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June 8, 1982

Director of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Attn: Mr. Darrell G. Eisenhut, Director
Division of Licensing
Washington, DC 20555

Reference: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334, License No. DPR-66
Generic Letter No. 82-10 (NUREG-0737)

Gentlemen:

This is in response to your letter of May 5, 1982, Generic Letter No. 82-10, Post-TMI Requirements whereby you requested a firm schedule or a reconfirmation of scheduled dates for selected NUREG-0737 items. The following describes the present status of each item:

I.A.1.3.1 Shift Manning: Limit Overtime

The NRC policy statement issued by Generic Letter 82-02, as amended in the Federal Register on June 1, 1982 (Volume 47, No. 105), has been reviewed to determine the impact on existing guidelines which schedule overtime. We acknowledge the NRC's objective to have operating personnel work a normal 8-hour day, 40-hour week and to only schedule overtime when necessary.

With regard to our licensed operating staff, we will be unable to meet this objective for the following reasons:

- a large attrition rate of licensed personnel resulting in a small licensed staff
- the need for work schedules which support the minimum shift crew during periods of time when retraining or vacations are scheduled
- the need for overtime to support shift coverage when an employee reports off sick

This condition is expected to continue through 1982 and 1983. We expect to have additional licensed personnel late in 1983 such that a five shift schedule may be implemented which will provide the relief needed to support the common objective of an 8-hour day, 40-hour week.

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We will implement the four enumerated overtime scheduling guidelines as set forth in FR 23836 dated June 1, 1982 by the recommended implementation date of October 1, 1982. For this purpose, we interpret the title "health physicists" to mean "Radiation Control Technicians" and we believe that the term "key maintenance personnel" to correspond to "Meter and Control Repairmen" at our facility. It will be our policy to extend these guidelines to all personnel actually performing work on safety related equipment.

I.A.1.3.2 Shift Manning: Minimum Shift Crew

Action on this item is complete. Our letter of October 29, 1980 addressed the Staff concerns for minimum shift crew and documented how compliance would be achieved. On September 17, 1980, we submitted proposed changes to our Technical Specifications specifying the minimum shift crew in accordance with NUREG-0737. This change request was approved and issued by the NRC as Amendment 39 on February 11, 1981.

I.C.1 Revise Emergency Procedures

The Westinghouse Owners' Group (WOG) has been developing the emergency guidelines which are to be used for the development of plant specific procedures. At the present time, we are reviewing the emergency response guidelines which have been received from the WOG. The recommended schedule, as published in Generic Letter 82-10, of the first refueling after October 1, 1982, is our present goal for completing this effort; however, we understand that the Commissioners are presently considering a revised implementation schedule for this item under the topic of SECY 82-111, "Requirements For Emergency Response Capability". It is also our understanding that Commission action on this document is expected in the near future. We will provide additional information on our ability to meet the implementation schedule when the results of the Commission action has been published.

II.D.1.2 Relief Valve and Safety Valve Test Program

This item requires plant-specific submittals by April 1, 1982, confirming adequacy of safety and relief valves based on licensee preliminary review of generic test program results. We provided our submittal on March 29, 1982 confirming that the valves tested adequately represent the safety and relief valve designs and the conditions for Beaver Valley Power Station, Unit No. 1

II.D.1.3 Block Valve Test Program

The block valve test program was discussed with the NRC Staff and representatives of the PWR utilities on July 17, 1981, and documented in a letter to Mr. Harold Denton from Mr. R. C. Youngdahl of Consumers Power Company, representing the utilities, on July 24, 1981. A test program position stating that additional block valve testing would not be necessary was presented based on the relief valve test program results and the results of block valve tests performed at the Marshall facility. The test data accumulated from this program contains information applicable to our block valves and will be provided as required to satisfy this NUREG-0737 item by July 1, 1982.

II.K.3.30 and 31 Small-Break LOCA Analysis

This item requires that the analysis methods used by NSSS vendors for small-break LOCA analysis for compliance with Appendix K to 10 CFR part 50 and 10 CFR 50.46 be revised, documented and submitted for NRC approval. The plant specific analysis is to be submitted to the NRC one year after the Staff's approval of the revised SB-LOCA model. Our understanding is that on March 31, 1982, the Westinghouse Electric Corporation submitted their new small-break model under the title WCAP 10054, and they are presently awaiting the Staff's review and approval. It is expected that we can support the recommended schedule following the NRC Staff approval of the new small-break LOCA analysis model.

III.A.1.2 Staffing Levels for Emergency Situations

Our response to Generic Letter 81-10 dated April 8, 1981, indicated that the staffing requirements of Table III.A.1.2-1 would be achieved. We amended this commitment on August 25, 1981, indicating that implementation of the staffing requirements within the specified time periods is not physically achievable at the Beaver Valley Power Station. During the period of October 4-16, 1981, the Office of Inspection and Enforcement conducted an appraisal of our emergency preparedness program. Subsequently, a confirmatory action letter dated November 2, 1981 was issued requesting a study be performed to determine how the augmentation of the onshift staff could be attained within the time constraints identified in Generic Letter 81-10. The results of this study were provided to the NRC on January 5, 1982, and indicated that the on-shift personnel could be augmented with called-in personnel in about 30 minutes, with complete activation within about 60 minutes. This represents a best time estimate and does not take into account failures of the paging devices to alert personnel and the subsequent delays in sequentially locating designated alternates. As stated in our August 25 letter, we do not feel we can realistically commit to 100% activation within 30 minutes for every occasion. The results of this evaluation are attached to this letter as Attachment 1. This report identifies the various emergency organization functions, the on-shift and augmentation personnel who would perform those functions, and the expected low, mean and high travel times for these personnel. This evaluation indicated that the BVPS Emergency Organization is responsive to the criteria of Table III.A.1.2-1. In addition to this study, Duquesne Light has increased the on-duty shift complement to ten individuals with the addition of an Administrative Aide to the Shift Supervisor. In an emergency situation, this individual is assigned the responsibility for notifications and communications until relieved by the designated Communications and Records personnel.

On April 28, 1982, IE Inspection Report 81-27 (Emergency Preparedness Appraisal) was issued which reiterated the concerns identified in the confirmatory action letter. Our response of May 28, 1982 addressed each of the NRC concerns for staffing levels for emergency situations which represents our formal position on staffing levels and is consistent with statements contained herein.

III.A.1.2 Upgrade Emergency Support Facilities

In our letter dated June 15, 1981 we had stated that the Emergency Response Facility (ERF) would be operational by June 1, 1983. Currently, eight separate Design Change Packages have been issued in support of the ERF and its ancillary functions. They are:

DCP 400	Meteorological Systems Upgrade
DCP 296/366	ERF Communications/Instrumentation
DCP 398	Technical Support Center Substation
DCP 331	ERF Structure
DCP 529	ERF Domestic Water System
DCP 394	Backup Instrumentation for the Meteorological System
DCP 509	Fire Protection for the ERF

The current projected cost for completing the ERF exceeds 50 million dollars. Over one third of this money has been expended in support of this activity as of the first quarter of this year.

Based on receipt of all electrical and communications equipment by February, 1983, we will complete construction of the ERF structures prior to start-up from the third refueling in 1983. At this time, we will have sufficient information input to the computer systems, to enable the Technical Support Center personnel to assist the Control Room Operator in evaluating the status of the plant under emergency conditions. This schedule is necessary since the tie in and testing of the majority of the circuits between the plant and the ERF can only be performed during an extended outage. This is necessary to insure that protective and control functions are not affected, and will limit the amount of construction activities in the control room and safety related areas during operation. The remainder of the computer interfacing and testing will be completed during the fourth refueling outage, presently anticipated to occur in early 1985.

Our Electrical Engineering Department had set early goals to provide design outputs to our Construction Department such that 95% of the parameters listed in Regulatory Guide 1.97 would be available for display, stored or printed for retrieval purposes at the locations required by NUREG 0696. The remaining 5% require a significant amount of additional evaluation and engineering per parameter as compared to the 95% which were readily available.

With the issuance of each additional regulatory document, including new criteria contained in NUREG 0814, "Methodology for Evaluation of Emergency Response Facilities", it became increasingly difficult to determine exactly what the final requirements for the ERF would be.

Your letter dated November 9, 1981 requested information you required to evaluate and approve conceptual designs for our ERF. Although this letter was later withdrawn, it created a redirection of engineering and licensing activities that ultimately raised numerous questions with regard to the overall schedule of the ERF, which could not be considered in a conceptual stage at this late date. The more significant engineering delays encountered have been due to the following problems:

- Backfitting several highly reliable computer data acquisition systems to interface with a large portion of existing station equipment;
- Lack of detailed engineering information on equipment from suppliers which is required to complete engineering design.
- Regulatory requirements on modifications which have been established since the initial licensing of the plant are much more restrictive than those to which the original plant was designed, built, and licensed;
- The final NUREG-0696 and Reg. Guide 1.97 are more stringent than original drafts;
- Delays in delivery dates from suppliers;

We have placed separate orders to Westinghouse (April 1980) and Bailey Control Companies (March 1980) for a SPDS Computer and a 1.97 Plant Variable Computer System respectively.

The NRC Staff extended the completion date, but also increased the reliability and qualification requirements of these computer systems and their respective interfaces. We were already financially tied with the above suppliers, requested proposals and schedules for these additions and redirected our engineering efforts per the revised requirements.

Even though these systems were originally promised to be shipped for installation prior to 1981, neither supplier is ready to ship a system today which will meet the revised NUREG's and Regulatory Guides. The SPDS Computer supplier will not commit to a firm date to provide the system drawings required for the preparation of detailed installation drawings. The PVS Computer supplier has not yet responded with a quotation for the Historical Data Storage and Retrieval Function which was discussed in mid 1981. The same type of problem exists with other equipment suppliers as well as qualification problems for Category I isolation equipment. The equipment suppliers have not yet supplied the necessary engineering information required to provide design outputs such as wiring diagrams, etc.

BVPS No. 1 was designed and constructed in the late 1960's - early 1970's and licensed per the applicable standards and regulations at that time. The primary process electrical equipment is Westinghouse 7100 series equipment which cannot be qualified to the present standards for Category I equipment (Ref. IEEE Std. 384). Design and installation of additional raceway and cable is extremely difficult due to the congested trays, conduit, and areas where new raceway would have to be installed to interface with existing equipment (Ref. IEEE Std. 384; 10 CFR 50 - App. R). Installation of additional equipment and cabinets is difficult due to the same reasons. Much of this space has been filled by various plant modifications made since the original licensing of the plant.

With the limited amount of space available in the existing process rack room, detailed raceway and conduit schedules could not be developed prior to the completion of the NUREG-0737 required modifications which have been installed during the present refueling outage.

Justification for interim operation is based on the design adequacy of our interim Technical Support Center and Emergency Operation Facility in that it:

- provides all requisite information necessary to assist the operator in determining plant safety status;
- relieves control room personnel of peripheral duties and communications not directly related to plant operations;
- prevents congestion in the control room;
- provides assistance to operations by technical personnel who have comprehensive data acquisition capabilities at their disposal;
- provides a co-ordinated means for management and technical personnel to communicate and manage an event at a central location with offsite agencies.

Our interim Technical Support Center and Emergency Operations Facility will continue to provide these capabilities until such time that the Emergency Response Facility is operational. We have successfully demonstrated the functional capability of our alternate Technical Support Center and Emergency Operations Facility during our full scale EPP drill. This drill was performed on February 17, 1982 and documented in Inspection Report 82-04 dated March 24, 1982. This report contained no significant findings attributable to the use of the interim facility.

III.A.2.2 Meteorological Data

This item requires plant modifications to be completed by October 1, 1982, which will provide meteorological data for use in evaluating the offsite consequences of a radiological emergency condition. We have recently placed a purchase order to obtain the equipment necessary to provide this monitoring capability. Several months were spent reviewing proposals for this equipment and evaluating it against our needs to determine which will best satisfy our design philosophy. Our schedule for procuring, installing and testing this equipment remains consistent with our earlier commitment of December 1983, as documented in our letter of July 2, 1981. In the interim, we will continue to assess the offsite consequences of a radiological emergency condition through the use of our dose projection implementing procedures contained in our Emergency Preparedness Plan.

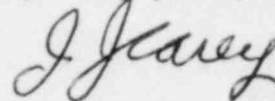
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III.D.3.4 Control Room Habitability

This item required that we perform an evaluation and recommend appropriate modifications to meet control room habitability requirements. On December 31, 1980 we provided the results of our evaluation with the modifications believed to be necessary at that time. On December 28, 1981, we submitted an additional study which represented the results of an intensive engineering review to identify which toxic gasses would require monitoring and to fully define the extent of the changes required to our ventilation system. The analysis concluded that the only chemical requiring monitoring is chlorine for which we have an installed detection system. The aggregate probability of all other toxic gas releases that would result in exposures greater than 10 CFR 100 guidelines was found to be lower than the design basis probability identified in the Standard Review Plan. It was determined that additional modifications would not be necessary. However, we are presently establishing firm communications links with local industry and enforcement officials such that our facility will receive priority notification during any spill or gas release and Control Room Ventilation isolation can be effected immediately. We received Staff notification of concurrence with our analysis on February 9, 1982 stating agreement that the control room habitability systems will provide safe, habitable conditions within the control room under both toxic gas and radiological releases and the design meets the criteria identified in item III.D.3.4 of NUREG-0737.

If you have any questions, please contact my office.

Very truly yours,



J. J. Carey
Vice President, Nuclear

cc: Mr. W. M. Troskoski, Resident Inspector
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DUQUESNE LIGHT COMPANY
Beaver Valley Power Station
Unit No. 1

Response to Generic Letter No. 82-10
dated May 5, 1982

Attachment #1
Emergency Organization Augmentation Times

Introduction

This document provides the results of the evaluation performed to determine the time required to augment the Beaver Valley Power Station emergency organization in the event of an emergency condition requiring the activation of the Technical Support Center and/or Emergency Operations Facility. This evaluation was performed in response to the Emergency Preparedness Appraisal and was based on a comparison of the BVPS emergency organization and "Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants".

Methodology

The evaluation was performed in two phases. The first phase was to determine the travel time required by the designated personnel to arrive at the site following notification. Questionnaires were distributed to the supervisory personnel designated as primaries and alternates to each emergency position. Each person responded with the normal travel time from their residences to the station.

The individual travel times were increased by 10 minutes each to provide for preparation time prior to departure. No adjustments were made for notification time as the primary individuals are provided personal radio paging devices which are simultaneously keyed by the paging services (2) called by the shift personnel. Personnel within this group are identified by a letter "B" in the column marked "means of notification" on Table 1, which is attached to this appendix. Table 1 tabulates the low, mean, and high adjusted travel times for these personnel.

For supplementary personnel, most of which are bargaining unit or contractor personnel, a different methodology was employed. An area map was annotated with the residence and travel time of each individual who was provided questionnaires. The residence of each supplementary person was located on this map and travel time extrapolated from adjacent data points. In addition, the individuals responsible for initiating these call-outs have been provided personal radio paging devices. We expect that these call-outs could be completed within about 15 minutes. Since the call-out times will vary depending on the individual's position on the call-list, no adjustments were made for notification time. However, the previously discussed 10 minute preparation time was incorporated. These supplementary personnel are identified on Table 1, by the Letter "C" in the column marked "means of notification".

The second phase of this evaluation involved the comparison of the derived BVPS augmentation times with the guidance of Table B-1 of NUREG-0654. A matrix identifying emergency function, major tasks, designated shift and non-shift personnel, non-shift augmentation times derived in phase 1, and NUREG-0654 Table B-1 requirements, was prepared. This matrix is attached as Table 1 to this appendix.

Results

As can be seen on Table 1, Duquesne Light has the capability to substantially augment its on-shift personnel within the guidance of Table B-1 of NUREG-0654 under favorable conditions. No provision has been made in this evaluation for failure of radio paging devices, or the time necessary to sequentially locate designated alternates. As we expressed in our letter of August 25, 1981, we do not feel that we can commit to 100% augmentation within 30 minutes of personnel notification. However, we will continue to maintain an emergency organization and a notification system which will have the objective of meeting the 30-minute response criterion.

TABLE I

Major Functional Area	Major Tasks	Position Title		Augment. Times			*	NUREG -0654	
		Onshift	Offshift	Lo	Mean	Hi		30	60
Plant Operations & assessment of operational		NSS	1					--	--
		NSOF	1					--	--
		NCO	2					--	--
		NO	2					--	--
		STA	1					--	--
Emergency dir. & Control		NSS	1*	Em. Dir. (3/3)		30 50 70	B	--	--
Notification & Communication	Notify licensee, state, local & Federal Personnel & maintain communications	NSS	1	C & RC (2/5)		30 46 70	B	1	2
		Asst.		C & RC Assts. (17)		25 41 70	C		
Radiological accident assessment & support of ops. accident assessment	EOF Director	NSS	1	E/RM (4/4)		50 63 65	B	--	1
	Offsite dose projection	NSS	1	EA & DP (2/4)		30 41 55	B	1	--
		NSOF	1						
	Offsite surveys	SCRT	1	RCT (17)		20 49 75	C	2	2
	Onsite surveys (Outside Plant)	SCRT	1	RCT (17)		20 49 75	C	1	1
	Inplant surveys	SCRT	1	RCT (17)		20 49 75	C	1	1
Plant system eng, repair, corr. actions	Chemistry	SCT	1	CT (10)		20 46 75	C	--	1
	Tech. support	STA	1	TSC (1/3)		25 50 75	B	--	--
	Core & hydraul. tech. supp.	STA	1	off-duty STA (6)		25 40 50	C	1	--
	Electrical tech. supp.	STA	1	Elect. Eng. (2)		55 55 55		--	
	Mechanical tech. supp.	STA	1	Maint. Eng. (2)		30 50 70	C	--	1
	Mech. Maint.	NO	1**	Maint. Coord. (1/2)		35 35 35	B	--	1
				OSC (1/2)		40 40 40	B		
	Radwaste oper.	NO	1**	off-duty NSOF/NO		15 40 65	C	--	1

Major Functional Area	Major Tasks	Position Title		Augment. Times Lo Mean Hi	*	NUREG -0654	
		Onshift	Offshift			30	60
	Electr. Maint.	NO	1** OSC (1/2)	45 45 45	B	1	1
	Inst. & Control	NO	1** MCR (1/4)	20 45 65	B	1	--
Protective actions (onsite)	Radiation Prot.	SRCT	1	RCC (2/5)	B	2	2
				RCT (17)	C		
Firefighting	Firefighting	Shift emerg. squad	Local Support	-- -- --			Local Supp.
Rescue & First aid	Rescue & First aid	Shift emerg. squad	Local Support				Local Supp.
Site access control	--- in accordance with site security plan						
State/Local EOC	Liaison with agencies		Nuclear Instrs.	as requested by offsite agencies			

Abbreviations:

NSS	Nuclear Shift Supervisor
NSS Asst.	Nuclear Shift Supervisor Administrative Assistant
NSOF	Nuclear Shift Foreman
NCO	Nuclear Control Operator
NO	Nuclear Operator
STA	Shift Technical Advisor
SRCT	Shift RadCon Technician
SCT	Shift Chemistry Technician
RCC	Radiological Controls Coordinator
RCT	RadCon Technician
CT	Chemistry Technician
MCR	Meter & Control Repairmen (I & C)
TSC	Technical Support Coordinator
OSC	Operations Support Center Coordinator
E/RM	Emergency/Recovery Manager (EOF)
C & RC	Communications and Records Coordinator
C	Notification by call-out
B	Notification by beeper
(2)	Number of personnel designated
(1/2)	(have beeper/designated)
**	May be provided by shift personnel assigned other functions.