

## Community concern or issue: *Diesel Emissions*

### How does this issue impact citizen health or the environment?

As we breathe, toxic gases and small particles of diesel present in exhaust are drawn into the lungs. Microscopic particles in diesel exhaust are less than one-fifth the thickness of a human hair and are small enough to penetrate deep into the lungs where they contribute to a range of health problems. Diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Exposure to diesel exhaust also increases the frequency or intensity of asthma attacks.

### Existing controls or standards

There are no local standards for diesel emissions in Salina. The U.S. Environmental Protection Agency (EPA) has national ambient air quality standards (NAAQS) for compounds found *in* diesel emissions such as particulate matter, ozone, carbon monoxide, and nitric oxides and has engine emission standards for on- and off-road equipment and vehicles, as well as for diesel *fuels*. The Mine Safety and Health Administration (MSHA) has exposure limits for particulate matter from diesel sources in mining operations and regulates the fuel-filtration efficiency for engines used underground. There are currently no accepted OSHA limits for particulates from diesel emissions.

### How is this issue impacting Salina?

Salina has three major refueling facilities for on-road diesel trucking operations, located near the north and west boundaries of the city. Together, these facilities are estimated to service at least 300 diesel trucks per day; however, actual data could not be obtained for any of the three facilities. Many of these trucks leave their engines idling for long hours due to refrigeration units or to power utilities in sleeper cabs. However, predominate wind direction and location of the refueling facilities and interstate highways reduce the potential for citizen exposure in Salina.

### What factors and behaviors contribute to this problem?

Proximity to diesel sources is very important. In general, those mostly likely affected live around high levels of diesel traffic, work near diesel-based operations, ride school buses or public transport buses or commuter trains, live within 100 meters of a highway, or commute daily in heavy traffic. In Salina there is little “commuter” exposure and no mining operations. Those who ride school buses have the greatest potential of being affected in Salina. Thirty-three diesel-powered buses serve all of the students and schools in the community.

### Potential solutions – how can the community help with this issue?

The community may want to gather data to see if there is an issue. “No-idle” policies could be established at school loading and unloading areas. Engines can be retrofitted with post-combustion control equipment.

NOTE: This fact sheet was taken from an issue paper developed by Sherry Davis. The detailed fact sheet can be accessed at [www.sbeap.org/CARE](http://www.sbeap.org/CARE)