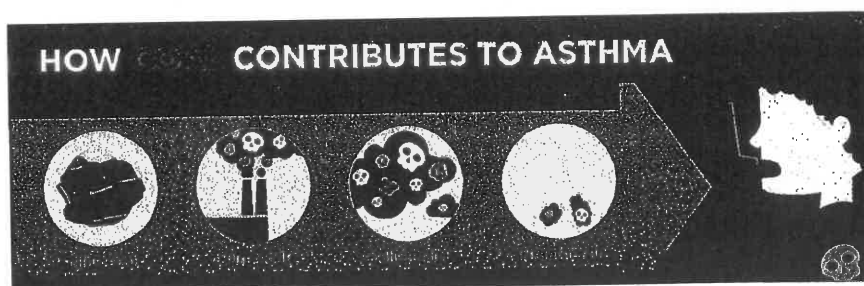


# PUBLIC HEALTH, SAFETY, AND ENVIRONMENTAL IMPACTS OF COAL TRANSPORTATION AND STORAGE

## RESPIRATORY AND CARDIOVASCULAR SYSTEM EFFECTS FROM EXPOSURE TO AIR POLLUTANTS

- Trains, trucks, and marine vessels hauling coal release toxic air pollutants, including nitrogen oxide (NOx) and particulate matter (PM) into the air, primarily through diesel exhaust. Health effects of NOx and PM include:
  - Nitrogen oxides and PM2.5 are linked to stunted lung development and hospital admissions for potentially fatal cardiac rhythm disturbances.
  - Diesel particulate matter (DPM) that is less than 2.5 microns in size, the most dangerous size, is emitted by the coal trains. PM2.5 concentrations in ambient air also increase the probability of hospital admission for heart attacks, ischemic heart diseases, disturbances of heart rhythm, and congestive heart failure.
  - Death rates in cities with high nitrogen dioxide concentrations were found to be 4 times higher than in cities with low nitrogen dioxide concentrations.
  - Nitrogen oxides and PM are linked to worsening of asthma, COPD, infant mortality, and ischemic stroke.
  - PM is associated with lung cancer.
- Coal trains and coal terminals also release coal dust into the air, which degrades air quality and exposes nearby communities to dust inhalation. During wind events, coal dust will be blown from coal piles to locations up to 5 miles away, as has been observed at the Point Roberts terminal in Canada, and it will be inhaled. Health effects of coal dust exposure include:
  - Increased asthma, wheezing & cough in children.
  - Wide range of health problems associated with exposure to heavy metals designated as hazardous air pollutants, such as lead, selenium and mercury.
  - Coal dust may be carcinogenic, depending on its chemical composition. There is evidence linking coal dust to lymphomas in laboratory animals. Known health effects from arsenic, which is found in coal dust, include: skin damage, problems with circulatory systems, and increased risk of developing cancer.
  - Inhalation of respirable coal dust causes pneumoconiosis, or black lung disease (permanent scarring of lung tissues) in coal mine workers.



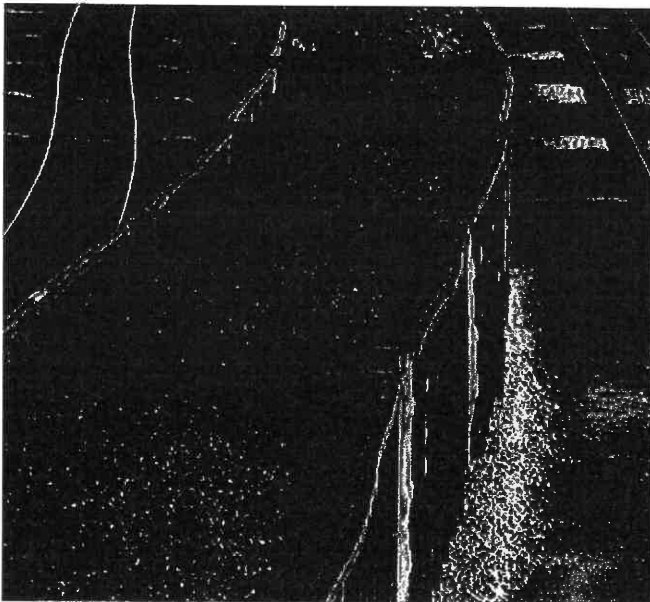
- Ships and barges approaching and leaving the terminal will emit air pollutants, including sulfur oxides, nitrogen oxides, hydrocarbon PM, and carbon monoxide. These pollutants can have serious health effects, as outlined above.

## PUBLIC SAFETY AND ECONOMIC IMPACTS FROM COAL TRANSPORTATION AND STORAGE

- A significant increase in barge and marine vessel traffic increases the risk of barge groundings and spills in the Mississippi River. Barges have also been known to break free of their moorings during storm events and either sink, releasing all of the coal they contain into the river, or run into bridges or other infrastructure.
- Coal trains are often over a mile long, and take five to seven minutes to clear road crossings; increased coal train traffic can leave emergency vehicles stranded behind trains and can have economic impacts on the parts of town that are cut off by the rail lines. Increased rail traffic will lead to public safety and economic impacts to communities along rail lines from the mine to the port in Southern Louisiana, including increased incidence of derailments and collisions with pedestrians and passenger vehicles.
- Coal dust is highly combustible, and coal piles have been known to catch fire in hot, dry conditions. When coal dust is blown from coal piles at the terminal on to nearby refineries, it could create a fire hazard or other hazardous conditions.

## ENVIRONMENTAL IMPACTS FROM COAL STORAGE AND TRANSPORTATION

- Some of the coal dust that leaves the coal trains will enter the surface stream system, degrading water quality. Coal dust will blow from coal piles and loading operations into the marine environment, with substantial environmental consequences for water quality and fisheries. Satellite images of the existing coal facilities in the lower Mississippi demonstrate that coal is already being released into the river as barges and vessels are loaded.
- Water spray is used to try to mitigate coal dust and for fire suppression. The resulting runoff is supposed to be captured and “managed” but the process is never perfect. Groundwater under and near the terminal site will be contaminated over time and will become unusable for any life-giving purpose.
- The proposed RAM Terminal includes the destruction of significant wetlands, and may significantly impair and impact the proposed Myrtle Grove Medium Diversion, a federally and state sponsored wetland restoration project. The proposed expansions at the other coal facilities will also likely impact wetlands. These wetlands provide significant benefits, including critical habitat for aquatic species, biodiversity protection, and absorption of floodwaters during hurricanes and tropical storms.
- Coal terminals are not designed to withstand hurricanes and other severe storm events, even though they are located in flood zones. These facilities routinely flood during wet weather events, and when dikes and containments fail, they release coal and coal laden waters into the surrounding communities and wetlands.



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