

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
Duke Power Company) Docket Nos. 50-270 & 50-287
)
(Oconee Nuclear Station, Unit)
Nos. 2 & 3))

DUKE POWER COMPANY'S ANSWER
TO ORDER TO SHOW CAUSE

On January 2, 1980, the Nuclear Regulatory Commission issued an Order to Show Cause why Duke Power Company (Licensee) should not

By February 15, 1980, implement all "Category A" requirements (except the requirement of 2.1.7.a of NUREG-0578) referred to in Part II of this Order, except those for which necessary equipment is shown, by appropriate and timely documentation to the Director, Office of NRR, to be unavailable, or place and maintain its facilities in a cold shutdown or refueling mode of operation unless shutdown would severely impact the power reliability in the Virginia-Carolina subregion of the Southeastern Electric Reliability Council, as shown by appropriate and timely documentation to the Director, Office of NRR. "Category A" requirements not implemented by February 15, 1980, owing to the unavailability of necessary equipment shall be implemented within 30 days of the date such equipment becomes available. All "Category A" requirements must be implemented no later than June 1, 1980.

Pursuant to the Order and 10 CFR 2.202(a)(2) and (b), Duke provides the following written answer:

Specific Admissions & Denials:

10 CFR 2.202(b) provides that an answer to an order to

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show cause "shall specifically admit or deny each allegation or charge made in the order to show cause" The subject Order to Show Cause is not in the form that lends itself to systematic admission or denial of allegations or charges. However, in an effort to comply with the intent of the regulation, Duke provides the following:

1. Duke admits paragraph I.

2. Duke admits paragraph II with the following exception:
Neither NUREG-0578 nor the NRC letters provide the bases of the implementation schedule requirements for Category A items.

3. Duke admits paragraph III with the following exception:
Duke is without knowledge as to the commitment of the majority of licensees; Duke is without knowledge as to indications from other licensees; Duke admits that 30 days is a practical time period for installing equipment for a single unit facility but denies that such is sufficient for Oconee Units 1, 2, and 3 because specific work, manpower and other constraints require a longer outage for a multiple unit facility; Duke denies that implementation of all Category A requirements by February 15, 1980 will permit practicable staggering of the Oconee units shutdowns; Duke submits that phased implementation over a period of months fully satisfies the continued assurance of public health and safety and that the deadline for Category A requirements approved in the Order can and should be extended to May 31, 1980 without adverse effects on the public health and safety.

4. Paragraph IV does not require an answer, except that Duke denies that prompt implementation of Category A requirements necessitates that the Order to Show Cause be temporarily effective.

5. Paragraph V does not require an answer.

Statement of Facts

10 CFR 2.202(b) also provides that an answer to an Order to Show Cause may set forth the matters of fact on which the licensee relies. Pursuant thereto, Duke provides the following:

I. BACKGROUND

Duke Power Company's Oconee Nuclear Station consists of three 860 MW(e) units located near Clemson, South Carolina. The Order to Show Cause applies to Oconee Units 2 and 3 only; Unit 1 is not referenced. However, Unit 1 outage is still very much a factor in scheduling the Unit 2 and 3 outages.

In July, 1979, the NRC published its first report (NUREG-0578) concerning its review of the implications of the Three Mile Island accident upon the nuclear industry. This document recommended items that should be implemented by licensees in the short-term. The recommendations were designated as Category A and B.^{1/} By letters of September 13 and October 30, 1979, the

^{1/} Category B items are not germane to the instant discussion.

NRC officially directed all licensees to implement the Category A and B recommendations of NUREG-0578 by January 1, 1980 and January 1, 1981, respectively.

Duke Power began an extensive effort to implement these requirements as soon as possible, in many cases before the implementation letters were sent. In letters of October 18, November 21, 27, December 17 and 27, 1979 (Attachments 1-5), Duke provided details of its plans and schedules with regard to each item.

With the exception of three items, all 24 Category A requirements will have been implemented for each Oconee unit by January 31, 1980. Two of the remaining items necessitate plant shutdown and involve direct PORV position indication and diverse containment isolation. The third item, system leakage testing, is presently being implemented.

On January 2, 1980, the Commission extended Duke's Category A compliance date until February 15, 1980. However, as will be discussed in this answer, power reliability considerations, replacement power costs, manpower constraints, and equipment availability render Duke unable, in practical terms, to comply with the February 15, 1980 date.

II. CURRENT OPERATING STATUS

To put the matter into perspective it is necessary to set forth Duke's current operating status with respect to the Oconee Station. Unit 1 was shut down on November 21, 1979 at

304 EFPD, which was less than the actual design cycle length of 320 EFPD, to refuel, comply with NUREG-0578 in an expeditious manner, and complete approximately 3000 specific work activities. Major items included: (a) an extensive steam generator eddy-current program (over 50% of the "1B" OTSG); (b) activities required by IE Bulletins 79-02, -13, -14, and -17; (c) a containment building Integrated Leak Rate Test; (d) NUREG-0578 requirements; (e) NRC required fire protection related modification; (f) NRC required HPI cross-connect modifications as well as; (g) normal refueling items including core loading, turbine maintenance, annual surveillance items and primary and secondary system component maintenance. This outage is scheduled to end in early February but its length is determined by regulatory requirements and cannot be shortened further. There is also the possibility that during maintenance, the scope of work would change and require additional time. Equipment availability, which is discussed in a subsequent section, also poses another potential delay. Finally, the premature shutdown of either Unit 2 or 3 prior to the return of Unit 1 to full service will cause delay in the completion of Unit 1 work due to the diversion of some manpower from Unit 1 to Units 2 and 3. Even if the outage is completed in early February, it is anticipated that neither reliable nor significant amounts of power will be generated before February 15, 1980.

Unit 2 is currently in operation. Refueling was scheduled to commence in January. However, to accommodate the

extended Unit 1 outage, Duke lengthened Unit 2's fuel cycle. Thus, Unit 2 is expected to begin a forced coastdown mode approximately January 18, 1980, with an expected power reduction of 1% per day due to the depletion of reactivity at end of cycle. Unit 2 is expected to be up to 250 MW deficient by February 15, 1980, which is its approximate refueling outage date. The Unit 2 outage will include essentially the same activities as Unit 1 except for extensive steam generator inspections. The outage is expected to take approximately eighty-six days.

With respect to Unit 3, no near term refueling is scheduled. However, an outage of Unit 3 is planned to accommodate the two remaining modifications required by NUREG-0578. It is anticipated that these modifications will require a three-week outage (installation will be less than three weeks but the unit will have to be off-line for approximately three weeks to accomplish the work). In sum, the out-of-service schedule for the units have been planned as follows:

Unit 1 Refueling (including IEB 79-02, -14, TMI) ^{2/}	11/79 - 2/80
Unit 2 Refueling (including IEB 79-02, -24, TMI)	2/80 - 5/80
Unit 3 Outage (TMI-only)	5/80 - 5/80

^{2/} TMI reference includes the implementation of the remaining NUREG-0578 Category A requirements.

III. NEED AND RELIABILITY

The schedule imposed by the Order of January 2, 1980, would require several weeks of multiple unit outages during likely peak power demand periods as described in Mr. A. C. Thies' letter of December 17, 1979. Specifically, the Order would require the following outages and power reductions:^{3/}

Unit 1 Refueling	through approx. 2/8/80
Unit 2 Coastdown begins	approx. 1/18/80
Unit 2 Shutdown	2/15/80
Unit 3 Shutdown	2/15/80

This multiple unit shutdown will have an adverse impact on power reliability within Duke's System, the Virginia-Carolinas Reliability Group (VACAR) and the Southeastern Electric Reliability Council (SERC).

If both Units 2 and 3 are taken out of service on February 15, after Unit 1 is scheduled to return to service and peak load conditions occur after February 15, system reserves for February and March are

^{3/} The lengths of such outages are, at this time, difficult to estimate due to limited manpower resources. To explain, personnel performing modifications would be the same for each Unit. Thus, multiple unit outages would result in inefficient use of resources and cause the time of each outage to be extended. If Unit 1 does not return to service by mid-February, then Duke would have all three of its Oconee units out of service.

only 1.8% and 5.0%, respectively as shown in Table I.^{4/} Under these conditions, Duke would be required to purchase capacity, if available, from neighboring systems during February and March to meet its minimum spinning reserve requirements of 502 MW. If both Units 2 and 3 are taken out of service on February 15 before Unit 1 has returned to service, Duke will not be able to serve the expected February peak load when it occurs under this condition. This condition is set forth in Table II. A reserve deficiency of 7.1% will exist and purchases of 700 MW would be required, if available, just to serve system load. Purchases of 1200 MW will be required, if available, to restore system spinning reserves to the minimum required level.

With respect to the availability of replacement power within the Duke System and VACAR Region, Tables I and II show that reserve margins are well below the levels considered acceptable for the months of February and March. In this regard, it should be noted that the miscellaneous continuous capacity reduction figures are averages and accordingly are subject to wide variation. Indeed, this category was the subject of inquiry by a representative of DOE and in an effort to validate these

^{4/} In preparing Table I, as well as Tables II-V, Duke has relied on information concerning available capacity and reserves provided by the other VACAR companies. Affidavits from VACAR members (Carolina Power and Light Company, South Carolina Electric and Gas Company, Virginia Electric and Power Company, and South Carolina Public Service Authority are included as Attachments 6-9). One company's numbers vary slightly from those previously furnished the NRC.

TABLE I

DUKE/VACAR RESERVES

Assuming: Oconee Unit 1 out through February 15
 Oconee Unit 2 out February 15 through May 15
 Oconee Unit 3 out February 15 through March 15

	FEB. 1980		MAR. 1980		APR. 1980		MAY 1980	
	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE
CAPACITY - April, 1979, Reports to DOE	37592	13502	37592	13502	37592	13502	37592	13502
Less: Capacity of Nuclear Units which will <u>not</u> be in commercial operation (N. Anna 2; McGuire 1)	-2087	-1180	-2087	-1180	-2087	-1180	-2087	-1180
Capacity Retirements, Adjustments, etc.	- 274	- 274	- 274	- 274	- 274	- 274	- 274	- 274
Net Capacity Transactions	- 300	+ 114	- 300	+ 114	- 300	+ 114	- 300	+ 114
Winter 1979-1980 Capability	34931	12162	34931	12162	34931	12162	34931	12162
Scheduled Outages*	-5336	-1814	-7324	-2040	-8483	-2113	-7219	-2328
Capability after Scheduled Outages	29595	10348	27607	10122	26448	10049	27712	9834
Miscellaneous Continuous Capacity Reductions**	-1300	- 500	-1300	- 500	-1300	- 500	-1300	- 500
AVAILABLE CAPABILITY	28295	9848	26307	9622	25148	9549	26412	9334
EXPECTED PEAK	25887	9679	23772	9162	20696	8044	21446	7940
RESERVES BEFORE FORCED UNIT OUTAGES MW	2408	169	2535	460	4452	1505	4966	1394
RESERVES %	9.3	<u>1.8</u>	10.7	<u>5.0</u>	21.5	<u>18.7</u>	23.2	<u>17.6</u>

*Includes two Oconee Units out in February and March; one Oconee Unit out in April and May.

**Reductions due to problems with pulverizer mills, pumps, fans, fuel quality, feedwater heaters, turbine blades, etc.

TABLE II

DUKE/VACAR RESERVES

Assuming: Oconee Unit 1 out through February 29
 Oconee Unit 2 out February 15 through May 15
 Oconee Unit 3 out February 15 through March 15
 Peak load condition occurs during second half of February

	FEB. 1980		MAR. 1980		APR. 1980		MAY 1980	
	<u>VACAR</u>	<u>DUKE</u>	<u>VACAR</u>	<u>DUKE</u>	<u>VACAR</u>	<u>DUKE</u>	<u>VACAR</u>	<u>DUKE</u>
CAPACITY - April, 1979, Reports to DOE	37592	13502	37592	13502	37592	13502	37592	13502
Less: Capacity of Nuclear Units which will not be in commercial operation (N. Anna 2; McGuire 1)	-2087	-1180	-2087	-1180	-2087	-1180	-2087	-1180
Capacity Retirements, Adjustments, etc.	- 274	- 274	- 274	- 274	- 274	- 274	- 274	- 274
Net Capacity Transactions	- 300	+ 114	- 300	+ 114	- 300	+ 114	- 300	+ 114
Winter 1979-1980 Capability	34931	12162	34931	12162	34931	12162	34931	12162
Scheduled Outages*	-6196	-2674	-7324	-2040	-8483	-2113	-7219	-2328
Capability After Scheduled Outages	28735	9488	27607	10122	26448	10049	27712	9834
Miscellaneous Continuous Capacity Reductions**	-1300	- 500	-1300	- 500	-1300	- 500	-1300	- 500
AVAILABLE CAPABILITY	27435	8988	26307	9622	25148	9549	26412	9334
EXPECTED PEAK	25887	9679	23772	9162	20696	8044	21446	7940
RESERVES BEFORE FORCED UNIT OUTAGES MW	1548	- 691	2535	460	4452	1505	4966	1394
RESERVES %	6.0	<u>- 7.1</u>	10.7	<u>5.0</u>	21.5	<u>18.7</u>	23.2	<u>17.6</u>

*Includes three Oconee Units out in February; two Oconee Units out in March; one Oconee Unit out in April and May.

**Reductions due to problems with pulverizer mills, pumps, fans, fuel quality, feedwater heaters, turbine blades, etc.

TABLE III

DUKE/VACAR RESERVES
MISCELLANEOUS CONTINUOUS CAPACITY REDUCTIONS
(Actual Experience on January 2, 1980)

<u>UNIT</u>	<u>REDUCTION MW</u>	<u>EXPLANATION</u>
<u>DUKE</u>		
Allen 5	110	No. 5A boiler feed pump
Belews Creek 2	220	No. 2D induced draft fan
Oconee 2 & 3	69	Moisture separator reheater (unit 2) Reduced turbine cycle efficiencies (units 2 & 3)
Buck 8C	16	Combustion turbine A engine
Allen 3	115	No. 3B boiler feed pump
Cliffside 5	200	Air quality regulation - stack opacity
Miscellaneous	<u>162</u>	Fuel quality and other unidentified limitations
DUKE TOTAL	892	
<u>CAROLINA POWER & LIGHT</u>		
Roxboro 1	90	Air quality regulations - stack opacity
Roxboro 2	175	Silica
Roxboro 3	120	Silica
Weatherspoon 3	53	In start-up after scheduled maintenance
Lee 1	15	Air quality regulation - stack opacity
Lee 3	60	No. 3A pulverizer mill out
Robinson 1	10	Coal quality
Sutton 1 & 2	10	Coal quality
Cape Fear	<u>5</u>	Coal quality
CP&L TOTAL	538	
<u>S. C. PUBLIC SERVICE AUTHORITY</u>		
Winyah	5	Pulverizer mills
Jeffries 3 & 4	20	Air quality regulation - stack opacity
Grainger	<u>10</u>	Air quality regulation - stack opacity
SCPSA TOTAL	35	

TABLE III

DUKE/VACAR RESERVES
 MISCELLANEOUS CONTINUOUS CAPACITY REDUCTIONS
 (Actual Experience on January 2, 1980)

<u>UNIT</u>	<u>REDUCTION MW</u>	<u>EXPLANATION</u>
<u>S. C. ELECTRIC & GAS</u>		
Canadys 1	75	Circulatory water pump
Canadys 2	35	Fuel quality
Canadys 3	20	Air quality regulation - stack opacity
Urquhart 1	25	Pulverizer mill out for repairs
Wateree 2	25	High pressure heater
Columbia Hydro	3	Wicket gate problem
Miscellaneous	<u>60</u>	Fuel quality and other unidentified limitations
SCE&G TOTAL	243	
<u>VIRGINIA ELECTRIC POWER CO.</u>		
Bremo 4	50	Silica
Chesterfield 1	12	No. 1A condensate pump
Chesterfield 2	25	Nos. 2A & 2B condensate pump & 2C boiler feed pump
Chesterfield 4	35	Insurer limited pending hydrostatic test
Mt. Storm 1	130	No. 1A boiler circ. pump & No. 1 feed mill
Mt. Storm 2	100	No. 2C boiler circ. pump & furnace pressure indicator
Portsmouth 1	40	Reduced boiler pressure to minimize tube leaks
Portsmouth 3	15	Plugged preheaters
Portsmouth 4	120	Air quality regulation - stack opacity
Yorktown 1	30	No. 1B boiler circulating pump
Yorktown 2	10	Air quality regulation - stack opacity
Yorktown 3	<u>75</u>	Reduced turbine efficiency - scheduled annual maintenance had to be postponed
VEPCO TOTAL	642	
VACAR TOTAL	<u>2350</u>	

figures a telephone survey was conducted at the DOE representative's request on January 2, 1980. The results of this survey, which are set forth in Attachments 6-9, not only validated the table values as reasonable, but demonstrated the wide variation, e.g., the total miscellaneous reductions on January 2, 1980 were 2350 MW for the VACAR Region and 892 MW for the Duke System. A tabulation of this data is attached as Table III and is supported by Attachments 6-9. Additionally, it is very likely that Duke will be subjected to forced unit outages during this time period. The average forced unit outages for the last four years is 1179 MW. The forced outages for January 14, 1980 are in excess of 1700 MW. In sum, while the reserve margins set forth in Tables I and II are already unacceptably low, increased outages from miscellaneous capacity reductions and forced unit outages will almost certainly degrade them even further.

The availability of reserve capacity which might be purchased from systems outside VACAR appears to be limited during the coming winter period. This point is confirmed in the letter of W. R. Brownlee, Administrative Manager of SERC and is included as Attachment 10.

From the foregoing, it is clear that implementation of the schedule set forth in the Order to Show Cause will have a

significant impact on the power reliability within Duke, VACAR and SERC. In the Order to Show Cause, the Commission recognized the "potential adverse impact of multiple nuclear plant shutdowns on power reliability" in the VACAR Subregion of SERC. The Commission granted Duke a two-week extension to avoid such a circumstance. Due to Duke's particular situation, as set forth above, the remedy provided by the Commission does not alleviate the problem. Inasmuch as the Commission recognized the necessity for a solution, another option which provides for sequential shutdown is warranted with an extension of the compliance date to May 31, 1980.

Duke has analyzed the potential alternatives for sequential shutdown of Units 2 and 3 and determined that the only viable schedules precluding multiple unit outages are proposed as follows: Unit 2 shutdown immediately following Unit 1 restart or at end-of-cycle, whichever is first; Unit 3 shutdown either following Unit 2 restart or when load considerations allow, but in any case no later than May 31, 1980. These alternatives are reflected in Tables IV and V. Duke requests approval of the schedule shown in Table IV, which allows for sequential shutdown, shortens the outages and does not put the Company and the region in a severe power shortage situation. As a modification of Duke's position, Duke may be able to accommodate a schedule allowing Unit 2 to be shut down after Unit 1 returns to service and requiring Unit 3 to be shut down no later than March 31, 1980 (Table V). Inasmuch as the modified position would require Units 2 and 3

TABLE IV - (PREFERRED SCHEDULE)

DUKE/VACAR RESERVES

Assuming: Oconee Unit 1 out through February 15
 Oconee Unit 2 out February 15 through May 3
 Oconee Unit 3 out May 3 through May 31

	FEB. 1980		MAR. 1980		APR. 1980		MAY 1980	
	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE	VACAR	DUKE
CAPACITY - April, 1979, Reports to DOE	37592	13502	37592	13502	37592	13502	37592	13502
Less: Capacity of Nuclear Units which are <u>not</u> in commercial operation	-2087	-1180	-2087	-1180	-2087	-1180	-2087	-1180
Capacity Retirements, Adjustments, etc.	- 274	- 274	- 274	- 274	- 274	- 274	- 274	- 274
Net Capacity Transactions	- 300	+ 114	- 300	+ 114	- 300	+ 114	- 300	+ 114
Winter 1979-1980 Capability	34931	12162	34931	12162	34931	12162	34931	12162
Scheduled Outages*	-4476	- 954	-6464	-1180	-8483	-2113	-7219	-2328
Capability after Scheduled Outages	30455	11208	28467	10982	26448	10049	27712	9834
Miscellaneous Continuous Capacity Reductions**	-1300	- 500	-1300	- 500	-1300	- 500	-1300	- 500
AVAILABLE CAPABILITY	29155	10708	27167	10482	25148	9549	26412	9334
EXPECTED PEAK	25887	9679	23772	9162	20696	8044	21446	7940
RESERVES BEFORE FORCED UNIT OUTAGES MW	3268	1029	3395	1320	4452	1505	4966	1394
RESERVES %	12.6	<u>10.6</u>	14.3	<u>14.4</u>	21.5	<u>18.7</u>	23.2	<u>17.6</u>

*Includes one Oconee Unit out in February, March, April and May.

**Reductions due to problems with pulverizer mills, pumps, fans, fuel quality, feedwater heaters, turbine blades, etc.

TABLE V

DUKE/VACAR RESERVES

Assuming: Oconee Unit 1 out through February 15
 Oconee Unit 2 out February 15 through May 15
 Oconee Unit 3 out April 1 through April 30

	FEB. 1980		MAR. 1980		APR. 1980		MAY 1980	
	<u>VACAR</u>	<u>DUKE</u>	<u>VACAR</u>	<u>DUKE</u>	<u>VACAR</u>	<u>DUKE</u>	<u>VACAR</u>	<u>DUKE</u>
CAPACITY - April, 1979, Reports to DOE	37592	13502	37592	13502	37592	13502	37592	13502
Less: Capacity of Nuclear Units which will <u>not</u> be in commercial operation (N. Anna 2; McGuire 1)	-2087	-1180	-2087	-1180	-2087	-1180	-2087	-1180
Capacity Retirements, Adjustments, etc.	- 274	- 274	- 274	- 274	- 274	- 274	- 274	- 274
Net Capacity Transactions	- 300	+ 114	- 300	+ 114	- 300	+ 114	- 300	+ 114
Winter 1979-1980 Capability	34931	12162	34931	12162	34931	12162	34931	12162
Scheduled Outages*	-4476	- 954	-6464	-1180	-9343	-2973	-7219	-2328
Capability after Scheduled Outages	30455	11208	28467	10982	25588	9189	27712	9834
Miscellaneous Continuous Capacity Reductions**	-1300	- 500	-1300	- 500	-1300	- 500	-1300	- 500
AVAILABLE CAPABILITY	29155	10708	27167	10482	24288	8689	26412	9334
EXPECTED PEAK	25887	9679	23772	9162	20696	8044	21446	7940
RESERVES BEFORE FORCED UNIT OUTAGES MW	3268	1029	3395	1320	3592	645	4966	1394
RESERVES %	12.6	<u>10.6</u>	14.3	<u>14.4</u>	17.4	<u>8.0</u>	23.2	<u>17.6</u>

*Includes one Oconee Unit out in February, March, and May; two Oconee Units out in April.

**Reductions due to problems with pulverizer mills, pumps, fans, fuel quality, feedwater heaters, turbine blades, etc.

to be out of service during April and would produce inadequate reserves of approximately 8%, such would be very costly to Duke's customers, and might require burning oil. The Company would thus prefer a schedule that would permit a May shutdown of Unit 3 after Unit 2 returns to service.

IV. COSTS

An examination of the costs associated with the shutdown of Oconee is supportive of the above discussion. One Oconee unit operating at 95% capacity factor produces 19,608 MWH per day at a fuel cost of approximately \$4.54 per MWH. If Duke is able to replace Oconee generation with on-system coal-fired generation, a reasonable minimum average replacement fuel cost for a typical week of the winter period is approximately \$17.50 per MWH. This yields an additional cost per day of approximately \$250,000/unit. Duke does not consider it likely that sufficient coal-fired generation will be available to replace Oconee.

If it is necessary to utilize all of Duke's units including combustion turbines (for which fuel costs approximate \$90.00 per MWH) to replace the Oconee generation, the average replacement fuel cost increases to approximately \$43.00 per MWH. This yields an additional cost per day of approximately \$750,000 for one unit. This, however, does not represent the maximum additional daily cost to replace the output of a single Oconee unit. Under the scenario of purchase of off-system oil-fired capacity (if available) to replace an Oconee unit's output, the replacement cost approaches \$1,500,000 per unit per day. The

daily (19,608 MWH) output of one Oconee unit is equivalent to approximately 55,800 barrels of oil. This discussion does not include any applicable capacity reservation charges.

V. EQUIPMENT AVAILABILITY

The Order to Show Cause recognizes the possibility of the unavailability of necessary equipment. In such a circumstance the Order provides, upon proper documentation, for a 30-day implementation period, such to run from the date the equipment becomes available, but in no case is the implementation date to extend past June 1, 1980. Duke has an equipment availability problem with respect to implementing Category A requirements at its Oconee units in that not all equipment is on site. The nonavailable material consists of cable conduit hanger material for the PORV position indication modification. Duke has been assured of delivery no later than January 31, 1980.

Should the Order to Show Cause be implemented as written, Duke would have 30 days from equipment availability to implement Category A requirements. Under Duke's best estimate of the equipment delivery date, i.e., January 31, 1980, all Oconee units would have to implement the required changes by March 1, 1980. Duke would urge that such a result is unreasonable, unnecessary, and not in the public interest as it pertains to its three Oconee units. In addition to affecting power supply, Duke's position is premised upon manpower constraints. The manpower required to complete the modifications associated with the newly available equipment on one Oconee unit, performs such work on all Oconee units. If the Commission is of the

view that 30 days is a reasonable time to make the required modifications on a single unit, it must recognize that something on the order of an additional 30 days should be provided for each additional unit at affected multiple unit stations. In Oconee's case, that period would be 90 days (April 30, 1980).

VI. PUBLIC HEALTH AND SAFETY

The Order to Show Cause states that "timely implementation of these (Category A) requirements is necessary to provide continued assurance of public health and safety." The "timely implementation" date presently specified in the Order is February 15, 1980.

Duke acknowledges the public health and safety considerations associated with Category A items. However, Duke maintains that the situation is not so serious as to warrant immediate shutdown. Duke premises its position upon the fact that 21 of the 24 Category A requirements have been completed for all three Oconee units. In addition, Duke relies upon not only its own judgment in this regard, but upon Commission action. The Commission was well aware of the public health and safety implications of Category A when it published NUREG-0578. At that time it did not consider the matter so serious as to merit immediate shutdown, but rather suggested the time for compliance be January 1, 1980. Subsequent thereto, the Commission extended the January 1, 1980 date to February 15, 1980 for the subject units. The Commission likewise extended the January 1, 1980 date to January 31 or February 15, 1980 for other utilities. Apparently the Commission again felt that the matter was not so detrimental to public health and safety so as to prohibit it from extending compliance dates. In addition, the Commission

has acknowledged equipment availability problems experienced by various utilities. In such circumstances they have ordered that compliance be attained within 30 days from the date equipment becomes available, such date not to extend past June 1, 1980. This further extension of time clearly indicates that the February 15 date is an artificial one and that in such circumstances the practicalities of scheduling work, the costs associated therewith, need for power and energy, and costs of replacement capacity and energy should control. In light thereof, simultaneous shutdowns are not warranted on the basis of public health and safety and all other relevant factors dictate sequential shutdown.

Duke hastens to point out that public health and safety concerns regarding the remaining Category A items have been adequately addressed so as to warrant continued operation. Duke Power and its management at all levels are committed to insuring health and safety which include the continued availability of sufficient power to our customers. Duke's involvements in INPO, NSAC, and virtually every industry effort to address the issues relating to TMI-2 is well documented. Duke contends that while the recommendations are advisable, they are by no means essential to public health and safety in the time frame required. Specifically:

- (1) Direct PORV Position Indication - The RPS trip setpoint is now set lower than the PORV setpoint as was required by IE Bulletin 79-05B. This has effectively prevented the PORV from opening during transients similar to TMI and has substantially reduced the safety significance of direct position indication. Additionally, Duke is convinced that in the immediate post-TMI atmosphere which now exists, that the Oconee operators, the Shift Technical Advisor, the increased training and improved operating and emergency procedures all taken together contribute to increased operator awareness of inadvertent PORV opening and have also reduced the need to have direct position indication.
- (2) Diverse Containment Isolation - With the exception of Reactor Building atmosphere sample and pressurizer sample lines, all nonessential systems which would be isolated on the diverse containment isolation signal are normally closed during power operation or can be readily closed, if required. All operators are aware of this action. Systems which have been identified as being essential, reactor coolant pump seal return, component cooling to reactor coolant pumps, and low pressure service water to the reactor coolant pumps will continue to be isolated on high reactor building pressure only.

- (3) System Leakage Testing - Duke Power has developed an extensive program of verifying the leak-tightness of various systems within the plant. In order to carry out this program within ALARA dose limitations, it will require a unit shutdown. However, many of these systems have been leak-tested in the past (Low Pressure Injection) or are included within the Reactor Coolant System water inventory monitoring carried out on a daily basis (e.g., High Pressure Injection, Letdown Storage). It is therefore considered that, while the revised program will upgrade this effort, the current system of leak-testing and radiation monitoring is adequate to monitor system integrity in the interim period.

Duke Power continues to support the installation of these modifications but does not agree that, in Oconee's case, they should be required on this schedule. The very low probability of an event in this time period coupled with all the improvements already in place substantially reduces the urgency with which these modifications should be addressed. When weighed against the real safety problems caused by interruptions in the power system these cannot be viewed as having a significance which would support the action proposed by the Order.

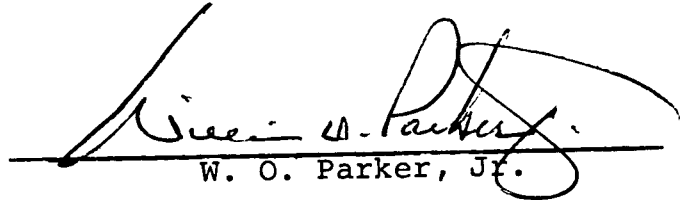
On the basis of the above, it can be seen that public health and safety continues to be assured until implementation of these modifications or the units are shut down, either of which will take place on or before May 31, 1980.

CONCLUSION


On the basis of the above, Duke respectfully requests that sequential shutdown of the Oconee units be allowed, such that at no time prior to May 31, 1980 will two or more Oconee units be out of service as a result of the subject Order to Show Cause. By May 31, 1980, Duke commits to have completed the implementation of the outstanding Category A requirements or, if not completed, to shut down the affected units and not return them to service until such work is completed.

The Order to Show Cause, as well as 10 CFR 2.202(a)(3) and (b), provides that Duke may demand a hearing. In the event Duke's request for sequential shutdown is not granted, Duke hereby respectfully demands a hearing and requests that such be held and a final decision issued prior to February 1, 1980. The early resolution is necessary because of essential planning involving manpower and scheduling material and equipment. Each day of delay could have an adverse impact on the Oconee outages. In the event a final decision has not been rendered by that date, Duke requests that the effectiveness of the Order to Show Cause be stayed until a final decision is rendered. If the above requests are denied, Duke assumes such denial would constitute a final Commission decision on these particular matters. If this is not the case, Duke hereby requests that such matter be expeditiously forwarded to the Commission so that final action can be

accomplished prior to February 1, 1980. In the event no action is taken on these requests by February 1, 1980, Duke will assume that they have been denied and that such constitutes final agency action.


W. O. Parker, Jr.

Sworn to and subscribed before me
this 14th day of January, 1980.


Notary Public

My Commission expires: 9-16-84

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION


In the Matter of)
DUKE POWER COMPANY) Docket Nos. 50-270 & 50-287
(Oconee Nuclear Station, Unit)
Nos. 2 & 3))

CERTIFICATE OF SERVICE

I hereby certify that copies of "Duke Power Company's Answer to Order to Show Cause", dated January 15th, 1980, in the above-captioned matter have been served upon the following by deposit in the United States mail this 15th day of January, 1980:

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. Chase Stephens, Chief
Docketing and Service Section
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



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Attorney for Duke Power Company