

AA61-2 PDR

Guy H. Cunningham

DEBEVOISE & LIBERMAN

February 9, 1983

Guy,

Duke Power Company thought
this may be of interest to you.
There will be more coming this
week.

Mike

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PDR PR
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DUKE POWER COMPANY

POWER BUILDING, BOX 33189, CHARLOTTE, N. C. 28242

A. C. THIES
EXECUTIVE VICE PRESIDENT
POWER OPERATIONS

(704) 373-4249

February 8, 1983

The Honorable Nunzio J. Palladino
Chairman
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Re: NRC Rulemaking Regarding No Significant
Hazards Consideration

Dear Mr. Chairman:

Recently the NRC Staff presented to the Commission for its consideration a package of proposed rules to implement various provisions contained in the recently enacted Pub. L. 97-415, the NRC authorization bill (SECY-83-16). Included in this package are two proposed amendments to the Commission's regulations which are intended to implement the so-called "Sholly Amendment." The first of these proposed amendments would establish criteria for determining whether a proposed license amendment constitutes a "significant hazards consideration." The NRC Staff has recommended that this rule be made effective immediately on an interim basis, without opportunity for comment thereon. The second proposed amendment would, among other things, establish procedures for providing (or in appropriate circumstances dispensing with) opportunity for prior public notice and comment on any such determination. As you know, the significance of any determination on whether an amendment involves a "significant hazards consideration" is whether, if requested and found justifiable, a hearing on the license amendment must be held before it issues.

It is our concern with aspects of the first of the two rules which prompts this letter. More specifically, the NRC Staff has proposed to the Commission a rule which provides that if, after analysis of a proposed amendment to an operating license, the Staff determines that such amendment would (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create a possibility of a new or different kind of accident than previously evaluated; or (3) involve a significant

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reduction in a margin of safety, then, and only then, will the amendment constitute a "significant hazards consideration." See, SECY-83-16, Enclosure 3, pp. 15, 27. The NRC Staff has provided nine examples of amendments which, while not all-inclusive, constitute amendments that, based upon Staff precedent and familiarity, are likely to "involve a significant hazards consideration." One such example is "reracking of a spent fuel storage pool." (Id., pp. 14-15, 21). Notwithstanding the foregoing, the SECY paper is unclear on its face as to whether the Staff believes spent fuel pool rerackings meet one or more of the three criteria listed above, or whether the Staff feels compelled to include such because of certain language in a report accompanying a Senate bill which was a predecessor to the authorization legislation actually passed. (Id. at p. 17).

It is our view that to include spent fuel pool rerackings in that class of license amendments which automatically constitutes "significant hazards considerations" is not warranted from either standpoint. Simply put, we believe that there is neither a legal nor a technical justification for determining automatically that spent fuel pool rerackings constitute significant hazards considerations.^{1/} We base this conclusion on the following: First, to the best of our knowledge, the NRC has never made a finding that a spent fuel pool reracking constitutes a "significant hazards consideration." Though as we will discuss below, spent fuel pool rerackings have been consistently pre-noticed by the NRC, such pre-notice has been for reasons other than the fact that they have been found to be "significant hazards considerations." Therefore, the mere fact that such pre-notice has taken place cannot serve as "precedent" for including reracking in this list of examples. Indeed, as nearly as we can tell, the NRC has never even been presented

^{1/} We would note in passing, moreover, that so to include spent fuel pool rerackings in this rule, proposed to be effective immediately, is to foreclose any opportunity for public comment on the matter, as the predecessor proposed rulemaking on this particular question made no mention of spent fuel pool reracking. Thus, from this standpoint alone, the matter should be reconsidered.

with the question whether such a reracking does or does not constitute a significant hazards consideration. Thus, to the extent that the legislative history cited by the NRC Staff as support for its decision to include spent fuel pool rerackings in its list relies on past Commission practice to support its view that a reracking constitutes a significant hazards consideration, it appears such reliance is in error. Second, in the past eight years, the NRC Staff has reviewed in detail, and the NRC has approved, more than eighty (80) applications for reracking spent fuel pools. In light of this, it is suggested that all conceivable aspects of such an action are well known, and it is difficult to conclude that a determination that such a reracking constitutes a "significant hazards consideration" has any technical basis. Third, it is our opinion that the legislative history quoted (which is from a Senate Report accompanying a predecessor Senate bill, not from the Conference Report accompanying the legislation as finally passed) does not require inclusion of spent fuel pool reracking in this list. Fourth, such inclusion hardly comports with the announced goals of this Administration, as well as this Commission, to streamline the regulatory process; remove unnecessary regulatory obstacles; put some certainty into the regulatory process; and concentrate NRC and licensee resources on those safety/environmental matters which clearly warrant NRC scrutiny.

We wish to address these points seriatim.

(1) During the past eight years, the NRC has approved more than eighty (80) applications for reracking commercial power reactor spent fuel pools. To the best of our knowledge in no instance has the NRC made a judgment on any specific docket as to whether such rerackings involve a significant hazards consideration. In fact, so far as we are aware, in no such docket has the question even been presented. In short, while it is true that applications for spent fuel pool rerackings have consistently been pre-noticed, this action is in no way connected with whether such application constituted a significant hazards consideration. To explain, the first reracking applications (filed around 1974) involved unreviewed technology. Thus, these applications were rightfully pre-noticed (i.e., notice was published in the Federal Register before issuance of the amendment). The question whether these applications presented a significant hazards consideration never arose.

Thereafter, on September 10, 1975, the Commission issued a policy statement regarding spent fuel storage. See 40 Fed. Reg. 42801 (1975). Therein, the Commission noted that the matter of spent fuel storage can more effectively "be examined in a broader context" and, thus, determined that a generic environmental impact statement on the handling and storage of spent fuel should be prepared. In the interim, the Commission stated that case-by-case treatment of all applications for expansion of storage capacity by, inter alia, reracking was to be accorded, with focus placed upon five enunciated factors. Id. at 42802. As to the issue of pre-notice, the policy statement was silent. However, it appears that an internal decision was made by the Staff that pre-notice was required so as to afford the public an opportunity to comment on the five factors. Accordingly, the pre-notice procedure, initially utilized because of the developing state of the technology, was kept in place so as to comport with what was thought to be required by the Commission's policy statement. Again, the question whether these applications presented significant hazards considerations did not arise.

In August of 1979, the final generic environmental impact statement was published (FGEIS) and the Commission withdrew its 1975 policy statement. See 46 Fed. Reg. 14506 (1981). Since that time the Commission has continued the practice of pre-noticing spent fuel reracking applications. Thus, it appears that what was once justified on the basis of new technology has been carried on to the present due to inertia, not technical considerations. Again, the question whether such applications constitute significant hazards considerations has not arisen.

(2) In each of the more than eighty instances in which the Commission has approved a spent fuel pool reracking, it has been found that the action would have no significant effect on public health and safety, and no environmental impact statement was necessary (i.e., the action would not have a significant effect on the quality of the human environment). See Attachment 1, setting forth the typical findings routinely made by the NRC Staff with regard to spent fuel pool rerackings, which, as can be seen, fail to meet any of the three criteria proposed by the NRC Staff for significant hazards consideration. Thus, we submit that from a technical perspective reracking spent fuel pools and subsequent storage of spent fuel in such pools is not "likely to involve significant hazards considerations."

(3) We believe that simple perpetuation of a past practice with no technical support does not provide an adequate basis to categorize automatically spent fuel reracking as an example of a license amendment likely to involve a significant hazards consideration. In this regard, it is our understanding that it was on this basis (e.g., spent fuel pool applications have been consistently pre-noticed) and not due to any technically supportable position, that the Senate Committee on Environmental and Public Works commented in its report that it "anticipates, for example, that consistent with prior practice, the Commission's standards would not permit a 'no significant hazards consideration' determination for licensing amendments to permit reracking of spent fuel pools." (Emphasis added). S.1207 at p. 15. In any event, in that this issue is not raised either in the governing statute or the Conference Report giving rise to the statute (neither of which is ambiguous in this area), the Commission is not bound by such statements here. See, e.g., American Trucking Associations, Inc. v. ICC, 659 F.2d 452-459 (5th Cir. 1981); Aviation Consumer Action Project v. Washburn, 535 F.2d 101 (D.C. Cir. 1976).

(4) We would ask that you consider the effects on resources, both of the Commission's Staff and licensees, of inclusion of spent fuel pool reracking applications as matters which automatically constitute significant hazards considerations. It is our impression that such applications have, more often than not, been the subject of contested proceedings. While a finding that an application to rerack a spent fuel pool will not preclude its becoming the subject of a contested proceeding, such will allow issuance of the amendment prior to any hearing. This would allow both the NRC Staff and the licensee to allocate their resources in a more reasonable manner, absent time constraints surrounding completion of the hearing prior to receipt of the amendment.

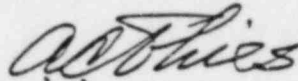
In conclusion, from the foregoing we maintain that there is no technical justification for the Staff's position that spent fuel pool reracking is an example of a license amendment likely to involve a significant hazards consideration. If the Staff's position prevails, this will impose a needless and unjustified burden on licensees attempting to expand spent fuel storage capacity through the use of safe, proven reracking technology. Thus, we strongly recommend that you delete this example from the rule. To be clear, we do not

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ask the Commission to determine generically that spent fuel pool rerackings do not constitute significant hazards considerations. Rather, we ask that the Commission not, through adoption of the rule as proposed, foreclose licensees from demonstrating that a spent fuel pool reracking does not constitute a significant hazards consideration.

We appreciate the opportunity to present our views to you on this important question and are prepared to discuss this matter further if you should need additional information.

Very truly yours,



A. C. Thies

AVCJr/fhb
Attachment

cc: Commissioner Gilinsky
Commissioner Ahearne
Commissioner Roberts
Commissioner Asselstine

bcc: G.H. Cunningham
W.J. Dircks
M.G. Malsch
J. Scinto
V. Stello

NRC STAFF FINDINGS REGARDING SPENT
FUEL POOL RERACKING APPLICATIONS

Over 80 spent fuel pool reracking applications have been made with the NRC. In each instance wherein the application was pursued approval was obtained. The approval was supported by NRC Staff safety and environmental reviews. In each instance the Staff made specific findings with respect to safety and environmental considerations. However, despite the specificity of the findings, an examination of a representative number of the Staff reviews (approximately twenty) reflects that the same basic elements necessary to approval appear in each reracking application review.

With regard to safety concerns, the findings appearing in the SERs examined are:

- (1) the increase in occupational radiation exposure to individuals due to the storage of additional fuel in the spent fuel pool will be negligible;
- (2) the installation and use of the new fuel racks does not alter the potential consequences of the design basis accident for the spent fuel pool;
- (3) the likelihood of an accident involving heavy loads in the vicinity of the spent fuel pool is sufficiently small that no additional restrictions on load movement are necessary;
- (4) the physical design of the new storage racks will preclude criticality for any credible moderating condition;
- (5) the spent fuel pool has adequate cooling with existing systems;
- (6) the structural design and the materials of construction are adequate to assure safe storage of fuel in the pool environment for the duration of plant lifetime;
- (7) the structure design and the materials of construction are adequate to withstand the seismic loading of the design earthquakes;
- (8) the conclusions of the evaluation of the waste treatment systems are unchanged by the modifications of the spent fuel pool; and

- (9) the calculated effective neutron multiplication factor (Keff) of the fuel stored in the new storage racks is less than or equal to 0.95.

These safety findings are consistent with the position taken by the NRC in its FGEIS. Therein, it states that "the actions [i.e., rerackings] can be taken without significant effect on public health and safety" FGEIS, supra, at ES-5.

With respect to environmental concerns, in each instance the NRC Staff has concluded that an environmental impact statement was not warranted in that the environmental impacts were negligible. Rather, the NRC Staff prepared an environmental impact appraisal and negative declaration. The specific findings referenced in the appraisals examined are:

- (1) nonradiological impacts are within the scope of impacts previously evaluated in the FES at the operating license stage;
- (2) potential offsite radiological impacts associated with expansion are insignificant;
- (3) proposed modification will not have any significant nor measurable impact on exposures offsite;
- (4) the solid radioactive wastes associated with the additional stored fuel will not present a significant environmental impact;
- (5) there should not be a significant increase in the liquid release of radionuclides from the station as a result of the proposed modification;
- (6) the reracking operation is expected to result in a small fraction of the total man-rem burden from occupational exposure;
- (7) a spent fuel modification at any other pool should not significantly contribute to the environmental impact of the subject station and that the subject modification should not contribute significantly to the environmental impact of any other facility;
- (8) the installation and use of new racks (high-density or poison) will not change the radiological consequences of a postulated fuel

handling accident or spent fuel cask drop accident in the spent fuel pool area from those values reported in the FES supporting the issuance of an operating license.

The environmental conclusions are consistent with those set forth in the FGEIS. The FGEIS found that the environmental impact of interim storage of spent fuel was negligible and that the cost of the various alternatives reflect the advantage of continued generation of nuclear power with the accompanying spent fuel storage. Id. at ES-5. Specifically the FGEIS finds:

The storage of LWR spent fuels in water pools has an insignificant impact on the environment, whether at AR or at AFR sites. Primarily this is because the physical form of the material, sintered ceramic oxide fuel pellets hermetically sealed in Zircaloy cladding tubes. Zircaloy is a zirconium-tin alloy which was developed for nuclear power applications because of its high resistance to water corrosion in addition to its favorable nuclear properties. Even in cases where defective tubes expose the fuel material to the water environment, there is little attack on the ceramic fuel.

The technology of water pool storage is well developed; radioactivity levels are routinely maintained at about 5×10^{-4} Ci/ml. Maintenance of this purity requires treatment (filtration and ion exchange) of the pool water. Radioactive waste that is generated is readily confined and represents little potential hazard to the health and safety of the public.

There may be small quantities of ^{85}Kr released to the environment from defective fuel elements. However, for the fuel involved (fuel at least one year after discharge), experience has shown this to be not detectable beyond the immediate environs of a storage pool.

There will be no significant discharge of radioactive liquid effluents from a spent fuel storage operation as wastes will be in solid form. Id. at ES-12.