SEE DWG. 2007 ZONE C-4

SEE DWG. 2007 ZONE B-4

1-TEC-103-2 2" COOLING WATER SUPPLY

1-TEC-104-2 2" COOLING WATER RETURN

INTAKE STRUCT. — YARD

ICE CONTROL TUNNEL

927 BAY "A" | 928 | 929 BAY "B" | 930 | 931 BAY "C" | 932 | 936 BAY "D" | 933 | 934 BAY "E"

SLUICE GATE (TYP.)

84" CW-2

SHT. 3 THIS DWG. ZONE A-1

935 "D" TO "E" CROSSTIE — 30" DIA. M.H.

156" CW-1

C.W. SUPPLY TUNNEL

14"-10 — 14"-25CV

TEC-(318) VENT

2" TEC-1

1-CW-106-14

14" CW-1

1" TEC

½" TEC-239 — ½" TEC-238 — 1-CW-100-84 — 84" CW-1 — 84"112MV — S-126 — RIVERWELL SYS. DWG. 2006 SHT.5 ZONE G-2 — 1-A — BAY "A"

½" TEC-241 — ½" TEC-240 — 84"113MV — S-126 — RIVERWELL SYS. DWG. 2006 SHT.5 ZONE G-2 — 1-B — BAY "B"

½" TEC-243 — ½" TEC-242 — 84"114MV — S-126 — RIVERWELL SYS. DWG. 2006 SHT.5 ZONE G-3 — 1-C — BAY "C"

½" TEC-245 — ½" TEC-244 — 84"115MV — S-126 — RIVERWELL SYS. DWG. 2006 SHT.5 ZONE G-4 — 1-D — BAY "D"

RMS — MO — PI 360A/B/C — (104) (105) (106) (107)

PI 369 (671) — PS 369 (138) (139) CAPPED — VENT (614) (103) — SCREEN WASH PUMP INTERLOCK

1-SW-110-1

CW-V-1043 — SEE NOTE 15 — CW-V-1045

CW-V-1044 — SEE NOTE 15 — CW-V-1046

CIRCULATING WATER PUMPS

INTAKE STRUCT. | PUMP ROOM

PI 370A — 680 — 140 — 142 — 141 — (98) — 10 RV-4x6 RELIEF VALVE SET @ 180 PSIG — TO WASTE

FOR FLUSHING SAND FROM VALVES WHEN ONE PUMP IS OFF [A]

SEE DWG. 2006 SHT. 2 ZONE C-2

VENT ½"-13 — M — ¾"-(681) — ¾"-682 — 8" — (673) — (672) — 10" — 12" — 12"-11 — (96) — [A]

PS 372 — 729 — 152 — 153 — 154 — 102 — S-181 ("B" STRAINER) — 10" WW-1 — 317 — 1-CW-107-10 — 718 — 10" WW-1

(101) — (100) — 2"-21 — 2"-20 — 149 — 151 — 148 — 150 — 147 — 719 — 146 — 721 — DPIS 371 — 720 — C

10"-12 — 10"-11CV — 10"-15 — 10"-12CV — SHT. 5 ZONE F-4 — SHT. 5 ZONE F-6 — 1-A — 1-B — 1-CW-107-10 — 14" WW-1

TO SCREEN WASH CONTROL SYSTEM

PI 370B — 691 — 143 — 145 — 144 — (99) — 11 RV-4x6 RELIEF VALVE SET @ 180 PSIG — TO WASTE — VENT ½"-16 — M — 8" — (685) — 10" — (684) — 12" — (97) — 12"-14

RIVERWELL SYS. THIS DWG. SHT. 5 ZONE E-4 — CW-20CV — 2"-783 — 14" SW-2 PRIMING & EMERGENCY SCREEN WASH SUPPLY — 18" SW — 8"-39 — 8" B.F. (FUTURE CHLORINATION SYS.)

MO — RMS — SEE DWG 2006 SHT. 2 ZONE B-2 — 12" — 1-SW-109-14 — 14"-116MV — 1195 — CW-1 SW-2 — SEE NOTE 9

SEE THIS DWG. SHT. 2 ZONE C-3 — 14" SW-2

FOR FLUSHING SAND FROM VALVES WHEN ONE PUMP IS OFF [A]

SCREEN WASH PUMPS

TO RIVER — 2"-698 DRAIN VALVE N.C. — RMS — MO — M — S — 10" WW-1

181A "A" STRAINER — ¾"-CW-1 — 701 — 700 — 702 — ¾" (TYP.) — 703 — 704 — 705 — 706 — 707 — 708 — 709 — 710 — 839 — 840 — DPIS 371A — 841 — 842 — 717 — 714 — 712 — 715 — 713 — 716 — 711 — DPIS 371B — [A] — 10"-697 — ¾" VENT 857

UPSTREAM WATER LEVEL LT A1-1 — DOWNSTREAM WATER LEVEL LT A1-2

SCREEN CONTROL PANEL CW-PNL-A1 (TYP. FOR BGI SCREENS)

SW A1 BYPASS GATE SWITCH

BAY "A" — BAY "B" — BAY "C" — BAY "D" — BAY "E"

SCREEN A1 | SCREEN A2 | SCREEN B1 | SCREEN B2 | SCREEN C1 | SCREEN C2 | SCREEN D1 | SCREEN D2 | SCREEN E

2" — 991 — 992 — 993 — 994 — 995 — 996 — 997 — 998 — 999 — 1½"

PS A1 — PI A1 — PS A2 — PI A2 — PS B1 — PI B1 — PS B2 — PI B2 — PS C1 — PI C1 — PS C2 — PI C2 — PS D1 — PI D1 — PS D2 — PI D2 — PS E — PI E

4" — BY BGI (TYP) — 981 — 982 — 983 — 984 — 985 — 986 — 987 — 988 — 989 — ½"

1000 NOTE 11 — 1001 NOTE 11 — 1002 NOTE 11 — 1003 NOTE 11 — 1004 NOTE 11 — 1005 NOTE 11 — 1006 NOTE 11 — 1007 NOTE 11 — 1008 NOTE 11

1009 — 1010 — 1011 — 1012 — 1013 — 1014 — 49 — 52 — 55

10" WW-1S — 8" WW-1S — 6" WW-1S — 2½"-29

10" CW-1 SEE THIS DWG, SHT. 2, ZONE C-2

INTAKE STRUCT. | PUMP ROOM — 1-CW-109-10 — 10"-10CV — 10"-22 — 10" FP-1 — TO FIRE PUMP DISCH. HDR. SEE DWG. 2016 SHT. 1A ZONE B-7

PS 377 — 728 — 159 — 163 — 161 — PI 377 — 162 — IA-PRV77 — 160 — PIC 375 — 164 — IA-PRV76 — PCV373 — 10"-23 — 8" PCV-373 — 10"-24 — 118 — 10" WW-1 — 1-CW-102-10 — 123 — 27 — 26

2"-2419MV BACKWASH VALVE — 10"-696 — 1-CW-107-10 — 10" WW-1 — 10" VENT (856) — 721 — DPIS 371 — 720 — C — 10"-23 — 8"-25 — 86 — 8" — 10"-24 — 8" — PS 2200 (NOTE 12) — 158 — 727 — 156 — 157

CS WW-1 — SS WW-1S — SYSTEM CHANGE

2½"-778

TRAVELING SCREENS

1-SW-100A-20 — 20" SW-2 — 1-SW-100A-24 — 20" SW-2 — 24" SW-2

20"-13 — 20"(13-CV) — ½" (TYP.) — RMS — M — (202) — PI 360D — SW-V-1536 — SEE NOTE 15 — SW-V-1537 — S-129 — 1-SW-108-1 — 1"-1256 — C — 1"-1254 — FE 361D — FIS 361D — A L — 1255 — 1"-31 — 3 — 1-D — BAY "E"

20"-11 — 20"(11-CV) — (200) — PI 360B — S-129 — 1-SW-108-1 — 1"-1250 — 1"-1248 — FE 361B — FIS 361B — 1"-1249 — 1"-30 — 1-B

20"-12 — 20"(12-CV) — (201) — PI 360C — S-129 — 1-SW-108-1 — 1"-1253 — 1"-(1251) — FE 361C — FIS 361C — 1"-(1252) — 1-C

20"-10 — 20"(10-CV) — (199) — PI 360A — ½" (TYP.) — S-129 — 1-SW-108-1 — 1" SW-2 — 1"-1247 — 1"-1245 — FE 361A — FIS 361A — 1"-(1246) — 1"-23 — 1-A

1" SW-2 — 1-SW-108B-1" — 1"-24

1-SW-100B-24

STATION SERVICE WATER PUMPS

DWG. 2010 SHT.1 ZONE E-11 — NE SPV8858 — IF — AV — 1-SW-107B-4 — 4" SW-2 — 4"-1516 — 4"-858AV — 4"SW-2S — NC 3 — 2"-15 — TO RIVER — 2"SW-2 — 1"-1518

24" SW-2 — 24"-192 — S — S-192 — DPR 361 — 24"-17 — VENT 345 — 6" SW-2

(¾"-209) — (¾"-205) — dPT 361B — ¾"-206 — ¾"-210 — CND INSNUB-4 — INSNUB-1 CSN — 362 — 364 — 365 — 366 — 363 — INSNUB-3 CSN — 335 — 336 — 333 — 331 — 337 — 332 — 334 — (1187) — dPS 362B — (1188) — INSNUB-2 CSN — 342 — 338 — 344 — 343 — INSNUB-6 CSN — 340 — 339 — 341 — 1234 — dPIS 363B — 1235 — A H — C — 20"-194 — 20" SW-2

SEE THIS DWG. SHT.2 ZONE H-5

PUMP ROOM INTAKE STRUCT. — YARD

(1086) — IF — NOTE 13 — 88CV — NOTE 14 — 90CV — QUILL SWNC — (1527) — 24" SW-2

1079 — PI 364B — 347 — 348 — PS 364B — 346 — (213) — 1081 — PI 365B — 350 — 352 — PS 365B — 349 — (212) — NC 3 — C — A L — PUMP AUTO START — 89CV — QUILL SWBD — IF — (1523) — 24"-72 — (1225) — 24" SW-2

18" SW-2 — ½" — 1-239 — VENT — 1080 — 1078 — 24"-1490 — CLASS 1IS — SEE NOTE 3 — 24"-37MV — 3B — VENT — ¾" — 86CV — NOTE 14 — QUILL SWAC — (1226) — NOTE 13 — 24" SW-2

317 — PI 364A — 316 — PS 364A — 318 — 319 — 321 — PI 365A — 320 — PS 365A — 322 — 323 — PUMP AUTO START — NC 3 — 214 — 211 — RMS — MO — 24"-36MV — 24"-71 — (1519) — (1181) — NC 3 — IF

SEE SHT.3 THIS DWG. ZONE G-1 & H-1

DWG. 2010 SHT. 1 ZONE E-11 — NE SPV8857 — IF — AV — SW-2 — 4" SW-2 — 4"-1515 — 4"-857AV — 4"SW-2S — NC 3 — 2"-14 — TO RIVER — 2"SW-2 — 1"-1517

24" SW-2 — 24"-191 — S — S-191 — DPR 361 — 24"-16 — 24" SW-2

(¾"-207) — (¾"-203) — dPT 361A — ¾"-208 — CND INSNUB-3 — INSNUB-1 CSN — 355 — 357 — 358 — 356 — 360 — INSNUB-2 CSN — 305 — 306 — 303 — 301 — 307 — 302 — 304 — 1183 — dPS 362A — 1184 — INSNUB-5 CSN — 312 — 313 — 310 — 308 — 314 — 309 — 311 — 1231 — dPIS 363A — 1232 — A H — C — (315) VENT — 20"-193 — 20" SW-2 — 6" SW-2

1½"-21 — 1½"-28 — 24"-16 — 24" SW-2

SEE THIS DWG SHT. 2 ZONE J-4

AUTOMATIC BACKWASH STRAINERS

FOR CONT. SEE THIS DWG, SHT. 3, ZONE H-7

(1178) — 3 NC — 1385 — 1082 — IF — PI 394 — 1478 — 1474 — 1475 — ½" — 1470 — 1457 — PI 393 — 1462 — 1465 — 1461

1½" SW-2 — 1" SW-2 — 1468 — 1469 — 1480 — 1479 — 1455 — 1456

1" SW-2 — 1476 — 1489

454003586

STATUS: Release
STATUS DATE: 02/02/2022
DS APPROVED: KKKUKER
VER: AO REV: 91 SIZE: F

NOTE: ALL ITEMS MARKED THUS [A] ARE "AS BUILT" ITEMS AND ARE NOT SHOWN ON PIPING DRAWINGS.

AS BUILT

NOTES:

1. "C-P" INDICATES LOCATION OF CATHODIC PROTECTION LEADS TO BE INSTALLED IN ACCORDANCE WITH PARAGRAPH 1.4.14.2, CONTRACT E-69-4.
2. AT SAMPLING POINTS, CONNECTIONS, PROBES AND ROOT VALVES SHALL BE FURNISHED AND INSTALLED UNDER CONTRACT E-69-4. PROBES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH CONTRACT PARA. 3.4.2 AND DWG. SP-07211, FIG. NUMBER AS NOTED. CONTINUATION OF SAMPLE PIPING BY E-70-3.
3. CLASS 1S SEISMIC REQUIREMENTS FOR THE "SW-2" & "CW-2" SYSTEMS SHALL APPLY TO THAT PORTION OF THE SYSTEM IDENTIFIED AS CLASS 1S SEISMIC HEREON. ALL SW-2 PIPING DOWNSTREAM OF 24"-1490 IS CL-1IS. (REF. E-10)
4. UNLESS OTHERWISE INDICATED ALL PRESSURE AND/OR FLOW INSTRUMENT ROOT LINES SHALL BE 3/4" ROOT VALVES SHALL BE 3/4"-V2325 EXCEPT AS NOTED, LINE UP TO AND INCLUDING ROOT VALVE SHALL BE FURNISHED AND INSTALLED UNDER CONTRACT E-69-4.
5. ALL TEMPERATURE, TEST AND PROTECTING WELL PENETRATIONS SHALL BE 1"NPT UNLESS OTHERWISE NOTED.
6. 156" CW-1, 108" CW-2, 84" CW-2 TEMPERING LINE AND PORTIONS OF THE CW-1, CW-2 AND SW-2 SYSTEMS ARE NOT IN CONTRACT E-69-4. FOR INTERFACES SEE COMPOSITE PIPING DWGS.
7. VENTS & DRAINS SHALL CONFORM (FULL LENGTH) TO THE SYSTEMS DESIGNATION FROM WHICH THEY ORIGINATE.
8. ALL VALVE NUMBERS IN PARENTHESIS ( ) ARE NUMBERS TO BE USED IN OPERATING PROCEDURES. THESE NUMBERS ARE ASSIGNED BY NPPD AND WILL NOT BE SHOWN ON PIPING DRAWINGS.
9. ALL VALVES DOWNSTREAM OF SW-116MV ARE IN THE CIRCULATING WATER SYSTEM (CW) UNLESS DESIGNATED OTHERWISE. ALL VALVES UPSTREAM AND INCLUDING SW-116MV ARE IN THE SERVICE WATER SYSTEM (SW) UNLESS DESIGNATED OTHERWISE.
10. WHERE LINES ARE INTERCONNECTED AND CONTINUED ON OTHER DRAWINGS, ZONE NUMBERS ARE APPROX. ONLY.
11. PRESSURE REGULATING VALVE FOR TWS SCREEN WASH SUPPLY IS MANUALLY ADJUSTABLE.
12. INSTRUMENT ABANDONED IN PLACE.
13. HOSE CONNECTION FOR CHEMICAL INJECTION LINE.
14. CHEMICAL INJECTION QUILL AND ASSOCIATED COMPRESSION GLAND, CHECK VALVE(S), AND HOSE CONNECTION MAY OR MAY NOT BE INSTALLED. IF NOT INSTALLED, ISI BOUNDARY/CLASS BREAK REVERTS TO NEAREST CLOSED VALVE (1519, 1523) FOR CLASS 3 BOUNDARIES.
15. CHEMICAL INJECTION LINES FROM SW/CW CHEMICAL TREATMENT SYSTEM TO SW/CW BAYS. THE SW/CW CHEMICAL TREATMENT SYSTEM, INCLUDING ISOLATION VALVES CW-V-1043, CW-V-1044, CW-V-1045, CW-V-1046, SW-V-1536 & SW-V-1537 IS A PROCEDURE 0.31 EXEMPT SYSTEM CONTROLLED BY THE CHEMISTRY DEPARTMENT. THESE INJECTION LINES TO THE SW/CW BAYS ARE PLASTIC TUBING AND ARE NOT PART OF CONTRACT E-69-4.

REVISIONS TO THIS DRAWING REQUIRES A REVISION TO THE CORRESPONDING ISOKEY.

VERSIONS/REVISIONS BY NPPD					
NO.	DESCRIPTION	ORDER	DFT	DATE	ENG
AO/91	DR-2022-0001	–	DLR	2/2/22	KKKUKER

SIGNIFICANT NUMBER GROUP		1	2	3	4	5	6	

DRAWN — DATE
CHECKED — DATE
APPROVED — DATE
SEE SUPERSEDED DWGS
FILMED

FLOW DIAGRAM
CIRCULATING, SCREEN WASH & SERVICE WATER SYSTEMS
COOPER NUCLEAR STATION

BURNS & ROE

2006 SH 1

CADD FILE: C0017906