San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

GLOSSARY OF COMMONLY USED AIR QUALITY AND AB 617 TERMS

AB 617 – Assembly Bill (AB) 617 (C. Garcia, Chapter 136, Statutes of 2017) directs the state and local air districts to identify communities in California that are exposed to high levels of air pollution and established the Community Air Protection Program. Air districts with input from residents and stakeholders are to develop community focused action plans and community air monitoring plans to address localized air pollution and reduce exposure to particulate matter and toxic air contaminants.

Area Sources – Sources of air pollutants that individually emit relatively small quantities of air pollutants, but that may emit considerable quantities of emissions when combined over a large area. Examples include water heaters, lawn maintenance equipment, and consumer products.

Best Available Control Technology (BACT) – These are the most stringent requirements for new or modified sources. An emissions limitation based on using the most up-to-date methods, systems, techniques, and production processes available to achieve the greatest level of emission reductions.

Best Available Retrofit Control Technology (BARCT) – An emissions limitation based on the maximum degree of reduction achievable for existing sources considering environmental, energy, and economic impacts.

Black Carbon – Black carbon is the sooty black material emitted from gasoline and diesel engines, and other sources that burn fossil fuel. It comprises a significant portion of particulate matter. Inhalation of black carbon is associated with health problems including respiratory and cardiovascular disease, cancer, and birth defects.

California Air Resources Board (CARB) – The State of California agency responsible for air pollution control. Responsibilities include: establishing State ambient air quality standards, setting allowable emission levels for mobile sources of emissions and consumer products.

California Environmental Quality Act (CEQA) – Legislation requiring state and local agencies to disclose the significant environmental impacts of a project through the preparation of an Initial Study, Negative Declaration or Environmental Impact Report, including actions to mitigate any significant environmental project impacts.

Cancer Risk – The likelihood that a person will develop cancer during their lifetime.

Carbon Monoxide (CO) - a colorless, odorless gas emitted from combustion processes like mobile sources.

Concentrations – Pollution in the air is typically expressed as a *concentration*. A concentration is the amount that could be extracted from a given volume of air (like a

cubic meter). For example, the amount of particulate matter concentrations in terms of “micrograms per cubic meter (µg/m3).” This is a measure of the amount of particulate matter collected if you were to draw a cubic meter of air through a clean filter, and then weigh the filter on a scale that can measure millionths of a gram. Today we would expect, on average, to be able to collect about 10 µg of PM2.5 from a cubic meter of ambient air.

Control Device – Devices designed to capture, remove and/or reduce pollutants that would otherwise be emitted into the air. Examples are baghouses, scrubbers, dust collectors, direct flame afterburners, vapor recovery units, and water sprayers.

Criteria Air Pollutants – As required by the Clean Air Act, the U.S. Environmental Protection Agency (EPA) identifies and set standards to protect human health and welfare for six pollutants: ozone, carbon monoxide, particulate matter, sulfur dioxide, lead, and nitrogen oxide. The term "criteria pollutants" derives from the requirement that the U.S. EPA must describe the characteristics and potential health and welfare effects of these pollutants. U.S. EPA periodically reviews new scientific data and may propose revisions to the standards as a result.

Diesel Engine – An internal combustion engine in which ignition of the fuel, which is injected into the combustion chamber, is caused by the elevated temperature of the air in the cylinder due to mechanical compression.

Diesel Particulate Matter (DPM) – The particles found in the exhaust of diesel-fueled compression ignition engines. Diesel PM may combine and adsorb other species to form structures of complex physical and chemical properties.

Drayage Trucks – A truck used to haul containers to and from the container terminals. It consists of the tractor unit and a semitrailer consisting of the container on a chassis (wheeled base).

Emissions – A gas or liquid stream containing one or more air contaminants discharging or emitted into the atmosphere.

Enforcement Action – When non-compliance with District rules and regulations and local, state, and federal requirements which the District has authority over.

Environmental Protection Agency (EPA) – The federal agency in charge of creating and enforcing regulations to protect human health and the environment.

Fine Particulate Matter (PM2.5) – Particulate matter (PM) is a mixture of solid particles and liquid droplets suspended in the air. Of these particles, those less than 2.5 micrometers in diameter, called fine PM or PM2.5, pose the greatest risk to health. See particulate matter.

Gasoline Dispensing Facilities (GDF) – Retail service station or private facility that stores and/or dispenses gasoline into fuel tanks.

Greenhouse Gases (GHG) – Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include water vapor, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), halogenated fluorocarbons (HCFCs), ozone (O3), perfluorocarbons (PFCs), sulfur hexafluoride (SF6) and hydrofluorocarbons (HFCs).

Health Risk Assessment (HRA) – A detailed comprehensive analysis to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations, and to assess and quantify both the individual and population wide health risks associated with those levels of exposure.

High Efficiency Particulate Air Filters (HEPA filters) – A high efficiency particulate air filter capable of filtering 0.3 micron particles with 99.97 percent efficiency.

Idling - keep the engine of a vehicle running while parked.

Indirect Sources – Land uses and facilities that attract or generate motor vehicle trips and thus result in air pollutant emissions; for example, shopping centers, office buildings, warehouses, and airports.

Minimum efficiency reporting value (MERV) – Developed by the American Society of Heating, Refrigerating and Air Conditioning Engineers, MERV rates the effectiveness of air filters. The higher the number, the finer the filtration.

Mixed Land Use – A range of land uses including residential, commercial, and industrial to be collocated in an integrated way that supports sustainable forms of transportation.

Mobile Sources Of Air Pollution – Any motor vehicle that produces air pollution, e.g., cars, trucks, motorcycles (on-road mobile sources) or airplanes, trains and construction equipment (off-road mobile sources).

National Ambient Air Quality Standards (NAAQS) – The Clean Air Act requires U.S. EPA to set National Ambient Air Quality Standards (NAAQS) at a levels determined to be protective of public health within an adequate margin of safety for six pollutants referred to as criteria pollutants. Standards are set based on scientific research and policy assessments reviewed by the Clean Air Scientific Advisory Committee.

New Source Review (NSR) – A pre-construction permitting review requirement that ensures that when a new source of air pollution is built, or when an existing source is modified, the source will implement effective emission control technology and will comply with related regulatory requirements pertaining to air emissions.

Nitrogen Oxides (NOx) - or “oxides of nitrogen” is a group of gases that are composed of nitrogen and oxygen. Two of the most common nitrogen oxides are nitric oxide (NO) and nitrogen dioxide (NO2).

Off-Road Vehicles – An off-road vehicle is any type of vehicle which can drive on and off paved or gravel surfaces. They are generally characterized by having large tires, open treads, a flexible suspension or caterpillar tracks. Other vehicles that do not travel public streets or highways are called off-highway vehicles and include tractors, forklifts, cranes, backhoes, bulldozers and golf carts.

On-Road Vehicles – A vehicle designed to legally carry people or cargo on public roads and highways such as buses, cars, trucks, vans, motor homes, and motorcycles.

Ozone (O3) - ground level or “bad” ozone which is not emitted directly into the air, it is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight.

Particulate Matter (PM) – PM includes a wide range of particles that vary in terms of their size and mass, physical state (solid or liquid), chemical composition, toxicity, and how they behave and transform in the atmosphere. PM is commonly characterized based on particle size. Ultrafine PM includes the very smallest particles less than 0.1 micron in diameter (one micron equals one-millionth of a meter). Fine PM, commonly referred to as PM2.5, consists of particles 2.5 microns or less in diameter (includes ultrafine PM). Coarse PM refers to particles between 2.5 microns and 10 microns in diameter. The term “coarse” particles may be misleading; it should be emphasized that even “coarse” particles are still very tiny, many times smaller than the diameter of a human hair. PM10 consists of particles 10 microns or less in diameter (includes ultrafine, fine and coarse PM).

Parts per Billion (ppb) – A weight-to-weight ratio used to describe concentrations. Parts per billion (ppb) is the number of units of mass of a contaminant in the air per 1000 million units of total mass.

Parts per Million (ppm) – A weight-to-weight ratio used to describe concentrations. Parts per million (ppm) is the number of units of mass of a contaminant in the air per million units of total mass.

Partial Zero Emission Vehicle (PZEV) – PZEV is an automobile that has zero *evaporative* emissions from its fuel system and meets Super Ultra Low Emissions Vehicle (SULEV) tailpipe-emission standards. Evaporative emissions are the gasoline fumes that escape during refueling or from the fuel tank and supply lines. See also ZEV.

Sensitive Receptors – Members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses.

Stationary Sources of Air Pollution (Stationary Sources) – A fixed, non-mobile producer of air pollution, usually found at industrial or commercial facilities.

Toxic Air Contaminants (TACs) – TACs are air pollutants, identified by CARB, which may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential health hazard. Health effects may occur at extremely low levels of TACs.

Transport Refrigeration Unit (TRU) – Refrigeration systems powered by integral internal combustion engines designed to control the environment of temperature sensitive products that are transported in trucks and refrigerated trailers. TRUs may be capable of both cooling and heating.

Vehicle Miles Traveled (**VMT)** – One vehicle (whether a car carrying one passenger or a bus carrying 30 people) traveling one mile constitutes a vehicle mile.

Volatile Organic Compounds (VOCs) - are a large group of carbon-based chemicals that easily become vapors or gases. They include both human-made and naturally occurring chemical compounds.

Zero-Emission Vehicle (ZEV) – Vehicles which produce no emissions from the on-board source of power (for example, a fully electric vehicle).