Iroquois
GAS TRANSMISSION SYSTEM
IROQUOIS PIPELINE OPERATING COMPANY, OPERATOR

ONE CORPORATE DRIVE, SUITE 600
SHELTON, CT 06484-6211
TEL: (203) 925-7291
FAX: (203) 929-9501

August 12, 2013

Byron Coy, PE
Director, Eastern Region
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
820 Bear Tavern Road, Suite 103
West Trenton, NJ 08628

Re: CPF 1-2013-1010M
Response to July 12, 2013, Notice of Amendment

Dear Mr. Coy:

From October 11, 2011, through October 13, 2011, representatives of the Office of Pipeline Safety ("OPS") within the Pipeline and Hazardous Materials Safety Administration ("PHMSA") conducted an on-site audit ("Audit") of Iroquois Gas Transmission System, L.P. ("Iroquois") regarding its procedures for Control Room Management ("CRM") pursuant to Chapter 601 of 49 United States Code. On July 12, 2013, PHMSA issued a Notice of Amendment ("NOA" or "Notice") in which the agency identified apparent procedural inadequacies with Iroquois' CRM program. The Notice required Iroquois to respond within thirty (30) days.

Iroquois has updated its written CRM policies and procedures to address the issues identified in the NOA. For each item in the Notice, Iroquois has restated PHMSA's observation in italic type, followed by Iroquois' response.

1. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because there were no provisions for controller re-acquaintance after an extended absence. Also, temporary supervisors have no qualification time-out provisions if they have not worked the console for an extended period as prescribed in §192.631(b)(4).

Iroquois Response to Item No. 1:

Iroquois has updated its Gas Control Operating Procedure Manual ("GCOP")[1] 400 6.6.6 which now provides that if any Gas Controller is absent from the Control room for five weeks or more, they will be updated on any system changes and/or additions and they will review Gas Control Logs and AOC's prior to shift operations.

2. **§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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because there was no procedure to address controller's roles and responsibilities to stay at the console to verify all SCADA commands that have been initiated are fulfilled, and that that commands given via verbal communications are acknowledged before leaving the console as prescribed in §192.631(b)(4).

Iroquois Response to Item No. 2:

Iroquois has updated GCOP 400-6.6.1 to require that all commands, SCADA, verbal or written, are acknowledged by the controller before leaving the Control Room.

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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because there was no procedure to address calling in another controller when a controller is unable to continue or assume responsibility for any reason as prescribed in §192.631(b)(4).

[1] All procedures cited to in this response are attached to this response. Where changes were made before receipt of the NOA, these changes are noted in the response. All procedures that were amended pursuant to the NOA are in redline.

Iroquois Response to Item No. 3:

Iroquois has updated GCOP 500-6.3.6 to permit a Gas Controller on duty to call in another Controller to assist with or take over Gas Controller responsibilities, when the original Gas Controller is unable to continue his or her duties for any reason.

4. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP- 400, Section 6.2 references API RP-1165 (192.631(d)(1)) rather than API RP-1165 (192.631(c)(1)) as prescribed in §192.631(c)(1).

Iroquois Response to Item No. 4:

Iroquois has updated GCOP 400-6.2 to correctly reference 192.631(c)(1).

5. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP- 400, Section 6.2.1 indicates that Sections 1,4, 8 and 9 of API 1165 will be implemented "whenever the SCADA system is expanded or replaced" but does not elaborate on the threshold of changes to drive the API RP-1165 implementation as prescribed in §192.631(c)(1).

Iroquois Response to Item No. 5:

In January 2013, Iroquois updated GCOP 400-6.2.1 to provide a threshold establishing when to update changes to API RP-1165.

6. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because the definition of Safety Related Points contained in GCOP-400, 6.3.2 states that points indicate harm and failures, rather than what is needed to insure the pipeline is remains safe as prescribed in §192.631(c)(2).

Iroquois Response to Item No. 6:

In January of 2013, Iroquois updated GCOP 400-6.3.2 to provide that safety related points are defined as those SCADA Points that must provide accurate information to the Controller to operate the pipeline safely. SCADA Points also indicate status of the pipeline equipment facilities components and systems. These points provide data that the Controller looks at to determine that the pipeline is running safely.

7. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because the criteria described in GCOP-400, 6.3.1 that trigger a point-to-point verification are not definitive, as prescribed in §192.631(c)(2).

Iroquois Response to Item No. 7:

Iroquois has updated GCOP 400-6.3.1 to provide greater detail on point-to-point verification of Safety Related Points between SCADA displays and related field equipment.

8. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-400 6.3.3 describes field technician verification of field devices, but does not extend to verification to display changes in the control room, as prescribed in §192.631(c)(2). This is contrary to the Appendix 3 verification forms which do require verification to include SCADA displays.

Iroquois Response to Item No. 8:

Iroquois has updated GCOP 400-6.3.3 to provide for verification of SCADA display in the Control Room.

9. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-400 6.3.2 does not declare an expediency of completion when a point-to-point verification is initiated, as prescribed in §192.631(c)(2).

Iroquois Response to Item No. 9:

Iroquois has updated GCOP 400-6.3.3 to provide more detailed completion requirements.

10. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-400, 6.4.2 needs to distinguish between

two scenario's, (1) with the backup Oxford Control Room energized, and (2) with no operational SCADA anywhere as prescribed in §192.631(c)(4).

Iroquois Response to Item No. 10:

In January of 2013, Iroquois updated GCOP 400-6.5.1 to address when the Oxford Control Room backup is utilized and the procedure when SCADA is not operational anywhere.

11. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-400, 6.4 is inadequate for the post mortem of the test. The procedure does not address a post-test critique as prescribed in §192.631(c)(3).

Iroquois Response to Item No. 11:

Iroquois has updated GCOP 400-6.4.5 to provide for a post mortem test and has updated the Appendix 8 form to review lessons learned.

12 §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-400, 6.5 does not include explicit parameters for authority and responsibility parameters for a controller to initiate fail-over, or otherwise denote a failover regimen as prescribed in §192.631(c)(5).

Iroquois Response to Item No. 12:

In January of 2013, Iroquois updated GCOP 400-6.5.1 to provide explicit parameters for authority and responsibility for a Controller to initiate fail-over, or otherwise denote a fail-over.

13. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because the number of displays is not consistent between primary site and backup location. The Oxford Control Room has two displays while the Shelton Control Room has four displays. The operator could not adequately explain how this limitation does not impact controller performance as prescribed in §192.631(c)(4).

Iroquois Response to Item No. 13:

In May of 2012, Iroquois installed two additional displays in the Oxford Control Room.

14. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-400, 6.5.2 does not include language to test a representative sample of all types of command functions as prescribed in §192.631(c)(4).

Iroquois Response to Item No. 14:

In January of 2013, Iroquois updated GCOP 400-6.5.3 and Appendix 8 Form to provide for testing of command functions.

15. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-400, 6.6.5 addresses the use of the "shift change document" but does not explicitly identify the name of the prescribed form/file. There is no explicit requirement to provide minimal information as prescribed in §192.631(c)(5).

Iroquois Response to Item No. 15:

In January of 2013, Iroquois updated GCOP 400-6.6.2 to outline requirements for shift change documentation. Additionally, Iroquois has updated GCOP 3, the shift change document.

16. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-500, 6.3.6 addresses fatigue as a factor to contact the standby controller, but does not explicitly state "self-identified" as prescribed in §192.631(d)(3).

Iroquois Response to Item No. 16:

In January of 2013, Iroquois updated GCOP 500-6.3.6 to provide that if a Controller becomes unfit for duty during a shift, the Controller has the authority to self-identify their inability to continue and to contact the standby Controller to replace him or her.

17. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-500, 6.3.9 references the PHMSA Incident Report, Section 8, but does not explicitly identify what constitutes an adequate investigation as prescribed in §192.631(d).

Iroquois Response to Item No. 17:

Iroquois has updated GCOP 500-6.3.9 to provide a review of the incident to ensure the investigation is adequate.

18. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-400, 6.4.1 requires the recording of deviations, but only if actual conditions fall below the regulations which is inconsistent with that prescribed in §192.631(d).

Iroquois Response to Item No. 18:

Iroquois believes that PHMSA meant to reference GCOP 500-6.1.4 and, therefore, Iroquois has updated this section as well as GCOP 500-6.1.5, Appendix 6, and GCOP 2 to provide for shift work hours and limitations.

19. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-500, 6.2.1 requires training, but fatigue education is not explicitly included in the list of training topic areas as prescribed in §192.631(d)(2).

Iroquois Response to Item No. 19:

Iroquois has updated GCOP 500-6.2.1 to ensure that Controllers receive fatigue education training every year.

20. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-600, 6.1.10 describes a review by the Working Group, but does not include a list of report criteria that the Working Group would be reviewing from as prescribed in §192.631(e)(2).

Iroquois Response to Item No. 20:

In January of 2013, Iroquois updated GCOP 600-6.1.10 to provide report criteria that the Working Group would review.

21. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because the Working Group tasks described in GCOP-600, 6.1.10 described "points impacting safety", but did not explicitly identify inhibited and points off scan as prescribed in §192.631(e)(2).

Iroquois Response to Item No. 21:

In January of 2013, Iroquois updated GCOP 600-6.1.10 to specifically identify inhibited points and points taken off scan as points impacting safety.

22. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-600, 6.1.11 addresses tracking restoration of outages, but contains no explicit timeline as prescribed in §192.631(e)(2).

Iroquois Response to Item No. 22:

Iroquois has updated GCOP 600-6.1.11 which now provides an explicit timeframe for actions and repairs.

23. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-600, 6.1.11 stipulates that restoration or changes to alarm systems should be performed, but does not declare related timelines as prescribed in §192.631(e).

Iroquois Response to Item No. 23:

Iroquois has updated GCOP 600-6.1.11 which now provides timelines associated with alarms.

24. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-600, 6.1 does not include a list of target metrics as prescribed in §192.631(e)(5).

Iroquois Response to Item No. 24:

In January 2013, Iroquois updated GCOP 600-6.2.2 to provide a list of target metrics.

25. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-600, 6.3.2 does not establish a metric around alarm response as prescribed in §192.631(e)(5).

Iroquois Response to Item No. 25:

Iroquois has updated GCOP 600-6.3.2 to provide a metric regarding alarm responses.

26. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-800, 6.1.1 does not include criteria to review non-reportable events that may be valuable to add to training as prescribed in §192.631(g)(2).

Iroquois Response to Item No. 26:

In January of 2013, Iroquois updated GCOP 800-6.3.1 to include the criteria used to review operating events other than those that are reportable events.

27. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-900, 6.5.1 although thoroughly

documented with dates, contains no specific reference to record training elements and dates of completion as prescribed in §192.631(h).

Iroquois Response to Item No. 27:

Iroquois created GCOP 900-7.4 which provides for Controller training records to include required information.

28. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-900, 7.3.1 depicts a bullet list that addresses infrequent setups, but contains no actual listing or description of such setups as prescribed in §192.631(h)(5).

Iroquois Response to Item No. 28:

In January of 2013, Iroquois updated GCOP 900-7.3.1 to provide a description addressing infrequent setups.

29. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-100, 6.4 addresses responsibility for deviation management, but does not address overall CRM implementation as prescribed in §192.631(i).

Iroquois Response to Item No. 29:

Iroquois has updated GCOP 100-6.5.1 to provide overall responsibility for the implementation and compliance of the CRM Plan and procedure manual.

30. §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: . . . .

Iroquois' written control room management procedures, Gas Control Operating Procedures dated 10/03/2011, were inadequate because GCOP-400, 7.3.4 addresses data storage as a process, but does not explicitly address the level of detail to be retained in the records as prescribed in §192.631(j)(1).

Iroquois Response to Item No. 30:

Iroquois has updated GCOP 100-6.6 to address the retention, maintenance, and inspection of specific records.

Conclusion

Iroquois appreciates the feedback provided by the PHMSA CRM inspection team during the 2011 Audit. Iroquois is dedicated to the safety of its pipeline system and recognizes the benefit of periodic improvements to its written procedures, including its procedures to address the recently implemented CRM program. Iroquois believes that the procedural improvements identified in this response will address the concerns PHMSA expressed in the Notice. Therefore, Iroquois respectfully requests that PHMSA close the NOA.

Please contact me at 203-925-7291 if you have any questions about this response or Iroquois' amended CRM procedures.

Respectfully submitted,

Scott Rupff
VP-Marketing, Development & Commercial Operations

Enclosures