

DOCKETED

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Project Title:	Marsh Landing Generating Station Compliance
TN #:	203085
Document Title:	NRG Marsh Landing's Responses to Data Requests 1-3
Description:	N/A
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Organization:	URS
Submitter Role:	Applicant Consultant
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Docketed Date:	9/19/2014



September 19, 2014

Christine Stora
Compliance Project Manger
California Energy Commission
1516 Ninth Street, MS 4
Sacramento, CA 95814

RE: Marsh Landing Generating Station
Petition to Amend (08-AFC-03C)
Responses to Data Requests 1 - 3

Dear Ms. Stora,

NRG Marsh Landing LLC submitted a Petition to Amend the Marsh Landing Generating Station's license on July 8, 2014. On August 20, 2014, the California Energy Commission Staff requested additional information related to soil and water resources.

On behalf of NRG Marsh Landing LLC, please find enclosed the *Responses to Data Requests 1 - 3*.

If you have questions on this submittal, please call me at (415) 243-3892 or George Piantka at (760) 710-2156.

URS Corporation

Anne Connell
Project Manager

cc: George Piantka, NRG
Enclosure

Technical Area: Soil and Water Resources

Author: Christopher Dennis

BACKGROUND

The Marsh Landing Generating Station (MLGS) proposes to change its fire suppression water supply from a connection to the Contra Costa Generating Station (CCGS) fire suppression loop (raw water from the San Joaquin River) to potable water supplied by the City of Antioch. The MLGS onsite fire suppression system includes an underground firewater loop that supplies the hydrants and fixed suppression systems installed for the MLGS structures. MLGS currently shares the CCGS fire pump that draws water from the San Joaquin River. CCGS has requested that MLGS be disconnected from the CCGS fire pump system. The project owner has indicated the water use permitted in accordance with Condition of Certification SOIL&WATER-6 (50 acre-feet per year) will not increase. The current supply for all project operation and sanitary needs is provided by the City of Antioch.

The proposed new fire suppression water supply would require a new diesel fire pump and approximately 150 lineal feet of new piping. The new piping would be installed from the fire pump to the existing raw water storage tank, where the fire suppression water would be stored. The piping would be above ground and below ground to a maximum depth of five feet.

DATA REQUESTS

- 1. Please explain why CCGS requested the project owner disconnect from the fire suppression water loop shared with CCGS.***

RESPONSE

On April 30, 2013, the CCGS was retired. The CCGS owner has since requested that MLGS install a stand-alone fire suppression system, because the CCGS is in the process of being decommissioned and will no longer be maintained or operated by CCGS. It therefore no longer will be available for use by MLGS.

Furthermore, as explained in the Petition to Amend submitted on July 8, 2014, the existing CCGS fire pump draws water from the San Joaquin River. The proposed fire pump for the MLGS fire suppression system will draw water from the Raw Water Storage Tanks which is supplied by City of Antioch water. As such the proposed modification will eliminate the direct intake of river water, thereby eliminating any potential adverse impacts to aquatic species associated with the withdrawal of river water.

- 2. Please provide water use data showing how much water was delivered from the CCGS fire suppression loop.***

RESPONSE

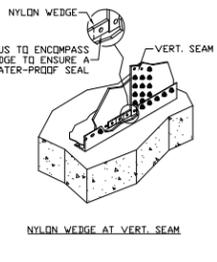
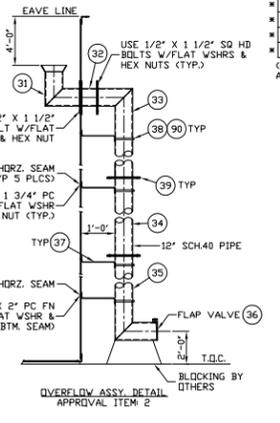
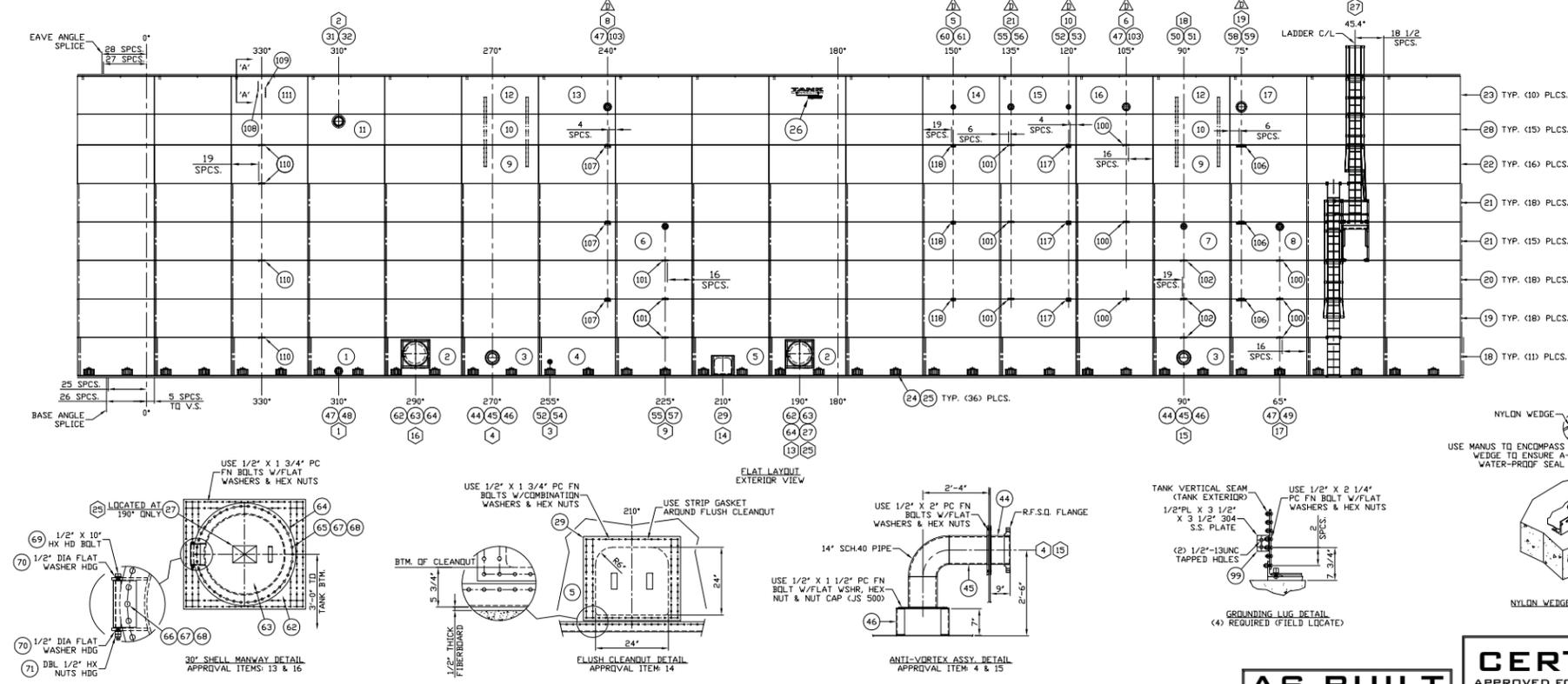
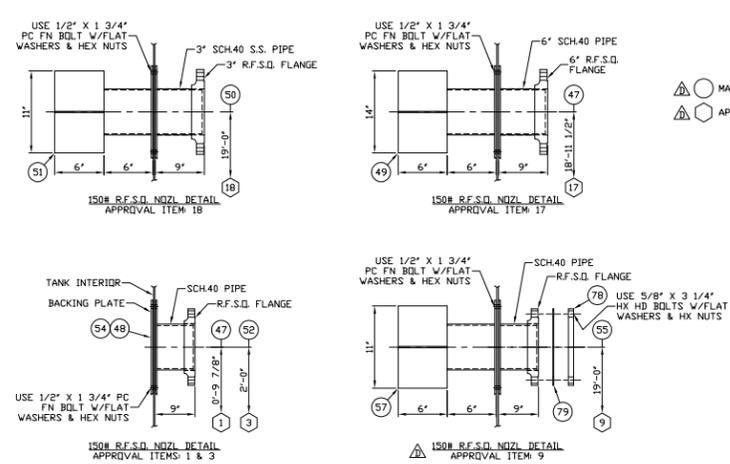
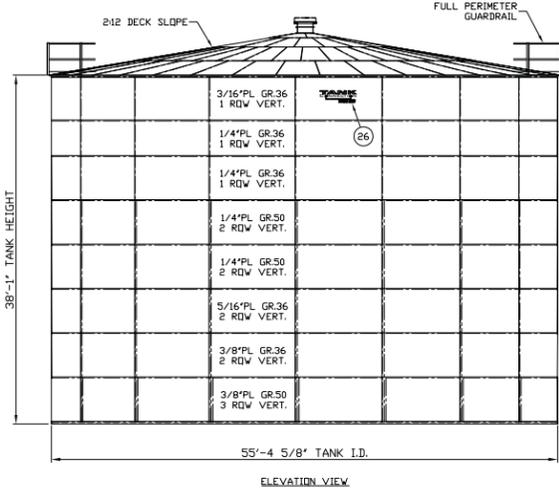
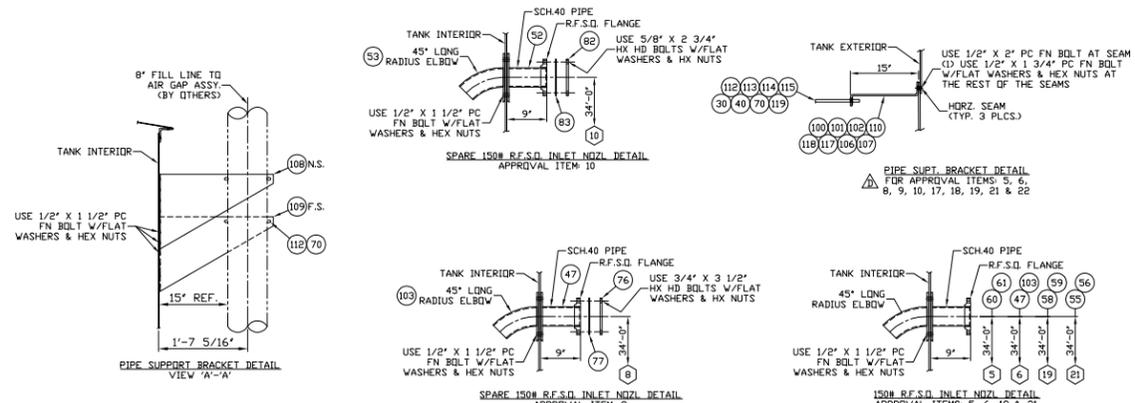
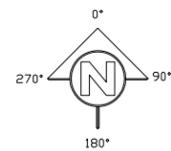
There are no water flow meters on the fire suppression system. Data showing volumes of water delivered from the fire suppression system are therefore not available. The only fire water usage post construction has been for annual inspection and testing of the hydrants, which was done on May 20, 2014.

- 3. Please provide a detailed construction drawing showing the location of the piping where it would be above ground and below ground from the diesel pump to the raw water storage tank and where the piping would connect to the existing onsite fire suppression system.**

RESPONSE

There are no detailed piping drawings at this time. The attached Piping and Instrumentation Diagram (Figure 3-1) shows the tie in points for the future system. The Raw Water Storage Tank drawing (Figure 3-2) shows connection numbers 4 and 19 are for future fire water piping (see Accessory Orientation Chart). These are the only drawings that NRG Marsh Landing has available at this time.

As described and shown on Figure 1 in the Petition to Amend submitted on July 8, 2014, there will be approximately 150 lineal feet of connection piping between the new fire pump, existing Raw Water Storage Tank and the existing fire loop. Most of the connection piping will be below ground (approximately 110 feet). The remaining approximately 40 feet will be above ground near the tank.



ITEM#	PART NO.	QTY	DESCRIPTION	EST. WT.	PAINT
76	FLGB16.56	4	6" BLIND FLANGE ANSI B16.5 150#	25	N/E
77	EGDF0600	4	GASKET 6" 150# PUNCHING EPDM	N	N
78	FLGB16.54	2	4" BLIND FLANGE ANSI B16.5 150#	15	1/E
79	EGDF0400	2	GASKET 4" 150# PUNCHING EPDM	N	N
80	FLGB16.53	1	3" BLIND FLANGE ANSI B16.5 150#	11	1/E
81	EGDF0300	1	GASKET 3" 150# PUNCHING EPDM	N	N
82	FLGB16.52	1	2" BLIND FLANGE ANSI B16.5 150#	5	1/E
83	EGDF0200	1	GASKET 2" 150# PUNCHING EPDM	N	N
84	FLGB16.515	1	1 1/2" BLIND FLANGE ANSI B16.5 150#	5	1/E
85	EGDF0150	1	GASKET 1 1/2" 150# PUNCHING EPDM	N	N
86	BLTHG05000	26	BOLT 1" X 4 1/2" HX HD BOLT HDG A325	N	N
87	WSHF1000	26	1" FLAT WASHER HDG F436	N	N
88	NUTHG1000	26	1" HEX NUT HDG A325	N	N
89	BLTHG0875000	13	BOLT 7/8" X 4" HX HDG A325	N	N
90	WSHF0875	26	7/8" FLAT WASHER HDG F463	N	N
91	NUTHG0875	13	7/8" HEX NUT HDG A325	N	N
92	BLTHG07503500	35	BOLT 3/4" X 3 1/2" HX HD BOLT HDG A325	N	N
93	BLTHG06253250	22	BOLT 5/8" X 3 1/4" HX HDG A325	N	N
94	BLTHG0625750	9	BOLT 5/8" X 2 3/4" HX HDG A325	N	N
95	WSHF0625	31	5/8" FLAT WASHER HDG F463	N	N
96	NUTHG0625	31	5/8" HEX NUT HDG A325	N	N
99	BLTHG08061	4	1/2" PL X 3 1/2" X 3 1/2" S.S. GROUNDING LUG	4	N
100	BLTHG01057	6	PIPE SUPPORT BRACKET 1/4" PL	13	E
101	BLTHG01056	6	4" PIPE SUPPORT BRACKET 1/4" PL	13	E
102	BLTHG01055	3	3" PIPE SUPPORT BRACKET 1/4" PL	9	E
103	BLTHG03019	1	6" PIPE STUB 45° ELBOW	18	I
104	BLTSDJSS05002500	5	1/2" X 2 1/2" SD HEAD BOLT J5500 (GR 8.2)	N	N
105	BLTJSS05001500	62	1/2" X 1 1/2" PC FN BOLT J5500 (GR 8.2)	N	N
106	BLTHG01090	3	10" PIPE SUPPORT BRACKET	13	E
107	BLTHG01093	3	6" PIPE SUPPORT BRACKET	9	E
108	BLTHG01062	1	8" PIPE SUPPORT BRACKET 1/4" PL (L.H.)	22	E
109	BLTHG01063	1	8" PIPE SUPPORT BRACKET 1/4" PL (R.H.)	22	E
110	BLTHG01065	4	8" PIPE SUPPORT BRACKET 1/4" PL	9	E
111	BLTHG01021	1	TOP PANEL 3/16" PL IRV. GR.36 W/PIPE SUPT. PCHG.	377	1/E
112	UBLTTPG625	6	U-BOLT W/ NUTS 6" PIPE GALV	N	N
113	UBLTTPG4500	9	U-BOLT W/ NUTS 4" PIPE GALV	N	N
114	UBLTTPG3500	6	U-BOLT W/ NUTS 3" PIPE GALV	N	N
115	BLTJSS05001500	3	1/2" X 1 1/2" PC FN BOLT J5500 (GR 8.2)	N	N
116	BLTJSS05001500	3	1/2" X 1 1/2" PC FN BOLT J5500 (GR 8.2)	N	N
117	BLTJSS05001500	3	1/2" X 1 1/2" PC FN BOLT J5500 (GR 8.2)	N	N
118	BLTJSS05001500	3	1/2" X 1 1/2" PC FN BOLT J5500 (GR 8.2)	N	N
119	UBLTTPG1500	3	U-BOLT W/ NUTS 1 1/2" PIPE GALV	N	N

APPROVAL ITEM	ITEM	SERVICE	SIZE	REF. DEGREE	RADIUS	ELEV. FROM B.M. OF TANK STEEL TO TOP OF ACCESSORY UNLESS NOTED OTHERWISE
1	47/48	BRAIN	6"	310	---	0'-9 7/8"
2	31/32	OVERFLOW	12"	310	---	SEE DETAIL
3	52/54	LEVEL TRANSMITTER	2"	255	---	2'-0"
4	44/45	FUTURE FIRE WATER PUMP SUCTION W/BREAKER	14"	270	---	2'-6"
5	60/61	SERVICE WATER PUMP-RECIRC	1 1/2"	150	---	34'-0"
6	47/103	WELL WATER PUMP DISCHARGE	6"	105	---	34'-0"
8	47/103	INLET SPARE W/BLIND	6"	240	---	34'-0"
9	55/57	OUTLET SPARE W/BREAKER & BLIND	4"	285	---	19'-0"
10	52/53	INLET SPARE W/BLIND	2"	120	---	34'-0"
13	62/63	SHELL MANWAY	30"	190	---	3'-0"
14	29	FLUSH CLEANOUT	24" SD	210	---	SEE DETAIL
15	44/45	UF FEED PUMP/SRV. WATER PUMP CQM. SUCTION	14"	90	---	2'-6"
16	62/63	SHELL MANWAY	30"	290	---	3'-0"
17	47/49	FUTURE UF FEED PUMP SUCTION W/BREAKER	6"	65	---	18'-11 1/2"
18	50/51	FUTURE SRVC. WATER PUMP SUCTION W/BREAKER	3"	90	---	19'-0"
19	58/59	FIRE WATER PUMP RECIRC. INLET	10"	75	---	34'-0"
21	55/56	RQ PERMATE RECIRC. RETURN	4"	135	---	34'-0"
22	28	AIR GAP ASSEMBLY	8"	330	REF. DECK2187001	REF. DECK2187001
24	26	TC LOGG	STD	190	---	TOP RING
25	-	SS NAMEPLATE	STD	F.L.	---	CTR MANWAY
27	-	EXTERIOR LADDER	STD	45.4	---	---
29	99	GROUNDING LUGS 304SS	STD	F.L.	---	SEE DETAIL

ITEM#	PART NO.	QTY	DESCRIPTION	EST. WT.	PAINT
1	2187001020	1	BTM PANEL 3/8" PL 3RV. GR.50 W/NDZL. & ANCHR. PCHG.	784	1/E
2	2187001002	2	BTM PANEL 3/8" PL 3RV. GR.50 W/MNY. & ANCHR. PCHG.	677	1/E
3	2187001003	2	BTM PANEL 3/8" PL 3RV. GR.50 W/NDZL. & ANCHR. PCHG.	784	1/E
4	2187001004	1	BTM PANEL 3/8" PL 3RV. GR.50 W/NDZL. & ANCHR. PCHG.	784	1/E
5	2187001005	1	BTM PANEL 3/8" PL 3RV. GR.50 W/CLN. & ANCHR. PCHG.	718	1/E
6	2187001006	1	MID PANEL 1/4" PL 2RV. GR.50 W/NDZLZL PCHG.	513	1/E
7	2187001007	1	MID PANEL 1/4" PL 2RV. GR.50 W/NDZLZL PCHG.	513	1/E
8	2187001008	1	MID PANEL 1/4" PL 2RV. GR.50 W/NDZLZL PCHG.	513	1/E
9	2187001009	2	MID PANEL 1/4" PL IRV. GR.36 W/SUPPORT PCHG.	503	1/E
10	2187001010	2	MID PANEL 1/4" PL IRV. GR.36 W/SUPPORT PCHG.	405	1/E
11	2187001011	1	MID PANEL 1/4" PL IRV. GR.36 W/NDZLZL PCHG.	405	1/E
12	2187001012	2	TOP PANEL 3/16" PL IRV. GR.36 W/SUPPORT PCHG.	377	1/E
13	2187001013	1	TOP PANEL 3/16" PL IRV. GR.36 W/NDZLZL PCHG.	377	1/E
14	2187001014	1	TOP PANEL 3/16" PL IRV. GR.36 W/NDZLZL PCHG.	377	1/E
15	2187001015	1	TOP PANEL 3/16" PL IRV. GR.36 W/NDZLZL PCHG.	377	1/E
16	2187001016	1	TOP PANEL 3/16" PL IRV. GR.36 W/NDZLZL PCHG.	377	1/E
17	2187001017	1	TOP PANEL 3/16" PL IRV. GR.36 W/NDZLZL PCHG.	377	1/E
18	2187001018	11	BTM PANEL 3/8" PL 3RV. GR.50 W/ANCHR. PCHG.	784	1/E
19	BP6508621318	18	MID PANEL 3/8" PL 2RV. GR.36 PLAIN	769	1/E
20	BP6508621318	18	MID PANEL 3/8" PL 2RV. GR.36 PLAIN	64	1/E
21	BP4258611318	33	MID PANEL 1/4" PL 2RV. GR.50 PLAIN	513	1/E
22	BP4258611318	16	MID PANEL 1/4" PL IRV. GR.50 PLAIN	503	1/E
23	2187001019	10	TOP PANEL 3/16" PL IRV. GR.36 W/RAFTER PCHG.	377	1/E
24	1668002039	36	HEAVY DUTY ANCHOR BOLT SADDLE	32	E
25	1668001008	36	HVY DUTY ANCHOR BOLT TOP PLATE 1" X 6" X 9 1/4"	16	E
26	TCLOGG	1	TC LOGG	N	N
27	ANMPLT21870015	1	NAMEPLATE S.S.	N	N
28	BP4046511318	15	MID PANEL 1/4" PL IRV. GR.50 PLAIN	405	1/E
29	2187001050	1	3/8" PL FLUSH CLEANOUT COVER	128	1/E
30	UBLTPG1075	3	U-BOLT W/ NUTS 10" PIPE GALV	N	N
31	2187001035	1	12" WIER ELBOW ASSEMBLY	169	1
32	BNS12A106	1	12" OVERFLOW SPOOL 6" LG.	41	1/E
33	QF124005A106	1	UPPER 12" OVERFLOW ASSEMBLY	323	1/E
34	QF124005B106	1	MID 12" OVERFLOW ASSY. 15'-8 1/8" LG.	793	1/E
35	QF124005C106	1	LOWER 12" OVERFLOW ASSEMBLY	584	1/E
36	649001003	1	FLAP VALVE 12"	8	E
37	PSB12C	6	PIPE SUPPORT BRACKET 12" EXT.	9	E
38	UBLTPG1275	6	U-BOLT W/ NUTS 12" PIPE GALV	N	N
39	EGSF1200	3	12" SPOOL GASKET EPDM	N	N
40	UBLTPG2500	3	U-BOLT W/ NUTS 2" PIPE GALV	N	N
41	BLTSDJSS05001500	79	1/2" X 1 1/2" SD HEAD BOLT J5500 (GR 8.2)	N	N
42	WSHFJ5500	146	1/2" FLAT WASHER J5500	N	N
43	NUTHJ5500	146	1/2" HEX NUT J5500	N	N
44	BNR1501409A106	2	14" 150# R.F.S.D. FLANGED NOZZLE 9" PROJ.	139	1/E
45	2187001056	2	ANTI-VORTEX ELBOW 14" SCH40 PIPE	246	N
46	AVB14	2	14" ANTI-VORTEX BREAKER BOX, 7" TALL	57	I
47	BNR1500609A106	4	6" 150# R.F.S.D. FLANGED NOZZLE 9" PROJ.	37	1/E
48	SF0600	1	6" BOLTING SPOOL FLANGE 1/4" PLATE	6	I
49	2187001051	1	6" ANTI-VORTEX BREAKER STUB	27	I
50	BNR1500309S316	1	3" 150# R.F.S.D. FLANGED NOZZLE 9" PROJ.	25	N
51	2187001052	1	3" ANTI-VORTEX BREAKER STUB	16	N
52	BNR1500209S316	2	2" 150# R.F.S.D. FLANGED NOZZLE 9" PROJ.	11	N
53	2187002017	1	2" 45° INLET STUB	4	N
54	SF0200	1	2" BOLTING SPOOL FLANGE 1/4" PLATE	3	I
55	BNR1500409S316	2	4" 150# R.F.S.D. FLANGED NOZZLE 9" PROJ.	25	N
56	2187002015	1	4" 45° INLET STUB	9	N
57	2187001092	1	4" ANTI-VORTEX BREAKER STUB	16	N
58	BNR1501009A106	1	10" 150# R.F.S.D. FLANGED NOZZLE 9" PROJ.	75	1/E
59	2187001053	1	10" 45° INLET STUB	50	I
60	BNR1501509S316	1	1 1/2" 150# R.F.S.D. FLANGED NOZZLE 9" PROJ.	8	N
61	2187001054	1	1 1/2" 45° INLET STUB	4	N
62	SH05523374	2	BOLT-IN SHELL MANWAY 30" DIA 2RV	275	1/E
63	MWC62530	2	MANWAY COVER 5/8" PL 30" DIA	234	1/E
64	170054009	4	MANWAY GASKET 30" EPDM	N	N
65	BLTHG07502500	86	3/4" X 2 1/2" HX HD BOLT HDG A325	N	N
66	BLTHG07502750	7	3/4" X 2 3/4" HX HD BOLT HDG A325	N	N
67	WSHF0750	141	3/4" FLAT WASHER HDG F436	N	N
68	NUTHG0750	141	3/4" HEX NUT HDG A325	N	N
69	BLTHG050010000	2	1/2" X 10" HX HD BOLT HDG GR.5	N	N
70	WSHF0500	43	1/2" FLAT WASHER HDG	N	N
71	NUTHG0500	5	1/2" HEX NUT HDG	N	N
72	FLGB16.514	2	14" BLIND FLANGE ANSI B16.5 150#	128	1/E
73	EGDF1400	2	GASKET 14" 150# PUNCHING EPDM	N	N
74	FLGB16.510	1	10" BLIND FLANGE ANSI B16.5 150#	64	1/E
75	EGDF1000	1	GASKET 10" 150# PUNCHING EPDM	N	N

(ROLL ALL PANELS TO 55"-4 5/8" DIA.)
ASSY. WT. = 87,172#

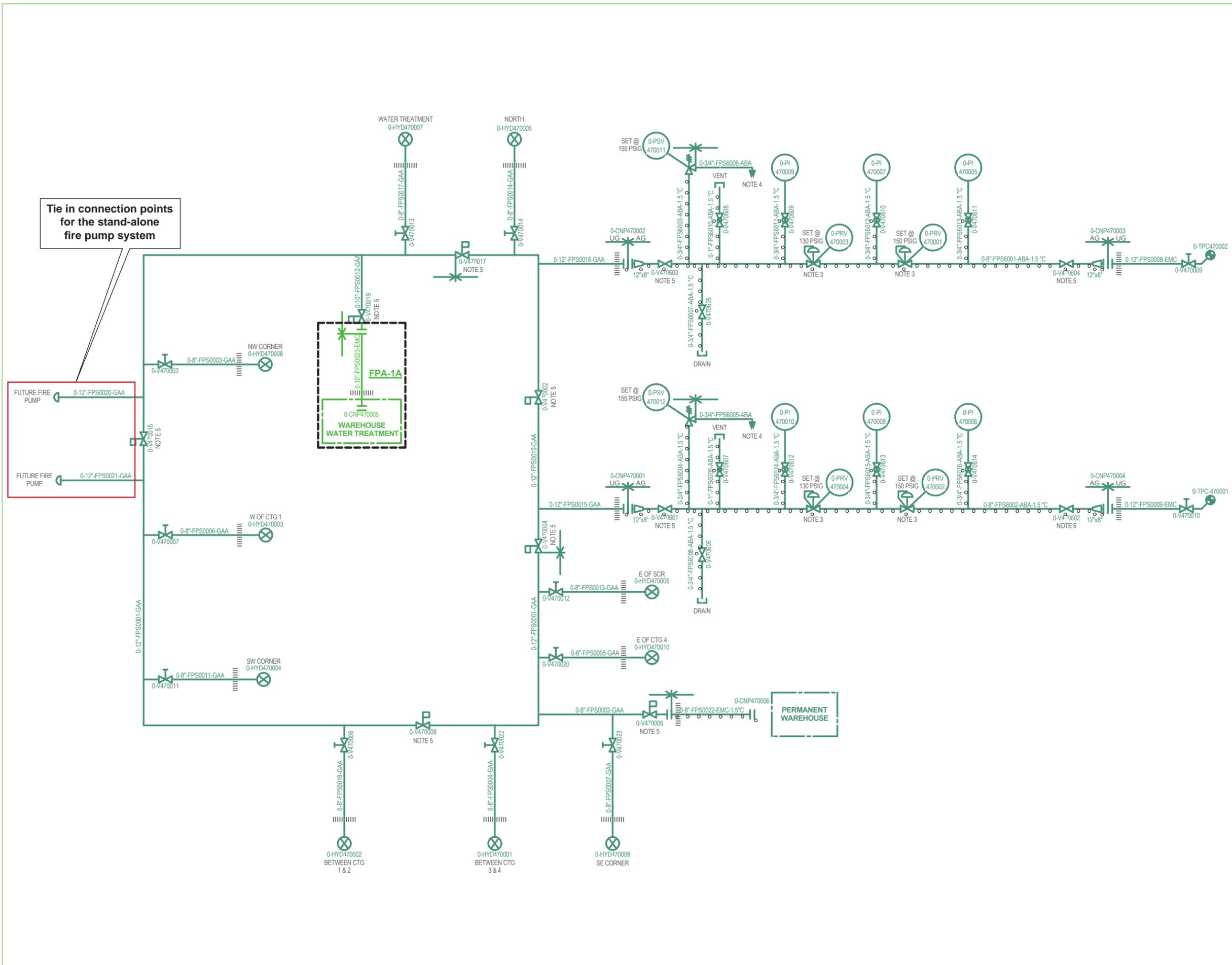
PAINT CODE NOTE: (TYP. ALL DRAWINGS)
1= INTERIOR ONLY
1/E= INTERIOR ONE SIDE, EXTERIOR OTHER SIDE
2= H.D.G.
N= NONE (COATING NOT REQUIRED)

SAFETY/OPERATIONAL NOTES:
1. TANK IS DESIGNED FOR LEAKS INDUCED FROM A LIQUID PRODUCT.
2. DO NOT FIELD CUT ANY OPENINGS IN TANK WITHOUT WRITTEN CONSENT FROM TANK CONNECTION.
3. CUSTOMER IS RESPONSIBLE FOR PROVIDING PROPER BRACING OF THEIR EQUIPMENT ATTACHING TO ANY PART OF THE TANK.
4. TANK FOUNDATIONS SHALL BE LEVEL WITHIN 1/8" IN ANY 30 FT. CIRCUMFERENCE UNDER THE TANK SHELL. LEVELNESS IN CIRCUMFERENCE SHALL NOT VARY MORE THAN 1/4" FROM AN ESTABLISHED PLANE. TANK PADDING TO BE USED ON CONCRETE FOUNDATIONS. WAPOR BARRIER TO BE USED ON GRAVEL AND SAND FOUNDATIONS.
5. IF ANCHOR BOLTS ARE NOT PROVIDED BY TANK CONNECTION, ANCHORING FOR ALL WIND AND SEISMIC LOADS IS THE RESPONSIBILITY OF CUSTOMER.
6. APPLICATION OF LOADS TO TANK FROM EQUIPMENT, OTHER THAN NOTED ON THIS DRAWING, MUST BE APPROVED IN WRITING BY TANK CONNECTION PRIOR TO INSTALLATION.
7. TANK IS DESIGNED FOR ATMOSPHERIC (EQUALIZED) PRESSURE INTERNALLY AND EXTERNALLY. CUSTOMER TO ASSURE PROPER VENTILATION IS PROVIDED AND MAINTAINED.

INSTALLATION NOTES:
1. USE ONLY HARDWARE FURNISHED WITH TANK. ALL BOLTS MUST MEET SPECIAL HIGH STRENGTH REQUIREMENTS.
2. INSTALL TANK SEGMENTS IN A COUNTER-CLOCKWISE DIRECTION WHEN WORKING FROM TOP DOWN. INSTALL TANK SEGMENTS IN A CLOCKWISE DIRECTION WHEN WORKING FROM BOTTOM UP.
3. TANK SHALL BE ADEQUATELY BRACED DURING ERECTION TO PREVENT WIND DAMAGE.
4. WHEN ENCAPSULATED BOLTS ARE REQUIRED, THEY WILL BE UTILIZED IN THE STORED LIQUID ZONE ONLY.
5. INSTALLATION CONTRACTOR SHALL COORDINATE TOUCH-UP PAINTING PROCEDURES. CONTRACTOR TO FOLLOW MANUFACTURER'S LABEL INSTRUCTIONS.
6. ADEQUATE BLOCKING SHOULD BE USED TO PROTECT BOLTED PANELS IF REMOVED FROM SHIPPING PALLETS PRIOR TO FIELD INSTALLATION.

DESIGN CRITERIA:
1. TANK DESIGN PER AVMA D103-09, COMPLIES WITH CRC 2007
2. BECK IS DESIGNED FOR 25 PSF ROOF LIVE LOAD
3. TANK DESIGNED TO WITHSTAND WIND LOADS PER AVMA D103-09, 90 MPH, EXP. C, 1-115
4. TANK DESIGNED TO WITHSTAND SEISMIC LOADS PER AVMA D103-09, S₁=150.0%, S₂=59.7% (1-15)
5. TANK TO WITHSTAND ATMOSPHERIC PRESSURES
6. OPERATING PRESSURE OF TANK IS ATMOSPHERIC
7. TANK IS DESIGNED FOR STORAGE OF WASTE WATER WITH A SPECIFIC GRAVITY OF 1.0
8. LIQUID PH RANGE BETWEEN 4-9
9. OPERATING TEMPERATURE IS AMBIENT
10. TANK CAPACITY IS 614,300 GALLONS OF WORKING CAPACITY BASED ON 4'-0" FREEBOARD & 7" AT TANK BTM.
11. ALL WELDING SHALL BE PER ASME SECTION VIII DIV. 1, ALL WELDS SHALL BE GRADE B (150 KSI) WELD
12. TOTAL TANK WEIGHT 146,785#
13. TANK CONSTRUCTED OF ASTM CERTIFIED SHEET, PLATE AND STRUCTURAL MEMBERS.

TANK FLUSH SYSTEM & SEALANT:
INTERIOR PRIMER LID FUSION 7000 FBE-7 7 MILS MINIMUM DFT, RANGE OF 7



- NOTES:
- MISCELLANEOUS PIPING AND TEMPERATURE CONNECTION SIZES ARE AS FOLLOWS, EXCEPT AS INDICATED:
VENTS AND DRAINS 3/4"
TEMPERATURE CONNECTION 1" THREADED
 - FIRE HYDRANTS TO BE PLACED A MINIMUM OF 5 FEET FROM THE ROAD.
 - UL LISTED PRESSURE REDUCING VALVE SET TO MAINTAIN DOWNSTREAM PRESSURE.
 - FIELD ROUTE TO GRADE.
 - VALVE IS TO BE LOCKED OPEN.

Start Up Codes
 FPU-1 (BALANCE)
 FPA-1A (1)

4	CONFORMED TO CONSTRUCTION RECORDS			
	A. GAYLE	L. POLLOCK	J. ALBERS	07-29-2013
3	CONFORMED TO CONSTRUCTION RECORDS			
	A. GAYLE	L. POLLOCK	J. ALBERS	03-15-2013
2	REVISED WAREHOUSE			
	A. GAYLE	L. POLLOCK	J. ALBERS	11-01-2012
1	REVISED NOTES; CHANGED INSULATION TYPE; ADDED UG VALVES, BLIND FLANGE & START-UP CODES			
	A. TAYLOR	L. POLLOCK	J. ALBERS	05-18-2012
0	ISSUED FOR CONSTRUCTION			
	A. GOSSMANN	L. POLLOCK	J. ALBERS	10-28-2011
REV	DESIGN BY	DRAWN BY	CHECKED BY	DATE

GENON MARSH LANDING, LCC
 MARSH LANDING GENERATING STATION



Jacob Albers, P.E.
 Digitally signed by Jacob Albers, P.E.
 DN: cn=Jacob Albers, P.E., o=Kiewit Power Engineers Co., ou=Mechanical Engineer, email=jacob.albers@kiewit.com, c=US
 Date: 2013.07.29 14:34:31 -0500



PIPING AND INSTRUMENTATION DIAGRAM
 FPS - FIRE PROTECTION

ENGINEER/DESIGN ORIGINATOR	A. ROBINETT	DRAWING NUMBER	2009-019-PS-470
LEAD ENG	J. ALBERS		
ENG MGR	C. ENDERS		
PROJ MGR	J. LOCKWOOD		

FIGURE 3-2 : RAW WATER STORAGE TANK DRAWING