UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Administrative Judges:

Alan S. Rosenthal, Chairman
Dr. W. Reed Johnson
Stephen F. Eilperin

In the Matter of	)	
FLORIDA POWER & LIGHT COMPANY	)	Docket Nos. 50-250 SP 50-251 SP
(Turkey Point Nuclear Generating, Units Nos. 3 and 4)	)	

Mr. Harold Reis, Washington, D. C (with whom Mr. Norman A. Coll, Miami, Florida was on the brief) for Florida Power and Light Company, licensee.

Mr. Joel Lumer, Miami, Florida (Neil Chonin, Miami Florida, on the brief) for Mark P. Oncavage, intervenor.

Mr. Steven C. Goldberg for the Nuclear Regulatory Commission staff.

DECISION

November 30, 1981

(ALAB-660)

We have before us for decision the consolidated appeals of intervenor Mark P. Oncavage from two Licensing Board orders which (1) granted the NRC staff's motion for summary disposition of Mr. Oncavage's contentions opposing Florida Power and Light Company's proposal to repair the steam generators at Turkey Point Nuclear Units 3 and 4; and (2) authorized the

D502
1/1

issuance of license amendments to effect the repairs after finding, on a question over which the Board had retained jurisdiction, that the impact of a hurricane or tornado on low level waste to be stored at Turkey Point during the repairs would not endanger the health and safety of the public. LBP-81-14, 13 NRC 677; LPB-81-16, 13 NRC 1115 (1981). The appeals require us to consider in the context of the grant of summary disposition, the scope of the Commission's duties under the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321, the specificity with which contentions must be stated to raise an issue for adjudication, and the Board's discretion to control the course of discovery in its proceedings. For the reasons discussed below we affirm the Licensing Board.

I.

A. Background

In order to understand the nature of the problem that gave rise to the issues in this case it is useful to describe briefly the functions of a steam generator in a nuclear power plant. All pressurized water nuclear power plants including the two units designed by Westinghouse Electric Corporation for Turkey Point, have two systems of piping to effect the transfer of energy from the reactor core

to the turbines which produce electricity. The primary system pumps circulate primary coolant water around the hot fuel rods within the reactor core where the nuclear reaction takes place. The super-heated water then passes through large pipes to the steam generators. In each steam generator -- heat exchangers approximately 70 feet high and fourteen feet in diameter -- the primary coolant water passes from large pipes into about 3000 smaller tubes which are partially immersed in a separate system of water, the secondary coolant. Heat is transferred through the tube walls from the primary coolant to the secondary coolant which boils and, in the form of steam, passes through turbines to generate electricity. In order to prevent leaks of primary coolant and radiation from the primary system to the secondary coolant, it is necessary to assure the integrity of the entire piping system, including each of the thousands of small tubes inside each steam generator.

Since Turkey Point Units 3 and 4 began commercial operation on December 14, 1972 and September 9, 1973, the tubes of all six steam generators at those units have undergone a significant amount of degradation, including tube wall thinning and denting, stress corrosion cracking, and several instances of primary coolant leakage through cracked

tubes.[1] The steam generator tube degradation problem has been seen in several Westinghouse designed pressurized water nuclear power reactors.[2] When the leakage from the primary to the secondary system exceeds a specified limit, or when inspections reveal tubes degraded beyond a prescribed amount, FPL is required by the terms of its license to shut down the plant and remove the troublesome tubes from service by means of plugging the tubes. In the process, workers are exposed to some radiation. In recent years, workers at Units 3 and 4 have received doses of 335 to 600 person-rem during inspection and plugging of degraded steam generator tubes. About 20% of the steam generator tubes in Unit 3 and about 24% of the tubes in Unit 4 have been removed from

---

1/ We have discussed steam generator degradation and its safety significance most notably in Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-427, 6 NRC 212 (1977), and ALAB-343, 4 NRC 169 (1976). The safety implications have also been noted in NRC Regulatory Guide 1.83 Revision 1, "Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes" (July 1975), at 1, which states:

> Failure of steam generator tubes, which can be caused by cracking, wastage, and fretting, will release radioactive materials to the secondary coolant system. Furthermore, serious weakening of these tubes from similar causes could, in the event of a loss-of-coolant accident (LOCA), result in tube failures that would release the energy of the secondary system into the containment. (footnote omitted)

2/ "Summary of Operating Experience with Recirculating Steam Generators," NUREG-0523 (January 1979).

service.[3/] If a still larger number of tubes were to be plugged, the reactor would be required to operate at reduced power.

In anticipation of the continuing nature of these problems, on September 20, 1977, FPL proposed to repair the six steam generators in Units 3 and 4 by replacing the lower assembly, including the tube bundles, of each generator.[4/] The units would be repaired in series: Unit 4 which had the larger number of plugged tubes would be repaired first over an approximate 9 month period, while Unit 3 conducted normal operations. In outline, the repair project would entail preparatory work of putting the reactor in condition for long-term layup, removing the fuel, and installing guide rails for transporting the steam generator lower assembly through the containment equipment hatch. Then the cutting of system piping would begin, including cutting and removal of sections of steam lines, feedwater lines, and miscellaneous smaller lines. The steam generator would be cut at the transition cone, the upper shell removed and refurbished inside containment. A second cut would free the steam generator

---

3/ The statistics on worker exposure cover the years 1975-1979; that on the percentage of plugged tubes is as of November, 1980. See "Final Environmental Statement Related to Steam Generator Repair at Turkey Point Plant Units 3 and 4," NUREG-0743 (March 1981) ["FES"] at 2-1 , 4-5.

4/ See FES, supra fn. 3, at 3-1 to 3-4. While the final repair proposal differs in several respects from FPL's initial proposal, the differences are immaterial for purposes of this overview.

lower assembly, including the tube bundles, from the channel head and attached primary system piping. The lower assembly would then be welded shut, lowered onto a transport mechanism, removed from the containment through the equipment hatch, and placed in the onsite steam generator storage facility. The same machinery used to remove the lower assemblies would be used to install each new assembly. The new lower assembly would be rewelded to the old channel head bottom, the piping reconstructed, and the system tested before startup.

On December 13, 1977, the NRC published in the Federal Register a notice of opportunity for hearing on the steam generator repair license amendment. 42 Fed. Reg. 62569. No timely intervention petition was filed.

B. The Proceedings Below

Mr. Oncavage's petition to intervene was filed on February 9, 1979. It was granted by a divided Licensing Board on August 3, 1979, based on an examination of the factors specified in 10 C.F.R. 2.714(a) for considering late intervention petitions. LBP-79-21, 10 NRC 183. Six of Mr. Oncavage's proffered 19 contentions were admitted at that time, among them his claim that NEPA and the Commission's implementing regulations obliged the Commission to prepare an environmental impact statement prior to authorizing the repairs. The Licensing Board reserved ruling on the remaining contentions and urged the parties to reach agreement on them. Id. at 198-99.

On September 25, 1979, following a variety of filings, the Licensing Board entered an order ruling on the disputed contentions. It admitted ten, most of which were later withdrawn. Only two of the contentions are of any pertinence to an understanding of these appeals. As just noted, the Licensing Board admitted as a contention Mr. Oncavage's claim that the proposed steam generator repair was a major federal action significantly affecting the environment, requiring preparation of an environmental impact statement.[5/] Second, the Board admitted the contention that a hurricane would likely result in radioactive releases to unrestricted areas from one or more stored steam generator lower assemblies in violation of 10 CFR Part 20, and 10 CFR Part 50 ALARA principles. This latter contention came to be denominated contention 4A.

The claimed need for an environmental impact statement became moot when on March 6, 1980, the NRC staff informed the Licensing Board that an environmental impact statement would be prepared. The staff acted in response to a Commission memorandum and order directing the issuance of such a statement in connection with proposed steam generator repairs to be undertaken by the Virginia Electric and Power Company at its Surry

---

5/ At that time it had been the NRC staff's position that the environmental impact appraisal it issued June 29, 1979, satisfied its NEPA obligations.

nuclear power plant, repairs upon which the Turkey Point proposal had been modeled. See Virginia Electric and Power Co. (Surry Nuclear Power Station, Units 1 and 2) CLI-80-4, 11 NRC 405 (1980).[6/]

The draft environmental impact statement ("DES") for the Turkey Point repairs issued in December, 1980.[7/] Mr. Oncavage filed extensive comments arguing, among other things that the DES failed to address how low level waste generated by the repair would be protected from hurricanes for extended

---

6/ At the time the Commission acted, repairs at Surry Unit 2 were essentially complete, while those at Unit 1 had not yet been started. The Commission's review in Surry focused on the occupational radiation exposure that the repair program would entail -- 2070 man rem for the repair at each unit -- because the Commission believed that adverse environmental impact to be "the only one associated with the repair program that might be consisdered significant." 11 NRC at 406. Given the controversy in the scientific community as to the effects of exposures of that magnitude, the Commission found itself unable to determine whether the impact was significant, and decided that the preferable course of action was to prepare an environmental impact statement on the repair. Id. at 407.

7/ The parties then negotiated a schedule for completion of the proceedings and submitted it to the Licensing Board on January 28, 1981. The negotiated schedule called for comments on the DES to be submitted by March 2, 1981, final discovery requests and motions for summary disposition by April 15, responses to them by April 30 and May 11 respectively, prepared testimony filed by May 15, and the hearing to begin on June 1. The Licensing Board accepted the negotiated schedule on February 23, 1981.

periods of time.[8] He also claimed that, erroneously, the DES had not examined the preferred alternative of operating Turkey Point on a derated basis, in tandem with a conservation program financed by the monies not employed in making the steam generator repairs.[9]

On March 24, while the FES was still in preparation, the Licensing Board held a prehearing conference to settle the contentions to be heard at the evidentiary hearing then scheduled to begin June 1. Because the FES was soon to be issued, the Licensing Board ruled that Mr. Oncavage's original contention which had argued the need for an FES could be rephrased to plead with specificity the respects in which the forthcoming FES was claimed to be deficient. The Board set April 20 as the due date for that filing. Memorandum and Order of April 2, 1981 at 4; see also Prehearing Conf. Tr. 43 (March 24, 1981). The Board also decided, at Mr.

8/ See Comments to Draft Environmental Statement, Turkey Point Steam Generator Repairs by Mark P. Oncavage, Intervenor (February 26, 1981), ["Oncavage Comments"] at 15-18, 29-32. Mr. Oncavage noted that each units's repair would generate between 38,830 and 81,190 cubic feet of low level waste. Given the volume restriction which Barnwell, South Carolina had imposed as to Turkey Point generated waste, Mr. Oncavage estimated that Turkey Point would have to store some 100,400 to 185,000 cubic feet of low level radioactive waste.

9/ With regard to energy conservation, Mr. Oncavage claimed that the economic advantage of conservation over the repair program was clear cut, and would entail fewer health and environmental hazards. Id. at 32-33, 35-37.

Oncavage's request and over the objections of the NRC staff and the licensee, to amend the previously admitted contention regarding the impact of hurricanes on the stored steam generators, to encompass more broadly the claim that radioactive releases above 10 CFR Part 20 and Part 50 ALARA limits would occur "as a result of a hurricane or a tornado striking the site during the steam generator repairs." Memorandum and Order of April 2, 1981 at 5; Prehearing Conf. Tr. 56-57, 60, 77, 99-100. The Board considered the expanded contention (which it denominated 4B) to be within its intent to hear evidence on the impact of a hurricane or tornado during the extended repair process, and Mr. Oncavage had argued that the impact of a hurricane while the repair was in progress was an issue he should be free to raise in any event in connection with his contention regarding the forthcoming FES. Prehearing Conf. Tr. 56-57, 73-76.[10/]

10/ The day before the prehearing conference, the staff filed a motion for summary disposition of the unexpanded contention supported by affidavits of Richard B. Codell, Marshall Grotenhuis and Bernard Turovlin. The Codell and Grotenhuis affidavits showed the maximum flood which could reasonably occur at Turkey Point would result in wind driven waves less than 1 foot up the storage building where the steam generator lower assemblies (SGLA) would be stored, that the SGLA's would not float, and that there was no credible mechanism for the leakage of radioactivity to the environment from a liquid pathway. Even if released from the steam generator, liquid radioactive contamination would be inhibited from being released to the environment by the integrity of the storage building including a 6 inch thick reinforced concrete floor. Any radioactive
(FOOTNOTE CONTINUED ON NEXT PAGE)

The FES issued on March 30, 1981. It examined the environmental impacts of the proposed repair and a series of alternatives, among them the no action alternative, shutdown and replacement of the units with a generating plant of different design, decontamination of the steam generators before cutting, retubing the existing steam generators, installing tube sleeves in the existing steam generator, and complete replacement of the steam generators. FES, supra fn. 3, at 5-1 to 5-4. The FES also considered a series of alternatives with regard to disposition of the replaced steam generators. Id. at 5-4 to 5-7. It concluded that the proposed repair would not significantly affect the quality of the environment, that there were no preferable alternatives to the proposed action, and that any impact from the repair would be outweighed by its benefits. Id. at 6-1.

In responding to Mr. Oncavage's comments on the DES, the FES noted FPL's estimate that the repair effort would generate

---

10/ (FOOTNOTE CONTINUED FROM PREVIOUS PAGE)
leakage would be discovered well before radioactive groundwater could escape to the environment. The Turovlin affidavit concluded that the possibility of through wall corrosion of the steam generator lower assemblies was insignificant over the 30 year period during which they might be stored.

On April 17 FPL filed an answer supporting the staff motion for summary disposition with affidavits of Frederick G. Flugger and H. H. Jabali. Those affidavits gave further support to the staff's conclusion that there is no credible liquid pathway to the environment from the stored SGLA's. Intervenor did not file a response, and on May 7 the Licensing Board granted the unopposed motion for summary disposition.

about 1100 cubic meters of solid waste per unit containing about 130 to 270 curies of radioactivity; that normal operation of Turkey Point generated an annual average of about 575 cubic meters of solid waste per unit containing about 170 curies; and that the impact from the solid wastes should therefore be about the same as that from normal operations and not environmentally significant. Id. at 4-11. The FES did acknowledge, however, given the scarcity of available acreage, that off-site disposal was a general problem. Id. at 8-17 to 8-18. With regard to Mr. Oncavage's comments about energy conservation, the FES noted the impacts of plant operation and alternatives to it (including alternative energy sources) had been fully evaluated in the operating license FES issued in 1972. At this stage the environmental review was said to be properly confined to a consideration of the extent to which the proposed action will lead to significant environmental impacts beyond those previously assessed. Id. at 8-13. See also id. at 8-19. The FES also noted that the option of not operating Turkey Point Units 3 and 4 was not feasible in light of the power demand in the FPL service area. While the units could be run in a derated mode, the economic cost of replacement power -- put at $840 million for the first ten years -- and the continuing person-rem cost of occupational

exposure during the inspection and plugging of derated tubes led the NRC staff to reject that alternative. Id. at 5-1.

On April 20, Mr. Oncavage submitted his amendment to contention 1. The proffered contention sparsely enumerated 17 respects in which the FES was claimed to be deficient.[11/]

11/ The amended contention read as follows:

1. The EIS failed to follow section 1501.7 of the NEPA regulations in that the Staff failed to invite interested persons to participate in scoping process in which the scope of the EIS was to be decided.

2. No record of decision was prepared for the Turkey Point Project in violation of 40 CFR 1505.2.

3. The EIS is not a programatic EIS and a programatic EIS is required as a result of the steam generator repairs that would be required nationally.

4. The final EIS fails to comply with NEPA in that the EIS does not address (to the fullest extent possible) all environmental effects of proposed actions as well as all irreversible and irretrievable resources.

5. The EIS fails to look at the socio-economic effects upon Florida Power and Light rate payers. Such effects must be examined fully within the EIS because the project entails direct significant environmental effects which are intertwined with the socio-economic effects.

6. The EIS contains no glossary or table of definitions and consistently uses terminology beyond the ken of lay people.

7. The estimates of worker exposure provided for in the final are unreasonably low.

8. The analysis of deaths and health effects likely to result from the action is invalid because it is based on outmoded scientific information.
(FOOTNOTE CONTINUED ON NEXT PAGE)

Both the NRC staff and the licensee objected to it. The staff, supported by FPL, moved for summary disposition of the amended contention and of contention 4B which questioned the radiological effects of a hurricane or tornado striking the site during the proposed repairs. It was their position that

---

11/ (FOOTNOTE CONTINUED FROM PREVIOUS PAGE)
9. The economic analysis in the EIS is invalid in that it fails to consider the possibility that replacement or repair of the steam generators may be necessary a second time.

10. The entire EIS fails to comply with a good faith consideration as is required under NEPA.

11. The analysis of alternatives is inadequate under NEPA.

12. The final EIS as a whole fails to adequately address the impact of the steam generator repair on the human environment because it tends to explore the positive effects that the repair will have while down-playing the negative impact.

13. The EIS fails to adequately discuss the alternatives to the proposed action.

14. The EIS fails to adequately discuss the relationship between local short term use of man's environment and maintenance and enhancement of the long term productivity.

15. The EIS fails to discuss the irreversible and irretrievable commitment of resources involved in the proposed action.

16. The final EIS fails to adequately discuss the environmental impact of a hurricane if one occurs during the repair process.

17. The final EIS fails to consider the long term effects of a nuclear waste building next to biscayne bay.

the amended contention failed to fulfill the Licensing Board's requirement to plead with specificity the respects in which the FES does not comply with NEPA, that there were no material facts in issue, and summary disposition was proper as a matter of law.[12/]

The staff's motion for summary disposition of contention 4B was supported by an affidavit of Robert F. Abbey, a staff meteorologist. His affidavit explained that, depending upon support width, it would take a wind speed between 340 and 635 miles per hour to dislodge and overturn a steam generator lower assembly following its removal from containment and prior to its destined onsite storage. The probability of such an occurrence was put at one in ten billion per year. Even if the SGLA should be moved, it was considered unlikely to strike some other object with an impact as great as the 12 foot drop analyzed in the FES and found to be comparable to 10 CFR Part 20 limits governing normal reactor operation. The accident risk due to a hurricane or tornado-generated missile during the repair was considered to be similarly small. FPL

12/ See NRC Staff Objections to Proposed Amended Contention 1 and Third Motion for Summary Disposition (filed April 27, 1981); Licensee's Response in Support of NRC Motion for Summary Disposition of Amended Contention 1 and Objections to the Amended Contention (filed April 30, 1981); Licensee's Response in Support of NRC Staff Motion for Summary Disposition of Contention 4B (filed May 5, 1981).

filed an affidavit consistent with the staff position.[13/]

Mr. Oncavage's response to the objections to amended contention 1 argued, in essence, that it had been pled with sufficient specificity, and that he would provide more detail regarding the FES defects in failing to consider the energy conservation and solar energy alternatives to the proposed repairs when he responded to the motions for summary disposition, and in pre-filed testimony.[14/] In later opposing the motions for summary disposition, Mr. Oncavage submitted 4 affidavits. The affidavits of Drs. Roger A. Messenger and and John H. Parker examined the conservation strategies that could be used with money saved from not undertaking the steam generator repairs and derating Units 3 and 4.[15/]

13/ Affidavit of Frederick G. Flugger, Habib H. Jabali, and Ping K. Wan on Contention 4B attached to Licensee's Reponse in Support of NRC Staff Motion for Summary Disposition of Contention 4B (filed May 5, 1981).

14/ Response to NRC Staff Objections to Proposed Amended Contention 1 and Licensee's Motion to Dismiss Contention 1 (filed May 12, 1981).

15/ Dr. Messenger saw several opportunities for a 50-70% reduction in per capita consumption of energy over a 20 year period through replacement of inefficient air conditioners, water heaters, and refrigerators, with currently available high efficiency equipment. Dr. Parker emphasized his view that, given the fairly unique energy consumption patterns of a short heating season and long cooling season in FPL's service area, an aggressive residential conservation program to landscape residences, shade air conditioners, and install timers on hot water heaters, offered a cost effective alternative to the Turkey Point steam generator repairs.

The affidavits of Messrs. Douglas King and Leonard G. Pardue spoke to the impact of severe storms on lower level waste stored onsite. Mr. King had observed several hundred drums in open areas exposed to weathering which contained low level radioactive waste. At some locations the drums were loosely stacked on top of each other. Mr. King was concerned that a hurricane could breach the drums which would be used to hold low-level waste from the steam generator repairs and cause a contaminating accident. In his view the practice of loose, outdoor storage of radioactive wastes in a hurricane prone area was unreasonble and an abandonement of the ALARA principle. The affidavit of Leonard G. Pardue, a meteorologist of extensive experience, saw a 5% per year probability of a major hurricane with winds in excess of 111 m.p.h. striking the 50 mile segment of southeast Florida coast in which Turkey Point is located.[16/] Winds of that force could be expected to scatter loosely stacked drums and subject them to shocks from collisions with other objects.

C. Licensing Board Decisions

On May 28, 1981, the Licensing Board issued its decision granting summary disposition of contentions 1 and 4B. LBP-81-14, 13 NRC 677. With regard to most of the 17 subparts

---

16/ A major hurricane was defined as categories 3, 4, or 5 on the Saffir/Simpson Hurricane Scale. Category 3 winds are from 111-130 mph. Winds generated during a category 5 hurricane, could exceed 200 mph.

of amended contention 1, the Board found the pleading did not meet the basis and specificity requirements of 10 C.F.R. 2.714(b), and the FES itself provided sufficient answer to the proffered contention.[17/] As to other, purely procedural issues, such as the claimed failure to follow CEQ regulations on scoping and preparing a record for decision, the Board found that whatever legal duty the Commission owed had been met.[18/] In those instances where Mr. Oncavage had supplemented the generality of his contention with affidavits -- the asserted need to consider conservation and solar energy in tandem with derating as a preferred alternative to the proposed steam generator repair -- the Licensing Board found it outside the scope of the proceeding. The Board reasoned that the need for the power generated by Turkey Point had previously been explored and settled in the prior construction permit and operating license proceedings, and the environmental analysis need focus only on changes arising from the license amendment rather than on plant operation itself.[19/] As to those aspects

---

17/ Subparts 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14 and 15 fall within this category. 13 NRC at 686-93.

18/ Subparts 1, 2, and 6 fall in this category. Id. at 684, 689.

19/ Subparts 11 and 13 fall within this category. Id. at 691.

of contention 1 which dealt with the impact of hurricanes during the course of steam generator repairs, the Licensing Board found them to be disposed of on the basis of affidavits submitted in connection with contention 4B and previously disposed of contention 4A.[20/] It granted summary disposition of both. Finally, with respect to the impact of a hurricane or tornado on low level radioactive waste stored on-site, a subject on which the Board had no information from the licensee or staff, the Board implicitly concluded that the subject fell outside the scope of Contention 4B, deemed the record inadequate for its disposition of the matter, and called upon the parties to file detailed information and a statement of position concerning the subject by June 15.

Both the licensee and staff submitted statements of position and affidavits in response to the Board's May 28 order. FPL filed an affidavit of Alan J. Gould, employed

---

20/ Subparts 16 and 17 fall within this category. Id. at 693-94. The Board found there was no material issue of fact that (1) the proposed repair schedule did not substantially coincide with the historical hurricane season in southeastern Florida, and the probability of a tornado occurring at the site during the repair activity is remote, (2) the reactor building, in which the physical work associated with removal and replacement of the steam generator lower assemblies will be conducted, is designed to withstand a tornado or hurricane, (3) when outside the reactor building a steam generator lower assembly would be unmoveable in such a storm, (4) a tornado-borne missile could not penetrate the steel wall of a steam generator lower assembly, and (5) any storm related radioactive release from the steam generator lower assemblies would fall within the permissible radiation level of 10 CFR Part 20, levels which are applicable to normal reactor operation rather than accident conditions. The Board thereupon granted summary disposition of Contention 4B.

by it as a Power Resources Radwaste and Radiochemistry Specialist, which set forth detailed facts and commitments concerning the handling, storage, transportation and disposition of the wastes, supporting the conclusion that even if all the waste containers were breached by a hurricane or tornado, the resultant dose would be below 10 CFR Part 20 limits. The staff affidavit of Marshall Grotenhuis, project manager for the steam generator repair project reached the same conclusion.

Mr. Oncavage did not add to the information contained in the King affidavit. But he filed a statement of position arguing, among other things, that the environmental impact of the project's waste had not been adequately examined, FPL should be required to submit an application under 10 CFR 20.302 setting forth its proposed disposal procedures, the steam generator repairs should be prohibited because there is no legal manner in which to dispose of such low level wastes, and discovery on the waste issue should be reopened.

On June 19, 1981 the Licensing Board issued a final order authorizing the Director of Nuclear Reactor Regulation to issue appropriate license amendments to permit the proposed steam generator repairs of Units 3 and 4 in accordance with the commitments made by FPL in its application and further described in the Gould affidavit. LBP-81-16, 13 NRC 1115.

The Board's opinion thoroughly canvassed the pertinent affidavits and the statement of positions filed by the parties.

On the basis of the Gould affidavit, the Board found that approximately 45,600 cubic feet of low level waste containing an estimated 23.2 curies of radioactivity might be retained onsite during the steam generator repairs.[21/] Compressible trash would be compacted into wooden boxes, lined, lidded, and banded with steel. The boxes would then be tied or banded together in blocks of four, providing a subassembly weighing approximately 16,000 pounds, and stacked no more than two high. Plastic covers and/or tarps would be used to protect the containers from storms. Tie downs would be used for groups of these subassemblies to hold them in place in the event of a hurricane or tornado. Noncompressible solid waste would normally be packaged in steel drums, lids clamped in place and held securely by a bolting ring. These too would be banded together in groups of four and stacked no more than two high providing a subassembly weighing approximately 4,000 pounds. The boxes and drums would meet pertinent DOT criteria. 49 CFR Parts 173, "Shippers-General Requirements for Shipments and Packagings" and 178, "Shipping

---

21/ This included the 1,312 drums on site viewed by Mr. King.

Container Specifications." Those which could not be expeditiously shipped would be located within the Unit 3 and 4 radiation controlled area at elevation 17.5 mean low water and appropriately secured. Waste containing a higher concentration of radioactivity would be given priority of shipment and kept inside the radwaste building for the two or three month period prior to shipment.

The Board found that the protective measures noted above made it extremely unlikely that the packages would be breached during a hurricane or tornado. In the event there should be a breach, the radioactive disposal consequences to the public were found to be insignificant.[22/] Lastly the Board reviewed each of intervenor's statements of position and found them to be without merit.

These appeals followed.

II.

In appealing from the Licensing Board's May 28 decision, intervenor argues that NEPA obliges the Commission to (1) consider the solar and conservation alternatives to the steam

---

22/ The affidavit of Marshall Grotenhuis, submitted by the staff, estimated a site boundary dose of 1.5 mrem could result from a hurricane which caused the release into the atmosphere of all of the radioactivity in the low level waste from the repair of one unit. This is well within the limits set forth in 10 CFR Part 50, Appendix I, governing the design objectives for yearly doses produced by the normal operation of a nuclear power plant. The consequences of a release onto the cooling canals also was small. If all the low level waste washed into the cooling canals, the staff estimate of 1.4×10^{-5} uCi/cm^3 is within the limits set forth in 10 CFR Part 20, Appendix B, for releases to uncontrolled areas.

generator repairs, (2) prepare a programmatic environmental impact statement dealing with the fifteen Westinghouse designed nuclear power plants that have degraded steam generators and, (3) examine more thoroughly the impacts of extended onsite storage of low level waste. He also argues that the Commission must (4) abide by CEQ implementing regulations requiring a record of decision and public participation in deciding upon the scope of environmental impact statements. Mr. Oncavage's appeal from the Board's final order of June 19 reiterates his view that the environmental impacts of long term onsite storage of low level radioactive wastes have not been adequately examined. Additionally, he argues that (5) the extended onsite storage of low level waste requires new licensing approval, (6) the radioactivity of the stored wastes will be higher than the Board found, thus invalidating the Board's health and safety analysis, and (7) the Board erred in not allowing further discovery on the long term storage of low level radioactive waste.

More generally, as noted at the outset of this opinion, these appeals require us to consider in the context of the grant of summary disposition, the scope of the Commission's duties under NEPA, the specificity with which contentions

must be stated to raise an issue for adjudication, and the Board's discretion to control the course of discovery in its proceedings. Our analysis proceeds by first examining the broad NEPA issues intervenor has raised, and then turns more particularly to those issues which arise from the onsite storage of low level radiation waste attributable to the steam generator repairs. We conclude that the pleadings and affidavits on file "show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law." 10 CFR 2.749(d). The grant of summary disposition therefore was proper. See generally Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 453 (1980).

A. NEPA

1. Solar Power and Energy Conservation

On several occasions we have delineated the scope of the Commission's NEPA responsibilities in the context of a proposed license amendment for an already operating nuclear power plant. We have also spoken to the question whether the Commission is obliged to consider the asserted economic advantages of a proposed alternative. Those earlier analyses lead us to reject as a matter of law intervenor's argument that the Commission was obliged to consider the alternative

and economic advantages of FPL foregoing the steam generator repairs and operating Turkey Point on a derated basis, while adopting an aggressive conservation program with the savings effected from the foregone repairs. Our analysis of the governing standard was set forth succinctly in Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 46 fn. 4 (1978), remanded on other grounds sub. nom. Minnesota v. Nuclear Regulatory Commission, 602 F.2d 412 (D.C. Cir. 1979), where we rejected the claim that the Commission was obliged to consider the environmental impacts of plant operation when passing on a license amendment to expand the capacity of a spent fuel pool necessary for continued power plant operation:

> Because the practical effect of not now increasing the capacity of the Prairie Island spent fuel pool would be that that facility would have to cease operation, the MPCA appears to believe that what is being licensed is in reality plant operation. Therefore, according to MPCA, the license amendment could not issue without a prior exploration of the environmental impact of continued operation and the consideration of the alternatives to that operation (e.g., energy conservation). We do not agree. The issuance of operating licenses for the two Prairie Island units was preceded by a full environmental review, including the consideration of alternatives. See LBP-74-17, 7 AEC 487 (1974), affirmed on all environmental questions, ALAB-244, 8 AEC 857 (1974). Nothing in NEPA or in those judicial decisions to which our attention has been directed dictates that the same ground be wholly replowed in connection with a proposed amendment to those 40-year operating licenses. Rather, it

> seems manifest to us that all that need be undertaken is a consideration of whether the amendment itself would bring about significant environmental consequences beyond those previously assessed and, if so, whether those consequences (to the extent unavoidable) would be sufficient on balance to require a denial of the amendment application. This is true irrespective of whether, by happenstance, the particular amendment is necessary in order to enable continued reactor operation (although such a factor might be considered in balancing the environmental impact flowing from the amendment against the benefits to be derived from it). 23/ (emphasis added)

Our analysis in Prairie Island was essentially an application of the rule of reason to which NEPA is subject. Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 832, 837 (D.C. Cir. 1972). The purpose of our NEPA inquiry is to determine whether the proposed action brings about changes in the environmental status quo, and to measure the justification for the proposed action against those changes. Our Prairie Island decision was based first on the undisputed fact that there were no changes in the environmental status quo of any significance from increasing the facility's spent fuel pool capacity, and second on the ground that the justification for the license amendment -- to allow the power plant to continue operation at full power -- could be taken as concluded from the prior licensing proceedings.

23/ We have since adhered to this analysis several times. See most recently Consumers Power Co. (Big Rock Point Nuclear Plant), ALAB-636, 13 NRC 312, 326, 328-29 (1981); see also ALAB-584, supra, 11 NRC at 454-58; Portland General Electric Co. (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 266-68 and fn. 6 (1979).

In the present case there is no dispute among the parties that the Commission's NEPA inquiry should be directed to the impacts attributable to the steam generator repair itself, rather than to the impacts of continued plant operation. The argument pressed by intervenor goes rather to the second leg of our Prairie Island decision -- whether the justification for the license amendment -- to allow the power plant to continue operation at full power -- can be taken as concluded from the prior licensing proceedings. Mr. Oncavage argues that it can not for two reasons: first, the energy conservation and solar alternatives were not explicitly at issue in the earlier proceedings so to examine it now would not be wholly replowing old ground; second, energy conservation has now evolved to the point where it should be considered a legitimate alternative to power plant operation, a proposition Mr. Oncavage asserts received the Supreme Court's imprimatur in Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc. 435 U.S. 519 (1978).

The question whether some issue should be taken as precluded from one proceeding to another is not subject to easy or mechanical resolution. Again, we must take NEPA's rule of reason as our guide. The most straightforward case is one where the proposed action has no environmental consequences to speak of and the particular issue sought to be

litigated has explicitly been litigated in an earlier proceeding. It is here that the Supreme Court's reminder in Interstate Commerce Commission v. Jersey City, 322 U.S. 503, 514 (1944) has the most force:

> Administrative consideration of evidence *** always creates a gap between the time the record is closed and the time the administrative decision is promulgated .... If upon the coming down of the order litigants might demand rehearings as a matter of law because some new circumstance has arisen, some new trend has been observed, or some new fact discovered, there would be little hope that the administrative process could ever be consummated in an order that would not be subject to reopening.

Prairie Island was a step removed from that hypothetical case. While the spent fuel pool expansion entailed no significant environmental consequences and the environmental impacts of power plant operation and need for power had received full exploration in the prior licensing proceedings, there had been no prior examination of the energy conservation alternative which intervenors sought to raise. We nevertheless concluded that NEPA did not require us to examine that alternative in connection with the requested license amendment. Energy conservation was viewed simply as another aspect of the more general need for power question, which the earlier proceedings had settled. Consumers Power Co. (Midland Plant, Units 1 and 2) ALAB-458, 7 NRC 155, 165 (1978).

The present case arguably takes us a step beyond Prairie Island. Unlike Prairie Island, where an environmental appraisal sufficed to fulfill the Commission's NEPA responsibilities, here at the Commission's insistence an environmental impact statement was prepared.[24/] Where an environmental impact statement is in fact required by NEPA it seems plain to us the Commission is obliged to take a harder look at alternatives than if the proposed action were inconsequential. As we said in passing upon a challenge to a license amendment to expand the Trojan facility's spent fuel pool capacity,

> there is no obligation to search out possible alternatives to a course which itself will not either harm the environment or bring into serious question the manner in which this country's resources are being expended.

Portland General Electric Co. (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 266 (1979). And CEQ's regulations instruct us that where an action is not of such a consequence as to trigger an environmental impact statement, a brief discussion of alternatives will suffice. 40 CFR 1508.9. Thus, as we see it, NEPA's rule of reason establishes a continuum where more is expected and required of the agency depending upon

---

24/ We noted earlier that the staff acted in response to a Commission directive in connection with the Surry steam generator repairs upon which the Turkey Point proposal had been modeled.

the environmental significance of the proposal before it.[25/]

The principles we have just outlined guide our decision here. While an environmental impact statement was prepared for the Turkey Point repairs, the NRC staff has said its preparation was a matter of agency discretion not of statutory compulsion. The FES in fact reached the conclusion that the proposed steam generator repair will not significantly affect the quality of the environment. FES, supra fn. 3, at 6-1. Nor has the Commission taken the general position that an EIS is statutorily mandated for steam generator repairs. In Surry the only perceived environmental consequence -- the occupational exposure (2070 person-rem) that the repair program would entail -- was considered by the Commission to be of borderline significance.[26/]

25/ CEQ's regulations provide useful guidance in this regard. Thus 40 CFR 1502.2 states in pertinent part:

> (b) Impacts shall be discussed in proportion to their significance. There shall be only brief discussion of other than significant issues. As in a finding of no significant impact, there should be only enough discussion to show why more study is not warranted.

The scope of alternatives to be considered is related to the environmental consequences of the proposed action. See 40 CFR 1502.14.

26/ The Commission stated that it was "unable to determine from the data and arguments presented ... whether the occupational radiation exposure involved here is significant," and concluded "that the preferable course of action in the circumstances of this case is to prepare an environmental impact statement on the repair." CLI-80-4, supra, 11 NRC at 406, 407.

We need not decide whether an EIS in the present case was mandated by statute or not. In holding that the Commission's NEPA review in this case need not extend to a reconsideration of the need for power from Units 3 and 4, or to the energy conservation and solar energy alternatives to full power operation of those Units, we only decide that the environmental consequences of the steam generator repairs are sufficiently small that the justification for Turkey Point operation need not be reopened. As we explain, infra, the only impact urged by intervenor,[27/] that of the low level radioactive waste which the repairs will generate, is quite minor and was properly disposed of by the Licensing Board on the basis of the affidavits before it. Indeed the main thrust of Mr. Oncavage's argument in support of the energy conservation and solar alternatives was not so much environmental as it was economic. He claims it makes better economic sense to operate Units 3 and 4 on a derated basis and to expend the monies saved thereby on an aggressive conservation program

---

27/ At oral argument intervenor also urged on us the adverse impacts of worker exposure and onsite storage of the steam generator lower assemblies (SGLA). Neither of the impacts was properly preserved for our review. Intervenor did not oppose the staff's motion for summary disposition of contention 4A regarding onsite storage of SGLA's and did not raise at all the impacts of worker exposure. As we noted earlier, worker exposure from inspecting and plugging defective steam generator tubes has accounted over the years for exposures comparable to that from the proposed repair.

than to effectuate the repairs. But the financial pros and cons of the repair program as against a conservation program are not the Commission's concern at least where, as here, there has been no showing that significant environmental consequences attach to the utility's proposal. Neither NEPA nor any other statute gives us the authority to reject an applicant's proposal solely because an alternative might prove less costly financially.[28/] Finally, we reject intervenor's argument that

---

28/ The Commission's role in assessing the financial pros and cons of nuclear power plant operation was explored by us in Midland:

> In the Atomic Energy Act, Congress did not make this agency responsible for assessing whether a proposed nuclear plant would be the most financially advantageous way for a utility to satisfy its customers' need for power. Such matters remained the province of the utility and its supervising State regulatory commission. Antitrust issues to one side, our involvement in financial matters was limited to determining whether, if we license the plant, the company will be able to build and then to operate it without compromising safety because of pressing financial needs.
>
> The passage of the National Environmental Policy Act increased our concern with the economics of nuclear power plants, but only in a limited way. That Act requires us to consider whether there are environmentally preferable alternatives to the proposal before us. If there are, we must take the steps we can to see that they are implemented if that can be accomplished at a

Vermont Yankee obliges the Commission to examine energy conservation and solar power alternatives. The Supreme Court's decision in that case gives its stamp of approval to a rule of reason interpretation of NEPA. While it may well be reasonable for the Commission to examine solar and energy conservation in connection with need for power when passing upon an application to construct a nuclear power plant, we find no hint in the Court's decision that the issue must be addressed in regard to an already operating power plant when the action initiating the NEPA inquiry is of minor environmental consequence, and the principal claimed advantage of the conservation alternative is an economic one.

28/ (FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

> reasonable cost; i.e., one not out of proportion to the environmental advantages to be gained. But if there are no preferable environmental alternatives, such cost-benefit balancing does not take place. Manifestly, nothing in NEPA calls upon us to sift through environmentally inferior alternatives to find a cheaper (but dirtier) way of handling the matter at hand. In the scheme of things, we leave such matters to the business judgment of the utility companies and to the wisdom of the State regulatory agencies responsible for scrutinizing the purely economic aspects of proposals to build new generating facilities.

ALAB-458, supra, 7 NRC at 162-63 (footnotes omitted) (emphasis in original). We think the reasoning in Midland is applicable as well to a proposal which does not entail significant environmental consequences.

2. Programmatic Environmental Impact Statement

We do not think extended discussion is warranted of intervenor's argument that the proposed steam generator repair in this case should have been the subject of a programmatic environmental impact statement. Mr. Oncavage's proffered contention on the subject was the barest of bare bones.[29] In his brief to us, the claimed need for a programmatic environmental impact statement was said to arise from the fact that steam generator degradation has occurred at 15 other Westinghouse-designed units. Whatever may have been the viability of intervenor's contention standing alone, a matter of considerable doubt,[30] nothing was offered in response to the staff's motion for summary judgment to dispute

---

29/ It simply reads:

> 3. The EIS is not a programmatic EIS and a programmatic EIS is required as a result of the steam generator repairs that would be required nationally.

30/ The contention does not even allege that repair of the degraded steam generators would have cumulative impacts, nor does it identify any impact of the repairs, cumulative or otherwise. As we explain in text, pp. 35-36, infra, the fact that steam generator degradation is a problem common to many nuclear power plants does not trigger a programmatic environmental impact statement. Thus, taking everything in the contention as true and provable, it nevertheless provides a legally insufficient reason for requiring preparation of a programmatic impact statement. For this reason the contention necessarily failed at the threshhold. See Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 548-49 (1980).

the factual material presented in the FES on the localized nature of the steam generator repair impacts.[31/] As we have indicated earlier, the principal impact of the repairs is to the workers who will effect the repairs.[32/] Even if we were to consider the affidavits later presented by intervenor on the risk from severe storms scattering repair-generated low level radioactive waste, they too did not controvert the fact that impacts would be only local. See pp. 41-43, infra.

While intervenor correctly points out that steam generator degradation is a problem common to many nuclear power plants, it is the impact of the resolution not the commonality of the problem that engages the need for a programmatic environmental impact statement. Kleppe v. Sierra Club, 427 U.S. 390, 410 (1976) instructs that a comprehensive impact statement should be prepared when several proposals for action "that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency ...." Even in that situation so long as one action does not commit the agency to approval of other pending projects, "an agency could approve one pending project that is

---

31/ As we have seen intervenor's response was directed to the energy conservation issue. See p. 16, supra.

32/ The FES gave an estimate of 2100 person-rem per unit. FES, supra fn. 3, at 4-3.

fully covered by an impact statement, then take into consideration the environmental effects of that existing project when preparing the comprehensive statement on the cumulative impact of the remaining proposals." Id. at 414 fn. 26. Thus it is not compelling that, at the time the Turkey Point repairs were proposed, the Commission also had pending before it proposals for steam generator repairs at power plants in Virginia and Michigan. See Virginia Electric and Power Co. (Surry Power Station, Units 1 and 2), DD-79-19, 10 NRC 625 (1979), reversed in part, CLI-80-4, 11 NRC 405 (1980). The impacts of the Turkey Point repair are local in nature, not cumulative, and the repair of one power plant does not commit the agency to follow that course of action somewhere else. Intervenor has not made a factual showing of any impact from the Turkey Point repair that would exercise a restrictive influence on the choice of alternatives at another project, nor has he pointed out a cumulative impact, let alone one that has been overlooked in the Turkey Point FES. See Minnesota v. Nuclear Regulatory Commission, 602 F.2d at 416 fn. 5. Summary disposition of the proffered contention was properly granted.

3. Compliance with CEQ Regulations

Intervenor argues that CEQ regulations are binding on the Commission, and that as alleged in amended contention 1 those on scoping the environmental impact statement and preparing a record for decision, 40 CFR 1501.7 and 40 CFR 1505, have been violated. See fn. 11, supra.[33/] While the Licensing Board's decision and the parties briefs touch on the question whether the CEQ regulations are binding on this Commission, we prefer to leave that issue to another day, and rest our decision on the alternative grounds reached by the Licensing Board.[34/]

Intervenor's complaint that no record of decision was prepared in violation of 40 CFR 1505.2 is frivolous. The Licensing Board was plainly correct that its decision, subject to Appeal Board and Commission review, provided the agency record of decision on FPL's steam generator repair proposal. Its decision (and now ours) have considered the FES in full

---

33/ At oral argument, intervenor also argued that CEQ regulations governing consideration of alternatives had been violated. See e.g., 40 CFR 1502.14. Because the regulations do not expand the statutory rule of reason NEPA requirement, we are content to rest that part of our decision regarding solar and energy conservation on the statutory analysis given earlier.

34/ We would note, however, the fact that the Commission has not yet adopted its own set of regulations implementing the CEQ regulations does not strike us as pertinent to the question whether, or to what extent, the Commission owes them adherence. The Commission's proposed rule was published on March 3, 1980. 45 Fed. Reg. 13739 et seq.

satisfaction of the letter and purpose of 40 CFR 1505.2 to link the EIS process with the agency's decision. See 43 Fed. Reg. 55985-86 (November 29, 1978).

We also find the scoping requirement of 40 CFR 1501.7 satisfied. Its purpose is to provide a means for early identification of what are and what are not the important issues deserving of study in an environmental impact statement. 43 Fed. Reg. 55982. Here, on June 29, 1979, prior to issuance of the draft environmental impact statement, the staff published an environmental impact appraisal which went well beyond the brief description of the proposed action and possible alternatives called for by the CEQ regulations. See 40 CFR 1501.7 and 40 CFR 1508.22. By that time Mr. Oncavage had filed his petition to intervene in the proceeding. Through pleadings and prehearing conferences Mr. Oncavage had an opportunity to explain and in fact explained to the staff what he considered the important issues deserving of study in an environmental impact statement.[35/] That process satisfied the requirements of 40 CFR 1501.7. Amended contention 1 was properly dismissed.

35/ See, e.g., "List of Contentions Presented to the Atomic Safety and Licensing Board," Prehearing Conf. Tr. fol. p. 122 (May 2, 1979) which listed, among others, the conservation and solar energy alternatives to the steam generator repairs.

B. Low Level Waste ("LLW")

We also conclude that the Licensing Board properly granted summary disposition of intervenor's claim that extended onsite storage of low level waste generated by the repairs was unacceptable.[36/] The overriding legal issue is much the same as it is with the prolonged onsite storage of spent fuel. While the volume limitations imposed by the low level burial site at Barnwell, South Carolina and the tightness of space elsewhere[37/] are not nearly as troublesome

---

36/ We treat intervenor's claim as if it were before the Licensing Board for summary disposition. In the rather perplexing procedural posture below, the Licensing Board implicitly ruled that intervenor's claim was not within Contention 4B, the expanded contention dealing with the impact of hurricanes or tornados during the steam generator repair process. Whether this ruling was correct or not is beside the point because the Licensing Board invited evidentiary submissions on the issue and the material facts not in dispute showed that summary disposition would have been proper.

37/ The FES notes that the offsite disposal of low level waste is a generally acknowledged problem. Only three commercial LLW burial sites are currently in operation. These three are the sites at Beatty, Nevada; Richland, Washington; and Barnwell, South Carolina. While a State of Washington initiative precluding the disposal of out-of-state LLW was held unconstitutional, Washington State Bldg. & Constr. Trades Council v. Spellman, 518 F. Supp. 928 (E. D. Wash. 1981), appeal docketed, No. 81-3453 (9th Cir. July 27, 1981), both Washington and South Carolina have urged the development of regional LLW disposal sites in other parts of the country to reduce the need for continuing long-range shipments of high volumes of wastes to the sites in their states. The state of South
(FOOTNOTE CONTINUED ON NEXT PAGE)

a problem as the absence of a high level waste disposal facility, the legal issue under the Atomic Energy Act in both instances is whether the Commission has reasonable assurance that the wastes can be safely handled and stored as they are generated, and safely disposed of when, from a public health and safety standpoint, that is likely to become necessary.[38/] The NEPA environmental review for onsite storage should cover the time period over which it is foreseeable the wastes will remain on site. See generally Minnesota

---

37/ (FOOTNOTE CONTINUED FROM PREVIOUS PAGE) Carolina has implemented a license condition at the Barnwell site that reduces the allowable monthly volume to be accepted for disposal. The remaining burial capacity at the Barnwell disposal site at the end of 1979 was 35 million cubic feet. See FES, supra fn. 3, at 8-17 to 8-18, App. C-10 to C-12.

38/ The Commission made this standard explicit in the high level waste context when denying a rulemaking petition of the Natural Resources Defense Council which sought a halt to nuclear power plant licensing until the Commission makes a finding that nuclear wastes can be permanently disposed of safely. It was the Commission's view that power plant high level wastes can be stored in a manner consistent with the public health and safety until a permanent waste disposal facility is in operation; and that in passing the Atomic Energy Act Congress did not intend that nuclear power plant licensing be postponed until a waste disposal facility was in operation, or until the safety of waste disposal was found to be assured. The Commission stated:

> There is, we believe, a clear distinction between permanent disposal of wastes and their interim storage. The Commission must be assured that wastes generated by licensed power reactors can be safely handled and stored as they are generated. As part of the licensing process for an

(FOOTNOTE CONTINUED ON NEXT PAGE)

v. Nuclear Regulatory Commission, 602 F.2d 412 (D.C. Cir. 1979).

Here we find the undisputed facts before the Licensing Board sufficient to conclude that the low level wastes generated by the steam generator repairs would be safely stored and disposed of when necessary. We have already detailed the evidence on the issue which was before the Licensing Board. To summarize, the Gould affidavit showed that, during a two-year period encompassing the repair project, Turkey Point would generate 8,395 cubic feet of higher activity low level waste which would be accorded priority of shipment and be disposed of within a few months of being produced. The Turkey Point allocation from Barnwell in that two-year period, 19,498 cubic

---

38/ (FOOTNOTE CONTINUED FROM PREVIOUS PAGE)
individual power reactor facility, the Commission does review the facility in question in order to assure that the design provides for safe methods for interim storage of spent nuclear fuel. But it is neither necessary nor reasonable for the Commission to insist on proof that a means of permanent waste disposal is on hand at the time reactor operation begins, so long as the Commission can be reasonably confident that permanent disposal (as distinguished from continued surveillance) can be accomplished safely when it is likely to become necessary. 42 Fed. Reg. 34391 (July 5, 1977).

The Commission's decision was upheld on judicial review. Natural Resources Defense Council v. Nuclear Regulatory Commission, 582 F.2d 166 (2d Cir. 1978).

feet, would allow for all but 35,755 cubic feet of waste to be shipped during that time. (At that rate all of the repair-generated waste would be disposed of within 6 years from the time repairs were first undertaken.)[39/] This remaining onsite waste would contain approximately 23.2 curies of radioactivity and be securely packaged. While there was some factual dispute, or at least understandable imprecision, whether a major hurricane would breach a large number of low-level waste containers,[40/] the consequences of a large

---

39/ The Gould affidavit also related FPL's expectation of receiving an additional allocation of between 700-1,000 cubic feet per month from the "first come, first serve" pool at Barnwell, and the fact that FPL was seeking a permit for shipping LLW to an alternate waste disposal facility. At oral argument FPL counsel represented that the company had received a permit to ship LLW to Richland, Washington, and that LLW from the steam generator repairs is being shipped offsite on a current basis. See also fn. 41 infra and Licensee's Brief in Opposition to Intervenor's Final Exceptions (filed September 10, 1981) at 14 fn. 14.

40/ The King and Pardue affidavits filed by intervenor stated that the integrity of loosely stacked drums of low-level radioactive waste cannot be assured during the passage of a major hurricane and that the scattering of such drums can be expected. The Gould affidavit submitted by FPL explained that the drums and packages would not be loosely stacked, and that it was extremely unlikely that a large number of packages would be breached, by a hurricane.

scale failure were not disputed. Intervenor did not controvert the affidavits filed by the licensee and the staff. The Grotenhuis affidavit submitted by staff was to the effect that the site boundary dose due to all the low-level solid waste from one unit repair being released in one accident including the higher activity low level waste was 1.5 mrem. If washed into the Turkey Point cooling canals, the concentration would be within 10 CFR Part 20, Appendix B standards for effluents from normal reactor operations. Thus the Licensing Board was not obliged to try to particularize through an evidentiary hearing a more precise forecast of the number of containers that might be breached by a severe storm, or to establish the effects of long term weathering, or to settle upon a definite time when the repair generated waste in its totality would be shipped offsite. The evidence was sufficient to find that, even absent additional allocations of space at Barnwell or permits to ship to other low level waste disposal sites, the Turkey Point steam generator wastes would be disposed of within approximately 6 years of the repairs and would be safely stored onsite during that time.[41/]

41/ On June 27 intervenor submitted a second affidavit of Douglas King, this in support of a motion to stay the Licensing Board's final order. The King affidavit noted disparities between FPL's estimate of the amount of radioactivity a steam generator lower assembly would contain at the time of removal, 250 curies, and the Pacific Northwest Laboratory estimate of 400-1,000 curies per SGLA. Compare FES, supra fn. 3, at 4-12 with "Radiological Assessment of Steam Generator Removal and Replacement: Update and Revision" (PNL-3454), NUREG/CR-1595, (December 1980), p. 5. While no estimate was given of the amount of radioactivity that FPL

(FOOTNOTE CONTINUED ON NEXT PAGE)

Intervenor's remaining arguments can be disposed of briefly. Mr. Oncavage argues that given the shortage of available offsite disposal acreage, FPL was obliged to seek new licensing authority for, in effect, converting Turkey Point into a low level disposal site. The argument is without any basis in fact as is plain from the preceding discussion. Moreover, even if there were no offsite disposal site available, that fact would not convert a site where wastes were stored into a disposal facility. The Seventh Circuit rejected just such an argument in the context of the storage

---

41/ (FOOTNOTE CONTINUED FROM PREVIOUS PAGE)
would attempt to remove from the channel head and divider plate areas of each steam generator, it presumably was higher than FPL would estimate. The King affidavit also estimated that processing the primary coolant would result in an additional 270 curies of solid waste for storage. From this, Mr. King argued that the activity level of the stored low level wastes would be much higher than FPL had projected, and the consequences of a hurricane or tornado correspondingly more severe.

The licensee opposed the stay motion. The accompanying Gould affidavit disputed the King affidavit. Mr. Gould estimated only 40 curies of low level solid waste would be generated from processing the primary coolant of each unit and at most 45 curies of solid radioactive waste would be removed from decontaminating each of the six SGLA's. This waste would all be handled as indicated in the earlier Gould affidavit, which is to say that pending shipment the higher concentration low level waste would be kept inside the Turkey Point radwaste or auxiliary building, which are designed to withstand hurricanes, while the low concentration low level waste would be packaged in either LSA boxes or steel drums. The Gould affidavit also noted that FPL had received a permit to ship low level waste to Richland, Washington, and planned to minimize the amount of low-level waste temporarily retained at the Turkey Point site by utilizing both the Barnwell and Richland disposal facilities.
(FOOTNOTE CONTINUED ON NEXT PAGE)

of spent fuel. Illinois v. Nuclear Regulatory Commission, 591 F.2d 12 (7th Cir. 1979). Once again, the proper inquiry is to ask whether the wastes can be safely stored for their foreseeable stay on site, and then disposed of safely elsewhere. We are satisfied that standard has been met here.

We also reject the argument that NEPA has been violated because the Turkey Point FES did not treat the impact of severe storms on low level waste. While the FES may not have provided a sufficient response to intervenor's comments,[42] the subsequent Gould and Grotenhuis affidavits did, and thus cured the defects in the FES. The Commission's regulations explicitly provide that a Licensing Board decision based on the evidentiary record before it shall be deemed to modify the staff prepared FES, 10 CFR 51.52(b)(3), and its practice

---

41/ (FOOTNOTE CONTINUED FROM PREVIOUS PAGE)
While the second King affidavit does create a factual issue as to the activity level of the low level waste that would be generated by the steam generator repairs it comes far too late to be judged by the standards applicable to a motion for summary disposition. We agree with the Licensing Board there "was abundant evidence in the record that under either normal or hurricane conditions, the onsite storage ... would not pose a significant risk to public health and safety." Memorandum and Order of August 12, 1981 at 3.

42/ Compare Oncavage Comments, supra fn. 8, at 15-16 with FES, supra fn. 3, at 8-17 to 8-18.

in this regard has been specifically upheld by two courts of appeals. New England Coalition on Nuclear Pollution v. Nuclear Regulatory Commission, 582 F.2d 87, 93-94 (1st Cir. 1978); Citizens for Safe Power Inc. v. Nuclear Regulatory Commission, 524 F.2d 1291, 1294 and fn. 5 (D.C. Cir. 1975). We have noted that general practice with approval, cautioning however that there may be instances where the absence of discussion in an FES is so fundamental an omission as to call for recirculation of the FES. Public Service Co. of Oklahoma (Black Fox Station, Units 1 and 2), ALAB-573, 10 NRC 775, 785-87 (1979).

We do not think the failure of the FES in this case to discuss the impact of severe storms on low level waste rises to that level of major significance. The FES discussed the impact of the steam generator repairs and alternatives to it in some detail. See p. 11 supra. The impact of low level waste storage itself received a fair amount of attention. See FES, supra fn. 3, at 4-11 to 4-12, 8-17 to 8-18, App. C-10 to C-12. Indeed, the precise issue now raised by intervenor was not an explicit contention before the Board, and when the subject was more fully explored in response to the Licensing Board's call for further information from the parties intervenor did not avail himself of the opportunity to present additional information. In fact, the Grotenhuis and Gould affidavits submitted by the

staff and licensee showed the consequences of a hurricane to be small. In sum,the FES did not disregard important alternatives or broad areas of environmental impact, nor fail to apprise the public of the nature of the project or its expected consequences. In these circumstances we hold that the omission of discussion from the FES of the impact of severe storms on low level waste was a minor failing which did not call for recirculation of the FES. It was cured by the evidentiary submissions to the Licensing Board and by the Board's decision.

Finally,we reject intervenor's argument that the Licensing Board erred in not affording discovery on the issue. Intervenor was aware of the issue at least since the time he submitted comments on the Turkey Point DES in February, 1981. At about the same time, the parties negotiated, and the Licensing Board accepted, an agreed upon schedule to govern the pre-trial course of the proceedings. That schedule called among other things for final discovery requests to be completed by April 15, 1981. We have remarked that:

> [W]e enter the scheduling thicket cautiously. We are inclined to do so only to entertain a claim that a board abused its discretion by setting a hearing schedule that deprives a party of its right to procedural due process.

Public Service Co. of Indiana, (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-459, 7 NRC 179, 188 (1978) (footnote omitted). Whether or not we would take quite the same limited view of our reviewing powers over pre-trial discovery rulings as of the conduct of the hearing itself, we think it apparent that the Licensing Board did not abuse its discretion when its final order rejected intervenor's motion to put aside the schedule intervenor had previously agreed upon in order to reopen discovery on an issue that intervenor had not diligently pursued.

Accordingly, the May 28 and June 19, 1981 orders of the Licensing Board are affirmed.

It is so ORDERED.

FOR THE APPEAL BOARD

C. Jean Shoemaker
C. Jean Shoemaker
Secretary to the
Appeal Board