	–	NR-V1030	WT-V660
NR-P-1B		NR-PI-537B	NR-V62B	–	NR-V66B	–	NR-V1032	WT-V661
NR-P-1C	NR-FI-814	NR-PI-537C	NR-V62C	NR-V64C	NR-V66C	–	NR-V1034	WT-V662
SR-P-1A	–	SR-PI-538A	SR-V65A	–	SR-V69A	–	SR-V1000	WT-V663
SR-P-1B	–	SR-PI-538B	SR-V65B	–	SR-V69B	–	SR-V1004	WT-V664
SR-P-1C	–	SR-PI-538C	SR-V65C	–	SR-V69C	–	SR-V1008	WT-V665
DR-P-1A	–	DR-PI-539A	DR-V33A	–	DR-V37A	–	DR-V1014	WT-V666
DR-P-1B	–	DR-PI-539B	DR-V33B	–	DR-V37B	–	DR-V1016	WT-V667
SW-P-1A	SW-FI-826	SW-PI-540A	SW-V50A	SW-V52A	SW-V54A	–	SW-V1013	WT-V668
SW-P-1B	SW-FI-828	SW-PI-540B	SW-V50B	SW-V52B	SW-V54B	–	SW-V1015	WT-V669
SW-P-2A	SW-FI-830	SW-PI-541A	SW-V37A	SW-V36A	SW-V63A	–	SW-V1066	WT-V670
SW-P-2B	SW-FI-832	SW-PI-541B	SW-V56B	SW-V58B	SW-V63B	–	SW-V1067	WT-V671

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	A B	D P C	M A M

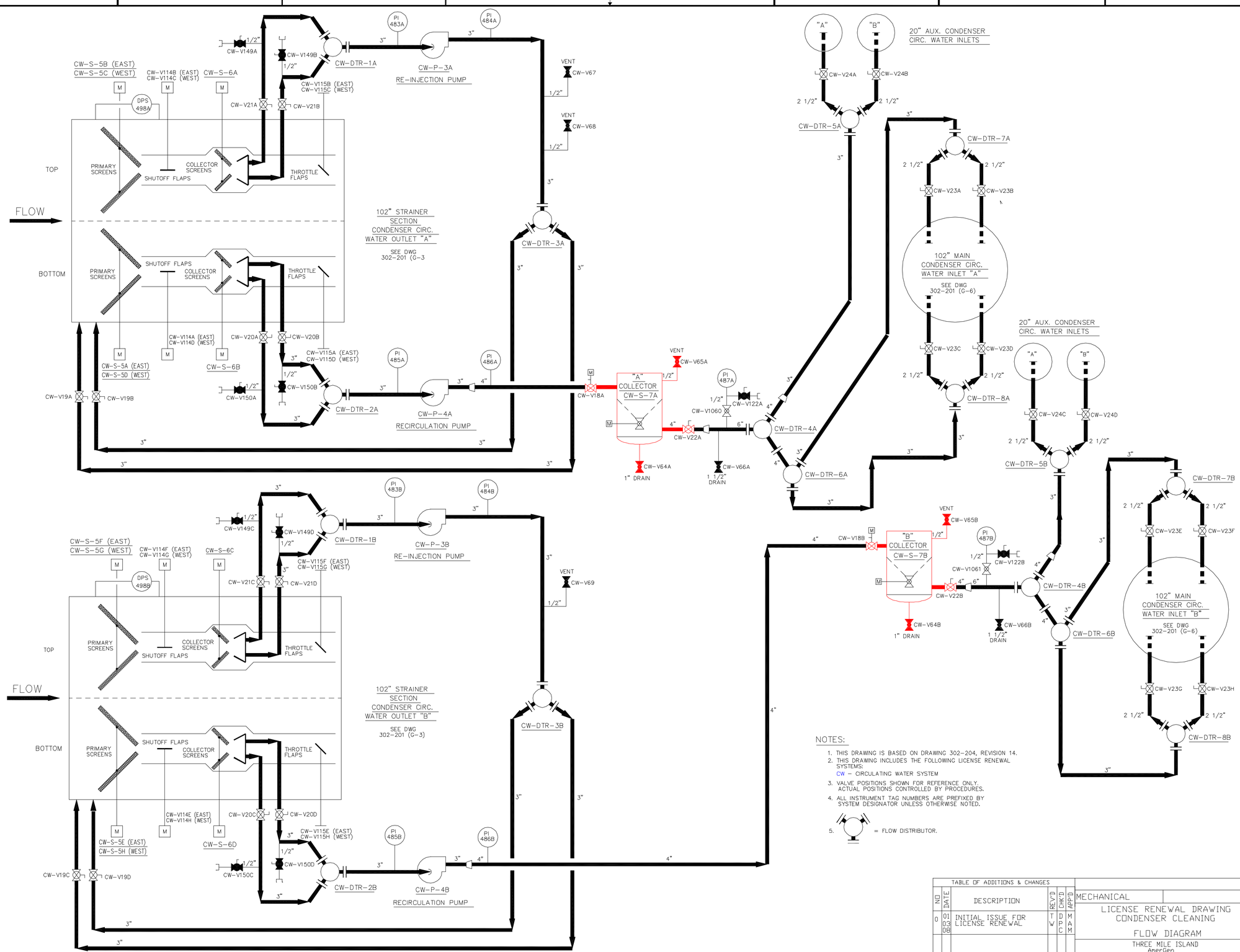
MECHANICAL

LICENSE RENEWAL DRAWING
SCREEN WASH & SLUICE SYS
RIVER WATER PUMPS-LUBRICATION SYS
FLOW DIAGRAM

THREE MILE ISLAND
AnerGen

SHEET 1 OF 1 LR-302-203 REV 0

DWG NO. LR-302-203 SH 1 REV 1



NOTES:

1. THIS DRAWING IS BASED ON DRAWING 302-204, REVISION 14.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   CW – CIRCULATING WATER SYSTEM
3. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
4. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.
5. = FLOW DISTRIBUTOR.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL	T W	D P C	M A M

MECHANICAL

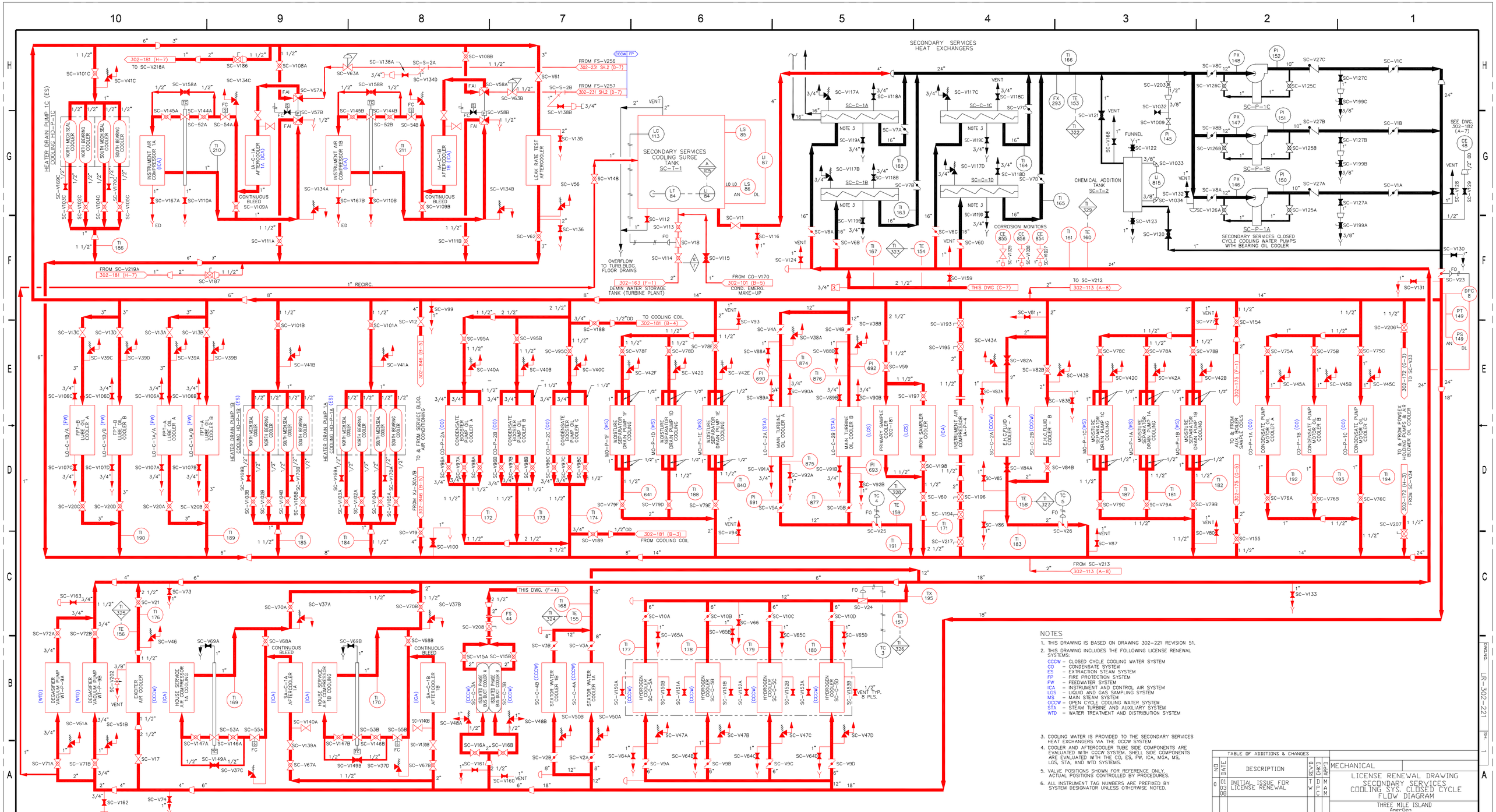
LICENSE RENEWAL DRAWING
CONDENSER CLEANING

FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-204 | REV 0

DWG.NO. LR-302-204 SH. 1



NOTES

1. THIS DRAWING IS BASED ON DRAWING 302-221 REVISION 51.
2. THIS DRAWING INCLUDES THE FOLLOWING LICENSE RENEWAL SYSTEMS:
   - CCCW – CLOSED CYCLE COOLING WATER SYSTEM
   - CO – CONDENSATE SYSTEM
   - ES – EXTRACTION STEAM SYSTEM
   - FP – FIRE PROTECTION SYSTEM
   - FW – FEEDWATER SYSTEM
   - ICA – INSTRUMENT AND CONTROL AIR SYSTEM
   - LGS – LIQUID AND GAS SAMPLING SYSTEM
   - MS – MAIN STEAM SYSTEM
   - OCCW – OPEN CYCLE COOLING WATER SYSTEM
   - STA – STEAM TURBINE AND AUXILIARY SYSTEM
   - WTD – WATER TREATMENT AND DISTRIBUTION SYSTEM
3. COOLING WATER IS PROVIDED TO THE SECONDARY SERVICES HEAT EXCHANGERS VIA THE OCCW SYSTEM.
4. COOLER AND AFTERCOOLER TUBE SIDE COMPONENTS ARE EVALUATED WITH CCCW SYSTEM. SHELL SIDE COMPONENTS ARE EVALUATED WITH THE CO, ES, FW, ICA, MGA, MS, LGS, STA, AND WTD SYSTEMS.
5. VALVE POSITIONS SHOWN FOR REFERENCE ONLY. ACTUAL POSITIONS CONTROLLED BY PROCEDURES.
6. ALL INSTRUMENT TAG NUMBERS ARE PREFIXED BY SYSTEM DESIGNATOR UNLESS OTHERWISE NOTED.

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D TW	DWN DPC	APP'D MAM
0	01 03 08	INITIAL ISSUE FOR LICENSE RENEWAL			

MECHANICAL

LICENSE RENEWAL DRAWING
SECONDARY SERVICES
COOLING SYS. CLOSED CYCLE
FLOW DIAGRAM

THREE MILE ISLAND
AmerGen

SHEET 1 OF 1 | LR-302-221 | REV 0

DWG NO. LR-302-221 | SH 1