Introduction to Clean Air Act Permits

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Speaker Backgrounds

Chris is a permit writer and inspector with DEQ's Northwest Region Air Quality team with a primary focus on complex minor sources. Chris received his BS in Chemical Engineering and has 20+ years of experience ranging from process engineering, permitting, public policy, and laboratory research and operations.

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Jared is an environmental engineer on DEQ's Eastern Region Air Quality team with a primary focus on permitting and inspecting complex minor and Title V sources. Jared has 10+ years of engineering experience ranging from civil infrastructure design, environmental planning, toxicology research, and permitting.

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Presentation Overview

Today we will be discussing:

- reasons for air permitting
- types of air permits
- permitting resources
- Your DEQ Online
- permitting process and conditions
- demonstrating compliance

Common Vocabulary and Acronyms

OAR 340-200-0020

- Oregon Administrative Rule (OAR)
- emission unit (EU)
- pollution control device (PCD)
- significant emission rate (SER)
- National Ambient Air Quality Standards (NAAQS)
- New Source Performance Standards (NSPS)
- potential to emit (PTE)
- plant site emission limit (PSEL)

Why are air permits important?

Air Contaminant Discharge Permit (ACDP)

- prevent **NAAQS** exceedances
- clarify applicability of state and federal regulations
- help sources demonstrate compliance with regulations
- allow for **public participation and comment**

Who needs an air permit?

Air Quality Permitting and Technical Assistance

Permitting Assistance

- Short-Term NAAQS Requirements
- Start with Your Regional Contact
- Multi-Agency Woody Biomass Utilization Permitting Guide
- Help Finding the Right Application
- Small Business Assistance
- Frequently Asked Questions

Permit Applications and Fees

- Basic and General ACDP
- Simple and Standard ACDP
- Title V
- CAO Permitting Requirements
- Getting started with Your DEQ Online
- Tier 4 Streamlined Data Center Permit

Reporting and Monitoring Resources

- Source Monitoring and Testing Guidance
- Air Toxics Emissions Inventory
- Greenhouse Gas Reporting

Find a Permitted Facility

- Search Your DEQ Online
- Search AQ Permits Online (for documents before November 2024)
- Request a facility's ACDP Permit or Annual Report

Types of Air Permits

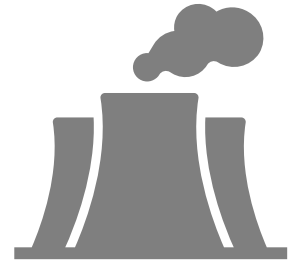
Basic and General ACDPs

- smaller, low-complexity sources
- includes rock crushers, fuel stations, dry cleaners, etc.

Simple and Standard ACDPs

- medium, semi-complex sources
- includes wood products, WWTPs, tech facilities, etc.

Title V Operating Permit



- large, complex sources
- includes metal foundries, paper mills, landfills, etc.

Potential to Emit (PTE)

OAR 340-200-0020(123)

- PTE is the basis for site-specific PSELs
- most often calculated at **capacity**, assuming:
  - **maximum emission rate (lbs/hr) for 8,760 hrs/yr**
- PTE is sometimes limited by inherent process limitations
  - understand difference between **Capacity vs PTE**

Source Categories

OAR 340-216-8010, Table 1

- lists activities and sources that require a permit
  - Part A: Basic
  - Part B: General, Simple, or Standard
  - Part C: Standard
- defines **applicability based on activities** at source
- Part B, 84 and 85 **based on uncontrolled emissions**

Land Use Compatibility Statement

Contact planning authority where the project is located.

- detailed **LUCS information** available on DEQ website
- ensures permit is consistent with local government comprehensive plans and land use regulations
- required for new sources and some modifications

DEQ does not make land use decisions.

Air Permitting Support

Local, State, and Federal Regulators

- guidance and resources on agency websites, like **EPA AP-42**
- **Small Business Assistance Program** resources

Industry Groups

- NCASI, NEBC, and many more…

Environmental Consultants

- SWCAA provides a **non-exhaustive list**
- many consultants in attendance today

Before Applying

Schedule a pre-application meeting with DEQ.

- **anticipate permit lead times**
- discuss project timeline and provide clarity
- call your regional DEQ office

Air Permitting Contacts

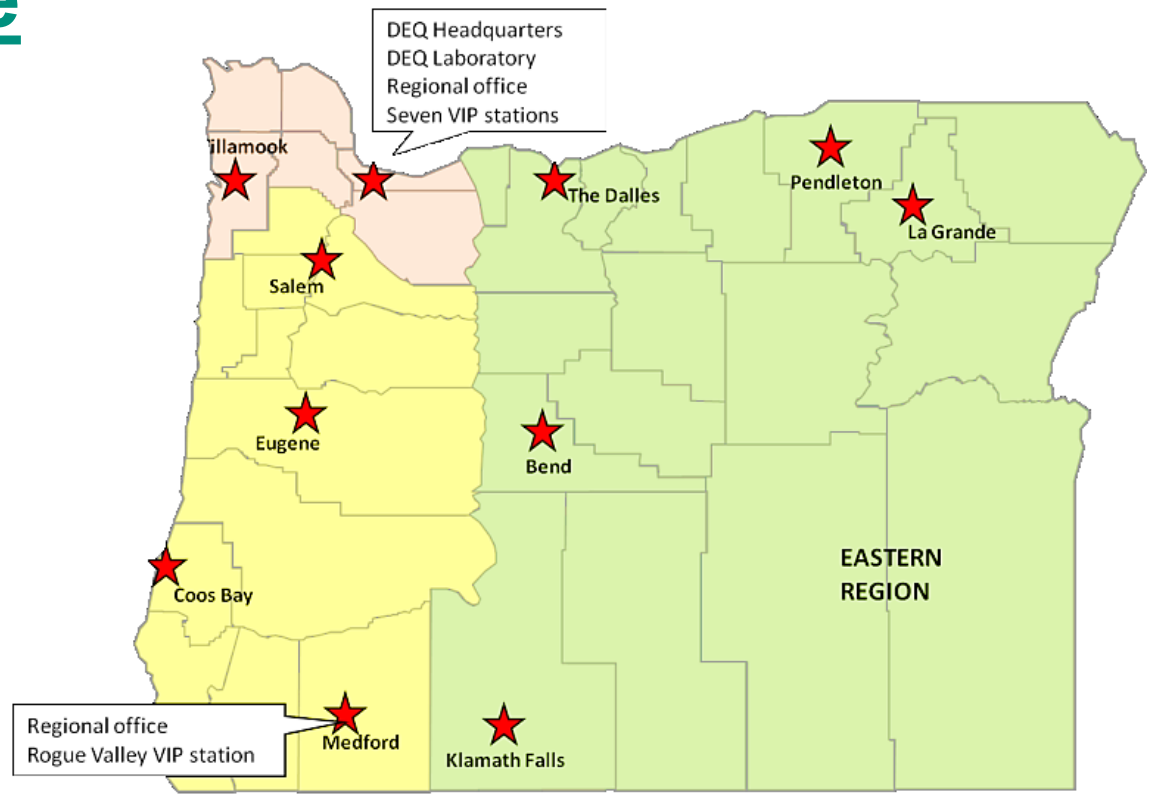
Regional Permit Assistance

Northwest Region (Portland)
(503) 229-5582

Western Region (Salem)
(503) 378-8240

Eastern Region (Bend)
(541) 633-2021

LRAPA (Lane County)
(541) 736-1056



Cleaner Air Oregon

OAR 340-245-0100

- focus is on toxic air contaminants (TACs), applies to:
  - new Simple and Standard ACDPs, Title V permits
  - some modifications and existing facilities (called-in)
- adds **Source Risk Limits** section to air permits

For CAO-related questions, reach out to the team:

cleanerair@deq.oregon.gov

National Ambient Air Quality Standard

OAR 340-202

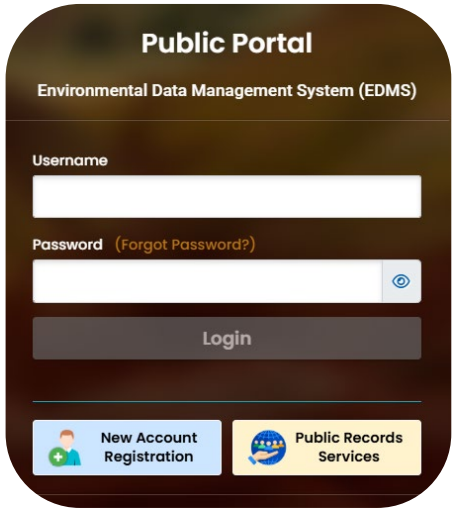
- annual SERs not protective of **Short-Term NAAQS**
- NAAQS analysis requires modeling to assess impacts for:
  - new Simple and Standard ACDPs, Title V permits
  - existing facilities undergoing Type 2 or 3 modifications
- **Short-Term NAAQS FAQs** for facilities made available

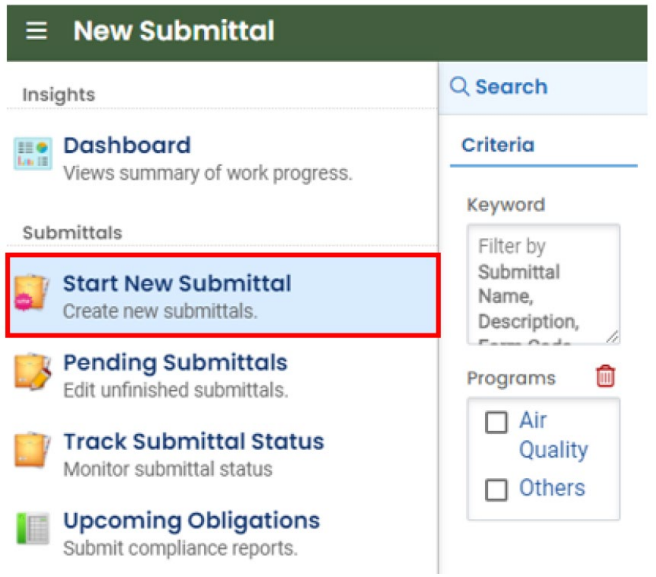
NAAQS analysis often conducted alongside CAO.

Applying for an Air Permit

Use Application Guidance Document as a starting point.

- includes guidance for all permit types
- **most forms now embedded in YDO**





Your DEQ Online

Your DEQ Online (YDO)

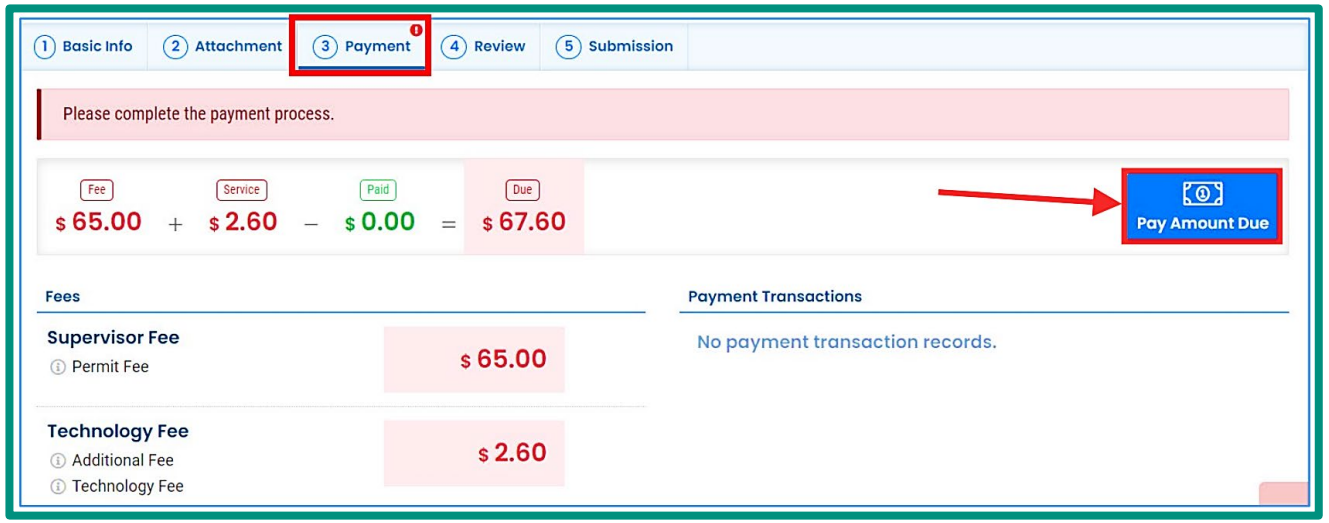
- **all air permit-related submittals now in YDO**
  - permit applications and modifications
  - construction, relocation, sale, and transfer notifications
  - reporting and fee payments
- **user guides and tutorials** available
- **YDO Helpdesk** for technical support

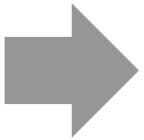
Permitting Fees

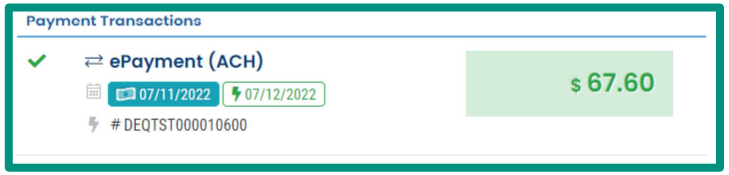
OAR 340-216-8020 Table 2 (ACDP)

OAR 340-216-8030 Table 3 (CAO)

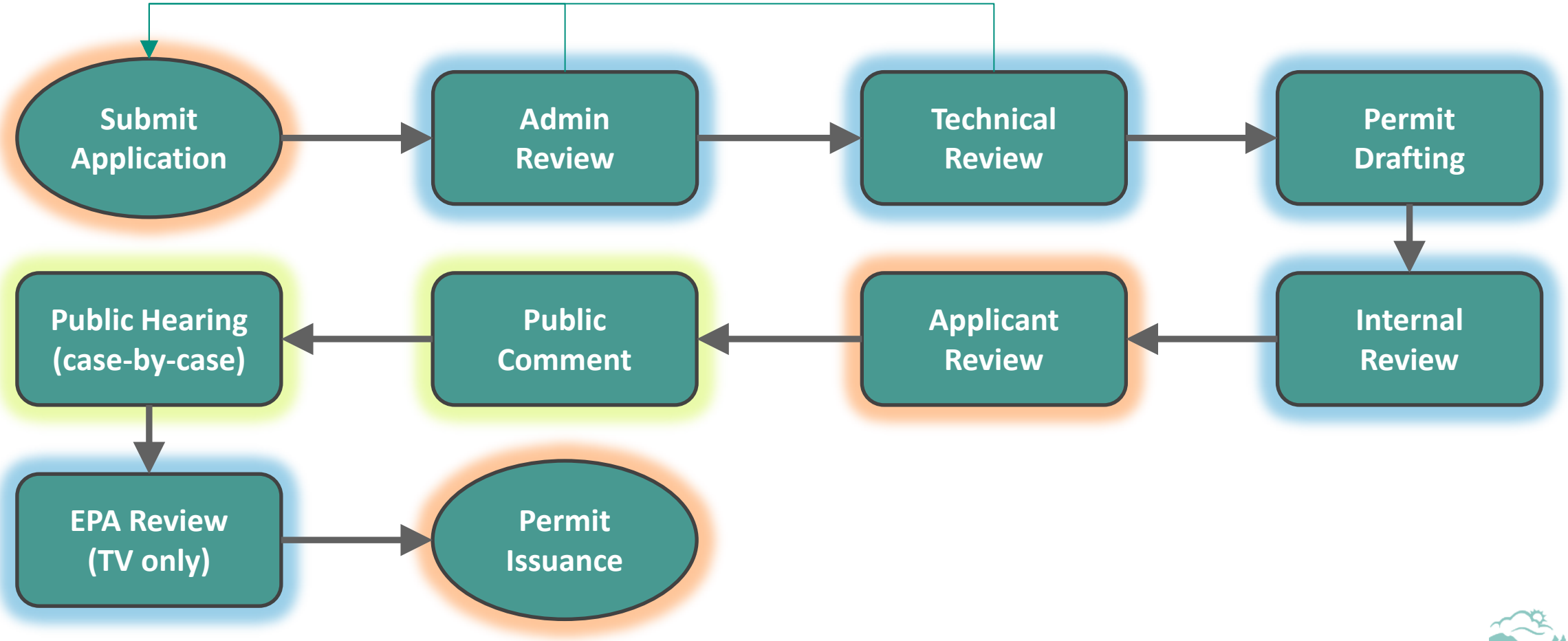
YDO Online Payments now available!







Permitting Process



What is included in an air permit?

Permits are a compliance tool, and typically include:

- **emission limits** – facility-wide, PSEL, risk-based
- **performance limits** – emission unit-specific, NSPS, NESHAP
- source testing – to verify emission factors
- monitoring – identify what is important to record
- recordkeeping – collect data for reporting and inspection
- reporting – review to determine compliance
- and more!

Permit Review Reports

Review Reports typically include:

- describes the source's operations and process flow
- basis for regulatory applicability and permit conditions
- history of facility modifications and compliance
- emissions detail sheets showing PTE calculations

Include relevant **Series 400 forms** showing emission calculations with all new permit and renewal applications!

Permit Review Reports

Below is an example of emissions calculations:

Pollutant	Emission Unit		Annual Production or Process Rate	Units	Emissions Factor Rate	Units	Reference	Emissions tons/yr
VOC	EU: B-1 Boiler (Firing Natural Gas)		54,229	MMBtu/yr	5.36E-03	lb/MMBtu	ODEQ AQ-EF05	1.448
	EU: B-1 Boiler (Firing Fuel Oil)		2,960	MMBtu/yr	1.45E-03	lb/MMBtu	ODEQ AQ-EF04	0.002
	EU: OX-1 (Process gas)		8,760	hr/yr	0.12	lb/hr	ST - April 2003	0.526
	EU: OX-1 (Firing Natural Gas)		6,570	MMBtu/yr	5.36E-03	lb/MMBtu	ODEQ AQ-EF05	0.02
	EU: LOAD-1 Transfer Racks	UFC HCHO	346,812	gal/yr	8.83E-06	lb/lb product	AP-42 Section 5.2	0.02
		UFC MeOH	346,812	gal/yr	9.03E-06	lb/lb product	AP-42 Section 5.2	0.02
		MeOH Distillate	480,000	gal/yr	1.15E-04	lb/lb product	AP-42 Section 5.2 (98% Vapor Balance Control)	0.006
	EU: CT-1 Cooling Tower		3,048,480	Mgal/yr	7.00E-04	lb/[illegible]	AP-42 Table 5.1-3	1.07
	EU: Miscellaneous Emission Units – Waste Resin Pile		8,760	hr/yr	9.66E-04	lb/[illegible]	ST – Resin Industry-specific Spray Dry Tests	0.004
	EU: Miscellaneous Emission Units - TW-1	UF Resin	5.31E-02	lb/truck	4,035	trucks/yr	Ideal Gas Law Estimations	0.11
		PF Resin	5.33E-02	lb/truck	5,483	trucks/yr	Ideal Gas Law Estimations	0.14
		Polyamide Resin	1.48E-01	lb/truck	4,000	trucks/yr	Ideal Gas Law Estimations	0.30
	EU: Aggregate Insignificant – Cleaning and Degreasing		160	gal/yr	7	lb/gal	Assumes 100% volatilization	0.5
	EU: LDAR		TCEQ Air Permit Technical Guidance for Chemical Sources Fugitive Guidance - See Appendix C					5.54
	EU: Miscellaneous Emission Units – Storage Tanks		Variable	gal/yr	Variable	lb/gal throughput	AP-42 Section 7.1- See Appendix D	3.76
	EU: Miscellaneous Emission Units - LOAD-2		Variable	lb resin/yr	Variable	lb/lb resin	AP-42 Section 5.2 – See Appendix E	0.52
							Total VOC	**14.0**

Plant Site Emission Limits

OAR 340-222-0041

- PSELs are site-specific, annual criteria pollutant limits

Pollutant	Plant Site Emission Limits (PSEL)		
	Previous PSEL (tons/year)	Proposed PSEL (tons/year)	PSEL Increase (tons/year)
PM	24	3	-21
PM_{10}	14	3	-11
$PM_{2.5}$	9	3	-6
NO_x	39	39	0
CO	99	20	-79
VOC	39	5	-34
GHG (CO_2e)	74,000	3,031	-70,969

Evaluated using **rolling 12-month totals**, NOT ANNUAL TOTAL.

Performance Limits

OAR 340-228-0210

- limits set for specific emission units
- often associated with fuel-burning equipment
- can trigger need for continuous monitoring systems

b. Particulate matter emissions from any fuel burning equipment (except solid fuel burning devices that have been certified under OAR 340-262-0500) that is installed, constructed or modified on or after April 16, 2015 must not exceed 0.10 grains per dry standard cubic foot, corrected to 12% CO_2 or 50% excess air. [OAR 340-228-0210(2)(c) and OAR 340-228-0210(3)]

May require EPA Method 9 certified staff.

NAAQS Impact Analysis

OAR 340-226-0140

- limits set per **short-term NAAQS analysis**

a. Each emergency engine generator set is limited to 100 hours per year for readiness testing and maintenance operations.

b. Each emergency engine generator set is limited to operate up to 20 hours per day for readiness testing and maintenance operations. This requirement does not apply to hours of operation for commissioning and source testing.

c. No more than 25 emergency engine generator sets may be operated simultaneously during readiness testing and maintenance operations.

d. The following minimum emergency engine generator set exhaust stack heights must be maintained at:
   i. Data Center Building CCO3 exhaust stacks - 70.0 feet elevation above grade.
   ii. Data Center Building CCO5 exhaust stacks - 70.0 feet elevation above grade.
   iii. Data Center Building CCO6 exhaust stacks - 70.0 feet elevation above grade.

CAO Source Risk Limits

OAR 340-245-0110

- look at acute and chronic risk, limit TACs driving risk

6.1 Chronic Source Risk Limits

The total amount of ULSD fuel used annually in all emergency engines for the purposes of all non-emergency operations as described in Condition 3.1d.iv, including commissioning, shall not exceed 294,585 gallons per year. [OAR 340-245-0110(1)(a)]

6.3 Acute Source Risk Limits

The total amount of ULSD fuel used daily in all emergency engines for the purposes of all non-emergency operations as described in Condition 3.1d.iv, including commissioning, shall not exceed 20,000 gallons per day. [OAR 340-245-0110(2)(a)]

Source Testing

OAR 340-212

- requires sampling and analysis of air pollutants from source
- used to determine compliance with emission limits

Tested Pollutant	Reference Test Method*
PM	ODEQ Method 7
VOC	EPA Method 25A
Exhaust gas flow rates	EPA Methods 1-4
Opacity	EPA Method 9

*Substitution of alternative test methods must be pre-approved by the DEQ.

Be prepared for source testing and schedule early.

Monitoring

OAR 340-226-0120

- informed by emission limits and required maintenance
- encompasses both visual and continuous monitoring
  - continuous monitoring often required by NSPS or BACT

a. Amount of natural gas combusted in boilers and fryers (ft^3); and
b. Weight of finished product processed in the fryers (tons).

Continuous monitoring has additional recordkeeping.

- Continuous Monitoring Manual available for guidance

Recordkeeping

OAR 340-214-0114

- records must be maintained for at least five years
  - **must be made available to DEQ upon request**
- informed by required by monitoring requirements

a. Amount of natural gas combusted in boilers and fryers (MMft^3/month);
b. Weight of finished product processed in the fryers (tons/month);

May require collection of hourly, daily, or monthly data.

- CAO and NAAQS often require more detailed information

Reporting

OAR 340-214-0114

- reports may be on a quarterly, semi-annual, or annual basis
- annual reports due **February 15** (March 15 for most Title V)
- informed by required monitoring and recordkeeping

a. Operating parameters:
   i. Amount of natural gas combusted in boilers and fryers, in $MMft^3$, monthly and 12-month rolling;
   ii. Weight of finished product processed in the fryers, in tons, monthly and 12-month rolling.

b. Calculations of pollutant emissions for 12-consecutive calendar month period determined each month in accordance with Conditions 5.2, 5.4 and 5.5.

Applicant Review

This provides sources an opportunity to review draft permit documents and give feedback prior to public notice.

Key areas for feedback include:

- clarifying uncertainty around permit requirements
- correct identification of facility equipment
- verification of regulatory applicability

Permits are legal documents, avoid fines by being familiar with the requirements of your permit!

Public Participation

OAR 340-209

- four categories of public notice (up to 40 days)
- public comments and hearing(s) may be applicable
- 45-day EPA review period for Title V permits

If a facility has an approved LUCS and meets all legal requirements, DEQ will issue the air quality permit.

ACDP and CAO may have different requirements for public notice.

Understand Your Permit

Avoid compliance issues by:

- ***reading and understanding your review report and permit***
- asking questions early (refer to **Regional Permit Assistance**)
- keeping a copy of permit documents available on-site
- submitting timely reports and applications (see **YDO guides**)
- staying below emission limits and maintaining records
- being ready and prepared for unannounced inspections

DEQ

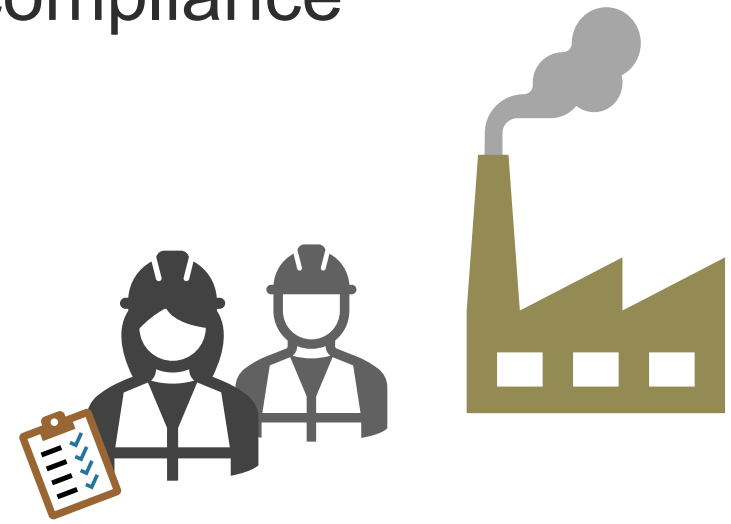
Inspections

DEQ inspects permitted facilities:

- periodically (2-10 years depending on ACDP type)
- in response to complaints received (**nuisance conditions**)
- using permit as a rubric to determine compliance

Types of enforcement include:

- warning letters (WL)
- pre-enforcement notices (PEN)
- and more…



Changing Your Permit

Two main pathways include:

- Notice of Intent to Construction (Type 1 or Type 2 NC)
- permit modification (simple, moderate, or significant)

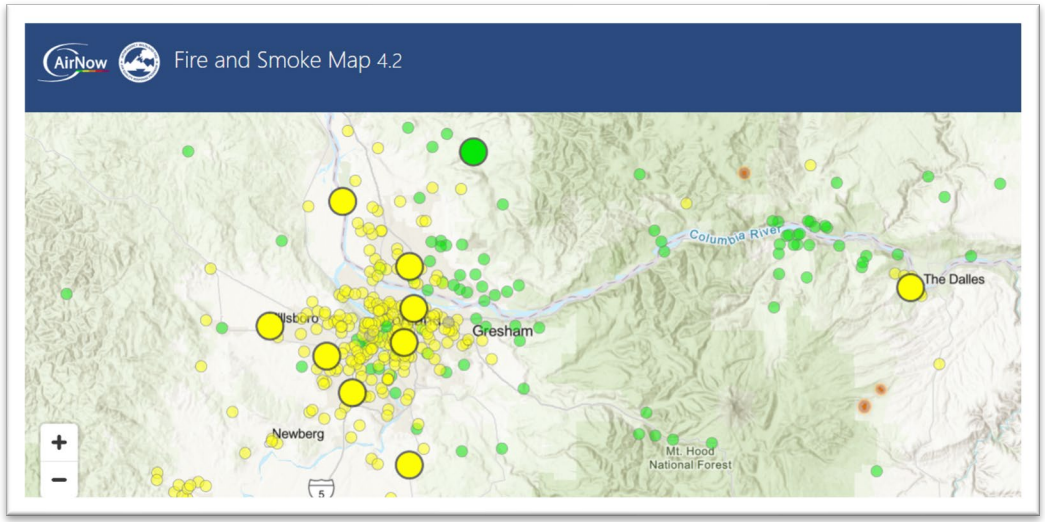
Know the difference between an NC and a modification.

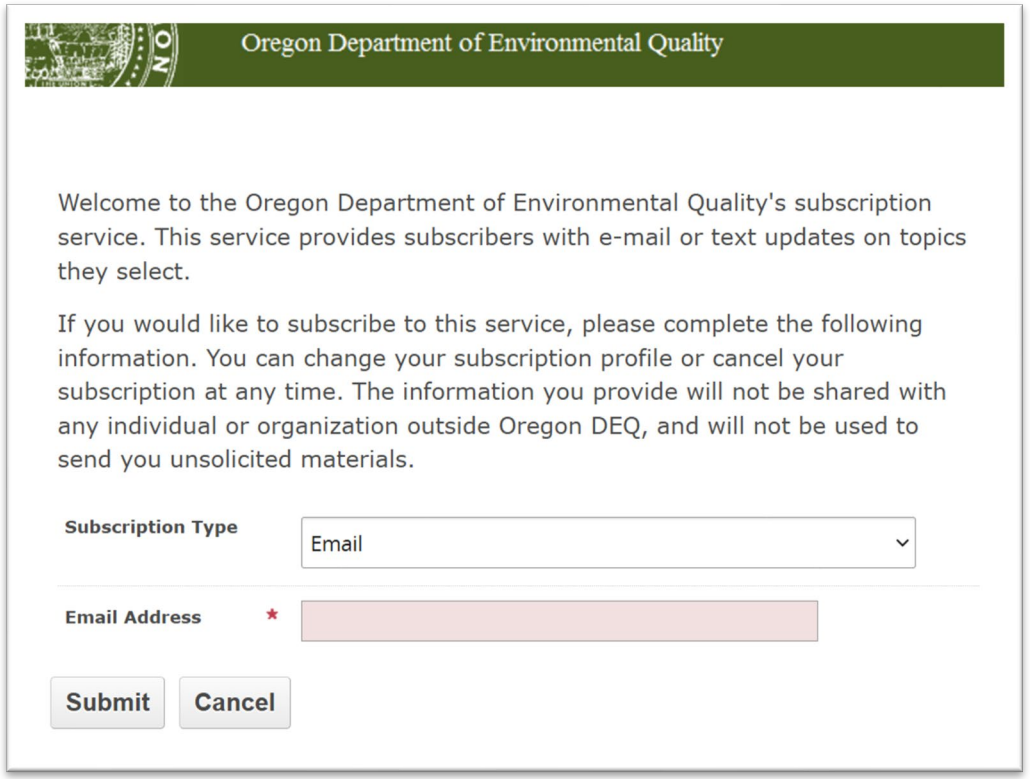
- Is a PSEL change required?
- Are proposed activities covered in the existing permit?

When in doubt, **contact your permit writer**.

Stay Informed

- sign up for **GovDelivery**
- monitor **local air quality**
- engage with **community**





Summary

Today we discussed:

- why air permits are important
- what is included in an air permit
- avoiding compliance issues
- how to change your permit
- contacting DEQ for support

Thank you for your time!