



Public Service Commission

State of North Dakota

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WARNING LETTER

August 29, 2018

Mr. Ryan Blazei CFO
North Dakota LNG LLC.
235 E. Lake St.
Wayzata, MN 55391

Dear Mr. Blazei:

On June 26, 2018, Public Service Commission staff, assisted by PHMSA staff completed a standard inspection of North Dakota LNG LLC., in Tioga, ND.

As a result of that inspection, thirteen warnings were discovered:

Warning 1:

In Section 2 of the Maintenance manual, there needs to be clarification on exactly the materials used for piping to transfer product underground to the delivery system. Example: Section 2.5 references vacuum-jacketed pipe which is actually wrapped and insulated.

Code in effect:

193.2625 Corrosion protection.

- (a) Each operator shall determine which metallic components could, unless corrosion is controlled, have their integrity or reliability adversely affected by external, internal, or atmospheric corrosion during their intended service life.
- (b) Components whose integrity or reliability could be adversely affected by corrosion must be either—
 - (1) Protected from corrosion in accordance with §§193.2627 through 193.2635, as applicable; or
 - (2) Inspected and replaced under a program of scheduled maintenance in accordance with procedures established under §193.2605.

Warning 2:

Operator to add Cathodic Protection (CP) and protective coating to buried steel piping or install piping resistant to corrosion and revise section 2.6 of Operations Manual.

Code in effect:

193.2629 External corrosion control: buried or submerged components.

(a) Each buried or submerged component that is subject to external corrosive attack must be protected from external corrosion by—

(1) Material that has been designed and selected to resist the corrosive environment involved; or

(2) The following means:

(i) An external protective coating designed and installed to prevent corrosion attack and to meet the requirements of §192.461 of this chapter; and

(ii) A cathodic protection system designed to protect components in their entirety in accordance with the requirements of §192.463 of this chapter and placed in operation before October 23, 1981, or within 1 year after the component is constructed or installed, whichever is later.

(b) Where cathodic protection is applied, components that are electrically interconnected must be protected as a unit.

Warning 3:

No CP currently on steel piping. Operator or their contractor will need to check piping for possibility of interference currents.

Code in effect:

193.2633 Interference currents.

(a) Each component that is subject to electrical current interference must be protected by a continuing program to minimize the detrimental effects of currents.

Warning 4:

There are currently no procedures for any corrosion control monitoring. Operator must establish a Cathodic Protection program for all affected piping on the plant site.

Code in effect:

193.2635 Monitoring corrosion control.

Corrosion protection provided as required by this subpart must be periodically monitored to give early recognition of ineffective corrosion protection, including the following, as applicable:

(a) Each buried or submerged component under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463 of this chapter.

(b) Each cathodic protection rectifier or other impressed current power source must be inspected at least 6 times each calendar year, but with intervals not exceeding 2 1/2 months, to ensure that it is operating properly.

(c) Each reverse current switch, each diode, and each interference bond whose failure would jeopardize component protection must be electrically checked for proper performance at least 6 times each calendar year, but with intervals not exceeding 2 1/2 months. Each other interference bond must be checked at least once each calendar year, but with intervals not exceeding 15 months.

Warning 5:

This are currently no corrosion control personnel at plant, and is not currently covered in Maintenance manual.

Code in effect:

193.2707 Operations and Maintenance.

(c) Corrosion control procedures under §193.2605(b), including those for the design, installation, operation, and maintenance of cathodic protection systems, must be carried out by, or under the direction of, a person qualified by experience and training in corrosion control technology.

Warning 6:

Need to add security monitoring on all perimeter fencing. Need to ensure security of the facility when unattended.

Code in effect:

193.2913 Security Monitoring.

Each protective enclosure and the area around each facility listed in §193.2905(a) must be monitored for the presence of unauthorized persons. Monitoring must be by visual observation in accordance with the schedule in the security procedures under §193.2903(a) or by security warning systems that continuously transmit data to an attended location. At an LNG plant with less than 40,000 m³ (250,000 bbl) of storage capacity, only the protective enclosure must be monitored.

Warning 7:

Operator could not document that cooldown of components was maintained within design limits.

Code in effect:

193.2503 Operating procedures.

Each operator shall follow one or more manuals of written procedures to provide safety in normal operation and in responding to an abnormal operation that would affect safety. The procedures must include provisions for:

(g) Cooldown of components according to the requirements of §193.2505.

Warning 8:

Operator could not show coordination with local authorities for evacuation plans, or mutual assistance.

Code in effect:

193.2509 Emergency Procedures.

(a) Each operator shall determine the types and places of emergencies other than fires that may reasonably be expected to occur at an LNG plant due to operating malfunctions, structural collapse, personnel error, forces of nature, and activities adjacent to the plant.

(b) To adequately handle each type of emergency identified under paragraph (a) of this section and each fire emergency, each operator must follow one or more manuals of written procedures. The procedures must provide for the following:

(3) Coordinating with appropriate local officials in preparation of an emergency evacuation plan, which sets forth the steps required to protect the public in the event of an emergency, including catastrophic failure of an LNG storage tank.

(4) Cooperating with appropriate local officials in evacuations and emergencies requiring mutual assistance and keeping these officials advised of:

(i) The LNG plant fire control equipment, its location, and quantity of units located throughout the plant;

(ii) Potential hazards at the plant, including fires;

(iii) Communication and emergency control capabilities at the LNG plant; and

(iv) The status of each emergency.

Warning 9:

Most maintenance records are not available at this time including:

Testing of auxiliary power sources

Testing of control systems

Testing of relief valves

Inspection of corrosion control systems

Items currently out of service, are not all properly tagged out
Records are not available for all items taken out of service

Code in effect:

193.2639 Maintenance records.

- (a) Each operator shall keep a record at each LNG plant of the date and type of each maintenance activity performed on each component to meet the requirements of this part. For each LNG facility that is designed and constructed after March 31, 2000 the operator shall also maintain related periodic inspection and testing records that NFPA-59A-2001 (incorporated by reference, see §193.2013) requires. Maintenance records, whether required by this part or NFPA-59A-2001, must be kept for a period of not less than five years.
- (b) Each operator shall maintain records or maps to show the location of cathodically protected components, neighboring structures bonded to the cathodic protection system, and corrosion protection equipment.
- (c) Each of the following records must be retained for as long as the LNG facility remains in service:
 - (1) Each record or map required by paragraph (b) of this section.
 - (2) Records of each test, survey, or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures.

193.2603 General.

- (c) Each component taken out of service must be identified in the records kept under §193.2639.
- (d) If a safety device is taken out of service for maintenance, the component being served by the device must be taken out of service unless the same safety function is provided by an alternate means.

193.2625 Corrosion protection.

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- (b) Components whose integrity or reliability could be adversely affected by corrosion must be either—
 - (1) Protected from corrosion in accordance with §§193.2627 through 193.2635, as applicable; or
 - (2) Inspected and replaced under a program of scheduled maintenance in accordance with procedures established under §193.2605.

193.2629 External corrosion control: buried or submerged components.

- (a) Each buried or submerged component that is subject to external corrosive attack must be protected from external corrosion by—
- (1) Material that has been designed and selected to resist the corrosive environment involved; or
 - (2) The following means:
 - (i) An external protective coating designed and installed to prevent corrosion attack and to meet the requirements of §192.461 of this chapter; and
 - (ii) A cathodic protection system designed to protect components in their entirety in accordance with the requirements of §192.463 of this chapter and placed in operation before October 23, 1981, or within 1 year after the component is constructed or installed, whichever is later.

193.2635 Monitoring corrosion control.

Corrosion protection provided as required by this subpart must be periodically monitored to give early recognition of ineffective corrosion protection, including the following, as applicable:

- (a) Each buried or submerged component under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463 of this chapter.
- (b) Each cathodic protection rectifier or other impressed current power source must be inspected at least 6 times each calendar year, but with intervals not exceeding 2½ months, to ensure that it is operating properly.
- (c) Each reverse current switch, each diode, and each interference bond whose failure would jeopardize component protection must be electrically checked for proper performance at least 6 times each calendar year, but with intervals not exceeding 2½ months. Each other interference bond must be checked at least once each calendar year, but with intervals not exceeding 15 months.
- (d) Each component that is protected from atmospheric corrosion must be inspected at intervals not exceeding 3 years.

Warning 10:

There are no gas detectors in the highest points of the process buildings, advise adding them.

The current ESD signage is very small and not easy to see, advise installing signage that will clearly identify the shutdown devices.

Code in effect:

193.2801 Fire protection.

Each operator must provide and maintain fire protection at LNG plants according to sections 9.1 through 9.7 and section 9.9 of NFPA-59A-2001 (incorporated by

reference, see §193.2013). However, LNG plants existing on March 31, 2000, need not comply with provisions on emergency shutdown systems, water delivery systems, detection systems, and personnel qualification and training until September 12, 2005.

Warning 11:

There is currently only one power source for communication, security monitoring, and emergency lighting systems.

Code in effect:

193.2445 Sources of power.

(a) Electrical control systems, means of communication, emergency lighting, and firefighting systems must have at least two sources of power which function so that failure of one source does not affect the capability of the other source.

193.2915 Alternative power sources.

An alternative source of power that meets the requirements of §193.2445 must be provided for security lighting and security monitoring and warning systems required under §§193.2911 and 193.2913.

Warning 12:

There are currently wood supports under the vaporizer in the load out area. The walkway in the load out area is also made of wood. Advise removing these items.

Code in effect:

193.2607 Foreign material.

(b) LNG plant grounds must be free from rubbish, debris, and other material which present a fire hazard. Grass areas on the LNG plant grounds must be maintained in a manner that does not present a fire hazard.

Warning 13:

There is currently no monitoring of the gate it is left open and there is free access to the facility. When the facility is shut down it is currently unmanned and not monitored.

Code in effect:

193.2905 Protective enclosures.

(a) The following facilities must be surrounded by a protective enclosure:

- (1) Storage tanks;
- (2) Impounding systems;
- (3) Vapor barriers;
- (4) Cargo transfer systems;
- (5) Process, liquefaction, and vaporization equipment;
- (6) Control rooms and stations;
- (7) Control systems;
- (8) Fire control equipment;
- (9) Security communications systems; and
- (10) Alternative power sources.

The protective enclosure may be one or more separate enclosures surrounding a single facility or multiple facilities.

(b) Ground elevations outside a protective enclosure must be graded in a manner that does not impair the effectiveness of the enclosure.

(c) Protective enclosures may not be located near features outside of the facility, such as trees, poles, or buildings, which could be used to breach the security.

(d) At least two accesses must be provided in each protective enclosure and be located to minimize the escape distance in the event of emergency.

(e) Each access must be locked unless it is continuously guarded. During normal operations, an access may be unlocked only by persons designated in writing by the operator. During an emergency, a means must be readily available to all facility personnel within the protective enclosure to open each access.

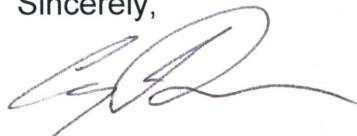
193.2913 Security monitoring.

Each protective enclosure and the area around each facility listed in §193.2905(a) must be monitored for the presence of unauthorized persons. Monitoring must be by visual observation in accordance with the schedule in the security procedures under §193.2903(a) or by security warning systems that continuously transmit data to an attended location. At an LNG plant with less than 40,000 m³ (250,000 bbl) of storage capacity, only the protective enclosure must be monitored.

North Dakota LNG LLC., must correct the warnings listed above or be subject to potential enforcement action in the future.

If you have any questions, please feel free to contact me at 701 328 4056 or creamann.nd.gov.

Sincerely,



Craig Reamann, Manager
Gas Pipeline Safety