



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

September 24, 1979

Dockets Nos. 50-317
and 50-318

Mr. Peter Conlon
17920 New Hampshire Avenue
Ashton, Maryland 20702

Dear Mr. Conlon:

This is to respond to your letter of August 30, 1979 in regards to the August 7, 1979 Federal Register notice relating to the planned expansion of the Calvert Cliffs Nuclear Power Plant spent fuel pool capacity.

In a light water reactor such as the Calvert Cliffs units, the source of heat to generate steam is enriched uranium, comparable to oil or coal used as the source of heat in a fossil-fired plant. The uranium is sealed in metal tubes, which are fabricated together to form fuel assemblies. During operation, the enrichment of the uranium gradually decreases. Eventually, a point is reached where, considering reduced power generation and cost of new fuel, it is no longer cost effective to operate with the used fuel. At this point, the fuel is referred to as "spent" and is replaced. At this point, only approximately 75% of the uranium has been used. During the process, plutonium is generated, which is also usable as fuel.

Starting in the 1950's, when the first nuclear power plants were designed, and continuing until 1977, the national policy was that the usable uranium and plutonium in the spent fuel would be recovered by reprocessing the fuel and recycled back to the reactor (i.e., used in the fabrication of replacement fuel assemblies). The basis for recycling the "recovered" fuel was to reduce the costs of power production.

In April 1977, President Carter issued his energy policy. To eliminate the possibility that plutonium in spent fuel might be diverted to non-peaceful uses, the President stated that "We will defer indefinitely the commercial reprocessing and recycling of the plutonium produced in the U. S. nuclear power program". The plan included provisions for the Federal government to construct a permanent repository where the spent fuel could be stored indefinitely under government control. Studies are underway on the design and possible location of a permanent repository for spent fuel from all nuclear power plants. In the meantime, until the government storage facility is completed, the spent fuel must be stored at the nuclear power plants.

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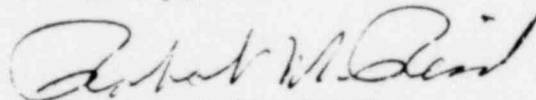
As a result of the above change in national policy, in August 1977 Baltimore Gas and Electric Company (BG&E) requested approval to increase the storage capacity of the spent fuel pool at Calvert Cliffs from the original design storage of 410 fuel assemblies to 1056 fuel assemblies. The purpose was to permit storage of the spent fuel onsite until the permanent government repository was available. After a detailed evaluation, we approved this request on January 4, 1978. A copy of our evaluation is enclosed.

It now appears that the schedule for construction of the permanent government repository has slipped (or was initially overly optimistic). Because of this delay in the schedule for completing the permanent government repository, in July 1979 BG&E again requested approval for an additional increase in the storage capacity of the onsite spent fuel pools to a total of 1,368 fuel assemblies. At present, the installed storage capacity of 728 fuel assemblies is adequate to accommodate operation of both Calvert Cliffs units until the end of 1982. The current licensed limit of 1,056 fuel assemblies would add storage for four additional refuelings allowing operation of both units through 1984. The proposed increased capacity would accommodate operation of both units through most of 1987. Our review of this request will probably not be completed for several months. When it is completed, I will send you a copy of the safety evaluation.

BG&E is actively pursuing a plan to increase the approximate refueling cycle (the time of operation between refuelings) from the current 12 months to a refueling cycle approaching 18 months. When this program is completed in a few years, the amount of spent fuel produced will be reduced.

We appreciate your comments and hope that this letter satisfactorily responds to your questions.

Sincerely,



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Enclosure:
Amendments 27 & 12 to Calvert
Cliffs 1 & 2 dtd. 1/4/78

cc:
Mr. A. E. Lundvall, Jr.
Vice President - Supply
Baltimore Gas & Electric Company
P. O. Box 1475
Baltimore, MD 21203

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