



November 7, 2012

Safety Division  
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION  
1300 S. Evergreen Park Dr. S. W.  
P.O. Box 47250  
Olympia, Washington 98504-7250

RECEIVED

NOV 21 2012

WASH. UT. & TP. COMM

RE: 2012 Hydrogen Gas Pipeline Safety  
Inspection-Air Liquide Kalama WA

In response to Safety Evaluation Summary conducted in October 2012 and the follow-up letter dated October 26, 2012, we offer the following actions/correction plan for the probable violations listed.

**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.1**

**Description: 49 CFR §191.22 National Registry of Pipeline and LNG operators.**  
*(b) OPID validation. An operator who has already been assigned one or more OPID by January 1, 2011, must validate the information associated with each OPID through the National Registry of Pipeline and LNG Operators at <http://opsweb.phmsa.dot.gov>, and correct that information as necessary, no later than June 30, 2012.*

**Inspectors Findings**

The operator could not document they had validated their OPID by June 30, 2012, as required by the regulation.

**Requirement: 49 CFR §191.22**

**Response:**

**The following step has been taken to address compliance with 49 CFR §191.22**

OPID: 842 - AIR LIQUIDE LARGE INDUSTRIES U.S. LP was validated and confirmed with PHMSA on October 3, 2012. The Air Liquide Large Industries confirmation notification is available for inspection upon request.

**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.2**

**Description: 49 CFR §192.605 Procedural manual for operations, maintenance, and emergencies.**

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.

(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.

(8) Periodically reviewing the work done by operator personnel to determine the effectiveness and adequacy of the procedures used in normal operation and maintenance and modifying the procedure when deficiencies are found



**Inspectors Findings**

The operator's procedure P-192.605(b) (3) requires "annual or more frequently as needed," reviews of personnel working under normal operating parameters to assess the effectiveness of O&M procedures and modify the procedure accordingly using Form F-192.605(b) (8). The operator could not document they followed this procedure or produce any completed Form F-192.605(b) (8). This same issue was also noted in the 2009 inspection. This review is a key part of the cycle to ensure pipeline safety. Air Liquide must make this review a priority.

**Requirement: 49 CFR §192.605 (b) (3)**

**Response:**

**The following steps will be taken to address compliance with 49 CFR §192.605**

Air Liquide will conduct annual reviews of OQ qualified personnel performing covered tasks on site to validate that O&M procedures are being followed. Assessments of the covered tasks and the procedures will be reviewed annually to determine if updates are needed. Results of the review and the assessments will be documented on form F192.605.

**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.3**

**49 CFR §192.615 Emergency plans.**

*(c) Each operator shall establish and maintain liaison with appropriate fire, police, and other public officials to:*

- (1) Learn the responsibility and resources of each government organization that may respond to a gas pipeline emergency;*
- (2) Acquaint the officials with the operator's ability in responding to a gas pipeline emergency;*
- (3) Identify the types of gas pipeline emergencies of which the operator notifies the officials; and*
- (4) Plan how the operator and officials can engage in mutual assistance to minimize hazards to life or property.*

**Inspectors Findings**

The operator could not document that they had established and maintained contact with appropriate public officials other than Cowlitz County Fire District #5 (i.e. police and other public officials as noted in the regulation).

**Requirement 49 CFR §192.615**

**Response:**

**The following steps will be taken to address compliance with 49 CFR §192.615**

Air Liquide will execute a Government Liaison Program (GLP) and Emergency Responders Program (ERP) for the Kalama/Cowlitz area to include certified mail-outs notifications and face-to-face meeting to educate and inform public officials and emergency responders pertaining to Air Liquide's pipelines and products.



**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.4**

**Description: 49 CFR §192.616 Public awareness.**

*(e) The program must include activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations.*

**Inspectors Findings**

The operator could not document that the PA plan included affected municipalities, school districts, businesses and residents of the operator's pipeline facility locations.

**Requirement: 49 CFR §192.616**

**Response:**

**The following steps will be taken to address compliance with 49 CFR §192.616**

Air Liquide will electronically document, using the public awareness manager (PAM) online software, all stakeholders notified in the executed Public Awareness Program (PAP) for the Kalama/Cowlitz area. Mail-out notification/information and material used to educate and inform the general public near our pipelines and the hazards pertaining to Air Liquide's gases will be maintained within PAM.

**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.5**

**Description: 49 CFR §192.616 Public awareness.**

*(f) The program and the media used must be as comprehensive as necessary to reach all areas in which the operator transports gas.*

**Inspectors Findings**

The operator could not document that the PA plan's programs and media used is comprehensive and reaches all areas in which the operator transports gas.

**Requirement: 49 CFR §192.616 (f)**

**Response:**

**The following steps will be taken to address compliance with 49 CFR §191.22**

Air Liquide will execute a Public Awareness Program (PAP) for the Kalama/Cowlitz area to include mail-outs notifications to educate and inform the public. Mail-out notification/information and material used to educate and inform the general public will be drafted in a manner to accommodate ease of understanding. Material will incorporate Air Liquide contact information to allow stakeholder to call if additional information is needed.



**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.6**

**Description: 49 CFR §192.616 Public awareness.**

(g) The program must be conducted in English and in other languages commonly understood by a significant number and concentration of the non-English speaking population in the operator's area

**Inspectors Findings**

The operator could not document the P A plan's programs were conducted in English (or other languages) commonly understood in the population of the operator's area.

**Requirement: 49 CFR §192.616 (g)**

**Response:**

**The following steps will be taken to address compliance with 49 CFR §192.616 (g)**

Air Liquide will execute a Public Awareness Program (PAP) for the Kalama/Cowlitz area to include mail-outs notifications to educate and inform the public. Mail-out notification/information and material used to educate and inform the general public will be in English and in other languages commonly understood by a significant number and concentration of non-English speaking population in the area of the pipeline.

**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, W A**

**Item No.7**

**Description: 49 CFR §192.616 Public awareness.**

(h) Operators in existence on June 20, 2005, must have completed their written programs no later than June 20, 2006. The operator of a master meter or petroleum gas system covered under paragraph (j) of this section must complete development of its written procedure by June 13, 2008. Upon request, operators must submit their completed programs to P HMSA or, in the case of an intrastate pipeline facility operator, the appropriate State agency.

**Inspectors Findings**

The operator could not document there were written procedures in its PA plan specific to Kalama. The hydrogen line was included in Air Liquide's companywide PA plan but this does not address site specific issues associated with this pipeline and the public that live, work, drive and recreate near it.

**Requirement: 49 CFR §192.616 (h)**

**Response:**

**The following steps will be taken to address compliance with 49 CFR §192.616 (h)**

Air Liquide will review and modify the company wide Public Awareness Program (PAP) to address the specific issues associated with the stakeholders that live, work, drive and recreate near Air Liquide's pipelines.



**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.8**

**Description:**

**49 CFR §192.807 Recordkeeping (Subpart N Qualification of Pipeline Personnel).**

Each operator shall maintain records that demonstrate compliance with this subpart.

(a) Qualification records shall include:

- (1) Identification of qualified individual(s);
- (2) Identification of the covered tasks the individual is qualified to perform;
- (3) Date(s) of current qualification; and
- (4) Qualification method(s).

(b) Records supporting an individual's current qualification shall be maintained while the individual is performing the covered task. Records of prior qualification and records of individuals no longer performing covered tasks shall be retained for a period of five years.

**Inspectors Findings**

The operator could not document the contractor used for locating services was evaluated and qualified to perform the covered tasks per procedures P-192.614(c)(5) and P-192.707.

**Requirement: 49 CFR §192.807**

**Response:**

**The following steps have been taken to address compliance with 49 CFR §192.807**

Air Liquide has received Operation Qualification (OQ) training information from the line-locating contractor and will work with the contractor to address receiving the information in a timelier manner. Air Liquide will also mandate that the line locating contractor use the Air Liquide OQ covered task best practices, to assure that the OQ training meet the requirements of the Air Liquide's OQ Plan.

**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.9**

**Description: WAC 480-93-110 Corrosion control.**

(3) Cathodic protection equipment and instrumentation must be maintained, tested for accuracy, calibrated, and operated in accordance with the manufacturers recommendations. When there are no manufacturer's recommendations, then instruments must be tested for accuracy at an appropriate schedule determined by the gas pipeline company.

**Inspectors Findings**

The operator could not produce calibration documentation for the multi-meter used in the 2009 (second half) CP survey or any calibration documentation for the half-cells used for pipe-to-soil readings for the years 2009 (second half), 2010, 2011 and 2012.



**Requirement: WAC 480-93-110 Corrosion control**

**Response:**

**The following steps have been taken to address compliance with 49 CFR §191.22**

Air Liquide has received calibration documentation from the CP contractor addressing the multi-meter and half-cells used for the pipe-to-soil readings for the years 2009 (second half), 2010, 2011 and 2012.

**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.10**

**Description: WAC 480-93-188 Gas leak surveys.**

(3) Each gas pipeline company must conduct gas leak surveys according to the following minimum frequencies:

(e) Unodorized gas pipelines- At least monthly.

**Inspectors Findings**

The operator did not leak survey the un-odorized hydrogen pipeline monthly as required. They erroneously were surveying two times per year per the federal code. The operator is not odorizing the pipeline as it makes the gas "unfit for its intended purpose" per WAC 480-93-015(6). The gas is used in a chemical process to make food grade preservatives.

**Response:**

**The following steps will be taken to address compliance with 49 CFR §191.22**

Air Liquide will conduct monthly leak surveys to comply with WAC 480-93-188 Gas leak surveys for un-odorized hydrogen.

**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**Item No.11**

**Description: WAC 480-93-200 Reporting requirements.**

(8) Each gas pipeline company must file with the commission, and with appropriate officials of all municipalities where gas pipeline companies have facilities, the names, addresses, and telephone numbers of the responsible officials of the gas pipeline company who may be contacted in the event of an emergency. In the event of any changes in such personnel, the gas pipeline company must immediately notify the commission and municipalities.

**Inspectors Findings**

The operator could not document they had notified all municipalities where they have facilities, i.e. Port of Kalama and Cowlitz County.



**Requirement: WAC 480-93-200**

**Response:**

**The following steps will be taken to address compliance with 480-93-200**

Air Liquide will execute a Government Liaison Program (GLP) and Emergency Responders Program (ERP) for the Kalama/Cowlitz area to include certified mail-outs notifications and face-to-face meeting to educate and inform public officials or the location of our pipeline and present the Air Liquide's Emergency Response Plan.

**RE: 2012 Hydrogen Gas Pipeline Safety Inspection -Air Liquide. Kalama, WA**

**AREAS OF CONCERN OR FIELD OBSERVATIONS**

**( 1 )Description: 49 CFR §192.603 General provisions.**

(b) Each operator shall keep records necessary to administer the procedures established under §192. 605.

**Inspectors Findings**

The operator needs to be able to produce documents necessary to show proper administration of the procedures in 192.605. Due to an accident, the plant manager was not available during the inspection which made accessing documentation relating to certain procedures difficult and in some cases impossible. The operator should have a plan in place to ensure documentation is accessible at all times.

**Response:**

**The following steps will be taken to address compliance with 49 CFR §192.603**

Air Liquide will develop the necessary document retention process to ensure that maintenance and construction records are maintained and accessible to our employees per CFR 192.605.

**( 2 )Description: 49 CFR §192.605 Procedural manual for operations, maintenance, and emergencies.**

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.

(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:

(4) Periodically reviewing the response of operator personnel to determine the effectiveness of the procedures controlling abnormal operation and taking corrective action where deficiencies are found.

**Inspectors Findings**

The operator's procedure P-192.605(c)(l) states that "procedures used during the abnormal operation should be reviewed periodically using Form F-92.605(c)(4) to ensure they are effective." The operator could not document they had conducted a review or produce any completed Form F-192.605(c)(4). The operator needs to define what "periodically" means in the procedure and incorporate this into the procedure.



**Response:**

**The following steps have been taken to address compliance with 49 CFR §192.605**

Abnormal Operating Condition procedures have been reviewed and documented on form F-192.605 (c)(4). Periodically will be defined as once per calendar year in the Kalama OQ manual.

**( 3 )Description: 49 CFR §192.619 Maximum allowable operating pressure- Steel or plastic pipelines.**

*(a) No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined under paragraph (c) or (d) of this section, or the lowest of the following:*

- (1) The design pressure of the weakest element in the segment, determined in accordance with subparts C and D of this part ...*
- (2) The pressure obtained by dividing the pressure to which the segment was tested after construction.*

Finding(s): The operator's documentation of the MAOP was based on the hydro test completed after construction of the pipeline. This form used to document the MAOP, however, is incomplete. The operator needs to complete the form and have the appropriate company official sign it. During the inspection, the calculated MAOP was confirmed based on construction documents and hydro test records, however, the operator's record document needs to be finalized.

**Response:**

**The following steps will be taken to address compliance with 49 CFR §192.619**

Air Liquide's plant engineering team will complete Form 192.619(a) steel pipe MAOP determination worksheet to confirm design MAOP pressure calculations.

If you need additional information, please call me at (832) 731-2176.

Sincerely,

Bobby L. Skelton  
Pipeline Operations/Regulatory Compliance Manager

cc: Michelle McMinn  
Scott Moon  
Gary Babish