

JAN 11 1988

MEMORANDUM FOR: Chairman Zech
FROM: Victor Stello, Jr.
Executive Director for Operations
SUBJECT: STATUS OF A MAINTENANCE PI

In your memorandum to staff of October 19, 1987, you requested, among other things, that staff address the issue of maintenance performance indicators. This memorandum serves as a status report on that issue.

The staff has been exploring several indicators in the area of maintenance over the past year. Efforts focused on using currently available data. Out of these efforts, we are prepared to include maintenance as a cause code of events included in the current PI program. Hence, we will be able to identify maintenance weaknesses associated with reported events at operating plants. Other potential indicators are currently being evaluated. Some have proven elusive to date. For example, we were particularly interested in excessive rework of the same system or component as an indication of poor maintenance practices. Although this aspect has validity, the data currently reported to the MRC is insufficient to support rework as an indicator.

We remain committed to develop measures of maintenance effectiveness as well as programmatic indicators, i.e., we want to monitor the results of maintenance programs such as items out of service, as well as less direct measures such as resource allocation.

Analysis of currently reported data has revealed limitations of the data which inhibit our ability to implement a maintenance indicator directly. We continue to explore the practicality of additional sources of information and data collection.

I anticipate incorporation of cause codes in the next PI report and will discuss the progress toward additional indicator(s) of maintenance effectiveness in the next several months.

Victor Stello, Jr.
Victor Stello, Jr.
Executive Director for
Operations

cc: See next page
See previous concurrence*

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V. Stello

J. Taylor

T. Rehm

E. Beckford

J. Murray

E. Jordan

J. Heltemes

T. Novak

J. Rosenthal

R. Singh

S. Stern

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DFC	: AEOD:ROAB	: AEOD:ROAB	: AEOD:DSP	: AEOD:DD	: AEOD:D	: VStello*
WANT	: JRosenthal*	: TNovak*	: CJHeltemes*	: ELJordan*	: VStello*	: 1/11/88

- 2 -

cc: Commissioner Roberts
Commissioner Bernthal
Commissioner Carr
Commissioner Rogers
SECY
OGC



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

October 19, 1987

ACTION - Murley, NRR

Cys: Stello
Taylor
Rehm
Beckjord, RES
Jordan, AEOD
Murray, OGC/B

COMLZ-87-51

MEMORANDUM FOR: Victor Stello, Jr.
Executive Director for Operations

FROM: Lando W. Zech, Jr.

Lando W. Zech Jr.

SUBJECT: COMMISSION POLICY STATEMENT ON MAINTENANCE

As you know, the Commission approved the staff's proposal to proceed with development of a Commission Policy Statement on Maintenance in April of this year. Upon reflection, the Commission believes that some changes to the policy outlined in SECY-86-316 need to be made in order to address all significant policy elements, to ensure the effectiveness of industry initiatives, and to reinforce the importance the Commission places on this policy. I am bringing these changes to your attention at this time so they can be factored into the staff's proposed policy statement before Commission consideration and to avoid undue schedule impacts.

First, please assure that Commissioner Carr's comments on SECY-86-316 are considered in development of the proposed policy statement. The important roles of preventive and predictive maintenance should be addressed as well as the significance of good maintenance practices to improved safety, reliability, and life extension for aging plants.

Second, particular attention should be paid to maintenance practices in balance of plant systems and components where plant transients and challenges to safety systems may be avoided by improved maintenance practices and procedures. The policy statement should explicate an NRC position that maintenance programs and procedures must reflect a management commitment to total systems attention.

In addition, the following specific comments should guide the staff in preparing the proposed Commission Policy on Maintenance:

1. The staff should proceed with an Advance Notice of Proposed Rulemaking and studies necessary to develop a proposed maintenance rule when the maintenance policy statement is issued. The schedule should be such that the proposed rule will be ready for Commission consideration about the time that the period of evaluation of industry progress, outlined in the maintenance policy statement, expires. Any proposed maintenance rule should avoid indirectly encouraging the limitation of vigilant maintenance to safety related components and systems.

The maintenance policy statement should indicate that the Commission will defer imposition of new maintenance requirements to the extent that industry maintenance initiatives are effective and consistently applied.

REC'D ON 10/20/87

Date

2. The staff should develop one or more objective maintenance performance indicators as part of the performance indicator program, to enhance our ability to monitor licensee maintenance performance and the effectiveness of industry self-improvement initiatives. If feasible, performance indicators should be implemented before issuing the policy statement.
3. The staff should continue to devote whatever resources are necessary to those plants with category 3 SALP performance in maintenance that NRC monitoring indicates are not achieving the improvement intended by the policy statement.

Resources necessary to implement the proposed maintenance policy should be explicitly addressed in your proposal.

The Commission considers each of these comments to be important to the overall goal of enhanced safety based on improved maintenance practices at licensed commercial power reactors.

Your prompt attention to these matters is appreciated.

cc: Commissioner Roberts
Commissioner Bernthal
Commissioner Carr
Commissioner Rogers
AEOD
NPR
SECY
OGC
GPA

186, 234, 68 Stat. 955, 83 Stat. 444, as amended (42 U.S.C. 2236, 2282); sec. 206, 88 Stat. 1246 (2 U.S.C. 5846). Sections 2.600-2.606 also issued under sec. 102, Pub. L. 97-190, 83 Stat. 853 as amended (42 U.S.C. 4332). Sections 2.700a, 2.719 also issued under 5 U.S.C. 554. Sections 2.754, 2.760, 2.770 also issued under 5 U.S.C. 557. Section 2.790 also issued under sec. 103, 68 Stat. 936, as amended (42 U.S.C. 2133) and 5 U.S.C. 552. Sections 2.806 and 2.808 also issued under 5 U.S.C. 553. Section 2.809 also issued under 5 U.S.C. 553 and sec. 29, Pub. L. 85-256, 71 Stat. 579, as amended (42 U.S.C. 2039). Subpart K also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Appendix A also issued under sec. 6, Pub. L. 91-580, 84 Stat. 1473 (42 U.S.C. 2135). Appendix B also issued under sec. 10, Pub. L. 99-240, 99 Stat. 1842 (42 U.S.C. 2021b et seq.).

2. Section V.F. of Appendix C is revised to read as follows:

Appendix C—General Statement of Policy and Procedure for NRC Enforcement Actions

V. Enforcement Actions

F. Reopening Closed Enforcement Actions

If significant new information is received or obtained by NRC which indicates that an enforcement sanction was incorrectly applied, consideration may be given, dependent on the circumstances, to reopening a closed enforcement action to increase or decrease the severity of a sanction or to correct the record. Reopening decisions will be made on a case-by-case basis, are expected to occur rarely, and require the specific approval of the Deputy Executive Director for Regional Operations.

Dated at Washington, DC, this 17th day of March 1988.

For the Nuclear Regulatory Commission,
Samuel J. Chilk,

Secretary of the Commission.

[FR Doc. 88-6333 Filed 3-22-88; 8:45 am]

BILLING CODE 7590-01-M

10 CFR Part 50

Final Commission Policy Statement on Maintenance of Nuclear Power Plants

AGENCY: Nuclear Regulatory Commission.

ACTION: Final policy statement.

SUMMARY: The Commission believes safety can be enhanced by improving the effectiveness of maintenance programs throughout the nuclear industry. The Commission is proceeding with rulemaking consistent with this belief. This Policy Statement is being issued to provide guidance to the industry while the rulemaking proceeds.

EFFECTIVE DATE: This Final Policy Statement is effective March 23, 1988.

FOR FURTHER INFORMATION CONTACT: Jack W. Roe, Director, Division of Licensee Performance and Quality Evaluation, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 492-1004.

Policy

Background

The Commission has a program to continually evaluate the operational performance of nuclear power plants. Analysis of operational events has shown that, in some cases, nuclear power plant equipment is not being maintained at a level which ensures, with a high degree of reliability, that the equipment will perform its intended function when required. A limited NRC examination of nuclear power plant maintenance programs has found a wide variation in the effectiveness of these programs. Inadequate maintenance at some plants has been a significant contributor to plant reliability problems and, hence, is of safety concern. The Commission believes safety can be enhanced by improving the effectiveness of maintenance programs throughout the nuclear industry. The Commission is proceeding with rulemaking consistent with this belief. This Policy Statement is being issued to provide guidance to the industry while the rulemaking proceeds.

Policy Statement

It is the objective of the Commission that all components, systems and structures of nuclear power plants be maintained so that plant equipment will perform its intended function when required. To accomplish this objective, each licensee should develop and implement a maintenance program which provides for the periodic evaluation, and prompt repair of plant components, systems, and structures to ensure their availability.

Definition of Maintenance

The Commission defines maintenance as the aggregate of those functions required to preserve or restore safety, reliability, and availability of plant structures, systems, and components. Maintenance includes not only activities traditionally associated with identifying and correcting actual or potential degraded conditions, i.e., repair, surveillance, diagnostic examinations, and preventive measures; but extends to all supporting functions for the conduct of these activities. These activities and functions are listed below under

"Activities Which Form the Basis of a Maintenance Program."

Maintenance Programs

Each commercial nuclear power plant should develop and implement a well-defined and effective program to assure that maintenance activities are conducted to preserve or restore the availability, performance and reliability of plant structures, systems, and components. The program should clearly define the components and activities included, as well as the management systems used to control those activities. Further, the program should include feedback of specific results to ensure corrective actions, provisions for overall program evaluation, and the identification of possible component or system design problems.

Activities Which Form the Basis of a Maintenance Program

An adequate program should consider:

- Technology in the areas of:
 - Corrective maintenance.
 - Preventive maintenance.
 - Predictive maintenance.
 - Surveillance:
 - Engineering support and plant modifications;
 - Quality assurance and quality control;
 - Equipment history and trending;
 - Maintenance records;
 - Management of parts, tools, and facilities;
 - Procedures;
 - Post-maintenance testing and return-to-service activities;
 - Measures of overall program effectiveness:
 - Maintenance management and organization in the areas of:
 - Planning.
 - Scheduling.
 - Staffing.
 - Shift coverage.
 - Resource allocation;
 - Control of contracted maintenance services;
 - Radiological exposure control (ALARA);
 - Personnel qualification and training;
 - Internal communications between the maintenance organization and plant operations and support groups;
 - Communications between plant and corporate management and the maintenance organization.
- Maintenance recommendations or requirements of individual vendors should receive appropriate attention in the development of the maintenance program.

Future Commission Action

The Commission intends this Policy Statement to provide guidance to the industry in improving maintenance programs for their power reactor facilities. The Commission will continue to enforce existing requirements including those that address maintenance practices and will take whatever action that may be necessary to protect health and safety.

The Commission expects to publish a Notice of Proposed Rulemaking in the near future that will establish basic requirements for plant maintenance programs. We believe that the contents and bounds of the proposed rule will fall within the general framework described in this Policy Statement.

Consideration will also be given to industry-wide efforts that already have been initiated. We encourage interested parties to provide their views on this important subject to the Commission, even at this early stage of the rulemaking process. Any notice of proposed rulemaking that is published will provide, of course, a period for public comment on its contents.

Dated at Washington, DC, this 17th day of March, 1988.

For the Nuclear Regulatory Commission,
Samuel J. Chilk,
Secretary of the Commission.
[FR Doc. 88-6334 Filed 3-22-88; 8:45 am]
BILLING CODE 7590-01-M

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket Number 86-ANE-21; Amdt. 39-5869]

Airworthiness Directives; General Electric (GE) CT7-5A, -5A1, and -5A2 Turbopropeller Engines as Installed in Saab-Fairchild SF340A Aircraft

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) which requires the installation of a second overspeed protection system on certain GE CT7-5A series turbopropeller engines as installed in Saab-Fairchild SF340A aircraft. This AD also supersedes AD 86-10-51, Amendment 39-5473 (51 FR 44439; December 9, 1986). This AD is needed to prevent engine power turbine (PT) overspeed and resulting uncontained failure caused by reaction of the fuel control to an

erroneous PT speed signal during ground operation with the bottoming governor (BG) enabled.

DATES: Effective—May 9, 1988.

Compliance Schedule—As prescribed in the body of the AD.

Incorporation by Reference—Approved by the Director of the Federal Register as of May 9, 1988.

ADDRESSES: The applicable service bulletins (SB's) may be obtained from Dowty Rotol Limited, Cheltenham Road East, Gloucester, England GL2 9QH; General Electric Company, 1000 Western Avenue, Lynn, Massachusetts 01910; and Saab-Scania AB, S-581 88, Linköping, Sweden.

A copy of each SB is contained in Rules Docket Number 86-ANE-21, in the Office of the Regional Counsel, Federal Aviation Administration, New England Region, 12 New England Executive Park, Burlington, Massachusetts 01803, and may be examined between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Barbara Garian, Engine Certification Branch, ANE-141, Engine Certification Office, Aircraft Certification Division, Federal Aviation Administration, New England Region, 12 New England Executive Park, Burlington, Massachusetts 01803; telephone (617) 273-7086.

SUPPLEMENTARY INFORMATION: A proposal to amend Part 39 of the Federal Aviation Regulations (FAR) to include a new AD requiring the installation of a second overspeed protection system on certain GE CT7-5A series turbopropeller engines as installed in Saab-Fairchild SF340A aircraft was published in the Federal Register on October 16, 1987. (52 FR 38458).

The proposal was prompted by an engine PT overspeed and resulting uncontained failure caused by reaction of the fuel control to an erroneous PT speed signal during ground operation with the BG enabled.

Since this condition is likely to exist or develop on other engines of the same type design, a new AD is being issued that requires installation of a second overspeed protection system on GE CT7-5A series turbopropeller engines as installed in Saab-Fairchild SF340A aircraft. This AD also requires incorporation of engine BG deactivation switches in the power lever quadrant to prevent an adverse yaw condition in the aircraft that could occur due to a mismatched aircraft power condition resulting from an uncommanded power increase of one engine. This would also prevent the crew from misinterpreting the uncommanded power increase of

one engine as a failure of the other engine. This AD supersedes AD 86-10-51, Amendment 39-5473 (51 FR 44439; December 9, 1986).

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received. Accordingly, the proposal is adopted without change.

AD 86-10-51, Amendment 39-5473 (51 FR 44439), issued November 18, 1986, requires that the engine BG be disabled when the aircraft power lever is positioned in the beta range (below flight idle). The AD was needed to prevent PT overspeed and resulting uncontained failure caused by reaction of the fuel control to an erroneous PT speed signal during ground operation with the BG enabled.

AD 86-10-51 provides interim instructions to prevent PT overspeed and uncontained failure. Since these instructions require special aircraft and engine operating procedures which increase crew workload and invalidate the constant torque on takeoff function, the FAA has determined that a second overspeed protection system with an improved level of safety precludes the need for these interim instructions and returns the aircraft and engine to pre-AD 86-10-51 operation.

Conclusion

The FAA has determined that this regulation affects 107 aircraft all of which are in compliance with this AD. Therefore, I certify that this action (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is minimal; and (4) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Engines, Air transportation, Aircraft, Aviation safety, Incorporation by reference.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, the Federal Aviation Administration (FAA) proposes to amend Part 39 of the Federal Aviation Regulations (FAR) as follows:

PART 39—[AMENDED]

1. The authority citation for Part 39 continues to read as follows: