Message

From: North, Alexis [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D24E261D2C5F490AA1247230E6198B94-NORTH, ALEXIS]
Sent: 6/19/2019 7:53:59 PM
To: Fritz, Peter [peter.fritz@und.edu]
Subject: RE: Western North Dakota Air Quality

Peter,

The EPA does not have any standards for ambient concentrations of benzene, methane or formaldehyde. EPA has programs built around how we measure ozone and what a healthy background level of ozone is, but we do not for benzene, methane or formaldehyde.

Thanks,

Alex

Alexis North, Environmental Scientist
Enforcement and Compliance Assurance Division
EPA Region 8
1595 Wynkoop Street (8ENF-AT)
Denver, CO 80202-1129
Phone: 303-312-7005
Email: north.alexis@epa.gov

From: Fritz, Peter <peter.fritz@und.edu>
Sent: Monday, June 17, 2019 11:48 AM
To: North, Alexis <North.Alexis@epa.gov>
Subject: Re: Western North Dakota Air Quality

You write that our ambient air quality is okay. Does this include possible high levels of Benzene, methane and formaldhyde? It is my understanding that these HAPs can affect ground level Ozone. However, they can be in high dangerous concentrations, while the ambient air quality or ground level Ozone is still registering okay. This is my main concern. Can you answer this question?

Thank you,

From: North, Alexis <North.Alexis@epa.gov>
Sent: Monday, June 17, 2019 10:47:07 AM
To: Fritz, Peter
Subject: RE: Western North Dakota Air Quality

Peter,

See my responses below.

Thanks,

Alex

Alexis North, Environmental Scientist
Enforcement and Compliance Assurance Division
EPA Region 8
1595 Wynkoop Street (8ENF-AT)
Denver, CO 80202-1129
Phone: 303-312-7005
Email: north.alexis@epa.gov

From: Fritz, Peter <peter.fritz@und.edu>
Sent: Wednesday, June 12, 2019 3:09 PM
To: North, Alexis <North.Alexis@epa.gov>
Subject: Re: Western North Dakota Air Quality

Very helpful knowledge, thank you. So, oil and gas companies have been negligent in regards to HAPs or Hazardous Air Pollutants or the Benzene type chemicals that I am concerned about. Okay. A couple of questions;

1) The EPA doesn't have standards for HAPs. but via inspections with infrared cameras, violations were detected---companies were punished----and fixes made. Has Slawson completed the required fixes yet?

The term of the Slawson CD is through 2021. EPA and ND found emissions from the storage tanks were not making it to the control device in violation of State regs on state lands and FBIR regs on the Reservation, which resulted in the CD. Those emissions are made up of methane, volatile organic compounds (VOCs) and a small subset of VOCs are considered HAPs.

2) How often are oil and gas site checked on, especially with infrared technology? Mr. Semerad says that there is a shortage of regulators in the state.

EPA does not discuss inspection planning or any active enforcement matters.

3) As an expert, would you warn Western North Dakota citizens against possibly harmful air pollutants in the region? I have a 3 year old son.

North Dakota air monitors show attainment for all the Clean Air Act ambient standards. EPA designed those standards in order to protected human health.

4) Why is North Dakota commonly considered the "wild west" in regards to all of the drilling?

This goes outside of my expertise.

5) As a citizen, how can I help the DEQ and EPA find HAPs violators?

Citizen science covers a suite of innovative tools to enable the public to apply their curiosity and contribute their talents to science and technology. Citizen scientists can provide information that would not otherwise be available due to time, geographic, or resource constraints. Learn about EPA work in citizen science and environmental citizen science projects (click here).

Thank you,

From: North, Alexis <North.Alexis@epa.gov>
Sent: Wednesday, June 12, 2019 2:46:19 PM
To: Fritz, Peter
Subject: RE: Western North Dakota Air Quality

Peter,

See my responses to each question in yesterday's email to me below. Additionally, please consider my #1 response below as a response to your 6/4/2019 request to our R8 Information Center.

Thanks,

Alex

Alexis North, Environmental Scientist
Enforcement and Compliance Assurance Division
EPA Region 8
1595 Wynkoop Street (8ENF-AT)
Denver, CO 80202-1129
Phone: 303-312-7005
Email: north.alexis@epa.gov

From: Fritz, Peter <peter.fritz@und.edu>
Sent: Tuesday, June 11, 2019 1:36 PM
To: North, Alexis <North.Alexis@epa.gov>
Subject: Re: Western North Dakota Air Quality

Thank you for the reply.

My preference is email, if possible.

Thank you,

From: North, Alexis <North.Alexis@epa.gov>
Sent: Tuesday, June 11, 2019 1:28:23 PM
To: Fritz, Peter
Subject: RE: Western North Dakota Air Quality

Hi Peter,

Thanks for your interest and email.

I have been in contact with Jim regarding his response to you. We work pretty closely with North Dakota on a number of Clean Air Act matters.

You've got a lot to discuss in your email, would you be willing to talk? There is a lot to unpack here that might do better in a phone conversation.

Feel free to give me a call at 303 312 7005 or respond with a good number for you and I'll give you a call.

Thanks,

Alex

Alexis North, Environmental Scientist
Enforcement and Compliance Assurance Division
EPA Region 8
1595 Wynkoop Street (8ENF-AT)
Denver, CO 80202-1129
Phone: 303-312-7005
Email: north.alexis@epa.gov

From: Fritz, Peter <peter.fritz@und.edu>
Sent: Tuesday, June 11, 2019 12:54 PM
To: North, Alexis <North.Alexis@epa.gov>
Subject: Western North Dakota Air Quality

Alexis North,

Recently, I have become concerned about air quality in Western North Dakota, particularly in Stark County. I have had many email conversations with Mr. Jim Semerad from the ND Department of Air Quality. Recently,

he answered a series of questions for me, where he cited the EPA. I would like to confirm these answers with you. The original Questions and Answers are located further down in this email. Here are my concerns:

1. Mr. Semerad and the DEQ like to lump Methane, Benzene and Formaldehyde with Ozone 3 and ambient air quality. My research tells me that these are outside threats around oil and gas production. Therefore, they should be monitored independently/separately. In other words, I am okay with the Ozone 3 (ambient air) in Western North Dakota. However, I am very concerned about Methane, Benzene and Formaldehyde levels. Should I be? Shouldn't the air for these chemicals be tested and then the results given to the public?

   Background: EPA (via the Clean Air Act) does not have an ambient standard for Benzene or Methane, the only ambient (normal, background air) standards EPA has authority over in your listed pollutants is Ozone (click here for website). North Dakota air monitors show attainment for Ozone (click here for website).

   Short Answer to your question of testing: No, because EPA does NOT have Clean Air Act (CAA) authority to regulate the ambient concentrations of Benzene, Methane or Formaldehyde. Thus, we don't have any ambient testing authority or standards by which to measure readings we would get.

   Longer Answer: EPA DOES have CAA authority to regulate individual sources of those pollutants. We have State regulations (North Dakota Administrative Code click here) on state land, the Fort Berthold Federal Implementation Plan (FBIR FIP) on the FBIR regulating Volatile Organic Compounds (VOCs). We also have federal regulations, like the New Source Performance Standards for oil and gas well sites (NSPS OOOOa depending on applicability thresholds) regulating methane and/or National Emission Standards for Hazardous Air Pollutants (NESHAPs) for engines regulating Formaldehyde on both State and Reservation. The NSPS and NESHAPs can require testing at the source for compliance, work practices, record keeping, reporting etc with emissions limits. I know this is a lot of information, but if you really want to dig into the federal regulations that regulate methane and can apply to oil and gas wells, visit the NSPS OOOOa information website (click here).

2. Mr. Semerad talks about an EPA QAQPS team that came to Western North Dakota in 2018. According to him, the region's air quality was deemed safe. Can I have these results with interpretation? Also, Western North Dakota is widely and commonly referred to as the "wild west"of oil and gas production due to the lack of regulation and oversight. My research also tells me that oil and gas companies will be negligent, if allowed. My research also tell me that ND allows negligence. Given this, why doesn't the EPA monitor Western North Dakota on an annual or semi-annual basis?

   Background: Remember, EPA does not have an ambient standard for Benzene or Methane, the only ambient standard we have authority over is Ozone (click here for website). North Dakota air monitors show attainment for Ozone (click here for website).

   Short Answer1: The effort that was undertaken last summer was called GMAP (click here for a FAQ sheet) and while it did yield some data and gave us some concentrations, we found that the data really didn't mean much as we didn't have any standards by which to compare it. More than anything, it did what we were already doing (during our CAA inspections) which was demonstrating when oil and water storage tanks were not complying with the State Regs or the FBIR FIP requirements of emissions control. If you are interested in obtaining this particular data, please submit an FOIAonline request (click here) for the 2018 GMAP Campaign in North Dakota and on the FBIR.

Short Answer2: While we don't monitor for ambient concentrations, we do accompany the state when they perform their routine CAA inspections at well sites for compliance with state regs as well as any applicable federal regulations (NSPS OOOOa for example, if it applies). We also conduct CAA inspections on the FBIR with the MHA Nation to determine compliance with the FBIR FIP and any applicable federal regulations that apply (like NSPS OOOOa or NESHAP for engines).

Short Answer3: Both EPA and North Dakota have been settling violations with companies for about the last 3 years. XTO and Slawson settlements with EPA yielded great improvements to these companies' O&M programs as well as increased company led inspections using an infrared camera. Pleases see a couple of examples of EPA settlements for XTO (here) and Slawson (here).

3. Mr. Semerad interpreted this Oil and Gas Threat Map located here: http://www.catf.us/wp-content/uploads/2017/02/CATF_FactSheet_HealthEffects_ND.pdf

   Answer: I do agree with Jim's summary of this map. Again, there aren't ambient standards so whatever data (if any) they are using is being measured against an unknown standard. AirNow (https://airnow.gov/) is a reliable, reputable source of air quality information that strongly recommend using.

Do you agree with his interpretation? Why or why not?

Thank you for your time,

1) I monitor Dickinson ambient air quality hourly using Breezometer, Weatherbug and AQI. Consistently it has been above 50 ppb, which is about the same as Bismarck and Fargo. This is obviously suspicious because we are a smaller urban area. Our Ozone doesn't cost me sleep. I am concerned about Methane, Benzene and Formaldehyde concentrations. How do I get these levels tested in Dickinson. Why aren't these levels tested annually to the North and West of me. These counties are in Purple (Threat Radius Map). EPA and various groups continue to study what the "background" concentration is for ozone. Background concentrations are the result of various things including the "Mother Nature" component that I have discussed in earlier emails. In any case, due to the characteristics of ozone, similar numbers across the state are not considered "suspicious". The

reason we added another monitor in the Bakken was to proactively check if problems may exist; we have been pleased that the required pollution control is working. The same pollution control that controls VOCs also works for other pollutants like methane, benzene, etc. Based on our field inspections, and then confirmed by the EPA OAQPS field testing (that I discussed in prior emails), we have seen and are seeing success in those areas as well.

2) When did the inspections take place? From my research oil and gas companies are notoriously negligent, if allowed to be. Also from my research, North Dakota allows them to be. Those inspections took place in June of 2018. ND took advantage of the opportunity to have concentrations measurements by requesting that the OAQPS team spend additional time in the Bakken; they worked long hours (10-12 hour days), 7 day weeks, and supplied extensive maps ahead of the trip to allow for less downtime while they were here. Note that OAQPS remarked that ND was some of the most efficient testing that they've conducted (and they have been to most oil producing states in the country).

3) Doesn't the DEQ want an interpretation of the Threat Map, which is based on EPA numbers? The Threat Map you reference appears to be a map created by Ecowatch where an arbitrary ½-mile radius is drawn around each oil and gas source (oil wells, compressor stations, etc.) without regard to facility specifications, emissions, etc. This is then referred to by Ecowatch as a "health threat radius" (a term created by Ecowatch). This is a reasonable approach to determine where problems may possibly exist. The document states/confirms that potential is used in determining the "health threat radius". Therefore, this kind of document should only be used as a very first step to determine where problems may exist. Then, further studies like detailed/specific paper evaluations, review of ambient data, field inspections, and the OAQPS field measurements are used to determine if problems actually exist. Our findings have shown that we continue to achieve ambient air quality attainment, which is great news. Further, in the past several years, we have completed more compliance inspections to ensure that pollution control equipment is working as designed. However, the number of wells (and the potential of emissions) has justified increased inspectors being hired and even more inspections planned (I've pointed out in past emails that challenges still exist). We will use these resources to continue to monitor oil and gas operations, to minimize emissions, and to protect air quality in North Dakota.

Thank you,