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TO: Environmental Quality Board of Pennsylvania

SUBJECT: CO₂ Budget Trading Program - Public Comment

DATE: December 14, 2020

Greetings – I'm writing from Washington County in favor of Pennsylvania joining the RGGI. Having been a resident of Washington County for 70-years, the past 40 years married with family, I am quite familiar with our ongoing air pollution problems (Fig. 1).

The centerpiece of my conditioning and staying physically active revolves around my 2-mile daily walk on the streets in our neighborhood in northern Peters Township. Recently, I wasn't able to complete my walk, turning back less than halfway through, due to a feeling of fatigue and generally just not feeling well.

Lo and behold, I learned later the same day (Friday December 11, 2020) that our area was under a 'Code Red' air pollution alert, which would explain why, for the first time ever, I was unable to complete my exercise walk. We live in a valley 11-miles west of US Steel's Clairton Coke Works (Fig. 2) and it's not unusual for us to smell rancid air, with a cooked coal odor. As air quality improved the next day, I finished my exercise walk as usual.

Earlier this year, we had a string of 'Code Orange' air pollution days, as they have become more frequent over recent years. In defense of our health, we invested in a \$600 Austin Air 'Heathmate' (Fig. 3) last year that runs 24-7. As senior citizens, poor air quality increases our health risks, most recently the additional deadly risk of being infected with Covid-19 that can be exacerbated by poor air quality, making us more vulnerable to that coronavirus.

While air pollution in our county has improved in some regards over recent decades, it has worsened in others, especially as it relates to ozone and particulate matter. Since our corner of Pennsylvania is one of the most drilled and fracked in the state, our county has been overrun with unconventional wells, pipelines, gas processing plants and compressor stations since 2004. The Hickory area is one example (Fig. 4).

I lost count of all the new gas processing facilities in our county built over the past 16-years at 40-some facilities, while being alarmed to see some of the newest facilities include compressor stations like the “Smith” (Fig. 5) and “Three Brothers” (Fig. 6) with nearly 20,000 horsepower each. Add to that all the “Title V” level pollution from cryogenic gas plants like Markwest’s Houston Plant (Fig. 7) & Rail Load Out (Fig. 8), Harmon Creek (Fig. 9 top), and the Revolution Plant (Fig. 9 bottom).

“Egg slicer” style permitting has allowed our county to take the brunt of oil and gas air pollution (Fig.10), while we are also “down winders” from a huge and growing array of similar facilities in West Virginia (Fig. 11) and Ohio (Fig. 12). The location of our residence in a valley increases the adverse effects of all this air pollution, especially when there are calm winds, or more frequent air inversions we are now seeing from the effects of climate change (Fig. 13).

As we look to the air quality future of our tri-state region, we see more major pollution sources under construction (Shell Cracker – Fig. 14), as well as two other cracker plants (PTT & ExxonMobil) as strong possibilities in the Ohio and Monongahela River valleys (Fig. 15). With a forward-looking timeline of supplying these plants for 50-years, while also filling pipelines for gas exports, it’s entirely possible that another 40,000 to 90,000 wells will be drilled and fracked in Pennsylvania, with more than half within an hour’s drive of us.

One of the most recently permitted well pads (Mingo – Fig. 16) in neighboring Union Township is permitted for 52 wells. As we have seen with ‘generation 3’ wells proposed by unconventional gas producers, the laterals and frac stages could easily stretch 3 to 4 miles

(Fig. 16), requiring a massive number, almost inconceivable number, of diesel truck trips to deliver frac sand, pipe, fluids and equipment.

Huge amounts of PM2.5 pollution will also be created by the fracking fleets that typically consist of fifteen 2,500 horsepower frac pumps (Fig. 18) running full blast for weeks on end. Then all the air pollution from fleets of diesel trucks hauling drill cuttings, acid, chemicals, flowback, and produced water (Fig. 19).

I've seen documented data showing anywhere from 1,000 to 10,000 truck trips per well. Multiply that by 52 on locations like the Mingo. Then add-in the air pollution from fugitive emissions from the actual well, as well as pig launcher venting and compressor blowdowns.

In attempt to do our part to curb some of this air pollution, in the same county my family has lived for over 200 years, we recently covered our roof with as many solar panels (Fig. 20) as it would hold, purchased an electric vehicle (Chevy Bolt EV – Fig. 21) and have converted entirely to LED bulbs, while practicing several other energy conservation measures.

For all the reasons listed above, ones presented by the Pennsylvania DEP, and many more presented by a host of knowledgeable individuals at the virtual events, I would strongly recommend and encourage Pennsylvania to join the RGGI. Thank you for your time and consideration!

Best wishes –

/s/ Robert Donnan

Figure 1 – Monongahela River Valley pollution is held in all our valleys



Figure 2 – Clairton Coke Works



Figure 3 – Austin Air ‘Healthmate’



Figure 4 – Air pollution layer in NW Washington County, PA

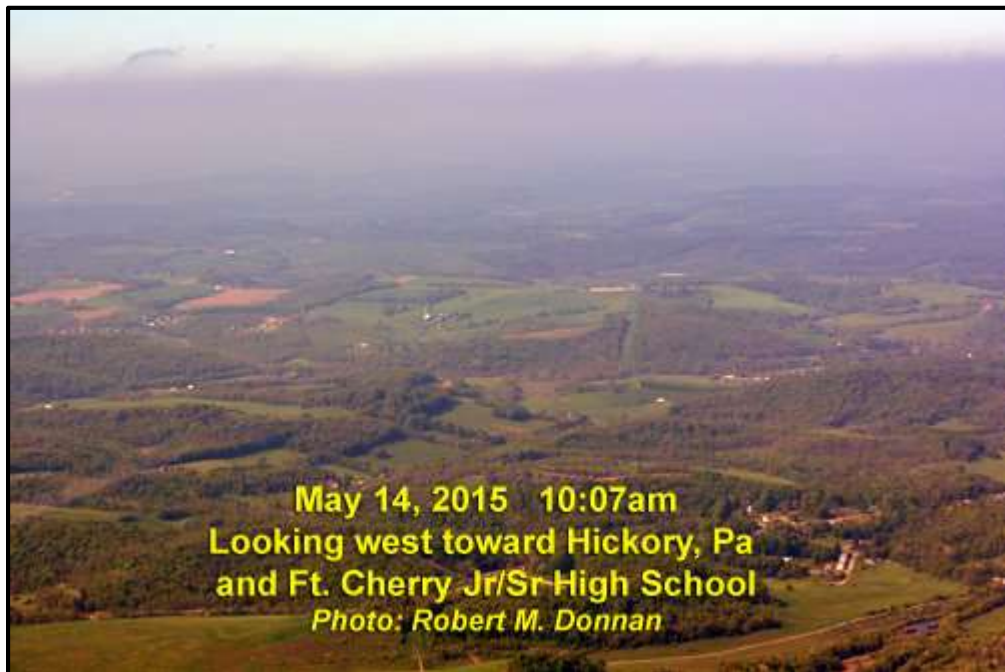


Figure 5 – Huge compressor station in Washington County, PA



Figure 6 – A second huge compressor station in the same township



Figure 7 – Markwest Gas Plant in Houston, PA is Title V pollution source



Figure 8 – Additional major air pollution from Markwest's rail Load-Out



Figure 9 – Two large cyrogenic gas plants close together
Harmon Creek Plant (top)
Revolution Plant (bottom)



Figure 10 (map at top is over 5 years old, more facilities were built since then)

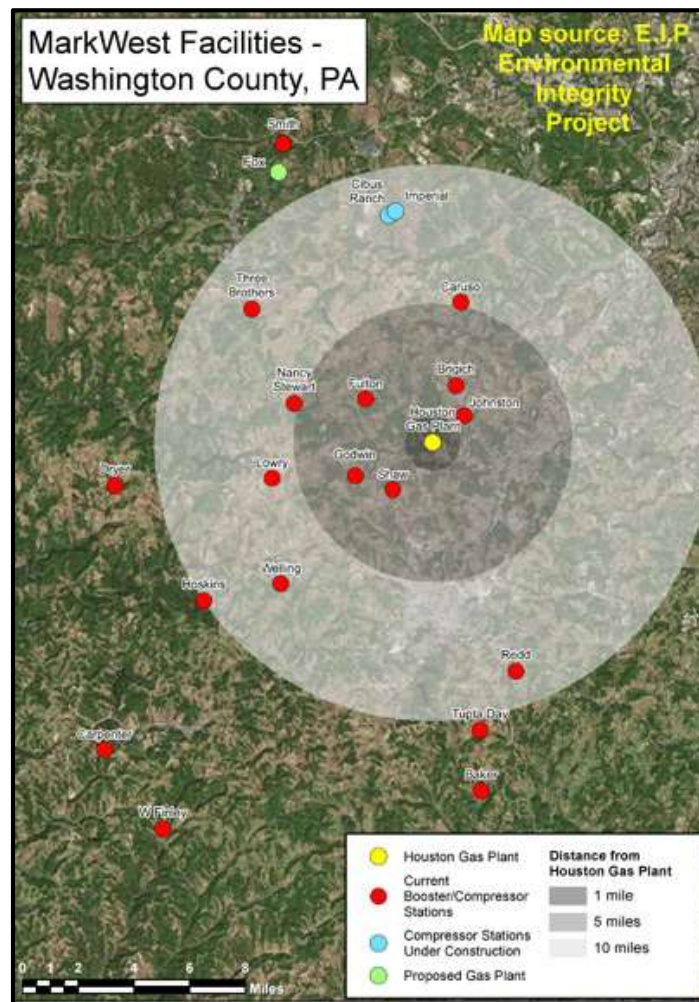
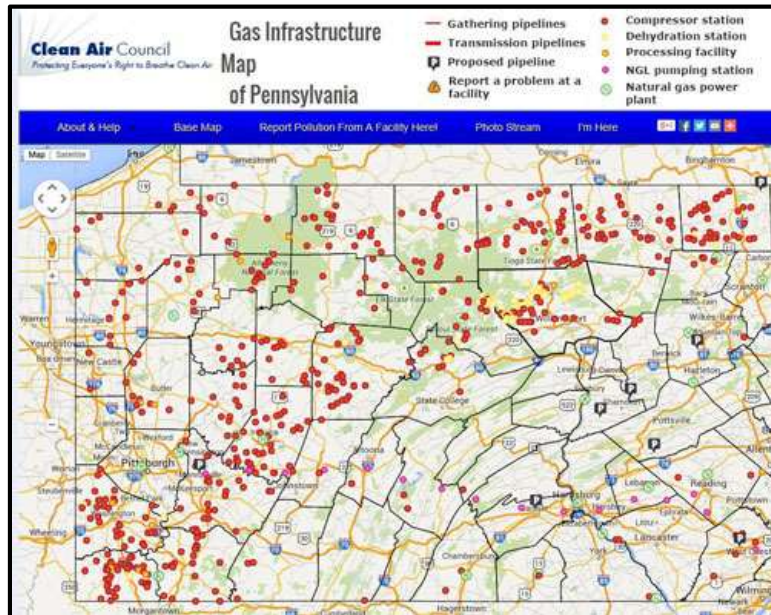


Figure 11 – One of several major gas processing plants in northern West Virginia



**Figure 12 – One of several major gas processing plants upwind in eastern Ohio
CADIZ, OHIO**



Figure 13 – Layer of air pollution in the Pittsburgh tri-state



Figure 14 – Shell Petrochemical Plant in neighboring Beaver County, PA



Figure 15 – Two local locations ExxonMobil is considering for a cracker plant

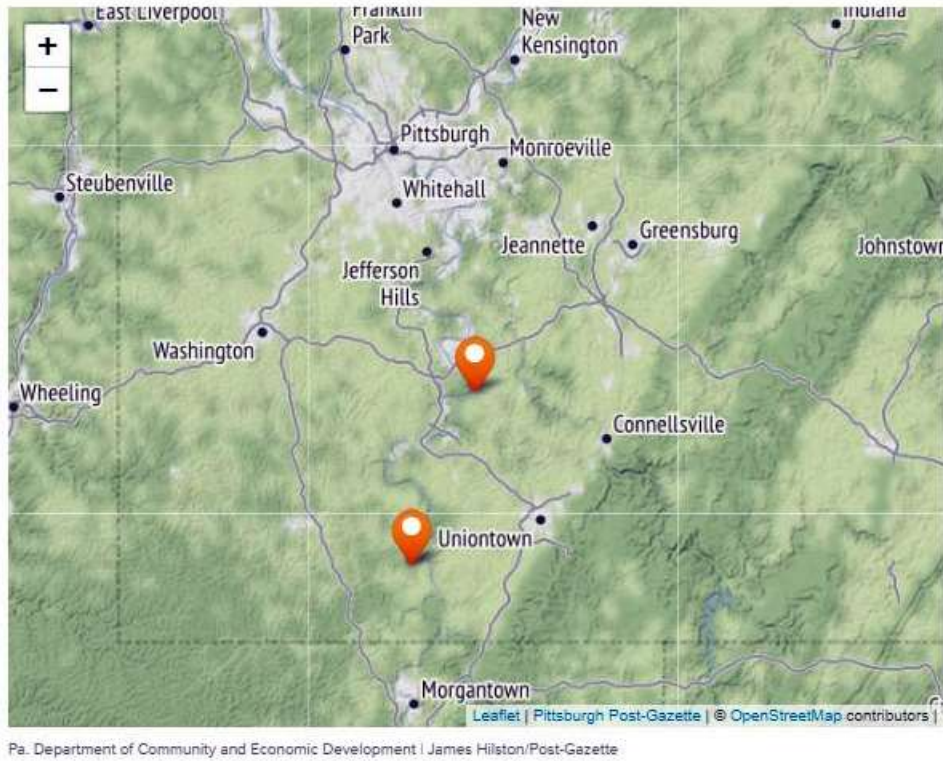


Figure 16 – Gas well pad under development in neighboring Union Township, PA

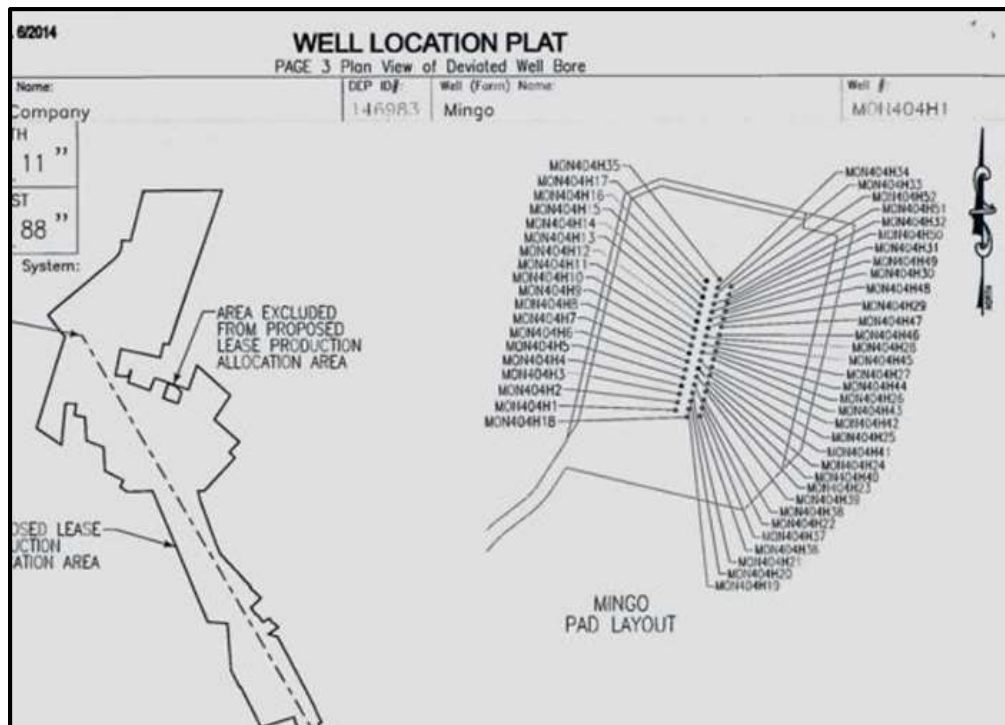


Figure 17 – New ‘Generation 3’ wells require thousands of diesel truck trips

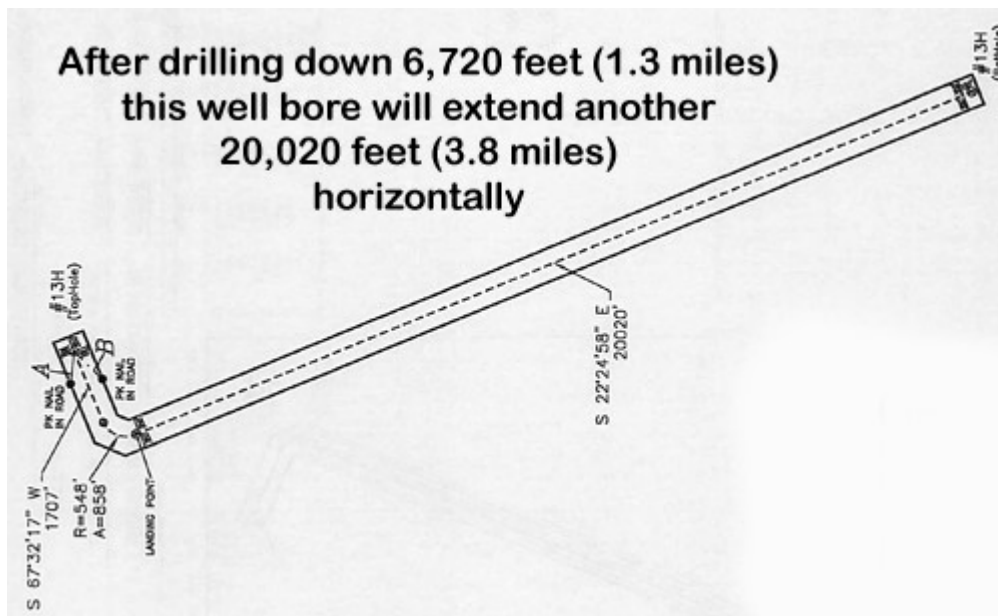
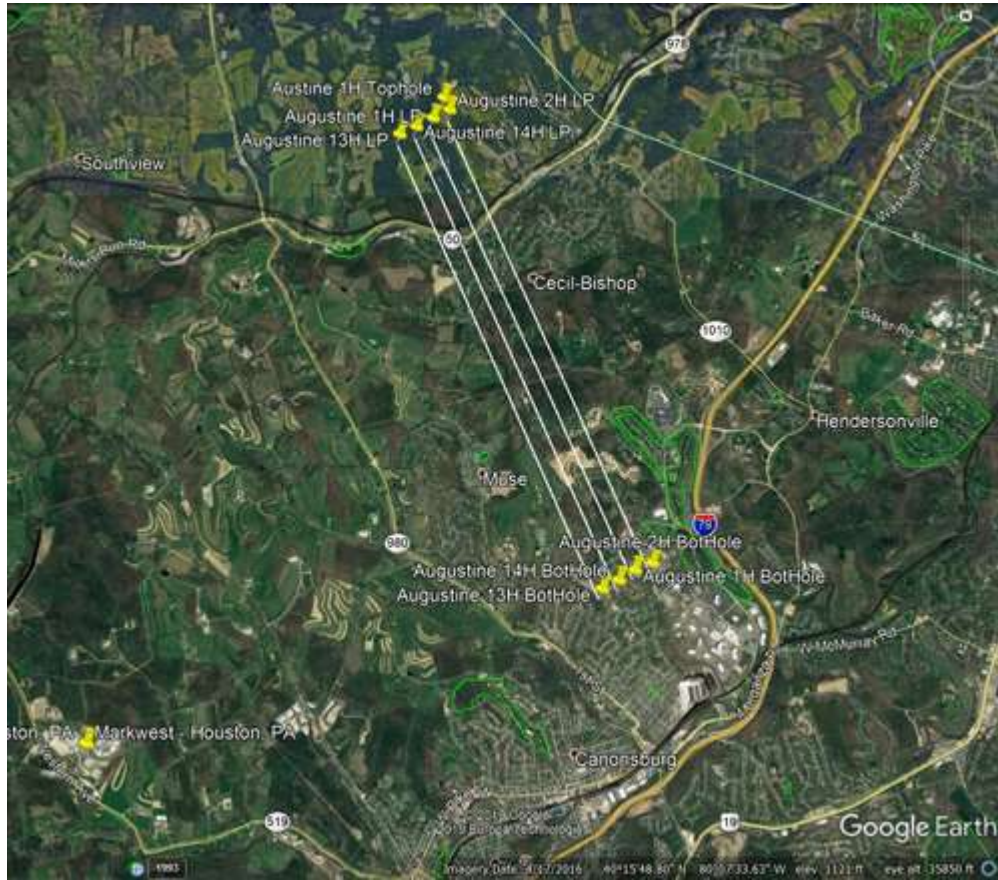


Figure 18 – Frac array with 2,500 horsepower pumps running 24-7 to crack the shale



Figure 19 – Fleets of diesel-powered tankers exacerbate ongoing PM2.5 problems



Figure 20 – Solar arrays on both roofs have greatly diminished our grid usage



Figure 21 – Our 2019 Chevy Bolt EV averaged 131 MPGe in October 2020

