NSR Permitting and Enforcement:
Elements of an Enforceable Permit and Post-Case Permitting
Enforceability of Permits

- Purpose of this session:
  - Explore basic concepts of permit enforcement
  - Identify permit terms and conditions necessary to assure that compliance obligations are met
  - Understand how permits can complicate enforcement
Interpretation of Permit Terms

- Permit requirements must "stand-alone"
- Courts will look first to “four corners of the permit” to understand legal obligations
  - Courts evaluate extra-permit information only if permit terms and conditions are ambiguous
- Permit language is strictly construed
- Permittees are strictly liable for compliance with all permit “terms and conditions”
Important Elements of an Enforceable Permit

- Does the Title V or NSR permit (major or otherwise), plainly identify:
  - Emissions units
  - All emissions limitations, standards and other requirements
  - Control technology and requirements;
  - Averaging period(s)
  - Monitoring requirements
  - Method(s) for determining compliance, including use of credible evidence
  - Excess emissions/deviation reporting
  - Reporting and recordkeeping requirements
Emissions Units

- Permit term should identify the emission unit:
  - Number and description
  - Size rating or design capacity
  - Control technology requirement
Emission Units (cont’d)
Enforceable Permit

- Example from State operating permit:

The emission units regulated by the permit are the following:

<table>
<thead>
<tr>
<th>Process</th>
<th>Plant Identifier</th>
<th>AIRS Stack Number</th>
<th>Description</th>
<th>Size</th>
<th>Pollution Control Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinker Cooling</td>
<td>P007</td>
<td>007</td>
<td>SO16 – Clinker Drag Chains</td>
<td>81 tons per hour</td>
<td>Baghouse (3 each)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SO17 – Clinker Cooler</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiln Burning</td>
<td>P008</td>
<td>008</td>
<td>SO18 Precalcer Kiln</td>
<td>120 tons per hour (Dry)</td>
<td>Baghouse</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Emission Units (cont’d)

### Enforceable Permit

- From the above state operating permit Section II: Specific Permit Terms

### P008 Kiln Burning

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Permit Condition Number</th>
<th>Limitations</th>
<th>Emission Factors</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiln Feed Rate</td>
<td>10.3</td>
<td>120 tons/hour 967,680 tons/year (dry basis)</td>
<td>NA</td>
<td>Recordkeeping</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Daily and Monthly</td>
</tr>
<tr>
<td>PM &amp; PM10 - Kiln</td>
<td>10.4</td>
<td>0.275 pound/ton of feed (dry basis)</td>
<td>NA</td>
<td>Stack Test</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Annually</td>
</tr>
<tr>
<td>NOx CO SO2</td>
<td>10.7 (rolling 12-month total, etc.)</td>
<td>2649 tons/year 396 tons/year 1340 tons/year</td>
<td>NA</td>
<td>CEM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Continuously</td>
</tr>
<tr>
<td>VOC</td>
<td>10.7 (Method 25A. Rolling 12-month total, etc.)</td>
<td>138 tons per year</td>
<td>Stack Test</td>
<td>Stack Test Recordkeeping &amp; Calculation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Annually Monthly</td>
</tr>
</tbody>
</table>
Example from a Title V permit application for foam manufacturing facility:

- Facility wanted to make equipment changes and additions without triggering permit review requirements
- Applicant stated:
  - “Equipment installations must often occur very quickly to ensure a competitive response to customer demand. Therefore, [the facility] requests that an approved permit not list the specific equipment noted herein.” (emphasis added)
**Emission Units (cont’d) Permit Example**

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Emission Unit Description</th>
<th>Size Rating / Design Capacity</th>
<th>Control Unit Description</th>
<th>Permit, Order, or Registration #</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-1</td>
<td>3 Pre-Expansion Units</td>
<td>Variable</td>
<td>None</td>
<td>P/X 10-009</td>
</tr>
<tr>
<td>EU-2</td>
<td>60 Pre-puff Storage Bags</td>
<td>Variable</td>
<td>None</td>
<td>P/X 10-009</td>
</tr>
<tr>
<td>EU-3</td>
<td>15 Molding Presses</td>
<td>Variable</td>
<td>None</td>
<td>P/X 10-009</td>
</tr>
<tr>
<td>EU-4</td>
<td>Finished Goods Storage</td>
<td>Variable</td>
<td>None</td>
<td>P/X 10-009</td>
</tr>
<tr>
<td>EU-5</td>
<td>Curing Room</td>
<td>Variable</td>
<td>None</td>
<td>P/X 10-009</td>
</tr>
<tr>
<td>EU-6</td>
<td>Drying Tunnel</td>
<td>Variable</td>
<td>None</td>
<td>P/X 10-009</td>
</tr>
</tbody>
</table>

It is not intended to incorporate by reference these NSR Permits into this Title V permit (emphasis added)
Emission Limitations and Standards

- Permit should plainly identify all applicable emissions limitations, standards and other operational limits
  - Source’s most fundamental legal requirement

- Where?
  - In the permit’s “terms and conditions” section
  - **Note**: In one instance, the source requested that an operating limit on heat input be transformed to a “descriptive” term

- Important: Incorporation by reference of an emission limitation (either by reference to permit application or underlying regulation) creates legal ambiguity

- Title V: All applicable SIP, NSPS, NESHAP, NSR requirements should be plainly set forth
Emission Limitations and Standards (cont’d)

- Substantive source characteristics may be used (where appropriate) as enforceable and measurable limits
  - Example:
    - Maximum heat input rate with specific averaging period, for example:
      - Enforceable – “4850 mmBtu/hr maximum heat input”
      - Ambiguous – “maximum continuous rating: 4850 mmBtu/hr”
      - Unclear meaning as to period covered and how measured
  - Example:
    - Maximum production rate or feed rate
      - ‘Kiln feed rate shall not exceed 120 tons/hour.”
  - Example:
    - Control device removal efficiency
      - “The FGD shall achieve a SO2 removal efficiency of no less than 95% as measured by inlet and outlet continuous emission monitoring.”
Is the emission limitation enforceable?

- **Federally-enforceable** emission limitations must be short-term and specific to determine compliance at any time.

- **Annual emissions** limitations alone (e.g., emission of SO2 shall not exceed 249 tons per year) are inadequate.

Emission Limitations and Standards (cont’d)

**NSR-avoidance permits:**

- Time Frames for Determination of Applicability to New Source Review,” Ed Reich, March 13, 1986
  - “a one month limit is agreed to be the maximum time EPA should generally accept for avoiding a PSD/NSR threshold. However, if a source is unable to use the monthly limit (due to seasonal variations in productions for example), rolling periods of longer durations are also acceptable for determining applicability to major source review. With the year long rolling average on a daily basis, the source must demonstrate compliance for any consecutive 365 days, thereby averting the problems encountered with enforcing discrete annual averages. A twelve month rolling average (year long, on a twelve month basis) is the maximum time frame that would be accepted as federally enforceable.”

- See also:
  - Use of Long Term Rolling Averages to Limit Potential to Emit, John Rasnic, February 24, 1992
Emission Limitations and Standards (cont’d)

- **Synthetic Minor Permits:**
  - A source’s potential to emit should include federally enforceable permit conditions which restrict hours of operation or amounts of material combusted or produced . . . but blanket restrictions on actual emissions are not “
  - U.S. v. Louisiana-Pacific Corporation, D. Colo. 1989, with regard to limiting PTE
Emission Limitations and Standards -- Unenforceable

  - Pollutant limits expressed as lbs/mmBtu “while firing at full load (5156 mmBtu/hr, Nameplate Capacity: 558 MW)”

  - Court: Heat input limit not enforceable

  - Court: Only those terms preceded by “shall not exceed” were enforceable
Emission Limitations and Standards (cont’d) -- Unenforceable

- Cement Plant Permit Condition:
  - 1998 PSD permit
    - Compliance with BACT limits “will be determined by testing in accordance with condition 10”
      - Condition 10a: “within 180 days of reaching the maximum production rate...emissions and opacity of the kiln shall be measured by an approved testing service.”
  - As of 12/07 facility had not reached the maximum production rate
Monitoring and Methods of Compliance – Best Practices

- Is the compliance monitoring method plainly identified and suitable for the averaging period specified?
  - Continuous Emissions Monitoring System (CEMS)
  - Continuous Opacity Monitoring System (COMS)
  - Annual stack testing
  - Fuel metering
  - Recordkeeping and calculation

- Does the permit require that back-up monitoring be available?

- Is calibration, certification, QA/QC, required?

- Is the averaging period specified and enforceable?

- Will the permit assure continuous compliance with the emission limitation?
Monitoring and Methods of Compliance (cont’d)

- Is the monitoring method plainly identified?
  - Remember: Credible Evidence
  - Permit should specify methods of compliance but not *preclude* the use of “any other credible evidence.” 42 U.S.C. 7413(e)
  - Suggested language:
    - “Nothing in this permit is intended to, or shall, alter or waive any applicable law (including but not limited to defenses, entitlements, challenges or clarifications related to the Credible Evidence Rule, 62. Fed. Reg. 8315 (Feb. 27, 1997) concerning the use of data for any purpose under the Act, generated by the reference method specified herein or otherwise.”
Monitoring and Methods of Compliance (cont’d)

- Do the permit terms assures continuous compliance?
  - The DC Circuit Court of Appeals held:
    - That all Title V permits should include monitoring requirements “sufficient to assure compliance with the terms and conditions of the permit,” and
    - That a permitting authority may supplement an inadequate monitoring requirement so that the requirement will “assure compliance with the permit terms and conditions.”
  - EPA may be seeking rehearing en banc. Currently, under review.
Permit Terms and Conditions
Generally

- Are permit limits and terms consistent with the requirements of the SIP and federal regulations?

- Some limits and terms that have been found in permits that conflict:
  - No CAM plan for PM
  - Insufficient monitoring to help ensure compliance
  - SSM exemptions not allowed by SIP
  - Relaxed emission limit through expansion of averaging period (e.g., a lbs/hr limit in SIP but permit allows to show compliance on a 24-hour average basis)
  - Replacement of mass emission limit with limit based on volume (e.g., replaces a lbs/day limit with and “equivalent” limit in ppm w/o corresponding limit on flow rate or capacity)
Permit Terms and Conditions Generally

- Avoid terms like “reasonable,” “generally,” “substantially:”
  - Example:
    “. . . Illinois EPA may grant a longer extension if the Permittee demonstrates that extraordinary circumstances exist and the affected operation can not reasonably be repaired or removed from service within the allowed time . . . and the Permittee is taking all reasonable steps to minimize excess emissions, based on the actions that have been and will be taken.”
  - Title V petition granted -- Permit failed to specify “reasonableness” criteria and is practicably unenforceable
  - See Midwest Generation Order
Permit Terms and Conditions

Generally

- Be clear regarding the number of significant figures in setting emission limits
  - *EPA Performance Test Calculation Guidelines, June 6, 1990*
    - At least 2 significant figures (SFs) and no more than 3 SFs
    - All existing standards considered to have at least 2 SFs
      - i.e., 0.1 g/kg (1 SF) is considered to be 0.10 g/kg (2 SFs)
One State’s Typical Enforcement Issues

- **Issue #1**: Sometimes the Title V permit doesn’t properly bring forward all the requirements from the NSR permit, and vice versa.

- **Issue #2**: Reduce the differences between NSR & Title V permits to provide consistency and ease of enforceability.

- **Issue #3**: Permits sometimes lack proper monitoring, recordkeeping and reporting (MRR).

- **Issue #4**: Sometimes inadequate time is provided to allow for proper Enforcement review prior to issuance.
State Issue #1: Sometimes the Title V permit doesn’t properly bring forward all the requirements from the NSR permit, and vice versa

- **Solution:** Have the same staff process both the NSR & Title V permitting for a given facility (facility assignment)

  - **Single Staff Processing of NSR & TV applications**
    - Permitting staff become more aware of all issues and requirements to be brought forward into the next permitting action
    - Facility assignment encourages greater identification with and, thus, enhanced ‘ownership’ of the permitting process for a facility

  - **Creation of a Major Source Section to handle all TV major permitting actions (see org chart)**
    - This promotes focused meetings & training
    - This promotes major source (advanced) permitting specialists aware of complex major source permitting issues

  - **Staff are cross trained (assigned) so that various staff are assigned to the different refineries, as opposed to having a ‘refinery expert’**
**State Issue #2:** Reduce the differences between NSR & Title V permits to provide consistency and ease of enforceability

- **Solution:** Parallel programs that streamline the process
  
  - **Universal Application**
    - A single application for both programs makes it easier for applicants to prepare the application and staff to review NSR & TV actions
    - Excel tables in the application are formatted to be copied & pasted into both the SOB and either permit template, reducing errors
    - Differences in the programs require a single TV specific section
  
  - **Universal Statement of Basis**
    - Universal SOB promotes bringing forward SOB between the programs
  
  - **Universal Permit Template (format)**
    - Promotes bringing forward requirements from one program to the other
State Issue #3: Permits sometimes lack proper MRR

- **Solution**: Build in systems to reduce mistakes, especially in MRR
  - **Universal Permit Template**
    - The Universal Template helps ensure previous requirements are brought forward into the next permitting action
  - **The MRR Tabular Operating Requirement Format**
    - The MRR Tabular Operating Requirement Format (next slide) ensures MRR for each limit and operating requirement
  - **Pasting Tables from the Application into the Permit**
    - Copying and pasting the Equipment Tables and the Requested Allowables Tables from the application directly into the permit, helping to reduce errors
State Issue #3 (continued): Permits sometimes lack proper MRR.

- **Solution: The MRR Tabular operating Requirement Format:**

  206: Hourly Ethanol Production Limit:

  | Requirement: | Total ethanol produced by the facility shall not exceed 600 gallons per hour. |
  | Monitoring:  | A flow meter and data logger shall be installed and continuously operated that measures the hourly flow volume in gallons of produced ethanol. |
  | Recordkeeping: | Records of the hourly flow volume shall be kept including the date, the hour of the day, and the total flow volume of produced ethanol during the proceeding hour in gallons. |
  | Reporting:   | By January 31 of each year, the facility will submit a report to the Department including the data required in this condition for all 8760 hours of the year. A synopsis shall be added to the beginning of the report summarizing each hour in the year the hourly ethanol production exceeded 300 gallons per hour. |
 Permit Shields

- **40 CFR Part 70.6 (f):**
  - *(f) Permit shield.*
    
    (1) . . . the permitting authority may expressly include in a part 70 permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that:
    
    (i) Such applicable requirements are included and are specifically identified in the permit; or
    
    (ii) The permitting authority, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof. (emphasis added)

    (2) A part 70 permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.
Permit Shield Language

- **Placeholder Language:**
  - 2.2- Permit Shield for Nonapplicable Requirements.

  - The Permittee is shielded from the following applicable requirements as of the date of issuance of this permit based on information furnished with all previous applications. However, this permit shield does not currently encompass major source construction permit requirements that are deemed applicable to the source as a result of ongoing litigation between EPA and Duke Energy Corporation. (emphasis added) The source shall not be shielded from any such requirements found to be applicable as a result of this litigation, and in the event that such a finding is made, this will provide a basis for reopening the permit to establish a schedule for complying with these requirements. This shield does not apply to future modifications or changes in the method of operation.
- **EPA letter to State Permitting Authority:**
  - EPA issued separate Notices of Violation (NOVs) to [the source]. Because [the source] is allegedly not in compliance with all applicable Clean Air Act requirements, [the state permitting authority] cannot issue a Title V permit to [the source] that serves as a shield to the alleged violations. [The state permitting authority] must include language appropriately limiting the application of the permit shield set out in 42 U.S.C. Section 7661(c)(f) and 40 CFR Part 70.6
Prohibition on netting of illegal emissions:

- 52.21 Prevention of significant deterioration of air quality.

(b) Definitions

(3)(vi) A decrease in actual emissions is creditable only to the extent that:

(a) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;

(b) It is enforceable as a practical matter at and after the time that actual construction on the particular change begins.
Source in Compliance with Allowable Limit:

- Allowable Emissions
- Actual Emissions
- New Allowable Emissions

Creditable Reduction
NSR – Netting/Creditable Emissions

Source in Violation of Allowable Limit:

- Allowable Emissions
- Actual Emissions
- New Allowable Emissions

Creditable Reduction