

**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 L. (Chip) Pollock, Jr.
Assistant General Counsel
Siemens Energy, Inc.
4400 Alafaya Trail
Suite Q1-475
Orlando, FL 32826

MAR 12 2012

Dear Mr. Pollock:

As you know, the U.S. Chemical Safety and Hazard Investigation Board (CSB) issued two recommendations to Siemens Energy, Inc. (SEI) 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-UR5:

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-UR12:

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.*

I am writing to inform you that the Board voted on February 22, 2012 to designate Recommendation No. 2010-07-I-CT-UR12 with the with the status "**Closed- Acceptable Action.**" This status reflects the Board's determination that SEI has met the intent of the CSB's recommendation and that no additional action is necessary. The Board was pleased to learn that SEI 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*.

As you will recall, Recommendation No. 2010-07-I-CT-UR5 remains open pending receipt of additional information requested by CSB Recommendations Specialist Christina

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Morgan in November and December 2011. (See enclosure.) To facilitate closure of this recommendation, please contact Ms. Morgan at 202-261-7642 or Christina.Morgan@csb.gov.

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

Sincerely,

Daniel Hourvitz for RME

Rafael Moure-Eraso, PhD, CIH
Chairperson

Enclosure

cc: Brenda Pence, Senior Counsel, Siemens Energy, Inc.
Don Holmstrom, Director, Western Regional Office, CSB
Manuel R. Gomez, Director of Recommendations, CSB
Christina Morgan, Recommendations Specialist, CSB

Morgan, Christina

From: Morgan, Christina
Sent: Thursday, November 10, 2011 3:59 PM
To: Pollock, Peter L (E F L-ORL)
Subject: RE: Siemens Energy, Inc. letter to the U.S. Chemical Safety Board

Dear Chip,

I am in the process of reviewing the materials which you provided in June regarding Siemens' actions pursuant to the CSB's recommendations (numbers 2010-07-I-CT-UR5 and UR12), and I have a few questions I am hoping you can answer for me.

1. Does Siemens ever supply provide BOP piping? If so, what information would that customer receive about BOP pipe cleaning operations?
2. If a customer only purchases a Siemens turbine, and not the SGT-PAC piping, what information would that customer receive about pipe cleaning operations?
3. Who receives the supplied document "Fuel Gas System Cleaning & Commissioning"?
 - Does SEI only provide equipment or are there instances where SEI is involved in commissioning activities (e.g., for turnkey or partnership projects)?
 - Do all purchasers of SGT-PAC gas system receive this document, regardless of whether SEI is involved in commissioning activities?

Thank you in advance for your assistance in helping move toward closure of the CSB's recommendations.

Sincerely,
Christina

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Christina Morgan, MPH
Recommendations Specialist
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Salus Populi Est Lex Suprema

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From: Pollock, Peter L (E F L-ORL) [<mailto:peter.pollock@siemens.com>]
Sent: Wednesday, June 22, 2011 1:42 PM
To: Morgan, Christina
Subject: Siemens Energy, Inc. letter to the U.S. Chemical Safety Board

Christina,

Attached is the letter from Siemens Energy, Inc. (SEI) in response to the CSB's letter of 29 December 2011 requesting an update regarding the CSB's recommendations.

I have sent the letter and attachments via federal express to the Honorable Rafael Moure-Eraso. I sent you a copy of the letter and the attachment via U.S. Mail.

Please let me know if you have any questions regarding the attached letter.

Best regards,

Peter L. (Chip) Pollock, Jr.
Assistant General Counsel
Siemens Energy, Inc.