**TO:** Matthew Resnick **COPIES VIA EMAIL TO:**

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**REGARDING:**

APPLICANT: Transcontinental Gas Pipe Line Company LLC

PROJECT: Northeast Supply Enhancement (NESE) Project

FILE NUMBERS: NJDEP File No. 0000-01-1001.3 FWW 180001 Individual Permit

NJDEP HEARING DATE: 11/5/18

**FROM:**

Full Name:

Full Address:

According to the Freshwater Wetlands Protection Act Rules, N.J.A.C. 7:7A, “**compelling public need**” means that “based on specific facts, the proposed regulated activity will serve an essential **health** or safety need of the municipality in which the proposed regulated activity is located, that the public **health** and safety benefit from the proposed use and that the proposed use is required to serve existing needs of the residents of the State, and that there is no other means available to meet the established public need.”

The Natural Gas Act does not prevent states from providing safety and environmental impact information to FERC, which FERC must consider in its Certificate order and must document in compliance with the National Environmental Policy Act (NEPA). Environmental impacts include those that would affect the health of residents and wildlife as well as environmental resources.

The overall NESE Project is expected to impact a significant amount of wetland in New Jersey – over 41 acres, including approximately 20 acres of forested wetland. In addition, the NESE Project will remove 35.3 acres of upland forest, and the impacts on forested uplands will be long term or permanent because trees would take up to 50 years or longer to become reestablished and would not be allowed to become reestablished directly over the pipeline.

**RISKS OF INCREASES IN FLOODING, ALONG WITH SECONDARY IMPACTS FROM CLIMATE CHANGE’S UNIQUE RISKS THAT THREATEN THE HEALTH AND WELL-BEING OF FAMILIES AND COMMUNITIES, WERE NOT ADEQUATELY ADDRESSED IN THE APPLICATION FOR A FRESHWATER WETLANDS INDIVIDUAL PERMIT.**

1. Construction of the NESE Project would create issues involving increased risks of flooding and stormwater runoff that could possibly carry contaminants from Superfund Sites and other contaminated groundwater or soils to residences, wetlands, and water supply sources. This risk is from:
* Tree clearing
* Building the compressor station on ground with a high water table and shallow bedrock without adequately addressing stormwater runoff
* Digging in shallow clay soil that already does not allow for good infiltration and, worse, would produce sulfuric acid when this clay is exposed to air - This creates soil that would not support revegetation and, then, will be more problematic for erosion and flooding. In this area of the Madison Loop, there is also the possibility that soil and groundwater contaminants could be exposed and carried with flood waters since construction is planned to be through or near the Road Department Garage Area 3-1, Global Sanitary Landfill, E.I. Dupont Denemours & Co. site, and the Morgan Ordnance Depot.
1. Floods and long-standing excess water can potentially increase transmission of communicable diseases:
* Water-borne diseases (typhoid fever, cholera, leptospirosis, and hepatitis A)
* Vector-borne diseases (West Nile Fever & Zika)
1. Direct contact with contaminated waters leads to the risk of non-epidemic-prone wound infections, dermatitis, conjunctivitis, and ear, nose and throat infections.
2. Depending on the extent and intensity of the flooding, animals, rodents and snakes could be displaced from their natural habitats, causing other potential risks. Mosquito populations would increase.
3. Additionally, flooding could result in health issues from toxic mold as well as stress, anxiety and depression. Allergenic, pathogenic and toxic illnesses related to the respiratory, digestive tract and reproductive system have been found to be related to toxic mold exposure.

**RISKS TO THE HEALTH OF RESIDENTS AS WELL AS WILDLIFE FROM THE COMPRESSOR STATION’S EMISSIONS SHOULD DISCOUNT ANY ASSERTION OF A “PUBLIC NEED” FOR THE NESE PROJECT.**

Freshwater wetlands are in the area around the proposed compressor station, and there was not a comprehensive analysis of the impacts to the wetlands from the compressor station’s emissions. Though the Clean Water Act does not require consideration of this, the NJDEP is required to consider the health and safety needs of the community when reviewing the Freshwater Wetlands Permit Application.

Formaldehyde, Acetaldehyde and Benzene, that will be released by the proposed Compressor Station 206, are known carcinogens and mutagens (which are substances that cause genetic mutations).2-4 Acetaldehyde’s and Toluene’s Hazardous Substance Fact Sheets clearly state in capital letters that the chemicals are known teratogens, which are substances that cause birth defects.3,5 Acetaldehyde is implicated as the cause of fetal alcohol syndrome through its inhibiting effects on DNA synthesis, placental amino acid transport, and development of the fetal brain.6

Children may be exposed to higher concentrations of Toluene since it is denser than air and its vapors stay closer to the ground. Also, children have faster breathing rates than adults and may therefore breathe in more Toluene. In older children and adolescents, repeated exposure to Toluene has been associated with loss of muscle control, loss of memory, poor balance, and decreased mental abilities. Some of these changes may last for a long time after Toluene has left the body. Exposure to Toluene during pregnancy has been associated with birth defects, including retardation of mental abilities and growth.5,7

Repeated exposure to Benzene can cause aplastic anemia, a life-threatening blood disorder resulting from damage to the bone marrow and blood cell-producing stem cells, which leaves the individual vulnerable to sepsis and hemorrhage.4

Acetaldehyde, Benzene, Toluene, Ethyl Benzene, Naphthalene, and Xylenes have been associated with neurological problems, including headache and dizziness.3-5,8-10 Ethyl Benzene is a known hepatotoxin, producing liver damage.8

Seizures and cardiac arrhythmias have been associated with high exposure to Benzene.4 Repeated exposure to Xylenes can affect concentration and memory as well as vision and can lead to muscle coordination problems.10

Toluene, Ethyl Benzene, Naphthalene (the active ingredient in moth balls), and Xylenes can damage the liver and/or kidneys.5.8,9,10 Formaldehyde, Acetaldehyde and Naphthalene also cause skin allergies.2,3,9 Repeated exposure of Naphthalene can lead to anemia.9 Repeated exposure to Toluene can cause brain damage.5

Formaldehyde, Benzene, Toluene, Ethyl Benzene, Naphthalene, and Xylenes are absorbed into the body via the lungs and skin thereby increasing the risk of exposure.2,4,5,8-10 All the compounds released from Compressor Station 206 could cause skin, eye and/or respiratory irritation.1-5,8-10

In addition to these human effects, wildlife is also subject to these effects as is our delicate ecosystem of the wetlands.

References:

1. New Jersey Department of Health. Right to Know Hazardous Substance Fact Sheet. **Ammonia.** <http://www.nj.gov/health/eoh/rtkweb/documents/fs/0084.pdf> Accessed 4/15/18.
2. New Jersey Department of Health. Right to Know Hazardous Substance Fact Sheet. **Formaldehyde.** <http://nj.gov/health/eoh/rtkweb/documents/fs/0946.pdf> Accessed 4/15/18.
3. New Jersey Department of Health. Right to Know Hazardous Substance Fact Sheet. **Acetaldehyde.** <http://www.nj.gov/health/eoh/rtkweb/documents/fs/0001.pdf> Accessed 4/15/18.
4. New Jersey Department of Health. Right to Know Hazardous Substance Fact Sheet. **Benzene.** <http://nj.gov/health/eoh/rtkweb/documents/fs/0197.pdf> Accessed 4/15/18.
5. New Jersey Department of Health. Right to Know Hazardous Substance Fact Sheet. **Toluene**. <http://nj.gov/health/eoh/rtkweb/documents/fs/1866.pdf> Accessed 4/15/18.
6. Gilbert-Barness E. Teratogenic causes of malformations. Ann Clin Lab Sci. 2010; 40(2): 99-114.<http://www.annclinlabsci.org/content/40/2/99.full> Accessed 4/15/18.
7. Agency for Toxic Substances and Disease Registry. **Public health statement on Toluene**. <https://www.atsdr.cdc.gov/phs/phs.asp?id=159&tid=29> Accessed 4/15/18.
8. New Jersey Department of Health. Right to Know Hazardous Substance Fact Sheet. **Ethyl Benzene.** <http://nj.gov/health/eoh/rtkweb/documents/fs/0851.pdf> Accessed 4/15/18.
9. New Jersey Department of Health. Right to Know Hazardous Substance Fact Sheet. **Naphthalene.** <http://nj.gov/health/eoh/rtkweb/documents/fs/1322.pdf> Accessed 4/15/18.
10. New Jersey Department of Health. Right to Know Hazardous Substance Fact Sheet. **Xylenes.** <http://nj.gov/health/eoh/rtkweb/documents/fs/2014.pdf> Accessed 4/15/18.

The NESE Project does not give anything to New Jersey, and it does not forward State goals to move toward renewable energy. Additionally, the expected impacts from climate change will exacerbate the potential for flooding in areas around the proposed compressor station and pipeline, and the impacts on health cannot be overlooked. Recognizing science, research, prior experiences with pipeline projects, and a need for Williams/Transco to follow the letter of New Jersey’s regulations, the application for a Freshwater Wetlands Individual Permit should be denied by the NJDEP. It does not meet criteria for “compelling public need.”