

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8206020422 DOC. DATE: 82/05/27 NOTARIZED: NO DOCKET #
 FACIL: 50-438 Bellefonte Nuclear Plant, Unit 1, Tennessee Valley Au 05000438
 50-439 Bellefonte Nuclear Plant, Unit 2, Tennessee Valley Au 05000439

AUTH. NAME AUTHOR AFFILIATION
 SCHREIBER, D.L. Schreiber Consultants, Inc.
 RECIP. NAME RECIPIENT AFFILIATION
 GONZALES, R. Division of Engineering

SUBJECT: Forwards request for addl info re FSAR draft needed prior to
 820614 site visit.

DISTRIBUTION CODE: B001S COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4
 TITLE: PSAR/FSAR AMDTS and Related Correspondence

NOTES:

	RECIPIENT ID CODE/NAME	COPIES L TTR ENCL	RECIPIENT ID CODE/NAME	COPIES L TTR ENCL
	A/D LICENSNG	1 0	LIC BR #4 BC	1 0
	LIC BR #4 LA	1 0	HERNAN, R. 01	1 1
INTERNAL:	ELD/HDS2	1 0	IE FILE	1 1
	IE/DEP EPDS 35	1 1	IE/DEP/EPLB 36	3 3
	MPA	1 0	NRR/DE/CEB 11	1 1
	NRR/DE/EQB 13	3 3	NRR/DE/GB 28	2 2
	NRR/DE/HGEB 30	2 2	NRR/DE/MEB 18	1 1
	NRR/DE/MTEB 17	1 1	NRR/DE/QAB 21	1 1
	NRR/DE/SAB 24	1 1	NRR/DE/SEB 25	1 1
	NRR/DHFS/HFEB 40	1 1	NRR/DHFS/LQB 32	1 1
	NRR/DHFS/OLB 34	1 1	NRR/DHFS/PTRB 20	1 1
	NRR/DSI/AEB 26	1 1	NRR/DSI/ASB 27	1 1
	NRR/DSI/CPB 10	1 1	NRR/DSI/CSB 09	1 1
	NRR/DSI/ETSB 12	1 1	NRR/DSI/ICSB 16	1 1
	NRR/DSI/PSB 19	1 1	NRR/DSI/RAB 22	1 1
	NRR/DSI/RSB 23	1 1	NRR/DST/LGB 33	1 1
	<u>REG FILE</u> 04	1 1	RGN2	2 2
EXTERNAL:	ACRS 41	16 16	BNL (AMDTS ONLY)	1 1
	FEMA-REP DIV 39	1 1	LPDR 03	1 1
	NRC PDR 02	1 1	NSIC 05	1 1
	NTIS 1	1 1		

TOTAL NUMBER OF COPIES REQUIRED: LTR 63 ENCL 58

*P.D.
Consult*



SCHREIBER CONSULTANTS, INC.

P.O. Box 1087 - 303 Park Drive
Coeur d' Alene, Idaho 83814
Telephone: (208) 667-8602

50-438

DR. DAVID L. SCHREIBER, P.E.
President and Principal

May 27, 1982

Mr. Ray Gonzales
Hydraulic Engineer/HGEB
Division Of Engineering/NRR
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ray:

As we discussed by telephone, I have reviewed the Bellefonte Final Safety Analysis Report. I have 13 draft questions that should be posed to the applicant (see enclosure) prior to our site visit on June 14, 1982. Hopefully, we will have the opportunity to discuss the questions with the applicant while we are attending the site visit.

If you have any questions regarding my requests for additional information, please call me. I appreciate the opportunity to provide consulting services to NRC on this project.

Sincerely,

Dr. David L. Schreiber, P.E.
President & Principal

Enclosure: As stated

cc w/o encl: M. Fliegel

B001
5
1/1

FSAR DRAFT QUESTIONS - HYDROLOGIC ENGINEERING

BELLEFONTE NUCLEAR PLANT

By

Dr. David L. Schreiber, P.E.
Schreiber Consultants, Inc.

1. Section 2.4.1.2. Update the flow durations on p. 2.4-5 to include the most recent daily discharge data.
2. Section 2.4.2.2. Coincident wind waves have been reduced in magnitude since the PSAR as a result of using the "median seasonal maximum wind." Provide your basis for using this criteria, since it does not meet the intent of Regulatory Guide 1.59 or ANSI N170-1976.
3. Section 2.4.2.3. Provide analyses that demonstrate the capability of site drainage facilities, including roof drains, to prevent flooding of safety-related facilities resulting from the local probable maximum precipitation (PMP). Provide sufficient details of the site drainage system to allow an independent review of rainfall and runoff effects on safety-related facilities. Provide a figure that illustrates the site drainage plan and shows post-construction topographic contours of the site.
4. Section 2.4.3.6. Reference 17 is outdated. It has been superseded by the following reference: U.S. Army Corps of Engineers, Engineer Technical Letter No. 110-2-221, November 29, 1976. Reevaluate your wave runup analyses using the current reference. In your response, please note any significant changes in wave runup values and whether or not there will be any effect on safety-related structures.
5. Section 2.4.7. During an extended cold weather period such as occurred in January - February 1940, what is to prevent surface ice from entering or blocking the intake pumping station?

6. Section 2.4.8.1. Describe the ability of the intake channel to withstand a probable maximum flood on the Tennessee River. Under such a condition, what is to prevent the intake channel from becoming blocked by debris? What is the design flow velocity for the intake channel?

7. Section 2.4.11.5. During the Construction Permit Stage of licensing, you estimated that safety-related water requirements were about 134 cfs. Is this estimate still valid? If not, provide documentation as to why it is not.

8. Section 2.4.13.3. Provide the basis for assuming a bedrock porosity of 0.01 and an overburden porosity of 0.04. Furthermore, if these values are total porosity, then provide values for effective porosity (specific yield). It is the latter parameter that should be used in calculating ground-water velocity and travel time. Furthermore, your analysis is incomplete in that you have not identified a potential radioactive spill source volume (e.g., radwaste tank), nor have you provided dilution factors or reductions in concentrations at the potential points of water use (which, by the way, in all probability will be downstream surface water users after the potential spill has moved through the ground water to the river). Provide the details of such an analysis, including the bases for assumed distribution and other coefficients, such as bulk density, dispersion, and dispersivity. For guidance, refer to "ANSI/ANS-2.17-1980, Evaluation of Radionuclide Transport in Ground Water for Nuclear Power Sites."

9. Section 2.4.13.4. Identify the network of observation wells that will be maintained throughout plant life. In addition, describe the methods for processing, analyzing, and reporting the data, as well as quality assurance procedures.

10. Section 2.4.14. The statement in this section (that no tech specs or emergency operation requirements are needed) is in conflict with that in Section 2.4.10 (when the lake level reaches elevation 610, a normal shutdown will commence). Please rectify.

11. Section 3.4. Provide in this section a discussion of the design basis ground-water level, as well as the design basis flood level.

12. Section 9.2.5.3. Since the intake channel is a safety-related plant feature, provide details of the "periodic monitoring and dredging program" that will be used to assure continual free access to the river.

13. General comment. Since this is a two-unit plant, presumably one unit will be in operation before the other. Provide a discussion of all hydrologic engineering safety-related aspects of constructing one unit while the other is in operation. For example, what safety-related problems may arise at the operating unit because of an open excavation at the other unit?