

August 30, 2010

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	Docket Nos. 50-282-LR
Northern States Power Co.)	50-306-LR
)	
(Prairie Island Nuclear Generating Plant,)	ASLBP No. 08-871-01-LR
Units 1 and 2))	

**PRAIRIE ISLAND INDIAN COMMUNITY’S RESPONSE
IN OPPOSITION TO NRC STAFF’S MOTION IN LIMINE**

I. INTRODUCTION

On August 23, 2010, the NRC Staff filed a motion in limine to exclude from the evidentiary record of the proceeding portions of the direct testimony of the Prairie Island Indian Community’s expert, Christopher I. Grimes, submitted in this proceeding, as well as portions of his Declaration of November 23, 2009 (PIIC Exhibit 2). On August 30, 2010, Northern States Power Company, a Minnesota corporation (“NSPM”) filed a response supporting the motion. NRC Staff’s motion seeks to preclude Mr. Grimes from providing expert testimony on safety culture during the proceeding. The basis for the Staff’s motion is that Mr. Grimes is not qualified by knowledge, training or experience to provide expert testimony on safety culture and that his testimony would not assist the Board in understanding the evidence in this proceeding. The Prairie Island Indian Community (“Community”) disagrees with both of the staff assertions and submits this response for the Board’s consideration. The Community believes that Mr. Grimes’ testimony and Declaration as a Reactor Safety Expert will assist the Board in understanding the evidence and determining a fact at issue in the proceeding, and should not be excluded from the record. At best, the concerns raised by NRC Staff’s motion go to the weight,

rather than the admissibility, of Mr. Grimes' proffered testimony and opinion. NRC Staff's motion in limine should be denied in all respects.

II. BACKGROUND

The rationale behind the Community's Safety Culture Contention is that a careful examination of events, including NRC inspection reports and enforcement actions, demonstrates that there is a weak safety culture at the Prairie Island Nuclear Generating Plant ("PINGP"). Consequently, the Applicant does not meet the requirements of 10 C.F.R. 54.29(a) which provides that the Commission cannot issue a renewed license unless it finds reasonable assurance that the applicant will manage the effects of aging during the period of extended operation.

In its January 28, 2010 Order (Narrowing and Admitting PIIC's Safety Culture Contention), the Board restated and clarified the Community's contention as follows:

PINGP's safety culture is not adequate to provide the reasonable assurance required by 10 C.F.R. § 54.29(a)(1) that PINGP can manage the effects of aging during the requested period of extended operation.

Jan. 28, 2010 Order at 14. In admitting the contention, the Board found and held as follows:

In the instant case, we find that all of the reports, documents, and transcripts referenced by PIIC, together with the attached expert declaration, constitute adequate support for an admissible contention. Certainly they "call into question the applicant's ability to effectively implement the aging management program during the period of extended operation." Any factual disputes between the parties are to be resolved at hearing.

Id. (quoting Grimes Declaration [PIIC Exhibit 2] ¶ 10). As set forth in his declaration and direct testimony, that particular statement of Mr. Grimes quoted by the Board specifically refers to a decades-long leakage of borated water from the Unit 1 and 2 refueling cavity:

While these additional commitments, if followed by the applicant, may provide assurance that no further damage to the containment vessel will result, applicant's deficient performance and dereliction of its obligations to promptly and effectively correct deficient conditions call into question the applicant's ability to effectively implement the aging management program during the period of

extended operation.

Grimes Declaration (PIIC Exhibit 2) ¶ 10; Grimes Direct at A19. Indeed, as Mr. Grimes has testified, NSPM waited until the NRC audit in the Fall of 2008 to finally acknowledge the importance of this problem to aging management. Grimes Declaration (PIIC Exhibit 2) ¶ 13; Grimes Direct at A19. Mr. Grimes declaration (PIIC Exhibit 2) and direct testimony also discuss several other instances of NSPM's deficient performance and dereliction of its obligations to promptly and effectively correct deficient conditions as the factual basis for his opinion. See Grimes Declaration (PIIC Exhibit 2) ¶¶ 10, 13, 21, 24-25; Grimes Direct at A15-16, A18-19, A22-23. It is these mostly undisputed facts, set forth in all of the reports, documents, and transcripts referenced by Mr. Grimes in his declaration and testimony, together with Mr. Grimes' expert opinion that these deficiencies "call into question the applicant's ability to effectively implement the aging management program during the period of extended operation," that are the essence of the Community's Safety Culture Contention. See Grimes Declaration (PIIC Exhibit 2) ¶¶ 24 and 25; Grimes Direct Testimony A41-45.

As the Board found when admitting the Community's Safety Culture Contention, the facts set forth in Mr. Grimes' declaration and testimony – the essentially uncontroverted factual bases for his expert opinion – do raise a legitimate question as to whether NSPM's safety culture is too weak to ensure the effectiveness of NSPM's aging management plan:

[A] close reading of PIIC's contention reveals that PIIC does not directly challenge these operational issues [including the refueling cavity leakage, human performance issues, and concerns regarding PINGP's Corrective Action Program]. Rather, it treats them as indications of a weak safety culture – a safety culture too weak to ensure the effectiveness of Applicant's AMP. As Mr. Grimes asserts in his declaration accompanying PIIC's contention, safety culture is an essential component of an effective AMP. Indeed, it appears to us that a strong safety culture is necessary to achieve the following four of the ten elements required for an effective AMP:

7. *Corrective actions, including root cause determination and prevention of recurrence, should be timely.*
8. *Confirmation process should ensure that preventive actions are adequate and that appropriate corrective actions have been completed and are effective.*
9. Administrative controls should provide a formal review and approval process.
10. *Operating experience should provide objective evidence to support the conclusion that the effects of aging will be managed adequately so that the structure and component intended function(s) will be maintained during the period of extended operation.*

01/28/10 Order at 11-12 (emphasis added) (citing Grimes Declaration ¶ 22 [PIIC Exhibit 2] (quoting Office of Nuclear Reactor Regulation, Division of Regulatory Improvement Programs, Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants, NUREG-1800, Rev. 1, at A.1-8 (Sept. 2005) (ADAMS Accession No. ML052110007))).

Based on his review of the facts and evidence, Mr. Grimes opines as that “there is a safety culture at Prairie Island that potentially fails to achieve four of the ten elements of an effective management program (items 7 through 10 above).” Grimes Direct Testimony A23. Accordingly, Mr. Grimes has opined that “the NRC cannot logically find that there is reasonable assurance under the requirements of 10 CFR 54.29(a)(1).” *Id.* A44. Mr. Grimes further opines that “the NRC should direct the applicant to conduct a third party assessment of safety culture as described in Section 10.02 of NRC Inspection Manual Chapter 0305;” and “[a] the review of this third party assessment, the NRC can address what corrective actions by the applicant are necessary before the renewal should be granted.” Grimes Declaration (PIIC Exhibit 2) ¶¶ 24 and 25; Grimes Direct Testimony A44-45.

NRC Staff’s motion seeks to exclude the following testimony proffered by Mr. Grimes from the record: A15-16, A18-19, A23, A31-32, A34, A36, A39, A41-45 and paragraphs 10, 13, 21, and 24-25 of PIIC Exhibit 2. NRC Staff does not challenge Mr. Grimes’ testimony regarding

his qualifications, training and experience set forth in A4, A5, A8, A10, A11, A13, A14, A24, A25 and A25,¹ and A26, or paragraphs 2-9 or 15-17. Nevertheless, NRC Staff seeks to preclude Mr. Grimes from testifying on safety culture and safety culture assessments. *See* NRC Staff Motion at 4.

III. DISCUSSION

A. Legal Standard

There is no dispute regarding the standard for admissibility of expert witness testimony. Experts must be qualified by knowledge, training, or experience. See Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-04, 61 NRC 71, 80-81 (2005) (“Savanna River”). Furthermore, citing the Federal Rule of Evidence 702 as guidance, the Board in Savanna River noted that the opinion of an expert is admissible if: (1) the opinion would assist the trier of fact in understanding the evidence or to determine a fact in issue; and (2) the opinion is based on sufficient facts or data to be the product of reliable principles and methods that the witness applied to the facts of the case. Although the Federal Rules of Evidence are not directly applicable to Commission proceedings, NRC presiding officers often look to the rules for guidance, including Federal Rule of Evidence 702 that allows a witness to be qualified as an expert “[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or determine a fact in issue.” Duke Power Co. (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982); Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-01-9, 53 NRC 239, 250 (2001). The Community believes that Mr. Grimes education, training, and experience as a Reactor Safety Expert will assist the Board in determining the adequacy of the safety culture at

¹ PIIC notes that Mr. Grimes’ Direct Testimony erroneously contains two Q25’s and two A25’s on page 11-12, neither of which is challenged by NRC Staff’s motion.

PINGP.

B. Mr. Grimes' Education, Training, and Experience Establish His Expertise on Issues Directly Relevant to the Safety Culture Contention

NRC Staff does not challenge Mr. Grimes' testimony regarding his qualifications, training and experience set forth in A4, A8, A10, A11, A13, A14, A24, A25 and A25,² and A26, or paragraphs 2-9 or 15-17, or his resume (PIIC Exhibit 1). Mr. Grimes was employed by the NRC and its predecessor AEC for 32 years. As set forth in the answers and paragraphs listed above, Mr. Grimes' distinguished career has involved extensive experience with, and regulatory oversight of, most aspects of nuclear power plant regulation, including, among other things: nuclear reactor safety; reactor safety management; safety reviews and safety assessments; aging management programs; and the reactor oversight process, including crosscutting issues of human performance, safety conscious work environment, and problem identification and resolution. Mr. Grimes' is also familiar with the underlying safety culture components of a safety-conscious work environment. See A24, A25, A25, A26. His credentials, knowledge, training and experience regarding these matters have not been questioned.

Given his education, training and experience, Mr. Grimes is abundantly qualified to opine that safety culture is necessary to achieve the following four of the ten elements required for an effective AMP. Indeed, in setting forth its express finding on that issue in its January 28, 2010 Order, the Board specifically cited Mr. Grimes' testimony. See 01/28/10 Order at 11-12. The issue raised by the NRC Staff's motion is whether Mr. Grimes is also qualified to draw the conclusion that NSPM's deficient performance and dereliction of its obligations to promptly and effectively correct deficient conditions call into question NSPM's ability to effectively implement the aging management program during the period of extended operation. He is.

² PIIC notes that Mr. Grimes' Direct Testimony erroneously contains two Q25's and two A25's on page 11-12, neither of which is challenged by NRC Staff's motion.

The Community offered Mr. Grimes' testimony as a Reactor Safety Expert. His operating reactor oversight experience at the NRC, including his Senior Executive Service management experience, provide essential and important bases for evaluating licensee behavior related to safety culture. His expertise and experience is of the same nature as that of the NRC inspection and operating reactor staff who bring their expertise to bear on the oversight of licensee operations to ensure compliance with NRC regulations and license conditions, including events and activities that have an important bearing on the adequacy of a licensee's safety culture. The actions and attitudes of licensee staff and management in regard to safety issues provide the foundation for the assessment of safety culture at a nuclear facility. An understanding of these reactor safety underpinnings is the essential foundation for any assessment of safety culture at a particular facility. Mr. Grimes' education, experience, and training fully qualify him as an expert in this regard. With all due respect to NRC staff witness Dr. Valerie Barnes, there is substantially more involved in assessing the safety culture at a facility than a "masters degree in psychology, sociology, or organizational behavior and at least 1 year experience." To carry the NRC staff's premise to its logical extreme, the NRC would be faced with the following questions: Can the NRC Staff verify that all NRC personnel or consultants who have contributed to the NRC's safety culture analysis at PINGP meet the expert qualifications NRC Staff contends are required for safety culture expertise? Can the NRC Staff verify that all NRC personnel or consultants whose input or analysis was relied upon in the evaluation of safety culture at PINGP meet the expert qualifications NRC Staff contends are required for safety culture expertise?

And more to the point, one does not need a "masters degree in psychology, sociology, or organizational behavior and at least 1 year experience" to conclude that NSPM's deficient

performance and dereliction of its obligations to promptly and effectively correct deficient conditions raise significant concerns about NSPM’s safety culture. Indeed, the largely undisputed factual bases for Mr. Grimes’ testimony reveal a plant culture where known safety problems were neglected for years – indeed, *decades* – before being addressed by NSPM. As such, NRC Staff’s efforts to question Mr. Grimes’ expert qualifications ring hollow.

Mr. Grimes’ expert conclusion, based on his knowledge, training and experience acquired during 32 years of distinguished federal service – and NRC and NSPM’s own documents and reports – is a reasonable, well-supported expert opinion. Given NSPM’s woeful track record and inability to resolve long-standing safety culture issues, the NRC cannot find the reasonable assurance required by 10 C.F.R. § 54.29(a)(1) that PINGP can manage the effects of aging during the requested period of extended operation until NSPM actually demonstrates its commitment with a proven track record of actually fixing its undisputed safety culture inadequacies. Grimes Direct Testimony A44.³

The Community believes that the findings and opinions of NRC headquarters technical staff and the regional inspection staff on issues related to safety have an important bearing on safety culture implications. Likewise, Mr. Grimes’ testimony on these issues provides the Board with an assessment and perspective on safety culture from an expert with decades of highly relevant education, training and experience. As the Commission stated in its Draft Safety Culture Policy, “[e]xamples linked to characteristics and attitudes in organizations and

³ Indeed, the NRC Staff’s own safety culture expert, Dr. Valerie Barnes opined that “a wide-scope, significant culture change effort may require up to 5 years or more to complete.” NRC Staff Testimony of Dr. Valerie E. Barnes, June Cai, Molly Jean Keefe, and Audrey L. Klett Concerning Safety Culture and NRC Safety Culture Policy Development and Implementation, A8 (citing Schneider, et al, 1996 (NRC Staff Exhibit 28)).

individuals associated with weak safety cultures include inadequate procedures; procedures not being followed; inadequate supervision; decisionmaking that does not ensure that safety and security is maintained; and ineffective problem identification, evaluation and resolution. See Draft Safety Culture Policy Statement, U.S. Nuclear Regulatory Commission, 74 Fed. Reg. 57525, 57526 (November 6, 2009). Furthermore, the “[c]haracteristics of a positive safety culture” set forth by the NRC in its draft Policy Statement” all depend on the assessment of reactor safety experts. It is these types of examples and characteristics that form the basis for the Community’s contention that the weak safety culture at PINGP would preclude a finding of reasonable assurance under 10 CFR 54.29(a)(1). Mr. Grimes’ testimony is relevant and useful to the Board in this regard.

Mr. Grimes’ experience as regulator and a former NRC manager should qualify his conclusions regarding licensee performance. His regulatory experience, including 22 years of SES managerial responsibilities should qualify his opinions on safety culture issues even more than a so-called safety culture expert who only has a narrow view of the organizational capabilities of nuclear power plant applicants and licensees. Mr. Grimes was regularly recertified by the NRC as an SES manager capable of assessing the performance of licensees and applicants, and was qualified to decide how to apply NRC resources and to decide how to pursue enforcement actions. Mr. Grimes was certified to lead NRC Incident Response Teams. He led a diagnostic evaluation team at Oyster Creek, whose procedures did include many of the cross-cutting issues that are currently addressed by the safety culture policy and associated inspection procedures. Mr. Grimes also served as the Division Director for Comanche Peak in the Office of Special Projects, which included direct supervision of the inspections and the operational readiness.

Given Mr. Grimes' extensive experience, the Community believes that the Board would find useful his expert opinions on whether there is reasonable assurance that NSPM's aging management program will adequately manage aging effects despite the continuing performance weaknesses in several areas important to effective implementation of the aging management programs.

IV. CONCLUSION

NRC Staff's motion in limine should be denied in all respects.

Respectfully Submitted,

/Signed electronically by Philip R. Mahowald/

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Dated: August 30, 2010

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the “Prairie Island Indian Community’s Response In Opposition to NRC Staff’s Motion in Limine,” dated August 30, 2010, was provided to the Electronic Information Exchange for service on the individuals listed below, this 30th day of August, 2010.

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