

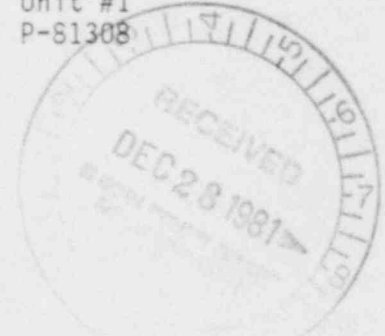


**Public Service Company of Colorado**

16805 WCR 19 1/2, Platteville, Colorado 80651-9298

50-267

December 7, 1981  
Fort St. Vrain  
Unit #1  
P-81308



Mr. Brian Grimes  
Director, Emergency Preparedness  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUBJECT: Emergency Planning  
Table B-1, NUREG 0654

REFERENCE: P-80288

Dear Mr. Grimes:

On December 3, 1981, a meeting was held at Fort St. Vrain to discuss the ORNL report on the applicability of NUREG 0737 to Fort St. Vrain and to resolve many of the issues which have been outstanding since late 1979. The Nuclear Regulatory Commission was represented by the project staff and the Regional Office, and the Nuclear Regulatory Commission Emergency Preparedness Group was represented by Mr. Dave Rohrer.

During this meeting the subject of shift manning under NUREG 0737, Item I.A.1.3, was discussed and Public Service Company's position regarding Item I.A.1.3 was accepted. As an item directly related to Item I.A.1.3 the subject of shift manning per Table B-1 of NUREG 0654 was discussed. We pointed out that in our letter P-80288, dated August 28, 1980, (see excerpt attached) we had set forth our position on Table B-1, but had never received a response. Your Mr. Rohrer asked if we had clearly set forth our position on this matter, and we indicated that we felt we had, as evidenced by the attached excerpt of P-80288. Mr. Rohrer indicated that perhaps we should reiterate our position in separate correspondence, and we are therefore resubmitting our position.

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*please see that this is docketed as responded to ASAP - looks generally ok*  
12/23  
BJ  
see notes table re licensed operators  
BJ

As stated in the referenced correspondence, we do not feel the augmentation times of Table B-1 are applicable to Fort St. Vrain. Due to the rate at which our accidents develop we justified, and received official Nuclear Regulatory Commission approval, for a one (1) hour response time for our Technical Advisors. On the basis of the time involved in the development of accidents, we have committed to having our emergency organization activated within 90 minutes, and we indicated in P-80288 that this activation would include the augmented staff equivalent to Table B-1 of NUREG 0654.

All of the essential personnel to provide the equivalency of Table B-1 are within a 45 minute to 50 minute driving time of the plant. Allowing sufficient time for personnel to be notified, time for getting on the road, inclement weather, etc, we believe the staff augmentation can be accomplished in 90 minutes. Given the basis of our Technical Advisor response we also feel that the 90 minutes represents a more than acceptable time equivalency for staff augmentation per Table B-1 with reference to the health and safety of the public and the intent of Table B-1 augmentation as it was developed for a light water reactor.

With reference to the Rad/Chem Technician on shift, we indicated in the referenced correspondence that the on-shift Health Physics Technician had sufficient training to perform the necessary initial surveys for access control and make initial surveys to protect in-plant personnel. Again, we have no immediate requirement for Rad/Chem expertise in terms of isotope analysis or analysis of off site survey samples. The on-shift operating personnel have sufficient training to perform off site dose assessment calculations either manually or with the aid of computerized models. Given the characteristics of Fort St. Vrain, our existing staff is more than adequate to meet the intent of Table B-1.

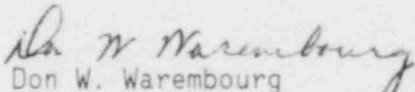
In order to clarify Table B-1 we have prepared the attached Table B-1 which sets forth the minimum staffing for Fort St. Vrain Station based on the above comments.

As further clarification we have also prepared a table which depicts our overall emergency response staffing.

It should be noted that other than the "on-shift" requirements and the Technical Advisor response, these tables represent a capability rather than a commitment. For example, the 60 minute and 90 minute columns represent a capability of response, but depending on the category of the incident or the severity of the situation, many of the people may not be called upon to respond. The term "capability" is also taken in the context that under normal circumstances the personnel are at home or can be reasonably reached. It does not infer that personnel are on 24 hour call nor does it take into account unusual circumstances such as inclement weather, road hazards, etc.

This matter has remained unresolved for a considerable period of time. In this respect we would request your immediate attention to this matter.

Very truly yours,

  
Don W. Warembourg  
Manager, Nuclear Production  
Fort St. Vrain Nuclear  
Generating Station

DWW/alk

Attachments

cc: John Collins, Region IV  
George Kuzmycz

Table B-1

MINIMUM STAFFING REQUIREMENTS FOR NRC LICENSEES  
FOR NUCLEAR POWER PLANT EMERGENCIES (See B.5.)

*Do the licensed operator levels pass muster with NRC? CAPABILITY FOR ADDITIONS*

MAJOR FUNCTIONAL AREA	LOCATION	MAJOR TASKS	POSITION TITLE OR EXPERTISE	ON SHIFT*	CAPABILITY FOR ADDITIONS		
					60 MIN	90 MIN	
Plant Operations and Assessment of Operational Aspects			Shift Supervisor (SRO)	1	--	--	
			Senior Reactor Operator (SRO)	1	--	--	
			Reactor Operator	1	--	--	
			Equipment Operators	2	--	--	
			Auxiliary Operators	2	--	--	
Emergency Direction and Control (Emergency Coordinator)***			Shift Supervisor or designated facility manager		1	1	
Notification/Communication****		Notify licensee, State local and Federal personnel & maintain communication		1**	1	2	
Radiological Accident Assessment and Support of Operational Accident Assessment	Emergency Operations Facility (EOF) Director	Senior Manager		--	--	1	
		Senior Health Physics (HP) Expertise			1	--	
	Offsite Surveys Onsite (out-of-plant) In-plant surveys				--	2	2
					--	1	1
					1	1	1
Chemistry/Radio-chemistry		HP Technicians Rad/Chem Technicians	1 --	1 2	1 1		
Plant System Engineering, Repair and Corrective Actions	Technical Support	Technical Advisor		On Call	1	--	
		Core/Thermal Hydraulics		--	1	--	
		Electrical		--	--	1	
		Mechanical		--	--	1	
	Repair and Corrective Actions		Mechanical Maintenance/ Rad Waste Operator		1**	--	1
		Electrical Maintenance/ Instrument and Control (I & C) Technician		1** --	1 1	1 --	

Table B-1 (cont'd)

MAJOR FUNCTIONAL AREA	LOCATION	MAJOR TASKS	POSITION TITLE OR EXPERTISE	ON SHIFT*	CAPABILITY FOR ADDITIONS	
					60 MIN	90 MIN
Protective Actions (In-Plant)		Radiation Protection:	HP Technicians	2**	2	2
		a. Access Control				
		b. HP Coverage for repair, corrective actions, search and rescue first- aid & firefighting				
		c. Personnel monitoring				
		d. Dosimetry				
Firefighting	--	--	--	Fire Brigade per Technical Specifications	Local Support	
Rescue Operations and First-Aid	--	--	--	2**	Local Support	
Site Access Control and Personnel Accountability		Security, firefighting communications, personnel accountability	Security Personnel  Lead Security Officer	All per Security plan  1	2	2
			TOTAL	9	18	19

## NOTES:

\* For each unaffected nuclear unit in operation, maintain at least one shift foreman, one control room operator and one auxiliary operator except that units sharing a control room may share a shift foreman if all functions are covered.

\*\* May be provided by shift personnel assigned other functions.

\*\*\* Overall direction of facility response to be assumed by EOF director when all centers are fully manned. Director of minute-to-minute facility operations remains with senior manager in technical support center or control room.

\*\*\*\* May be performed by engineering aide to shift supervisor.

FORT ST. VRAIN STATION  
STAFFING FOR EMERGENCY RESPONSE

MAJOR FUNCTIONAL AREA	LOCATION	MAJOR TASKS	POSITION/TITLE	ON SHIFT	RESPONSE TIME	
					NUMBER OF PERSONNEL	
					60 MIN	90 MIN
Plant Operations & Assessment of Operational Aspects	CR	Initial Assessment & Actions Required to Control & Mitigate the Consequences of the Event	Shift Supervisor (SLO)	1	1	4
			Sr. Reactor Oper (SLO)	1	1	2
			Reactor Operator (LO)	1	1	6
			Equip. Operator	2	1	9
			Aux. Tender	2	1	9
Emergency Direction and Control	CR	Control Room Emergency Director	Initially Assumed by Shift Supervisor			
			Supt. Operations	--	1	--
			Sr. Shift Supervisor	--	1	--
			Tech Advisor	--	1	1
	TSC	Overall On Site Emergency Control	Mgr. Nuclear Prod.	--	1	--
			Station Manager	--	1	--
			Tech. Asst.	--	2	5
	FCP	Licensee Offsite Emerg. Control	V.P. Production	--	1	--
			Rad. Prot. Mgr.	--	1	--
			Tech. Manager	--	1	--
			Tech/Admin Asst.	--	--	2
	ECP	Offsite Corporate Emergency Control	Chief Exec. Officer	--	--	1
			Tech Support Mgr.	--	--	1
Mgr. Resources			--	--	1	
Mgr. Security			--	--	1	
Mgr. Media Relations			--	1	--	
PCC	Direction & Control of Licensee On-Site Assigned Personnel	PCC Director	--	1	--	
		Tech/Admin Asst.	--	2	2	
EOC	Tech/Admin Assistance State Emergency Operation Center	Tech/Admin Asst.	--	1	2	
		Media Reps	--	1	2	

FORT ST. VRAIN STATION  
STAFFING FOR EMERGENCY RESPONSE

MAJOR FUNCTIONAL AREA	LOCATION	MAJOR TASKS	POSITION/TITLE	ON SHIFT	RESPONSE TIME NUMBER OF PERSONNEL		
					60 MIN	90 MIN	
Notification Communication	CR	Initial notification and initiate RERP Actions	Operations personnel on shift	**	**	**	
	TSC	On going communications	TSC personnel	--	**	**	
Radiological Accident Assessment & Support	CR	Initial assessment and offsite dose projections	Operations personnel on shift	**	**	**	
	TSC	On going assessment	TSC personnel	--	**	**	
	FCP	Dose projections & technical assistance to State/Local	Senior Manager Rad. Prot. Mgr.	-- --	** **	-- --	
	EOC	Coordination with State and Health Dept.	Mgr. Nuclear Engr. Mgr. Gov. Affairs Rad. Prot. Consultant	-- -- --	1** -- --	-- 1** 1**	
	PCC	Radiological Surveys Chemistry/Rad Chem	HP Techs Rad /Chem Techs	1 --	4 2	4 1	
	Plant System Engineering, Repair & Corrective Action	CR/TSC	Technical Support	Tech Advisor React. Engr. I & C Supvr. Tech Personnel	-- -- -- --	1** -- -- --	1** 1** 1** 2**
		PCC	Repair and Corrective Action	Mech. Maint. Elect. Maint. I & C Personnel	-- -- --	2 1 1	10 2 6
PCC		Radiation Protection/ Assessment	HP Techs	1*			
						See PCC under Rad. Accident Support	

FORT ST. VRAIN STATION  
STAFFING FOR EMERGENCY RESPONSE

MAJOR FUNCTIONAL AREA	LOCATION	MAJOR TASKS	POSITION/TITLE	ON SHIFT	RESPONSE TIME	
					NUMBER OF PERSONNEL	
					60 MIN	90 MIN
Fire Fighting	CR/PCC	Fire Fighting	Fire Brigade	Fire Brigade Per Tech Specs	Local Support	
Rescue Operations	PCC	--	Initially on Shift Personnel	--	--	--
Site Access Control & Personnel Accountability		Security, Firefighting communications accountability	Security Personnel Lead Security Officer	All Security Personnel per 1	Security Plan 1	3 74
				9	32	

\* May be provided by shift personnel assigned other functions.

\*\* Personnel accounted for under a different category or task of the Table.

Legend - CR - Control Room  
 ECP - Executive Command Post (Denver)  
 EOC - Emergency Operations Center (Camp George West)  
 FCP - Forward Command Post, Fort Lupton (EOF in NRC Terms)  
 PCC - Personnel Control Center (OSC in NRC Terms)  
 TSC - Technical Support Center (On Site)  
 SLO - Senior Licensed Operator  
 LO - Licensed Operator



Public Service Company of Colorado

August 28, 1980  
Fort St. Vrain  
Unit No. 1  
P-80288

Mr. Robert L. Tedesco, Assistant Director  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUBJECT: Fort St. Vrain Unit No. 1  
Emergency Response Plan

REFERENCE: NRC Letter July 23, 1980

Dear Mr. Tedesco:

We are transmitting herewith three (3) copies of our revised emergency response plan. This revised plan includes changes as a result of the May 21, 1980, plant site review meeting as well as certain changes that resulted from comments contained in your July 23, 1980, letter. In addition to the revised plan, we are providing our response as Attachment A to this letter to address your July 23, 1980, letter.

As we indicated in the May 21, 1980, meeting as well as in various correspondence submitted as a part of the TMI-2 Lessons Learned Tasks, we believe Fort St. Vrain is a completely different reactor concept. This reactor concept coupled with the size of the reactor negates many of the requirements set forth by NUREG's 0654 and 0610 which were developed primarily on the basis of 1,000 MW(e) light water reactor technology. It is imperative, therefore, that our Emergency Plan be evaluated on the basis of our reactor design and size, and that generic requirements be evaluated on the basis of specific technical, safety, and environmental differences.

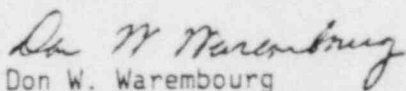
We have had to essentially develop our own criteria for Fort St. Vrain utilizing water reactor criteria set forth by various Nuclear Regulatory Commission documents. On this basis our criteria is necessarily different from that published and we have taken justifiable exception to the NUREG's. These exceptions were supported in various correspondence (see reference list attached) and are further supported by Attachment A of this letter.

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In the May 21, 1980, meeting we were informed by the Nuclear Regulatory Commission review team that many of the items were a matter of policy, and that the review team did not have the authority to make exceptions on policy matters regardless of the technical justification. We cannot accept this position, and we request that as soon as you have had the opportunity to review our revised emergency plan and our response that we be given the opportunity to meet with you and other personnel who do have the authority to evaluate and/or accept our positions on the basis of the technical justification provided.

In the interest of time it is requested that such a meeting be established at the earliest possible date so that we may finalize our plans to meet the various commitment dates setforth. We will be available to meet with you at your convenience and are looking forward to hearing from you shortly.

Very truly yours,

  
Don W. Warembourg  
Manager, Nuclear Production  
Fort St. Vrain Nuclear  
Generating Station

DWW/alk

Attachments

PSC CORRESPONDENCE LISTING  
LETTERS TO NRC INVOLVING  
TMI-2/EMERGENCY PLANNING/EMERGENCY RESPONSE PLANS

<u>Correspondence Number</u>	<u>Date</u>	<u>Subject</u>
1. P-79130	June 15, 1979	Gaseous Effluent Monitors
2. P-79205	September 10, 1979	Emergency Planning, Fort St. Vrain
3. P-79239	October 17, 1979	Followup Action TMI-2
4. P-79249	October 29, 1979	Followup Action Resulting From NRC Reviews Regarding the TMI-2 Accident
5. P-79290	November 30, 1979	NUREG-0610
6. P-79298	December 12, 1979	Fort St. Vrain, Unit No. 1, TMI Lessons Learned
7. P-79299	December 12, 1979	Revised Followup Actions Resulting From NRC Reviews Regarding TMI-2 Accident
8. P-79305	December 18, 1979	Supplementary Response, Item 2.2.1.b, Lessons Learned Task Force, TMI-2
9. P-79312	December 28, 1979	Additional Information Regarding June 1, 1980, Action Items Resulting from TMI-2
10. P-80011	January 29, 1980	Request for Evacuation Times
11. P-80028	February 20, 1980	Additional Information Resulting from TMI-2 NRC Review Team Site Visit, January 21-22, 1980
12. P-80041	March 5, 1980	Request for Evacuation Times
13. P-80083	March 18, 1980	Fort St. Vrain, Unit No. 1, Radiological Emergency Response Plan
14. P-80066	April 1, 1980	Fort St. Vrain, Unit No. 1, Emergency Planning

ATTACHMENT A

PSC RESPONSE TO NRC COMMENTS  
FSV EMERGENCY RESPONSE PLAN

1. NRC Question/Comment

Plan must be revised to establish a principal and an alternate EOF. Both facilities should meet the requirements of Darrell G. Eisenhut's letter of April 25, 1980, subject "Clarification of NRC Requirements for Emergency Response Facilities at Each Site."

PSC Response

We cannot address the principle and alternate EOF as we have never received the April 25, 1980, letter which you reference. It is our understanding that new criteria will be published as a part of NUREG-0696. Upon receipt and evaluation of this document we will modify our emergency plan. In the interim we intend to continue with our plans to utilize the Fort Lupton Municipal Building for the EOF as stated in our letter P-80083. As we understand the new criteria being developed under NUREG-0696, a distance of approximately 10 miles from the reactor would be acceptable for the EOF. Depending on the criteria specified for the EOF and an alternate EOF we will re-evaluate our position at the time NUREG-0696 is published.

2. NRC Question/Comment

Plan must be revised to take into consideration the plant staffing in Table B-1 of NUREG-0654. There must be some augmentation of on-site personnel within 30 minutes. Must identify position that will not be filled and provide rationale for not having 10 personnel on shift at all times.

PSC Response

Consideration was given to the plant staffing in our April draft of the RERP. Figures 5.1-1 through 5.2-6 of the RERP depict both the normal and the emergency staffing for the plant. Figure 5.1-2 provides the normal operating staff (9 personnel plus a Lead Security Officer) for the plant and fulfills the on-shift requirements of Table B-1, NUREG-0654, with the exception that we do not have a Rad/Chem Technician on shift. The on-shift Health Physics Technician has sufficient training to perform the necessary initial surveys and radiological assessments to protect in-plant personnel. The operating staff has sufficient training and procedures to evaluate the off-site effects. We can see no immediate requirement for the Rad/Chem Technician especially since our accidents develop at a much slower rate than comparable water reactor accidents (see NRC letter Themis Speis to J. Fuller, March, 1980, Acceptance of Category A TMI-2 Requirements).

With reference to the augmented staff called for in Table B-1, NUREG-0654, we have justified delaying the response time of the Shift Technical Advisor (STA) (based again on the rate in which our accidents develop) from 10 minutes to one (1) hour (see PSC letters P-79249, October 29, 1979; P-79299, December 12, 1979; P-79305, December 18, 1979; P-79312, December 28, 1979). The accident time frames and the associated response times were accepted by the Nuclear Regulatory Commission by the above referenced letter (Themis Speis to J. Fuller, March, 1980) in the overall acceptance of the Category A TMI-2 requirements. Since the Nuclear Regulatory Commission found the response time of the STA to be acceptable we maintain that the 30 minute augmented staff time called for in NUREG-0654, Table B-1, is not applicable to Fort St. Vrain. On the basis of the slow time in which accidents develop and the one (1) hour response time of the Technical Advisor we committed in our RERP (Section 5.2) to have the emergency organization activated within 90 minutes which would include an augmented staff equivalent to Table B-1, NUREG-0654. This staff augmentation is consistent with Technical Advisor response time and is certainly consistent with accident analysis and the accident development time frames.

3. NRC Question/Comment

The plan must (in addition to other NUREG-0610 notification requirements) specify that when a "general" emergency is declared that the off-site authorities responsible for implementation of protective measures will be notified by the "Plant Emergency Director" and advised of recommended protective actions within 15 minutes of the direction of the emergency condition. The plan must specify the content of this initial message to include:

- a. Class of emergency
- b. Whether a release is taking place
- c. Affected areas
- d. Protective measures

NOTE: The protective measures recommended in the initial message off-site may be - "go inside - turn on radio" (30 minutes) provided a followup message indicating more detail protective measures based on dose projections.

PSC Response

Per your request the notification time of fifteen (15) minutes after determination that a "general" emergency exists has been added to Table 4.1-4 of the RERP.

Sample notification messages as well as followup messages have been included in Section 6 of the RERP (see Figures 6.1-1 through 6.1-3).