



# Air Permitting Basics

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# I. ADMINISTRATION OF THE CLEAN AIR ACT

(FEDERAL AND STATE COOPERATION?)

- The federal Clean Air Act and supporting EPA regulations establish the legal framework for regulating air pollution

# I. ADMINISTRATION OF THE CLEAN AIR ACT (Cont.)

- The federal Clean Air Act authorizes states to implement the law so long as the state program is approved by EPA
  - State program must be at least as stringent as federal law
  - State implementation plans (SIPs) describe the elements of the state Clean Air Act programs

# I. ADMINISTRATION OF THE CLEAN AIR ACT (Cont.)

- A SIP must explain how the state will
  - Achieve ambient air quality standards
  - Establish emission limits
  - Permit new or modified sources of air pollution

# I. ADMINISTRATION OF THE CLEAN AIR ACT (Cont.)

- Even when a SIP is approved by EPA, the EPA retains oversight authority
  - EPA may take its own enforcement action if it disagrees with the state's enforcement of the Clean Air Act
  - In these cases, the regulated entity may find itself caught in a crossfire between EPA and the authorized state agency

## II. AMBIENT AIR QUALITY STANDARDS

- Primary and secondary ambient air quality standards
  - Carbon monoxide
  - Nitrogen oxides
  - Sulfur dioxide
  - Particulate matter
  - Ozone
  - Lead
- Attainment and nonattainment areas



### III. STATIONARY AND MOBILE SOURCES

- Today's presentation relates to the regulation of stationary sources

## IV. EMISSION STANDARDS AND LIMITATIONS

- New source performance standards (NSPS)
  - Normally expressed as emission limitations
- Hazardous air pollutants (HAPs)
  - List of HAPs
  - Maximum achievable control technology (MACT)

## IV. EMISSION STANDARDS AND LIMITATIONS (Cont.)

- MACT
  - More than 10 tons per year of any HAP or 25 tons per year of all HAPs
  - Technology based approach to control HAPs from various industrial categories
  - Eventually as many as 250 categories of major sources subject to MACT may be established

## V. PERMITTING REQUIREMENTS

- Prevention of significant deterioration (PSD)
  - Permitting of the construction or modification of major sources in attainment areas
  - Allocation of available air quality increment
    - Monitoring data
    - Best available control technology (BACT)
    - Modeling of proposed emissions
    - Public notice and comment

## V. PERMITTING REQUIREMENTS (Cont.)

- New source review
  - Permitting of the construction or modification of major sources in nonattainment areas
  - Emission offsets
  - Lowest achievable emission rate (LAER)

## V. PERMITTING REQUIREMENTS (Cont.)

- Title V permits
  - Applies to major sources (potential to emit more than 100 tons per year of any air pollutant)
  - All applicable legal requirements must be included in the permit
  - Periodic compliance certifications



## VI. Do It Yourself Permitting

- Project Description
- Potential Emissions
- Applicable Regulations
- RACT/BACT/MACT/LAER
- Dispersion Modeling
- Application Forms
- Permit Compliance



# Describing the Project

- What is the source?
- Where will it be located?
- Where is the closest boundary?
- Who owns the land?
- Who will operate it?
- When will construction start?
- When will operation start?
- What are the project costs?



# Determining Potential Emissions

- Measured or calculated or both
- Emission factors
- Net or Total



# Determining Potential Emissions

- Criteria Pollutants
  - Carbon Monoxide (CO)
  - Lead (Pb)
  - Nitrogen Dioxides (NO<sub>2</sub>)
  - Ozone (O<sub>3</sub>)
  - Particulate Matter (PM<sub>10</sub> & PM<sub>2.5</sub>)
  - Sulfur dioxide (SO<sub>2</sub>)
  
- State Specific Toxics
  - IDAPA 58.01.01.585 & 586
  - OAR 340-246
  - WAC 173-460



# Reviewing Applicable Regulations

- Title V - 40 CFR 70 / 71
- PSD/NSR – 40 CFR 52
- NSPS – 40 CFR 60
- NESHAPS – 40 CFR 61
- MACT – 40 CFR 63



<http://www.epa.gov/ttn/atw/mactfnlalph.html>

NESHAP (MACT) STANDARD Source Categories Affected	CFR Sub Parts	Final Federal Register Date & Citation	Compliance Date	Project Lead	Compliance Lead
<u>Aerospace</u>	GG	09/01/95 (60FR45948)	09/01/98	Kim Teal 919-541-5580 <a href="mailto:teal.kim@epa.gov">teal.kim@epa.gov</a>	Len Lazarus 202-564-6369 <a href="mailto:lazarus.leonard@epa.gov">lazarus.leonard@epa.gov</a> v
<u>Acrylic/Modacrylic Fiber(area sources)</u>	LLLLLL	07/16/07 (72FR38864)		Jodi Howard 919-541-4607 <a href="mailto:howard.jodi@epa.gov">howard.jodi@epa.gov</a>	Scott Throwe 202-564-7013 <a href="mailto:throwe.scott@epa.gov">throwe.scott@epa.gov</a>
<u>Asbestos</u>	40 CFR 61 Subpart M	40 CFR 61.140		Susan Fairchild 919-541-5167 <a href="mailto:fairchild.susan@epa.gov">fairchild.susan@epa.gov</a>	Everett Bishop 202-564-7032 <a href="mailto:bishop.everett@epa.gov">bishop.everett@epa.gov</a>
<u>Asphalt Processing and Asphalt Roofing Manufacturing</u>	LLLLL	04/29/03 (68 FR 22975)	5/1/06	Jeff Telander 919-541-5427 <a href="mailto:telander.jeff@epa.gov">telander.jeff@epa.gov</a>	
<u>Auto &amp; Light Duty Truck (surface coating)</u>	IIII	04/26/04 (69FR22601)	04/26/07	Dave Salman 919-541-0859 <a href="mailto:salman.dave@epa.gov">salman.dave@epa.gov</a>	Len Lazarus 202-564-6369 <a href="mailto:lazarus.leonard@epa.gov">lazarus.leonard@epa.gov</a> v
<b>Benzene Waste Operations</b>	40 CFR 61 Subpart FF	12/04/03 (68FR67931)	12/04/06	Bob Lucas 919-541-0884 <a href="mailto:lucas.bob@epa.gov">lucas.bob@epa.gov</a>	Marcia Mia 202-564-7042 <a href="mailto:mia.marcia@epa.gov">mia.marcia@epa.gov</a>
<b>Boat Manufacturing</b>	VVVV	8/22/01 (66FR44217)	8/22/04	Kaye Whitfield 919-541-2509 <a href="mailto:whitfield.kaye@epa.gov">whitfield.kaye@epa.gov</a>	Len Lazarus 202-564-6369 <a href="mailto:lazarus.leonard@epa.gov">lazarus.leonard@epa.gov</a> v
<u>Brick and Structural Clay Products Manufacturing</u>	JJJJJ	05/16/03 (68FR26689)	5/16/06	Jeff Telander 919-541-5427 <a href="mailto:telander.jeff@epa.gov">telander.jeff@epa.gov</a>	
<u>Clay Ceramics Manufacturing</u>	KKKKK				
<u>Carbon Black Production (area sources)</u>	MMMMMM	07/16/07 (72FR38864)		Sharon Nizich 919-541-2825 <a href="mailto:nizich.sharon@epa.gov">nizich.sharon@epa.gov</a>	Scott Throwe 202-564-7013 <a href="mailto:throwe.scott">throwe.scott</a>



# Proposing BACT

- When do you have to include BACT analysis?
- When do RACT, MACT or LAER apply?
- What is the 5-Step BACT Process?
- What are options for control equipment?
- How do you perform the cost evaluation?

# Performing Dispersion Modeling

- Screening or refined model?
- Which input parameters are needed?
- What can you do with the results?
- How can you improve the impacts?



Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
<u>Carbon Monoxide</u>	9 ppm (10 mg/m <sup>3</sup> )	8-hour <sup>(1)</sup>	None	
	35 ppm (40 mg/m <sup>3</sup> )	1-hour <sup>(1)</sup>		
<u>Lead</u>	0.15 µg/m <sup>3</sup> <sup>(2)</sup>	Rolling 3-Month Average	Same as Primary	
	1.5 µg/m <sup>3</sup>	Quarterly Average	Same as Primary	
<u>Nitrogen Dioxide</u>	53 ppb <sup>(3)</sup>	Annual (Arithmetic Average)	Same as Primary	
	100 ppb	1-hour <sup>(4)</sup>	None	
<u>Particulate Matter (PM<sub>10</sub>)</u>	150 µg/m <sup>3</sup>	24-hour <sup>(5)</sup>	Same as Primary	
<u>Particulate Matter (PM<sub>2.5</sub>)</u>	15.0 µg/m <sup>3</sup>	Annual <sup>(6)</sup> (Arithmetic Average)	Same as Primary	
	35 µg/m <sup>3</sup>	24-hour <sup>(7)</sup>	Same as Primary	
<u>Ozone</u>	0.075 ppm (2008 std)	8-hour <sup>(8)</sup>	Same as Primary	
	0.08 ppm (1997 std)	8-hour <sup>(9)</sup>	Same as Primary	
	0.12 ppm	1-hour <sup>(10)</sup>	Same as Primary	
<u>Sulfur Dioxide</u>	0.03 ppm	Annual (Arithmetic Average)	0.5 ppm	3-hour <sup>(1)</sup>
	0.14 ppm	24-hour <sup>(1)</sup>		
	75 ppb <sup>(11)</sup>	1-hour	None	

# Preparing the Application Forms

- Check with your Regulatory Agency!
  - Idaho – [http://www.deq.idaho.gov/air/permits\\_forms.cfm](http://www.deq.idaho.gov/air/permits_forms.cfm)
  - Oregon - [www.deq.state.or.us/pubs/forms.htm#AQ](http://www.deq.state.or.us/pubs/forms.htm#AQ)
  - Washington - <http://www.ecy.wa.gov/biblio/forms-air.html>
- Check for common errors:
  - Inconsistencies
  - Typographical
  - Incomplete forms
- Provide applicable fee



# Complying with the Permit

- Request and review the draft order of approval
- Ensure that you understand the conditions
- Implement the forms, procedures, & monitoring promptly
- Prepare for a compliance inspection



## VII. ENFORCEMENT

- Civil
- Criminal
- Citizen suits



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# Questions?