

April 4, 2000

Ms. Barbara Lange
Messrs. Mark Oncavage and Alan Farago
Sierra Club-Miami Group
Post Office Box 43-0741
South Miami, Florida 33243-0741

SUBJECT: TURKEY POINT UNITS 3 AND 4 - HOMESTEAD AIR FORCE BASE
PROPERTY DISPOSAL

Dear Sierra Club Representatives:

This letter is in response to your letter dated March 21, 2000, addressed to the U.S. Nuclear Regulatory Commission (NRC) Document Control Desk, regarding the above subject. You specifically requested additional information regarding this matter. Our specific responses to your comments are as stated below. I would like to express my appreciation for your effort in bringing your concerns to the NRC.

1. An NRC request for additional information (RAI) dated March 8, 2000, is the only document sent by the NRC to Florida Power and Light Company (FPL) after September 16, 1999. A copy of this request is Enclosed.
2. The November 17, 1999, submittal was the last document sent to NRC by FPL.
- 3 & 4. There were no documents exchanged between the NRC and the U.S. Air Force after the August 23, 1999, letter from Douglas J. Heady, U.S. Air Force.
5. At the request of the U.S. Air Force, the NRC staff is currently performing a Safety Evaluation (SE) to assess the potential risks to Turkey Point Units 3 and 4 of the proposed commercial airport at the Homestead Air Force Base (HAFB). The SE will be used to support the Final Supplemental Environmental Impact Statement to be issued by the Air Force. The NRC staff is planning on completing this action about late-May 2000.

We will put the Sierra Club Miami Group on distribution for the documents sent by the NRC to FPL regarding the above subject. This will apply to our SE when it is issued.

B. Lange, M. Oncavage and A. Farago

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Documents regarding the above subject are accessible electronically through the ADAMS Public Electronic Reading Room link at the NRC Web site (<http://www.nrc.gov>). If you have any comments on this matter or concerns in accessing ADAMS, please contact Kahtan Jabbour, Project Manager for the Turkey Point Plant, at 301-415-1496. The accession number for the RAI discussed in Item 1 is ML003689828.

Sincerely,

/RAI/

Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosure: RAI

B. Lange, M. Oncavage and A. Farago

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Sincerely,

/RA/

Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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Enclosure: RAI

cc w/encl: See next page

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OFFICIAL RECORD COPY

March 8, 2000

Mr. Thomas F. Plunkett
President - Nuclear Division
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING THE POTENTIAL RISK
OF THE PROPOSED CIVIL AND GOVERNMENT AIRCRAFT OPERATIONS AT
HOMESTEAD AIR FORCE BASE ON THE TURKEY POINT PLANT (TAC NOS.
MA6249 AND MA6250)

Dear Mr. Plunkett:

By letter dated November 17, 1999, Florida Power and Light Company's (FPL's) responded to the U. S. Nuclear Regulatory Commission (NRC) staff request regarding the above subject. The NRC staff has reviewed FPL's submittal and has determined that additional information is needed by the staff before it can complete its review. The enclosed request for additional information (RAI) has been discussed with Olga Hanek of your staff. A target date for your response has been agreed upon to be 45 days from your receipt of this RAI. Should a situation occur that prevents you from meeting the target date, please contact me at (301) 415-1496.

Sincerely,

/RA/

Kahtan N. Jabbour, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosure: Request for Additional Information

cc w/encl: See next page

Mr. T. F. Plunkett
Florida Power and Light Company

TURKEY POINT PLANT

cc:

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REQUEST FOR ADDITIONAL INFORMATION
REGARDING THE POTENTIAL RISK OF THE PROPOSED CIVIL AND GOVERNMENT
AIRCRAFT OPERATIONS AT HOMESTEAD AIR FORCE BASE ON
TURKEY POINT UNITS 3 AND 4
FLORIDA POWER AND LIGHT COMPANY
DOCKET NOS. 50-250 AND 50-251

1. The attachment to the FPL June 15, 1998 letter response (L-98-152) on aircraft hazards presents the equation

$$f = N * P * A * F$$

as part of the Department of Energy methodology for assessing the risk of aircraft crashes to nuclear power plants. The definition of P is given as “in flight crash rate **per mile**” In addition, F is defined as “crash probability density over area A,” without any mention of units. If F is dimensionless, then the units of f work-out to be

$$(\text{Flight operation/year}) * (\text{crashes/mile}) * (\text{sq. miles}) * (\text{probability density}).$$

This has the units of

$$\text{Flight operations-crashes-miles/year}$$

which is incompatible with the quantity f, whose units are crashes/year.

The same equation is also presented in FPL’s attachment to June 24, 1994 letter response (L-94-157) on IPEEE results for aircraft. However, some of the definitions appear to be different. Specifically, on page 27, P is defined as “probability of an aircraft crash **per operation.**” With this definition the units for the equation are

$$(\text{Flight operations/year}) * (\text{crashes/flight operations}) * (\text{sq. miles}) * (\text{probability density}).$$

This works-out to have the units

$$\text{Crashes-sq.miles/year}$$

which again is inappropriate for a crash frequency. It appears in this case that if the crash probability density had the units of (1/sq. mile) then the overall crash frequency would have the units of crashes/year.

Please provide a clarification of the units that were used in both analyses with respect to the crash probability and the crash probability density.

2. With respect to the aircraft risk analyses performed for Turkey Point Units 3 & 4, please indicate how the presence of the adjacent fossil unit chimneys was taken into account when calculating the effective target area used in estimating the on-site crash frequency. Indicate the relative effect of the chimneys on the total calculated effective target area.

3. The on-site crash frequency was estimated using parameters that are dependent on aircraft type and flight phase. Specifically, this applies to the parameters N, P, A, and F in the equation

$$f = N * P * A * F .$$

That is, the equation is really of the form

$$f = \sum_i \sum_j N_{ij} P_{ij} A_{ij} F_{ij}$$

where i is the ith type of aircraft and j is the jth flight phase. Please provide a sample of representative values (e.g., for a commercial air carrier and a large military aircraft) that were used in the analyses for each of these parameters. Please indicate the source of the information used to evaluate each parameter.

4. According to the draft SEIS for the proposed disposal of some of the former Homestead Air Force Base, bird strikes can cause aircraft mishaps. Hence, some portion of the overall crash rate for a given aircraft and flight phase may be attributable to bird strikes. To what extent has the possibility of bird strikes been incorporated in the aircraft risk assessment for Turkey Point Units 3 & 4? If the Turkey Point aircraft risk analyses are based on nationally averaged aircraft crash rates, please indicate how representative these rates are of the projected Homestead air operations with respect to the bird strike contribution?

5. The draft SEIS (pp. 2.2-9 to 2.2-11), in discussing the projected air traffic for the proposed Homestead airport conversion, indicates that more than 80% of the traffic is estimated to be in connection with flights from Latin America, the Caribbean, or other international locations. The aircraft crash rates presented in NUREG-0800, SRP 3.5.1.6, are based on data for U.S. Carriers, General Aviation, and military aviation. Hence, the data may not be representative of the air traffic mix being projected for the Homestead airport.

For example, in an item presented by the National Center for Policy Analysis,^{*} reference is made to an 80-page report of the Commercial Aviation Safety Strategy Team in which the U.S. accident rate from 1987 to 1996 is described to be on the average of 0.5 major accidents per million departures, compared to 0.7 for Western Europe, 4.8 for Eastern Europe and the old Soviet Union, 5.7 for Latin America and 13 for Africa. This suggests that the accident rate could be significantly affected by the mix of air traffic that is being projected. Indicate if this has been taken into account in the FPL aircraft analyses to-date and if not, to what extent would this affect the previously estimated aircraft risks for Turkey Point Units 3 & 4.

^{*}(<http://www.ncpa.org/pd/regulat/pdreg/regfeb98e.html>)