



NUCLEAR RESEARCH CORPORATION

April 21, 1993

U. S. Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406-1415

SUBJECT: 10CFR21 NOTIFICATION

REFERENCE: (1) 10CFR21
(2) PHONECON 4/19/93 D. MAKOSKI/CAROLINA POWER & LIGHT-
S. PANDEY/NUCLEAR RESEARCH CORPORATION

Gentlemen:

Pursuant to the requirements of 10CFR21, Nuclear Research Corporation (NRC) hereby advises the Nuclear Regulatory Commission of a potential safety-related or "Important-To-Safety" modification required on NRC's Model DRM-200 Series of Ratemeters.

Nuclear Research Corporation was advised on 4/19/93 by Mr. Dave Makoski of Carolina Power and Light Corporation, H. B. Robinson Station of the potential non-annunciation of a fail alarm due to the failure of the +5 VDC power supply in the DRM-200 Ratemeter. This condition would cause the microprocessor to cease functioning without de-energizing the fail-safe, fail relay into the alarm state.

As indicated on the enclosed letter, NRC has notified all nuclear utility users of the DRM-200 of the potential for safety-related effects. NRC has also indicated required corrective action.


NRC offers this correspondence both as notification of the potential safety-related concern, and as instructions for corrective action. A copy of the utilities notified is attached to this correspondence, along with the modified engineering drawings describing the circuit alteration.

Final corrected documentation will be supplied to all DRM-200 users within thirty days. NRC will inform the U. S. Nuclear Regulatory Commission promptly of any further correspondence or information concerning this matter.

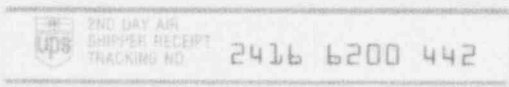
Should further information be desired, please contact the Nuclear Research Corporation corporate office at (215) 343-5900.

Sincerely,

NUCLEAR RESEARCH CORPORATION


Earl M. Pollock
President
ma

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Enclosures: As stated

cc: J. Cooley, S. Pandey, T. O'Malley, L. Lay, C. Mills, K. Barton

125 TITUS AVENUE WARRINGTON, PA 18976 Phone: (215) 343-5900 FAX No.: (215) 343-4670
9304270347 930421
PDR ADOCK 05000219
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NUCLEAR RESEARCH CORPORATION

April 21, 1993

H. B. Robinson Nuclear Power Station
CAROLINA POWER AND LIGHT CO.
P. O. Box 790
Hartsville, SC 29550

ATTENTION: PLANT MANAGER

SUBJECT: 10CFR21 MODIFICATION - SUPPLEMENTAL INFORMATION

REFERENCE: (1) NRC LETTER OF 4/19/93

Gentlemen:


Please be advised that the Nuclear Research Corporation (NRC) letter of 4/19/93 erroneously referenced a transistor with the circuit designation Q6.

All references to Q6 should be corrected to reference transistor circuit designation Q5.

In all other respects, the 10CFR21 modification is complete and correct.

Sincerely,

NUCLEAR RESEARCH CORPORATION



Earl M. Pollock
President

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Attachment: Letter of 4/19/93

cc: J. Cooley, S. Pandey, T. O'Malley, K. Barton, L. Lay, C. Mills, S. Prasad



NUCLEAR RESEARCH CORPORATION

April 19, 1993

H. B. Robinson Nuclear Power Station
CAROLINA POWER AND LIGHT COMPANY
P. O. Box 790
Hartsville, SC 29550

ATTENTION: PLANT MANAGER

SUBJECT: NOTIFICATION OF POTENTIAL SAFETY-RELATED MODIFICATION IN ACCORDANCE
WITH 10CFR21

REFERENCE: (1) 10CFR21
(2) PHONECON D. MAKOSKI/CP&L - S. PANDEY/NRC OF 4/19/93

Gentlemen:

As a possible user of the Nuclear Research Corporation (NRC) Model DRM-200 Series of Ratemeters in safety-related applications, you are advised of the potential for non-annunciation of the FAIL relay upon loss of 5 VDC power supply. All other power supply failures are annunciated by way of fail safe relay operation.

To correct this condition, perform the following actions on the Relay Driver PCB Assembly (NRC P/N: 7520-xxx, Schematic 7522-xxx):

- 1) Remove resistor R14 on assembly 7520-xxx. The resistor value is 10 K ohms.
- 2) Cut the printed circuit board trace between Q6 and ground as noted on the attached modified drawings.
- 3) Add a #24-#26 AWG insulated buss wire jumper between Q6 and +5 VDC as noted on the attached modified drawings.
- 4) Return the Relay Driver PCB to the DRM-200 Ratemeter.

This modification will provide sensing of the 5 VDC supply with reliable alarm annunciation of the FAIL relay. To test the DRM-200 for response to this modification, perform the following steps:

- 1) Power up the DRM-200 after performing the required modification.
- 2) Verify normal operation and alarm relay status.
- 3) Using jumper clips, short the positive 5 VDC terminal at the power supply to ground.

Carolina Power & Light Company
H. B. Robinson Nuclear Power
Station

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April 19, 1993

- 4) Observe FAIL relay transition to the alarmed/de-energized state. Observe visual indication of FAIL alarm.
- 5) Power down the DRM-200 and remove the shorting jumper.
- 6) Power up the DRM-200 and verify normal operation and alarm status.

Enclosed are modified schematics and assembly drawings indicating the changes to the documentation. Full-sized copies of these drawings will be provided to all addresses under separate correspondence.

Nuclear Research Corporation considers this correspondence as the complete response to the 10CFR21 requirements. Please contact Nuclear Research Corporation, if further difficulties are encountered during the performance of this modification.

Sincerely,

NUCLEAR RESEARCH CORPORATION



Earl M. Pollock
President

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Enclosures: As stated

cc: J. Cooley, S. Pandey, T. O'Malley, K. Barton, L. Lay, C. Mills, S. Prasad

H. B. Robinson Nuclear Power Station
CAROLINA POWER AND LIGHT CO.
P. O. Box 790
Hartsville, SC 29550

50-261

ATTENTION: PLANT MANAGER

Florida Power and Light Company
Turkey Point Nuclear Generating Station
Units 3 and 4
P. O. Box 4332
Princeton, FL 33032

50-250

251

ATTENTION: PLANT MANAGER

Florida Power Corporation
Crystal River Unit 3
P. O. Box 219
Crystal River, FL 32629

50-302

ATTENTION: PLANT MANAGER

GPU Nuclear Corporation
Oyster Creek Nuclear Generating Station
Rte. 9
Forked River, NJ 08731

50-219

ATTENTION: PLANT MANAGER

GPU Nuclear Corporation
Three Mile Island Nuclear Generating Station, Unit 1
P. O. Box 480
Middletown, PA 17057

50-289

ATTENTION: PLANT MANAGER

Public Service Electric and Gas Company
Salem Nuclear Generating Station
P. O. Box 236
Hancocks Bridge, NJ 08038

50-272

311

Rochester Gas and Electric Corporation
Robert E. Ginna Station
1503 Lake Road
Ontario, NY 14519

ATTENTION: PLANT MANAGER

Southern California Edison Company
San Diego Gas & Electric Co.
San Onofre Nuclear Generating Station
P. O. Box 128
San Clemente, CA 96272

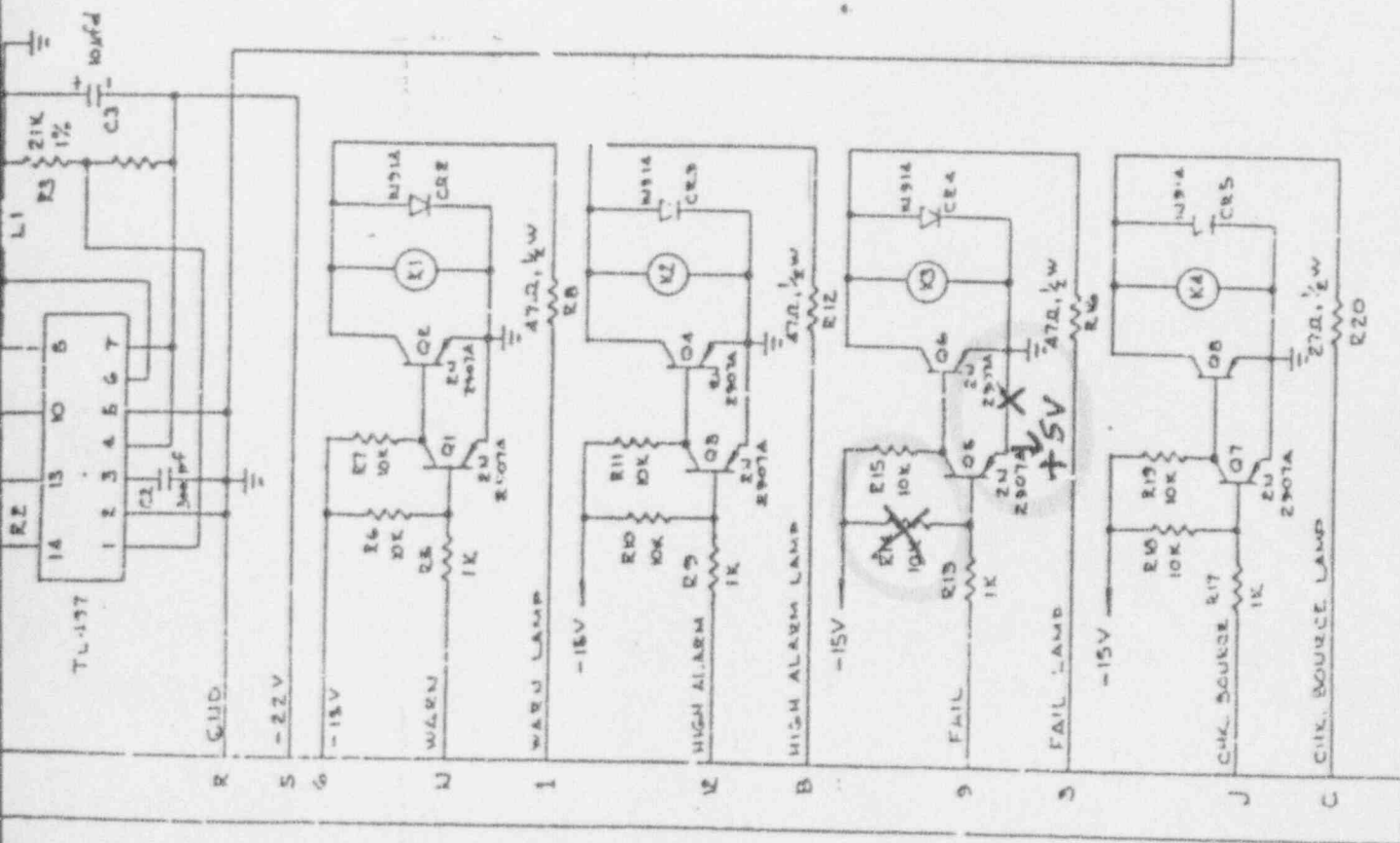
ATTENTION: PLANT MANAGER

South Carolina Electric and Gas Co.
Virgil C. Summer Station
P. O. Box 88
Jenkinsville, SC 29065

ATTENTION: PLANT MANAGER

Technology for Energy Corporation
P. O. Box 22996
Knoxville, TN 37933-0996

ATTENTION: PLANT MANAGER/QA MANAGER



NOTES:

- 1) UNLESS OTHERWISE SPECIFIED, ALL RESISTOR VALUES IN OHMS, $\frac{1}{4}$ W, 5%.
- 2) ALL RELAY CONTACTS SHOWN IN DEENERGIZED (ALARM) MODE.

PI

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4-20 MA OUT
4-20 MA 160L
4-20 MA 160L
SER, TTL IN
SER, TTL OUT
RS 232 IN
RS 232, OUT
OPTIONAL OUT
OPTIONAL OUT
OPTIONAL OUT
GND

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NOTES:

- 1) UNLESS OTHERWISE SPECIFIED, ALL RESISTOR VALUES IN OHMS, $\frac{1}{4}$ W, 5%. 2) ALL RELAY CONTACTS SHOWN IN DEENERGIZED (ALARM) MODE.

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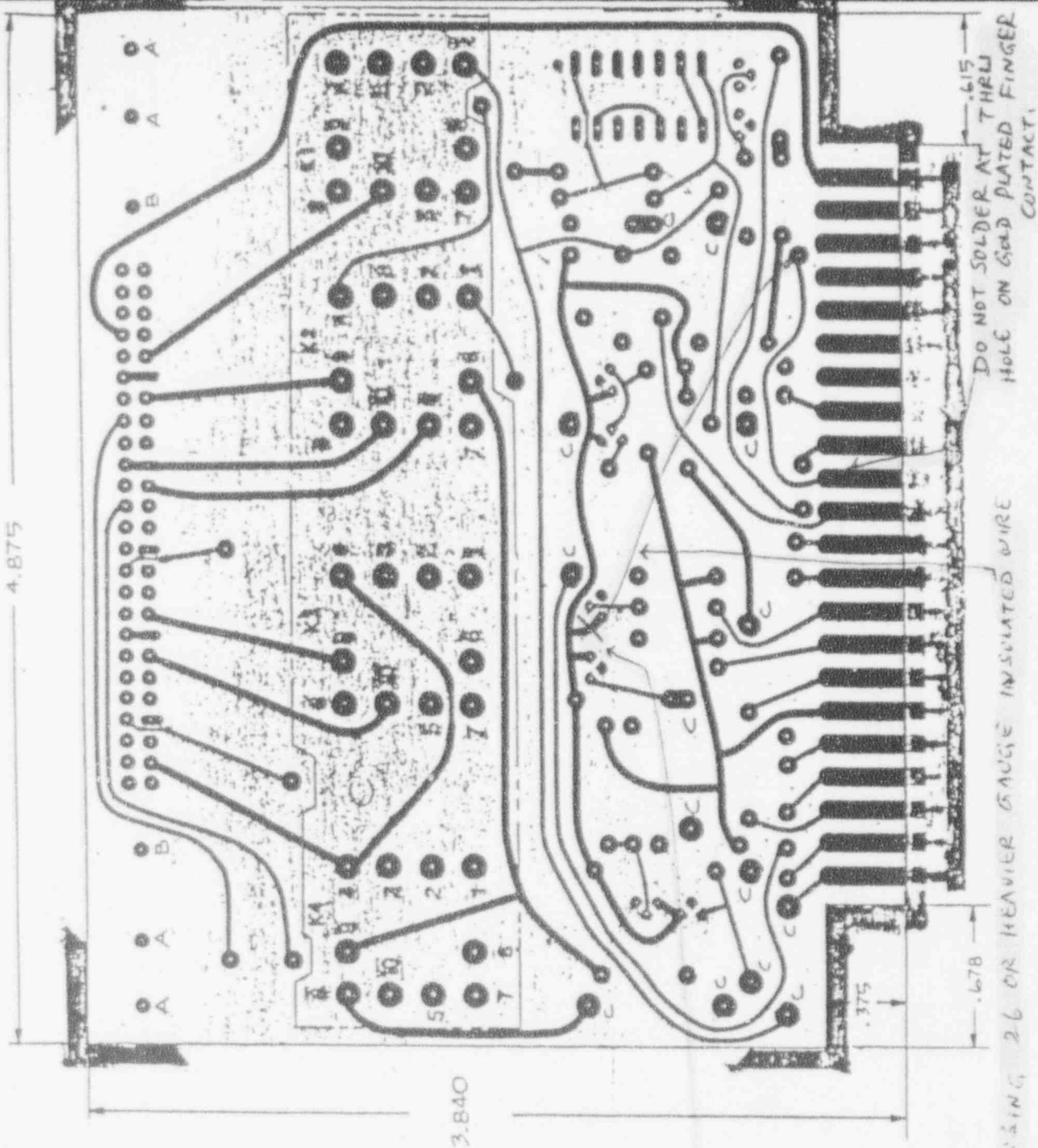
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ALL BOARDS SPECIFIED WITH NO DASH,
USE -1.
2. SHEET 1 OF 2, 15 - 1 ASSEMBLY, AND
SHEET 2 OF 2, 15 - 2 ASSEMBLY.

DELETE P.14

C-7520-001

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4.875



CUT THIS TRACE

CONNECT A JUMPER WIRE, 26 OR HEAVIER GAUGE INSULATED WIRE

DO NOT SOLDER AT THRU HOLE ON GOLD PLATED FINGER CONTACT

		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	DRAWN J. WALLER 6-27
		FRACTIONS TOLERANCES 3.154	CHECKED W. L. BURKE 6-27
		ANGLES DECIMALS 3.17	APPROVED S. J. 1-1
		XXX NOS	
		MAT'L: 1/16" G-10	