

Memorandum

To: Asheville Regional Office Files

From: Brendan Davey, Regional Supervisor *BDD*

Date: June 1, 2018

Subject: **Draft Air Permit / Public Comment Summary**
Public Service Company of NC, Mill Spring, Silver Creek Road
Mill Spring, Polk County, North Carolina
Permit Class: Small
Facility ID# 7500100

The intent of this memorandum is to summarize comments received regarding the draft air permit and draft air permit review for the Public Service Company of NC, Mill Spring Compressor, Silver Creek Road. Comments have been grouped by topic and brief responses have been provided. Comments were received by email and verbally during the May 23, 2018 public information session. There were no comments received by US Mail. This memo does not address permit or regulatory clarifications provided during the "Q&A" portion of the May 23 public information session. Approximately 54 email comments were received and several comments were noted during the public information session.

1. *Non-Air Quality Comments:* *Comments were received regarding noise, emergency response, emergency notification, earthquakes, lightning, the equestrian center, a fire at the previous location, PSNC safety monitoring, surface water issues, property value, unsightliness, signage at site, board members of PSNC, reduced taxes, US Pipeline Safety Regulations, other state and federal permitting requirements, land-use policy, and vegetative buffers:* The Division of Air Quality has no authority over these issues.

2. *Public Notice:* *Several comments addressed the perception of inadequate public notice:*

There was public notification and involvement as follows:

11/14/17	Public Notice in Tryon Daily Bulletin regarding pending air permit application by PSNC
December	Sign posted regarding application at location
12/7/17	DAQ receives application
12/20/17	Polk County Government acknowledges receipt of copy of permit application
4/24/18	Public Notice for draft permit in Tryon Daily Bulletin and NCDAQ Website and opening of public comment period
5/15/18	Press release regarding public information session
5/23/18	Public Meeting in Columbus
5/24/18	Public Comment Period Ends

3. *Hazardous/Toxic Air Pollutants: Comments addressed concerns regarding hazardous/toxic air pollutants impacts and specifically at the middle school:*

These pollutant impacts are addressed in the air permit review and were discussed during the public information session. NCDAQ also evaluated the impact at the middle school with the following results relative to 15A NCAC 2D .1100:

Toxic Air Pollutant Modeling		
Pollutant	% of allowable level (maximum impact)	% of allowable level at the middle school
Benzene	39%	<0.5%
Formaldehyde	24%	<2%
Acrolein	4%	<0.3%

The project meets the impact requirements for the NC Air Toxics Regulations with a significant margin. See the air permit review for more information. In addition, the referenced analysis is considered conservative as follows:

- A. The NC allowable ambient air levels are set at a conservative value following recommendations provided by an independent scientific advisory board to protect the public health with a protective margin;
- B. Computer models tend to be conservative; and
- C. The company overreported emissions (i.e. three turbines running all day every day, evaluated more blowdowns than expected, etc.)

One commenter indicated acute systemic toxicants were not addressed. These pollutants were addressed – see the air permit review.

Comments were provided regarding averaging periods. The appropriate lb/hr, lb/day, and lb/year periods were considered per 2Q .0711 and 2D .1100.

One commenter requested the benzene limit be lowered per turbine to 3 lb/yr/turbine (from 5.4 lb/yr). There is not a regulatory requirement for lowering this modeled limit as impacts were demonstrated to be compliant per above. However, actual emissions will most likely be in the 3 lb/yr range anyway considering the company conducted their impacts at unrealistic maximum year-round production.

One commenter requested a hexane limit. Hexane is limited facility-wide in the air quality permit. If this limit is exceeded, an additional analysis is needed to demonstrate compliance with 2D .1100 using source specific emissions and computer modeling.

Some commenters pointed out concerns from online articles. These articles reference studies primarily from Southwest Pennsylvania in areas that also include a significant presence of fracking operations, drill pads, and gas processing facilities (all of which are not present in Polk County) as well as compressor stations. The Division's toxic air pollutant impact analysis referenced above and detailed in the draft air permit review shows the expected and compliant impact from toxic air pollutants from this compressor station.

<http://www.cwfnc.org/documents/Dangerous-Neighbors-Final-6-8-2016.pdf>
www.environmentalhealthproject.org

"Anecdotally, we know that people living near compressor stations report episodic strong odors as well as visible plumes during venting or blowdowns. Residents often report symptoms that they associate with odors such as burning eyes and throat, skin irritation, and headaches. These are simply anecdotes but they are fairly consistently reported. It should be noted that residents in southwest Pennsylvania where these anecdotes were collected, often live near drill pads and in some instances processing plants along with compressor stations."

<http://journals.sagepub.com/doi/pdf/10.2190/NS.23.1.e>

"This project did not involve certain research elements, such as structured control groups in non-impacted areas and in-depth comparative health history research, that aim to show a direct cause-and-effect relationship or to rule out additional exposures and risks. Such work, while important, was beyond the scope of the project."

It was clarified for one commenter at the public meeting that in general air quality regulatory development utilizes information for sensitive populations and not just healthy adults.

4. **Site Construction:** The compressor turbines have not been brought on site as of the date of the public meeting. Some construction is allowed (not of the actual air emission source) prior to receiving an air permit. This includes site grading, underground pipe work, electric, and ancillary structures.
5. **Particulate Emissions:** Some commenters expressed concerns regarding particulate emissions. Particulate emissions are inherently low from natural gas combustion and reported by the EPA in the document AP-42 Page 3.1-4 as "PM emissions are negligible with natural gas firing" for gas turbines. One commenter requested a particulate emission rate of 0.6 lb/mmBtu. The EPA document AP-42 Table 3.1-2a estimates emissions well below this requested rate at 6.6E-3 lb/MMBtu. Also, fugitive emissions are not expected to be a concern from this site by the nature of the operation (no haul roads, no expected dust generation processes, etc.).
6. **NOx Emissions:** Commenters expressed concern of the NOx emissions and requested lower NOx limits to 9-15 ppm. DAQ will retain the current Federal Standard for new sources of 25 ppm. NOx compliance will be verified through stack testing.

7. *SO₂ Emissions:* Some commenters requested sulfur sampling, not certification and concerns about “20% sulfur.” The sulfur content of the natural gas will be significantly below this mentioned level at 0.4 grains of sulfur per 100 standard cubic foot. This is approximately 2% of the Federal NSPS standard of 20 grains of sulfur per 100 standard cubic foot. In addition, due to the very low sulfur in NC pipeline gas, no monitoring beyond the Federal NSPS will be required.
8. *Proximity of the Middle School and Recreation Complex:* NCDAQ has no control over local land use policy. The proposed air emissions and air emission sources are expected to comply with all applicable State and Federal air quality regulations which are designed to protect the public health.
9. *Ambient monitoring or continuous monitoring of toxics, NOx, and particulate:* Based on the conservative toxic air pollutant analysis and relatively low air emissions of particulate and NOx from natural gas combustion at this site, ambient or continuous stack air monitoring is not considered necessary at this time.
10. *Blow down concerns:* A few commenters expressed concern regarding blow down emissions. These emissions were taken into account in the air toxics analysis mentioned above. Also, the expected actual frequency of blowdown is well less than the impacts evaluated in the air permit application process.
11. *Odor Concerns:* Some commenters expressed concern regarding odors, specifically from the existing station. It was asked how many of the expected toxic air pollutants could be smelled. It is emphasized natural gas odors could be a safety concern and should be reported to PSNC. NCDAQ can also investigate objectionable odor complaints per the applicable regulations. NCDAQ has received no odor complaints regarding the existing station, or the much larger Davidson NC TRANSCO compressor station for comparison.
12. *Requiring emissions lower than regulatory required:* Some commenters requested lower emission limits than what the State or Federal Regulation require. The proposed air emissions and air emission sources are expected to comply with all State and Federal air quality regulations which are designed to protect the public health.
13. *Environmental Justice Concerns:* These concerns are addressed and mentioned in the air permit review as follows:
In accordance with the “Memorandum of Understanding on Environmental Justice and Executive Order 12898”, the EPA is required to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”

Based on the determination from Ms. Renee Kramer, Compliance Officer with the NC Division of Waste Management, Solid Waste Section, dated February 21, 2018 (see attached), there does not appear to be a low-income community of concern within a 1-mile radius of the proposed facility and only 13% of the population within a 1-mile radius are minority.

Therefore, there does not appear to be any environmental justice concerns for this facility.

PERMIT RECOMMENDATIONS BASED ON COMMENTS RECEIVED AND FURTHER REVIEW:

- A. Include a specific permit condition to document air quality related equipment maintenance on the nitrogen oxides reduction technology for the combustion turbines as follows:

NOx REDUCTION TECHNOLOGY REQUIREMENTS - The Permittee shall operate and maintain the SoLoNOx nitrogen oxides reduction technology for the three natural gas-fired compressor turbine sets (ID Nos. ES-1, ES-2, and ES-3) in a manner consistent with the equipment manufacturer's recommendations. In addition, the Permittee shall perform periodic inspections and maintenance as recommended by the equipment manufacturer regarding the SoLoNOx nitrogen oxides reduction technology. The results of all inspections, maintenance, and any variance from manufacturer's recommendations shall be investigated with corrections made and dates of actions recorded in a logbook. The logbook (in written or electronic format) shall be kept on-site and made available to DAQ personnel upon request.

- B. The current NOx stack compliance test is required only upon startup. I recommend a repeat test be included near the mid-point of the 8-year permit cycle to verify compliance.

The first part of the report discusses the current state of the industry and the challenges it faces. It highlights the need for a more integrated approach to risk management and the importance of a strong risk culture. The report also identifies key areas for improvement and provides a framework for implementing risk management practices.

The second part of the report provides a detailed analysis of the risks faced by the organization. It identifies the major risks and assesses their potential impact on the organization's objectives. The analysis also considers the organization's current risk management practices and identifies areas where improvements are needed.

The third part of the report outlines the organization's risk management strategy and the key objectives of the risk management framework. It describes the roles and responsibilities of the various stakeholders and provides a clear framework for implementing risk management practices.

The fourth part of the report provides a detailed description of the organization's risk management framework. It outlines the key components of the framework, including risk identification, risk assessment, risk mitigation, and risk monitoring. The framework is designed to be flexible and adaptable to the organization's changing needs.

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