

PMFermiCOLPEm Resource

From: Eudy, Michael
Sent: Monday, August 29, 2011 2:57 PM
To: Makar, Gregory; Honcharik, John
Cc: Muniz, Adrian; Norato, Michael; FermiCOL Resource
Subject: FW: Turbine Integrity Report Change List
Attachments: ST-56834 R3 Turbine Missile Change List.pdf

Greg and John,

DTE has offered this list as a supplement to help guide you through all the changes in the latest rev of the turbine report.

For the upcoming 9/1 OI call please plan to discuss:

1. Your issues with changes in the report
2. The new draft RAI 6015 which they will get COB tomorrow

Thanks and let me know if you have any questions.

From: Nicholas A Latzy [<mailto:latzyn@dteenergy.com>]
Sent: Monday, August 29, 2011 2:01 PM
To: Eudy, Michael; Muniz, Adrian
Subject: Turbine Integrity Report Change List

Here is the courtesy copy of the change list for the Turbine Integrity Report.

If you have any questions, please feel free to call.

Thank you.
Nicholas A. Latzy
Supervisor - Engineering
Nuclear Development - DTE Energy
(313)-235-3370

Hearing Identifier: Fermi_COL_Public
Email Number: 871

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Subject: FW: Turbine Integrity Report Change List
Sent Date: 8/29/2011 2:56:46 PM
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From: Eudy, Michael

Created By: Michael.Eudy@nrc.gov

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"Muniz, Adrian" <Adrian.Muniz@nrc.gov>
Tracking Status: None
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ESBWR Low Pressure Rotor Missile Generation Probability Analysis**GE Report # ST-56834/P and ST-56834/N-P****Revision 2 to Revision 3 Change List**

Item	Location	Description of Change
1.	General	Changed number of total pages from 56 to 58 and changed the Table of Contents appropriately. In addition, the Table of Contents is changed to address revised subsection numbers and titles in Section 10.
2.	General	Changed date of document from September 14, 2010, to July 22, 2011, and changed the copyright notice date from “2010” to “2011.”
3.	General	Changed the revision number from 2 to 3.
4.	General	Reformatted the subsection numbers by indenting.
5.	S1, 2 nd ¶	Change “favorable oriented” to “favorably oriented” and “unfavorable oriented” to “un-favorably oriented” to correct grammar. (Note that the NRC made this grammatical change in DG-1217, which is a proposed Revision 2 of RG 1.115. See DG-1217, Page 5.)
6.	S2, 1 st and 2 nd ¶¶	In first paragraph, for consistency capitalization and use of acronyms, changed “Moisture Separator Reheaters” to “moisture separator reheaters (MSRs).” In second paragraph, deleted “Moisture Separator Reheaters” and inserted “MSRs” for consistency in use of acronyms.
7.	S3.1	Section 3.1, Materials Selection,” is rewritten to reflect a change from material specification B50A373B8 to B50A373B12. Additional detail is added to the section and the NRC performed an audit to discuss this information with Detroit Edison and GE. The first sentence of the previous revision is now the beginning of a new first paragraph of the revised Section 3.1. The new second paragraph of this section is the same as the information that was contained in previous Section 3.1 except for the first sentence (i.e., no changes are made to the content that is the new second paragraph). See DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-12.
8.	S3.1.1, 2 nd ¶	Based on discussion with NRC, added the new last sentence of this paragraph: “By this definition, the plus 2 σ value of FATT is +30°F.” See DTE Letter NRC3-11-0028

Item	Location	Description of Change
		(7/29/2011) response to NRC RAI 10.02.03-13.
9.	S3.1.1, 3 rd ¶ and Figure 3-1	The previous third paragraph of this section is relocated to below Figure 3-1. No changes are made to the content of the third paragraph or to Figure 3-1.
10.	S4.4, eq. 4-6	Changed the font from “UTSRT” to “UTS _{RT} ” in the equation and in the explanation of the term that follows the equation. This subscript font is more appropriate to reflect that the term is UTS at room temperature.
11.	S5.1.2.1, 2 nd ¶	Added to the end of the first sentence: “... used in this evaluation.” This clarifies that Rev. 3 uses the combined valve failure data. See DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-16.
12.	S5.1.2.1, Last ¶	Changed “(with the updated failure rates)” to “(with the updated failure rates including 2008 data)” and “with the older failure rates” to “with the pre-2008 failure rates.” See DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-16.
13.	S7.1	In some instances of “K _{IC} ” the “c” in the subscript was previously not capitalized. This has been corrected in these instances of Section 7.1 for consistency.
14.	S7.1	Added “are” to first sentence after eq. 7-5 as a grammatical change.
15.	S7.3	In the explanation of terms for eq. 7-17, changed “PBMAX(t)” to “P _{BMAX} (t)” and “PBMAX(0)” to “P _{BMAX} (0)” for consistency of terms.
16.	S7.4, footnotes 3 and 4	Corrected the references in footnotes 3 and 4 for Section 7.4, Table 7-2 from “Table 1.5-1” to “Table 5-1” and “Section 1-5” to “Section 5” to correctly refer to items in Section 5 of the report.
17.	S8, 1 st and 2 nd ¶¶	The previous first paragraph of Section 8 is split into two paragraphs. After the first sentence of the first paragraph, the following is added: “The red curve represents the annual missile probability (P ₁) assuming a normally distributed FATT and the blue curve represents the annual missile probability (P ₁) for a fixed bounding FATT value of +30 degrees F as described in subsection 3.1.” In the new second paragraph, the information changed is related to the number of years of turbine operation, and the following is added to the end of the paragraph: “found during rotor inspections.” See DTE Letter NRC3-11-0028 (7/29/2011)

Item	Location	Description of Change
		response to NRC RAI 10.02.03-13 and 14.
18.	S8, Figure 8-1	This figure is changed to reflect the information added to Section 8 in the preceding change list item. See DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-13 and 14.
19.	S8, 4 th ¶	Proprietary information in the first sentence is changed to discuss changes in Figure 8-1.
20.	S8, 5 th ¶	Proprietary information in the first sentence is changed to discuss changes in Figure 8-1.
21.	S8, 6 th ¶	Changed “non shot-peened” to “non-shot-peened” in the last sentence of this paragraph.
22.	S8, 7 th and 8 th ¶¶	The previous last paragraph is replaced with two new paragraphs. See DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-13 and 14.
23.	S9, 1 st and 2 nd ¶¶	The previous first paragraph of Section 9 is split into two paragraphs. After the first sentence of the first paragraph, the following is added: “The red curve represents the annual missile probability (P ₁) assuming a normally distributed FATT and the blue curve represents the annual missile probability (P ₁) for a fixed bounding FATT value of +30 degrees F as described in subsection 3.1.” In the new second paragraph, the information changed is related to the number of years of turbine operation, and the following is added to the end of the paragraph: “found during rotor inspections.” See DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-13 and 14.
24.	S9, Figure 9-1	This figure is changed to reflect the information added to Section 9 in the preceding change list item. See DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-13 and 14.
25.	S9, 4 th ¶	Proprietary information in the first sentence is changed to discuss changes in Figure 9-1.
26.	S9, 5 th ¶	Proprietary information in the first sentence is changed to discuss changes in Figure 9-1 and a correction was made as follows: changed “Figure 8-1” to “Figure 9-1” in the 4 th sentence.
27.	S9, 5 th ¶	Changed “non shot-peened” to “non-shot-peened” in the last sentence of this paragraph.
28.	S9, 6 th , 7 th , and 8 th ¶¶	These new paragraphs in Section 9 replace the previous two paragraphs just prior to Figure 9-2 in their entirety. See

Item	Location	Description of Change
		DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-13 and 14.
29.	S9, last ¶	Added “rotor” to the first sentence.
30.	S10.1.1	Section 10.1.1 has changed in its entirety to discuss inservice rotor inspections. See DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-14 and 15.
31.	S10.1.2	<p>Previous Section 10.1.2 is renumbered as Section 10.2. New Section 10.1.2 is the information that was in previous Section 10.1.1 regarding rotor dovetail inspections. The content is the same with the following exceptions:</p> <ul style="list-style-type: none"> • Changed “(Stages 1 thru 5)” to “(Stages 1 thru 4)” in 2nd paragraph, first sentence. • Changed “and/or” to “or” in 3rd paragraph, last sentence. <p>See DTE Letter NRC3-11-0028 (7/29/2011) response to NRC RAI 10.02.03-12, 14, and 15.</p>
32.	S10.2	<p>New Section 10.2 replaced previous Section 10.1.2 for in-service inspection of turbine valves. The content is the same with the following exceptions:</p> <ul style="list-style-type: none"> • Added a new 3rd paragraph to address extraction non-return valves. • In the last paragraph, (1) added “and extraction non-return valves” to the first sentence; (2) changed “all of the valve” to “all of the valves” in the first sentence; and (3) changed “be performed” to “is performed” in the second sentence. <p>These changes were added to address NRC questions regarding non-return valve inspections and intervals.</p>