

October 9, 2012

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

|   |   |                                |
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| In the Matter of                        | ) |                                |
|   | ) |                                |
| Northern States Power Company           | ) |                                |
|   | ) |                                |
| Prairie Island Nuclear Generating Plant | ) | Docket No. 72-10-ISFSI-2       |
|   | ) | ASLBP No. 12-922-ISFSI-MLRBD01 |
| (Independent Spent Fuel Storage)        | ) |                                |
|   | ) |                                |

**Prairie Island Indian Community’s Reply on Request for Hearing and  
Petition to Intervene in License Renewal Proceeding for the  
Prairie Island Independent Spent Fuel Storage Installation**

**I. INTRODUCTION**

The Prairie Island Indian Community (PIIC) offers the following consolidated reply to Answer of Northern States Power, Minnesota (NSPM) and the Response of the Nuclear Regulatory Commission Staff (NRC Staff) to the PIIC’s Petition to Intervene in these proceedings.<sup>1</sup> As a backdrop to the PIIC’s reply on the individual contentions, it is first important to consider two overarching issues: 1) the Commission’s direction that contentions associated with waste confidence be held in “abeyance;” and 2) a license applicant’s obligations under NRC regulations and practice to identify and evaluate potential environmental impacts in an Environmental Report (ER).

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<sup>1</sup> PIIC’s Request for Hearing and Petition to Intervene in License Renewal Proceeding for the Prairie Island Independent Spent Fuel Storage Installation (“PIIC Petition”) (Aug. 24, 2012); NSPM’s Answer to the PIIC’s Petition to Intervene (“NSPM Answer”) (Sept. 25, 2012); NRC Staff Response to the Request for Hearing and Petition to Intervene by the PIIC (“NRC Staff Response”) (Sept. 25, 2012).

As to the first issue, on August 7, 2012, the Commission issued a Memorandum and Order (the Memorandum and Order)<sup>2</sup> responding to the decision of the United States Court of Appeals for the District of Columbia Circuit that vacated and remanded the 2010 update to the Commission’s Waste Confidence Decision and Temporary Storage Rule (the Circuit Court Decision).<sup>3</sup> The Memorandum and Order establishes the path forward for agency licensing decisions until the Commission has responded to the Circuit Court’s Decision. As the Commission noted, “[w]aste confidence undergirds certain agency licensing decisions, in particular new reactor licensing and reactor licensing renewal.”<sup>4</sup> The Commission went on to state that it would not issue final licenses dependent on the Waste Confidence Decision (WCD) or the Temporary Storage Rule (TSR) until the Circuit Court’s Decision is addressed and that, with respect to ongoing licensing reviews, “contentions and associated filings concerning waste confidence be held in abeyance pending our further order.”<sup>5</sup> This directive specifically captures the review and adjudication of contentions or portions of contentions that are “associated with waste confidence issues.”<sup>6</sup>

The Prairie Island Independent Spent Fuel Storage Installation (“PI ISFSI”) license renewal is one of the licensing decisions “undergirded” by the WCD and TSR, and contentions asserted in the PIIC Petition to Intervene are associated with waste

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<sup>2</sup>*Calvert Cliffs Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant Unit 3), et al.*, CLI-12-16, 76 N.R.C.\_\_(Aug. 7, 2012).

<sup>3</sup>*See New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012).

<sup>4</sup>*Calvert Cliffs* (slip op. at 4).

<sup>5</sup>*Id.* at footnote 7.

<sup>6</sup>*Id.*

confidence issues. Based on the Memorandum and Order, the PIIC agrees with the NRC that those contentions should be held in abeyance until the Circuit Court remand is addressed by final and legitimate rulemaking.<sup>7</sup> The Community concurs with the NRC Staff that Contention 1 and a portion of Contention 2 should be held in abeyance. In addition, the PIIC submits that all of Contention 2, Contention 3 and Contention 4 should be held in abeyance to the extent that NSPM's ER does not address or evaluate impacts beyond the license renewal term requested, which in turn is implicated by the final resolution of the WCD and TSR. Contentions 6 and 7 should also be held in abeyance to the extent the issues raised may be affected by the final resolution of the WCD and TSR.

As to the second issue, the PIIC submits that NSPM's Answer employs a misinterpretation and mischaracterization of an applicant's responsibility in its ER under 10 CFR Section 51.45, which would do serious harm to an important, long-standing Commission rule. In addition, NSPM's statement of the standard for updating a previous ER demonstrates that the ER on this license renewal is inadequate.

An applicant's environmental report "should contain sufficient data to aid the Commission in its development of an independent analysis,"<sup>8</sup> and an applicant's ER is the first opportunity – and the only opportunity until much later in the licensing process – to ensure that important environmental impact issues are identified and evaluated. NRC regulations require the Petitioner to raise contentions related to NEPA as challenges to

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<sup>7</sup>NRC Staff Response at 1.

<sup>8</sup>*In the Matter of Pacific Gas and Electric Company* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI -12- 6 at Footnote 31(June 7, 2012).

the Applicant's environmental report, which acts as a surrogate for the EIS or EA during the early stages of a relicensing proceeding.<sup>9</sup>

10 CFR 51.45(b) requires the applicant to address, at a minimum, the following:

- The impact of the proposed action on the environment;
- Any adverse environmental effects which cannot be avoided should the proposal be implemented;
- Alternatives to the proposed action;
- The relationship between local short-term uses of man's environment and the maintenance and enhancement of long term productivity; and
- Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

These provisions mirror the provisions in Section 102(2)(C) of the National Environmental Policy Act.<sup>10</sup> The applicant's ER responsibilities under these broad categories must be informed by not only Commission guidance<sup>11</sup> and policy statements,<sup>12</sup> but also by reference to basic and widely known interpretations of these broad categories by the courts and the Council on Environmental Quality.<sup>13</sup> The ER process is also not a "pick and choose" which impacts will be evaluated in the ER, as the applicant seems to

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<sup>9</sup>See 10 C.F.R. § 2.309(f)(2) explaining that [o]n issues arising under the National Environmental Policy Act, the petitioner shall file contentions based on the applicant's environmental report.

<sup>10</sup>42 U.S.C. § 4332(2)(C).

<sup>11</sup>See, e.g., NUREG 1748.

<sup>12</sup>U.S. Nuclear Regulatory Commission, Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (69 FR 52040, August 24, 2004).

<sup>13</sup>See Regulations for Implementing the Procedural provisions of the National Environmental Policy Act, Council on Environmental Quality, 40 CFR Parts 1500 – 1508.

believe, and those that the NRC will address in the Environmental Assessment (EA) or Environmental Impact Statement (EIS). The ER responsibilities of the applicant must match the comprehensive types of impacts that must be evaluated in the NRC EA or EIS. PIIC would also note that it is not the NRC Staff responsibility to excuse the applicant from its responsibilities. Furthermore, the applicant's responsibilities to evaluate impacts in the ER are not simply an exercise of reciting potential impacts that the NRC Staff would routinely pick up in its EA or EIS. One of the objectives of 10 CFR 51.45 is to call on the applicant's unique knowledge of local environmental conditions to set the NRC Staff in the proper direction in its environmental review inquiry.

NSPM states that the rules governing environmental reviews for ISFSIs set forth in 10 CFR sections 51.60 and 51.61 limit the scope of the ER on this license renewal application to "updating or supplementing the information previously submitted to reflect any significant environmental change."<sup>14</sup> NSPM interprets this as limiting the environmental analysis to the consideration of "new and significant information."<sup>15</sup> Under this interpretation, PIIC believes that impacts not evaluated in the previous ER, including cumulative impacts, and the socioeconomic impacts that are important for analyzing whether disproportionate and high impacts might affect low income and minority populations such as PIIC, must be identified and evaluated in the ER on this license renewal application. These types of impacts were not evaluated in the ER on the

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<sup>14</sup> NSPM Answer at 7.

<sup>15</sup> *Id.*

initial licensing of the PINGP ISFSI.<sup>16</sup> The cumulative impact evaluation of the incremental impact of the action when added to reasonably foreseeable future actions could not possibly have been evaluated in the initial ER. The incremental impacts of reasonably foreseeable future actions must be based on potentially significant environmental impacts at the present time, not in 1990 when the original ER was prepared. Likewise, the Commission's Policy on Environmental Justice,<sup>17</sup> established in 2004, could also not have been considered. All of this calls for the identification of new and significant information on cumulative impacts and environmental justice-related impacts in the ER.

Section 51.45(c) instructs that an environmental report should contain sufficient data to aid the Commission in its development of an independent analysis. As one Licensing Board stated, "these data include information that might aid the Commission in its analysis of environmental justice."<sup>18</sup> This also would include matters of cumulative impact. These issues will be addressed in more detail below in PIIC's response on Contentions 2 and 4.

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<sup>16</sup>*Northern States Power Company, Independent Spent Fuel Storage Installation Environmental Report*. Docket No. 72-10, August 1990, ML9010240382.

<sup>17</sup> *Supra*, note 12.

<sup>18</sup>*Northern States Power Company* (formerly Nuclear Management Company LLC) (Prairie Island Nuclear Generating Plant, Units 1 and 2), LBP-08-26, 68 NRC 905 at footnote 179 (2008).

## **II. ARGUMENT**

### **A. STANDING.**

Neither NSPM nor NRC Staff contest PIIC's standing, to Petition the Board for intervention.<sup>19</sup>

### **B. STANDARDS GOVERNING CONTENTION ADMISSIBILITY.**

There is no substantive disagreement between PIIC, NSPM, or NRC Staff regarding the requirements for contention admissibility.<sup>20</sup> PIIC relies on its earlier arguments.<sup>21</sup>

### **C. REPLY TO NSPM AND NRC STAFF RESPONSES ON PIIC'S CONTENTIONS**

NSPM and the NRC Staff disagree regarding the admissibility of the PIIC's contentions. NRC Staff has concluded that Contention 1 should be held in abeyance, Contention 5 is admissible and Contentions 2, 4 and 6 are admissible except to the extent that issues raised in those Contentions should be held in abeyance pending action to address the Circuit Court's decision regarding the WCD and the TSR.<sup>22</sup>

NSPM asserts that all of PIIC's contentions are inadmissible.<sup>23</sup>

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<sup>19</sup> See PIIC Petition at 17-18; NSPM Answer at 2; NRC Staff Response at 2-7.

<sup>20</sup> NSPM Answer at 3-12; NRC Staff Response at 7-9.

<sup>21</sup> PIIC Petition at 19-22.

<sup>22</sup> NRC Staff Response at 9-23.

<sup>23</sup> NSPM Answer at 12-50.

## **CONTENTION 1. NSPM’S ENVIRONMENTAL REPORT IMPROPERLY MINIMIZES WASTE STORAGE IMPACTS.**

NRC Staff asserts that not only should PIIC’s Contention 1 concerning Waste Confidence be held in abeyance,<sup>24</sup> but that “to the extent that PIIC contemplates impacts associated with WCD and TSR, the NRC Staff maintains that these issues should be held in abeyance, both in relation to the proposal for a generic EIS to support a new WCD and TSR, or to do site-specific environmental analysis, or some combination of both.<sup>25</sup> NRC Staff further has concluded that the Community’s Petition for a waiver to challenge the WDC/TSR is not necessary because the matter should be held in abeyance. PIIC has no objection to holding Contention 1 in abeyance.

The NRC Staff’s position is consistent with the Commission’s August 7, 2012 Memorandum and Order (“Memorandum and Order”)<sup>26</sup> and the Circuit Court’s Decision vacating and remanding the 2010 proposed WCD and TSR.<sup>27</sup> Specifically, the Memorandum and Order directed that “contentions and associated filings concerning waste confidence be held in abeyance pending our further order,”<sup>28</sup> and this directive specifically captures the review and adjudication of contentions or portions of contentions that are “associated with waste confidence issues.”<sup>29</sup> The PI ISFSI is the type

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<sup>24</sup> Staff Response at 1.

<sup>25</sup> *Id.* at 10.

<sup>26</sup> *Calvert Cliffs Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant Unit 3), et al.*, CLI-12-16, 76 N.R.C. \_\_ (Aug. 7, 2012) (slip op. at 6).

<sup>27</sup> *See New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012).

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*

of licensing decision on which a final Commission decision Circuit Court Decision is addressed.

NRC Staff has adopted the directive in the Memorandum and Order for purposes of this proceeding.<sup>30</sup> PIIC, too, is amenable to holding its other contentions affected by the WDC and TSR in abeyance, as detailed below.<sup>31</sup> Even NSPM agrees (at least, at one point) that abeyance is the correct course of action.<sup>32</sup>

NSPM asserts that PIIC's Contention 1 must be dismissed because it "impermissibly challenges a pending rulemaking."<sup>33</sup> NSPM attempts, to no avail, to recast the chronology to make it seem as if there is an *existing* rule under consideration, and there is not. NSPM filed its license renewal application almost a year ago, on October 20, 2011, in which it relied on the newly-updated TSR, along with the WCD.<sup>34</sup>

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<sup>30</sup> Staff Resp. at 1.

<sup>31</sup> In summary, abeyance under the Memorandum and Order is appropriate for Contentions 1, 2, 3, and 4 to the extent that the ER did not provide environmental impact or safety analysis beyond the license term requested in NSPM's LRA. Contentions 6 and 7 should also be held in abeyance to the extent the issues raised by those contentions may be affected by the final resolution of the WCD and TSR.

<sup>32</sup> See NSPM Resp. at 13 (With respect to pending or new waste confidence contentions, NSPM agrees that Commission directed that "these (pending) contentions—and any related contentions that may be filed in the near term—be held in abeyance pending further our further order.") and ("Should the NRC Staff choose to perform a site-specific analysis, this contention (and those portions of subsequent contentions challenging the WCD/TSR) would be held in abeyance in accordance with the Commissions August 27 (sic), 2012 Order..."); *but contrast* 14 (NSPM's simultaneous argument that Contention 1 be dismissed because NSPM's renewal application relies on the WCD/TSR "which is now the subject of rulemaking.") In short, there is no rule or any rulemaking upon which such an argument could rely.

<sup>33</sup> NSPM Answer at 12.

<sup>34</sup> See, e.g., NSPM's Environmental Report Supplement at pages E-1 to E-2. The revised WCD and TSR were published in the Federal Register at 75 Fed. Reg. 81,037 (Dec. 23, 2010).

Then, on June 8, 2012, the Circuit Court Decision vacated both the TSR and the WCD, eliminating them as any possible basis to support NSPM’s application.<sup>35</sup> On August 24, PIIC submitted the instant Petition citing the fact that NSPM could not rely on the now-vacated WCD and TSR.<sup>36</sup> About two weeks *later*, on September 6, the NRC instructed NRC staff to develop a new, generic EIS and rule within 24 months to support an new WCD and TSR.<sup>37</sup> So, the WCD and TSR are not themselves the “subject” of rulemaking; *entirely new rules* must be proposed, and it will be at least two years before they are published even in draft form. This is precisely the point of the Commission in its Memorandum Order, and the NRC in its Response, that in the absence of a rule that is central to an analysis of relevant and material contentions, the better approach is to admit all the contentions implicating the WCD and TSR *now* and hold them in abeyance for resolution *after* the Circuit Court remand is addressed by a valid and effective rule.

NSPM offers the *Oconee*<sup>38</sup> case in support of its argument. While *Oconee* suggests rejection of contentions that are “about to become” the subject of rulemaking, it is distinguishable. The Staff Requirements Memorandum (“SRM”) at issue in *Oconee* “explicitly stated that current license renewal applicants should not address [matters to be covered by the pending rule] *unless waiting for the rulemaking to be final would delay*

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<sup>35</sup>See *New York v. NRC*, 681 F.3d 471, 483 (D.C. Cir. 2012).

<sup>36</sup>See PIIC Petition at 23-26.

<sup>37</sup>See SRM-COMSECY-12-0016 (Sept. 6, 2012), ADAMS Accession No. ML 12250A023.

<sup>38</sup>*In the Matter of DUKE ENERGY CORPORATION* (Oconee Nuclear Station, Units 1, 2, and 3) CLI-99-11, 49 N.R.C. at 345 (cited at NSPM Answer at 14).

*the license renewal proceeding.*”<sup>39</sup> There, the rulemaking was not expected to delay the anticipated completion of the license renewal proceeding. Here, there is no rulemaking underway and, when it commences, it will take at least two years, with a highly uncertain result, and certainly will delay completion of this licensing proceeding. Therefore, although PIIC is amenable to NRC Staff’s suggestion of holding this Contention 1 in abeyance, the Commission remains authorized to accept and admit it at this time.

**CONTENTION 2. NSPM’S ENVIRONMENTAL REPORT FAILS TO ADDRESS CUMULATIVE IMPACTS ON RELATED PROJECTS ON PIIC, ITS MEMBERS, AND ITS LANDS.**

NRC Staff has concluded that this contention is admissible except that the Community’s cumulative impacts arguments based on the WCD and TSR be held in abeyance.<sup>40</sup> Specifically, has stated that it “intends to follow the guidance in NUREG-1748 and consider cumulative effects associated with the relicensing of the PI ISFSI”<sup>41</sup> and has determined to perform an Environmental Assessment (“EA”).<sup>42</sup> This moots NSPM’s arguments to the extent they are rooted in purported standards for far less detailed ERs, in addition to NSPM’s claims that any EA need not include a cumulative-impacts analysis. The PIIC has no objection to the NRC Staff’s recommendation for partial abeyance and partial admission of this contention.<sup>43</sup>

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<sup>39</sup>*Id.* (emphasis added).

<sup>40</sup> NRC Staff Response at 11-12.

<sup>41</sup>*Id.* at 11.

<sup>42</sup> NRC Staff Response at 12.

<sup>43</sup> In fact, based on 10 CFR Section 51.61, all of Contention 2 and 4, to the extent that the ER did not evaluate cumulative or environmental justice impacts *beyond the license term requested* in the renewal application, must also be held in abeyance: “...in accordance

NSPM asserts that PIIC's Contention 2 must be dismissed because "the alleged cumulative impacts are vague, are outside the scope of this proceeding, and in part, concern waster confidence issues."<sup>44</sup> NSPM's argument should be rejected for at least four reasons. First, citing Section 3.4.6.2 of NUREG-1748, NSPM contends that there is no requirement for an ISFSI license renewal ER to contain a cumulative impacts analysis.<sup>45</sup> As discussed below, Section 3.4.6.2 (in fact, all of Chapter 3 of NUREG-1748), pertains to the development of an EA by the NRC, not an ER by an applicant.

However, Chapter 6 of NUREG 1748 contains the instruction for the Applicant's ER entitled "The Environmental Report: Format and Content." Section 6.2.3 requires an applicant to

Discuss any past, present or reasonably foreseeable future actions which could result in cumulative impacts when combined with the proposed action.

This makes sense because the NRC must undertake a cumulative impact analysis as part of its environmental review of the ISFSI License Renewal Application.<sup>46</sup> And the ER

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with the generic determination in 51.23(a) and the provisions in 51.23(b), no discussion of the environmental impact of the storage of spent fuel at an ISFSI beyond the term of the license or amendment applied for is required for an environmental report..." 10 C.F.R. Section 51.61.

<sup>44</sup> NSPM Answer at 12.

<sup>45</sup> NSPM Answer at 17-18.

<sup>46</sup>CEQ provides "a framework for advancing environmental impact analysis by addressing cumulative effects in either an environmental assessment (EA) or an environmental impact statement (EIS)." *Considering Cumulative Effects Under the National Environmental Policy Act* at v (CEQ 1997), available on-line at <http://ceq.hss.doe.gov/nepa/ccenepa/ccenepa.htm> (last visited Oct. 3, 2012). This is because:

must provide a sufficient basis on which to make that assessment. And, as discussed below, every federal project that has the potential to affect Indian tribes and their lands must contain a *full* cumulative-impacts analysis, if not under NEPA, then as a matter of each federal agency's trust responsibility to preserve tribal resources.

Second, PIIC has discussed at length in its Petition why the NRC must consider additional future storage, not just 48 dry casks and a 40-year license term.<sup>47</sup> But NSPM insists that, because it “has not yet applied for an NRC license to increase the capacity of the ISFSI, evaluation of any such expansion in the current application is beyond the scope of this proceeding.”<sup>48</sup> Therefore, it asserts that a cumulative-impacts analysis does not require consideration of that future possibility.

NSPM's claim does not withstand the most cursory factual analysis using a helpful analytic tool: math. Indeed, the spent nuclear fuel currently stored in the PINGP's spent fuel pool will fill an additional 30 casks, or 11 more casks than the 48 casks identified in the renewal application, and NSPM concedes that a total of 98 casks will be needed to

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Many times there is a mismatch between the scale at which environmental effects occur and the level at which decisions are made. Such mismatches present an obstacle to cumulative effects analysis...*Cumulative effects analysis should be the tool for federal agencies to evaluate the implications of even project-level environmental assessments (EAs) on regional resources...*the increased use of EAs rather than EISs in recent years could exacerbate the cumulative effects problem. ...They are a cost-effective way to determine whether potentially significant effects are likely and whether a project can mitigate these effects. At the same time, because EAs focus on whether effects are significant, they tend to underestimate the cumulative effects of their projects. *Given that so many more EAs are prepared than EISs, adequate consideration of cumulative effects requires that EAs address them fully.* (*Id.* at 4.)

<sup>47</sup> PIIC Petition at 31-34.

<sup>48</sup> NSPM Answer at 16.

store all of the spent nuclear generated by the PINGP if it continues to operate to the end of its renewed reactor licenses in 2034. In fact, NSPM already has asked the Minnesota Public Utilities Commission for an expansion of ISFSI storage that would accommodate up to 64 casks in order “[t]o avoid having to seek multiple approvals from the MPUC.”<sup>49</sup> And it did so with the full EIS required by Minnesota state law. So NSPM has fully analyzed its real-world needs for spent nuclear fuel storage and can readily present that information as part of a cumulative impacts analysis—apparently it just doesn’t want to in this LRA.

NSPM cites *In the Matter of Duke Energy Corporation*,<sup>50</sup> with approval. But the facts of that decision are so distinguishable from the current matter that the decision actually favors PIIC. In *Duke Energy*, the Commission considered a contention alleging that likely future plans to use mixed oxide (“MOX”) fuel should be considered as part of a current licensing action. The Commission relied on federal precedent to determine how far an agency must delve into an allegedly connected, future project:

*Kleppe*... clearly establishes that an EIS need not delve into the possible effects of a hypothetical project, but need only focus on the impact of the particular proposal at issue and *other pending or recently approved proposals that might be connected to or act cumulatively with the proposal at issue*.<sup>51</sup>

The Commission rejected the contention, concluding there was no showing of either ripeness or a nexus based on various factors. The Commission noted that it had no

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<sup>49</sup>*Id.* at 15-16.

<sup>50</sup>*McQuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2*, 55 N.R.C. 278, CLI-02-14 (Apr. 12, 2002).

<sup>51</sup>*Id.* at 295 (citing *National Wildlife Federation v. FERC*, 912 F.2d 1471, 1478 (D.C. Cir. 1990) (emphasis in *Duke*) (citing *Kleppe v. Sierra Club*, 427 U.S.390, 414-15 (1976)).

current details about the plans because Duke simply had not submitted them.<sup>52</sup> Also, even though Duke had a current contract for delivery of the MOX fuel, it would not be delivered for more than six years, and in that time “any number of events could occur that would render a license amendment application to use MOX fuel unnecessary.”<sup>53</sup>

There, the plans were to use a new fuel not already part of the licensing scheme—presumably, the installation could continue to function without it, if necessary. And no plans were even available, unlike here. It is hardly “hypothetical” that the PINGP has already generated and is storing spent nuclear fuel in an amount that exceeds the current capacity of the ISFSI. And it is hardly “hypothetical” that NSPM intends to continue operating PINGP and, thereby, generating additional spent nuclear fuel far in excess of the current capacity of the ISFSI. So, *Duke Energy* does not help NSPM’s argument. Rather, it supports the Community’s contention that NSPM’s certain future conduct, which will result in a certain application to amend the ISFSI license must be considered in the Commission’s current review.

Third, NSPM also contests PIIC’s claim that there will be cumulative impacts related to disturbance of archaeological and cultural resources.<sup>54</sup> NSPM suggests that these issues are “vague, unsupported by any documentation or expert testimony, and thus, should not be admitted,” in addition to citing the fact that PIIC raised what NSPM calls “similar issues” in the earlier license renewal proceeding, including some matters that

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<sup>52</sup>*Id.* at 295.

<sup>53</sup>*Id.* at 296.

<sup>54</sup> PIIC Petition at 34.

were settled by agreement.<sup>55</sup> The Community submits that its concerns about archeological impacts are particular and demonstrate that NSPM is flying blind with respect to its knowledge of the archaeological landscape near the ISFSI. NSPM relies on a 2010 Phase I survey<sup>56</sup> that is best described as limited to support its application. Significant recent work that NSPM itself commissioned and its Phase I consultant ignore indicate that there is much work to be done to identify and protect cultural resources in the immediate vicinity of the ISFSI, despite NSPMs prior disruption of resources in the area.

Very little archaeological survey work was conducted in the immediate vicinity of the ISFSI *prior* to the construction of the ISFSI. The archaeological survey work referenced in the 1992 NRC ISFSI licensing proceedings was conducted in 1967, and has been exposed as unreliable, poorly documented, impossible to relocate and, in any event, conducted far from the ISFISI site. Furthermore, the recent archeological survey, upon which NSPM relies to contend that a summary “no impacts” conclusion should be reached, were, in fact, very limited in nature, especially in the area of the ISFSI. These concerns are especially relevant when considering the cumulative effects from the proposed action and the reasonably foreseeable expansion of the ISFSI.

As stated above, NSPM’s Environmental Report (“ER”) for the original ISFSI

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<sup>55</sup> NSPM Answer at 18-19. While PIIC lauds NSPM’s efforts to address past archeological impacts identified in past PIIC contentions that were admitted in prior proceedings, that does not render past impacts “outside” the cumulative impacts analysis and says nothing about foreseeable future impacts. In short, cultural resources are no less significant or worthy of protection from desecration simply because they have been previously desecrated.

<sup>56</sup>*Id.* at 20-21.

license application<sup>57</sup> referenced archaeological survey work conducted in 1967 (in support of PINGP construction), stating that nothing significant was found in the immediate power plant or ISFSI areas. The reference cited for this information, in the original ER, was the 1971 Environmental Report submitted to the NRC by NSPM in support of its operating license application.<sup>58</sup> Prior to the construction of the PINGP, NSP hired Dr. Eldon Johnson (then, the State Archaeologist) to conduct archaeological surveys of the area. We learned, through the PINGP relicensing process that Dr. Johnson was primarily interested in excavating the burial mounds, such as the Birch Lake Mound site that were located well away from the PINGP construction site (and nowhere near the ISFSI site). In the vicinity of the PINGP, Dr. Johnson conducted some mechanical trenching operations (close to the Mississippi River) and possibly some other work (mapping) in the immediate vicinity of the PINGP in 1967. Unfortunately, as an NSPM-commissioned literature review and synthesis of all archaeological surveys and reports determined, the 1967 work was not well documented and the “excavation units could not be re-located and no map or specific notes of the surveyed locations from that year are currently available.”<sup>59</sup> In short, the 1992 Environmental Report and its basis, the 1967 survey work, do not provide a sufficient basis to determine either past or potential future impacts of the license renewal on archaeological resources at PIIC.

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<sup>57</sup> NSP Prairie Island Independent Spent Fuel Storage Installation Environmental Report, Docket 72-10, Revision 1, September 1991.

<sup>58</sup> NSP, Environmental Report, Operating License Stage, Prairie Island Nuclear Generating Plant, Units 1 & 2, May 12, 1971.

<sup>59</sup> Archaeological Resources Impacted by Construction and Operation Activities at the Prairie Island Nuclear Generating Plant, Goodhue County, Minnesota. Emily Hildebrandt Iffert. January 2010. This publication is not publically available.

The NRC's 1992 Environmental Assessment ("EA") for the original ISFSI license also referenced the 1967 archaeological survey (conducted prior to the construction of the PINGP) that also concluded, "nothing significant in the immediate area of the power plant or ISFSI was found." The EA further stated "no other areas of historical, archaeological and cultural significance are found within the site boundary." No information was provided relative to the aerial extent of the 1967 archaeological survey.<sup>60</sup>

The 2010 Phase I Survey conducted by Westwood Professional Services (the Westwood Report) also provides a very limited survey of the ISFSI area.<sup>61</sup> NSPM states that while the Westwood Report documents a survey conducted subsequent to ISFSI construction, it provides "insight" into the cultural resources around the ISFSI,<sup>62</sup> which includes the area where any future expansion would take place. The survey identified no prehistoric or diagnostic historic artifacts and concluded that the area in which the ISFSI pad is located is previously disturbed. As a result, the 2010 Phase I survey recommended a determination of No Historic Properties be made for the project area and no additional cultural resources investigations be made.<sup>63</sup> This conclusion is based on eight test pits around perimeter of the ISFSI.

The Westwood Report suffers from significant questions regarding access to the site, testing location and methodology, apparent reliance on the prior NSPM work

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<sup>60</sup> ML090260415, July 1992.

<sup>61</sup> Phase I Archaeological Reconnaissance Survey Report for the Proposed Upgrades to the Independent Spent Fuel Storage Installation (ISFSI) at the Xcel Energy Prairie Island Nuclear Generating Plant, Goodhue County, Minnesota. November 29, 2010. Prepared by Westwood Professional services, Inc., and discussed in NSPM's ER at page EA-7.

<sup>62</sup> NSPM Answer at 20.

<sup>63</sup> *Id.*

conducted in 1967, and a failure to consider independent work conducted in 2009 and 2010, which reached significantly different conclusions. In fact, the Westwood Report raises more questions than it answers.

For example, the Westwood Report acknowledges that NSPM policies precluded Westwood personnel from excavating the test pits on site.<sup>64</sup> Rather, NSPM personnel excavated the 8 test pits and the material removed from the test pits was stored until the archeologists could inspect the soil profiles and screen the removed matrix.<sup>65</sup> It is unclear whether NSPM's policies permitted a trained archeologist on site to conduct the work, or even to observe that correct excavation procedures were followed. Without a trained archeologist on-site to observe the methodology, it cannot be determined that the test pits were excavated (and material stored) according to the MN State Historic Preservation Office (SHPO) guidelines for archeological projects.<sup>66</sup> Finally, it is unclear how long and under what conditions the material was stored.

According to the Westwood Report (the archaeologist did not personally dig the test pits), the 8 test pits inside the ISFSI fence line were approximately 1 foot in width and 6 feet in depth and were, at best guess, at intervals varying from 200 to 400 feet. If this is so, this is precisely the area that was significantly impacted by the construction of the ISFSI and PINGP. Limiting work to a previously-disturbed area that was not

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<sup>64</sup> NSPM ER at EA-31.

<sup>65</sup> Notably, these 8 test pits were not even disclosed in the 2010 PINGP Excavation Activity Report, a provision of the 2009 Settlement Agreement (the Excavation Report is also supposed to include archaeological activities).

<sup>66</sup> The Merjent Report discussed below, identifies the importance of having an archeologist observe all ground disturbing activities.

surveyed or documented prior to that disruption appears premeditated to result in the conclusion reached in the Westwood Report. And even within that area, the limited Westwood sample draws overbroad and unsupported conclusions regarding the absence of cultural resources in the entire vicinity of the ISFSI. This conclusion is in direct conflict with the 2009 Merjent Report, discussed below, which concludes that *within the ISFSI area*, there are specific relatively undisturbed sites (between the ISFSI and the Protected Area the fenced area surrounding the ISFSI) and that “there is a possibility of deeply buried prehistoric archaeological sites across most of the Plant grounds.”

It is curious that the Westwood Report does not reference the 2010 Merjent Report (a survey of the entire PINGP grounds) or the 2009 Hudak Survey or any other recent archaeological investigation conducted within the PINGP. The Westwood Report references only a 1990 University of Minnesota publication regarding archaeological regions within Minnesota, but no specific studies or surveys. The Phase I Survey of the *entire* grounds of the PINGP site conducted by Merjent in 2009 – still termed “*limited*” because shovel testing was not done in areas of inadequate ground visibility – states that “there is the possibility of deeply buried prehistoric archaeological sites across most of the Plant grounds, most recently demonstrated by a geomorphology study by Carl Hudak (2009).”<sup>67</sup> The Merjent Report also states “prehistoric archaeological sites could be buried under parking lots, modular buildings or other structures or features within the Plant.” According to the Merjent Report, “shovel testing only provides information for

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<sup>67</sup> Dr. Hudak’s 2009 survey identified a paleosol, which is a stable surface capable of preserving cultural materials, at up to 3 meters deep.

the top meter of any location.”<sup>68</sup>

The Merjent Report found that while most of the area had been heavily disturbed by the construction of the PINGP and ISFSI, there was “some potential for deeply buried sites beneath zones of superficial disturbance, and also for sites that may be relatively intact but covered with fill.” Furthermore, the report goes on to state that in spite of heavy disturbance in the area of the ISFSI, “*there are select areas that appear to remain largely undisturbed, and that have the potential to contain intact prehistoric and historic archaeological deposits* (emphasis added).” Within the ISFSI area, specific relatively undisturbed sites include: 1) the area between the ISFSI and the Protected Area; and 2) the fenced area surrounding the ISFSI. The survey found no prehistoric or historic features in these areas, but recognized that there is potential for archaeological resources in minimally disturbed areas that are covered in vegetation. These particular areas need special attention with respect to cumulative effects from the expected expansion of the ISFSI.

NSPM has more work to do regarding evaluation of historical resources to allow NRC to comply with its obligations under Section 106 of the National Historic Preservation Act (“NHPA”)<sup>69</sup> on this project. Neither the deficient earlier surveys nor the narrowly-scoped 2010 Phase I survey provides a basis to “check the box” even as to the *ISFSI site itself*. And an applicant may be required to resolve even “old” adverse effects

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<sup>68</sup> Notably, The Merjent Report only briefly discusses the work done by Dr. Johnson in the 1960s, noting its “lack of documentation from the archaeological salvage operations of the 1960s, *left doubts that the entire grounds of the plant had been surveyed, and that all mounds had been discovered and recorded* (emphasis added).”

<sup>69</sup> See 16 U.S.C. §§ 470 *et seq.*; 36 C.F.R. §§ 800 *et seq.*

to cultural resources before new permitting for an existing operation may be issued—especially where, as here, it is the applicant *itself* disturbed those resources in the first place. As NSPM admits, it has only initiated Section 106 consultation with the PIIC, not completed it.<sup>70</sup>

PIIC’s Contention 2 is an admissible contention. Furthermore, Contention 2 should be held in abeyance to the extent the issues raised may be affected by the final resolution of the WCD and TSR.

**CONTENTION 3: NSPM’S ENVIRONMENTAL REPORT FAILS TO ACCOUNT FOR THE FEDERAL TRUST RESPONSIBILITY THAT INFORMS ITS REVIEW OF POTENTIAL IMPACTS ON THE COMMUNITY, ITS PEOPLE, AND ITS LAND.**

NSPM asserts that Contention 3 should be dismissed because “it does not raise a genuine dispute with the Application and is beyond the scope of and immaterial to an ISFSI license renewal proceeding. Alternatively, this contention should be dismissed as a challenge to the NRC’s pending WCD/TSR rulemaking.”<sup>71</sup> NSPM claims that PIIC failed to identify “a single omission, deficiency, or error in NSPM’s Application that would prevent the federal government from carrying out its trust responsibility.”<sup>72</sup> NSPM also observes that PIIC is in part arguing that NRC has breached its trust responsibility by violating the NWPA (and other federal laws) in failing to act on the

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<sup>70</sup> NSPM Answer at 23 n. 8.

<sup>71</sup> *Id.* at 21.

<sup>72</sup> *Id.*

Yucca Mountain license application,<sup>73</sup> and asserts that PIIC should have attempted to join *In re Aiken County*<sup>74</sup> to make that argument.<sup>75</sup>

NRC Staff, too, asserts that Contention 3 is inadmissible because “it fails to raise a genuine dispute with the Applicant” as required by 10 C.F.R. §2.309(f)(1)(vi).<sup>76</sup> NRC Staff also argues that, because the trust responsibility belongs to the government and not the Applicant, “there is no requirement for the Applicant to address the trust responsibility in its ER.”<sup>77</sup> Finally, Staff agrees with NSPM that the alleged violation of the NWPA is “beyond the scope of this proceeding and cannot be settled here.”<sup>78</sup>

The PIIC submits that NSPM’s LRA and ER are insufficient precisely because they fail to address matters that are necessary for the NRC to meet its trust obligation and, in many instances, encourage conclusions by the NRC that violate the trust obligation.<sup>79</sup> PIIC does not suggest that the trust responsibility runs to the Applicant, but rather that an applicant must discuss the NRC’s compliance with all applicable federal laws in any draft environmental review document. This is because the applicant is

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<sup>73</sup>*Id.* at 22.

<sup>74</sup> D.C. Cir. No. 11-1271.

<sup>75</sup> PIIC did, in fact, intervene in the underlying ASLB proceedings at issue in the *In re Aiken County* case.

<sup>76</sup> NRC Staff Resp. at 13.

<sup>77</sup> *Id.*

<sup>78</sup> *Id.* at 14. Whether or not the NRC accepts this contention may be moot in light of NRC Staff’s commitment to an EA process, which will afford tribal consultation and the PIIC allow it to present and develop any trust-related issues. But PIIC continues to contend that the NRC should accept Contention 3.

<sup>79</sup> See *In the Matter of Pacific Gas and Electric Company* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI -12- 6 at n. 31 (June 7, 2012) (stating that an applicant’s environmental report “should contain sufficient data to aid the Commission in its development of an independent analysis”).

charged with presenting a sufficient basis to the NRC in support of its application, including NEPA compliance.<sup>80</sup> In this respect, Contention 3 does indeed raise a genuine dispute with the Applicant and raises issues that can, and must, be resolved within the scope of these proceedings.<sup>81</sup>

Several points are relevant to the PIIC's reply in this regard. First, regarding both NSPM's and NRC Staff's assertion, PIIC does, indeed, argue that NRC's *prima facie* violation of the NWPA and the AEA in failing to act on the Yucca Mountain application is a violation of the federal trust responsibility. Neither dispute, and in fact, both cite black letter law in support of, the principle that where a federal agency violates laws of general application and that has effects not just on the general public but on tribal interests, there is a violation of the trust responsibility.<sup>82</sup> NSPM admits that the NRC can only meet its trust obligation "through ensuring that the Application meets the requirements of its regulations for ISFSI license renewals."<sup>83</sup> But NSPM's reliance on the WCD and TSR have rendered the LRA and ER submissions that are insufficient for action, without the NRC acting contrary to law and inconsistent with the Circuit Court Decision. The NRC cannot fulfill its responsibility to PIIC in reliance on an LRA and an ER that in turn rely on a non-existent WCD and TSR.

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<sup>80</sup>See 10 C.F.R. § 2.309(f)(2) explaining that [o]n issues arising under the National Environmental Policy Act, the petitioner shall file contentions based on the applicant's environmental report.

<sup>81</sup>See 10 C.F.R. § 2.309(f)(2).

<sup>82</sup>NSPM Answer at 22-23; NRC Staff Response at 13.

<sup>83</sup>NSPM Answer at 23.

Second, both NSPM and NRC Staff claim that this contention presents no “genuine dispute” on a material issue of law or fact with the application as required by 10 C.F.R. §2.309(f)(1)(vi), or that it is beyond the scope of this proceeding. PIIC continues to disagree. Because there is currently no plan for a permanent or interim central repository, *any* license application to store waste on-site at any facility for a definite term of years renders the assumptions material to challenge as to whether they sufficiently address matters that must be addressed by the NRC in the fulfillment of its statutory obligations.

Third, NSPM and the NRC Staff’s contention that NRC’s compliance with the requirements of license renewals meets its trust obligation is not the whole story. The NRC does not meet its trust obligation solely by complying with the license renewal law. As discussed below, the federal laws with which the NRC also must comply include, among others, NEPA, NHPA, and Department of Energy tribal consultation standards. And PIIC has already cited cases that explain how violations of these laws can also constitute violations of the trust responsibility.<sup>84</sup> Here, for example, PIIC has discussed at length elsewhere in this document that NSPM’s ER fails to meet NEPA requirements to address cumulative impacts of related activities, including impacts on cultural resources, its minimization of waste storage impacts and its failure to address impacts that fall disproportionately on the PIIC and its members. These matters are genuine issues with the Applicant and implicate NRC’s trust responsibility based on its

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<sup>84</sup>See, e.g., PIIC Petition at 39-40.

compliance with federal laws and regulations other than those governing the license renewal process.

Finally, in response to PIIC's claims that the trust responsibility includes a duty to consult, NSPM in a footnote refuses to "conced[e] that the trust responsibility includes such a procedural requirement," and then points to its initiation solely of the Section 106 consultation as support for its claim that it, the Applicant, has consulted with the tribe already.<sup>85</sup> In fact, ongoing consultation throughout the course of a project is a cornerstone of the trust responsibility (and ultimately it belongs to the agency).

Executive Order 13175—Consultation and Coordination With Indian Tribal

Governments provides:

- "the United States has recognized Indian tribes as domestic dependent nations under its protection";
- there is a "trust relationship with Indian tribes"; and
- "[a]gencies shall respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments."<sup>86</sup>

Regarding specific consultation requirements under the trust responsibility, E.O. 13175

further provides:

To the extent practicable and permitted by law, no agency shall promulgate any regulation that has tribal implications, that imposes substantial direct compliance costs on Indian tribal governments, and that is not required by statute, unless: . . . the agency, prior to the formal promulgation of the

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<sup>85</sup>NSPM Answer at 23 n. 8.

<sup>86</sup>Available at <http://ceq.hss.doe.gov/nepa/regs/eos/eo13175.html> (last visited Oct. 4, 2012).

regulation... consulted with tribal officials early in the process of developing the proposed regulation....<sup>87</sup>

The Department of Energy has promulgated its own American Indian and Alaska Native Tribal Government Policy, updated in 2006, in which it recognizes:

***Trust Responsibility*** includes, but is not limited to: promotion and protection of tribal treaty rights, federally recognized reserved rights, and other federally recognized interests of the beneficiary American Indian and Alaska Native nations; *determining, documenting, notifying, and interacting with tribal governments with regard to the impact of Departmental programs, policies, and regulations to protect American Indian and Alaska Native traditional and cultural lifeways, natural resources, treaty and other federally recognized and reserved rights.*

***Consultation*** includes, but is not limited to: prior to taking any action with potential impact upon American Indian and Alaska Native nations, providing for mutually agreed protocols for timely communication, coordination, cooperation, and collaboration to determine the impact on traditional and cultural lifeways, natural resources, treaty and other federally reserved rights, *involving appropriate tribal officials and representatives throughout the decision-making process, including final decision-making and action implementation as allowed by law, consistent with a government to government relationship.*<sup>88</sup>

And NEPA also provides for early tribal consultation,<sup>89</sup> invites tribes to cooperate at the scoping phase,<sup>90</sup> and to participate as cooperating agencies,<sup>91</sup> as has already happened here. All of these consultation provisions are a required part of the agency's fulfillment of the trust obligation.

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<sup>87</sup>*Id.* at f.1.

<sup>88</sup> Emphasis added.

<sup>89</sup> 40 C.F.R. § 1501.2(d)(2).

<sup>90</sup>*Id.* at § 1501.7(a)(1).

<sup>91</sup>*Id.* at § 1508.5.

For all of these reasons, PIIC's Contention 3 is admissible. Furthermore, Contention 3 should be held in abeyance to the extent the issues raised may be affected by the final resolution of the WCD and TSR.

**CONTENTION 4: NSPM'S ENVIRONMENTAL REPORT DOES NOT ADEQUATELY ASSESS THE IMPACTS OF THE PI ISFSI ON THE ADJACENT MINORITY POPULATION.**

NRC Staff has concluded that Contention 4 is admissible, but feels it "should be narrowed to exclude some of the bases."<sup>92</sup> NRC Staff asserts that applicants "are not required to include an environmental justice analysis in their ERs," but that even though not an error in excluding an environmental justice analysis, "the contention is properly raised now."<sup>93</sup> Staff notes that "[a]fter the PI ISFSI application was submitted...the Staff agreed to analyze environmental justice in the EA for the PI ISFSI" and noted that the Staff and PIIC are finalizing an MOU naming PIIC a cooperating agency for NEPA review. Staff notes that "[t]he MOU lists environmental justice as one area where PIIC holds special expertise. Through its role as a cooperating agency, PIIC will be able to contribute information to address its specific concerns."<sup>94</sup>

NSPM asserts that this contention should be dismissed because "it fails to present a genuine dispute on a material issue of fact, fails to address material in the Application, fails to provide a documentary basis to support the contention, and includes aspects that

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<sup>92</sup> NRC Staff Response at 15.

<sup>93</sup> *Id.* citing *Private Fuel Storage, LLC*, (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 129, 130 (2004).

<sup>94</sup> *Id.* at 16.

are beyond the scope of this proceeding.”<sup>95</sup> While NSPM’s assertion is rendered moot by the MOU process and the determination to address environmental justice in the EA process, PIIC nevertheless offers the following reply.

NSPM appears to contend that its 2003 Settlement Agreement with PIIC alleviates its obligations to comply with the regulations and guidance applicable to its License Renewal Application and Environmental Report. PIIC acknowledges the existence of the agreement, and for its reply, assumes *arguendo*, that NSPM’s quantification of the financial benefits provided to the PIIC pursuant to the agreement is accurate. But NSPM’s argument misses the point. At issue in Contention 4 is whether NSPM’s License Renewal Application and ER are complete according to regulations and guidance. PIIC did not raise the 2003 Settlement Agreement in its contention, because the agreement was already referenced in NSPM’s ER.<sup>96</sup> The focus on PIIC’s contention is on the issues and concerns either omitted or not sufficiently addressed in either NSPM’s LRA or ER. NSPM’s license renewal application is not deficient because it included a discussion of the 2003 Settlement Agreement; it is deficient because NSPM apparently believes that the compensation paid to PIIC is sufficient to redress all past, present and future adverse cumulative and integrated environmental, health and safety impacts that disproportionately impact PIIC and its members. For example, the settlement agreement payments does not eliminate various cumulative and integrated

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<sup>95</sup> NSPM Answer at 24.

<sup>96</sup> NSPM ER at E-46.

impacts that the PINGP and the PI ISFSI have on the PIIC, its member and its lands, including but not limited to, those detailed below.

As discussed more fully above in connection with cumulative impacts discussion relating to Contention 2, historic as well as credible contemporary surveys indicate that there are sites within the boundaries of the PINGP and the immediate vicinity of the PI ISFSI that appear to remain largely undisturbed and that have the potential to contain intact prehistoric and historic archaeological deposits.

PIIC's contention also relates the cumulative disproportionate impacts that must also be considered from a total of 98 casks of spent nuclear fuel that will be generated if the plant continues to operate until 2034, and the likelihood that the waste will be stranded on Prairie Island indefinitely long after the expiration of the requested 40-year renewal term. For example, NSPM limits its discussion of the impacts of skyshine radiation – which disproportionately impacts the PIIC members living closest to the PI ISFSI – to the artificial and unrealistic limits of 48 casks for 40-year renewal term.<sup>97</sup> PIIC's Petition raises concerns about the health risks to Community members from potential long-term exposure to low-level skyshine radiation from the PI ISFSI. In its Answer, NSPM states that “[t]he analysis presented in the ER includes impacts from skyshine radiation and uses population data that includes PIIC, and thus includes an

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<sup>97</sup>Skyshine radiation is gamma and neutron radiation that travels upward from the casks and is reflected off the atmosphere back to the ground. While the shielding on the storage casks and the earthen berm reduce direct radiation to Community members, skyshine radiation is left as a primary means of exposure.

evaluation of the impacts to the PIIC.”<sup>98</sup> That is true, but as set forth in PIIC’s Petition to Intervene, NSPM’s analysis is limited to the skyshine impacts of only 48 casks, and not the skyshine impacts from the 64 or 98 casks that are reasonably foreseeable.<sup>99</sup>

The estimated annual dose to the nearest resident from the skyshine radiation from 64 (or even 98) casks should have been evaluated in the ER. It is simply not reasonable to believe that the spent fuel generated by the PINGP will leave Prairie Island within the 40-year license renewal term. Given the lack of a permanent geologic repository, or even an interim storage facility, it is reasonable to expect that spent nuclear fuel will be stored on-site at Prairie Island indefinitely. NSPM should have evaluated the cumulative effects of long-term spent fuel storage in its ER far beyond the requested 40-year license renewal term and consistent with the impacts that would likely occur from the presence of the 98 total casks that will be needed if the PINGP is decommissioned in 2034.

On page 30 of its Answer, NSPM dismisses PIIC’s concerns regarding the adequacy of the environmental monitoring program and technology at the ISFSI. NSPM inserts a Conclusion from the MPUC proceeding “in which PIIC participated”<sup>100</sup> to support its conclusion:

Xcel Energy has a comprehensive radiation environmental monitoring

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<sup>98</sup> NSPM Answer at 29.

<sup>99</sup> See, e.g. ER, Section E4.2.6 (Doses to the Public) at pages E-50, 51 (“As stated earlier, these dose estimates are bounding in that they assume that the PI ISFSI is fully loaded with 48 casks.”); and ER, Section E4.2.6 (Occupational Doses) at page E-5 (“This dose [to plant personnel] is based on loading 48 TN-40HT casks over a 22 year period.”).

<sup>100</sup> The concerns raised by the PIIC were in reference to the uprate CON docket, not the dry cask storage CON docket. The two dockets were combined into one proceeding, but pursuant to Section 12 of the 2003 Settlement Agreement the PIIC did not participate in the dry cask storage CON docket.

program in place at the Prairie Island Plant that meets the NRC's radiation monitoring requirements. Xcel, the MDH, and the Wisconsin Department of Health Services perform extensive radiation monitoring in and around the Prairie Island Plant. The Community proposed that additional radiation monitoring be conducted as a condition of approval of Xcel's applications. The equipment proposed for this monitoring is less sensitive than that used in Xcel's monitoring program. There is no reasonable basis for conducting less sensitive monitoring than is already conducted around the Prairie Island Plant.<sup>101</sup>

NSPM, however, fails to reference Finding 183 in the ALJ's Findings of Fact, Conclusions of Law and Recommendations, which states:

183. The PINGP Study Group maintained that the ISFSI will exceed the cancer risk allowable under Minn. R. 4717.7820, subp. 4, and 4717.8050, subp. 3. *The FEIS notes that the additional lifetime cancer risk to the public resulting from "skyshine radiation" from 64 casks at the PINGP ISFSI is 2.8 in 100,000. This additional lifetime cancer risk increases more than ten-fold to 35 in 100,000 when the number of spent fuel storage casks reaches 98.*<sup>102</sup>

PIIC believes that NSPM's ER is deficient because it fails to address the impacts of 98 casks, and therefore provides an inadequate analysis of the cumulative environmental and health related impacts from the expected expansion of the PI ISFSI that are disproportionately born by the PIIC and its members.

PIIC's Contention 4 is an admissible contention. Furthermore, Contention 4 should be held in abeyance to the extent the issues raised may be affected by the final resolution of the WCD and TSR.

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<sup>101</sup> In the Matter of Northern States Power Co., MPUC Docket Nos. E-002/CN-08-509, E-002/CN-08-510, & E-002/CN-08-690, Findings of Fact, Conclusions of Law and Recommendations (Oct. 21, 2009) at 85-86 (Conclusion 33). This document may be retrieved at <http://www.puc.state.mn.us/puc/index.html>, by entering Document ID # 200910-43138-01 in Search E-Dockets.

<sup>102</sup>*Id.* at 43 (citing the Department of Commerce FEIS at pages 37 and 64) (emphasis added).

**CONTENTION 5: THE NSPM LICENSE APPLICATION IS DEFICIENT BECAUSE IT DOES NOT INCLUDE THE ISFSI PRESSURE MONITORING SYSTEM AS A SSC WITHIN THE AGING MANAGEMENT PROGRAM.**

NRC Staff has concluded that Contention 5 is admissible<sup>103</sup> and disagrees with NSPM's argument that the contention must be dismissed "because it is outside the scope of this proceeding and fails to raise a material issue."<sup>104</sup> Specifically, NRC Staff notes that "PIIC's contention challenges the Applicant's characterization of the pressure monitoring system based on factors that the Staff is currently considering as part of its ongoing review. As such, the contention is within the scope of this proceeding and is material to the staff's review."<sup>105</sup> PIIC concurs with the NRC Staff's conclusion and believes that this contention is within the scope of license renewal proceeding and is material to the NRC staff review.

Contrary to the NSPM's view that the ISFSI pressure monitoring system is "not important to safety,"<sup>106</sup> the PIIC submits that it should be defined as an item that is important to safety or at a minimum, as a system whose failure could prevent the fulfillment of a function that is important to safety, and is one of the Systems, Structures or Components (SSC) that should be addressed in the NSPM aging management program. Industry experience shows that the cask seals leak in storage time periods even shorter than the 40-year period requested in NSPM's application. In support of the Contention, the PIIC cites two examples of seal leaks at Peach Bottom Atomic Power

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<sup>103</sup> NRC Staff Response at 17-19.

<sup>104</sup> NSPM Answer at 34.

<sup>105</sup> NRC Staff Response at 18-19.

<sup>106</sup> NSPM Answer at 34.

Station and Surry Power Station ISFSI in support of our contention. There is limited data about the performance of such seals for periods of time up to 60 years, especially for high burn up fuel the use of which is contemplated at the PINGP. While NSPM contends that the design bases for the TN casks were reviewed and accepted by the NRC in its July 1993 SAR, since 1993 considerable additional information has surfaced – including the gap analyses identified in the Contentions – that call into question the performance of these seals.

Most of the guidance the Staff used in its previous evaluations is based on a 20 year period of performance and the performance of the pressure monitoring systems for high burn up fuel over a period of 60 years *was not* considered in the 1993 SAR. Extending the period of operation of a component originally designed and analyzed for 20 years of service to a total of 60 years, and to further introduce a new fuel source to the environment, warrants further examination. Previous demonstration programs by DOE used low burnup fuel and cannot be imported to reach conclusions regarding performance involving high burnup fuel for periods longer than 20 years. Additional performance data of the sort that has been applied to low burnup fuel is needed to evaluate the performance of the system using both low burnup fuel and high burnup fuel for the additional 40 years of storage as would be permitted under this application for renewal.

Because of the uncertainty over the integrity of the seals to perform their function, particularly without the type of analysis suggested above, the pressure monitoring system becomes a system that is important to safety, or at a minimum, as a system whose failure could prevent the fulfillment of a function that is important to safety. NSPM seems to

rely on the fact that if the pressure monitoring system fails, there is sufficient time to identify and correct the failure, and therefore the pressure monitoring system is not important to safety.<sup>107</sup> The reliance on a “don’t worry, we’ll find it” attitude is not a sufficient justification for the pressure monitoring system being classified as “not important to safety.” The NRC requires all storage confinement systems to have the capability for continuous monitoring in a manner such that the licensee will be able to determine when corrective action needs to be taken to maintain safe storage conditions.<sup>108</sup> The pressure monitoring system is essential to ensuring that leakage of the seals is promptly identified.

NSPM assertion that adopting the above classification would change the PI IFSFI design and licensing basis. The PIIC suggests that the NRC Staff has disposed of this issue directly: “the Staff is currently reviewing whether the pressure monitoring system is not within the scope of license renewal...[a]s such the contention is within the scope of the proceeding and is material to the staff review.”<sup>109</sup> The PIIC concurs.<sup>110</sup>

**CONTENTION 6: NSPM’S LICENSE RENEWAL APPLICATION IS DEFICIENT BECAUSE IT DID NOT ADEQUATELY ADDRESS THE POTENTIAL DEGRADATION OF HIGH BURNUP FUEL DUE TO AGING DURING STORAGE, SUBSEQUENT HANDLING, AND TRANSPORTATION. 10**

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<sup>107</sup> NSPM Answer at 35.

<sup>108</sup> 10 C.F.R. Section 72.122(h)(4).

<sup>109</sup> NRC Staff Response at 18

<sup>110</sup> The PIIC submits that the NRC Staff position on this contention sufficiently addresses the NSPM’s assertion that the pressure monitoring system is an active system that is not subject to aging management plans. NSPM Answer at 38. In addition, as NSPM itself points out, “the guidance for ISFSI license renewal does not specifically provide that the Aging Management Review only applies to passive systems....” *Id.* at 39.

**C.F.R. § 72.122 REQUIRES CONFINEMENT BARRIERS  
AND SYSTEMS TO PROTECT DEGRADATION OF FUEL  
AND TO NOT POSE OPERATIONAL SAFETY PROBLEMS.**

The basis for Contention 6 is that NSPM’s license renewal application is deficient because it does not adequately address the potential degradation of high burnup fuel due to aging during storage, subsequent handling, and transportation. NRC Staff has concluded that “PIIC has proposed an admissible contention, in part, as it relates to the storage of high burnup fuel during the proposed license renewal period.”<sup>111</sup> NSPM, in its Answer, asserts that PIIC has failed to address the information on these issues that NSPM had provided in its application. In addition, NSPM disputes the relevance of the reports that PIIC has cited in support of this Contention, asserting that “each of these reports were developed for the purpose of identifying issues that need further study to support extending the time frame for onsite storage to greater than 60 years.”<sup>112</sup>

NRC requirements in 10 CFR Section 72.122 are designed to ensure safe fuel storage and handling and minimization of post-operational safety problems with respect to the removal of the fuel from storage. Section 72.122(h)(1) specifically requires spent fuel cladding to be “protected during storage against degradation that leads to gross ruptures or the fuel must be otherwise confined such that degradation of the fuel during

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<sup>111</sup> NRC Staff Response at 20. The NRC Staff contends that the PIIC did not identify the specific storage conditions that NSPM had not evaluated with respect to criticality prevention and, so, have not stated an adequate factual support as required by Section 2.309(f)(1)(v).

<sup>112</sup> NSPM Answer at 42. In addition, NSPM’s Answer on Contention 6 states that “to the extent that the contention addresses issues beyond the 40 year ISFSI renewal term, the Contention raises a Waste Confidence issue and should be dismissed.” *Id.* at 40. The PIIC submits that, based on the Memorandum and Order, the more proper approach would be to admit Contention 6 and to hold it in abeyance.

storage will not pose operational problems with respect to its removal from storage.” Additionally, § 72.122(l) requires that the storage system “be designed to allow ready retrieval of the spent fuel from the storage system for further processing or disposal.” The Applicant has not adequately addressed a number of potential deficiencies and uncertainties regarding high burnup fuel. For example, the Applicant has not adequately addressed potential fuel cladding degradation from hydriding effects, oxidation, clad creep, embrittlement, and thermal-driven cracking and leakage. Consequently, PIIC does not believe the applicant is in compliance with 10 CFR Section 72.122.

The three reports PIIC identifies in its Contention not only directly address the issues raised in the Contention, but are also relevant to the time frame requested in the license renewal application. At the recent Regulatory Conference on Spent Fuel convened by the NRC,<sup>113</sup> the NRC staff repeatedly stated that it had not considered periods beyond twenty years in the development of much of the staff guidance applicable to 10 CFR Section 72.122 for spent fuel storage.<sup>114</sup> PIIC contends the issues are relevant to the license renewal for 40 more years in that there is a lack of data on the uncertainties and degradation effects resulting from storage of high burnup fuel in TN casks.

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<sup>113</sup> US. Nuclear Regulatory Commission, Regulatory Conference on Radioactive Materials Storage and Transportation (September 12-13, 2012). A list of 2012 SFST Regulatory Conference Biographies and Presentations is available at <http://pbadupws.nrc.gov/docs/ML1226/ML12269A414.pdf>.

<sup>114</sup> *Id.* PIIC has requested a transcript of this meeting to provide specific citations, but according to the NRC, the transcript is not yet available. Therefore, cites to specific statements cannot be provided at this time. PIIC will supplement this filing when it receives the transcript of this meeting from the NRC.

Previous DOE tests addressed low burnup fuel conditions over a short period of time. Extrapolation of this data to high burnup fuel conditions over a 40 year additional period of time is not justifiable. Low burnup fuel was used in the DOE demonstration program cited by the Applicant. This demonstration is not applicable to storage of high burnup fuel for periods beyond 20 years. High burnup conditions poses significantly larger uncertainties in the long term physical state and fragility of the spent fuel stored in the casks at the PI ISFSI. NSPM's Answer refers to its April 26, 2012 letter to the NRC on the degradation of high burnup fuel, citing the most recent revision of NRC Interim Staff Guidance to support its case on the stability of high burnup fuel.<sup>115</sup> The PIIC would note that the staff developed this ISG when there was an expectation that spent fuel would remain at reactor sites for a period of only twenty years, not an additional 40 years as requested by the applicant, and certainly not for an extended period beyond that.<sup>116</sup>

The PIIC concurs with the NRC Staff's conclusion that the PIIC Contention has an adequate basis, is within the scope of the proceeding and raises issues that are material to the Staff's ongoing review,<sup>117</sup> and that, consistent with Section 3.4.3 of NUREG- 1927, the Applicant should provide any new supporting data demonstrating high burnup fuel performance during extended storage.<sup>118</sup>

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<sup>115</sup> NRC Answer at 41 – 42.

<sup>116</sup> See U.S. Nuclear Regulatory Commission, Cladding Considerations for Transportation and Storage of Spent Fuel, Interim Staff Guidance-11, Rev. 3 (ADAMS Accession No. ML033230335).

<sup>117</sup> NRC Staff Response at 20.

<sup>118</sup> *Id.*

PIIC's Contention 6 is an admissible contention. Furthermore, Contention 6 should be held in abeyance to the extent the issues raised may be affected by the final resolution of the WCD and TSR.

**CONTENTION 7: THE NSPM LICENSE RENEWAL APPLICATION DOES NOT ADDRESS THE POTENTIAL FOR OPERATIONAL RADIOLOGICAL EFFLUENT RELEASES IN EXCESS OF THE LIMITS IN NRC REGULATIONS FROM THE FUEL CASK CONFINEMENT SYSTEM DUE TO AGING OF THE SYSTEM.**

The concern underlying this Contention is that the degradation and wear of materials over the 40 year period requested in the license renewal application will result in an operational occurrence. NSPM does not address the potential for reasonable anticipated radiological effluent releases in excess of NRC limits from the cask confinement system due to aging of the system and the effect of extreme external heat and cold cycles, rain, snow, and icing conditions on the system. The NRC Staff asserts in that Applicant must provide reasonable assurance that the confinement boundary will perform its intended function and not allow releases during the period of extended operation.<sup>119</sup> NSPM asserts that the confinement failure alleged in this Contention is a failure for which the accident dose limits of 10 C.F.R. 72.106, rather than the operational and anticipated occurrences dose limits, apply.<sup>120</sup> Neither response confronts the thrust of this Contention.

NSPM has wholly failed to show reasonable assurance that the seal system will prevent any releases during the period of extended operation over 60 years. Facts cited in other contentions, and recognized by both NSPM and NRC, indicate that the exterior seals of TN casks have been compromised by normal environmental conditions – extreme external heat and cold cycles, rain, snow and icing conditions – leading to corrosion and

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<sup>119</sup> NRC Staff Response at 22.

<sup>120</sup> NSPM Answer at 46.

leakage paths. In addition, there is simply no body of evidence addressing the potential degradation of high burnup fuel over the extended period of storage (for which there is no practical experience) resulting in leakage of radiological effluents from the interior of the cask and then to the environment, much less evidence that such leakage can be prevented. Moreover, the Contention contemplates gradual degradation from long-time exposure to environmental conditions and eventually leakage of the confinement system, rather than distinct accident-type events, so the operational dose limits, rather than accident dose limits, will apply.

The combination of normal and anticipated extreme weather conditions on the operation of the casks, plus the lack of real world data and certainty on the performance of high burnup fuel, has not been addressed. There is essentially no practical data on the performance of high burnup fuel over a 40 year period of performance to indicate the reliability of the TN casks loaded with high burnup fuel. The applicant is responsible for providing reasonable assurance that confinement will be maintained during the period of extended operations. The confinement integrity of high burnup fuel and the interior seal system for the TN cask has not been tested adequately to demonstrate performance over the extended term of the license. There have been no comprehensive analyses of the uncertainties associated with the performance of the high burnup fuel and its confinement seal system.

Finally, because an appropriate assessment of the viability of the TN casks necessarily depends on the length of time that the casks will be exposed to weather conditions and be expected to house securely high burn up fuel, the assessment implicates

the WCD and the TSR. Accordingly, this contention could also be admitted now and held in abeyance consistent with the Memorandum and Order.

### **III. CONCLUSION**

For the foregoing reasons, and for the reasons PIIC presented in its original petition, PIIC should be granted intervention and all seven of its contentions should either be admitted or held in abeyance.

Respectfully submitted,

*Signed (electronically) by Philip R. Mahowald*

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Philip R. Mahowald  
General Counsel  
Prairie Island Indian Community  
5636 Sturgeon Lake Road  
Welch, Minnesota 55089  
651-267-4006  
pmahowald@piic.org

October 9, 2012

October 9, 2012

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**Before the Atomic Safety and Licensing Board**

|   |   |                                |
|---|---|--------------------------------|
| In the Matter of                        | ) |                                |
|   | ) |                                |
| Northern States Power Company           | ) |                                |
|   | ) |                                |
| Prairie Island Nuclear Generating Plant | ) | Docket No. 72-10-ISFSI-2       |
|   | ) | ASLBP No. 12-922-ISFSI-MLRBD01 |
| (Independent Spent Fuel Storage)        | ) |                                |

**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing **Prairie Island Indian Community's Reply on Request for Hearing and Petition to Intervene in License Renewal Proceeding for the Prairie Island Independent Spent Fuel Storage Installation**, dated October 9, 2012, was provided to the Electronic Information Exchange for service on the individuals listed below, this 9th day of October, 2012.

U.S. Nuclear Regulatory Commission  
Atomic Safety and Licensing Board  
Mail Stop T-3F23  
Washington, DC 20555-0001

E. Roy Hawkens, Chief  
Administrative Judge  
E-mail: [roy.hawkens@nrc.gov](mailto:roy.hawkens@nrc.gov)

Dr. Gary S. Arnold  
Atomic Safety and Licensing Board  
Administrative Judge  
E-mail: [gary.arnold@nrc.gov](mailto:gary.arnold@nrc.gov)

Michael M. Gibson  
Atomic Safety and Licensing Board Judge  
E-mail: [michael.gibson@nrc.gov](mailto:michael.gibson@nrc.gov)

James Maltese, Law Clerk  
[james.maltese@nrc.gov](mailto:james.maltese@nrc.gov)

U.S. Nuclear Regulatory Commission  
Office of the Secretary of the Commission  
Mail Stop O-16C1  
Washington, DC 20555-0001  
Hearing Docket Email: [hearingdocket@nrc.gov](mailto:hearingdocket@nrc.gov)

U.S. Nuclear Regulatory Commission  
Office of the General Counsel  
Mail Stop O-15D21  
Washington, DC 20555-0001  
OGC Mail Center: [OGCMailCenter@nrc.gov](mailto:OGCMailCenter@nrc.gov)

Catherine Scott, Esq.  
Mauri Lemoncelli, Esq.  
Molly Marsh, Esq.  
Christopher Hair, Esq.  
Mary Spencer, Esq.  
Carrie Safford, Esq.  
E-mail: [catherine.scott@nrc.gov](mailto:catherine.scott@nrc.gov)  
[mauri.lemoncelli@nrc.gov](mailto:mauri.lemoncelli@nrc.gov)  
[molly.barkmanmarsh@nrc.gov](mailto:molly.barkmanmarsh@nrc.gov)  
[christopher.hair@nrc.gov](mailto:christopher.hair@nrc.gov)  
[mary.spencer@nrc.gov](mailto:mary.spencer@nrc.gov)  
[carrie.safford@nrc.gov](mailto:carrie.safford@nrc.gov)

U.S. Nuclear Regulatory Commission  
Office of Commission Appellate Adjudication  
Mail Stop O-16C1  
Washington, DC 20555-0001

OCAA Mail Center: [ocaamail@nrc.gov](mailto:ocaamail@nrc.gov)

Prairie Island Indian Community  
General Counsel for  
Prairie Island Indian Community  
5636 Sturgeon Lake Road  
Welch, MN 55089

Phil Mahowald, Esq.  
Nancy Johnson, Legal Assistant  
E-mail: [pmahowald@piic.org](mailto:pmahowald@piic.org)  
[njohnson@piic.org](mailto:njohnson@piic.org)

Pillsbury Winthrop Shaw Pittman, LLP  
2300 N. Street, N.W.  
Washington, DC 20037-1128  
Counsel for Prairie Island Nuclear Generating Plant

Jay Silberg, Esq.  
Kimberly Harshaw, Esq.  
Maria Webb, Paralegal  
E-mail: [jay.silberg@pillsburylaw.com](mailto:jay.silberg@pillsburylaw.com)  
[kimberly.harshaw@pillsburylaw.com](mailto:kimberly.harshaw@pillsburylaw.com)  
[maria.webb@pillsbury.law.com](mailto:maria.webb@pillsbury.law.com)

Counsel for Prairie Island Indian Community  
Jacobson, Buffalo, Magnuson,  
Anderson, & Hogen, P.C.  
335 Atrium Office Building  
1295 Bandana Boulevard  
St. Paul, MN 55108

Joseph F. Halloran, Esq.  
Diana Kinney, Legal Assistant  
E-mail: [jfh@jacobsonbuffalo.com](mailto:jfh@jacobsonbuffalo.com)  
[dkinney@jacobsonbuffalo.com](mailto:dkinney@jacobsonbuffalo.com)

*Signed (electronically) by Philip R. Mahowald*

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Philip R. Mahowald  
General Counsel  
Prairie Island Indian Community  
5636 Sturgeon Lake Road  
Welch, Minnesota 55089  
651-267-4006  
[pmahowald@piic.org](mailto:pmahowald@piic.org)

October 9, 2012