Importance of Addressing Data Completeness and Data Quality Issues to Achieve the NCI Goals

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Data Quality and Completeness

• Where we are:
  – What is the current status of data completeness and quality?
  – What has the SNC rate reduction effort done so far to improve data issues?

• Where we need to be:
  – How much do we need to do?
  – Where should we focus efforts to get the biggest impact most efficiently?
Where we are

- Approx. 41,800 permits with sufficient data in ICIS-NPDES to include in quarterly SNC rate calculation
  - ~4,000 permits still need to have this permit-level data complete
- Range of individual permit universes in authorized programs from six states with under 100 permits to >2,000 in five states – and everywhere in between
- A BUNCH of data systems – ICIS-NPDES, NetDMR, state eDMR systems, state data systems (often more than one per state)
SNC by Type

Quarterly SNC status for FY2019Q4, from SNC Dashboard 1/8/2020

<table>
<thead>
<tr>
<th>Code</th>
<th>Status</th>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Noncompliant</td>
<td>SNC/Cat. 1</td>
<td>Enforcement action or permit compliance schedule event violation - more than 90 days late</td>
</tr>
<tr>
<td>E</td>
<td>Noncompliant</td>
<td>SNC/Cat. 1</td>
<td>Effluent violations of monthly average limits</td>
</tr>
<tr>
<td>X</td>
<td>Noncompliant</td>
<td>SNC/Cat. 1</td>
<td>Effluent violations of non-monthly average limits</td>
</tr>
<tr>
<td>T</td>
<td>Noncompliant</td>
<td>SNC/Cat. 1</td>
<td>Enforcement action or permit compliance report violation &gt; 30 days late</td>
</tr>
<tr>
<td>D</td>
<td>Noncompliant</td>
<td>SNC/Cat. 1</td>
<td>Reporting violation - non-receipt of DMR</td>
</tr>
</tbody>
</table>
Data from SNC dashboard as of official QNCR date for that quarter's data
DMR non-receipt SNC

- Permittee doesn’t submit entire DMR, or submits an “invalid” no data indicator (NODI) code for entire DMR
  - Status persists for 2 years unless violations are resolved
- Permittee submits DMR, but the data doesn’t get into ICIS-NPDES
- Missing DMR data masks effluent violations
- How much is true non-submittal of data? How much would show SNC-level effluent violations if the data were in ICIS?
Enforcement Action or Permit Compliance Schedule Events

- Milestone dates may be in ICIS, but completion dates are not entered
- Violations persist until order closed
- Completeness of enforcement action data?
Additional Challenges

• Data transfer issues can be multi-faceted
  – Multiple issues may need to be addressed to improve data completeness substantially

• Technical issues are not the only barrier to improved data completeness

• Good data quality/completeness doesn’t necessarily stay that way
Efforts Underway

• Each EPA region is working with a priority state to resolve individual data issues
• ICIS-NPDES training webinars
• Other efforts to address some national data quality issues (e.g., NODI code sub-group, updating reference tables)
Data Quality and DMR Non-receipt Subgroup Efforts

- 6 tasks identified at 2019 workgroup symposium in Atlanta for subgroup work:
  - Create a soft-error notification in NetDMR to alert for invalid NODI code submission (done)
  - Develop handbook for investigating SNC in data (2nd draft under review by subgroup)
  - Propose routine nation-wide re-runs of RNC processing
  - Propose standard practices for manual resolution of DMR non-receipt violations
  - Enhanced DMR non-submission notification
  - Improving what we can tell about SNC from data we have
Data Completeness Critical to Achieving NCI Goals

• Improve analysis about non-compliance issues and their root causes
• Accurately identify facilities for state/EPA discussion
• 60% of current SNC is DMR non-receipt; must address to achieve our overall 50% reduction from the baseline
• About 4,000 permits per quarter are in SNC for DMR non-receipt, and that is the highest noncompliance status for >5,000 permits each year
Goals

• Get permit data complete and compliance tracking on for full active individual permit universe so we can include all individual permits in rate calculation and analysis

• Resolve data transfer issues between state databases and ICIS-NPDES, including processes and controls to monitor and maintain data quality once achieved

• Address true non-submission of required monitoring data
Where to Focus

• Ensure compliance status reflects underlying data
• Schedule event completion dates
• Identify “low-hanging fruit” issues in states with substantial data completeness issues
• Continuous engagement with states working on data issues
• Compliance assistance or enforcement (as appropriate) where non-submittal of data is causing SNC