

LETTER OF CONCERN

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 12, 1999

Mr. Theopolis Holeman
Sr. Vice President Transmission
Duke Energy
P.O. Box 1642
Houston, TX 77251

CPF No. 19302C

Dear Mr. Holeman:

On April 7 - 9, 1999, a representative of the Eastern Region, Office of Pipeline Safety (OPS), pursuant to Chapter 601 of 49 United States Code, conducted an onsite LNG facility safety inspection of your facilities and records at the Algonquin LNG, Inc., (ALNG) plant located at 121 Terminal Road, Providence, Rhode Island. During the inspection, the following items came to our attention that have caused some concern. I hope you will give these items your attention.

1. **§ 193.2017 Plans and procedures.**
 - (a) **Each operator shall maintain at each LNG plant the plans and procedures required for that plant by this part. The plans and procedures must be available upon request for review and inspection by the Administrator or any State Agency that has submitted a current certification or agreement with respect to the plant under the pipeline safety laws (49 U.S.C. 60101 et seq.). In addition, each change to the plans or procedures must be available at the LNG plant for review and inspection within 20 days after the change is made.**

The plant organization chart was reviewed and found to be incomplete and inconsistent with the written narrative. The chart did not show the “plant engineer” or attempt to differentiate between the “Control Room Operator” and the “Plant Operator”. We understand that even though the capability exists, barge loading and unloading operations have never been conducted and are not anticipated in the future. You may want to consider removing the “Barge Unloading” chain of command and job descriptions, i.e., “Dock Operator” or “Barge Watch Operator” from the manual. It is suggested that the procedural manuals and the organization charts be reviewed to eliminate the incongruities. The inspection/maintenance plan was dated and reprinted on March 22, 1993. Any other recent revisions were unknown.

A random field check of items shown on the plant process, instrument and electrical control drawings was made. A valve was found in the field not tagged. It is suggested that additional random correlation checks of the field equipment with the plant facility drawings be made to insure the operational integrity of the plant.

2. § 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:

(c) Recognizing abnormal operating conditions.

Procedures for identifying and controlling “abnormal conditions” (high pressure, low temperature, vibration, etc.) were cited in the “routine” procedures section of the operations manual and not specifically designated as abnormal. It is suggested that a separate section of the existing manual deal explicitly with identifying and controlling “abnormal conditions”.

3. § 193.2509 Emergency procedures.

(b) To adequately handle each type of emergency identified under paragraph (a) of this section and each fire emergency identified under §193.2817(a), each operator shall follow one or more manuals of written procedures. The procedures must provide for the following:

- (1) **Responding to controllable emergencies, including notifying personnel and using equipment appropriate for handling the emergency.**
- (2) **Recognizing an uncontrollable emergency and taking action to minimize harm to the public and personnel, including prompt notification of appropriate local officials of the emergency and possible need for evacuation of the public in the vicinity of the LNG plant.**

“Uncontrollable” and “Controllable” emergencies were not defined in the existing operations/emergency manual. It is suggested that the appropriate emergencies be identified and categorized in the emergency manual.

4. § 193.2511 Personnel safety.

- (b) **All personnel who are normally on duty at a fixed location, such as a building or yard, where they could be harmed by thermal radiation from a burning pool of impounded liquid, must be provided a means of protection at that location from the harmful effects of thermal radiation or a means of escape.**

There apparently is no procedure for “mustering” or “gathering” outside contractor personnel who may be working in the plant at the time of a contingency, into one central or reporting area. This is also true for the ALNG receptionist. In the event of a contingency she appears to have no assignment because “she is not in operations!”. I suggest that all personnel working at any time in the plant be trained and instructed on specific reporting procedures in the event of a contingency alarm. The safety and accounting of all personnel working in the plant should receive high priority.

5. § 193.2513 Transfer procedures.

- (b) **The transfer procedures must include provisions for personnel to:**
 - (4) **When making bulk transfer of LNG into a partially filled (excluding cool-down heel) container, determine any differences in temperature or specific gravity between the LNG being transferred and the LNG already in the container and, if necessary, provide a means to prevent rollover due to stratification.**

The word “rollover” did not appear in the operations manual regarding the LNG storage tank; “boil-off suppression” was used as an antonym. Due to the extended periods of inactivity associated with the LNG storage tank it is suggested that “rollover” be addressed directly in the operations manual. The existing tank is equipped with both top and bottom fill lines which should make the implementation of these procedures fairly straight forward.

(c) In addition to the requirements of paragraph (b) of this section, the procedures for cargo transfer must be located at the transfer area and include provisions for personnel to:

(3) Before transfer, verify that:

(4) Prevent a tank truck engine that is off during transfer operations from being restarted until the transfer lines have been disconnected and any released vapors have dissipated;

During the review of the written Truck Loading Procedures it was noted that the trucks were allowed to start their engines before hoses and unloading arms were disconnected.

(6) Verify that all transfer lines have been disconnected and equipment cleared before the tank car or tank truck is moved from the transfer position;

During the review of the written Truck Loading Procedures it was noted that the procedures did not include disconnecting the grounding cables when the truck loading operation was finished.

It is suggested that the Truck Loading Procedures be reviewed and modified accordingly.

6. § 193.2519 Communication systems.

(b) Each LNG plant in excess of 70,000 gallons (265,000 liters) storage capacity must have an emergency communication system that provides for verbal communications between all persons and locations necessary for the orderly shutdown of operating equipment and the operation of safety equipment in time of emergency. The emergency communication system must be independent of and physically separated from the primary communication system and the security communication system under § 193.2909.

Although emergency communications equipment and systems were in existence within the plant, the operations manual did not contain any written description of the respective systems and their appropriate implementation in the event of a contingency. It is suggested that written descriptions be added to the operations/emergency manual in sufficient detail to enable a new employee to understand how and when the appropriate system will go into effect.

7. § 193.2639 Maintenance Records.

(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.

It was noted that the CB&I drawing of the tank foundation shows the cathodic protection test reference cells in different locations than the ALNG plant facility drawings. It is suggested that a determination be made as to what is correct and make the necessary drawing modifications.

In addition to the above items of concerns, I would like to bring to your attention to the following suggestions for your future operational consideration. Although not specifically delineated in Part 193, I believe they may enhance the overall safety of your plant.

1. Although this plant is grandfathered due to its construction in 1974, from Subpart C, Design, it may be prudent to install a low temperature cut off switch on the vaporizer sump pump. Photographs taken during the inspection suggest that this particular impounding system has a reasonably close proximity to the equipment maintenance building.
2. The Area Evacuation Plan was last prepared by the Providence Fire Department dated January 15, 1996. Considering the planned future modifications to the plant associated with the proposed increased capacity and operational capability, it may be timely to review the existing plan for adequacy with the Providence Fire Department and update it as necessary.
3. It was observed during the review of the operations procedures that a “relay cheater” was to be used to clear a malfunction response to Step #7 of the Vaporizer Start-up. It is my understanding that no other manual over-rides exist for temperature controls, fuel pressure controls, blower pressure controls, etc. I suggest that the use of “manual over-rides” of any control system be carefully evaluated to make sure that human error does not cause a serious contingency.

If you wish to discuss any of the above items, please feel free to call Chuck Behounek, staff New England Representative, at (207) 926-5929 or me at (202) 366-4580. I would appreciate receiving your comments on the above items within 45 days of receipt of this letter.

Sincerely,

William H. Gute
Director, Eastern Region
Office of Pipeline Safety

CBEHOUNEK/sj/DPS-24/(207) 926-5929/8/12/99
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cc: DPS-22.1, DPS-24, NJDO, Regions, MEDO, PIDO
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