



FRIENDS OF THE EVERGLADES

Founded by Marjory Stoneman Douglas

Admiral Stewart Ebnetter
Regional Administrator
U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W. Suite 2900
Atlanta, Georgia 30323-01999


December 9, 1997

Dear Admiral Ebnetter,

I write to you on behalf of Friends of the Everglades, Izaak Walton League Florida Keys Chapter, and Sierra Club Miami Group. Friends wrote to you a year ago about Dade County's plan to build a large commercial airport at the Homestead Air Force Base site in south Dade. Since our letter, certain developments have increased our concern about the proposed airport's proximity to the Turkey Point Nuclear Power Plant only five miles south-southwest of the base (Exhibit 1). Reports about an air cargo plane crashing near Miami International Airport, and the rash of military training flight crashes, have heightened our concern about a commercial airport being established so close to an operating nuclear plant (Exhibit 2). Our groups would like information on NRC guidelines for establishing a commercial airport in the vicinity of a nuclear plant and information as to whether the design basis of Turkey Point considered a commercial airport in close proximity to the two nuclear reactors.

Discussions with your staff did not assure us that the NRC was actively looking into this matter. However, you did say in response to our letter that, "in the event that development of the Homestead site becomes imminent, the NRC will require Florida Power and Light Company to assess the risk to the Turkey Point Plant from flight operations, and to revise evacuation time estimates for the emergency planning zone based upon projected increase in population due to airport employees and transient airline passengers." (Exhibit 3). Admiral Ebnetter, we want to inform you that "imminent" is here! Dade County has applied to the South Florida Water Management District for an Environmental Resource Permit to develop a commercial airport at the Base site and a hearing will be held on the disputed permit in January.

In the interest of public safety, we believe the time has come for the NRC to address the evacuation and potential nuclear safety issues associated with this matter. We are requesting that the NRC study the commercial airport proposed for the Homestead Air Force Base site to determine whether or not it meets the "criteria with respect to an acceptable risk for airports based on the distance from a plant and the total annual number of flight operations," described in your letter, along with the requirements of the Atomic Energy Act and 10 CFR Part 50, Appendix E. Your letter says, "If necessary, measures to reduce aircraft crash risk to an acceptable level for a plant could include the implementation of plant overflight restrictions." Please let us know in your response how large a radius such an overflight restriction might effect.



I know that you take your responsibility for nuclear safety and the protection of the public welfare very seriously. This solemn responsibility dictates that your agency commence a review of any and all potential impacts that Dade's proposed commercial airport might have on our neighborhood nuclear plant. This review would properly include an assessment of the potential risks that flight operations and crashes could pose to non-safety related and safety related equipment, plant security, offsite power, fire protection, the electrical and communication systems, the spent fuel pool facility, and the effect that increased population, both resident and transient, could have on emergency evacuation capability. It should also include an analysis of the potential effect that bird strikes, in this area of dense bird populations, could have on the vicinity of the nuclear plant (Exhibit 4). Finally, it would analyze the issue raised by Senator Darryl Jones who has been nominated for Secretary of the Air Force in his testimony before the Defense Base Closure Commission in May 1993 that, "Turkey Point, a nuclear power plant south of Miami and near Homestead Air Force Base has long been reported as a potential target by defecting pilots and intelligence sources," in light of the fact that was once a military base will become primarily a commercial airport (Exhibit 5).

Hurricane Andrew aptly demonstrated the fragility of the emergency response capability in this hurricane prone area (Exhibit 6). Indeed, one of the reasons for originally selecting the Turkey Point site was the low population density (Exhibit 7). I have attached a page from the County's Potential Secondary and Cumulative Impacts analysis that states, "The operation of the Dade County-Homestead Regional Airport will be a catalyst for further economic expansion of the Region allowing the non-aeronautical impacts (benefits) of the Project to materialize within the greater Homestead area and throughout Dade and Northern Monroe County." (Exhibit 8).

It logically follows that the economic expansion envisioned by the airport planners, along with the proposed widening of U.S. 1, will cause the resident and transient population in south Dade and the Keys to mushroom with only a few roads to escape (no matter how wide they are) in the event of a nuclear accident. The NRC should require the licensee to reassess the Turkey Point emergency plans for adequacy based on population projections for the airport vicinity to determine whether offsite plans will be adequate and can be implemented, especially since a Dade County satellite school is located precariously close to the plant (Exhibit 9).

Thank you for your cooperation on this matter of grave concern to those of us who live in the shadow of Turkey Point and seek to protect the fragile Everglades ecosystem and the public health from the serious consequences that could result from a nuclear accident. Please call me at (305) 669-0858, if you have any questions or comments. I look forward to speaking with you once again.

Respectfully,

Joette Lorion

Joette Lorion
President

cc FEMA with enclosures

ACTION

EDO Principal Correspondence Control

FROM:

DUE: 05/26/98

EDO CONTROL: G980315

DOC DT: 04/28/98

FINAL REPLY:

Richard Rebuth, Chairman
South Dade Community Council, FL

TO:

Chairman Jackson

FOR SIGNATURE OF :

** GRN **

CRC NO: 98-0442

Collins, NRR

DESC:

ROUTING:

REQUEST INFORMATION ON TURKEY POINT AS IT RELATES
TO THE PROPOSED EXPANSION & COMMERCIAL DEVELOPMENT
OF HOMESTEAD AIR RESERVE BASE

Callan
Thadani
Thompson
Norry
Blaha
Burns
Reyes, RII

DATE: 05/12/98

ASSIGNED TO:

CONTACT:

NRR

Collins

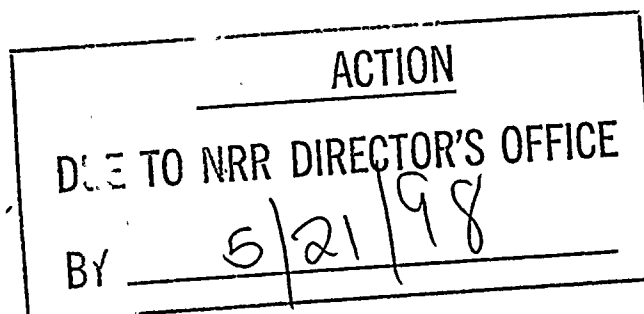
SPECIAL INSTRUCTIONS OR REMARKS:

NRR ACTION: DRPE:Zwolinski

NRR RECEIVED: May 12, 1998

NRR ROUTING: Collins/Miraglia

Boger
Sheron
Travers
Roe
Zimmerman
NRR Mailroom



OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

PAPER NUMBER: CRC-98-0442 LOGGING DATE: May 11 98
ACTION OFFICE: EDO
AUTHOR: RICHARD REBUTH
AFFILIATION: FLORIDA
ADDRESSEE: CHAIRMAN JACKSON
LETTER DATE: Apr 28 98 FILE CODE: ID&R 5 TURKEY POINT
SUBJECT: REQUEST INFORMATION RE TURKEY POINT AS IT RELATES
TO THE PROPOSED EXPANSION & COMMERCIAL DVEL. OF
HOMESTEAD AIR RESERVE BASE
ACTION: Direct Reply
DISTRIBUTION: CHAIRMAN
SPECIAL HANDLING: SECY TO ACK
CONSTITUENT:
NOTES: OCM #13142
DATE DUE: May 26 98
SIGNATURE: . DATE SIGNED:
AFFILIATION:



U.S. NUCLEAR REGULATORY COMMISSION

STANDARD REVIEW PLAN

OFFICE OF NUCLEAR REACTOR REGULATION

3.5.1.6 AIRCRAFT HAZARDS

REVIEW RESPONSIBILITIES

Primary - Siting Analysis Branch (SAB)

Secondary - None

I. AREAS OF REVIEW

The staff reviews the applicant's assessment of aircraft hazards. The purpose of the review is to assure that the risks due to aircraft hazards are sufficiently low. Probabilistic considerations may be used to demonstrate that aircraft hazards need not be a design basis concern. Otherwise, design basis aircraft identification is made and the applicant's plant design is evaluated to assure that it is protected against the potential effects of aircraft impacts and fires.

The SAB reviews the applicant's assessment of aircraft hazards to the plant and determines whether or not they should be incorporated into the plant design basis. If the aircraft hazards are incorporated into the plant design basis, the SAB identifies and describes the design basis aircraft in terms of aircraft weight, speed, and other appropriate characteristics.

On request by SAB, the following branches with primary review responsibility will review specific aspects of aircraft hazards:

1. The Structural Engineering Branch (SEB), in the area of missile effects (SRP Section 3.5.3), with respect to aircraft impacts,
2. The Chemical Engineering Branch (CMEB), in the area of fire protection (SRP Section 9.5.1), with respect to aircraft fires, and
3. The Auxiliary Systems Branch (ASB), in the area of structures, systems, and components (SSC) important to safety (SRP Section 3.5.2), with respect to protection requirements against aircraft crashes.

Rev. 2 - July 1981

USNRC STANDARD REVIEW PLAN

Standard review plans are prepared for the guidance of the Office of Nuclear Reactor Regulation staff responsible for the review of applications to construct and operate nuclear power plants. These documents are made available to the public as part of the Commission's policy to inform the nuclear industry and the general public of regulatory procedures and policies. Standard review plans are not substitutes for regulatory guides or the Commission's regulations and compliance with them is not required. The standard review plan sections are keyed to the Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants. Not all sections of the Standard Format have a corresponding review plan.

Published standard review plans will be revised periodically, as appropriate, to accommodate comments and to reflect new information and experience.

Comments and suggestions for improvement will be considered and should be sent to the U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, Washington, D.C. 20555.

Enclosure 2

4. For those areas of review identified above as being part of the primary responsibility of other branches, the acceptance criteria necessary for the review and the methods of their application are contained in the referenced SRP sections of the corresponding primary branches.
5. The Applied Statistics Branch (ASB/MPA) will provide technical review support with respect to aircraft accident statistics.

II. ACCEPTANCE CRITERIA

SAB acceptance criteria are based on meeting the relevant requirements of one of the following sets of regulations:

1. 10 CFR Part 100, §100.10 as it relates to indicating that the site location, in conjunction with other considerations (such as plant design, construction, and operation), should insure a low risk of public exposure. This requirement is met if the probability of aircraft accidents resulting in radiological consequences greater than 10 CFR Part 100 exposure guidelines is less than about 10^{-7} per year (see SRP Section 2.2.3). The probability is considered to be less than about 10^{-7} per year by inspection if the distances from the plant meet all the requirements listed below:
 - (a) The plant-to-airport distance D is between 5 and 10 statute miles, and the projected annual number of operations is less than $500 D^2$, or the plant-to-airport distance D is greater than 10 statute miles, and the projected annual number of operations is less than $1000 D^2$,
 - (b) The plant is at least 5 statute miles from the edge of military training routes, including low-level training routes, except for those associated with a usage greater than 1000 flights per year, or where activities (such as practice bombing) may create an unusual stress situation,
 - (c) The plant is at least 2 statute miles beyond the nearest edge of a federal airway, holding pattern, or approach pattern.

If the above proximity criteria are not met, or if sufficiently hazardous military activities are identified (see item b above), a detailed review of aircraft hazards must be performed. Aircraft accidents which could lead to radiological consequences in excess of the exposure guidelines of 10 CFR Part 100 with a probability of occurrence greater than about 10^{-7} per year should be considered in the design of the plant. If the results of the review do not support a finding that the risk due to aircraft activities is acceptably low, then the design basis acceptance criteria outlined in Item II.2 below applies.

2. General Design Criterion (GDC) 4 of 10 CFR Part 50 (Ref. 13), Appendix A, requires that structures, systems, and components (SSC) important to safety be appropriately protected against the effects of missiles that may result from events and conditions outside the nuclear power unit. GDC 3 of 10 CFR Part 50, Appendix A, requires that SSC important to safety be appropriately protected against the effects of fires. The plant meets the relevant requirements of GDC 3 and GDC 4, and is considered appropriately protected against design basis aircraft impacts (Ref. 6) and fires (Ref. 3) if the SSC important to safety are capable of withstanding the effects of the

postulated aircraft impacts and fires without loss of safe shutdown capability, and without causing a release of radioactivity which would exceed 10 CFR Part 100 dose guidelines.

The safety-related SSC to be considered with respect to the above acceptance criteria include those described in the Appendix to Regulatory Guide 1.117, "Structures, Systems, and Components of Light-Water-Cooled Reactors to be Protected Against Tornadoes." Other safety-related SSC, which may not be included in Regulatory Guide 1.117, will be considered on a case-by-case basis in accordance with the acceptance criteria of the appropriate branches having primary responsibility for their protection.

III. REVIEW PROCEDURES

The reviewer selects and emphasizes aspects of the areas covered by this SRP section as may be appropriate for a particular case. The judgment on areas to be given attention and emphasis in the review is based on a inspection of the material presented to see whether it is similar to that recently reviewed on other plants and whether items of special safety significance are involved.

The staff's review of the aircraft hazard assessment consists of the following steps:

1. **Aviation Uses.** Data describing aviation uses in the airspace near the proposed site, including airports and their approach paths, federal airways, Federal Aviation Administration (FAA) restricted areas, and military uses is obtained from Section 2.2.1-2.2.2 of the SAR. For many cases, no detailed analysis need be made as the probability can be judged adequately low based on a comparison with analyses previously performed (Refs. 5, 7, 8, 9 and 10). In general, civilian and military maps should be examined to verify that all aviation facilities of interest have been considered. In the process, the reviewer should develop an independent assessment of the aircraft hazards. Communications with agencies responsible for aircraft operations and the evaluation of aircraft operational data may be utilized.
2. **Airways.** For situations where federal airways or aviation corridors pass through the vicinity of the site, the probability per year of an aircraft crashing into the plant (P_{FA}) should be estimated. This probability will depend on a number of factors such as the altitude and frequency of the flights, the width of the corridor, and the corresponding distribution of past accidents.

One way of calculating P_{FA} is by using the following expression:

$$P_{FA} = C \times N \times A/w$$

where:

C = inflight crash rate per mile for aircraft using airway,

w = width of airway (plus twice the distance from the airway edge to the site when the site is outside the airway) in miles,

N = number of flights per year along the airway, and

A = effective area of plant in square miles.

This gives a conservative upper bound on aircraft impact probability if care is taken in using values for the individual factors that are meaningful and conservative. For commercial aircraft a value of $C = 4 \times 10^{-10}$ (Ref. 11) per aircraft mile has been used. For heavily traveled corridors (greater than 100 flights per day), a more detailed analysis may be required to obtain a proper value for this factor.

3. Civilian and Military Airports and Heli-Ports (Refs. 2, 4, and 14). The probability of an aircraft crashing into the site should be estimated for cases where one or more of the conditions in Item II.1 of the Acceptance Criteria are not met.

The probability per year of an aircraft crashing into the site for these cases (P_A) may be calculated by using the following expression:

$$P_A = \sum_{i=1}^L \sum_{j=1}^M C_j N_{ij} A_j$$

where:

M = number of different types of aircraft using the airport,
L = number of flight trajectories affecting the site,
 C_j = probability per square mile of a crash per aircraft movement, for the jth aircraft,
 N_{ij} = number (per year) of movements by the jth aircraft along the ith flight path, and
 A_j = effective plant area (in square miles) for the jth aircraft.

The manner of interpreting the individual factors in the above equation may vary on a case-by-case basis because of the specific conditions of each case or because of changes in aircraft accident statistics.

Values for C_j currently being used are taken from the data summarized in the following table:

Distance From End of Runway (miles)	Probability ($\times 10^8$) of a Fatal Crash per Square Mile per Aircraft Movement			
	U.S. Air Carrier ¹	General Aviation ²	USN/USMC ¹	USAF ¹
0-1	16.7	84	8.3	5.7
1-2	4.0	15	1.1	2.3
2-3	0.96	6.2	0.33	1.1
3-4	0.68	3.8	0.31	0.42
4-5	0.27	1.2	0.20	0.40
5-6	0	NA ³	NA	NA
6-7	0	NA	NA	NA
7-8	0	NA	NA	NA
8-9	0.14	NA	NA	NA
9-10	0.12	NA	NA	NA

¹Reference 2.

²Reference 4.

³NA indicates that data was not available for this distance.

4. Designated Airspaces. For designated airspaces involving military or civilian usage, a detailed quantitative modeling of all operations should be verified. The results of the model should be the total probability (C) of an aircraft crash per unit area and time in the vicinity of the proposed site.

The probability per year of a potentially damaging crash at the site due to operations at the facility under consideration (P_M) is then given for this case by the following expression:

$$P_M = C \times A$$

where:

C = total probability of an aircraft crash per square mile per year in the vicinity of the site due to the airports being considered; and

A = effective area of one unit of the plant in square miles.

Where estimated risks due to military aircraft activity are found to be unacceptably high, suitable airspace or airway relocation should be implemented. Past experience has been that military authorities have been responsive to modification of military operations and relocation of training routes in close proximity to nuclear power plant sites. (Ref. 12)

5. Holding Patterns. Holding patterns are race track shaped courses at specified altitudes, associated with one or more radio-navigational facilities, where aircraft can "circle" while awaiting clearance to execute an approach to a landing at an airport or to continue along an airway. Holding patterns which are sufficiently distant from the plant need not be considered (See subsection II above). Otherwise, traffic in the holding pattern should be converted into equivalent aircraft passages taking into account the characteristics, including orientation with respect to the plant, of the holding pattern. The information in Item III.2 above should be used in this evaluation.
6. The total aircraft hazard probability at the site equals the sum of the individual probabilities obtained in the preceding steps.
7. The effective plant areas used in the calculations should include the following:
 - a. A shadow area of the plant elevation upon the horizontal plane based on the assumed crash angle for the different kinds of aircraft and failure modes.
 - b. A skid area around the plant as determined by the characteristics of the aircraft under consideration. Artificial berms or any other man-made and natural barriers should be taken into account in calculating this area.
 - c. The areas of those safety-related SSC which are susceptible to impact or fire damage as a result of aircraft crashes.

IV. EVALUATION FINDINGS

The reviewer drafts an introductory paragraph for the evaluation findings describing the procedure used in evaluating the aircraft hazards with respect to the safety-related SSC. The reviewer verifies that the site location is acceptable and meets the requirements of 10 CFR Part 100, §100.10.

The basis for the above findings may be strictly in terms of the probabilities associated with potential aircraft crashes onsite. If the aircraft crash statistics applicable to the onsite facilities are such that SRP Section 2.2.3 criteria are met without explicit consideration of plant design features, then conclusions of the following type should be included in the staff's safety evaluation report:

The staff concludes that the operation of the _____ plant in the vicinity of _____ does not present an undue risk to the health and safety of the public and meets the relevant requirements of 10 CFR Part 100, §100.10. This conclusion is based on the staff's independent verification of the applicant's assessment of aircraft hazards at the site that resulted in a probability less than about 10^{-7} per year for an accident having radiological consequences worse than the exposure guidelines of 10 CFR Part 100.

In addition, plant sites reviewed in the past which had equivalent aircraft traffic in equal or closer proximity were, after careful examination, found to present no undue risk to the safe operation of those plants. Based upon this experience, in the staff's judgment, no undue risk is present from aircraft hazard at the plant site now under consideration.

In the event that the staff evaluation of the aircraft hazards does not support the above basis, i.e., if SRP Section 2.2.3 criteria are not met, then the basis for acceptance is derived from applying GDC 3 and GDC 4 criteria. If the protection against aircraft impacts and fires is such that the plant safety-related SSC meet GDC 3 and GDC 4 criteria, then 10 CFR Part 100 requirements are considered to be met and conclusion of the following type may be included in the staff's safety evaluation report:

The staff concludes that the operation of the _____ plant in the vicinity of _____ does not present an undue risk to the health and safety of the public due to aircraft hazards and meets the relevant requirements of General Design Criteria 3 and 4. This conclusion is based on the staff having independently verified the applicant's assessment of aircraft hazards, including aircraft fires and impacts, at the site and that if the appropriate safety-related structures, systems, and components are designed to withstand the aircraft selected as the design basis aircraft, the probability of an aircraft strike causing radiological consequences in excess of the exposure guidelines of 10 CFR Part 100 is less than about 10^{-7} per year.

V. IMPLEMENTATION

The following is intended to provide guidance to applicants and licensees regarding the NRC staff's plans for using this SRP section.

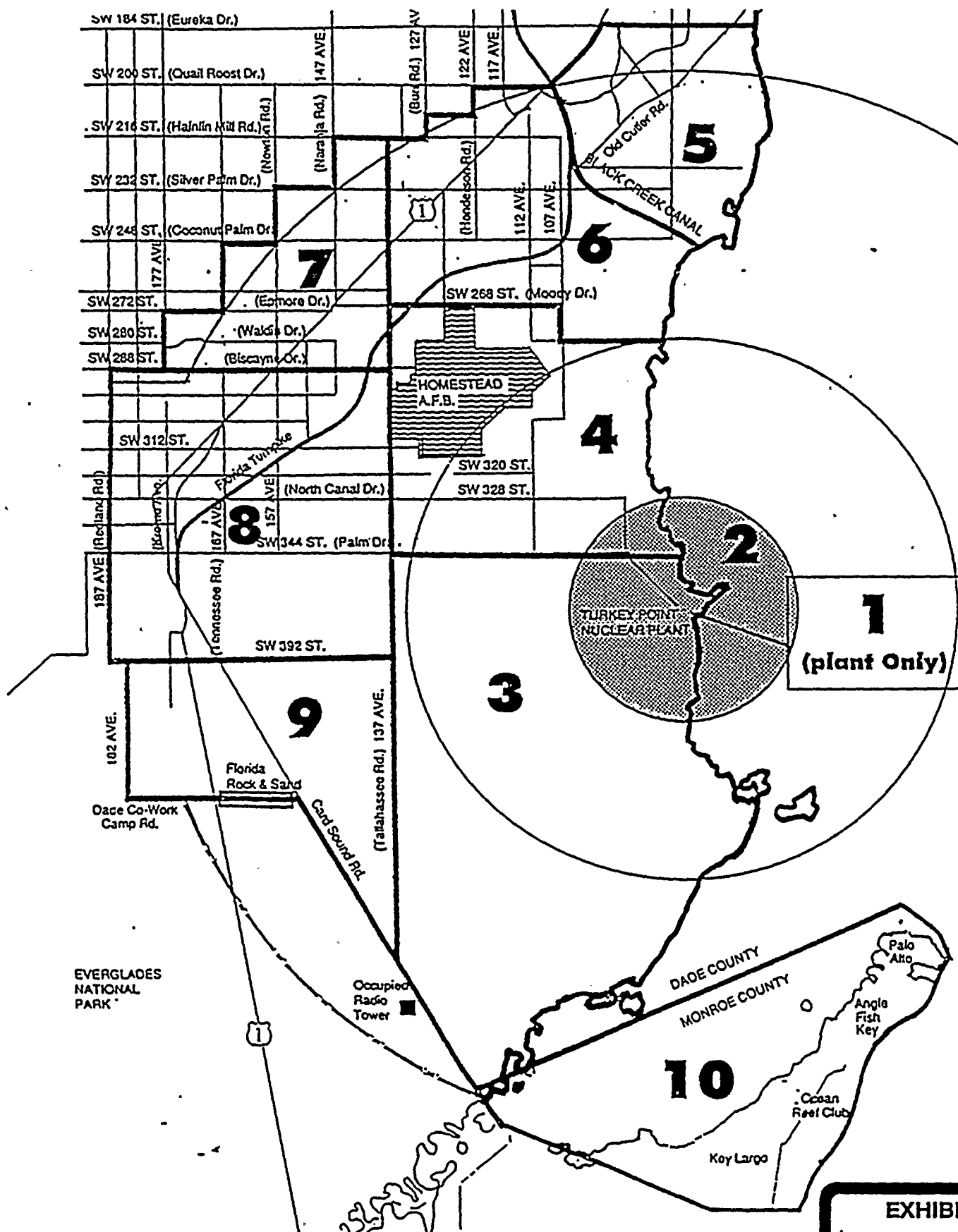
Except in those cases in which the applicant proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, and method described herein will be used by the staff in its evaluation of conformance with Commission regulations.

Implementation schedules for conformance to parts of the method discussed herein are contained in the referenced regulatory guides and NUREG.

VI: REFERENCES

1. 10 CFR Part 100, "Reactor Site Criteria."
2. D. G. Eisenhut, "Reactor Siting in the Vicinity of Airfields." Paper presented at the American Nuclear Society Annual Meeting, June 1973.
3. I. I. Pinkel, "Appraisal of Fire Effects from Aircraft Crash at Zion Power Reactor Facility," July 17, 1972 (Docket No. 50-295).
4. D. G. Eisenhut, "Testimony on Zion/Waukegan Airport Interaction" (Docket No. 50-295).
5. USAEC Regulatory Staff, "Safety Evaluation Report," Appendix A, "Probability of an Aircraft Crash at the Shoreham Site" (Docket No. 50-322).
6. "Addendum to the Safety Evaluation by the Division of Reactor Licensing, USAEC, in the Matter of Metropolitan Edison Company (Three Mile Island Nuclear Station Unit 1, Dauphin County, Pennsylvania)," April 26, 1968 (Docket No. 50-289).
7. Letter to Honorable J. R. Schlesinger from S. H. Bush, Chairman, Advisory Committee on Reactor Safeguards, "Report on Rome Point Nuclear Generating Station," November 18, 1971 (Project No. 455).
8. Letter to Mr. Joseph L. Williams, Portland General Electric Company, from R. C. DeYoung (in reference to Mr. Williams' letter of May 7, 1973), November 23, 1973 (Project No. 485).
9. "Aircraft Considerations-Preapplication Site Review by the Directorate of Licensing, USAEC, in the Matter of Portland General Electric Company, Boardman Nuclear Plant, Boardman, Oregon," October 12, 1973 (Project No. 485).
10. Letter to Mr. J. H. Campbell, Consumers Power Company, from Col. James M. Campbell, Dep. Chief, Strategic Division, Directorate of Operations, U.S. Air Force, May 19, 1971 (Docket No. 50-155).
11. H. E. P. Krug, "Testimony on Aircraft Operations in Response to a Question from the Board" (Docket Nos. 50-275 and 50-323).
12. Letter to Mr. J. H. Campbell, Consumers Power Company, from Col. James M. Campbell, Dep. Chief, Strategic Division, Directorate of Operations, U.S. Air Force, May 19, 1971 (Docket No. 50-155).
13. 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."
14. NUREG-0533, "Aircraft Impact Risk Assessment Data Base for Assessment of Fixed Wing Air Carrier Impact Risk in the Vicinity of Airports."

EVACUATION IN THE EVENT OF NUCLEAR RELEASE AT TURKEY POINT F.P.L. PLANT



EXHIBIT

1

Halt flights, military told after crashes

By RICHARD PARKER
Herald Washington Bureau

WASHINGTON — Defense Secretary William Cohen on Wednesday ordered the armed services to halt training flights for 24 hours beginning Friday.

With five military air crashes beginning Saturday off the African coast and culminating with two F-16s bumping off the New Jersey coast Tuesday night, Cohen said, "We can do better."

The services, one at a time, will ground their crews for a day while they inspect planes and review flight techniques over the course of a week. The suspension of training flights will not affect normal patrols such as those over Bosnia and the Persian Gulf.

Cohen's order comes even though Air Force and Navy pilots are having one of their safest years on record.

The services track air safety by measuring the number of crashes in which someone is killed or \$1 million in damage is done to a plane, and by measuring accidents against the number of fly

DEADLY DAYS

Five crashes involving military aircraft have occurred since last weekend:

- **Saturday:** An Air Force C-141 collided with a German military plane off the coast of Africa; all 33 persons aboard the two aircraft apparently were killed.
- **Sunday:** A Navy F-A-18 fighter crashed in Oman; the pilot was killed. An Air Force F-117A stealth fighter broke up in flight at a Maryland air show; there were no serious injuries.
- **Monday:** A Marine Corps F-A-18D Hornet fighter crashed in North Carolina; both crewmen were killed.
- **Tuesday:** Two Air National Guard F-16 fighters collided off the New Jersey coast; there no serious injuries.

Herald Washington Bureau

ing hours logged by pilots.

In 1979 the Air Force endured 107 major accidents. This year, records kept by the Air Force Safety Center show 29 major accidents, two more than last year, the safest the service has ever had.

Even with the three recent accidents "we are projecting the second-best year ever," said Capt. Keri Humphrey, an Air Force public affairs officer.

The Navy has had 14 major accidents this year, its best year ever, while the Marine Corps has had 12 accidents, an average year in Marine aviation.

The types of planes involved in the recent accidents also reveal little: 11 F-16s have crashed this

year, compared with nine last year, and 17 in 1995. More than 20 crashed in 1990. The F-16 is the most common aircraft in the inventory; about 1,500 are in U.S. hangars and on runways.

The Air Force has lost three Stealth fighters in the past six years, including an accident at a Maryland air show.

The explanation for the crashes, among different kinds of aircraft flying different missions, might lie in peacetime pilots' failure to get enough high-quality experience in simulated combat conditions, according to a senior Air Force investigator.

The investigator also cautioned that accidents happen all the time. "Sometimes there is no reason," he said.

EXHIBIT

2a

The Miami Herald

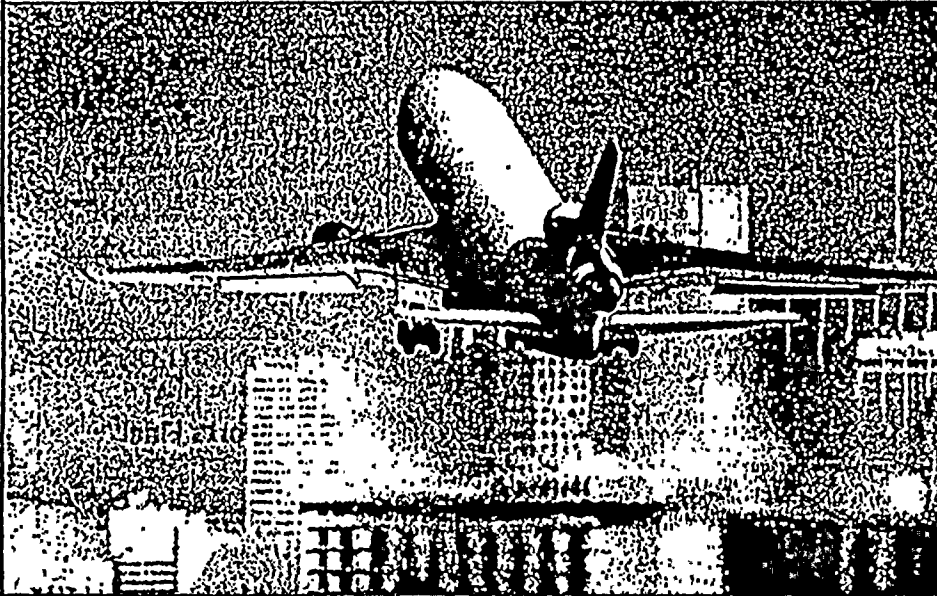
www.herald.com

87th YEAR, No. 309
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SUNDAY, OCTOBER 5, 1997

FAA INSPECTION PROCESS:

Holes in the safety net



TAKING OFF:
An airplane climbing eastward from MIA is part of dramatically increased air traffic over Miami.

JON KRAL
Herald Staff

The ValuJet and Fine Air crashes have raised serious questions about gaps in procedures to ensure that planes are safe to fly

By JOHN LAHTIQUA
Herald Staff Writer

Last spring, nine Federal Aviation Administration inspectors spent 19 days conducting a costly, white-glove inspection of Miami-based Fine Air. That team, assembled from around the country, found numerous minor problems at the cargo carrier, but no significant safety issues.

The team confirmed the reports of other well-paid FAA inspectors in Miami, who regularly oversee Fine Air. The local inspectors also found no major malfunctions in the airline's operations.

But on Aug. 7, a Fine Air DC-8 jet plane crashed on takeoff from Miami International Airport, killing five men and narrowly missing a busy office complex.

Still another team of FAA inspectors swept in, with their briefcases and thick binders full of federal aviation regulations, and promptly told the airline, "Shut down or we'll shut you down."

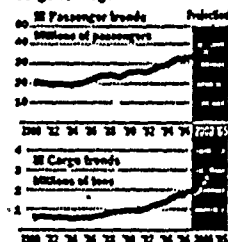
This time, they found a long list of problems and erroneous procedures that clearly had existed before the crash. The airline expects to reopen this week and has agreed to pay the FAA \$1.5 million.

The Fine Air crash came 15 months after ValuJet Flight 592 nose-dived into the Everglades mud, killing 110 people. That tragedy brought to light glaring gaps in FAA inspection procedures.

"It sure does seem that a lot of people missed things that should have been obvious before these crashes," says Tim Forte,

PLEASE SEE FAA, 20A

MIAMI INTERNATIONAL AIRPORT Total passenger flights and cargo tonnage



*Projected for 1997, 2000 and 2005
SOURCE: Dade County Airports Express

EXHIBIT

26



FAA safety inspections questioned

Aircraft scrutiny called lax

FAA, FROM 1A

a former FAA and National Transportation Safety Board executive. Forte is now air safety officer at Embry Riddle Aviation University in Daytona Beach. "We are seeing repeated occurrences of people not doing their jobs in a satisfactory way."

The twin disasters have raised serious questions about the effectiveness of the FAA's air safety inspection process — the system designed to ensure that licensed aircraft are safe to fly.

Miami is the busiest international air cargo port in the country. With the number of cargo and passenger flights increasing sharply every year, air safety inspections could mean the lives of pilots, passengers and those who live and work under flight paths.

Critics of the FAA say inspectors spend too much time reviewing paperwork and not enough time checking actual flight procedures.

The FAA argues that the agency's relationship with airlines is a partnership that depends on airlines' voluntary compliance with federal safety regulations.

In the wake of the Fine Air crash, FAA Administrator Jane Garvey announced that the agency would review its inspection methods to better identify problems before they become safety issues.

THE FAA'S PROCEDURES Night inspections slack; few long flights reviewed

This is what The Herald found in its review of the FAA's performance:

Although flights take off and land every day at all hours in Miami, none of the 88 full-time federal air safety inspectors in the Miami region, including those responsible for cargo air-



NIGHT FLIGHT: Loaders begin to strap down cargo on a Boeing 757 at MIA. Until recently, the FAA didn't review cargo loading procedures.

THE FAA

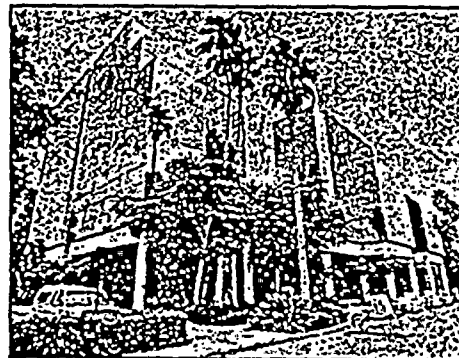
The FAA, the agency responsible for air safety in America, oversees:

Flights per day	30,000
Pilots in the U.S. (both general aviation and commercial)	700,000
Airplanes	200,000
Mechanical	300,000

The FAA has an estimated budget this year of \$9.4 billion. It has 48,378 permanent employees, including more than 33,000 air traffic control personnel. There are about 3,000 air safety inspectors.

SC-002, FAA News Service

Inspectors spend most of their time reviewing paperwork.



'THE CRYSTAL PALACE': This building on Northwest 32th Street



PROMISED A REVIEW: FAA Administrator Jane Garvey.

disciplined, according to the FAA. Again, the FAA would not allow interviews with any of the personnel involved.

Sacrey says that in his five years overseeing the Miami district, no inspector in Miami has ever been dismissed, suspended or demoted for lack of vigilance in inspections.

He said there have been cases of "burnout" in which people were transferred out of inspector positions and others put in "performance enhancement" programs if other inspectors found infractions they had failed to detect.

Sacrey said that inspectors had been transferred from inspecting airlines after complaints by airline owners about their oversight. He said these transfers most often are attributed to "personality differences." He said some airlines have obtained injunctions against particularly bothersome inspectors.

The government's General Accounting Office has repeatedly criticized the FAA for its assignment of inspectors, especially its failure to target obvious problem areas — such as the rapidly expanding Miami cargo scene.

But even if inspectors are on the scene, some people in the aviation industry question their ability to do their job, given what they say is the strong political pressure in the FAA to protect airline operators.

DON'T MAKE WAVES? Critics say inspectors defensive about airlines

In at least two cargo plane crashes in the past five years, National Transportation Safety Board reports have criticized FAA oversight. After a February 1995 crash in Kansas City, the NTSB noted a tendency of FAA inspectors to be "defensive" about the airlines to which they were assigned.

"That's because they don't want to make waves because of the influence airline companies have in the FAA," said a source close to the investigation of the Fine Air crash. "A lot of these inspectors don't have the motivation to really change anything. They are discouraged. Complaints against the airlines tend to get lost in their own bureaucracy."

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the Miami region, including those responsible for cargo airlines, are regularly assigned to work nights or weekends.

"Everybody knows if you have a sick airplane, you put it on the midnight run because after 3 p.m. you won't see an inspector," says Ryan Young, a cargo pilot and former senior first officer at Fine Air. "These are 6-to-3 and 9-to-5 guys, which doesn't make sense when most cargo goes at night."

Long-distance flights to Latin America make up a major portion of Miami-based commercial aviation. Inspectors are supposed to review crew and plane performance on cargo flights, but few long-distance flight inspections are actually made. Pilots and sources close to the ValuJet and Fine Air crashes say,

"You might see them do that on a passenger airline where they get a comfortable seat, meals, a drink," says one source close to the Fine Air and ValuJet investigations. "But you don't see many on cargo planes." Cargo pilots interviewed by The Herald agree.

The FAA, which has a reputation as an insular federal agency that rebuffs outside criticism or interference, refused to permit The Herald to interview its inspection team. That included any inspector or supervisor based in Atlanta who oversaw ValuJet, or those who inspect Fine Air in Dade County.

Although the FAA would not allow The Herald to observe inspections and interview Miami employees, inspectors seem to have desirable jobs.

Profile of Inspectors

The inspection force in Miami is about 90 percent male. Many inspectors are retired from the military with pensions, or are former pilots for commercial aviation companies. The great majority are 40 to 65 years old.

They receive salaries ranging from \$40,000 to \$80,000 per year, depending on seniority. Two of the principal inspectors assigned to Fine Air in Miami, one for maintenance and one for operations, make \$74,333 and \$78,331 per year, respectively. Mike Thomas, the FAA's district manager in Miami, is paid \$80,346.

None of the Fine Air or ValuJet safety inspectors or their immediate supervisors have been dismissed or suspended in the wake of the crashes.

Inspectors are rarely dismissed.

They work out of a glass building on Northwest 36th Street known to pilots, somewhat whimsically, as "The Crystal Palace." The inspectors normally work weekdays, and some have four-day-a-week work schedules.

Inspectors spend most of their time reviewing the paperwork necessary for the renewal of the certificates that pilots, airlines and maintenance shops need to operate. That emphasis on paperwork leaves relatively little time to observe actual flight operations and potentially life-threatening safety problems.

PAPERWORK AN ISSUE

Pilots say airlines can falsify records

The emphasis on paperwork is questionable for another important reason:

Cargo pilots say that, in their experience, records can easily be falsified by airline operators.

"On Fine Air flights, the paperwork I was handed was often pure fiction," said former Fine Air pilot Richard Smith, speaking at the time of the crash. He said the airline's flights were regularly overloaded.

Young agrees. "People ... know the way to get around the FAA is keeping your paperwork in shape. Then you can do whatever you want," he said.

"It just doesn't work," Young said. "They have to get serious with these companies. The FAA needs to be there when the planes are loaded. There are some good people over there at the FAA who know this, but they can't buck the system."

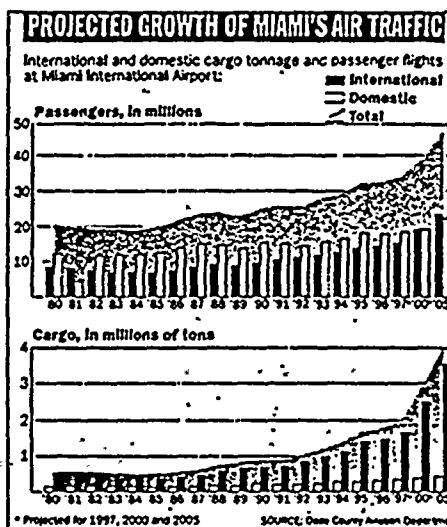
Fine Air officials deny falsifying paperwork, and they have challenged the two pilots to identify specific overweight flights.

Neither pilot worked for the airline for more than a year, they said. Young, they said, has an ax to grind because he was fired in 1995. The pilot had a "short fuse," according to Charles South, Fine Air director of operations. Smith, according to John Zappia, Fine Air's chief operating officer, quit and failed to honor his contract to fly for the company after receiving free pilot training.

FAA spokeswoman Kathleen Bergen says attacks on FAA procedures result from a misunderstanding of what the agency is about.

"It is the airlines, the certificate holders, who have the responsibility to oversee maintenance and the loading of airplanes," she says. "It is our work to oversee the airlines' compliance with their own maintenance and operations programs. Inspectors work normally with administrative personnel from those

THE CRYSTAL PALACE: This building on Northwest 36th Street near Miami International Airport houses FAA inspectors.



* Projected for 1997, 2000 and 2005. SOURCE: Dade County Aviation Development.

companies." Bergen conceded that after any crash, the FAA "routinely increases surveillance." After the Fine Air crash, inspectors focused on loading procedures not only at Miami International Airport, but around the country.

ACTION AND REACTION

Timing is criticized; FAA cites work load

Critics, who have dubbed the FAA the "tombstone agency," say timing is exactly the problem — it reacts only after a disaster.

During the past five years, none of the drastic enforcement actions against airlines stemmed initially from the investigations of FAA inspectors. The suspensions of Rich International in 1996 and Arrow Air in 1995 came after whistle-blowers went public with violations of FAA rules. The closing of Fine Air this year, and Miloon Air last year, came only after crashes.

FAA managers in the past have defended the performance of inspectors, saying they are overloaded with work and assigned to many airlines or maintenance

shops at a time. The agency has requested and won added funding for more inspectors.

In the case of Fine Air, adding inspectors didn't uncover fatal problems.

The nine-man National Aviation Safety Inspection team spent 19 days at Fine Air three months before the DC-8 crash as part of a nationwide inspection program.

Team members not only checked paperwork, they flew six flights with Fine Air pilots and observed maintenance procedures in Miami and in the Caribbean and Central America.

Minor complaints noted

The FAA team's report revealed minor complaints about "weight and balance" procedures in planning the loading of an airplane. But the inspectors never reviewed actual loading.

The DC-8 apparently crashed because of faulty loading of its cargo, according to early reports from the National Transportation Safety Board.

Fine Air pilots had complained for years in company pilots' meetings — and in at least one case directly to an FAA inspector — about overloading of air-

Administrator Jane Garvey.

planes and also the loading of hazardous material not listed on manifests.

The FAA has few answers for these questions or others about its inspectors.

In a recent interview with The Herald in Washington, the acting director of FAA Flight Standards, W. Michael Sacrey, was asked if any inspector had been called on the carpet about his or her performance in the wake of the Fine Air crash. His answer: "Maybe."

Asked if an internal investigation was under way to review the work of those inspectors and/or supervisors, Sacrey said: "I assume."

But Sacrey, who is also head of FAA Flight Standards for the FAA regional office in Atlanta and oversees Miami operations, couldn't say for sure. Later, his office said there would be no investigation.

OVERSIGHT FAULTED

DOT said inspector of ValuJet unqualified

The FAA's apparent lack of accountability is not new.

After ValuJet Flight 392 crashed on May 11, 1996, investigators for the Department of Transportation took a look at FAA oversight. They found the principal FAA maintenance inspector on ValuJet unqualified for the position, according to their 122-page report, which was obtained by one aviation reporter in Washington. It still has not been released publicly.

According to an article in the Cleveland Plain Dealer newspaper, the report said the inspector, David J. Harper, obtained his job through friends in his Air Force Reserve unit who were FAA managers.

Although he passed tests, the DOT Inspector General's report found that Harper had lied about his experience on his work application, according to the Plain Dealer. Harper, who has denied falsifying his application, did not respond to The Herald's request for an interview.

Harper, who is based in Atlanta, still works for the FAA with the title of flight safety inspector, although he has been removed from the field and now works in an office, according to the FAA. No one responsible for his hiring or assignment has been

plaints against the airlines tend to get lost when they get to supervisors and higher up. What they need to do is infiltrate these airlines, which they won't do."

A former FAA supervisor in Miami agrees:

"If you're an inspector, you do the best you can, then go fishing and collect your 30 years. You don't rock the boat," he said, asking not to be named.

"It often won't do any good because these companies tend to hire expensive lawyers and the FAA attorneys just aren't willing to go up against them," he added. "I'm not sure they ever really pay the fines that are announced. What needs to change is that the law has to be rewritten to give inspectors more real power that can't be interfered with by politicians."

FAA defends its practice

The FAA defends its record over the years and its approach that focuses on paperwork.

"We're not there on the midnight shift watching the mechanic do his job," Sacrey says.

In fact, FAA inspectors often give airlines advance notice that they will be coming to inspect their paperwork and do cursory inspections of their airplanes. FAA officials defend this policy, saying they need top airline managers on the scene in order to get access to necessary maintenance and operation documents.

"In most cases, nothing wrong is found," Sacrey said.

In South Florida, there have been only two cargo plane crashes that killed people on the ground in the past 25 years. The FAA says the United States enjoys one of the best aviation safety records in the world under its present system.

But former FAA Administrator David Hinson warned last year that the number of flights is increasing so rapidly that the FAA must change the way it does business or expect many more crashes — as many as one major crash per week, Hinson said.

Sacrey agrees, although hesitantly, that he may have to make some changes in inspection procedures.

"Perhaps something has to change. Maybe make it more hands-on and arrange for more night inspections," he said. "Perhaps."

Postscript: In an interview in The Journal of Commerce published Thursday, Sacrey spoke of an upcoming study of the FAA inspection process, and changes that could come.

"It could suggest to us we should be looking at the night cargo area rather than at day passenger operators," he said.

Herald researcher Elizabeth

"Perhaps something has to change. Maybe make it more hands-on and arrange for more night inspections. Perhaps."

W. MICHAEL SACREY, acting director of FAA Flight Standards

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