

SIERRA
CLUB



Miami Group

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U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington DC 20555

24 February 00

RE: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Homestead AFB Property Disposal

We appreciate the considerations you have shown us during this process. As you likely realize, the conversion involving Homestead Air Force Base is very important to us and the base is very close to Turkey Point. We are extremely concerned about the public safety consequences of the conversion.

We understand that the Nuclear Regulatory Commission ("NRC") is completing a Safety Evaluation Report ("SER") for the Final Supplemental Environmental Impact Statement. Sierra Club, Miami Group, has noticed that a significant amount of important information seems to be missing from the public record including the Draft Supplemental Environmental Impact Statement ("DSEIS"). We respectfully request that you ensure that the information below is incorporated into the calculations and conclusions of the SER.

1. The NRC staff, in a letter (ref. 2) to Florida Power & Light ("FP&L"), states that the probability calculations of aircraft hazards should comply with NUREG-0800 (ref. 3, p 3.5.1.6-3). FP&L's response (ref. 4 and ref. 7) utilizes formulae that appear to be inconsistent with NUREG-0800.

2. We realize that in complex calculations, assumptions can mislead and mistakes can be made. In a Memorandum and Order for the Big Rock Nuclear Power Plant (ref. 5), for example, a conceptual error was discovered in a probability analysis. This error led to a conclusion that underestimated a plane crash risk into the nuclear power plant by a factor of 23,667. We request that a line-by-line, calculation-by-calculation probability analysis of air crashes from Homestead Airport, Homestead Spaceport, and the Combined Spaceport/Airport alternative be included in the SER, as specified by NUREG-0800.

3. Aside from Mexico, Guatemala, and the northern Bahamas Islands, it appears that Homestead is the closest mainland American airport to all the countries of the Caribbean, Central America, and South America. The DSEIS (ref. 1, p 2.2-9) predicts significant foreign passenger and cargo operations by the year 2005. For 2015 (assuming FP&L receives a license renewal) the DSEIS (ref. 1 p 2.2-9 to 2.2-11) states:

"Together, these commercial passenger server user groups are forecast to have 20,300 jet and 30,920 turboprop annual operations



by 2015. Of these 51,220 operations, more than 80% are estimated to be Latin American, Caribbean, or other international locations."

In NUREG-0800 (ref. 3, p 3.5.1.6-4), the table for fatal crash probability only states data for US. Air Carriers, General Aviation, USN/USMC, and USAF. NUREG-0800 appears to be inadequate to calculate accident probabilities concerning large proportions of foreign aircraft operations. Please explain in the SER what data and calculations are being used to compensate for the disparity between the predicted Homestead foreign/domestic fleet mix and the general norm.

4. In the Turkey Point Final Safety Analysis Report (ref. 6, fig. 2.2-2, fig. 2.5-1, fig. 2.5-2), the relevant aerial photograph, maps, and diagrams appear to show that portions of Homestead Air Force Base lie within a 5 mile radius of the plant. How does this meet acceptance criteria II.1.a and II.1.b of NUREG-0800 (ref. 3, p 3.5.1.6-2) ?

5. In an addendum to the DSEIS, on the flight path chart named "HST EAST FLOW," it appears that the following flight paths over fly Turkey Point;

1. helicopter arrivals EA1X,
2. backbone ND3X, and
3. backbone NDOX.

On the flight path chart named "HST WEST FLOW," it appears that the following flight path over flies Turkey Point:

4. backbone SD5X.

On the chart named "HST EXISTING & FUTURE LOCAL PATTERN TRACKS," it appears that the following patterns over fly Turkey Point:

5. NC8,
6. NC9, and
7. SC4.

On the flight path chart named "HST EAST FLOW-ARRIVALS," it appears that the following flight paths over fly Turkey Point:

8. backbone O5JJ,
9. backbone NDAX, and
10. backbone EA1X.

On the flight path chart named "HST EAST FLOW-DEPARTURES," it appears that the following flight paths over fly Turkey Point:

11. backbone O5WP, and
12. backbone O5WJ.

On the flight path chart named "HST WEST FLOW-ARRIVALS," it appears that the following flight paths over fly Turkey Point:

13. backbone 23FJ,
14. backbone 23RJ, and
15. backbone 23TP.

On the flight path chart named "HST WEST FLOW-DEPARTURES," it appears that the following flight paths over fly Turkey Point:

16. 23HJ,
17. 23HP,
18. 23WP,
19. 23WJ,

- 20. 23VJ,
- 21. 23SJ, and
- 22. WDX.

How do these over flights meet acceptance criteria, II.1.c of NUREG-0800 ?

6. FP&L lists the critical structures for risk assessment (ref. 7 p 3) as the containment buildings, turbine building, control building, auxiliary building spent fuel buildings, emergency diesel generator buildings, intake structure and the (twin 400') fossil unit chimneys (413' above mean sea level). We request that all fire fighting equipment, all fuel tanks (including the tanks associated with fossil units 1 & 2), and the switchyard be added to the list for risk assessment, even though they may not be structures in the strictest sense.

7. In a study conducted by Brookhaven National Laboratory (ref. 8, p 4-2) the worst case scenario of an accident at a spent fuel pool of a typical decommissioned pressurized water reactor anticipates that prompt fatalities will be 95, latent fatalities will be 143,000 and condemned land will be 2,790 square miles. We realize that Turkey Point has not been decommissioned, but there are two reactors on site, not one. The Reactor Spent Fuel Storage report (ref. 9, p 3) states that as of 11/4/98 there are 1,578 spent fuel assemblies being stored on site. This potential catastrophic accident should receive a separate risk assessment analysis since the consequences are comparable to a core-melt atmospheric accident at one reactor (ref. 8, p 4-4).

8. Bird strike hazards are a documented problem at Homestead Air Reserve Base (ref. 10). Bird strikes have the potential for causing additional aircraft crashes in the Turkey Point area. Efforts to mitigate this situation are not likely to occur, due to the close proximity of Biscayne National Park and Everglades National Park. Bird populations are protected and the killing of birds, the destruction of their habitat or attempts to traumatize bird life by noise or chemical means would be politically and legally impossible. Recently Miami-Dade government stated a willingness to maintain a buffer of undeveloped land around the former HAFB. This would likely increase bird habitat and exacerbate the problem. A site-specific quantitative multiplier based upon the bird strike hazards needs to be incorporated into the probability calculations of the air crashes in the SER.

Conclusions:

Without guessing the outcome of the SER, Sierra Club, Miami Group believes that developing a commercial airport next to two nuclear reactors at Turkey Point creates an intolerable radiological danger for south Florida far exceeding the 10 CFR 100 guidelines. We agree with FP&L that adjacent structures and canals may mitigate some aspects of an air crash and we agree that the containment buildings probably would not experience perforation. However, as discussed supra, the existence of the following unquantified problems may increase the risk of air crashes.

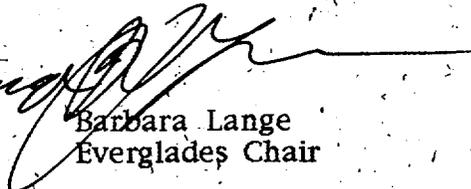
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Foreign aircraft may not be up to the standards to which we are accustomed, e.g. old aircraft, reduced maintenance, marginally trained pilots and overloaded planes. Language difficulties may also occur between air traffic controllers and foreign air pilots. Moreover, the arrival and departure flight patterns appear to be complex and convoluted (ref.11, p 1&2) with aircraft crossing over and under various federal airways to reach or leave the airport. Finally there is a significantly higher risk of bird strikes at Homestead than is the norm nationally.

Sincerely,


Alan Farago
Conservation Chair


Mark Oncavage
Energy Chair


Barbara Lange
Everglades Chair

References

1. Draft Supplemental Environmental Impact Statement, Disposal of Portions of the Former Homestead Air Force Base, Florida , U.S. Air Force and Federal Aviation Administration, December, 1999.
2. Letter to Thomas F. Plunkett, Florida Power and Light from Kahtan N. Jabbour, Senior Project Manager, Office of Nuclear Reactor Regulation, May 4, 1998.
3. NUREG-0800, Standard Review Plan 10 CFR Part 100, 3.5.1.6 Aircraft Hazards, rev. 2 - July 1981
4. Letter to U.S. Nuclear Regulatory Commission from R.J. Hovey, Vice President, Turkey Point Plant, June 15, 1998.
5. Memorandum and Order in the matter of Consumers Power Company (Big Rock Nuclear Power Plant) Atomic Safety and Licensing Board, U.S. Nuclear Regulatory Commission, March 6, 1984 (Docket No: 50-155-OLA).
6. Final Safety Analysis Report , Turkey Point Plant, Units 3 & 4, Florida Power and Light Company, volume 1, rev. 5, July 1987.
7. Letter to U.S. Nuclear Regulatory Commission from R.J. Hovey, Vice President, Turkey Point Plant, November 17, 1999.
8. NUREG/CR-6451, A Safety and Regulatory Assessment of Generic BWR and PWR Permanently Shutdown Nuclear Power Plants , Brookhaven National Laboratory, August 1997.
9. Reactor Spent Fuel Storage,
<http://www.nrc.gov/OPA/drycask/sfdata.htm>, November 4, 1998.
10. Memorandum for Distribution from Steven R. Fulghum, Col., USAFR, 482d Fighter Wing Bird Hazard Working Group, March 25, 1996.
11. Letter to U.S. Nuclear Regulatory Commission from Douglas J. Heady, SAF/GCN U.S. Air Force, August 23, 1999 enclosure HST Departure and Arrival Altitude Restrictions .

Comments on the DSEIS for the Disposal of
the Former Homestead Air Force Base, Florida

Mark P. Oncavage
12200 SW 110th Ave.
Miami, FL 33176
March 3,2000

I request an extension of the filing deadline so that I may view the "Safety Evaluation Report" ("SER") being written by the Nuclear Regulatory Commission ("NRC") for the proposed airport, spaceport, and combined airport/spaceport alternative. The Air Force and the Federal Aviation Administration have had approximately 80 months to obtain an SER from the NRC but has failed to do so, violating the letter and spirit of the National Environmental Policy Act of 1969. Since all of my comments are relevant to public safety concerning the 2 nuclear reactors and the spent fuel pools at Turkey Point, I believe the extension should be granted. I request a filing deadline not earlier than 10 days after the SER is delivered to me.

Please have the following questions answered in the Final Supplemental Environmental Impact Statement ("FSEIS").

SPACEPORT

1. Is the storage area for the 1,000,000 lbs. of liquid oxygen, 1,000,000 lbs. of liquid hydrogen, nitrogen tetroxide, and perchlorates located within 5 miles of Turkey Point ?
2. What are the dangers to the human environment and the natural environment if these rocket fuels were to leak from their storage ?
3. If these rocket fuels were to ignite and explode how large would the fireball be ?
4. If these rocket fuels were to ignite and explode, what temperature at Turkey Point would be reached ?
5. Would safety equipment at Turkey Point be damaged or destroyed by the rocket fuel explosion ?

6. Would safety personnel at Turkey Point be killed or injured by the rocket fuel explosion ?
7. Would the 400' stacks at Turkey Point be toppled ?
8. Would the switchyard at Turkey Point be damaged or destroyed ?
9. If a category 5 hurricane were to come ashore at the spaceport, would the aboveground rocket fuel tanks be torn from their moorings ?
10. Would the underground rocket fuel tanks be brought up to the surface by the pressure differential from the storm surge ?
11. Would the rocket fuel tanks be transported by storm surge, wind, and waves to Turkey Point ?
12. What happens when rocket fuels and seawater are mixed ?
13. Would the problems created by the fuel tanks damage the spent fuel pools at Turkey Point ?
14. Would a rocket crash create significant public safety hazards at the Turkey Point reactors ?
15. Would a rocket crash create significant public safety hazards at the Turkey Point spent fuel pools ?
16. What is the Air Force's statistical probability of a spaceport crash occurring at Turkey Point ?
17. What is the FAA's statistical probability of a spaceport crash occurring at Turkey Point ?
18. What is the NRC's statistical probability of a spaceport crash occurring at Turkey Point ?

COMMERCIAL AIRPORT

19. How many flight paths, holding patterns, and landing patterns cross over Turkey Point ?
20. How many flight paths, holding patterns, and landing patterns are within 2 miles of Turkey Point ?
21. How many flight paths, holding patterns, and landing patterns are within 5 miles of Turkey Point ?
22. How many flight paths, holding patterns, and landing patterns are within 5 to 10 miles of Turkey Point ?
23. How does the Air Force quantify the increased air crash hazard for commercial operations from birds associated with Everglades N.P., Biscayne N.P., and Mt. Trashmore ?
24. How does the FAA quantify the increased air crash hazard for commercial operations from birds associated with Everglades N.P., Biscayne N.P., and Mt. Trashmore ?
25. How does the NRC quantify the increased air crash hazard for commercial operations from birds associated with Everglades N.P., Biscayne N.P., and Mt. Trashmore ?
26. How does the Air Force quantify the air crash probabilities for Turkey Point for air carriers from the Caribbean, Central American, and South American countries ?
27. How does the FAA quantify the air crash probabilities for Turkey Point for air carriers from the Caribbean, Central American, and South American countries ?
28. How does the NRC quantify the air crash probabilities for Turkey Point for air carriers from Caribbean, Central American, and South American countries ?
29. What would be the consequences of a worst case accident of an airliner crashing into the Turkey Point control building ?

30. What would be the consequences of a worst case accident of an airliner crashing into the Turkey Point spent fuel pool buildings ?

31. What would be the dollar costs of making the following structures and equipment at Turkey Point strong enough to withstand a direct airliner crash and still be able to perform its function:

- a. containment buildings,
- b. turbine building,
- c. control building,
- d. auxiliary building,
- e. spent fuel buildings,
- f. emergency diesel generator buildings,
- g. intake structure,
- h. 400' fossil unit chimneys,
- i. all fire fighting equipment,
- j. all fuel tanks, including fossil unit tanks, and
- k. the switchyard ?

32. What is the Air Force's statistical probability of an airplane crash at Turkey Point from the Homestead airport ?

33. What is the FAA's statistical probability of an airplane crash at Turkey Point from the Homestead airport ?

34. What is the NRC's statistical probability of an airplane crash at Turkey Point from the Homestead airport ?