

TOWN OF ACUSHNET

FIRE & EMERGENCY MEDICAL SERVICES DEPARTMENT

FIRE & RESCUE DIVISION

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Kevin A. Gallagher
Chief of Department

Mr. Jeffrey R. Martin
Director, Project Planning and Siting
Eversource Energy
56 Prospect Street, 56P-1
Hartford, CT 06103

March 24, 2016

Dear Mr. Martin:

As the Access Northeast proposal continues to wind its way through the federal regulatory process, those of us at the local level are doing our due diligence by compiling information in order to ensure that, in the event the proposal comes to fruition, we are prepared to respond to certain LNG specific scenarios. In order to effectively prepare, certain information is needed in order to form judgements on the potential future involvement of the Acushnet Fire & EMS Department in general; and the specific responsibilities of the Acushnet Fire Chief as the Authority Having Jurisdiction, in particular.

I understand that specific design and technological decisions will be made as the Federal Energy Regulatory Commission review process unfolds. However, in certain instances early notification of Acushnet officials will afford us the time necessary to plan, prepare and, if necessary equip. As the scope of this project is unprecedented in our town's history, I'm sure you can appreciate our interest in gathering as much information as possible in order to develop training curriculums, resource allocation and budgetary needs as we move forward.

My request today is specific to the liquefaction process. The proposed facility would incorporate a natural gas liquefaction process that is unfamiliar to public safety officials in this area. I would appreciate your providing this department with the following:

- Type of liquefaction system to be used
- A listing of the mixed refrigerants and/or other gases to be employed in the heat exchange process
- The maximum amount of gases and/or other components to be stored on site for use in the liquefaction process

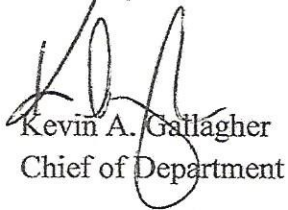
- The emission control plans associated with the liquefaction process
- The fuel source, storage amounts and emission control plans for the system to be used to power the liquefaction process
- Other information relative to potential hazardous material storage and removal associated with the liquefaction process

The information you provide will assist this department in analyzing our current capacities against the potential of a significant change to our present operating procedures.

Again, this project is in the early stages of multiple layers of government review which we have been told is a time consuming process. It is during this time that we will be conducting fact based analysis of our operational abilities and potential needs.

Thank you for your attention to this request.

Sincerely,



Kevin A. Gallagher
Chief of Department



Jeffrey R. Martin, PMP
Director, Project Planning & Siting
Eversource Energy
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April 22, 2016

Kevin A. Gallagher
Committee Chair
Acushnet LNG Advisory Committee
122 Main Street
Acushnet, MA 02743

Re: LNG Advisory Committee, Acushnet, MA
Letter request dated March 24, 2016

Dear Chairman Gallagher,

The Algonquin Access Northeast Project ("the Project") is in receipt of your April 24, 2016 letter in which you requested information relative to the liquefaction process currently under development for the Access Northeast LNG Facility.

On behalf of the Project, we thank you for this inquiry and very much appreciate the opportunity to respond. Please find below a point-by-point response to each of the six requests made in your letter:

▪ *Type of liquefaction system to be used*

The liquefaction system chosen for this facility is a nitrogen liquefaction system which uses nitrogen as a refrigerant to cool natural gas into LNG. This type of system is a proven, state-of-the-art technology that is safe to operate with no environmental or safety impacts to the community.

▪ *A listing of mixed refrigerants/and or other gases to be employed on site for use in the liquefaction process*

The nitrogen liquefaction system does not use mixed refrigerants. It only uses nitrogen as a single component to provide refrigeration necessary to cool natural gas into LNG. Nitrogen is inert, non-toxic, and makes up approximately 78% of the air we breathe.

▪ *The maximum amount of gases and/or other components to be stored on site for use in the liquefaction process*

Only nitrogen will need to be stored on site as make up refrigerant. The final quantity to be stored on site will be determined as engineering and design efforts proceed.

▪ *The emission control plans associated with the liquefaction process*

The liquefaction and vaporization system will require air permitting per 310 Code of Massachusetts Regulations 7.00. Preliminary design review of the liquefaction system estimates that two (2) simple cycle gas turbines each with an estimated 20 mega-watt (27,000 horsepower) output rating will be needed. These details will be refined as engineering

and design efforts proceed. Likewise, air emissions from these units will be quantified as design decisions are made. Access Northeast will comply with the applicable regulatory requirements noted above, which will entail the selection of low emitting equipment, potential mitigation through the use of air control technology, and ultimately a demonstration of no adverse impacts to the community through extensive air dispersion modeling.

■ *The fuel source, storage amounts and emission control plans for the system to be used to power the liquefaction process*

The compressors for liquefaction will be powered by natural gas and will not require that additional fuel be stored on site. During the liquefaction process, heavier components in the natural gas are separated and used as fuel for the liquefaction compressors along with boil off gas and inlet feed gas. The only emissions from this system will be associated with the liquefaction compressors. Please see the previous response for information regarding emissions control and regulatory compliance.

■ *Other information relative to potential hazardous material storage and removal associated with the liquefaction process*

Nitrogen is non-flammable, non-toxic and inherently safer than other liquefaction systems which use flammable hydrocarbons as refrigerants.

Natural gas enters the liquefaction process after pre-treatment. During the initial stages of liquefaction, and as noted above, heavier components in the gas are removed and used as fuel gas for the liquefaction compressors. The gas is then chilled via nitrogen refrigerant and turned into LNG. LNG is then sent to the storage tanks.

No other hazardous material storage or removal is associated with the liquefaction process.

However, some constituents removed from feed gas, and some other materials used as part of the feed gas pretreatment or vaporization processes, are considered toxic or hazardous materials. While these are not related to liquefaction, they are discussed below in the interest of completeness.

- Hydrogen Sulfide (H₂S) and Mercury (Hg) – These will be removed from feed gas during pretreatment. Only trace amounts of H₂S are typically found in feed gas, and this is removed by the Amine Unit and passed via a Thermal Oxidizer for destruction. Any mercury in the feed gas will be removed and will accumulate in a mercury guard bed. Ultimately, accumulated mercury will be removed by a qualified contractor and disposed of offsite in accordance with applicable regulatory requirements. No other storage of these products will occur on-site, and there will be no release of hydrogen sulfide or mercury to the environment.
- Some other constituents of feed gas, such as benzene, toluene, and xylene are considered hazardous. These are removed during pretreatment and used as fuel gas, along with other heavy hydrocarbons removed during pretreatment. None of these compounds will be stored on-site.
- Amine solution, and oil for the Hot Oil System – These materials are used during the pretreatment process and will be properly stored and contained on-site in accordance with applicable codes. Spill kits will also be provided at the facility in the unlikely event of a spill.
- Diesel fuel for firewater pumps – Diesel will be properly stored and contained on-site, and will be located away from other major process areas. In the unlikely event of a spill, an on-site oil/water separator will capture and remove any released product.
- Water Ethylene Glycol (WEG) – WEG is used to support the vaporization process, and will be properly stored and contained on-site. In the unlikely event of a spill, a vacuum truck can be dispatched to the site to clean up the contained release and/or spill kits can be used to clean-up minor releases.

The draft Environmental Resource Report 11, anticipated to be filed with FERC in late May 2016, will contain additional information on these materials and the measures taken to demonstrate that there will be no adverse impacts to the community.

Again, we thank you for the opportunity to respond in writing to your request, and look forward to further discussion of these and other topics of interest to the Advisory Committee during the upcoming April 26 meeting and/or future meetings of the Committee.

Regards,

A handwritten signature in black ink, appearing to read "Jeffrey R. Martin". The signature is written in a cursive, flowing style.

Jeffrey R. Martin
on behalf of the Algonquin Access Northeast Project