



Department of Health

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June 2, 2023

Emma Rodvien, Coordinator
Energy Facility Siting Board
89 Jefferson Boulevard
Warwick, RI 02888

Dear Ms. Rodvien,

This letter represents RIDOH's advisory opinion on The Narragansett Electric Company's Application to Construct and Operate a Portable Liquid Natural Gas (LNG) Vaporization Facility at Old Mill Lane in Portsmouth. The largest public health concern for the proposed facility is the potential health effects of noise. According to modeling performed by the company, as described in the April 2022 Siting Report, engineering controls should be sufficient to control the risks associated with noise from the site. RIDOH recommends that the facility be required to install the proposed mitigation and comply with municipal noise ordinances limiting nighttime noise to 55 dB. RIDOH does not anticipate any other significant risks to public health from the proposed project, including through drinking water.

According to the initial siting report prepared for Narragansett Electric Company, when operating at full capacity, equipment at the proposed facility will generate up to 97 dB of noise if not mitigated, compared to current levels that are below 55 dB. This expected noise would greatly exceed the municipal residential noise ordinances, particularly at night, which are in place to protect both the health of residents and their enjoyment of their property.

Environmental noise has been linked to a variety of social and health impacts and should be considered not just a nuisance but a concern for public and environmental health¹. Noise at any time can cause distraction, irritation, and general stress, which can result in both negative social outcomes and health outcomes. Exposure to elevated noise, particularly in residential areas at night, results in disruption of sleep patterns, which has the potential to cause significant harm. According to the WHO, sleep disturbance, one of the most common complaints raised by noise-exposed populations, can have a major impact on health and quality of life. People can recognize and react to sounds even when they are asleep. Those reactions, including waking and changes in sleep stage, are associated with daytime after-effects, such as sleepiness, reduced cognitive and motor performance, and increased risk of cardiovascular disease.

¹ World Health Organization, [Burden of disease from environmental noise : Quantification of healthy life years lost in Europe \(who.int\)](https://www.who.int/publications/m/item/burden-of-disease-from-environmental-noise-quantification-of-healthy-life-years-lost-in-europe), 2011.



The Narragansett Electric Company has proposed steps to mitigate the impact of noise on neighboring residences that seem appropriate to limit health risks. The follow up siting report from April 2022, describes mitigation activities that will limit the noise impact to surrounding residences. Operational controls at the site will reduce the noise produced during the overnight hours. Further, the report describes engineering controls at the site to reduce noise impacts, which include moving the operating equipment away from nearby residences and installing an acoustic wall at least 21 feet tall around the equipment to dampen the noise. According to modeling shown in Figure 8-1 of the April 2022 Report, with the mitigation steps in place, the company believes that they will be able to reduce noise levels at the nearest residences below the Portsmouth overnight noise limit of 55 dB.

If the modeling of the noise following mitigation is correct, which RIDOH is not able to independently evaluate, noise from the proposed facility should not adversely impact public health. RIDOH recommends that follow-up monitoring be performed to ensure that the engineering controls are working as designed. Further, any deficiencies identified through monitoring should be addressed. As long as these controls are in place and operating as described in the April 2022 Report, RIDOH does not have concerns about the public health impacts of noise from the proposed facility.

RIDOH also evaluated the potential for the proposed facility to impact drinking water supplies. The proposed facility is not in a source water protection area and is thus not likely to impact municipal drinking water supplies. In addition, the proposed facility does not appear to pose a high risk of impact to water. The primary source of risk is likely the storage of diesel on-site for the backup generator. These risks are anticipated to be minimal if the company complies with all DEM regulations.

RIDOH did not have a basis to evaluate the potential impact of the proposed facility on public health through climate change. RIDOH lacks the expertise to evaluate risks related to fire safety or building security, which can be better assessed by others. Other health risks from this project, including those associated with air pollution from construction and operation of the site, are expected to be minimal.

Overall, given the available information on the proposed project to provide natural gas vaporization at Old Mill Lane, RIDOH does not anticipate any direct adverse impacts to public health. Please feel free to reach out at michael.byrns@health.ri.gov if you have any questions or concerns about this evaluation.

Sincerely,



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