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Federal Energy Regulatory Commission

Re: Natural Gas Compressor Station in North Weymouth, Massachusetts

Dear Commissioners,

I am writing to urge the Federal Energy Regulatory Commission to reexamine your decision to permit the operation of a natural gas compressor station in North Weymouth, Massachusetts. The operation of a compressor station in North Weymouth, MA poses significant hazards to public health. It raises serious questions of environmental justice. Until now, these issues have been overlooked and inadequately examined.

I am a pediatrician, epidemiologist and public health physician. I direct the Program in Global Public Health and the Common Good at Boston College. I served as an Epidemic Intelligence Service Officer and epidemiologist at the Centers for Disease Control and Prevention from 1970 to 1985, and as a member of the faculty of the Icahn School of Medicine at Mount Sinai in New York from 1985 to 2018, where I was Chairman of the Department of Preventive Medicine, Professor of Pediatrics, and Dean for Global Health. I am a member of the National Academy of Medicine.

I have spent more than 50 years studying the health effects of hazardous exposures in the environment including lead, asbestos, air pollution and pesticides. I served as a senior advisor to the Administrator of the US EPA in the Clinton Administration, and I have contributed to several Presidential Advisory Committees and National Academy of Sciences Committees on topics in environmental health. During my service as a physician in the United States Navy, I trained in disaster medicine. I have consulted for the World Health Organization on issues

pertaining to the chemical causation of cancer. I authored the 2018 report of the *Lancet* Commission on Pollution and Health.

The review process that preceded the construction of the compressor station in North Weymouth was hasty and incomplete. It ignored and dismissed concerns about the siting of the compressor station that had been raised by the community immediately surrounding the facility, the Town of Weymouth, the neighboring City of Quincy, and public health scientists myself among them.

A key element in that review process was a Health Impact Assessment of the proposed compressor station was undertaken by the Metropolitan Area Planning Council (MAPC) at the request of the Commonwealth of Massachusetts. This assessment was limited in scope. It did not consider the danger of fire and explosion from the compressor station. It did not evaluate the risks of coastal flooding. It did not consider emergency access. It failed to consider how toxic chemicals released by the compressor station would add to already elevated levels of pollution and disease in the surrounding communities. It did not examine the impact that the compressor station and the gas that moves through it will have on global climate change.

Specific deficiencies in the MAPC Health Impact Assessment are the following:

Fire and explosion. Natural gas is flammable and explosive. The greater the pressure, the greater the danger. Gas pipeline explosions occur almost every year in the United States. Eighty explosions in a pipeline in the Merrimack Valley of Massachusetts damaged 130 buildings, injured 23 people (including two firefighters) and killed one person. Other recent explosions have occurred in Armada Township, MI, Refugio TX, and Watford City, ND.

An April 2016 explosion in a high-pressure pipeline in Salem PA created a crater 30 feet wide, 50 feet long and 12 feet deep, destroyed a house 200 feet away, melted the siding off of a house 0.2 miles away, charred trees and telephone poles a mile away, and hospitalized a man in his 20's with third degree burns on over 75% of his body. This pipeline was pressured to about 1,000 pounds per square inch (psi)

The North Weymouth station will pressurize gas to a still higher level – more than 1,400 psi.

Because they are dangerous, most gas compressor stations are located in remote areas. The North Weymouth station will be located in a heavily populated community with limited emergency access. The surrounding neighborhoods contain 6 schools with 1,700 students, elderly housing, nursing homes and a mental health facility. The pipeline will lie 20 feet from the foundation of the Fore River Bridge, which carries 30,000 cars per day.

An explosion would likely take lives in Weymouth, Quincy, Braintree and Hingham as well as on the bridge. Children, elderly and disabled persons near the compressor station will not be able to escape. It could endanger property in Milton, Dorchester, South Boston and downtown Boston.

Toxic emissions. Pipelines and compressor stations leak. Emissions from the North Weymouth compressor station will contain benzene, formaldehyde, and 1, 3-butadiene – three proven human carcinogens. Benzene causes leukemia - including childhood leukemia - and lymphoma. Formaldehyde causes leukemia and cancer of the nasopharynx. 1, 3-butadiene causes leukemia and lymphoma. No level of exposure to these chemicals is safe. The soil under the compressor station contains arsenic. These toxic materials will be added to the multiple pollutants already present in the North Weymouth environment, the legacy of generations of unregulated industrial dumping.

High rates of disease. The communities of North Weymouth and adjoining South Quincy are burdened by high rates of chronic disease. Hospital admissions for heart disease and lung disease are significantly elevated. Incidence is increased for cancers of the lung, colon, liver and oral cavity. Pollution is among the causes of these diseases. Without any detailed assessment of the epidemiologic or environmental data, the MAPC Health Impact Assessment dismissed these elevated rates of disease as due to the unhealthy lifestyles of local community residents. Toxic emissions from the compressor station will further increase the disproportionate burden of disease in an already overburdened community.

Economic and racial injustice. The largely blue-collar communities surrounding the Fore River basin are economically depressed, and the two census tracts closest to the proposed compressor station contain large racial and ethnic minorities: 26% Asian, 7% African-American and 4.5% Latino. Construction of a gas compressor station against the express wishes of these communities and their elected officials is deeply unjust. It is a flagrant example of environmental injustice.

Global climate change. Natural gas has thus been put forward in recent years as a better alternative to coal and oil. It is portrayed as a 'bridge fuel' between the more polluting fossil fuels of the past and clean, renewable energy. But that rosy narrative overlooks the substantial dangers posed by natural gas.

Gas extraction is linked to contamination of ground and surface water, air pollution, noise and light pollution, ecological damage and earthquakes. Gas pipelines and storage facilities leak, catch fire and explode. They release toxic and carcinogenic chemicals. Gas combustion generates oxides of nitrogen and ammonia that can trigger asthma attacks and increase hospitalizations in people with chronic obstructive pulmonary disease. Perhaps most concerning from the perspective of climate change is methane - the main substance of natural gas. Methane is a powerful greenhouse gas with a heat-trapping potential 30 times greater

than that of carbon dioxide over a 100-year span and 85 times greater over a 20-year span. Of all fracked gas, 4% or more is lost to leakage and these releases appear to have contributed to recent, unprecedented increases in atmospheric methane.

As a physician deeply concerned about climate change and its consequences for human health and well-being, I consider expansion of the natural gas infrastructure, of which the North Weymouth compressor station is a component, to be a grave health hazard. All reasonable analyses indicate that we must leave nearly all remaining fossil fuels in the ground if we are to hold the extent of global warming below 1.5°C, the target set by the Intergovernmental Panel on Climate Change, and thus mitigate the health and environmental consequences of climate change.

A further argument against expansion of the natural gas infrastructure is that it is economically reckless. Such investment ignores the reality that the cost of producing electricity from renewables is falling rapidly and that energy prices are approaching a “tipping point” after which it will become cheaper to generate electricity from solar and wind sources than from gas. Indeed in many places across the United States, it is already cheaper to produce heat and electricity from wind and solar energy than from any fossil fuel, including natural gas. Facilities such as the North Weymouth compressor station could soon become stranded assets – industrial wastelands that burden their communities for years to come.

Conclusion. The arguments for construction of the North Weymouth compressor station are extremely tenuous. The gas that will move through the facility will not meet the energy needs of New England – as its proponents have falsely claimed. Instead, this gas is destined largely for export to Canada and possibly Europe.

Acknowledging the limits of their Health Impact Assessment, MAPC stated unequivocally on February 6 2019 that they cannot support construction of a gas compressor station in North Weymouth.

The health of the public would have been better served if MAPC had issue this disavowal much sooner

As a physician with more than a half century of experience in public health, I call upon the Federal Energy Regulatory Commission to acknowledge the grave danger and deep injustice of locating a gas compressor station in North Weymouth. I call upon you to stand up for health and justice. I urge you to reexamine the Commission’s’ earlier decision and to reject this most dangerous proposal.

Sincerely,

A handwritten signature in black ink, appearing to read "Philip J. Landrigan". The signature is fluid and cursive, with a long horizontal stroke at the end.

Philip J. Landrigan, MD, MSc, FAAP