



**Entergy**

**Entergy Operations, Inc.**

River Bend Station  
5485 U.S. Highway 61N  
St. Francisville, LA 70775  
Tel 225-381-4157

**N. Todd Brumfield**

Director – Regulatory & Performance  
Improvement

RBG-47582

July 16, 2015

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

**SUBJECT:** Response to Request for Information - Change to Technical Specification  
3.8.1, "AC Sources – Operating"  
River Bend Station, Unit 1  
Docket No. 50-458  
License No. NPF-47

- References
1. Entergy letter, Application for Change to Technical Specification 3.8.1, "AC Sources – Operating" dated July 9, 2014 (RBG-47461)
  2. NRC email, River Bend Station Unit 1 License Amendment Request for Change to Technical Specifications 3.8.1, "AC Sources - Operating" (MF4421) dated January 20, 2015
  3. Entergy letter, Response to Request for Information - Change to Technical Specification 3.8.1, "AC Sources — Operating" dated May 7, 2015
  4. NRC email, River Bend Station Unit 1 License Amendment Request for Change to Technical Specifications 3.8.1, "AC Sources - Operating" (MF4421) dated May 04, 2015
  5. Entergy letter, Response to Request for Information - Change to Technical Specification 3.8.1, "AC Sources — Operating" dated June 3, 2015

Dear Sir or Madam:

In Reference 1 Entergy submitted a request for an amendment to the Technical Specifications (TS) for River Bend Station (RBS), Unit 1, modifying the existing Surveillance Requirements (SRs) related to Technical Specification 3.8.1, "AC Sources – Operating." References 3 and 5, are responses to NRC Staff requested additional information.

During the review an editorial changes to the numbering of the revised TS SRs was identified. The changes are for clarity and have no technical effect. The changes are identified in the attachment.

ADD  
NRC

The changes were discussed with the NRC Project Manager. These changes are in the Attachment.

There are not new commitments in this letter. Please contact Mr. J. A. Clark at (225) 381-4177, if you have any questions.

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 16, 2015.

Sincerely,

A handwritten signature in black ink, appearing to read "N. J. Brunfield". The signature is fluid and cursive, with the first name "N." and last name "Brunfield" clearly distinguishable.

NTB/JAC/bmb

Attachment: Revised Surveillance Requirement Numbering

cc: Regional Administrator  
U. S. Nuclear Regulatory Commission, Region IV  
1600 East Lamar Blvd.  
Arlington, TX 76011-4511

NRC Senior Resident Inspector  
P. O. Box 1050  
St. Francisville, LA 70775

U. S. Nuclear Regulatory Commission  
Attn: Mr. Alan Wang  
MS O-8B1  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

Department of Environmental Quality  
Office of Environmental Compliance  
Radiological Emergency Planning and Response Section  
Ji Young Wiley  
P.O. Box 4312  
Baton Rouge, LA 70821-4312

Public Utility Commission of Texas  
Attn: PUC Filing Clerk  
1701 N. Congress Avenue  
P. O. Box 13326  
Austin, TX 78711-3326

RB1-15-0101

LAR 2014-02

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.11</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period.</li> <li>2. This Surveillance shall not be performed in MODE 1, 2, or 3. (Not applicable to DG 1C) However, credit may be taken for unplanned events that satisfy this SR.</li> </ol> <p>-----</p> <p>Verify on an actual or simulated loss of offsite power signal:</p> <ol style="list-style-type: none"> <li>a. De-energization of emergency buses;</li> <li>b. Load shedding from emergency buses for Divisions I and II; and</li> <li>c. DG auto-starts from standby condition and:               <ol style="list-style-type: none"> <li>1. energizes permanently connected loads in <math>\leq 10</math> seconds for DG 1A and DG 1B and <math>\leq 13</math> seconds for DG 1C,</li> <li>2. energizes auto-connected shutdown loads,</li> <li>3. maintains steady state voltage                   <ol style="list-style-type: none"> <li>i. for DG 1A and DG 1B <math>\geq 3740</math> V and <math>\leq 4368</math> V,</li> <li>ii. for DG 1C <math>\geq 3740</math> V and <math>\leq 4580</math> V</li> </ol> </li> <li>4. maintains steady state frequency <math>\geq 58.8</math> Hz and <math>\leq 60.2</math> Hz, and</li> <li>5. supplies permanently connected and auto-connected shutdown loads for <math>\geq 5</math> minutes.</li> </ol> </li> </ol>	<p>24 months</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.12      -----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period.</li> <li>2. This Surveillance shall not be performed in MODE 1 or 2. (Not applicable to DG 1C) However, credit may be taken for unplanned events that satisfy this SR.</li> </ol> <p>-----</p> <p>Verify on an actual or simulated Emergency Core Cooling System (ECCS) initiation signal each DG auto-starts from standby condition and:</p> <ol style="list-style-type: none"> <li>a. For DG 1C during the auto-start maintains voltage <math>\leq 5400</math> V and frequency <math>\leq 66.75</math> Hz;</li> <li>b. In <math>\leq 10</math> seconds for DG 1A and DG 1B and <math>\leq 13</math> seconds for DG 1C after auto-start and during tests, achieves voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz.</li> <li>c. Achieves steady state voltage               <ol style="list-style-type: none"> <li>1. For DG 1A and DG 1B <math>\geq 3740</math> V and <math>\leq 4368</math> V,</li> <li>2. For DG 1C <math>\geq 3740</math> V and <math>\leq 4580</math> V, and</li> <li>3. For DG 1A, 1B, and 1C, frequency of <math>\geq 58.8</math> and <math>\leq 60.2</math> Hz; and</li> </ol> </li> <li>d. Operates for <math>\geq 5</math> minutes.</li> </ol>	<p>24 months</p>

(continued)

**Attachment 1**

**RBG-47582**

**Revised Surveillance Requirement Numbering**

<b>Specification</b>	<b>Page</b>	<b>Note/Change</b>
SR 3.8.1.11	3.8-9	Subsection lettering/numbering
SR 3.8.1.12	3.8-10	Subsection lettering/numbering
SR 3.8.1.15	3.8-12	Subsection lettering/numbering
SR 3.8.1.15	3.8-13	Relocation of SR 3.8.1.16 (no change to SR)
SR 3.8.1.19	3.8-14	Subsection lettering/numbering
SR 3.8.1.20	3.8-15	Subsection lettering/numbering

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.13 -----NOTE----- This Surveillance shall not be performed in MODE 1, 2, or 3. (Not applicable to DG 1C) However, credit may be taken for unplanned events that satisfy this SR. ----- Verify each DG's automatic trips are bypassed on an actual or simulated ECCS initiation signal except:</p> <ul style="list-style-type: none"> <li>a. Engine overspeed; and</li> <li>b. Generator differential current.</li> </ul>	<p>24 months</p>
<p>SR 3.8.1.14 -----NOTES----- 1. Momentary transients outside the load and power factor ranges do not invalidate this test. 2. Credit may be taken for unplanned events that satisfy this SR. ----- Verify each DG operating at a power factor <math>\leq 0.9</math>, operates for <math>\geq 24</math> hours:</p> <ul style="list-style-type: none"> <li>a. For DG 1A and DG 1B loaded <math>\geq 3050</math> kW and <math>\leq 3130</math> kW; and</li> <li>b. For DG 1C: <ul style="list-style-type: none"> <li>1. For <math>\geq 2</math> hours loaded <math>\geq 2750</math> kW and <math>\leq 2850</math> kW, and</li> <li>2. For the remaining hours of the test loaded <math>\geq 2525</math> kW and <math>\leq 2600</math> kW.</li> </ul> </li> </ul>	<p>24 months</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.15</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>This Surveillance shall be performed within 5 minutes of shutting down the DG after the DG has operated <math>\geq 1</math> hour loaded <math>\geq 3050</math> kW and <math>\leq 3100</math> kW for DG 1A and DG 1B, and <math>\geq 2525</math> kW and <math>\leq 2600</math> for DG 1C, or operating temperatures have stabilized, which ever is longer.</li> </ol> <p>Momentary transients outside of the load range do not invalidate this test.</p> <ol style="list-style-type: none"> <li>All DG starts may be preceded by an engine prelube period.</li> </ol> <p>-----</p> <p>Verify each DG starts and achieves:</p> <ol style="list-style-type: none"> <li>In <math>\leq 10</math> seconds for DG 1A and DG 1B and <math>\leq 13</math> seconds for DG 1C voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz, and</li> <li>Steady state voltage               <ol style="list-style-type: none"> <li>For DG 1A and DG 1B <math>\geq 3740</math> V and <math>\leq 4368</math> V</li> <li>For DG 1C <math>\geq 3740</math> V and <math>\leq 4580</math> V and</li> <li>For DG 1A, 1B, and 1C frequency <math>\geq 58.8</math> Hz and <math>\leq 60.2</math> Hz.</li> </ol> </li> </ol>	<p>24 months</p>

(continued)



SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.16</p> <p>-----NOTE----- This Surveillance shall not be performed in MODE 1, 2, or 3. (Not applicable to DG 1C) However, credit may be taken for unplanned events that satisfy this SR.</p> <p>-----</p> <p>Verify each DG:</p> <ul style="list-style-type: none"> <li>a. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power;</li> <li>b. Transfers loads to offsite power source; and</li> <li>c. Returns to ready-to-load operation.</li> </ul>	<p>24 months</p>
<p>SR 3.8.1.17</p> <p>-----NOTE----- This Surveillance shall not be performed in MODE 1, 2, or 3. (Not applicable to DG 1C) However, credit may be taken for unplanned events that satisfy this SR.</p> <p>-----</p> <p>Verify, with a DG operating in test mode and connected to its bus, an actual or simulated ECCS initiation signal overrides the test mode by:</p> <ul style="list-style-type: none"> <li>a. Returning DG to ready-to-load operation; and</li> <li>b. Automatically energizing the emergency loads from offsite power.</li> </ul>	<p>24 months</p>
<p>SR 3.8.1.18</p> <p>-----NOTE----- This Surveillance shall not be performed in MODE 1, 2, or 3. (Not applicable to DG 1C) However, credit may be taken for unplanned events that satisfy this SR.</p> <p>-----</p> <p>Verify sequence time is within <math>\pm 10\%</math> of design for each load sequencer timer.</p>	<p>24 months</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.19      -----NOTES-----</p> <ol style="list-style-type: none"> <li>1. All DG starts may be preceded by an engine prelube period.</li> <li>2. This Surveillance shall not be performed in MODE 1, 2, or 3. (Not applicable to DG 1C) However, credit may be taken for unplanned events that satisfy this SR.</li> </ol> <p>-----</p> <p>Verify, on an actual or simulated loss of offsite power signal in conjunction with an actual or simulated ECCS initiation signal:</p> <ol style="list-style-type: none"> <li>a. De-energization of emergency buses;</li> <li>b. Load shedding from emergency buses for Divisions I and II; and</li> <li>c. DG auto-starts from standby condition and:               <ol style="list-style-type: none"> <li>1. energizes permanently connected loads in <math>\leq 10</math> seconds for DG 1A and DG 1B and <math>\leq 13</math> seconds for DG 1C,</li> <li>2. energizes auto-connected emergency loads,</li> <li>3. achieves steady state voltage                   <ol style="list-style-type: none"> <li>i. for DG 1A and DG 1B <math>\geq 3740</math> V and <math>\leq 4368</math> V,</li> <li>ii. for DG 1C <math>\geq 3740</math> V and <math>\leq 4580</math> V,</li> </ol> </li> <li>4. achieves steady state frequency <math>\geq 58.8</math> Hz and <math>\leq 60.2</math> Hz, and</li> <li>5. supplies permanently connected and auto-connected emergency loads for <math>\geq 5</math> minutes.</li> </ol> </li> </ol>	<p>24 months</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.1.20</p> <p>-----NOTE----- All DG starts may be preceded by an engine prelube period. -----</p> <p>Verify, when started simultaneously from standby condition, each DG achieves:</p> <ol style="list-style-type: none"> <li>1. In <math>\leq 10</math> seconds for DG 1A and DG 1B and <math>\leq 13</math> seconds for DG 1C voltage <math>\geq 3740</math> V and frequency <math>\geq 58.8</math> Hz, and</li> <li>2. Steady state voltage               <ol style="list-style-type: none"> <li>a) For DG 1A and DG 1B <math>\geq 3740</math> V and <math>\leq 4368</math> V,</li> <li>b) For DG 1C <math>\geq 3740</math> V and <math>\leq 4580</math> V, and</li> <li>c) For DG 1A, 1B, and 1C frequency <math>\geq 58.8</math> Hz and <math>\leq 60.2</math> Hz.</li> </ol> </li> </ol>	<p>10 years</p>