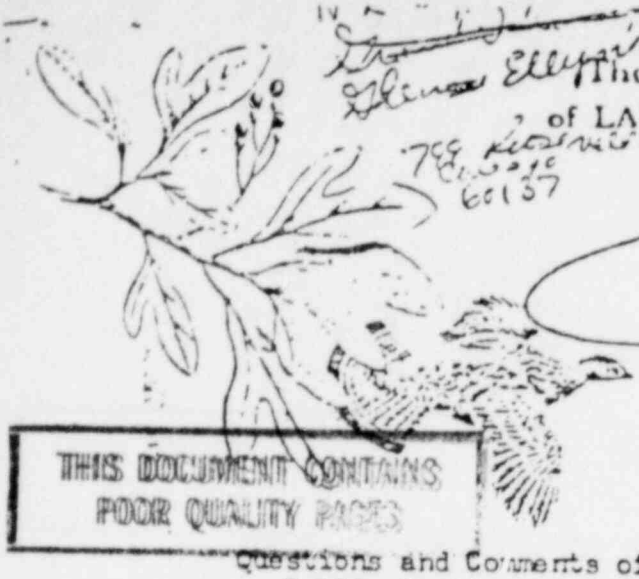

The SASSAFRAS AUDUBON SOCIETY
of LAWRENCE - GREENE - MONROE - BROWN -
MORGAN & OWEN COUNTIES
INDIANA

Apr 30, 1980

TO: Mr. Victor Stello, Jr., Director, Office of Inspection and Enforcement, Nuclear Regulatory Commission (NRC).
Mr. James G. Keppler, Director, Region III NRC.
Mr. Cordell C. Williams, Construction Project Section Chief, Region III NRC.

Questions and Comments of the Sassafras Audubon Society presented at a Public Meeting held at Madison, Indiana, March 25, 1980, on the Response of Public Service Indiana, Inc. (PSI) to the NRC "Order Confirming Suspension of Construction" at Marble Hill, August 15, 1979.

The paramount question concerning Marble Hill is not whether safety-related construction should be resumed, but whether all construction should be stopped. Should the public be subjected to the dangers inherent in the operation of a nuclear plant, including the storage of the plant's highly toxic wastes on-site, if its power is not needed?

PSI has an overcapacity of more than 50% at peak power demand with Gibson 5 expected to come on line in 1983. PSI has over-estimated growth in demand for electrical energy in its service area for many years, and is unwilling to recognize:

1) that the expected population growth and general economic activity in its area is likely to remain low, below the Nation's average, and

2) that the increasing cost of electrical energy will spur greater energy conservation, with the potential of energy conservation cutting energy use 30-40% by the year 2000, and

3) that increasing availability of natural gas in the next several decades will compete with and reduce dependency on electric power.

The disastrous economics of nuclear plants adds another dimension to the question of whether Marble Hill should be built. The costs of constructing a nuclear plant has been increasing annually at more than 3X the rate of general inflation, partly because of changes in design and adoption of standards to reduce the level of hazards in plant operation.

PSI should be required by the NRC, prior to consideration of resumption of construction, to identify and document all safety-related materials and systems which will have to be changed, additionally tested, or replaced to comply with post-TMI-2 standards and criteria. The results of the DOE study of the Byron Nuclear Plant, the prototype of Marble Hill, should also be applied to Marble Hill. Will the Westinghouse steam generators on-site have to be replaced?

PSI has made no realistic estimate of what it will cost to bring Marble Hill on line, but cost estimates of nuclear plants of similar size made by other utilities and public service commissions place the cost nearer $1 billion than $2 billion. And this does not include the costs of decontamination, dismantling, and disposal of the "hot"

parts of Marble Hill, costs which are increasing with time as experience is acquired on the effects of aging on nuclear facilities. The prospect at this point is that it will be both expedient and necessary to let Marble Hill stand as a monument to the nuclear energy experiment under the "perpetual care" of future generations because of the costs (radioactive as well as financial) of disposal as well as the probable lack of disposal space in a Federal repository.

Another part of the disastrous economics of nuclear plants concerns their ageing? What is their life expectancy? Plants are aging (getting "hot" and "activated") faster than expected. Is Dresden I finished at age 19 or can it be decontaminated (at considerable expense and with serious radioactive waste disposal problems) and given another decade of life? To what extent are generic flaws such as steam generator degradation affecting the viability as well as generating capacity of PWR's and adding to the costs of nuclear power?

If all these factors are considered with the fact that Marble Hill is not needed, questions surrounding its construction are academic for it should be stopped while the investment is minor. The questions and comments that follow must be viewed in this context.

I

Can Marble Hill be repaired sufficiently?

Concrete placement at Marble Hill has been below standard with numerous voids and honeycombs in the Unit 1 containment and auxiliary buildings, structures nearing completion when safety-related construction was stopped.

How much of this huge volume of concrete can be and will be tested to insure structural integrity? Will the selection and testing of selected volumes of concrete on a statistical basis such as has been done by Mr. Muenow of the Portland Cement Corporation be sufficient not only to "satisfy all applicable regulatory requirements" and "reasonably assure" the NRC, but will such testing and repair of defects where discovered, establish unequivocally that Unit 1 can withstand a 28 psig pressure spike such as occurred at TMI-2?

The NRC's Regulatory Guide 1.55 entitled "Concrete Placement in Category I Structures," notes:

> "In particular, the presence of numerous concrete voids which have been detected at or near the surfaces of nuclear containment buildings raises concern about the density of portions of these and other concrete structures that cannot be readily inspected. For such unaccessible areas, the only method of assuring a quality concrete structure is through good planning and control of the placement of concrete and all items embedded in it."

How much of the concrete cited in 25 reports to PSI as "out of slump concrete" and/or included in the 91 field reports to PSI of honeycombing, is in safety-related construction and inaccessible to inspection and testing but vital to structural integrity?

II

Will PSI be required to have N Certification prior to resumption of safety-related construction at Marble Hill?

Several confusing statements are made by PSI in their Report, Description of Licensee Activities Addressing Order Confirming Suspension of Construction, concerning N Certification, but it is clear that PSI does not expect to have N Certification at the time they expect the Confirming Order to be lifted:

.....on page III-H-1, PSI mentions "An interim letter of authorization has been issued by the ASME."

.....on page III-H-5, PSI mentions that they have had their "ASME Quality Assurance Program reviewed by the ASME Survey Team and as a result of their findings, expect to receive an interim letter from the ASME soon."

.....on page III-H-5, PSI also notes that "PSI will request ASME to survey its implementation of the ASME Quality Assurance Program within six months of resuming Code work on piping systems.",

while in a footnote on the same page PSI notes that "Subsequent to the January 17, 1980 letter, the decision was made to arrange for the survey to start the same date the Confirming Order is lifted with respect to Code work on piping systems."

The Indiana Boiler and Pressure Vessel Board (IBPVB) is supposed to hold the view that Marble Hill is at a sufficiently advanced stage of construction that PSI should have an N Certificate and should not be allowed to proceed with only an "interim letter." Does ASME have a similar position? The NRC?

Sassafras Audubon concurs with the IBPVB that PSI should have N Certification prior to resumption of safety-related construction.

III

When does Region III NRC expect PSI to have a fully developed and functional Material Management Program?

PSI, in a letter to Mr. Gaston Fiorelli, Region V NRC, on February 15, 1980, concerning 19 storage and maintenance nonconformances cited during a November 14-16, 1979 inspection of Marble Hill, mentions that "Development of the PSI Material Management Program is in process. PSI will provide an updated status of this development by March 31, 1980."

PSI, in a subsequent letter (March 10, 1980) to Mr. Fiorelli confirmed that the program is "developing" and gives no date when full compliance will be achieved.

PSI has had two full years+ in which to institute a Materials Handling Program in conformance with the NRC's Regulation Guide 1.38 regarding levels and methods of storage and maintenance of materials prior to placement in their final location. How much time does the NRC consider "reasonable" for establishment of a Materials Management Program by the Licensee?

IV

Will Region III NRC make certain that PSI has sufficient personnel sufficiently trained and experienced on-site at Marble Hill prior to permitting construction activities to resume? Mr. Cordell Williams testified before the Moffett Subcommittee in November 1979 that Marble Hill had been seriously understaffed prior to work stoppage in terms of both capability and numbers.

The Management Analysis Company (MAC) in their Diagnostic on Marble Hill came to the general conclusion that the problems that led to suspension of construction at Marble Hill were primarily the result of insufficient commercial nuclear experience within PSI and its contractors.

PSI, in the section of their Report on Staffing and Qualification in areas of Project Management and Quality Assurance, is confusing as to what quality and quantity of staff they would have on hand for "installation activities" and what would be required for full construction activities, stating on page III-C-7 that "Full construction activities will be supported by additional staffing as required."

MAC personnel, under contract to PSI are to staff key positions until PSI's counterpart in each of these positions is indoctrinated to assume project responsibilities, and PSI mentions that specific plans for implementing the transition will be developed and that contract personnel will be used in other areas of the project to supplement existing staff as needed. This seems far too indefinite and open-ended for a Project which has suffered from a lack of sufficient personnel as well as sufficiently trained personnel.

V

If construction is allowed to resume at Marble Hill will it be under "fixed-price contracts" between PSI and its contractors and subcontractors?

Many workers at Marble Hill, including the carpenters who went on strike at one point, have testified to excessive work-schedule demands, directed toward meeting construction "milestones" which were not compatible with quality construction. The construction pressures have been related to fixed-price contracts where contractors will be the losers if they do not meet construction schedules.

The NRC mentioned in Item 4, Part IV of their August 15, 1979 Order of Confirmation, that PSI should review all contracts, "including conditions of such contracts that may impact negatively on quality," and asks PSI to identify specific steps to be taken to assume such conditions do not reduce the quality of safety-related work.

MAC, in their Diagnostic of Marble Hill, mentions (page 3), "that the original cost and schedule anticipations, even with the benefit of replication and fixed price contracts, were too optimistic, and that to derive the maximum benefits of the fixed price construction contracts in the environment of constant change, PSI should break down the scope of existing contracts into smaller elements and aggressively monitor them at the site by more experienced personnel (nuclear experience in contract monitoring and administration).

PSI, on page III-D-1 of their Report, mentions that they have reviewed all

safety-related agreements entered into prior to August 15, 1977, and that "Based upon this review determined "that none of the safety-related agreements contain conditions which impact negatively on the contractor's quality obligations."

PSI does not get to the heart of the matter with regard to the problems of fixed-price contracts in their "Review of Safety-Related Contracts" on page III-D-1 of the Report. What further action does the NRC intend to take on this matter?

VI

Region III's program of inspection and enforcement at Marble Hill failed to assure the quality-construction of that facility for the protection of the public's health and safety. Mr. James Keppler, Director, Region III NRC, in testimony before the Moffett Subcommittee (page 159 of the Proceedings of the two-day Hearings) acknowledged that "There is no question in my mind that we will have to have an augmented inspection program even beyond putting a resident inspector there."

A resident inspector has been on-site at Marble Hill for some months. What, specifically, are the duties of the Resident Inspector? If construction is permitted to resume at Marble Hill, how will the inspection program be augmented by Region III NRC and how will it interface and be coordinated with the duties of the Resident Inspector? How much of the augmented program will consist of "independent verification" and direct observation of construction in comparison with examination of PSI's construction records, etc?

VII

Representative Lee Hamilton, 9th District, Indiana, in his letter to Joseph M. Hendrie, Nuclear Regulatory Commission, of December 20, 1979, noted that it became apparent during the Moffett Subcommittee Hearings that part of the problem that caused the situation at Marble Hill "was that all matters being handled by Public Service Indiana and the NRC were handled privately, quietly, within the bureaucracy. No one was accountable and nothing was done in an open enough manner to allow full public scrutiny."

Mr. Keppler, under questioning by Mr. Hamilton at the Moffett Subcommittee Hearings on the responsibility of Region III NRC to make public the deficiencies in construction which were found at Marble Hill, acknowledged (page 143) that he wished that he had held news conferences earlier "in the game". He also acknowledged that he might have fallen victim to the fact that he thought a cure might be at hand and Region III would be able to turn the thing around.

Whatever Region III's attitude toward the public's right to know and to question where their health and safety is involved, a public "meeting" at this time is no substitute for an evidentiary public proceeding on whether construction should resume at Marble Hill. The circumstances warrant such a public hearing.

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