

**Doerflein, Lawrence**

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**From:** Russell, Andrea  
**Sent:** Tuesday, May 08, 2012 2:00 PM  
**To:** Lee, Samson; Bickett, Brice; Doerflein, Lawrence; Jennerich, Matthew; Dennig, Robert; Ulses, Anthony; MorganButler, Kimyata; Fretz, Robert; (b)(7)(C) Eul, Ryan; Safford, Carrie; Monninger, John; McIntyre, David; Collins, Timothy; Scott, Catherine; Albert, Michelle; Cook, William; McCarver, Sammy  
**Cc:** Vaidya, Bhalchandra; Thadani, Mohan  
**Subject:** Action: Request for Review of G20120172 (Fitzpatrick 2.206): PRB Internal Meeting Notes on Initial Recommendation (TAC ME 8189)  
**Attachments:** ME8189-(G20120172)PRB Notes (1st Mtg)-third edit 5.8.12 DRAFT.docx

Good afternoon,

On behalf of Bhalchandra, I am providing you with the PRB internal meeting notes on the initial recommendation, for your review. Please provide your comments to myself and Bhalchandra by COB Friday May 11<sup>th</sup>. As a reminder, we will be meeting on this petition Thursday, May 17<sup>th</sup>.

Thank you for your time,  
Andrea  
2.206 Coordinator

Andrea Russell  
Project Manager  
Nuclear Regulatory Commission  
NRR/DPR/PGCB  
Ph: 301-415-8553

10 CFR 2.206

PRB Closed Meeting Notes – 05/17/12

SUBJECT: GUNTER ET AL. 2.206 REQUESTING ENFORCEMENT ACTION AGAINST JAMES A. FITZPATRICK PLANT (G20120172) (TAC ME8189)

PETITIONER: Paul Gunter, et al

DATE: May 9, 2012, the supplements dated March 13, and March 20, 2012, and Petitioners' Presentations to the PRB in the Public Meeting on April 17, 2012.

PRB MEMBERS & ADVISORS

Samson Lee	(PRB Chair – Deputy Director, NRR, Division of Risk Assessment)
Bhalchandra Vaidya	(Petition Manager – NRR, Division of Operating Reactor Licensing)
Anthony Ulses	(Branch Chief – NRR, Division of Safety Systems, Reactor Systems Branch)
Robert Dennig	(Branch Chief – NRR, Division of Safety Systems, Containment and Ventilation Branch)
Robert Fretz	(Senior Project Manager – NRR, Japan Lessons Learned Project Directorate, Projects Management Branch)
John Monninger	(Associate Director – NRR, Japan Lessons Learned Project Directorate)
Andrea Russell	(Agency 2.206 Coordinator – NRR, Division of Policy and Rulemaking)
Kim MorganButler	(Branch Chief(A) – NRR, Division of Policy and Rulemaking, Generic Communications Branch)
Brice Bickett	(Senior Project Manager – Region 1, Branch 2, Division of Reactor Projects)
Mathew Jennerich	(Project Engineer – Region 1, Branch 2, Division of Reactor Projects)
Lawrence Doerflein	(Branch Chief – Region 1, Branch 2, Division of Reactor Safety)
Carrie Safford	(Deputy Assistant General Counsel Materials Litigation and Enforcement – Office of General Counsel)
Ryan Eul	(Enforcement Specialist – Office of Enforcement)
Catherine Scott	(Assistant General Counsel – Materials Litigation and Enforcement - Office of General Counsel)

SUMMARY OF REQUEST:

On March 9, 2012, as supplemented March 13 and March 20, 2012, Mr. Paul Gunter, et. al., submitted a joint petition to the NRC, under Title 10 of the *Code of Federal Regulations*, Part 2.206, regarding James A. FitzPatrick Nuclear Power Plant (FitzPatrick).

The joint petitioners request that the FitzPatrick operating license be immediately suspended as the result of the undue risk to the public health and safety presented by the operator's reliance on non-conservative and wrong assumptions that went into the analysis of the capability of FitzPatrick's pre-existing ductwork containment vent system. The joint petitioners state that the risks and uncertainty presented by FitzPatrick's assumptions and decisions, in regard to NRC Generic Letter 89-16, as associated with the day-to-day operations of this nuclear power plant now constitute an undue risk to public health and safety. The joint petitioners request that the suspension of the operating license be in effect pending final resolution of a public challenge to the adequacy of the pre-existing vent line in light of the Fukushima Daiichi nuclear accident. The joint petitioners do not seek or request that FitzPatrick operators now install the Direct

Torus Vent System (DTVS) as it is demonstrated to have experienced multiple failures to mitigate the severe nuclear accidents at Fukushima Daiichi.

The joint petitioners request that the NRC take action to suspend the FitzPatrick operating license immediately until the following emergency enforcement actions are enacted, completed, reviewed, and approved by the NRC and informed by independent scientific analysis:

- 1) Entergy Nuclear Operations' FitzPatrick nuclear power plant shall be subject to public hearings with full hearing rights on the continued operation of the Mark I BWR and the adequacy and capability of a pre-existing containment vent which is not a fully hardened vent line as recommended by NRC Generic Letter 89-16. As such, the FitzPatrick operator uniquely did not make containment modifications and did not install the DTVS, otherwise known as "the hardened vent," as requested by NRC Generic Letter 89-16 and as installed on every other GE Mark I in the US;
- 2) Entergy Nuclear Operations shall publicly document for independent review its post-Fukushima re-analyses for the reliability and capability of the FitzPatrick pre-existing containment vent system as previously identified as "an acceptable deviation" from NRC Generic Letter 89-16 which recommended the installation of the Direct Torus Vent System and as outlined in the NRC Safety Evaluation Report dated September 28, 1992. The publicly documented post-Fukushima analysis shall include the reassessment of all assumptions regarding the capability and reliability of the pre-existing containment venting and specifically address non-conservative assumptions regarding:
  - a) the FitzPatrick cost-benefit analysis used to justify not installing a fully hardened vent system and;
  - b) "unlikely ignition points" as claimed in the FitzPatrick pre-existing vent line system that would otherwise present increased risks and consequences associated with the detonation of hydrogen gas generated during a severe accident.

In the March 20, 2012, supplement to the petition, the joint petitioners state that the Temporary Instruction 2515/183 provides the NRC inspection results in the "Follow-up to the Fukushima Daiichi Nuclear Station Fuel Damage Event." The joint petitioners draw attention to what is described at page 8 of the enclosure as an "*apparent beyond design and licensing basis vulnerability*" involving the FitzPatrick operator's refusal to install the DTVS as recommended by NRC in Generic Letter 89-16.

To summarize the supplement, the joint petitioners state that:

- The Commission's March 12, 2012, Order states that "Current regulatory requirement and existing plant capabilities allow the NRC to conclude that a sequence of events such as the Fukushima Dai-ichi accident is unlikely to occur in the US. Therefore, continued operation and continued licensed activities do not pose an imminent threat to public health and safety." The Order further states, "While not required, hardened vents have been in place in U.S. plants with BWR Mark I containments for many years but a wide variance exist with regard to the reliability of the vents."
- The NRC inspection report identifies that FitzPatrick's "existing plant capabilities" and "current procedures do not address hydrogen considerations during primary containment venting" which is further identified as a "current licensing basis vulnerability." The joint petitioners further reiterate that the NRC inspection finding that FitzPatrick's "existing plant capabilities" as assumed by the Order are in fact negated by the finding that

"FitzPatrick's current licensing basis did not require the plant to have a primary containment torus air space hardened vent system as part of their Mark I containment improvement program."

- The Commission Order timeline setting December 31, 2016, for installing the hardened vent Order does not address in a timely way the unique condition of FitzPatrick.
- FitzPatrick uniquely does not have a fully hardened vent system on the vulnerable Mark I containment. As a result, FitzPatrick's current capability is identified with "a beyond design and licensing bases vulnerability, in that FitzPatrick's current licensing basis did not require the plant to have a primary containment torus air space hardened vent system as part of their Mark I containment improvement program." Given that the FitzPatrick unit willfully refused to install the DTVS, the documented discovery of the "licensing basis vulnerability" of its chosen pre-existing vent now uniquely warrants the suspension of operations pending closer scrutiny, public hearings, and full disclosure for its adequacy and capability in the event of a severe accident. The additional identified "vulnerability" and the relatively remote and uncertain mitigation strategy places the public health and safety unduly and unacceptably at risk by the continued day-to-day operations where "current procedures do not address hydrogen considerations during primary containment venting" and will not for nearly five (5) more years.

#### BASIS FOR THE REQUEST:

As a basis for the request, the joint petitioners' state that in light of the multiple failures of the GE Mark I containment and hardened vent systems at the Fukushima Daiichi nuclear power station in the days following the March 11, 2011, station black out event, the joint petitions seek the prompt and immediate suspension of the FitzPatrick operations because:

- The GE Mark I BWR pressure suppression containment system is identified as inherently unreliable and likely to fail during a severe accident.
- The capability of FitzPatrick's pre-existing containment vent as approved for severe accident mitigation is not a fully "hardened vent" system.
- The capability of FitzPatrick's pre-existing containment vent as approved relies upon non-conservative and faulty assumptions.
- The capability of FitzPatrick's pre-existing containment vent system uniquely allows for a severe nuclear accident to be released at ground level.
- The Fukushima Daiichi nuclear catastrophe dramatically and exponentially changes the FitzPatrick cost-benefit analyses.
- The continued day-to-day reliance upon the significantly flawed pre-existing containment vent system as would be relied upon to mitigate a severe accident at the FitzPatrick Mark I reactor presents an undue risk to the public health and safety.
- The identified containment vulnerability, the non-conservative if not false assumption of "no likely ignition sources" in the pre-existing vent line and the unacceptable consequences of failure of the FitzPatrick pre-existing containment vent place both greater uncertainty and undue risk on public health and safety and are not reasonably justified by arbitrarily assigning a low probability of the occurrence of a severe accident.

(b)(5)

(b)(5)

The NRC staff was aware of the conclusions presented in its Safety Evaluation (SE) dated September 28, 1992, for Fitzpatrick with respect to GL 89-16, and considered this information in its overall assessment on whether or not BWR facilities with Mark I and Mark II containments were safe to operate following the events at Fukushima. In addition, the NRC staff was cognizant of and reviewed the results of inspections performed under TI 183 at FitzPatrick (Report dated May 13, 2011, ADAMS Accession No. ML111330455) following the events at Fukushima. (b)(5)

(b)(5)

3. There is no NRC proceeding available in which the petitioner is or could be party and through which the petitioner's concerns could be addressed.

**YES, in part.** There is an NRC proceeding available. On March 12, 2012, the NRC ordered licensees of BWR facilities with Mark I and Mark II containments to have reliable hardened containment vents (EA-12-050). This order was based on the Commission's direction provided by the Staff Requirements Memorandum (SRM) to SECY-12-0025, dated March 9, 2012. The Commission Order timeline is December 31, 2016, for installing the reliable hardened containment vent. This proceeding would follow the 10 CFR 50.90 process, which would provide opportunity for public comments and therefore, public participation.

**Criteria for Rejecting Petitions Under 10 CFR 2.206:**

1. The incoming correspondence does not ask for an enforcement-related action or fails to provide sufficient facts to support the petition, but simply alleges wrongdoing, violations of NRC regulations, or existence of safety concerns.

**YES, in part.**

2. The petitioner raises issues that have already been the subject of NRC staff review and evaluation either on that facility, other similar facilities, or on a generic basis, for which a resolution has been achieved, the issues have been resolved, and the resolution is applicable to the facility in question.

**YES, in part.**

On March 12, 2012, the NRC ordered licensees of BWR facilities with Mark I and Mark II containments to have reliable hardened containment vents (EA-12-050). This order was based on the Commission's direction provided by the Staff Requirements Memorandum (SRM) to SECY-12-0025, dated March 9, 2012.

It cannot be stated with certainty that the NTTF, as well as, the JLD, while developing the Commission Order, performed a detailed review of the FitzPatrick's unique situation with respect to its refusal to perform the modifications recommended by GL 89-16.

3. The request is to deny a license application or amendment. **NO.**
4. The request addresses deficiencies within existing NRC rules. **NO.**

**IS THERE A NEED FOR OE, OI, OIG, or OGC INVOLVEMENT:**

The petition does not contain any allegations of licensee or NRC staff wrongdoing. However, the PRB includes representatives from OE and OGC.

**RECOMMENDED APPROACH AND SCHEDULE (Next Steps):**

**Reject** if the NRC staff develops the staff evaluation to address and revalidate the conclusions of the NTTF and the Commission Order for FitzPatrick's specific situation with respect to its containment vent system **or not accept** if we find that the petitioner raises issues that are currently being addressed in another proceeding, the Commission Order EA-12-050. The Order

(b)(5)

Table (This table summarizes each issue for the following criteria).

<b>Specific Issue Raised</b>	<b>Does this meet criteria for review under 2.206 process?</b>	<b>Recommendation</b>
<p>FitzPatrick operating license be immediately suspended as the result of the undue risk to the public health and safety presented by <u>the operator's reliance on non-conservative and wrong assumptions that went into the analysis of the capability of FitzPatrick's pre-existing ductwork containment vent system.</u> The risks and uncertainty presented by FitzPatrick's assumptions and decisions, in regard to NRC Generic Letter 89-16, as associated with the day-to-day operations of this nuclear power plant now constitute an undue risk to public health and safety.</p>		

(b)(5)



<b>Specific Issue Raised</b>	<b>Does this meet criteria for review under 2.206 process?</b>	<b>Recommendation</b>
<p>The suspension of the operating license be in effect pending final resolution of a public challenge to the adequacy of the pre-existing vent line in light of the Fukushima Daiichi nuclear accident.</p>		
<p>The joint petitioners do not seek or request that FitzPatrick operators now install the Direct Torus Vent System (DTVS) Recommended by GL89-16, as it is demonstrated to have experienced multiple failures to mitigate the severe nuclear accidents at Fukushima Daiichi.</p>		
<p>FitzPatrick be subject to public hearings with full hearing rights on the continued operation of the Mark I BWR and the adequacy and capability of a pre-existing containment vent which is not a fully hardened vent line as recommended by NRC Generic Letter 89-16. As such, the FitzPatrick operator uniquely did not make containment modifications and did not install the DTVS, otherwise known as "the hardened vent," as requested by NRC Generic Letter 89-16 and as installed on every other GE Mark I in the US;</p>		
<p>FitzPatrick shall publicly document for independent review its post-Fukushima re-analyses for the reliability and capability of the FitzPatrick pre-existing containment vent system as previously identified as "an acceptable deviation" from NRC Generic Letter 89-16 which recommended the installation of the Direct Torus Vent System and as outlined in the NRC Safety Evaluation Report dated September 28, 1992. The publicly</p>		

(b)(5)

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<p>documented post-Fukushima analysis shall include the reassessment of all assumptions regarding the capability and reliability of the pre-existing containment venting and specifically address non-conservative assumptions regarding:</p> <ul style="list-style-type: none"> <li>a) the FitzPatrick cost-benefit analysis used to justify not installing a fully hardened vent system and;</li> <li>b) "unlikely ignition points" as claimed in the FitzPatrick pre-existing vent line system that would otherwise present increased risks and consequences associated with the detonation of hydrogen gas generated during a severe accident.</li> </ul>		
<p>In the March 20, 2012, supplement to the petition, the joint petitioners state that the Temporary Instruction 2515/183 provides the NRC inspection results in the "Follow-up to the Fukushima Daiichi Nuclear Station Fuel Damage Event." The joint petitioners draw attention to what is described at page 8 of the inspection report as an "apparent beyond design and licensing basis vulnerability" involving the FitzPatrick operator's refusal to install the DTVS as recommended by NRC in Generic Letter 89-16.</p>		(b)(5)
<p>The NRC inspection report [per TI-2515/183] identifies that FitzPatrick's "existing plant capabilities" and "current procedures do not address hydrogen considerations during primary containment venting" which is further</p>		

<b>Specific Issue Raised</b>	<b>Does this meet criteria for review under 2.206 process?</b>	<b>Recommendation</b>
<p>identified as a "current licensing basis vulnerability." The joint petitioners further reiterate that the NRC inspection finding that FitzPatrick's "existing plant capabilities" as assumed by the Order are in fact negated by the finding that "FitzPatrick's current licensing basis did not require the plant to have a primary containment torus air space hardened vent system as part of their Mark I containment improvement program."</p>		
<p>The Commission Order timeline setting December 31, 2016, for installing the hardened vent Order does not address, in a timely way, the unique condition of the FitzPatrick nuclear power plant.</p>		
<p>The FitzPatrick nuclear power plant uniquely does not have a fully hardened vent system on the vulnerable Mark I containment. As a result, FitzPatrick's current capability is identified with "a beyond design and licensing</p>		<p>(b)(5)</p>

<b>Specific Issue Raised</b>	<b>Does this meet criteria for review under 2.206 process?</b>	<b>Recommendation</b>
<p><u>bases vulnerability</u>, in that FitzPatrick's current licensing basis did not require the plant to have a primary containment torus air space hardened vent system as part of their Mark I containment improvement program."</p> <p>Given that the FitzPatrick unit willfully refused to install the DTVS, the documented discovery of the "<u>licensing basis vulnerability</u>" of its chosen pre-existing vent now uniquely warrants the suspension of operations pending closer scrutiny, public hearings, and full disclosure for its adequacy and capability in the event of a severe accident.</p>		<p>(b)(5)</p>

<b>Specific Issue Raised</b>	<b>Does this meet criteria for review under 2.206 process?</b>	<b>Recommendation</b>
<p>The additional identified "vulnerability" and the <u>relatively remote and uncertain mitigation strategy</u> places the public health and safety unduly and unacceptably at risk by the continued day-to-day operations where "current procedures do not address hydrogen considerations during primary containment venting" and will not for nearly five (5) more years.</p>		<p>(b)(5)</p>

(b)(5)

(b)(5)