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October 20, 1989
USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of)	
)	
GPU NUCLEAR CORPORATION)	Docket No. 50-320-0LA
)	(Disposal of Accident-
(Three Mile Island Nuclear)	Generated Water)
Station, Unit 2))	

LICENSEE'S RESPONSE TO THE NRC STAFF'S
SEPTEMBER 29, 1989 RESPONSE TO APPEAL BOARD ORDER

On September 11, 1989, the NRC Staff published in the Federal Register an Environmental Assessment relating to the proposal of GPU Nuclear Corporation (GPUN) to evaporate accident-generated water (AGW) at Three Mile Island, Unit 2 (TMI-2). 54 Fed. Reg. 37,517. The Environmental Assessment stated that subsequent to the issuance of Final Supplement No. 2 to the Programmatic Environmental Impact Statement on the TMI-2 cleanup, GPUN had modified its plans for pretreatment and for the packaging and shipment of the evaporator bottoms. In particular, the Assessment addressed: (1) the option of using the evaporator in a closed-cycle configuration to pre-process AGW; and (2) the shipment of evaporator bottoms in a dried pelletized waste form rather than as bottoms solidified with cement. The Environmental Assessment reviewed these modifications and concluded that the "current proposal" would result in certain reduced impacts, that

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there are no significant environmental effects associated with the proposal, and that there is no need to supplement the PEIS.

In an Order dated September 13, 1989, the Appeal Board asked the Staff a number of questions relating to the Environmental Assessment, including when was GPUN's "current proposal" submitted, and was the "current proposal" litigated below. The NRC Staff filed its ". . . Response to Appeal board Order," on September 29, 1989. In an Order issued October 6, 1989, the Appeal Board provided all parties with the opportunity to reply to the Staff's response on or before October 20, 1989. As reported by the Staff and discussed below, both the option of using the evaporator to pretreat AGW and the methods to package and ship dried bottoms were fully disclosed and considered throughout the hearing and before.

The Use of the Evaporator to Pretreat AGW

GPUN's July 1986 proposal for the disposal of AGW, which evaluated evaporation and two other alternatives, assumed as a starting point for the evaluation that the levels of radionuclides in the AGW would be certain levels reasonably achievable by the routine, demineralizer-system processing that is a part of GPUN's recovery operations. The July 1986 proposal nevertheless noted that GPUN intended to procure an evaporator that could be operated in both an open and closed-cycle fashion in order to have the flexibility to use the evaporator not only

for the disposal of AGW but also for the processing and decontamination of AGW to support decontamination activities. G1 4, Disposal of TMI-2 Water (July 1986) at 29.

Supplement 2 to the PEIS addressed GPUN's evaporation proposal. There, the NRC Staff utilized the radionuclide levels in processed AGW as the starting point for its evaluation of evaporation. The NRC's PEIS considered the possibility of using the evaporator in a closed-cycle configuration to pre-process the AGW, but concluded that quantitative evaluation of this variant was unnecessary. See PEIS Supp. No. 2 (Staff Ex. 1) at 3.36.

The option of using the evaporator in a closed-cycle configuration to pretreat AGW was reasserted by GPUN early in this proceeding. GPUN fully described the option in the Preliminary System Description provided to the parties and the Licensing Board on February 17, 1988, during the discovery phase of the proceeding. It was the subject of an interrogatory by Joint Intervenors to which Licensee responded in some detail. Licensee's Answers to SVA/TMIA's Second Set of Interrogatories to GPU Nuclear (March 30, 1988) at 15-16. It was described in detail by Licensee during Summary Disposition. Licensee's Motion for Summary Disposition of Contentions 4b (In Part), 4c, and 4d, Affidavit of David R. Buchanan (Contentions 4b in part, 4c and 4d) (May 9, 1988). Finally, it was included in Licensee Testimony of David R. Buchanan (Tr. 457-59) and Licensee's Exhibit 1.

During the hearing, Joint Intervenors explored whether the use of the evaporator to pre-process AGW would affect the environmental evaluation of GPUN's proposal and Joint Intervenors' alternative. Joint Intervenors questioned whether occupational exposure would be increased. Licensee's witnesses explained that the occupational exposure estimates could not be affected by batch-cycle operation. Licensee's estimate of 23 person-rem is based on the maximum dose rate Licensee would permit and is higher than would result from the maximum concentration of AGW that would be processed through the evaporator. Tr. 496, 513-14 (Tarpinian). Also in response to Joint Intervenors' cross-examination, Licensee's witnesses testified that the use of the evaporator to pre-process AGW would create no additional waste. Tr. 502, 504, 529-30 (Buchanan). The Licensing Board's decision on Licensee's proposal addresses the option of using the evaporator in a closed-cycle configuration to process AGW, as presented in Licensee's testimony. LBP-89-7, 29 N.R.C. 138, 146-47 (1990).

Packaging of Evaporator Bottoms

GPUN's July 1986 proposal assumed for purposes of evaluation that the evaporator bottoms would be solidified with a cement binder prior to shipment, in order to immobilize free-standing liquids. GPUN, Disposal of TMI-2 Water (July 1986) at 28. The NRC Staff utilized this assumption in the draft PEIS Supplement No. 2. In written comments on the draft PEIS Supplement No. 2,

GPUN informed the Staff that the evaporator bottoms might be in the form of a dry powder, in which case solidification would not be required, and the dry waste would be packaged in drums. Letter from F. Standerfer to M. Masnik (March 17, 1987). The NRC Staff included this letter as part of its Final PEIS Supplement No. 2. PEIS Supp. No. 2 at A.28.

By the time the adjudicatory proceeding commenced, GPUN had progressed toward the selection of a particular evaporator design. On February 17, 1988, GPUN provided the Licensing Board and the parties with a Preliminary System Description which included a blender/dryer to eliminate liquid and three options for packaging the dried bottoms, including a pelletizer. Preliminary Description (Rev. 0, Feb. 16, 1988) at 12. Further, in response to Joint Intervenors' interrogatories, GPUN stated that the blender/dryer and packaging features of the evaporator system obviated the solidification of the bottoms with cement as assumed in the July 1986 Report, and that no cement binder would be used. Licensee's Answers to SVA/TMIA's Interrogatories to GPU Nuclear Corporation (Feb. 19, 1988) at 32-35 (Responses to Interrogatories S46, S47, S48 and S49). In follow-up interrogatories, Joint Intervenors raised no further questions relating to the packaging of dried bottoms.

The use of the blender/dryer and packaging options was again reflected in Licensee's Motion for Summary Disposition of Alternatives (Contentions 1, 2, 3 and 8), May 16, 1988 (Joint

Affidavit at 15). Licensee provided dose and accident assessments based on the packaging and shipment of dried evaporator bottoms. Joint Intervenors raised no issue with respect to this aspect of Licensee's motion.

The NRC Staff supported Licensee's motion. The NRC Staff affiant noted that solidification was no longer necessary, and that the current options would result in significantly less burial volume and less risk of traffic accidents and fatalities than was estimated in PEIS Supplement No. 2. NRC Staff Response in Support of the Licensee's Motion for Summary Disposition (June 23, 1988), Affidavit of Linda F. Munson at 5-6. In the Licensing Board's Memorandum and Order ruling on the summary disposition motions, the Licensing Board granted Licensee's motion with respect to all issues except whether Licensee's proposal was obviously superior to the no-action alternative. The waste form of the evaporator bottoms was not specified as an issue. See LBP-88-23, 28 N.R.C. 178, 183-201, 225-32 (1988).

On October 17, 1988, GPUN pre-filed as a proposed exhibit GPUN's Technical Evaluation Report (TER) for the Processed Water Disposal System (Oct. 10, 1988). Licensee Ex. 1. Page 9 of the TER described the blender/dryer and the packaging system (the pellets) that would be utilized. GPUN also submitted Licensee's Testimony of William W. Weaver on Accident Risks (Contention 2), which assessed the risk connected with the shipment of evaporator bottoms. Tr. 473-82.

During the hearing, Joint Intervenors asked no questions and raised no issue concerning the waste form of the evaporator bottoms. In proposed findings, Joint Intervenors explicitly acknowledged the waste packaging system as a part of Licensee's evaporator proposal, but raised no challenge or issue with respect thereto. See SVA/TMIA's Proposed Findings of Fact and Conclusions of Law in the Form of a Proposed Decision (Dec. 30, 1988) (PF 1 on Licensee's Proposal). The Licensing Board subsequently rendered its decision based on Licensee's proposal and assessment of occupational and accident risks. LBP-89-, 29 N.R.C. 138, 145-48 (1989). No issue regarding the waste form of the evaporator bottoms, or any aspects of the environmental evaluation relating to waste form, have been raised on appeal.

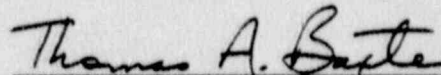
Conclusion

As is evident from the discussion above, and from the documents in the record, there has been no recent or unexplained change in GPUN's proposal. The possibility that it would be unnecessary to add cement to the evaporator bottoms was communicated to the NRC Staff prior to the issuance of Final PEIS Supplement No. 2, and the intended use of a blender/dryer and pelletizer was fully disclosed throughout the adjudicatory proceeding and formed an integral part of the record of decision. Similarly, the option of using the evaporator in a closed-cycle configuration to process AGW was alluded to in GPUN's July 1986

Report, was considered (though not quantitatively) in the PEIS Supplement No. 2, and was fully disclosed, explored, and considered in the adjudicatory proceeding.

In sum, all aspects of Licensee's proposal are fully reflected and considered in the adjudicatory record and the Licensing Board's decision, which supplement the PEIS. Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 N.R.C. 681, 704-07 (1985), aff'd in part and review otherwise declined, CLI-86-5, 23 N.P.C. 125 (1986). For this reason, the Environmental Assessment was not really necessary.

Respectfully submitted,



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OFFICE OF SECRETARY
DOCKETING & SERVICE
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CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Response to the NRC Staff's September 29, 1989 Response to Appeal Board Order," dated October 20, 1989, were served upon the parties identified on the attached Service List by deposit in the U.S. Mail, first class, postage prepaid, this 20th day of October, 1989.

Thomas A. Baxter
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