

Emission Statement Program

N.J.A.C. 7:27-21



**& Update for the
2010 Emission Statement**

March 31, 2011

Why Is an Emission Statement Required?

- SIP inventory required by Section 182 (a)(3) and 110 (a)(2)(F) of the Clean Air Act every 3 years until attainment
- National Emissions Inventory required by 40 CFR 51 Subpart A
 - Requires inventories every 3 years (Point, Area, Onroad, Nonroad, and Biogenics)
 - Major point sources in nonattainment areas are required to report annually
- Emissions inventory for point sources are required through the Emission Statement Program, N.J.A.C. 7:27-21
 - N.J.A.C 7:27-22 applies an annual emissions fee based on the emissions inventory collected through the Emission Statement Program

What is an Emission Statement

- Annual report required for facilities with Potential-To-Emit (PTE) that meet the reporting threshold under N.J.A.C. 7:27-21.
- Air contaminants required include CO, NO_x, VOC, Pb, SO₂, PM₁₀, PM_{2.5}, TSP, ammonia, greenhouse gases (CO₂ and methane), and 36 toxic air pollutants (TAP's) as listed in the Rule.
- Data is submitted using the RADIUS software.

Air Contaminant Applicability Thresholds

- Emission Statement reporting applies if a facility has a Potential To Emit (PTE) of:
 - 5 tons or greater Pb
 - 10 tons or greater VOC*
 - 25 tons or greater NO_x
 - 100 tons or greater of CO, SO₂, PM₁₀, PM_{2.5}, TSP, or ammonia

*Note: Facilities with a PTE for VOC between 10 and 25 tpy are required to report emissions for CO, NO_x, VOC and TAPs. All major facilities have to report emissions for all air pollutants in N.J.A.C. 7:27-21.

36 Toxic Air Pollutants

- Acetaldehyde
- Acrolein
- Acrylonitrile
- Arsenic and compounds
- Benzene
- Beryllium and compounds
- 1,3-Butadiene
- Cadmium and compounds
- Carbon tetrachloride
- Chloroform
- Chromium and compounds
- 1,3-Dichloropropene
- 1,4-Dioxane
- Dioxins
- Ethylene dibromide
- Ethylene dichloride
- Ethyleneimine
- Ethylene oxide
- Formaldehyde
- Hexachlorobenzene
- Hydrazine
- Hydrochloric acid
- Manganese and compounds
- Mercury and compounds
- Methylene chloride
- Nickel and compounds
- Polychlorinated biphenyls (PCBs)
- Polycyclic organic matter
- Propylene dichloride
- Quinoline
- 1,1,2,2-Tetrachloroethane
- Tetrachloroethylene
- 1,1,1-Trichloroethane (Methyl chloroform)
- 1,1,2-Trichloroethane
- Trichloroethylene
- Vinyl chloride

The reporting thresholds for these chemicals are in N.J.A.C. 7:27-8, Appendix 1, Table B. The thresholds are applied at the facility-wide level.

Greenhouse Gases

- CO2 and methane
- All major facilities
- No minimum reporting threshold
- No reporting applicability

Potential To Emit

- The maximum aggregate capacity of a source operation or of a facility to emit an air contaminant under its physical or operation design
- Permit conditions can limit the design or maximum capacity if the limitation is “federally enforceable”
- Permitted Sources have a PTE equal to their permit allowable emissions and unpermitted (grandfathered, insignificant, fugitive, etc.) sources are assumed to operate at their maximum capacity for 8,760 hours per year

What is Defined as a VOC?

- A Volatile Organic Compound (VOC) is defined (in 40CFR 51.100(s)(1)) as all organic compounds “which participate in atmospheric photochemical reactions or which are measured by a reference method (40 CFR, Part 60.2).”
- Excluded are a list of compounds that do not participate in photochemical reactions.

Which Pollutants Do I Have to Report?

- PTE for VOC is 10 tpy or above
 - CO, NO_x, and VOC
 - TAPs starting with the 2005 Emission Statement
- PTE for VOC is 25 tpy or above
 - CO, NO_x, VOC, SO₂, Pb, PM_{2.5}, PM₁₀, TSP, and ammonia
 - Greenhouse gases (CO₂ and methane)
 - TAPs
- PTE for any of the other pollutant(s) is at or above the Applicability Threshold
 - CO, NO_x, VOC, SO₂, Pb, PM_{2.5}, PM₁₀, TSP, and ammonia
 - Greenhouse gases (CO₂ and methane)
 - TAPs

What is in an Emission Statement - Administrative Information

- Facility Profile (General)
 - Facility information
 - Contact information
- Facility Profile (Planning)
 - Facility type
 - # of employees
 - Estimates of future emissions

What is in an Emission Statement - Inventories

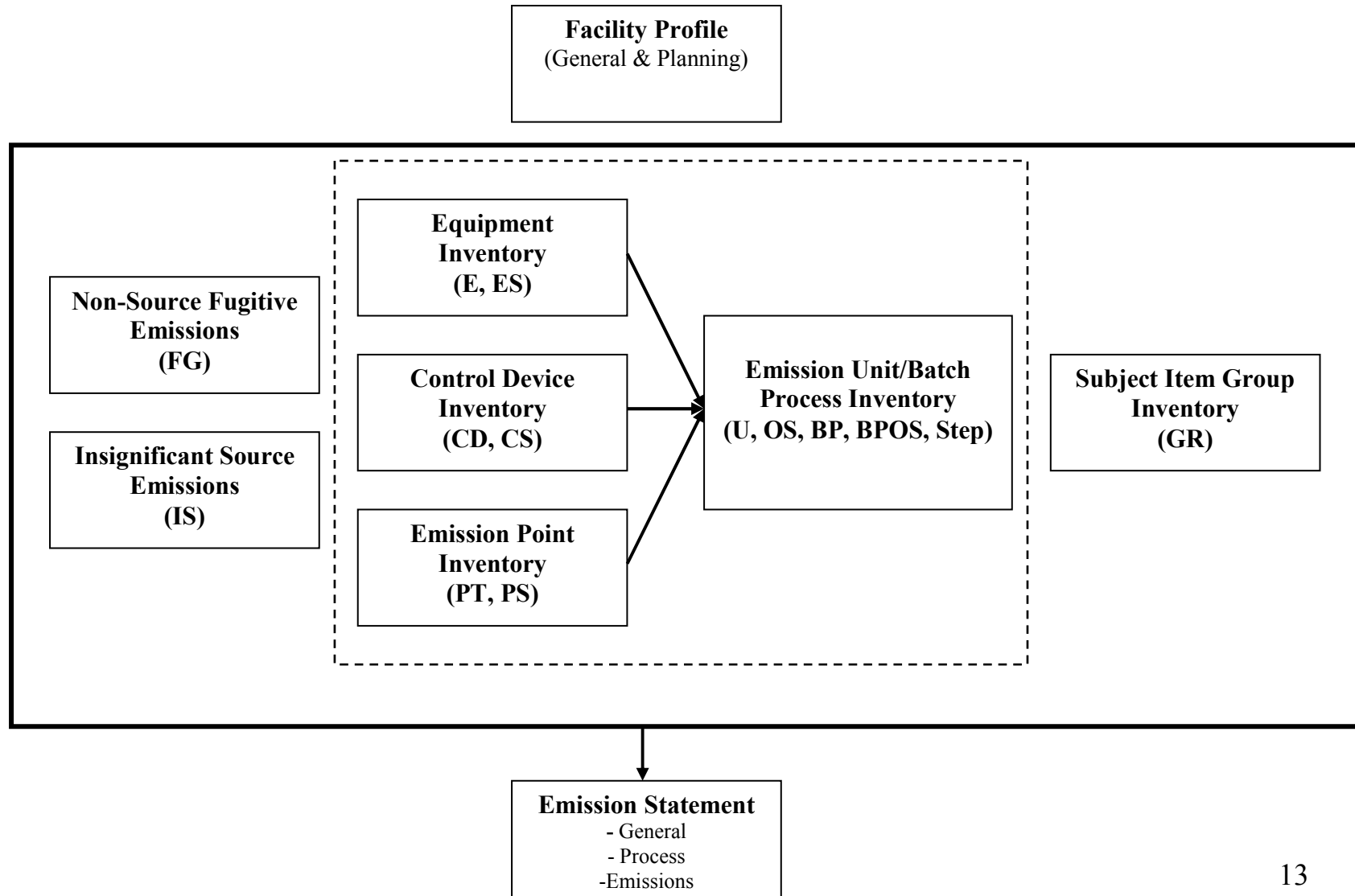
- Non-Source Fugitive Emissions
- Insignificant Source Emissions
- Equipment Inventory
- Control Device Inventory
- Emission Point Inventory
- Emission Unit/Batch Process Inventory
- Subject Item Group

What is in an Emission Statement - Emissions Information

- Emission Statement
 - General
 - Quarterly throughputs
 - Source Status
 - Process
 - Process amounts
 - Operating time
 - Emissions
 - Emission factors
 - Control operations
 - Source details

RADIUS: TABLE OF CONTENTS

Radius Elements And Their Relation



Consistency With Numbers

- Emission Statement reporting must be consistent with permits
- How you structure your permits decides if you can report in an easier fashion
- The nature and variability of your operation decides if easier reporting can occur
- There are a few instances where the Emission Statement structure may be different from those in the permits such as a thermal oxidizer must be reported as a piece of equipment

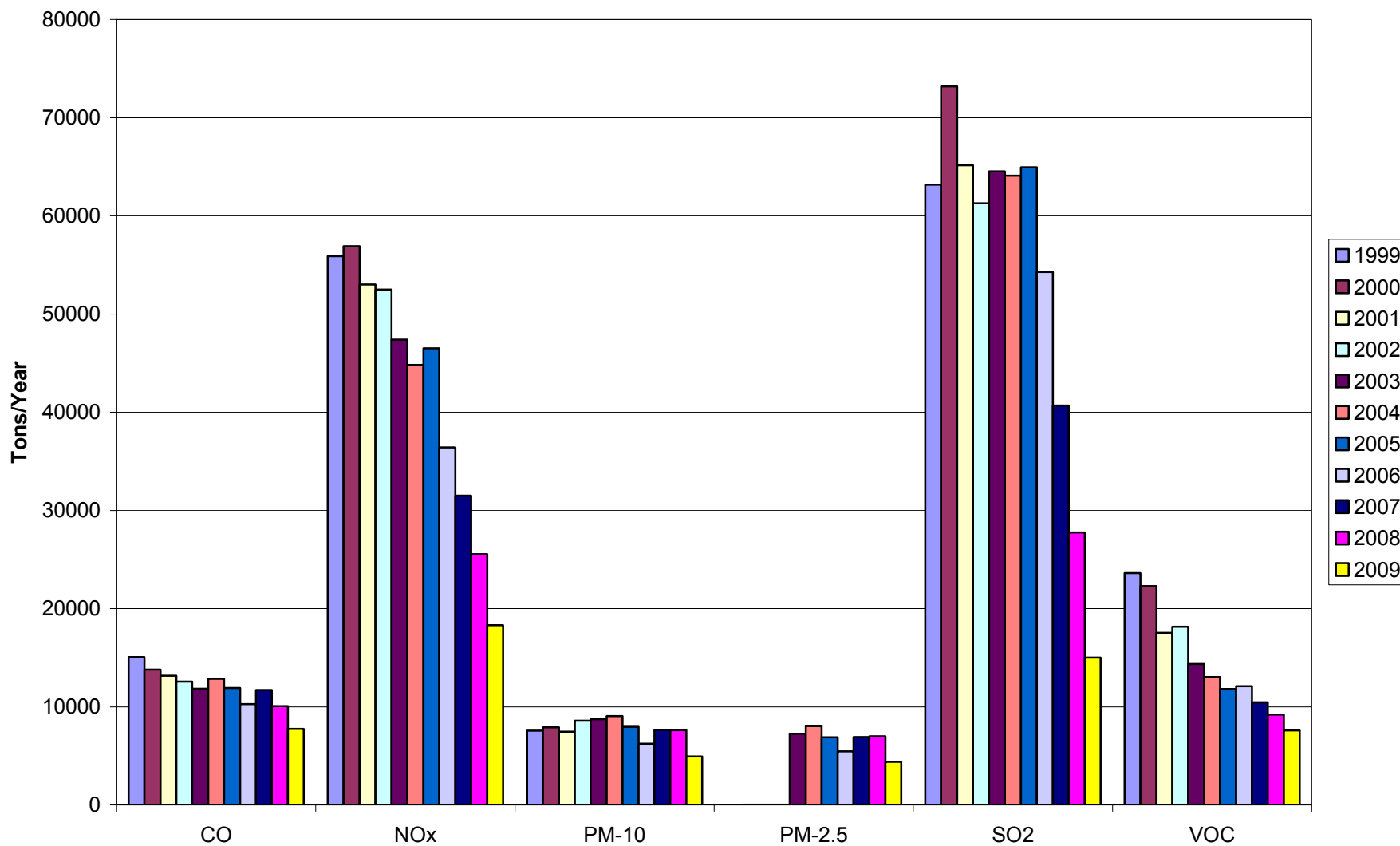
Control Device Efficiency

- Operating Time (OT)
- Capture Efficiency (CE)
- Removal Efficiency (RE)
- Overall Efficiency = $OT \times CE \times RE$
- Use of Design Efficiency
- **Rule Effectiveness**

Summary of 2009

- 565 Emission Statements submitted
 - 100% electronic
 - 275 major
 - 290 minor/synthetic minor

Emissions Reported To The Emission Statement Program



Common Issues in 2009 Emission Statements

- Structure of the Emission Statement
 - Mirror permit(s)
 - Correctly link the equipment, emission point, and control device in the Emission Unit/Batch Process Inventory
 - Correctly identifying the Equipment Type
 - Create new equipment/operating scenario for control devices that burn fuel
 - Delete sources that are no longer permitted and did not operate during that reporting year

Common Issues in 2009 Emission Statements

- Process & Emissions Screens:
 - Report fuel usage for combustion sources
 - Report amount of coating/ink/solution for coating/printing operations
 - CO₂ in 1000 tons/yr and TAP's in lbs/yr
 - NO_x for 5/1-9/30 in tons/season
 - PM_{2.5} at source level for sources of particulates
 - Ammonia at source level
 - Emission factors except for CEM and material balance
 - Source Details and Control Operations

Common Issues in 2009 Emission Statements

- Things to remember about the latest version of RADIUS:
 - Correctly use the check boxes on the General screen
 - Select pollutants from drop-down list
 - “Sum Facility Emissions” before creating file
 - Use the Submit function in RADIUS
 - Use Save As Different Year under the Tools drop-down menu, not under the File drop-down menu
 - RADIUS only calculates emissions for boilers and coating/printing processes
 - Autocalculate does not calculate emissions for the NO_x tons/season (5/1-9/30) nor emissions for PM_{2.5}, ammonia, CO₂, methane, and TAP’s

Common Issues in 2009 Emission Statements

- Other Miscellaneous Issues:
 - Missing NAICS (An administrative error is now produced w/o this information)
 - Use of proper SCC to 4 levels (Cannot save/exit w/o choosing a valid SCC code)
 - Use of proper AP-42 emission factors
 - Include condensable as part of PM
 - Checklist for reviewing the emission statements
 - N.J.A.C. 7:27-21(j)
 - Reporting roof landing emissions via RADIUS
 - Additional reporting of information beyond RADIUS

What's New in RADIUS

- Use latest version of RADIUS (3.5)
 - Same version as last year
- Import the latest Reference Tables
 - There are new ones since last year

Where to Start

- Start with Emission Statement from previous year
 - Include any permit modifications
- Title V Facilities that never submitted an Emission Statement using RADIUS
 - Convert the Title V permit/application in an Emission Statement
- Non-Title V Facilities that never submitted an Emission Statement using RADIUS
 - Request the Department to create a file from all permits
 - Or, merge all existing permit and convert the resulting file into an Emission Statement

Certification of Emission Statement

- Email electronically certified Emission Statements to Emis_Statement@dep.state.nj.us.
 - When certifying with PINs, please enter all letters in CAPs
- If you used a paper certification form, you must mail the certification form with your CD-ROM to DEP

Important Dates

- RADIUS submittals due May 15, 2011
 - Post-marked; next business day if due date falls on a weekend or holiday
- NJDEP must submit data to USEPA by December 31, 2011 (5 months less than before)

Emission Statement Web Page

- www.nj.gov/dep/baqp (Bureau of Air Quality Planning)
- Important Dates
- Guidance Document and other forms
- General ES Info
- Listserv Instructions
- Contact Information
- FAQ's
- Useful Links (USEPA, NAICS, etc.)