



**Minerals Research, Inc. (MRI):
Voluntary Remediation Program (VRP)
& Draft Air Quality Permit**

September 23, 2026

Tips for a good meeting

Share from your experience and perspective

Please listen while others are speaking

Allow space for all to participate

Be kind and respectful

ADEQ Introductions

Daniel Czecholinski

Air Quality Division Director

Balaji Vaidyanathan

Air Quality Division Deputy Director

Sean Sandy

Manager of Air Compliance & Enforcement

Tina Le Page-Wood (VRP)

Senior Environmental Program Manager

Dr. Hazel Cox (VRP)

Senior Hydrogeologist

Roxanne Linsley

Community Liaison

Aaron Tews

Community Liaison

Shea Sorenson

Deputy Public Information Officer

Crystal Jimenez

Deputy Public Information Officer

Rob Verville

Senior Inspector

Remedial Program Update

Veterans of Foreign Wars (VFW) Post 7400 Site

ADEQ's VRP accepted MRI's application for the VFW Site on Aug. 7, 2026.

- **MRI is expected to submit a work plan for the proposed remedial actions in early Oct.**
- **The work plan will then be released for a 45-day public comment period.**
- **Learn more about the site:**
azdeq.gov/vrp/vfw

What is the VRP?

- **The VRP allows property owners or volunteers the opportunity to clean up properties with ADEQ's oversight.**
- **In return for cleaning up the property, ADEQ foregoes enforcement activity at the site.**
- **Allows volunteers an expedited pathway to site closure.**



Minerals Research Inc. Draft Air Quality Permit

Daniel Czecholinski, Director of Air Quality Division

Balaji Vaidyanathan, Deputy Director of Air Quality Division

Sean Sandy, Manager of Air Compliance & Enforcement

Key Presentation Topics:

- 01** Current Facility Status
- 02** Air Monitoring Study Summary
- 03** Air Permit Process and Public Health Impacts Analysis
- 04** Key Permit Provisions and Compliance Process
- 05** Opportunity to Comment

Current Facility Status

Permit Shield

Minerals Research Inc. (MRI) is operating under the shield of its individual permit application that was submitted on October 31, 2023.

Inspections

ADEQ has conducted routine unannounced inspections at the facility to verify ongoing compliance with the terms of its application. Inspections did not document non-compliance.

Air Monitoring

In keeping with its December 2023 community commitment, ADEQ completed two rounds of ambient air monitoring around the facility.

Air Monitoring locations



Conclusions of Air Monitoring Study

PM₁₀

- Maximum 24-hr concentration was 150 µg/m³ (equal to National Ambient Air Quality Standards (NAAQS) limit)
- All other collected values remained below 85% of the NAAQS
- Cottonwood Kids Park had lower levels than the VFW Post site

Lead

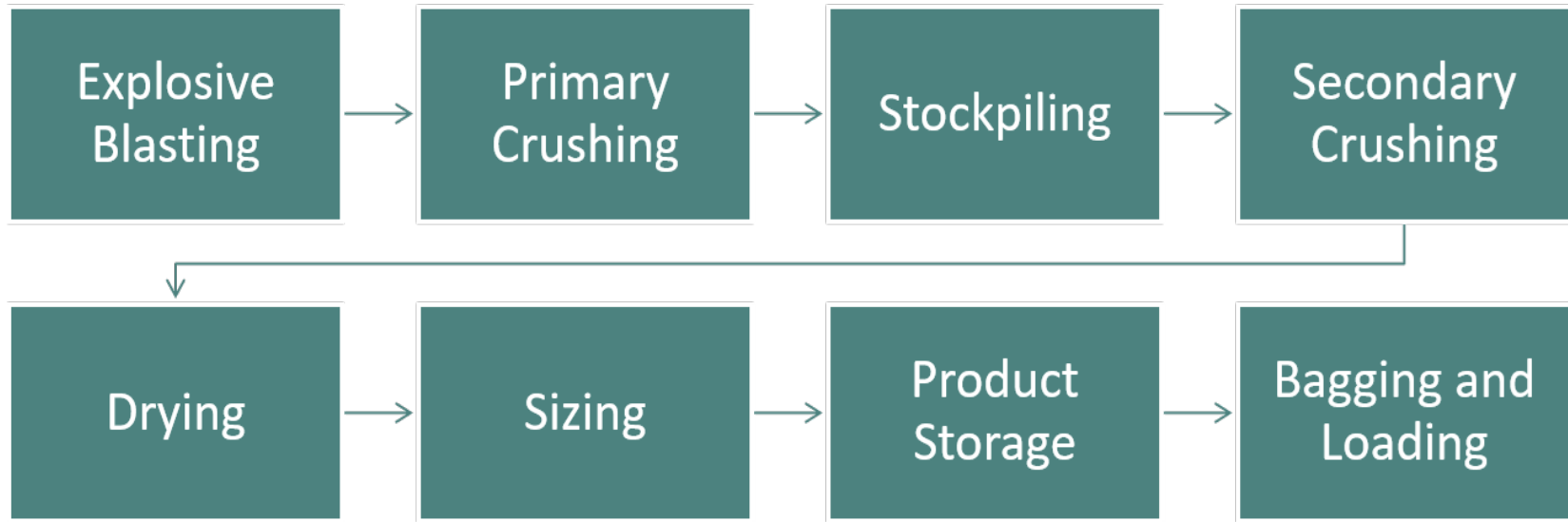
- The maximum rolling 3-month average was 0.018 µg/m³
- This performance is well below the NAAQS standard of 0.15 µg/m³

Other Metals

- The Arizona Department of Health Services assessed the monitoring data for potential health impacts
- General exposure risks associated with MRI slag processing are low

Overview of MRI operations

- MRI processes a historical copper smelter slag pile to produce abrasive blasting media, roofing granules, and pavement aggregate



Permitting Process

MRI Submits Permit Application (10/31/2023)



ADEQ Reviews Application, Emission Calculations, Modeling, and Regulations



ADEQ Drafts the Air Quality Permit and Technical Support Document



ADEQ Hosts Community Meeting for Draft Air Quality Permit (9/23/2026)



Formal Public Participation Period (9/29/2026 - 11/30/2026)



Formal Public Hearing (11/18/2026 from 5:30 to 7:30 p.m.)



ADEQ Prepares Response to Public Comments



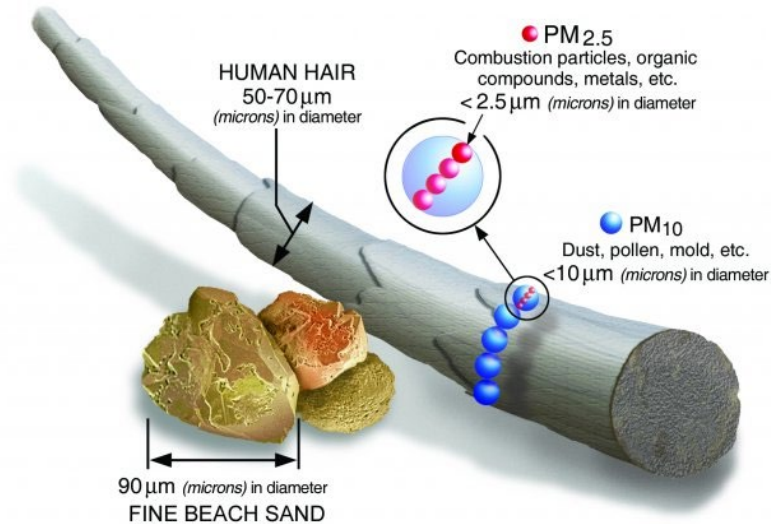
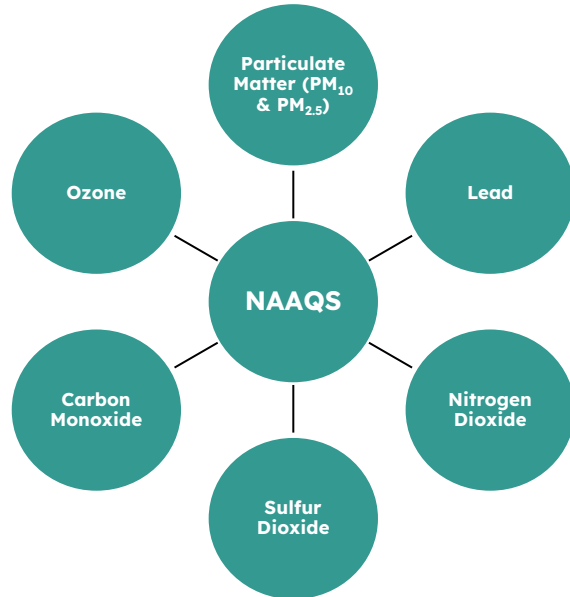
ADEQ Makes Final Air Quality Permit Decision

Class II Permit

Pollutant	Emissions (tons per year)	Significant Thresholds (tons per year)	Major Source Thresholds (tons per year)
NO _x	3.00	40	100
CO	3.53	100	100
PM ₁₀	4.27	15	100
PM _{2.5}	1.64	10	100
SO ₂	0.04	40	100
VOCs	0.16	40	100
Total Hazardous Air Pollutants (HAPs)	0.00533	N/A	25

National Ambient Air Quality Standards (NAAQS)

- Federal health-based ambient air quality standards that are protective of sensitive populations including children, the elderly, and populations with respiratory illnesses.



Air Dispersion Modeling

Why Modeling?

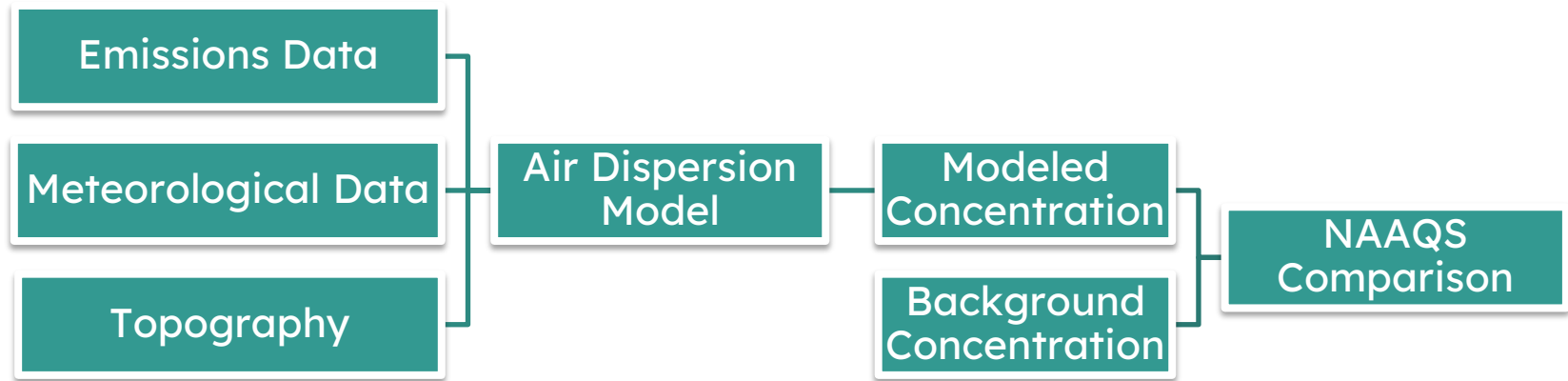
For a facility that is being permitted, the only way to predict potential air quality impacts in advance is through modeling.

What is Modeling?

Mathematical simulation of how air pollutants travel and disperse in the atmosphere.

Using emission data (how much a source emits) and meteorological data, the model predicts pollutant concentrations at downwind locations.

Demonstrating NAAQS Compliance with Modeling



Background Concentrations:

The pollution levels that currently exist in the area before the operation of a facility. These concentrations are typically established using the ambient air monitors operated by federal, state, or local agencies.

Model Results

Pollutant	Averaging Period	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Background Concentration ($\mu\text{g}/\text{m}^3$)	Total Concentration ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)	Exceeds NAAQS?
PM _{2.5}	Annual	4.3	4.2	8.5	9	No
	24-hour	12.6	11.0	23.6	35	No
PM ₁₀	24-hour	66.8	74	140.8	150	No

Peak Impact: Maximum modeled concentrations occur at the northern facility fenceline (VFW site).

Rapid Dissipation: Concentrations drop with increasing distance.

Impacts on Learning Sites

Learning Site Policy

Protects children from criteria air pollutants and HAPs. Applies to facilities located ≤ 2 miles from a learning site.

Model Results

PM_{10} / $PM_{2.5}$

- **< 57%** of NAAQS at Kids Park
- **< 52%** of NAAQS for schools

HAPs

- **Several orders of magnitude below Acute Ambient Air Concentrations**
- **Below Chronic Ambient Air Concentrations (< 25.4% of guideline)**



Impacts on Residential Area

Residential Areas

Evaluated impacts on the nearest downwind residential Areas (prevailing winds from south to north).

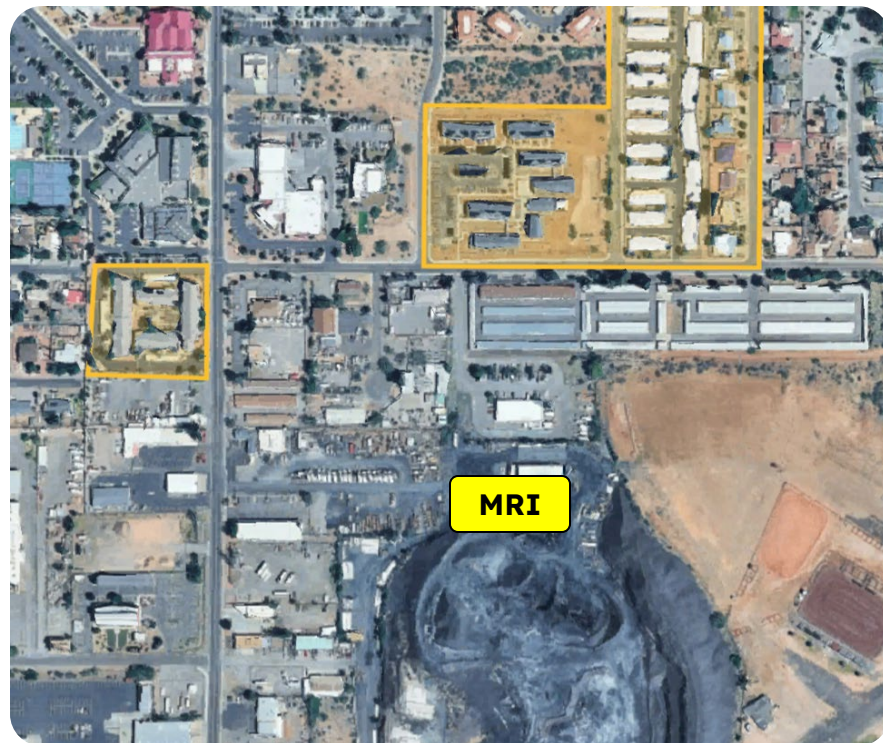
Model Results

PM_{10} / $PM_{2.5}$

- ~ 60% of NAAQS

HAPs

- Several orders of magnitude below Acute Ambient Air Concentrations
- Below Chronic Ambient Air Concentrations (< 84.3% of guideline)



Significant Permit Conditions

Routine Inspections

- **Daily** observations of visible emissions from key process equipment
- **Weekly** inspection of spray bars to optimize control performance

Compliance Testing

- **Semi-annual** black light testing to verify bag integrity in baghouse
- **Annual** stack testing to verify emission limit compliance

Dust Control & Suppression

- Comply with **Dust Control Plan** and Operation & Maintenance Plan to ensure controlled emissions
- **Chemical dust suppression** to minimize offsite transport of dust from roadways

Limits & Public Health

- Strict **limits on baghouse emissions** to protect public health
- **Throughput limits** enforced through continuous and detailed recordkeeping

Blasting-related conditions

Usage & Design Limits

- Limit **ammonium nitrate/fuel oil** usage to specific amounts during blasting events
- Optimize **blast hole design** to minimize fly rock and offsite transport

Scheduling & Notice

- **72-hour** advance notice to ADEQ required for all blast events
- Blasting only allowed between **9:00 a.m. – 4:00 p.m.**

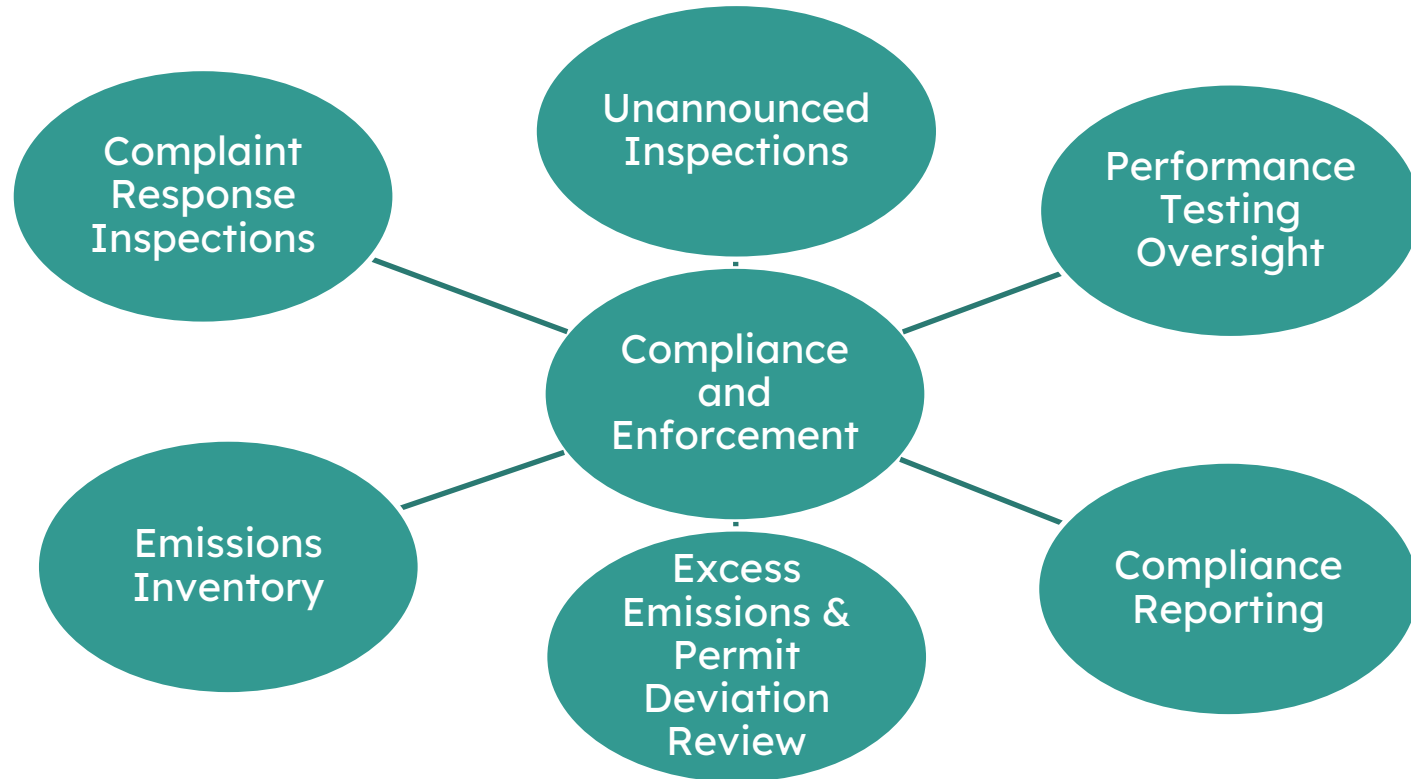
Weather Restrictions

- No blast events allowed during **high wind periods** (>25 mph sustained wind speeds)

Monitoring

- Continuous **visible emission monitoring** required during all active blast events

Compliance and Enforcement



How you can provide comment?

Public Comment Period

The public comment period will run from **September 29 to November 30, 2026.**

Formal Public Hearing

Wednesday, November 18, 2026

Time: 5:30 to 7:30 p.m.

Event hall at Cottonwood Parks and Rec
150 South 6th Street, Cottonwood, AZ 86326

How to Submit Comments

You may comment **orally at the hearing** or submit **written or electronic comments** during the official comment period.

Comment Consideration

All comments are given equal deference, regardless of the method of submission (oral, written, or electronic).

How can you influence this permit action?

Focus on Air Quality Topics

The most effective comments address issues directly related to air pollution and environmental standards.

Outside the Scope:

Noise, light, or zoning issues cannot be considered in an air quality permit decision.

Keys to Effective Comments

- **Point out technical or factual errors**
Example: Emission calculations are incorrect or incomplete.
- **Identify missing or misapplied regulations**
Example: The draft permit missed a key state or federal rule.
- **Challenge reasoning with clear support**
Example: Provide evidence that the air modeling is flawed.
- **Provide new and relevant information**
Introduce data or local factors not previously analyzed.



Questions?

Thank you!

Daniel Czecholinski
czecholinski.daniel@azdeq.gov
602-771-4684

Balaji Vaidyanathan
vaidyanathan.balaji@azdeq.gov
602-771-4527

Sean Sandy
sandy.sean@azdeq.gov
602-785-3194

Thank you!

- **Questions**

- to.sam@azdeq.gov

- **Media Inquiries**

- pio@azdeq.gov

This meeting will conclude at 7:30 PM.

Following the meeting, ADEQ will make the presentation available on its website at: azdeq.gov/aqd/mri

