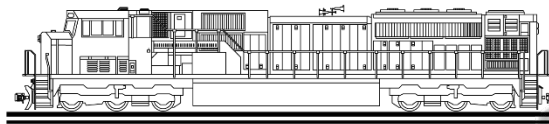


# Air Regulatory Program Inspections at Railyards

Applicability and Inspection Focus

## 18<sup>th</sup> RAILROAD ENVIRONMENTAL CONFERENCE



Amanda Marruffo, BNSF Railway Company

Emmett Keegan, CPEA, TRC

Michael Lawrence, PE, TRC

# Agenda

- Typical Sources
- Source-Specific Inspection Items
- Permit-Related Inspection Items
- BNSF Best Way Program



## Air Sources - Railyards

- Typical Sources
  - Painting Operations
  - Combustion Sources
  - Stationary Engines
  - Maintenance Operations
  - Fueling Operations
- Regulatory Drivers
  - Federal (NSPS, NESHAP)
  - State and Local (Regulations, Permits)



# Painting Operations

- **Applicable Requirements**
  - State/Local regulatory limits
    - Opacity, process weight rate (PWR) limits
    - VOC content limits
    - Control, inspection and maintenance requirements
  - Federal regulatory requirements
    - Misc. Metal Parts and Products
    - Paint Stripping & Misc. Surface Coating

## Typical Sources

Sand Blasting  
Coating and Touch-Up  
Cleaning



# Painting Operations

- Inspection Items
  - Compliance with coating and usage limits
  - VOC and HAP calculations
  - Monitoring records (e.g. pressure drops, flow rates, etc.)
  - Maintenance and calibration records
  - Stack observations

# Combustion Sources

- Applicable Requirements
  - Permit limits and associated recordkeeping requirements
  - NSPS Subpart Dc
  - NESHAP Subpart JJJJJJ (area sources)

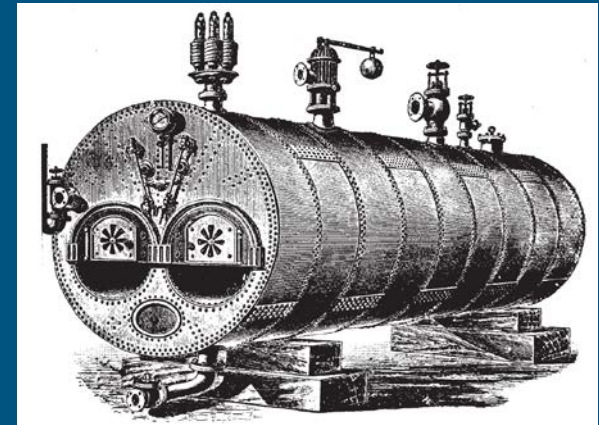
## Typical Sources

Boilers

Hot Water Heaters

Space Heaters

Power Washers



# Combustion Sources

- Inspection Items
  - Fuel usage records
  - Emission and usage limits
  - Emission calculations
  - Proper emission factors
  - Notification requirements
  - Tune-up requirements



# Stationary Engines

- Applicable Requirements
  - Permit limits and associated recordkeeping requirements
  - NSPS Subparts IIII or JJJJ
  - NESHAP Subpart ZZZZ

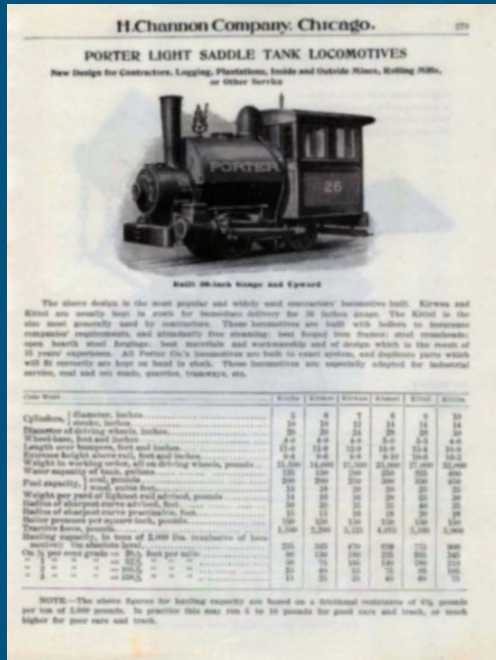
Typical Sources  
 Emergency Generators  
 Fire Water Pumps





# Stationary Engines

- Inspection Items
  - Run-time records and limits
  - Emission calculations
  - Emission factors
  - Engine maintenance records (oil changes, inspection requirements)
  - Portable engines managed as stationary



## Maintenance and Other Activities

- **Applicable Requirements**
  - Parts washer management requirements
  - Opacity and PWR limits
  - Material throughput limits

### Typical Sources

Parts Washers

Shot Blasters

Machining

Welding

Sand Silo Operations

Tanks and Fueling

Transloading



## Maintenance and Other Activities

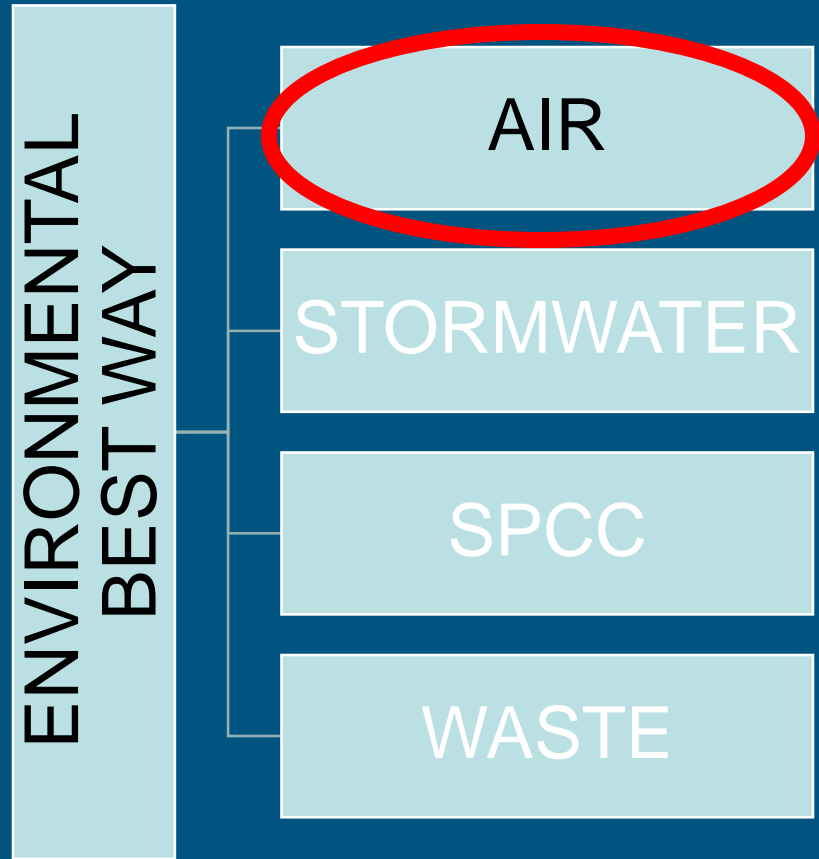
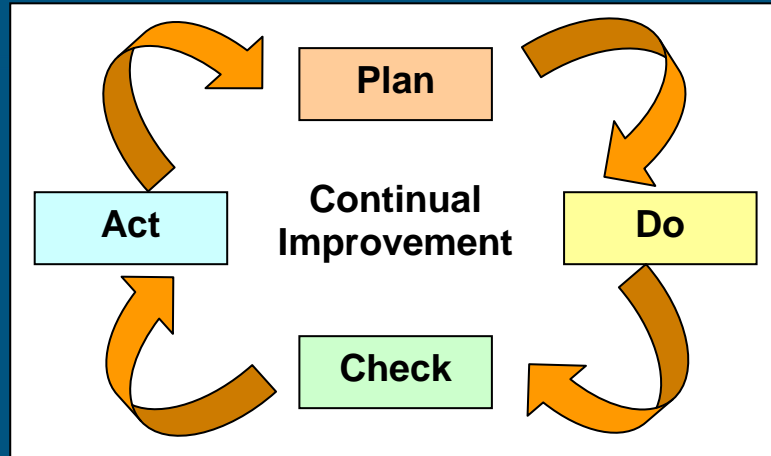
- Inspection Items
  - Parts washer management requirements
    - Closed lid
    - Operating instructions
    - Solvent usage
  - Stack observations (opacity)
  - Throughput limits
  - Emission calculations
  - Emission factors

# Permitting

- Inspection Items
  - All sources properly permitted
  - Review of permit application
  - Changes to sources
  - Emission factors
  - Emission inventory calculations
  - Potential to Emit (PTE) calculations
  - Exempt sources properly documented
  - Additional local permitting requirements



# BNSF Environmental Best Way Program



# BNSF Air Best Way Program Moves Forward

## 2013/2014

- Initiated ABW!
- Developed Permitting Procedure

## 2015

- Developed Standardized Inventory and Calculation Tool
- Roll out of Tool at Select Sites

## 2016

- Standardized recordkeeping for specific types of equipment
- Widespread implementation of Tool

## Air Best Way Aligns with Big Pictures Goals

**More  
Comprehensive**

- **A complete and standardized list of equipment onsite**

**More Efficient**

- **Standardized format**
- **Repeatable Process**

**More Cost  
Effective**

- **On average 50% cheaper than previous assessment costs**

A blurred background image of a train, likely a BNSF locomotive, moving through a desert landscape. The train is orange and black, with its headlights on. The background is out of focus, showing a hazy horizon and some distant structures.

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