START

0025668

15

ENGINEERING CHANGE NOTICE

Page 1 of 15

1. ECN ~~187609~~

Proj. ECN W-105-213

2. ECN Category (mark one)						
Supplemental	[X]	Change ECN	[]	Supersedure	[]
Cancel/Void	[]	Direct Revision	[]	Temporary	[]	Discovery []

3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
GJ KUBINSKI, KEH, E6-23, 6-2669	9/22/92

5. Project Title/No./Work Order No.	6. Bldg./Sys./Fac. No.	7. Impact Level
LERF, 242-A EVAP INTERIM RETENTION BASINS, W-105	242-AL	3Q 3/SC3 DRS 10-20-92

8. Document Number Affected (include rev. and sheet no.)	9. Related ECN No(s).	10. Related PO No.
SEE BLOCK (12)	W-105-116 & W-105-182	N/A

11a. Modification Work	11b. Work Package Doc. No.	11c. Complete Installation Work	11d. Complete Restoration (Temp. ECN only)
[] Yes (fill out Blk. 11b) ☒ No DRS 10-20-92 ~~11c.~~ ~~11d.~~ Unknown	Unknown N/A	N/A Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

DOCUMENTS AFFECTED:

NOTE: SC-3

H-2-79666, SH1, REV1
H-2-79667, SH1, REV1
H-2-79667, SH2, REV1
H-2-79668, SH5, REV0
H-2-79687, SH1, REV1
H-2-79687, SH2, REV1
CONSTR SPEC W-105-C3, REV0

CHANGE ALL AFFECTED DOCUMENTS AS OUTLINED ON PAGE 3.

JAN 1993 RECEIVED EDMC

13a. Justification (mark one)							
Criteria Change	[X]	Environmental	[]	Facilitate Const.	[]
Design Error/Omission	[]	Design Improvement	[]	As-Found	[]	Const. Error/Omission	[]

13b. Justification Details

LOI #115 DIRECTS KEH TO REMOVE VALVE & ACTUATOR MOV 43-1, ALSO LOI #119 DIRECTS KEH TO INSTALL REDUCED CAPACITY LEACHATE PUMPS AND FLOW INSTRUMENTATION.

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

KEH DISTRIBUTION		J. J. Huston	S1-54
Const Doc Cntl	E2-50	M. N. Islam	R3-08
WHC DISTRIBUTION		D. R. Shreve	R3-30
Project Files	R1-28	S. J. Skurla	H4-57
S. A. Burris	T1-30	L. R. Tollbom (PE)	R3-30
J. K. Epperley	R1-29	M. A. White	R1-43
E. R. Hamm	S4-65	R. B. Wurz	S5-14
STA. 6	~~T2-03~~	~~DOE/A. G. Lassila~~	~~A5-10~~
STA. 10	A3-87	Lupe Garza	L6-76

RELEASE STAMP

OFFICIAL RELEASE BY WHC 5

DATE OCT 27 1992 Sta. 4

A-7900-013-2 (11/88) (EF) GEF095

A-7900-013-1 (11/88)

9312904230 0

ENGINEERING CHANGE NOTICE	Page 2 of 15	1. ECN (use no. from pg. 1) W-105-213

15. Design Verification Required	16. Cost Impact						17. Schedule Impact (days)	
	ENGINEERING			CONSTRUCTION				
[] Yes	Additional	[X]	$ 500	Additional	[X]	$ 1100	Improvement	[] N/A
[X] No	Savings	[]	$	Savings	[]	$	Delay	[]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

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

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

Document Number/Revision	Document Number/Revision	Document Number Revision

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog./Project Engineer [signature]	10-16-92	PE [signature]	10/14/92
Cog./Project Engr. Mgr. [signature] for [signature]	10-21-92	QA [signature]	10-15-92
QA [signature]	10/22/92	Safety D Lundgren	10-12-92
Safety		Design G P McDonald	10/9/92
Security		Other SAETS. M.A. Fischer	10/18/92
Proj. Prog./Dept. Mgr.		Env. T. Ambrose	10/14/92
Def. React. Div.			
Chem. Proc. Div.			
Def. Wst. Mgmt. Div.		DEPARTMENT OF ENERGY	
Adv. React. Dev. Div.			
Proj. Dept.			
Environ. Div.		ADDITIONAL	
IRM Dept.			
Facility Rep. (Ops.)			
Other Darrell R. Shreve WHC/CE	10-22-92		
[signature]	10/26/92		
VC Boyles for RJN 10/26/92			

9312904230 1

DESCRIPTION OF CHANGE:

H-2-79666, SH1, REV1

- REVISE DETAIL 1 AS SHOWN ON PAGE 4.

H-2-79667, SH1, REV1

- ADD FE-42-1 AND ADDITIONAL CND AS SHOWN ON PAGE 5.

H-2-79667, SH2, REV1

- ADD FE-43-1 AND ADDITIONAL CND AS SHOWN ON PAGE 6.
- ADD FE-44-1 AND ADDITIONAL CND AS SHOWN ON PAGE 7.
- REVISE NAMEPLATE LEGEND AS SHOWN ON PAGE 7.
- REVISE ELEV "H" AS SHOWN ON PAGE 8.

H-2-79668, SH5, REV0

- REMOVE POWER FEEDER FOR MOV 43-1 AND ADD LEACHATE FLOW POWER SUPPLY FEEDER BREAKERS AS SHOWN ON PAGE 9.
- ADD PWR-*-1 & FQI-*-1 AND ENCLOSURE HEATER TO ELEMENTARY DIAGRAM AS SHOWN ON PAGE 10.
- DELETE MOV 43-1 ELEMENTARY DIAGRAM AS SHOWN ON PAGE 11.

H-2-79687, SH1, REV1

- REVISE WIRERUN LIST AND CONDUIT SCHEDULE AS SHOWN ON PAGES 12 & 13.
- DELETE WIRERUN #80.

H-2-79687, SH2, REV1

- REVISE WIRERUN LIST AS SHOWN ON PAGES 14 & 15.

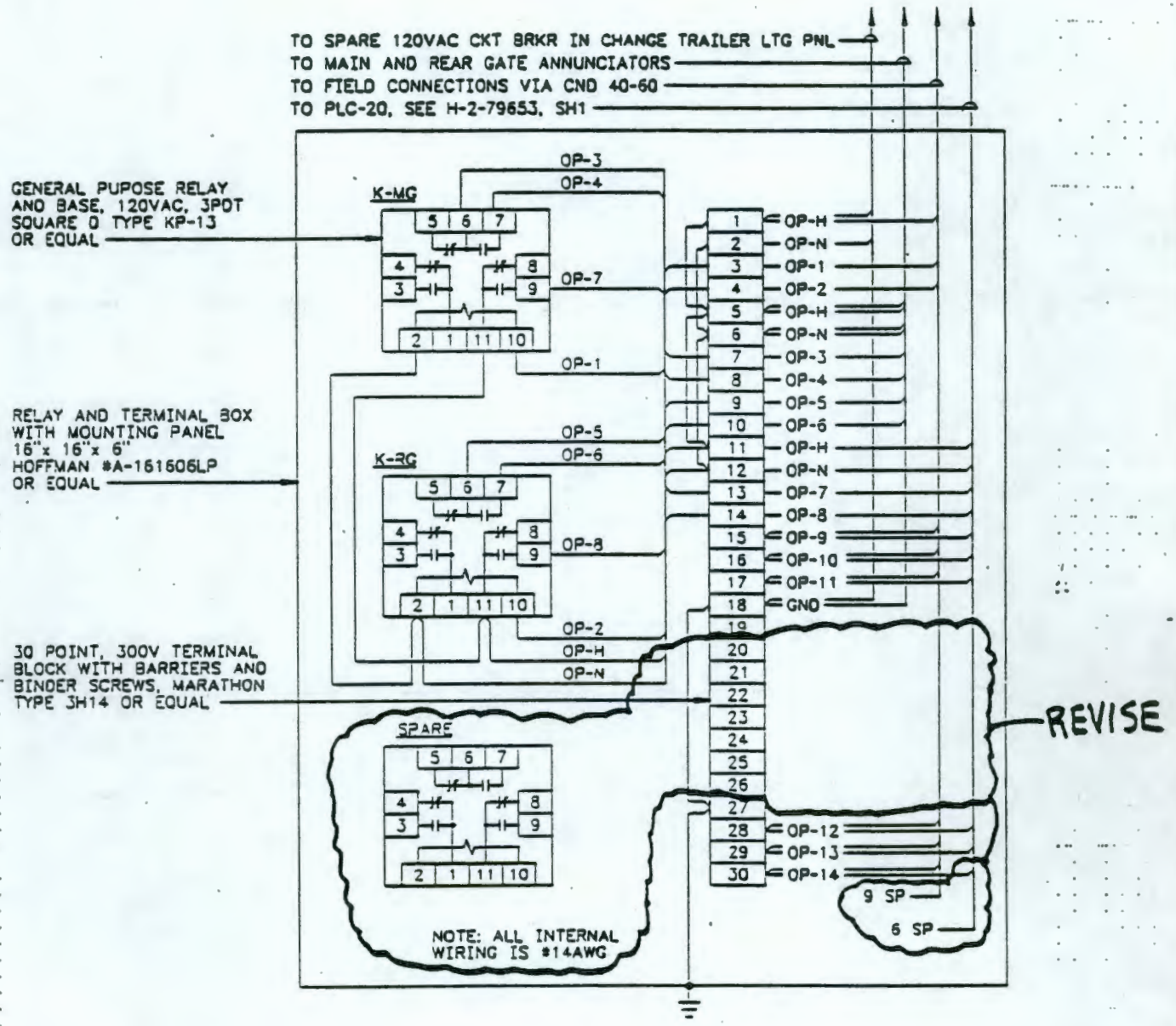
CONSTRUCTION SPECIFICATION W-105-C3, REV0

- REVISE SECTION 16400 AS FOLLOWS:
  DELETE "EXCEPT THAT CONDUCTORS #10AWG AND SMALLER SHALL BE SOLID" FROM SUB-PARAGRAPH 2.1.3.2.

9 3 1 2 9 0 4 2 3 0 2

KAISER ENGINEERS HANFORD	ENGINEERING CHANGE NOTICE SKETCH					
Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-79666	1	1	G. KUBINSKI	10/6/92 ML Alexander	W-105-213	4/15

THIS PAGE MODIFIES PAGE 15 of ECN W-105-116 AND PAGE 9 of ECN W-105-182.



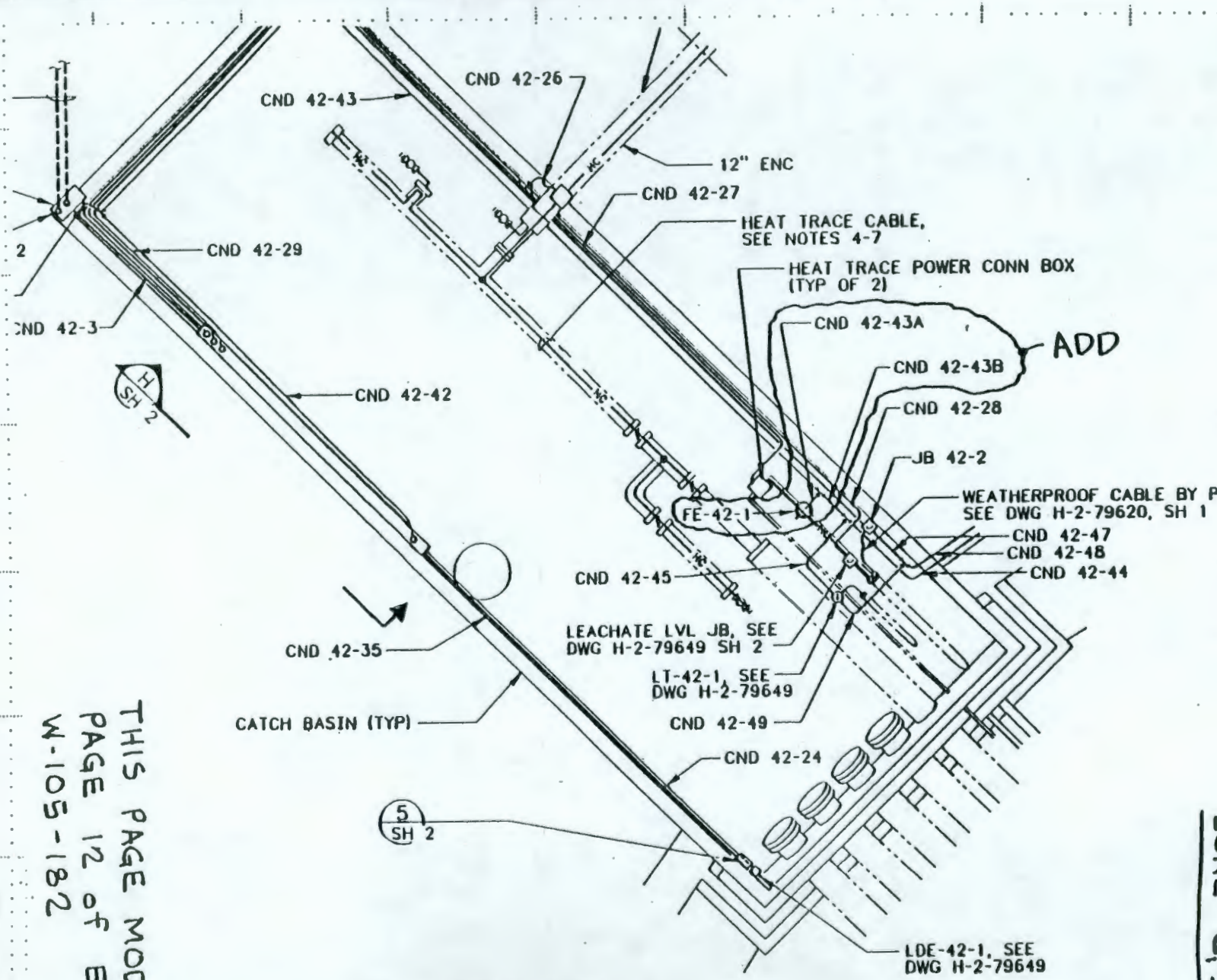
DETAIL 1
SCALE: NONE

9 3 1 2 9 0 4 2 3 0 4

KAISER ENGINEERS
HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-79667	1	1	G. KUBINSKI	10/6/92	W-105-213	5/15



ZONE C,3

ENLARGED PLAN
CATCH BASIN 242AL-42
SCALE: 1/4" = 1'-0"
SEE Z E-6

THIS PAGE MODIFIES PAGE 12 of ECN W-105-182

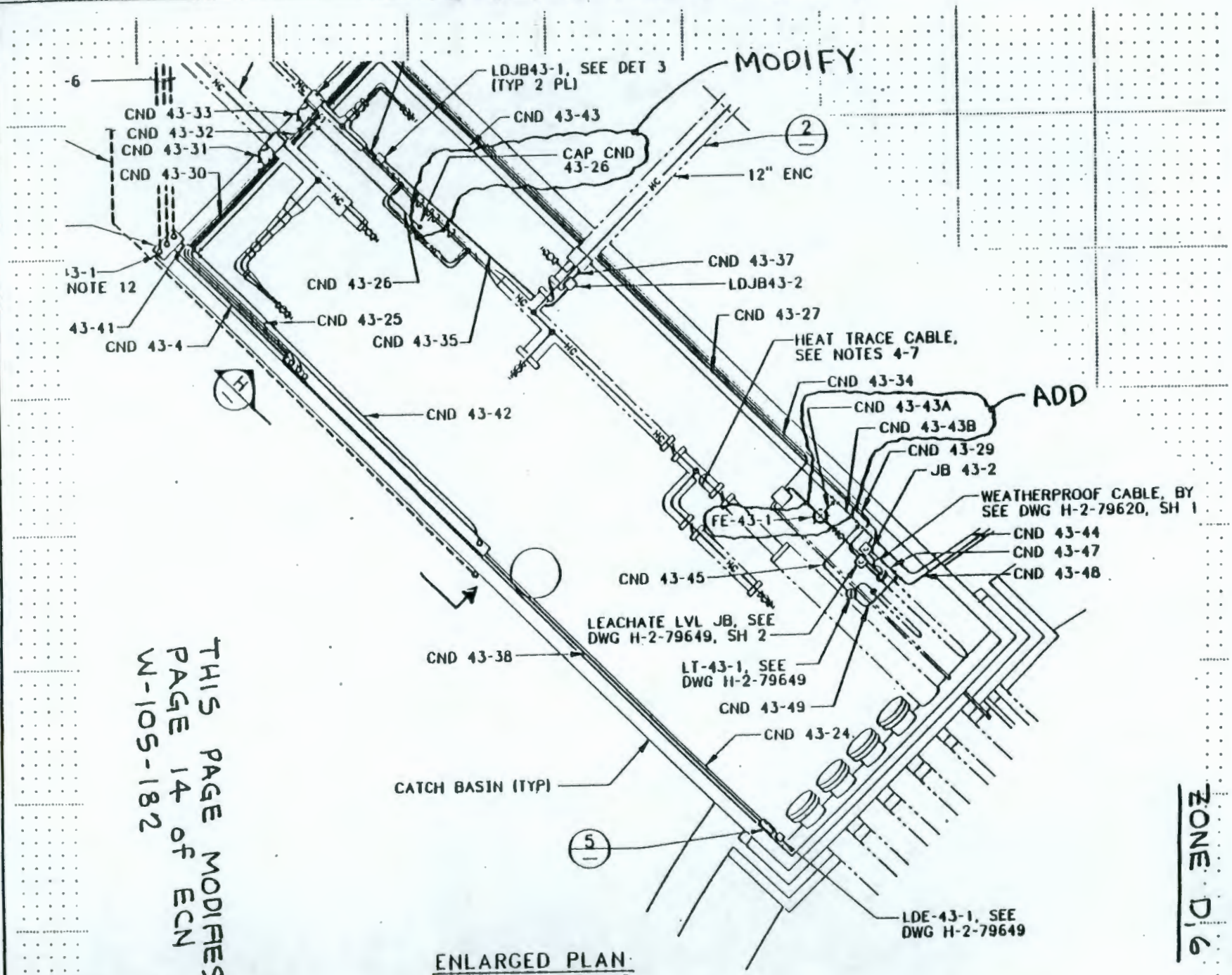
KEH-0159 00 (1/88)

9 3 1 2 9 0 4 2 3 0 5

KAISER ENGINEERS
HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-79667	2	1	G. KUBINSKI	10/6/92	W-105-213	6/15



ZONE D,6

ENLARGED PLAN
CATCH BASIN 242AL-43
SCALE: NONE
SEE SH 1, Z E-5

THIS PAGE MODIFIES
PAGE 14 of ECN
W-105-182

KEH-0159 00 (1/88)

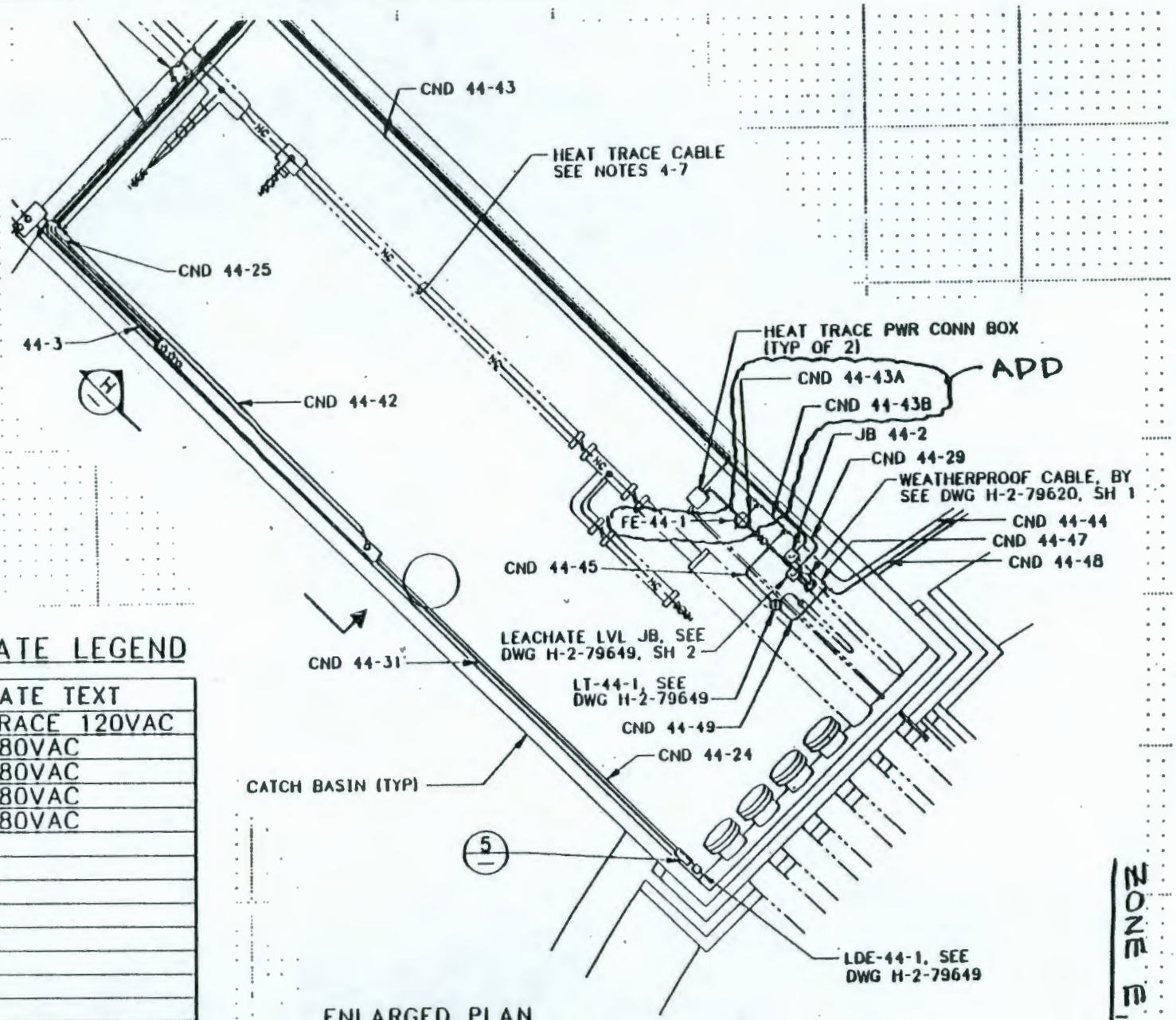
9 3 1 2 9 0 4 2 3 0 6

KAISER ENGINEERS HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-79667	2	1	G. KUBINSKI	10/6/92	W-105-213	7/15

THIS PAGE MODIFIES ECN W-105-182 PAGE 15 of 15



ZONE E, 3

NAMEPLATE LEGEND

NO	NAMEPLATE TEXT
1	HEAT TRACE 120VAC
2	P*-1 480VAC
3	P*-2 480VAC
4	P*-3 480VAC
5	P*-4 480VAC
6	CB *-1
7	CB *-2
8	MPZ-*
9	P-*
10	P*-1
11	P*-2
12	P*-3
13	P*-4
14	LY *-1
15	LDS-*-1 & LDY-*-1
16	TS-*-1
17	PWR-*-1 & FQI-*-1

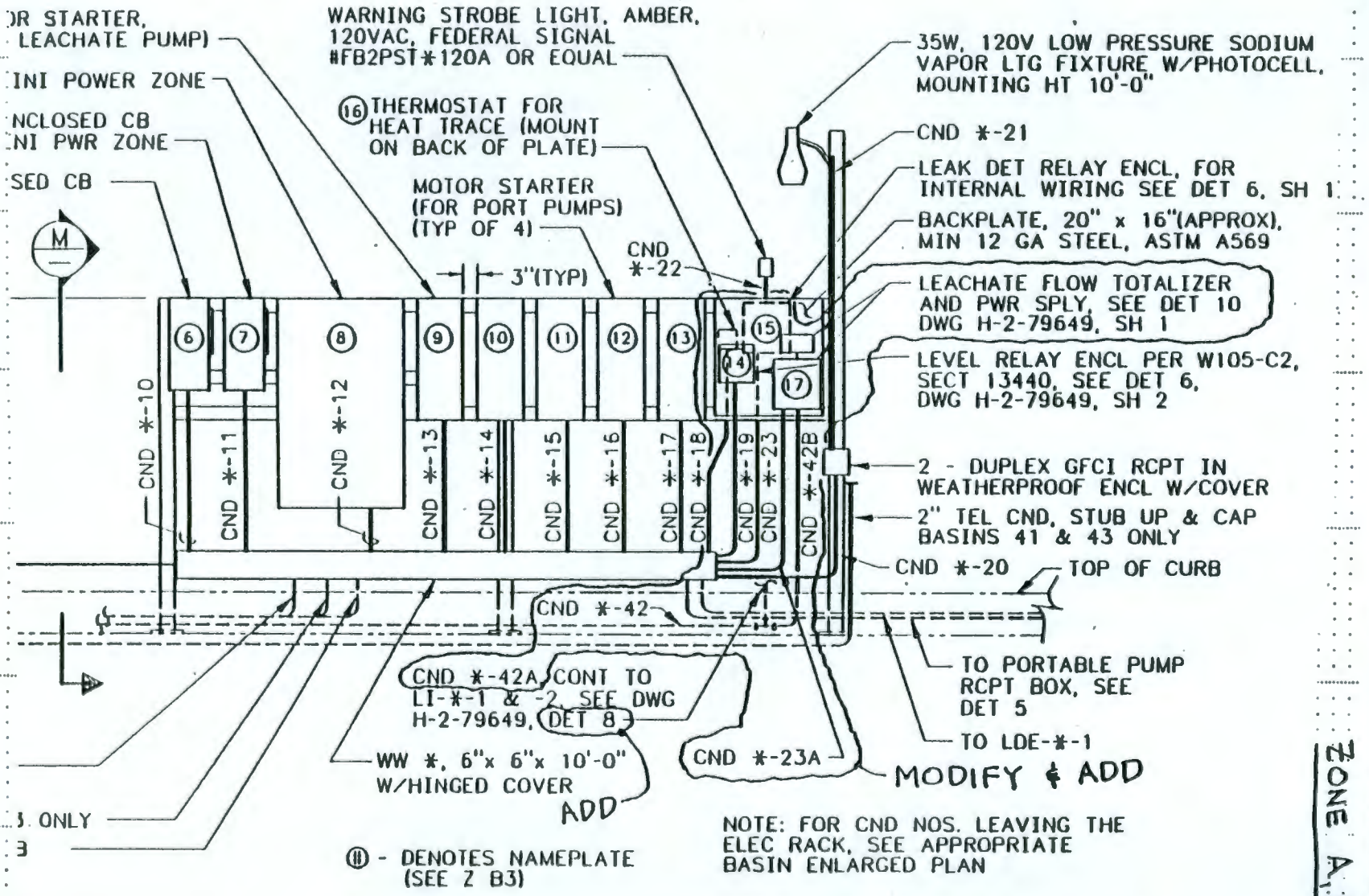
ADD

ENLARGED PLAN
CATCH BASIN 242AL-44
SCALE: NONE
SEE SH 1, Z E-3

ZONE B, 3

KEH-0159 00 (1/88)

9 3 1 2 9 0 4 2 3 0 7



THIS PAGE MODIFIES PAGE 16 of ECN W-105-182

ZONE A, B, G, I

ELEVATION (H) SH 1 & 2

SCALE: 1/2"=1'-0"

* - TO BE REPLACED W/BASIN NUMBER (42, 43 OR 44)

KAISER ENGINEERS HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-79667	2	1	G. KUBINSKI	10/6/92	W-105-213	8/15

KEH-0159 00 (1/88)

KAISER ENGINEERS HANFORD	ENGINEERING CHANGE NOTICE SKETCH					
Ref. Dwg. H-2-79668	Sh. 5	Rev. 0	Prepared By G.KUBINSKI	Checked By 10/6/92 M L [illegible]	ECN No. W-105-213	Page 9/15

ZONE E,2,4,6

PANELBOARD MPZ-42 LOCATION 242AL-42 VOLTS 208Y/120VAC 3PH,4W
MFG & TYPE SQ-D POWER SUPPLIED FROM BASIN SUBSTA
CKT BRKR TYPE PLUG-ON
NEMA TYPE ENCL 4 ☒ MAIN CKT BRKR ☐ PANELBOARD GROUND FAULT PROTECTION 60A AMP BUS
☒ SURFACE MOUNTED ☐ MAIN LUGS ONLY 60A AMP NEUT
☐ FLUSH MOUNTED ☐ TOP ☐ BOT ☒ GROUND BUS

SERVICE	VA	NO.		NO.	VA	SERVICE
HEAT TRACE	2000	1 *		2		SPARE
ADD → LEACHATE FLOW PWR SPLY	130	5		6	460	LTG, CONV RCPT
LEAK & LEVEL DETECTION	100	7		8		PIPE JUMPER HT TRACING RCPT
SPARE		9		10		SPARE
SPARE		11		12		SPARE

* WITH GFCI

PANELBOARD MPZ-43 LOCATION 242AL-43 VOLTS 208Y/120VAC 3PH,4W
MFG & TYPE SQ-D POWER SUPPLIED FROM BASIN SUBSTA
CKT BRKR TYPE PLUG-ON
NEMA TYPE ENCL 4 ☒ MAIN CKT BRKR ☐ PANELBOARD GROUND FAULT PROTECTION 60A AMP BUS
☒ SURFACE MOUNTED ☐ MAIN LUGS ONLY 60A AMP NEUT
☐ FLUSH MOUNTED ☐ TOP ☐ BOT ☒ GROUND BUS

SERVICE	VA	NO.		NO.	VA	SERVICE
HEAT TRACE	3055	1 *		2		SPARE
CHANGE → LEACHATE FLOW PWR SPLY	130	5		6	460	LTG, CONV RCPT
LEAK & LEVEL DETECTION	100	7		8		PIPE JUMPER HT TRACING RCPT
SPARE		9		10		SPARE
SPARE		11		12		SPARE

* WITH GFCI

PANELBOARD MPZ-44 LOCATION 242AL-44 VOLTS 208Y/120VAC 3PH,4W
MFG & TYPE SQ-D POWER SUPPLIED FROM BASIN SUBSTA
CKT BRKR TYPE PLUG-ON
NEMA TYPE ENCL 4 ☒ MAIN CKT BRKR ☐ PANELBOARD GROUND FAULT PROTECTION 60A AMP BUS
☒ SURFACE MOUNTED ☐ MAIN LUGS ONLY 60A AMP NEUT
☐ FLUSH MOUNTED ☐ TOP ☐ BOT ☒ GROUND BUS

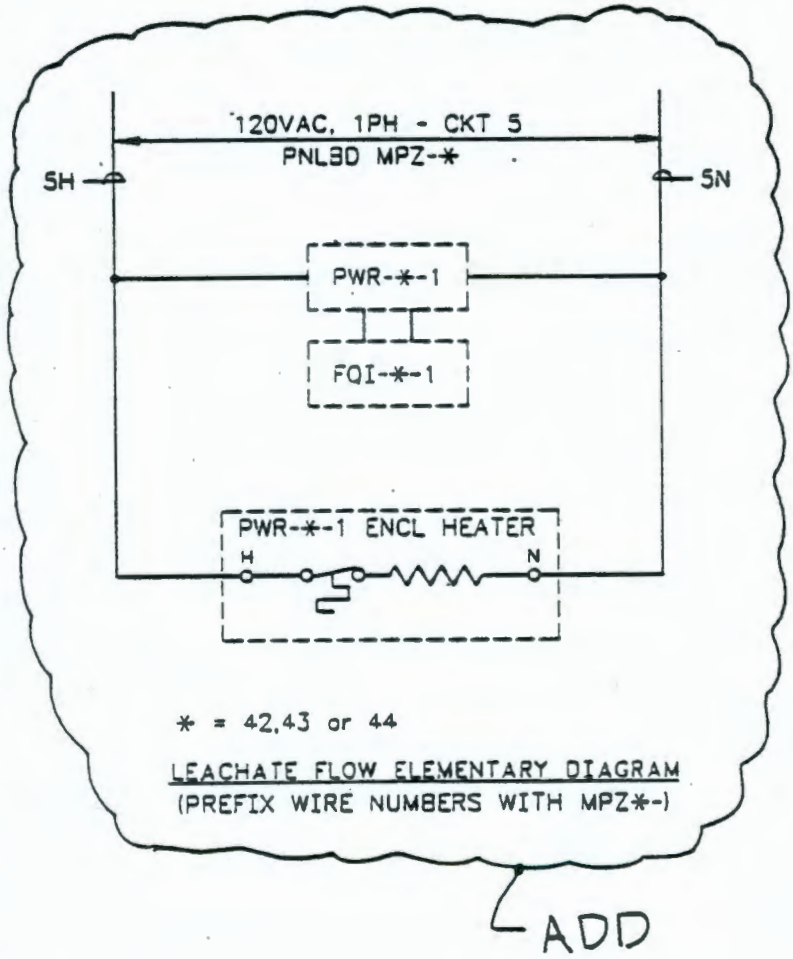
SERVICE	VA	NO.		NO.	VA	SERVICE
HEAT TRACE	1980	1 *		2		SPARE
ADD → LEACHATE FLOW PWR SPLY	130	5		6	460	LTG, CONV RCPT
LEAK & LEVEL DETECTION	100	7		8		PIPE JUMPER HT TRACING RCPT
SPARE		9		10		SPARE
SPARE		11		12		SPARE

* WITH GFCI

9312904230 8

KAISER ENGINEERS HANFORD	ENGINEERING CHANGE NOTICE SKETCH					
Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-79668	5	0	G. KUBINSKI	10/6/92 M L Alexander	W-105-213	10/15

ZONE B, C, 3, 4

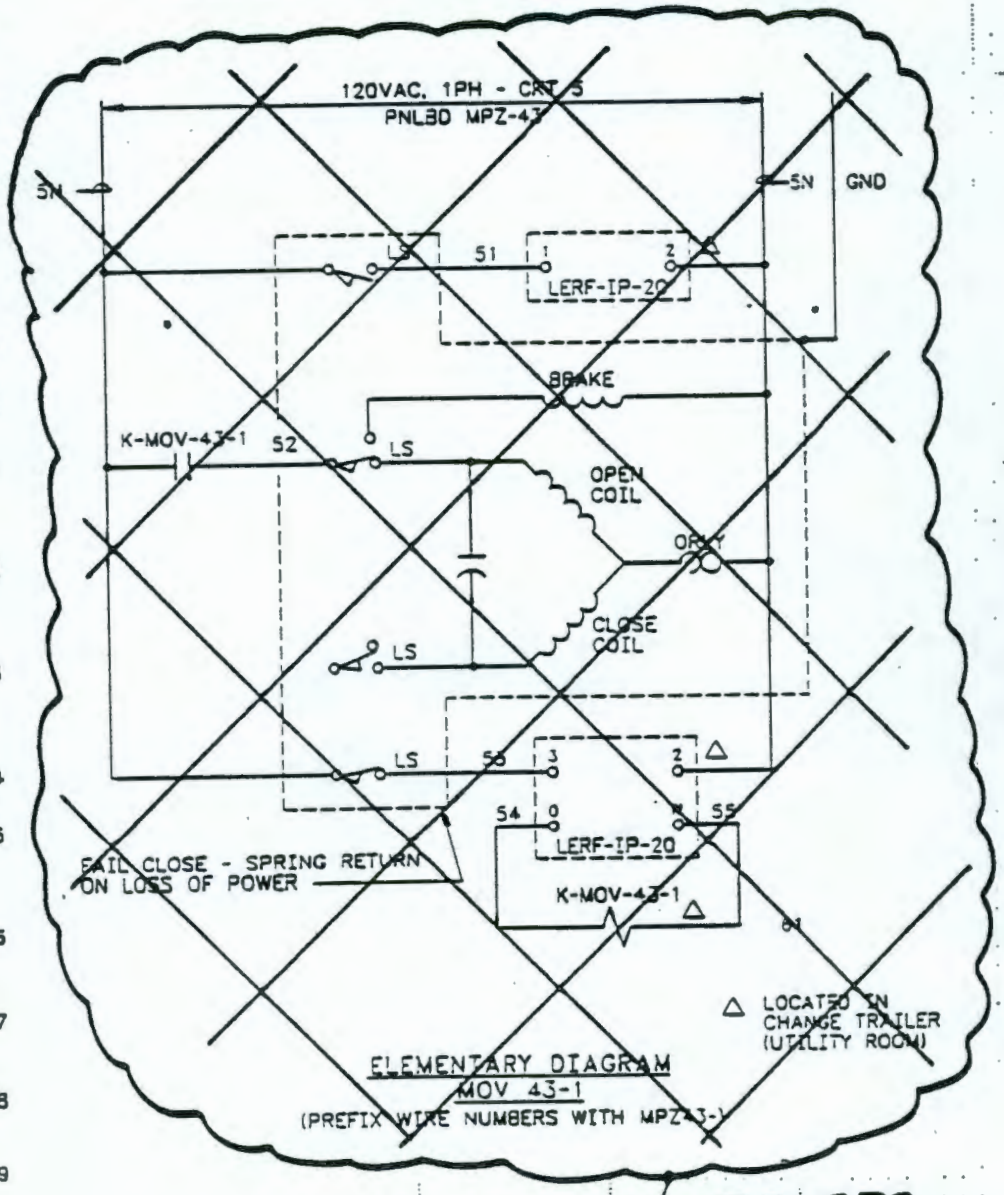


9312904230 9

KAISER ENGINEERS HANFORD	ENGINEERING CHANGE NOTICE SKETCH					
Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-79668	5	0	G. KUBINSKI	10/6/92 ML Allende	W-105-213	11/15

ZONE B, C, 3, 4

HEAT TRACE ELEMENTARY DIAGRAM
BASIN 242AL-43
(PREFIX WIRE NUMBERS WITH MPZ43-)



ELEMENTARY DIAGRAM
MOV 43-1
(PREFIX WIRE NUMBERS WITH MPZ43-)

DELETE

NOTE: THIS PAGE VOIDS PAGE 30 of ECN W-105-116

9312904231 0

KEH-0159 00 (1/88)

9 3 1 2 9 0 4 2 3 1 1

KAISER ENGINEERS
HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-79687	1	1	G. KUBINSKI	MLC 9/6/92	W-105-213	12

MODIFY

WIRE RUN NO	NO OF WIRES	SIZE OF WIRES	TYPE OF WIRES	FROM	VIA	TO	WIRE NUMBERS
83	6	12	2	WW 43	CND 43-4, JB 43-1, CND 43-3, HH-6, CND 40-13, HH-5, CND 40-10, HH-3, CND 40-7, HH-1, CND 40-20	JB 40-2 (SPLICE TO WIRE RUN 134)	GND (WW 43) 5 SP (TAPE ENDS AND COIL WIRES IN WW 43)
127	18	12	2	RELAY & TERM BOX (TRLR)	CND 40-60	JB 40-1 (SPLICE TO WIRE RUN 128,134)	OP-H, -1, -2, -9, -10, -11, OP-12, -13, -14, GND, 8 SP
134	20	16	4	JB 40-2 (SPLICE TO WIRE RUN 83,130,140, 141,142,163,173,183)	2"CND, AERIAL CABLE, 2"CND	JB 40-1 (SPLICE TO WIRE RUN 127,128)	OP-H, -2, -9, -10, -11, OP-12, -13, -14, GND, 11 SP
138	16	14	2	RELAY & TERM BOX (TRLR)	CND 40-85	LERF-1P-20	OP-H, -N, -7, -8, -9, -10, -11, OP-12, -13, -14, GND, 5 SP

MODIFY

THIS PAGE MODIFIES PAGE 32 of ECN W-105-116
AND PAGE 21 of ECN W-105-182.

KEH-0159 00 (1/88)

KAISER ENGINEERS HANFORD	ENGINEERING CHANGE NOTICE SKETCH					
Ref. Dwg. H-2-79687	Sh. 1	Rev. 1	Prepared By G KUBINSKI	Checked By 10/6/92 ML Alexander	ECN No. W-105-213	Page 13/15

THIS PAGE MODIFIES PAGE 25 of ECN W-105-182
AND PAGE 33 of ECN W-105-116

CONDUIT SCHEDULE

CND NO	CND SIZE	WIRE RUN NUMBERS	
42-12	2"	37,50,52,54,55,160,165,201	ADD
42-23A	3/4"	201	ADD
42-42	3/4"	190,191,192,202	
42-42A	3/4"	190,191,192	
42-42B	3/4"	202	
42-43	3/4"	190,191,202	
42-43A	3/4"	202	
42-43B	3/4"	190,191	
43-12	2"	59,72,74,77,78,170,175,206	MODIFY
43-23A	3/4"	206	ADD
43-25	3/4"	67	
43-26	3/4"	SPARE	
43-42	3/4"	193,194,195,207	
43-42A	3/4"	193,194,195	ADD
43-42B	3/4"	207	
43-43	3/4"	193,194,207	
43-43A	3/4"	207	
43-43B	3/4"	193,194	
44-12	2"	87,100,102,104,105,180,185,211	ADD
44-23A	3/4"	211	ADD
44-42	3/4"	196,197,198,212	
44-42A	3/4"	196,197,198	
44-42B	3/4"	212	
44-43	3/4"	196,197,212	
44-43A	3/4"	212	
44-43B	3/4"	196,197	

9312904231 2

KAISER ENGINEERS
HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-79687	2	1	G. KUBINSKI	10/6/92	W-105-213	14/15

WIRE RUN NO	NO OF WIRES	SIZE OF WIRES	TYPE OF WIRES	FROM	VIA	TO	WIRE NUMBERS
190	1	18	5	LT-42-1	CND 42-45, TEE, CND 42-43B, TEE, CND 42-43, TEE, CND 42-42 TEE, CND 42-42A ADD	LI-42-1	LT-42-1LCH(+), (-), SH
191	1	18	5	LT-42-2	CND 42-44, TEE, CND 42-43B, TEE, CND 42-43, TEE, CND 42-42 TEE, CND 42-42A	LI-42-2	LT-42-2BSN(+), (-), SH
192	2	18	5	LI-42-1 & LI-42-2	CND 42-42A, TEE, CND 42-42, TEE, CND 42-41, JB 42-1, CND 42-2, HH-5, CND 40-11, HH-3, CND 40-8, HH-1, CND 40-25	JB 40-2A (SPLICE TO WIRE RUN 199)	LI-42-1LCH(-), LT-42-1LCH(-), SH; LI-42-2BSN(-), LT-42-2BSN(-), SH
193	1	18	5	LT-43-1	CND 43-45, TEE, CND 43-43B, TEE, CND 43-43, TEE, CND 43-42 TEE, CND 43-42A ADD	LI-43-1	LT-43-1LCH(+), (-), SH
194	1	18	5	LT-43-2	CND 43-44, TEE, CND 43-43B, TEE, CND 43-43, TEE, CND 43-42 TEE, CND 43-42A	LI-43-2	LT-43-2BSN(+), (-), SH
195	2	18	5	LI-43-1 & LI-43-2	CND 43-42A, TEE, CND 43-42, TEE, CND 43-41, JB 43-1, CND 43-2, HH-6, CND 40-14, HH-5, CND 40-11, HH-3, CND 40-8, HH-1, CND 40-25	JB 40-2A (SPLICE TO WIRE RUN 199)	LI-43-1LCH(-), LT-43-1LCH(-), SH; LI-43-2BSN(-), LT-43-2BSN(-), SH
196	1	18	5	LT-44-1	CND 44-45, TEE, CND 44-43B, TEE, CND 44-43, TEE, CND 44-42 TEE, CND 44-42A ADD	LI-44-1	LT-44-1LCH(+), (-), SH
197	1	18	5	LT-44-2	CND 44-44, TEE, CND 44-43B, TEE, CND 44-43, TEE, CND 44-42 TEE, CND 44-42A	LI-44-2	LT-44-2BSN(+), (-), SH
198	2	18	5	LI-44-1 & LI-44-2	CND 44-42A, TEE, CND 44-42, TEE, CND 44-41 JB 44-1, CND 44-2, HH-8, CND 40-16, HH-6, CND 40-14, HH-5, CND 40-11, HH-3, CND 40-8, HH-1, CND 40-25	JB 40-2A (SPLICE TO WIRE RUN 199)	LI-44-1LCH(-), LT-44-1LCH(-), SH; LI-44-2BSN(-), LT-44-2BSN(-), SH

THIS PAGE MODIFIES PAGE 22, 23 and 24 of ECN W-105-182

KEH-0159.00 (1/88)

9 3 1 2 9 0 4 2 3 1 4

WIRE RUN NO	NO OF WIRES	SIZE OF WIRES	TYPE OF WIRES	FROM	VIA	TO	WIRE NUMBERS
201	3	12	2	PNLBD MPZ-42	CND 42-12, WW 42, CND 42-23A	PWR-42-1	MPZ42-5H, -5N, GND
202	1	18	5	FE-42-1	CND 42-43A, TEE, CND 42-43, TEE, CND 42-42, TEE, CND 42-42B	PWR-42-1 & FQI-42-1	FE-42-1LCH(+), (-), SH
203	1	18	5	FQI-42-1	CND NIPPLE	PWR-42-1	PWR-42-1LCH(+), (-), SH
206	3	12	2	PNLBD MPZ-43	CND 43-12, WW 43, CND 43-23A	PWR-43-1	MPZ43-5H, -5N, GND
207	1	18	5	FE-43-1	CND 43-43A, TEE, CND 43-43, TEE, CND 43-42, TEE, CND 43-42B	PWR-43-1 & FQI-43-1	FE-43-1LCH(+), (-), SH
208	1	18	5	FQI-43-1	CND NIPPLE	PWR-43-1	PWR-43-1LCH(+), (-), SH
211	3	12	2	PNLBD MPZ-44	CND 44-12, WW 44, CND 44-23A	PWR-44-1	MPZ44-5H, -5N, GND
212	1	18	5	FE-44-1	CND 44-43A, TEE, CND 44-43, TEE, CND 44-42, TEE, CND 44-42B	PWR-44-1 & FQI-44-1	FE-44-1LCH(+), (-), SH
213	1	18	5	FQI-44-1	CND NIPPLE	PWR-44-1	PWR-44-1LCH(+), (-), SH

ADD

KAISER ENGINEERS HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg. H-2-79687 | Sh. 2 | Rev. 1 | Prepared By G. KUBINSKI | Checked By 9/6/92 | ECN No. W-105-2213 | Page 15/15

KEH-0159 00 (1/88)