UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Dr. Robert M. Lazo, Chairman
Dr. Richard F. Cole
Dr. Emmeth A. Luebke

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| In the Matter of | ) | Docket Nos. 50-250-OLA-2 |
| | ) | 50-251-OLA-2 |
| Florida Power & Light Company | ) | |
| | ) | ASLBP No. 84-504-07 LA |
| Turkey Point | ) | |
| Units 3 & 4 | ) | |

AMENDED PETITION TO INTERVENE

I. INTRODUCTION

On June 7,1984, the Nuclear Regulatory Commission ("NRC") published Federal Register Notice , 49 F.R. 23715, which was a notice of consideration of the issuance of license amendments to the Florida Power and Light Company ("FPL") that would allow the expansion of the spent fuel storage capacity for Turkey Point Nuclear Units 3 & 4.

Pursuant to that notice, Petitioners, Joette Lorion and the Center for Nuclear Responsibility, filed a joint request for hearing and a petition for leave to intervene on July 9, 1984.

Subsequently, on November 23, 1984, the Staff made a final no significant hazards determination and issued the amendments to Turkey Point's operating license. And, on February 7, 1985, the Atomic Safety and Licensing Board ("ASLB") issued an Order Scheduling a Prehearing Conference on the above-identified

proceeedings to take place on March 27 and 28, 1985.

Thus, pursuant to 10 C.F.R. 2.714 (b), the Petitioners submit this, their "Amended Petition to Intervene" in these proceeedings.

## II. AMENDED PETITION

Petitioners request a hearing and leave to intervene in these license amendment proceedings.

1. The Center for Nuclear Responsibility, Inc. ("Center") and Joette Lorion request a hearing and petition for leave to intervene in the above captioned proceeding as allowed by the U.S. Nuclear Regulatory Commission's (Commission or NRC) Rules of Practice.

2. The Center for Nuclear Responsibility is a non-profit corporation with its principal place of business in Miami, Florida. The Center manages a resource library that could be damaged as a result of an accident at the Turkey Point facility. The Center for Nuclear Responsibility is an environmental organization.

3. The Center's members live, use, work, and vacation in and otherwise use and enjoy a geographic area within the immediate vicinity of the Turkey Point Nuclear Power Plants and could suffer severe consequences if a serious nuclear accident occurred at these facilities.

Thus, the Center and its members are significantly and adversely affected, and otherwise aggrieved, by the final agency action proposed in the captioned June 7, 1984, Federal Register

Notice and subsequent issuance of the license amendments on November 23, 1984. The Center is an appropriate party to represent the interests of persons similarly situated, or whose interests might go otherwise unrepresented. Members of the Center who may be affected, and who have consented to be represented, are:

Joette Lorion, 7269 SW 54 Avenue, Miami, Fl. 33143
Susan Bortel, 9580 Caribbean Blvd., Miami, Fl. 33139
Howard Pew Sheronas, 4071 Barbarosa, Coconut Grove, Fl. 33133.

4. Joette Lorion is an individual who lives, works, and owns property real and personal in and about the city of South Miami, Florida, approximately 15 miles from the Turkey Point Nuclear Plants, and otherwise uses and enjoys a geographic area within the immediate vicinity of those plants. Her interests, and those of her family, could also be significantly and adversely affected if a serious nuclear accident occurred at the Turkey Point facility. She is an appropriate party to represent the interests of others similarly situated whose interests might otherwise go unrepresented.

5. The Commission's issuance of the license amendments in in the manner sought by the utility, causes the operation of the spent fuel facilities for the Turkey Point Plant Units 3 & 4 to:

a) involve a significant increase in the probability or consequences of an accident previously evaluated;

b) create the possibility of a new or different kind of accident from any accident previously evaluated; and

c) involve a significant reduction in the margin of safety.

6. If permitted to intervene, the petitioners could address, but not be limited to, the following contentions:

AMENDED AND SUPPLEMENTAL CONTENTIONS

CONTENTION 1. That the expansion of the spent fuel pool at the Turkey Point facility is a significant hazards consideration and requires that a public hearing be held before issuance of the license amendments.

BASES FOR CONTENTION:

a) The expansion of the spent fuel pool at the Turkey Point facility increases the possibility of a criticality and loss of cooling water accident, involves a significant reduction in the margin of safety of the spent fuel pool, and creates the possibility of a new and different kind of accident occurring, which would cause the pool to lose its structural integrity.

b) The Commission has traditionally held, in a series of case law, that expansion of the spent fuel facility involves a significant hazards consideration. As noted by Commissioner Asselstine, during an exchange with Senator Mitchell in Congress in 1983 and quoted in a letter of March 15,1983 from Senators, Simpson, Hart, and Mitchell to Palladino. Mr. Asselstine is quoted as saying:

> That is correct, Senator. The Commission has never been able to categorize the spent fuel storage as a no significant hazard consideration.

c) Congress clearly intended the spent fuel pool expansion be considered a no significant hazards consideration. During a meeting in Congress on House Bill 4255, a Mr. Ottinger was quoted as saying:

> If the gentlemen will yield, the expansion of spent fuel pools and the reracking of the spent fuel pools are clearly matters which raise significant hazards consideration... (127 Cong. Record H 8156)

The Senate Committee on Environment and Public Works reiterated this understanding on its report on S. 1207:

> The Committee anticipates,for example, that consistent with prior practice, the Commission's standards would not permit a "no significant hazards consideration determination" for license amendments to permit reracking of spent fuel pools." S. Rep. 97-113, p. 15.

Thus, the legislative history behind PL 97-415 clearly contemplates that reracking is an example of licensing amendments involving a significant hazards consideration.

CONTENTION 2. Expansion of the spent fuel pool at Turkey Point constitutes a major Federal action and requires that the Commission prepare an environmental impact statement in accordance with the National Environmental Policy Act of 1969 ("NEPA") and 10 CFR Part 51.

BASES FOR CONTENTION: The proposed expansion and reracking of the spent fuel pool at Turkey Point increases both the possibility and probability of an occurrence of a release of radiation or radioactive materials into the environment, both as a result of normal operation and in the event that there is a total or partial loss of coolant from the spent fuel pool. The licensee and staff must also address the following:

a) as a result of the expansion there will be an increased amount of spent fuel stored at the Turkey Point plant. There is the possibility that this site could become a permanent waste disposal facility. The Licensee and Staff have not looked at long term, perpetual maintenance of these wastes, or calculated the costs associated with such in both monetary losses and losses of land use.

b) There has not been alternate on site storage methods and alternatives to the expansions, including alternatives, such as derating, which would reduce the amount of spent fuel produced.

CONTENTION 3. That the calculation of radiological consequences resulting from a cask drop accident are not conservative, and the radiation releases in such an accident will not be ALARA, and will not meet with the 10 CFP Part 100 criteria.

BASES FOR CONTENTION 3: The Florida Power and Light Company did not comply with the conservative assumption for a cask drop accident that are specified in the Standard Review Plan 15.7.5 (5) and Regulatory Guide 125 (5), in that they used a 1.0 radial peaking factor, rather than a 1.65 factor. Thus, the potential offsite dose using the more conservavtive calculations could cause FPL to exceed the 10 CFP Part 100 criterion.

CONTENTION 4. That FPL has not provided a site specific radiological analysis of a spent fuel boiling event that proves that offsite dose limits and personal exposure limits will not be exceeded in allowing the pool to boil with makeup water from only seismic Category 1 sources.

BASES FOR CONTENTION: FPL used calculation performed for the Limerick plant to prove that they would not exceed radiological limits in a spent fuel pool boiling accident. FPL should not be allowed to extrapolate Limerick's study for their own, because there are many differences between the two plants which could be critical. For example, the saturation noble gas and iodine

inventories could be greater for the Turkey Point plant as a result of fuel failure and increased enrichment; more than 1% of the fuel rods may be deffective at Turkey Point because of the asme fuel failure;and the gap activity of noble gases, such as krypton 85, and fisson products, such as radioative iodine may also be greater for Turkey Point.

CONTENTION 5. That the main safety function of the spent fuel pool, which is to maintain the spent fuel assemblies in a safe configuration through all environmental and abnormal loadings , may not be met as a result of a recently brought to light unreviewed safety question involved in the current rerack design that allows racks whose outer rows overhang the support pads in the spent fuel pool. Thus, the amendments should be revoked.

a) In a February 1, 1985 letter from Williams, FPL, to Varga, NRC, which describes the potential for rack lift off under seismic event conditions. This is clearly an unreviewed safety question that demands a safety analysis of all seismic and hurricane conditions and their potential impact on the racks in question before the license amendments are issued, because of the potential to increase the possibility of an accident previously evaluate, or to create the possibility of a new or different kind of accident caused by loss of structural integrity. If integrity is lost, the damaged fuel rods could cause a criticality accident.

CONTENTION 6. The Licensee and Staff have not adequately considered

or analyzed materials deterioration or failure in materials integrity resulting from the increased generation and heat and radioactivity,as a result of increases capacity and long term storage, in the spent fuel pool.

BASES FOR CONTENTION 6: The spent fuel facility at Turkey Point was originally designed to store a lesser amount of fuel for a short period of time. Some of the problems that have not been analyzed properly are:

a) deterioration of fuel cladding as a result of increased exposure and decay heat and radiation levels during extended periods of pool storage.

b) loss of materials integrity of storage rack and pool liner as a result of exposure to higher levels of radiation over longer periods.

c) deterioration of concrete pool structure as a result of of exposure to increased heat over extended periods of time.

CONTENTION 7. That there is no assurance that the health and safety of the workers will be protected during spent fuel pool expansion, and that the NRC estimates of between 80-130 rem/person will not meet ALARA requirements, in particular those in 10 CFR Part 20.

BASES FOR CONTENTION 7: FPL's estimates of between 80-130 rem/person are much higher than the NRC's estimate for reracking of 40-50 person/rem, and much higher than experience at other nuclear plants. Thus, there estimates are not ALARA.

CONTENTION 8. That the high density design of the fuel racks will cause higher heat loads and increase in water temperature which could cause a loss-of-cooling accident in the spent fuel pool, which

could in turn cause a major release of radioactivity to the environment. And, that the decrease in the time that it takes the spent fuel to reach its boiling point in such an accident, both increases the probability of accidents previously evaluated and increase the chances of accidents not previously evaluated.

BASES FOR CONTENTION 8:

a) The NRC has stated in numerous documents that the water in spent fuel pools should normally be kept below 122 degrees F. The present temperature of the water at Turkey Point is estimated to be 127 degrees F. After the reracking, the temperature of the water could rise to 141 degrees on a normal basis, and could reach 180 degrees F. with a full core load added. In addition, the time for the spent fuel boiling point to be reached in a loss of cooling accident will go from 15 hours to 4 hours. Four hours is clearly not enough time to take action to prevent a major accident in the spent fuel pool from occurring. Thus, the increase in heat and radioactivity resulting from increased density will result in an increase in the probability of a major spent fuel pool meltdown occurring.

b) There is also the possibility that a delay in the make up emergency water, could cause the zirconium cladding on the fuel rods to heat up to such high temperatures that any attempt at later cooling by injecting water back into the pool could hasten the heat up, because water reacts chemically with heated zirconium to produce heat and possible explosions. Thus, the zirconium cladding could catch on fire, especially in a high density design, and create an accident not previously evaluated.

CONTENTION 9. Licensee has not analyzed the effect that a hurricane or tornado could have on the spent fuel storage facility or its contents, and that the SER neglects certain accidents that could be caused by such natural disasters.

BASES FOR CONTENTION 9: The Turkey Point sight is in an area of potential hurricane and tornado activity. Accidents externally intiated by such events should be analyzed, including:

a) the possibility that a tornado driven or hurricane wind driven missile could damage the spent fuel racks.

b) the possibility that a tidal wave caused by a hurricane could cause the radioactivity in the spent fuel pool to be washed into the surrounding environment.

CONTENTION 10. That the increase of the spent fuel pool capacity, which includes fuel rods which have experienced fuel failure and fuel rods that are more highly enriched, will cause the requirements of ANSI NI6-1975 not to be met and will increase the probability that a criticality accident will occur in the spent fuel pool and will exceed 10 CFR Part 50, A 62 criterion.

BASES FOR CONTENTION 10: The increase in the number of fuel rods stored and the fact that many of them may have experienced fuel failure or may be more highly enriched and have more reactivity will increase the chances that the fuel pool will go critical, and cause a major criticality accident, and perhaps explosion, that will release large amounts of radioactivity to the environment in excess of the 10 CFR 100 criteria.

Thus, for all the above reasons, Intervenors contend that the expansion of the spent fuel facility at the Turkey Point plant involves a significant hazards determination, which requires a public hearing be held and an environmental impact statement issued before the requested action is allowed to take place, as required by the Atomic Energy Act of 1954 and The National Environmental Policy Act of 1969.

Respectfully submitted,

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Dated: March 7, 1985

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CERTIFICATE OF SERVICE

I hereby certify that copies of the Intervenors' "Amended Petition To Intervene" has been served on the following parties by deposit in the United States mail express, postage prepaid, on this 7th day of March, 1985.

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