

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE COMMISSION

In the Matter of  
South Texas Project Nuclear Operating Co.  
Application for the South Texas Project  
Units 3 and 4  
Combined Operating License

Docket Nos. 52-012, 52-013

Petitioners' Brief Regarding Contention Two's Mootness

Introduction

During oral arguments in the above-captioned matter the issue of whether Petitioner's contention two is moot was based on the Applicant's submittal of May 26, 2009 regarding site-specific mitigative strategies to deal with explosions/fires that would cause a large loss of areas of the nuclear plant. The Petitioners had not, at the time of oral arguments, been granted access to the subject submittal because it was classified SUNSI. Subsequent to the oral arguments, this Board granted Petitioners SUNSI access to the submittal pursuant to an Order dated July 1, 2009. The SUNSI protected submittal was sent to the individuals authorized to receive such on July 7, 2009. On June 14, 2009, Petitioners gave notice to this Board, the Applicant and NRC Staff that contention two is not moot based on the subject submittal. This brief is offered in support of the Petitioners' position that contention two is not moot.

The Petitioners contend that the Applicant's submittal that purports to bring its COL application into compliance with 10 C.F.R. 52.80(d) is deficient because it fails to make any

29

Information in this report was deleted  
in accordance with the Freedom of Information  
Act, exemptions  
FOIA- 2010 0715

attempt to describe the magnitude of fires or explosions that would presumably be addressed by the mitigative strategies set forth in its submittal. Accordingly, the submittal is deficient because there is no description or relationship between the mitigative strategies described therein and events that such strategies would address.

The submittal is also deficient because it leaves significant aspects of the mitigative strategies presently incomplete and/or undeveloped.

#### **Discussion**

**A. The submittal is deficient because it omits a reference to the magnitude of the fires and explosions that would be on a scale caused by the impact of a large commercial airliner.**

10 C.F.R. 52.80(d) mandates that the subject COL application include the means to meet the requirements of 10 C.F.R. 50.54(hh)(2).<sup>1</sup> This regulation on its face requires that the Applicant consider that there will be a loss of large areas of the plant due to fires/explosions. The regulation does not specify the magnitude of fires/explosions that the Applicant is to consider. However, the Federal Register notice that announced the final adoption of 10 C.F.R. 50.54(hh)(2) does require that the mitigative strategies response procedures consider

---

<sup>1</sup> 10 C.F.R. 50.54(hh)(2) requires as follows: "Each licensee shall develop and implement guidance and strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with loss of large areas of the plant due to explosions or fire, to include strategies in the following areas: (i) Fire fighting; (ii) Operations to mitigate fuel damage; and (iii) Actions to minimize radiological release."

aircraft attacks as a baseline<sup>2</sup> for determining the scale of fires/explosions that would be assumed to occur and therefore addressed by the requirements of 10 C.F.R. 50.54(hh) (2).<sup>3</sup>

On May 22, 2009 the Applicant submitted documentation to the Commission that purports to provide the site specific mitigative strategies to address the requirements of 10 C.F.R. 52.80(d) that require a description and plans for implementation of the guidance and strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under circumstances associated with the loss of large areas of a nuclear plant caused by explosions or fire as required by 10 C.F.R. 50.54(hh)(2).

The Applicant's submittal adopts the guidance of, *inter alia*, NEI 06-12, "B.5.b Phase 2 and 3 Submittal Guideline", Rev. 2. (Applicant's submittal cover letter dated May 26, 2009)

Page 1 of NEI 06-12 includes the following its introduction:

---

<sup>2</sup> "Licensees are required to develop procedures to facilitate the rapid entry of appropriate onsite personnel as well as offsite responders into their protected areas to deal with the consequences of an aircraft impact." (74 Fed. Reg. 13957)

"Because the most well-considered plans and procedures do not guarantee that critical on-shift personnel will survive an aircraft impact, the rule requires licensees to develop, implement, and maintain procedures for an effective recall process for appropriate off-shift personnel." (74 Fed. Reg. 13957)

"The mitigative strategies employed by new reactors as required by this rule would also need to account for, as appropriate, the specific features of the plant design, or any design changes made as a result of an aircraft assessment that would be performed in accordance with the proposed Aircraft Impact Assessment rule (72 FR 56287; October 3, 2007)." (74 Fed. Reg. 13957)

"As discussed previously, the Commission has proposed in a separate rulemaking to require designers of new nuclear power plants (*e.g.*, applicants for standard design certification under part 52, and applicants for combined licenses under part 52) to conduct an assessment of the effects of the impact of a large commercial aircraft on a nuclear power plant." (74 Fed. Reg. 13957)

"Section 50.54(hh)(2) focuses on ensuring that the nuclear power plant's licensees will be able to implement effective mitigative measures for large fires and explosions including (but not explicitly limited to) those caused by the impacts of large commercial aircraft. (74 Fed. Reg. 13958)

<sup>3</sup> "Mitigative Strategies and Response Procedures for Potential or Actual Aircraft Attacks. These requirements appear in new § 50.54(hh). Section 50.54(hh)(1) establishes the necessary regulatory framework to facilitate consistent application of Commission requirements for preparatory actions to be taken in the event of a potential or actual aircraft attack and mitigation strategies for loss of large areas due to fire and explosions." 74 Fed. Reg. 13927-13928.

(b)(4)

EXEMPTION 4 NEI

The Petitioners contend that the failure of the Applicant to attempt to describe the scale or magnitude of fires and explosions anticipated from an aircraft impact renders its submittal inadequate to meet the requirements of 10 C.F.R. 52.80(d). The NEI 06-12 submittal guideline concedes that it does not consider the scale of any potential fire or explosion and instead adopts a “flexible response” for meeting “extreme conditions” that are described in neither quantitative nor qualitative ways. Accordingly, there is no way to determine whether the proposed mitigative strategies are actually adequate to address the magnitude of fires and explosions that could reasonably be expected from the impact of the large commercial airliner.

The original contention two was one of omission that argued the COL application was deficient because it failed to address how fires and explosions that cause a large loss of plant would be dealt with. The Applicant’s response was to rely on the guidance in NEI 06-12. However, NEI 06-12 concedes that it makes no attempt to predict how large the fires and explosions that result from an impact of the large commercial airliner might be and therefore does not make any projections as to the scale of response that would be required to address such.

The Federal Register notice clearly anticipates that the fire and explosions that the regulatory requirements envision would be of the magnitude that would result from the impact of a large commercial airliner. (see footnote 2). Nevertheless, the Applicant has chosen to rely upon the NEI guidance which makes no projections as to the size of the fires or explosions that are considered. Therefore, there is no meaningful way to determine whether the mitigative strategies in the Applicant's submittal are adequate to deal with fires and explosions that would be caused by the impact of a large commercial airliner.

(b)(4)

EXEMPTION 4 NEI

What is the "full spectrum of potential damage states" to which the guidance refers? If the "full spectrum of potential damage states" is known adequately to concede that response capabilities may be inadequate, why is this undefined/undescribed spectrum not used to accurately predict the nature and extent of damage that could be expected from the impact of a large commercial airliner?

Large commercial airliners are known quantities. For example, the fuel capacity of airliners is quantifiable as well as the amount of fuel that would be consumed from takeoff from various originating airports to impact into South Texas Project Units 3 and 4. Additionally, the physics of an impact would presumably also be quantifiable. Based on these quantifiable

variables the Petitioners contend that the nature and extent of the damage that could be expected from the fires and explosions resulting from the impact of a large commercial airliner are known sufficiently to tailor a response strategy appropriate thereto. The submittal may be adequate for its stated purpose but there is no way to determine such without a defined description of the event(s) to which the subject mitigative strategies apply.

The Applicant is to provide 'reasonable assurance' that public health, safety and environmental concerns are protected by a preponderance of the evidence. Commonwealth Edison Co. (Zion Station, Units 1 and 2), ALAB-616, 12 NRC 419, 421 (1980). Without baseline assumptions about the magnitude of fires and explosions, there is no reasonable assurance that the mitigative strategies will be adequate. The Petitioners recognize that the Commission has discretion to deal with compliance with its regulatory requirements on case-by-case basis. Whether the mitigative strategies proposed herein by the Applicant provide adequate protection under the Atomic Energy Act are determinations "where the Commission should be permitted to have discretion to make case-by-case judgments based on its technical expertise and on all the relevant information," Union of Concerned Scientists v. Nuclear Regulatory Commission, 880 F.2d 552, 558 (D.C. Cir. 1989), "rather than by a mechanical verbal formula or a set of objective standards," *id.* However, the Commission cannot be expected to make a reasonable case-by-case determination without an adequate starting point. In this case, that means a description in quantitative and/or qualitative terms of the magnitude of the fires and explosions that the mitigative strategies are intended to address.

10 C.F.R. 2.309(f)(1)(v) requires the Petitioners to provide a concise statement of the facts that support their position and upon which the petitioner intends to rely at the hearing.

However, the requirements of 10 C.F.R. § 2.309(f)(1)(v), that generally call for a specification of facts or expert opinion supporting the issue raised, are not applicable to a contention of omission beyond identifying the information required under the regulation in question. North Anna, LBP-08-15, 68 NRC (slip op. at 27) (quoting Pa'ina Hawaii, LLC (Materials License Application), LBP-06-12, 63 NRC 403, 414 (2006)). Thus, for a contention of omission, the Petitioners' burden is only to show the facts necessary to establish that the application omits information that should have been included. The facts relied on need not show that the facility cannot be safely operated, but rather that the application is incomplete. If an applicant cures the omission, the contention will become moot. Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 383 (2002).

However, in this instance the Applicant has not cured the omission. Instead the Applicant has provided a statement of mitigative measures without any attempt to determine whether such are adequate for the regulatory requirement of addressing fires and explosions that would result from the impact of a large commercial airliner. Accordingly, contention two is not moot.

**B. The submittal is deficient because there are incomplete regulatory commitments that bear on the efficacy of the mitigative strategies.**

The submittal includes an attachment that lists numerous regulatory commitments that are left for action in the future.

(b)(4)

EXEMPTION 4 SOUTH TEXAS

Exemption 4  
South Texas

(b)(4)

Petitioners contend that some of the regulatory commitments and incomplete tasks are sufficiently significant that such should be completed in order to comply with 10 C.F.R.

52.80(d). At a minimum, the following regulatory commitments, specified by commitment number designation, should be completed prior to a finding that the submittal meets the requirements of 10 C.F.R. 52.80(d):

- 08-18140-38
- 08-18140-37
- 08-18140-36
- 08-18140-56
- 08-18140-23
- 08-18140-21
- 08-18140-6
- 08-18140-55
- 08-18140-54
- 08-18140-40
- 08-18140-41
- 08-18140-42
- 08-18140-44
- 08-18140-45
- 08-18140-46
- 08-18140-51
- 08-18140-52
- 08-18140-53

The Applicant's failure to complete the above-specified aspects of its mitigative strategies supports the Petitioner's contention two of omission and contradicts the Staff's and Applicant's assertion made at the oral arguments that the contention is moot based on the Applicant's submittal. North Anna, LBP-08-15, 68 NRC (slip op. at 27).

**Conclusion**

Contention two is not moot for two reasons: (1) the Applicant's failure to specify whether the response mitigative strategies are consistent with fires and explosions of a magnitude reasonably expected as a result of the impact of a large commercial airliner; (2) the incomplete regulatory commitments that have a bearing on the efficacy of the mitigative strategies.

Further, upon review of the SUNSI submittal by Petitioner's expert, Dr. Edwin Lyman, Petitioners anticipate that they may seek leave to supplement this brief based on his review of the subject documentation.

Respectfully submitted,

/s/ Robert V. Eye  
Robert V. Eye, Kan. Sup. Ct. No.10689  
Kauffman & Eye  
Suite 202  
112 SW6th Ave.  
Topeka, Kansas 66603  
785-234-4040  
bob@kauffmaneye.com  
July 21, 2009

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD PANEL**

---

**In the Matter of  
South Texas Project Nuclear Operating Co.  
Application for the South Texas Project  
Units 3 and 4  
Combined Operating License**

**Docket Nos. 52-012, 52-013**

**CERTIFICATE OF SERVICE**

I hereby certify that on July 21, 2009 a copy of "Petitioners' Brief Regarding Contention Two's Mootness" was served by the Electronic Information Exchange on the following recipients:

Administrative Judge  
Michael M. Gibson, Chair  
Atomic Safety and Licensing Board Panel  
Mail Stop T-3 F23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
E-mail: mmg3@nrc.gov

Office of the General Counsel  
U.S. Nuclear Regulatory Commission  
Mail Stop O-15D21  
Washington, DC 20555-0001  
James Biggins, Sara Brock, Jessica Bielecki  
E-mail: James.Biggins@nrc.gov;  
Sara.Brock@nrc.gov; jab2@nrc.gov

Administrative Judge  
Dr. Randall J. Charbeneau  
Atomic Safety and Licensing Board Panel  
Mail Stop T-3 F23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
E-mail: Randall.Charbeneau@nrc.gov

Counsel for STP Nuclear Operating Company  
Morgan, Lewis & Bockius LLP  
1111 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004  
Phone: 202-739-3000  
Fax: 202-739-3001  
Steven P. Frantz, Stephen J. Burdick  
E-mail: sfrantz@morganlewis.com;  
sburdick@morganlewis.com

Administrative Judge  
Dr. Gary S. Arnold  
Atomic Safety and Licensing Board Panel  
Mail Stop T-3 F23  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
E-mail: gxal@nrc.gov

*Signed (electronically) by Robert V. Eye*  
Robert V. Eye  
Counsel for the Petitioners  
Kauffman & Eye  
112 SW 6<sup>th</sup> Ave., Suite 202  
Topeka, KS 66603  
E-mail: bob@kauffmaneye.com

