



Major Air Permitting & Compliance Developments

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July 17, 2024





Significant Court Decisions

- U.S. Supreme Court overturns *Chevron*
- U.S. Supreme Court stays Good Neighbor Rule
- D.C. Circuit partially vacates 2015 SSM SIP Call

U.S. EPA Enforcement

- National Enforcement and Compliance Initiatives (NECI)
- Enforcement statistics
- Practical advice

“Today, the Court places a tombstone on Chevron
no one can miss.”

- Justice Gorsuch, concurring





- Ronald Reagan was elected to his second term as U.S. President.
- The Soviet Union boycotted the summer Olympics.
- The first music video aired on MTV.
- Wendy's asked, "Where's the Beef?"
- The U.S. Supreme Court issued its decision in *Chevron v. Natural Resources Defense Council*.



In *Chevron*, the U.S. Supreme Court said that courts should defer to an agency's permissible interpretation of a statute so long as Congress had not spoken directly to the precise issue at question.

Chevron deference can be summarized in two steps:

Step 1: Did Congress expressly state its intent in statute or is Congress' intent ambiguous? If the intent is ambiguous, go to Step 2.

Step 2: Is the agency's interpretation of the statute permissible? If yes, then the court defers to the agency's interpretation.



18,000



Loper Bright Enterprises v. Raimondo (Loper Bright)

Courts are required to exercise independent judgment in deciding whether an agency has acted within its statutory authority and may not defer to an agency interpretation simply because a statute is ambiguous.

Best, not permissible interpretation

Respect, not deference



- The *Chevron* doctrine had broad applicability to all federal agencies.
 - Environment, health care, finance, tax...
- 40 years of environmental law developed under the *Chevron* doctrine.
 - Clean Air Act is a lengthy, technical, complex and comprehensive rule that is not frequently revised.
 - Implementation of Clean Air Act has relied on EPA adopting regulations within the statutory framework to address new technologies and policies.
 - But, the court had been limiting *Chevron* deference in recent years.
 - And, some significant decisions were not based on *Chevron* deference. E.g., *Massachusetts v. EPA* (GHG emissions are air pollutants).



- Existing cases that relied on *Chevron* deference are not immediately vacated.
- Judges will have more say in determining whether EPA acted within its statutory authority when issuing rules.
- Decision may lead to less dramatic swings between administrations.
- EPA will continue to justify why its interpretation is the best interpretation.
- Litigants will continue to assert the Major Questions Doctrine.
- Will Congress revise the Administrative Procedures Act?



- National Ambient Air Quality Standards (NAAQS) for particulate matter
 - CAA Section 109: National primary ambient air quality standards...shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health.

- GHG emission standards for motor vehicles (tailpipe rules)
 - CAA Section 201: The Administrator shall by regulation prescribe...in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.



- On June 27, the Supreme Court stayed EPA's enforcement of the Good Neighbor Plan pending litigation.
 - Good Neighbor Plan is a federal plan for controlling ozone emissions in 23 states.
 - Rule has been challenged in the D.C. Circuit Court.
- The Court concluded that the petitioners are likely to prevail on the merits of their claims.
 - EPA failed to reasonably explain the final rule.
 - EPA failed to consider which emissions-control measures maximize cost-effective downwind air-quality improvement if upwind states fall out of the federal plan.



- In 2015, EPA called the State Implementation Plans (SIPs) from 35 states, including Ohio, due to the inclusion of exemptions and defenses for startup, shutdown and malfunction (SSM) periods.
 - EPA determined that emission limitations in SIP provisions cannot contain exemptions for emissions during SSM events.
- Several states and companies challenged EPA's SIP Call.
- In March 2024, the D.C. Circuit Court of Appeals vacated part of the SIP Call and upheld the other part of the SIP Call.
- The various SSM exemptions and defenses found in the SIPs can be bucketed into five types.



- Court vacated the SIP call for the following types:
 - *Automatic exemptions.* SSM emissions are automatically exempted from the emission standards.
 - *Director's discretion exemption.* A state agency official can grant or deny an exemption for SSM emissions. (e.g., Ohio).
 - *Affirmative defenses to liability.* If a federal or state agency files an enforcement action, or a third party files a citizen suit, the source could invoke an affirmative defense to liability if it proved that certain criteria were met.



- Court upheld the SIP call for the following types:
 - *Enforcement discretion provisions.* Only at issue in Tennessee, this provision recognized that a source's SSM emissions would violate applicable emission standards, but the state agency would decline to file an enforcement action.
 - *Affirmative defenses to relief.* A source's SSM emissions would establish liability for violating an emission standard, but it could invoke an affirmative defense to limit or eliminate civil penalties.



Three of six initiatives

● Mitigating Climate Change

- Addresses three contributors to climate change:
 - Methane emissions from oil and gas facilities;
 - Methane emissions from landfills; and
 - The use, importation, and production of hydrofluorocarbons (HFCs).

● Reducing Air Toxics in Overburdened Communities

- Each region focuses on one overburdened community and addresses non-compliance with hazardous air pollutant (HAP) regulations in this community.

● Chemical Accident Risk Reduction

- Focus on noncompliance at facilities that use either of the following hazardous substances:
 - Anhydrous ammonia; or
 - Hydrogen fluoride.



- Over 60% of on-site inspections were at facilities affecting communities with potential Environmental Justice concerns.
 - Exceeded the 50% goal set for 2023
 - 40% increase from number of inspections in EJ communities during FY 2022.
- Concluded a total of 1,791 civil settlements.
 - Resolved 150 more cases than in FY 2022
 - 55% of the cases address facilities in communities with potential EJ concerns, the highest percentage since FY 2014.



- **Be Knowledgeable**

- Know the regulations that apply to your facility and stay aware of new or revised regulations
- Reference U.S. EPA Enforcement Alerts

- **Be Prepared**

- Perform audits
- Have a plan for an agency inspection

- **Be Responsive**

- Timely respond to agency information requests



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Ohio EPA

Division of Air Pollution Control

Environmental Permitting Conference

July 17, 2024



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Ozone Update

An aerial photograph showing a vast, dense layer of white, puffy clouds covering a dark blue ocean. The clouds are scattered and vary in size, creating a textured appearance. In the upper left, the horizon of the Earth is visible, showing a thin line of land and the curvature of the planet against a clear blue sky. The overall scene is bright and clear, suggesting a high-altitude or satellite perspective.

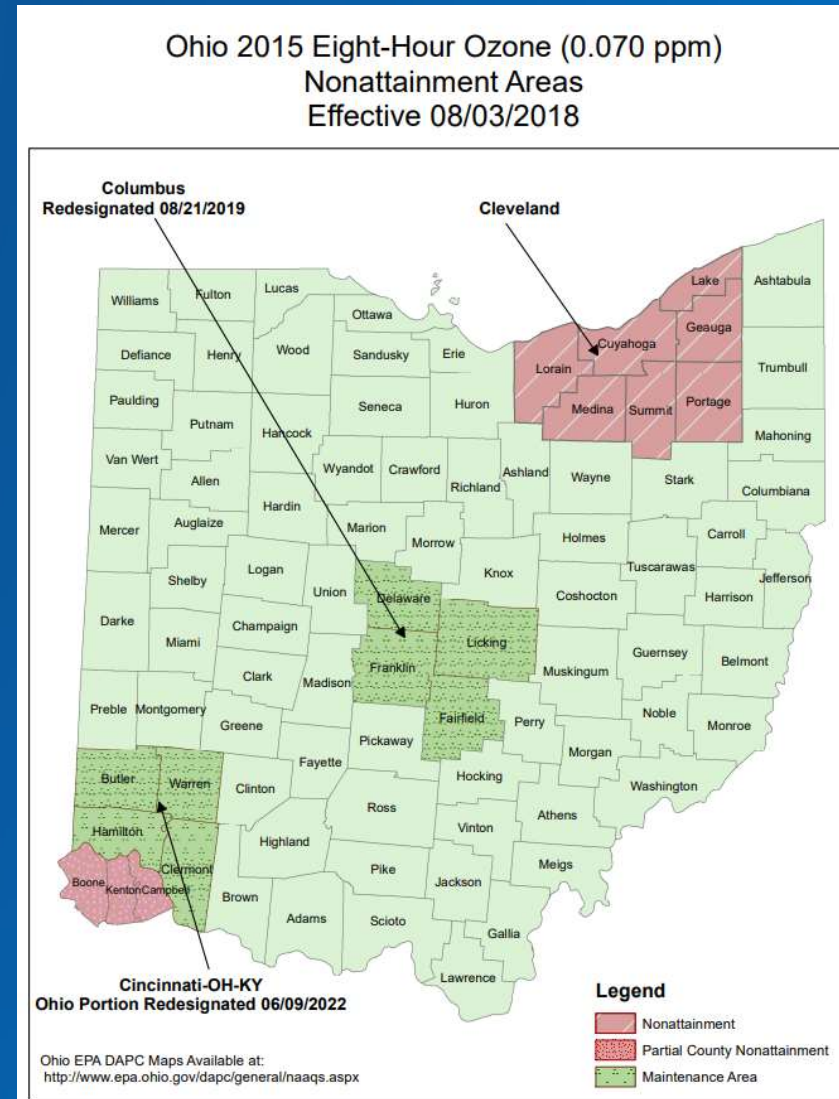
Ozone Background/Refresher

- Ozone is formed from “precursor” emissions of nitrogen oxides (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight
- The ozone standard changes over time
 - Since 1997 – it has been based on a 3-year average of annual 4th highest daily maximum 8-hour concentration (called “design value”)
 - 1997 – 80 ppb
 - 2008 – 75 ppb
 - 2015 – 70 ppb ← current standard
- Ozone monitoring season is March 1 to October 31



2015 Ozone Standard Designation Timeline

- August 3, 2018: U.S. EPA finalized nonattainment areas
 - Columbus, Cincinnati, and Cleveland areas designated *marginal* nonattainment
 - Marginal attainment date set for August 3, 2021 (2018-2020 design values)
- August 2019 - Columbus redesignated to attainment
- June 2022 – Cincinnati redesignated to attainment
- November 2022: Cleveland “bumped up” to *moderate* nonattainment
 - Moderate attainment date set for August 3, 2024 (2021-2023 design values)



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)		
	VMT REPORTING		
SERIOUS (9 years to attain)	NSR REQUIREMENTS FOR EXISTING SOURCE MODS	1.2 : 1 Serious	50 tpy
	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		
MODERATE (6 years to attain)	CONTINGENCY MEASURES FOR FAILURE TO ATTAIN	1.15 : 1 Moderate	100 tpy
	ENHANCED MONITORING PLAN		
	Stage-II-Gasoline-Vapor-Recovery		
	BASIC VEHICLE I/M for larger population areas		
MARGINAL (3 years to attain)	15% VOC ROP or 15% VOC/NOx RFP (OVER 6 YEARS)	1.1 : 1 Marginal	100 tpy
	VOC/NOx RACT for MAJOR/CTG SOURCES		
	ATTAINMENT DEMONSTRATION		
	NONATTAINMENT NEW SOURCE REVIEW PROGRAM		
	BASELINE EMISSIONS INVENTORY (EI)		
			PERIODIC EMISSIONS INVENTORY UPDATES

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



Cleveland Ozone Outlook (*as of 6/12/24)

Eastlake has had 4 of 4 days over already (65, 68, 73, 81)

District 6 has had 2 of 4 days over already (69, 75)

Lake Rockwell has had 1 of 4 days over already (72)

Site Name	Site Id	County	2021 4th High	2022 4th high	2023 4th high	2024 4 th high needed to violate 2015 standard	2024 4 th high	2021-2023 DV	2022-2024 DV*
District 6	39-035-0034	Cuyahoga	70	73	71	69	65	71	69
GT Craig NCore	39-035-0060	Cuyahoga	59	61	65	87	60	61	62
Berea BOE	39-035-0064	Cuyahoga	69	65	75	73	64	69	68
Mayfield	39-035-5002	Cuyahoga	68	65	73	75	65	68	67
Notre Dame	39-055-0004	Geauga	67	64	66	83	62	65	64
Eastlake	39-085-0003	Lake	72	76	72	65	65	73	71
Painesville	39-085-0007	Lake	63	62	73	78	63	66	66
Sheffield	39-093-0018	Lorain	59	63	64	86	57	62	61
Chippewa	39-103-0004	Medina	65	67	72	74	63	68	67
Lake Rockwell	39-133-1001	Portage	67	71	70	72	67	69	69
North High	39-153-0026	Summit	66	69	71	76	64	68	68

“Mandatory” *Moderate* Classification Requirements

- NO_x and VOC Reasonably Available Control Technology (RACT)
 - Revised OAC Chapters 3745-110 NO_x 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

**all of these have been implemented*

“Mandatory” *Serious* Classification Requirements

- Keep all Moderate programs in place
- NO_x and VOC RACT – lower thresholds for applicability from 100 TPY to 50 TPY
- Additional challenges permitting new and modified sources
 - NSR offset ratio 1.2:1
 - Baseline year reset
 - Major source permitting threshold lowered from 100 TPY to 50 TPY
 - More Title V and synthetic minor sources
 - Application timing to avoid Title V
 - Major modification significance levels decrease from 40 TPY to 25 TPY thresholds will be lowered
 - More changes at existing facilities will trigger major new source review

**Preparing to move to proposed rulemaking*

Serious Bump-up Timeline

- Attainment deadline for moderate 8/3/24
 - Rely on 2021-2023 DVs
- Finding of failure to attain and bump-up
 - CAA due w/in 6 months - 2/3/25
 - Last time took until November
- Attainment demonstration due
 - CAA discretion
 - Last time January 1 after finalizing in November – estimate 1/1/26
- Attainment date for serious 8/3/27
 - Rely on 2024-2026 DVs
- Deadline for control strategies
 - One year before final ozone season before attainment – 1/1/26



Additional Ozone Reduction Measures

Additional **nonmandatory** requirements updated statewide ← *Completed*

- Consumer Products Rule
- Architectural & Industrial Maintenance Rule

Voluntary Ozone Reduction Initiatives With LAA/MPOs ← *In progress*

Locomotives

- Idle-limiting or shut-off devices (develop MOUs with railroads, encourage sources to apply for funding assistance)

Harbor Craft

- Rebuild/replace engines (encourage sources to apply for funding assistance)

Heavy Duty Diesel Trucks

- Idle reduction (encourage municipalities to adopt ordinances, work with fleet operators to develop MOUs)

Non-road Diesel Construction Equipment

- Idle reduction (encourage municipalities to adopt ordinances, work with major companies to develop MOUs)

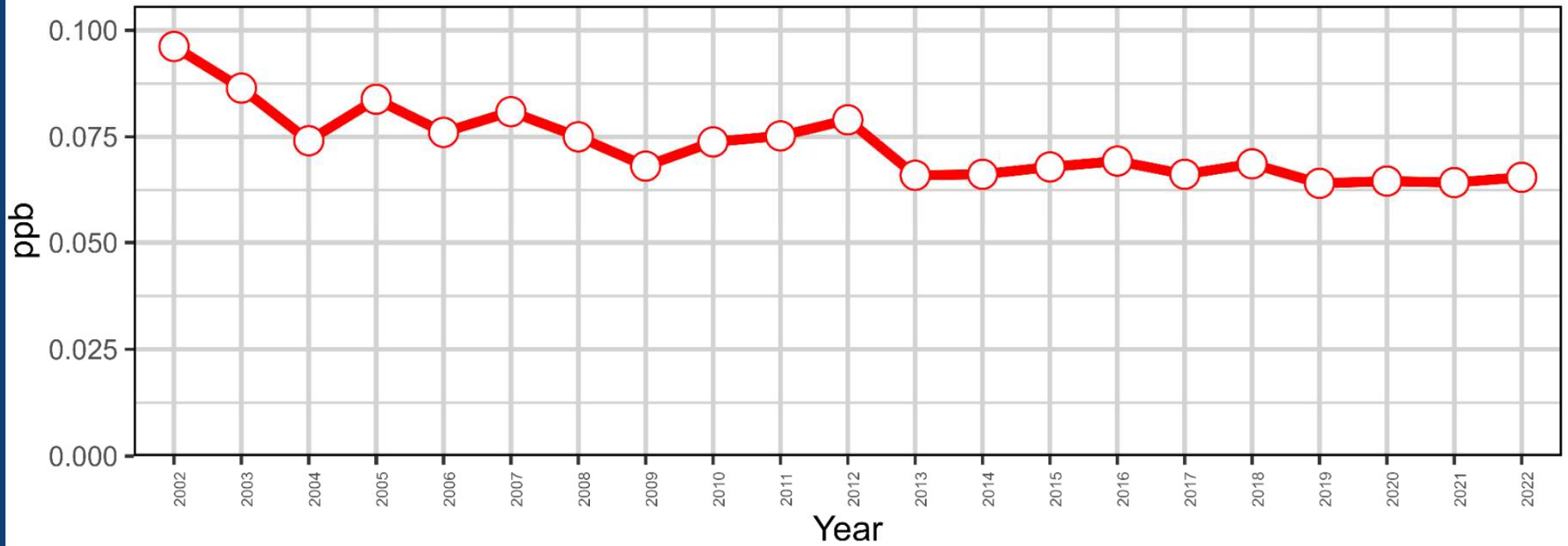
Lawn/garden, Light Commercial Equipment

- Rebates/discounts on electric equipment
- Programs in Cleveland, Cincinnati, Toledo, and Akron starting next year - Ohio EPA provided \$50k to each agency for rebates in 2023 and another \$20k in 2024 for Cleveland

Ozone 20-Year Trend

Ozone **All of Ohio**

Yearly 8-hour Fourth Max Value Trend



Particulate Matter Proposal

Final Changes to PM_{2.5} NAAQS

Two standards, annual and 24-hour, for which the implementation steps are done independently

- 2006 - 24-hour Standard – 35 ug/m³
- 2013 annual standard – 12.0 ug/m³ - ***STRENGTHENED in 2024 TO 9.0 ug/m³***
 - ***Promulgated FEBRUARY 7, 2024***
 - ***Effective MAY 6, 2024***

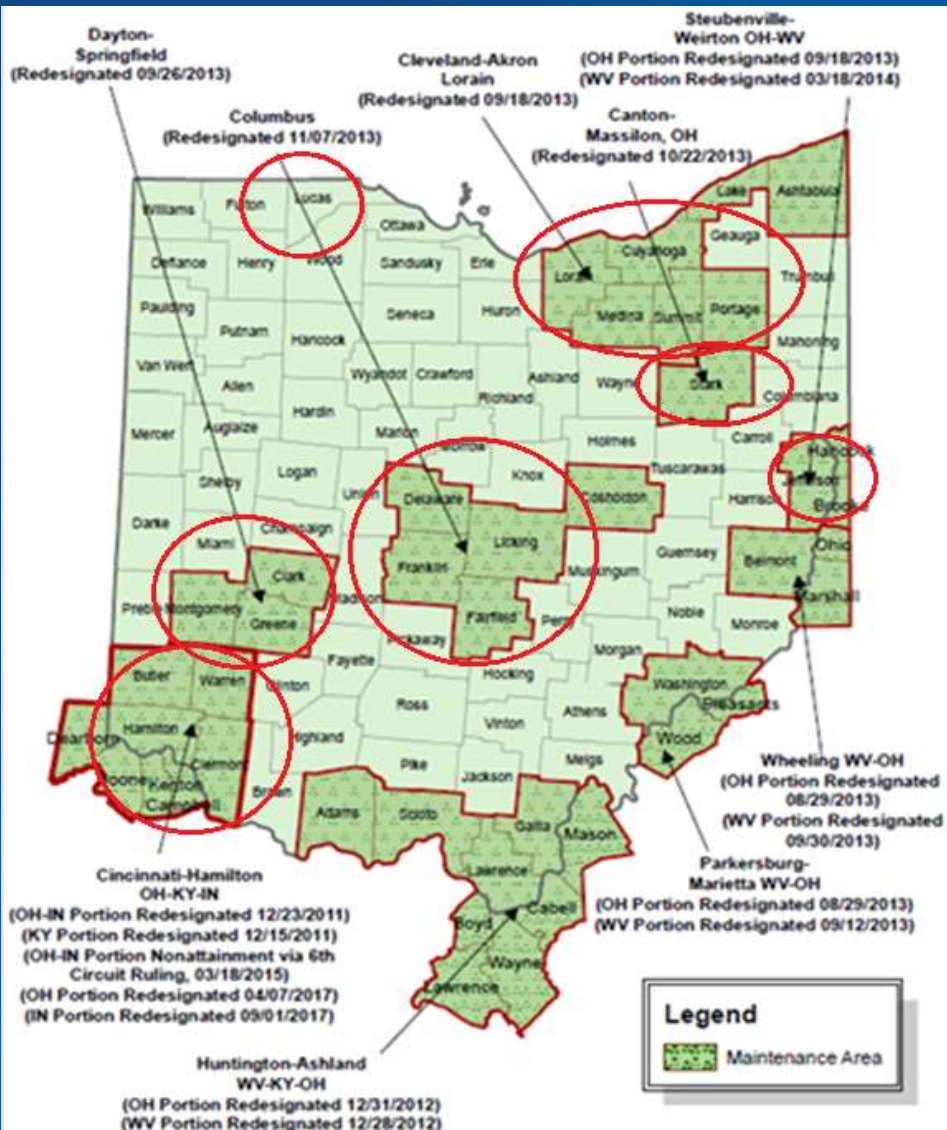
PM_{2.5} Data - Statewide

PM25-Annual Yearly and Design Value (ug/m3)			
SITEID	County	2022-2023 DV Unajusted	2022-2023 DV Ajusted
39-003-0009	Allen	7.5	
39-009-0003	Athens	6.1	
39-013-0006	Belmont	7.8	
39-017-0022	Butler	11.0	10.9
39-023-0005	Clark	9.4	8.8
39-035-0065	Cuyahoga	12.2	12.2
39-049-0038	Franklin	9.9	9.3
39-061-0014	Hamilton	10.7	9.9
39-061-0048	Hamilton	10.2	10.2
39-081-0017	Jefferson	10.6	10.0
39-085-0007	Lake	7.2	
39-087-0012	Lawrence	8.5	
39-093-3002	Lorain	7.6	
39-095-1003	Lucas	9.4	9.4
39-099-0015	Mahoning	9.0	
39-103-0004	Medina	7.5	
39-113-0038	Montgomery	9.6	9.0
39-133-0002	Portage	6.9	
39-135-1001	Preble	8.7	
39-145-0015	Scioto	7.8	
39-151-0020	Stark	9.9	9.2
39-153-0017	Summit	8.7	
39-155-0014	Trumbull	8.8	

Late May – US EPA makes “adjustments” to data for certain high-reading continuous instruments

9 **7** counties and 7 **6** areas (MSA) with monitors > 9.0 ug/m³

- Cleveland area: Cuyahoga County
- Canton-Massilon area: Stark County
- Cincinnati area: Butler & Hamilton Counties
- Columbus area: Franklin County
- Steubenville-Weirton area: Jefferson County
- ~~Dayton area: Clark & Montgomery Counties~~
- Toledo area: Lucas County



What could a nonattainment map look like?

Example 1997 Annual $PM_{2.5}$

PM2.5 NAAQS Implementation Timeline

- Ohio EPA recommends nonattainment designations due 1 year from **PROMULGATION** of the NAAQS - 2/7/25
 - Ohio recommended designations would be based on 2021-2023 data
 - Five factor analysis may result in multi-county nonattainment areas
- U.S. EPA finalizes nonattainment designations required 2 years from **PROMULGATION** of the NAAQS - 2/7/26 +90 days to effective date typically ~ 5/7/26
 - Estimate U.S. EPA recommended designations would be based on 2022-2024 data
- Infrastructure SIP due 3 years from **PROMULGATION** of the NAAQS - 2/7/28
 - Transport likely addressed by U.S.EPA as a FIP
- Attainment demonstration due 18 months from **final designations** the effective date ~11/7/27
- Moderate attainment date is set at the end of the 6th year after the effective date of **final designations** ~ 12/31/32

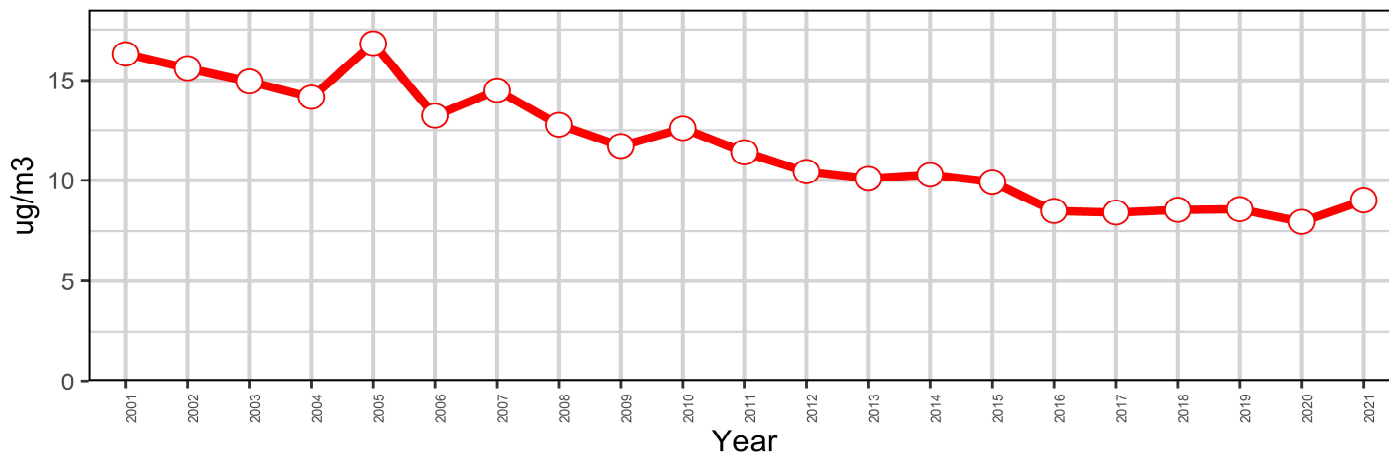
Moderate Attainment Demonstration SIP

- Follow 2016 U.S. EPA Implementation Rule (August 24, 2016)
- PM_{2.5} (filterable and condensable) and precursors: SO₂, NOX, VOC, and NH₃
- Emissions Inventory
 - Resets base year and impacts availability of offsets
 - Likely NEI year 2023 (requirement: one of 3 years in nonattainment designations)
- Mobile emissions budgets
- RACT/RACM and additional reasonable measures
 - point, area and mobile

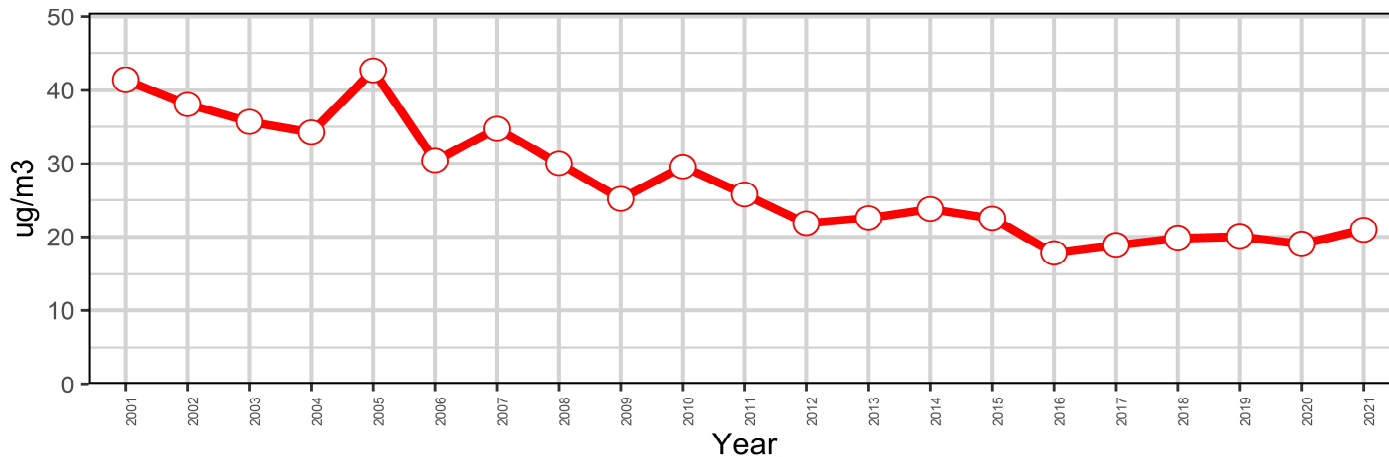
Moderate Attainment Demonstration SIP

- NNSR precursor demonstration for major NNSR
 - NH₃ and VOC no longer “presumptively insignificant”
 - Ohio submitted for NH₃ and VOC
 - Resource intensive modeling iteration process
- Modeling of attainment year showing attainment with-on-the-books controls and/or RACT/RACM
- Reasonable further progress
- Contingency measures
 - Growing problematic

PM2.5 Annual
Yearly Annual Average Trend



PM2.5 24-Hour
Yearly 98th Percentile Trend



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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





Greenhouse Gas Requirements

Bob Hodanbosi, Chief
Division of Air Pollution Control

GHG Restrictions from Power Plants

- U.S. EPA has adopted 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
- CCS is very expensive to install and operate
- Other option is to co-fire with Hydrogen

GHG Restrictions from Coal-fired 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 coal plants until 2032 or 2040 if plant will shutdown
- Three options:
 - Install CCS
 - Co-fire with hydrogen
 - Shutdown

GHG Restrictions from Power Plants

- U.S. EPA recently announced that existing gas-fired plants will be dropped from final promulgation
- U.S. EPA will repropose for existing gas-fired plants
- New gas-fired plants must comply with proposal
- Coal-fired plants are part of final rule



Need for Electricity

- Nation continues to require increasing amounts of electricity
- Reduction of coal plants reducing the amount of available power
- U.S. EPA proposed NSPS/ 111(d) plan will have all existing fossil-fuel plants examine overall viability – three choices:
 - Carbon capture and sequestration
 - Mix with Hydrogen
 - Closure
- Renewables not coming on-line as anticipated.

Need for Electricity

- Power will need to be produced or new projects will be delayed
- There may be additional peakers that are proposed.
- How things have changed.....Ohio had ferroalloy plants that located next to power plants to minimize transmission losses – many of those plants are gone.
- Now we have data centers that use just as much power as small power plant output.

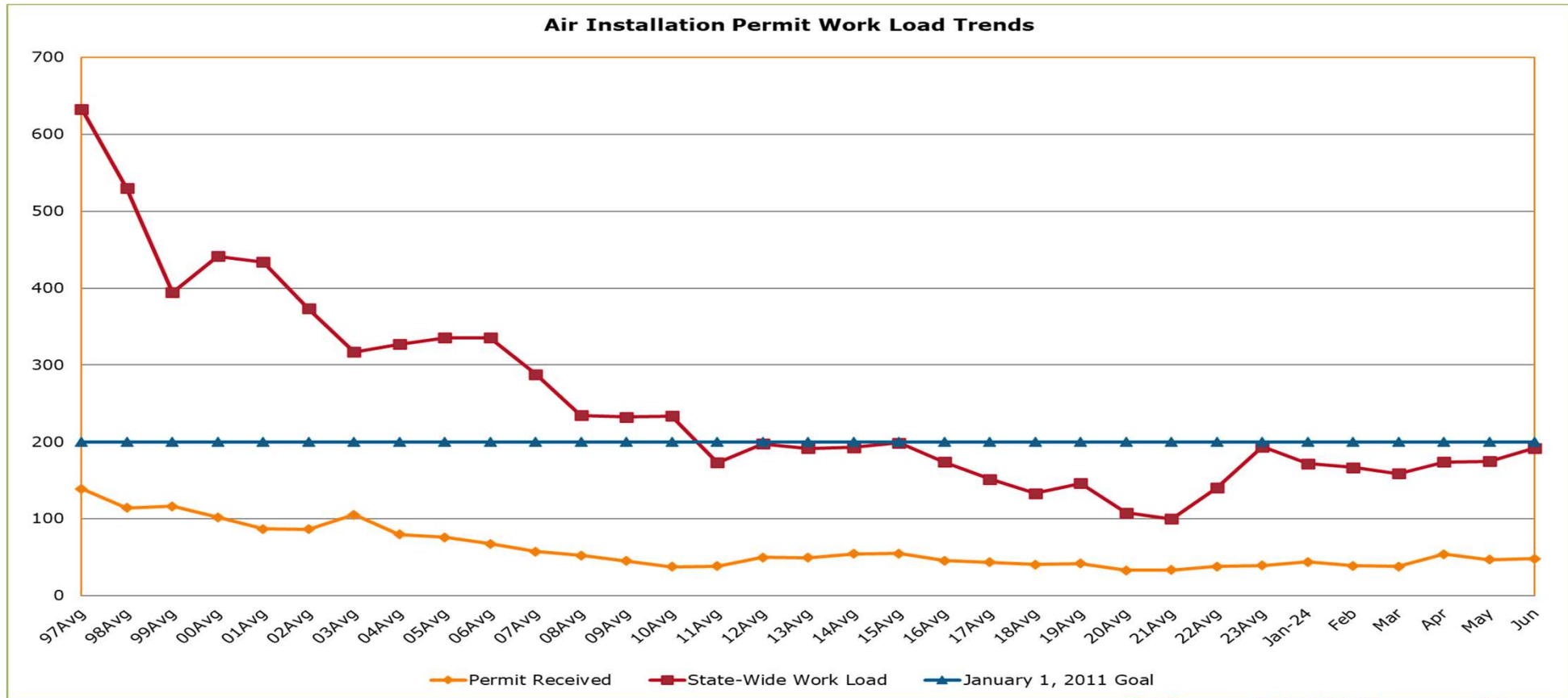
Permitting Updates

A close-up photograph of a stack of white papers. Several papers are held together by silver binder rings. Two black binder clips are visible, securing the papers. The background is blurred, showing what appears to be an office setting with a computer monitor and other equipment. The text 'Permitting Updates' is overlaid in the center of the image.

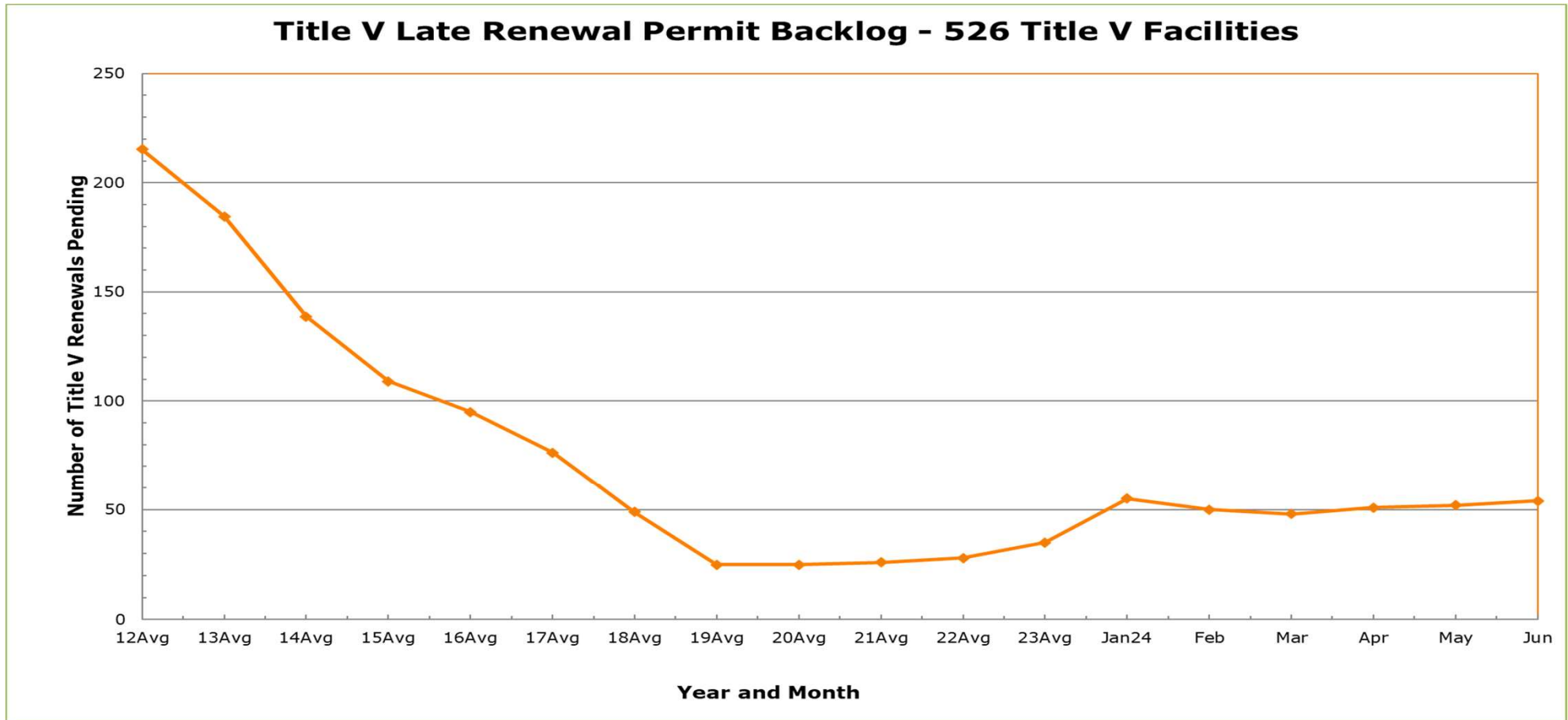
Construction Permits

- Permits for new construction projects remain the highest priority for the agency
- We have a goal of having no more than 200 permits in queue at any one time
- We are maintaining that goal, but are looking at ways to improve timeliness

Construction Permits



Late Title V Renewal Status



Title V Permits

- Title V permits – U.S. EPA has a goal of no more than 10% late permits.
- We are currently just under that value

Going Forward

- With agency reorganization, looking more at programs on statewide basis
- Although we have utilized approach in the past, we are going to look at expanding usage in the permitting area
- We will be looking at how we can utilize staff throughout the state to make sure we are providing good customer service
- Southeast Ohio – with staff turnover has had the largest challenge – we have asked other offices to assist

A photograph of an oil pumpjack (jack-o'-lantern) at night. The pumpjack is a large, green metal structure with a wooden walking beam and a counterweight. It is mounted on a concrete foundation. The background is a dark, starry night sky. The foreground shows some dark vegetation.

U.S. EPA Regulatory Activities Oil and Gas

- Robert Hodanbosi, Chief
- Division of Air Pollution Control

Background

- U.S. EPA proposed new rules for oil & gas industry
- Oil & gas industry large industrial source of methane – methane is an important greenhouse gas
- Purpose: Reduce emissions of GHGs (methane), VOC and SO₂
- Pre-proposal issued 11/15/21
- Proposed rules issued 11/11/22

Rules Finalized

- U.S. EPA announced the finalization of the rules on December 2, 2023
- Rules were published in Federal Register on March 8, 2024
- Rules effective May 7, 2024
- Ohio Attorney General joined many other states in the appeal of the rule

Background

- Two actions
 - Revise New Source Performance Standards for new and modified sources
 - Issue Emissions Guidelines (EGs) for existing sources – which states must adopt

Current Ohio EPA Regulated Facilities

724 well sites (1056 air permits)

- All horizontal, fractured wells
- Don't currently regulate traditional oil & gas wells
- ODNR says ~53,000 active oil & gas wells

279 mid-stream facilities (890 permits)

11 gas processing facilities (90 permits)

What does it mean?

- New and modified sources will need to meet more stringent requirements under new NSPS OOOO(b)
- For first time, Ohio EPA will be required (per 111(d) of the CAAA) to write rules for existing wells OOOO(c)
- Ohio EPA's current program covers "new" equipment – post 2011

Final Rules

- Standards for existing sources will be very similar to proposed standards for new
- Significantly more stringent than Ohio EPA's requirements for existing wells
- Covers all wells:
 - *“Well” means a hole drilled for the purpose of producing oil or natural gas, or a well into which fluids are injected.*
- All wells, not just horizontal – ODNR has 53,000 on file

Final Rules

- Ohio EPA has delegation agreement to enforce NSPS
- States are required to write rules for 111(d) requirements
 - Rule writing, inventory, SIP submission, etc.
- Ohio EPA does not currently regulate traditional wells

Final Rules

Small business/
individual owner
impact

- OVA inspections, reports, etc. lot of work

Ohio EPA work

- Review reports, inspections, testing – lots of work for 53,000 wells
- Significant staffing needs/\$ needs
- Can general permits be developed?



“Super Emitter” Program

- Approval process for third-party investigator to look/find large leaks
- 100 kg methane/hr (220 lb/hr, 964 tons/yr)
- Well site, centralized production facility or compressor station other operations
- If third-party finds emissions –can submit information to U.S. EPA
- Then U.S. EPA can take further action on the third-party information

What are we doing?

01

Evaluating contents of rule

- Over 600 pages in Federal Register

02

Revising the Ohio EPA General Permit for new sources to address changes for new facilities

03

Consulting with other states on plan to address rule

04

Discussing future activities with trade organizations



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MEC 33rd Annual Conference on Environmental Permitting in Ohio

Major Air Permitting & Compliance Developments

July 17, 2024

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Projected PM_{2.5} Nonattainment Areas Under Revised NAAQS

EPA's View of Annual PM_{2.5} NAAQS

Most Counties with Monitors Already Meet the Strengthened Particle Pollution Standard
(Based on 2020-2022 Air Monitoring Data)



<https://www.epa.gov/system/files/documents/2024-02/2024-pm-naaqs-final-2020-22-dv-map.pdf>

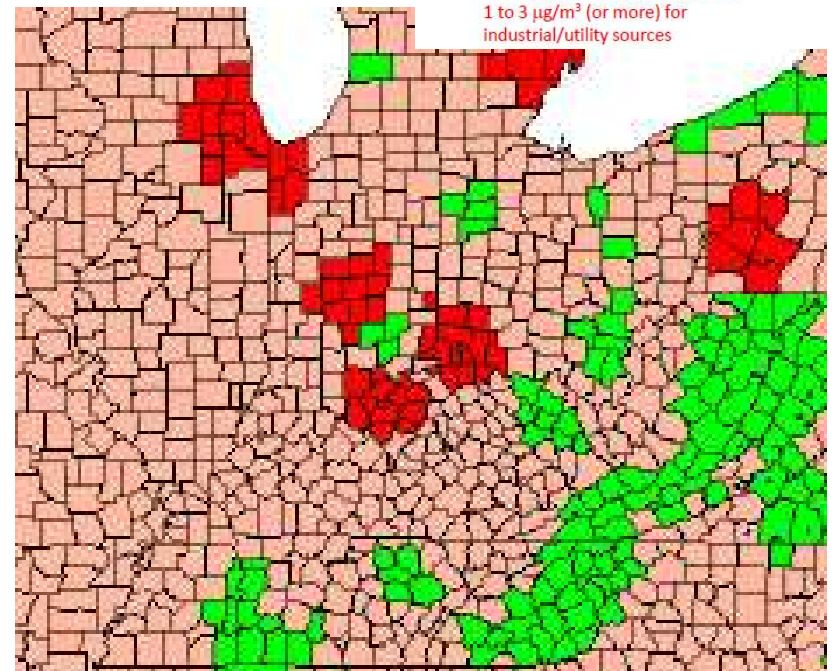
Industry's View of Annual PM_{2.5} NAAQS

2020-2022 Annual PM_{2.5} DV
Headroom to Threshold

- Nonattainment
- 1-3 ug/m³
- 3+ ug/m³

	Modeled
Count	35
90th Percentile	4.4
75th Percentile	3.5
Average	2.6
Median	2.5
25th Percentile	1.6
10th Percentile	0.9

Permit applicants typically model 1 to 3 µg/m³ (or more) for industrial/utility sources

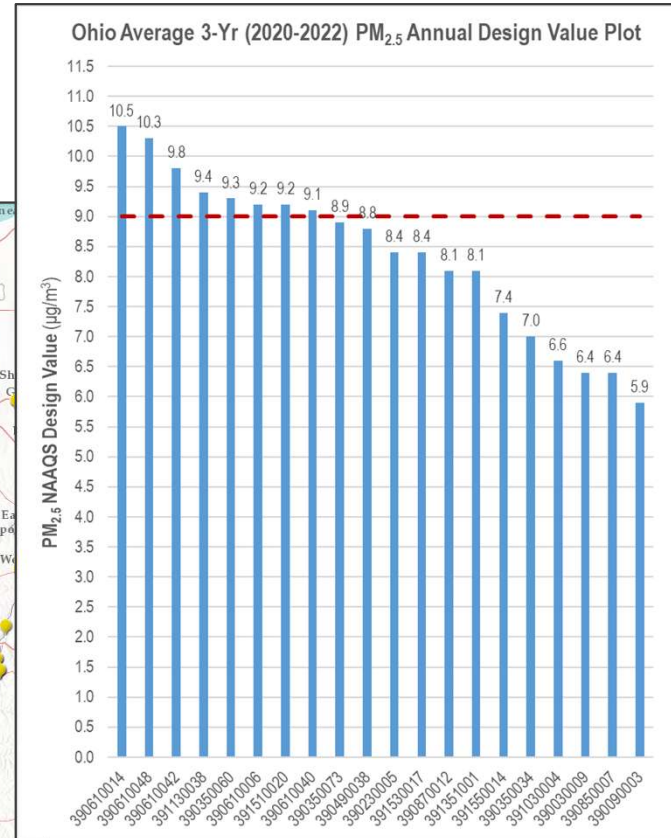
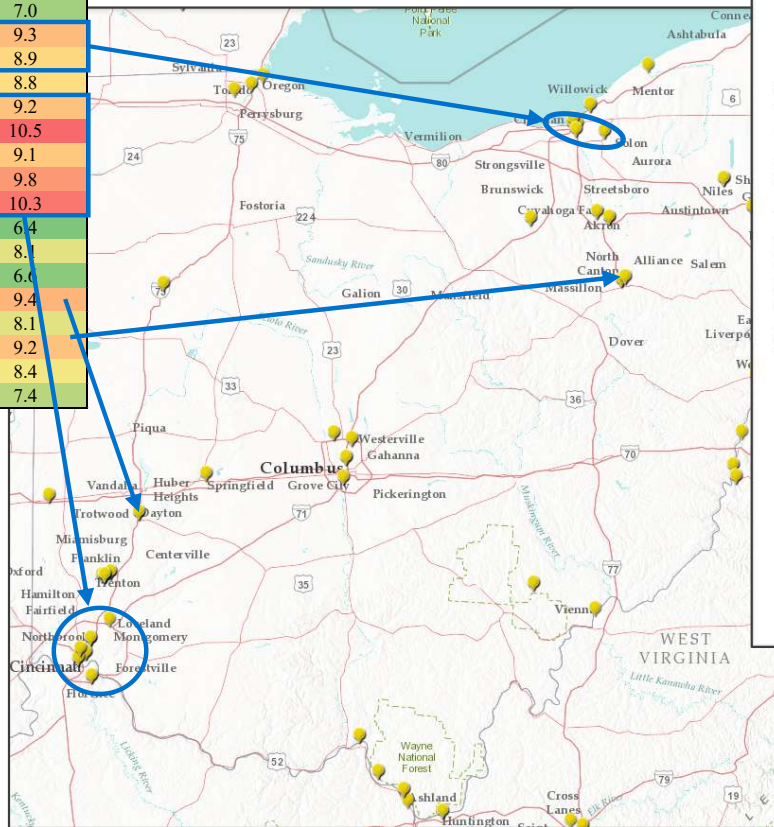


<https://www.regulations.gov/document/EPA-HQ-OAR-2015-0072-5976>

Annual PM_{2.5} Background Concentrations- Ohio



State Name	County Name	CBSA Name	AQS Site ID	2020-2022 Annual Design Value (µg/m ³) [1,2]
Ohio	Allen	Lima, OH	390030009	6.4
Ohio	Athens	Athens, OH	390090003	5.9
Ohio	Clark	Springfield, OH	390230005	8.4
Ohio	Cuyahoga	Cleveland-Elyria, OH	390350034	7.0
Ohio	Cuyahoga	Cleveland-Elyria, OH	390350060	9.3
Ohio	Cuyahoga	Cleveland-Elyria, OH	390350073	8.9
Ohio	Franklin	Columbus, OH	390490038	8.8
Ohio	Hamilton	Cincinnati, OH-KY-IN	390610006	9.2
Ohio	Hamilton	Cincinnati, OH-KY-IN	390610014	10.5
Ohio	Hamilton	Cincinnati, OH-KY-IN	390610040	9.1
Ohio	Hamilton	Cincinnati, OH-KY-IN	390610042	9.8
Ohio	Hamilton	Cincinnati, OH-KY-IN	390610048	10.3
Ohio	Lake	Cleveland-Elyria, OH	390850007	6.4
Ohio	Lawrence	Huntington-Ashland, WV-KY-OH	390870012	8.1
Ohio	Medina	Cleveland-Elyria, OH	391030004	6.6
Ohio	Montgomery	Dayton, OH	391130038	9.4
Ohio	Preble	Dayton, OH	391351001	8.1
Ohio	Stark	Canton-Massillon, OH	391510020	9.2
Ohio	Summit	Akron, OH	391530017	8.4
Ohio	Trumbull	Youngstown-Warren-Boardman, OH-PA	391550014	7.4



- ▶ 51 Active PM_{2.5} Monitors
- ▶ 20 PM_{2.5} Monitors w/ valid 2020-2022 DV
- ▶ Canton (Stark Cty.) designated NAA for first time
- ▶ Columbus (Franklin Cty.) borderline w/ new monitors added...will it fall into NAA?

Basic Permitting/Compliance Implications of Revised PM_{2.5} NAAQS

- ▶ **Short-Term Impact** (>5/6/2024) - Air quality analysis component of PSD must address reduced annual PM_{2.5} NAAQS; Affects active/planned PSD projects
 - No grandfathering provisions for pending PSD permits
 - July 2022 modeling guidance from EPA – PM_{2.5} modeling required if trigger PSD for **PM_{2.5}, SO₂, or NO_x**
- ▶ **Short- to Medium-Term Impact** (Next Modeling Study in Your Area?) – Your source shown as “culpable” for modeled NAAQS exceedances from nearby source
- ▶ **Medium Term Impact** (within ~2 years of Eff. Date) - More prevalent Nonattainment NSR (NNSR) permitting from new or expanded NAA
 - LAER/offsets in place of BACT /modeling for major NSR actions in newly designated nonattainment areas
- ▶ **Medium Term Impact** (within ~2 years of Eff. Date) - Sources located near nonattainment areas cannot impact NAAQS attainment plan
- ▶ **Long-Term Impact** (18 months after designations or ~3-4 Years from Eff. Date) - New and revised RACT requirements for existing sources in NAA
- ▶ **Very Long-Term Impact** (~2032 and beyond) – Reduced major source thresholds for areas not attaining standard

2015 O₃ NAAQS – Cleveland Area Bump-Up to Serious Nonattainment (NA) Designation

- ▶ 2015 – EPA lowered O₃ NAAQS to 70 ppb, 8-hr average
- ▶ 11/2022 – Cleveland Area bumped from Marginal to Moderate NA
 - 8/2024 attainment deadline (will not meet)
- ▶ **2/2025 – Cleveland Area to be reclassified to Serious NA**
 - What does this mean?
 - Lowers NO_x and VOC Reasonably Available Control Technology (RACT) applicability under OAC Chapters 3745-110 and 3745-21 from a PTE of 100 tpy to 50 tpy
 - Lowers the major source threshold for NNSR permitting under OAC 3745-31 from 100 tpy to 50 tpy VOC or NO_x
 - Lowers the major modification significance level under OAC 3745-31 from 40 tpy to 25 tpy VOC or NO_x
 - Lowers Title V operating permit major source threshold under OAC 3745-77 from 100 tpy to 50 tpy VOC or NO_x

NSPS 0000/0000a/0000b/0000c

- ▶ NSPS 0000 was originally proposed on 8/23/2011 and finalized on 8/16/2012 – VOC and SO₂
- ▶ NSPS 0000a was originally proposed on 9/18/2015 and finalized on 6/3/2016 – VOC, SO₂, and 1st attempt to cover GHGs in the form of CH₄
 - 2020 policy/technical amendments; 2021 Congressional Review Act process
- ▶ NSPS 0000b/c was originally proposed on 11/15/2021 and finalized on **12/2/2023, published in FR 3/8/2024 – effective 5/7/2024**
 - **Final (?) word on regulating GHG emissions in the form of CH₄**
- ▶ There have now been **nine (9) revisions** to these various rules since they were originally implemented
- ▶ Applicability is based on:
 - Construction, modification, or reconstruction date
 - Type of affected facility
 - Location within the affected source category

Applicable Dates for 0000 Subparts

Subpart	Source Type	Applicable Dates
40 CFR 60, Subpart 0000	New, modified, or reconstructed sources	After August 23, 2011 , and on or before September 18, 2015
40 CFR 60, Subpart 0000a	New, modified, or reconstructed sources	After September 18, 2015 , and on or before December 6, 2022
40 CFR 60, Subpart 0000b	New, modified, or reconstructed sources	After December 6, 2022
40 CFR 60, Subpart 0000c	Existing sources	On or before December 6, 2022

Applicability dates are the same for all affected facilities, and these dates are different than the effective (initial compliance) dates. Effective dates can also vary for each affected facility.

0000 Updates Presents Numerous Challenges for the O&G Industry

- ▶ NSPS 0000a revisions – officially rescinds 2020 Policy Amendment and portions of 2020 Technical Amendment
- ▶ New NSPS 0000b – adds additional affected facilities, tiered fugitives monitoring, new modification definitions, new applicability threshold for storage vessels, multiple compliance dates, super emitter program...
- ▶ New NSPS 0000c – same as 0000b requirements w/ minor exceptions, impacts 50,000+ existing wells in Ohio that are unfamiliar with environmental monitoring, recordkeeping, and reporting, super emitter program, state permitting/SIP issues...
- ▶ Intersection of 0000b/c with other regulatory developments
 - 40 CFR 98, Subpart W (GHG MRR for Petroleum and Natural Gas Systems) proposed in 8/2023 – calculation method & emission factor updates, new monitoring/measurement requirements, could impact 0000b applicability
 - 2022 Inflation Reduction Act – provides framework for CH₄ emissions reduction program for facilities that emit > 25,000 mt CO₂e/yr under Subpart W, Waste Emissions Change (WEC) rule proposed under 40 CFR 99 on 1/26/2024, will charge fee on CH₄ emissions exceeding sector specific thresholds, CY2024 fee would be due 3/31/2025 (1 yr prior to effective date of Subpart W changes)

<https://youtu.be/gzDYgRc6eic>