

July 26, 2005

Mr. Farouk D. Baxter, PE
23 Pilgrims Path
Sudbury, MA 01776

Dear Mr. Baxter:

In an e-mail dated September 18, 2004, you submitted a concern to the Nuclear Regulatory Commission (NRC) related to offsite power for Nine Mile Point Nuclear Station, Unit Nos. 1 and 2 (NMP1 and NMP2), and requested that the NRC consider your concern in its review of the NMP1 and NMP2 license renewal application. Specifically, you stated that NMP1, NMP2, and the adjacent James A. FitzPatrick Nuclear Power Plant (JAF) are essentially three nuclear units located on the same site, and as such, they do not meet NRC's safety requirements of offsite power system for multi-unit plants. The NRC staff determined that the concerns are not within the review scope for license renewal, and should, instead, be addressed under the operating reactor program.

The NRC staff forwarded your concern to Constellation Energy, the licensee, for information regarding the licensing basis of the offsite power system for NMP1 and NMP2. By letter dated November 10, 2004, the licensee provided its response. On December 30, 2004, you sent another e-mail, providing comments on the licensee's letter.

The construction permit for NMP2 was issued in 1974, after issuance of the General Design Criteria (GDC) of Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR Part 50). Therefore, all the GDC apply to NMP2. You specifically cited GDC 5, which states:

Structures, systems, and components important to safety shall not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, an orderly shutdown and cooldown of the remaining units.

In terms of offsite electrical power, NMP2 is a nuclear power unit separate from NMP1, with its own offsite alternating current (ac) power system independent of those of NMP1 and JAF. The NMP2 115-kV offsite power sources referred to as line numbers 5 and 6 are from two separate 345/115-kV transformers at the Scriba Substation and are connected to the NMP2 onsite emergency power system. The Scriba Substation has multiple sources of input power, including a fossil fuel generating unit and connections to the 345-kV grid. The associated 345-kV circuit breakers are arranged in a breaker-and-a-half configuration. The offsite power system for NMP2 is designed in accordance with GDC 17. There are no structures, systems, or components associated with the NMP2 offsite power sources that are shared with either NMP1 or JAF, and, therefore, NMP2 is in compliance with GDC 5.

NMP1 receives offsite power from the South Oswego and Lighthouse Hill Substations via 115-kV line numbers 1 and 4, and have multiple sources of input power, including hydroelectric generating units and fossil fuel generating units. JAF receives offsite power from the same two

sources via line number 3 originating at the Lighthouse Hill Substation and line number 4 via the NMP1 switchyard. To minimize the possibility of a double-circuit outage, the lines are separated and supported on independent structures. Under normal operation, the sectionalizing disconnect switches and all breakers at both JAF and NMP1 are operated in the closed position, thereby providing two sources of 115-kV power for JAF. In the event of a fault on either section of the 115-kV bus, the associated breakers will de-energize the bus and the 115-kV bus disconnect switches will open automatically to isolate the faulted bus section. Although NMP1's and JAF's two 115-kV offsite power lines are not entirely physically separate by virtue of the common motor-operated disconnect switches in the NMP1 and JAF switchyard buses, the two 115 kV-circuits for each unit are functionally independent.

GDC 5 is not part of the licensing basis for NMP1 and FitzPatrick as the construction permits for NMP1 (1965) and JAF (1970) were issued before issuance of the GDC of Appendix A to 10 CFR Part 50 (1971). The proposed design criteria for nuclear power plant construction permits were initially developed by the Atomic Energy Commission regulatory staff and issued for public comment on November 22, 1965, and July 11, 1967. Draft GDC 4 in the July 1967 version addressed the sharing of systems or components. In NMP1's July 1972 technical supplement to petition for conversion from provisional operating license to full-term operating license, the licensee stated that "Structures, systems and components that are important to safety are not shared between the Nine Mile Point Nuclear Station and any other unit." The NRC staff's Safety Evaluation Report on this conversion was published on July 3, 1974, and did not note any deficiencies in this area.

The NRC evaluated the offsite electrical distribution system for JAF during a power uprate review. On December 6, 1996, the NRC issued a safety evaluation for the power uprate. In this safety evaluation the NRC staff stated that conformance to GDC 17 is maintained.

We trust that we responded to your concerns.

Sincerely,

/RA/

Peter S. Tam, Senior Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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Peter S. Tam, Senior Project Manager, Section 1
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Docket Nos. 50-220 and 50-410

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*SE transmitted by memo of 3/22/05; concurred on new paragraph on 4/12/05.

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