UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

February 27, 2026

MEMORANDUM TO: John D. Monninger, Regional Administrator
Region IV

THRU: Patricia J. Vossmar, Director
Division of Operating Reactor Safety
Signed by Vossmar, Patricia on 02/25/26

FROM: Doug E. Dodson, II, Chief
Projects Branch C
Division of Operating Reactor Safety
Signed by Dodson, Douglas on 02/24/26

SUBJECT: MANAGEMENT DIRECTIVE 8.3 EVALUATION FOR RIVER BEND STATION DIVISION 3 STANDBY SERVICE WATER PUMP FAULT, TRIP, AND LOCKOUT ON FEBRUARY 3, 2026

Pursuant to Regional Office Policy Guide 0801.7, “Management Directive 8.3 and Inspection Manual Chapter 0309 Reactive Team Inspection Decisions, Implementation, and Documentation for Power Reactors,” the enclosed table provides the Management Directive 8.3 evaluation associated with a standby service water pump fault, trip, and lockout and resultant loss of normal power to the division III bus that occurred on February 3, 2026, during a routine surveillance.

Staff performed this evaluation to determine the risk significance of the event to support a decision on the appropriate level of the U.S. Nuclear Regulatory Commission response. Based on this evaluation, the staff recommends that no additional reactive inspection be performed for follow-up of this event at the River Bend Station.

Concur with Recommendation: Signed by Monninger, John on 02/27/26

John D. Monninger
Regional Administrator

Date

Enclosures:
1. MD 8.3 Decision Documentation Form
   (Deterministic and Risk Criteria Analyzed)
2. MD 8.3 Decision Documentation Form
   (Deterministic-Only Criteria Analyzed)

CONTACT: Douglas E. Dodson II, DORS/PBC
(817) 200-1148

MANAGEMENT DIRECTIVE 8.3 EVALUATION FOR RIVER BEND DIVISION 3 STANDBY SERVICE WATER PUMP FAULT, TRIP, AND LOCKOUT ON FEBRUARY 3, 2026 – DATED FEBRUARY 27, 2026

DISTRIBUTION:
JMonninger, ORA
PVossmar, DORS
JJosey, DORS
DCylkowski, RC
RClagg, RIV/OEDO
EStamm, RIV/OEDO
TSmith, ORA
AGomez, ORA
LWilkins, OCA
JDrake, NRR
AMoreno, RIV/OCA
RAlexander, RSLO
WCullum, DORS
NOkonkwo, DORS
DDodson, DORS
RKumana, DORS
EPowell, DORS
ABetts, DORS
LDay, DORS
R4-DORS-IPAT
R4Enforcement
NRR Reactive Inspection Resource

DOCUMENT NAME: MANAGEMENT DIRECTIVE 8.3 EVALUATION FOR RIVER BEND DIVISION 3 STANDBY SERVICE WATER PUMP FAULT, TRIP, AND LOCKOUT ON FEBRUARY 3, 2026
ADAMS ACCESSION NUMBER: **ML26054A080** PACKAGE ACCESSION NUMBER: **ML26054A081**
☒ SUNSI Review By: DED ADAMS: ☒ Yes ☐ No ☐ Non-Publicly Available ☒ Publicly Available ☒ Non-Sensitive ☐ Sensitive Keyword:

OFFICE	SPE:DORS/PBC	SRA:DORS	BC:DORS/PBC	D:DORS	RA:RIV
NAME	RKumana	RDeese	DDodson	PVossmar	JMonninger
SIGNATURE	***/RA/***	***/RA/***	***/RA/***	***/RA/***	***/RA/***
DATE	02/23/26	02/24/26	02/24/26	02/25/26	02/27/26

OFFICIAL RECORD COPY

MANAGEMENT DIRECTIVE 8.3
DECISION DOCUMENTATION FOR REACTIVE INSPECTION
(Deterministic and Risk Criteria Analyzed)

Note: The results of this assessment are based on an initial or preliminary set of information and do not prejudge or imply deficient performance on the part of the licensee or the lack thereof. The purpose of this assessment is to determine whether to conduct a reactive inspection; it is independent of determining the significance of any inspection findings that may be associated with these circumstances.

PLANT:	River Bend Station	**EVENT DATE:**	February 4, 2026
RESPONSIBLE BRANCH CHIEF:	Doug Dodson	**EVALUATION DATE:**	February 4-20, 2026

BRIEF DESCRIPTION OF THE SIGNIFICANT OPERATIONAL EVENT OR DEGRADED CONDITION:

At 11:39 p.m. on February 3, 2026, during a surveillance run of the standby service water (SSW) systems, the division 3 SSW pump C (SWP-P2C) faulted, tripped, and locked out approximately 4 minutes into the run, causing an undervoltage condition on the division 3 emergency 4160V bus. The division 3 high pressure core spray (HPCS) diesel started on the undervoltage condition and began carrying the division 3 safety bus loads. Simultaneously, the preferred station service transformer (RTX-XSR1D), which was powering both the 1B and 1C normal 4160V switchgear loads (including the division 2 safety bus) also momentarily experienced an undervoltage condition causing several division 2 annunciators to alarm, including the “DIVISION 2 STBY SERVICE WTR INOPERATIVE” alarm. This alarm was found to be caused by the failure of a relay in a division 2 motor control center. Additionally, the voltage transient caused the division 2 safety related invertor to switch over from rectified AC to DC power.

The plant entered Technical Specification (TS) 3.8.9, "Distribution Systems - Operating" for the breaker trip and declared both the SSW pump C and HPCS inoperable, which put the station in a 14-Day TS action statement associated with TS 3.5.1 for HPCS and a 30-day action statement associated with T.S. 3.7.1 for division 3 SSW. The licensee made an 8-hour report to the NRC at 7:09 a.m. on February 4, 2026, for a valid engineered safety feature (ESF) actuation and the failure of a safety function for a single train system (HPCS). Subsequently, the licensee partially retracted the event report and concluded the event did not constitute a safety system functional failure.

Following the event, the licensee determined that the most likely cause of the event was a phase-to-phase fault caused by loose connections at the SSW pump C motor terminal box. These connections are removed for periodic testing and were most recently worked in September 2025. Prior to the failure, the pump was last successfully run in November of 2025. The licensee replaced the terminal box and restored the pump to service.

Y/N	DETERMINISTIC CRITERIA
N	Involved operations that exceeded, or were not included in, the design bases of the facility
	Remarks: Based on available information at the time of this evaluation, this failure of a safety related pump and corresponding impacts were within the design basis of the facility.
N	Involved a major deficiency in design, construction, or operation having potential generic safety implications
	Remarks: Based on available information at the time of this evaluation, there is no identified major deficiency in design, construction, or operation, and no generic safety implication.
N	Led to a significant loss of integrity of the fuel, primary coolant pressure boundary, or primary containment boundary of a nuclear reactor
	Remarks: While inoperability of a standby service water pump reduced the ability to mitigate an event, this event did not lead to a loss of integrity of the fuel, primary coolant pressure boundary, or the primary containment boundary.
Y	Led to the loss of a safety function or multiple failures in systems used to mitigate an actual event
	Remarks: HPCS is a single train safety system. Based on best available information at the time of this evaluation, the staff assessed that the failure of the division 3 service water pump and the fault on the division 3 bus, both of which are the dedicated support systems for HPCS, could prevent the safety function from being fulfilled. The staff noted that on February 12, 2026, the licensee determined the failure did not cause a loss of safety function and partially retracted Event # 58148, “EDG Actuation and HPCS System Inoperable.” The branch had not yet validated that conclusion at the time of this evaluation.
N	Involved possible adverse generic implications
	Remarks: Based on available information at the time of this evaluation, there are no identified adverse generic implications.
Y	Involved significant unexpected system interactions
	Remarks: The fault of a single 4160V breaker on the division 3 safety bus was not expected to cause alarms on or adversely impact the preferred station transformer or the division 2 service water system annunciator circuit.
N	Involved repetitive failures or events involving safety-related equipment or deficiencies in operations
	Remarks: Based on available information at the time, this was a single event and failure of safety-related equipment and did not involve deficiencies in operations.

N	Involved questions or concerns pertaining to licensee operational performance
	Remarks: Based on available information at the time, there were no questions or concerns with licensee operational performance.

CONDITIONAL RISK ASSESSMENT

IF IT IS DETERMINED THAT A RISK ANALYSIS IS NOT REQUIRED - ENTER NA BELOW AND CONTINUE TO THE DECISION BASIS BLOCK

RISK ANALYSIS BY: Rick Deese and Dustin Reinert	DATE: February 19, 2026

Brief description of the basis of the assessment (may include assumptions, calculations, references, peer review, or comparison with licensee's results):

A Regional Senior Reactor Analyst (SRA) performed a condition assessment for the degraded division 3 SSW pump using SAPHIRE 8, Version 8.2.12 and the River Bend SPAR model Version 8.83.

The analyst determined that the pump could not perform its PRA function because it failed its surveillance test and could not supply cooling water to the supported division 3 equipment. Since the pump started but failed within the first hour of operation, the failure was modeled as a Failure to Load and Run.

The River Bend SPAR model does not explicitly represent the electrical circuitry between the division 3 bus and the preferred station service transformer. To address the observed undervoltage condition that triggered alarms on the division 2 bus, the analyst evaluated the potential for a division 3 SSW pump failure to induce a voltage transient resulting in a loss of offsite power to the division 2 electrical bus. Accordingly, the division 2 bus fault tree was modified to include an additional loss-of-offsite-power event conditional on division 3 SSW pump failure. The analyst concluded that this model adjustment had only a minimal impact on the overall conditional core damage probability.

The analyst assumed an exposure time of 84 days, from the last successful division 3 SSW pump surveillance on November 11, 2025, until the pump failure on February 3, 2026. This assumption was applied rather than a t/2 assumption based on the best available information for electrical grounding failures and this particular failure.

The nominal test and maintenance model was used because plant-specific configuration details during the exposure period were not readily available.

This analysis resulted in:

- Estimated CCDP (Conditional Core Damage Probability): 4.78E-6
- ICCDP (Incremental CCDP) for internal events: 4.15E-6

In addition, the licensee provided fire risk results for the division 3 SSW pump failure:

- ICCDP due to fire risk: 9.92E-7

The dominant accident sequence is a loss of normal service water, a failure of high-pressure core spray, suppression pool cooling, low pressure injection, and containment heat removal.

The estimated ICCDP is 5.14E-6 including internal events and fire. This places the risk in the overlap range between baseline and special inspection.

It's important to note that for this analysis, the ICCDP value is a better representation of the risk significance since it's a condition assessment for a degraded plant condition. It would be appropriate to compare the ICCDP value against the recommended event response thresholds of IMC 0309 for decision-making (as stated in previous versions of IMC 0309).

THE ESTIMATED INCREMENTAL CONDITIONAL CORE DAMAGE PROBABILITY (ICCDP) IS:	5.14E-6
WHICH PLACES THE RISK IN THE RANGE OF:	Overlap range between baseline and special inspection

RESPONSE DECISION	
USING THE ABOVE INFORMATION AND OTHER KEY ELEMENTS OF CONSIDERATION AS APPROPRIATE, DOCUMENT THE RESPONSE DECISION TO THE EVENT OR CONDITION, AND THE BASIS FOR THAT DECISION	
The branch recommends not performing a reactive inspection at this time. Best available information at the time of this evaluation suggests maintenance practices contributed to the SSW pump fault, trip, and lockout, and the branch noted that the licensee is performing a cause analysis and other evaluations to understand the causes of the event and the unexpected system interactions. Fully understanding the causes of the failure and the system interactions are staff priorities. While the staff concluded that two deterministic criteria were met and the risk assessment determined the risk was in the upper portion of the no additional reactive inspection and lower portion of the special inspection range, the staff has already gathered facts to begin expeditiously evaluating these issues, commensurate with their safety significance. Additionally, the staff determined that no deterministic-only criteria were met (these follow this response decision) The branch also noted that an engineering inspector with the appropriate skills and experience to assess the potential technical issues and licensee actions is already scheduled to be onsite at the end of February 2026 as part of a planned fire protection inspection. These inspection resources may be used to support baseline inspection follow-up by the resident inspectors and the region. No additional resources are needed to evaluate this event. Based on the specific circumstances of the event, considering risk, noting resource availability, and in consideration of timely baseline inspection opportunities, the branch recommends conducting normal baseline inspection follow-up to review this event to understand the failures and licensee maintenance practices.	
BRANCH CHIEF REVIEW: Douglas E. Dodson II	DATE: 02/20/2026
DIVISION DIRECTOR REVIEW: Patricia J. Vossmar	DATE: 02/25/2026
ADAMS ACCESSION NUMBER: **ML26054A080** EVENT NOTIFICATION REPORT NUMBER (as applicable): 58148 Email to NRR_Reactive_Inspection@nrc.gov	

MANAGEMENT DIRECTIVE 8.3
DECISION DOCUMENTATION FOR REACTIVE INSPECTION
(Deterministic-only Criteria Analyzed)

Note: The results of this assessment are based on an initial or preliminary set of information and do not prejudge or imply deficient performance on the part of the licensee or the lack thereof. The purpose of this assessment is to determine whether to conduct a reactive inspection; it is independent of determining the significance of any inspection findings that may be associated with these circumstances.

PLANT:	River Bend Station	**EVENT DATE:**	February 4, 2026
RESPONSIBLE BRANCH CHIEF:	Doug E. Dodson II	**EVALUATION DATE:**	February 4-20, 2026

BRIEF DESCRIPTION OF THE SIGNIFICANT OPERATIONAL EVENT OR DEGRADED CONDITION:

Please see previous description in the “Deterministic and Risk Criteria Analyzed” section.

REACTOR SAFETY

Y/N	IIT Deterministic Criteria
N	Led to a Site Area Emergency
	Remarks: This event did not result in any declared emergency.
N	Exceeded a safety limit of the licensee's technical specifications
	Remarks: The event did not result in exceeding a safety limit of the licensee's technical specifications.
N	Involved circumstances sufficiently complex, unique, or not well enough understood, or involved safeguards concerns, or involved characteristics the investigation of which would best serve the needs and interests of the Commission
	Remarks: The staff assessed that the failure of the service water pump was similar to other failures evaluated using the baseline inspection program, and the staff determined that the event did not involve circumstances sufficiently complex, unique, or not well enough understood such that an incident investigation team was necessary to best serve the needs and interests of the Commission. Additionally, the circumstances did not involve safeguards concerns.

Y/N	SI Deterministic Criteria
N	Significant failure to implement the emergency preparedness program during an actual event, including the failure to classify, notify, or augment onsite personnel
	Remarks: The event did not involve a failure to implement the emergency preparedness program; there were no known failures to classify, notify, or augment onsite personnel.
N	Involved significant deficiencies in operational performance which resulted in degrading, challenging, or disabling a safety system function or resulted in placing the plant in an unanalyzed condition for which available risk assessment methods do not provide an adequate or reasonable estimate of risk
	Remarks: The event did not involve significant deficiencies in operational performance.

RADIATION SAFETY	
Y/N	IIT Deterministic Criteria
N	Led to a significant radiological release (levels of radiation or concentrations of radioactive material in excess of 10 times any applicable limit in the license or 10 times the concentrations specified in 10 CFR Part 20, Appendix B, Table 2, when averaged over a year) of byproduct, source, or special nuclear material to unrestricted areas
	Remarks: The event did not lead to a radiological release.
N	Led to a significant occupational exposure or significant exposure to a member of the public. In both cases, “significant” is defined as five times the applicable regulatory limit (except for shallow-dose equivalent to the skin or extremities from discrete radioactive particles)
	Remarks: The event did not lead to occupational exposure.
N	Involved the deliberate misuse of byproduct, source, or special nuclear material from its intended or authorized use, which resulted in the exposure of a significant number of individuals
	Remarks: The event did not involve the deliberate misuse of byproduct, source, or special nuclear material from its intended or authorized use.
N	Involved byproduct, source, or special nuclear material, which may have resulted in a fatality
	Remarks: The event did not involve byproduct, source, or special nuclear material or result in any fatalities.
N	Involved circumstances sufficiently complex, unique, or not well enough understood, or involved safeguards concerns, or involved characteristics the investigation of which would best serve the needs and interests of the Commission
	Remarks: The staff assessed the event was sufficiently similar to other failures such that the event could be evaluated using available risk assessment methods; therefore, the staff determined that the event did not involve circumstances sufficiently complex, unique, or not well enough understood such that an incident investigation team was necessary to best serve the needs and interests of the Commission. Additionally, the event circumstances did not involve safeguard concerns.

Y/N	AIT Deterministic Criteria
N	Led to a radiological release of byproduct, source, or special nuclear material to unrestricted areas that resulted in occupational exposure or exposure to a member of the public in excess of the applicable regulatory limit (except for shallow-dose equivalent to the skin or extremities from discrete radioactive particles)
	Remarks: The event did not involve the radiological release of byproduct, source, or special nuclear material to unrestricted areas that resulted in occupational exposure or exposure to a member of the public.
N	Involved the deliberate misuse of byproduct, source, or special nuclear material from its intended or authorized use and had the potential to cause an exposure of greater than 5 rem to an individual or 500 mrem to an embryo or fetus
	Remarks: The event did not involve the deliberate misuse of byproduct, source, or special nuclear material from its intended or authorized use.
N	Involved the failure of radioactive material packaging that resulted in external radiation levels exceeding 10 rads/hr or contamination of the packaging exceeding 1,000 times the applicable limits specified in 10 CFR 71.87
	Remarks: The event did not involve the failure of radioactive material packaging.
N	Involved the failure of the dam for mill tailings with substantial release of tailings material and solution off site
	Remarks: The event did not involve the failure of a dam for mill tailings that resulted in the release of tailings material.

Y/N	SI Deterministic Criteria
N	May have led to an exposure in excess of the applicable regulatory limits, other than via the radiological release of byproduct, source, or special nuclear material to the unrestricted area; specifically • occupational exposure in excess of the regulatory limits in 10 CFR 20.1201 • exposure to an embryo/fetus in excess of the regulatory limits in 10 CFR 20.1208 • exposure to a member of the public in excess of the regulatory limits in 10 CFR 20.1301
	Remarks: The event did not lead to an exposure in excess of the applicable regulatory limits.
N	May have led to an unplanned occupational exposure in excess of 40 percent of the applicable regulatory limit (excluding shallow-dose equivalent to the skin or extremities from discrete radioactive particles)
	Remarks: The event did not lead to an unplanned occupational exposure in excess of 40 percent of the applicable regulatory limit.
N	Led to unplanned changes in restricted area dose rates in excess of 20 rem/hr in an area where personnel were present or which is accessible to personnel
	Remarks: The event did not lead to unplanned changes in restricted area dose rates in excess of 20 rem per hour.
N	Led to unplanned changes in restricted area airborne radioactivity levels in excess of 500 DAC in an area where personnel were present or which is accessible to personnel and where the airborne radioactivity level was not promptly recognized and/or appropriate actions were not taken in a timely manner
	Remarks: The event did not lead to unplanned changes in restricted area airborne radioactivity levels.
N	Led to an uncontrolled, unplanned, or abnormal release of radioactive material to the unrestricted area • for which the extent of the contamination is unknown; or • that may have resulted in a dose to a member of the public from loss of radioactive material control in excess of 25 mrem (10 CFR 20.1301(e)); or • that may have resulted in an exposure to a member of the public from effluents in excess of the ALARA guidelines contained in Appendix I to 10 CFR Part 50
	Remarks: The event did not lead to an uncontrolled, unplanned, or abnormal release of radioactive material.

N	Led to a large (typically greater than 100,000 gallons), unplanned release of radioactive liquid inside the restricted area that has the potential for ground-water or offsite contamination
	Remarks: The event did not lead to a large, unplanned release of radioactive liquid inside the restricted area.
N	Involved the failure of radioactive material packaging that resulted in external radiation levels exceeding 5 times the accessible area dose rate limits specified in 10 CFR Part 71, or 50 times the contamination limits specified in 49 CFR Part 173
	Remarks: The event did not involve the failure of radioactive material packaging.
N	Involved an emergency or non-emergency event or situation, related to the health and safety of the public or on-site personnel or protection of the environment, for which a 10 CFR 50.72 report has been submitted that is expected to cause significant, heightened public or government concern
	Remarks: The event is not expected to cause significant heightened public or government concern.

SAFEGUARDS/SECURITY	
Y/N	IIT Deterministic Criteria
N	Involved circumstances sufficiently complex, unique, or not well enough understood, or involved safeguards concerns, or involved characteristics the investigation of which would best serve the needs and interests of the Commission
	Remarks: The staff assessed the event was sufficiently similar to other issues/events such that the event could be evaluated using available risk assessment methods; therefore, the staff determined that the event did not involve circumstances sufficiently complex, unique, or not well enough understood such that an incident investigation team was necessary to best serve the needs and interests of the Commission. Additionally, the event circumstances did not involve safeguard concerns.
N	Failure of licensee significant safety equipment or adverse impact on licensee operations as a result of a safeguards-initiated event (e.g., tampering)
	Remarks: The event did not involve an adverse impact on safety equipment or licensee operations as a result of a safeguards-initiated event.
N	Actual intrusion into the protected area
	Remarks: The event did not involve an actual intrusion into the protected area.

Y/N	AIT Deterministic Criteria
N	Involved a significant infraction or repeated instances of safeguards infractions that demonstrate the ineffectiveness of facility security provisions
	Remarks: The event did not involve a significant infraction or repeated instances of safeguards infractions.
N	Involved repeated instances of inadequate nuclear material control and accounting provisions to protect against theft or diversions of nuclear material
	Remarks: The event did not involve repeated instances of inadequate nuclear material control and accounting provisions.
N	Confirmed tampering event involving significant safety or security equipment
	Remarks: The event did not involve tampering of safety or security equipment.
N	Substantial failure in the licensee’s intrusion detection or package/personnel search procedures which results in a significant vulnerability or compromise of plant safety or security
	Remarks: The event did not involve a substantial failure in the licensee’s intrusion detection or package/personnel search procedures.

Y/N	SI Deterministic Criteria
N	Involved inadequate nuclear material control and accounting provisions to protect against theft or diversion, as evidenced by inability to locate an item containing special nuclear material (such as an irradiated rod, rod piece, pellet, or instrument)
	Remarks: The event did not involve inadequate nuclear material control and accounting provisions.
N	Involved a significant safeguards infraction that demonstrates the ineffectiveness of facility security provisions
	Remarks: The event did not involve a significant safeguards infraction.
N	Confirmation of lost or stolen weapon
	Remarks: The event did not involve a lost or stolen weapon.
N	Unauthorized, actual non-accidental discharge of a weapon within the protected area
	Remarks: The event did not involve the unauthorized, actual non-accidental discharge of a weapon.
N	Substantial failure of the intrusion detection system (not weather-related)
	Remarks: The event did not involve the substantial failure of the intrusion detection system.
N	Failure to the licensee's package/personnel search procedures which results in contraband or an unauthorized individual being introduced into the protected area
	Remarks: The event did not involve a failure in the licensee's package/personnel search procedures.
N	Potential tampering or vandalism event involving significant safety or security equipment where questions remain regarding licensee performance/response or a need exists to independently assess the licensee's conclusion that tampering or vandalism was not a factor in the condition(s) identified
	Remarks: The event did not involve potential tampering or vandalism, and based on available information at the time, there is no need to independently assess that tampering or vandalism was not a factor.