

# State-of-the-Art (SOTA) Manual

## Date

### February 4, 2011

# State-of-the-Art (SOTA) Manuals

- SOTA Manual for Asphalt Pavement Production Plants
  - Reviewed data that was the basis for the NO<sub>x</sub> limits in N.J.A.C. 7:27-19.9 “Asphalt Pavement Product Plants”
  - Gathered stack test data and emission limits from other jurisdictions, such as the South Coast Air Quality Management District
  - Several meetings held with New Jersey Asphalt Pavement Association

# State-of-the-Art (SOTA) Manuals

- Limits for NO<sub>x</sub>, CO, VOC based on whether the equipment is new or modified
- For modified equipment
  - NO<sub>x</sub> limit is consistent with N.J.A.C. 7:27-19.9
  - VOC and CO limits consistent with prior SOTA Manual
- For new equipment,
  - NO<sub>x</sub>, CO, and VOC limits are provided for natural gas only
  - Any other fuels or dual fuel scenarios, case-by-case; insufficient data

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- TSP limit is 0.020 gr/scf
- Opacity limit is no visible emissions
- Sulfur dioxide is to meet N.J.A.C. 7:27-9
- Public notice is being prepared for management review/signature
- Draft Asphalt Pavement Production Plant SOTA Manual expected in NJ Register for comment Spring, 2011

# State-of-the-Art (SOTA) Manuals

- SOTA Manual for Aboveground VOC Storage Tanks
  - Reviewed data that was the basis for the limits and guidelines in N.J.A.C. 7:27-16.2 “VOC Stationary Storage Tanks”
  - Gathered recent data from other jurisdictions
  - Nine revisions made to prior draft based on comments received from 3 stakeholders
    - Clarifications
    - Additional compliance options included

# State-of-the-Art (SOTA) Manuals

- Final version of the SOTA Tank Manual has been drafted
  - Requirements for floating roof tanks are established based on whether it is an existing tank being modified or it is a new tank
  - All subject fixed roof tanks have the same requirements

# State-of-the-Art (SOTA) Manuals

- New floating roof tanks
  - Install cable suspended roofs to eliminate emissions from landing leg sleeves **OR** install a welded floating roof to eliminate emissions from deck seam losses **AND**
  - Implement one of the following
    - Vapor collection system;
    - Bottom of roof deck can be lowered to <6 inches; or
    - Limit in-service landings

# State-of-the-Art (SOTA) Manuals

- Modified floating roof tanks
  - Install cable suspended roofs to eliminate emissions from landing leg sleeves or install a welded floating roof to eliminate emissions from deck seam losses



# State-of-the-Art (SOTA) Manuals

- Newly constructed or modified fixed roof tanks
  - Install an internal floating roof system or vapor control system AND
  - Install vapor tight covers on all tank gauging or sampling devices
- Draft Aboveground VOC Storage Tank SOTA Manual expected in NJ Register for comment Spring, 2011

# State-of-the-Art (SOTA) Manuals

- New Manual for Landfill Gas Venting Equipment and Landfill Gas Treatment being developed. First effort to develop such a Manual
- Addresses emissions of methane (an air contaminant, which has been classified as a greenhouse gas)
  - Need to install methane control device will be based on flowrate and methane concentration
  - A spark ignited flare, or equivalent, will be required where there is enough methane for combustion to occur, but not enough to sustain a standard enclosed flare (methane conc >20% and flowrate >5 cfm)

# State-of-the-Art (SOTA) Manuals

- Being written to address the many landfills being developed which now are installing venting equipment
- Also, limits for products of combustion (CO, NO<sub>x</sub>) also have been incorporated
- Three sets of comments received on initial draft of manual, not very supportive
- Recent stack test data support draft limits
- Manufacturer supports more stringent limits; arranging a meeting with company