



Corbin A. McNeill  
Senior Vice President  
Nuclear Generation

January 17, 1985  
JPN-85-04

Director of Nuclear Reactor Regulation  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

ATTENTION: Darrell G. Eisenhut, Director  
Division of Licensing

SUBJECT: James A. FitzPatrick Nuclear Power Plant  
Docket No. 50-333  
Proposed Staff Actions To Improve And Maintain  
Diesel Generator Reliability (Generic Letter  
84-15)

Gentlemen:

In response to the subject Generic Letter, the Authority will submit changes to the FitzPatrick Technical Specifications by March 27, 1985 to eliminate diesel generator testing when emergency core cooling subsystems are inoperable. The current Technical Specifications (Sections 3.5 and 4.1) require that the Emergency Diesel Generators (EDGs) shall be demonstrated to be operable whenever the Core Spray System or the Low Pressure Coolant Injection mode of the Residual Heat Removal System is determined to be inoperable. It is estimated that deleting these requirements from the Technical Specifications would reduce the fast cold starts of the EDGs by approximately 33%. This estimated reduction is based on surveillance test data for the years 1981 to 1983 inclusive.

In addition, the Authority is currently evaluating modifications to:

1. install engine idle speed control for warm-up and cool-down cycle capability
2. modify the oil system to maintain the accessory equipment (turbocharger) full of oil and maintain a low pressure oil flow to the engine oil gallery to reduce the undesirable effects of cold starts
3. install refrigerant or regenerative (desiccant type) air dryers in the air start system

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If evaluation indicates that modifications to allow engine idle speed control for warm-up and cool-down are cost effective, additional Technical Specification changes will be submitted to allow surveillance testing which reflects the engine idle capability. Modification of the oil system and installation of dryers in the air start system would not require changes to the FitzPatrick Technical Specifications.

The Emergency AC Power System (EACPS) consists of two independent and redundant on-site AC generating power sources. Each of these sources consists of two diesel generators. Diesel generators A and C (Division I) feed the emergency bus 10500 and the emergency bus 10600 is fed by units B and D which are part of Division II. Details of the EACPS are provided in Chapter 8.6 of the Final Safety Analysis Report.

For the last one hundred starts prior to November 2, 1984, the FitzPatrick Emergency Diesel Generators had only one failure (in an Emergency Service Water pump breaker) that would constitute a failed test in accordance with Regulatory Guide 1.108. The diesels were operable as soon as the pump breaker overcurrent trip device was replaced. As a result, the reliability of the B and D units (Division II) is .99 for the last one hundred starts.

For A and C units (Division I) for the last one hundred starts, and for all four units over the last twenty tests, the demonstrated reliability has been 1.00. The equipment history which is compiled at FitzPatrick does not record individual demands and failures in the manner outlined in Regulatory Guide 1.108 Position C.3.a.. However, this information is available through the Automated Records Management System. FitzPatrick does not maintain a yearly data report for each diesel generator's reliability.

The routine maintenance program for the FitzPatrick diesels is based upon the vendor's recommendations which meet the manufacturer's requirements as modified for standby service. This is supplemented by "Maintenance Instructions" and "Power Pointers" supplied by the vendor and evaluated for the site specific application. All four diesel generators have routine scheduled maintenance performed on a once per operating cycle basis, and includes but is not limited to inspection and checking of cooling system, fuel oil, lube oil, governor oil and dual air start systems. For the generators, the access covers are removed and the brushes, slip rings, bearings,

windings and couplings are inspected and cleaned as part of the routine maintenance. The diesel maintenance is performed by a dedicated group within the maintenance department. This group has been trained by General Motors to enhance their knowledge and performance of diesel maintenance. FitzPatrick has relied on this routine maintenance program and personnel training to achieve the reliability levels indicated above. There are no quantitative reliability goals for the diesel generators.

The Authority believes that an increase in system test frequency may be inappropriate for certain diesel subsystem or component failures. A series of diesel system tests to certify reliability of a repaired subsystem or component may accelerate other failures and lead to an overall reduction in reliability.

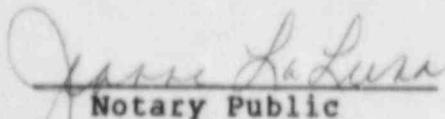
If you have any questions, please contact Mr. J.A. Gray, Jr., of my staff.



C. A. McNeill, Jr.  
Senior Vice President  
Nuclear Generation

State of New York  
County of Westchester

Subscribed and Sworn to before  
me this *16* day of *January* 1985.

  
Notary Public

JEANNE LA LUNA  
Notary Public, State of New York  
No. 004414399  
Qualified in Westchester County  
1982, Expires March 31st 1985...

cc: Office of the Resident Inspector  
U.S. Nuclear Regulatory Commission  
P.O. Box 136  
Lycoming, New York 13093