

NO₂ In-stack ratio database

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NO₂ ISR Development

- Initiated by OAQPS in response to comments from community about data needs
- 12-person workgroup
 - Modelers, permit engineers, source-test experts

EPA

- Andy Hawkins
- Ashley Mohr
- Cleveland Holladay
- Erik Snyder
- Kim Garnett
- Shirley Rivera
- James, George, Roger

State & Local

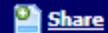
- Jillian Baker
- Leland Villalvazo
- Maragret Valis
- Steve Moore
- Gail Good

Status

- Data collection effort launched August, 2012
- Data submission template
 - Excel spreadsheet
 - 41 fields, 31 are “required”
 - Detailed descriptions of input fields
- What data to submit
 - Most records/highest resolution rather than averaged data
- Who can submit data
 - Anyone – EPA, State, Local, facility, manufacturer
- Listed on SCRAM
 - http://www.epa.gov/scram001/no2_isr_database.htm
 - Google search “NO2 ISR”



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NO₂/NO_x In-Stack Ratio (ISR) Database

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Overview

Section 5.2.4 of the EPA's [Guideline on Air Quality Models](#), Appendix W to 40 CFR Part 51, recommends a three-tiered screening approach to estimate ambient concentrations of NO₂:

- Tier 1 – assume complete conversion of all emitted NO to NO₂
- Tier 2 – multiply Tier 1 results by a representative equilibrium NO₂/NO_x ratio
- Tier 3 – perform a detailed analysis on a case-by-case basis

Prior to the April 2010 revision of the NO₂ NAAQS, most facilities were able to demonstrate compliance with the NAAQS using the Tier 1 and 2 screening methods. However, with the additional stringency of the new 1-hour NO₂ NAAQS, the need for facilities to use a Tier 3 approach has increased. EPA issued [guidance](#) on June 28, 2010, indicating that the three-tiered approach in Section 5.2.4 is generally applicable for the 1-hour NO₂ NAAQS, and also clarified that the Ozone-Limiting Method (OLM) and Plume Volume Molar Ratio Method (PVMRM), included as non-default options in the AERMOD dispersion model, are currently considered to be detailed screening methods under Tier 3.

Status

- **Alpha database available**
 - Preliminary/incomplete data
- **Official database is empty – no data submitted to date**
- **Data collection cross-cutting issue**
 - Modelers, permit engineer, source-test groups
 - Potentially significant issues with data quality
 - Potential issues with confidentiality
- **Conversation about how we can promote data collection & submission**