OVERVIEW OF NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP)

Lisa M. Schmidt, P.E.
Thompson Environmental Consulting, Inc.

NESHAPS – INTRODUCTION

- Required by the Clean Air Act (CAA)
- Impacts both major and minor facilities
- Typically require controls or other forms of emission reductions (e.g. replacement of HAP containing material)

KEY DEFINTIONS

NESHAP MAJOR SOURCE

- Any stationary source or group of stationary sources within a contiguous area and under common control that have the potential to emit of more than 10 tpy of single hazardous air pollutant (HAP) or more than 25 tpy of total HAPs.

NESHAP AREA SOURCE

- Any stationary source or group of stationary sources within a contiguous area and under common control that have the potential to emit of less than 10 tpy of single hazardous air pollutant (HAP) or less than 25 tpy of total HAPs.

MAJOR SOURCE NESHAPS

MAJOR SOURCE NESHAPS

- Maximum Achievable Control Technology (MACT) required under CAA

- Standards have been issued for all the original major source categories, though some standards have been vacated or are being reconsidered (e.g. Boiler MACT). New categories have been added (e.g. Utility Boilers)

SOURCE CATEGORIES - MAJOR

- Complete list available at:

  www.epa.gov/ttn/atw/mactfnlalph.html

- Examples include:
  - Boilers and generators at major sources
  - Miscellaneous Organic Chemical Manufacturing
  - Vegetable Oil Processing

MAJOR SOURCE NESHAP - MACT

- MACT is defined as the maximum degree of reduction in HAP emissions that is achievable taking into consideration the cost of achieving the emissions reductions, any non-air-quality health and environmental impacts, and energy requirements.

MAJOR SOURCE NESHAP - MACT

- MACT floor is the minimum control level allowed for NESHAP.
- MACT floor ensures that all major HAP emission sources achieve the level of control already achieved by the better-controlled and lower-emitting sources in each category

MAJOR SOURCE NESHAP - MACT

- NEW SOURCES:
  - MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source.
  - New sources are typically defined as any source constructed after the proposed MACT standard is published in the Federal Register
  - Compliance dates for new sources is typically 6 months after publication of the final rule or upon startup

MAJOR SOURCE NESHAP - MACT

- EXISTING SOURCES:
  - MACT floor cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources (or the best-performing 5 sources for categories or subcategories with fewer than 30 sources).
  - Any source that is not defined as “new” is existing
  - Compliance date for existing sources is typically 3 years after publication of the final rule

MAJOR SOURCE NESHAP

- Most facilities subject to major source NESHAPS have been operating under the standards for a few years now

- Exceptions include some of the Reciprocating Internal Combustion Engines (RICE) and all the Industrial, Commercial, and Institutional Boilers

AREA SOURCE NESHAPS

AREA SOURCE NESHAPS

- CAA requirements:
  - Identification of no less than 30 HAPs which present the greatest threat to public health
  - Identification of list of sources or source categories sufficient enough to ensure 90% reduction of the listed HAPs
- EPA has identified 33 HAPs to be regulated under the Area Source NESHAPS and approximately 70 area source categories

AREA SOURCE NESHAPS

- Standards have been issued for nearly all area source categories, though some standards have been vacated or are being reconsidered (e.g. Boiler MACT)
- Most of the compliance dates for these standards have either recently occurred or are occurring in the near future

AREA SOURCE NESHAPS – REGULATED HAPS

- List consists of only 33 HAPS (vs. the full 187 list of HAPS regulated for major sources)
- Complete list is available at www.epa.gov/ttn/atw/area/list33.html
- Examples: acetaldehyde, benzene, metal HAPS (chromium, lead, mercury, etc), ethylene oxide, methylene chloride

SOURCE CATEGORIES – AREA

- Complete list available at:

http://www.epa.gov/ttn/atw/area/arearules.html

- Examples include:
  - Painting Operations
  - Metal Finishing and Fabricating
  - Animal Feed Preparations
  - Chemical Manufacturing
  - Boilers and generators located at area sources

AREA SOURCE NESHAPS - GACT

- GACT is defined as the generally available control technologies or management practices
- CAA does not set specifications for area source standards
- EPA has discretion in setting GACT
- No GACT floor based on best existing source or top 12%.

AREA SOURCE NESHAPS - GACT

- GACT defined by EPA as methods, practices, and techniques which are commercially available and appropriate for application by the sources in the category considering economic impacts and the technical capabilities of the firms to operate and maintain the emissions control systems

AREA SOURCE NESHAPS - GACT

- GACT typically includes standard controls and management practices
- Examples are:
  - Monthly maintenance on generators
  - Pressure drop monitoring on cyclones
  - Housekeeping practices
  - Spray paint and adhesive application training

AREA SOURCE NESHAP - GACT

- NEW VS. EXISTING SOURCES:
  - Generally GACT is typical identical for new and existing sources
  - Primary difference is compliance date. New sources typically have to comply upon startup or within a few months of final publication of the regulation. Existing sources typically have 3 years after the publication of the final regulation to comply

AREA SOURCE NESHAP REMINDERS

- Review required monitoring and tracking systems annually or semi-annually to ensure you have all the required paperwork
- Don’t forget annual compliance reports are required for several of the standards
- Review EPA’s website at least once per year to ensure no updates to regulations have been issued

AREA SOURCE NESHAP WITH 2011 COMPLIANCE DATES

- Ferroalloys Production (Subpart 6Y)
- Metal Fabrication and Finishing (nine categories) (Subpart 6X)
- Nonferrous Foundries: Aluminum, Copper and other (Subpart 6Z)
- Gasoline Dispensing Facilities (Subpart 6C)
- Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (Subpart 6B)
- Iron and Steel Foundries (Subpart 5Z)

AREA SOURCE NESHAP – CHEMICAL MANUFACTURING (SUBPART 6V)

- Compliance date is 10/29/2012
- Ethanol facilities are one of the source categories considered to fall into this category
- Most ethanol facilities have determined that they do not have any applicable requirements due to low HAP concentrations
- DNR has requested additional input from EPA on interpretation of the term “process fluids”
- Ongoing discussions being held with IRFA

QUESTIONS?