

# **Air Overload: Everything, Everywhere, All at Once**

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## National Enforcement and Compliance Initiatives

- Reducing Toxics
  - Problem Statement: Communities overburdened by air pollution (HAPs + carcinogens) which may cause health impacts
  - Plan: EPA will review data (publicly available, complaints, ambient air monitors) and conduct targeted inspections
  - Crystal ball:
    - State agency involvement
    - “Next gen”
    - Cumulative impact analysis
    - Increased enforcement
    - Community engagement

## National Enforcement and Compliance Initiatives

- Mitigating Climate Change
  - Problem Statement: Widespread noncompliance in three focus areas (HFC, O&G, MSW landfills) causing excess GHG emissions
  - Plan: Continued focus on these three areas, plus facilities with gas flaring, emissions from storage tanks and wastewater treatment systems, incineration and combustion, and facilities with GHG rule compliance issues
  - Crystal Ball:
    - Prioritization of inspections at facilities with highest climate risks
      - Including “next gen” (flyovers, satellite data)
    - Incorporation of climate strategies through enforcement
      - Super Delegation approach
    - Regulation
      - GHG new and existing source rule (URA estimate April 2024)
        - May have different timelines for specified subcategories
      - Final 111(d) guidelines published Nov. 27, 2023 – implementation throughout 2024 (to meet 18-month deadline for state plan submittal)

## National Enforcement and Compliance Initiatives

- Chemical Accident Risk Reduction
  - Problem Statement: Accidents continue to occur from facilities due to inadequate management of risk
  - Plan: Inspect high-risk facilities (HF and NG3) including petroleum refineries and chemical manufacturing; increased credentialed 112(r) inspectors
  - Crystal Ball:
    - RMP revisions will issue (URA estimate: Dec. 2023; at OMB since 9/25/23)
    - Continued enforcement, w/ EJ and climate overlay (and inclusion in of related injunctive relief in resolutions)
      - Environmental organizations issued Chemical Incident Tracking 2021-2023, which may serve as a guide (identifies 825 hazardous chemical accidents since Jan. 2021)
      - General Duty Clause
    - Agency coordination (RMP/PSM)

# Key RMP Requirements

- ▶ 2019 Requirements
- ▶ 2022 Proposed Changes

## Public Meeting After RMP-Reportable

- ▶ Applies to incidents that occur after March 15, 2021
- ▶ Requirement for public meeting within 90 days after RMP-reportable incident
- ▶ Reconsideration narrowed to only those incidents with off-site effects
  - Death, injury, evacuation, shelter in place, property or environmental damage
- ▶ Date of the public meeting will be reported in site RMPlan Registration Information after RMP\*eSubmit modifications

## RMP - Emergency Response Coordination- ALL SITES

- Section 68.93 - All Level 2 & 3 programs
- Coordinate with local responders at least annually, to
  - Ensure local responders are aware of your regulated substances, their quantities & risks, and your response resources & capabilities
  - Address changes at the source & in source emergency plan
  - Address changes in local community response plan
  - Provide copy of source emergency plan and emergency contact info
- Document coordination activities
- Applies to non-responding and responding facilities at Level 2 & 3 sites
  - Level 1 sites already require coordination (68.10(b)(3))
- Sites must also coordinate Emergency Exercises schedule
  - Establish schedules and plans before **December 19, 2023**

## RMP –Emergency Response Exercises (1 of 2) – ALL SITES

- ▶ Maintains Section 68.96 with modifications to schedule and exercise scope
- ▶ EPA plans to publish guidance for ER exercises
- ▶ **Develop exercise schedule by 12/19/2023**

### 68.96(a) Notification exercises – all Level 2 & 3 sites

- ▶ Once each calendar year, test emergency response notification mechanisms
  - Contact information is accurate
  - Responding sites can combine with other exercises
  - Maintain records of exercises for last 5 years
- ▶ **Conduct first notification exercise by 12/19/2024**



## RMP – Responding Sites - Emergency Response Exercises (2 of 2)

### 68.96(b) Tabletop & field exercises – responding sites

- ▶ Coordinate with & invite local public responders
- ▶ Tabletop
  - **Conduct first tabletop exercise by 12/19/2026** and at least every 3 years after
- ▶ Field (simulated) release
  - Conduct field exercise “at appropriate interval” based on schedule developed with local public responders
- ▶ Evaluation report within 90 days of exercise

RMP Safer Communities by Chemical Accident Prevention  
(SCCAP) August 31, 2022 Proposed Rule

## 2022 RMP Proposed Rule

- ▶ Prevention Program (Subpart C and D)
  - Hazard Review (HR) and Process Hazard Analysis (PHA)
  - Incident Investigation
  - Compliance Audit
  - Employee Participation
- ▶ Emergency Response (Subpart E)
- ▶ Information Availability
- ▶ Other Areas of Technical Clarification
  - Process Safety Information (PSI)
  - Compliance with Recognized and Generally Accepted Good Engineering Practices (RAGAGEP)
  - Storage Incident to Transportation
  - Retail Facility Exemption



## Prevention Program (Subpart C and D)

## Hazard Review (HR) and Process Hazard Analysis (PHA)

- ▶ Address external events such as **natural hazards**, including those caused by *climate change* or other triggering events, that could lead to an accidental release
- ▶ Address **standby or emergency power systems**
  - Required for *air pollution control or monitoring equipment for prevention and detection of accidental releases*
  - Not required for the entirety of an RMP process
- ▶ Clarify **facility siting** requirements
  - *New requirements* for Program 2 HR
  - Rely on industry guidance to help **adequately address stationary source siting**
- ▶ Justify in the Risk Management Plan why recommendations from facility siting were not adopted

# Hazard Review (HR) and Process Hazard Analysis (PHA)

- ▶ Add Safer Technologies and Alternative Analysis (STAA) for
  - Petroleum refining or chemical manufacturing processes located within one mile of another facility with petroleum refining or chemical manufacturing processes
  - All petroleum refining facilities *using hydrofluoric acid (HF) in an alkylation unit*
- ▶ Document the feasibility of applying STAA in PHA based on more than cost alone
  - Not required to implement identified inherent safer measures

# Compliance Audit

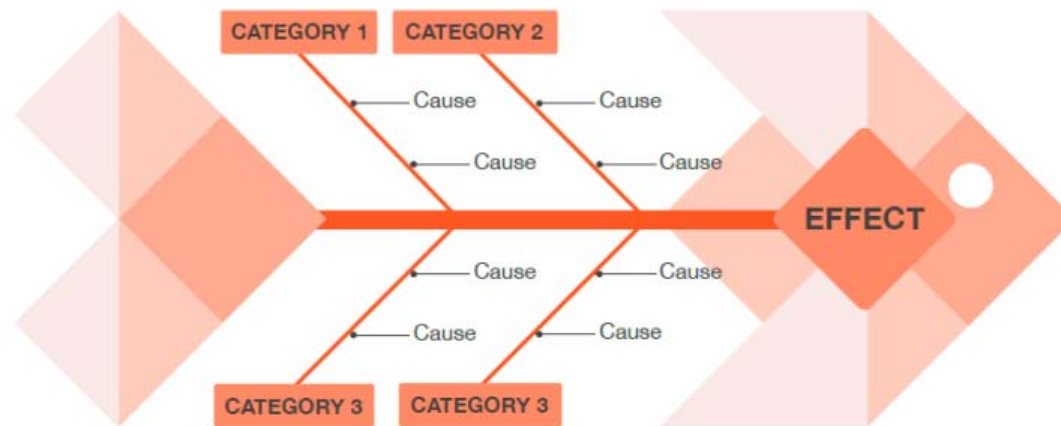
- ▶ Require a **third-party audit** for
  - All facilities after **two RMP-reportable accidents within a 5-year period**
  - All petroleum refining or chemical manufacturing processes that are located within a one-mile radius of another petroleum refining or chemical manufacturing process after **one RMP-reportable accident**
- ▶ Justify in the Risk Management Plan why recommendations from third-party audit were not adopted.



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# Incident Investigation

- ▶ Require a root cause analysis for **any** RMP-reportable accident
  - Use a recognized investigation method
  - Complete within 12 months of the incident
  - Time extension via a written approval may be granted by the implementing agency for complex incidents



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## Additional Resources

- ▶ Trinity eNews Article  
<https://www.trinityconsultants.com/news/risk-management-program-safer-communities-by-chemical-accident-prevention-proposed-rule-highlights>
- ▶ EPA RMP SCCAP Rule  
<https://www.epa.gov/rmp/risk-management-program-safer-communities-chemical-accident-prevention-proposed-rule>
- ▶ See information submitted during public comment period on the proposed rule
  - [www.regulations.gov](http://www.regulations.gov)
  - Docket ID No.: EPA-HQ-OLEM-2022-0174
  - **No final rule published as of 12/4/2023**

# NAAQS Revisions

- ▶ PM2.5
- ▶ Ozone

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# NAAQS



	PM2.5	Ozone
Current Standard	Primary: 12.0 ug/m <sup>3</sup> (annual) Secondary: 15.0 ug/m <sup>3</sup> (secondary)	Primary/Secondary: 0.070 ppm (8-hour)
Status	Reconsideration under review (took comment on 8-11 ug/mg <sup>3</sup> , with particular focus on 9-10 ug/mg <sup>3</sup> )	Under full review Call for Information in August 2023
Next Steps	Final Rule was expected in Oct. 2023 (per UFA) At OMB (since 9/22/2023)	NPRM expected in April 2024 No date for Final Rule at this time
Feedback	Extensive lobbying happening for both sides (GOP wants rule scrapped based on costs; industry wants 12.0 retained; states concerned with lowered standard, permit impacts, exceptional events considerations)	Draft recommendations from Clean Air Scientific Advisory Committee to lower standard;
Crystal Ball	New (by year-end), lower, challenged	No final rule before 2024 election

# NAAQS

- Other NAAQS on the horizon:
  - Secondary NO<sub>x</sub>, SO<sub>2</sub> and PM – NPRM estimated March 2024 (last Notice was 2018)
  - NO<sub>x</sub> (2018), Lead (2016) and CO (2011)
- Exceptional Events
- Practicalities
  - Permitting timelines/grandfathered apps
  - Delays in implementation
  - PM 2.5 designations required 12 months after effective date (2024/early 2025)

# MERPS and Boots the Ground in Ozone and PM<sub>2.5</sub> Compliance Demonstrations

## The future of Ozone and PM<sub>2.5</sub>

- ▶ In July 2022, EPA issued final Guidance for Ozone and Fine Particulate Matter (PM<sub>2.5</sub>) Permit Modeling
  - Intended to provide final guidance on how a PSD permit applicant can show that it will not cause or contribute to a violation of the NAAQS or PSD increments for Ozone and PM<sub>2.5</sub>
  - Provides a two tier approach for addressing single source impacts
    - ◆ Tier I - Demonstration involving relationships between emissions and ambient impacts
    - ◆ Tier II - Sophisticated case-specific chemical transport models

## When an analysis is triggered

- ▶ For Ozone:
  - If NO<sub>x</sub> => 40 tpy, OR
  - VOC => 40 tpy
  - Must include both pollutants in the analysis
  
- ▶ For PM<sub>2.5</sub>
  - If direct PM<sub>2.5</sub> emissions => 10 tpy, OR
  - If NO<sub>x</sub> emissions => 40 tpy, OR
  - If SO<sub>2</sub> emissions => 40 tpy
  - Must include direct PM<sub>2.5</sub> AND secondary PM<sub>2.5</sub> from NO<sub>x</sub> and SO<sub>2</sub> in analysis

## Options for demonstration

- ▶ Ozone
  - Tier I – Modeled Emission Rates for Precursors (MERPs)
  - Tier II – Photochemical modeling
  
- ▶ PM<sub>2.5</sub>
  - Assess primary PM<sub>2.5</sub> impacts via AERMOD
  - Assess secondary impacts
    - ◆ Tier I – Modeled Emission Rates for Precursors (MERPs)
    - ◆ Tier II – Photochemical modeling



## What is a MERPs analysis (in one slide)?

- ▶ Tier I analysis (conservative)
- ▶ Uses hypothetical illustrative sources that have been modeled at a small handful of point source parameters
  - Stack height of 10m or 90m
  - Emission rates of 500, 1000, or 3,000 tpy
- ▶ Represents a level of increased precursor emissions that is not expected to contribute to significant levels of ozone or  $PM_{2.5}$



## What to do once you select your hypothetical source?

- ▶ Select source stack height (units: meters)
- ▶ Select emission rates (units: tpy)
- ▶ Review MERP
- ▶ Express the project source's emissions increase as a percent of the MERP value for each precursor, then add
- ▶ If the total value is less than 100%, indicative of the SIL not exceeded when considering the combined precursor impacts.

State	County	Metric	Precursor	Emissions	Stack	MERP	MaxConc
Missouri	Camden	8-hr Ozone	NOx	500	10	284	1.762336
Missouri	Camden	8-hr Ozone	NOx	500	90	236	2.119628
Missouri	Camden	8-hr Ozone	NOx	1000	90	262	3.815662
Missouri	Camden	8-hr Ozone	NOx	3000	90	328	9.139234
Missouri	Camden	8-hr Ozone	VOC	500	10	10962	0.045614
Missouri	Camden	8-hr Ozone	VOC	1000	10	10684	0.093595
Missouri	Camden	8-hr Ozone	VOC	1000	90	11062	0.090396
Missouri	Camden	8-hr Ozone	VOC	3000	90	8808	0.340607

Example: New source involves 150 tpy NOx and 50 tpy VOC. Stack height 37m. In mid-Missouri.

MERP for NOx = 284 (tpy)  
 MERP for VOC = 10962 (tpy)

Total impact =  $150/284 + 50/10962$   
 Total impact = 53%

## What do I need to know about this?



- ▶ With new EPA guidance, assessing a project's impacts on Ozone and PM<sub>2.5</sub>, especially with respect to secondary pollutant formation, is a real thing!
- ▶ The analysis can get a little complicated, especially when involving PM<sub>2.5</sub> (with both direct and indirect impacts)
- ▶ The analysis when involving Class I areas gets more involved
- ▶ Even though this guidance was initially implemented for PSD Permit applicants, states are pondering if similar analyses should be included in state-level modeling

# Environmental Disclosures

▶ SEC Proposed Rule

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# ESG – SEC Disclosure Proposal

- In March 2022, the Securities and Exchange Commission (SEC) proposed rules to enhance and standardize climate-related disclosures
  - Proposed to ensure “investors representing literally tens of trillions of dollars ... [get] reliable information about climate risks to make informed investment decisions.”
- Key components:
  - Disclosure of climate-related risks and their actual or likely material impacts on business, strategy and outlook;
  - Governance of climate-related risks and relevant risk management processes
  - GHG emissions (Scope 1-3)
  - Climate-related financial statement metrics and audited financial statement
  - Specifics about climate-related targets, goals and transition plan

# ESG – SEC Disclosure Proposal

- Status/timing
  - SEC has acknowledged challenges with the proposal, including during the recent Chamber of Commerce fireside chat with SEC Chairman Gary Gensler
    - Have also acknowledged changes in states and internationally that complicate the roll out
  - Unified Regulatory Agenda: October 2023
  - Not expected to go into effect until after first full calendar year after publication (i.e., in 2025 if it is released in 2023)
  - Unlikely to be finalized before year-end.

# EPA's Air Emission Reporting Rule (AERR)

## Proposed AERR Key Changes

- ▶ Additional data being requested
  - Unit-specific release point locations (lat./long.), stack exhaust parameters, control equipment identification and effectiveness, regulatory applicability, etc.
  - Per Table 2A
- ▶ All stack test reports must be submitted (if not already submitted via *CEDRI*)
- ▶ Required information cannot be marked Confidential
  - Including throughput data (in stack tests & annual reporting)



## New HAP Reporting Applicability Criteria

- ▶ Title V Major Sources
  - Report all HAP emitted
- ▶ Sites with a Primary NAICS on Table 1C
  - Report each HAP with actual emissions  $\geq$  [Table 1B](#) thresholds
  - Also report *incidental* CAP (e.g., VOC, PM<sub>10</sub>, PM<sub>2.5</sub>)
- ▶ Table 1B thresholds vary by individual HAP (1.1E-07 tpy to 10 tpy!)
- ▶ The first report will be required May 31, 2026, and annually thereafter
- ▶ **Reminder** – State reporting requirements may be more stringent

# New HAP Reporting Applicability Criteria

## ► Table 1C Primary NAICS:

NAICS	Description
21xxxx, 22xxxx, 3xxxxx except 311811	Industrial and manufacturing industries.
4247xx	Petroleum and Petroleum Products Merchant Wholesalers.
481xxx	Scheduled Air Transportation.
486xxx	Pipeline Transportation.
4883xx	Support Activities for Water Transportation.
493xxx	Warehousing and Storage.
5417xx	Scientific Research and Development Services
54199x	Other Professional, Scientific, and Technical Services.
56191x	Packaging and Labeling Services.
5622xx	Waste Treatment and Disposal.

NAICS	Description
5629xx	Waste Management and Remediation Services.
61131x	Colleges, Universities, and Professional Schools.
62211x	General Medical and Surgical Hospitals.
62231x	Specialty (except Psychiatric and Substance Abuse) Hospitals.
811121	Automotive Body, Paint and Interior Repair and Maintenance (except small entities)
8122xx	Death Care Services.
812332	Industrial Launderers.
92214x	Correctional Institutions.
927xxx	Space Research and Technology.
928xxx	National Security and International Affairs.

# How will EPA use additional HAP emission data?

## Regulatory Purposes

- ▶ Protect public health and inform communities of potential risks from these pollutants
- ▶ Currently a gap in the data that is available to EPA and data needed for EPA to meet regulatory requirements
- ▶ Facilitate future residual risk and technology reviews (RTR)
  - Review and revise current standards
- ▶ New source categories with “maximum achievable control technology,” (MACT) standards

# How will EPA use additional HAP emission data?

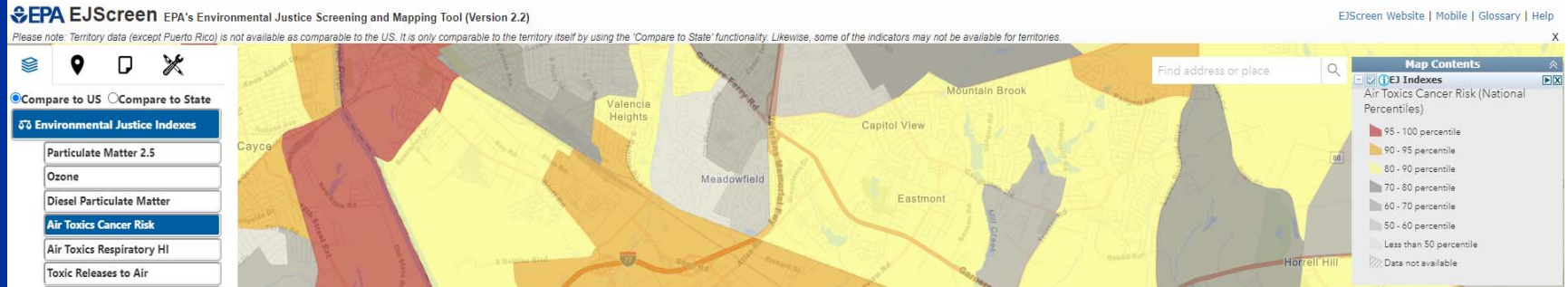
## Risk Assessment

- ▶ Integrated Risk Information System (IRIS) Program
  - Pollutant toxicity value from chronic exposure
  - HAP data will help inform priorities for nominations
- ▶ Compliance and enforcement
  - Discrepancies between reported and monitored data
  - Facility search based on risk
- ▶ Siting of ambient air monitors



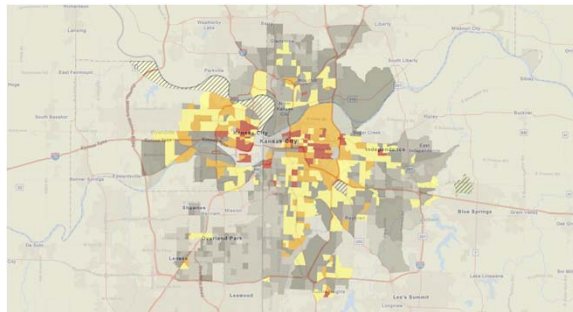
# What does this hold for the future?

- ▶ Executive Order (E.O.) 12898 (59 FR 7629, February 16, 1994) directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission
- ▶ Additional HAP Data -> AirToxScreen -> EJScreen
- ▶ More information will lead to more accurate risk modeling
  - Close gap in understanding impacts of HAPs on communities



## How to Prepare?

- ▶ Review proposed AERR rule and consider submitting comments
  - EPA extended comment period to 11/17/2023
- ▶ Be aware of AirToxScreen impacts via EJScreen or AirToxScreen mapping tool
- ▶ Assure reported data is accurate and not overly reported
  - Reported information feeds into tools
- ▶ Foster ongoing community engagement
- ▶ Be aware of hazardous air pollutants of interest (heavy metals, EtO, PFAS, etc.)



# Ozone Interstate Transport

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# Ozone Interstate Transport

- Good Neighbor provision requires upwind states to ensure that they do not affect downwind states' ability to meet the NAAQS
- March 15, 2023: EPA finalized Good Neighbor Plan for ozone transport
  - Applicable to 23 states
  - Challenged; rule is now stayed for majority of states:
    - Since June 2023: Arkansas, Kentucky, Louisiana, Mississippi, Missouri and Texas
    - Since Sept. 2023: Alabama, Minnesota, Nevada, Oklahoma, Utah, WV
  - Litigation continues
- June 2023: EPA finalizes Good Neighbor FIP
  - Challenged in D.C. Circuit – Briefing Schedule not yet issued



# Ozone Interstate Transport

- Oct. 2023: EPA sends GNP supplemental proposal to OMB; could include additional states (Kansas)
- December 1: EPA announces success of GNP
  - In the first summer of the program, power plants in the 10 currently participating states decreased smog-forming emissions of nitrogen oxides (NO<sub>x</sub>) by 18%, an important step toward the overall goals of the program.
- Crystal Ball: In 2024 - we will likely have an expanded proposal for the GNP that draws in additional states, we will likely have a decision on the GNP, but may not have a decision on the GNP FIP

# Best Practices (technical and legal)

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## Three Best Practices – Consultant View

- ▶ Understand your EJ community
- ▶ Embrace your compliance systems
- ▶ Be aware of PM<sub>2.5</sub> NAAQS promulgation



## Best Practices – Legal

1. Coordinate among departments to ensure environmental considerations are considered as early as possible
2. Keep records and compliance documents in auditable form
3. Ensure staff training remains up to date both from a documentation and a knowledge standpoint (rules and processes), especially with turnover
4. Build redundancies into environmental compliance systems
5. Understand historic documents, be skeptical, and reconsider if needed



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