WORKSHOP F AIR PERMITTING:

Practical Advice and Strategic Permitting Considerations

Proposed Good Neighbor Federal Implementation Plan for
2015 Ozone National Ambient Air Quality Standard

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Ohio Environmental Protection Agency

ALL4

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Learning Objectives

- Provide an overview of proposed Good Neighbor Federal Implementation Plan (FIP or Good Neighbor Plan).
- Identify air emissions sources in industry sectors potentially subject to future emissions reductions for oxides of nitrogen (NO_X).
- Gain a summary-level knowledge of comments submitted to U.S. EPA during the rulemaking process.
- Identify strategic permitting considerations for impacted sources.

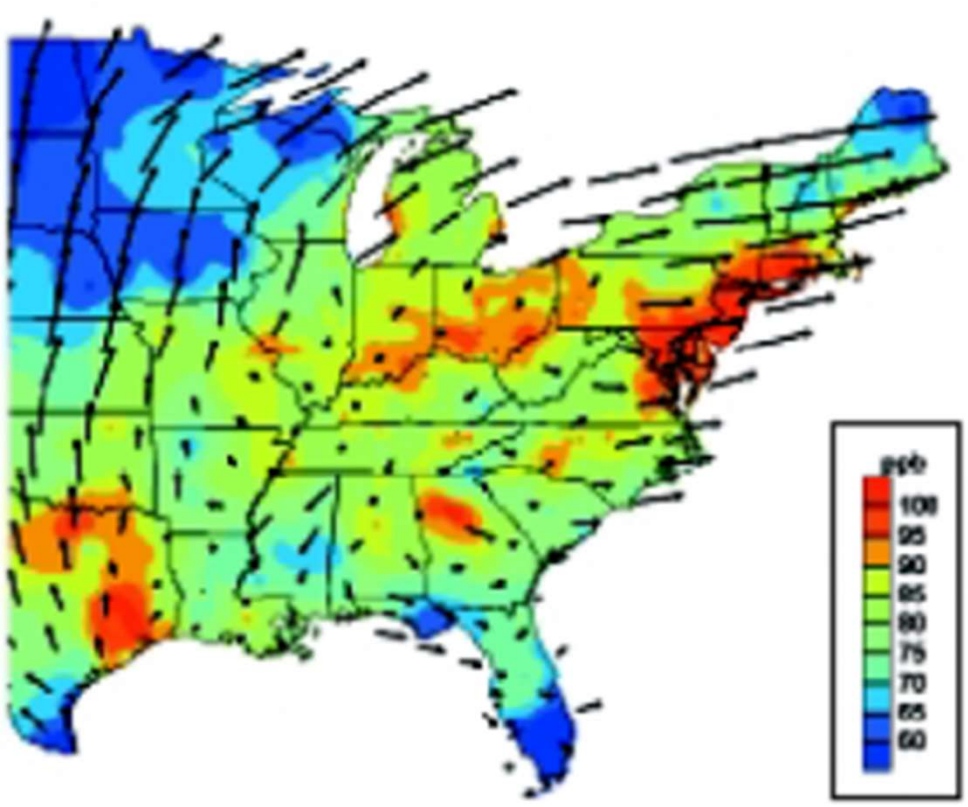
Overview of Proposed Rulemaking

- Clean Air Act (CAA) Good Neighbor Provisions
- Regional Transport Patterns for Ozone
- 4-Step Interstate Transport Framework
- Proposed Rule Geography and Affected States
- Summary of Proposed Emissions Reductions by Source Category

CAA §110(a)(2)(D)(i)(I)

- "Good Neighbor" or "Interstate Transport" provision of the Act.
- Requires states to prohibit any sources or emissions activities that ***"contribute significantly to nonattainment in"*** or ***"interfere with maintenance by"*** any other state with respect to any primary or secondary National Ambient Air Quality Standard (NAAQS).
- CAA §126(b) authorizes states to petition U.S. EPA to issue findings that emissions from "any major source or group of stationary sources" violate Good Neighbor provision.
- Good Neighbor determinations required for subsequent NAAQS.

Regional Transport Patterns



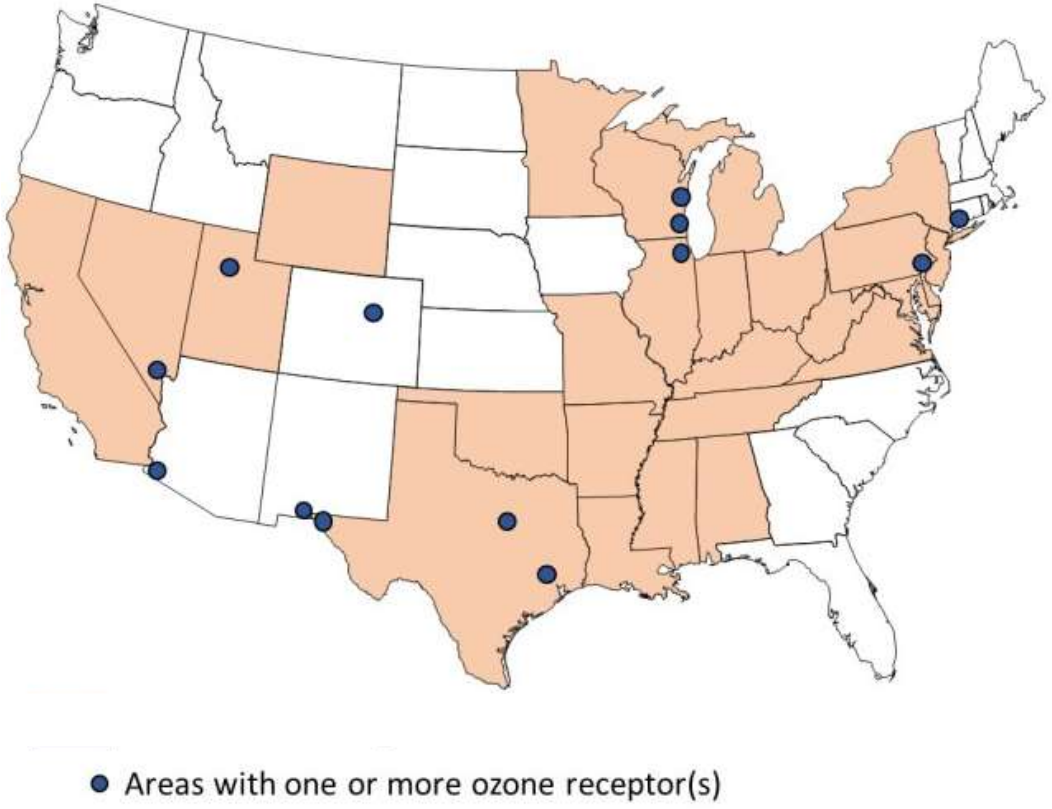
Transport Winds & Ozone Patterns on High Ozone Days

4-Step Interstate Transport Framework

- Identify downwind receptors that are expected to have problems attaining or maintaining NAAQS.
- Determine which upwind states are ***"linked"*** to these receptors based on the magnitude of contributions using a threshold value.
- For states linked to downwind air quality problems, identify upwind emissions on a statewide basis that significantly contribute to nonattainment or interfere with maintenance in any area, using a multifactor analysis.
- Reduce the identified upwind emissions via permanent and enforceable requirements (e.g., Good Neighbor Plan).

Step 1: Identify Downwind Receptors

Locations with Nonattainment and/or Maintenance Problems with 2015 Ozone NAAQS



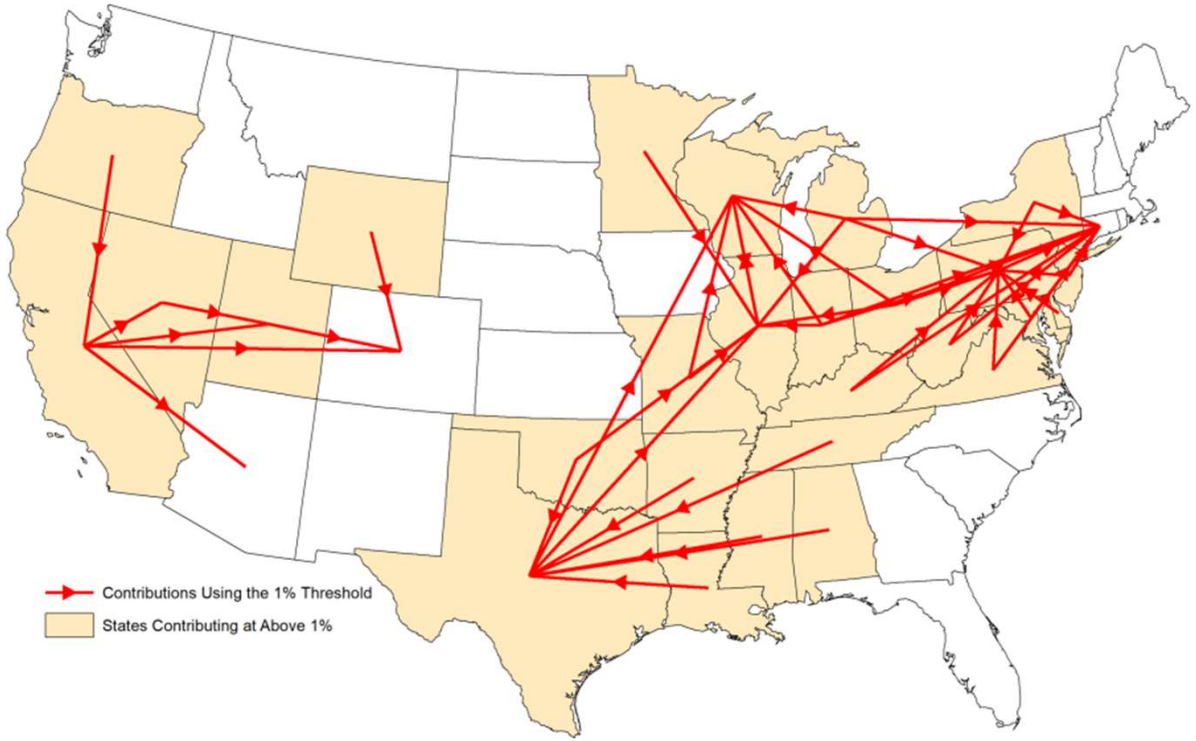
Step 1: EPA identified 36 nonattainment and maintenance problems in the following areas: **Yuma, AZ**; **Denver, CO**; **Coastal CT**; **Chicago, IL**; **Las Vegas, NV**; **Doña Ana, NM**; **Philadelphia, PA**; **Dallas, TX**; **El Paso, TX**; **Houston, TX**; **Salt Lake City, UT**; and along the **western shoreline of Lake Michigan in WI**.

SOURCE: https://www.epa.gov/system/files/documents/2022-04/r9-rtoc-ozone-transport-tribal-consultation-workgroup.pdf

Step 2: Evaluate Upwind State Contributions

- Contribution metric is the average impact from each state to each receptor during the highest modeled ozone concentration days (2023 modeling).
- State impacts to a downwind receptor at 1% of the NAAQS or greater are ***"linked"***.
- 2015 Ozone NAAQS 1% Threshold Value = 0.7 parts per billion (ppb)
- Previous U.S. EPA Guidance for SIP Development in August 2018 suggested using an alternate 1 ppb threshold value to determine linkages.
- Once a state is linked to a downwind receptor above the threshold value, a multi-factor analysis is performed to identify the source(s) that contribute to the linkage.

Step 2: Evaluate Upwind State Contributions



Upwind States Contributing Above 1% to Downwind States

1% Threshold = 0.70 parts per billion (PPB)

2015 Ozone NAAQS: 70 PPB

Step 2: Evaluate Upwind State Contributions

Sites Measuring Nonattainment and Projected to be Nonattainment in 2023

Ambient Monitor Site ID	County	State	2015-2017 Design Value (DV)	2023 Avg DV	2023 Max DV	Ohio Contribution	Status
36-103-0002	Suffolk	New York	76	71.6	73.1	1.75	Nonattainment/Maintenance
09-001-9003	Fairfield	Connecticut	83	71.4	74.2	1.58	Nonattainment/Maintenance
24-025-1001	Harford	Maryland	75	71.0	73.3	2.83	Nonattainment/Maintenance
36-085-0067	Richmond	New York	76	70.9	72.4	2.24	Maintenance
55-117-0006	Sheboygan	Wisconsin	80	70.5	72.8	1.17	Maintenance
09-009-9002	New Haven	Connecticut	82	69.9	72.6	1.12	Maintenance
09-001-3007	Fairfield	Connecticut	83	69.8	73.7	1.84	Maintenance
36-081-0124	Queens	New York	74	69.2	71.0	1.88	Maintenance
09-001-0017	Fairfield	Connecticut	79	68.9	71.2	1.05	Maintenance
26-005-0003	Allegan	Michigan	73	68.8	71.5	0.19	Maintenance - Not Linked

SOURCE: https://epa.ohio.gov/static/Portals/27/sip/App3_2015O3Inf_LADCOInterstatemodeling_draft.pdf

Step 3: Multifactor Analysis Overview

- Evaluate additional available control opportunities by preparing a multifactor assessment.
- Typically performed by a state as part of its infrastructure State Implementation Plan (SIP).
- Multifactor Analysis considers the following:
  - Information on emissions sources
  - Applicable control technologies
  - Emissions reductions
  - Costs and cost-effectiveness of controls
  - Downwind air quality impacts of estimated reductions

Step 3: Multifactor Analysis for FIP

- For the Good Neighbor Plan U.S. EPA performed a multifactor analysis to identify control opportunities using the Air Quality Assessment Tool (AQAT)
  - Differed from previous NO_X SIP Call Regulations because AQAT is an electronic spreadsheet tool and not a photochemical modeling analysis.
- U.S. EPA Analytical Framework using AQAT
  - Identify ***potentially impactful industries***.
  - Identify cost threshold to evaluate emissions reductions.
  - Estimate air quality impacts at downwind receptors.

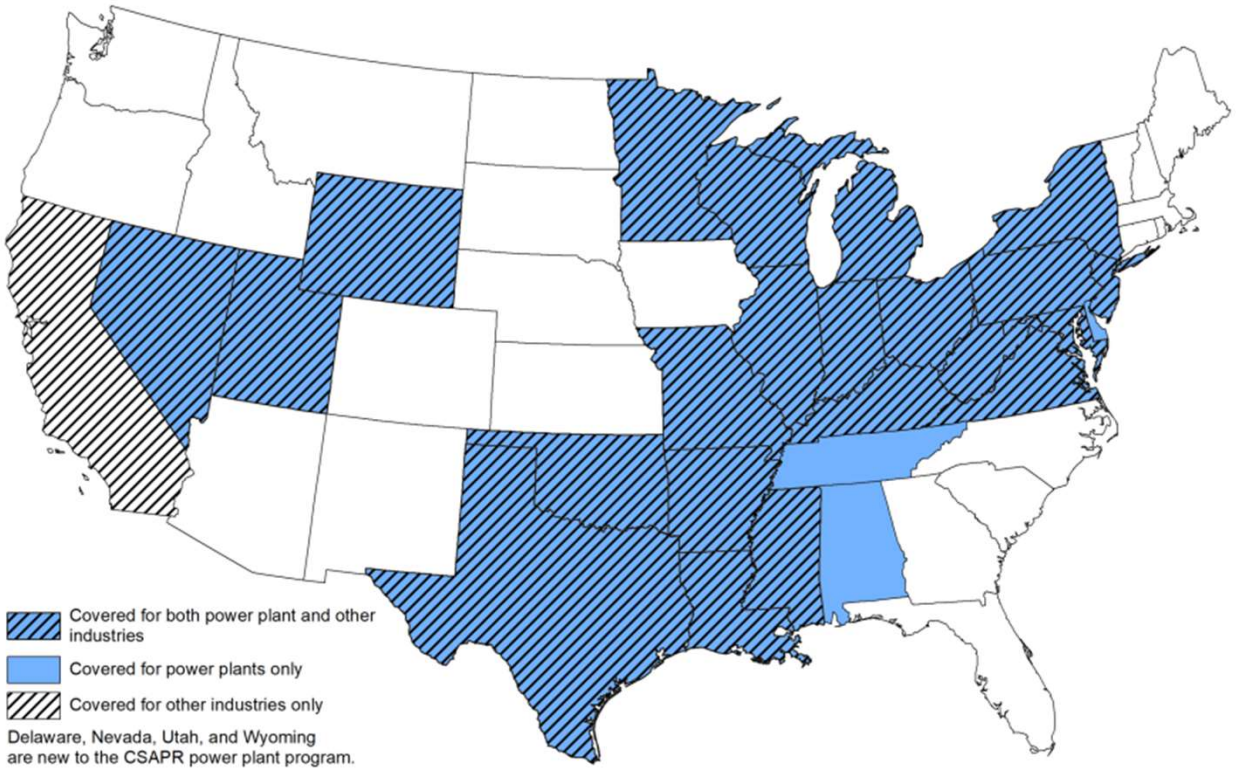
Step 3: Multifactor Analysis FIP Analytical Framework

- Identify ***potentially impactful industries*** (grouped by 4-digit NAICS codes)
  - Maximum contribution ≥ 0.10 ppb at any single receptor.
  - Contributions ≥ 0.01 ppb at 10 or more receptors.
- Identify marginal cost threshold ($7,500/ton NO_X) using U.S. EPA Control Strategy Tool (CoST) to evaluate emissions reductions
  - Estimate emissions reductions for ***potentially impacted industries*** using the marginal cost threshold.
  - Estimate costs to ***potentially impacted industries***.
- Estimate air quality impacts at downwind receptors using AQAT based on emissions reductions in ***potentially impacted industries***.

Step 4: Permanent Emissions Reductions

- Federally enforceable requirements to achieve emissions reductions determined to be necessary at Step 3 to eliminate significant contributions.
  - Electric Generating Unit (EGU) – Ozone Season Budgetary Program
  - Non-EGU Unit-Specific Emissions Standards
- Must be included in an implementation plan so that it is permanent and federally enforceable.
- Emissions reductions in the Good Neighbor Plan **do not** predict attainment for all downwind receptors.

Geography and Affected States



23 States Subject to non-EGU Unit-Specific Emissions Limitations (2026):

Arkansas, California, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming

SOURCE: https://www.epa.gov/system/files/documents/2022-03/fact-sheet_2015-ozone-proposed-good-neighbor-rule.pdf

EGU Ozone Season NO_X Reductions

Electrical Generating Unit Future Year Emission Baselines, Proposed Budgets and Illustrative Proposed Budgets (tons)								
State	2023		2024		*2025*		*2026*	
	Baseline[1]	Proposed Budgets[2]	Baseline[1]	Proposed Budgets[2]	Baseline[1]	Proposed Budgets[2,3]	Baseline[1]	Proposed Budgets[2,3]
Ohio	10,295	8,369	10,295	8,369	10,295	8,369	10,295	8,586

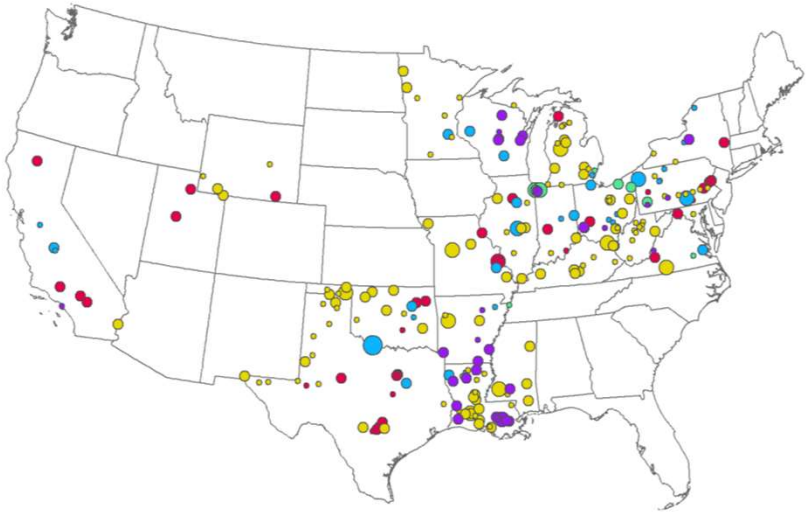
[1] Baseline values shown here reflect current 2021 emissions adjusted to account for the removal of units scheduled to retire or the addition of under-construction new fossil units scheduled to occur by that year. Actual future year baseline emissions will likely be lower due to yet-to-be announced changes in the fleet composition (see RIA for these estimates).

[2] Each state has a variability limit of 21%, meaning they can emit up to an assurance level of 121% of the budgets shown in the tables provided that they do not collectively exceed the regional budget and any available banked allowances.

[3] 2025 and 2026 budget values are illustrative only. Eventual budgets for those years will be calculated at a later date by applying the methodology described in the proposed rule to latest fleet characteristics at that time.

SOURCE: https://www.epa.gov/csapr/proposed-state-budgets-under-csapr-2015-ozone-naaqs

Non-EGU Ozone Season NO_X Reductions



- Cement and Concrete Product Manufacturing
- Glass and Glass Product Manufacturing
- Iron and Steel Mills and Ferroalloy Manufacturing
- Pipeline Transportation of Natural Gas
- High Emitting Equipment from Tier 2 industries

- >1000 tons
- 500-1000 tons
- 100-500 tons
- Under 100 tons

State	Cement and Concrete Product Manufacturing	Glass and Glass Product Manufacturing	Iron and Steel Mills and Ferroalloy Manufacturing	Pipeline Transportation of Natural Gas	High Emitting Equipment from Tier 2 industries	Total
LA	0	206	0	3,915	2,649	6,769
TX	1,234	1,470	0	1,736	0	4,440
OK	586	190	0	2,799	0	3,575
PA	888	1,379	438	427	152	3,284
IN	468	338	1,829	152	388	3,175
MO	1,296	227	0	1,581	0	3,103
OH	116	451	847	1,198	179	2,790
MI	371	50	38	2,272	0	2,731
IL	234	901	0	1,316	0	2,452
KY	0	0	0	2,291	0	2,291
WI	0	677	0	0	1,472	2,150
MS	0	0	0	1,577	184	1,761
CA	1,162	299	0	137	68	1,666
AR	0	47	6	868	732	1,654
VA	398	174	92	801	98	1,563
WV	230	0	0	751	0	982
WY	446	0	0	380	0	826
UT	520	0	0	237	0	757
MN	0	115	0	558	0	673
NY	142	141	0	106	111	500
MD	0	0	0	45	0	45

2,790 Tons NO_X Reduction in Ohio for 2026 Ozone (Projected)

SOURCE: https://www.epa.gov/system/files/documents/2022-03/nonegu-reductions-ppb-impacts-2015-o3-transport-fip-final-memo.pdf

Background and Timeline for Proposed Rulemaking

Ohio Environmental Protection Agency

Background of Proposed Rulemaking

- Proposed **Federal** Rule
  - Would be promulgated and implemented by U.S. EPA
  - Not a state rule implemented by Ohio EPA
- Latest Update to the Nitrogen Oxides (NO_X) SIP Call Regulations
  - NO_X Budget Trading Program (2003 – 2008)
  - Clean Air Interstate Rule (2009 – 2014)
  - Cross-State Air Pollution Rule (CASPR) [2015 – Present]
  - Good Neighbor FIP (Proposed 2021)

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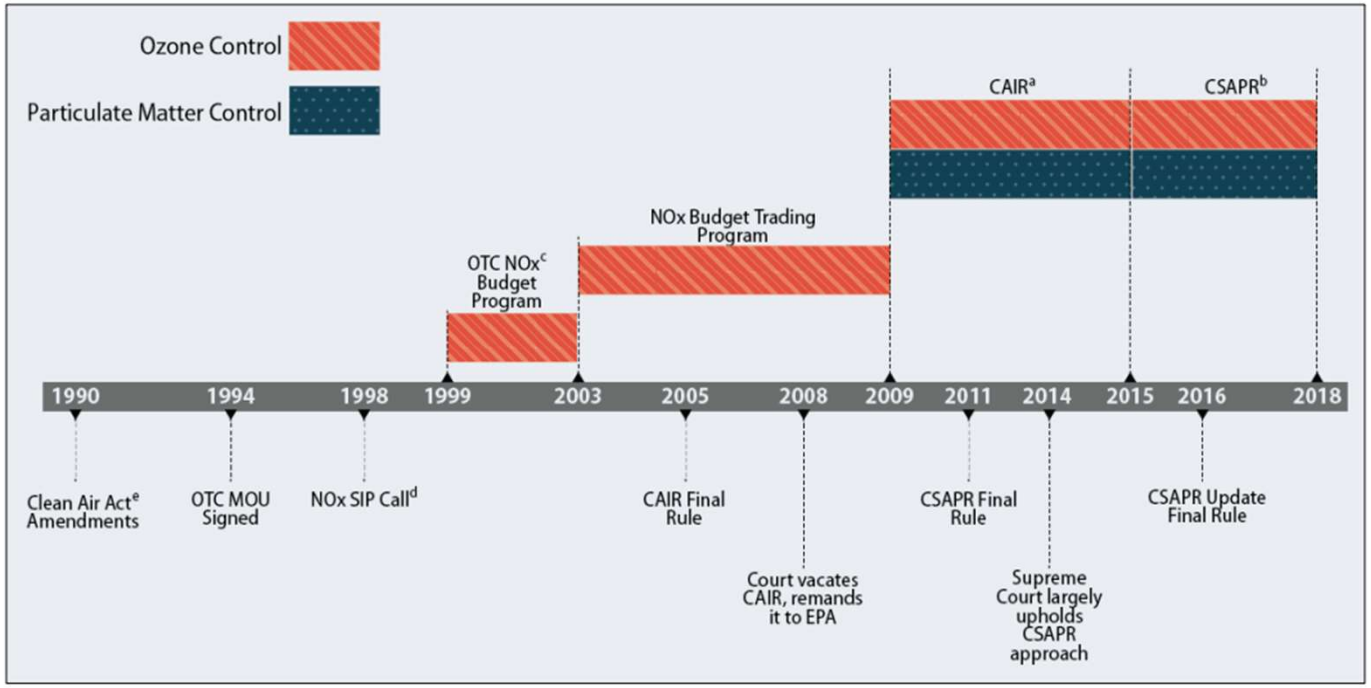
Implementation Timeline of Regional Ozone Control Programs



Source: CRS analysis.

Notes: The program dates in the figure represent the timeline for implementation and not enactment of statutory mandates. In addition, the Acid Rain Program, which seeks to reduce power sector emissions that cause acid rain (i.e., SO_2 and NO_x), was established under the 1990 CAA Amendments and remains in effect today.

a. CAIR refers to the Clean Air Interstate Rule.
b. CSAPR refers to the Cross State Air Pollution Rule.
c. OTC NO_x refers to the Ozone Transport Commission Nitrogen Oxide Budget Program.
d. NO_x SIP Call refers to the Nitrogen Oxide State Implementation Plan Call.
e. Clean Air Act (CAA) of 1970 initially mandated the "Good Neighbor" provision, which was subsequently amended under the 1977 CAA and the 1990 amendments.

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Timeline of Proposed Rulemaking

- November 2021 and January 2022 consent decrees established deadlines for U.S. EPA to act on State Implementation Plans (SIPs) and propose a Federal Implementation Plan (FIP)

- On February 22, 2022, U.S. EPA proposed to disapprove Ohio's good neighbor State Implementation Plan (SIP)
  - U.S. EPA has indicated the proposed FIP would fully resolve Ohio's outstanding good neighbor obligations.

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Timeline of Proposed Rulemaking

- February 28, 2022, U.S. EPA Administrator signs proposed Federal Implementation Plan (FIP)
- March 29 – 31, 2022, U.S. EPA hosts informational webinars
- On April 6, 2022, U.S. EPA published a FIP addressing regional ozone transport for the 2015 Ozone National Ambient Air Quality Standard (NAAQS)
  - https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs

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Timeline of Proposed Rulemaking

- On April 21, 2022, U.S. EPA held a public hearing.
- On May 12, 2022, U.S. EPA extends comment period
  - Comments were due on or before June 21, 2022
- July 2022 Updates
- December 2022, U.S. EPA consent decree deadline to take final action on SIPs.

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Proposed Transport FIP

- Initial compliance date in 2026 for non-EGU Sources
  - Applies May 1 through September 30
- Non-EGUs are not proposed to be included in the trading program (CSAPR)
  - Would necessitate Part 75 continuous monitoring
- Emissions limits by source type
  - No apparent provisions for approval of source-specific alternative limits
- Requirements incorporated into Title V permit
- Electronic reporting through U.S. EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI)
  - Performance test reports, performance evaluation reports, quarterly and semi-annual reports, and excess emissions reports
- Maintain records for at least 5 years (at least 2 years on site)

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Impacted Sources
(Non-Electric Generating Units)

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Pipeline Transportation of Natural Gas

– Stationary, natural gas-fired, spark ignited reciprocating internal combustion engines ("stationary SI engines") of 1000 horsepower (hp) or greater
  - NAICS code 4862xx

Engine Type and Fuel	Proposed NO_x Emission Limit (grams per horsepower per hour)
Natural Gas Fired Four Stroke Rich Burn	1.0 g/hp-hr
Natural Gas Fired Four Stroke Lean Burn	1.5 g/hp-hr
Natural Gas Fired Two Stroke Lean Burn	3.0 g/hp-hr

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Pipeline Transportation of Natural Gas

- Compliance is based on the average of three 1-hour runs
- Keep a maintenance plan and record of conducted maintenance
- To the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions
- Performance testing:
  - If engine meets certification requirements of New Source Performance Standards (NSPS) in § 60.4243(a), performance testing is not required
  - For non-certified engines:
    - Initial performance test within 6 months; subsequent performance tests every 6 months thereafter
    - 40 CFR Part 60, Appendix A, any alternative test method approved by U.S. EPA as of 4/6/22, or other methods approved by U.S. EPA through notice-and-comment rulemaking
    - U.S. EPA is requesting comment on whether to require CEMS instead of semi-annual performance testing
- If SCR or NSCR is used to reduce emissions, monitor inlet temperature daily and pressure drop monthly
- If SCR or NSCR is not used to reduce emissions, continuous parameter monitoring system (CPMS) based on a site-specific monitoring plan
- Electronic reporting through CEDRI
- See proposed FIP for additional details

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Cement and Concrete Product Manufacturing

- Units (kilns) that emit or have the potential to emit (PTE) 100 tons/yr or more of NO_X
  - NAICS 3273xx; SCCs 3-05-006 and 3-05-007
- 30-operating day rolling average period

Kiln Type	Proposed NO_X Emissions Limit (lb/ton of clinker)
Long Wet	4.0 lb/ton
Long Dry	3.0 lb/ton
Preheater	3.8 lb/ton
Precalciner	2.3 lb/ton
Preheater/Precalciner	2.8 lb/ton

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Cement and Concrete Product Manufacturing

- Also, a 30-day rolling average source cap limit expressed in tons per day (tpd) of NOx for each individual cement plant

$$CAP2015\ Ozone\ Transport = \frac{(KW\ x\ NW) + (KD\ x\ ND)}{\left(2000\frac{pounds}{ton}\ x\ 365\frac{days}{year}\right)}$$

Where:

CAP2015 Ozone Transport = total allowable NOx emissions from all cement kilns located at one cement plant, in tons per day, on a 30-operating day rolling average basis;

KD = 1.7 pounds NOx per ton of clinker for dry preheater-precalciner or precalciner kilns;

KW = 3.4 pounds NOx per ton of clinker for long wet kilns;

ND = the average annual production in tons of clinker plus one standard deviation for the three most recent calendar years from all dry preheater-precalciner or precalciner kilns located at one cement plant; and

NW = the average annual production in tons of clinker plus one standard deviation for the three most recent calendar years from all long wet kilns located at one cement plant.

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Cement and Concrete Product Manufacturing

- Performance testing:
  - Semi-annual
  - 40 CFR Part 60, Appendix A, any alternative test method approved by U.S. EPA as of 4/6/22, or other methods approved by U.S. EPA through notice-and-comment rulemaking
- Calculate and record 30-operating day rolling emission rate of NOx
- Electronic reporting through CEDRI
- See proposed FIP for additional details

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Glass and Glass Product Manufacturing

- Units that emit or have the PTE of 100 tons/yr or more of NO_X
  - NAICS 3272xx
- 30-operating day rolling average period

Furnace	Proposed NO_X Emissions Limit (lb/ton of glass produced)
Container Glass Manufacturing Furnace	4.0 lb/ton
Pressed/Brown Glass Manufacturing Furnace or Fiberglass Manufacturing Furnace	4.0 lb/ton
Flat Glass Manufacturing Furnace	9.2 lb/ton

Ohio Environmental Protection Agency

Glass and Glass Product Manufacturing

- Performance testing:
  - Semi-annual
  - 40 CFR Part 60, Appendix A, any alternative test method approved by U.S. EPA as of 4/6/22, or other methods approved by U.S. EPA through notice-and-comment rulemaking
- Calculate and record 30-operating day rolling emission rate of NOx
- Electronic reporting through CEDRI
- See proposed FIP for additional details

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Iron and Steel Mills and Ferroalloy Manufacturing

- Units that emit or have the potential to emit 100 tons/yr or more of NOx
- Facilities containing two or more such units that collectively emit or have the potential to emit 100 tons/yr or more of NOx
- NAICS 3311xx

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Iron and Steel Mills and Ferroalloy Manufacturing

Emissions Unit	Proposed NO_X Emissions Standard or Requirement (lbs/ton or lb/mmBtu)
Blast Furnace	0.03 lb/mmBtu
Basic Oxygen Furnace	0.07 lb/ton steel
Electric Arc Furnace	0.15 lb/ton steel
Ladle/tundish Preheaters	0.06 lb/mmBtu
Reheat furnace	0.05 lb/mmBtu
Annealing Furnace	0.06 lb/mmBtu
Vacuum Degasser	0.03 lb/mmBtu
Ladle Metallurgy Furnace	0.1 lb/ton steel
Taconite production kilns	Install and operate low NOx burners as required by 2013 and 2016 Minnesota FIPs
Coke ovens (charging and coking)	0.6 lb/ton of coal charged
Coke ovens (pushing)	0.015 lb/ton of coal pushed
Boilers - Coal	0.20 lb/mmBtu
Boilers - Residual oil	0.20 lb/mmBtu
Boilers - Distillate oil	0.12 lb/mmBtu
Boilers - Natural gas	0.08 lb/mmBtu
Note: U.S. EPA indicates the proposed rule is intended to cover ferroalloy plants and the rule should have specified "lb/ton" without referencing steel specifically.	

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Iron and Steel Mills and Ferroalloy Manufacturing

- Compliance is based on 3-hour rolling average
  - Proposed rule also refers to 30-day rolling average, but we have confirmed U.S. EPA's intent is 3-hour rolling average
- Install, maintain and continuously operate NOx control devices to achieve emission limits
- Submit a work plan within 180 days of the effective date of the rule identifying how the unit will comply
- Install, operate and maintain NOx continuous emission monitoring system (CEMS)
  - 40 CFR Part 60, Appendix B
- Electronic reporting through CEDRI
- See proposed FIP for additional details

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Basic Chemical Manufacturing, Petroleum and Coal Products Manufacturing, and Pulp, Paper, and Paperboard Mills

- Boilers with design capacity ≥ 100 mmBtu/hr
  - Basic Chemical Manufacturing: NAICS 3251xx
  - Petroleum and Coal Products Manufacturing: NAICs 3241xx
  - Pulp, Paper, and Paperboard Mills: NAICS 3221xx
- 30-operating day rolling average period

Unit type	Proposed Emissions limit (lbs NO_X/mmBtu)
Coal	0.20 lb/mmBtu
Residual oil	0.20 lb/mmBtu
Distillate oil	0.12 lb/mmBtu
Natural gas	0.08 lb/mmBtu

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Basic Chemical Manufacturing, Petroleum and Coal Products Manufacturing, and Pulp, Paper, and Paperboard Mills

- Initial compliance test
  - 40 CFR 60.8 using continuous NOx monitoring system
  - 30-day average rate used to determine compliance
    - Average of all hourly emissions during the 30-day test period
- Install, operate and maintain NOx continuous emission monitoring system (CEMS) and either O_2 or CO_2 CEMS
  - 40 CFR 60.13
  - 40 CFR Part 75 CEMS may be used to meet requirements
  - Installation of CEMS may be delayed until after initial compliance test
    - If initial compliance test is less than 70% of emission limit, may request alternative monitoring procedure
- Following initial compliance test, compliance is based on 30-operating day rolling average
- Electronic reporting through CEDRI
- See proposed FIP for additional details

Summary

- Need to be aware of developments as U.S. EPA moves forward.
- Ohio EPA will notify affected facilities when the rule is finalized.

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Comments Submitted by Ohio EPA and the Attorney General of Ohio

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Ohio EPA Comments to Proposed Rulemaking

- U.S. EPA has proposed an extremely low and potentially unachievable emissions rate and NO_X budget for Ohio's EGUs.
- U.S. EPA should provide clarity on state's role in the U.S. EPA FIP.
- Applicability for non-EGUs is based on calculation of potential-to-emit (PTE); however, there is no definition of PTE in FIP.
- Screening analysis conducted by U.S. EPA does not include all the sources subject to the FIP. This could lead to under-predicting the marginal cost of compliance and therefore over-regulating sources under the FIP.

Ohio EPA Comments to Proposed Rulemaking

- U.S. EPA should only require Continuous Emissions Monitoring Systems (CEMS) for significant emitting sources based on actual emissions. CEMS requirements should not be based on PTE or categorical requirement for all units in a non-EGU source category.
- U.S. EPA should clarify actual emissions threshold triggering applicability of the FIP for the iron and steel category.

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Ohio EPA Comments to Proposed Rulemaking

- Ohio continues to have concerns regarding the use of one percent of the standard as a contribution threshold to determine linkage to downwind attainment or maintenance ambient air monitoring sites.
  - As NAAQS continue to be revised and strengthened, the continued use of a 1% threshold will eventually become impractical and infeasible.
  - Results in very small contributions having substantial consequences for unit-level contributions.
  - When used for promulgating trading programs, use of such low thresholds continually rachets down state budgets and unit level allocations.

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Ohio EPA Comments to Proposed Rulemaking

- A U.S. EPA study suggests that ozone in the Eastern U.S. may have become more of a local problem as opposed to a broad regional (transport) problem.
  - Source apportionment modeling shows approximately 10-13 ppb contribution from the onroad sector at the pertinent monitors.
  - For illustrative purposes, a change to a 4% (2.8 ppb) threshold would eliminate all Ohio linkages.
- Local onroad emissions should be properly addressed before continuing to require more and more reductions, at potentially cost-prohibitive levels, from upwind sources.

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Attorney General of Ohio Comments

- FIP “over-controls” States, resulting in greater emissions reductions than necessary to meet the NAAQS.
- Arbitrarily regulates seven industries and imposes requirement that many sources cannot achieve in a cost-effective manner.
- Defies Supreme Court and D.C. Circuit precedent barring EPA’s over-control proposed in the FIP.

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SUMMARY OF COMMENTS

Delegated Clean Air Act Administrators, Industry and Trade Associations, & Regulated Sources

Comments to Good Neighbor FIP:

Delegated Clean Air Act Administrators

- Upwind states are not receiving “fair treatment” (consistent with U.S. EPA Environmental Justice and Equity Policies) under the rule because U.S. EPA is only considering the potential health benefits in downwind states while not accounting for economic impact and costs to upwind states.
- Significant reductions from upwind states are proposed with minimal improvement to ambient ozone concentrations at downwind monitors. U.S. EPA explicitly states that only a single monitor will come into attainment by 2023 and only four total by 2026.

Comments to Good Neighbor FIP:

Delegated Clean Air Act Administrators

- U.S. EPA is proposing a transport FIP using newly updated modeling data (2016v2 Platform) that was not made available via the Notice of Data Availability (NODA) process and publication in the Federal Register.
- U.S. EPA should provide states opportunities to review emissions inventories used in the modeling. Then, once the inventories are correct, U.S. EPA should perform revised photochemical modeling and provide notification of availability using the NODA process.

Comments to Good Neighbor FIP:

Other Delegated Clean Air Act Administrators

- U.S. EPA used shortcuts to evaluate data because of consent decree schedule relying on the Air Quality Assessment Tool (AQAT) rather than photochemical air quality modeling.
  - U.S. EPA established photochemical modeling as the basis for determining downwind ozone impacts from upwind NO_X emissions.
  - Photochemical modeling has been applied in every ozone transport rule that U.S. EPA has developed since 1998.
  - U.S. EPA states air quality modeling would be the optimal way to estimate impact at cost threshold level for EGUs and non-EGUs in proposed rulemaking but did not perform.

Comments to Good Neighbor FIP:

Cement and Concrete Product Manufacturing

- U.S. EPA circumvented required analyses to establish industry-wide standards for the Cement and Concrete Manufacturing Industry to emissions controls and exceeded its interstate transport authority under §110(a)(2)(D)(i)(I).
  - NSPS Program requires U.S. EPA to determine if control technologies have been adequately demonstrated or are achievable before determining the best system of emissions reduction (BSER).
  - Inappropriate to apply Reasonable Available Control Technology (RACT) standards industry-wide. RACT is determined on a case-by-case basis considering technological and economic circumstances for a source.
  - In setting MACT, EPA must consider "the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements."

Comments to Good Neighbor FIP:

Iron and Steel Mills and Ferroalloy Manufacturing

- FIP rule applicability should not be based solely on PTE. Numerous identified facilities have PTE > 100 tons/yr NO_X but actual NO_X emissions significantly below 100 tons/yr.
- U.S. EPA NO_X emissions reduction requirements for Iron and Steel Mills and Ferroalloy Manufacturing will lead to increases in other criteria pollutants.
  - Excessively low NO_X emissions limitations will force industries to operate combustion sources in a fuel-rich environment, which will inevitably result in higher local and ambient carbon monoxide (CO) emissions.

ALL4

Comments to Good Neighbor FIP:

Pulp, Paper, and Paperboard Mills (NAICS 3221xx)

- Sector should not be included in the Good Neighbor Plan.
  - U.S. EPA AQAT analysis included facilities that are closed, shut down units, or units burning only wood waste resulting in overestimation of ozone contribution to downwind receptors.
  - Updated AQAT analysis with corrected baseline inventory, to remove emissions units that have been shut down, indicates that the pulp, paper, and paperboard sector no longer triggers the criteria identified for inclusion as a “Tier 2” industry.
  - Technical infeasibility of NO_X controls proposed in FIP for biomass or co-fired boilers that are load-following (swing) units.

Strategic Permitting Considerations

Non-EGU Sources

Confirm Applicability Status at Final Rule

- Once final rulemaking is promulgated, review rule to determine if your source(s) are impacted.
- Initiate discussions with Ohio EPA. Ohio EPA intends to notify affected sources and a preliminary conversation is recommended so that Ohio EPA and permittee are on the same page for affected source(s).
  - PTE definition discussions and Ohio EPA interpretation.
- Communicate to site operations and engineering the compliance timeline of the rule.
  - 2026 Ozone Season for non-EGUs

Compliance Cost Considerations

- Stack testing frequency could be increased under the FIP.
- Does the rule require your source(s) to use Continuous Emissions Monitoring Systems (CEMS) to demonstrate compliance?
  - Do you have staff expertise to operate and maintain CEMS?
  - Plan now for budgetary impacts for annual operating costs of CEMS.

Program and Regulation Considerations

- Is your facility a major stationary source under the New Source Review (NSR) Permitting Program?
  - Gather baseline emissions data for affected units.
  - Minor NSR actual-to-projected-actual applicability test likely necessary for any project initiated to meet new emissions standard.
- FIP affected source(s) likely subject to Federal air regulations.
  - Standards of Performance for New Stationary Sources (NSPS) [40 CFR Part 60]
  - CAA §111(d) Emissions Guidelines for Existing Sources [40 CFR Part 60]
  - National Emissions Standards for Hazardous Air Pollutants (NESHAP) [40 CFR Part 61]
  - Maximum Achievable Control Technology (MACT) Standards [40 CFR Part 63]

Strategic Permitting Considerations

- What are your options to comply with new emissions standard?
  - New restriction on operations to meet lower emissions standard.
  - Installation of add-on pollution control device.
  - Physical change to an air contaminant source.
- Identify costs for any physical changes to the air contaminant source.
  - Fixed capital costs for new components > 50% of the fixed capital costs to construct a comparable new source or affected facility?
  - Changes to applicable requirements under NSPS, NESHAP, or MACT.

Strategic Permitting Considerations

- Does project result in a "Modification" of an Air Contaminant Source? [OAC 3745-31-01(SSS)]
  - Best Available Technology (BAT) Requirements.
- Before beginning actual construction of a NSR Project, the owner or operator shall document [OAC 3745-31-10(A)] the following:
  - Description of the NSR Project.
  - Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the NSR Project.
  - NSR applicability test used.

Recap of Permitting Considerations

- PTE definition for affected units.
- NSR Project considerations.
- Reconstruction under NSPS, NESHAP, or MACT?
- Modification considerations.
  - OAC Chapter 31 Modification?
    - BAT Requirements.
  - NSPS Modification.
- Compliance Assurance Monitoring (CAM)
  - Revision to Site Plan if operating new or changed CEMS.

Permit Process and Recommendations

- Permit-to-Install (PTI) used to incorporate new requirements into Title V Operating Permit.
  - Significant changes to standards, recordkeeping, monitoring, or reporting.
- Goal - accurate, flexible, with reasonable compliance requirements
- Improve your chances of getting the “right” permit:
  - Prepare a detailed application that incorporates operational flexibility.
  - Carefully review draft permit for accuracy, flexibility, and proactively identify any ambiguous permit condition(s).

Permit Process and Recommendations

- Request a pre-publication draft
  - Provide all comments on pre-publication draft prior to formal public comment period.
- Formal public comment period
  - Draft permit is not set in stone – comment and negotiate!
  - Review again, source can provide additional comments during public comment period (as appropriate).
  - Permit negotiation is normal.
- Final permit

Questions?

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Biographical Information

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Mr. Stewart McCollam is a licensed professional chemical engineer with over 12 years of experience in all aspects of air quality regulation. As a practitioner, he focuses on preconstruction air permitting, dispersion modeling, litigation support, and compliance management. Mr. McCollam assists clients with complex air permitting and strategic compliance solutions in a multitude of industries including: chemical manufacturing; distilled spirits production; flat glass manufacturing; industrial printing; municipal solid waste landfills; and cement manufacturing. Prior to being a consultant, Mr. McCollam was a permit engineer with the Louisville Metro Air Pollution Control District. His professional experience as both a regulator and consultant provide Mr. McCollam a unique perspective on regulatory policy and a comprehensive understanding of its impacts to businesses.

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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.