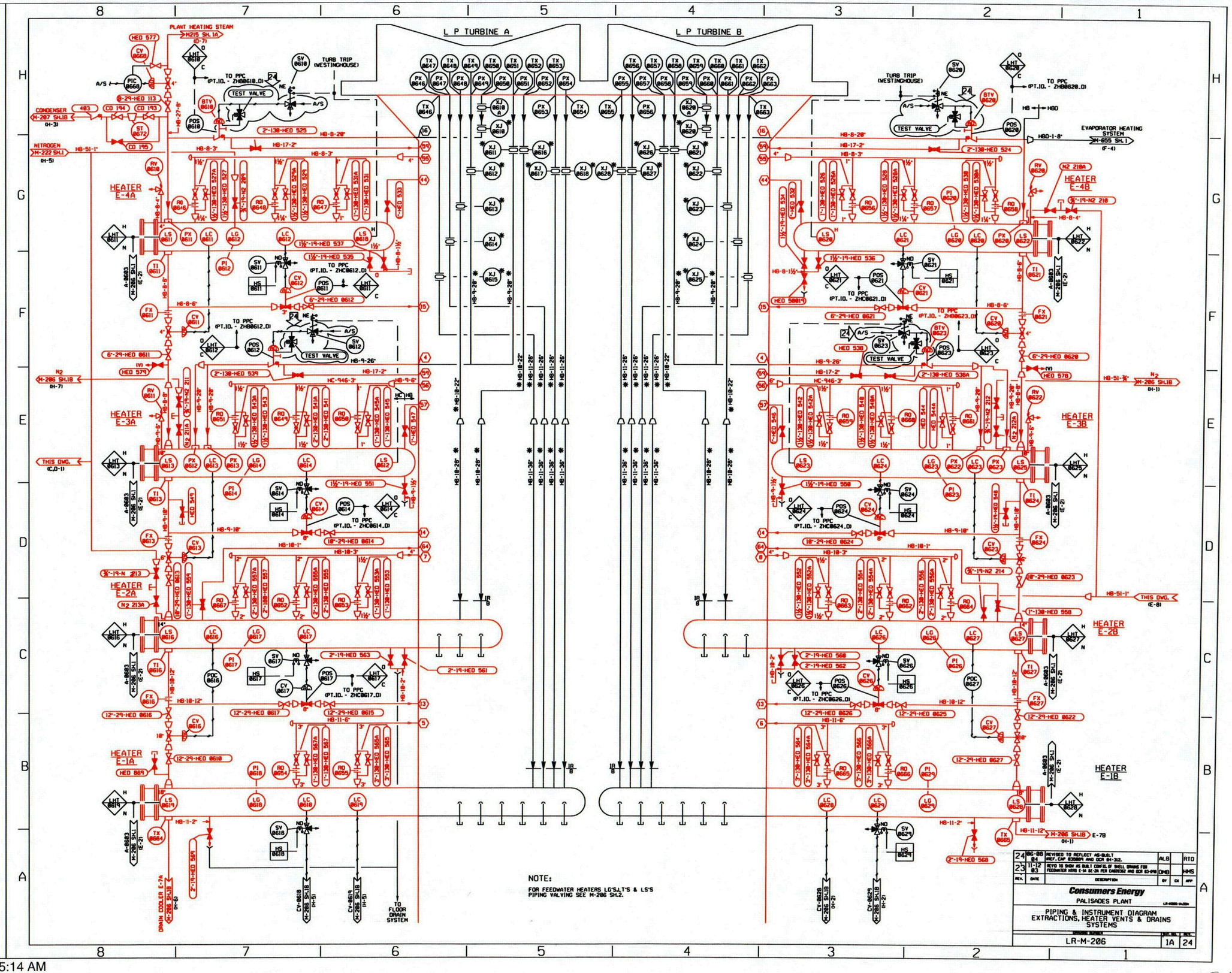
COLOR TABLE-4 DRIVER-L4

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



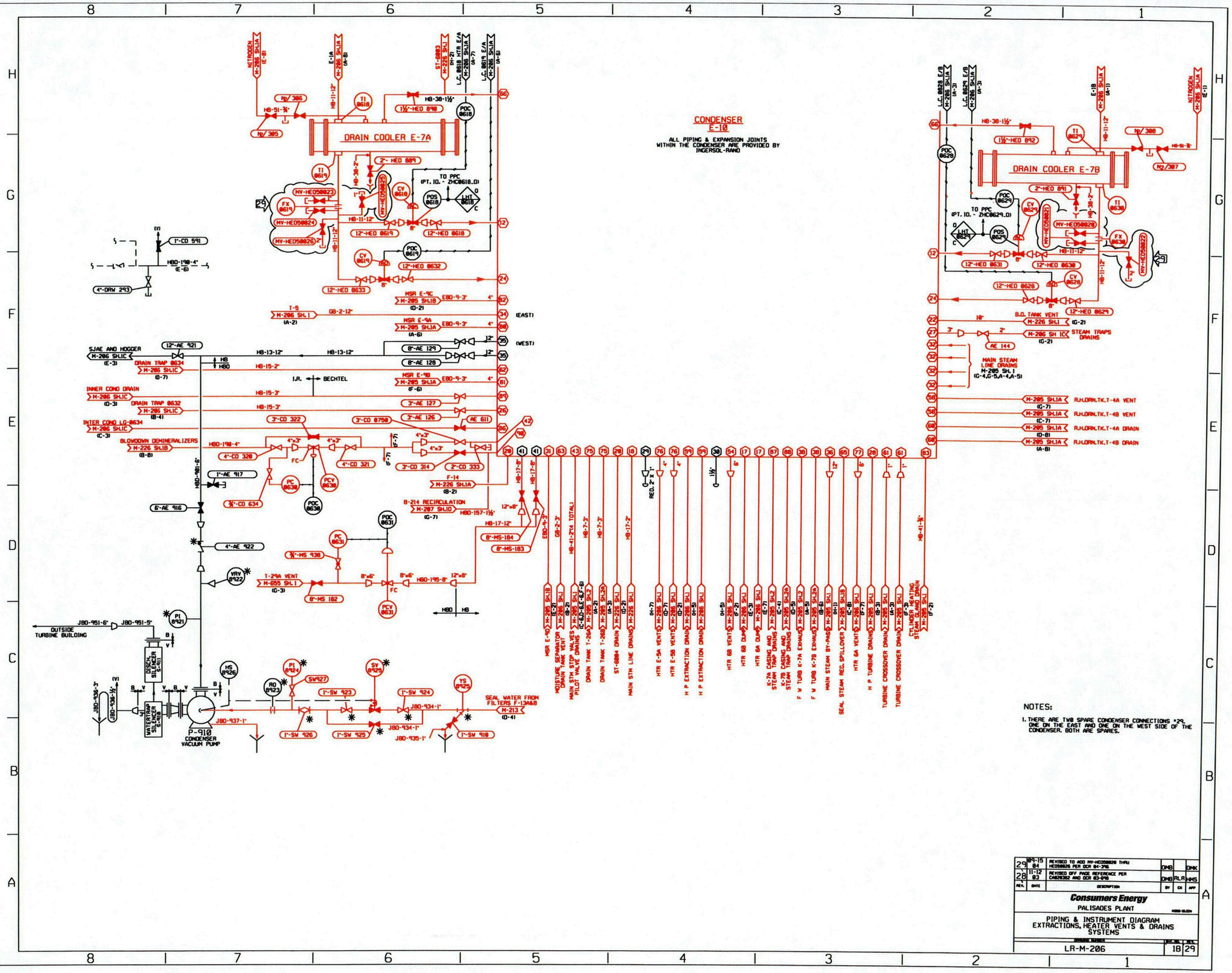
RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\LR-M206-1A.DGN 03/21/2005 10:15:14 AM

C21

COLOR TABLE-1 DRIVER-L

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



NOTES:

1. THERE ARE TWO SPARE CONDENSER CONNECTIONS #29. ONE ON THE EAST AND ONE ON THE WEST SIDE OF THE CONDENSER. BOTH ARE SPARES.

REV.	DATE	DESCRIPTION	BY	CK	APP
29	09-15 04	REVISED TO ADD MV-HED50020 THRU HED50026 PER DCR 04-396	DMB		DMK
28	11-12 03	REVISED OFF PAGE REFERENCE PER CA020362 AND DCR 03-698	DMB	RLR	HMS

Consumers Energy

PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
EXTRACTIONS, HEATER VENTS & DRAINS
SYSTEMS

LR-M-206 | 1B | 29

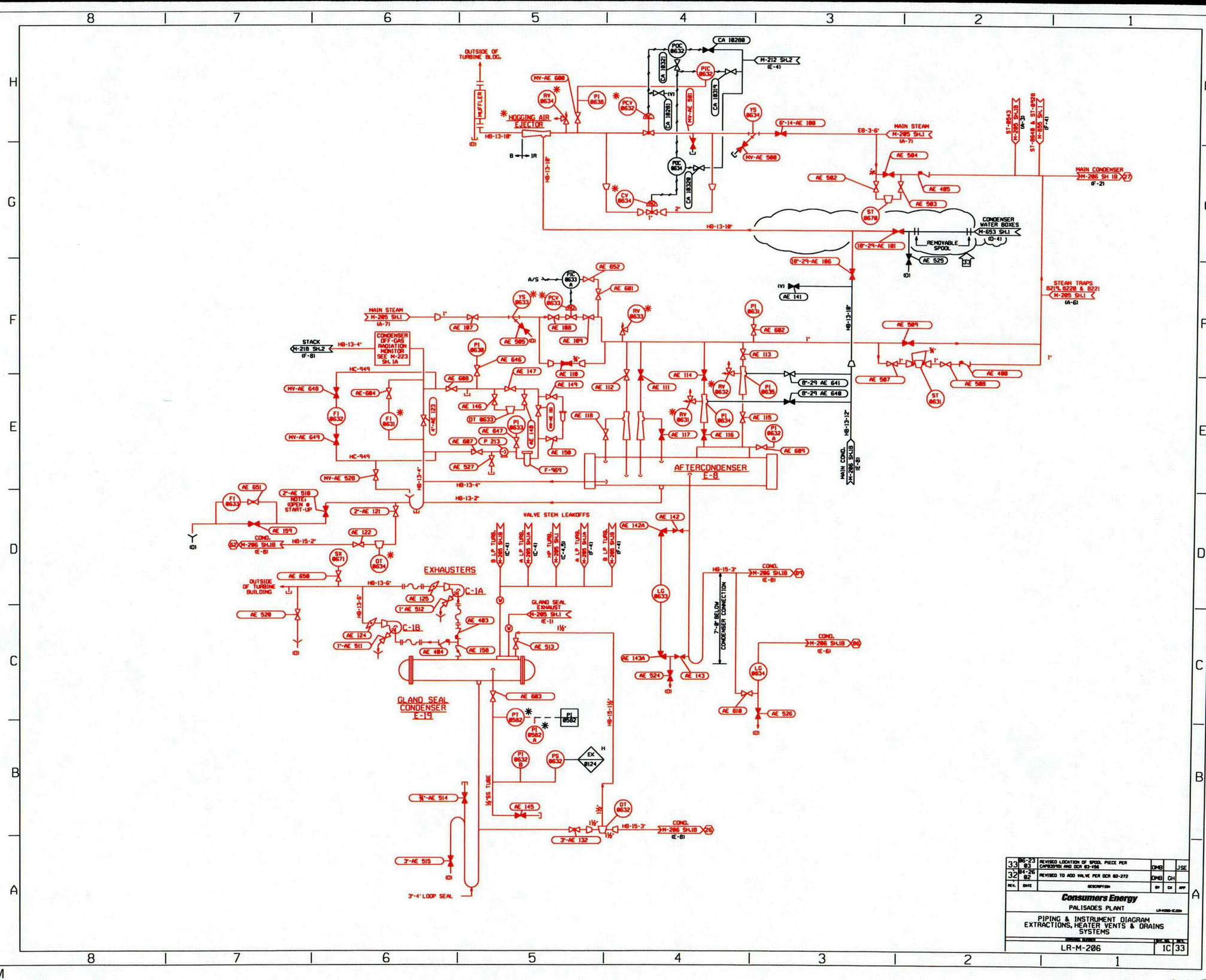
RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\LR-M206-1B.dgn 03/21/2005 10:16:57 AM

C22

COLOR TABLE-3 DRIVER-L3

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



REV.	DATE	DESCRIPTION	BY	CK	APP
33	96-23 02	REVISED LOCATION OF SPOOL PIECE PER CAMDESIGN AND DCR 02-156	DMB		JSE
32	84-26 02	REVISED TO ADD VALVE PER DCR 02-272	DMB	GH	

Consumers Energy
PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
EXTRACTIONS, HEATER VENTS & DRAINS SYSTEMS

LR-M-206 | IC | 33

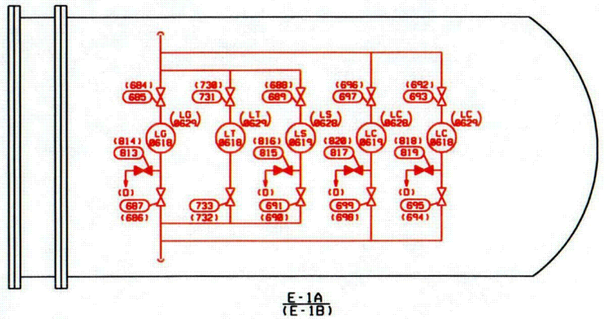
RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\LR-M206-1C.DGN 03/21/2005 10:26:23 AM

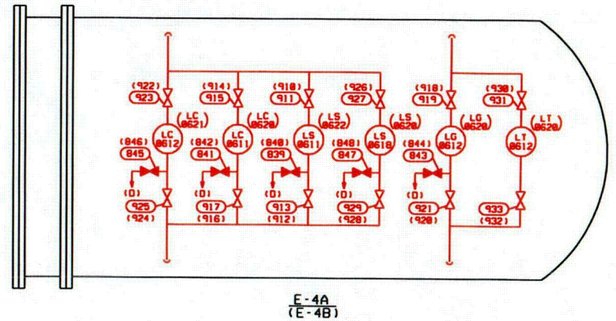
C23

COLOR TABLE-3 DRIVER-L3

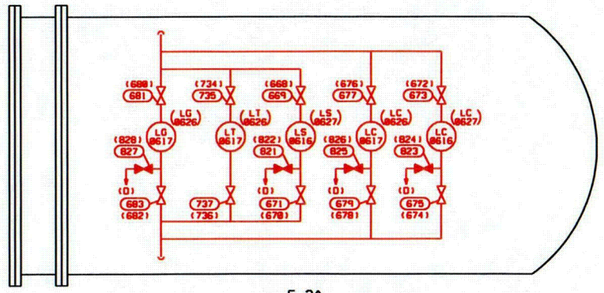
THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



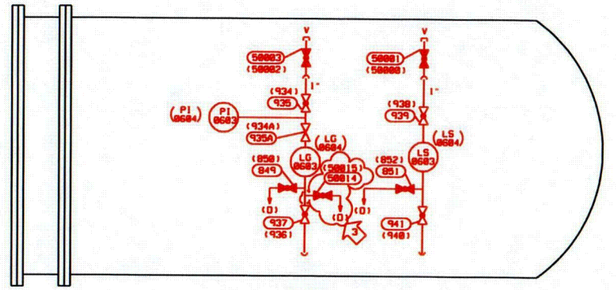
E-1A
(E-1B)



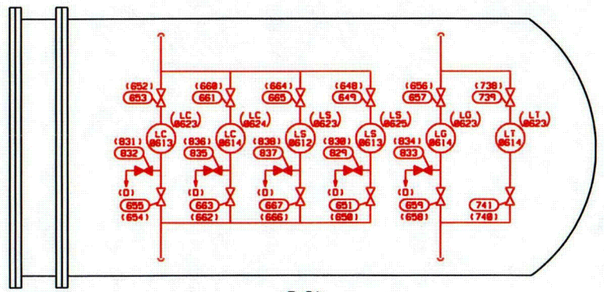
E-4A
(E-4B)



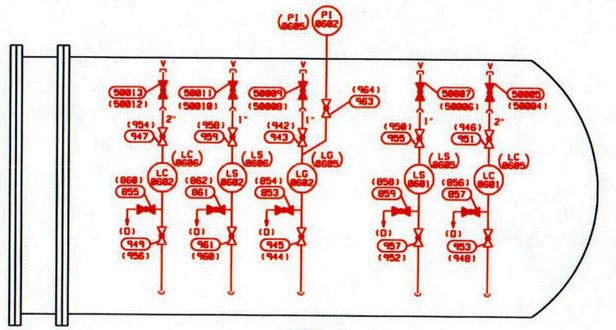
E-2A
(E-2B)



E-5A
(E-5B)



E-3A
(E-3B)



E-6A
(E-6B)

NOTE:
1. ALL VALVE NO'S ARE "HED".

REV	DATE	DESCRIPTION	BY	APP
3	1-17-05	ADDED VALVE NO. 50814 (50815) PER WALKDOWN & DCR-M3-816.	ALB	

Consumers Energy
PALISADES PLANT
M206-2.DGN

PIPING & INSTRUMENT DIAGRAM
STEAM GENERATOR BLOWDOWN
MODIFICATION

LR-M206 | 2 | 3

P&ID

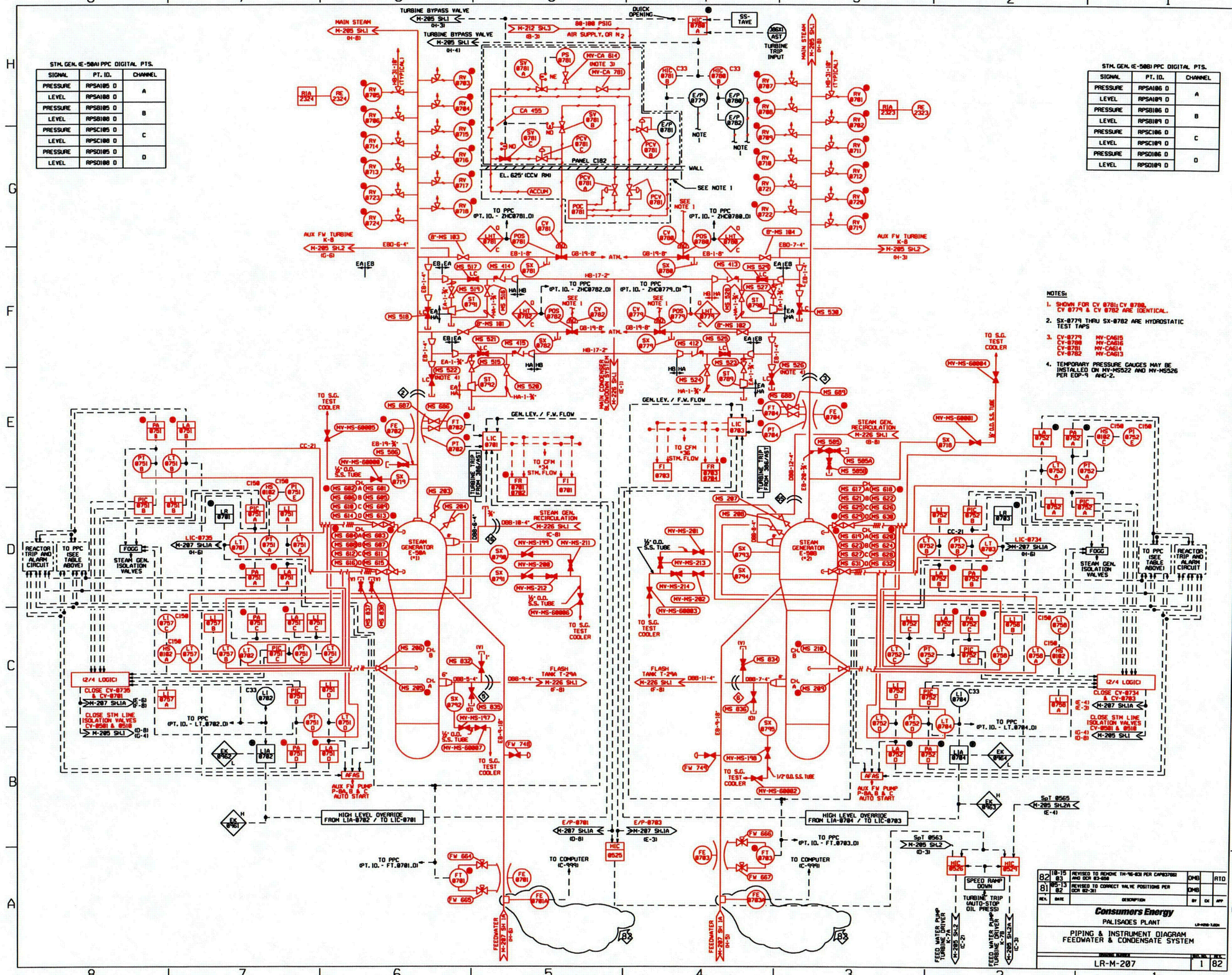
RED = IN SCOPE FOR LR
BLACK = NOT IN SCOPE

...\LR-M206-2.dgn 03/21/2005 10:27:48 AM

C24

COLOR TABLE-1 DRIVER-L

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



STM. GEN. (E-50A) PPC DIGITAL PTS.

SIGNAL	PT. ID.	CHANNEL
PRESSURE	RPSA105 D	A
LEVEL	RPSA108 D	
PRESSURE	RPSB105 D	B
LEVEL	RPSB108 D	
PRESSURE	RPSC105 D	C
LEVEL	RPSC108 D	
PRESSURE	RPSD105 D	D
LEVEL	RPSD108 D	

STM. GEN. (E-50B) PPC DIGITAL PTS.

SIGNAL	PT. ID.	CHANNEL
PRESSURE	RPSA106 D	A
LEVEL	RPSA109 D	
PRESSURE	RPSB106 D	B
LEVEL	RPSB109 D	
PRESSURE	RPSC106 D	C
LEVEL	RPSC109 D	
PRESSURE	RPSD106 D	D
LEVEL	RPSD109 D	

NOTES:

1. SHOWN FOR CV 0781; CV 0780, CV 0779 & CV 0782 ARE IDENTICAL.
2. SX-0779 THRU SX-0782 ARE HYDROSTATIC TEST TAPS
3. CV-0779 MV-CA615; CV-0780 MV-CA616; CV-0781 MV-CA614; CV-0782 MV-CA613
4. TEMPORARY PRESSURE GAUGES MAY BE INSTALLED ON MV-MS522 AND MV-MS526 PER EOP-9 AHG-2.

REV.	DATE	DESCRIPTION	BY	CK	APP
82	10-15 03	REVISED TO REMOVE TM-96-031 PER CAP03766 AND DCR 03-658	DMB		RTD
81	05-13 02	REVISED TO CORRECT VALVE POSITIONS PER DCR 02-311	DMB		

Consumers Energy

PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
FEEDWATER & CONDENSATE SYSTEM

LR-M-207 | 1 | 82

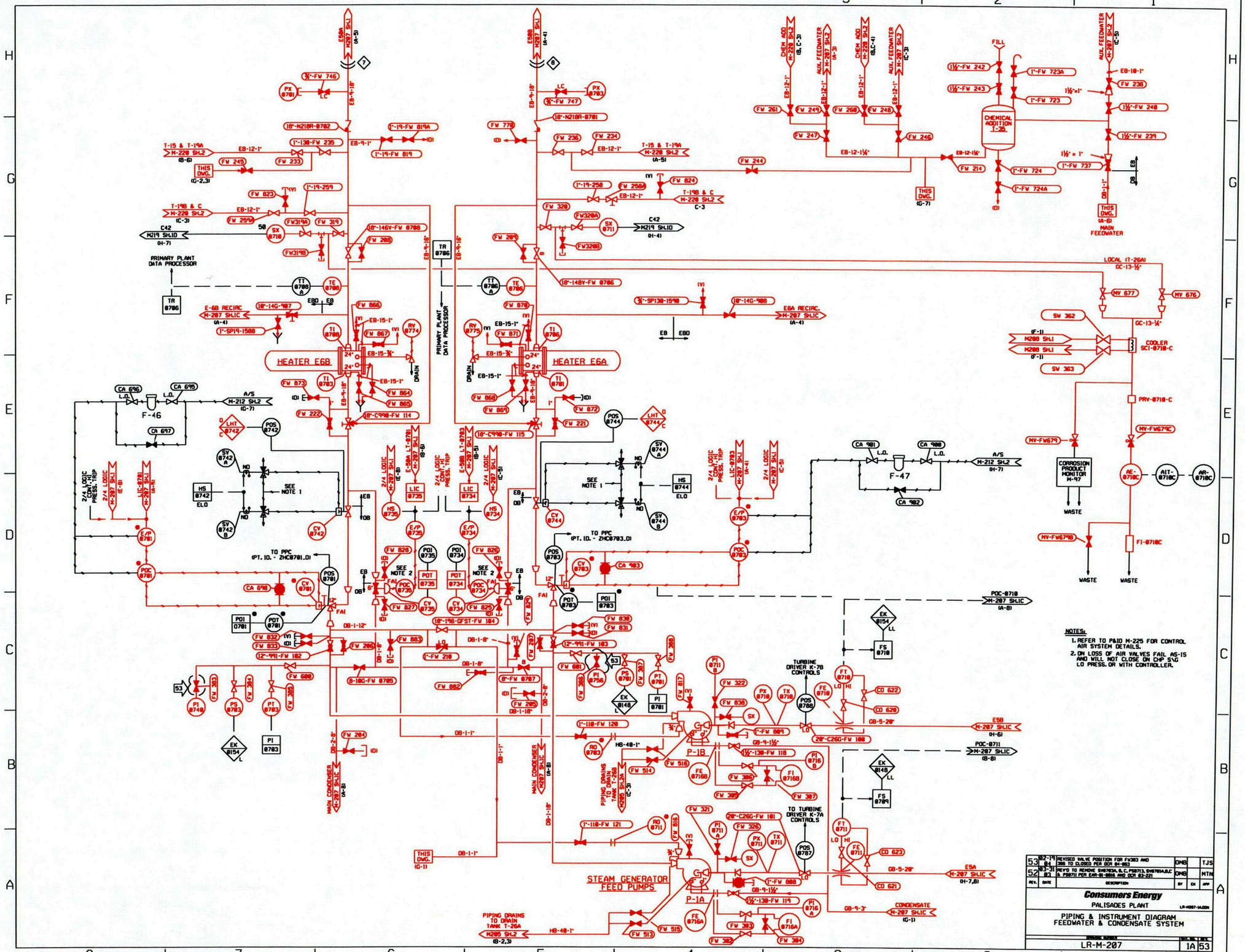
RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\LR-M207-1.dgn 03/21/2005 10:29:12 AM

C25

COLOR TABLE-2 DRIVER-L2

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\LR-M207-1A.dgn 03/21/2005 10:30:10 AM

C26

COLOR TABLE-2 DRIVER-L2

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.

RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

HOTWELL

DRAIN COOLER E7A

DRAIN COOLER E7B

AIR EJECTOR INTER & AFTER CONDENSERS

MAIN TURBINE GLAND SEAL CONDENSER

FAST MAKE-UP FOR MAIN STM. DUMP

MAKEUP FOR COND. FILL & MAX. BLOW DOWN

NOTES:
1. REFER TO P&ID M-225 FOR CONTROL AIR SYSTEM DETAILS

REV.	DATE	DESCRIPTION	BY	CK	APP
36	94-24 01	REVISED TO ADD MV-CO815 PER DCR 94-322	DMB		JSE
35	89-12 01	REVISED TO ADD CO-681/8 PER EAR-88-8388 AND DCR 91-219	DMB		

Consumers Energy
PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
FEEDWATER & CONDENSATE SYSTEM

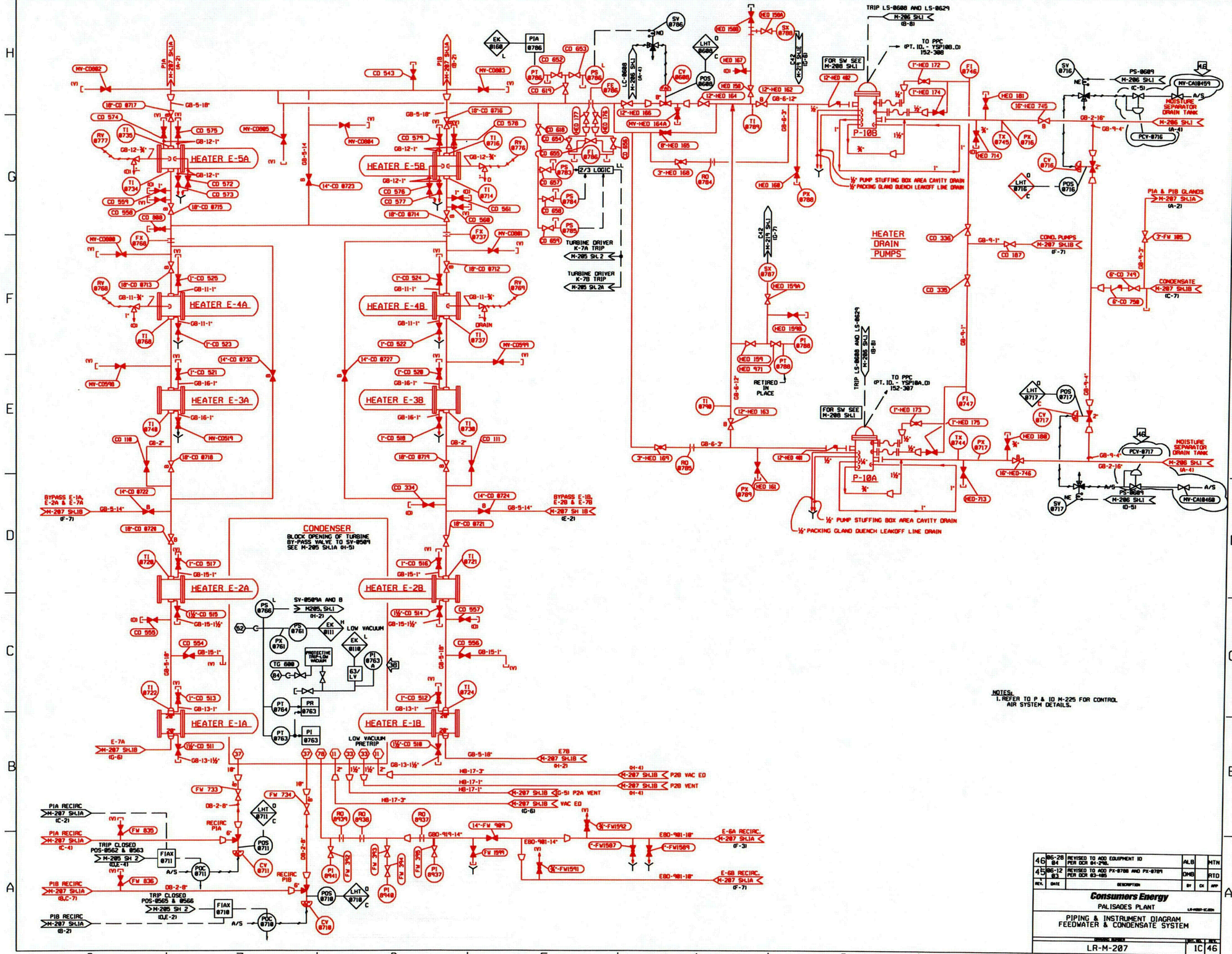
LR-M-207 | 18 | 36

...\LR-M207-1B.dgn 03/21/2005 10:32:05 AM

C27

COLOR TABLE-1 DRIVER-L

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



REV.	DATE	DESCRIPTION	BY	CK	APP
46	06-28-04	REVISED TO ADD EQUIPMENT ID PER DCR 04-2782.	ALB		MTN
45	06-12-03	REVISED TO ADD PX-8788 AND PX-8789 PER DCR 03-485	DMB		RTO

Consumers Energy

PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
FEEDWATER & CONDENSATE SYSTEM

LR-M-207 | IC | 46

RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

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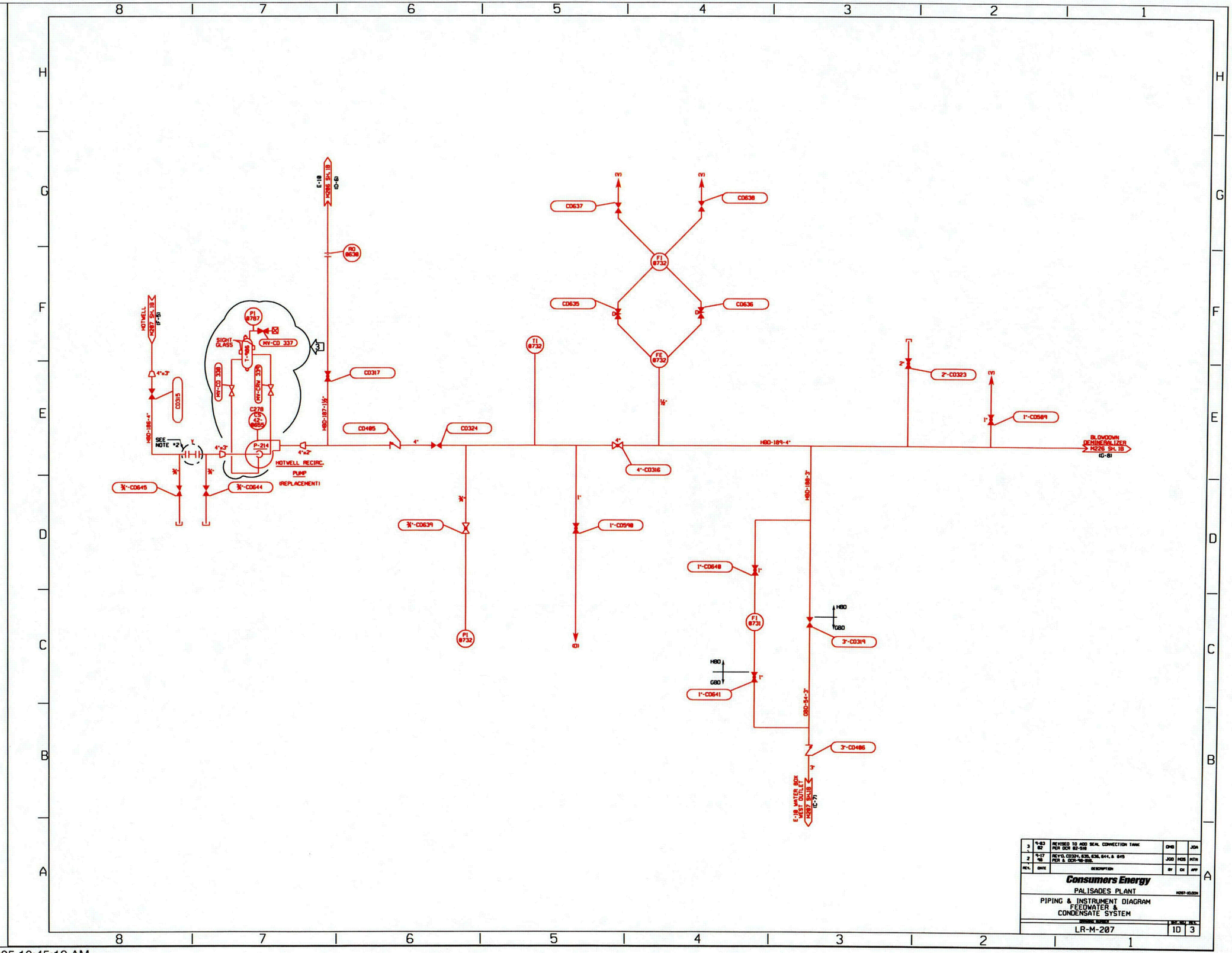
C28

COLOR TABLE-1 DRIVER-L

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.

RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE



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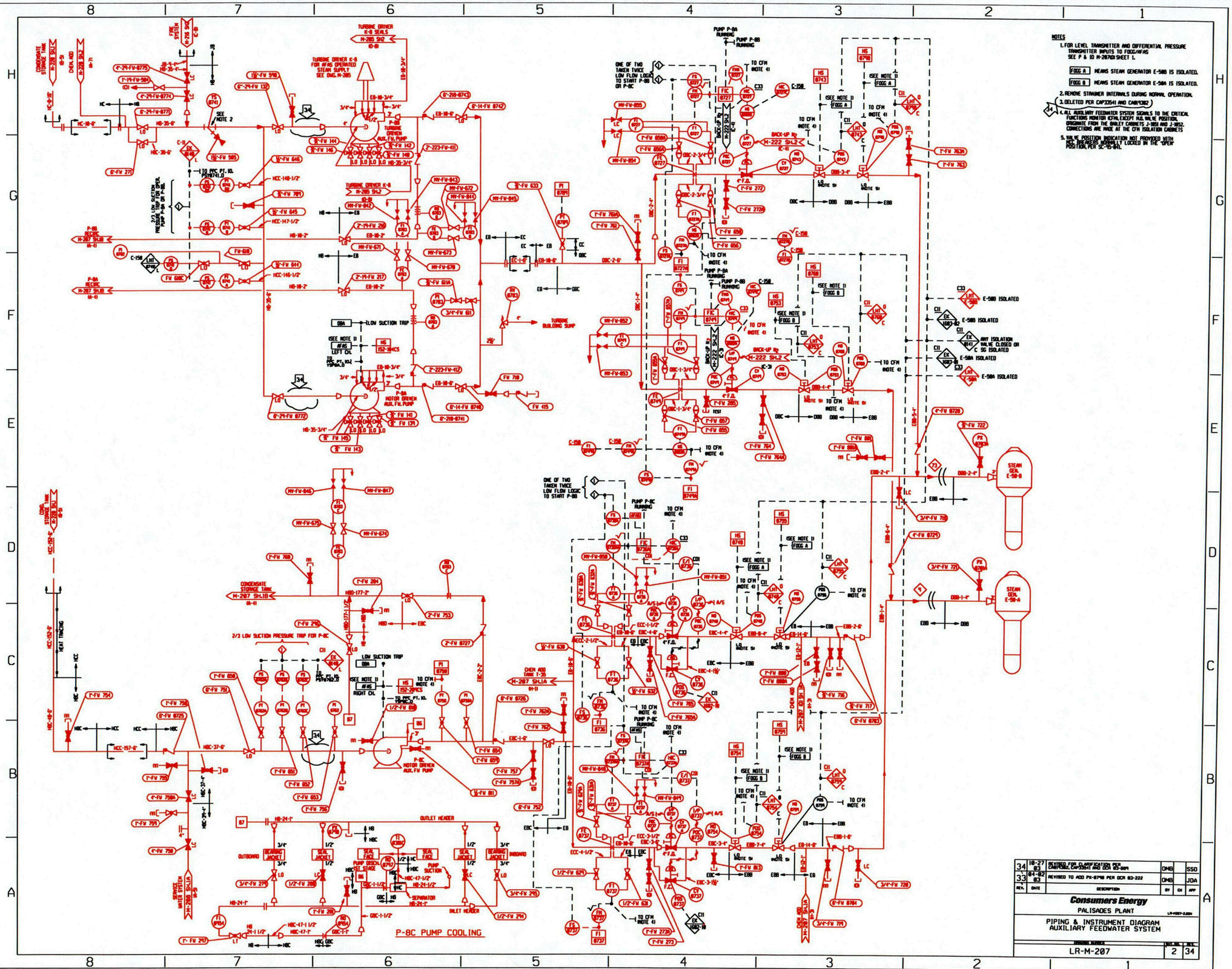
C29

COLOR TABLE-2 DRIVER-L2

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



NOTES

1. FOR LEVEL TRANSMITTER AND DIFFERENTIAL PRESSURE TRANSMITTER INPUTS TO FOGG/AFAS SEE P & ID M-207(D) SHEET 1.

FOGG A MEANS STEAM GENERATOR E-50B IS ISOLATED.

FOGG B MEANS STEAM GENERATOR E-50A IS ISOLATED.

2. REMOVE STRAINER INTERNALS DURING NORMAL OPERATION.

3. DELETED PER CAP33541 AND CAB19382

34 4. ALL AUXILIARY FEEDWATER SYSTEM SIGNALS TO THE CRITICAL FUNCTIONS MONITOR (CFM), EXCEPT M.O. VALVE POSITION, ORIGINATE FROM THE BAILEY CABINETS J-1051 AND J-1052. CONNECTIONS ARE MADE AT THE CFM ISOLATION CABINETS

5. VALVE POSITION INDICATION NOT PROVIDED WITH MCC BREAKERS NORMALLY LOCKED IN THE "OPEN" POSITION, PER SC-95-041.

REV.	DATE	DESCRIPTION	BY	CK	APP
34	10-27-03	REVISED FOR CLARIFICATION PER CAB19382, CAP33541 AND OCR 03-609	DMB		SSO
33	04-02-03	REVISED TO ADD PX-8798 PER OCR 03-222	DMB		JDA

Consumers Energy

PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
AUXILIARY FEEDWATER SYSTEM

LR-M-207 | 2 | 34

RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\dwgrev2-lr\LR-M207-2.dgn 03/21/2005 10:46:41 AM

C30

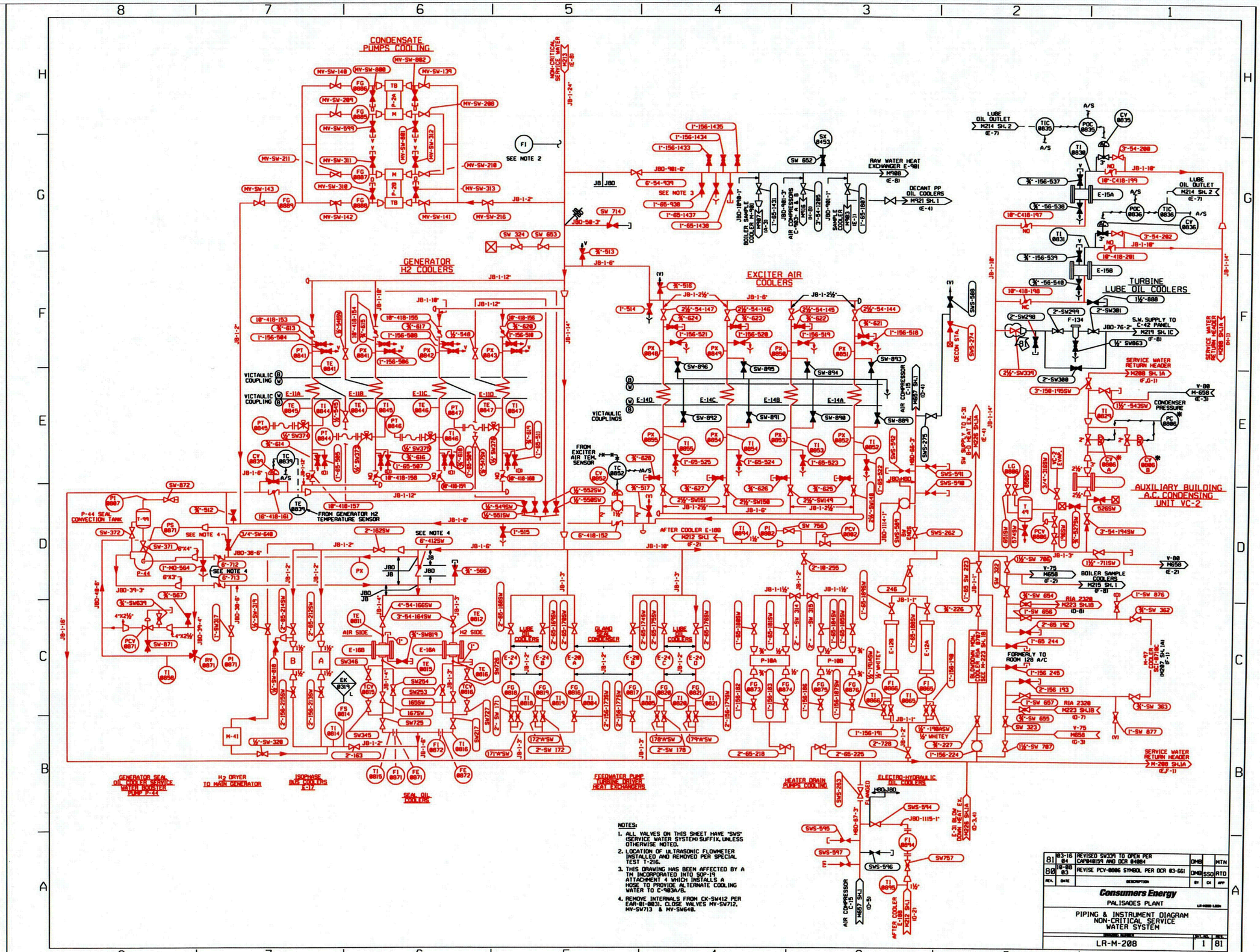
COLOR TABLE-2 DRIVER-L2

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.

NOTES:

1) THE NON-CRITICAL SW RETURN HEADER IS IN BOUNDARY OF LR. THE BRANCH LINES COMING OFF THE HEADER ARE IN BOUNDARY OF LR UP TO AND INCLUDING THEIR RESPECTIVE ISOLATION VALVES DUE TO BEING CAPABLE OF ISOLATION BY OPERATOR ACTION.

RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE



NOTES:
1. ALL VALVES ON THIS SHEET HAVE "SWS" (SERVICE WATER SYSTEM) SUFFIX, UNLESS OTHERWISE NOTED.
2. LOCATION OF ULTRASONIC FLOWMETER INSTALLED AND REMOVED PER SPECIAL TEST T-216.
3. THIS DRAWING HAS BEEN AFFECTED BY A TM INCORPORATED INTO SOP-19 ATTACHMENT 4 WHICH INSTALLS A HOSE TO PROVIDE ALTERNATE COOLING WATER TO C-1B3A/B.
4. REMOVE INTERNALS FROM CX-SW412 PER EAR-81-0831. CLOSE VALVES MV-SW712, MV-SW713 & MV-SW648.

REV.	DATE	DESCRIPTION	BY	CK	APP
81	03-16-84	REVISED SW339 TO OPEN PER CAP84159 AND DCR 84084	DMB		MTN
80	10-08-83	REVISE PCV-0886 SYMBOL PER DCR 83-661	DMB	SSO	RTO

Consumers Energy
PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
NON-CRITICAL SERVICE WATER SYSTEM

LR-M-208 | 1 | 81

...\dwgrev2-lr\LR-M208-1.dgn 03/21/2005 10:53:34 AM

C31

COLOR TABLE-2 DRIVER-L2

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.

RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\dwgrev2-lr\LR-M208-1A.dgn 03/21/2005 10:55:49 AM

C32

PLANT AIR COMPRESSORS

NOTES:
1. ALL VALVES ON THIS SHEET HAVE "SW" (SERVICE WATER SYSTEM) PREFIX, UNLESS OTHERWISE NOTED.
2. SC 98-153 PERMITS ¾" OFFSET FOR EXPANSION JOINT.
3. EXPANSION JOINT HAS 7" UNEXTENDED HEIGHT PER SC 98-153
4. MV-SW-278 & MV-SW279 THROTTLED PER SERVICE WATER FLOW VERIFICATION TEST T-216.
5. FOR DIESEL LUBE OIL AND JACKET WATER COOLING SEE P&ID M-214 SH.1.
6. DELETED
7. FLANGED CONNECTIONS NOTED ARE FOR FC-956 TEMPORARY COOLING.
8. TEMPORARY gP GAUGES WILL BE INSTALLED DURING PERFORMANCE OF PROCEDURE SWS-1-4.
9. THIS IS A BLIND COUPLING WHICH ISOLATES THE PIPING FROM YC-1A OR YC-1B.
10. A TM HAS BEEN APPROVED TO ALLOW HOSES TO BE CONNECTED TO MV-SW758 AND MV-SW759 TO PROVIDE MAKE-UP WATER TO THE SPENT FUEL POOL PER PC50-5

REV.	DATE	DESCRIPTION	BY	CK	APP
54	6-29-04	REMOVED TE/TI FROM YHX-27A&B AND ADDED TO M-218 SH.1 PER CAP 040646 AND DCR 04-342.	ALB		TJS
53	12-18-03	REVISED PER MOD-03-817 AND DCR 03-764			
		REVISED TO ADD XJ-8883, XJ-8882 & XJ-8884 PER DCR 02-747	DMB		MTN

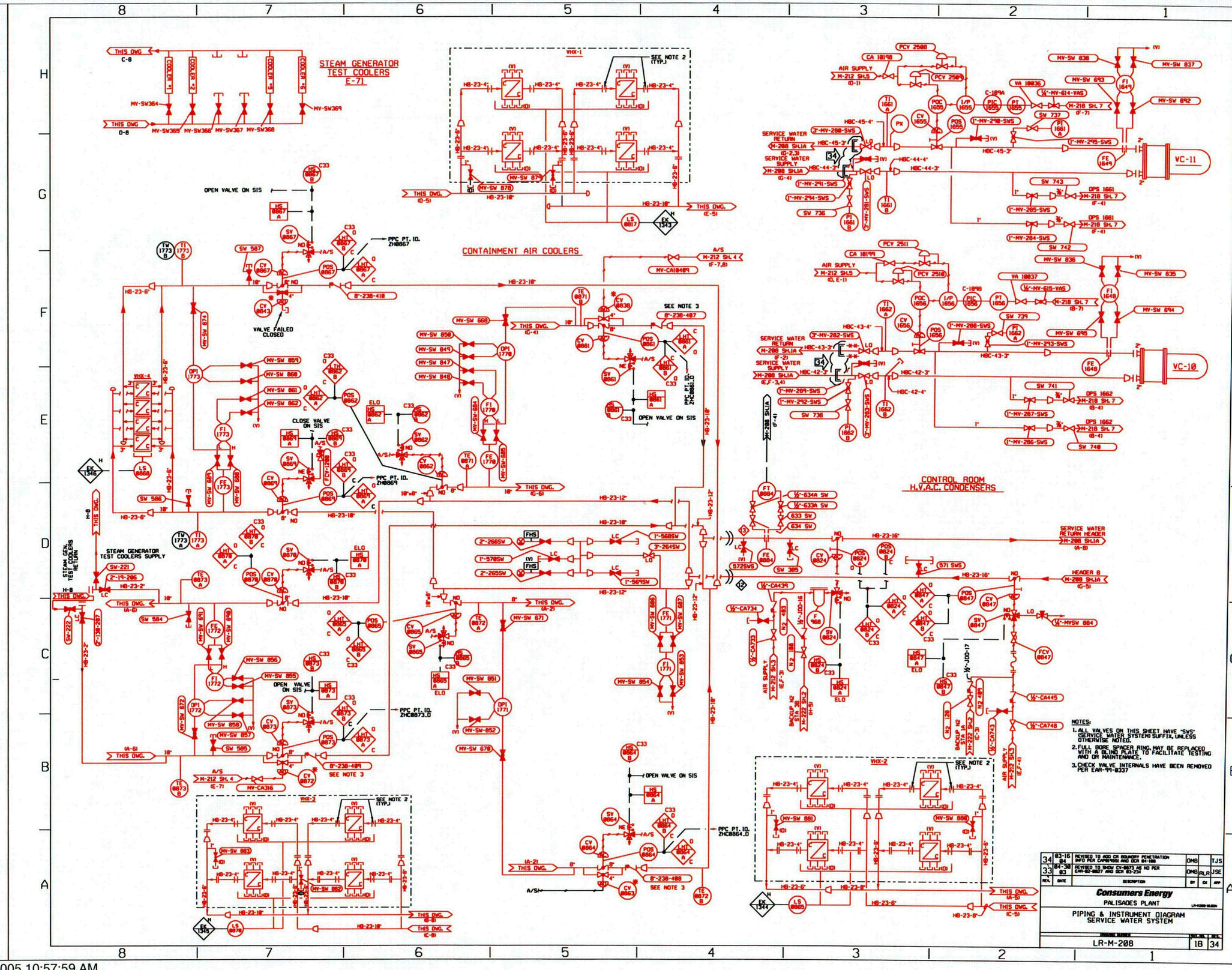
Consumers Energy
PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
SERVICE WATER SYSTEM

DRAWING NUMBER: LR-M-208 | REV. NO.: 1A | REV.: 54

COLOR TABLE-4 DRIVER-L4

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

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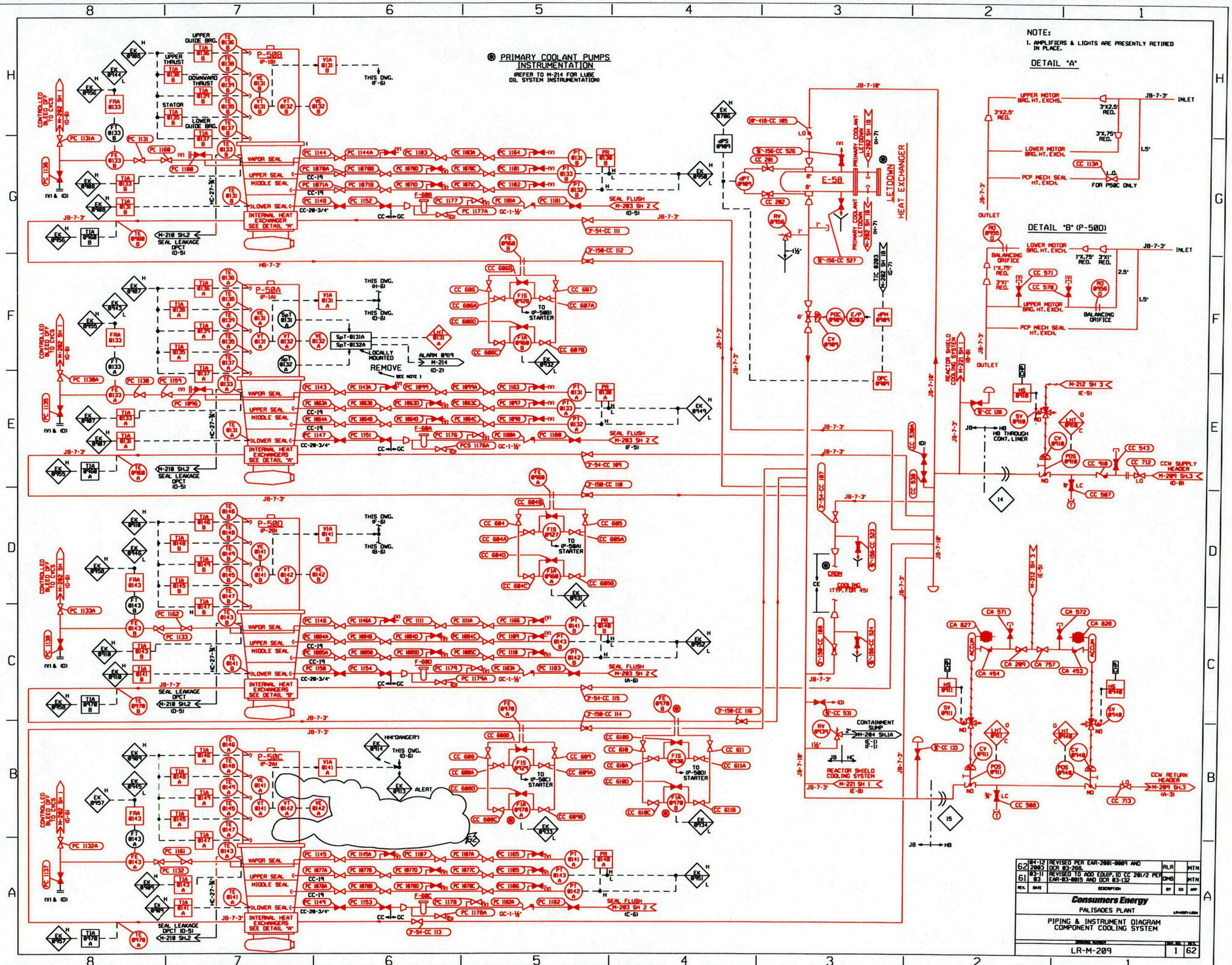
C33

COLOR TABLE-1 DRIVER-L

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



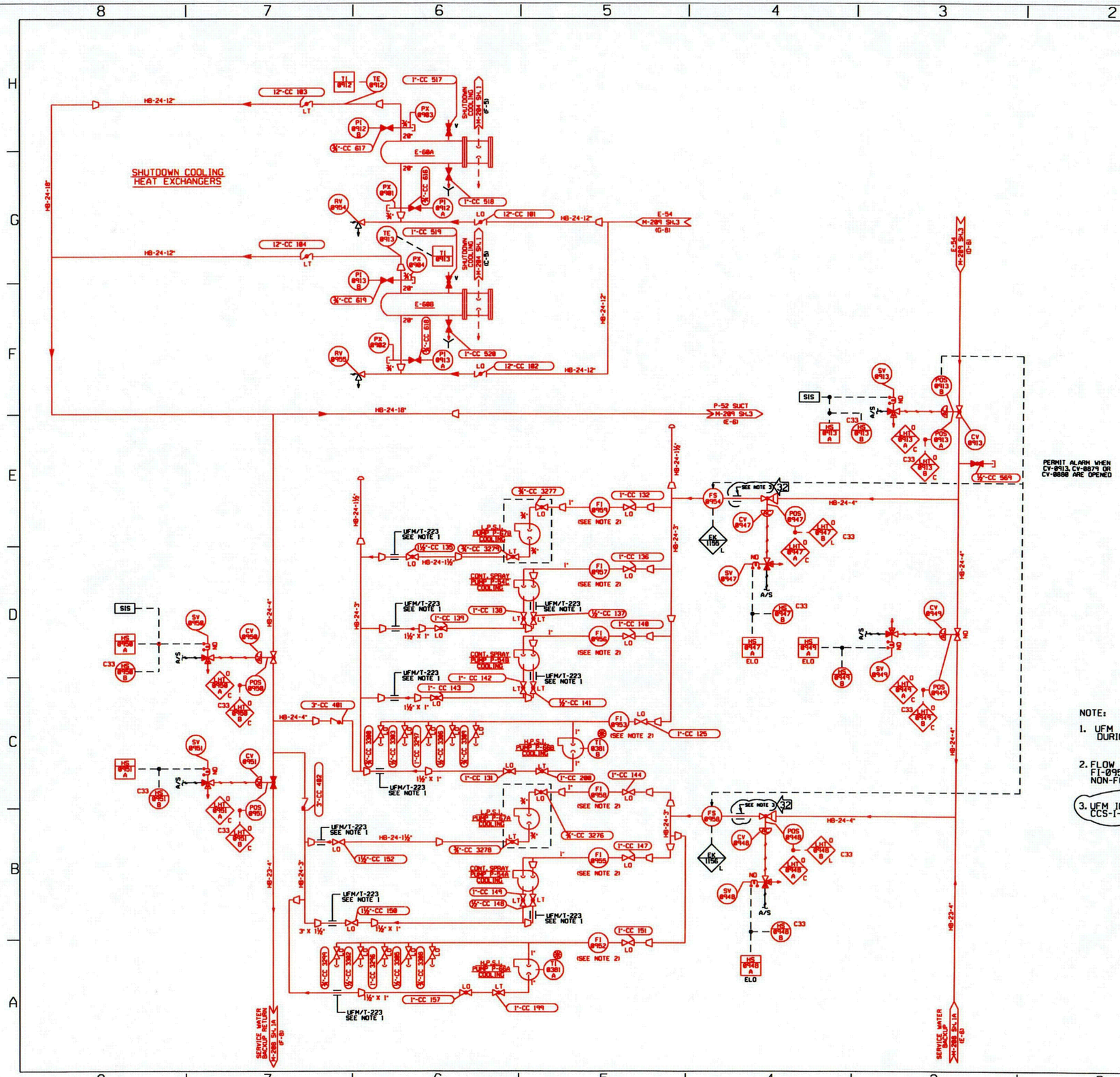
RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\dwgrev2-lr\LR-M209-1.DGN 03/21/2005 10:59:28 AM

C34

COLOR TABLE-2 DRIVER-L2

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



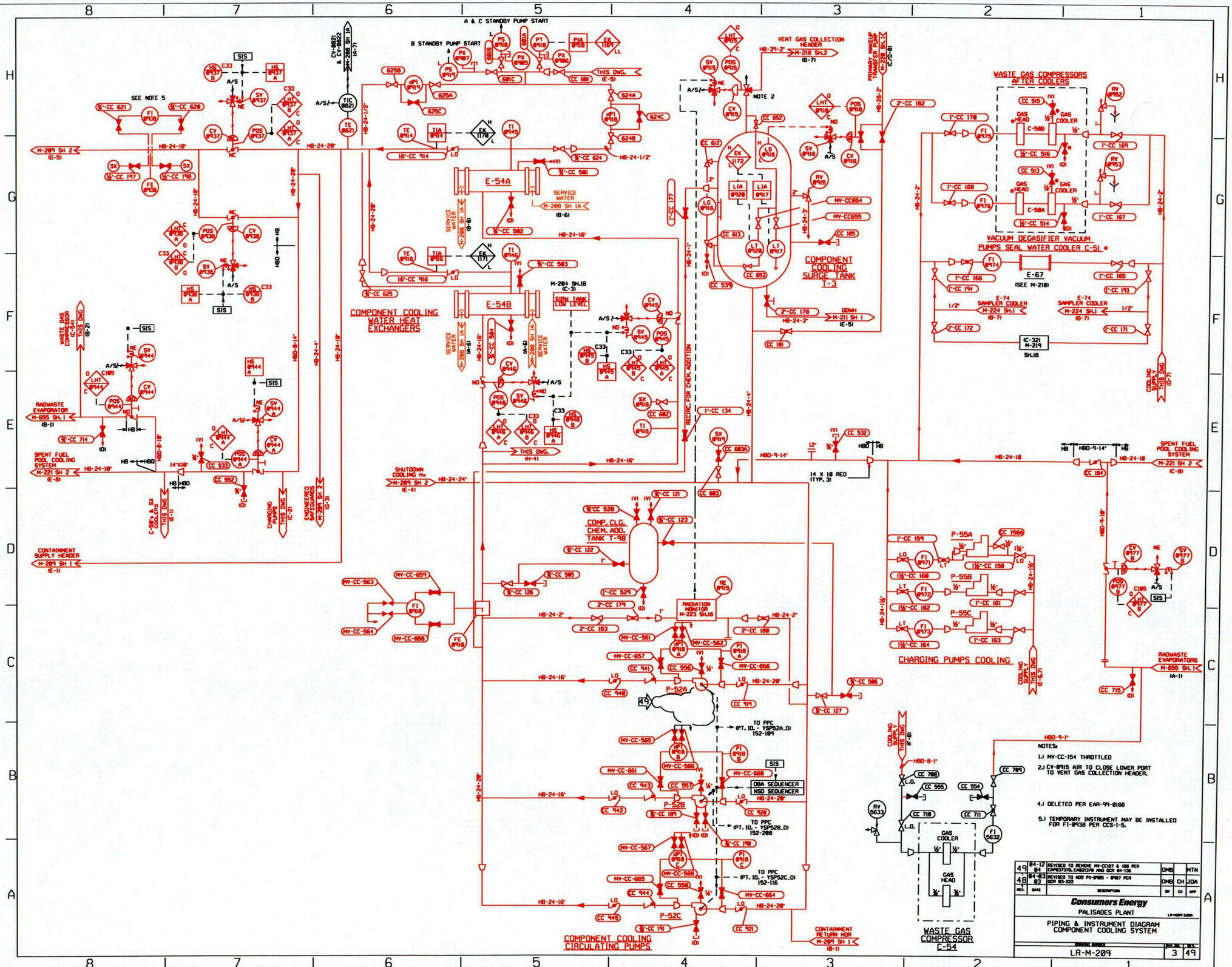
RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\dwgrev2-lr\LR-M209-2.DGN 03/21/2005 11:00:53 AM

C35

COLOR TABLE-3 DRIVER-L3

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

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C36

COLOR TABLE-4 DRIVER-L4

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.

RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

CONTROLLED CHEM. LAB. DRAIN TANK T-76

CONTROLLED CHEM. LAB. DRAIN PUMP P-61

EQUIPMENT DRAIN TANK T-80

EQUIPMENT DRAIN PUMPS P-75 A & B

P-75A

P-75B

T-961

CRDM LEAKOFF

CRD SEAL LEAKAGE RESERVOIR EL. 598' (CONTAINMENT)

NOTES:
1. ALL VALVES ON THIS PRINT ARE CRV PREFIX UNLESS OTHERWISE NOTED.
2. A TM FOR TEST RIG INSTALLATION HAS BEEN APPROVED AND INCORPORATED INTO RT-71L, WHICH IS PERFORMED EACH REFUELING OUTAGE. MV-CRV622A (D-4)

REV.	DATE	DESCRIPTION	BY	CK	APP
43	04-38 03	REVISED TO ADD NOTE 2 FOR TM PER DCR 03-242	DMB	CH	DMK TJS
42	04-24 02	REVISED TO ADD PI-1088 PER DCR 02-585			

Consumers Energy
PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
RADIOACTIVE WASTE TREATMENT SYSTEM
CLEAN

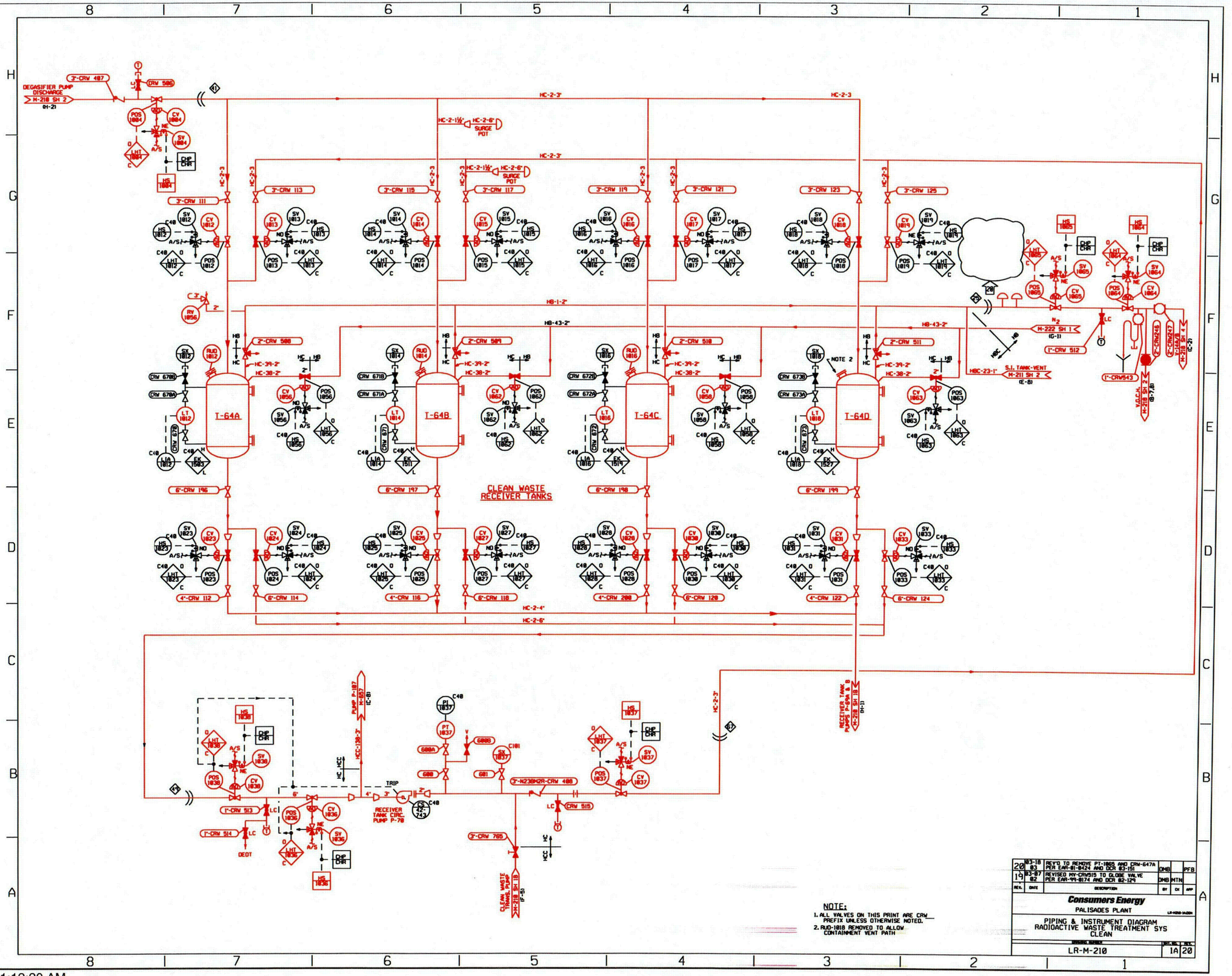
LR-M-210 | 1 | 43

...\dwgrev2-lr\LR-M210-1.DGN 03/21/2005 11:10:46 AM

C37

COLOR TABLE-4 DRIVER-L4

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



NOTE:
1. ALL VALVES ON THIS PRINT ARE CRV__ PREFIX UNLESS OTHERWISE NOTED.
2. RUD-1818 REMOVED TO ALLOW CONTAINMENT VENT PATH

REV.	DATE	DESCRIPTION	BY	CK	APP
20	03-18-03	REV'D TO REMOVE PT-1005 AND CRV-647A PER EAR-01-0424 AND DCR 02-151	DMB		PFB
19	03-07-02	REVISED MV-CRV515 TO GLOBE VALVE PER EAR-99-0174 AND DCR 02-129	DMB	MTN	

Consumers Energy
PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
RADIOACTIVE WASTE TREATMENT SYS
CLEAN

DRAWING NO.	REV. NO.	SHT. NO.
LR-M-210	1A	20

RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

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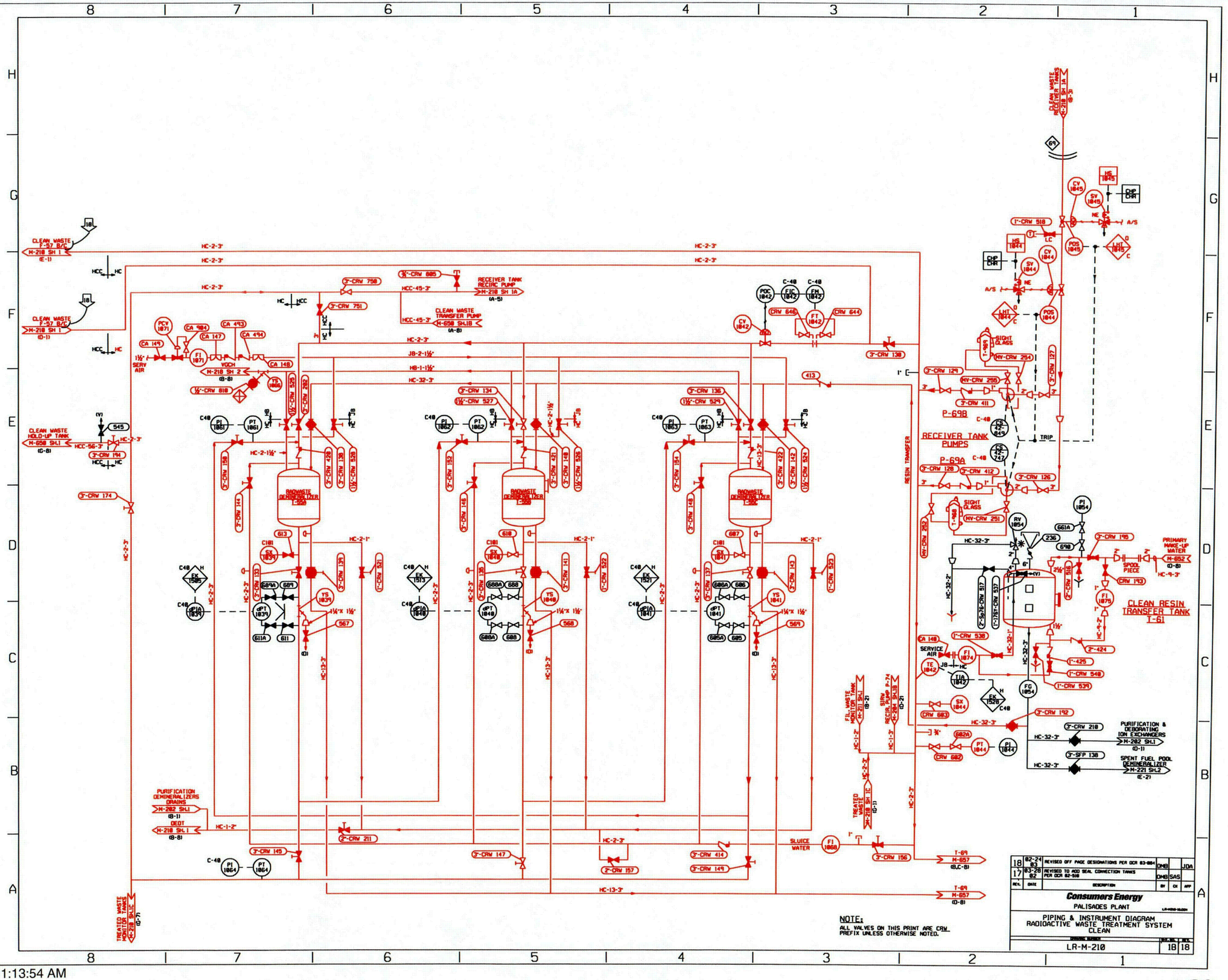
C38

COLOR TABLE-4 DRIVER-L4

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



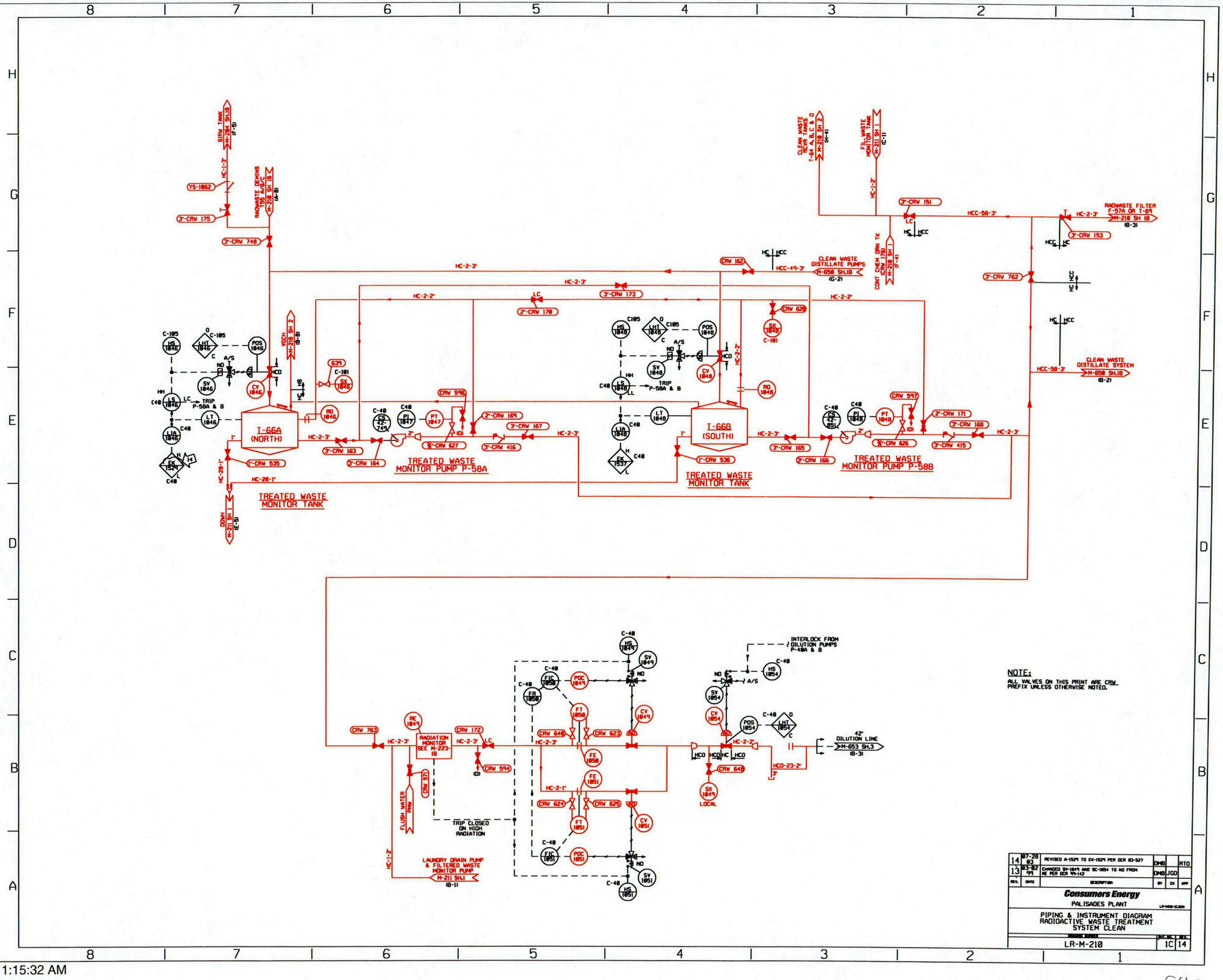
RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\dwgrev2-lr\LR-M210-1B.DGN 03/21/2005 11:13:54 AM

C39

COLOR TABLE-4 DRIVER-L4

THIS DRAWING IS COLOR CODED FOR LICENSE RENEWAL.



NOTE:
ALL VALVES ON THIS PRINT ARE CRW PREFIX UNLESS OTHERWISE NOTED.

REV.	DATE	DESCRIPTION	BY	CK	APP
14	97-28 03	REVISED A-1529 TO EX-1529 PER DCR 03-527	DMB		RTD
13	03-82 99	CHANGED SV-1849 AND SC-1854 TO NO FROM NE PER DCR 99-142	DMB	JGD	

Consumers Energy
PALISADES PLANT

PIPING & INSTRUMENT DIAGRAM
RADIOACTIVE WASTE TREATMENT SYSTEM CLEAN

LR-M-210 | IC | 14

RED=IN SCOPE FOR LR
BLACK=NOT IN SCOPE

...\dwgrev2-lr\LR-M210-1C.DGN 03/21/2005 11:15:32 AM

C49