

## Air Quality Services to the Rail Sector



### Areas of Expertise

- Strategic Planning for New Facilities
- Rail Traffic Air Quality Modeling
- Air Quality Monitoring
- Construction Activities
- Air Quality Modeling
- Operating Air Permitting and Compliance Support
- Air Emissions Inventories
- Training
- Site Support
- Emissions Measurement
- Fugitive Dust and Diesel-Related Particulate Monitoring
- State and Federal Planning Agency Response

### More Information

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### Overview

Global concern has been growing over such air quality-related issues as greenhouse gas emissions, regional haze, transportation congestion, project and regional level transportation conformity determinations, as well as criteria and air toxic pollutant emissions. AECOM provides comprehensive air quality services that help our clients achieve their goals while improving and protecting the world's air quality.

AECOM has 50 years of experience in permitting, emissions inventory, source testing, ambient air monitoring, dispersion modeling, and regulatory strategy development, serving clients in a variety of businesses, including railway facilities and associated industrial/manufacturing sites. We support all aspects of NEPA and EIS analyses for transportation projects for both new and modified configurations. With over 400 air quality professionals globally, we truly are one of the largest and most experienced air practices in the world today.

### Our Approach

AECOM provides a complete range of air quality services for successful environmental review and permitting of any size rail project, from construction of a new railway or improvement of a local railyard to construction of a new terminal facility. Transportation-related environmental review projects typically include air quality monitoring to establish baseline conditions and a modeling component to assess future impacts and develop mitigation strategies. For projects triggering NEPA review in non-attainment areas, AECOM completes air quality conformity analyses required by the Clean Air Act. We are familiar with Department of Transportation policies and procedures in various states and federal regions, and use this expertise to tailor our approach to the scale of each project. We mobilize across the globe to support rail projects of all sizes and scopes.

### AECOM Experience

- **Strategic Planning for New Facilities.** Assistance with strategic planning for planned new railyard, station, and rail-related manufacturing sites, as well as modifications of existing sites. Planning support includes assessment of raw material/operational change impacts on permitting and regulatory compliance.
- **Rail Traffic Air Quality Modeling.** We are thoroughly proficient in using MOVES2014a, EMFAC2014, CAL3QHC/R, CALINE4, and AERMOD to predict localized concentrations and project-level microscale/mesoscale emissions associated with mobile sources,



as well as analyzing mobile source air toxics and greenhouse gas impacts from individual projects, as necessary. We use Federal Railroad Administration and state Department of Transportation-adopted guidelines and analyses procedures.

- **Air Quality Monitoring.** Air quality monitoring in the vicinity of hotspots is becoming increasingly important with the promulgation of the new 1-hour NO National Ambient Air Quality Standard (NAAQS). We provide full-range air quality monitoring services, including system design, siting, operation, and maintenance, as well as data collection, processing, validation, and reporting.
- **Transportation Construction Activities Air Quality Modeling.** Construction activity-related concentration impacts are typically analyzed in a similar fashion to stationary sources using dispersion models. However, construction activity-associated emissions are predicted using USEPA's MOVES2014a model. Given the uncertainty and complexity of these activities, we routinely forecast the construction activity data using the RS Means Estimating Handbook to develop inputs required for predicting construction activity-associated emissions for general conformity rule and ambient impact concentration analyses on a per-project basis
- **Air Permitting and Compliance Support.** For railyard, station, and rail-related manufacturing sites, including renewal of current permits. Compliance support related to applicable state and federal air regulations, including assessment of applicable requirements, development of compliance documentation/recordkeeping, and auditing.
- **Air Emissions Inventories.** Preparation of air emissions inventories required by state authorities, including documentation of emissions of criteria pollutants, hazardous air pollutants, state-regulated air toxics, and greenhouse gases.
- **Training.** Our staff provides training to site staff on air emissions compliance/permit obligations.
- **Site Support.** Support may be provided during and after agency inspection/enforcement activity.
- **Emissions Measurement.** Includes conducting stack testing per USEPA methods.
- **Fugitive Dust and Diesel-Related Particulate Monitoring**
- **State and Federal Planning Agency Response.** Assistance with response regarding mobile source emission budgets, conformity determinations, and special emissions analyses (microscale, mesoscale, and regional impact analyses).

### Examples of current and past rail air quality clients include:

- National Railroad Passenger Corporation, doing business as Amtrak
- BNSF Railway Company
- Canadian National Railway Company
- Norfolk Southern Railway Company
- Washington Metro Area Transit Authority (WMATA)
- Metropolitan Atlanta Rapid Transit Authority (MARTA)
- City of Chicago subcontractors
- Southeastern Pennsylvania Transportation Authority (SEPTA)
- Amsted Industries, Inc./Amsted Rail Company, including Griffin Wheel Company

### Key AECOM Attributes

- One of the largest, most experienced air quality practices in the world.
- 50 years of experience in permitting, ambient air monitoring, emission factor development, dispersion modeling, microscale/mesoscale impact analyses, and regulatory strategies.
- Project- and regional-level transportation conformity analyses.
- Substantial experience with air quality transportation-based computer models, with the computing power to handle the largest and most complex analyses.
- Active participation in development of new air quality modeling tools.
- Substantial inventory of air monitoring equipment, allowing for flexible equipment deployment.