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March 4, 1993

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Subject: **Docket Nos. 50-361 and 50-362**
San Onofre Nuclear Generating Station
Units 2 and 3

Reference NRC Bulletin 90-01, Supplement 1 dated December 22, 1992; Subject: Loss of Fill-Oil in Transmitters Manufactured by Rosemount.

This letter provides Southern California Edison's (SCE's) response to NRC Bulletin 90-01, Supplement 1, "Loss of Fill-Oil in Transmitters Manufactured by Rosemount" for San Onofre Units 2 and 3. The details of our response to the Bulletin Supplement are documented in the enclosure of this letter and are summarized below.

SCE will comply with the actions requested by the NRC for Rosemount Model 1153 Series B and D, and Model 1154 transmitters manufactured prior to July 11, 1989 except for the monitoring frequency of category 1b transmitters which may exceed the 24 month monitoring frequency limit provided in the Bulletin (San Onofre Units 2 and 3 operate on a 24 month refueling cycle). The enhanced monitoring program is being accomplished through the plant's computerized data retrieval system and is currently performing the requested enhanced surveillances for the applicable transmitters. A separate procedure for the enhanced monitoring program will be issued by November 19, 1993.

If you have any questions, please contact me.

Very truly yours,

for W. C. Marsh

Enclosure

cc: J. B. Martin, Regional Administrator, NRC Region V
C. W. Caldwell, NRC Senior Resident Inspector, San Onofre Units 1, 2 & 3
M. B. Fields, NRC Project Manager, San Onofre Units 2 & 3

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Enclosure

Response to NRC Bulletin 90-01, Supplement 1
San Onofre Units 2 and 3

NRC Reporting Requirement 1:

Provide a statement whether the licensee will take the actions requested above.

SCE Response:

SCE will comply with the actions requested by the NRC for Rosemount Model 1153 Series B and D, and Model 1154 transmitters manufactured prior to July 11, 1989 except for the monitoring frequency of category 1b transmitters which may exceed the 24 month monitoring frequency limit provided in the Bulletin (San Onofre Units 2 and 3 operate on a 24 month refueling cycle).

NRC Reporting Requirement 2a:

With regard to the actions requested above that the licensee is taking, provide a list of the specific actions that the licensee will complete to meet Item 1 of the Requested Actions for Operating Reactors provided in this supplement, including justification as appropriate.

SCE Response: (Response numbering corresponds to Actions 1a-1f in Bulletin 90-01, Supp. 1)

1a. **High Pressure** - SCE will monitor, on a monthly basis for the life of the transmitter, Rosemount Model 1153, Series B and D, and Model 1154 transmitters manufactured before July 11, 1989 installed in high pressure applications in the Reactor Protection System (RPS), Engineered Safety Feature (ESF) systems, or Anticipated Transients Without Scram (ATWS) systems.

1b. **High Pressure** - SCE will monitor, at least once every refueling cycle*, safety-related Rosemount Model 1153, Series B and D, and Model 1154 transmitters manufactured before July 11, 1989 installed in high pressure applications **other than the** Reactor Protection System (RPS), Engineered Safety Feature (ESF) systems, or Anticipated Transients Without Scram (ATWS) systems.

* This monitoring frequency may not comply with the "not exceeding 24 months" monitoring frequency limit provided in the Bulletin. SCE's response to NRC reporting requirement 3 provides the required justification.

1c. **Medium Pressure** - SCE **does not** have any safety-related Rosemount Model 1153, Series B and D, and Model 1154 transmitters manufactured before July 11, 1989 installed in medium pressure applications in the Reactor Protection System (RPS), Engineered Safety Feature (ESF) systems, or Anticipated Transients Without Scram (ATWS) systems.

1d. **Medium pressure** - For safety-related Rosemount Model 1153, Series B and D, and Model 1154 transmitters manufactured before July 11, 1989 installed in medium pressure applications **other than the** Reactor Protection System (RPS), Engineered Safety Feature (ESF) systems, or Anticipated Transients Without Scram (ATWS) systems, SCE will monitor each transmitter every 24 months.

1e. **Medium Pressure** - As permitted by Item 1.e of the subject bulletin, SCE will **exclude** from the monitoring program, any safety-related Rosemount Model 1153, Series B and D, or Model 1154 transmitter manufactured before July 11, 1989 installed in any medium pressure application that has satisfied its psi-month maturity criterion after SCE has established a high degree of confidence of detecting a loss of fill-oil transmitter failure and after a high degree of reliability has been established for these transmitters.

1f. **Low Pressure** - As permitted by Item 1.f of the subject Bulletin, SCE will **exclude** from the monitoring program, any Rosemount Model 1153, Series B and D, and Model 1154 transmitters manufactured before July 11, 1989 in any low pressure application after SCE has established a high degree of confidence of detecting a loss of fill-oil transmitter failure and after a high degree of reliability has been established for these transmitters.

The table attached to this Enclosure lists the Rosemount transmitters installed at San Onofre Units 2 and 3 that are subject to the requirements of Bulletin 90-01, Supplement 1.

NRC Reporting Requirement 2b:

With regard to the actions requested above that the licensee is taking, provide the schedule for completing licensee actions to meet Item 1 of the Requested Actions provided in this supplement.

SCE Response:

In response to NRC Bulletin 90-01, SCE developed an enhanced surveillance monitoring program for all subject Rosemount transmitters. As required by Supplement 1 to Bulletin 90-01, SCE has updated this program to comply with the NRC's new monitoring requirements. Our updated monitoring program uses the techniques described on page 6 of Rosemount Technical Bulletin Number 4 for output drift analysis (trending of actual operating data for some transmitters and evaluation of normal calibration data to determine drift trends for other transmitters).

Although our updated program is currently in place, incorporating these program modifications into a procedure will require several months to complete. SCE expects our formal program to be completed by November 19, 1993. SCE is confident that the use of a less formal program prior to completion of our program procedure will not degrade our ability to detect a loss of fill oil condition.

NRC Reporting Requirement 2c:

When completed, provide a statement confirming that Items 1 and 2 of the Requested Actions for Operating Reactors provided in this supplement have been completed.

SCE Response:

The actions requested by the NRC in this bulletin can be summarized as follows:

Actions 1a-1f	Enhanced transmitter monitoring or transmitter replacement, and
Action 2	Evaluation of the enhanced surveillance program to ensure it is adequate to detect a failed transmitter.

Although SCE believes our enhanced surveillance program is adequate to detect a failed transmitter, we will complete an evaluation of our enhanced monitoring program to verify program adequacy during the preparation of the program procedure. When these actions have been completed, SCE will send the requested notification letter to the NRC.

NRC Reporting Requirement 3:

Provide a statement identifying those actions requested by the NRC that the licensee is not taking and an evaluation which provides the basis for not taking the requested actions.

SCE Response:

SCE is completing all actions requested in NRC Bulletin 90-01, Supp 1 with one exception. As stated in our response to reporting requirement 2a, SCE will monitor Category 1b transmitters once every refueling outage which may exceed the 24 month limit provided in the Bulletin.

Justification

San Onofre has 4 pressurizer pressure low range transmitters per unit. Two of these transmitters per Unit are manufactured by Foxboro and two by Rosemount and have a calibrated range of 100 psig to 750 psig. These transmitters are used a few weeks per cycle during operation in Modes 3, 4 and 5. During operation in Modes 1 and 2 (nominal operating pressure

2250 psig) or Mode 6 (RCS pressure at 0 psig with the reactor vessel head removed) these transmitters are off scale and cannot be monitored.

The Bulletin allows a surveillance interval of once every refueling outage, but "**not exceeding 24 months,**" for category 1b transmitters which have reached their appropriate psi-month maturity criterion. San Onofre Units 2 and 3 operate on a 24 month refueling cycle with the normal cycle length of approximately 20-22 months. The possibility exists, however, for a cycle to last longer than 24 months which would therefore result in the 24 month surveillance limit for these four transmitters being exceeded. SCE believes it is the intent of the Bulletin to monitor category 1b transmitters during refueling outages and not impose an unnecessary plant shutdown to perform this surveillance.

SCE believes this interval is appropriate considering: (1) the safety significance of these transmitters is low, (2) they have reached their psi-month threshold criteria recommended by Rosemount, and (3) they are paired with Foxboro transmitters serving the same function.

ROSEMOUNT 1153 AND 1154 TRANSMITTERS
MANUFACTURED BEFORE 7/11/89
INSTALLED IN SAFETY RELATED SYSTEMS

a. **High Pressure (>1500 psia) - Installed in RPS/EFS/ATWS Systems - Monitor Monthly**

MATURE				NOT MATURE			
TAG NO.	**MODEL**	**FUNCTION**	**PSI-MO***	**TAG NO.**	**MODEL**	**FUNCTION**	**PSI-MO***
2PT01021	1153GD9N	PZR PRESS WIDE RANGE TR A	156,375	3PT01024	1153GD9N	PZR PRESS WIDE RANGE TR D	42,750
3PT01021	1153GD9N	PZR PRESS WIDE RANGE TR A	135,000	2PT0114A	1154GP9RA	PZR PRESS ATWS/DSS	58,500
2PT01022	1153GD9N	PZR PRESS WIDE RANGE TR B	156,375	3PT0114A	1154GP9RA	PZR PRESS ATWS/DSS	45,000
3PT01022	1153GD9N	PZR PRESS WIDE RANGE TR B	135,000	2PT0114B	1154GP9RA	PZR PRESS ATWS/DSS	58,500
2PT01023	1153GD9N	PZR PRESS WIDE RANGE TR C	156,375	3PT0114B	1154GP9RA	PZR PRESS ATWS/DSS	45,000
3PT01023	1153GD9N	PZR PRESS WIDE RANGE TR C	135,000	2PT0114C	1154GP9RA	PZR PRESS ATWS/DSS	58,500
2PT01024	1153GD9N	PZR PRESS WIDE RANGE TR D	156,375	3PT0114C	1154GP9RA	PZR PRESS ATWS/DSS	45,000
2PDT09781	1153HD6N	SG E089 PRIMARY FLOW D.P.	156,375	2PT0114D	1154GP9RA	PZR PRESS ATWS/DSS	58,500
3PDT09781	1153HD6N	SG E089 PRIMARY FLOW D.P.	135,000	3PT0114D	1154GP9RA	PZR PRESS ATWS/DSS	45,000
2PDT09782	1153HD6N	SG E089 PRIMARY FLOW D.P.	156,375	3PDT09784	1153HD6N	SG E089 PRIMARY FLOW D.P.	88,875
3PDT09782	1153HD6N	SG E089 PRIMARY FLOW D.P.	135,000				
2PDT09783	1153HD6N	SG E089 PRIMARY FLOW D.P.	156,375				
3PDT09783	1153HD6N	SG E089 PRIMARY FLOW D.P.	135,000				
2PDT09784	1153HD6N	SG E089 PRIMARY FLOW D.P.	156,375				
2PDT09791	1153HD6N	SG E088 PRIMARY FLOW D.P.	156,375				
3PDT09791	1153HD6N	SG E088 PRIMARY FLOW D.P.	135,000				
2PDT09792	1153HD6N	SG E088 PRIMARY FLOW D.P.	156,375				
3PDT09792	1153HD6N	SG E088 PRIMARY FLOW D.P.	135,000				
2PDT09793	1153HD6N	SG E088 PRIMARY FLOW D.P.	156,375				
3PDT09793	1153HD6N	SG E088 PRIMARY FLOW D.P.	135,000				
2PDT09794	1153HD6N	SG E088 PRIMARY FLOW D.P.	156,375				
3PDT09794	1153HD6N	SG E088 PRIMARY FLOW D.P.	135,000				

b. **High Pressure (>1500 psia) - Safety Related but not installed in RPS/EFS/ATWS Systems - Monitor Quarterly**

MATURE				NOT MATURE			
2PT01042	1153GD9N	PZR PRESS LOW RANGE 2E087	157,500	NONE			
3PT01042	1153GD9N	PZR PRESS LOW RANGE 3E087	136,125				
2PT01064	1153GD9N	PZR PRESS LOW RANGE 2E087	157,500				
3PT01064	1153GD9N	PZR PRESS LOW RANGE 3E087	136,125				

ROSEMOUNT 1153 AND 1154 TRANSMITTERS
MANUFACTURED BEFORE 7/11/89
INSTALLED IN SAFETY RELATED SYSTEMS
PAGE 2 OF 2

c. Medium Pressure (500-1500 psia) - Installed in RPS/EFS/ATWS Systems - Monitor each Refueling

NOT MATURE			
NONE			

d. Medium Pressure (500-1500 psia) - Safety Related but not installed in RPS/EFS/ATWS Systems - Monitor each Refueling

NOT MATURE			
2LT11151	1153HD5N	SG E089 LEVEL WIDE RANGE	29,000
3LT11152	1153HD5N	SG E089 LEVEL WIDE RANGE	39,000

e. Medium Pressure (500-1500 psia) - Safety Related but not installed in RPS/EFS/ATWS - May be excluded from enhanced monitoring

MATURE			
3LT11151	1153HD5N	SG E089 LEVEL WIDE RANGE	60,500
2LT11152	1153HD5N	SG E089 LEVEL WIDE RANGE	70,000
2LT11251	1153HD5N	SG E088 LEVEL WIDE RANGE	70,000
3LT11251	1153HD5N	SG E088 LEVEL WIDE RANGE	60,500
2LT11252	1153HD5N	SG E088 LEVEL WIDE RANGE	70,000
3LT11252	1153HD5N	SG E088 LEVEL WIDE RANGE	60,500

f. Low Pressure (<500 psia) - May be excluded from enhanced monitoring

NOT MATURE			
2LT4355	1153DD3PB	CDST T121 LVL NARROW RANGE	860
3LT4355	1153DD3PB	CDST T121 LVL NARROW RANGE	397
2LT4356	1153DD3PB	CDST T121 LVL WIDE RANGE	265
3LT4356	1153DD3PB	CDST T121 LVL WIDE RANGE	698

* PSI-MO as of January 15, 1993