Bluewater
Gas Storage LLC

Bluewater Gas Storage
333 S. Wales Center Rd.
Columbus, MI 48063

December 19, 2018

BY OVERNIGHT COURIER
Mr. Allan C. Beshore
Director, Central Region, OPS
Pipeline and Hazardous Materials Safety Administration
901 Locust Street, Suite 462
Kansas City, Missouri 64106-2641

Subject: **Notice of Amendment CPF 3-2018-1004M**
Bluewater Gas Storage, LLC

Dear Mr. Beshore,
On November 6, 2018, Bluewater Gas Storage, LLC (Bluewater) received a Notice of Amendment (NOA), CPF 3-2018-1004M, dated November 6, 2018, from the Pipeline and Hazardous Materials Safety Administration (PHMSA) concerning the Michigan Public Service Commission audit of Bluewater's control room management operations and maintenance procedures; which took place May 7-14, 2018.

The following are Bluewater's responses to the NOA which identified items with apparent inadequacies found within Bluewater's plans or procedures. The enclosures include Exhibits which are excerpts from amended Bluewater plans, manuals, and procedures (revisions identified by yellow highlighted text) to address NOA items.

1. §192.605 Procedural manual for operations, maintenance, and emergencies

(b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

(1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and Subpart M of this part.

§192.745 Valve maintenance: Transmission lines.

(a) Each transmission line valve that might be required during any emergency must be inspected and partially operated at intervals not exceeding 15 months, but at least once each calendar year.

Inspection Comments: BGS's (Bluewater Gas Storage) procedures for inspecting and partially operating transmission line valves that are required for an emergency did not include the process for when the control room operates the valve. BGS's procedures only addressed the inspection of the valve when it is inspected manually. However, the valve can be operated in a time of emergency by the control center and therefore must have inspection

procedures for that operation. Also, BGS's valve inspection procedure in Chapter 600 does not require the documentation of the process when the control room activates the transmission line valve.

Bluewater Response: Bluewater has addressed this item by amending the "Valve Inspection Procedure" in Chapter 600. Testing (and documenting) remote operation of the valve by Gas Control was added to the annual inspection tasks, for any valve that can be remotely operated by Gas Control in the event of an emergency. The amended procedure (Exhibit 1 - NOA Item 1 Response) is included in the supporting enclosures.

2. ***§192.605 (c) Abnormal operation.***

For transmission lines, the manual required by paragraph (a) of this section must include procedures for the following to provide safety when operating design limits have been exceeded:

(iii) Loss of communications;

Inspection Comments: BGS procedures did not address accurately what controllers are doing in the event of a communication failure. Appendix J Section 5.8.1 indicates that during partial communication failures personnel will be dispatched within 30 minutes. However, this does not occur in practice. Additionally, the Appendix did not specify that stations would be manned during a full or partial communications failure on key points within BGS's system or how that would be documented. On August 2, 2018, BGS submitted revised procedures that addressed this item. No further action is required.

Bluewater Response: Bluewater revised procedures to address this item, and submitted revised procedures to the inspector on August 2, 2018.

3. ***§192.631 Control room management.***

(a)General.

(1) This section applies to each operator of a pipeline facility with a controller working in a control room who monitors and controls all or part of a pipeline facility through a SCADA system. Each operator must have and follow written control room management procedures that implement the requirements of this section, except that for each control room where an operator's activities are limited to either or both of:

(i) Distribution with less than 250,000 services, or

(ii) Transmission without a compressor station, the operator must have and follow written procedures that implement only paragraphs (d) (regarding fatigue), (i) (regarding compliance validation), and (j) (regarding compliance and deviations) of this section.

§192.631 Control room management.

(c) Provide adequate information. Each operator must provide its controllers with the information, tools, processes and procedures necessary for the controllers to carry out the roles and responsibilities the operator has defined by performing each of the following:

(4) Test any backup SCADA systems at least once each calendar year, but at intervals not to exceed 15 months;

Inspection Comments: BGS's procedures did not indicate that the backup SCADA systems would be tested once each calendar year. Appendix J indicates that the Failover "Hot/Standby" server will be tested every 2 years. On August 2, 2018, BGS submitted revised procedures that addressed this item. No further action is required.

Bluewater Response: Bluewater revised procedures to address this item, and submitted revised procedures to the inspector on August 2, 2018.

4. ***§192.631(a) - See above.***

§192.631 Control room management.

(e) Alarm management. Each operator using a SCADA system must have a written alarm management plan to provide for effective controller response to alarms. An operator's plan must include provisions to:

(2) Identify at least once each calendar month points affecting safety that have been taken off scan in the SCADA host, have had alarms inhibited, generated false alarms, or that have had forced or manual values for periods of time exceeding that required for associated maintenance or operating activities;

Inspection Comments: BGS's procedures for alarm management did not have procedures for the monthly alarm reviews. The procedure did not reference the records BGS must produce, and there was no mention of who was responsible for them and what they are required to do. The procedure also did not define time frames to address issues with safety and non-safety related points. Additionally, Table 20 of the control room management plan was not updated to accurately reflect how BGS operates the control room. For instance, the Alarm Metric Reporting Table indicates that controllers can suppress, shelf, and put alarms out of service. However, these actions cannot be done in the Columbus, MI control room.

Bluewater Response: Bluewater has addressed this item by amending "Appendix I: Alarm Management Plan". The amended procedure (Exhibit 2 - NOA Item 4 Response) is included in the supporting enclosures.

5. ***§192.631(a) - See above.***

§192.631 Control room management.

(t) Change management. Each operator must assure that changes that could affect control room operations are coordinated with the control room personnel by performing each of the following:

(2) Require its field personnel to contact the control room when emergency conditions exist and when making field changes that affect control room operations;

Inspection Comments: BGS's procedure for communication between the controllers and maintenance technician did not have requirements for how the maintenance technician's communications are to be documented when field changes affect the control room operation.

Bluewater Response: Bluewater has addressed this item by amending the "Change Management" procedure to state not only when to communicate with the Control Room, but also where to document this communication as well. The amended procedure (Exhibit 3 - NOA Item 5 Response) is included in the supporting enclosures.

6. ***§192.631(a) - See above.***

§192.631 Control room management.

(g) Operating experience. Each operator must assure that lessons learned from its operating experience are incorporated, as appropriate, into its control room management procedures by performing each of the following:

(2) Include lessons learned from the operator's experience in the training program required by this section.

Inspection Comments: BGS's procedures did not indicate that lessons learned will be incorporated into the training program even if the control room did not contribute to an incident. On August 2, 2018, BGS submitted revised procedures that addressed this item. No further action is required.

Bluewater Response: Bluewater revised procedures to address this item, and submitted revised procedures to the inspector on August 2, 2018.

7. ***§192.63l(a) - See above.***

§192.631 Control room management.

(h) Training. Each operator must establish a controller training program and review the training program content to identify potential improvements at least once each

calendar year, but at intervals not to exceed 15 months. An operator's program must provide for training each controller to carry out the roles and responsibilities defined by the operator.

Inspection Comments: BGS did not have procedures for the control room management training. BGS utilizes the OQ training for their controllers, but there is no procedure to specify formal documentation of this training. There were no checklists, no specific training materials, and no tests or other performance based indications to demonstrate that one has reached the level of a fully trained controller. The control room procedures must address this aspect of training for the controllers.

Bluewater Response: Bluewater has addressed this item by adding the "Controller Training Plan" procedure (Exhibit 4 - NOA Item 7 Response), to specify topics the controllers will be trained on. Appendix A is a checklist of tasks to be completed and the method to document completion of each task. Appendix A also lists "Understanding and Knowledge" requirements, and the method by which each of these requirements will be assessed and documented. The testing to assess the "understanding and knowledge" topics will be developed and ready to use within 120 days.

8. ***§192.63l(a) - See above.***

§192.631 Control room management.

(i) Compliance validation. Upon request, operators must submit their procedures to PHMSA or, in the case of an intrastate pipeline facility regulated by a State, to the appropriate State agency.

Inspection Comments: BGS's procedure did not accurately specify the company personnel responsible for submitting the procedures to PHMSA or the appropriate state agency. The procedure indicated that the compliance coordinator was responsible for this duty. However, it appears that both the Compliance Coordinator and the Asset Manager are actually responsible for this. On August 2, 2018, BGS submitted revised procedures that addressed this item. No further action is required.

Bluewater Response: Bluewater revised procedures to address this item, and submitted revised procedures to the inspector on August 2, 2018.

9. ***§192.631(a) - See above.***

§192.631 Control room management.

(j) Compliance and deviations. An operator must maintain for review during inspection:

(1) Records that demonstrate compliance with the requirements of this section;

Inspection Comments: BGS's procedures include fatigue mitigation strategies [§192.631(d)(2)], but did not require that the use of fatigue countermeasures be documented. Additionally, the documentation of when fatigue countermeasures are used, especially in the ninth shift hour and beyond, is necessary to perform an adequate review of incidents to determine if control room actions contributed to the event [see §192.631(g)(l)(i)] and assure that lessons learned about fatigue mitigation are incorporated into the control room procedures based on BGS's operating experience. [See also FAQ D.07 #8]

Bluewater Response: Bluewater is proactive in addressing fatigue mitigation. Examples of proactively addressing fatigue mitigation with the controller's position include:

- A normally scheduled shift for a controller is eight (8) hours.
- During normal operations, the controller should conduct outside rounds every two (2) hours to monitor equipment. The benefits of the outside rounds are:
    - Reduction of fatigue through exercise and exposure to fresh air.
    - Provides a mental break from the SCADA screens in the control room, while still being able to monitor the pipeline and be alerted to alarms remotely through technology.
- Once each calendar year, at intervals not to exceed fifteen (15) months, Bluewater Gas Control Management conducts fatigue education and training to Controllers and Supervisors, attendance is required.
- Once each calendar year, at intervals not to exceed fifteen (15) months, Bluewater currently contracts with a third party to conduct a workload assessment of the controller position. This establishes a benchmark of how Bluewater compares to the industry; and the results are used for trend analysis, and to identify areas for improvement.
    - The most recent assessment (completed on November 4, 2018) concluded that "Overall, the operation falls within expected and acceptable levels of workload based on the controllers' perception."

The "Roles and Responsibilities" procedure was amended to prompt controllers to engage in fatigue mitigating measures if their shift is greater than 8 hours during normal operations. The "Post Incident Controller Questionnaire" was amended to document if the controller was feeling fatigued prior to an incident, and if any fatigue mitigation tactics were implemented prior to an incident.

The attached procedures and documentation (Exhibit 5 - NOA Item 9 Response) demonstrate Bluewater's fatigue mitigation strategies.

Bluewater respectfully submits responses to these items to address the apparent inadequacies identified in the NOA CPF 3-2018-1004M. Please contact Mr. Jeffrey Westrick @ (810) 642-9035 (jeffrey.westrick@wecenergygroup.com), if you have any further questions or require additional information.

Sincerely,

Daniel Krueger
President

Enclosure

CC: David Chislea-MPSC
Tim Wolf-MPSC
Hans Shieh-PHMSA
Todd Duffield-BW
Jeff Westrick-BW
Paul Spicer-BW

ENCLOSURES:
EXCERPTS FROM AMENDED BLUEWATER GAS STORAGE, LLC MANUALS, PLANS, AND PROCEDURES

Exhibit 1 – NOA Item 1 Response (4 pages)
Exhibit 2 – NOA Item 4 Response (5 pages)
Exhibit 3 – NOA Item 5 Response (1 page)
Exhibit 4 – NOA Item 7 Response (11 pages)
Exhibit 5 – NOA Item 9 Response (6 pages)