

# THE RECORDER

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## Noisy neighbor? For many, compressor station becoming a hot-button issue



This is the approximate location of the proposed natural gas pipeline that will cross Gulf Road in Northfield as it heads north and east to New Hampshire. (Recorder/Paul Franz)

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### Third in a series

(EDITOR'S NOTE: In coming weeks, Tennessee Gas Pipeline Co.'s proposed Northeast Energy Direct pipeline through Franklin County will proceed through a Federal Energy Regulatory Commission process to choose which issues to include in an environmental review to begin this fall. This series explores the project.)

If there's one aspect of the proposed natural-gas pipeline through western Massachusetts that sets off as many alarms for potential neighbors as the pipeline itself, it's the compressor stations along the 430-mile route that would keep gas in the Northeast Energy Direct project flowing.

A maximum 80,000-horsepower, gas-fueled compressor station — larger than many in the Northeast — is planned along the pipeline route in Northfield, as well as in the Berkshire County town of Windsor and north of the Fitchburg-Westminster area in Hillsborough County, N.H.

Opponents of the project have raised concerns about air pollution, safety and noise of the unmanned, round-the-clock stations. The pipeline's builder and proponents say they are working hard to make those non-issues.

Richard Wheatley, a spokesman for Kinder Morgan, TGP's parent company, told The Recorder that compressor stations comply with federal noise regulations, with a maximum day-night weighted average of 55 decibels — about as loud as a conversation or an air conditioner.

“We will be conducting noise studies during the course of the permitting process in relation to homes and structures and their distance from where we contemplate stations will be located,” Wheatley added.

“Stations will be situated inside large parcels of land,” providing a sound buffer between machinery and residents.

The company has made an offer on a 242-acre parcel in Northfield along the planned transmission line, just east of Gulf Road and along the New England National Scenic Trail. Bordered on three sides by conservation land, most of the 242 acres would likely be used as a noise and light-pollution buffer.

But critics, many of whom have also objected to the pipeline itself, are suspicious of promises of effective mitigation from a company that originally illustrated public presentations using a photograph of a modest 2,000-horsepower station in Southwick, near the Connecticut border.

Critics worry that the Northfield compressor stations might cause pollution from exhaust and from routine “off-gassing” procedures used to adjust pressure, as well as from maintenance and unexpected leaks. They cite information provided by the Pennsylvania-based Clean Air Council about the potential public health and environmental threats posed by chemicals like benzene, toluene and methane.

Wheatley has told The Recorder in the past, “Compressor stations do not ‘exhaust’ or ‘release’ methane gas under normal operations. Piping systems are specifically designed and tested to prevent methane gas release. Very small quantities of gas are vented when gas is used as a power source for normal compressor station operations. In other special operating circumstances, gas is vented to depressurize pipes in the compressor station to allow maintenance or under emergency conditions. When gas is vented, it is done under controlled conditions specifically designed to allow depressurization to be done safely.”

## **Emissions**

Emissions vary from compressor to compressor, depending on the type and size of operation. Project opponents warn of potentially toxic air emissions from burning the gas in the compressors and from the periodic release of methane and other chemicals in the gas from the hydraulic fracturing process used to extract natural gas from shale.

A report last fall by the health department in Madison County, N.Y., says the largest single emission at a compressor station is an intentional venting to release pipeline pressure, a process known as “blowdown.”

“They can be scheduled or accidental ... It is not possible to know what exactly would be emitted in a given natural gas compressor station blowdown as there is no data available. We know that it will include whatever is in the pipeline when the blowdown occurs. This would undoubtedly include the constituents of natural gas: methane, ethane, etc.”

Compressor stations maintain pressure in the pipeline system. They are placed along the route at varying intervals based on the pipe’s planned 36-inch diameter, the terrain and the volume of gas to be moved.

Compressor stations are equipped with emergency shutdown systems that can detect an unanticipated pressure drop, gas leak or other abnormal conditions, according to the U.S. Energy Information Administration.

“In the event of a needed facility shutdown, natural gas is safely released to the atmosphere as a result of the activation of safety systems that stop operations so that personnel can assess what has occurred,” said Wheatley. “The turbines proposed for the NED compressor stations use clean burning natural gas fuel, and they will be equipped with emission control technology to meet federal and state emission standards.”

## **Firefighters**

Northfield Fire Chief Floyd M. “Skip” Dunnell III says he’s had concerns about how fire-detection and fire-suppression systems would be employed at the compressor station site.

“We have to know what to expect so we can prepare and train,” said Dunnell. “With any gas issue, you’re not going to put (the fire) out. If there’s a fire, at least you’ll know where it is, so you can keep people safe and away from it. To isolate it to the point where you can handle it.”

Pipeline pressure is monitored continuously, he said, so it can be shut down. “But obviously, that’s not going to happen in a matter of a few minutes. It takes time to depressurize it and shut it down” to avoid a “shock wave” causing a rupture somewhere else.

“It’s important to us, whether you’re for or against the pipeline, to be ready for it and understand it,” said Town Administrator Brian Noble, who reported after his recent visit to a 32,000-horsepower Pennsylvania compressor station with Dunnell and the town’s police chief that there have been no fires, explosions or leaks reported since it was built in 1969, and the noise level at the street is a constant 52 decibels. The only incident was an emergency venting of the compressor 14 years ago that he said was “heard for miles.”

Northfield firefighters were among those emergency personnel who attended a six-hour training session on pipeline emergencies put on by the National Association of State Fire Marshals in Pittsfield.

Pipeline opponents also raise concerns about the potential for light and noise pollution from compressor stations, especially the gunshot-like or sustained jet-engine roaring “blowdowns.” They also fret about the potential long-term health effects on people and wildlife from continuous, low-frequency noise, also known as vibro-acoustic noise.

To address such concerns, some pipeline companies have built compressors away from residential areas, with buffering and acoustic baffling to minimize the impact.

Andrew Jones, who bought a weekend home in Hawley, Penn., in 2009, with a 25,900 horsepower compressor station less than a mile away, told The Recorder that the sound was initially obnoxious. “Wow, it was incredible!” he said. “A pressure-hissing noise like you wouldn’t believe ... like pressure engines and a high-pitched noise.”

But complaints from Jones and his neighbors caused the company to bring in outside engineers and install noise-baffling insulation. That brought improvement, he said, but the situation worsened after the leaves fell — and required more complaints and more soundproofing.

“They’ve been great,” said Jones said of pipeline officials. Still, he said, there are still some noises and gas odors at times.

Marco Boscardin of Amherst-based Boscardin Consulting Engineers was hired by regional planners to provide an expert’s perspective in the public deliberation process. When asked about the implications of living less than three-quarters of a mile from the Northfield compressor station planned for the project at a Franklin Regional Council of Governments-sponsored forum last month, he said: “You’re going to be living next to an airport.”

**TOMORROW: Environmental, safety issues.**

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