LOUISIANA POWER & LIGHT / 317 BARONNE STREET • P.O. BOX 60340
NEW ORLEANS, LOUISIANA 70160 • (504) 595-2204

MIDDLE SOUTH UTILITIES SYSTEM

J.M. CAIN
President

January 15, 1985

W3B85-0005
A4.05

Director of Nuclear Reactor Regulation
ATTN: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Waterford 3 SES
Partial Response to Items
from Waterford Review Team

REFERENCE: 1) Letter, D.G. Eisenhut to J.M. Cain,
dated June 13, 1984

Dear Mr. Eisenhut:

The purpose of this letter is to submit a revised response to Issue 19. This revision is for the purpose of clarifying information regarding the piezometer conduit discussed in the response.

To facilitate your review, change bars have been provided in the right hand margins of the revised response to indicate the portions which have been revised.

The revision to the response has been reviewed and verified by LP&L QA in accordance with Procedure QASP 19-13. Because of the minor nature of the revision, the designated subcommittee of the Waterford Safety Review Committee has not been requested to review the revised response.

We currently anticipate the submittal of a final report on the 23 issues by the end of January, 1985.

Sincerely,

J.M. Cain

JMC:DED:pbs

Attachments

cc: (See next page)

A001
1/1

cc: Mr. R.S. Leddick

Mr. D.E. Dobson

Mr. R.F. Burski

Mr. K.W. Cook

Mr. T.F. Gerrets

Mr. A.S. Lockhart

Mr. R.P. Barkhurst

Mr. L. Constable
USNRC - Waterford 3

Mr. R.D. Martin
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Mr. D. Crutchfield
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. G. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
Washington, D.C. 20555

Mr. M. Peranich
Waterford 3 Investigation and
Evaluation Inquiry Report Team
Leader
4340 E.W. Hwy. MS-EWS-358
Bethesda, MD 20114

Mr. D. Thatcher
Waterford 3 Instrumentation & Control
Leader
7920 Norfolk Ave. MS-216
Bethesda, MD 20114

Mr. L. Shao
Waterford 3 Civil/Structure Team
Leader
5650 Nicholson Ln.
Rockville, MD

Mr. J. Harrison
Waterford 3 QA Team Leader
Region III
700 Roosevelt Rd.
Glen Ellyn, IL 60137

Mr. J.E. Gagliardo
Director of Waterford 3 Task
Force
Region IV
611 Ryan Plaza Drive Suite 1000
Arlington, TX 76011

Mr. D. Couchman
NUS Corporation
910 Clopper Rd.
Gaithersburg, MD 20878

Mr. R.L. Ferguson
UNC Nuclear Industries
1200 Jadwin, Suite 425
Richland, WA 99352

Mr. L.L. Humphreys
UNC Nuclear Industries
1200 Jadwin, Suite 425
Richland, WA 99352

Mr. G. Charnoff
Shaw, Pittman, Potts &
Trowbridge
1800 M. St. N.W.
Washington, D.C. 20555

Dr. J. Hendrie
50 Bellport Lane
Bellport, NY 11713

Mr. R. Douglass
Baltimore Gas & Electric
8013 Ft. Smallwood Road
Baltimore, MD 21226

Mr. M.K. Yates, Project Manager
Ebasco Services, Inc.
Two World Trade Center, 80th
New York, NY 10048

Mr. R. Christesen, President
Ebasco Services, Inc.
Two World Trade Center
New York, NY 10048

RESPONSE

ITEM NO.: 19 (Revision 2)

TITLE: Water in Basemat Instrumentation Conduit

NRC DESCRIPTION OF CONCERN:

In examining the safety significance of the allegations, the NRC staff performed system walkdowns as a means of verifying the as-built conditions. During one of those walkdowns, the staff noted that there was water in an electrical conduit that penetrated the basemat. If the seals in that conduit should fail there is a potential direct path for ground water to flood the auxiliary building basement. LP&L should review all conduit that penetrates the basemat and terminates above the top of the basemat to assure that these potential direct access paths of water are properly sealed.

DISCUSSION:

During the construction period, several permanent conduits embedded in the basemat were observed to seep water at the stub-up couplings. None of them leaked in a quantity sufficient to cause flooding concerns during construction.

Silicone foam seals were placed in these conduits beginning in late 1983.

In May, 1984, a walkdown, as described in Attachment 1, was performed by Ebasco which identified 29 places where wetness due to seepage from conduits or conduits within 9 boxes plus one piezometer riser were found and 12 places where evidence of past leaking from conduits and piezometer risers were found. These cases will be addressed by LP&L by removing the existing seals and replacing them with a light density silicone elastomer which has the capability to stop the seepage as required. This work will be performed as a routine maintenance item as directed by the Plant Operations Staff, since the slow seepage through the seals is a maintenance inconvenience and not a flooding hazard. This is reflected in Attachment 1.

The 12 sheet table that is part of Attachment 1 is in fact 2 related listings. The first 2 sheets list 36 items (27 conduits including one piezometer riser and 9 pull boxes). These items were checked off in the listing as either having a leak or giving evidence of once having a leak. The remaining 10 sheets detail what conduits come into each of the 9 pull boxes listed on the first 2 sheets (Items 4,5,7,9,10,23,27,28 and 32). These 10 sheets have listed on them 56 conduits (within pull boxes) which when combined with the 27 conduits (not in pull boxes) on the first 2 sheets makes a total of 83 identified conduits. (Note: Attachment 1/Paragraph I indicates that 8 pull boxes were identified. Subsequent to issuance of Attachment 1, additional conduits and one pull box were added to the table. The first sentence of Attachment 1/Paragraph 1 requires correction. The first walkdown resulting in the memo consisted of an inventory of individual conduits which had seepage or evidence of past seepage and pull boxes containing numerous conduits which had a potential for seepage or evidence of past seepage. Subsequent to the first walkdown, the covers were removed from the pull boxes to identify individual conduits within the pull boxes with seepage or evidence of past seepage. This reduced the totals reflected in the sentence and provides the actual numbers of conduits with evidence of current or past seepage as shown in the tables.)

Temporary conduits which enter the basemat from outside, and which once allowed passage of ground water in quantities that required periodic pumping, have now all been pressure grouted as part of the normal design requirement and their temporary blockout pits filled with concrete as shown on Drawing LOU-1564-G-499 S09. Therefore, they no longer serve as leak paths for ground water.

Attachment 2 discusses the sealing of a piezometer riser and a piezometer standpipe. The piezometer riser (Item 8 of Attachment 1) consists of piezometers in a conduit down in the aquifer (surrounded by a well pipe). The conduit was internally sealed behind the piezometers and was sealed again in the portion of conduit that transverses the basemat. Since the piezometers contained in this conduit were no longer considered to be required to be operable, the conduit was capped to minimize seepage. Should it be determined later that usage of one or both of the previously operable piezometers is necessary, this conduit will be sealed with a light density silicone elastomer, as recommended in Attachment 2. The location of the riser is just south of the J wall, between 5A and 6A (i.e., in corridor south of EFW pump A - see FSAR Figure 1.2-11). The piezometer standpipe is basically a well pipe filled with water under pressure from the aquifer with piezometers attached at the -35 level. This standpipe has been pressure grouted. The location of the standpipe is north of the L wall, between 6A and 7A (i.e., in the radioactive pipe chase - see FSAR Figure 1.2-19).

CAUSE:

Except in the case of the piezometer riser, the seal material in place does not provide total waterstop characteristics.

GENERIC IMPLICATIONS:

There are no generic implications since the potential paths for ground water to flow in appreciable quantities had already been addressed.

SAFETY SIGNIFICANCE:

There was never a path for ground water to flow in sufficient quantity to flood the auxiliary building basement, even before the seals were installed and before the temporary conduits were grouted. The floor drain and sump pump system was more than adequate to handle the quantity of water which entered the building during construction, and is adequate to handle the much reduced quantity presently observed, most of which evaporates before ever reaching a floor drain. On this basis, there is no recognized reason that this issue should constrain fuel load or power operation.

CORRECTIVE ACTION PLAN/SCHEDULE:

As stated above, there is no safety significance associated with this issue. Corrective action will be taken as part of good construction practice. The decision to replace the seals on the conduits will be based strictly on operating and maintenance considerations. Any replacement seals will consist of a light density silicone elastomer which has the capability to stop the seepage.

Temporary conduits which enter the basemat from outside, and which once allowed passage of ground water in quantities that required periodic pumping, have now all been pressure grouted as part of the normal design requirement and their temporary blockout pits filled with concrete as shown on Drawing LOU-1564-G-499 S09. Therefore, they no longer serve as leak paths for ground water.

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ATTACHMENTS:

(1) Memorandum ES-9160-84 of May 18, 1984

(2) Memorandum ES-9409-84 of June 1, 1984

REFERENCES:

(1) Drawing LOU-1564-G-499 S09

(2) FSAR Figure 1.2-11

(3) FSAR Figure 1.2-19

ATTACHMENT 1

MEMORANDUM

May 18, 1984
ES-9160-84

To: J. Boughtaling

From: J. T. GRILLO

Subject: LOUISIANA POWER & LIGHT COMPANY
WATERFORD SES - UNIT NO. 3
WATER SEEPAGE FROM CONDUITS,
ELEVATION -35

In accordance with your request, Civil and Electrical ESSE conducted a walkdown of the conduits which penetrate the mat at Elevation -35 of the RAB, FHB and Cooling towers to determine which conduits are leaking water. At the same time NTIEI was requested to review the type of material that could be employed to seal the conduits and eliminate seepage of water onto the floor.

The results of this study are as follows:

I. Results of Walkdown

A comprehensive walkdown of all conduits which penetrate the Mat at Elevation -35 revealed either seepage of water or evidence that water has leaked from 76 of these conduits. The attached table provides a complete listing of the affected conduits including their location and cables contained. A large number of these conduits (53) penetrate the Mat and enter floor mounted pull boxes. There are eight such pull boxes that have been identified.

II. Results of NTIEI Study

NTIEI was requested to review this problem and identify the type of fix that would prevent water from penetrating these conduits. It was determined that sealing the conduits with Light Density Silicone Elastomer (LDSE) which has been provided by B&B in accordance with existing specification LOU 1364.249W will prevent the seepage of water through the conduits.

Assuming the water table to be equal to grade elevation of +17.5 feet and the affected conduits end flush with slab elevation -35 feet (worse case), the pressure on top of the conduit opening can be calculated as follows:

Pressure (PSI) = Head (ft.)/2.31(ft/psi) where
Head (ft.) = $d_1 - d_2$, therefore

Pressure (PSI) = 17.5-(-35)/2.31 or 22.7psi

A four (4) inch thickness of LDSE has been tested by B&B to be a fire rated seal and a hydrostatic seal rated for 20 psi.

Since the pressure on the conduit is 22.7psi, it is recommended that a six (6) inch thickness of LDSE in each conduit end will provide a margin for flooding at grade elevation. The existing Silicone Foam fire barrier material must be completely removed prior to pouring the LDSE. Also, upon curing the LDSE becomes hard and can only be removed by using a chisel.

It should be noted that the seepage of water onto the floor of Elevation -35 through these conduits is not an immediate hazard to the safety of the plant or its personnel, but rather a nuisance to maintenance. On this basis, it is recommended that replacement of the Silicone foam fire barrier material with the LDSE be scheduled as a post fuel load task at a time convenient to LP&L.

JTG/kw

cc: J. F. Montalbano
J. Costello
J. DeBruin
C. Ruiz
R. Vidal

CLIENT LOUISIANA POWER & LIGHT
PROJECT WATERFORD · S.E.S. #3
SUBJECT EMBEDDED CONDUIT INVESTIGATION

OFS NO. _____ DEPT. NO. _____
BY _____ DATE _____
CHECKED BY _____ DATE _____

ITEM NO.	LINE Nº OR BOX Nº	CONDUIT SIZE	APPROX LOCATION	DESCRIPTION		FROM / TO	CABLE TYPE	VOLTAGE	CABLE Nº
				LEAK	EVIDENCE				
1	35075	2"ϕ	W. OF WALL ON 12A, BETW. H & J	✓		CAP NEAR J/12A B3275-NB	-	-	-
2	30370A	4"ϕ	DITTO	✓		SWGR 3AB31S 480V(4) CHG P "AB" (CH-3)	3/C #1/0T (075-03)	POWER	30370A
3	30873A	2"ϕ	S. OF SUMP IN WASTE TANK A	✓		B3267-NA W OR TKS MP #11A	3/C #8 (075-09)	POWER	30873A
4	B3278 (PULL BOX)	8-2"ϕ	E. OF WALL ON 6A, INJECT. PUMP AREA "B"	✓ (1 CND)		SEE SHEET-3			
5	B3279 (PULL BOX)	11-2"ϕ	DITTO	✓ (3 CNDS)		SEE SHEET-4			
6	30863B	2"ϕ	DITTO	✓		B3276-NB REAC OR P FD SMP #5A	3/C #8 (075-09)	POWER	30863B
7	B3753 (PULL BOX)	3-2"ϕ	W. OF WALL ON 10A, INJECT. PUMP AREA "B"	✓ (1 CND)		SEE SHEET-6			
8	4" RISER PIEZOMETER	4"ϕ	3'-0 S. OF J, 3'-0 W. OF 6A	✓					
9	B3270 (PULL BOX)	5-2"ϕ	E. OF WALL ON 6A, INJECT. PUMP AREA "A"	✓ (2 CNDS)		SEE SHEET-7			
10	B3271 (PULL BOX)	6-2"ϕ	DITTO	✓ (1 CND)		SEE SHEET-8			
11	33537	2"ϕ	S. OF WALL ON H, BETW. 4A & 5A.		✓	CAP NEAR H/4A (SP) B3279-NB	-	-	-
12	7902203 TEMP. POWER CONSTR	4"ϕ	S. OF WALL ON W, W. OF 7FH – FHB.	✓					
13	30876E	2"ϕ	W. OF WALL ON 1M, BETW VEW - C.T.		✓	B3168-NA B3174-NA	2/C #14 (050-03)	CONTROL	30876E, G, N.
14	30340	2"ϕ	NEXT TO N. WALL INSIDE B.A. MAKE-UP TANK "B"		✓	P201-5A : 3403 B3289-5A	1/C #4 (075-07)	POWER	30340A
15	30370A	4"ϕ	INSIDE CHARGE PUMP ROOM - AB	✓		SWGR 3AB31S 480V (4) CHG P "AB" (CH-3)	3/C #1/0T (075-03)	POWER	30370A
16	38011	2"ϕ	S.W. OF COL LINES 5A & K	✓		CAP NEAR K/5A (SP) CAP NEAR K/6A	-	-	-

SB10/5-74

CLIENT LOUISIANA POWER & LIGHT
PROJECT WATERFORD - S.E.S. #3
SUBJECT EMBEDDED CONDUIT INVESTIGATION

OFS NO. _____ DEPT. NO. _____
BY _____ DATE _____
CHECKED BY _____ DATE _____

ITEM NO.	LINE Nº OR BOX Nº	CONDUIT SIZE	APPROX LOCATION	DESCRIPTION LEAK	DESCRIPTION EVIDENCE	FROM/ TO	CABLE TYPE	VOLTAGE	CABLE Nº
17	30851V	2"ϕ	BETW. 4A & 5A, NEXT TO SUMP	✓		C201B-5A; 3307 CCW M-U P "A"	-	-	-
18	37102	2"ϕ	S.E. OF COL. LINES 4A & K		✓	B3297-5AB GOV CNTL PNL	2/C #18ST (D23-06)	LOW	31541H
19	30686A	2"ϕ	DITTO		✓	L205A-NB; 3304 TE-6051	2/C #14ST (D23-01)	LOW	30686A
20	30872V	2"ϕ	S. OF WALL ON L, EQUIP. DRAIN & SUMP PUMP.		✓	B3759-NA B30276-NA	2/C #14 (D50-03)	CONTROL	30872C, D, G, H, J.
21	30872B	2"ϕ	DITTO		✓	EQUIP DR SMP #1B B3276-NB	3/C #8 (D25-09)	POWER	30872B
22	30528A	2"ϕ	N. OF WALL ON L, BETW. 9A & 10A	✓		P102-5B; 3748 MV25I-V154484 (5I-646)	3/C #8 (D25-09)	POWER	30528A
23	B3319 (PULL BOX)	B-2"ϕ	S. OF COL. ON COL. LINE 9A & M	✓ (2 CNDS)		SEE SHEET-9			
24	30516A	2"ϕ	N. OF WALL ON L, BETW. 8A & 9A	✓		B3317-5A MV25I-V809A (5I-668)	3/C #8 (D25-09)	PWR	30516A
25	30516B	2"ϕ	DITTO		✓	B3318-5A MV25I-V809A (5I-668)	9/C #14 (D50-07)	CONTL	30516B
26	38001	2"ϕ	N. OF WALL ON L, BETW. 7A & 8A		✓	B3319-5B (SP) CAP NR LY/7A	-	-	38001-5B
27	B3318 (PULL BOX)	6-2"ϕ	S. OF COL. ON COL. LINE 6A & LY.	✓ (2 CNDS)		SEE SHEET-10			
28	B3317 (PULL BOX)	6-2"ϕ	DITTO	✓ (2 CNDS)		SEE SHEET-11			
29	30877B	2"ϕ	E. OF A.D. SUMP W. OF WALL ON 12A-C.T.		✓	MCC B3314S (5I) CLG TWR AREA DR SMP #2B	3/C #8 (D25-09)	POWER	30877B
30	33095	3"ϕ	S.W. CORNER OF WALLS ON 12A & S - C.T.		✓	SPARE			
31	TEMP. POWER CONSTR.	4"ϕ	N. OF WALL ON R, BETW. 12A & 12M - C.T.		✓				
32	B3751 (PULL BOX)	3-2"Ø	6A & 12'N of J	✓ (1 CND)		SEE SHEET 12			
33	30867A	2"ϕ	8'E of 8A @ M	✓		B3270-NA RAB SMP #3A	3/C #8 (D25-09)	POWER	30867A
34	30406A	2"ϕ	11'E OF 6A/11'-6 N OF K	✓		B3270-NA REAC. DR. TR. P	3-1/C #8 (D25-08)	POWER	30406A
35	35314	2"ϕ	7'E OF 9A/@ K	✓		B3277-NB CAP NR. K/9A (SPARE)	-	-	-
36	38010	2"Ø	SOUTH WALL OF CHG. P. RM A/B IN PIPE CHASE	✓		B3282-5AB CAP NR. J/3A (SPARE)	-	-	-

BY _____ DATE _____
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PROJECT _____
SUBJECT _____
DEPT. NO. _____
PG 3 OF 12 SHEET 2 OF 11½

ITEM NO.	CONDUIT Nº	SIZE	FROM / TO	CABLE TYPE	VOLTAGE	CABLE Nº
14	B3278-NB					
*	30865F-NB	2	B3278-NB B3751-NA	3/C #14 (050-04)	CONTROL	30865F
	30883F-NB	2	B3278-NB B3748-NA	3/C #14 (050-04)	CONTROL	30883F
	35086-NB	2	B3278-NB (SP) CAP NEAR K/4A	-	-	-
	30884F-NB	2	B3278-NB B3457-NA	3/C #14 (050-04)	CONTROL	30884F
	35087-NB	2	CAP NEAR J/5A (SP) B3278-NB	-	-	-
	30871F-NB	2	B3749-NA B3278-NB	3/C #14 (050-04)	CONTROL	30871F
	30867F-NB	2	B3278-NB B3442-NA	3/C #14 (050-04)	CONTROL	30867F
	35097-NB	2	CAP NEAR H/4A (SP) B3278-NB	-	-	-

* = CND HAS LEAK

ITEM NO.	CONDUIT No.	SIZE	FROM / TO	CABLE TYRE	VOLTAGE	CABLE No.
5	B3279-NB					
	30441A-NB	2	B3279-NB HLDP DR P	1/C #8 (D25-08)	POWER	30441A
*	33085-NB	2	CAP NEAR J/5A (SP) B3279-NB	-	-	-
	30883B-NB	2	OIL SMP #3B B3279-NB	3/C #8 (D25-09)	POWER	30883B
	30447A-NB	2	B3279-NB HLDP RCRLG P	1/C #8 (D25-08)	POWER	30447A
	30871B-NB	2	B3279-NB BA RM SMP #9B	3/C #8 (D25-09)	POWER	30871B
*	30469A-NB	2	B3279-NB BA COND P "B" (BAC-B)	1/C #8 (D25-09)	POWER	30469A
	33086-NB	2	B3279-NB (SP) CAP NEAR K/4A	-	-	-
	30867B-NB	2	B3279-NB RAB SMP #3B	3/C #8 (D25-09)	POWER	30867B

*= CND HAS LEAK

BY _____ DATE _____
CHKD. BY _____ DATE _____
CLIENT _____
PROJECT _____
SUBJECT _____
DEPT. NO. _____
OPR NO. _____
SHEET 6 OF 12
pg 4 of 12

BY _____ DATE _____
CHKD BY _____ DATE _____
CLIENT _____
PROJECT _____
SUBJECT _____
PG 5 OF 12 SHEET 5 OF 11
OPR NO. _____ DEPT. NO. _____

ITEM NO.		CONDUIT Nº	SIZE	FROM / TO	CABLE TYPE	VOLTAGE	CABLE Nº
5		B3279 (CONT.)					
		30865B-NB	2	B3279-NB SIRM "AB" SMP #7B	3/C #8 (025-09)	POWER	30865B
	*	33532-NB	2	CAP NEAR H/4A (SP) B3279-NB	-	-	-
		30884B-NB	2	B3279-NB DSL OIL STG TK OSMP #1B	3/C #8 (026-09)	POWER	30884B

* = CND HAS LEAK

BY _____ DATE _____

CHKD. BY _____ DATE _____

CLIENT _____

PROJECT _____

SUBJECT _____

OPS NO. _____ DEPT. NO. _____

PG 6 OF 12 SHEET 6 OF 12

ITEM NO.	CONDUIT No.	SIZE	FROM / TO	CABLE TYPE	VOLTAGE	CABLE No.
7	B3753-NA					
	30866E-NA	2	B3266-NA	3/C #14 050.04	CONTROL	30866E
			B3753-NA	2/C #14 050.03	CONTROL	30866G1
*	30866F-NB	2	B3275-NB	3/C #14 080.04	CONTROL	30866F
			B3753-NA			
	30866Y-NB	2	B3753-NA	2/C #14 050.03	CONTROL	30866C, D, G, H, J.
			B3818-NA			

* = CNDS. HAVE LEAK ONLY AT THE FLOOR WHERE THEY EXIST. THE MAT. NOT INSIDE THE PULLBOX. (THE PULLBOX IS MOUNTED 3'-0" ABOVE THE FLOOR)

BY _____ DATE _____

CHKD. BY _____ DATE _____

CLIENT _____

PROJECT _____

SUBJECT _____

SHEET 1 OF 11

DEPT. NO. _____

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ITEM NO.	CONDUIT Nº	SIZE	FROM / TO	CABLE TYPE	VOLTAGE	CABLE Nº
9	B3270					
*	30884E-NA	2	B3271-NA	3/C #14 D50-04	CONTROL	30884E
			B3457-NA	2/C #14 D50-03	CONTROL	30884G
	30872E-NA	2	B3271-NA	3/C #14 D50-04	CONTROL	30872E
			B3759-NA	2/C #14 D50-03	CONTROL	30872G
	30883E-NA	2	B3271-NA	3/C #14 D50-04	CONTROL	30883E
			B3748-NA	2/C #14 D50-03	CONTROL	30883G
*	30867E-NA	2	B3271-NA	3/C #14 D50-04	CONTROL	30867E
			B3442-NA	2/C #14 D50-03	CONTROL	30867G
	30863E-NA	2	B3271-NA	3/C #14 D50-04	CONTROL	30863E
			B3750-NA	2/C #14 D50-03	CONTROL	30863G

* = CNDS HAVE LEAK

EBASCO SERVICES INCORPORATED

BY _____ DATE _____

CHKD. BY _____ DATE _____

CLIENT _____ OFS NO. _____

PROJECT _____ DEPT. NO. _____

SUBJECT _____ SHEET 8 OF 11

PS 8 OF 12

ITEM NO.	CONDUIT Nº	SIZE	FROM / TO	CABLE TYPE	VOLTAGE	CABLE Nº
10	B3271-NA 30872A-NA	2	ED SMP #1A B3271-NA	3/C #8 025.09	POWER	30872A
	30867A-NA	2	B3271-NA RAB SMP #3A	3/C #8 025.09	POWER	30867A
*	30883A-NA	2	OIL SMP #3A B3271-NA	3/C #8 025.09	POWER	30883A
	30863A-NA	2	B3271-NA REAL DR RFL DR SMP #5A	3/C #8 025.09	POWER	30863A
	30884A-NA	2	B3271-NA DSL OIL STG TK OSMP #1A	3/C #8 025.09	POWER	30884A
	30406A-NA	2	B3271-NA REAL DR TK P			30406A

* = CND HAS LEAK

DATE _____ SHEET 7 OF 12

BY _____ DATE _____ OPS NO. _____ DEPT. NO. _____

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PROJECT _____

SUBJECT _____

Pg 9 OF 12

ITEM NO.	CONDUIT No	SIZE	FROM / TO	CABLE TYPE	VOLTAGE	CABLE No
23	B3319-SB					
	30542A-SB	2	P102-SB:3708 MV 25I-V1539B1 (SI-675)	3/c #8 025-09	PWR	30542A
	38001-SB	2	B3319-SB CAP NR 4Y/7A	-	-	-
*	30526A-SB	2	P102-SB:3708 MV 25I-V1540B2 (SI-676)	3/c #8 025-09	PWR	30526A
	30541A-SB	2	P102-SB:3708 MV 25I-V1549A1 (SI-615)	3/c #8 025-09	PWR MRL 60120T PO N4-03495	30541A
*	30528A-SB	2	P102-SB:3708 MV 25I-V1544B4 (SI-644)	3/c #8 025-09	PWR	30528A
	30527A-SB	2	P102-SB:3708 MV 25I-V1547B3 (SI-634)	3/c #8 025-09	PWR	30527A
	38018-SB	2	B3319-SB CAP NR 2207	-	-	-
	30525A-SB	2	P102-SB:3708 MV 25I-V1545B1 (SI-616)	3/c #8 025-09	PWR	30525A

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ITEM NO.	CONDUIT No	SIZE	FROM / TO	CABLE TYPE	VOLTAGE	CABLE No
37	B3318-SA					
	30522B-SA	2	B3318-SA	9/C #14	CONTROL	30522B
		1	MV 251-V1546A2 (SI-627)	D50-07		
*	30516B-SA	2	B3318-SA	9/C #14	CONTROL	30516B
			MV 251-V809 (SI-648)	D50-07		
	30521B-SA	2	B3318-SA	2/C #18ST	LOW LEVEL	30521M
			MV 251-V1550A (SI-617)	D83-06		
*	30524B-SA	2	B3318-SA	9/C #14	CONTROL	30524B
			MV 251-V1548A4 (SI-647)	D50-07		
	30544B-SA	2	B3318-SA	9/C #14	CONTROL	30544B
			MV 251-V1548B2	D50-07		
	30523B-SA	2	B3318-SA	9/C #14	CONTROL	30523B
			MV-251-V1542AB (SI-637)	D50-07		

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CLIENT _____
PROJECT _____
SUBJECT _____
OPS NO. _____ DEPT. NO. _____

PS 10 OF 12 SHEET 10 OF 44/2

ITEM NO.	CONDUIT Nº	SIZE	FROM / TO	CABLE TYPE	VOLTAGE	CABLE Nº
28	B3317-5A					
	30544A-5A	2	B3317-5A MV25I-V543B2	3/C #8 D25.09	PWR	30544A
*	30516A-5A	2	B3317-5A MV25I-V808A (5I-668)	3/C #8 D25.09	POWER	30516A
	30522A-5A	2	B3317-5A MV25I-V1546A2 (5I-627)	3/C #8 D25.09	POWER MLR6 DL207 403495	30522A
*	30524A-5A	2	B3317-5A MV25I-V548A4 (5I-647)	3/C #8 D25.09	POWER	30524A
	30521A-5A	2	B3317-5A MV25I-V1550A1 (5I-617)	1/C #8 D25.08	POWER	30521A
	30523A-5A	2	B3317-5A MV25I-V1542A3 (5I-637)	3/C #8 D25.09	POWER	30523A

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DATE _____

J. ET _____ DATE _____

CLIENT _____

PROJECT _____

SUBJECT _____

PSII OP 12 · SHEET 11 OF 412

OPS NO. _____ DEPT. NO. _____

ITEM NO.	CONDUIT No.	SIZE	FROM / TO	CABLE TYPE	VOLTAGE	CABLE No.
32	B3751-NA					
	30865B-NB	2"	B3279-NB SI-RM "AB" SMP #78	3/C #8 (D25-09)	POWER	30865B
*	30865F-NB	2	B3278-NB B3751-NA	3/C #14 (D50-04)	CONTROL	30865F
	30865V-NA	2	B3751-NA B3820-NA	2/C #14 (D50-03)	CONTROL	30865C, D, G, H, J

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09 12 OF 12

SUBJECT

PROJECT

CLIENT

DATE

DEPT. NO.

OPS NO.

KC-BY

ATTACHMENT 2

MEMORANDUM

June 1, 1984
ES-9409-84

TO: J. Houghtaling

FROM: B. Grant BG for D.G.

SUBJECT: LOUISIANA POWER & LIGHT COMPANY
WATERFORD SES - UNIT NO. 3
WATER SEEPAGE FROM PIEZOMETERS IN BASE MAT

Reference: Memo ES-9160-84 of 5-18-84, Grillo to Houghtaling, "WATER SEEPAGE FROM CONDUITS, ELEVATION - 35"

Item 3 of the attachment to referenced memo identifies a leaking 4"ϕ riser for piezometers, as shown on drawing LOU-1564-G-499509, Detail "X".

Two of the piezometers in this riser are still operating and they should continue in service so long as they give readings. Application of LDSE sealing foam as recommended in the memo will not interfere with continued service.

There is also a piezometer standpipe, No. P-23, which is shown on the same drawing, but which was not included in the referenced memo because it is not a conduit and does not leak.

This standpipe also requires sealing even though it does not leak at present, since its utility is over (it monitors a deep aquifer of no present interest) and in its present configuration (full of water under pressure) represents a potential leak path if it were to be broken by accident or corrosion.

It should be sealed by injection of pressure grout in sufficient quantity to fill it the height of the base mat, and then valved off against any minor seepage through the grout.

It is suggested that this action item be added to the list conveyed by the referenced memo.

BG/tw

cc: J. Costello
J. DeBruin
J. Grillo
R. Esnes
A. Bishara
P.C. Liu
L. Biller
B. Grant
G. Wu
ESSE File P. 83