

**U.S. Chemical Safety and
Hazard Investigation Board**

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Hon. Rafael Moure-Eraso
Chairperson

Hon. John S. Bresland
Board Member

Hon. Mark Griffon
Board Member



Peter C. Christman, Jr., President
Pratt & Whitney Power Systems, Inc.
400 Main Street, Building G
East Hartford, CT 06108

Dear Mr. Christman:

MAR 12 2012

As you know, the U.S. Chemical Safety and Hazard Investigation Board (CSB) issued two recommendations to Pratt & Whitney Power Systems, Inc. (PWPS) pursuant to its investigation of the February 7, 2010 natural gas explosion at Kleen Energy, a natural gas-fueled, combined-cycle power plant under construction in Middletown, CT.

Those recommendations read as follows:

Recommendation No. 2010-07-I-CT-UR8:

Provide to your customers:

- a. *Comprehensive technical guidance on inherently safer methods for cleaning fuel gas piping, such as the use of air or pigging with air.*
- b. *Comprehensive Cleaning Force Ratio (CFR) guidelines, specifying both the upper and lower limits required to obtain satisfactory cleaning for the fuel gas piping for purposes of the warranties of the turbines.*
- c. *Warnings against the use of fuel gas to clean pipes.*

Recommendation No. 2010-07-I-CT-UR14:

Work with the Electric Power Research Institute to publish technical guidance addressing the safe cleaning of fuel gas piping supplying gas turbines. At minimum:

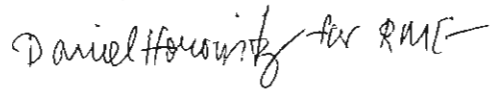
- a. *For cleaning methodology, require the use of inherently safer alternatives such as air blows and pigging with air in lieu of flammable gas.*
- b. *Provide technical guidance for the safe and effective use of alternative methods for cleaning such as air and pigging with air.*

As you will recall, the Board voted on December 6, 2011 to close Recommendation No. 2010-07-I-CT-UR8. I am now writing to inform you that the Board voted on February 22, 2012 to designate the second Recommendation, No. 2010-07-I-CT-UR14, with the status "**Closed-Acceptable Action**." This status reflects the Board's determination that PWPS has met the intent of the CSB's recommendation and that no additional action is necessary. The Board was pleased to learn that PWPS collaborated with the Electric Power Research Institute in the production of its recently published *Guidelines for Fuel Gas Line Cleaning Using Compressed Air or Nitrogen*.

**U.S. Chemical Safety and
Hazard Investigation Board**

Thank you again for PWPS's efforts to protect the safety and health of workers and the public at large.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel H. ... for RME". The signature is written in a cursive style.

Rafael Moure-Eraso, PhD, CIH
Chairperson

Enclosure

CC: James Scroggins, Senior Contracts Manager and Business Practices &
Compliance Officer, PWPS
Don Holmstrom, Investigations Supervisor, CSB
Manuel R. Gomez, Director of Recommendations, CSB
Christina Morgan, Recommendations Specialist, CSB