PUBLIC
SERVICE
INDIANA

S. W. Shields
Senior Vice President -
Nuclear Division

April 30, 1981

Decommissioning Program Manager
Division of Engineering Standards
Office of Standards Development
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Sir:

Per the Federal Register, February 10, 1981 (44 FR 11666) the Nuclear Regulatory Commission staff solicited comments on the document NUREG-0586 "Draft Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities." Public Service Company of Indiana, Inc. (PSI) comments are attached to this letter. They are for the most part specific to nuclear generating stations, however we feel they can probably be generally applied to each type of facility within the NUREG's scope.

As you will find when reading our comments, PSI does not agree with the NUREG's recommendations that new decommissioning regulatory guidance is needed. We conclude this from the same technology data base that is presented in the NUREG, plus a concern about possible NRC pre-emption of other governmental agencies' authorities. Basically, the NUREG does not adequately address the relative impact (costs/benefits) of new regulations versus maintaining regulatory status quo. The document is therefore deficient as an Environmental Impact Statement and does not represent an adequate base for the proposed regulations.

Another concern that we have deals with the costs to the consumer that would result from the potential regulations discussed in the report. They would for the most part be inflationary, and we believe these costs would not be accompanied by any significant improvements from a public health and safety standpoint.

If the recommended regulations are to be further considered, a cost/benefit/impact type study incorporating these and similar concerns would be in order.

Sincerely,

S. W. Shields

8105180397

RSW/gb
Attachment

P. O. Box 190, New Washington, Indiana 47162 812 . 289 . 1000

ATTACHMENT I

PUBLIC SERVICE COMPANY OF INDIANA, INC.
COMMENTS ON NUREG-0586

GENERAL

1) There are several conclusions within NUREG-0586 that Public Service Company of Indiana, Inc. (PSI) is in concurrence with. In Attachment II we bring some of these conclusions to your attention. However, we also note that there are several statements, conclusions, and recommendations that PSI disagrees with. The remaining general comments deal with these.

2) PSI notes that the NUREG's abstract (p. iii) states that "Mitigation of potential health, safety, and environmental impacts requires more specific and detailed regulatory guidance than is currently available." Similar statements are dispersed throughout the NUREG. To be sure, health, safety, and environmental impacts are a major concern in decommissioning as well as in operating nuclear power plants, however, PSI cannot find anywhere in the document where evidence is given to support the notion that new regulations are needed. An argument for additional regulations should justify the accompanying costs (time, money, and limits on future flexibility) with respect to the impacts of maintaining regulatory status quo. The draft Generic Environmental Impact Statement (GEIS) does not do this.

   The statements in Attachment II, plus the history of previous decommissioning activities* support PSI's position on this matter.

3) The draft GEIS recommends regulations to accommodate better initial planning for decommissioning to consist of three elements: Selection of the decommissioning alternative, facilitation and operational considerations ("such as periodic decontamination of coolant crud buildup," p. 15-5), and good record keeping.

   With respect to choosing the decommissioning alternative (DECON, SAFSTOR, or ENTOMB) prior to commissioning, PSI believes there are too many varying factors at this time to appropriately do this for a period of time approximately 40 years from the time of assessment. The NUREG supports this by listing "technology advances, changing regulatory requirements, economics, political climate," (p.15-5) and the relative benefits/impacts of the three options as variables. PSI also notes that the NUREG favors the DECON option, but additionally states that final plans should also "realistically assess the availability of permanent waste burial grounds," (p. 15-6). Today's lack of a high-level waste repository essentially eliminates the DECON option, and this may be the case for 15 or more years.

---

* The previous decommissioning history, per the NUREG: "Since 1960, five licensed nuclear power reactors, four demonstration reactors and six licensed test reactors have been decommissioned." p. 0-3.

On the other hand, PSI believes that the NUREG adequately addresses the three decommissioning alternatives' costs and impacts so that a conclusion can be safely made that initial planning need not include a selection of the particular alternative.

Regarding facilitation of decommissioning through early design and operational considerations, PSI notes that the NUREG adds that some aspects "of decommissioning facilitation (such as those that have impact on reducing occupational dose during facility operation) can reduce operational costs" (p. vi). It is PSI's position that additional regulatory guidance in this area would not be appropriate. "ALARA" regulations that are meant to regulate occupational exposure already exist. Other activities that might be an outcome of this topic, if genuinely cost-worthy, should be considered as prudent management and do not need regulatory assistance.

Recordkeeping which would facilitate decommissioning by reducing costs and/or radiation exposure should also be considered prudent management, therefore additional regulatory guidance is not needed, at least without an assessment of the inadequacies, if any, of current recordkeeping methodologies.

Though we are not sure of the value of additional NRC-funded studies on decommissioning technology (the near-term candidates will soon be adding to the technology base), new information should continue to be disseminated throughout the industry as it becomes available.

4) New regulations to define required final decommissioning planning are also proposed in the NUREG, to entail: Choice of the decommissioning alternative, detailed schedules, administrative controls (such as aspects of the QA program), specifications, and training. Again, PSI concludes that existing regulations are more than adequate in mandating that decommissioning candidates make such commitments. The reasons for this are essentially the same as in comment Number 3 above, including prudent management (very few reactor operators will voluntarily absorb the continuing costs in maintaining an NRC license for a non-productive facility).

5) The NUREG recommends regulations for the establishment of residual radioactivity levels.

PSI does not offer technical comments at this time on suggested dose rates as discussed in the NUREG. However, we do concur with what we understand the philosophy of the discussion to be (ALARA).

Although residual radioactivity levels may well be worthy for regulatory considerations in the future, PSI does not believe it would be appropriate or necessary for NRC to do so at this time: Of the three possible decommissioning options, residual radioactivity levels will only be useful when removing virtually all radioactive materials from the plant site, including high-level wastes. However, since no high-level waste repositories currently

exist, ultimate decommissioning cannot occur. Regulated residual radioactivity levels will not be useful until high-level waste disposal sites exist. Regulations providing such will not be productive at this time.

6) The draft GEIS references types of mechanisms for financial assurance of decommissioning.

PSI notes that the House of Representatives is considering the topic (HRs 1814 and 2512), as has the Nuclear Safety Oversight Committee (Reference: Letter, NSOC to President Reagan, dated February 12, 1981), DOE, GAO, various industry groups, and of course NRC. In Indiana, the Indiana State Senate considered a bill (#352, which did not pass), that would have provided financial assurance via a means similar to the method described in NUREG-0586 as "external sinking fund."

In the final analysis, PSI believes that the choice of financial assurance will become a subjective matter. The obvious consideration is how much assurance is desired, weighed against the costs of that assurance and its perceived incremental public health and safety impacts (with respect to some lesser assurance).

It is PSI's position that NRC regulations pertaining to financial assurance, in addition to the existing financial assurance regulations, are not apprioriate for consideration at this time. The reasons for this include:

- Considerations involving rate structures are the domain of State public utility commissions. This includes the authority over how utilities may finance decommissioning costs. The NRC should not attempt to invade this authority.

- The costs of additional assurance must be carefully weighed against improved public health and safety. For the most extreme case, probably prepayment, NUREG-0584, Revision 2, "Assuring the Availability of Funds for Decommissioning Nuclear Facilities," estimate a present value cost of about $283M (1979 dollars), using certain assumptions. This $283M present value cost of the prepayment option contrasts to an actual decommissioning cost of less than $30M (today's dollars); the difference between the two represents the cost of the additional assurance. Less extreme financial assurance methods will accordingly have lower associated costs.

- In assessing costs, it should be understood that the additional cost of assurance does not represent an additional product, i.e., it would represent a decline in the industry's overall productivity without significant health and safety

benefits and therefore an increase in inflation (ratepayers would presumably have to pay more for the same amount of electricity without adequate accompanying benefits.

Perhaps the point made in the preceeding item is the most important. The actual cost of the decommissioning effort will be unchanged, regardless of the degree of assurance or who pays for it. At this time, with inflation running at record levels and a new administration's commitment to reduce it, additional regulations of the type contemplated do not provide enough benefit to the public's health and safety to be warranted.

ATTACHMENT II

CONCLUSIONS OF NUREG-0586 THAT PSI AGREES WITH

1) "In any given year the quantity of (radioactive waste) generated by decommissioning will be considerably less than that generated by operating nuclear facilities." p. 0-8

2) "A reactor can be decontaminated with reasonable occupational radiation exposure and with virtually no public radiation exposure." p. 0-9

3) While the Elk River reactor "was quite small compared to present-day power reactors, its decommissioning served to demonstrate a reactor can be decontaminated safely with little occupational or public risk." p. 0-13

4) "Decommissioning of nuclear facilities is not an imminent health and safety problem." pp. 0-39 and 15-2

5) "The major adverse environmental impact of decommissioning is the commitment of small amounts of land for waste burial in exchange for reuse of the facility for other nuclear or non-nuclear purposes." p. 0-39

6) "The primary objective of the NRC with respect to decommissioning is to protect public health and safety." p. 0-40

ATTACHMENT III

PSI SPECIFIC COMMENTS ON NUREG-0586

To avoid redundancy, this attachment does not discuss any comments that do not offer additional information over Attachment I.

1) p. iv, "SCOPE OF THE EIS"

The draft GEIS "does not address the considerations involved in extending the life of a nuclear facility," and indicates this "is outside of the scope of this EIS." However, the NUREG additionally states on p. 0-4 (and again on p. 2-5) that "Conversion to a new or modified use is also considered," and "if the intended new use involved radioactive material and, thus was under NRC licensing authority, an application for the new use would be reviewed as amendments to the existing license under appropriate existing regulations. If the intended new use does not involve radioactive material, i.e., unrestricted public access, and does not come under NRC licensing authority, then such application for a new use would be reviewed as a request for decommissioning and termination of license."

In the realistic case it is expected that extension of the facility use, either for nuclear or non-nuclear means, will occur for many cases. This is particularly true when considering that:

- Ultimate decommissioning cannot occur until commercial high level waste repositories exist.

- Over 50% of this country's nuclear generation station sites are 2, 3, or 4 unit sites. (It is generally agreed that the presence of other operating reactors at a site is one factor favoring the SAFSTOR option.)

PSI also notes that another version of SAFSTOR exists, where a non-nuclear use of the facility might be desirable. Presumably the high-level wastes would be removed (though not necessarily offsite) and decontamination would have taken place. An obvious example might be the use of the containment building as a "cold" high bay, or as a maintenance shop area. Stabilization of potential contamination may be needed, along with dosimetry, air sampling equipment, etc., along with an appropriate NRC license since radiation levels may not be low enough for unrestricted use. Of course, this would not be a "public access" facility.

DOE has several examples of this option at various research and development laboratories. PSI believes that the final GEIS should be edited to reflect this as a SAFSTOR option. If regulations are

promulgated dealing with decommissioning options this case should be included as it is quite likely.

2) p. v, "REGULATORY OBJECTIVE"

This section states, "Present regulatory requirements and guidance are not specific enough in many critical areas to ensure that potential problems are properly considered." As we indicate in our general comments we disagree. No new NRC regulations dealing with decommissioning are needed at this time.

The section also states that "it is clear that decommissioning can be accomplished safely and at modest cost shortly after cessation of facility operation and it is considered reasonable that decommissioning should be completed at this time." If decommissioning here does not refer to a particular decommissioning alternative, the statement is true. However if ultimate decommissioning (i.e., removal of virtually all radioactive material from the site is implied, then other factors as referenced elsewhere in the NUREG may suggest the SAFSTOR or ENTOMB alternative). Again the high-level waste repository situation may completely remove some options.

The section states, "Delay in the completion of decommissioning would be primarily for reasons of health and safety considerations, since it is recognized that with delay there may be reduction in occupational dose and radioactive waste volume for some facility types due to radioactive decay." Again, if ultimate decommissioning is implied here, PSI points out that the differences in public health and safety impacts from one decommissioning alternative to another, as presented in the NUREG, are not that great. At some point costs of decommissioning (including alternate uses of the facility if it is not fully decommissioned) should be considered. Again, the Federal government apparently subscribes to this practice, as DOE facilities have been converted to other uses without full decommissioning.

3) p. vii, "PRELIMINARY CONCLUSIONS ON DECOMMISSIONING IMPACTS"

This section states that, "making the facility available for unrestricted use.....also releases valuable industrial land that can be reused with great benefit." This is an assumption that may not be correct, depending upon regional considerations. PSI additionally notes that utilities should continue to be able to "reuse" the land without necessarily making it "available for unrestricted use." Also there is no requirement that the land be turned over to the public, at any time after cessation of reactor operation.

4) p. vii, "INCORPORATION OF EIS CONCLUSIONS IN REGULATIONS"

The NUREG states, "It is recommended that specific implementation of regulatory activities be performed by rulemaking to existing regulations (i.e., 10 CFR Parts 30, 40, 50, 51, 70 and 72) rather than a separate regulation solely governing decommissioning." If decommissioning regulatory activities do occur, PSI believes a separate regulation would be more effective and better understood.

5) p. 0-2, Section 0.1.1.1, "NEPA REQUIREMENTS"

This section states, "The National Environmental Policy Act (42 U.S.C. 4321 et seq.) requires that all agencies of the Federal Government include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on various particulars describing analysis of environmental impacts for the proposed activity." This has not been adequately done. The discussion of the environmental impacts of the recommended regulations should include discussion of the impacts which would occur if the new regulations are not provided.

6) p. 0-7, Section 0.2.5.3, "IMPLEMENTATION OF OBJECTIVES"

The NUREG states that, "decontamination costs of a facility are essentially independent of the level to which it must be decontaminated as long as that level is in the range of 1 to 25 mrem/year to an exposed individual." Although this may generally be true if "decommissioning" is intended here, rather than "decontamination"* it is not necessarily the case. However if "decontamination" is actually intended here, PSI disagrees. The historical experience is that as one decontaminates to lower and lower levels, the costs per increment go higher and higher.

7) p. 0-10, Section 0.4.3.1, "DECON"

This section compares the cost and schedule of the DECON option for a PWR to the cost and schedule for building same. The comparison is inappropriate. A valid comparison is the costs/schedules/public and worker health and safety for DECON versus SAFSTOR versus ENTOMB.

---

* In decommissioning, the larger portion of the costs will probably relate to the removal and disposal of highly radioactive equipment, therefore the activities intended to further reduce radiation levels may seem small compared to the overall cost.

8) p. 2-8, Section 2.4.3, "SAFSTOR"

The second paragraph on this page states, with regard to SAFSTOR: "It is not intended that the facilities will ever be reactivated." As was discussed in comment 2) of this attachment, an additional SAFSTOR option where the facilities may be given a somewhat different use (though some equipment might retain the same functions) should be included.

9) p. 2-12, Section 2.5.3, "IMPLEMENTATION OF OBJECTIVES"

The NUREG states that, "for the PWR case.....a residual radioactivity level corresponding to 5 mrem/year or less would be justifiable on the basis of survey costs." This is based on the estimated costs of $250,000 and $225,000, respectively, for 5 mrem/year and 25 mrem/year survey efforts. The decontamination cost differences in going from 25 to 5 mrem/year dose rates should also be considered in establishing acceptable residual radioactivity levels. This, in part, is why PSI supports the ALARA concept in determining unrestricted release levels.