



U.S. Department
of Transportation

Pipeline and Hazardous Materials
Safety Administration

1200 New Jersey Avenue SE
Washington DC 20590

OCT 01 2019

Mr. J. Raymond Miyares
Town Counsel
Town of Hopkinton
40 Grove Street
Suite 190
Wellesley, MA 02482

Dear Mr. Miyares:

In a December 17, 2018, letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA), you requested an interpretation of 49 CFR §§ 193.2005 and 193.2051. Specifically, you asked if lengthening an existing liquefied natural gas (LNG) facility's piping would subject the facility to Part 193, Subpart B regulations.

Background

According to your letter, Hopkinton LNG Corp. (HOPCo) owns a peak-shaving LNG plant in the Town of Hopkinton, Massachusetts (Hopkinton LNG Plant). The Hopkinton LNG Plant has three cryogenic LNG storage tanks, with associated vaporizer and liquefaction facilities. The plant is sited on two parcels of land that straddle Wilson Street, a public roadway in Hopkinton. The existing vaporizer and liquefaction facilities are connected to the three LNG storage tanks through two pipelines that cross Wilson Street through a below-grade, concrete culvert perpendicular to and under the Wilson Street roadway. The piping enters the culvert a short distance from the roadway on the eastern parcel, travels through the culvert below the roadway, and exits the culvert a short distance from the roadway on the western parcel. At the entry points for the culvert on the east side of the roadway, the piping changes direction in an approximately 90° turn twice – 90° downward until reaching the grade of the culvert and then 90° to run parallel to the culvert floor. At both the east-side entry point and west-side exist point, the piping is protected by metal fencing, boulders, concrete jersey barriers, and guardrails. Outside of the culvert, the pipes are suspended a short height above-grade, on concrete sleepers.

You indicated that HOPCo proposes to replace the plant's liquefaction facilities as part of an upgrade to the plant. That replacement project will remove the current liquefaction facilities on the eastern parcel and replace them with new liquefaction facilities on the western parcel. The plant's existing vaporization facilities, however, will remain on the eastern parcel. Accordingly, the two pipes crossing Wilson Street will remain in place and will continue to transport LNG between facilities on the two parcels.

The Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety provides written clarifications of the Regulations (49 CFR Parts 190-199) in the form of interpretation letters. These letters reflect the agency's current application of the regulations to the specific facts presented by the person requesting the clarification. Interpretations do not create legally-enforceable rights or obligations and are provided to help the public understand how to comply with the regulations.

As HOPCo replaces equipment at its LNG facility, the Town of Hopkinton also wants HOPCo to lengthen the distance between the roadway and the two pipes' entry and exit points. You believe this action would push the above-ground length of the piping farther back from the roadway to lessen the possibility of accidental vehicle strikes to the pipes. You further indicated that this proposal would not move the existing piping from its current route between the existing vaporizer and liquefaction facilities. Rather, it would entail lengthening the below-grade culvert and shifting the 90-degree piping turns farther back from the roadway an equal distance. Finally, you provided photos of the site and mentioned HOPCo's previous modifications to the plant's existing vaporizer, which were not subject to the Part 193 siting requirements.

PHMSA also received a March 11, 2019, letter from HOPCo, which indicated that the company believes that the Town's proposed modification to the Hopkinton LNG Plant, which went into service in the early 1970s, would likely require the facility to comply with the Subpart B, Part 193 siting requirements. Specifically, HOPCo stated that at least some portion of the piping would need to be lowered as part of the Town's proposal, and that lowering appears to qualify as a relocation of an existing LNG facility (whether in terms of elevation from the ground or distance from plant property lines or other LNG facilities) under the Part 193 regulations. HOPCo further indicated that the Town's proposal would also require the installation of at least some new LNG piping.

PHMSA shared this letter with you on April 1, 2019, via email, and you responded on April 22, 2019, indicating that you had no amendments to your request for interpretation based on HOPCo's March 11, 2019 letter.

Question

Would the Town of Hopkinton's proposed enhancement to the existing LNG pipelines at the Hopkinton LNG plant constitute the replacement, relocation or significant alteration of the facility within the meaning of 49 CFR §§ 193.2005(b) and 193.2051 and, therefore, be subject to siting requirements of 49 CFR Part 193, Subpart B?

Analysis

PHMSA prescribes minimum Federal safety standards for the design, construction, operation, maintenance, and security of LNG facilities. PHMSA has promulgated regulations that govern the applicability of the siting requirements to existing LNG facilities. In particular, § 193.2005(b) states "[I]f an existing LNG facility (or facility under construction before March 31, 2000) is replaced, relocated or significantly altered after March 31, 2000, the facility must comply with the applicable requirements of this part governing, siting, design, installation, and construction ..."¹ Additionally, § 193.2051 states "[E]ach LNG facility designed, constructed, replaced, relocated or significantly altered after March 31, 2000, must be provided with siting requirements in accordance with the requirements of this part and of NFPA 59A (incorporated by reference, see § 193.2013) ..."

¹ See 49 USC §§ 60101(a)(1), (16), and 60103(c), providing that, with certain exceptions, a design, location, installation, construction, initial inspection, or initial testing standard prescribed after March 1, 1978, does not apply to an existing liquefied natural gas pipeline facility.

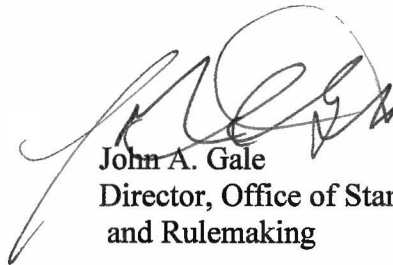
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Based on the facts represented by the Town of Hopkinton, PHMSA does not consider the Town's proposed enhancement to the existing LNG pipelines at the Hopkinton LNG plant to constitute design, construction, replacement, relocation or significant alteration of the facility within the meaning of 49 CFR §§ 193.2005(b) and 193.2051. The existing LNG pipelines would remain in the same location and, therefore, would not be replaced or relocated. The change would also not constitute a significant alteration because the LNG operating parameters would not be affected by the proposed changes. Therefore, the proposed change in modifying the below-grade culvert and shifting the 90-degree piping turns farther back from the roadway would not be subject to the Subpart B, 49 CFR Part 193 siting requirements. However, if these existing LNG facilities are otherwise replaced, relocated, or significantly altered (by using new piping as suggested by HOPCo's March 11, 2019, letter), they may trigger the siting requirements under 49 CFR §§ 193.2005(b) and 193.2051.

Please keep in mind that this response letter reflects the agency's current application of the regulations to the specific facts you presented for clarification. Also, interpretations do not create legally-enforceable rights or obligations and are provided to help the requester understand how to comply with the regulations.

If we can be of further assistance, please contact Tewabe Asebe at 202-366-5523.

Sincerely,

A handwritten signature in black ink, appearing to read "John A. Gale", is written over the printed name and title.

John A. Gale
Director, Office of Standards
and Rulemaking



J. Raymond Miyares Thomas J. Harrington Christopher H. Heep Donna M. Brewer Jennie M. Merrill
Rebekah Lacey Bryan Bertram Ivria Glass Fried Eric Reustle Katherine E. Stock

December 17, 2018

By: Overnight Mail

JAN 30 2019

United States Department of Transportation
Pipeline and Hazardous Materials Safety Administration
East Building, 2nd Floor
1200 New Jersey Ave., SE
Washington, D.C. 20590

Re: Request for Written Interpretation of U.S. DOT Regulations

Dear Sir or Madam:

On behalf of the Town of Hopkinton, Massachusetts – for which I am the duly appointed Town Counsel – I write to request a formal written letter interpreting the Department of Transportation's regulations at 49 C.F.R. Part 193. I further ask that the Department expedite its treatment of this request because it concerns the safety of an existing liquefied natural gas (LNG) storage plant.

Background

Hopkinton is host community to the largest peak-shaving LNG plant in New England. It is owned by Hopkinton LNG Corp. ("HOPCo"), which contracts with NSTAR Gas Company, a subsidiary of Eversource Energy, for peak-shaving capacity. The plant has three cryogenic LNG storage tanks, with associated vaporizer and liquefaction facilities. The plant entered service in stages, beginning in the late 1960s. It is sited on two parcels of land that straddle Wilson Street, a public way in Hopkinton. The three LNG storage tanks are located on the western parcel at 55 Wilson Street and the vaporizer and liquefaction facilities are located on the eastern parcel at 52 Wilson Street.

The existing liquefaction and vaporizer facilities are connected to the three LNG storage tanks through two pipes that cross Wilson Street through a below-grade, concrete culvert perpendicular to and under the Wilson Street roadway. The piping enters that culvert a short distance from the roadway on the eastern parcel (52 Wilson Street), travels through the culvert below the roadway, and exits the culvert a short distance from the roadway on the western parcel

(55 Wilson Street). At the entry points for the culvert on the east side of the roadway, the piping changes direction in an approximately 90° turn twice – 90° downward until reaching the grade of the culvert and then 90° to run parallel to the culvert floor. At both the east-side entry point and west-side exist point on the opposite side of Wilson Street, the piping is protected by metal fencing, boulders, concrete jersey barriers, and guardrails. Outside of the culvert, the pipes are suspended a short height above-grade, on concrete sleepers.

Overhead photographs of facility with Wilson Street pipe crossing circled in red



View of pipe entering under-road culvert looking east from roadway



View of pipe entering under-road culvert looking west from roadway



HOPCo proposes to replace the plant's liquefaction facilities as part of an upgrade to the plant. That replacement project will remove the current liquefaction facilities on the eastern parcel and replace them with new liquefaction facilities on the western parcel. The plant's existing vaporization facilities, however, will remain on the eastern parcel. Accordingly, the two pipes crossing Wilson Street will remain in place and will continue to transport LNG between facilities on the two parcels.

This replacement project is currently undergoing administrative review, in a proceeding for a comprehensive zoning exemption, before the State's Department of Public Utilities.¹ The Town of Hopkinton has intervened in that proceeding, to ensure that the plant properly addresses all safety and other concerns associated with the upgrade and future operations. In connection with that proceeding, the Town has discussed with HOPCo the feasibility of improving the plant's safety where the existing piping crosses Wilson Street. One potential enhancement to the existing configuration would be to lengthen the distance between the roadway and the two pipes' entry and exist points from the below-grade culvert – *i.e.* pushing the above-ground length of the piping farther back from the roadway. Doing so would enhance safety by moving the pipes farther from the road, lessening the possibility of accidental vehicle strikes to the pipes, and increasing available space for additional barriers and other pipe protection measures.

Implementing such a change would not move the existing piping from its current route between the existing vaporizer and liquefaction facilities. Rather, it would entail lengthening the below-grade culvert and shifting the 90-degree piping turns farther back from the roadway an equal distance. It is not contemplated that this would require any change in piping materials or to the capacity of the pipes or their construction (other than shifting the 90-degree turns). The sole purpose to this minimal change would be enhancing safety at the Wilson Street crossing.²

Interpretation Request

The Town of Hopkinton requests a written determination from the Department answering whether the potential, proposed change to the Wilson Street pipes described above would constitute “design[ing], construct[ing], replac[ing], relocate[ing] or significantly alter[ing]” a facility within the meaning of 49 C.F.R. §193.2005 and/or §193.2051, thus making the proposed change

¹ *Petition of Hopkinton LNG Corp. pursuant to G.L. c. 40A, § 3. for Individual and Comprehensive Exemptions from the Zoning Bylaws of the Town of Hopkinton, Mass.* D.P.U. No. 17-114. All filings in that proceeding are available at <https://eeonline.eea.state.ma.us/DPU/Fileroom/dockets/bynumber> by searching under docket number “17-114”.

² To be clear, the proposed project currently undergoing Massachusetts DPU review includes the construction of additional piping under Wilson Street, adjacent to the existing piping. This letter, however, does not request interpretation of the Department's regulations for that new piping. Rather, this letter's request is limited to interpretation of the Department's regulations with respect to the existing piping, as described above.

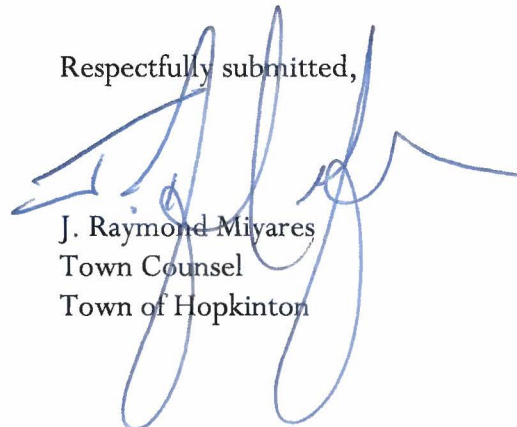
subject to 49 C.F.R. Part 193, Subpart B Siting Requirements, or any other of the Department's regulatory siting requirements.

Of note, HOPCo previously performed a significant project on the plant's existing vaporizer, taking the position that the vaporizer project was not subject to Part 193 siting requirements. HOPCo communicated to PHMSA, on or about December 22, 2015, that this was only an "in-situ" replacement with OEM parts that would "provide no additional vaporization capacity" and "make no major changes to the original design or footprint of the equipment." HOPCO described the project to PHMSA as "include[ing] the refurbishment of the existing concrete vaporizer pits, replacement of sixteen natural gas fired burners and the associated fuel gas piping, electrical distribution, controls and combustion air blowers."³

As the Town understands matters, the vaporizer project required extensive replacement of vaporizer parts with new ones that, in turn, required designing a supplemental foundation to be located adjacent to the existing foundation.⁴ It also required large-scale replacement of vaporizer parts. In contrast, the proposed change to the below-grade pipes under Wilson Street would require far less construction than the vaporizer project and would similarly require only "in-kind" replacement of any parts as well as no meaningful change in the location of the pipes. Accordingly, the Town can discern no reason why making those proposed changes to the pipes should be subject to Part 193 siting requirements, if the vaporizer project was not.

The Town asks that the Department render its interpretation as expeditiously as possible. Thank you in advance for that consideration.

Respectfully submitted,



J. Raymond Miyares
Town Counsel
Town of Hopkinton

³ These communications were specifically made to Mr. Joseph F. Klesin, Project Manager, Eastern Region of PHMSA. That communication is included as Attachment A.

⁴ PowerPoint provided by Eversource in April 2016, included as Attachment B and letter from James P. Davis to Charles Kadlik, dated July 13, 2016, included as Attachment C.

cc.: Norman Khumalo
Town Manager, Town of Hopkinton
Town of Hopkinton Board of Selectmen
Hon. Karen E. Spilka
President, Massachusetts Senate
Hon. Carolyn C. Dykema
Massachusetts House of Representatives
Richard Wallace
Director, Pipeline Safety Division, Massachusetts Department of Public Utilities
Neven Rabadjija
Deputy General Counsel, Eversource Energy Service Co.

Attachment A

December 22, 2015

Joseph F. Klesin
Project Manager – Eastern Region
Pipeline & Hazardous Materials Safety Administration
United States Department of Transportation
820 Bear Tavern Road, Suite 103
West Trenton, NJ 08628

SUBJECT: ER Request – Construction Projects for 2016

Dear Mr. Klesin:

This letter is in response to an email request, dated November 30, 2015, for the information related to significant construction projects to commence in 2016.

The following project has been identified as meeting the requirements set forth within the request:

Project Name

Hopkinton LNG, Vaporizer Replacement Project

Location

Hopkinton, Middlesex County, Massachusetts

Project Description

The Hopkinton LNG Plant has invested in the replacement of the existing vaporizers in order to ensure equipment and system reliability. The new vaporizer equipment has been provided by the Original Equipment Manufacturer (OEM) and will be considered an in-situ replacement. The new vaporizers will provide no additional vaporization capacity and will make no major changes to the original design or footprint of the equipment.

This project will include the refurbishment of the existing concrete vaporizer pits, replacement of sixteen natural gas fired burners and the associated fuel gas piping, electrical distribution, controls and combustion air blowers. The existing tube bundles, which were replaced in the mid 1990's, will be maintained in their current state. This project is estimated at a total cost of approximately \$14.5 million and will be constructed during the summer of 2016.

Type of System

LNG, Submerged Combustion Vaporizers

Anticipated Construction Start Date

June 1st, 2016

Anticipated Construction Completion Date

September 30th, 2016

Anticipated In-Service Date

October 31st, 2016

As you can see this project is considered a maintenance activity taking place at an existing LNG facility. The installation of equipment is expected to take place during the summer of 2016, contingent on the timely delivery of the replacement equipment from the manufacturer.

If you have any additional questions or concerns please don't hesitate to contact me for additional information.

Sincerely,

Jim Blackburn, PE, PMP
Project Manager, LNG
One NSTAR Way, NE380
Westwood, MA 02090

P: 508-813-6308

James.Blackburn@eversource.com

Attachment B

Hopkinton LNG Facility **Vaporizer Maintenance Project**



Facility Review

- Constructed in 1967 by Tennessee Gas, the facility has been operated by Air Products since commissioning & owned by Eversource since 1970.
- The facility provides supplemental capacity to constrained pipelines, serving as an emergency supply independent of interstate gas and maintains seasonal price stability for rate payers.
- Connected to Eversource's gas distribution system, the facility serves over 300,000 customers in 36 towns, making up 40% of our customer's supply on the coldest days of the year.
- Facility is regulated by MassDPU with oversight from PHMSA and FERC.

Project Scope

- Refurbishment of existing concrete vaporizer pits.
- Replacement of existing power supply.
- Replacement of the burners, fuel gas piping, electrical controls and blowers with new, in-kind, equipment supplied by the original equipment manufacturer.

Project Benefits

- This maintenance work provides for increased operator control, maintainability and is an upgrade to the design as it relates to safety and reliability of the equipment.
- No increased capacity of the facility or changes to the environmental standard MassDEP holds us to.

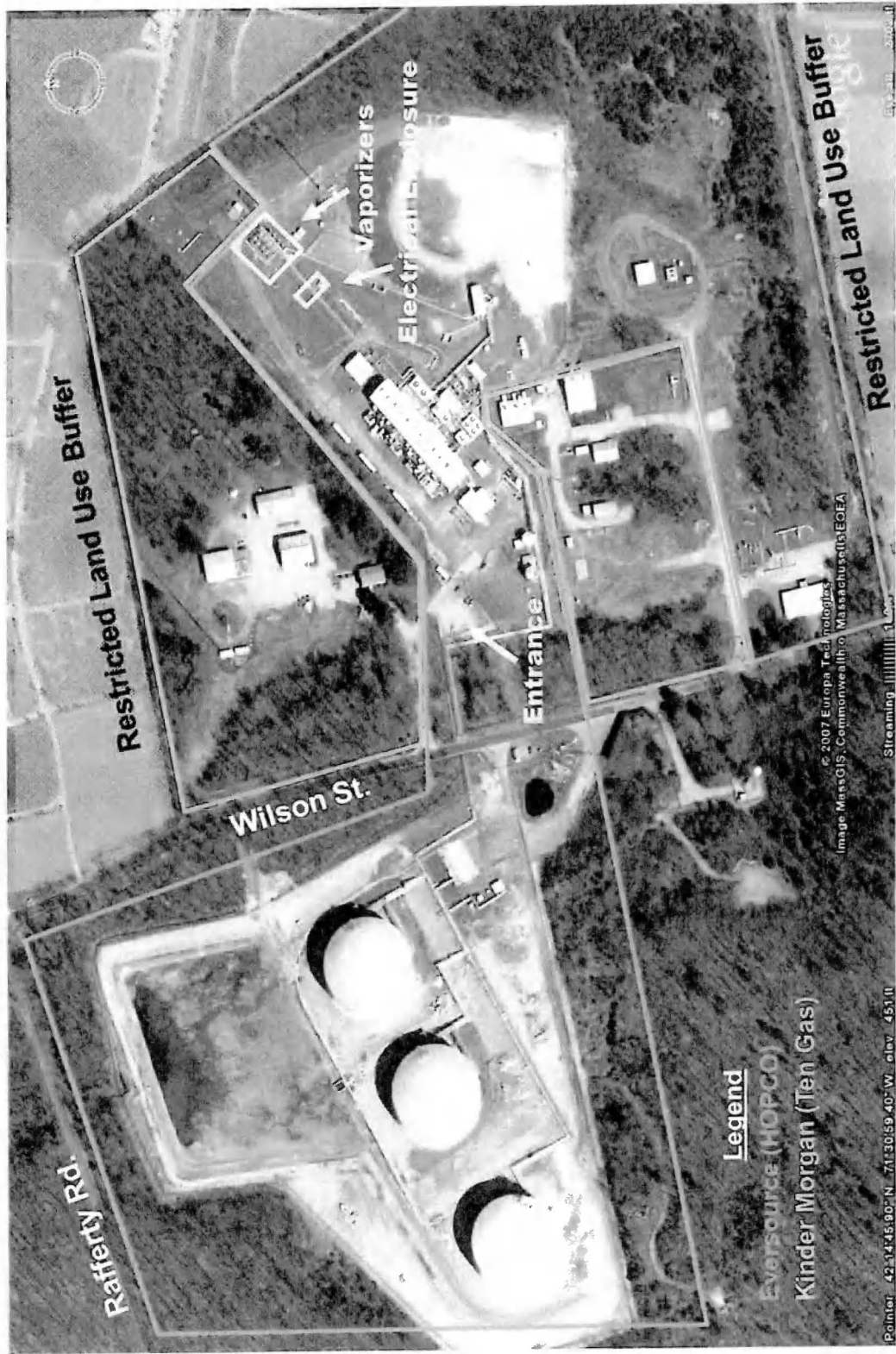
Vaporizer Refurbishment Project Introduction to Vaporization

EVERSOURCE
ENERGY



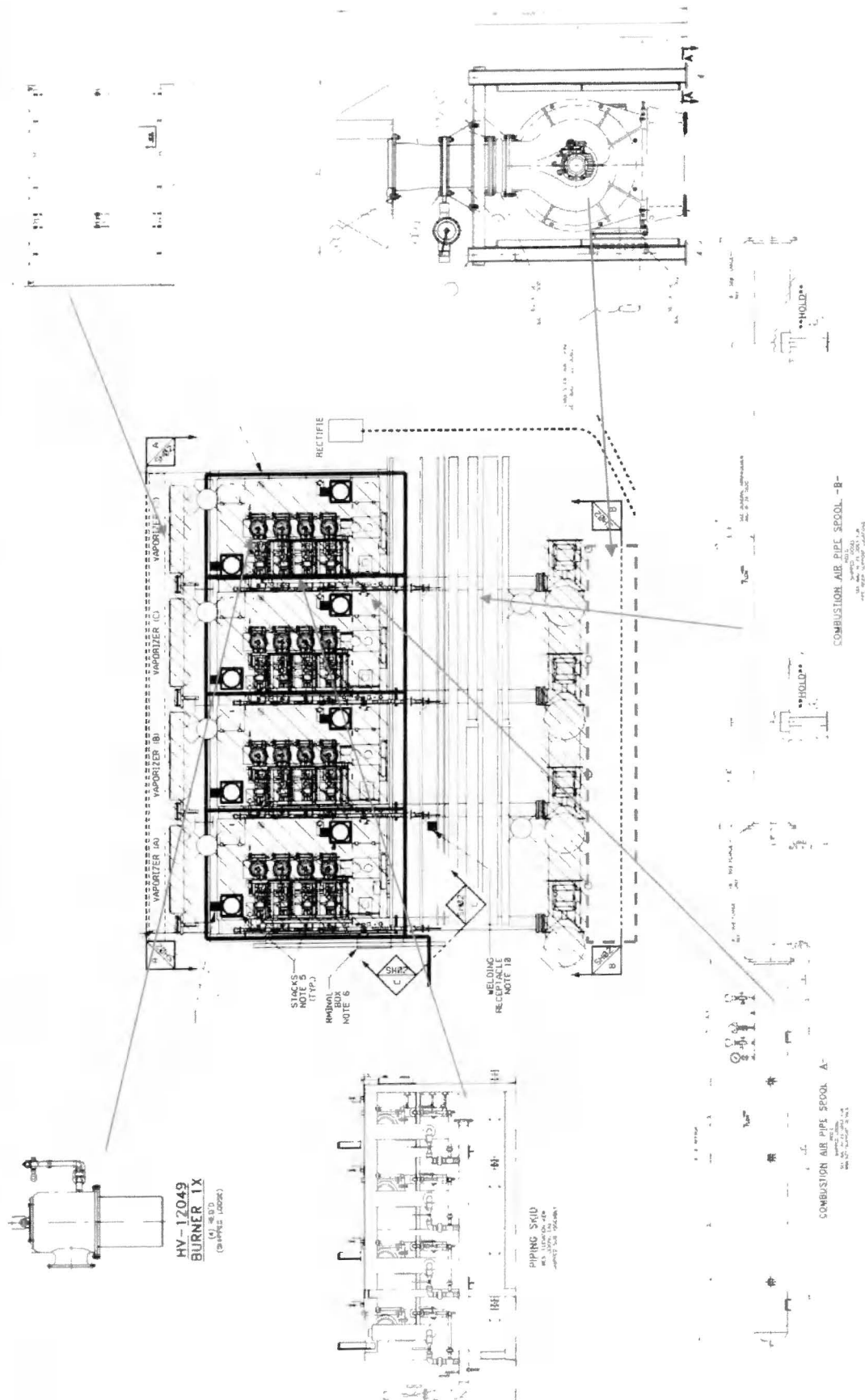
Vaporizer Refurbishment Project Site Plan

EVERSOURCE
ENERGY



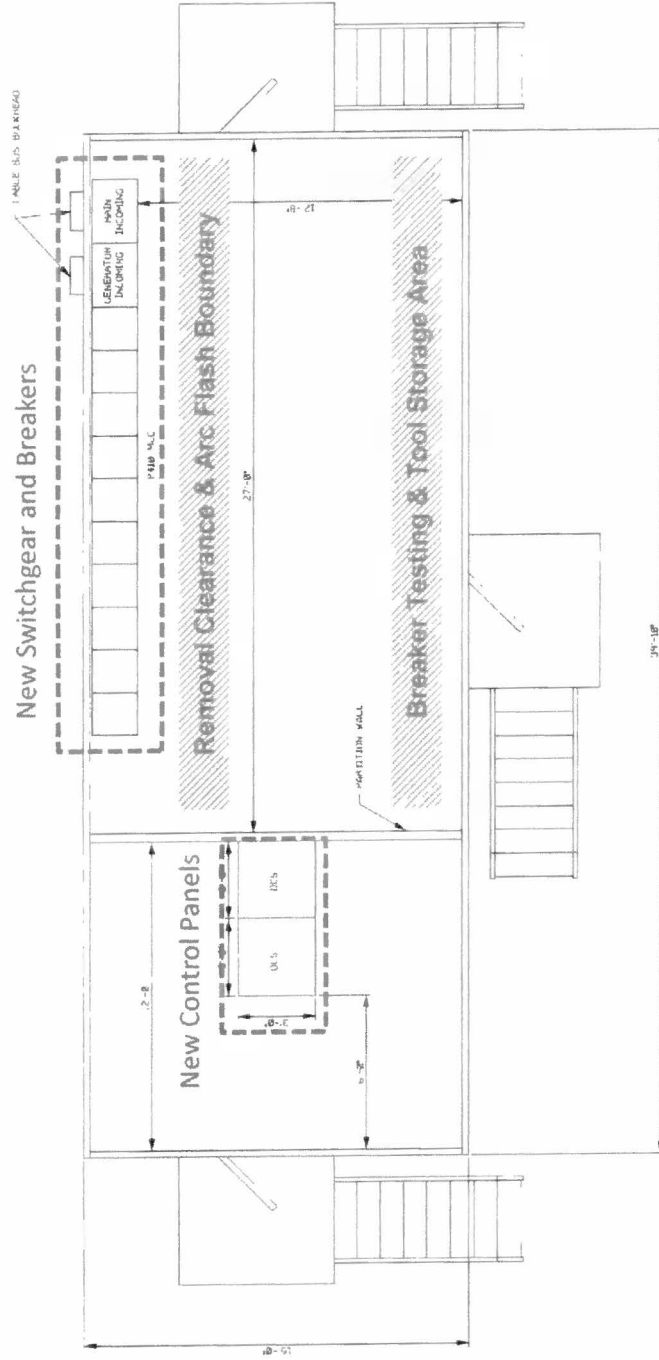
Vaporizer Refurbishment Project Replacement Equipment

EVERSOURCE
ENERGY



Vaporizer Refurbishment Project New Power Distribution Enclosure

EVERSOURCE
ENERGY



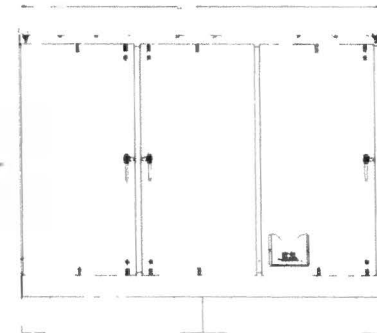
Vaporizer Refurbishment Project

Site Views

EVERSOURCE
ENERGY



**Location of Replacement
Control Panels**



Walkway is to be Replaced



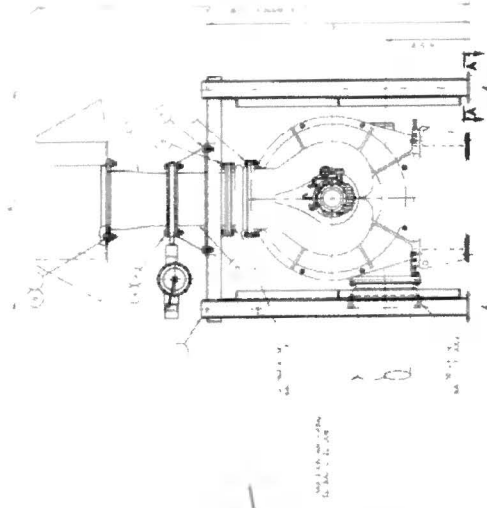
**Location of New Power
Distribution Enclosure**

Vaporizer Refurbishment Project Site Views

EVERSOURCE
ENERGY



Location of Replacement Blowers



Existing Power Distribution
Enclosures

Vaporizer Refurbishment Project

Construction Permit Requirements



Construction Permits

- Electrical Permit
- Trench Safety Permit
- Building Permit

Construction Details

- All gas work is within the bounds of CFR 193
- No wetlands in the area
- Enclosure floor space is increased by 600 ft²
- Location is isolated, in back section of property
- All work is more than 75ft from existing fence line
- 126 yds³ of spoils will be disposed of in accordance with MassDEP guidelines
- Construction is scheduled from 7am to 4:30pm, Monday through Friday
- Very limited public road use, minimal truck deliveries over the course of the project
- Expect less than 25 additional workers on site

Attachment C

July 13, 2016

Charles E. Kadlik
Director of Municipal Inspections – Zoning Enforcement Officer
Town of Hopkinton
Office of Inspectional Services
18 Main Street
Hopkinton, MA 01748

SUBJECT: Explanation of Project Scope

Dear Mr. Kadlik:

This letter is intended to provide supplemental explanation and information regarding the building permit applications filed for the Vaporizer Refurbishment Project at the Hopkinton LNG facility.

As a general overview, the vaporization system at the Hopkinton plant is where liquid natural gas is warmed and converted into a vapor state for use in the Eversource gas distribution system. The natural gas vapor produced at Hopkinton is distributed to area natural gas customers for their use on the coldest days of the year when there are no other economical supplies of gas available. On a cold day all of Eversource gas customers in Massachusetts, including the Town of Hopkinton, depend on the operation of this facility for a significant portion of their gas supplies.

The vaporization system at Hopkinton has been well maintained over the years however a significant portion of the vaporization equipment is original at forty nine years old and requires investment. The investments are intended to maintain continued safe operation, improve reliability and modernize the system. The vaporizer system is not increasing in capacity, nor is the use of the system itself changing. Linde Engineering North America (LENA), the original equipment manufacturer of the existing equipment, was contracted and has provided replacement burners, combustion air blowers and controls to facilitate this investment effort and has produced technical equipment specifications demonstrating that there is no change in system send-out or capacity. The vaporization system construction season is limited to the summer months as this system must be available for operation fall, winter and spring. The following sections provide supplemental information regarding the permit applications that have been submitted.

Power Distribution Center (PDC)

The existing Power Distribution Center is being replaced with a new enclosure containing the replacement electrical equipment. Due to current design standards, specifically the National Electric

Code, the replacement enclosure needs to be slightly larger than existing to accommodate equipment removal clearances and other changes inherent to the modern equipment size.

In order to maintain operation of the plant, it was necessary to install the replacement equipment at an adjacent location, while the existing equipment remained in service. After the replacement equipment is installed power will be cut over from the existing equipment to the replacement equipment. Once the replacement equipment is in service, the old equipment will then be removed from service and demolished.

The replacement PDC will be fed from the existing electric supply circuit, of which feeder circuit capacity is not changing.

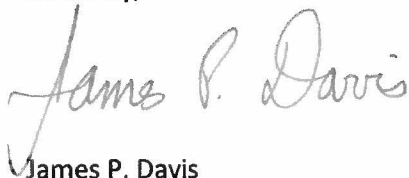
Blower Foundations

LENA, as the OEM provider, specified larger combustion air blowers to comply with current air quality and emissions requirements for replacement equipment. There are four blowers in total being replaced all of which are supported on a single foundation. The replacement blowers will not physically fit on the existing foundation. A replacement foundation has been designed to be located adjacent to the existing foundation and will accommodate the increased blower size while complying with current American Society of Civil Engineer's requirements.

The increase in blower size does not increase the capacity of the vaporization system. It is simply a physical and technical design requirement to comply with emissions requirements that apply to the replacement equipment.

We appreciate the opportunity to host the site meeting today. We are providing these additional details to specifically address possible areas of concern. Please do not hesitate to contact me if any questions arise regarding this supplemental information or any other aspect of the permit applications and supporting documentation.

Sincerely,

A handwritten signature in cursive script that reads "James P. Davis".

James P. Davis
Director of Gas System Operation
One NSTAR Way,
Westwood, MA 02090

P: 781-441-8941

James.Davis@eversource.com

CC: Michael Shepard