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FACIL:50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
AUTH.NAME AUTHOR AFFILIATION
MANGAN,C.V. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION
SCHWENCER,A. Licensing Branch 2

SUBJECT: Forwards info re detection of algae in diesel generator fuel oil tanks & HPCS diesel generator start sys,per 841220 request,Info will be included in Amend 17 to FSAR.

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Add: Ed Tomlinson
PSB

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NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

December 21, 1984
(NMP2L 0307)

Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Schwencer:

Re: Nine Mile Point Unit 2
Docket No. 50-410

Attached is the information requested by Mr. Tomlinson on the detection of algae in the diesel generator fuel oil tanks and the High Pressure Core Spray diesel generator start system. This information was requested as a result of a conference call on December 20, 1984.

This information will be included in Final Safety Analysis Report Amendment 17.

Very truly yours,

C. V. Mangan
Vice President
Nuclear Engineering & Licensing

DS:ja
Attachment
xc: R. A. Gramm, NRC Resident Inspector
Project File (2)

A001
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Add: Ed Tomlinson PSB
Ltr Encl
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Niagara Mohawk Power Corporation	)	Docket No. 50-410
	)	
(Nine Mile Point Unit 2)	)	

AFFIDAVIT

C. V. Mangan, being duly sworn, states that he is Vice President of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.

C V Mangan

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 21st day of December, 1984.

Christine Austin
Notary Public in and for
Onondaga County, New York

My Commission expires:

CHRISTINE AUSTIN
Notary Public in the State of New York
Qualified in Onondaga Co. No. 4787687
My Commission Expires March 30, 1985

CHRISTINE AUSTIN
Notary Public in the State of New York
Qualified in Onondaga Co. No. 4757697
My Commission Expires March 30, 19__

insertion into the sounding tube furnished in each storage and day tank. The possible accumulation of water at the bottom of each diesel fuel oil storage and day tank is also checked by applying a water-indicating paste to the sounding rod. The paste changes color when it comes in contact with water. Should the water level be excessive, water is removed from the storage tanks by the use of a portable pump and from the day tanks by opening a drain valve located near the bottom of each tank.

Adequate sources of diesel quality fuel oil are available in the cities of Oswego (8 mi), Belgium (25 mi), and Syracuse (35 mi). Under extremely unfavorable environmental conditions, fuel oil will be delivered onsite via tanker truck escorted by highway snow removal equipment.

This will permit each standby diesel generator system to supply uninterrupted emergency power. Fuel oil meets or exceeds the quality requirements of ASTM D975-1981 and the diesel engine manufacturer's recommendations.

The particulate contamination (for example, algae) in the fuel oil storage tank is determined by measuring the particulate contamination in accordance with ASTM D2276-78, method A on a monthly basis and examining the contamination by either microscopic or atomic absorption methods when the levels approach established limits. The fuel oil in the affected storage tank will then be appropriately treated (filtration or biocides) to reduce the level to acceptable concentrations if the level approaches the established limits.

9.5.4.4 Inspection and Testing Requirements

The standby diesel generator fuel oil storage and transfer system is designed to permit periodic inspection and maintenance of active components. Local display and indicating devices are provided for periodic inspection of tank oil level and operating parameters such as pump discharge pressure and pressure drop across each fuel oil strainer.

Fuel oil storage and day tanks and piping are hydrostatically tested prior to filling with fuel oil. System operability is tested in conjunction with the diesel generator. Continued system integrity is verified with periodic testing with the diesel generator.

ponents fabricated from carbon steel. The piping on the engine is fabricated from stainless steel. The entire starting air system is designed to Category I requirements.

9.5.6.2.2 Division III Diesel Generator Starting System

The Division III standby diesel generator starting system consists of two independent, redundant subsystems, either of which is capable of starting the diesel generator. Each subsystem consists mainly of the following equipment with interconnecting piping, valves, filters, or strainers: 1) an air compressor, 2) an aftercooler, 3) an air receiver tank, 4) a starting air relay valve, and 5) two starting air motors. The air compressor, air receiver tank, and aftercooler are located on the starting air skid, whereas the starting air relay valve, and starting air motors are located on the engine.

The Division III diesel generator starting system has one motor-driven air compressor and one diesel engine-driven air compressor. Each air compressor is a two stage, air-cooled compressor with a 20 scfm rating and is capable of recharging the associated 64-cu ft air receiver from 150 psig minimum operating pressure to 250 psig maximum operating pressure in less than 30 min. One of the compressors is driven by a 7 1/2-hp, 575-V, 3-phase ac motor fed from the Division III emergency 600-V ac bus. The other compressor is engine driven with a 125-V dc starting circuit. The 125-V dc power is drawn from the Division III emergency 125-V dc bus.

The air compressor supplies compressed air to the air receiver through an aftercooler, a check valve, a relief valve, and a service valve. The check valve prevents depressurization of the loop back through the compressor when it is not operating. The relief valve protects against system overpressurization. The service valve is provided for isolating the compressor from the rest of the system. The air-cooled aftercooler ensures dry air in the air receiver.

Each air receiver has a volume of 64 cu ft.
The starting air system for the Division III Diesel and the Diesel Generator are identical to the River Bend Nuclear Station HPCS Diesel. Based upon testing at River Bend Nuclear Station, it can be inferred that there is sufficient air storage capacity to start the Unit 2 engine when initially charged at 215 psig, five consecutive times without recharging when operated in its normal configuration using both redundant trains through all air start motors.
The air receivers are mounted vertically on the starting air skid. Each air receiver has a top-mounted pressure-relief valve for protection against over-pressurization and a bottom-mounted drain valve for