Northeast Supply Enhancement (NESE) Project is a Public Threat – not a Public Convenience

Safety Risk – Fires or Explosions

Williams/Transco's Northeast Supply Enhancement Project (NESE), with its proposed compression station, would increase the volume of gas and velocities through the existing system. *Simply put*, we'd be pushing more gas, faster and hotter through aging lines. This could lead to increased corrosion rates as well as weld failures.

New Jersey has already begun to step up and take a proactive approach to prevent a devastating accident by passing pipeline safety resolution ACR164 out of committee and its sister resolution SCR118 through the full senate - telling the federal government that we can no longer tolerate the much weaker requirements interstate pipelines are held to.

Trap Rock Quarry's operations could easily provide an ignition source for leaked methane from CS206.

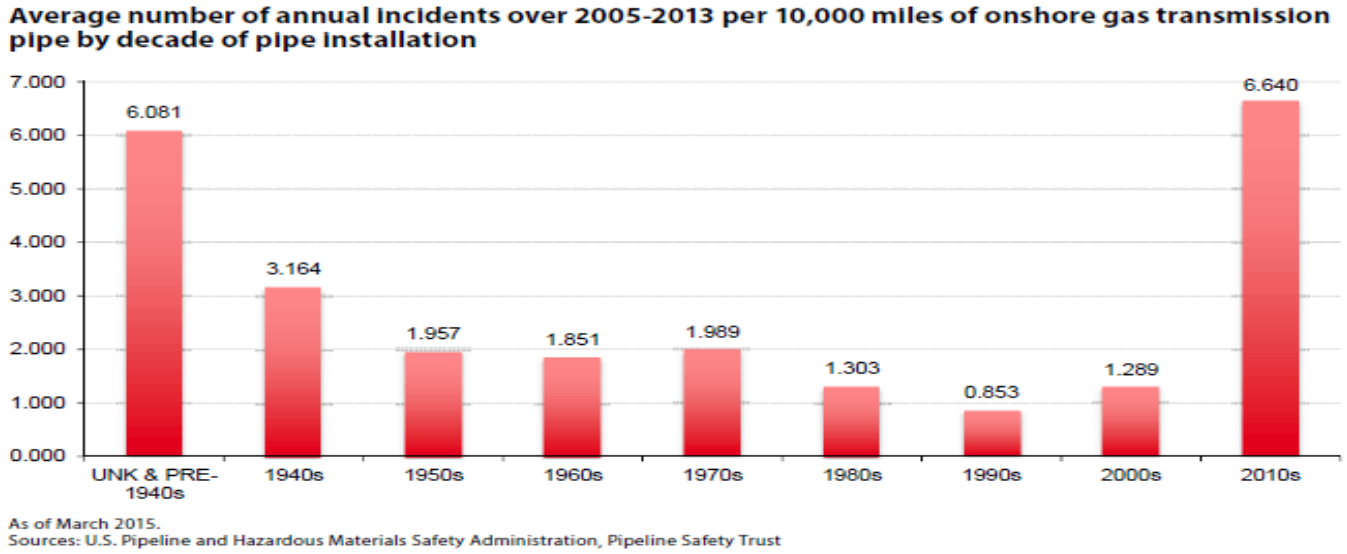
- Blasting from Trap Rock Quarry with dynamite results in shaking of items inside homes that are one mile away. The Buddha statue nearby has a crack in its base, and Trap Rock has paid people whose foundations have cracked from the blasting.
- Williams/Transco only did a cursory blasting assessment to determine if the blasting (one time) would have an impact on their proposed compressor station units/building.
- There was no viewable study about the impact of blasting on the area where they plan to construct tie-in piping and the suction and discharge piping which is in wetlands.
- There was no modeling of the impact of blasting month-after-month and year-after-year on any part of this facility where additional chemicals will be stored.
- Trap Rock Quarry plans to mine through 2040, and the impacts on homes a mile away should be carefully considered in terms of any possibility of damage to the pipelines and components of the entire facility since an accident would certainly impact the wetlands and nearby residents or visitors.

The *industry claims* that their pipelines are safe. What they don't tell you is that large transmission line accidents have been occurring in this decade at a rate that hasn't been seen since the 1940s.

Existing corrosion on older segments of pipeline to be connected to NESE was not reported. Adding velocity increases risk of more rapid corrosion from increased heat in the lines.

If FERC and PHMSA did their jobs, why does the Pipeline Safety Trust report that the safety record of pipelines is getting worse and not better by noting that average incident rates in the 2010's exceed those for pipelines installed prior to 1940?

Older pipeline corrode and leak, and newer pipelines are not necessarily safer, as was noted in a report by Kathy Kunkel & Tom Sanzillo, "Risks Associated with Natural Gas Pipeline Expansion in Appalachia" (April 2016) - Instutute for Energy Economics and Financial Analysis, published first in S. Smith's "As U.S. rushes to build gas lines, failure rate of new pipes has spiked," SNL Financial, September 9, 2015 – accessed at: https://www.snl.com/interactiveX/article.aspx?CDID=A-33791090-11060&ID=33791090&Printable=1



Accidents may be uncommon, but when they occur, they can be deadly. For the twenty years of 1997-2016, PHMSA recorded 1,719 incidents (averaging 114 incidents a year for the last ten years) for onshore gas transmission pipelines, with 48 fatalities and 179 injuries. 166 people — including both members of the public and industry workers — have been killed and 721 have been injured in serious pipeline incidents from all gas pipeline types since 2005.

There is good reason to worry about public safety. Since 2010, there has been, according to Pipeline and Hazardous Materials Safety Administration ("PHMSA") data, a five-fold increase in the number of pipeline incidents per 100,000 miles of gas transmission pipeline (see figure below). When we consider that pipelines put in the ground in the last decade are more likely to fail than those built in the 1940s, we understand that something has gone very wrong.

Such a dramatic rise is evidence that the Dept. of Transportation's PHMSA standards themselves are inadequate to prevent pipeline incidents, and/or that the inspection and enforcement of those standards is failing, likely due to rushed pace of construction. The gas industry is motivated to construct pipelines as quickly as possible to transport the glut of fracked gas from Pennsylvania and the Appalachian region to utility companies that are not required to tell how they will or do use the gas.

- A new natural gas pipeline just exploded in West Virginia five (5) months after it was put into operation (June 7, 2018). Supposedly built to standards, inspected and tested before pushing natural gas through it, this pipeline failed soon after it was built. https://inhabitat.com/transcanada-natural-gas-pipeline-explodes-in-west-virginia/
- A few years ago (April 26, 2016), a pipeline in Salem County, PA exploded after the company had inspected it in 2012, discovered some corrosion and 30% loss of pipeline thickness, but felt that the amount of corrosion was not an immediate risk. Surprise! The released methane caught fire, scorched over 40 acres, and caused a man to be burnt over 75% of his body. It's thought that the added compression hastened the rate of pipeline corrosion from the increased speed of gas through the pipeline and, since inspections are not frequent, the danger was not discovered in time. http://www.post-gazette.com/powersource/companies/2016/05/11/Could-faster-gas-flow-have-contributed-to-Texas-Eastern-pipeline-erosion/stories/201605110092

There are no federal regulations limiting gas flow velocity.

To believe that Williams/Transco would design, install, inspect, test, construct, operate, replace, and maintain the proposed Compressor Station 206 facility as a condition to get a Certificate from FERC does not assure compliance in a time when the motivation is high to construct pipelines as quickly as possible. Williams/Transco's contracted company just got caught in Pennsylvania using an unauthorized drilling method after they had a fluid spill that they reported to the PADEP. (March 2018) That led to the second Notice of Violation issued to them for their construction of the Atlantic Sunrise pipeline in Lebanon County. https://www.ldnews.com/story/news/local/2018/03/31/pipeline-builder-faulted-unauthorized-form-drilling-spill-lebanon-county/474491002/

If FERC did its job to ensure that pipelines and compressor stations are constructed according to plans to be safe, why are there so many incidents reported to the Department of Transportation's Pipeline & Hazardous Materials Safety Administration (PHMSA) – 503 significant natural gas transmission incidents causing 20 fatalities and another 89 injuries, also resulting in over $1 billion in property damage and costs from 2010 to 2016?

Corrosion Issues and NESE

Williams/Transco has not provided information requested by FERC about the extent of corrosion that they know exists in parts of the pipeline that would connect with the NESE pipelines (Mainlines A & C) even though they wrote that "it is ***likely*** that the Transco system began experiencing some degree of corrosion shortly after original installation."

Renowned pipeline engineer and safety expert Richard Kupriwicz – who was called to testify after the horrific Massachusetts gas explosions last fall – has concluded about the NESE project that "Transco has failed demonstrate that the risks of corrosion attack on its pipeline facilities and/or system is under control and would not be exacerbated by the NESE Project."

The following needs to be known before this project could be permitted as one that is in the public interest:

1. If corrosion was likely detected shortly after installation of pipeline, how was it detected and remediated?
2. Over the past 50 years, how often has Williams-Transco detected anomalies on a) pre-1970 installed segments and b) segment replaced by Trap Rock Quarry in the 1980's?
3. When was the last smart pig inspection through Central Jersey Mainlines A and C?
4. Provide a summary of all anomalies and extent of anomalies within a) pre-1970 installed segments and b) segment replaced by Trap Rock Quarry in the 1980's from the last smart pig inspection.
5. Detail Williams-Transco's planned remediation and identify when the remediation is planned to be completed.

The **Emergency Plan** for Compressor Station 206 (CS206) has not been published, but:

- Princeton Manor's only exit is onto Route 27 (toward the CS206 site).
- The access road from CS206 is 3,300 feet long & from a 2-lane road without working fire hydrants.
- CS206 would only be manned during business hours 5 days/week (40 hours/week) = It's only manned 24% of the time. Thus, having portable fire extinguishers on site may not be enough to deal with a fire at CS206 to prevent it from spreading.
- Williams/Transco wrote that they did not intend to install a fire hydrant on the CS206 site.
- First responders would be trained, but these plans have not yet been released, and meetings with local first responders haven't happened. Also – There's no information about the equipment that would be needed to fight an explosion or spreading fire at the CS206 site & whether or not the townships would bear the cost of these purchases.

Lack of Fire Suppression Support at Compressor Station 206 site:

According to a memo submitted by Carl Hauck, PE, CME, CPWM, Public Works Manager/Licensed Water Operator to the Franklin Township Manager on June 20, 2018 and submitted to FERC on that same date [Accession No. 201806290-5059(32963505)], the following was written in "response to a request for fire service availability for a proposed gas compressor station on Route 518 near Carroll Place." -

There is an existing 10-inch water main and pump station which was installed as part of a US EPA Superfund site project in the early 1990's due to private well contamination from the Higgins Farm property. The water main and pump station were installed to provide domestic water service to the affected properties. Blow offs or underground hydrant stubs were installed to provide testing and flushing areas to monitor and maintain water quality of the water line. No above grade hydrants were installed due to the limitation on the design.

Based on recent flow testing data from May 2018, the Route 518 line does not provide minimum fire flows as necessary for firefighting purposes.

An engineering evaluation would be required for the existing pump station which should include a hydraulic model on the existing water main. Upgrades would be required to provide fire service to the gas compressor station.

Potential Impact Radius

- According to Williams/Transco, the Potential Impact Radius (PIR) is 820-feet for the compressor station and associated pipelines at that site. The Potential Impact Radius of 820-feet should be expanded since there have been explosions with significant damage occurring at places farther away than the PIRs reported for natural gas pipelines.
    - The exploded 30"-diameter pipeline in Appomattox, VA (2008) had a PIR of 585-feet. However, scorched earth & destroyed buildings was found 958-feet away, and a minimum estimate of the radius of damage was 1,444-feet away.
    - The 30"-diameter pipeline that exploded in Salem County, PA (2016) had a PIR of 671-feet. However, high impact damage happened 80-feet away, and minor impacts happened 1,400-feet away, with other impacts happening 2,200-feet away.
- The PIR is often referred to as an **"incineration zone"** in which there is a 99% chance that people and buildings in it will not survive from a natural gas explosion/fire. However:
    - The PIR determinations do not account for the presence of fuel or fire accelerants such as trees, topography or weather conditions.
    - The PIR determinations do not take into account the velocity of the gas traveling through the pipelines or the condition of the pipelines.
    - The PIR determinations do not consider other pipelines that are nearby which, in the case of the proposed NESE, would have two existing pipelines (Mainlines A & C) tied-into Compressor Station 206 and another nearby Sunoco pipeline.
    - The PIR determinations are only based on the diameter of the pipeline and the MAOP.
- In only using the pipeline diameter and Maximum Allowable Operating Pressure (MAOP) to determine the PIR calculation, this does not consider other relevant risk factors such as the presence of another nearby pipeline, velocity of gas going through the pipeline, fuel or fire accelerants such as trees, topography, or weather conditions.
- Poisonous gases are produced and can result in massive explosions, further contaminating the air and water. In fact, acetaldehyde can spontaneously decompose or polymerize to form explosive peroxides when heated, distilled, evaporated or even, when contaminated. It is considered flammable, reactive and an explosion hazard.

Madison Loop is planned to go by the Morgan Ordnance Depot north of MP 11.10 – Here, there may be unexploded munitions.

- **Morgan Ordnance Depot**, between Route 35 and Cheesequake Road near Ernston Road in Sayreville is 0.3 miles north of MP 11.10 of the Madison Loop according to the NESE Application to FERC (03/27/2017 - Resource Report 7 – pp. 7-30 & 7-31). Williams/Transco has stated that there could be soil contamination from this site in part of the Madison Loop from Route 9 to the Raritan Bay: "As of December 17, 1995, the site is listed as a U.S. Army Corps of Engineers (USACE) Formerly Used Defense Site (FUDS) with confirmed contamination. The USACE FUDS Geographic Information System public database indicates that the site contamination area includes a portion of the Madison Loop starting from approximately Route 9 to the Raritan Bay shoreline (USACE 2013)."
- At issue in this area is the fact that, following massive explosions at this munitions site in 1918, unexploded munitions were spread over a large area, and the USACE has not completed a comprehensive survey to identify locations of still unexploded munitions that are buried in the ground in the area where Williams/Transco plans to construct the Madison Loop.
- The U.S. Army Corps of Engineers was scheduled to investigate the area to determine the location of any buried ordnance. That project was not implemented, so the danger of excavations in this area has not been eliminated. Thus, construction of the Madison Loop in this area and surrounding areas that may have buried unexploded munitions is an additional safety risk that was not addressed in the application.
- Over a century later, explosive debris continues to surface regularly across a 1.2-mile (1.9 km) radius, and the USACE has been called to Sayreville in the past to look for unexploded munitions at the LaMer development as well as at two schools in Sayreville – Eisenhower and Samsel. [Reference: *"Old military explosive unearthed in schoolyard". The Suburban. July 6, 2007. Archived from the original on March 4, 2016. We find these things a couple of times a year in town.]* Williams/Transco acknowledged this in their application to FERC by stating: "Nearly a century later, explosive debris continues to surface regularly across a 1.2-mile radius. Because this site contamination boundary includes a portion of the Project facilities and has an unclear remedial history, it is possible that soil contamination associated with this property could be present in the vicinity of the Project facilities. If contamination is unearthed, Transco will adhere to its Unanticipated Discovery of Contamination Plan included in RR 1, Appendix 1B, Attachment 8." (Application 3/27/17 to FERC in Resource Report 7 – pp. 7-30 & 7-31). However, this only addresses potential contaminated soils and not the possibility of hitting or unearthing unexploded munitions. If any munitions explode, there is the potential that contaminated soils would be spread across an undetermined amount of wetlands in addition to any damage from the explosion.

Safety Record of Williams/Transco reveals that procedures and required precautions are not always followed by them or their contracted workers.

**** See separate listing of their violations on www.scrap-NESE.org –***
Go to tab at the top (Risks & Issues) > Safety & Accidents > READ MORE > W-T Safety Record

PHMSA, the arm of the Department of Transportation responsible for monitoring pipelines and compressor stations after they are operational, reported the following national statistics for gas pipelines between 1996 and 2015: There were 11,192 reportable incidents with

- 6,678,631,880 dollars in damages,
- 371 people killed, and
- 1,378 other people injured.
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Right here in *our* region, the federal Pipeline Hazardous Materials Safety Administration (PHMSA) is currently recommending that Williams/Transco be *fined* over $1,000,000 for safety violations. These violations include missing safety reports and plans, failure to conduct inspections, failure to investigate internal corrosion inspection results, *and* running gas through their pipelines ***above allowable pressures.***

We can't afford to wait for a deadly explosion to occur, such as the one in Massachusetts, before we take action to protect New Jersey citizens.