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

February 11, 2021

Mr. Steven Vercelli
Site Vice President
Entergy Operations, Inc.
5485 U.S. Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION – INTEGRATED INSPECTION REPORT 05000458/2020004

Dear Mr. Vercelli:

On December 31, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at River Bend Station. On January 6, 2021, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. One Severity Level IV violation without an associated finding is documented in this report. We are treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violations or the significance or severity of the violations documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement; and the NRC Resident Inspector at River Bend Station.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Jason W. Kozal
Digitally signed by Jason W. Kozal
Date: 2021.02.11 10:59:52 -06'00'

Jason W. Kozal, Chief
Reactor Projects Branch C
Division of Reactor Projects

Docket No. 05000458
License No. NPF-47

Enclosure:
As stated

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number:	05000458
License Number:	NPF-47
Report Number:	05000458/2020004
Enterprise Identifier:	I-2020-004-0005
Licensee:	Entergy Operations, Inc.
Facility:	River Bend Station
Location:	St. Francisville, Louisiana
Inspection Dates:	October 1, 2020 to December 31, 2020
Inspectors:	R. Alexander, Senior Emergency Preparedness Inspect R. Kumana, Senior Resident Inspector J. O'Donnell, Senior Health Physicist B. Parks, Resident Inspector
Approved By:	Jason W. Kozal, Chief Reactor Projects Branch C Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at River Bend Station, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information.

List of Findings and Violations

Failure to Ensure Adequate Design of Structures for Protection Against External Flooding			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000458/2020004-01 Open/Closed	None (NPP)	71111.01
The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," with four examples, for failure to ensure that materials, parts, equipment, and processes essential to the safety-related functions of structures, systems, and components were suitable for the application. Specifically, the licensee failed to ensure that the G tunnel, a safety-related structure, was suitably designed to withstand the effects of natural phenomena in accordance with 10 CFR Part 50, Appendix A, Criterion 2. The licensee failed to ensure that the correct inputs were used in design basis calculations for external flooding, that the calculations were updated to reflect changes made to the plant, and that the construction of the tunnel was adequate to meet the design requirements.			

Failure to Update the Updated Safety Analysis Report			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Not Applicable	NCV 05000458/2020004-02 Open/Closed	Not Applicable	71111.01
The inspectors identified a Severity Level IV non-cited violation of 10 CFR 50.71(e), "Maintenance of Records, Making Reports," with two examples, associated with the licensee's failure to correctly update the Updated Safety Analysis Report. Specifically, following multiple changes in configuration of the Unit 2 excavation pit and the G tunnel, the licensee failed to update the Updated Safety Analysis Report regarding the postulated design basis flood level for the Unit 2 excavation and the design features for protecting safety related structures, systems, and components against external flood hazards.			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
LER	05000458/2020-001-00	Loss of Control Building Chill Water due to Chiller Control Panel Installation Error	71153	Closed

PLANT STATUS

River Bend Station began the inspection period at rated thermal power. On October 6, 2020, the station conducted a down power to approximately 94 percent power to perform maintenance on moisture separator reheaters. The unit was returned to rated thermal power on October 7, 2020. On October 30, 2020, the station conducted a down power to approximately 68 percent power to perform a control rod pattern adjustment. On October 31, 2020, the station implemented a controlled shutdown in response to a loss of makeup water to the circulating system. The unit was returned to rated thermal power on November 15, 2020. On December 5, 2020, the station conducted a down power to approximately 67 percent power to perform a control rod pattern adjustment. The unit was returned to rated thermal power on December 6, 2020. On December 21, 2020, the station conducted a down power to approximately 70 percent power to perform a control rod pattern adjustment. The unit was returned to rated thermal power on December 22, 2020 and remained at rated thermal power for the remainder of the inspection period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the Coronavirus Disease 2019 (COVID-19), resident inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time, the resident inspectors performed periodic site visits each week; conducted plant status activities as described in IMC 2515, Appendix D, "Plant Status," observed risk -significant activities; and completed on-site portions of IPs. In addition, resident and regional baseline inspections were evaluated to determine if all or portions of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on-site. The inspections documented below met the objectives and requirements for completion of the IP.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Impending Severe Weather Sample (IP Section 03.02) (2 Samples)

(1) The inspectors evaluated the adequacy of the overall preparations to protect risk -significant systems from impending severe weather conditions for a hurricane warning on October 8, 2020.

(2) The inspectors evaluated the adequacy of the overall preparations to protect risk -significant systems from impending severe weather conditions for a hurricane warning on October 26, 2020.

External Flooding Sample (IP Section 03.03) (1 Sample)

(1) The inspectors evaluated that flood protection barriers, mitigation plans, procedures, and equipment are consistent with the licensee's design requirements and risk analysis assumptions for coping with external flooding on December 11, 2020.

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

(1) Division II 125 Volt DC system on October 17, 2020
(2) Division II remote shutdown system on October 26, 2020
(3) Division I residual heat removal system on November 30, 2020
(4) Division I vital AC inverters on December 1, 2020

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

(1) Cable chase III, fire area C-9, on October 17, 2020
(2) Cable chase II, fire area C-2, on November 12, 2020
(3) High pressure core spray pump room, fire area AB-2/Z-1, on November 12, 2020

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

(1) The inspectors observed and evaluated licensed operator performance in the Control Room during power reduction on October 30, 2020.

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (2 Samples)

(1) The inspectors observed and evaluated licensed operator requalification training on October 1, 2020.
(2) The inspectors observed and evaluated licensed operator requalification training on October 21, 2020.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (2 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

(1) Functional failure review of 120-volt AC system on November 19, 2020
(2) Functional failure review of residual heat removal system on December 23, 2020

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

(1) Elevated risk with Division III diesel generator out of service and impending severe weather on October 28, 2020
(2) Yellow risk during maintenance on reactor core isolation cooling on November 10, 2020
(3) Yellow risk during planned maintenance on high pressure core spray system on December 23, 2020

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

(1) Meteorological tower after failed channel check on October 19, 2020 (CR-RBS-2020-04312)
(2) Standby gas treatment system after initiation on damper closure in annulus pressure control system on November 24, 2020 (CR-RBS-2020-03056)
(3) Reactor core isolation cooling system after increased leakage from instrument root valve ICS-V52 on December 14, 2020 (CR-RBS-2020-05267)
(4) Division I emergency diesel generator after failure of standby ventilation fan HVP-FN2A to automatically start on December 15, 2020 (CR-RBS-2020-05179)

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (1 Sample)

The inspectors evaluated the following temporary or permanent modifications:

(1) Leak repair of residual heat removal injection check valve temporary modification on November 13, 2020

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (7 Samples)

The inspectors evaluated the following post-maintenance test activities to verify system operability and functionality:

(1) Work Order (WO) 34538503, SWP-V149 test after internal inspection on October 22, 2020
(2) WO 52849778, ENB-CHGR1B load test after clean and inspect on October 23, 2020
(3) WO 52875373, control room standby gas filter 3B inlet damper HVC-AOD43B after actuator inspection, replacement, and refurbishment on November 2, 2020
(4) WO 00549941, residual heat removal check valve E12-AOVF041A after leak repair on November 10, 2020
(5) WO 52922952, reactor core isolation cooling pump after oil replacement on November 20, 2020
(6) WO 52864337, Division I emergency diesel generator 184-day operability test after extended maintenance outage on December 7, 2020
(7) WO 00550539, testing of recirculation flow control valve A after replacement of servo valve RCS-MOV302C on December 16, 2020

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated forced outage activities from November 7, 2020 to November 14, 2020. The outage was due to failure of the plant makeup water system.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (3 Samples)

(1) STP-309-0202, Revision 332, “Division II Diesel Generator Operability Test” on November 20, 2020
(2) STP-256-6302, Revision 028, “Division II Standby Service Water Quarterly Valve Operability Test” on December 1, 2020

(3) CSP-0100, Revision 029, “Chemistry – Required Surveillances and Actions” on December 10, 2020

Inservice Testing (IP Section 03.01) (1 Sample)

(1) STP-204-6301, Revision 30, “Div I LPCI (RHR) Pump and Valve Operability Test” on November 18, 2020

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

(1) The inspectors evaluated the following submitted Emergency Action Level and Emergency Plan changes:

- River Bend Station Emergency Plan, Revision 48 (effective 9/22/2020; submitted to the NRC on 10/2/2020)

This evaluation does not constitute NRC approval.

71114.06 - Drill Evaluation

Drill/Training Evolution Observation (IP Section 03.02) (1 Sample)

The inspectors evaluated:

(1) Simulator-based licensed operator requalification training evolution that contributed to the Drill and Exercise Performance (DEP) performance indicator on October 1, 2020

71114.08 - Exercise Evaluation Scenario Review

Inspection Review (IP Section 02.01 - 02.04) (1 Sample)

(1) The inspectors reviewed the licensee's preliminary exercise scenario, which was submitted to the NRC on October 2, 2020, for the exercise which was scheduled to occur on December 1, 2020 (after being rescheduled from earlier in the year due to the COVID-19 Public Health Emergency). The inspectors discussed the preliminary scenario with Mr. T. Gates, Manager, Emergency Preparedness, and other members of the emergency preparedness staff on October 29, 2020. The inspectors’ review does not constitute NRC approval of the scenario. [Subsequent to the scenario discussion, due to on-going events surrounding the COVID-19 Public Health Emergency, the licensee requested an exemption from the NRC to postpone the biennial exercise to a date to be determined in CY 2021. However, the scenario has been retained and securely controlled, such that it may be utilized when the exercise is ultimately conducted in CY 2021.]

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

EP01: Drill/Exercise Performance (IP Section 02.12) (1 Sample)

(1) July 1, 2019 through September 30, 2020

EP02: ERO Drill Participation (IP Section 02.13) (1 Sample)

(1) July 1, 2019 through September 30, 2020

EP03: Alert & Notification System Reliability (IP Section 02.14) (1 Sample)

(1) July 1, 2019 through September 30, 2020

BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 02.10) (1 Sample)

(1) October 1, 2019 through September 30, 2020

BI02: RCS Leak Rate Sample (IP Section 02.11) (1 Sample)

(1) October 1, 2019 through September 30, 2020

OR01: Occupational Exposure Control Effectiveness Sample (IP Section 02.15) (1 Sample)

(1) April 1, 2019 through September 30, 2020

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample (IP Section 02.16) (1 Sample)

(1) August 1, 2019 through September 30, 2020

71152 - Problem Identification and Resolution

Semiannual Trend Review (IP Section 02.02) (1 Sample)

(1) The inspectors reviewed the licensee's corrective action program for potential adverse trends that might be indicative of a more significant safety issue.

Annual Follow-up of Selected Issues (IP Section 02.03) (1 Sample)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

(1) Division III diesel generator relay failure under Condition Report CR-RBS-2020-03133 on December 4, 2020

71153 - Followup of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event report (LER):

(1) LER 05000458/2020-001-00, Loss of Control Building Chill Water due to Chiller Control Panel Installation Error (ADAMS Accession No. ML20064D511). The inspectors determined that it was not reasonable to foresee or correct the cause discussed in the LER; therefore, no performance deficiency was identified. The inspectors did not identify a violation of NRC requirements.

INSPECTION RESULTS

<table>
<tr><td colspan="4">Failure to Ensure Adequate Design of Structures for Protection Against External Flooding</td></tr>
<tr><td>Cornerstone</td><td>Significance</td><td>Cross-Cutting Aspect</td><td>Report Section</td></tr>
<tr><td>Mitigating Systems</td><td>Green
NCV 05000458/2020004-01
Open/Closed</td><td>None (NPP)</td><td>71111.01</td></tr>
<tr><td colspan="4">The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” with four examples, for failure to ensure that materials, parts, equipment, and processes essential to the safety-related functions of structures, systems, and components were suitable for the application. Specifically, the licensee failed to ensure that the G tunnel, a safety-related structure, was suitably designed to withstand the effects of natural phenomena in accordance with 10 CFR Part 50, Appendix A, Criterion 2. The licensee failed to ensure that the correct inputs were used in design basis calculations for external flooding, that the calculations were updated to reflect changes made to the plant, and that the construction of the tunnel was adequate to meet the design requirements.</td></tr>
<tr><td colspan="4">Description: During a review of external flood protection, the inspectors identified that the licensee had a vulnerability to flooding in the G tunnel, a safety-related structure. The tunnel was originally intended to connect Unit 1 to a planned second unit. During the licensing process, the licensee cancelled the second unit after excavating the site and ultimately left the excavation pit unfilled. In order to close the Unit 2 end of the tunnel, the licensee installed an end wall and a ventilation system through the tunnel wall with a vertical ventilation shaft on the outside of the wall. The ventilation shaft was constructed with an uncovered opening at 80.5 feet mean sea level (MSL). This was later covered with a filter assembly. During their design basis flood analysis, the licensee identified that flooding from precipitation could result in the pit filling up and potentially affecting the adjacent safety-related structures of Unit 1. Specifically, the G tunnel was vulnerable to flooding effects, and contained safety-related piping and valves for the standby service water system. In order to mitigate the effects of this flooding, the licensee installed a berm surrounding the north end of the pit to divert runoff away from the pit. This berm was not seismically qualified, but the licensee assessed the impact of a combination of precipitation and seismic events on the pit slopes including those adjacent to the berm. The design basis flood events that were evaluated by the licensee in their Updated Safety Analysis Report (USAR) were based on Regulatory Guide 1.59, Revision 2, “Design Basis Floods for Nuclear Power Plants.” The licensee considered three events that could impact the G tunnel; a precipitation event consisting of ½ of the probable maximum precipitation (PMP) followed by a second event consisting of the PMP, an operating basis earthquake (OBE) in conjunction with a ½ PMP, and a safe</td></tr>
</table>

shutdown earthquake in conjunction with precipitation from a 25-year storm. The licensee also assumed antecedent ponding in the pit of 65 feet MSL. The licensee calculated the levels that would result in the pit from those events, to include the levels given a postulated failure of the berm due to the seismic events. This evaluation was submitted to the agency as Revision 17 of the USAR in March 1985. The worst-case flood elevation in the pit was documented as 80.3 feet MSL, resulting from the OBE in conjunction with the ½ PMP and an assumed failure of the berm.

The inspectors walked down the pit and noted that the licensee had changed the configuration of the pit since their initial design and licensing. Specifically, the licensee had constructed chemical storage tanks, their independent spent fuel storage installation, and a security fence through the pit. In addition, in both 2000 and 2011, the licensee had taken additional survey data on the pit that revealed changes in soil distribution. The licensee had also installed a submersible pump and piping in the pit and a road for vehicle access. The inspectors also reviewed drawings and calculations to verify whether they reflected the actual configuration of the site. As a result of these reviews and walkdowns, the inspectors identified four separate examples of failures to maintain the design of the flood control measures to prevent a design basis flood from impacting the standby service water system.

Example 1:

The inspectors reviewed drawing EB-036C, which showed the dimensions and layout of the tunnel ventilation system for the G tunnel, including the exterior ventilation shaft. The inspectors noted that the drawing showed the ventilation system penetrated the shaft at elevation 71.5 feet MSL. The inspectors also identified that the drawing showed that the ventilation shaft was constructed with weep holes at the bottom. The inspectors questioned whether the drawing was correct, and if the weep holes would allow floodwater to enter the G tunnel at a flood elevation significantly below the assumed design basis flood level. The licensee inspected the exterior of the shaft and confirmed that two 2-inch weep holes had been built into the shaft at an approximate elevation of 66 feet MSL.

The inspectors determined that the weep holes would allow water to enter the ventilation shaft at an elevation of 66 feet and from there enter the tunnel through the ventilation duct at an elevation of 71.5 feet. Inside the tunnel, the standby service water motor operated return valves for Division I and II are located at 70 feet and 75 feet, respectively. Based on the design basis flood level in the pit, the inspectors determined that flooding through the weep holes would result in both return valves being submerged, resulting in a loss of both trains of standby service water. In addition, flood water would submerge the air operated alternate return valve that allows service water return in a station blackout, the motor driven FLEX pump P1,the manual valves necessary to connect the diesel driven FLEX pump P2, and the level instruments for automatic transfer of the suction source for reactor core isolation cooling and high pressure core spray.

The licensee took immediate action to seal the weep holes with grout. The licensee also determined the weep holes had most likely been built in during initial construction.

Example 2:

The inspectors reviewed the initial inputs to the calculations for design basis flood level. The inspectors noted that the design basis flood level calculation for the pit, calculation 8.3.1.42, assumed that the area subject to runoff from precipitation into the pit was 800,000 ft^2. This

included an estimated 700,000 ft^2 for the pit itself, and 100,000 ft^2 of area between the pit and the berm. The inspectors noted that this input was determined prior to construction of the berm. The inspectors compared this to the value found in the USAR and noted that the USAR assumed 700,000 ft^2 for the pit, and 450,000 ft^2 for the area between the pit and the berm. The inspectors saw that the 800,000 ft^2 value was carried forward from 1984 through the most recently updated revision of calculation G13.18.8.0-004. The inspectors questioned why the calculation contained a value that was significantly less than the value shown in the USAR and asked what the actual value was. The licensee reviewed the most recent survey data and estimated that the area was approximately 400,000 ft^2, consistent with the value used in the USAR. They then determined that the resulting design basis flood level using the correct value for the drainage area would be significantly higher than what was currently assumed in their calculation. The licensee entered this into their corrective action program and evaluated the operability of the G tunnel. The licensee established interim actions to maintain the operability of the affected systems pending final corrective actions.

Example 3:

The inspectors reviewed the changes to the configuration of the plant against the current calculations to ensure the licensee had adequately incorporated the changes into their calculation of the design basis flood level. The inspectors determined that, following the initial calculation of the volume of the excavation pit and resulting water levels in calculation 8.3.1.42, the licensee had conducted topographic surveys in 2000 and again in 2011. These surveys showed some differences in soil distribution over time. The inspectors found that prior to 2004, the licensee had accounted for the construction of the chemical storage tanks in a separate calculation but had not incorporated the impact in their design basis flood level. The licensee revised calculation 8.3.1.42 in 2004 and reissued it as calculation G13.18.8.0-004. This calculation incorporated the volume of the independent spent fuel storage installation and the storage tanks, and the 2000 survey data, and resulted in a change of the design basis flood level from 80.3 to 80.34 feet.

The inspectors found that the licensee had identified in 2011 that the construction of the Security Owner Controlled Area (SOCA) fence had affected the volume of the excavation pit, but an action to update the calculation had not been completed. In addition, the 2011 survey data had not been incorporated into the calculation. The licensee reviewed the information and concluded that the resulting change in design basis flood level would increase from 80.34 to 80.39 feet MSL. This error was documented in a corrective action report; however, the new values were never incorporated into the calculation.

The inspectors also noted that the licensee had only considered the PMP event in their updates to the calculation. The inspectors questioned why the design basis flood level for the combined events had not been recalculated along with the PMP event. The licensee stated that they believed the berm could be credited with maintaining its structural integrity following an OBE and ½ PMP. The inspectors requested the basis for this assumption, given that the USAR had originally shown that the berm was not required. The inspectors reviewed the licensee's slope stability calculations. The inspectors found that the licensee had evaluated the stability of the excavation slopes to determine whether the berm would fail, and the stability was dependent on the water level in the pit. The water levels used in the stability analysis were not bounded by the new levels that could be expected given the changes to the site. Based on this, the inspectors determined that the licensee had not maintained a calculation to ensure that the design basis flood level would not be exceeded during a combined OBE and ½ PMP. Furthermore, the inspectors found that the stability calculation

for the ½ PMP and PMP event was not bounded by the assumed water level, meaning that the licensee failed to show that the berm would not fail during a design basis flood even without a seismic event.

The inspectors determined that the design basis flood level calculation and the excavation pit slope stability calculation were processes essential to the safety-related functions of SSCs and that the calculations were not suitable because they had not been updated with the actual configuration of the plant, based on the most recent changes to structures within the pit and the most recent survey data.

The licensee entered these issues into their corrective action program.

Example 4:

As part of the initial determination of design basis flood level for the Unit 2 excavation pit, the licensee assumed an antecedent ponding level in the pit prior to the PMP sequence. The licensee initially assumed a water level of 68 feet MSL, but then revised it to 65 feet MSL in Revision 17 of the USAR. The licensee did not incorporate an initial water level in their combined events analyses. The inspectors noted that the pit had standing water in the lower portion of the pit near the installed pump. The inspectors questioned whether the water level was known and how it was controlled. The inspectors determined that the licensee did not have a means of determining the standing water level in the pit. The licensee had been using the pump to maintain water level below the access road into the pit when needed for access. The licensee estimated that the access road was at approximately 65 feet MSL. Based on that, the inspectors noted that there was reason to believe that water level could occasionally reach 65 feet MSL, which would exceed the postulated initial level in the USAR. The inspectors also noted that any water in the pit exceeded the assumption for the combined events analysis, which assumed the pit was dry. The inspectors determined that the licensee had not incorporated the bounding initial water level in their flooding analyses into procedures or specifications and had failed to control the antecedent ponding level such that the design basis assumptions for external flooding were met.

The licensee entered this issue into their corrective action program.

Corrective Actions: The licensee completed a modification to seal the weep holes. The licensee established compensatory measures to mitigate potential flooding and entered the calculation discrepancies into their corrective action program.

Corrective Action References: CR-RBS-2020-03873, CR-RBS-2020-03880, CR-RBS-2020-03926, CR-RBS-2020-04429, and CR-RBS-2020-05391

Performance Assessment:

Performance Deficiency: This failure to ensure that materials, parts, equipment, and processes essential to the safety-related functions of SSCs were suitable for the application is a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the performance deficiency resulted in the standby

service water system being unable to perform its function in the event of a postulated design basis flood.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using Exhibit 2, "Mitigating System Screening Questions," the inspectors determined that the finding involved the loss or degradation of equipment or function specifically designed to mitigate a seismic, flooding, or severe weather initiating event for greater than 14 days. Using Exhibit 4, "External Events Screening Questions," the inspectors determined that the finding required a detailed risk evaluation because the loss of this equipment or function by itself during the external initiating event it was intended to mitigate would degrade two or more trains of a multi-train system or function.

River Bend, Unit 2 Pit Flooding Detailed Risk Evaluation

Conclusion

The estimated increase in core damage frequency (CDF) from the documented performance deficiency which resulted in postulated flooding in the G tunnel was 4.3E-7/year. This result was peer reviewed by a risk and reliability analyst from the Division of Risk Assessment in the Office of Nuclear Reactor Regulation.

Assumptions

The following assumptions were used by inspectors and the analyst to estimate the amount of rain that would cause flooding in the G tunnel and conditions related to that flooding:

1. The amount of water entering the Unit 2 pit during postulated events was estimated using hand calculations which assumed that runoff curves from initial design were used; the Unit 2 pit was assumed at the 65 feet MSL initially; three-quarters of parking lot runoff enters pit when the berm fails during seismic events; the berm completely fails when exposed to OBE ground motion and is unaffected below this ground motion level; and credit was not given for sumps, the pit pump, and storm drains.

2. Operators were not credited for detection and recovery to avert flooding in the G tunnel. The flooding of the G tunnel would always occur during the postulated rainfall and/or seismic events.

3. The levels of flooding in the G tunnel were simplified to 2 levels, a "low" level and a "high" level. Each of these levels was assumed to either be reached from intense precipitation events or an OBE event combined with intense precipitation. Mitigating equipment which would have been wetted by the "low" level in the G tunnel and the assumed degradation from flooding was:

    - High pressure core spray swap-over valve fails to transfer suction from the condensate storage tank to the suppression pool

    - Reactor core isolation cooling swap-over valve fails to transfer suction from the condensate storage tank to the suppression pool

- Service water return line valve 055A fails in its closed position
- FLEX pump P-1 is assumed unavailable and modeled as failed to start
- FLEX pump service water injection strategy is assumed unavailable due to inability to line the system up

Service water return line valve 055B was the only mitigating component which would have been wetted by the "high" level in the G tunnel (in addition to all of the equipment at the "low" level).

Precipitation Estimates

The analyst used precipitation frequency data from the Hydrometeorological Design Studies Center from the National Oceanographic and Atmospheric Administration's National Weather Service. The New Roads Station was the closest estimated site to River Bend Station and precipitation frequency estimates were found at:

https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=la.

Inspectors determined four precipitation that totals were of interest for this evaluation. The 30--day precipitation totals were used to estimate these values. The analyst assumed that after 30 days the additional rainfall in the 45--day or 60--day precipitation frequencies would either partially seep into the ground or evaporate away in the additional 15 or 30 days these precipitation estimates predict. These precipitation totals and their recurrence intervals are estimated below. The recurrence intervals were inverted to estimate initiating event frequencies for these precipitation totals.

Precipitation Total	Recurrence Interval	Initiating Event Frequency
8.3 inches	0.5 years	2.0/year
13.6 inches	1.5 years	0.67/year
24.1 inches	60 years	0.017/year
43.0 inches	2000 years	0.0005/year

The analyst then applied these initiating event frequencies to the events or plant conditions to determine the increase in core damage frequency due to the precipitation events.

Seismic Event Estimates

Part of the design basis for flooding at the River Bend site includes events where a seismic event occurs concurrent with intense precipitation events. The assumption for these concurrent events is that the seismic event degrades a constructed berm such that precipitation runoff from other parts of the site will make its way to the Unit 2 pit.

The licensing basis assumes an 0.05 g OBE will be the smallest severity earthquake to degrade the berm. The analyst assumed, consistent with the NRC SPAR model, that this earthquake would not damage mitigating plant equipment. The Risk Assessment of Operational Events Handbook, Volume 2, External Events, prescribes a mean frequency per year for the OBE at River Bend of 1.80E-4/year. For this evaluation, the analyst assumed that an OBE would occur at the station during the year prior to the intense precipitation events needed to begin flooding the G tunnel. For this to be true, the earthquake would

occur; site personnel would not be aware of the potential impact of the degraded bank during any intense precipitation events for the year after the earthquake; and subsequent intense precipitation events would occur. This assumption would result in a probability of 1.80E-4 to postulated seismic plus precipitation events.

Events Postulated

1. Precipitation event with 24.1 inches of rain in 30 days. This precipitation event would permit water to flood the G tunnel up to "low" level and affect the mitigating equipment listed in the assumptions section. One of the following two scenarios below could occur. The analyst assumed each had the same likelihood and applied a 50 percent split fraction to each.

    a. All affected mitigating equipment at the "low" level in the G tunnel fails. After the equipment fails, the licensee will take 7 days to figure out the G tunnel is flooded and take action to dewater the G tunnel and prevent additional flooding. During this time the probabilistic occurrence of risk significant initiating events (e.g., losses of offsite power) was applied. This scenario yielded an estimate in the increase in core damage frequency of 1.8E-7/year. Applying a 50 percent probability to this result yielded 9.0E-8/year.

    b. Service water return line valve 055A fails open when submerged causing a service water initiating event. Upon being wetted, service water return line 055A would spuriously open due to an electrical short. This failure serves as a service water return line initiator. All other mitigating equipment at the "low" flood level in the G tunnel was assumed failed. With the conditional core damage probability applied to the precipitation frequency as the initiating event frequency, this scenario yielded an estimate in the increase in core damage frequency of 4.0E-7/year. Applying a 50 percent probability to this result yielded 2.0E-7/year.

2. Precipitation event with 43.0 inches of rain in 30 days. This event would permit water to flood the G tunnel up to "high" level and affect the mitigating equipment listed in the "low" and "high" levels above. The same 7-day period for dewatering where a probabilistic initiator could occur was applied. This scenario yielded an estimate in the increase in core damage frequency of 7.5E-8/year.

3. Precipitation event with 8.3 inches of rain in 30 days after an OBE. These concurrent events would permit water to flood the G tunnel up to "low" level and affect the mitigating equipment listed above. The analyst assumed that one year before the rain an OBE would occur and degrade the berm and the licensee would not repair the berm. This would allow a smaller rainfall total to fill the Unit 2 pit. One of the following two scenarios below could occur. The analyst assumed each had the same likelihood and applied a 50 percent split fraction to the results.

    a. All affected mitigating equipment at the "low" levels in the G tunnel fails. After the equipment fails, the licensee will take 7 days to figure out the G tunnel is flooded and take action to dewater the G tunnel and prevent additional flooding. During this time the probabilistic occurrence of risk significant initiating events was applied. This scenario yielded an estimate in the

increase in core damage frequency of 9.8E-9/year. Applying a 50 percent probability to this result yielded 4.9E-9/year.

b. Service water return line valve 055A fails open when submerged causing a service water initiating event. Upon being wetted, service water return line 055A would spuriously open due to an electrical short. This failure serves as a service water return line initiator. All other mitigating equipment at the "low" flood level in the G tunnel was assumed failed. With the conditional core damage probability applied to the precipitation frequency as the initiating event frequency, this scenario yielded an estimate in the increase in core damage frequency of 2.1E-8/year. Applying a 50 percent probability to this result yielded 1.1E-8/year.

4. Precipitation event with 13.6 inches of rain in 30 days after an OBE. These concurrent events would permit water to flood the G tunnel up to "high" level and affect the mitigating equipment listed. The same 7-day period for dewatering where a probabilistic initiator could occur was applied. This scenario yielded an estimate in the increase in core damage frequency of 5.4E-8/year.

The results are summed in the table below, yielding an estimate of the increase in core damage frequency of 4.3E-7/year.

Scenario		Increase in Core Damage Frequency (per year)
1.a.	24.1 inches of rain affects mitigating equipment	9.0E-8
1.b	24.1 inches of rain initiates event	2.0E-7
2	43.0 inches of rain affects mitigating equipment	7.5E-8
3.a	8.3 inches of rain plus OBE affects equipment	4.9E-9
3.b	8.3 inches of rain plus OBE initiates event	1.1E-8
4	13.6 inches of rain plus OBE affects equipment	5.4E-8
Total		**4.3E-7**

Analysis Information

The analyst performed the analysis with the River Bend SPAR model, Revision 8.58, run on SAPHIRE, Version 8.2.1. The analyst modified this model to reflect the licensee's FLEX strategy by changing the value of basic event FLX-XHE-XL-ELAP, "Operators fail to declare ELAP when beneficial," from 1.0 to 1.0E-2 to reflect credit for the licensee's FLEX strategy. Also, the analyst changed the value of basic event FLX-XHE-XM-RPV2, "Operators fail to stage or run or supply or refill FLEX RPV pump," from TRUE to 3.4E-1 to reflect credit for service water basin injection into the reactor vessel as a source of water injection during an ELAP event. These modifications were documented in detail in River Bend Special Inspection Report 05000458/2020050.

Large Early Release Frequency

Using Table 6.1, "Phase 1 Screening – Type A Findings at Full Power," from Manual Chapter 0609, Appendix H, "Containment Integrity Significance Determination Process," the analyst noted that the table instructs further Phase 2 analysis for BWR reactor types with Mark III containment types for station blackout sequences. From that point, Table 6.2, "Phase 2

Assessment Factors – Type A Findings at Power," prescribes an assessment factor of 0.2 for BWR reactor types with Mark III containment types for station blackout and high-pressure sequences. Over 90 percent of the contribution to core damage frequency came from transient and loss of offsite power sequences, so the analyst applied the 0.2 assessment factor to the total results. After application of the assessment factor, the analyst estimated the increase in LERF to be 8.6E-7/year.

External Events

The analyst assumed that the probability of other concurrent external events would be extremely small and therefore additional increase in core damage frequency from external events was considered negligible.

Cross-Cutting Aspect: Not Present Performance. No cross-cutting aspect was assigned to this finding because the inspectors determined the finding did not reflect present licensee performance.

Enforcement:

Violation: Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," states, in part, that for those SSCs to which this appendix applies, measures shall be established for the selection and reviewed for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the SSCs. Contrary to the above, from initial construction until December 2020, for quality-related components associated with protection of standby service water from external flooding, to which 10 CFR Part 50, Appendix B applies, the licensee failed to select and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related function of the component. Specifically, the licensee failed to ensure that the design basis flood level calculation was updated to reflect actual changes in the plant and that the safety-related G tunnel structure was adequately designed and constructed to protect the standby service water system in the event of a design basis flood event.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Failure to Update the Updated Safety Analysis Report			
Cornerstone	Severity	Cross-Cutting Aspect	Report Section
Not Applicable	Severity Level IV NCV 05000458/2020004-02 Open/Closed	Not Applicable	71111.01

The inspectors identified a Severity Level IV non-cited violation of 10 CFR 50.71(e), "Maintenance of Records, Making Reports," with two examples, associated with the licensee's failure to correctly update the Updated Safety Analysis Report. Specifically, following multiple changes in configuration of the Unit 2 excavation pit and the G tunnel, the licensee failed to update the Updated Safety Analysis Report regarding the postulated design basis flood level for the Unit 2 excavation and the design features for protecting safety-related structures, systems, and components against external flood hazards.

Description: During a review of external flood protection, the inspectors identified that the licensee had a vulnerability to flooding in the G tunnel, a safety-related structure. The tunnel was originally intended to connect Unit 1 to a planned second unit. During the licensing

process, the licensee cancelled the second unit after excavating the site and ultimately left the excavation pit unfilled. In order to close the Unit 2 end of the tunnel, the licensee installed an end wall and a ventilation system through the tunnel wall with a vertical ventilation shaft on the outside of the wall. The ventilation shaft was constructed with an uncovered opening at 80.5 feet mean sea level (MSL). This was later covered with a filter assembly. During their design basis flood analysis, the licensee identified that flooding from precipitation could result in the pit filling up and potentially affecting the adjacent safety-related structures of Unit 1. Specifically, the G tunnel was vulnerable to flooding effects, and contained safety-related piping and valves for the standby service water system. In order to mitigate the effects of this flooding, the licensee installed a berm surrounding the north end of the pit to divert runoff away from the pit. This berm was not seismically qualified, but the licensee assessed the impact of a combination of precipitation and seismic events on the pit slopes including those adjacent to the berm. The design basis flood events that were evaluated by the licensee in their Updated Safety Analysis Report (USAR) were based on Regulatory Guide 1.59, Revision 2, "Design Basis Floods for Nuclear Power Plants." The licensee considered three events that could impact the G tunnel; a precipitation event consisting of ½ of the probable maximum precipitation (PMP) followed by a second event consisting of the PMP, an operating basis earthquake (OBE) in conjunction with a ½ PMP, and a safe shutdown earthquake in conjunction with precipitation from a 25-year storm. The licensee also assumed antecedent ponding in the pit of 65 feet MSL. The licensee calculated the levels that would result in the pit from those events, to include the levels given a postulated failure of the berm due to the seismic events. This evaluation was submitted to the agency as Revision 17 of the USAR in March 1985. The worst-case flood elevation in the pit was documented as 80.3 feet MSL, resulting from the OBE in conjunction with the ½ PMP and an assumed failure of the berm.

During inspection of the licensee's design for coping with external flooding, the inspectors reviewed the description of the external flood hazard and mitigation in the licensee's USAR. The inspectors determined that the licensee had provided a description of the design basis flood level for the Unit 2 excavation pit in Section 2.4 of the USAR, and a description of penetrations designed for flood protection in Section 3.4 of the USAR. The inspectors reviewed this description during inspection of the licensee external flood protection measures and noted that several discrepancies existed between the description as written in the USAR and the actual site configuration. The inspectors identified two examples of a failure to update the USAR with the latest information developed:

Example 1:

The inspectors noted that flood protection features were documented in Section 3.4 of the USAR. Specifically, the license had documented structures and penetrations designed for flood protection in USAR Table 3.4-1, "Structures, Penetrations, and Access Openings Designed for Flood Protection." The inspectors noted that the G tunnel was not listed as a structure designed for flood protection. In addition, penetrations and openings in the G tunnel below ground level that were subject to flood potential were also not listed. The inspectors noted that the end wall of the G tunnel had two doors installed that were designed for flood protection of SSCs in the G tunnel. These doors were not listed in Table 3.4-1 or Section 3.4 or described anywhere else in the USAR. The inspectors also found that the ventilation shaft in the G tunnel formed the basis for the limit on the maximum acceptable water level in the pit but was not described in the USAR. The inspectors noted that the ventilation shaft duct penetration was a penetration in the G tunnel that was below ground level and subject to potential flooding. The inspectors determined that the failure to include the G tunnel and its

penetrations and openings in Section 3.4 of the USAR resulted in incomplete information that was required to be contained in the USAR.

Example 2:

The inspectors noted that the licensee had modified the pit in ways that affected the design basis flood level since the issuance of the operating license. For example, the licensee constructed the independent spent fuel storage installation, three chemical storage tanks, and a security fence, all of which altered the configuration of the excavation pit. The inspectors found that the licensee had not updated the USAR to describe the current configuration of the pit. In addition, the licensee had revised their determination of the design basis flood level but had not updated the USAR to reflect the new value. The USAR contained the original design basis flood level of 80.3 feet MSL, while the licensee had already determined that the design basis flood level would exceed that level. The inspectors determined that the configuration of the pit and the resulting design basis flood level was information that was required to be maintained in the USAR. The inspectors found that the information had not been updated to reflect the most current information.

The inspectors determined that the USAR did not contain the latest information developed regarding the design basis and safety analysis for external events and natural phenomena for which the plant is designed to function. In addition, the inspectors determined that the information that was provided in the USAR was not sufficient to permit understanding of the system design and relationship to safety evaluations. The inspectors determined that the changes to the plant that should have been updated first occurred with the addition of the chemical storage tanks to the pit in April 1991.

Corrective Actions: The licensee entered these issues into their corrective action program.

Corrective Action References: CR-RBS-2020-03928 and CR-RBS-2020-04025

Performance Assessment: The inspectors determined this violation was associated with a minor performance deficiency.

Enforcement: The ROP's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address this violation which impedes the NRC's ability to regulate using traditional enforcement to adequately deter non-compliance.

Severity: Because this performance deficiency had the potential to impact the NRC's ability to perform its regulatory function, it is necessary to address this violation using traditional enforcement to adequately deter noncompliance. Using the NRC Enforcement Policy, dated January 15, 2020, the violation was determined to be a Severity Level IV violation in accordance with Section 6.1.d.3 because the lack of up-to-date information in the USAR had a material impact on licensed activities.

Violation: Title 10 CFR 50.71(e) requires, in part, that licensees shall update periodically, as provided in paragraphs (e)(3) and (4) of 10 CFR 50.71, USAR, originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. Contrary to the above, from April 1991, through September 2020, the licensee failed to update the USAR to assure that the information included in the report contained the latest information developed. Specifically, USAR, Sections 2.4 and 3.4, did not contain accurate information regarding the current design basis

flood level and design features implemented to protect safety-related SSCs against external flooding.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Observation: Semiannual Trend Review	71152

In January 2020, the licensee documented an adverse trend of issues related to the fire protection program. The licensee reviewed the issues and entered their process for an "aggregate performance issue" in accordance with Procedure EN-LI-121, "Trending and Performance Review Process." The licensee performed additional analyses to focus on three areas; specifically, fire brigade drill performance, control of fire doors, and maintenance of fire extinguishers. The licensee reviewed the trend in May 2020 and August 2020.

The inspectors reviewed the status of licensee actions following the August trend review. The inspectors noted that the licensee had observed an improvement in the previously observed trend based on 189 condition reports coded with the fire protection issue trend code. The inspectors noted that the analyses performed appeared to address concerns with the three selected areas. However, the inspectors also observed that 88 of the condition reports involved spurious alarms, and an additional 52 condition reports documented degraded material conditions with fire protection equipment. The inspectors noted that none of the analyses performed addressed the high number of spurious alarms and material conditions and notified the licensee of this observation. However, the licensee does have a planned modification to address spurious alarms. The adverse trend remains open in the licensee's corrective action trending and performance review process.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On October 29, 2020, the inspectors presented the emergency preparedness exercise scenario review inspection results to Mr. T. Gates, Manager, Emergency Preparedness, and other members of the licensee staff.

- On December 17, 2020, the inspectors presented the emergency preparedness performance indicator verification and emergency plan change in-office inspection results to Mr. T. Gates, Manager, Emergency Preparedness, and other members of the licensee staff.

- On January 6, 2021, the inspectors presented the integrated inspection results to Mr. S. Vercelli, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Calculations	8.3.1.34	PMP in Site Area	1
		8.3.1.42	Ponding in Unit 2 Excavation and Seepage, Assuming a Berm Around Excavation	0
		8.3.1.43	Ponding in Excavation for 25Yr Flood + SSE, Assuming Berm Loss	0
		G(C)-249	Slope Stability Analysis for West Excavation Slope and Slope West of SSWCT	0
		G(C)-252	Slope Stability Analysis: Unit 2 Excavation Slope w/ Flood Control Berm	0
		G(C)-257	Slope Stability Analysis: Unit 2 Excavation West Slope and Fill Slope West of SSWCT	0
		G13.18.1.0*00	Impact of Service Water Chemical Cleaning Waste Tanks on Ponding in Unit 2 Excavation	0
		G13.18.1.4*010	Design of Doors TU 66-01 & TU-67-H1 and Evaluation of Stresses for G-Tunnel End Wall	0
		G13.18.8.0-004	Impact of Independent Spent Fuel Storage Installation on Ponding in Unit 2 Excavation	0A
	Corrective Action Documents	CR-RBS-	2011-06331, 2012-06704, 2020-02338, 2020-02385, 2020-02445, 2020-03873, 2020-03880, 2020-04343, 2020-04429, 2020-05391	
	Drawings	0125.928-002-010	Dry Cask Storage Site Plan	A
		11-343	Map Showing As-Built Survey of Dry Cask Storage Site	07/14/2011
		EB-036C	Ventilation, Remote Air & Chilled Water Piping Tunnels	12
		EB-036C-8	Ventilation, Remote Air & Chilled Water Piping Tunnels	7
71114.04	Miscellaneous		10 CFR 50.54(q)(3) Evaluation for Emergency Plan, Revision 48	07/30/2020
			Process Applicability Determination for Emergency Plan, Revision 48	07/30/2020
		RBG-48023	RBS Emergency Plan	47
		RBG-48042	RBS Emergency Plan	48
	Procedures	EPP-2-503	River Bend Station Equipment Important to Emergency Response (EITER)	5

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71151	Corrective Action Documents	CR-RBS-	2019-04682, 2019-04896, 2019-06934, 2019-06949, 2019-06965, 2019-07544, 2020-00091, 2020-00312, 2020-01738, 2020-03830	
		CR-RBS-	2019-01999, 2019-02732, 2019-02809, 2019-03606, 2019-04214, 2019-04738, 2019-04825, 2019-06643, 2019-07890, 2019-07981, 2020-00201, 2020-00428, 2020-00590, 2020-00613, 2020-00907, 2020-03805, 2020-03806, 2020-03808	
		For Effluent PI: CR-RBS-	2019-05199, 2019-05877, 2019-05909, 2019-07058, 2019-07493, 2020-01818, 2020-02056, 2020-02354, 2020-02557, 2020-03713, 2020-04388	
		For Effluents PI: CR-HQN-	2019-02131	
	Miscellaneous		Sentinel Log	12/08/2020
			RBS Drill and Exercise Performance Indicator Records (from License Operator Exam/Requalification, Team Drills, and other ERO Activities)	3Q/2019 - 3Q/2020
			RBS Key ERO Member Participation Reports & ERO Rosters	3Q/2019 - 3Q/2020
			Fleet EP OE Notification Form: CR-RBS-2020-3830 (Missed DEP)	09/09/2020
			10 CFR 50.54(q)(2) Review: Adoption EN-EP-801 Standard ERO Minimum Key PI Positions	02/12/2020
			EN-LI-114 NRC Performance Indicator Technique/Data Sheets for RBS Alert & Notification System Reliability Performance Indicator	3Q/2019 - 3Q/2020
		RBG-47951	2018 Annual Radioactive Effluent Release Report River Bend Station - Unit 1	05/01/2019
		RBG-48019	2019 Annual Radioactive Effluent Release Report River Bend Station - Unit 1	04/30/2020
	Procedures	EPP-2-701	Prompt Notification System Maintenance and Testing	33