



Russell A. Smith
Site Vice President and Chief Nuclear Operating Officer

January 11, 2013
WO 13-0002

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Docket No. 50-482: Request for Notice of Enforcement Discretion
from Technical Specification 3.8.1, "AC Sources – Operating"

Gentlemen:

This letter confirms the results of the teleconference that was conducted between Wolf Creek Nuclear Operating Corporation (WCNOC) and Nuclear Regulatory Commission (NRC) Staff representatives at 1300 hours Central Standard Time (CST) on January 10, 2013 in which WCNOC requested the NRC to exercise enforcement discretion for the Wolf Creek Generating Station (WCGS), regarding the requirements of Technical Specification (TS) 3.8.1, "AC Sources – Operating." With the plant operating in MODE 1 at 100% Rated Thermal Power, the request was made in order to provide additional time to repair and test the 'B' diesel generator (DG) before a plant shutdown would have otherwise been required.

The events leading to WCNOC's request began when the 'B' DG was declared inoperable at 0500 hours on January 8, 2013, for performance of voluntary preplanned maintenance activities. One of the preplanned maintenance activities was the replacement of the o-ring between the cylinder head and valve housing on the number 7 cylinder. This maintenance activity was being performed due to an oil leak on the number 7 cylinder. During the removal of the rocker arm assembly, maintenance personnel contacted one of the 8 cylinder head studs and identified that the stud was loose. Upon further investigation, it was identified that the head stud was broken. The necessary replacement parts are available, however, replacement and testing of the 'B' DG to establish OPERABILITY, will result in exceeding the 72 hour Completion Time of TS 3.8.1, Required Action B.4.1.

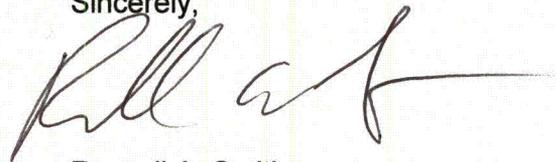
Enforcement discretion was sought to permit noncompliance with TS 3.8.1, i.e., to permit additional time to complete repairs and restoration of the 'B' DG before a plant shutdown was required. An additional 96 hours was requested to restore the 'B' DG to OPERABLE status such that the Completion Time of Required Action B.4.1 would expire at 0500 hours CST on January 15, 2013. The incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP) was quantified for the requested additional time for restoring the 'B' DG. The results of the quantification are within the guidance threshold in Regulatory Issue Summary 2005-01, "Changes to Notice of Enforcement Discretion (NOED) Process and Staff Guidance." It has been determined that there is no net increase in radiological risk.

ADD
NRC

At 1430 hours on January 10, 2013, Barry Westreich, Acting DRP Deputy Director, Region IV, notified WCNOG that after NRC Region IV Office consideration of WCNOG's verbal request for enforcement discretion, and in consultation with the NRR technical staff, the request for a Notice of Enforcement Discretion (NOED) was approved. The approval was effective and would begin at 0500 hours on January 11, 2013 for an additional 96 hours. WCNOG is required to submit a written request for the NOED within 2 working days of the NRC verbal approval.

Attachment I provides the information documenting WCNOG's earlier verbal request for the NOED. Regulatory commitments made by WCNOG are identified in Attachment II to this letter. If you have any questions concerning this matter, please contact me at (620) 364-4156, or Mr. Michael J. Westman at (620) 364-8831 ext. 4009.

Sincerely,

A handwritten signature in black ink, appearing to read 'Russell A. Smith', with a long horizontal flourish extending to the right.

Russell A. Smith

RAS/rtt

- Attachment I Request for Notice of Enforcement Discretion (NOED) from Technical Specification 3.8.1, "AC Sources – Operating"
- II List of Regulatory Commitments

cc: E. E. Collins (NRC), w/a
C. F. Lyon (NRC), w/a
N. F. O'Keefe (NRC), w/a
Senior Resident Inspector (NRC), w/a

**Request for Notice of Enforcement Discretion (NOED) from Technical Specification 3.8.1,
"AC Sources – Operating"**

1. The Technical Specification (TS) or other license conditions that will be violated.

Wolf Creek Nuclear Operating Corporation (WCNOC) specifically requests enforcement discretion from the 72 hour Completion Time of TS 3.8.1 Required Action B.4.1 to restore the 'B' diesel generator (DG) to OPERABLE status. The enforcement discretion provides sufficient time to complete repairs and post maintenance testing on the 'B' DG. Technical Specification 3.8.1, Required Action B.4.1 requires restoration of an inoperable DG to OPERABLE status within 72 hours.

Enforcement discretion was sought to allow up to an additional 96 hours for restoring the 'B' DG to OPERABLE status such that the Completion Time of Required Action B.4.1 would expire at 0500 hours Central Standard Time (CST) on January 15, 2013.

2. The circumstances surrounding the situation: including likely causes; the need for prompt action; action taken in attempt to avoid the need for an NOED; and identification of any relevant historical events.

Required Action B.4.1 of TS 3.8.1 was entered when the 'B' DG was declared inoperable on January 8, 2013, at 0500 hours CST, for performing voluntary preplanned maintenance activities. The 72 hour Completion Time for this Required Action required the inoperable DG to be restored by 0500 hours on January 11, 2013 before entering Condition H of TS 3.8.1. This Condition requires a plant shutdown such that MODE 3 must be entered within 6 hours (per Required Action H.1) and MODE 5 must be entered within 36 hours (per Required Action H.2).

One of the preplanned maintenance activities was the replacement of the o-ring between the cylinder head and valve housing on the number 7 cylinder. This maintenance activity was being performed due to an oil leak on the number 7 cylinder. During the removal of the rocker arm assembly, maintenance personnel contacted one of the 8 cylinder head studs and identified that the stud was loose. The broken stud was removed by hand. Figure 1 below identifies the o-ring being replaced and the location of the broken stud (Note that the figure is from DG overhaul activities during Refueling Outage 15 and is representative of the number 7 cylinder). At approximately 1213 hours, it was identified that the head stud was broken. Figure 2 identifies the approximate location of the break.

The necessary replacement parts are available, however, with input from the DG vendor, it was determined that the replacement and testing of the 'B' DG to establish OPERABILITY, would result in exceeding the 72 hour Completion Time of TS 3.8.1, Required Action B.4.1.

Preliminary results of the hardware failure analysis indicate the likely cause of the failure of the broken stud from the number 7 cylinder was cyclic fatigue. This is further discussed in Item 3 below.



Figure 1

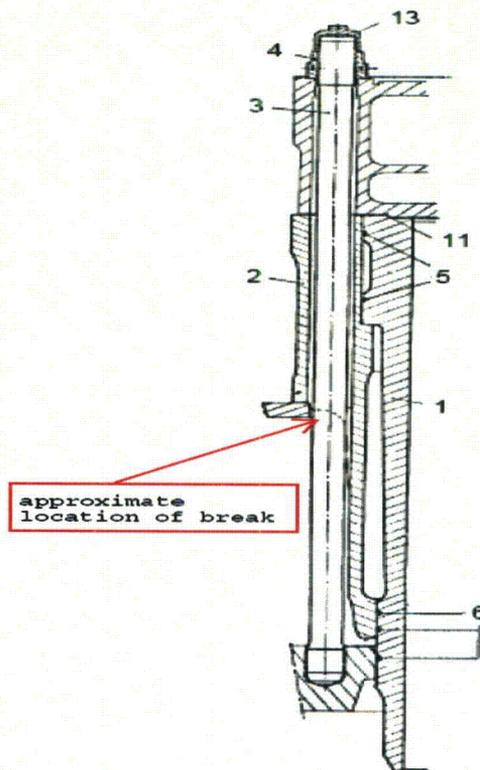


Figure 2

A ping (ring) test was performed on the remaining 7 cylinder head studs on the number 7 cylinder. This ping test was also performed on the studs of the other 13 cylinders on the 'B' DG. The ping test confirmed that there are no additional broken studs on the 'B' DG. Performance of a ping test on the 'A' DG was not performed, as the performance of this test requires declaring the 'A' DG inoperable. At 2342 hours on January 8, 2013, Surveillance Requirement (SR) 3.8.1.2 was performed satisfactorily on the 'A' DG in accordance with Required Action B.3.2 of TS 3.8.1. SR 3.8.1.2 verifies the DG starts from standby conditions and achieves steady state voltage and frequency. For the performance of SR 3.8.1.2, procedure STS KJ-005B, "Manual/Auto Start, Sync & Loading of EDG NE01," requires documenting any deficiencies, such as intake, exhaust or oil leaks. No deficiencies were identified. WCNOG will perform a ping test and ultrasonic test (UT) of the 'A' DG cylinder head studs prior to startup from Refueling Outage 19.

In Refueling Outage 15, Fall 2006, during a maintenance overhaul of the 'B' DG, the detensioning of a cylinder stud on the number 4 cylinder resulted in a broken cylinder head stud. It was determined that a crack existed on the stud prior to the detensioning. A failure analysis of this broken stud was not performed, as there was clear indication of a nick that caused a stress riser.

3. Information to show that the cause and proposed path to resolve the situation are understood, such that there is a high likelihood that planned actions to resolve the situation can be completed within the proposed NOED time frame.

The broken stud on the number 7 cylinder is original to the engine and has been in service for about 30 years. The overall run time of the 'B' DG is 2321.5 hours. The DGs are subjected to a 1-hour run once a month, and a 24-hour run every 18 months. The most recent run on the 'B' DG was on December 14, 2012, which consisted of two 1-hour runs, whereas the last 24-hour run was on March 11, 2012.

Half of the broken stud was sent to Exelon PowerLabs, LLC, for a hardware failure analysis. Preliminary results of the analysis indicate the cause of the failure of the broken stud from the number 7 cylinder was cyclic fatigue. Beachmarks were identified on the fracture surface, which are indicative of fatigue. A possible contributing cause may have been fretting corrosion identified on the outer diameter of the stud directly adjacent the fracture initiation site. Fretting would cause a stress concentration on the outside diameter surface and make the material more susceptible to fatigue.

Upon discovery of the single broken cylinder head stud, a ping test was performed on all cylinder head studs to determine if any others were broken. The test only determines if the stud is fully fractured; it does not give an indication of a fatigue crack that has not yet resulted in failure. Following the ping test, an UT was performed on all remaining studs on the 'B' DG. The UT can be performed with the studs installed and tensioned. The UT of all remaining studs was completed at approximately 2007 hours on January 9, 2013, 111 in total, did not identify any additional fatigue cracks in any studs of any other cylinders of the 'B' DG. This provides assurance that no additional work activities are needed at the current time to return the 'B' DG to operational service. This does not preclude the need for future testing or inspections based on an in depth analysis of the cause of the failure.

Initial information from the DG engine manufacturer indicated that the engine could successfully operate with a single cylinder head stud of a single cylinder not tensioned for a period of up to 7 days while operating at nameplate rated load capacity (6201 kW), and of those 7 days, up to 2

hours at 107% of rated load (6635 kW). If operated under the above load conditions, and a combustion gas leak were to develop at the head gasket, the leak itself would not immediately compromise engine operation. The engine could continue to operate with a head gasket leak for a short duration but may require reduced loading depending on the severity of the leak. From this information, WCNOG determined that the 'B' DG should be repaired.

Repairs and post maintenance testing of the 'B' DG are estimated to take approximately 116 hours (from identification of the broken stud to DG declared OPERABLE). The repairs include draining the crankcase oil, removing the cylinder head, removing 8 studs, non-destructive examination of 7 studs, replacing the broken stud and installing 2 new studs adjacent to the broken stud, reinstalling 5 of the removed studs, assembly of the cylinder head, refill the DG crankcase with oil and perform post maintenance testing.

The estimated time to complete the replacement of the broken head cylinder stud and the two adjacent studs and perform the required testing to establish DG OPERABILITY is 0800 on January 13, 2013. This estimated time exceeds the initial TS Completion Time and is within the requested enforcement discretion timeframe of 0500 on January 15, 2013.

4. The safety basis for the request, including an evaluation of the safety significance and potential consequences of the proposed course of action.

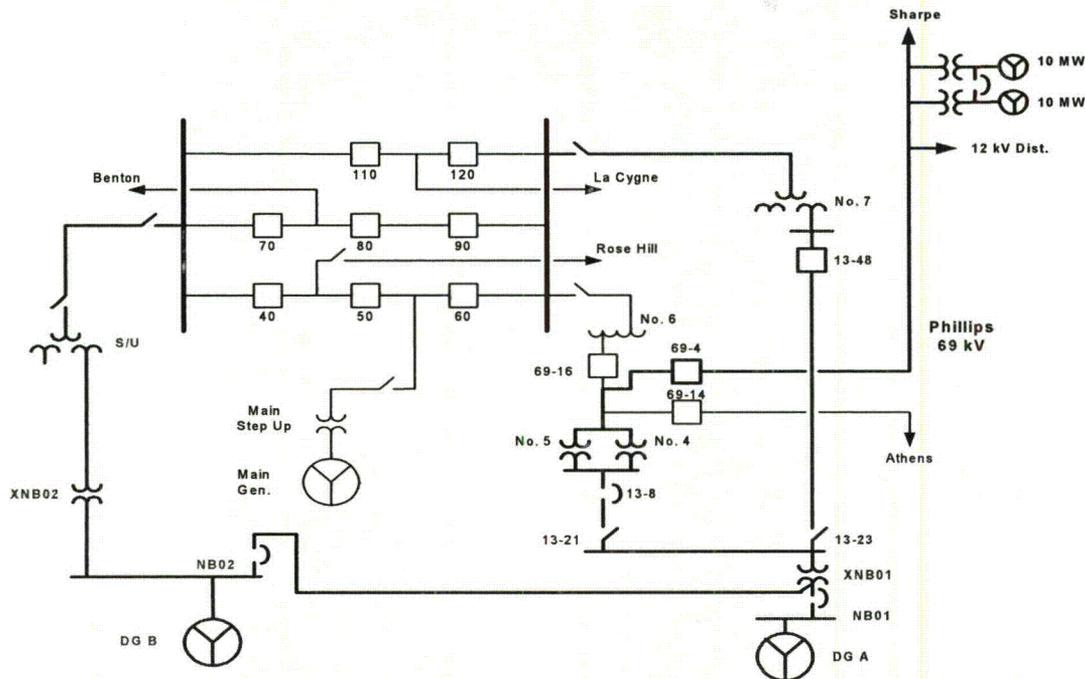
Description of Class 1E Power System at Wolf Creek Generating Station (WCGS)

The onsite power system is generally divided into two load groups. Each load group consists of an arrangement of buses, transformers, switching equipment, and loads fed from a common power supply. Power is supplied to loads at 13.8 kV, 4.16 kV, 480 V, 480/277 V, 208/120 V, 120 VAC, 250 VDC, and 125 VDC. The Class 1E AC system loads are accordingly separated into two load groups, which, as noted above, are powered from separate engineered safety feature (ESF) transformers. Each load group has power distributed by a 4.16-kV bus (NB01 or NB02), 480-V load centers, and 480-V motor control centers. Each load group is independently capable of safely bringing the plant to a cold shutdown condition, as the Class 1E electrical power distribution system is designed to satisfy the single-failure criterion.

The onsite standby power system includes Class 1E AC and DC power supply capability for equipment used to achieve and maintain a cold shutdown of the plant and to mitigate the consequences of a design basis accident (DBA). With respect to Class 1E AC power, each of the two Class 1E load groups, at the 4.16-kV bus level, is capable of being powered from an independent diesel generator (one per load group) which functions to provide power in the event of a loss of the preferred power source. Undervoltage relays are provided for each 4.16-kV bus to detect an undervoltage condition. Upon recognition of a loss of voltage at the 4.16-kV buses, a logic signal generated by the load shedder and emergency load sequencer (LSELS) initiates a 1) trip of the 4.16-kV preferred normal and alternate bus feeder breakers, 2) shed of all loads from the bus except the Class 1E 480 Vac load centers and centrifugal charging pumps, and 3) an automatic DG start signal.

The standby power supply for each Class 1E load group consists of one DG complete with its accessories and fuel storage and transfer systems. The DG is capable of supplying essential loads necessary to reliably and safely shut down and isolate the reactor. Each DG is rated at 6,201 kW for continuous operation.

A simplified one-line diagram of the offsite power system and 4.16-kV buses is provided below. As can be seen from the figure, and as described above, each of the two 4.16-kV Class 1E buses is normally supplied by its preferred (offsite) power source (via its respective ESF transformer) and is capable of being exclusively supplied by its associated DG (as there is no automatic connection between the redundant load groups.)



The DG engine is a Colt Pielstick/Fairbanks Morse, V-14, turbocharged, four-stroke, diesel engine. Each engine operates at 514 rpm and develops 8600 BHP at full load using #2 diesel fuel. The engine has a 13:1 compression ratio. The cylinders are numbered along the main axis from the generator to the turbochargers, starting with the west side of the engine.

Each cylinder is a separate assembly consisting of a replaceable liner surrounded and supported by a water jacket. The cylinder head has internal cooling water flow paths to remove the absorbed heat of combustion. The cylinder head serves as the mounting base for the two exhaust valves, the two intake valves, the air-start check valve, the injection nozzle, and the rocker arm assembly. There are two intake and two exhaust valve assemblies for each of the 14 cylinders of the engine. The intake valve assembly delivers the filtered, turbocharged, and cooled air from the common cylinder bank air intake manifold to the individual cylinders, and the exhaust valve assembly regulates the removal of exhaust gases from the individual cylinders following the combustion process. Each cylinder has a petcock connection for checking compression.

ICCDP and ICLERP Determination

The WCGS zero maintenance Revision 5 Probabilistic Risk Assessment (PRA) model was used to quantify the impact on risk of extending the allowed outage time per this request. Core Damage Frequency (CDF), Large Early Release Frequency (LERF), Incremental Conditional Core Damage Probability (ICCDP), and Incremental Conditional Large Early Release Probability (ICLERP) factors are listed below.

Quantification of the station blackout (SBO) event when the initial plant condition has one of the two DGs in the extended TS Completion Time is referred to as the "Protected Plant Alignment" or "Protected DG Configuration." Protected Loss of Offsite Power Initiating Event Frequency refers to the additional controls placed on switchyard work and other concurrent major maintenance. In the Protected Plant Alignment, recovery of AC power using the Sharpe Station is considered feasible for all AC power recovery time periods in the SBO event tree structure. The Protected Plant Alignment SBO event tree has the same structure and number of sequences as the SBO event tree.

The 'B' DG has been out of service for 72 hours for planned and unplanned maintenance activities. This evaluation considers the risk impact of the 'B' DG out of service and an additional 96 hours with full credit of Sharpe Station to complete unplanned maintenance activities and complete post maintenance testing.

Numerical result of two cases for the risk evaluation are provided below. The first is the Base Case. It uses the Zero Test and Maintenance model, and no credit for operator action to provide temporary cooling upon loss of either SGK05A or SGK05B (Class 1E electrical equipment air conditioning units). The second case added the non-functional KKJ01B ('B' DG).

	CDF/yr	LERF/yr
Base CDF zero T&M, OPA-1EHVACAB-EXE Fail	1.91E-5	2.78E-6
KKJ01B OOS, OPA-1EHVACAB-EXE Fail, With Sharpe	5.92E-05	3.50E-06

The ICCDP and ICLERP were calculated using Equations 1 and 2 below.

Equation 1: $ICCDP = (\Delta CDF) \times \text{Duration in years}$

Equation 2: $ICLERP = (\Delta LERF) \times \text{Duration in years}$

The Duration in years is defined as the additional time for the 'B' DG to be out of service beyond the 72 hours allowed by Technical Specifications. The ICCDP and ICLERP are calculated for 96 hours with Sharpe Station.

$ICCDP = (5.92E-5 - 1.91E-5) * (96\text{hrs} \div 8760\text{hrs/yr}) = 4.39E-7$

$ICLERP = (3.50E-6 - 2.78E-6) * (96\text{hrs} \div 8760\text{hrs/yr}) = 7.89E-9$

The ICCDP shown above fits into Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants," as an activity that merits risk management considerations and activities. The calculated value for ICCDP meets the Regulatory Issue Summary 2005-01, "Changes to Notice of Enforcement Discretion (NOED) Process and Staff Guidance," guidance threshold of less than or equal to 5.0E-07 ICCDP and 5E-08 ICLERP. The calculated ICCDP value reported above does not account for various conservatisms in place including, but not limited to, the following:

- Reduction in risk by the avoidance of shutting down the plant with only one available DG, and

- Just-in-time training of the operations staff for SYS SY-120, "Sharpe Diesel Operation and Alignment to Site."

Numerical risk reductions for avoidance of Transition and Shutdown Risk is not included in the above results. WCNOG developed a Shutdown PRA in 1999. It utilized the same methodologies for fault tree development as the At-Power model. While it was not fully approved, insights from its use showed a notable risk increase transitioning in MODE 4 due to the defeat of automatic actuations for Safety Injection. This caused a higher reliance on the success of Operator Actions. By simple qualitative evaluation, the numerical insight was reasonable.

Dominant Risk Contributors

Six initiating events account for over 94 percent of the total conditional core damage contribution. As expected, loss of offsite power (INIT-LSP) dominates all other initiating events by contributing 68.3 percent to CDF. Small loss of coolant accident (LOCA) (INIT-SLO) contributes 15.3 percent and very small LOCA (INIT-VLO) contributes 3.3 percent to CDF. Steam Generator Tube Rupture (INIT-SGR) and low pressure safety injection (LPSI) Cold Leg Injection ISLOCA (INIT-ISL-LPSI-CL) both contribute 2.6 percent to CDF. Initiating event INIT-DC4 with Loss of NK51 (INIT-DC1-NK51) contributes 2.3 percent to CDF.

Contribution of initiating events to LERF is dominated by INIT-ISL-LPSI-CL and INIT-SGR. These two initiating events contribute over 50 percent of the total LERF with percentages being 43.8 and 17.6 respectively. INIT-DC1-NK51 contributes 7.3 percent, INIT-LSP contributes 6.6 percent, INIT-VLO contributes 3.1 percent, and INIT-SLO contributes 1.0 percent of the total LERF. These top six initiating events contribute to 79.4 percent of the total LERF.

Important OPERABLE components from the Safety Monitor™ with the 'B' DG unavailable are the Class 1E DC Bus systems, subsystems and components (SSCs) (e.g., NK051, NK105, NK001, NK004), Startup Transformer (XMR01), Essential Service Water (ESW) Train 'A', Class 1E Electrical Bus NB01, No. 7 Switchyard Transformer, 345kV West Bus (1ELSY0004), 'A' DG (KKJ01A), Component Cooling Water (CCW) Train 'A', and refueling water storage tank (RWST) outlet isolation valve BNV0011.

Compensatory Risk Management Measures

Qualitative risk insight indicates that compensatory measures to limit the possibility of experiencing a SBO have significant impact on the risk to the plant. Such compensatory measures that are in place include, but are not limited to, the following:

- Avoidance of testing and maintenance impacting availability of the 'A' train safety bus, including but not limited to, the ESW System, motor driven auxiliary feedwater (AFW) pump, turbine driven AFW pump, CCW System, Residual Heat Removal (RHR) System, and all 125 Volt DC System (NK) batteries and the associated DG to maximize the mitigative response to a SBO event;
- Ensure that switchyard access is restricted and no elective or discretionary maintenance within the switchyard and offsite circuit is performed that would challenge offsite power availability;

- Enhanced operator sensitivity to safety bus electrical power supply issues to recognize and respond expeditiously to a SBO or loss of offsite power event (e.g., posting of protected train signage to NK rooms);
- Control Room staff briefing to review the important risk significant manual actions as provided by the Supervisor Engineer for Fuel and Probabilistic Safety Assessment supporting the request for NOED;
- Continual monitoring by the grid operator regarding grid conditions to anticipate challenges to offsite power availability; and
- Operations staff just-in-time training for SYS SY-120, "Sharpe Diesel Operation and Alignment to Site."

PRA Operator Action Review

Safety Monitor™ cutsets were reviewed for operator actions. Three actions were identified and have been provided to the Shift Manager for discussion with Control Room staff. The purpose is to refresh important actions that could emerge with additional postulated SSC failures given a plant initiating event.

The specific PRA Operator Actions that have the highest Birnbaum are as follows:

1. OPA-RHR. Stop RHR pumps during a high pressure injection event.
2. OPA-HPR. Align for high pressure cold leg recirculation when the RWST level reaches 36 percent.
3. OPA-RR11. Align and start one centrifugal charging pump (CCP) or safety injection (SI) pump following reactor coolant pump (RCP) seal LOCA to restore Reactor Coolant System (RCS) inventory with AFW or MFW available. Restore CCP or SI pump injection following a SBO or loss of CCW, ESW, or RCP Cooling.

Seismic Event

Seismic considerations are treated as follows: The seismically induced LOOP is taken from Risk Assessment of Operational Events Volume 2 – External Events Revision 1.01 - January 2008

Appendix A Frequencies of Seismically-Induced LOOP Events for SPAR Models

3.29E-04 Seismic Initiating Event Frequency

5.70E-02 Conditional Loss of Offsite Power

1.87E-05 Seismic Induced Loss of Offsite Power

The relevant DG basic events are:

DGNE-----NE01-PR 5.161E-002	DIESEL GENERATOR NE01 FAILS TO RUN
DGNE-----NE01-PS 2.874E-003	DIESEL GENERATOR NE01 FAILS TO START
DGNE-----NE01-TM 7.768E-003	TRAIN A OF EMERGENCY DIESEL GENERATOR IN T&M
DGNE-----NE02-PR 5.161E-002	DIESEL GENERATOR NE02 FAILS TO RUN
DGNE-----NE02-PS 2.874E-003	DIESEL GENERATOR NE02 FAILS TO START
DGNE-----NE02-TM 5.801E-003	DG NE02 UNAVAILABLE DUE TO TEST OR MAINTENANCE

MVAL--HV0030-ACC	1.555E-003	3	MOTOR OPERATED VALVE	ALHV0030	FAILS TO OPEN
MVAL--HV0031-ACC	1.555E-003	3	MOTOR-OPERATED VALVE	ALHV0031	FAILS TO OPEN
MVAL--HV0032-ACC	1.555E-003	3	MOTOR-OPERATED VALVE	ALHV0032	FAILS TO OPEN
MVAL--HV0033-ACC	1.555E-003	3	MOTOR-OPERATED VALVE	ALHV0033	FAILS TO OPEN
MVAL--HV0034-AOO	1.555E-003	3	MOTOR OPERATED VALVE	ALHV0034	FAILS TO CLOSE
MVAL--HV0035-AOO	1.555E-003	3	MOTOR OPERATED VALVE	ALHV0035	FAILS TO CLOSE
MVAL--HV0036-AOO	1.555E-003	3	MOTOR-OPERATED VALVE	ALHV0036	FAILS TO CLOSE

By simple inspection, the addition of the additional failures, of DGs to run or the ALHV (condensate storage tank suction valves and ESW suction supply valves) valves to open, quickly takes the sequence below a value of 1.06E-08.

For example:

Seismic Induced Loss of Offsite Power	DGNE-----NE01-PR	DGNE-----NE02-PR	CDF / Rx-yr
1.87E-05*(96/8760)	5.16E-02	1.0 (not available)	1.06E-08

External Events

A review of the Fire Protection Impairment Control Permit log and of the Breach Authorization Permit log did not uncover any additional challenges from fire or flood.

Weather Forecast

The National Weather Service forecast for the area is:

- Today (1/10), Rain, mainly before 1 pm. High near 51°F. East wind 5 to 10 mph. Chance of precipitation is 90 percent.
- Tonight, A 40 percent change of rain or drizzle, mainly before 7 pm. Patchy fog after 7 pm. Otherwise, mostly cloudy, with a low around 42°F. Southeast wind 5 to 15 mph becoming south after midnight.
- Friday, Patchy fog before 11 am. Otherwise, partly sunny, with a high near 65°F. Breezy, with a south wind 15 to 20 mph increasing to 20 to 25 mph in the afternoon. Winds could gust as high as 30 mph.
- Friday Night, Partly cloudy, with a low around 29°F. Breezy, with a south wind 15 to 20 mph becoming west 10 to 15 mph after midnight. Winds could gust as high as 30 mph.
- Saturday, Mostly sunny, with a high near 38°F. North wind around 15 mph, with gusts as high as 20 mph.
- Saturday Night, a 20 percent chance of snow after 7 pm. Mostly cloudy, with a low around 18°F.
- Sunday, A 20 percent chance of snow before 7 am. Mostly sunny, with a high near 30°F.
- Sunday Night, Mostly clear, with a low around 17°F.
- Monday, Mostly sunny, with a high near 32°F.
- Monday Night, Mostly cloudy, with a low around 19°F.

Defense in Depth

The request for enforcement discretion provides a one-time increase in the Completion Time specified in the TSs for an inoperable DG. The Completion Time is a TS provision that, as noted in the TS Bases, "takes into account the capacity and capability of the remaining AC sources, a reasonable time for repairs, and the low probability of a DBA occurring during this period." In general, the TSs permit Limiting Conditions for Operation and thus the normally full complement of redundant components and trains to not be met for short periods of time on this basis. These provisions, as noted in the TSs themselves, have been determined to be reasonable based on engineering judgment, while still preserving the intent of maintaining adequate system/component availability for those systems and components assumed to function in accordance with the assumptions of the accident analysis.

In 2002, Kansas Electric Power Cooperative, Inc. (KEPCo) constructed an electric generating station (Sharpe Station) that consists of ten, two-megawatt Caterpillar 3516B engine-generator sets (gensets). The gensets are sited at a single location near an existing 69 kV substation near Sharpe, Kansas, approximately two miles north of WCGS. Siting it near WCGS provides emergency back-up power for WCGS, specifically, to improve availability and reliability of sufficient AC power for planned or postulated WCGS plant conditions including planned onsite DG maintenance, complete loss of all onsite emergency AC power, and grid perturbations or loss of a normal offsite power source to WCGS. Sharpe Station is not an Alternate AC (AAC) power source as defined in Regulatory Guide 1.155, "Station Blackout." Power from the Sharpe Station enters the WCGS switchyard via the Phillips 69-kV line.

In addition to the information above WCGS has received License Amendment No. 163 that allows energizing Sharpe Station and providing power to the WCGS switchyard under certain conditions. WCNOG was not utilizing the 7-day Completion Time of Required Action B.4.2 when the 'B' DG was declared inoperable for planned maintenance on January 8, 2013. However, WCNOG has taken the necessary actions per procedure SYS SY-120, "Sharpe Diesel Operation and Alignment to Site," to ensure that the Sharpe Station would be available during the period of the additional 96 hours. This includes, but is not limited to:

- Operations has assigned dedicated operators to perform this procedure and a dedicated operator will be maintained available for the duration of the requested additional time. The dedicated operators have walked down procedure SYS SY-120 to ensure they are familiar with the actions to be taken during procedure performance.
- The Sharpe Station gensets have been started and proper operation verified (i.e., the gensets reach rated speed and voltage) within the past 30 days.
- Within the last 8 months, a load capability test/verification has been performed on the Sharpe Station gensets.
- The Sharpe Station switchgear batteries were tested within the last 7 days.

5. The justification for the duration of the noncompliance.

As discussed in the probabilistic risk assessment above, extending the Completion Time of TS 3.8.1, Required Action B.4.1 by an additional 96 hours results in no net increase in radiological risk.

Activities to prepare for and perform repairs to the 'B' DG number 7 cylinder are currently in progress and are being worked on a 24-hour schedule until completion.

The nature of the failure resulted in major repairs and post maintenance testing of the 'B' DG. As the failure was unexpected, additional planning, vendor support, and tooling to affect a complex repair were needed. The DG cylinder reassembly and post maintenance testing involves several major activities. Steps to return the DG to OPERABLE status include:

	DATE	TIME*
• Reinstall of 8 studs	1/11/13	0800
• Reinstall cylinder and jacket liner	1/12/13	0100
• Reinstall piston, connecting rod and reassemble cylinder head	1/12/13	0500
• Refill DG crankcase	1/12/13	0500
• Fill, vent and pressure test jacket water system	1/12/13	0900
• Diesel engine heatup	1/12/13	1400
• Post engine overhaul run	1/13/13	0400
• Surveillance testing/DG OPERABLE	1/13/13	0800

* The time is the expected time for the activity to complete.

In addition, the following compensatory measures are being taken and will continue until the 'B' DG is restored to OPERABLE status:

- During repair of the number 7 cylinder, no other planned maintenance or testing will be performed that would render the 'A' DG and associated support systems inoperable.
- High risk plant evolutions will be avoided.
- Monitoring of the Sharpe Station to ensure availability is maintained.

6. The condition and operational status of the plant (including safety related equipment out of service or otherwise inoperable).

Currently, the plant is operating in MODE 1 at 100% power. The current Plant Awareness Level is 2. Plant Awareness Level identifies the risk of performing work activities, by considering core damage frequency and commercially significant equipment. Plant Awareness Level 2 refers to medium core damage frequency.

The following list of safety related components are currently inoperable or out of service:

- KKJ01B, Diesel Generator 'B'

7. The status and potential challenges to off-site and on-site power sources.

The plant was operating, providing power to the offsite power grid and all the onsite and offsite power sources were OPERABLE. According to System Operations (Westar Energy Transmission Services), the transmission system was lightly loaded due to mild weather conditions, and there were no problems stressing the grid. Grid voltage is required to be maintained between 97% and 105% of nominal value. The voltage was at 101.2% at 0725 on January 11, 2013 and is continually monitored by System Operations. WCNOG has an off

normal procedure (OFN AF-025, "Unit Limitations," Attachment E) should the voltage deviate from the required band.

8. The basis for the conclusion that the noncompliance will not be of potential detriment to the public health and safety.

The request for enforcement discretion is to allow an additional 96 hours to TS 3.8.1, Required Action B.4.1, to effect repairs and post-maintenance testing on the 'B' DG number 7 cylinder to preclude a unit shutdown. The proposed additional time does not involve a significant hazards consideration based on the three standards set forth in 10 CFR 50.92(c) as discussed below:

- (i) Do the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

Overall protection system performance will remain within the bounds of the previously performed accident analyses since no hardware changes are proposed. The protection systems (Reactor Trip System and Engineered Safety Feature Actuation System) will continue to function in a manner consistent with the plant design basis. This additional allowed time does not result in a condition where the design, material, and construction standards that were applicable prior to the change are altered. The proposed change will not modify any system interface. The proposed change will not affect the probability of any event initiators. There will be no change to normal plant operating parameters or accident mitigation performance. The proposed change will not alter any assumptions or change any mitigation actions in the radiological consequence evaluations in the Updated Safety Analysis Report (USAR).

Implementation of the proposed change results in a no net increase in radiological risk. The proposed one-time only change to the TS 3.8.1 Required Action B.4.1 Completion Time does not, of itself, increase the probability of any accident previously evaluated. The incremental conditional core damage probabilities (ICCDP) and incremental conditional large early release probabilities (ICLERP) are $4.39E-7$ and $7.89E-9$, respectively. The risk insight is to continue with repairs at-power as opposed to completing the repairs at shutdown.

The proposed change does not adversely affect accident initiators or precursors nor alter the design assumptions or the manner in which the plant is normally operated and maintained. The proposed change does not affect the source term, containment isolation, or radiological release assumptions used in evaluating the radiological consequences of an accident previously evaluated. The proposed change is consistent with safety analysis assumptions, which apply when the plant is operating in compliance with LCO requirements.

Therefore, the proposed request does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- (ii) Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change does not result in a change in the manner in which the electrical distribution subsystems provide plant protection. The change does not alter assumptions made in the safety analysis. The one-time extension of the Completion Time does not change any existing accident scenarios, nor create any new or different accident scenarios. The proposed change is consistent with the safety analysis assumptions and current plant operating practice.

Therefore, the proposed request does not create a new or different kind of accident from any accident previously evaluated.

- (iii) Do the proposed changes involve a significant reduction in a margin of safety?

Response: No

The proposed change does not affect the acceptance criteria for any analyzed event nor is there a change to any Safety Analysis Limit (SAL). There will be no effect on the manner in which safety limits, limiting safety system settings, or limiting conditions for operation are determined nor will there be any effect on those plant systems necessary to assure the accomplishment of protection functions. There will be no impact on the overpower limit, Departure From Nucleate Boiling Ratio (DNBR) limits, F_Q , $F_{\Delta H}$, LOCA peak centerline temperature (PCT), peak local power density, or any other margin of safety. The radiological dose consequence acceptance criteria listed in the Standard Review Plan will continue to be met.

The quantified risk ICCDP impact is small and offset by qualitative considerations. The proposed change seeks to reduce the risk in returning to normal plant status.

Therefore, the proposed changes do not involve a significant reduction in the margin of safety.

Based on the above evaluations, WCNOG concludes that the activities associated with the above described enforcement discretion request present no significant hazards consideration under the standards set forth in 10 CFR 50.92 and as such, would not be a potential detriment to the public health and safety.

9. The basis for the conclusion that the noncompliance will not involve adverse consequences to the environment.

WCNOG has determined that the proposed amendment would not change requirements with respect to the installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. This request for enforcement discretion meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) as specified below:

(i) Involves no significant hazards consideration.

As demonstrated in Item 8 above, this request does not involve any significant hazards consideration.

(ii) There is no significant change in the types of or significant increase in the amounts of any effluents that may be released offsite,

The request does not involve a change to the facility or operating procedures that would cause an increase in the amounts of effluents or create new types of effluents.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The request would not adversely affect the operation of the reactor and would not affect any system that would affect occupational radiation exposure. The proposed request does not create additional exposure to utility personnel nor affect radiation levels that are present. The request will not result in any increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

10. A statement that the request has been approved by the facility organization that normally reviews safety issues (Plant Safety Review Committee).

The WCGS Plant Safety Review Committee approved this NOED request on January 10, 2013.

11. The request must specifically address which of the NOED criteria for appropriate plant conditions specified in Section B of Part 9900, "Operations – Notices of Enforcement Discretion," is satisfied and how it is satisfied

This request is made under the criteria in Section B, Paragraph 2.1, Item 1.a in Part 9900: Technical Guidance, "Operations – Notices of Enforcement Discretion." This NOED criteria states:

1. For a plant in power operation, an NOED is intended to:
 - a. avoid unnecessary transients as a result of compliance with the license condition and, thus, minimize potential safety consequences and operational risks; or

The type of NOED required per this request was identified to be a "regular" NOED, i.e., one that does not involve severe weather or other natural phenomena. It involves a nonrecurring noncompliance as it only involves a single request for extending the period of time that an inoperable plant component must be restored to OPERABLE status as specified per the plant Technical Specifications. As such, it involves a plant condition whereby the plant would be returned to compliance with the plant operating license within a short period of time.

With WCGS currently in MODE 1 at 100 % power, this request is for an operating plant. The intent is to avoid an unnecessary plant shutdown, thereby avoiding the increased potential for a transient associated with plant shutdown, consistent with criterion 2.1.1.a above.

- 12. Unless otherwise agreed as discussed in Section B of Part 9900, a commitment is required that the written NOED request will be submitted within 2 working days and the follow-up amendment will be submitted within 4 working days of verbally granting the NOED.**

This request for enforcement discretion is a one-time only extension of the Completion Time to complete restoration activities on the 'B' DG. As such, a follow-up license amendment is not required.

- 13. For a severe weather NOED request provide the following information:**

The name, organization and telephone number of the official in the government or independent entity who made the emergency situation determination.

Details of the basis and nature of the emergency situation, including, but not limited to, its effect on:

- i. on-site and off-site emergency preparedness**
- ii. plant and site ingress and egress**
- iii. off-site and on-site power sources**
- iv. grid stability; and**
- v. actions taken to avert and/or alleviate the emergency situation (e.g., coordinating with other utilities and the load dispatcher organization for buying additional power or for cycling load, or shedding interruptible industrial or non-emergency loads).**

Potential consequences of compliance with existing license requirements (e.g., plant trip, controlled shutdown).

The impact of the emergency situation on plant safety including the capability of the ultimate heat sink.

Potential adverse effects on public health and safety from enforcing compliance with specific license requirements during the emergency situation.

Not applicable.

LIST OF REGULATORY COMMITMENTS

The following table identifies those actions committed to by Wolf Creek Nuclear Operating Corporation in this document. Any other statements in this letter are provided for information purposes and are not considered regulatory commitments. Please direct questions regarding this commitment to Mr. Michael J. Westman, Manager Regulatory Affairs at Wolf Creek Generating Station, at (620) 364-8831 ext. 4009.

REGULATORY COMMITMENT	DUE DATE
WCNOC will perform a ping test and ultrasonic (UT) test of the 'A' DG cylinder head studs prior to startup from Refueling Outage 19.	Prior to startup from Refueling Outage 19