Glossary for the Camden Waterfront South Air Toxics Pilot Project
6/17/2003

Background concentration:
The contribution to the total air concentration of a pollutant that is not from the sources being modeled. This is often a concentration that is measured in a "clean" location, or in a location that could be considered representative of a region. Background concentrations are influenced by natural sources, past years' emissions that persist in the environment, and long-range transport from distant sources.

Concentration (air):
A measure of the amount of a substance (chemical) contained in a volume (of air, in this case).

> **Ambient concentration:** Concentration of a pollutant in the surrounding air.
>
> **Monitored concentration:** Concentration of a pollutant that is actually measured in the air over some period of time at a specific location.
>
> **Modeled or predicted concentration:** Air concentration of a pollutant that is estimated, or predicted, for a specific area by using a computer-based air dispersion model. Local emissions and meteorology information must be input to the model.

Incremental Cancer Risk:
The likelihood that up to one person, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the specific concentration of a specific chemical over 70 years (an assumed lifetime). This would be in addition to those cancer cases that would normally occur in an unexposed population of one million people.

Micrograms per cubic meter (:g/m^3):
A standard way of measuring the amount of a chemical in the air, or its concentration. It shows how many millionths of a gram (weight) of the chemical there is per cubic meter of air.

National Ambient Air Quality Standard (NAAQS):
Under the federal Clean Air Act, the U.S. Environmental Protection Agency (USEPA) is assigned the task of establishing air quality standards (or levels) to protect public health. This includes protecting the health of "sensitive" populations, such as people with asthma, children, and the elderly. USEPA also sets limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. USEPA has set national air quality standards for six principal air pollutants (also referred to as criteria pollutants): nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), particulate matter (PM), carbon monoxide (CO), and lead (Pb).

USEPA's health-based National Ambient Air Quality Standard (NAAQS) for PM_{10} is 50 µg/m^3 (measured as an annual mean), and 150 µg/m^3 (measured as a daily concentration). For $PM_{2.5}$, the annual NAAQS is set at 15 µg/m^3, and the 24-hour NAAQS is 65 µg/m^3.

Particulate matter (PM):

> **PM_{10}:** Particles with a diameter of 10 micrometers or less (0.0004 inches or one-seventh the width of a human hair). These particles are small enough to be inhaled, and are sometimes referred to as "inhalable particulate."
>
> **$PM_{2.5}$:** Particles with a diameter of 2.5 micrometers or less, sometimes referred to as "fine particulate."
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> **Diesel Particulate Matter:** A mixture of particles that is emitted from diesel engines in trucks, cars, generators, and other equipment.

Receptor:
A person or thing (hospital, farm field, water body) that could be located within the area affected by the release of a pollutant.

Receptor grid:
A gridded map showing air concentrations at regularly-spaced locations, used to show the results of air dispersion modeling.

Stack parameters:
Characteristics of a smokestack or vent that influence how a pollutant (in the form of a gas or particle) is dispersed from it. These parameters are fed into a computer program for air dispersion modeling. They include stack height and diameter, and the temperature and speed of the gas or particles being released.