IOWA DEPARTMENT OF
NATURAL RESOURCES
LEADING IOWANS IN CARING FOR OUR NATURAL RESOURCES

Air Construction Permitting Services

Sarah Piziali,
Construction Permit Section Supervisor
Presentation Outline

- Section Organization and Staffing
- Construction Permit Overview
- Construction Permit Section Statistics
- Construction Permit Section Process Improvements
Construction Permit Service Value

• Provide assistance to business and industry through:
  – Fast permit issuance
  – Permit applications
  – Rules and regulations

• While ensuring:
  – Economic growth occurs in harmony with the preservation of air resource
  – Public health and welfare is protected
Construction Permit Staff

15 Total Staff consisting of:
- 5 Senior Environmental Engineers
- 9 Environmental Engineers
Construction Permit Overview
Construction Permit Program

• In Iowa our rules require:
  – Unless exempt, all new or modified equipment and control equipment is required to obtain a construction permit if constructed after 9/23/70

• Currently 41 specific exemptions from construction permitting listed in our rules
  – Ex. Equipment used for indirect heating burning natural gas or propane rated at < 10 MMBTU/hr heat input
Critical Services Beyond Permitting

• We also provide technical assistance to Business and Industry, the Public and the rest of the Air Quality Bureau:
  – Economic Development Prospects
  – Permit Helpline
  – Applicability Determinations / Assistance
  – Emissions Estimation Assistance
  – Review and Assist Local Programs
  – SIP / Non-Attainment Plan Development
  – Rules Review
## Types of Air Quality Permits in Iowa

### Construction Permits
- Issued under New Source Review (NSR) Program established by the CAA of 1970 and subsequently amended
- Issued prior to construction
- Permit is obtained for each emission point
- Term: Life of equipment
- Applies to all facilities in Iowa (~7200)

### Operating Permits (Title V)
- Requirement from Title V of the CAAA of 1990
- Issued to sources after start operation
- One permit is issued for the entire facility
- Term: 5 years
- Applies to largest facilities in Iowa (~300)
Categories of Construction Permits

**Minor NSR Permits**
- Minor New Sources
- Minor Modifications at Existing Sources

567 IAC Chapter 22

**Major NSR Permits**
- Major New Sources
- Major Modifications at Existing Sources

**Attainment Areas**
(Areas meeting NAAQS)
Prevention of Significant Deterioration (PSD)

567 IAC Chapter 33

**Non-attainment Areas**
(Areas not meeting NAAQS)
Non-Attainment NSR (NA NSR)

567 IAC Chapter 31
Minor NSR Permits in Attainment Areas

**Minor NSR Permits**
- Minor New Sources
- Minor Modifications at Existing Sources
  567 IAC Chapter 22

**Attainment Areas**
(Areas meeting NAAQS)
Applicability Thresholds from
567 IAC Chapter 33

- **Minor Source:**
  - < 100 TPY of any pollutant if listed source category or;
  - < 250 TPY of any pollutant
- **Modification to a Minor Source:**
  - < 100 TPY increase of any pollutant if listed source category;
  - < 250 TPY increase of any pollutant
- **Minor Modification to a Major Source:**
  - TPY increase < Significant Emission Rate (SER) [see slide 9]
Minor NSR Permits in Non-attainment Areas

**Minor NSR Permits**
- Minor New Sources
- Minor Modifications at Existing Sources
  567 IAC Chapter 22

**Non-attainment Areas**
(Areas not meeting NAAQS)
Applicability Thresholds from 567 IAC Chapter 31

- **Minor Source:**
  < 100 TPY of any pollutant*

- **Modification to a Minor Source:**
  < 100 TPY increase of any pollutant*

- **Minor Modification to a Major Source:**
  TPY increase < Significant Emission Rate (SER) [see slide 9]

* Minor source threshold changes for CO, VOC, NO\textsubscript{x} and PM\textsubscript{10} depending on non-attainment classification
Minor Modifications to Major Sources

**Minor NSR Permits**
- Minor New Sources
- Minor Modifications at Existing Sources

567 IAC Chapter 22

**Minor Modifications to a Major Source:**
TPY Increase < Significant Emission Rate (SER)*

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>SER (TPY)</th>
<th>Pollutant</th>
<th>SER (TPY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>25</td>
<td>Pb</td>
<td>0.6</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>15</td>
<td>Fluorides</td>
<td>3</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>10</td>
<td>H$_2$SO$_4$</td>
<td>7</td>
</tr>
<tr>
<td>NO$_x$ / SO$_2$ / VOC</td>
<td>40</td>
<td>H$_2$S / TRS / RSC</td>
<td>10</td>
</tr>
<tr>
<td>CO</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*SER changes for CO, VOC and NO$_x$ depending on non-attainment classification*
“Synthetic Minor” Projects

• “Synthetic Minor” Modifications or Sources
  – Involve establishing a restriction to avoid state/federal regulation
    Ex. PSD, NA NSR, Title V, National Emissions Standards for Hazardous Air Pollutants (NESHAP), etc.
  – Can apply to a specific project or entire facility
  – Classified as Minor NSR Projects for both Major and Minor Sources
  – Represents a significant number of permits issued by Construction Permit staff
Major NSR Permits in Attainment Areas

- **Major Source:**
  $\geq 100$ TPY of any pollutant if listed source category or;
  $\geq 250$ TPY of any pollutant

- **Major Modification to a Minor Source:**
  $\geq 100$ TPY of any pollutant if listed source category or;
  $\geq 250$ TPY of any pollutant

- **Major Modification to a Major Source:**
  TPY Increase $\geq$ Significant Emission Rate (SER) [see thresholds on slide 9]
Major NSR Permits in Non-attainment Areas

- **Major Source:**
  ≥ 100 TPY of any pollutant*

- **Major Modification to a Minor Source:**
  ≥ 100 TPY of any pollutant*

- **Major Modification to a Major Source:**
  TPY Increase ≥ Significant Emission Rate (SER) [see thresholds on slide 9]

*Major source threshold changes for CO, VOC, NO\textsubscript{x} and PM\textsubscript{10} depending on non-attainment classification

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Major NSR Permits

- Major New Sources
- Major Modifications at Existing Sources

Non-attainment Areas
(Areas not meeting NAAQS)

Non-Attainment NSR
(NA NSR)

567 IAC Chapter 31
Construction Permit Statistics
### Types of Construction Permit Projects

#### Standard
- Any Project that is Not Classified as Complex

#### PSD / NA NSR Complex
- New Major Sources in both Attainment and Non-attainment Areas
- Major Modification at Existing Sources in both Attainment and Non-attainment Areas
- Amendments to PSD / NA NSR Permits (even if change is not a major modification)

#### Other Complex
- Greenfield Ethanol Plants
- PSD / Non-attainment NSR Netting
- PSD / Non-attainment NSR Synthetic Minor
- Projects involving Legal (e.g. Consent Order, Compliance Order, Permit Appeal)
- State Implementation Plan Maintenance Area Changes
- Any other Project requiring Public Comment
### Construction Permit Statistics

<table>
<thead>
<tr>
<th>Category</th>
<th>5-yr Average (2009 – 2013)</th>
<th>2014 (as of 7/14/14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Projects</td>
<td>503</td>
<td>213</td>
</tr>
<tr>
<td>Standard Permit Actions</td>
<td>1543</td>
<td>815</td>
</tr>
<tr>
<td>Standard Project Average Leadtime</td>
<td>61 days</td>
<td>84 days</td>
</tr>
<tr>
<td>PSD/NA NSR Complex Projects</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>PSD/NA NSR Complex Permit Actions</td>
<td>116</td>
<td>66</td>
</tr>
<tr>
<td>PSD/NA NSR Complex Project Average Leadtime</td>
<td>204 days</td>
<td>180 days</td>
</tr>
<tr>
<td>Other Complex Projects</td>
<td>35</td>
<td>10</td>
</tr>
<tr>
<td>Other Complex Permit Actions</td>
<td>253</td>
<td>370</td>
</tr>
<tr>
<td>Other Complex Project Average Leadtime</td>
<td>235 days</td>
<td>267 days</td>
</tr>
</tbody>
</table>
Construction Permit Project History

![Graph showing projects received and completed from June 2012 to April 2014. The graph indicates variability in the number of projects received and completed across different months, with peaks and troughs throughout the time period.](image-url)
Construction Permit Backlog

![Construction Permit Backlog Graph](image-url)
Construction Permit Process Improvements
Construction Permit Improved Efficiency

• Original Core Process Event - 2003
  – 1st Kaizen of State Government
  – Focus: Construction Permit review process and permit leadtime
  – Decreased leadtime from a pre-event start of 120 days

• CP Complex Permits Event - 2004
  – Focus: Reduce leadtime for complex projects
  – Established current leadtime goals:
    • 180-days for PSD Complex Projects [now includes NANSR]
    • 90-days for all other Complex Projects
Construction Permit Improved Efficiency

• Re-visit of the Original Core Event - 2006
  – Focus: Attain new improvements to the construction permit process and continue the lean journey
  – Established current leadtime goal:
    • 30-day for Standard Projects
    • Significant Application Form Revisions

• Stack Test JAD/Process Improvement Event - 2008
  – Focus: Develop stack test system data requirements and improving the use of existing stack test data
  – Assist staff in faster permit issuance through organization of completed and outstanding stack tests
Construction Permit Improved Efficiency

- **Construction Permit Application Review Process Improvement - 2010**
  - Focus: How a construction permit application is reviewed by an engineer
  - Resulted in increased consistency in application review and in construction permits issued

- **AQB Value Stream Mapping - 2012**
  - Focus: All work done is supporting Bureau and Section goals
  - Eliminated engineer’s spending time on VOP Program
    - Assisted 19 facilities in exiting the program
Construction Permit Improved Efficiency

- **2014 Future Streamlining - Construction Permit Forms and Instruction Improvements**
  - Focus:
    - Making forms more simple and straightforward
    - Reduce requests for additional information
    - Align construction permit forms with current rules and regulations
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