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4410-87-L-0063  
Document ID 0180P

April 29, 1987

US Nuclear Regulatory  
Attn: Document Control Desk  
Washington, DC 20555

Dear Sirs:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)  
Operating License No. DPR-73  
Docket No. 50-320  
Canister Gas Sampling

NRC TMICPD Letter NRC/TMI-87-003 dated January 7, 1987, "Reduced Canister Void Volume," approved GPU Nuclear's request for a reduced canister void volume subject, in part, to the following condition:

"After shipping, confirmatory gas measurements will be taken on one canister per shipment (i.e., one of seven for a single cask shipment, one of fourteen for a double cask shipment). A gas sample will be withdrawn and analyzed shortly after (within a few days) removal of the canister from the shipping cask at the Idaho National Engineering Laboratory. The canister will be stored in an unvented condition for about six weeks and resampled. The gas sample analysis is to be recorded and used to confirm the conservatism in the projected allowable shipping window determined by the samples withdrawn prior to shipping."

As requested by Mr. J. Thomas, of the TMI-2 Cleanup Project Directorate, GPU Nuclear is informing you that a canister sampling program has been implemented at the Idaho National Engineering Laboratory (INEL). The specifics as to the implementation of this program are described below.

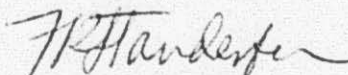
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- o Attached GPU Nuclear letter 4400-87-S-013 dated January 8, 1987, requested EG&G to institute a sampling program at INEL per the NRC imposed requirements.
- o The sampling program at INEL was initiated with cask shipment No. 6 which was shipped on January 11, 1987. This was the first fuel shipment after the NRC letter of January 7, 1987.
- o Concurrent with each fuel shipment, GPU Nuclear transmits a letter to EG&G identifying the specific canister per cask that is to be sampled. EG&G forwards this letter to INEL for incorporation in their operating procedures for cask unloading. The canister selected by GPU Nuclear for sampling is that which represents the least conservative case for the shipment.
- o Upon receipt of the fuel shipment at INEL, the designated canister is placed in a separate storage module, which can store six (6) canisters, and a gas sample is obtained. As additional casks are received, canisters for gas sampling are accumulated in this module. When the sixth canister is loaded in the module, gas samples are taken from all six (6) canisters. Thus, one (1) out of every six (6) canisters is not resampled. A benefit of this procedure is that a variety of storage times are provided for comparison as opposed to a constant six (6) week monitoring period for all canisters sampled. It is GPU Nuclear's understanding, based on discussions between Mr. L. Ball of EG&G and Mr. J. Thomas, that this sampling methodology at INEL is acceptable to the NRC.

Sincerely,

  
F. R. Standerfer  
Director, TMI-2

FRS/RDW/eml

Attachment

cc: Regional Administrator, Region 1 - W. T. Russell  
Director, TMI-2 Cleanup Project Directorate - Dr. W. D. Travers  
Mr. W. A. Franz - EG&G Idaho, Inc.

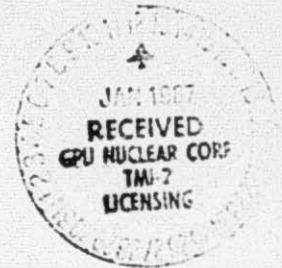


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January 8, 1987

4000-87-S-013

Mr. W. A. Franz  
EG&G IDAHO, INC.  
P.O. Box 80  
Middletown, PA 17057



Subject: Canister Gas Sampling

Dear Mr. Franz:

GPU Nuclear requests that a program be instituted at INEL to satisfy a sampling requirement imposed by the NRC in a meeting held between the NRC, GPU Nuclear, and EG&G on Wednesday, January 7, 1987. This program would sample one canister per shipment upon arrival at INEL and again after a waiting period of approximately six weeks. The canister to be sampled will be specified by GPU Nuclear and will be only one canister from either a single or double cask shipment. The samples are to be analyzed for hydrogen and oxygen content with the results reported to GPU Nuclear in values of volume percent. This sampling program is to commence with the next shipment and be continued until the end of the fuel shipping program. However, you will be notified to discontinue this sampling program, should GPU Nuclear decide, with NRC concurrence, that the sampling program be discontinued prior to the end of the fuel shipping program.

Upon receipt, GPU Nuclear will forward a copy of the NRC letter which imposes the sampling requirement.

Please provide us an estimate of GPU Nuclear cost for this program within two weeks.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'F. R. Standerfer'.  
F. R. Standerfer  
Director, TMI-2

FRS/dch

cc: (See page 2)

W. A. Franz

- 2 -

January 8, 1987  
4000-87-S013

cc: Manager, Recovery Engineering - D. R. Buchanan  
Manager, TMI 2 Licensing, J. J. Byrne  
Site Operations Director - S. Levin  
Manager, Waste Management - J. A. Renshaw  
Director, Licensing & Nuclear Safety - R. E. Rogan