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December 21, 2015

Victor McCree, Executive Director for Operations
United States Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Emergency License Amendment at South Texas Project Unit 1

Dear Mr. McCree:

By letter dated December 3, 2015 (ADAMS ML15343A347), the licensee for South Texas Project Unit 1 requested the Nuclear Regulatory Commission's approval by December 11, 2015, of an amendment to the operating license to allow the reactor to operate for a cycle with control rod D-6 removed due to operability problems.

By emails dated December 11, 2015, to the NRC Project Manager, the NRC Director of the Office of Nuclear Reactor Regulation (NRR) and the Regional Administrator for NRC Region IV, I contested the agency issuing the amendment under the emergency situation provision of 10 CFR 50.91 paragraph (a)(5):

> *Where the Commission finds that an emergency situation exists, in that failure to act in a timely way would result in derating or shutdown of a nuclear power plant, or in prevention of either resumption of operation or of increase in power output up to the plant's licensed power level, it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment. In such a situation, the Commission will not publish a notice of proposed determination on no significant hazards consideration, but will publish a notice of issuance under § 2.106 of this chapter, providing for opportunity for a hearing and for public comment after issuance. The Commission expects its licensees to apply for license amendments in timely fashion. It will decline to dispense with notice and comment on the determination of no significant hazards consideration if it determines that the licensee has abused the emergency provision by failing to make timely application for the amendment and thus itself creating the emergency. Whenever an emergency situation exists, a licensee requesting an amendment must explain why this emergency situation occurred and why it could not avoid this situation, and the Commission will assess the licensee's reasons for failing to file an application sufficiently in advance of that event.*

The licensee's letter clearly indicated that control rod D-6 had malfunctioned during the two prior refueling outages. The licensee worked around these malfunctions, taking no steps to correct the hardware problems causing them. Thus, it should have been anticipated that problems would, once again, crop up during the 2015 refueling outage. Yet when problems occurred for the third straight refueling outage, the licensee sought an emergency amendment from the NRC for a situation it claimed "it could not avoid."

The licensee's letter contended that South Texas Project is the only nuclear plant in the U.S. with control rods equipped with rapid refueling measures. Apparently, these rapid refueling attachments malfunctioned in the two prior refueling outages and caused control rod D-6 to be deemed inoperable during the 2015 refueling outage. The licensee's letter further contends that replacing or repairing the control rod would require development of a special tool that does not now exist.

The letter did not explain why the licensee was unable to initiate development of the special tool over the years since the problem was first identified. Because no other measures had been taken to correct the problem, it would have been overly speculative to assume it would fix itself and entirely prudent to assume the problem would worsen and require remediation. Yet, apparently those years were not used to develop the special tool and methodology that could have been used during the 2015 refueling outage.

The letter explained that control rod D-6 passed all surveillance tests since its problem was first identified, until the 2015 refueling outage. But surveillance tests have two possible outcomes: pass and fail. It seems imprudent for this licensee to assume every surveillance test of a control rod with a known and recurring problem not to have planned for responding to a failed test. In other words, had the licensee developed those plans since the problem was first identified years ago, the situation requiring an emergency amendment could easily have been avoided.

The NRC complied with the licensee's request by issuing the licensing amendment on December 11, 2015 (ADAMS ML15343A128).

While I continue to believe based on publicly available information that this licensee could have, and should have, taken actions that would have avoided the need for an emergency amendment, I find insufficient and vague guidance exists upon which to determine when an emergency amendment is warranted. In other words, if I put myself in the shoes of the plant worker justifying an emergency amendment or in the shoes of the NRC reviewer judging whether an emergency amendment request is adequate, the yes/no criteria informing that important decision is scant.

An emergency amendment request has two components: (1) technical justification why the amendment does not compromise safety levels, and (2) legal justification why bypassing the normal amendment process, including the advance public comment period, is acceptable.

Considerable guidance is available to assist the plant worker and the NRC reviewer evaluate the adequacy of the technical justification component. From the criteria in 10 CFR 50.59 to Regulatory Guides and Information Notices and NUREG reports, the NRC's expectations regarding what does, and does not, compromise safety levels are clear.

To me, the ready availability of such crisp, clear guidance is a primary reason why the South Texas Project licensee and the NRC staff made such strong and compelling technical justifications for why the removal of control rod D-6 from the Unit 1 reactor core would not compromise safety. My department head in college taught me that it is not sufficient to have all the right answers until all the right questions have been asked. The licensee's amendment request and the NRC staff's associated safety evaluation asked and answered all the right questions, from a technical justification perspective.

But neither party asked and answered all the right questions about the legal justification for the emergency handling of the request. The thorough request and evaluation of the safety case strongly suggest that both were willing and able to ask and answer all the right questions. Thus, reluctance and incompetence are both ruled out as reasons for the thin legal justifications.

I suggest that the lack of guidance prevented the licensee and the NRC staff from asking and answering all the right questions for the legal justification for the emergency handling of the amendment request. I unsuccessfully sought guidance in places like NUREG-0386, "US Nuclear Regulatory Commission Staff Practice and Procedure Digest: Commission, Appeal Board and Licensing Board Decisions, July 1972 – August 2009" (ML101000014); NRC Management Directive Volume 8, Licensee Oversight; and ADAMS.

The ADAMS searches returned other times when licensees have requested emergency license amendments. My review of several such requests showed that licensees provided considerable discussions of the hardships they would experience from the normal amendment request process but scant discussions of why the situations were unavoidable.

I am not contending that the emergency amendments issued by the NRC staff recently for South Texas Project Unit 1 or in the past for any other licensee should not have been issued. There may have been sound reasons why the situations were unavoidable to complement the sound reasons why the amendments did not compromise safety. But I would posit that the legal justifications are not nearly as well documented and supported as are the technical justifications. I strongly suspect that the reason for this disparity is the disparity between the guidance available for technical justifications compared to that available for legal justifications.

I respectfully recommend that the NRC staff develop and made publicly available its guidance and expectations on when an emergency amendment request can be approved.

Sincerely,

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