WOLF CREEK
NUCLEAR OPERATING CORPORATION

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

June 19, 2013
WO 13-0050

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

Subject: Docket No. 50-482: Request for Notice of Enforcement Discretion for Technical Specification Limiting Condition for Operation (LCO) 3.0.3, TS 3.8.4, "DC Sources – Operating," TS 3.8.7, "Inverters – Operating," and TS 3.8.9, "Distribution Systems – 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 1607 hours Central Daylight Time (CDT) on June 17, 2013 in which WCNOC requested the NRC to exercise enforcement discretion for the Wolf Creek Generating Station (WCGS), regarding the requirements of Technical Specification Limiting Condition for Operation (LCO) 3.0.3, TS 3.8.4, "DC Sources – Operating, " TS 3.8.7, "Inverters – Operating," and TS 3.8.9, "Distribution Systems – 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 'A' Class 1E electrical equipment air conditioning (A/C) unit (SGK05A) before a plant shutdown would have otherwise been required.

The events leading to WCNOC's request began at 1111 hours on June 17, 2013, when the 'A' Class 1E electrical equipment air conditioning (A/C) train (SGK05A) was declared nonfunctional when it was determined that SGK05A was not capable of performing its specified function. Since one nonfunctional Class 1E electrical equipment A/C train renders the supported train of affected electrical equipment inoperable (i.e., two inverters among other affected equipment), LCO 3.0.3 was entered in light of the limitations of the Conditions and Required Actions of TS 3.8.7, "Inverters - Operating." LCO 3.0.3 requires action to be taken within 1 hour to place the plant in MODE 3 within 7 hours, in MODE 4 within 13 hours, and in MODE 5 within 37 hours. Therefore, absent a support system TS LCO to declare inoperable, the control room staff is required to enter LCO 3.0.3 anytime a Class 1E electrical equipment A/C train is discovered to be nonfunctional. At 1111 hours a plant shutdown was initiated in accordance with LCO 3.0.3.

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Enforcement discretion was sought to permit noncompliance with LCO 3.0.3, TS 3.8.4, TS 3.8.7, and TS 3.8.9 to permit additional time to complete repairs and restoration of SGK05A before entry into MODE 5 was required. An additional 168 hours was requested to restore SGK05A to FUNCTIONAL status such that the action to place the plant in MODE 5 within 37 hours per LCO 3.0.3 would begin at 1111 hours CDT on June 24. The incremental conditional core damage probability (ICCDP) and incremental conditional large early release probability (ICLERP) was quantified for the requested additional time for restoring SGK05A. 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.

WCNOC will work around the clock to complete repairs and restoration of SGK05A. WCNOC understands that the enforcement discretion does not allow troubleshooting and that, if at any time during the effort it becomes apparent that the allowed time will not be met, that the enforcement discretion no longer applies.

At 1607 hours on June 17, Mr. Kriss Kennedy, Director Division of Reactor Projects, Region IV, notified WCNOC that after NRC Region IV Office consideration of WCNOC'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 1111 hours on June 17 for an additional 168 hours. WCNOC is required to submit a written request for the NOED within 2 working days of the NRC verbal approval.

The Attachments provide the information documenting WCNOC's earlier verbal request for the NOED. If you should have any questions regarding this submittal, please contact me at (620) 364-4156, or Mr. Michael J. Westman at (620) 364-4009.

Sincerely,

Russell A. Smith

RAS/rlt

Attachments I - Request for Notice of Enforcement Discretion
II - Top 100 Cutsets

cc: A. T. Howell (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) Regarding Technical Specification 3.0.3, 3.8.4, 3.8.7 and 3.8.9

a. The type of NOED being requested.

A regular NOED to avoid an unnecessary transient as a result of compliance with the Technical Specifications is being requested since compliance with the Technical Specifications (TSs) would involve an unnecessary shutdown of the unit without a corresponding health and safety benefit.

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

LCO 3.0.3 requires action to be taken within 1 hour to place the plant in MODE 3 within 7 hours, in MODE 4 within 13 hours, and in MODE 5 within 37 hours. LCO 3.0.3 was entered in light of the limitations of the Conditions and Required Actions of TS 3.8.7, "Inverters - Operating." Therefore, absent a support system TS LCO to declare inoperable, the control room staff is required to enter LCO 3.0.3 anytime a Class 1E electrical equipment A/C train is discovered to be nonfunctional, resulting in an unnecessary plant transient.

Required Actions B.1 and B.2 of TS 3.8.4 would require placing the plant in MODE 3 in 6 hours and MODE 5 in 36 hours if Required Action A.1 (restore DC electrical power subsystem to OPERABLE status) and it associated Completion Time (2 hours) is not met. Required Actions B.1 and B.2 of TS 3.8.7 would require placing the plant in MODE 3 in 6 hours and MODE 5 in 36 hours if Required Action A.1 (restore one required inverter to OPERABLE status) and it associated Completion Time (24 hours) are not met. Required Actions E.1 and E.2 of TS 3.8.9 would require placing the plant in MODE 3 in 6 hours and MODE 5 in 36 hours if Required Actions C.1 and D.1 (restore one AC vital bus subsystem and one DC electrical power distribution subsystem to OPERABLE status) and its associated Completion Time (2 hours) is not met.

The granting of a regular NOED request would avoid an unnecessary plant transient.

c. 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.

The events leading to WCNOC's request began the morning June 17, 2013, when the analysis of an oil sample taken from the 'A' Class IE electrical equipment air conditioning (A/C) train (SGK05A) showed elevated levels of aluminum. This was discussed with the equipment manufacturer and it was concluded that the equipment could no longer be considered reliable to support the mission time of supported systems. This, in conjunction with other monitoring parameters, led to the conclusion that the unit could not be relied on to meet its required function and the Shift Manager declared the unit non-functional and entered Technical Specification 3.0.3 at 1111 AM.

Likely Cause

The unit was observed to be running with elevated Amperes which are approximately 20% less than the rated full load amperage of the motor (55 Amps). In addition the oil in the compressor was observed to be darker than previously noted. An oil sample was taken and sent for offsite analysis. Results showed elevated levels of aluminum, approximately 86 ppm. The compressor's pistons and connecting rods are made of aluminum so the concern is that these parts are damaged. Further evidence of this are the increased vibration levels that have been noted on the unit. The likely cause of this damage is slugging/hydraulicing of either the oil or the refrigerant.

The last maintenance performed on the equipment was on May 28, 2013, when the compressor was replaced with this unit.

Identification of any Relevant Historical Events

During the week of May 23, 2012, a Nuclear Regulatory Commission (NRC) Problem Identification and Resolution team inspection identified several concerns with the incorporation of calculation GK-06-W, Revision 2, "SGK05A/B Class 1E Electrical Equipment Rooms A/C Units, Single Unit Operation Capability," into plant documents. One of the concerns related to the calculation requirements for the use of temporary ventilation fans and the fans not being powered from a safety related source. On May 29, 2012, SGK05B was declared nonfunctional due to the oil pump pressure degrading. The SGK05B unit was restored to functional status prior to completing a prompt OPERABILITY determination. On June 4, 2012, the compressor for SGK05A was found tripped on low oil pressure and the unit declared nonfunctional. During the Operability Determination and Functionality Assessment process it was determined that OPERABILITY of the associated train Class 1E electrical equipment could not be maintained without additional compensatory measures and for a limited period of time. The functionality requirements imposed on the Class 1E electrical equipment A/C trains at WCGS were governed by TRM TR 3.7.23, "Class 1E Electrical Equipment Air-Conditioning (A/C)". With one Class 1E electrical equipment A/C train nonfunctional when the plant is in MODES 1 through 4, TR 3.7.23 allowed up to a 7-day delay period before declaring the supported Class 1E electrical equipment inoperable (in the area served by the A/C train) and entering the applicable Conditions and Required Actions of TS 3.8.4, TS 3.8.7, and TS 3.8.9. WCNOC has revised TRM Technical Requirement (TR) 3.7.23, "Class 1E Electrical Equipment Air-Conditioning (A/C)," to require entry into the Conditions and Required Actions of TS 3.8.4, TS 3.8.7 and TS 3.8.9 when a Class 1E electrical equipment A/C train is nonfunctional. Procedure SYS GK-200, "INOPERABLE CLASS 1E A/C UNIT," was utilized to provide guidance for a nonfunctional Class 1E electrical equipment A/C train and has been deleted. The failure of a Class 1E electrical equipment A/C train currently results in declaring the affected Class 1E electrical equipment inoperable and entry into the Conditions and Required Actions of TS 3.8.4, TS 3.8.7 and TS 3.8.9 as well as entry into LCO 3.0.3. In addition, preventative maintenance activities that require taking the Class 1E electrical equipment trains out of service currently require entry into the Conditions/Required Actions of TS 3.8.4, TS 3.8.7 and TS 3.8.9 as well as entry into LCO 3.0.3. Note that voluntary entry into LCO 3.0.3 is prohibited.

Action Taken in Attempt to Avoid the Need for an NOED

Discussion was held with the vendor to determine if the results of the oil analysis and other indicators could be used to justify waiting for a planned evolution. The vendor could not support this and the unit was declared non-functional.

Other alternatives pursued with respect to this unit in the past include:

Since the determination that the continued use of the 7-day Completion Time in TR 3.7.23 was not appropriate, WCNOC has continued efforts to develop an adequate heat calculation associated to the Engineered Safety Features switchgear room components. Additionally, WCNOC is performing analyses to re-create and update the design basis calculations for the Class 1E electrical equipment A/C trains and evaluating plant modifications.

WCNOC has been in discussion with other utilities to determine the best course of action to resolve the issue with the Class 1E Electrical Equipment A/C System regulatory relationship with the electrical TS. The industry Technical Specification Task Force has become engaged to evaluate potential generic resolutions to this issue.

The last NOED request was initiated on January 10, 2013 and verbally approved by the NRC at 1300 hours. This NOED involved a broken cylinder head bolt on the 'B' diesel generator.

d. Information to show that the cause of the situation that led to the NOED request is fully understood.

It was determined that the situation leading to the NOED request resulted from likely damage to the internal components of the compressor unit.

This is believed because the motor current and vibration of the unit had both increased and, although within allowable limits, were elevated from the normal condition. In addition the oil in the unit was observed to be darker than normal and was shown by analysis to contain elevated levels of aluminum.

Discussion with vendor indicated that piston and connecting rod in the compressor were the aluminum components and that the symptoms observed showed degradation of these components.

The vendor stated that they had seen failures of this type before and that they were typically caused by slugging/hydraulicing which is the introduction of a liquid, either oil or refrigerant, into a system meant for gas. It was their opinion that probable sources of liquid could be either the overfilling of these two liquids or the failure of the thermal expansion valves to operate properly.

WCNOC has been monitoring the performance of the thermal expansion valves and, because they appear to be operating properly, believes that damage to the compressor caused by excessive oil in the system is the problem. Therefore, replacement of the compressor, using vendor support from the manufacturer and additional post maintenance testing will return this unit to proper functionality.

e. Information on the proposed course of action to resolve the situation, such that there is a high likelihood that planned actions can be completed within the proposed NOED time frame.

A timeline has been developed that will allow for the following activities to be performed within the time allowed by the NOED.

Prior to any work being performed preparations are being made to conduct the following Compensatory Actions:

Put temporary cooling in place for the spaces normally cooled by SGK05A. This will be a temporary AC unit (elephant trunk type) powered by reliable non-safety power. A second unit will be made available in case of failure.

Monitoring of room temperature will be done every two hours and if room temperatures exceed limits the appropriate actions will be taken.

A fire watch will be established to compensate for the fire barriers that will be breached by the temporary AC units.

Once these measures are in place the SGK05A unit will be shutdown and the following steps performed.

Hang clearance order / Get vendor support flown in
Recover refrigerant from the system
Provide Rigging support for removal of the compressor
Remove compressor – and send it off to vendor for failure analysis
Prepare new compressor for installation
Install new compressor – with vendor support
Remove clearance order
Perform Post Maintenance Testing (PMT) – extended with vendor support to ensure proper operation after reinstallation
Remove clearance and restore from compensatory measures
Return SGK05A to functional status.

Estimates to complete this work at T-0 have it complete within the 168 hours allowed by the NOED.

f. Information to show that the resolution of the situation will not result in a different, unnecessary transient.

Replacement of the compressor will not result in a different unnecessary transient as the AC unit is not the initiator of any event. Performing this replacement within the time allowed by the NOED will avoid an unnecessary plant transient.

g. Explain why there was not time to process an emergency license amendment, or that a license amendment is not needed.

Oil samples first showed unacceptable results the morning of June 17, 2013, and with the corresponding entry into Technical Specification 3.0.3 a plant shutdown was commenced. In this condition the plant would require action to be taken within 1 hour to place the plant in MODE 3 within 7 hours, in MODE 4 within 13 hours, and in MODE 5 within 37 hours. This does not allow time to process an emergency license amendment. Further, a license amendment is not needed because this is a one time request to repair the unit, not a change to a specific Technical Specification.

h. 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 with all safety related equipment Operable. There is one Non-Safety Related service water pump, and one Spent Fuel Pool Heat Exchanger out of service and being repaired. In addition there is a small air leak on the Non-Safety side of one Emergency Diesel Generator air start system that WCGS intends to repair during the NOED. Both air accumulators are full and the other air compressor for that EDG remains in service.

i. The justification for the duration of the non-compliance.

This request is for 168 hours (7 days) from the entry in Technical Specification 3.0.3 on June 17, 2013, at 1111 AM. This duration is based on the time required to place clearances, perform the work, test the system, and remove the clearances, and return the system to service. This estimate is based on similar work performed in May 2013, and has a high likelihood of being completed within the requested NOED duration.

j. Detail and explain compensatory actions that have been taken and will be taken to reduce the risk associated with the specified configuration.

In order to reduce the risk during the duration of the NOED WCNOC will take the following compensatory actions.

Temporary cooling will be provided to the spaces served by SGK05A to maintain desired room temperatures.

Room temperatures will be monitored every two hours

A fire watch will be established due to breaches necessary to establish temporary cooling.

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

Currently the grid is stable with no planned switchyard or grid work that would impact grid reliability during the NOED period.

Both on-site Emergency Diesel Generators are Operable with no planned maintenance or surveillances scheduled except the starting air compressor leak described in section h above.

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

1. The WCGS Equipment Out Of Service (EOOS) zero test and maintenance Revision 6 PRA model was used to establish the plant's baseline risk and the estimated risk increase associated with the period of enforcement discretion. Core Damage Frequency (CDF), Large Early Release Frequency (LERF), Incremental Conditional Core Damage Probability (ICCDP), and Incremental Conditional Large Early Release Probability (ICLERP) values are listed below and compared with guidance thresholds discussed above.

Quantification of the plant risk for the initial plant condition has one of the two Class IE Electrical Equipment Air Conditioning Units out of service. Additionally, the "C" Normal Service Water pump (1WS001PC) is reflected as out of service as it is physically removed from the plant and has been shipped offsite for maintenance.

The Top 100 cutsets for CDF with SGK05A out of service are provided in attachment II. Numerical results of the cases for the risk evaluation are provided below in Table 1. The first is the Base Case and uses the Zero Test and Maintenance model. The second case added the non-functional SGK05A.

Table 1: EOOS Results

Equipment OOS	CDF (/ry)	LERF (/ry)
Base CDF zero T&M @ 1E-12 truncation	3.87E-06	7.11E-07
Base CDF zero T&M, 1WS001PC OOS & SGK05A Fail	7.54E-06	7.43E-07

The ICCDP and ICLERP were calculated from data in Table 1 using Equations 1 and 2 below.

Equation 1: ICCDP = (ΔCDF) x Duration in years
Equation 2: ICLERP = (ΔLERF) x Duration in years

The Duration in years is defined as the additional time for the SGK05A to be out of service. This request is for an additional 168 hours to complete repairs on the SGK05A unit.

ICCDP = (7.54E-6 – 3.87E-6) * (168 hrs ÷ 8760 hrs/yr) = 7.038E-08
ICLERP = (7.43E-7 – 7.11E-7) * (168 hrs ÷ 8760 hrs/yr) = 6.137E-10

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 and ICLERP values reported above do not account for various conservatisms in place such as the various compensatory actions being taken by operations and maintenance while under the NOED.

Numerical risk reductions for avoidance of Transition and Shutdown Risk are not included in the above results. Wolf Creek 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.

2. **Dominant Risk Contributors**

Initiator	% CDF Contribution	Description
INIT-SWS	52.50%	LOSS OF ALL SERVICE WATER INITIATING EVENT
INIT-SGR	7.60%	STEAM GENERATOR TUBE RUPTURE INITIATING EVENT
INIT-SLBO	7.30%	LARGE STEAM LINE BREAK OUTSIDE CTMT INITIATING EVENT
INIT-ISL-EJ-CLI	7.30%	LPSI/HPSI CL INJECTION ISLOCA INITIATING EVENT
INIT-FLB	5.90%	LARGE FEEDWATER LINE BREAK INITIATING EVENT
INIT-TRO	5.80%	TRANSIENT WITHOUT POWER CONVERSION INITIATING EVENT
INIT-LSP-WI	3.00%	WEATHER-INDUCED LOSS OF OFFSITE POWER INITIATING EVENT
INIT-TRA	2.20%	TRANSIENT WITH POWER CONVERSION INITIATING EVENT
INIT-SLO	1.90%	SMALL LOCA INITIATING EVENT
INIT-MLO	1.20%	MEDIUM LOCA INITIATING EVENT
INIT-ISL-RHR-SCT	1.10%	RHR SUCTION ISLOCA INITIATING EVENT
INIT-DC4-NK04	0.80%	LOSS OF 125V DC BUS NK04 INITIATING EVENT
INIT-CCW	0.70%	LOSS OF COMPONENT COOLING WATER INITIATING EVENT
INIT-VEF	0.50%	REACTOR VESSEL FAILURE INITIATING EVENT
INIT-LSP-GR	0.50%	GRID-RELATED LOSS OF OFFSITE POWER INITIATING EVENT
INIT-DC1-NK51	0.40%	LOSS OF 125V DC BUS NK51 INITIATING EVENT
INIT-DC1-NK01	0.40%	LOSS OF 125V DC BUS NK01 INITIATING EVENT
INIT-DC4-NK54	0.30%	LOSS OF 125V DC BUS NK54 INITIATING EVENT
INIT-SLBI	0.20%	LARGE STEAM LINE BREAK INSIDE CTMT INITIATING EVENT
INIT-LSP-SC	0.20%	SWITCHYARD CENTERED LOSS OF OFFSITE POWER INITIATING EVENT
INIT-VLO	0.10%	VERY SMALL LOCA INITIATING EVENT
INIT-LLO	0.10%	LARGE LOCA INITIATING EVENT
INIT-ISL-LPSI-HL	0.10%	LPSI HL INJECTION ISLOCA INITIATING EVENT
INIT-LSP-PC	0.00%	PLANT-CENTERED LOSS OF OFFSITE POWER INITIATING EVENT

LERF is dominated by Interfacing System LOCA (72.1%, combined). The only other significant contribution to LERF comes from Steam Generator Tube Rupture (24.7%).

The Top 100 cutsets for CDF are provided in Attachment II.

3. Compensatory Risk Management Actions

Compensatory risk management actions that were discussed with the NRC on the June 17, 2013 phone call are not explicitly credited in this evaluation. This is considered a source of conservatism. As an example of ongoing compensatory actions not being credited, temporary cooling is replacing the function of the out-of-service SGK05A unit. Further, room temperatures are being monitored on a regular basis.

4. Extent of condition

An increase in the probability of the common cause failure terms for the SGK05A and SGK05B units is not considered to be appropriate. The SGK05B unit is not showing any indication similar to that of the "A" unit. Common cause basic events "ACGK-05AB--12-R1" (fail to run) and "ACGK-05AB--12-S1" (fail to start) retain their respective values.

5. External Events

A list of the current fire impairments was reviewed with Fire Protection personnel. All current fire impairments are mitigated by compensatory risk management actions. Nothing was identified that would impact this evaluation.

The following weather forecast information for the 7-day period during which the NOED is in effect was obtained from the National Weather Service website. There is no mention of severe weather for the duration.

Weather Forecast

HAZARDOUS WEATHER OUTLOOK...UPDATED
NATIONAL WEATHER SERVICE TOPEKA KS
541 AM CDT MON JUN 17 2013

KSZ008>012-020>024-026-034>040-054>056-058-059-181045-
REPUBLIC-WASHINGTON-MARSHALL-NEMAHA-BROWN-CLOUD-CLAY-RILEY-
POTTAWATOMIE-JACKSON-JEFFERSON-OTTAWA-DICKINSON-GEARY-MORRIS-
WABAUNSEE-SHAWNEE-DOUGLAS-LYON-OSAGE-FRANKLIN-COFFEY-ANDERSON-
541 AM CDT MON JUN 17 2013

THIS HAZARDOUS WEATHER OUTLOOK IS FOR EAST CENTRAL...NORTH CENTRAL AND NORTHEAST KANSAS.

.DAY ONE...TODAY AND TONIGHT.

OCCASIONAL THUNDERSTORMS WILL CONTINUE THIS MORNING PRIMARILY SOUTH OF INTERSTATE 70. LOCALLY VERY HEAVY RAINFALL WILL OCCUR IN SOME AREAS OF COFFEY AND ANDERSON COUNTIES WHICH COULD LEAD TO FLOODING.

THERE IS SLIGHT CHANCE FOR THUNDERSTORMS LATER THIS AFTERNOON AND TONIGHT IN PORTIONS OF NORTH CENTRAL KANSAS.

.DAYS TWO THROUGH SEVEN...TUESDAY THROUGH SUNDAY.

THERE IS A CHANCE FOR MORE THUNDERSTORMS OVER THE AREA WEDNESDAY INTO THURSDAY NIGHT.

.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION WILL NOT BE NEEDED THROUGH TONIGHT.

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

By simple inspection, the additional failures, such as those of Emergency Diesel Generators with fail-to-start basic event value of 2.498E-02, and the fraction of a year for the NOED (1.918E-02) results in any applicable sequence being well below 1E-07. Therefore, contribution to CDF from seismic is not considered significant.

m. Demonstrate that the NOED condition, along with any compensatory measures, will not result in more than a minimal increase in radiological risk

The results meet the criteria of Regulatory Issue Summary 2005-01 for 168 hours. Continued operation of the plant during the period of enforcement discretion will not cause risk to exceed the level determined acceptable during normal work controls and therefore there is no net increase in radiological risk to the public. The risk metrics described by the NOED guidance are Incremental Conditional Core Damage Probability (ICCDP) less than or equal to 5.0E-07 and Incremental Conditional Large Early Release Probability (ICLERP) less than or equal to 5.0E-08.

n. Discuss forecasted weather and pandemic conditions for the requested NOED period and any plant vulnerabilities related to weather or pandemic conditions.

The weather forecast for the duration of the period allowed by the NOED includes no severe weather.

The following weather forecast information for the 7-day period during which the NOED is in effect was obtained from the National Weather Service website. There is no mention of severe weather for the duration.

Weather Forecast

HAZARDOUS WEATHER OUTLOOK...UPDATED
NATIONAL WEATHER SERVICE TOPEKA KS
541 AM CDT MON JUN 17 2013

KSZ008>012-020>024-026-034>040-054>056-058-059-181045-
REPUBLIC-WASHINGTON-MARSHALL-NEMAHA-BROWN-CLOUD-CLAY-RILEY-
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.SPOTTER INFORMATION STATEMENT...

SPOTTER ACTIVATION WILL NOT BE NEEDED THROUGH TONIGHT.

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

WCNOC has evaluated whether or not a significant hazards consideration is involved with the requested enforcement discretion by focusing 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

The proposed request 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 request 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 request 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

With respect to any new or different kind of accident, there are no proposed design changes nor or there any changes in the method by which any safety related plant SSC performs its specified safety function. The proposed request will not affect the normal method of plant operation or change any operating parameters. No new accident scenarios, transient precursors, failure mechanisms, or limiting single failures will be introduced as a result of this request.

The proposed request will not alter the design or performance of the 7300 Process Protection System, Nuclear Instrumentation System, Solid State Protection System, Balance of Plant Engineered Safety Features Actuation System, Main Steam and Feedwater Isolation System, or Load Shedder and Emergency Load Sequencers used in the plant protection systems.

The request does not involve a physical modification of the plant. There are no alterations to the parameters within which the plant is normally operated. No changes are being proposed to the procedures relied upon to mitigate a design basis event. The request does not have a detrimental impact on the manner in which plant equipment operates or responds to an actuation signal.

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

There will be no effect on those plant systems necessary to assure the accomplishment of protection functions associated with reactor operation or the Reactor Coolant System. The will be no impact on the overpower limit, departure from nucleate boiling ratio (DNBR) limits, heat flux hot channel factor, nuclear enthalpy rise hot channel factor, loss of coolant accident peak cladding temperature, peak local power density, or any other limit and associated margin of safety. Required shutdown margins in the CORE OPERATING LIMITS REPORT will not be changed.

The proposed request does not eliminate any surveillances or alter the Frequency of surveillances required by the TSs.

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

Based on the above evaluations, WCNOC 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.

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

WCNOC 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 Section h 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.

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

This request has been approved by the WCNOC Plant Safety Review Committee.

r. 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. State if the NRC has agreed during the teleconference that a follow-up amendment is not needed.

This submittal is the written NOED request following the verbal approval granted on June 17, 2013.

This request for enforcement discretion is a one-time only extension of the Completion Time to complete restoration activities on the 'A' Class IE Air Conditioning System (SGK05A). As such, a follow-up license amendment is not required. This was agreed to during the June 17, 2013 Teleconference.

s. If the NOED request is a natural event NOED, provide the following additional information:

1. List the name, organization, and telephone number of the official in the government or independent entity who made the emergency determination, if applicable. If deemed necessary, the staff may contact the appropriate official to independently verify the information the licensee provided before making a NOED determination.

2. Include details of the basis and nature of the emergency including, but not limited to, its effect on the following:

   (a.) on-site and off-site emergency preparedness,

   (b.) plant and site ingress and egress,

   (c.) off-site and on-site power sources,

   (d.) plant security,

   (e.) grid stability, and

   (f.) actions taken to avert or alleviate the emergency situation (e.g., coordinating with other utilities and the load dispatcher organization for buying additional

power or for cycling loads, or shedding interruptible industrial or non-emergency loads)

3. Identify and discuss the potential consequences of compliance with existing license requirements (e.g., plant trip, controlled shutdown).

4. Discuss the potential adverse effects on public health and safety from enforcing compliance with specific license requirements during the emergency.

5. Discuss the impact of the emergency on plant safety, including any limitations of the UHS.

6. For a grid instability NOED, assure the NRC that all reasonable opportunities for purchasing replacement power have been exhausted, and the NOED shall not last any longer than replacement power becomes available, if applicable.

Not applicable, this is not a natural event NOED request.

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  1.  1.34E-06  ETHER*
  2.  2.08E-07  INIT-SWS          BUPA-----PA02-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TPALT---PAL02-PR OTH-ESWAB-
EXE-DF
  3.  2.08E-07  INIT-SWS          BUSL----SL-41-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TPALT---PAL02-PR OTH-ESWAB-
EXE-DF
  4.  2.08E-07  INIT-SWS          BUSL-----SL-4-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TPALT---PAL02-PR OTH-ESWAB-
EXE-DF
  5.  1.53E-07  INIT-SWS          BUPA-----PA02-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           OTH-ESWAB-
EXE-DF
  6.  1.53E-07  INIT-SWS          BUSL----SL-41-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           OTH-ESWAB-
EXE-DF
  7.  1.53E-07  INIT-SWS          BUSL-----SL-4-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           OTH-ESWAB-
EXE-DF
  8.  1.42E-07  INIT-SWS          FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE
OPA-WSTOESWB-EXE PAVAIL           TPALT---PAL02-PR TRSL----XSL41-FA OTH-ESWAB-
EXE-DF
  9.  1.04E-07  INIT-SWS          FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR OPA-SGOVERFL-COG
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TRSL----XSL41-FA OTH-ESWAB-
EXE-DF
 10.  1.01E-07  INIT-SWS          BUPA-----PA02-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TPAL----PAL02-PS OTH-ESWAB-
EXE-DF
 11.  1.01E-07  INIT-SWS          BUSL----SL-41-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TPAL----PAL02-PS OTH-ESWAB-
EXE-DF
 12.  1.01E-07  INIT-SWS          BUSL-----SL-4-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TPAL----PAL02-PS OTH-ESWAB-
EXE-DF
 13.  8.76E-08  INIT-ISL-EJ-CLI  CF-PTOF          CVBB8948A----ICO CVEJ8118A--
--ICO RUPTURE1          SOKCC2T
 14.  8.76E-08  INIT-ISL-EJ-CLI  CF-PTOF          CVBB8948B----ICO CVEJ8118B--
--ICO RUPTURE1          SOKCC2T
 15.  8.76E-08  INIT-ISL-EJ-CLI  CF-PTOF          CVBB8948C----ICO CVEJ8118C--
--ICO RUPTURE1          SOKCC2T
 16.  8.76E-08  INIT-ISL-EJ-CLI  CF-PTOF          CVBB8948D----ICO CVEJ8118D--
--ICO RUPTURE1          SOKCC2T
 17.  8.48E-08  INIT-SWS          BUPA-----PA02-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TPAL----PAL02-PX OTH-ESWAB-
EXE-DF
 18.  8.48E-08  INIT-SWS          BUSL----SL-41-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TPAL----PAL02-PX OTH-ESWAB-
EXE-DF
 19.  8.48E-08  INIT-SWS          BUSL-----SL-4-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
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OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL          TPAL----PAL02-PX OTH-ESWAB-
EXE-DF
 20.  6.86E-08  INIT-SWS         FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE
OPA-WSTOESWB-EXE PAVAIL          TPAL----PAL02-PS TRSL----XSL41-FA OTH-ESWAB-
EXE-DF
 21.  6.34E-08  INIT-SGR         OPA-OD1-EXE      OPA-OD2-EXE      SGRA
SSV-SUCCESS
 22.  6.34E-08  INIT-SGR         OPA-OD1-EXE      OPA-OD2-EXE      SGRB
SSV-SUCCESS
 23.  6.34E-08  INIT-SGR         OPA-OD1-EXE      OPA-OD2-EXE      SGRC
SSV-SUCCESS
 24.  6.34E-08  INIT-SGR         OPA-OD1-EXE      OPA-OD2-EXE      SGRD
SSV-SUCCESS
 25.  5.77E-08  INIT-SWS         FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE
OPA-WSTOESWB-EXE PAVAIL          TPAL----PAL02-PX TRSL----XSL41-FA OTH-ESWAB-
EXE-DF
 26.  4.17E-08  INIT-SWS         BUSL-----SL4A-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL          TPALT---PAL02-PR TZSW---
DEBRIS-PL OTH-ESWAB-EXE-DF
 27.  4.05E-08  INIT-TRA         CRSF-MECHBINDING FG-AMS-SUCCESS   MFA-FAILS
PLV-40PLUS      XXF-UET------MTC
 28.  4.03E-08  INIT-TRO         FG-AFW           OPA-OFB-EXE      XXALSTMBD-
123-F3
 29.  3.28E-08  INIT-VEF
 30.  3.17E-08  INIT-SWS         CBPA---PA0209-CO FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL          TPALT---PAL02-PR OTH-ESWAB-
EXE-DF
 31.  3.17E-08  INIT-SWS         CBSL----13-34-CO FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL          TPALT---PAL02-PR OTH-ESWAB-
EXE-DF
 32.  3.17E-08  INIT-SWS         CBSL----13-37-CO FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL          TPALT---PAL02-PR OTH-ESWAB-
EXE-DF
 33.  3.17E-08  INIT-SWS         CBSL-----4-16-CO FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL          TPALT---PAL02-PR OTH-ESWAB-
EXE-DF
 34.  3.13E-08  INIT-ISL-RHR-SCT CF-PTOF          MVBB8702A----IOO MVEJ8701A--
---IL RUPTURE4
 35.  3.13E-08  INIT-ISL-RHR-SCT CF-PTOF          MVBB8702B----IOO MVEJ8701B--
---IL RUPTURE3
 36.  3.07E-08  INIT-SWS         BUSL-----SL4A-FA FG-AFW           FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL           TZSW---
DEBRIS-PL OTH-ESWAB-EXE-DF
 37.  2.89E-08  INIT-SLBO        FG-AFW           FG-AFW-AUTO-STRT FG-SW-ISLN-
OCCRS RESB-525AB-12-C1 SLBA             TPAL----PAL02-PR
 38.  2.89E-08  INIT-SLBO        FG-AFW           FG-AFW-AUTO-STRT FG-SW-ISLN-
OCCRS RESB-525AB-12-C1 SLBB             TPAL----PAL02-PR
 39.  2.89E-08  INIT-SLBO        FG-AFW           FG-AFW-AUTO-STRT FG-SW-ISLN-
OCCRS RESB-525AB-12-C1 SLBC             TPAL----PAL02-PR
 40.  2.89E-08  INIT-SLBO        FG-AFW           FG-AFW-AUTO-STRT FG-SW-ISLN-
OCCRS RESB-525AB-12-C1 SLBD             TPAL----PAL02-PR
 41.  2.83E-08  INIT-SWS         FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE
OPA-WSTOESWB-EXE PAVAIL          TPALT---PAL02-PR TRSL----XSL4A-FA TZSW---
DEBRIS-PL OTH-ESWAB-EXE-DF
 42.  2.59E-08  INIT-SLO         FG-SW-ISLN-OCCRS MFGL-10AB--12-R1
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 43.  2.34E-08  INIT-SWS          CBPA---PA0209-CO FG-AFW            FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            OTH-ESWAB-
EXE-DF
 44.  2.34E-08  INIT-SWS          CBSL----13-34-CO FG-AFW            FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            OTH-ESWAB-
EXE-DF
 45.  2.34E-08  INIT-SWS          CBSL----13-37-CO FG-AFW            FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            OTH-ESWAB-
EXE-DF
 46.  2.34E-08  INIT-SWS          CBSL-----4-16-CO FG-AFW            FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            OTH-ESWAB-
EXE-DF
 47.  2.33E-08  INIT-SLBO         ESNFLOCASEQ12SF1 FG-AFW            FG-AFW-
AUTO-STRT FG-SW-ISLN-OCCRS SLBA             TPAL----PAL02-PR
 48.  2.33E-08  INIT-SLBO         ESNFLOCASEQ12SF1 FG-AFW            FG-AFW-
AUTO-STRT FG-SW-ISLN-OCCRS SLBB             TPAL----PAL02-PR
 49.  2.33E-08  INIT-SLBO         ESNFLOCASEQ12SF1 FG-AFW            FG-AFW-
AUTO-STRT FG-SW-ISLN-OCCRS SLBC             TPAL----PAL02-PR
 50.  2.33E-08  INIT-SLBO         ESNFLOCASEQ12SF1 FG-AFW            FG-AFW-
AUTO-STRT FG-SW-ISLN-OCCRS SLBD             TPAL----PAL02-PR
 51.  2.09E-08  INIT-SWS          FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR OPA-SGOVERFL-COG
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            TRSL----XSL4A-FA TZSW---
DEBRIS-PL OTH-ESWAB-EXE-DF
 52.  2.02E-08  INIT-SWS          BUSL-----SL4A-FA FG-AFW            FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            TPAL----PAL02-PS TZSW---
DEBRIS-PL OTH-ESWAB-EXE-DF
 53.  1.85E-08  INIT-TRO          FG-SW-ISLN-OCCRS OPA-BNLB-MISC-LD OTH-
PORVOPENSMFW PVBB----8010A-OO RESB-713AB-12-C1
 54.  1.85E-08  INIT-TRO          FG-SW-ISLN-OCCRS OPA-BNLB-MISC-LD OTH-
PORVOPENSMFW PVBB----8010B-OO RESB-713AB-12-C1
 55.  1.85E-08  INIT-TRO          FG-SW-ISLN-OCCRS OPA-BNLB-MISC-LD OTH-
PORVOPENSMFW PVBB----8010C-OO RESB-713AB-12-C1
 56.  1.85E-08  INIT-SWS          BUPA-----PA02-FA FG-AFW            FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
MVFC---HV0312-CC OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            OTH-ESWAB-
EXE-DF
 57.  1.85E-08  INIT-SWS          BUSL----SL-41-FA FG-AFW            FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
MVFC---HV0312-CC OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            OTH-ESWAB-
EXE-DF
 58.  1.85E-08  INIT-SWS          BUSL-----SL-4-FA FG-AFW            FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
MVFC---HV0312-CC OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            OTH-ESWAB-
EXE-DF
 59.  1.76E-08  INIT-LSP-WI        ACR1F            DGNE-----NE01-PR DGNE-----
NE02-PR OPA-NSAFW         OPA-SBO-DG         OTH-INIT-LSP-N   SBO
SDS-SUCCESS       RACR1F2W
 60.  1.70E-08  INIT-MLO          OPA-BNLB-MISC-LD
 61.  1.70E-08  INIT-SWS          BUSL-----SL4A-FA FG-AFW            FG-NO-SIS-
NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PC-GPR
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            TPAL----PAL02-PX TZSW---
DEBRIS-PL OTH-ESWAB-EXE-DF
 62.  1.55E-08  INIT-SWS          FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PA-GPR OPA-1WS1PABC-EXE
OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL            TPALT---PAL02-PR OTH-WS2-
ESWAB-DF
 63.  1.55E-08  INIT-SWS          FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PB-GPR OPA-1WS1PABC-EXE
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OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPALT---PAL02-PR OTH-WS2-ESWAB-DF

64. 1.54E-08 INIT-SWS CBPA---PA0209-CO FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPAL----PAL02-PS OTH-ESWAB-EXE-DF

65. 1.54E-08 INIT-SWS CBSL----13-34-CO FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPAL----PAL02-PS OTH-ESWAB-EXE-DF

66. 1.54E-08 INIT-SWS CBSL----13-37-CO FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPAL----PAL02-PS OTH-ESWAB-EXE-DF

67. 1.54E-08 INIT-SWS CBSL-----4-16-CO FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPAL----PAL02-PS OTH-ESWAB-EXE-DF

68. 1.48E-08 INIT-SLO FG-SW-ISLN-OCCRS MVEG-1012-12-HO1

69. 1.44E-08 INIT-SLO FG-SW-ISLN-OCCRS MFGL-10AB--12-S1

70. 1.43E-08 INIT-CCW BUNB-----NB02-FA BUNK-----NK01-FA FG-AFW FG-CCWA-FAILS FG-FW FG-NO-DC1LOSS FG-OSP-NB01-AVAL FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS PAVAIL TPAL----PAL02-PR

71. 1.40E-08 INIT-SLO FG-SW-ISLN-OCCRS MFGL-10AB--12-X1

72. 1.37E-08 INIT-SWS FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPAL----PAL02-PS TRSL----XSL4A-FA TZSW---DEBRIS-PL OTH-ESWAB-EXE-DF

73. 1.35E-08 INIT-FLB ACGK---SGK05A-PR FG-NB01-PWR-AVAL FG-SW-ISLN-OCCRS FLBA OPA-MSISOL-EXE OPA-RHR-EXE OSC-FLB

74. 1.35E-08 INIT-FLB ACGK---SGK05A-PR FG-NB01-PWR-AVAL FG-SW-ISLN-OCCRS FLBD OPA-MSISOL-EXE OPA-RHR-EXE OSC-FLB

75. 1.33E-08 INIT-LSP-WI ACR1F DGNE-----NE01-PR DGNE-----NE02-PR DGNSAFP------PS OPA-SBO-DG OTH-INIT-LSP-N SBO SDS-SUCCESS RACR1F2W

76. 1.32E-08 INIT-SLO FG-SW-ISLN-OCCRS MPEJ-01AB-12-BS1

77. 1.29E-08 INIT-SWS CBPA---PA0209-CO FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPAL----PAL02-PX OTH-ESWAB-EXE-DF

78. 1.29E-08 INIT-SWS CBSL----13-34-CO FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPAL----PAL02-PX OTH-ESWAB-EXE-DF

79. 1.29E-08 INIT-SWS CBSL----13-37-CO FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPAL----PAL02-PX OTH-ESWAB-EXE-DF

80. 1.29E-08 INIT-SWS CBSL-----4-16-CO FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TPAL----PAL02-PX OTH-ESWAB-EXE-DF

81. 1.26E-08 INIT-SWS FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR MVFC---HV0312-CC OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL TRSL----XSL41-FA OTH-ESWAB-EXE-DF

82. 1.18E-08 INIT-TRO FG-SW-ISLN-OCCRS MFGL-10AB--12-R1 OTH-PORVOPENSMFW PVBB----8010A-OO RESB-713AB-12-C1

83. 1.18E-08 INIT-TRO FG-SW-ISLN-OCCRS MFGL-10AB--12-R1 OTH-PORVOPENSMFW PVBB----8010B-OO RESB-713AB-12-C1

84. 1.18E-08 INIT-TRO FG-SW-ISLN-OCCRS MFGL-10AB--12-R1 OTH-PORVOPENSMFW PVBB----8010C-OO RESB-713AB-12-C1

85. 1.15E-08 INIT-SWS FG-AFW FG-NO-SIS-NO-LSP FG-RCP-COOL-LOSS FG-TRAINA-FAILS FG-TRAINB-FAILS MPWS-1WS01PC-GPR OPA-WSTOESWA-EXE

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OPA-WSTOESWB-EXE PAVAIL           TPAL----PAL02-PX TRSL----XSL4A-FA TZSW---
DEBRIS-PL OTH-ESWAB-EXE-DF
 86.  1.14E-08  INIT-SWS          FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PA-GPR OPA-1WS1PABC-EXE
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL          OTH-WS2-
ESWAB-DF
 87.  1.14E-08  INIT-SWS          FG-AFW           FG-NO-SIS-NO-LSP FG-RCP-
COOL-LOSS FG-TRAINA-FAILS  FG-TRAINB-FAILS  MPWS-1WS01PB-GPR OPA-1WS1PABC-EXE
OPA-SGOVERFL-COG OPA-WSTOESWA-EXE OPA-WSTOESWB-EXE PAVAIL          OTH-WS2-
ESWAB-DF
 88.  1.12E-08  INIT-TRA          ESSB515AB-F12VF1 FG-NO-DC1LOSS    MFA-
CONTINUES    OPA-MANUALRT-COG OPA-MRT-COG
 89.  1.11E-08  INIT-SGR          OPA-ABV-ISOLATED SGRA             SSV-SUCCESS
 90.  1.11E-08  INIT-SGR          OPA-ABV-ISOLATED SGRB             SSV-SUCCESS
 91.  1.11E-08  INIT-SGR          OPA-ABV-ISOLATED SGRC             SSV-SUCCESS
 92.  1.11E-08  INIT-SGR          OPA-ABV-ISOLATED SGRD             SSV-SUCCESS
 93.  1.09E-08  INIT-MLO          MFGL-10AB--12-R1
 94.  1.08E-08  INIT-FLB          FG-SW-ISLN-OCCRS FLBA             OPA-RHR-EXE
OPA-SLB-EXE      OSC-FLB
 95.  1.08E-08  INIT-FLB          FG-SW-ISLN-OCCRS FLBB             OPA-RHR-EXE
OPA-SLB-EXE      OSC-FLB
 96.  1.08E-08  INIT-FLB          FG-SW-ISLN-OCCRS FLBC             OPA-RHR-EXE
OPA-SLB-EXE      OSC-FLB
 97.  1.08E-08  INIT-FLB          FG-SW-ISLN-OCCRS FLBD             OPA-RHR-EXE
OPA-SLB-EXE      OSC-FLB
 98.  1.07E-08  INIT-SLBO         ACGK---SGK05A-PR FG-NB01-PWR-AVAL FG-SW-ISLN-
OCCRS OPA-MSISOL-EXE   RESB-525AB-12-C1 SLBA
 99.  1.07E-08  INIT-SLBO         ACGK---SGK05A-PR FG-NB01-PWR-AVAL FG-SW-ISLN-
OCCRS OPA-MSISOL-EXE   RESB-525AB-12-C1 SLBD
100.  1.01E-08  INIT-FLB          ACGK---SGK05A-PR FG-NB01-PWR-AVAL
FLBA             OPA-MSISOL-EXE   OPA-OF2-EXE      OSC-FLB
101.  1.01E-08  INIT-FLB          ACGK---SGK05A-PR FG-NB01-PWR-AVAL FLBD
OPA-MSISOL-EXE   OPA-OF2-EXE      OSC-FLB
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*NOTE: The "ETHER" cutest, listed as the first cutest, is a summation of all the cutsets not retained by the cutest file following quantification. In order to utilize storage space and memory effectively, the number of cutsets recorded in the cutest file is limited to 1000. This can be overridden if necessary, however it results in large file sizes. Therefore, the EOOS program sums up the values of all cutsets below the top 1000 into the "ETHER" event.