

Environmental Permitting in Ohio

July 19, 2023

- Bob Hodanbosi, Chief
- Division of Air Pollution Control
- Ohio EPA



Topics to Cover

- Federal Actions
 - Proposed GHG restrictions for power plants
 - Proposed restrictions on methane from oil and gas
 - U.S. promulgation of Transport Rule
- Ozone NAAQS update
- Proposed PM2.5 NAAQS
- Startup, Shutdown and Malfunction SIP Call Update
- Canadian Wildfire Impacts
- Permitting Update



Proposed GHG Restrictions from Power Plants

- U.S. EPA has proposed revisions of the New Source Performance Standards for power plants to include emissions of GHGs.
- Will require carbon capture and control/sequestration (CCS) of CO₂ or co-firing with hydrogen
- CCS is very expensive to install and operate

Proposed GHG Restrictions from Power Plants

- Because CO₂ is a non-criteria pollutant, under 111(d) of the Clean Air Act, states must develop plans to control CO₂ from existing plants.
- U.S. EPA has proposed extended timeframes for the control of existing plants until 2032 or 2040 if plant will shutdown
- Three options:
 - Install CCS
 - Co-fire with Hydrogen
 - Shutdown

Proposed GHG Restrictions from Power Plants

- Co-firing with Hydrogen may be a cost-effective approach, depending on the price of hydrogen
- DOE is supplying billions of dollars to create “Hydrogen Hubs” throughout the country
- However, U.S. EPA is proposing an entirely new regulatory scheme – set limitations on the source of hydrogen. If H₂ is not produced from low GHG sources, not allowed to be credited for compliance.

THE COLORS OF HYDROGEN

GREEN

Hydrogen produced by electrolysis of water, using electricity from renewable sources like wind or solar. Zero CO₂ emissions are produced.

BLUE

Hydrogen produced from fossil fuels (i.e., grey, black, or brown hydrogen) where CO₂ is captured and either stored or repurposed.

GREY

Hydrogen extracted from natural gas using steam-methane reforming. This is the most common form of hydrogen production in the world today.

PURPLE/PINK

Hydrogen produced by electrolysis using nuclear power.

TURQUOISE

Hydrogen produced by thermal splitting of methane (methane pyrolysis). Instead of CO₂, solid carbon is produced.

BROWN/BLACK

Hydrogen extracted from coal using gasification.

YELLOW

Hydrogen produced by electrolysis using grid electricity from various sources (i.e., renewables and fossil fuels).

WHITE

Hydrogen produced as a byproduct of industrial processes. Also refers to hydrogen occurring in its (rare) natural form.



Hydrogen Hubs

- Infrastructure Bill provides \$ 8 Billion dollars to develop 6 to 10 regional “Hydrogen Hubs” in country to support the creation of new hydrogen production.
- How much “compliance” hydrogen will be produced is speculation.



Proposed GHG Restrictions from Power Plants

- Will Inflation Reduction Act produce enough renewables to offset fossil fuel shutdowns? Large concern.
- Will there be enough “compliance” hydrogen for co-firing?
- Still in comment stage – Comments are being drafted to raise concerns
- Comments due August 8, 2023

“Methane” Rule Proposal

- Federal Proposal:
 - Methane rule – proposed/ Ohio EPA submitted comments
 - Requires updated controls for new oil and gas wells....
 - Plus, requires states to adopt requirements for existing wells
 - Over 50,000 wells in Ohio –new monitoring and reporting requirements – a huge additional workload for industry including small producers
 - Large workload for Ohio EPA
 - Expect promulgation sometime later this year.



Ozone Background/Refresher

- Ozone is formed from precursor emissions of nitrogen oxides (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight
- 2015 ozone standard
 - Lowered to 70 ppb
 - Based on a 3-year average of annual 4th high values (called “design value”)
- Ozone season is March 1 to October 31
- In recent years, exceedances began in mid-April or later



Ozone Background/Refresher

- Columbus, Cincinnati and Cleveland were initially designated marginal nonattainment
- Required to meet standard by August 3, 2021 (called “attainment date”)
 - 2020 was last full ozone season (*March 1 to October 31*) before attainment date
- Columbus and Cincinnati were redesignated to attainment
- Cleveland was bumped up to moderate nonattainment November 2022



“Mandatory” Moderate Bump-up Requirements

- Triggered additional mandatory requirements under Clean Air Act (CAA):
 - NOx and VOC Reasonably Available Control Technology (RACT)
 - Revised OAC Chapters 3745-110 NOx RACT, 3745-21 VOC RACT
 - Emissions Inspection and Maintenance (I/M) Program (i.e. E-Check) – in operation
 - Additional challenges permitting new and modified sources
 - NSR offset ratio 1.15:1
 - Baseline year reset



“Bump-up” Timeline

- Attainment date for marginal areas – August 3, 2021
- Cleveland area missed attainment
- Bumped up to moderate – November 7, 2022
- Clean Air Act only allows three years for next attainment date for moderate ozone nonattainment areas – August 3, 2024
- But, U.S. will not split ozone season nor extend to the end of 2024, so 2023 is last full year of the ozone season to attain the standard for moderate nonattainment areas
- Next on the staircase chart is serious ozone nonattainment



Overview of CAA Ozone Nonattainment Area Planning & Control Requirements by Classification



		NSR Offset Ratio	Major Source Threshold	
EXTREME (20 years to attain)	TRAFFIC CONGESTION CONTROLS (if appropriate)	1.5 : 1 Extreme	10 tpy	
	CLEAN FUELS REQUIREMENT FOR BOILERS			
SEVERE (15/17 years to attain)	PENALTY FEE PROGRAM FOR MAJOR SOURCES	1.3 : 1 Severe	25 tpy	
	VMT GROWTH DEMONSTRATION (& TCMS if needed)			
SERIOUS (9 years to attain)	VMT REPORTING	1.2 : 1 Serious	50 tpy	
	NSR REQUIREMENTS FOR EXISTING SOURCE MOOS			
	CLEAN FUELS PROGRAM OR SUBSTITUTE MEASURE FOR LARGER POP. AREAS			
	MODELED DEMO OF ATTAINMENT			MILESTONE DEMONSTRATIONS and CONTINGENCY MEASURES FOR RFP
	3% ANNUAL RFP UNTIL ATTAINMENT			ENHANCED I/M for larger population areas
	CONTINGENCY MEASURES FOR FAILURE TO ATTAIN			ENHANCED MONITORING PLAN
	Stage-II Gasoline Vapor Recovery			BASIC VEHICLE I/M for larger population areas
MODERATE (6 years to attain)	15% VOC ROP or 15% VOC/NOx RFP (OVER 6 YEARS)	1.15 : 1 Moderate	100 tpy	
	VOC/NOx RACT for MAJOR/CTG SOURCES			ATTAINMENT DEMONSTRATION
	NONATTAINMENT NEW SOURCE REVIEW PROGRAM			EMISSIONS STATEMENTS
MARGINAL (3 years to attain)	BASELINE EMISSIONS INVENTORY (EI)	1.1 : 1 Marginal	100 tpy	
	PERIODIC EMISSIONS INVENTORY UPDATES			

NOTE: Transportation and General Conformity apply in all ozone nonattainment areas.



Cleveland Ozone Outlook (*as of 7/6/23)

To get a 1-year extension, all monitors must be at 70 ppb or lower for the 4th high for 2023

Site Name	Site Id	County	2020 4th High	2021 4th high	2022 4 th high	2023 4th high needed to violate 2015 standard	2023 4 th high to date	2020-2023 DV to date
District 6	39-035-0034	Cuyahoga	74	70	73	70	71	71
GT Craig NCore	39-035-0060	Cuyahoga	66	59	61	93	65	61
Berea BOE	39-035-0064	Cuyahoga	66	69	55	79	75	69
Mayfield	39-035-5002	Cuyahoga	68	68	65	80	73	68
Notre Dame	39-055-0004	Geauga	65	67	64	82	65	65
Eastlake	39-085-0003	Lake	75	72	76	65	72	73
Painesville	39-085-0007	Lake	68	63	62	88	73	66
Sheffield	39-093-0018	Lorain	59	59	63	91	64	62
Chippewa	39-103-0004	Medina	64	65	67	81	72	68
Lake Rockwell	39-133-1001	Portage	63	67	71	75	70	69
North High	39-153-0026	Summit	62	66	69	78	71	68



“Serious” Ozone Nonattainment

- Large ramifications on permitting
 - Major Source Threshold reduced to 50 TPY
 - Title V permits needed for minor sources with greater than 50 TPY actual emissions
 - All synthetic minor permits with greater than 50 TPY will need to be reviewed/revised if facility emits less than 50 TPY
 - Also – Major new source review thresholds will be lowered

“Serious” Ozone Nonattainment

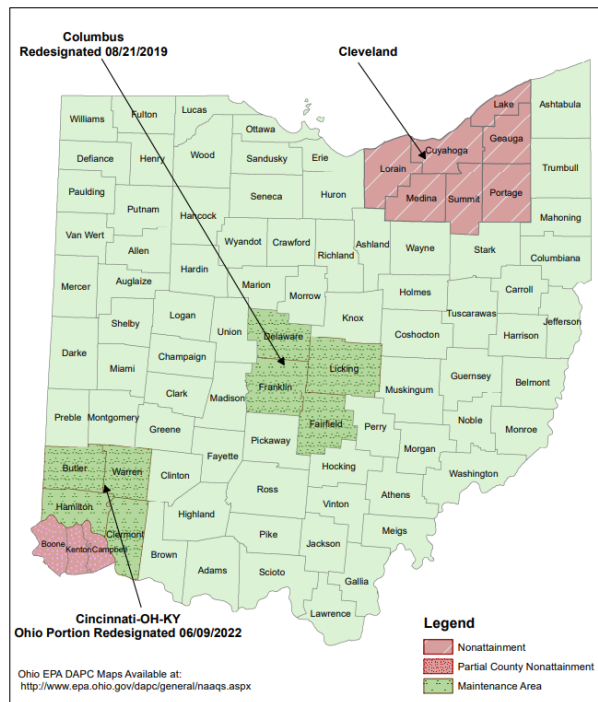
08/03/24	Attainment date for moderate nonattainment
2/3/25	Finding of failure to attain and bump-up (due w/in 6 mo)
1/1/26	Attainment demonstration due
1/1/26	Implementation of control measures
2026 ozone season	Last season before serious attainment date
8/3/27 (cannot be extended)	Serious attainment date

2015 Ozone Standard

Implementation Timeline

- 8-hour standard – 0.70 ppm (avg. of 4th high over 3-ys)
- US EPA finalized non-attainment areas effective August 3, 2018
 - Cleveland bumped up to moderate Nov 2022
- Columbus – Redesignated to attainment 2019
- Cincinnati – Redesignated to attainment June 2022

Ohio 2015 Eight-Hour Ozone (0.070 ppm)
Nonattainment Areas
Effective 08/03/2018



Proposed Changes to PM2.5 NAAQS

- Federal Proposal:
 - New PM2.5 standard – Proposal issued for a revised standard of between 9.0 and 10.0 ug/m³
 - Depending on final selection of standard, there will be additional PM2.5 nonattainment areas in Ohio



PM2.5 Data - Statewide

PM25-Annual Yearly and Design Value (ug/m3)											
SITEID	County	2018	2019	2020	2021	2022	2018-2020 DV	2019-2021 DV	2020-2022 DV (all)	2020-2022 DV (valid only)	
39-003-0009	Allen	8.32	7.44	5.37	6.9	7.1	7.1	6.6	6.4	6.4	
39-009-0003	Athens	6.67	6.38	6.11	6.2	5.5	6.4	6.2	5.9	5.9	
39-013-0006	Belmont	7.73	8.66	7.12	8.1	6.7	7.8	8.0	9.0	none	11.0
39-017-0022	Butler	10.17	10.79	9.76	11.0	9.5	10.2	10.5	10.1	none	10.0
39-023-0005	Clark	9.61	9.78	7.43	9.6	8.3	8.9	9.0	8.4	8.4	9.0
39-035-0065	Cuyahoga	11.08	10.81	10.45	12.6	11.0	10.8	11.3	11.4	9.3	8.0
39-049-0038	Franklin	9.06	9.69	7.75	9.9	8.7	8.8	9.1	8.8	8.8	
39-057-0005	Greene	8.14	NA	NA	NA	NA	8.1	NA	NA	NA	
39-061-0048	Hamilton	12.41	11.93	10.35	10.8	9.7	11.6	11.0	10.5	10.5	
39-067-0004	Harrison	7.28	NA	NA	NA	NA	7.3	NA	7.1	none	
39-081-0017	Jefferson	8.65	8.99	8.87	11.7	9.8	8.8	9.8	10.1	none	
39-085-0007	Lake	7.03	6.52	6.19	6.9	6.2	6.7	6.5	6.4	6.4	
39-087-0012	Lawrence	6.41	6.74	7.67	8.7	7.8	6.9	7.7	8.1	8.1	
39-093-3002	Lorain	7.78	7.18	6.68	7.6	NA	7.2	7.2	7.2	none	
39-095-1003	Lucas	8.9	8.84	9.53	8.9	8.7	9.1	9.1	9.1	none	
39-099-0014	Mahoning	7.83	8.32	7.85	8.8	NA	8.0	8.3	8.4	none	
39-103-0004	Medina	7.46	8.06	6.47	6.9	6.3	7.3	7.1	6.6	6.6	
39-113-0038	Montgomery	8.28	9.39	9.64	9.9	8.7	9.1	9.6	9.4	9.4	
39-133-0002	Portage	7.27	7.64	6.9	7.3	6.4	7.3	7.3	6.9	none	
39-135-1001	Preble	8.68	8.28	7.43	8.8	8.0	8.1	8.2	8.1	8.1	
39-145-0013	Scioto	7.06	6.74	6.57	7.1	6.8	6.8	6.8	7.0	none	
39-151-0020	Stark	8.84	9.56	8.68	10.2	8.7	9.0	9.5	9.2	9.2	
39-153-0017	Summit	8.8	8.74	8.82	8.6	7.9	8.8	8.7	8.4	8.4	
39-155-0014	Trumbull	7.73	7.25	6.22	8.7	7.3	7.1	7.4	7.4	7.4	



If Standard lowered

Canadian Wildfire Impacts



Exceptional Event?

- Unusual to have large wildfires in Canada this early in the year
- Low pressure in eastern U.S./Canada was stationary bringing down northerly winds for an extended period of time
- Ohio does not have any control of source of emissions
- U.S. EPA allows for exclusion of measured air quality values for Exceptional Events.....but



Exceptional Event?

- Not that easy.....
- U.S. EPA will only consider an Exceptional Event if it has “regulatory significance”if it does not change areas from attainment to nonattainment – not interested in reviewing
- A significant effort goes into the demonstration.....Arizona has complained about the amount of time/money to document a dust storm causing an exceedance....when it has been on the local news.
- Will be working with other states to evaluate situation and whether to assemble an Exceptional Event package



Startup, Shutdown & Malfunction SIP Call

- State Level Actions:
 - Startup, Shutdown, and Malfunction Rule – U.S. EPA started “sanctions clock” - deadline was July 2023.
 - Needed to complete rules and submit approvable plan to U.S. EPA
 - Region V acknowledge receipt of material – stopped sanctions clock
 - Waiting for U.S. EPA proposal – at HQ undergoing review



“Good Neighbor” Transport SIP Background

- CAA section 110(a)(2)(D)(i)(I) requires states to prohibit emissions that will contribute significantly to nonattainment or interfere with maintenance in any other state with respect to any primary or secondary National Ambient Air Quality Standard (NAAQS)
 - Called the “good neighbor” or “interstate transport” provision
- On February 22, 2022, U.S. EPA proposed to disapprove Ohio’s good neighbor State Implementation Plan (SIP)
 - Consent Decrees have established deadlines for U.S. EPA to act on SIPs and propose a FIP
- U.S. EPA indicates the FIP would fully resolve Ohio’s outstanding good neighbor obligations



“Good Neighbor” Transport SIP Background

- U.S. EPA issued Federal Implementation Plan (FIP)
- Affects the following industrial groups:
 - Pipeline transport of natural gas
 - Cement and concrete product manufacturing
 - Iron and steel mills, plus ferroalloy manufacturing
 - Metal ore mining
 - Basic chemical manufacturing
 - Petroleum and coal products manufacturing
 - Pulp, paper and paperboard mills
 - Solid waste combustion and incinerators



“Good Neighbor” Transport SIP Background

- We will be reaching out to affected facilities to explain requirements – close to having the list of affected sources finalized
- Approximately 380 emission units in Ohio that are covered by the rule.



District Office Workload

	First issue PTIO, PTI & Chapt. 31 mods: Total received 2022	PTIO Workload (2/23)	Title V facilities	Title V renewals backlog	Title V renewals	PTIO renewal backlog
CDO	51	22	52	1	4	9
NEDO	66	22	84	0	5	7
NWDO	62	25	131	1	13	7
SEDO	99	66	80	15	2	99
All DO/LAA	460	207	532	29		168

Permitting

- Just under 200 construction permits in queue versus goal of 200
- Disproportionate number of permits in SEDO – both PTIOs and Title V.
- Have requested that a number of SEDO permits be distributed to other districts for review/processing to minimize the delay of permit issuance.

Questions?

Robert Hodanbosi, P.E.
Chief, Division of Air Pollution
Control

Ohio EPA

50 West Town St. Suite 700

Columbus, Ohio 43215

614-644-2270

robert.hodanbosi@epa.ohio.gov





Proposed Federal Air Regulations & Enforcement Trends

Sherry L. Hesselbein, Deputy General Counsel

July 19, 2023



Biden Administration Regulatory Review

- Significant air regulations under review

Environmental Enforcement

- National Enforcement and Compliance Initiatives
- Enforcement Alert – stationary engines
- Case example – BP Whiting refinery

Air Regulations Under Review



The Spring 2023 Unified Agenda lists 71 regulations that the U.S. EPA Office of Air and Radiation is either reviewing or has proposed

RULE	STATUS
Ozone NAAQS (currently at 70 ppb)	EPA is reconsidering the decision to retain the 2015 standards and had planned to complete reconsideration by end of 2023. Now proposal scheduled April 2024, with no date for final rule.
PM NAAQS (currently at 12.0 µg/m ³)	Proposed rule to lower the limit to within the range of 9.0 to 10.0 µg/m ³ issued in January 2023. Final rule scheduled for October 2023.
Review of the Secondary NAAQS for Ecological Effects of NO _x , SO _x , and PM	Announced review of the planning document in August 2018. Notice of proposed rulemaking scheduled for March 2024.
NSPS for GHG Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired EGUs	Proposed rule issued in May 2023 proposes standards based on carbon capture and sequestration and low-GHG hydrogen co-firing. Final rule scheduled for April 2024.
Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles	Proposed rule issued May 2023. EPA estimates 70% of model year 2032 vehicles will be battery electric vehicles.* Final rule scheduled for March 2024.

*EPA Fact Sheet <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1017626.pdf>, downloaded on July 3, 2023

Air Regulations Under Review



RULE	STATUS
MACT Reclassification of Major Sources to Area Sources	Proposal date moved from June 2022 to September 2023.
PSD and NNSR: Reconsideration of Fugitive Emissions Rule	Proposed rule would require fugitives be counted in all new and modified major source determinations. Final rule scheduled for November 2023.
Clarifying the Scope of Applicable Requirements under Permit Programs	Clarify definition of “applicable requirement,” including extent to which RMP general duty clause may be implemented in Title V permitting process. Proposal date pushed back to January 2024.
PSD and NNSR: Regulations related to Project Emissions Accounting	Original rule published in November 2020. This is a discretionary rulemaking to address issues raised in January 2021 petition for reconsideration. Proposal scheduled for December 2023.
Revisions to Minor NSR Permit Program Requirements for SIPs	Federal rules for the minor source permitting requirements in SIPs have not changed for more than 40 years. Proposal date pushed back to December 2023.
Removal of Title V Emergency Affirmative Defense Provisions from Permit Programs	Proposed in April 2022 to remove the emergency affirmative defense provisions from the Title V implementing regulations. Final rule was scheduled for June 2023.



- **Air**
 - Creating Cleaner Air for Communities by Reducing Excess Emissions of Harmful Pollutants
 - Addresses VOC and HAP exceedances (statistics on next slide)
 - Enforcement Alerts, including November 2020 reminder about improper use of AP-42 emission factors in permitting
 - Stopping Aftermarket Defeat Devices for Vehicles and Engines
 - Prevent impermissible NOx and PM emissions from vehicles; resolved 24 cases in FY2022
- **Hazardous Chemicals**
 - Reducing Hazardous Air Emissions from Hazardous Waste Facilities
 - OECA's goal is to ensure that all RCRA inspections at TSDs and LQGs assess the applicability of the hazardous waste air emission standards for each facility
 - Reducing Risks of Accidental Releases at Industrial and Chemical Facilities
 - The goal of this initiative is to increase compliance with risk management plan and general duty clause requirements
 - Concluded 2 judicial actions and 113 administrative penalty actions in FY2022



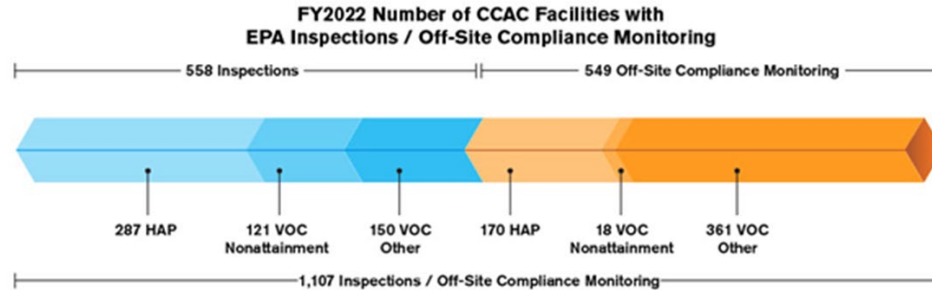
- **Remove the following two initiatives**

- Stopping Aftermarket Defeat Devices for Vehicles and Engines
- Reducing Toxic Air Emissions from Hazardous Waste Facilities

- **Add the following two initiatives**

- Mitigating Climate Change
 - This initiative would seek to combat climate change through a focus on:
 - Reducing non-compliance with the illegal import, production, use, and sale of hydrofluorocarbons (HFCs) pursuant to the American Innovation and Manufacturing Act of 2020 (AIM Act);
 - Excess emissions from sources within certain industrial sectors, including municipal solid waste landfills and oil and natural gas production facilities;
 - Non-compliance with other requirements such as mobile source, fuels, and methane regulations
- Addressing PFAS Contamination
 - This initiative initially would focus on identifying the extent of PFAS exposures that pose a threat to human health and the environment and pursuing responsible parties for those exposures

Creating Cleaner Air for Communities (CCAC) Facility Enforcement



FY2022 Number of CCAC Facilities with EPA Concluded Enforcement Actions



HAP: Sources of hazardous air pollutants (HAPs) having significant impact on air quality and health in communities.

VOC Nonattainment: Significant sources of volatile organic compounds (VOCs) having a substantial impact on air quality and located within an area designated in ozone nonattainment with the National Ambient Air Quality Standards (NAAQS) or in a nonattainment area based upon the Ozone Transport Region.

VOC Other: Significant sources of VOCs that may affect an area's attainment of the NAAQS and/or may adversely affect vulnerable populations.

<https://www.epa.gov/enforcement/national-compliance-initiative-creating-cleaner-air-communities-reducing-excess>

EPA Enforcement Alert

Stationary Engines



● Purpose of alert

- Inform the regulated community that EPA has found numerous violations of the Clean Air Act requirements related to stationary engines
- The most serious violations include the failure to retrofit existing engines with necessary pollution controls
- Participating in demand response programs can void the emergency status of engines

● Enforcement example

- A&L Iron and Metal Company – Gaylord, MI (2019)
 - A&L owns and operates a metal shredding facility in Gaylord, Michigan
 - The metal shredder is powered by a 3,506-horsepower diesel engine, which EPA found to be in violation of Subpart ZZZZ
 - Under a settlement agreement with EPA, A&L retrofitted the engine with a diesel oxidation catalyst and a diesel particulate filter, conducted the required testing and monitoring, and submitted the required reports

Environmental Enforcement

Case Example – BP Whiting Refinery



- DOJ / EPA executed a consent decree with BP Products North America to settle violations at its Whiting, IN refinery
 - Requires capital investments estimated at \$197 million
 - Total penalty of \$40 million – the largest CAA penalty for stationary source emissions
- Alleged violations involve NSPS Subpart QQQ, NESHAP Subpart FF (BWON) and their general provisions in Subparts A
- One area of concern was leak repair:
 - BP used caulking to seal gaps, cracks and leaks and failed to perform preventative maintenance
 - BP used wooden plugs to seal drain cups
- Community Engagement
 - Supplemental Environmental Project - Community engagement committees will advise on how best to spend the \$5 million fund to replace diesel vehicles owned by local governments and local non-profits
 - Community Air Monitoring – BP must install ten new monitoring stations in the community that will monitor benzene, toluene and xylene and post the results at a publicly available website

MEC 32nd Annual Conference on Environmental Permitting

Major Air Permitting & Compliance Developments

July 19, 2023

Kirk Lowery, Managing Director

klowery@trinityconsultants.com



trinityconsultants.com

Ozone NAAQS

- ▶ In December 2020, EPA finalized rulemaking to retain the previous ozone primary NAAQS, which was initially set in 2015
 - The standard is 70 ppb based on the annual fourth-highest daily maximum 8-hr average concentration averaged across three years
- ▶ In October 2021, EPA announced a decision to reconsider the 2020 ozone NAAQS final rulemaking based on the existing scientific record
 - In support of this reconsideration, EPA updated its Policy Assessment (PA), which is intended to “bridge the gap” between scientific and technical information

2023 Policy Assessment and CASAC Review

- ▶ EPA released the *Policy Assessment for Reconsideration of the Ozone NAAQS External Review Draft Version 2* in March 2023
 - A public comment period was held that ran through April 2023 on this document
 - In the draft PA, EPA recommended retaining the current magnitude and form of the ozone primary NAAQS
- ▶ On June 9, 2023, the Clean Air Scientific Advisory Committee (CASAC) submitted a letter to EPA with their comments on the Draft Policy Assessment

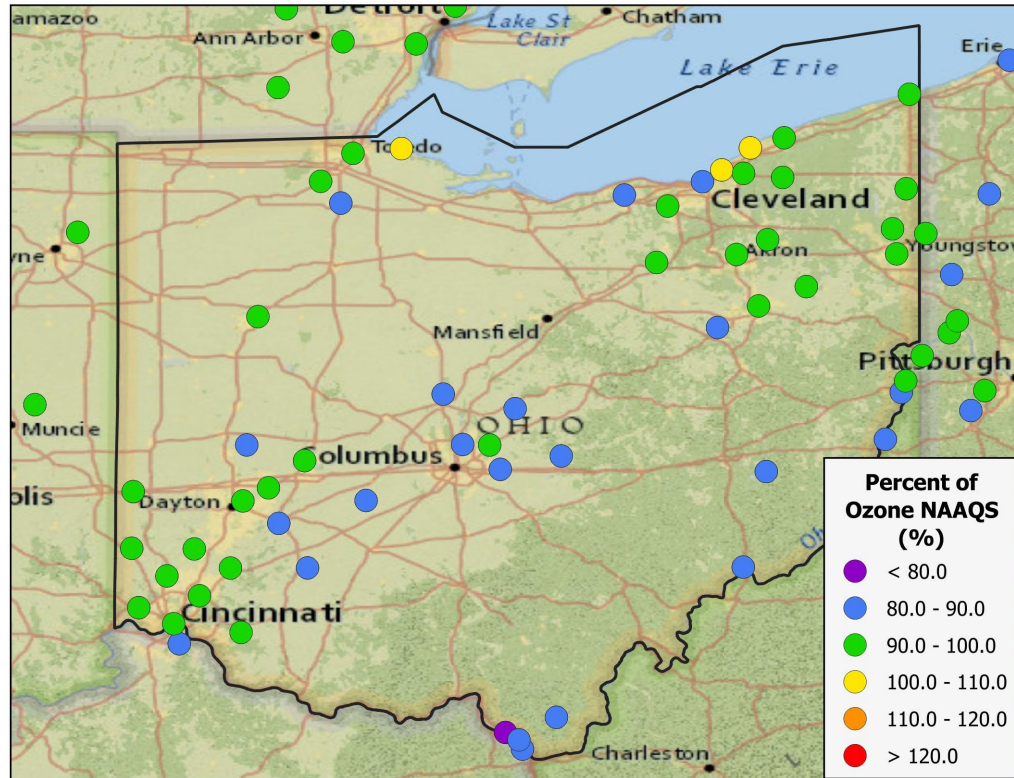
CASAC Recommendations

- ▶ Provide additional detail on how CASAC's comments on the 2020 Ozone Integrated Science Assessment (ISA) were factored into the Policy Assessment
- ▶ Recommend year-round ozone monitoring nationwide
- ▶ All CASAC members (except one) are concerned that the approach taken in the Policy Assessment may substantially underestimate public health risk
- ▶ Inadequate evidence is available to support changes to the averaging time or form of the primary ozone NAAQS at this time

CASAC Recommendations

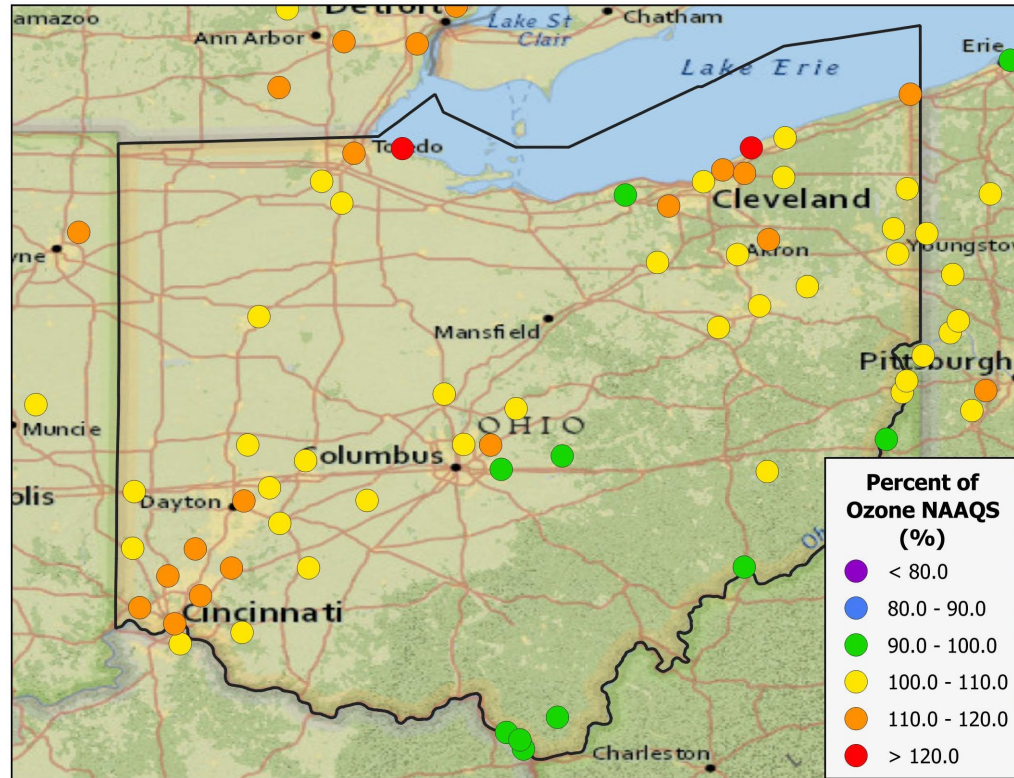
- ▶ All CASAC members (except one) conclude that the scientific evidence indicates that the level of the current primary NAAQS is not sufficiently protective of public health
- ▶ All CASAC members (except one) recommend a revised NAAQS level in the range of **55 to 60 ppb** to be protective of public health
- ▶ CASAC also recommends tightening of the secondary NAAQS for ozone

Review of Ohio Ozone Monitors – 70 ppb NAAQS



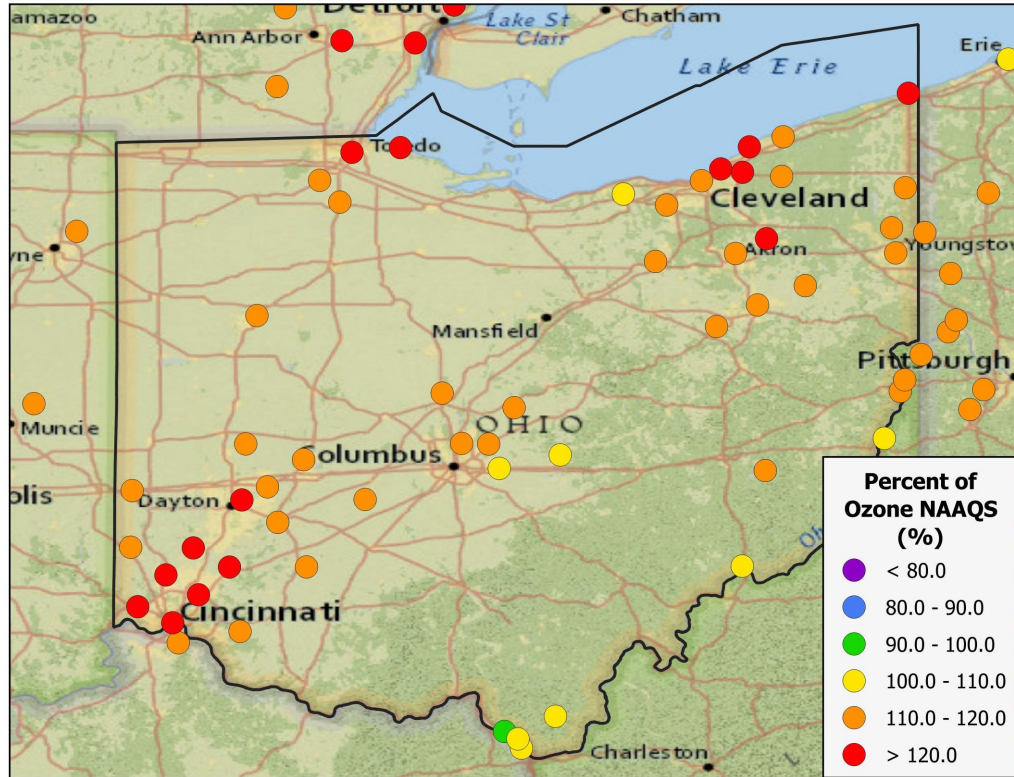
- ▶ Exceedances in Toledo and Cleveland based on 2020-2022 data

Review of Ohio Ozone Monitors – 60 ppb NAAQS



- ▶ Exceedances in Toledo, Cleveland, Columbus, and Cincinnati based on 2020-2022 data

Review of Ohio Ozone Monitors – 55 ppb NAAQS



- ▶ Exceedances at nearly all monitors in Ohio based on 2020-2022 data

Summary

- ▶ EPA draft Policy Assessment recommends retaining current standard of 70 ppb
- ▶ CASAC recommends reducing the magnitude of the standard to 55 to 60 ppb
- ▶ Final EPA determinations on NAAQS do not always follow CASAC recommendations
- ▶ Additional developments in EPA's reconsideration of the ozone NAAQS should be followed closely
- ▶ A reduced ozone NAAQS will have major impacts on attainment for Ohio

Questions?





Contact Us

Kirk Lowery

klowery@trinityconsultants.com

614.433.0733

trinityconsultants.com

800.229.6500

Enforcement Alert

Publication no. EPA 310-F-22-001

August 2022

Stationary Engines Cause Excess Emissions in Communities Across the Country

Purpose

This Enforcement Alert informs owners and operators of stationary engines that EPA has been finding numerous violations of the applicable Clean Air Act requirements. The Agency has taken enforcement actions and assessed substantial penalties for facilities that have failed to comply. Stationary engines are used in applications such as generating electricity, providing primary power, and powering various equipment such as pumps and compressors. They are also used to supply power in the event of emergencies such as fire or flood. Stationary engines combust fuel oil or natural gas and have the potential to emit pollutants that negatively impact air quality.

Public Health Concerns

Noncomplying stationary engines potentially emit excess air pollutants. The key pollutants from stationary engines include volatile organic compounds (VOC), carbon monoxide (CO), nitrogen oxide (NO_x), particulate matter (PM), formaldehyde, acetaldehyde, acrolein, methanol, and polycyclic aromatic hydrocarbon (PAH). The health effects associated with exposure to these pollutants include a range of respiratory issues, especially asthma among children and seniors. These “demand response engines,” which operate in the summer to offset electricity demand, further exacerbate poor air quality, including the formation of ground-level ozone. Many of these demand response engines are located in communities already overburdened by pollution, adding to air quality concerns.



Non-Compliance Concerns

EPA investigations have uncovered numerous violations. The most serious violations include the failure to retrofit existing engines with necessary pollution controls. Depending on the age and size of the engine, and the type of source at which it is located, pollution controls may be required. In addition, owners of emergency stationary engines sometimes participate in demand response programs run by electricity system operators, thus voiding the emergency status of these engines. EPA has also found that some facilities have installed pollution controls, but without conducting testing in accordance with EPA requirements.

Recent Cases

EPA has taken numerous enforcement actions against owners and operators of stationary engines used for primary power, directing them to take action to comply and assessing penalties for violations. By compelling these facilities to comply (e.g., installing air pollution controls, converting to grid power, or purchasing new, cleaner engines), these enforcement actions have reduced emissions of carbon monoxide, hazardous air pollutants, and particulates.

Examples of Some Recent Cases include:

Green Mountain Power Corporation – Vergennes, VT (2021)

Green Mountain Power is an electric utility that operates two diesel engines, both 2,737 horsepower. EPA found these engines to be in violation of Subpart ZZZZ as they lacked the proper monitoring equipment and Green Mountain Power had not submitted the required reports and plans. Green Mountain Power addressed these issues in accordance with EPA's settlement.

J.K. Merrill & Sons, Inc. – Fort Hall Reservation, ID (2020)

J.K. Merrill operates a sand and gravel plant on the Fort Hall Reservation in Idaho. The facility uses two large diesel engines (of 1,576 and 536 horsepower) to supply electric power to the facility's crushing and wash plant operations. EPA found these engines to be in violation of Subpart ZZZZ. Under a settlement agreement with EPA, J.K. Merrill retrofitted the engines with diesel oxidation catalysts, conducted the required testing and monitoring, and submitted the required reports.

Boro Sand and Stone Corp. – North Attleborough, MA (2020)

Boro is a concrete and stone producer in North Attleborough, Massachusetts, using three diesel engines (of 896, 464, and 464 horsepower) to supply electric power to the facility's wash and recycle plant operations. EPA found these engines to be in violation of Subpart ZZZZ. As a result of EPA's action, Boro has since invested in a new utility line to supply electric grid power to its operations.

A&L Iron and Metal Company – Gaylord, MI (2019)

A&L owns and operates a metal shredding facility in Gaylord, Michigan. The metal shredder is powered by a 3,506-horsepower diesel engine. EPA found this engine to be in violation of Subpart ZZZZ. Under a settlement agreement with EPA, A&L retrofitted the engine with a diesel oxidation catalyst and a diesel particulate filter, conducted the required testing and monitoring, and submitted the required reports.

Highpoint Resources Corporation – Denver, CO (2019)

Highpoint operates the Pelican Lake Compressor Station in the Uinta Basin of Utah, which uses a 760-horsepower engine. EPA and representatives of the Ute Indian Tribe inspected the compressor station and found this engine to be in violation of Subpart JJJJ. During testing, the engine exceeded emission limits for oxides of nitrogen and carbon monoxide. As a result of EPA's action, Highpoint subsequently replaced the catalyst, conducted tuning and retested the engine to demonstrate compliance with the emission limits.

Recommended Actions

To help minimize emissions and achieve compliance, EPA recommends that owners and operators of stationary engines:

- Review the helpful resources about stationary engines on EPA's website available at: <https://www.epa.gov/stationary-engines>. In particular, click "Tools to Help You Comply" and then, based on which regulation may apply to your engine, see the "Regulation Navigation Tool" or "Summary Tables."
- Review the Stationary Engine Regulations
 - Several regulations may apply depending on the age of the engine, the size of the engine, its location, and the type of fuel used. These regulations include:
 - *National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (see 40 CFR Part 63, Subpart ZZZZ);*
 - *New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (see 40 CFR Part 60, Subpart IIII); and*
 - *New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines (see 40 CFR Part 60, Subpart JJJJ).*
- Determine the applicable engine regulations based on the following:
 - The year the engine was manufactured;
 - The engine design (e.g., compression ignition, spark ignition);
 - The capacity of the engine in brake horsepower;
 - The engine fuel type; and
 - The use type (emergency or non-emergency).
- Determine whether the engine has or needs an emissions control system.
- Determine whether the engine has a Certificate of Conformity from the manufacturer.
- Review the regulations for stationary engines paying close attention to the emission and operating limitations as well as recordkeeping and reporting obligations.
- Consider replacing older engines with new, cleaner engines or converting to grid power if it is an option.

DISCLAIMER: This document aims to explain the application of certain EPA regulatory provisions using plain language. Nothing in this Alert revises or replaces any regulatory provisions, any other part of the Code of Federal Regulations, the Federal Register, or the Clean Air Act. Following the recommendations discussed in this Alert does not guarantee compliance with the Clean Air Act, its implementing regulations, and associated state/local requirements. For more information, visit: www.epa.gov/compliance.

Biographical Information

Kirk P. Lowery, P.E., Managing Director, East Region
Trinity Consultants
110 Pulsar Place, Suite 200, Westerville, Ohio 43082
614.433.0733
klowery@trinityconsultants.com

Kirk serves as Managing Director for Trinity's East Region and has over 27 years of environmental experience with a focus in the air quality regulatory arena. Kirk's regulatory expertise includes air permitting (NSR/PSD/Title V), NSPS/NESHAP/MACT compliance, emission inventories, enforcement/litigation support, compliance/due diligence auditing, and state/local air quality regulations. With an in-depth understanding of air regulations and air permitting processes, Kirk helps industrial clients develop and execute strategies for addressing their air permitting requirements associated with capital projects, while optimizing the client's business objectives against regulatory requirements.

As Managing Director, he oversees and has P&L responsibilities for Trinity's East Region consulting operations, which spans from Kentucky through New England. Kirk also leads Trinity's refrigerant and ozone depleting substance (ODS) compliance services team through the execution of compliance audits and the development of compliance management programs driven by 40 CFR 82 and state-specific regulations. Kirk is the primary author for Trinity's refrigerant and ODS regulatory training workshop that is provided across the nation. During his five plus years managing the air quality program for The Boeing Company's Wichita, Kansas facility, Kirk also oversaw the implementation of the ODS compliance program for the facility.

Kirk earned both his MS degree in Environmental Engineering and BS degree in Aeronautical & Aerospace Engineering from Purdue University.

Biographical Information

**Sherry L. Hesselbein, Deputy General Counsel, HESS&PQ Law
Marathon Petroleum Corporation
539 S. Main St., Findlay, OH 45840
shesselbein@marathonpetroleum.com
419-421-4616**

Sherry Hesselbein is Deputy General Counsel, overseeing the Health, Environmental, Safety, Security and Product Quality group in Marathon Petroleum's Legal Department. She joined Marathon in 2010 as the remediation attorney, with an emphasis on RCRA and CERCLA compliance. She then counseled the refining operations organization on environmental compliance and served as the Legal Department's subject matter expert on the Clean Air Act. Sherry has also advised the company on fuels compliance and product quality matters before assuming her role as supervisor of the group. Sherry has held multiple temporary assignments within Marathon including Environmental Supervisor at the Catlettsburg, Kentucky Refinery. Prior to joining Marathon, Sherry was an associate in the Columbus office of Ulmer & Berne LLP practicing in the areas of environmental and construction law and an assistant attorney general with the Ohio Attorney General's Office Environmental Enforcement Section.

Sherry holds a J.D. from The Ohio State University Moritz College of Law and a B.S. in earth, atmospheric and planetary science from the Massachusetts Institute of Technology. She is a member of the Women for Economic and Leadership Development (WELD).

Biographical Information

**Robert F. Hodanbosi, Chief, Division of Air Pollution Control, Ohio EPA
Lazarus Government Center, 50 West Town Street, Suite 700, Columbus, Ohio 43215
(614) 644-3585 Fax: (614) 644-3681 bob.hodanbosi@epa.ohio.gov**

Bob Hodanbosi became chief of the Division of Air Pollution Control (DAPC), Ohio Environmental Protection Agency (Ohio EPA) in September 1992. His current duties include being responsible for the air pollution control program for the state of Ohio and development of the programs needed to comply with the Clean Air Act Amendments. In 2004, Bob was selected to represent state permitting authorities on the Title V Permit Performance Task Force that was formed by the U.S. EPA's Clean Air Act Advisory Committee (CAAAC). Bob has also had the opportunity to testify at U.S. House and Senate committees on Clean Air Act impacts on facilities in Ohio. From May 1987 to September 1992, his position was assistant chief of DAPC and manager of the Air Quality Modeling and Planning Section, DAPC, Ohio EPA. From April 1978 to May 1987, as manager of the Air Quality Modeling and Planning Section, his main duties included: development of the technical support for air pollution control regulations for criteria air pollutants; atmospheric dispersion modeling; air quality designations under Section 107 of the Clean Air Act; development of new source review procedures; Since the 1980's, Bob has represented Ohio EPA on the Ohio Coal Development Office, Technical Advisory Committee. From January 1977 to April 1978, his position was supervisor of the Environmental Assessment Unit, DAPC, Ohio EPA. The main responsibilities of this position involved the supervising of all air quality evaluation and atmospheric dispersion modeling activities for DAPC. From June 1973 to December 1976, he held a position in the Northeast District Office/Engineering Services Section, DAPC, Ohio EPA. The main function of this position involved the engineering review of air pollution permit applications. Bob has lectured extensively on topics relating to the requirements under the Clean Air Act and the controls needed to meet air quality standards. Finally, Bob is a current member of CAAAC through August of 2021.

PROFESSIONAL ASSOCIATIONS

Mr. Hodanbosi is a member of the American Institute of Chemical Engineers and Air & Waste Management Association, and is registered as a Professional Engineer in the states of Ohio and West Virginia. Bob is current President of the Association of Air Pollution Control Agencies.

EDUCATIONAL BACKGROUND

Mr. Hodanbosi received his Master's of Science degree in Chemical Engineering at the Cleveland State University in 1977, and a Bachelor in Chemical Engineering at the Cleveland State University in 1973. In addition, he completed post-graduate courses in fluid mechanics and turbulence at the Ohio State University, 1978 to 1982.

PUBLICATIONS

- Hodanbosi, R.F. and Peters, L.K., "Evaluation of RAM Model for Cleveland, Ohio," Journal of Air Pollution Control, March 1981
- Hodanbosi, R.F. and Bradley, R.L., "Evaluation of RAM Model for Cleveland, Ohio, Part II," Journal of Air Pollution Control, April 1984
- "Research Guidelines for Regional Modeling of Fine Particulates, Acid Deposition and Visibility", U.S. EPA, Office of Research and Development, June 1980, pp. 47-52
- Edgerton, S.A. Czvczwa J.M., Rewch, J.D., Egan, D.A. Koval, P.J., and Hodanbosi, R.F., "Determination of Polychlorination of Dibenzo-p-dioxins and dibenzofurans and Associated Health Risks in Ambient Air in Ohio," Presentation at 81st General Meeting of Air Pollution Control Association, June 1988
- Kelly, T.J., Czvczwa, J.M., Stickel P.R., Sverdrup, G.M., Koval, P.J., and Hodanbosi, R.F., "Atmospheric and Tributary Inputs of Toxic Substance to Lake Erie," J. Great Lakes Res.17(4):504-516, International Association Great Lakes Research, 1991.
- Hays, K., Hodanbosi R., Sloan J., "The National Ambient Air Quality Standards at 50", em, The Magazine for Environmental Managers, A&WMA, December 2020.