

AFFIDAVIT

STATE OF NEW JERSEY:

SS.

COUNTY OF MORRIS:

The undersigned, Bernard H. Cherry, being duly sworn according to law, deposes and says that:

1. I am the Nuclear Fuels Manager for General Public Utilities Service Corporation (GPUSC), 260 Cherry Hill Road, Parsippany, New Jersey 07054. GPUSC is a wholly owned subsidiary of General Public Utilities (GPU) as is Metropolitan-Edison Company (Met-Ed), the licensee and operator of the Three Mile Island Nuclear Generating Station Unit 1.

2. I have been employed by GPUSC since March, 1969. My duties include the procurement and technical evaluation of fuel for the GPU system nuclear plants. I have been responsible for the evaluation of the hyphothesized Loss of Coolant Accident for Three Mile Island Unit 1 and the evaluation of the mode of compliance with the criteria of 10 CFR 50.

3. This statement is submitted in response to the requirements of Section 50.46 of 10 CFR 50, and reflects my opinion as to the time and effort required to properly prepare an ECCS technical evaluation for the Three Mile Island Generating Station Unit 1.

4. Preparation of the ECCS performance evaluation following a hyphothesized Loss of Coolant Accident (LOCA) as specified by Appendix K to 10 CFR 50 for the Three Mile Island Nuclear Generating Station Unit 1 requires the integration of five complicated analyses. These are: (1) primary system blowdown; (2) timedependent fuel heat transfer coefficient determination; (3) pellet to clad gap conductance; (4) fuel clad mechanical performance; and (5) the integrated PWR fuel assembly heat up evaluation. These interdependent analyses are performed on the basis of: (1) reactor plant and system data; (2) required assumptions and initial conditions; (3) fuel design data; and (4) fuel and plant performance data. An appropriate ECCS evaluation requires the assessment of all data and assumptions; the review and confirmation of the suitability of each model calculation; and the integration of each model output to yield the final evaluation result. The effort required to independently develop evaluation models judged suitable against the standard of Appendix K to 10 CFR 50 is beyond the existing capability of GPU Service Corporation. It should be noted,

1587 043

~~9811040~~

7911040 90

however, that GPUSC having participated in the development effort of two components of a fuel LOCA analysis model and having engaged in technical discussions of the remaining model components, possesses the technical capability to review existing models and their results.

5. It is clearly required by Appendix B to 10 CFR 50, that Metropolitan-Edison Company technically review and judge the appropriateness of the ECCS evaluation for Three Mile Island Unit 1. GPUSC, acting for Met-Ed, will evaluate the suitability of: the plant and fuel design dependent input data; the characteristics of the calculation model used; the results of that model; and the operating requirements proposed to satisfy the criteria of 10 CFR 50.


6. The Three Mile Island Nuclear Generating Station Unit 1 includes a Babcock & Wilcox (B&W) nuclear steam supply system (NSSS) which contains 177 B&W fuel assemblies. Babcock & Wilcox has been asked to provide the blowdown analysis of the NSSS and the LOCA analysis of the fuel assemblies. In response Babcock & Wilcox has stated that the blowdown analysis of the Three Mile Island Unit 1 primary coolant system and the LOCA analyses of the fuel will both be forwarded to Met-Ed/GPUSC on August 5, 1974. Joint efforts by GPUSC and B&W to expedite this schedule have not yielded any significant benefits.

7. Upon receipt of the B&W LOCA analysis, GPUSC will complete the Three Mile Island Unit 1 ECCS technical evaluation, including consideration of the blowdown analysis, the performance analysis of the B&W fuel, and the recommended plant operational requirements to comply with 10 CFR 50.

8. It is presently estimated that the above cited technical review functions can be completed by GPUSC in three weeks from receipt of all required information. This time will be utilized approximately as follows: (1) two weeks to review results of blowdown and LOCA analyses, the suitability of models, plant data, and assumptions; and (2) one week to compile the overall evaluation, evaluate operational alternatives; propose solutions and forward the results to Met-Ed. It is my judgment that this three week period and the individual estimated times for each technical function are the minimum time periods possible for the action required.

9. The foregoing is true and correct to the best of my information, knowledge and belief.

SUBSCRIBED AND SWORN TO
BEFORE ME THIS 17th DAY
OF JUNE, 1974


MARION P. BAWIEC
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Jan. 21, 1979


1587 044

5586