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AUTH.NAME AUTHOR AFFILIATION
UHRIG,R.E. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
VARGA,S.A. Operating Reactors Branch 1

SUBJECT: Forwards info re containment sumps & insulation,in response to NRC 801107 ltr.

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FLORIDA POWER & LIGHT COMPANY

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U.S. NUCLEAR REGULATORY COMMISSION

Office of Nuclear Reactor Regulation
Attention: Mr. S.A. Varga, Chief
Operating Reactors Branch #1
Division of Operating Reactors
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Varga:

Re: St. Lucie Unit 1
Docket No. 50-335
Containment Sump & Insulation Information

Please find attached the information requested by your letter dated November 7, 1980 regarding containment sumps and insulation. Attachment A provides the information requested in Part 1 of the letter and Attachments B & C contain the information in Part 2.

Very truly yours,

Jack E Vessely for

Robert E. Uhrig
Vice President
Advanced Systems and Technology

REU/JEM/mbd

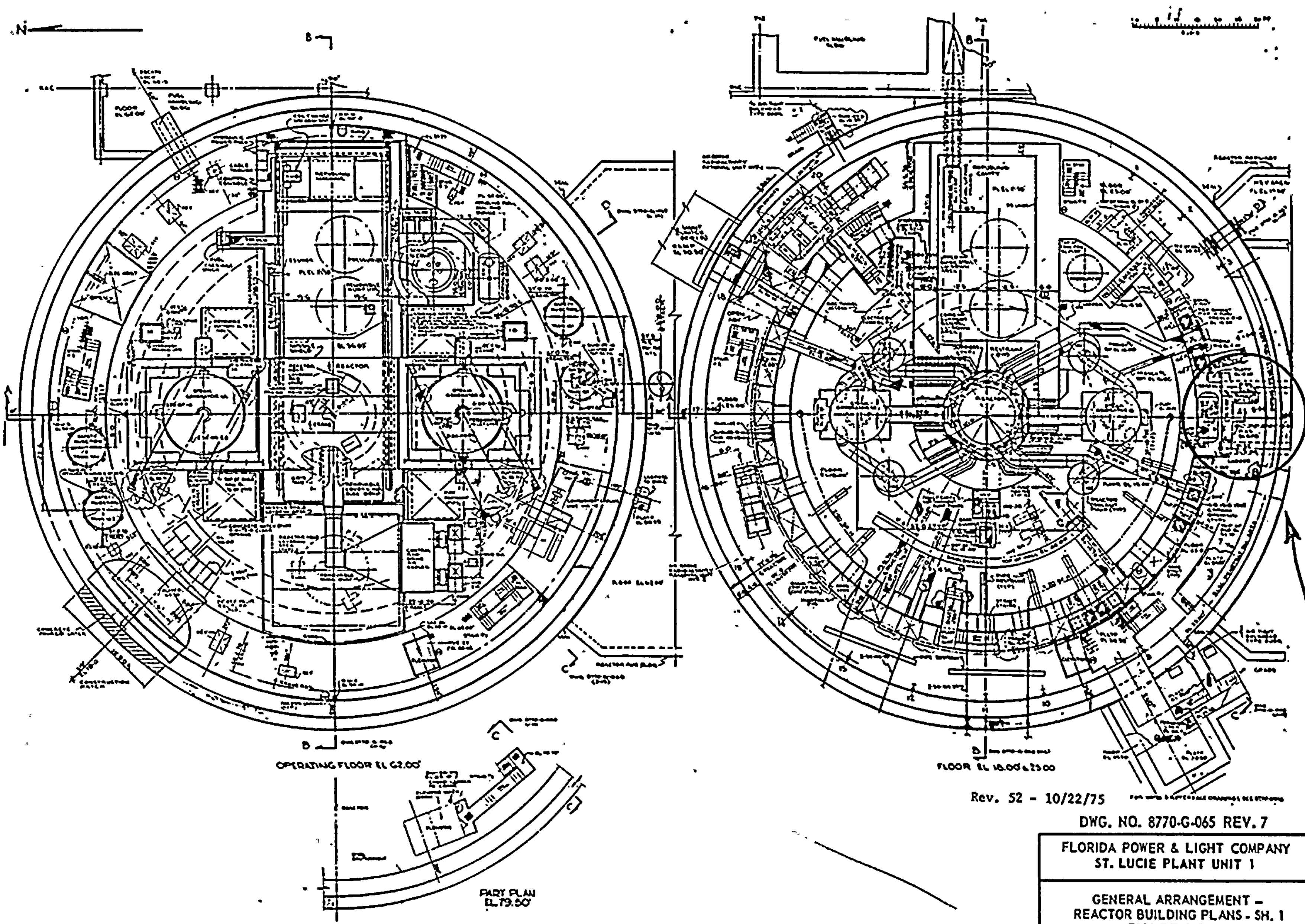
Attachment

cc: Mr. James P. O'Reilly, Region II
Harold F. Reis, Esquire

A001 S/3/3

8103240368

ATTACHMENT A



Rev. 52 - 10/22/75

DWG. NO. 8770-G-065 REV. 7

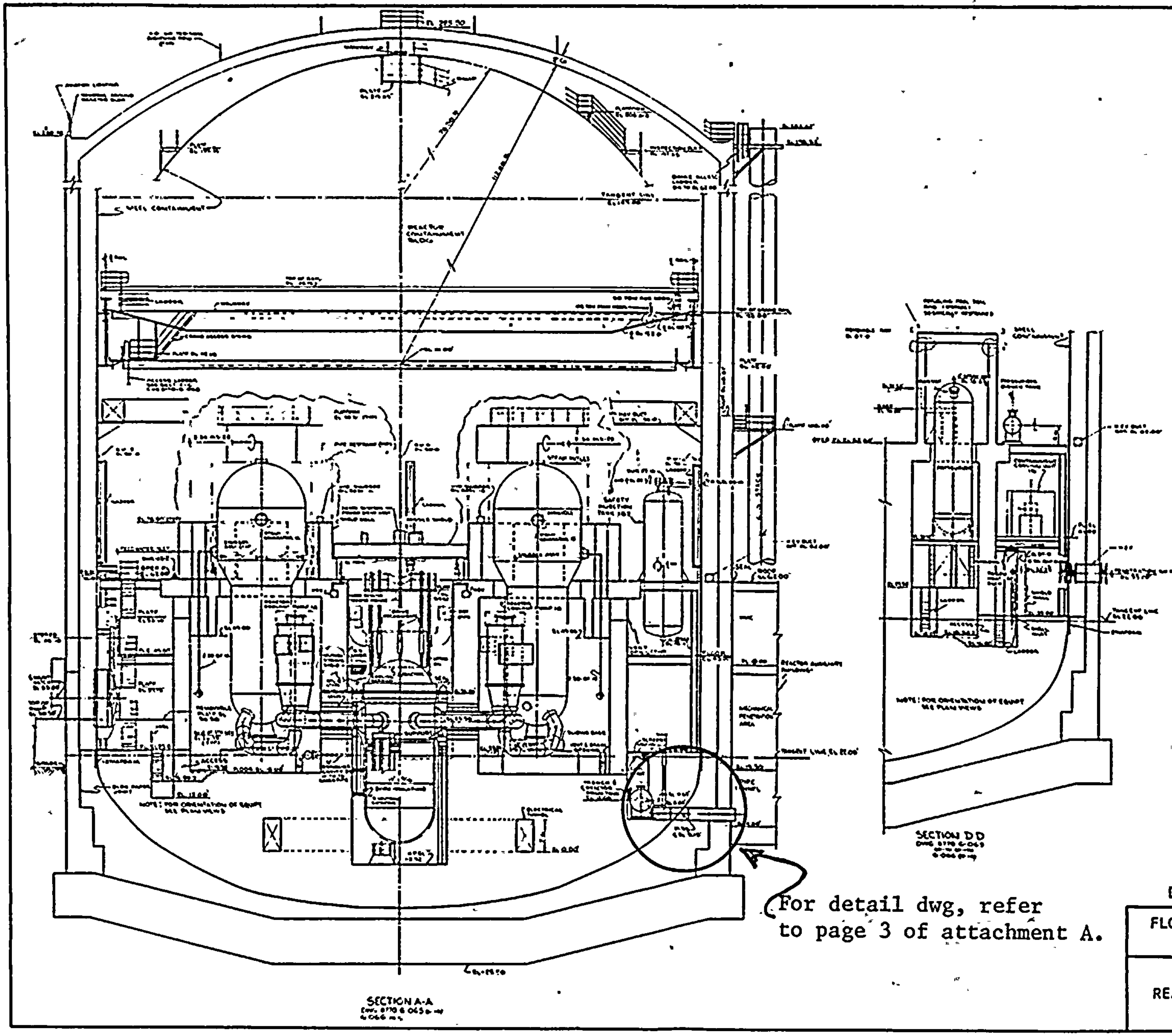
FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT 1

GENERAL ARRANGEMENT -
REACTOR BUILDING PLANS - SH. 1
FIGURE 1.2-8

For detail dwg, refer to page 3 of attachment A.

Page 2 of 4

ATTACHMENT A



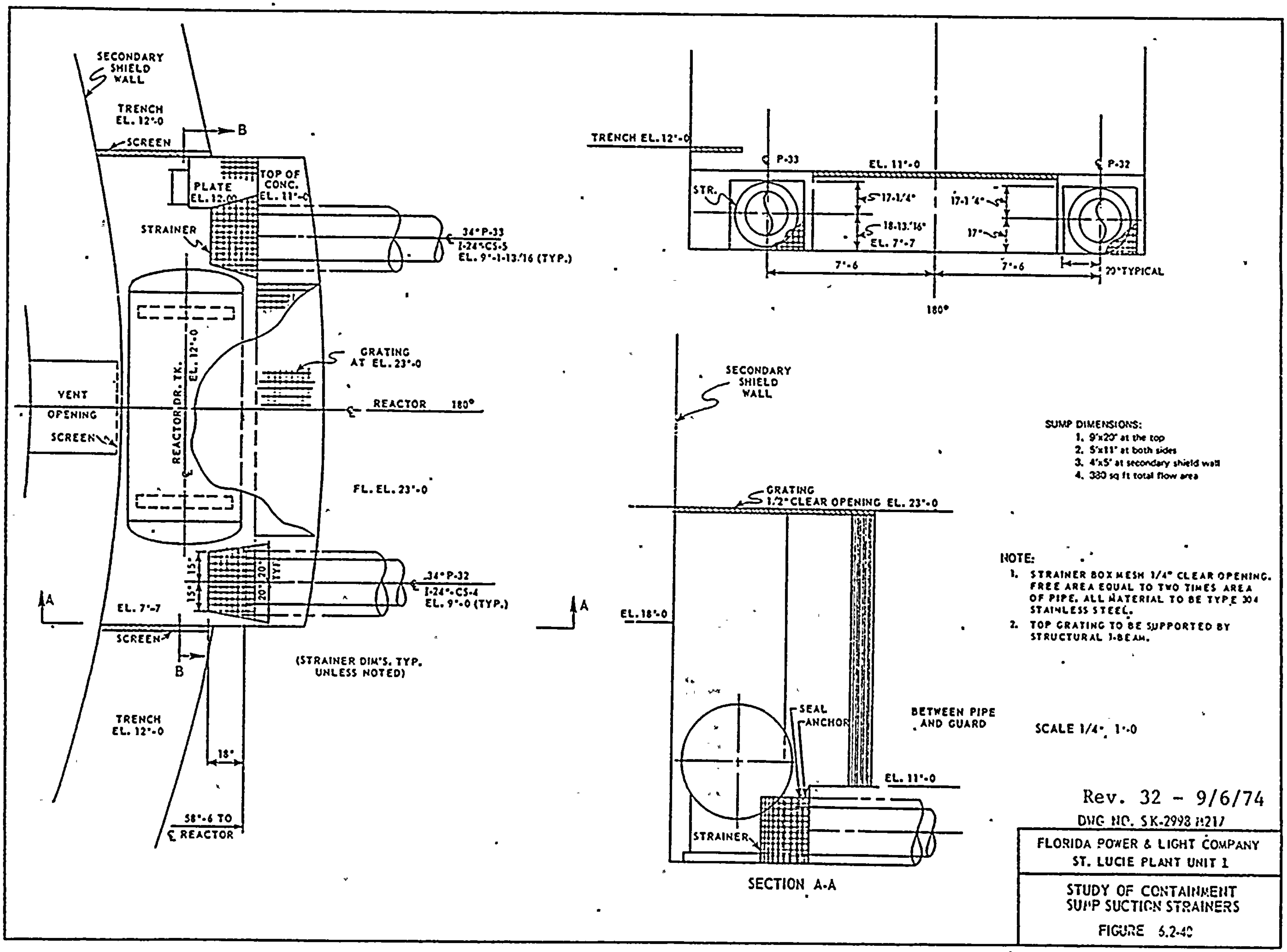
For detail dwg, refer to page 3 of attachment A.

Rev. 52 - 10/22/75
DWG. NO. 8770-G-067 REV. 7

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT 1

GENERAL ARRANGEMENT -
REACTOR BUILDING SECTIONS-SH. 1
FIGURE 1.2-10

ATTACHMENT A

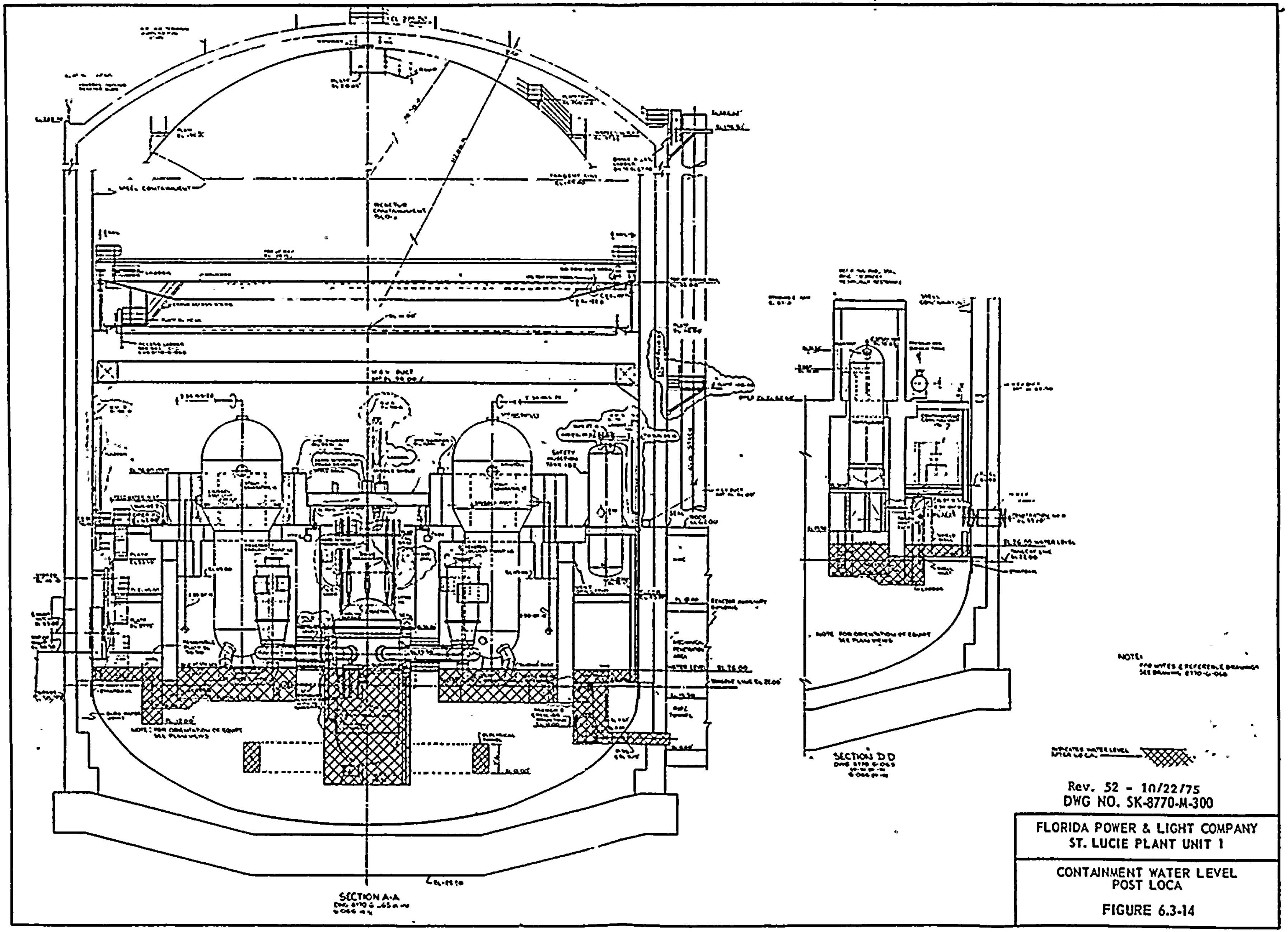


FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT 1

STUDY OF CONTAINMENT SUMP SUCTION STRAINERS

FIGURE 6.2-40

ATTACHMENT A



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FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT 1

CONTAINMENT WATER LEVEL
POST LOCA

FIGURE 6.3-14

ATTACHMENT B

INSULATED PIPING INSIDE CONTAINMENT

ZONE I*

Pipe		Insulation		
Size	total Length	Thickness	Type*	method of Attachment *
3/8"	25'	3"	a	2
3/4"	240'	1	a	2
	655'	2	a	2
	402'	2	c	1
	128'	3	a	2
1"	10'	1	a	2
	118'	2	a	2
	175'	2	c	1
	2'	2 1/2	a	2
	22'	3	a	2
2"	263'	1 1/2	a	2
	110'	2	a	2
	245'	2	b	2
	43'	2	c	1
	2'	2 1/2	a	2
4"	171'	1 1/2	c	1
	52'	3	a	2
6"	338'	2	a	2
10"	222'	2	a	2
	27'	3	a	2
12"	221'	2 1/2	a	2
	99'	3	a	2
30"	128'	3	c	1
42"	28'	3	c	1

ZONE II*

Pipe			Insulation	
size	total length	thickness	type	method of attachment
3/8"	323'	2"	b	2
	311'	3	a	2
3/4"	266'	1	a	2
	20'	1 1/2	a	2
	20'	2	a	2
1"	8'	2	a	2
2"	61'	1	a	2
	481'	1 1/2	a	2
	42'	2	a	2
	327'	2	b	2
	4'	3	a	2
6"	164'	2	a	2
10"	18'	2	a	2
12"	35'	2 1/2	a	2

ZONE III*

Pipe		Insulation		
size	total length	thickness	type	method of attachment
3/4"	2'	1"	a	2
	622'	2	a	2
	261'	2	c	1
1"	16'	2	a	2
	40'	3	a	2
2"	12'	1 1/2	a	2

ZONE IV*

Pipe size	Pipe total length	Insulation thickness	Insulation type	Insulation method of attachment
1/2"	7'	2"	a	2
	28'	3	a	2
	38'	3 1/2	a	2
3/4"	109'	1	a	2
	208'	2	a	2
	228'	2	c	1
	91'	3	a	2
	39'	3	c	1
1"	195'	1	a	2
	4'	2	a	2
	2'	2	c	1
	300'	3	a	2
	4'	3	c	1
1 1/2"	5'	1	a	2
2"	11'	1	a	2
	5'	1	c	1
	2'	1 1/2	a	2
	6'	3	a	2
	82'	3	c	1
2 1/2"	93'	3	a	2
4"	40'	3	a	2
	20'	3 1/2	a	2
6"	10'	3	a	2
	37'	3 1/2	a	2
10"	40'	3 1/2	a	2

INSULATED EQUIPMENT INSIDE CONTAINMENT

				Insulation		
	Equipment	Quantity	Type	Thickness	Zone	Total area/each
1)	Steam Generator	2	a	3"	I	3187 ft^2
2)	Pressurizer	1	a	3"	I	975 ft^2
3)	Reactor Coolant Pump	4	d	3"	I	160 ft^2
4)	Regenerative heat exchanger	1	a	3"	II	100 ft^2
5)	Reactor Vessel	1	a	3"	I	2235 ft^2

ATTACHMENT C

INSULATING MATERIALS

1)	Type:	Calcium silicate block insulation	Reflective insulation
2)	Commercial name:	Thermo - 12	
3)	Mfr:	Johns-Manville	Transco
4)	Materials	SiO_2 49.6% Fe_2O_3 0.3% AL_2O_3 1.2% CaO 37.6% MgO 0.2% other 0.2%	Stainless Steel
5)	Loss on ignition:	10.9%	
6)	Max. cont. temp:	1500°F	
7)	Total integrated dose:	1.3×10^7 R	1000°F
8)	density (lb/ft^3):	13	
9)	Compressive strength dry (5% deformation, 1200°F), lb/ft^2	165	
10)	Tensile strength, psi	90	
11)	Lineal shrinkage after 24 hr soaking period at the max. temp.	1.1%	
12)	Complies w/following specs.	ASTM C-533 MIL-I-24244 Amendment 3	
13)	Minimum thickness		1"
14)			Thermal expansion variation 70°F to 600°F with mean linear coefficient of expansion of 9.7 x 10^{-6} in/inches°F.

Notes*

Types (insulation)

a) Metal jacketed Calcium Silicate with removable reflective metal panels at weld joints.
b) Metal jacketed Calcium Silicate with removable conventional panels at weld joints.
c) Metal jacketed Calcium Silicate block insulation.
d) Reflective insulation - Fully removable.

Method of attachment

1) Block insulation halves wired together then covered with metal lagging which is riveted or bonded.

2) These lines are subject to inservice inspection, therefore, the reflective and conventional metal panels come equipped with buckles for ease of disassembly.

Zones

I - 18' elevation (inside the secondary shield wall)
II - 23' elev. (outside the secondary shield wall)
III - 45' elev. (outside the secondary shield wall)
IV - 62' elev. (operating deck)

[illegible]