



OKLAHOMA
Environmental
Quality

GOOD EVENING

Sign up for DEQ Notifications
regarding proposed smelter
project:





OKLAHOMA
Environmental
Quality

Department of Environmental Quality

PROCESS MEETING

PSD Air Permit Application, Oklahoma Primary Aluminum

INOLA, OK - April 23, 2026

PURPOSE



Process Meeting



Air Quality PSD Permit Application

ROADMAP



1. Overview of Permitting Process under Oklahoma Uniform Environmental Permitting Act



2. Status of current permit application review



3. Q & A (3 minutes per person)



4. Wrap-up 7:55/8pm

DEQ Webpage for Proposed Smelter Project



SCAN ME

DEQ

Proposed Aluminum Smelter Project: Inola, Oklahoma

This webpage provides information about the Oklahoma Department of Environmental Quality's permitting process for the proposed aluminum smelter in Inola.

DEQ's role is to review permit applications using established environmental standards, scientific analysis, and applicable laws and regulations. All permitting decisions are based on these criteria to ensure the protection of public health and the environment.

UPCOMING PUBLIC PARTICIPATION OPPORTUNITIES

April 23, 2026, 6 p.m.
Inola High School
Fine Arts Center
801 E. Commercial St.,
Inola, OK 74036

Permitting Overview

Large industrial facilities typically require multiple permits before construction and operation can begin. Depending on the specific details of the project, permits may be required for:

Air
Emissions

Water
Discharge

Stormwater
Management

Waste Handling &
Disposal



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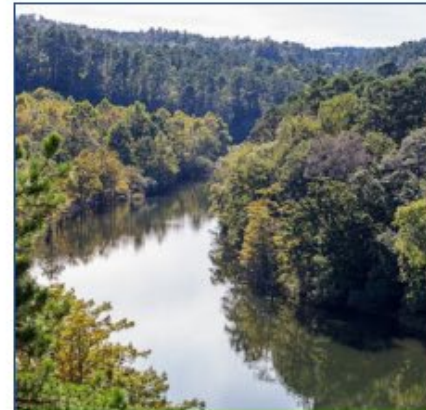
Aluminum Smelter Project: Inola

[!\[\]\(aab88c0d099e5d18d6533a97b13ec28d_img.jpg\) Information](#)



Key Performance Measures

[!\[\]\(21226b58c700e5231ab98d27101bac58_img.jpg\) See the Data](#)



Grants & Funding Resources

[!\[\]\(111c5272ee3f91361f0d2e3665dd6ad0_img.jpg\) Grants & Funding](#)



Our Mission & True North

[!\[\]\(2cf6801d0ea3db56ed897b0c35d9ff86_img.jpg\) Our Mission](#)

PERMITTING STEPS



1. Construction Permit



2. Operating Permit

PSD PERMIT PROCESS



(Construction Permit)

27A O.S. 2-14-101, *et seq.*

OAC 252:4

OAC 252:100-8, Part 7

40 C.F.R. Parts 51 and 52

- DEQ receipt of PSD Air Quality Application (2/9/26)
- “Tier III” permit application
- Notice of Filing publication (2/28/26)
- **Public Process Meeting** (4/23/26)
- **2 Technical meetings** to explain BACT and Dispersion Modeling prior to draft permit issuance (Meetings NOT required by law)
- Publication of draft permit for **30-day public comment** period and opportunity to request public meeting (Date TBD)
 - EPA will also have the opportunity to comment on the draft permit
- **Public meeting** on draft permit (Date TBD)
- DEQ prepares response to comments (90 days or less)
- Publication of proposed permit and **20-day public opportunity to petition** for Administrative Hearing
- **Administrative Hearing**
- Final permit decision **appealable to district court**

TITLE V PERMIT PROCESS



(Operating Permit)

27A O.S. 2-14-101, *et seq.*

OAC 252:4

OAC 252:100-8

40 C.F.R. Part 70

- DEQ receipt of Title V Air Quality Application within 180 days of “commencement of operation”
- “Tier II” permit
- Public notice of filing application
- Publication of draft permit for 30-day public comment and opportunity to request public meeting
- Public meeting on draft permit
- DEQ prepares response to comments
- 45-day EPA review period
 - If EPA objects to the permit, DEQ will respond to the objection
 - DEQ is required to issue the permit if no objection is received from EPA
- 60-day period from the end of EPA’s review for public to petition EPA to object to the permit
 - Petitions may be based only on comments submitted during comment period
- Final Title V Permit appealable to district court



OKLAHOMA
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Department of Environmental Quality

**Prevention of Significant Deterioration (PSD)
New Source Review Requirements**

Understanding PSD



BACT
Determinations



Class I Area
Reviews



NAAQS &
Increment Modeling



Additional Impact
Analyses

New Source Review (NSR) Pollutants

- Pollutants with established NAAQS
 - Nitrogen Dioxide (NO₂)
 - Sulfur Dioxide (SO₂)
 - Lead (Pb)
 - Particulate Matter (PM)
 - Carbon Monoxide (CO)
 - Ozone (precursor Volatile Organic Compounds and Oxides of Nitrogen) (VOC and NO_x)
- Pollutants subject to federal New Source Performance Standards
 - Total Fluoride (TF)
- Excludes Hazardous Air Pollutants (HAPs)
 - Hydrogen Fluoride (HF)
 - Hydrogen Chloride (HCl)

Hazardous Air Pollutants

- EPA established a list of 188 Hazardous Air Pollutants
 - Polycyclic Aromatic Hydrocarbons (PAHs)
 - Hydrogen Chloride (HCl)
 - Hydrogen Fluoride (HF)
- Not an NSR Pollutant
- Subject to Oklahoma BACT review if:
 - Source is a major source due to emissions of this pollutant (10 tons or more per year) and
 - Emissions of this pollutant exceed 100 tons per year
- Subject to Additional Impact Analyses under PSD
 - Not limited to NSR pollutants
 - EPA provides some guidance on thresholds for evaluation of fluorides

What is a PSD Permit & Why Does It Matter?

PSD — Prevention of Significant Deterioration — Its purpose is to keep clean air clean while still allowing economic growth.

Every PSD permit answers four questions:

- 1 Is the new facility using the best available pollution controls?
- 2 Will it protect national and state air quality standards?
- 3 Will it harm pristine areas like national parks?
- 4 What are the broader impacts on soil, plants, and visibility?



PSD applies to proposed new 'major' stationary sources



100 tons/year for 28 listed source categories (power plants, refineries, primary aluminum smelters, etc.)



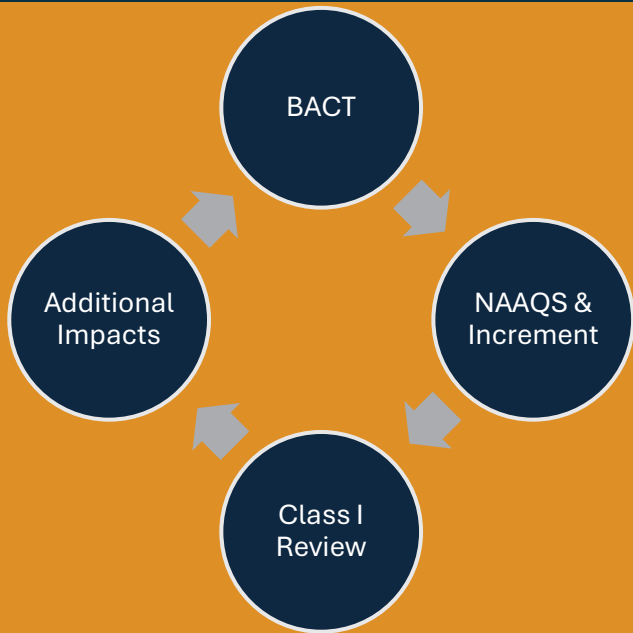
250 tons/year for all other types of facilities

These thresholds apply to 'regulated NSR pollutants' such as SO₂, NO_x, CO, PM, VOC, and lead.

The Four Pillars of PSD Review



Every PSD permit application for a new major source passes through four linked analyses. Each protects a different aspect of the public's air — together, they form the backbone of a PSD decision.



BACT

Best Available Control Technology

Ensures the new facility uses top-tier pollution controls after weighing energy, environmental, and economic factors.

NAAQS & Increment

Air Quality Standards Modeling

Computer modeling shows the new facility will not push pollutant levels above federally-set health standards or state increment ceilings.

Class I Review

Pristine Area Protection

Special scrutiny for national parks and wilderness areas — coordinated with the Federal Land Manager.

Additional Impacts

Soils, Plants, Visibility, Growth

Evaluates effects on vegetation, soils, visibility, and the indirect air quality impact of the growth the new facility supports.

Part 1

BACT Determinations



“The maximum degree of reduction achievable for each pollutant, considering energy, environment, and economic impacts.”



— Clean Air Act §169(3); 40 CFR §52.21 (b) (12)

What is 'Best Available Control Technology'?

BACT is a case-by-case determination. DEQ requires each proposed new major source to install the most effective pollution controls that are technically feasible and economically reasonable for that specific source.

ENERGY

Does the control technology consume so much energy that its use is impractical? For example, would a scrubber require more electricity than the plant itself generates?

ENVIRONMENTAL


Does one control create a different environmental problem — wastewater, hazardous sludge, or a different air pollutant? BACT weighs the trade-offs.

ECONOMIC

Is the cost per ton of pollutant removed within the range of similar sources nationwide? Options are not rejected simply because they are expensive.


The Top-Down BACT Process

1. Identify




List every possible control technology, from the most stringent to the least — including transfer of technology from other industries and countries.

2. Eliminate Infeasible




Remove options that are technically impossible (e.g., wrong pollutant chemistry, incompatible process).

3. Rank




Arrange remaining options by control effectiveness — highest pollutant removal efficiency at the top.

4. Evaluate



Review the top option against energy, environmental, and economic impacts. If option fails, it is set aside and the next option is evaluated.

5. Select & Set Limit




The most stringent surviving option becomes BACT. The permit establishes an enforceable numeric emission limit and monitoring requirements.

BACT in Practice: What Does It Look Like?

BACT is source-specific. To the right are the kinds of controls that have served as BACT in permits DEQ and other states have issued for new facilities. Actual BACT for a future permit is determined case-by-case.

Example BACT

Source Type	Pollutant	Example Control
Natural-gas Turbine	NO _x (nitrogen oxides)	Dry Low-NO _x combustor + Selective Catalytic Reduction (SCR)
Coal-fired boiler	SO ₂ (sulfur dioxide)	Wet or dry Flue-Gas Desulfurization (FGD) scrubber
Cement kiln	Particulate matter	Fabric filter (baghouse) with high collection efficiency
Refinery process heater	CO + VOC	Good combustion practices; low-emission burners
Glycol dehydrator	VOC + HAP	Vapor-recovery unit or enclosed combustion device



EPA maintains the RACT/BACT/LAER Clearinghouse (RBLC) — a public database of past determinations that DEQ and applicants consult when identifying technology options for a given source category.
<https://www.epa.gov/catc/ractbactlaer-clearinghouse-rbhc-basic-information>

Part 2

NAAQS & Increment Modeling



Two ceilings every new facility must stay beneath — health-based national standards, and the increment of clean-air consumption allowed in each area.



40 CFR §52.21(k) & (c) • OAC 252:100-8-34, -8-35

NAAQS: The National Ceiling for Clean Air

The National Ambient Air Quality Standards (NAAQS) are concentration limits EPA sets for six 'criteria pollutants' to protect public health and welfare. A PSD applicant proposing a new major source must show — through computer modeling — that its emissions will not push outdoor air above these limits, anywhere the public can breathe.

PM_{2.5} / PM₁₀

Fine/Coarse
Particulate Matter

SO₂

Sulfur Dioxide

NO₂

Nitrogen Dioxide

The Demonstration
Modeling must show that:

New facility contribution +
existing background < NAAQS

*... at every location, the public can
access, for every averaging time the
NAAQS covers (1-hour, 8-hour, 24-
hour, annual).*

CO

Carbon Monoxide

O₃

Ozone

Pb

Lead

PSD Increments: Keeping Clean Air Clean

Even where the air is cleaner than NAAQS allows, the Clean Air Act limits how much new pollution can be added. The 'increment' is the amount of clean-air margin that new sources can consume — and it differs for three classes of area.

CLASS I

NATIONAL PARKS &
WILDERNESS

Strictest increment. Protects visibility, ecosystems, and the public's enjoyment of designated pristine areas.

CLASS II

MOST OF THE COUNTRY

Moderate increment. The default for nearly all of Oklahoma — allows reasonable industrial and commercial growth while safeguarding air quality.

CLASS III

NONE CURRENTLY
DESIGNATED

Largest increment. Congress authorized this category for areas prioritizing industrial expansion, but no area has ever been reclassified.

APPENDIX W

EPA's Guideline on Air Quality Models

The modeling a PSD applicant performs is governed by 40 CFR Part 51, Appendix W — the national rulebook that specifies which models, which weather data, and which procedures to use, so results are comparable across states and defensible in court.

How the Modeling Works

Air quality modeling turns stack data, weather patterns, and terrain into projected pollutant concentrations at ground level around the proposed new facility.



INPUTS

Stack heights, gas temperature & velocity, proposed emission rates, building dimensions, nearby terrain, five years of hourly meteorological data.



MODEL

EPA-approved dispersion models — primarily AERMOD — run hour-by-hour for every receptor grid point around the proposed new facility.



RESULTS

Predicted pollutant concentrations compared to (a) NAAQS and (b) the PSD increment remaining in the area.



DECISION

If predicted impact exceeds a threshold, the applicant must reduce proposed emissions, raise stacks, or redesign before DEQ can issue the permit.

Part 3

Class I Area Review



*Protecting America's wilderness areas,
national parks, and the scenic vistas that
define them.*



40 CFR §52.21 (p), §51.300–§51.309 • OAC 252:100-8-36

Mandatory Class I Areas



What Is a Mandatory Federal Class I Area?

PSD gives these areas the strongest increment protection and a dedicated review role for the agency that manages them.

- Caney Creek Wilderness – 14,460-acre protected area in Arkansas’s Ouachita National Forest
- Hercules Glades Wilderness – 12,314-acre protected area in the Ozarks of southwest Missouri
- Upper Buffalo Wilderness – 12,000-acre protected area in Ozark-St. Francis National Forest in Arkansas



Designation by Congress



Federal Land Manager (FLM) oversight



Air Quality Related Values

How Class I Review Works

Under OAC 252:100-8-36 and 40 CFR §52.21(p), when a proposed new major source may affect a Class I area, DEQ must coordinate directly with the Federal Land Manager (FLM). The FLM evaluates impacts on 'air quality related values' — visibility, flora, fauna, soils, waters — and the permit decision must give that assessment substantial weight.

NOTIFY

DEQ notifies the affected FLM as soon as a complete PSD application is received that may impact a Class I area.

ANALYZE

Applicant submits dispersion and visibility modeling

CONSULT

FLM reviews and may object within a defined window if the proposed new source would have an 'adverse impact' on air quality related values.

DECIDE

If DEQ disagrees with the FLM's finding, the applicant can still demonstrate compliance with increments — but DEQ must explain its decision on the record.

Part 4

Additional Impacts Analyses



Looking beyond concentrations — at plants, soils, visibility, and the chain of growth a new facility can trigger.



40 CFR §52.21(o) & §51.166(o)

Beyond Concentrations: Additional Impact Analyses

Federal rule 40 CFR §52.21(o) requires every PSD applicant proposing a new major source to submit three additional analyses — describing effects the NAAQS/increment numbers don't directly capture.

Soils & Vegetation

Evaluates whether projected pollutant concentrations from the proposed new facility could damage soils or sensitive vegetation — especially commercially or recreationally important plant species near the site.

Visibility Impairment

Considers how the new facility's emissions might cause haze or discoloration of the air, both near the site and — where relevant — at integral vistas. Visibility modeling is coordinated with any Class I area review.

Associated Growth

Estimates the air quality effect of the indirect growth the new facility will support — new housing, transportation, and commercial activity that arrives alongside a major new employer. This ensures cumulative impacts are considered, not just direct stack emissions.

QUESTIONS

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY





1

DEQ receipt of PSD (Construction) Air Quality Permit Application (2/9/26)

2

Public Notice of filling of PSD (Construction) Air Quality Permit Application (2/28/26)

3

Public Process Meeting (4/23/26)

4

Technical meeting to explain BACT

9

Publication of proposed permit & 20-day public opportunity to petition for Administrative Hearing

8

DEQ prepares response to comments (90 days or less)

7

Public meeting on draft permit

6

Publication of draft permit for 30-day public comment period & opportunity to request public meeting

5

Technical meeting to explain Dispersion Modeling

10

Administrative Hearing

11

Final PSD (Construction) Permit decision appealable to district court

1

DEQ receipt of Title V (Operating) Air Quality Permit Application within 180 days of "commencement of operation"

2

Public notice of filling of Title V (Operating) Air Quality Permit application

3

Publication of draft permit for 30-day public comment period & opportunity to request public meeting

8

Final Title V (Operating) Permit decision appealable to district court

7

60-day period from the end of EPA's review for public to petition EPA to object to the permit

6

45-day EPA review period

5

DEQ prepares response to comments

4

Public meeting on draft permit

