



Resolution

Urging FERC to Require a Health Assessment and Otherwise Opposing the Construction and Operation of a Compressor Station to Connect to Williams Transco's Pipeline in Franklin Township (Somerset County) NJ

WHEREAS, the residents of South Brunswick Township live in close proximity to the proposed Williams-Transco Compressor Station 206 at Trap Rock Quarry in Franklin Township; and

WHEREAS, Williams Transco plans to install a greenfield natural gas fired 32,000hp Compressor Station 206 in Franklin Township, Somerset NJ; and

WHEREAS, the Trap Rock Quarry, adjacent to the proposed Compressor Station 206, is slated as a potential future reservoir site in 2045; and

WHEREAS, the Federal Energy Regulatory Commission (FERC) issued a Draft Environmental Impact Statement (DEIS) on March 23, 2018; and

WHEREAS, FERC acknowledges receiving comments requesting FERC to perform a Health Impact Assessment for Compressor Station 206 in the Executive Summary (pages ES-5 to 7), Environmental Analysis (page 4-292) and their Conclusions and Recommendations (page 5-20) of the DEIS; and

WHEREAS, FERC also identifies existing federal guidelines for air quality and that, pursuant to these regulations, Compressor Station 206 is designated as a minor source of pollution; and

WHEREAS, the FERC online database does not indicate performing a Health Impact Assessment for the past 12 years; and

WHEREAS, recent studies detail known and evidenced health hazards resulting from natural gas-fired compressor station emissions and causal evidence of long-term chronic health conditions; and

WHEREAS, these studies include but are not limited to: 2015 Southwest Pennsylvania Environmental - A brief review of compressor stations¹; NY Environmental Health Project 2017 study - Health Effects Associated with Stack Chemical Emissions from NYS Natural Gas

Compressor Stations: 2008-2014²; Dr. Nordgaard's studies regarding compressor chemical emissions highlighting that current federal standards do not closely reflect actual human health risks³; Concerned Health Professionals of NY published its 5th edition Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (unconventional Gas and Oil Extraction)⁴; and

WHEREAS, a study of nearly 2.5 million veterans followed for over eight years concluded that there is a significant association between exposure to airborne Particulate Matter (PM_{2.5}) and kidney disease. The authors found that levels of PM_{2.5} that were below the EPA threshold of 12 microgram/m³ were associated with risk of Chronic Kidney Disease (CKD) and end-stage renal disease (ESRD)⁵; and

WHEREAS, the Application from Williams Transco for the Northeast Supply Enhancement Project indicates an expectation that PM_{2.5} emissions for Compressor Station 206 and background air would be dangerously close to exceeding "acceptable" thresholds:

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| Annual: | 10.1 microgram/m ³ |
| (EPA-NAAQS threshold: | 12 microgram/m ³) |
| 24-hour: | 32.1 microgram/m ³ |
| (EPA-NAAQS threshold: | 35 microgram/m ³) |

WHEREAS, airborne emissions from Compressor Station 206 have been identified from Williams as:

- **Estimated** emissions from proposed compressor, **in tons per year (tpy)**, for:

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| CO = 56.86tpy; | NOx = 22.74tpy; | VOC = 8.35tpy; | PM ₁₀ = 18.94tpy; |
| PM _{2.5} = 18.94tpy; | SO ₂ = 3.07tpy; | GHG (natural gas) = 132,720tpy. | |

- **Estimated** caustic chemical emissions, **in pounds per year (lbs/yr)**, for:

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| Formaldehyde= 660lbs/yr; | Ammonia = 29,580lbs/yr; | Acrolein = 6lbs/yr; |
| Acetaldehyde = 44lbs/yr; | Ethylbenzene = 34lbs/yr; | Benzene = 14lbs/yr; |
| Toluene = 142lbs/yr; | Propylene Oxide = 32lbs/yr; | Xylenes = 70lbs/yr. |

WHEREAS, these estimated emissions have not been validated by FERC; FERC has not performed a health impact of the above identified chemicals in recent years; and FERC has not indicated reviewing recent developments and studies correlating natural gas fired compressor emissions with direct health hazards; and

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WHEREAS, Federal and New Jersey state agencies have recognized the above stated airborne chemical emissions as highly toxic to human health causing a variety of immediate and chronic health conditions; and

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WHEREAS, the ambient air sampling that was completed for the NESE Project used stations in Elizabeth, North Brunswick, and East Brunswick NJ as well as Philadelphia PA, and each only measured specific components; and

WHEREAS, there was no local assessment of air quality emissions that included the airborne pollutants from the mining operations of Trap Rock Quarry in combination with the anticipated emissions from Compressor Station 206; and

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WHEREAS, FERC has issued its DEIS but the DEIS does not detail the environmental or health impact of above said proposed Compressor Station 206 emissions and is soliciting input from the public and stakeholders; and

WHEREAS, the Township Council of the Township of South Brunswick, County of Middlesex, hereby strongly urges FERC to require a Health Impact Assessment to detail immediate health impacts, long-term health impacts, and contamination potential from Compressor Station 206 emissions over the next 25 years;

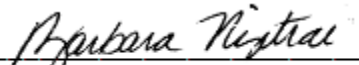
NOW, THEREFORE, BE IT RESOLVED on this 8th day of May, 2018, by the Township Council of the Township of South Brunswick, County of Middlesex, State of New Jersey, that:

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1. An Environmental Impact Statement that does not include analysis of health or environmental impact of chemical emissions from Compressor Station 206 cannot be recognized as a legitimate environmental impact statement.

2. The South Brunswick Township Council opposes the construction and operation of the proposed compressor station as there has not been an adequate assessment of the potential detrimental health impacts from construction and operations of the proposed Compressor Station 206 on the residents around this site.
3. The South Brunswick Township Council strenuously urges FERC to conduct a thorough and comprehensive **Health Impact Assessment** of the proposed Williams Transco Compressor Station 206 emissions regarding health and environmental impact for the immediate areas as well as long-term contamination potential for the future 2045 reservoir site.
4. The South Brunswick Township Council requests the Federal Energy Regulatory Commission to require continuous air sampling at the site of the proposed Compressor Station 206 before and during construction as well as ongoing for the lifetime of the compressor station operation and make publicly available real time updates of air sampling on the internet.
5. The South Brunswick Township Council urges FERC to require a Health Impact Assessment that is started prior to issuing its Final Environmental Impact Statement and urges its representatives of the United States Congress, United States Senate and New Jersey Legislature to oppose the Northeast Supply Enhancement Project that includes the proposed Compressor Station 206.
6. A copy of this resolution be forwarded to U.S. Senators Cory Booker and Robert Menendez, Congresswoman Bonnie Watson Coleman, N.J. Senators Christopher Bateman and Robert Smith, and N.J. Assemblymen Joseph Daniels, Joseph Egan, Andrew Zwicker and Roy Frieman.

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| RESULT: | ADOPTED [UNANIMOUS] |
| MOVER: | Joseph Camarota, Deputy Mayor |
| SECONDER: | Josephine "Jo" Hochman, Councilwoman |
| AYES: | Bierman, Camarota, Hochman, Carley, Grover |

This is to certify that the foregoing is a true copy of a resolution adopted at the South Brunswick Township Council meeting held on May 8, 2018.


Barbara Nyitrai, Township Clerk

References

(1) Referenced Studies:

- ¹ Kloczko, N. (2015, November). A brief review of compressor stations. Southwest Pennsylvania Environmental Health Project. Retrieved from <http://www.environmentalhealthproject.org/files/A%20Brief%20Review%20of%20Compressor%20Stations%2011.2015.pdf>
- ² Russo, P.N. & Carpenter, D.O. (2017, October 12). Health effects associated with stack chemical emissions from NYS natural gas compressor stations: 2008-2014. Institute for Health and the Environment - A Pan American Health Organization / World Health Organization Collaborating Centre in Environmental Health, University at Albany. Retrieved from https://www.albany.edu/about/assets/Complete_report.pdf
- ³ The hazards of a compressor station: A town wakes up to the realities of corporate deception. (2015, November). Retrieved from <http://350ma-berkshires.org/the-hazards-of-a-compressor-station-a-town-wakes-up-to-the-realities-of-corporate-deception/>
Dr. Nordgaard's [Boston pediatrician] "main point was that the EPA limits do not closely reflect actual human health risks. The closer you are to the compressor station, the worse the symptoms experienced. Both doctors [Dr. Nordgaard & Dr. Sheila Bushkin-Bedient, physician at Albany's Institute for Environmental Health] agreed that many of these chemicals are known carcinogens and respiratory irritants, but that an even greater danger would come from their synergistic combinations, some of which have never before been tested on humans."
- ⁴ Compendium of scientific, medical, and media findings demonstrating risks and harms of fracking (unconventional gas and oil extraction) (5th ed.) (2018, March). Concerned Health Professionals of New York & Physicians for Social Responsibility. Retrieved from <http://concernedhealthny.org/compendium/>
- ⁵ Bowe, B., Xie, Y., Li, T., Yan, Y., Xian, H. & Al-Aly, Z. (2017, September 21). Particulate matter air pollution and the risk of incident CKD and progression to ESRD. *Journal of American Society of Nephrology*, 29: 218-230. Retrieved from <http://jasn.asnjournals.org/content/29/1/218.full.pdf+html>

Other Studies:

Summary on compressor stations and health impacts. (2015, February 24). Southwestern Environmental Health Project. Retrieved from <http://www.environmentalhealthproject.org/files/Summary%20Compressor-station-emissions-and-health-impacts-02.24.2015.pdf>

NY Compressor Station Report. Retrieved from <http://www.environmentalhealthproject-ny.org/>

70 chemicals released from compressor stations are linked to 19 of 20 major categories of human disease.

Summary of Minisink Monitoring Results.

Retrieved from <http://www.environmentalhealthproject.org/resources/10/click/5>

(2) Federal and New Jersey State Agency chemical references recognizing above stated airborne chemical emissions as highly toxic to human health causing a variety immediate and chronic health conditions from CS206 emissions (see attachment).

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| <p>Ammonia CS206 emission 29,580 lbs per year</p> | <ul style="list-style-type: none">• Suspected liver, gastrointestinal, reproductive, respiratory, skin, and neurotoxicant (EDF Goodguide)• Exposure from inhalation may cause bronchiolitis obliterans; symptoms include cough, wheezing, obstructive/restrictive defect, chronic shortness of breath and difficulty breathing from low activity, increased inflation of lungs (HAZMAP)• Exposure through inhalation may cause toxic pneumonitis (acute inflammation of lungs); symptoms include burning, chest tightness, conjunctivitis, cough, dark or bluish color of skin due to oxygen deficient blood, shortness of breath and difficulty breathing from low activity, crackling when listening to breathing with stethoscope, excessive tearing of eyes, sore throat, pulmonary edema (increased fluid in lung tissues), runny nose, wheezing (HAZMAP)• Exposure through inhalation may cause chronic bronchitis; symptoms include coughing up phlegm, wheezing (HAZMAP)• TOXIC; may be fatal if inhaled, ingested or absorbed through skin; vapors are extremely irritating and corrosive (NOAA)• High exposure can cause a build-up of fluid in the lungs (pulmonary edema) (NJ Fsheet)• Strong irritant to eyes, skin, respiratory tract (HSDB)• Exposure to high levels of ammonia in air may be irritating to skin, eyes, throat, and lungs and cause coughing and burns; lung damage and death may occur after exposure to very high concentrations of ammonia; some people with asthma may be more sensitive to breathing ammonia than others (ASTDR)• Populations at increased risk include asthmatics, those hyper reactive to other respiratory irritants, and those with glaucoma, corneal disease, and chronic respiratory disease (HSDB)• Agency exposure limits:<ul style="list-style-type: none">○ CDC Acute Inhalation Risk Level at 1.7 Parts Per Million (PPM)○ OSHA: 50ppm over 8 hour work shift○ NIOSH: 25ppm over 10 hour work shift (NJ Fsheet) |
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| <p>Formaldehyde CS206 emission 660 lbs per year</p> | <ul style="list-style-type: none"> • Known carcinogen (HAZMAP) • Suspected gastrointestinal/liver, immune system, neuro, reproductive, respiratory, and skin/sense organ toxicant (EDF Goodguide) • Adverse effects from exposure include asthma and toxic pneumonitis (inflammation of the lungs) (HAZMAP) • High exposure through inhalation can cause a buildup of fluids in the lungs (NJ Fsheet) • Repeated exposure may cause bronchitis and an asthma like allergy (NJ Fsheet) • Limited evidence that exposure may damage developing fetus and affect female fertility (NJ Fsheet) • Eye, skin, and respiratory tract irritant (HSDB) • People with asthma may be particularly sensitive to exposure (HSDB) • Exposure through inhalation can cause burning sensation, cough, headache, nausea, and shortness of breath (NIOSH) • Agency exposure limits: <ul style="list-style-type: none"> ○ CDC Acute Inhalation Risk Level at .04 parts per million (PPM) ○ OSHA: 0.75ppm averaged over 8 hour work shift ○ NIOSH: 0.016ppm averaged over 10 hour work shift (NJ Fsheet) |
| <p>Benzene CS206 emission 14 lbs per year</p> | <ul style="list-style-type: none"> • Listed as a known carcinogen (HAZMAP) • Listed as a recognized carcinogen and developmental and reproductive toxicants (EDF Goodguide) • Listed as a cause of anemia (decrease in number of red blood cells) (HAZMAP) • Listed as a neurotoxin (cause of central nervous system solvent syndrome) (HAZMAP) • Listed as a reproductive toxin (HAZMAP) • Listed as a suspected cardiovascular/blood, endocrine, gastrointestinal/liver, immune system, neuro-, respiratory, skin/sense organ toxicant (EDF Goodguide) • The major effect of benzene from long-term exposure is on the blood; causes harmful effects on the bone marrow and can cause a decrease in red blood cells leading to anemia; can also cause excessive bleeding and can affect the immune system, increasing the chance for infection (ASTDR) • Occupational diseases associated with exposure include: leukemia and aplastic anemia (symptoms include fever, bleeding into the skin, mouth, nose, and gastrointestinal tract caused by the low platelet count of aplastic anemia and the damage to capillaries caused by viral hemorrhagic fevers, decreased white blood cell count, tiny circumscribed foci of extravagated blood in the skin); large areas of confluent petechiae are called purpura, ecchymoses, or bruises (HAZMAP) • Acute exposure to high concentrations of benzene in air results in neurological toxicity (headache, dizziness, drowsiness, confusion, tremors, and loss of consciousness) (HSDB) • Agency exposure limits: <ul style="list-style-type: none"> ○ CDC Acute Inhalation Risk Level at .009 Parts Per Million (PPM) ○ OSHA: 1ppm averaged over 8 hour work shift ○ NIOSH: 0.1ppm averaged over 10 hour work shift (NJ Fsheet) |

Ethylbenzene
CS206 emission
34 lbs per year

- Possible human carcinogen ([ASTDR](#))
- Listed as a suspected blood/cardiovascular, developmental, endocrine, gastrointestinal/liver, kidney, neuro, reproductive, respiratory, and skin/sense organ toxicant ([EDF Goodguide](#))
- Limited evidence that ethylbenzene may damage the developing fetus ([NJ Fsheet](#))
- Exposure to relatively low concentrations of ethylbenzene in air for several months to years causes kidney damage in animals ([ASTDR](#))
- High exposure can cause symptoms similar to chronic solvent encephalopathy, a syndrome with a variety of central nervous effects ([HAZMAP](#))
- Exposure may cause acute toxic effects such as difficulty concentrating, confusion, dizziness, fatigue, irritability, lethargy, impaired speech ([HAZMAP](#))
- Most severe irritant of benzene series ([HSDB](#))
- Exposure to high levels of ethylbenzene in air for short periods can cause eye and throat irritation; exposure to higher levels can result in dizziness ([ASTDR](#))
- Irreversible damage to the inner ear and hearing has been observed in animals exposed to relatively low concentrations of ethylbenzene for several days to weeks ([ASTDR](#))
- Inhalation may cause irritation of nose, dizziness, depression ([NOAA](#))
- Agency exposure limits
 - CDC Acute Inhalation Risk Level at **5 Parts Per Million (PPM)**
 - OSHA: **100ppm** averaged over 8 hour work shift
 - NIOSH: **100ppm** averaged over 10 hour work shift ([NJ Fsheet](#))

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| <p>Acetaldehyde CS206 emission 44 lbs per year</p> | <ul style="list-style-type: none"> • Listed as a possible human carcinogen (HSDB) • Suspected developmental, immune system, kidney, neuro, respiratory, skin/sense organ toxicant (EDF Goodguide) • Acetaldehyde may cause birth defects in humans since it causes them in animals (NJ Fsheets) • Exposure can cause toxic pneumonitis (inflammation of the lungs) (HAZMAP) • Eye irritant at 50ppm for 15 min.; respiratory tract irritant at 134ppm for 30 min.; nose and throat irritant at 200ppm for 15 min. (HSDB) • Breathing vapors will be irritating and may cause nausea, vomiting, headache, and unconsciousness (NOAA) • Exposure to high concentrations can cause headache, dizziness, headache, light-headedness, and passing out (NJ Fsheets) • Higher exposures may cause a buildup of fluid in the lungs (NJ Fsheets) • Repeated exposure may bronchitis to develop with coughing, phlegm, and shortness of breath (NJ Fsheets) • Agency exposure limits: <ul style="list-style-type: none"> ○ CDC Acute Inhalation Risk Level - A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C. ○ OSHA: 200ppm over 8 hour work shift ○ NIOSH: limit to lowest feasible concentration (NJ Fsheets) |
| <p>Naphthalene CS206 emission 2 lbs per year</p> | <ul style="list-style-type: none"> • Listed as a possible carcinogen (HSDB) • Suspected cardiovascular/blood, developmental, gastrointestinal/liver, neuro, respiratory, skin/sense organ toxicant (EDF Goodguide) • Limited evidence that exposure may damage developing fetus (NJ Fsheets) • May damage red blood cells causing anemia (low blood count) (NJ Fsheets) • Exposure to large amounts may damage red blood cells or cause hemolytic anemiadestroy (destroys red blood cells resulting in too few red blood cells until body replaces them; symptoms include fatigue, lack of appetite, restlessness, and pale skin) (ASTDR) • Exposure may cause methemoglobinemia (blood disorder in which an abnormal amount of methemoglobin [form of hemoglobin--the molecule in red blood cells that distributes oxygen to the body] is produced, preventing oxygen from being effectively released to tissues in the body) (HAZMAP) • Naphthalene is an ocular irritant that has caused cataracts in exposed workers (HAZMAP) • Acute toxic effects from exposure include abdominal pain, confusion, cough, fatigue, wheezing, weakness, buildup of fluid in the lungs, nausea, and more (HAZMAP) • Effects from exposure through inhalation include headache, weakness, nausea, vomiting, sweating, confusion, jaundice, and dark urine (NIOSH) • People with blood, kidney, or liver diseases may be at a heightened risk (HSDB) • Agency exposure limits: <ul style="list-style-type: none"> ○ CDC Chronic Inhalation Risk Level at .0007 Parts Per Million (PPM) ○ OSHA: 10ppm averaged over 8 hour work shift ○ NIOSH: 10ppm averaged over 10 hour work shift (NJ Fsheets) |

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| <p>Toluene CS206 emission 142 lbs per year</p> | <ul style="list-style-type: none"> • Listed as a recognized developmental toxicant (EDF goodguide) • Listed as a suspected cardiovascular/blood, gastrointestinal/liver, immune system, kidney, neuro-, reproductive, respiratory, and skin/sense organ toxicant (EDF goodguide) • Inhaling high levels of toluene in a short time can make you feel light-headed, dizzy, or sleepy; can also cause unconsciousness, and even death (ASTDR) • High levels of toluene may affect your kidneys (ASTDR) • Toluene may cause birth defects in humans as it has been shown to cause them in animals (NJ Fsheets) • Toluene may damage developing fetus (NJ Fsheets) • High exposure can cause symptoms similar to chronic solvent encephalopathy (a syndrome with a variety of central nervous effects) (HAZMAP) • Exposure may cause acute toxic effects such as difficulty concentrating, confusion, dizziness, fatigue, irritability, lethargy, impaired speech (HAZMAP) • Toluene may affect the nervous system; low-to-moderate levels can cause tiredness, confusion, weakness, drunken-type actions, memory loss, nausea, loss of appetite, and hearing and color vision loss; these symptoms usually disappear when exposure is stopped (ASTDR) • Vapors irritate eyes and upper respiratory tract; cause dizziness, headache, anesthesia, respiratory arrest (NOAA) • Inhaling can irritate the nose and throat causing coughing and wheezing (NJ Fsheets) • People with central nervous system or liver diseases may be especially sensitive (HSDB) • Agency exposure limits: <ul style="list-style-type: none"> ○ CDC Acute Inhalation Risk Level at 4 Parts Per Million (PPM) ○ OSHA: 200ppm averaged over 8 hour work shift ○ NIOSH: 300ppm averaged over 10 shift (NJ Fsheets) |
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Xylene
CS206 emission
70 lbs per year

- **Temporary memory loss, confusion, and laboratory evidence of liver injury have been reported in workers overexposed to xylene ([HAZMAP](#))**
- **Listed as a suspected cardiovascular, developmental, liver, immune system, kidney, respiratory, skin, reproductive, and immune system toxin ([EDF Goodguide](#))**
- Listed as a neurotoxin ([EDF Goodguide](#))
- People who breathe high levels may have dizziness, confusion, and a change in their sense of balance ([ASTDR](#))
- Exposure to high levels for short periods can also cause irritation of the skin, eyes, nose, and throat; difficulty in breathing; problems with the lungs; delayed reaction time; memory difficulties; stomach discomfort; and possibly changes in the liver and kidneys ([ASTDR](#))
- Inhalation can irritate the nose and throat causing coughing and wheezing ([NJ Fsheet](#))
- Exposure can cause headache, nausea and vomiting, dizziness, light-headedness and passing out ([NJ Fsheet](#))
- Repeated exposure can affect concentration, memory, vision, and muscle coordination ([NJ Fsheet](#))
- **CDC Acute Inhalation Risk Level at 4 Parts Per Million (PPM)**