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SHIELDS L. DALTROFF
VICE PRESIDENT
ELECTRIC PRODUCTION

November 5, 1979

Re: Docket Nos.: 50-277
50-278

Mr. Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors
United States Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Ippolito:

This is in response to your request of October 5, 1979 for additional information pertaining to our application for amendments to Facility Operating License Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station Unit Nos. 2 and 3 submitted on October 27, 1979. The proposed amendments involve the use of analog transmitter/trip unit systems for certain engineered safeguard sensors. Your requests are restated below with our responses.

1. Provide the interface information specified in the GE Topical Report NEDO-21617-A for each of the four parameters specified in your application for amendment.

Response

The response to item 1 is contained in Appendix A (attached).

2. For each location, state the maximum and minimum abnormal environmental conditions that are expected during normal, accident, and post-accident situations. The information should include both magnitude and duration.

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Response

Environmental profiles being developed for our response to bulletin 79-01 will also be used in responding to this item. It is anticipated that we will be able to forward this information to you by January 30, 1980.

3. For each parameter, state the position of the trip output logic select switch in terms of the opening or closing of the trip output contacts on a loss of power.

Response

Trip unit switch positions are defined as follows:

Normal - signal greater than the trip point causes trip output of 24VDC

Reverse - signal greater than the trip point causes trip output of zero volts - DC

Instrument		Switch Position	Contact position on Loss of Power
PIS	5-12A,B,C,D	Reverse	Open
PISH	2-3-55A,B,C,D	Note 1	Note 1
PSL	2-3-55A,B,C,D	Reverse	Open
PISL	2-3-52A,B,C,D	Reverse	Open
PSLL	2-3-52A,B,C,D	Reverse	Open
LISH	2-3-72A,B	Note 2	Note 2
PISHH	10-100A,B,C,D	Normal	Open
PSH	10-100A,B,C,D	Normal	Open

Note 1: These trip units are existing plant equipment. Since output to a slave trip unit is only a portion of trip unit used for this modification, switch position is not applicable.

Note 2: These trip units are existing plant equipment. Since analog output is only portion of trip unit used for this modification, switch position is not applicable.

Very truly yours,

Attachment

1307 193

APPENDIX A - NEDO 21617-A

5.4.1 Specific Instrument Loops

(1) Variable Name	(2) Part # of device replaced	New Instrument Loop	(3) System Involved	(4) Engineered Safeguard Division	(5) Vendor Model of transmitter
Drywell Pressure	PS5-12 -A -B -C -D	PI5-12 -A & -B PIS5-12 -C -D	RPS Scram Sensor	IA IB IIA IIB	Rosemount Model # 1151GP
Reactor Pressure	PS2-3-51 -A -B -C -D	*PT2-3-5 -A *PISP2-3-55 -B & *PSL2-3-55 -C -D	RPS Condenser Low Vacuum and MSIV closure bypass	IA IB IIA IIB	Rosemount Model # 1151GP
Reactor Pressure	PS2-3-52 -A -C -B -D	PT2-3-52 -A PISL-2-3-52 -C & -b PSLL2-3-52 -D	Core Spray, RHR, Recirc. Permissive	I I II II	Rosemount Model # 1151GP
Reactor Water Level	LITS2-3-59-A -B	*LT2-3-72 & -A *LISH2-3-72 -B	Nuclear Boiler	Non Safe guard	Rosemount Model # 1151DP
	LI2-3-85 -A -B	LI2-3-85 -A -B			
	LI2-3-85 -Ax -Bx	LI2-3-85 -Ax -Bx			

191 104

APPENDIX A - NEDO 21617-A

5.4.1 Specific Instrument Loops

(1) Variable Name	(2) Part # of device replaced	New Instrument Loop	(3) System Involved	(4) Engineered Safeguard Division	(5) Vendor Model of transmitter
Drywell Pressure	PS10-100 -A PS10-101 -C & -B PS10-119 -D	PT10-100 -A PISHH10-100 -C & -B PSH 10-100 -D	ADS initiation, HPIC, Core Spray & diesel-generator initiation, containment spray permissive	I I II II	Rosemount Model # 1151GP

* Existing plant equipment

197 195

Appendix A (Cont'd)

5.4.2 Trip Unit Cabinet

1) For cabinet layout see the following prints:

6280-M-1-EE-380	Arrangement of Equipment panel 2AC65D (typical for panels 3AC65D and 3BC65D)
6280-M-1-EE-382	Tag list for panels
6280-M-1-EE-383	Equipment Identity
6280-M-1-EE-386	Card File Tag List

2) Division to which cabinet is assigned:

Cabinets 2AC65D & 3AC65D are for RPS Division IA and IB and ECCS Division I.

Cabinets 2BC65D & 3BC65D are for RPS Division IIA and IIB and ECCS Division II.

3) See the following Elementary Diagrams for the trip variables of each card slot:

6280-M-1-S-54, sht. 19	Reactor Protection System
6280-M-1-S-65, Shts. 22 & 23	Residual Heat Removal

5.4.3 Environmental Interface

5.4.3.1 Environmental profiles are being developed for Peach Bottom Reactor enclosure compartments required for IE Bulletin 79-01. The profiles will be used to determine normal operation and post-accident temperature and humidity conditions for areas where the retrofit hardware will be located. It is anticipated that we will be able to forward the required information to you by January 30, 1980.

5.4.3.2 The seismic qualification requirements are defined in the specification for the panel and includes the response spectrum curves for the location in which the panels are to be located. All panels supplied for this modification utilize the same structural configuration; they differ only in the complement of panel mounted

Appendix A (Cont'd)

devices. The seismic qualification was performed by the use of a mathematical model of the panel loaded with a full set of components including the mounting of components in spaces originally designated for spares. Design seismic stresses were compared against 60% of the material yield stress and maximum credible seismic stresses were compared against 90% of the material yield stress. In all cases, the computed stresses are well within the acceptance criteria. In addition, the peak acceleration input to the components mounted on the panels are well within the limits to which the individual components were tested.

5.4.3.3 The trip unit cabinets are located (as shown in Figure 5-3 of NEDO-21617-A) near the instrumentation racks. The lack of space in the cable spreading room and the control room is the primary reason for choosing this location. The equipment in the trip unit cabinets is qualified to the requirement of the Peach Bottom FSAR. This location will be re-evaluated to determine its acceptability for the environmental profiles addressed in 5.4.3.1.

5.4.4 Specific Plant Interconnections

See the following prints for interconnection diagrams which show the interconnections between existing logic cabinets and instrument cabinets, and the new trip unit cabinets:

6280-M-1-S-42, sh	1,2	RCIC System
6280-M-1-S-54, sh	1,7,8, 11,19	Reactor Protection System
6280-M-1-S-65, sh	1,3,4, 5,6,7,8 9,10,11 22,23	Elem. Diag. RHR System

Panels 25-5, 25-6, 25-5-2, 25-6-2, 25-51, 25-52 are near the instrumentation racks

Panel C05A is in the control room
Panel C43 is close to the control

Appendix A (Cont'd)

room and used for backup control

5.4.5 Field Calibration Rack

A "Field Calibration Rack" is not required for this modification.

197 198