NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

6NYCRR Part 212 Process Operations

The Evaluation of Public Health & Environmental Impacts – Permitting Sources of Air Pollution From Process Operations

Air & Waste Management Association Meeting – Niagara Frontier Section
September 24, 2015

Overview

- History
- Major Changes
- Application Requirements
- DEC Review
- Questions Received

History

- 1966 - Part 187 “Contaminant Emissions from Processes, Exhaust and Ventilation Systems”. Focused on 81specific chemicals and 24 chemical classes.
- 1968 - 6 NYCRR Part 212 Processes and Exhaust and/or Ventilation Systems. Process Source Handbook (Chapters 3900 & 4100).
- **Environmental Rating System Concept First Developed.**
- 1978 -1984 Introduction of source specific rules.
- 1981 – Air Guide -1 developed (Updated 1983, 1985, 1991).
- 1986 -1995 Introduction of VOC RACT rules.
- 2010 - Addition of NOx RACT for Asphalt Plants. (12 sections)
- 2015 – Separation into 4 sections (Effective June 14, 2015).

A New Era in Air Toxics Control

EPA Residual Risk Report to Congress (1999)

" A successful comprehensive air toxics program will be one that integrates the residual risk and other federal programs with State and local programs and strengthens those existing programs. Program integration will involve interactive sharing of expertise, data, analyses and methodologies."

Objectives of the New Part 212

- To control process emission sources in a manner that is protective of public health and the environment.
- To provide regulatory assurance to businesses and the public concerning emissions of toxic air contaminants.
- To provide consistency among Parts 200, 201 and 212 and the federal NSPS/NESHAP programs.

Applicability (Transition Plan)

- Upon issuance of a new or modified permit or registration for a facility containing process emission sources.
- Upon issuance of a renewal for an existing permit or registration.
- Part 212 does not apply to combustion or incineration sources just process operations.

Major Changes to Current Part 212

First Major Change

- Implementation of the High Toxicity Air Contaminant list (HTACs): a pound per year emission rate threshold for each contaminant on the list.
- This alternative compliance option allows staff to evaluate HTACs without air dispersion modeling.

Second Major Change

- The Department will eliminate the phrase:

"Degree of air cleaning required shall be specified by the Commissioner"

- This phrase was replaced with the requirement to perform an air dispersion modeling analysis showing compliance with either: the National Ambient Air Quality Standards; or Annual Guideline Concentrations. In addition, for specific HTACs an evaluation for emission reductions that exceed the Persistent and Bioaccumulative (PB) Trigger is required.

- This will provide consistency from one Region to another.

Major Changes to Current Part 212

Third Major Change

- Lowering the applicability control requirement from 1 lb/hr to 0.1 lb/hr for toxic air contaminants that are “A” rated.
- This step gives regulatory certainty that high toxicity air contaminants will be reduced a minimum of 90%.

Fourth Major Change

- Accept the 40 CFR Part 61 and 63 NESHAP program as meeting the requirements of Part 212 for all toxic air contaminants controlled by the NESHAP with the exception of HTACs.
- NESHAP affected process operations emitting HTACs contaminants will submit a Toxic Impacts Assessment (TIA) analysis demonstrating that offsite ambient air concentrations are acceptable to the Department.

Determining an Environmental Rating

- Toxic and other properties and the emission rate potential of the air contaminant;
- Location of the source with respect to residences or other sensitive environmental receptors, including consideration of the area's anticipated growth;
- Emission dispersion characteristics at or near the source, taking into account the physical location of the source with respect to terrain; and
- Projected maximum cumulative impact taking into account emissions from all sources at the facility under review and the pre-existing ambient concentration of the air contaminant under review (background).

Application Requirements

- All emitted air contaminants with chemical name and CAS#.
- Plot plan of the facility with emission points (EPs) identified.
- A list and description of all emission sources at the facility except those that are listed as exempt or trivial in Subpart 201-3.
- Stack parameters for all listed EPs.
- A process flow diagram detailing which process emissions and process emission sources exhaust from which EP.

DEC Review

- Do any emission sources meet the requirements of exempt status or exceptions found in 212-1.4?
- Are any of the emission sources covered by a NESHAP?
  - If so, are any air contaminants controlled by the NESHAP identified as a High Toxicity Air Contaminant (HTAC)?
- Are any air contaminants found on the HTAC list; are facility wide emissions less than HTAC mass emission rate?

DEC Review

- Assign an Environmental Rating for each air contaminant
  - Group compounds by Particulate family and VOC family and other.
  - Assign control for speciated air contaminants and Particulate family.
- Work with applicant explaining the degree of control required for a particular emission source.

Questions Received

1.) *Do I need to ask this facility to prepare a TIA, or are they in compliance if meeting the NESHAP requirement?*

The TIA is filling the requirement of section 112(f) of the CAA for HTACs. EPA has not addressed the residual risk in the timeframes set out in the CAA.

2.) *If a facility is subject to the NESHAP and the method to determine compliance is measurement of total VOCs, is this source not required to comply with VOC RACT.*

In a majority of source categories, the NESHAP will have reduced emissions to be below the VOC major threshold levels which are based on potential to emit (PTE).

Questions Received

3.) *Under the applicable NESHAP, **PM is regulated as a surrogate for metal HAPs**. The process emission source emits many different metal compounds under the metal compound categories listed in Table 2 (HTAC table), such as nickel compounds and lead compounds. Does the facility need to perform modeling for these metal emissions, per 212-1.5(e)(2)?*

The PM surrogate or in other instances the total THC surrogate are methodologies to demonstrate compliance. These surrogates do not answer the question are the impacts of toxic air contaminants protective of public health. To satisfy the requirements of 212-1.5, the source owner must meet the NESHAP surrogate emission requirements to be in compliance. The speciated compounds within the surrogate emission profile need to be evaluated with a Toxic Impact Assessment if they are on the HTAC list.

Questions Received

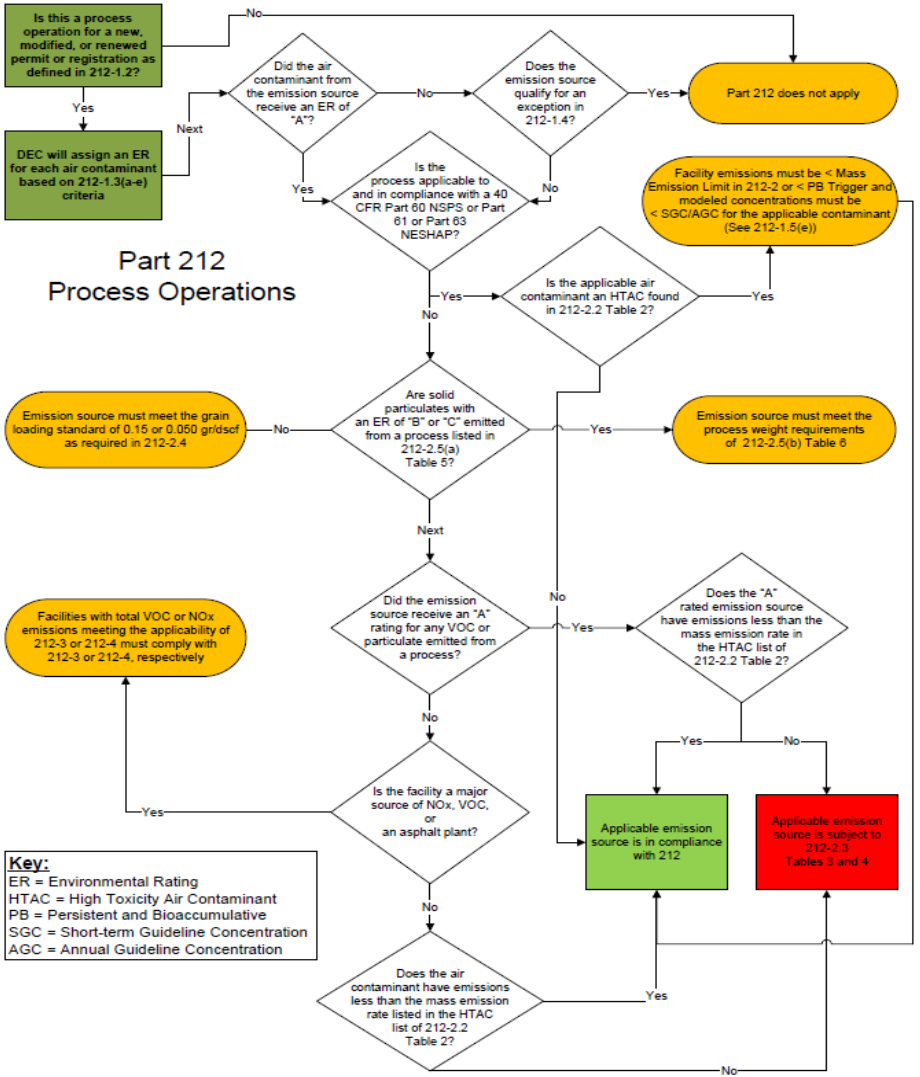
4.) *Can you clarify for me the 212 applicability of NESHAP GACT sources? (i.e., NESHAP Subparts that are for area sources) Based on a couple of the answers in the response to proposed rule comments, it seems that the intention of 212-1.5(e)(2) was to cover major NESHAP MACT sources only. However, the published rule cites 40 CFR 63 in its entirety.*

The Department is looking to use the federal program where it is applicable. Small process emission sources, which traditionally would have been covered by Part 212, will be covered by the federal program. The control strategies under GACT will be deemed sufficient unless they emit an HTAC contaminant.

Next Steps

- Updated web page which summarizes the rule and provides a general implementation flow chart.

  http://www.dec.ny.gov/chemical/8568.html
- Create a frequently asked questions (FAQ) page.
- Update and reissue DAR-1: Guidelines for the Control of Ambient Air Contaminants Under Part 212.


Is this a process operation for a new, modified, or renewed permit or registration as defined in 212-1.2?
No
Yes
DEC will assign an ER for each air contaminant based on 212-1.3(a-e) criteria
Next
Did the air contaminant from the emission source receive an ER of "A"?
No
Does the emission source qualify for an exception in 212-1.4?
Yes
Part 212 does not apply
Yes
No
Is the process applicable to and in compliance with a 40 CFR Part 60 NSPS or Part 61 or Part 63 NESHAP?
Facility emissions must be < Mass Emission Limit in 212-2 or < PB Trigger and modeled concentrations must be < SGC/AGC for the applicable contaminant (See 212-1.5(e))
Part 212
Process Operations
Yes
Is the applicable air contaminant an HTAC found in 212-2.2 Table 2?
Yes
No
Emission source must meet the grain loading standard of 0.15 or 0.050 gr/dscf as required in 212-2.4
No
Are solid particulates with an ER of "B" or "C" emitted from a process listed in 212-2.5(a) Table 5?
Yes
Emission source must meet the process weight requirements of 212-2.5(b) Table 6
Next
Facilities with total VOC or NOx emissions meeting the applicability of 212-3 or 212-4 must comply with 212-3 or 212-4, respectively
Did the emission source receive an "A" rating for any VOC or particulate emitted from a process?
No
Yes
Does the "A" rated emission source have emissions less than the mass emission rate in the HTAC list of 212-2.2 Table 2?
Yes
No
No
Is the facility a major source of NOx, VOC, or an asphalt plant?
Yes
Applicable emission source is in compliance with 212
Applicable emission source is subject to 212-2.3 Tables 3 and 4
No
Does the air contaminant have emissions less than the mass emission rate listed in the HTAC list of 212-2.2 Table 2?
Yes
No
Key:
ER = Environmental Rating
HTAC = High Toxicity Air Contaminant
PB = Persistent and Bioaccumulative
SGC = Short-term Guideline Concentration
AGC = Annual Guideline Concentration

Thank You

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