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March 4, 2010

EA-09-326

Matthew W. Sunseri, President and  
Chief Executive Officer  
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P.O. Box 411  
Burlington, KS 66839

SUBJECT: RESPONSE TO DISPUTED NON-CITED VIOLATIONS IN NRC INSPECTION  
REPORT 05000482/2009004 AND WITHDRAWAL OF NONCITED VIOLATION

Dear Mr. Sunseri:

Thank you for your December 9, 2009 letter of reply (WM 09-0065) to our November 10, 2009 inspection report (ML 093140803). Attachments I and II of your reply contained a request for withdrawal of noncited violations NCV 05000482/2009004-03, "Inadequate Evaluation of Emergency Diesel Generator for Common Cause Failure in the Supporting Essential Service Water System," and NCV 05000482/2009004-06, "Performing Prohibited Elective Maintenance on Safety Bus NB02 Channel 4 during Emergency Diesel Generator Maintenance," respectively. Attachment III of your reply contained a request for withdrawal of two of the three examples of NCV 05000482/2009004-07, "Failure to Report Conditions that Could Have Prevented Fulfillment of a Safety Function."

We have reviewed the denial of the two noncited violations and the two examples from the third noncited violation. Our comments and conclusions are addressed below as discussed on March 4, 2010, with Mr. S. Hedges, Site Vice President, and other members of your staff.

NCV 05000482/2009004-03, "Inadequate Evaluation of Emergency Diesel Generator for Common Cause Failure in the Supporting Essential Service Water System:"

The referenced report stated, in part:

"Technical Specification 3.8.1 Required Actions B.3.1 and B.3.2 require, with one diesel generator inoperable, to determine that the operable diesel generator is not inoperable due to common cause failure or else perform SR 3.8.1.2 [run the diesel generator]. Contrary to this requirement, on June 30, 2009, the licensee failed to demonstrate that Emergency Diesel Generator A was operable by evaluation of common cause failure or by performing SR 3.8.1.2 while emergency diesel generator B was inoperable due to essential service water piping corrosion. Specifically, the control room logs exited Required Action B.3.1 stating that "EDG B inoperable due to ESW being inoperable not a common cause failure." No further evaluation was provided."

In Attachment I of your reply, you stated that you did not believe a violation of Technical Specification 3.8.1 existed. The reasons that you requested withdrawal of the above noncited violation were:

- Emergency Diesel Generator B was declared operable prior to the expiration of the 24 hour Completion Time; and
- A common cause determination was performed, although not required per Generic Letter 93-05.

The regional staff, in consultation with NRC's Office of Nuclear Reactor Regulation and Office of Enforcement, has reviewed these reasons and the supporting information. We have concluded that the original noncited violation is still applicable as described below.

Technical Specification 3.8.1 Required Actions B.3.1 and B.3.2 require, with one diesel generator inoperable, to determine that the operable diesel generator is not inoperable due to common cause failure. On June 30, 2009, the Train B emergency diesel generator was declared inoperable due to a leak in the essential service water system caused by through-wall corrosion. As stated in your response, the common cause was ruled out on the basis that a common cause failure did not exist since the inoperability was due to a support system. Your response further stated that any leaks would have been identified by operators during their rounds. The staff concluded the lack of reported leakage was not a valid basis to conclude similar corrosion did not exist in Train A. Consequently, the staff concluded the operators inappropriately exited Required Action B.3.1 without a valid determination that the operable diesel generator was not affected by a common cause failure mechanism. As a result, when the Train B emergency diesel generator was restored to service, operators did not initiate an action in the plant corrective action program to evaluate the common cause potential as stated in the Technical Specification Bases for Required Action B.3.1.

The staff recognizes that Technical Specifications have changed over time, particularly with regard to emergency diesel generator surveillance testing and required actions. While previous guidance has either included or excluded diesel generator inoperability caused by support systems, the NRC expects licensees to comply with their station's current Technical Specifications. As a result, the NRC has concluded the original noncited violation is still applicable.

NCV 05000482/2009004-06, "Performing Prohibited Elective Maintenance on Safety Bus NB02 Channel 4 during Emergency Diesel Generator Maintenance."

The referenced report stated, in part:

"Procedure AP 22C-003, "Operational Risk Assessment Program," Revision 13, prohibits elective maintenance within the switchyard that would challenge offsite power during Technical Specification 3.8.1.B.4.2.2. Normally the safety bus NB02 cabinets are protected equipment (no work allowed) but because this work was planned in advance for the diesel outage, the work was permitted. In consultation with the Office of Nuclear Reactor Regulation, the inspectors concluded that Procedure STS IC-208B and power supply replacement was inappropriate during the 7-day diesel outages because it increased the probability of the loss of offsite power

to safety equipment that could not be powered by the diesel. Wolf Creek appropriately restricted access to the portion of the switchyard outside the protected area but did not appropriately restrict work for offsite power inside the protected area. The inspectors determined that challenges to offsite power can originate with elective maintenance inside the protected area. The inspectors found that Wolf Creek assessed risk under 10 CFR 50.65 a(4) for this evolution, resulting in elevated risk within the Green band during the 7-day diesel outage. The inspectors also found that Wolf Creek appropriately protected component cooling water, emergency service water, instrument busses, dc busses, emergency core cooling, the Train A diesel, and control room ventilation.”

“Technical Specification 3.8.1, Required Action B.4.2.2, permits one diesel generator to be inoperable for 7 days provided the limitations articulated in the NRC SER for License Amendment 163 are met. The NRC SER for License Amendment 163 requires that the offsite power supply and switchyard conditions be conducive to an extended diesel generator completion time, which includes ensuring that switchyard access is restricted and no elective maintenance within the switchyard is performed that would challenge the offsite power availability. Contrary to the above, on March 24, 2009, Wolf Creek performed elective maintenance which challenged offsite power availability while emergency diesel generator B was in the 7-day extended completion time. Specifically the licensee performed maintenance on the safety bus NB02 degraded and undervoltage voltage relay Channel 4 power supply while the emergency diesel generator Train B was in an extended outage.”

In Attachment II of your reply, you stated you did not believe a violation of Technical Specification 3.8.1, Required Action B.4.2.2 existed because:

- Emergency Diesel Generator B was restored within the 7 day Completion Time of Required Action B.4.2.2;
- The Safety Evaluation for Amendment 163 prohibits elective testing and maintenance in the switchyard and the power supply replaced and testing performed were not in the switchyard; and
- The Work Order and post maintenance test were evaluated as part of a risk assessment and determined not to yield unacceptable results.

The regional staff, in consultation with NRC’s Office of Nuclear Reactor Regulation and Office of Enforcement, has reviewed these reasons and the supporting information. We have concluded that the performance deficiency associated with the original noncited violation is more appropriately characterized as a noncited violation of 10 CFR 50.65(a)(4) involving the failure to adequately assess and manage the risk associated with maintenance activities. The basis for this determination is described below.

The staff determined Attachment II of your reply was correct in that the Technical Specification Required Action statement does not require that the limitations articulated in the NRC Safety Evaluation for License Amendment No. 163 are met. However, the staff concluded the station did not comply with the administrative controls specified in the Technical Specification Bases. As stated in the Technical Specification Bases, the 7-day Completion Time of Required Action B.4.2.2 is a risk-informed allowed outage time based on a plant-specific risk analysis. The

reliability of offsite power is an important contributor to the risk analysis for an emergency diesel generator outage. This importance is reflected in the administrative controls stated in the Technical Specification Bases during implementation of the 7-day Completion Time, which include: "The offsite power supply and switchyard condition are conducive to an extended DG Completion Time, which includes ensuring that switchyard access is restricted and no elective maintenance within the switchyard is performed that would challenge offsite power availability." Consistent with the Tier 2 controls described in Regulatory Guide 1.177, "An Approach for Plant-Specific Risk-Informed Decisionmaking," this administrative control provides reasonable assurance that risk significant equipment outage configurations will not occur during the extended allowed outage time. Section 2.3 of Regulatory Guide 1.177 discusses the need for maintenance risk assessments during extended allowed outage times, stating "The need for [operational risk assessment] stems from the difficulty of identifying all possible risk-significant configurations under Tier 2 that will ever be encountered over extended periods of plant operation."

As stated in your reply, the Probabilistic Safety Assessment group reviewed the power supply replacement as part of an operational risk assessment which determined the activity would not render the load shedder and emergency load sequencer unavailable. The staff noted this evaluation did not address the reduction in reliability of offsite power or the potential for consequential equipment failures or human error. Specifically, the change in coincidence logic from 2 out of 4 to 1 out of 3 reduced the reliability of offsite power, in that a single spurious signal could result in actuation of the trip circuitry. The performance of maintenance activities inside the cabinets containing the protective circuitry for load shedder and emergency load sequencer also increased the likelihood of a spurious trip signal, similar to the way that equipment operation inside the switchyard would increase in the likelihood of spurious trip of offsite power. Consequently, the risk analysis performed by the station was inadequate in that it failed to consider that the maintenance activity impacted the reliability of offsite power upon which the risk analysis to support the extended completion time of Required Action B.4.2.2 was based, and the activity should have therefore been prohibited while the diesel generator was out of service.

The staff determined the performance of maintenance activities that reduced the reliability of offsite power during the extended allowed outage time for the Train B emergency diesel generator was a performance deficiency. Per NRC management review using Appendix M of Manual Chapter 0609, "Significance Determination Process," the staff determined the finding was of very low safety significance (Green) since it did not affect both qualified sources of offsite power and sufficient defense in depth remained.

Title 10 CFR 50.65(a)(4) requires, in part, that licensees shall assess and manage the increase in risk that may result from proposed maintenance activities. Contrary to the above, on March 24, 2009, the licensee failed to adequately assess and manage the increase in risk from maintenance activities. Specifically, the licensee failed to ensure the offsite power supply remained conducive to an extended emergency diesel generator allowed outage time by performing elective maintenance which challenged the reliability of offsite power while the Train B emergency diesel generator was out of service for the extended allowed outage time. NRC Inspection Report 05000482/2009004 will be amended to reflect the conversion of NCV 05000482/2009004-06, "Performing Prohibited Elective Maintenance on Safety Bus NB02 Channel 4 during Emergency Diesel Generator Maintenance," to a noncited violation of 10 CFR

50.65(a)(4).

NCV 05000482/2009004-07, "Failure to Report Conditions that Could Have Prevented Fulfillment of a Safety Function:"

The referenced report stated, in part:

"The inspectors identified a Severity Level IV noncited violation of 10 CFR 50.73, with three examples in which the licensee failed to submit licensee event reports within 60 days following discovery of events or conditions meeting the reportability criteria.

"First, on April 10, 2008, the licensee submitted LER 2008-002 under 10 CFR 50.73(a)(2)(i)(B) which is operation prohibited by technical specifications. For 11 hours from February 13-14, 2008, Wolf Creek did not have an operable emergency core cooling system because no high head charging pumps were operable. Wolf Creek was in Technical Specification 3.0.3 during this time. Wolf Creek received enforcement discretion to remain at power. Charging Pump B was required to be declared inoperable because emergency diesel generator B was inoperable, and charging Pump A was inoperable because it did not have an operable room cooler. On June 25, 2009, the inspectors identified that Wolf Creek failed to report this event as a safety system functional failure under 10 CFR 50.73(a)(2)(v) for the emergency core cooling system being inoperable. The inspectors discussed this with Wolf Creek and Condition Report 00018156 was initiated. On July 30, 2009, the licensee completed the evaluation of this condition report and concluded that the loss of high head charging was not reportable, however no evaluation demonstrated operability of the charging pumps."

"Third, on April 10, 2008, Wolf Creek filed Event Notification Report 44131 per 10 CFR 50.72(b)(3)(ii)(B) based on a possible trip of all four containment coolers. The containment coolers have thermal overload protection such that if a cooler trips in fast speed during normal power operation, that cooler will not restart in slow speed for an accident. Wolf Creek evaluated this concern and issued Event Notification 44131. Wolf Creek later retracted the Event Notification stating: "Further analysis of the main steam line break, if this concern had existed, showed that the calculated post-accident pressure and temperature peak values would not exceed the peak accident values in the USAR. Therefore, an unanalyzed condition did not exist and Wolf Creek is retracting the 50.72(b)(3)(ii)(B) notification."

"The inspectors found that Wolf Creek did not analyze the current draw for the motors prior to receipt of a safety injection signal. Wolf Creek assumed that the coolers would not restart and relied on containment, but this is still the loss of a safety function to remove heat from containment. Wolf Creek found that without the coolers, containment pressure exceeds the Analysis of Record but not the design pressure in the USAR. Inspectors found that this was not an appropriate method to consider the coolers' heat removal safety function met. At the end of the report period, Wolf Creek did not have an analysis for the containment cooler motors to determine if they would have tripped prior to receiving an accident signal. Wolf Creek's condition report and reportability evaluation has been open since April 11, 2008. No licensee event report has been submitted. The inspectors found insufficient evidence to show that the containment coolers could accomplish their safety function and that this should have been reported under 10 CFR 50.73(a)(2)(v)."

In Attachment III of your reply, you stated that two examples of this violation did not prevent the

fulfillment of the safety function of the structure, system or component and therefore were not reportable in accordance with 10 CFR 50.73(a)(2)(v). Specifically, you stated the first and third examples were not violations since:

- In the first example, if the leaking centrifugal charging pump A room cooler end plug failed catastrophically, the resulting leak rate would not have threatened the capability of either the ultimate heat sink or essential service water A to perform its safety function;
- Also in the first example, centrifugal charging pump A remained functional with its respective room cooler out of service; and
- In the third example, you performed a calculation that demonstrated that the containment fan coolers would have operated in fast speed under worst case environmental conditions, and that the fans would start in slow speed on a safety injection signal as required by the analysis of record.

The regional staff, in consultation with NRC's Office of Nuclear Reactor Regulation and Office of Enforcement, has reviewed your request and the supporting information. We have concluded that the first and third examples of the original noncited violation are both still applicable; however, we have concluded the third example is more appropriately characterized as a minor violation.

The staff reviewed the information provided in your response for the first example of the noncited violation. The staff noted the calculations provided for the room cooler leak did not address the mechanical stresses generated in the room cooler and potential consequential failures following catastrophic failure of the end plug. The staff also noted that the calculations for centrifugal charging pump A utilized the conditions that existed at the time instead of design conditions. The staff concluded the computations provided in your response did not provide a reasonable basis to demonstrate the operability of the structures, systems and components described in the first example. Therefore, NRC staff determined that this example was applicable.

For the third example of the original noncited violation, the staff reviewed calculation WCN003-PR-01, "Worst Case Brake Horsepower Requirements on Containment Air Cooler (CAC) Fan Motors," Revision 0. The staff concluded the calculation provided a reasonable basis for determination that the containment air coolers would not trip if a design basis accident were to occur while the coolers were operating in fast speed. However, the staff determined that a violation still occurred since the original event notification occurred on April 10, 2008, and the station therefore did not file a licensee event report within 60 days following discovery of an event meeting the reportability criteria as required by 10 CFR 50.73. Licensee event reports can be revised or retracted after submittal based on new information or conclusions resulting from the licensee's review. In this case, since the new information provided by calculation WCN003-PR-01 would have resulted in retraction of the licensee event report, this violation was reviewed by NRC management and determined to be of minor significance. The inspection report will be amended to remove the third example of NCV 05000482/2009004-07.

In Attachment III of your reply, you also identified a potential discrepancy in the information documented on page 35 of the subject inspection report related to the initiation of Condition

Report 00018156. Specifically, you stated that WCNOC believed the initiation of this condition report was not based on issues raised by the resident inspection staff. Based on the information you provided, Inspection Report 05000482/2009004 will be amended to reflect that Condition Report 00018156 was initiated in response to concerns raised by the NRC at the June Reactor Oversight Process meeting.

Based on our reviews, as described above, NRC Inspection Report 05000482/2009004 will be amended to reflect the conversion of noncited violation NCV 05000482/2009004-06, "Performing Prohibited Elective Maintenance on Safety Bus NB02 Channel 4 during Emergency Diesel Generator Maintenance," to a noncited violation of 10 CFR 50.65(a)(4), and the third example of noncited violation NCV 05000482/2009004-07, "Failure to Report Conditions that Could Have Prevented Fulfillment of a Safety Function," to a minor violation. The NRC concluded the remaining original noncited violations are still applicable.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA for AVegel/**

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