



Matthew W. Sunseri
President and Chief Executive Officer

January 15, 2012

WM 12-0003

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

Reference: Letter dated November 30, 2011, from J. R. Hall, USNRC to M. W. Sunseri, WCNOG, "Wolf Creek Generating Station - Request for Additional Information Regarding 60-day Response to NRC Bulletin 2011-01, 'Mitigating Strategies' (TAC NOS. ME6501)"

Subject: Docket No. 50-482: Response to NRC Request for Additional Information Regarding 60-day Response to NRC Bulletin 2011-01, "Mitigating Strategies"

Gentlemen:

The Reference issued a request for additional information (RAI) regarding Wolf Creek Nuclear Operating Corporation's (WCNOG) 60-day Response to NRC Bulletin 2011-01, "Mitigating Strategies." In accordance with 10 CFR 50.54(f), the attachment to this letter provides the response requested within 45 days of the date of the RAI.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4008, or Mr. Gautam Sen at (620) 364-4175.

Sincerely,

Matthew W. Sunseri

MWS/rlt

Attachment

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

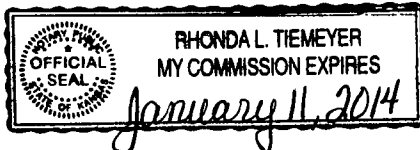
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STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Matthew W. Sunseri, of lawful age, being first duly sworn upon oath says that he is President and Chief Executive Officer of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the contents thereof; that he has executed the same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By M W Sunseri
Matthew W. Sunseri
President and Chief Executive Officer

SUBSCRIBED and sworn to before me this 15th day of January, 2012.



Rhonda L. Tiemeyer
Notary Public

Expiration Date 1-11-14

**Response to Request for Additional Information Regarding
60-Day Response to NRC Bulletin 2011-01, Mitigating Strategies**

Reference 1 provided Wolf Creek Nuclear Operating Corporation's (WCNOC) 30-day response to NRC Bulletin 2011-01, "Mitigating Strategies." Reference 2 provided WCNOC's 60-day response to NRC Bulletin 2011-01. Reference 3 provided a request for additional information to support the NRC staff review of Reference 2. The specific NRC question is provided in italics.

Many of the items described below represent current station practices. Individual items may be revised or adjusted in the future based on new or revised vendor recommendations, industry experience, new or revised regulations, or other guidance in accordance with established processes.

1. *Please describe in detail the maintenance or testing of monitor nozzles, spray nozzles, or similar devices to ensure that they will be functional when needed.*

The bulletin requested that each licensee describe in detail the maintenance and testing on equipment procured to support the mitigating strategies to ensure that it will be functional when needed. In the context of the mitigating strategies, these devices are commonly used for firefighting, spent fuel pool spray strategies, and as a means to reduce the magnitude of fission product releases.

Response:

Table 3.1, provided in response to question 3 in this document, identifies the support equipment that is dedicated to B.5.b mitigating strategies. Passive equipment, such as wrenches, flanges, and flow diffusers, require no periodic maintenance or testing. The ozzie monitors, spray nozzles, and gated wyes located on the B.5.b portable pump (fire truck) and the ventilation fans at the Fire Training Building are informally tested during fire brigade training addressing the use of B.5.b equipment. A formal periodic maintenance and testing program has not been established for B.5.b stored equipment that has an active function when operating. There is reasonable assurance that the equipment that is not periodically cycled during fire brigade training evolutions remains functional, because it is located in metal storage boxes, within the Auxiliary Building and Fuel Building. These boxes are dedicated for B.5.b equipment storage. The equipment in the boxes is only accessed for the performance of the quarterly inventory activity, which would identify observable equipment deficiencies. Additionally, in an effort to improve mitigating strategy response equipment availability during a B.5.b event, the equipment stored on the B.5.b portable pump is a duplicate of the equipment contained within the storage boxes in the Auxiliary Building and Fuel Building. Condition Report 00047383 has been initiated to develop a formal periodic maintenance and testing program for the B.5.b dedicated equipment identified in Table 1.1.

Table 1.1 - B.5.b Equipment Warranting Periodic Testing / Maintenance

Equipment	Test / Maintenance Activity	Frequency
Ozzie Monitors	Inspect Lubricate Functional flow test	Annual
Spray Nozzles	Inspect Functional flow test	Annual
Gated Wyes	Open/close and inspect for valve movement	Annual
Gas Powered Ventilation Fans	Inspect Check/change oil Operate	Semi-annual
Electric Powered Ventilation Fans	Inspect Operate	Semi-annual

2. *Please describe in detail how the licensee ensures there is sufficient fuel for the pumping source when needed.*

The bulletin requested that each licensee describe in detail the maintenance of equipment supporting the mitigating strategies to ensure that it will be functional when needed.

Response:

The Wolf Creek Generating Station (WCGS) B.5.b portable pump is 1989 Pierce Lance fire truck rated for 2,000 gpm at 150 psi. It is provided with a rear mounted 65 gallon diesel fuel tank. Monthly inspection of the B.5.b portable pump ensures that the fuel gauge registers at least a $\frac{3}{4}$ full level. WCNOB B.5.b response procedure EDMG T-01, "EDMG Tool Box," contains a precaution/limitation reminder that the B.5.b portable pump requires refueling after two hours of operation.

WCGS has a 10,000 gallon capacity in-ground tank, which stores highway grade diesel fuel. The tank, located west of the Vehicle Maintenance Shop, has a usable capacity of 9,000 gallons. There is an AC powered submersible pump that supplies fuel to a dispenser located on a fuel service island north of the Vehicle Maintenance Shop. This dispenser is used for drive up-fuel service. Tank fuel level is monitored daily during the normal work week, based on fuel logs maintained at the fuel service island. Fuel is ordered when the tank level reaches approximately 2,000 gallons. Fuel for the tank is supplied by Hampel Fuel Oil distributors of Wichita, Kansas.

A 1976 Ford LN8000 fuel truck staged at the Vehicle Maintenance Shop is used to fill the fuel tank for the diesel fire pump, B.5.b portable pump, and other portable diesel equipment on the owner controlled property. It has a 650 gallon capacity bulk diesel fuel tank that is maintained at a level of at least 500 gallons. The fuel truck also has a 90 gallon capacity unleaded gasoline fuel tank. Diesel fuel is pumped off the truck via a gasoline engine driven centrifugal pump.

In the event the in-ground tank at the Vehicle Maintenance is not functional, the fuel truck can be driven to surrounding locations, (Burlington, LeRoy, Garnett, BETO Junction, etc.) to be filled with fuel. Also, Lewis Oil of Burlington, Kansas, LeRoy Coop of LeRoy, Kansas, and Lybarger Oil of Garnett, Kansas, have bulk trucks that can deliver fuel to Wolf Creek, if needed.

Five gallon fuel cans are located onsite at Vehicle Maintenance Shop that are available for use to manually fuel the B.5.b portable pump. A 12-volt DC powered electric pump is available to pump diesel fuel off the fuel truck if the gasoline engine driven centrifugal pump is not functional. Also available is a 12 volt DC powered emergency fuel pumping station in the tool room at the Vehicle Maintenance Shop. This is available as an alternate means for filling the fuel truck, fuel cans, or portable equipment with diesel fuel from the in-ground tank if necessary.

Alternate onsite diesel fuel storage sources include the two in-ground safety related storage tanks for the emergency diesel generators and an above-ground tank with approximately 469,000 gallon capacity that provides the fuel source for the auxiliary boiler.

The above discussion provides reasonable assurance that adequate diverse means have been established to ensure availability of a sufficient fuel source for the B.5.b portable pump.

3. Please identify the minimum inventory frequency for equipment needed for the mitigating strategies not specifically identified in response to the bulletin. Alternatively, please describe the inventory frequency for tools and instruments needed to support the mitigating strategies.

The bulletin requested that each licensee describe in detail the controls for ensuring equipment supporting the mitigating strategies will be available when needed. Tools and instruments are generally needed to implement the mitigating strategies, but these items were not clearly included in the licensee's response to the bulletin.

Response:

The equipment identified in Table 3.1 is dedicated to B.5.b mitigating strategy response. The equipment is inventoried, per WCNOC procedure AI 10-001, "Fire Brigade Equipment Inventory Maintenance and Cleaning," as identified in Table 3.1.

Table 3.1 – B.5.b Equipment

Qty.	Description	Location	Inventory Frequency
3	3-inch fire hose equipped with 2.5-inch fire hose thread couplings, orange, 50-foot length (nominal)	Fuel Building 2047' – Storage Box	Quarterly
1	4-inch fire hose equipped with Storz couplings, yellow, 100-foot length (nominal)	Fuel Building 2047' – Storage Box	Quarterly
1	Ozzie water monitor (style 911), equipped with one 2.5-inch female fire hose thread inlet), and style 4827 fog nozzle	Fuel Building 2047' – Storage Box	Quarterly
1	Flow diffuser, cone shaped, galvanized, equipped with one 2.5-inch female fire hose thread inlet	Fuel Building 2047' – Storage Box	Quarterly
1	Gated wye equipped with one 4-inch Storz inlet & two 2.5-inch inch male fire hose thread outlets	Fuel Building 2047' – Storage Box	Quarterly
2	Nylon strap, made from black rescue webbing, and equipped with carabiner	Fuel Building 2047' – Storage Box	Quarterly
2	Spanner wrench, for use on threaded fire hose couplings	Fuel Building 2047' – Storage Box	Quarterly
2	Wood wedge	Fuel Building 2047' – Storage Box	Quarterly
3	3-inch fire hose equipped with 2.5-inch fire hose thread couplings, orange, 50-foot length (nominal)	Auxiliary Building 2047' South End – Storage Box	Quarterly

Qty.	Description	Location	Inventory Frequency
1	4-inch fire hose equipped with Storz couplings, yellow, 100-foot length (nominal)	Auxiliary Building 2047' South End – Storage Box	Quarterly
1	Ozzie water monitor (style 911), equipped with one 2.5-inch female fire hose thread inlet), and style 4827 fog nozzle	Auxiliary Building 2047' South End – Storage Box	Quarterly
1	Flow diffuser, cone shaped, galvanized, equipped with one 2.5-inch female fire hose thread inlet	Auxiliary Building 2047' South End – Storage Box	Quarterly
1	Gated wye equipped with one 4-inch Storz inlet & two 2.5-inch male fire hose thread outlets	Auxiliary Building 2047' South End – Storage Box	Quarterly
1	Spectacle flange, stainless steel, with handle (replaces flow orifice ENFO0001)	Auxiliary Building 2047' South End – Storage Box	Quarterly
2	Nylon strap, made from black rescue webbing, and equipped with carabineer	Auxiliary Building 2047' South End – Storage Box	Quarterly
2	Spanner wrench, for use on threaded fire hose couplings	Auxiliary Building 2047' South End – Storage Box	Quarterly
2	Wood wedge	Auxiliary Building 2047' South End – Storage Box	Quarterly
6	3-inch fire hose equipped with 2.5-inch fire hose thread couplings, orange, 50-foot length (nominal)	Auxiliary Building 2047' North End – Storage Box	Quarterly
2	3-inch bolted pipe flange to 2.5-inch female fire hose connection adapter with gasket	Auxiliary Building 2047' North End – Storage Box	Quarterly
1	4-inch bolted pipe flange to 2.5-inch female fire hose connection adapter with gasket	Auxiliary Building 2047' North End – Storage Box	Quarterly
2	Nylon strap, made from black rescue webbing, and equipped with carabineer	Auxiliary Building 2047' North End – Storage Box	Quarterly
2	Spanner wrench, for use on threaded fire hose couplings	Auxiliary Building 2047' North End – Storage Box	Quarterly
2	Wood wedge	Auxiliary Building 2047' North End – Storage Box	Quarterly
4	12-inch adjustable wrenches (Crescent type)	Auxiliary Building 2047' North End – Storage Box	Quarterly
2	1 ¼ inch combination (box/open end) wrenches	Auxiliary Building 2047' North End – Storage Box	Quarterly

Qty.	Description	Location	Inventory Frequency
2	Gas powered ventilators	Fire Training Building	Quarterly
2	Electric powered ventilators	Fire Training Building	Quarterly
20	Bunker coats (assorted sizes)*	Fire Training Building	Quarterly
20	Bunker pants (assorted sizes)*	Fire Training Building	Quarterly
20	Pairs of fire boots (assorted sizes)*	Fire Training Building	Quarterly
20	Fire gloves (assorted sizes)*	Fire Training Building	Quarterly
20	Fire helmets*	Fire Training Building	Quarterly
20	Fire hoods*	Fire Training Building	Quarterly
2	2.5 inch double male fire hose thread adapter	B.5.b Portable Pump (Fire Truck)	Quarterly
2	2.5 inch double swivel female fire hose thread adapter	B.5.b Portable Pump (Fire Truck)	Quarterly
2	3-inch bolted pipe flange to 2.5-inch female fire hose connection adapter, with gasket	B.5.b Portable Pump (Fire Truck)	Quarterly
1	3-inch female pipe thread to 2.5-inch female fire hose connection adapter	B.5.b Portable Pump (Fire Truck)	Quarterly
1	4-inch bolted pipe flange to 2.5-inch female fire hose connection adapter, with gasket	B.5.b Portable Pump (Fire Truck)	Quarterly
1	4-inch bolted pipe flange to 4-inch Storz fire hose connection adapter, with gasket	B.5.b Portable Pump (Fire Truck)	Quarterly
1	Spectacle flange, stainless steel, with handle (Replaces Flow Orifice ENFO0001)	B.5.b Portable Pump (Fire Truck)	Quarterly
1	4-inch female hydrant steamer connection thread to 4-inch Storz fire hose adapter	B.5.b Portable Pump (Fire Truck)	Quarterly
1	4.5-inch female hydrant steamer connection thread to 4-inch Storz fire hose adapter	B.5.b Portable Pump (Fire Truck)	Quarterly
2	Ozzie water monitor (style 911), equipped with one 2.5-inch female fire hose thread inlet), and style 4827 fog nozzle	B.5.b Portable Pump (Fire Truck)	Quarterly
2	Flow diffuser, cone shaped, galvanized, equipped with one 2.5-inch female fire hose thread inlet	B.5.b Portable Pump (Fire Truck)	Quarterly

Qty.	Description	Location	Inventory Frequency
1	Floating strainer equipped with 6-inch threaded inlet	B.5.b Portable Pump (Fire Truck)	Quarterly
2	Hard suction hose 10-feet in length (nominal), and equipped with 6-inch thread couplings	B.5.b Portable Pump (Fire Truck)	Quarterly
1	Gated manifold equipped with one 4-inch Storz inlet & three 2.5-inch male fire hose thread outlets	B.5.b Portable Pump (Fire Truck)	Quarterly
100 feet	.75-inch high pressure steam hose, with universal pipe flange and weighted end. One 50-foot section (nominal) in truck compartment C1, and the other 50-foot section (nominal) in truck compartment S1	B.5.b Portable Pump (Fire Truck)	Quarterly
600 feet	3-inch fire hose equipped with 2.5-inch fire hose thread couplings, orange, 50-foot lengths (nominal), pre-connected in hose bed	B.5.b Portable Pump (Fire Truck)	Quarterly
1600 feet	4-inch fire hose equipped with Storz couplings, yellow, 100-foot lengths (nominal), pre-connected in hose bed	B.5.b Portable Pump (Fire Truck)	Quarterly
4	Adjustable open end wrenches (Crescent type)	B.5.b Portable Pump (Fire Truck)	Quarterly
2	1 ¼ inch combination (box/open end) wrenches	B.5.b Portable Pump (Fire Truck)	Quarterly
1	24 inch pipe wrench	B.5.b Portable Pump (Fire Truck)	Quarterly
1	36 inch pipe wrench	B.5.b Portable Pump (Fire Truck)	Quarterly
1	Combination wrench set	B.5.b Portable Pump (Fire Truck)	Quarterly
4	Sling with carabiner	B.5.b Portable Pump (Fire Truck)	Quarterly
1	Bag containing door chocks	B.5.b Portable Pump (Fire Truck)	Quarterly
N/A	Misc. length of rope	B.5.b Portable Pump (Fire Truck)	Quarterly
1	Procedure AI 10-106, Operation off the WCGS Fire Truck	B.5.b Portable Pump (Fire Truck)	Quarterly
1	Procedure AP 10-106, Fire Preplans	B.5.b Portable Pump (Fire Truck)	Quarterly

Qty.	Description	Location	Inventory Frequency
2	Procedure EDMG-T01, EDMG Tool Box	B.5.b Portable Pump (Fire Truck)	Quarterly
2	Procedure EDMG-001, Extensive Damage Mitigation Guidelines	B.5.b Portable Pump (Fire Truck)	Quarterly
2	Form AIF 10-001-03, WCGS Fire Truck Inventory Sheet	B.5.b Portable Pump (Fire Truck)	Quarterly
2	Form AIF 10-001-05, EDMG-T01 Equipment Storage Box/Other B.5.b Equipment Inventory	B.5.b Portable Pump (Fire Truck)	Quarterly
4	SCBA with mask	B.5.b Portable Pump (Fire Truck)	Monthly
20*	SCBA with mask	Fire Training Building	Monthly
*Denotes a typical quantity on hand, from fire training stock.			

The equipment identified in Table 3.2 supports fire brigade response. However, it can be used for B.5.b response, as necessary. The equipment is inventoried as identified in Table 3.2.

Table 3.2 – Fire Brigade Equipment

Qty.	Description	Location	Inventory Frequency
5	Helmets	Dress-Out Lockers – 2000' Communications Corridor	Quarterly
5	Flashlights	Dress-Out Lockers – 2000' Communications Corridor	Quarterly
5	Spanner hose wrench	Dress-Out Lockers – 2000' Communications Corridor	Quarterly
1	Procedure AP 10-106, Fire Preplans	Dress-Out Lockers – 2000' Communications Corridor	Quarterly
5	SCBA Mask	Dress-Out Lockers – 2000' Communications Corridor	Quarterly
5	Radios	Gray Cabinet Near Dress-Out Lockers	Quarterly
2	Hand lanterns	Gray Cabinet Near Dress-Out Lockers	Quarterly
1	Maintenance jack head set	Gray Cabinet Near Dress-Out Lockers	Quarterly

Qty.	Description	Location	Inventory Frequency
5	Spare SCBA air bottles on hand cart	Communications Corridor 2000' Stair CC-1	Quarterly
1	Two wheel dolly Attack Pack Two 50 foot lengths of 1-1/2 inch hose Two pistol grip nozzles One wye, 2-1/2 to two 1-1/2 inch	Communications Corridor 2000' Stair CC-1	Quarterly
1	Pry bar (3 foot)	Communications Corridor 2000' Stair CC-1	Quarterly
2	50 foot sections of 2-1/2 inch hose	Communications Corridor 2000' Stair CC-1	Quarterly
1	Tool box	Communications Corridor 2000' Stair CC-1 and Fire Brigade Equipment Locker	Quarterly
1	2-1/2 inch adjustable nozzle	Communications Corridor 2000' Stair CC-1	Quarterly
1	Set stacked tips for deluge set	Communications Corridor 2000' Stair CC-1	Quarterly
2	16 inch Electric ventilation fans	Communications Corridor 2000' Stair CC-1	Quarterly
3	Duct segments for ventilation fans	Communications Corridor 2000' Stair CC-1	Quarterly
3	Ventilation Fan Duct Adaptors	Communications Corridor 2000' Stair CC-1	Quarterly
1	Extension power cord on reel	Communications Corridor 2000' Stair CC-1	Quarterly
1	Deluge set with "Black Widow" tip	Communications Corridor 2000' Stair CC-1	Quarterly
1	Dolly (CTMT standpipe outage use: 1-1/2 and 2-1/2 inch hose, wye, 1-1/2 inch double female connection, and nozzles)	Auxiliary Building 1974' Fire Brigade Equipment Locker	Quarterly
1	Dolly: <ul style="list-style-type: none"> • One Attack Pack: 1-1/2 inch hose, wye, and nozzles • Tool box • Bolt cutters • Pick headed ax • Crow bar 	Auxiliary Building 1974' Fire Brigade Equipment Locker	Quarterly
7	Fire Brigade SCBA with mask	Communications Corridor 2000' Stair CC-1	Monthly

4. *Please describe in detail the semiannual maintenance activities for the B.5.b portable pump.*

The bulletin requested that each licensee describe in detail the maintenance of equipment supporting the mitigating strategies to ensure that it will be functional when needed. The NRC determined that the description of the semiannual maintenance performed on the B.5.b portable pump is not detailed since it only states that "general maintenance activities" are performed. The NRC staff notes that the licensee's response states a condition report was generated to consider clarifying this maintenance.

Response:

Periodic preventive maintenance (PM) for the B.5.b portable pump (fire truck) is performed by WCNOG Vehicle Maintenance Shop personnel. This activity is triggered by a repetitive PM work order. If degradation or failures are found, action is taken to resolve the issue. The semi-annual PM activity addresses the following attributes:

- Engine Oil and Filter - Change
- Transmission Fluid - Check/Change
- Lube Points / Grease Fittings
- Differential Fluid - Check/Change
- Frame / Drive Train / U-Joints – Check/Lube
- Transfer Case Fluid - Check/Change
- Steering – Check
- King Pins / Ball Joints – Check
- Clutch – Check
- Fuel Filter – Check/Change
- Tires / Wheels / Pressure / Spare – Check/Rotate
- Wheel Bearings / Check
- Service Brakes / Brake Fluid Level / Air Pressure – Check/Adjust
- Parking / Emergency Brakes – Condition/Operation
- Springs / Shocks – Check
- Power Steering Fluid – Check
- Battery – Check/Clean/Condition
- Air Filter – Check/Change
- Breather – Check/Change
- Belts – Check
- Hoses – Check
- Coolant – Check/Change/Condition
- Leaks – Air/Coolant/Oil – Check

Cab/Body/Enclosure – Check
Glass - Check
Mirrors - Check
Windshield Wipers/Washer – Check
Horn – Check
Seatbelts – Check
Heater / Defroster – Check
Head Lamps – Check
Tail Lamps/Tag Light – Check
Turn Signals – Check
Hazard Flasher – Check
Stop Lamps – Check
Clearance Lamps – Check
Dome/Cab Lamp – Check
Spot Lamp - Check

References:

1. WCNOC letter WO 11-0031 "30-day Response to NRC Bulletin 2011-01, "Mitigating Strategies"," June 9, 2011
2. WCNOC letter WO 11-0055 "60-day Response to NRC Bulletin 2011-01, "Mitigating Strategies"," July 11, 2011
3. Letter dated November 30, 2011, from J. R. Hall, USNRC to M. W. Sunseri, WCNOC, "Wolf Creek Generating Station - Request for Additional Information Regarding 60-day Response to NRC Bulletin 2011-01, "Mitigating Strategies" (TAC NOS. ME6501)"