DESERT BREEZE
VOLUME II ISSUE I MARCH 2014

NESHAPs for Portland Cement Plants

Portland cement is a necessary product for today's modern society. Without Portland cement many items we "take for granted" could not be built in the fast and efficient way they are today; these items include: bridges, highways, buildings, dams, furniture, and homes. Simply stated, cement is the "glue" (activated with water) that holds together coarse and fine aggregate to form a solid product (usually concrete).

Cement is formed when raw materials (calcium carbonate, silica, alumina and iron ore) are crushed through a milling process (into a fine powder), preheated, heated in a kiln, cooled, gypsum is added, and finally ground into a powder for use. The kiln is at the heart of the manufacturing process. Once inside the kiln, the raw meal is heated to approximately 2700°F (1,500°C - similar to the temperature of molten lava) for 20-30 minutes.

Currently, three Portland cement plants operate with the Eastern Kern Air Pollution Control District (District) jurisdiction (the most in any Air District in California). On February 12, 2013, the United States Environmental Protection Agency (EPA) published the revised National Emission Standards for Hazardous Air Pollutants (NESHAPs) for the Portland Cement Manufacturing Industry (40CFR Part 63, Subpart LLL). The new standards are designed to reduce hazardous pollutants from cement manufacturing facilities. Cement manufacturing facilities emit many types of air pollutants; however, EPA has keyed on minimizing emissions from the following air pollutants: mercury (Hg), total hydrocarbons, particulate matter (PM), hydrochloric acid (HCl) and organic hazardous air pollutants (HAP). The old and new standards are summarized below:

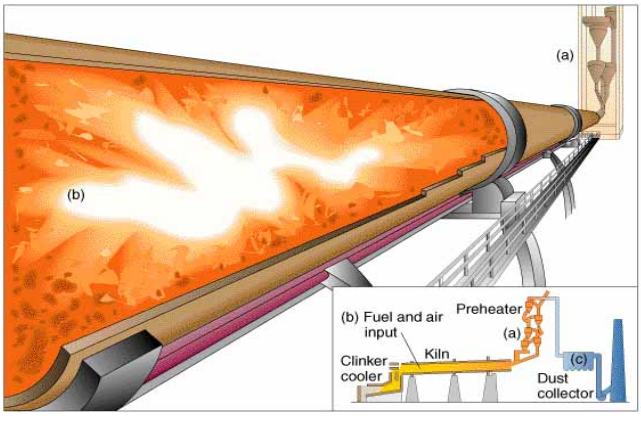
EXISTING AND NEW SOURCE STANDARDS

Pollutant	Existing Standard	New Standard
Mercury	55-lb/MM tons clinker	21-lb/MM tons clinker
Total Hydrocarbons (THC)	24-ppmvd*	24-ppmvd
PM	0.07-lb/ton clinker (3-run test average)	0.02-lb/ton clinker (3-run test average)
HCl	3-ppmvd	3-ppmvd
Organic HAP	12-ppmvd	12-ppmvd

*parts per million per unit volume based on dry air

Compliance date with the new standards listed above is September 9, 2015. However, compliance with the above standard may require installation of millions of dollars of equipment, and several thousand dollars of air monitoring equipment to show compliance with the above standards. Currently, the cement plants within the District are installing equipment to comply with the new standards.

To assist the cement industry, the California Air Resources Board (ARB) is sponsoring a Cement NESHAPs training class in Tehachapi, California on April 9, 2014. For more information use the following url: https://ssl.arb.ca.gov/training/DisplayCourse.php?SectionNumber=7472.



ANTELOPE VALLEY DUSTBUSTERS

Residence in the high elevation Mojave Desert and Antelope Valley have encountered extended droughts, high winds, and soil erosion. These circumstances and others such as vehicle traffic, construction activities and farming can result in blowing dust. Blowing dust is harmful to people, wildlife and plants. Wind speeds in this area can exceed 50 mph. As a result, high winds can pick up loose sand particles from the desert soil surface and bounce them along the ground. The bouncing or saltation of sand particles sandblast the soil surface and cause fine dust to be lofted into the air. Blowing sand and dust can damage property, cause respiratory health problems, and lower real estate values.

The Dustbusters Research Group formed a task force in 1991 to develop best management practices for mitigating wind erosion, reducing blowing dust, and improving the air quality. The Dustbusters Research Group developed land treatment guides designed to minimize wind erosion through vegetative and mechanical procedures.

The Dustbusters "Homeowner's Guide" provides a two-step approach for selecting and implementing cost-effective measures for controlling sand flow that generates coarse dust. Fine dust lofted above a height of 3 feet from the ground cannot be captured effectively. However, controlling sand flow prevents the generation of most fine dust.

Step 1: Stop the flow of sand from upwind to prevent blowing sand from entering your property. Blowing sand from areas outside your property can be limited by placing wind barrier or wind breaks along the upwind property boundaries. The wind barrier/break should face the direction of high winds. Wind breaks include: berms made from wood chips or soil, walls of concrete blocks or other structural materials, stacks of hay bales, and solid fences. Wind breaks include: Porous fences (lattice design) and rows of large vegetation (trees and shrubs).

Step 2: Stabilize loose soil on your property by covering areas of loose soil or accumulated sand with a thin layer (3-4 inches) of wind-resistant material, such as wood chips or gravel. Planting small vegetation such as indigenous grasses, shrubs, and plants can also stabilize the soil.

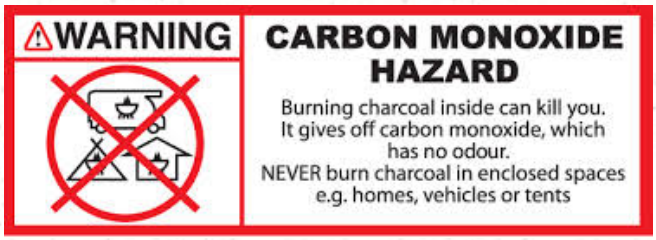
Complete copies of the Dustbusters Homeowner's Guide, Agricultural Guide, and Large Area Land Manager's Guide are available for free download on the District's website: www.kernair.org.

GASOLINE DISPENSING FACILITY (GDF)
QUESTIONS AND ANSWERS

- **Why does the Inspector ask to see an Executive Order (E.O.) and an Installation and Operation Manual (IOM)?** In order to install, operate, and maintain a certified system specific parts must be used, standards, and installation practices observed. The E.O. and the IOM are a set of instructions for each certified system. By following these instructions one can install and maintain the system according to the specifications of certification, and increase the likelihood that a station will remain in compliance. Some rely on a contractor to maintain the system. By comparing the work done to requirements specified in the E.O. and IOM the owner operator can either note discrepancies, or confirm that the procedures are followed correctly.
- **Why is a 30 day advance notification required in for a source test?** To authorize a start-up Inspector must verify that the testing protocols have been observed, and that the system works correctly. The inspector needs advance warning of a proposed test in order to arrange a time to observe the test and 'sign-off on' (approve) the start-up.
- **When is the deadline for existing GDFs to install EVR for ASTs?** The deadline is currently July 1, 2014
- **Why does the inspector ask for a monthly throughput summery?** The inspector should to be able to verify that permit limits applicable to monthly and yearly throughput limitation are observed. If this summary is prepared in advance, the inspector may spend less time on site.
- **What if I have a question?** For any questions about staying in compliance, please call District field staff, at 661 862 5250, or 661 823 9264. Our goal is to help owners and operators stay in compliance.

POLLUTANT OF THE MONTH
CARBON MONOXIDE (CO)

Carbon Monoxide (CO) is one of the six criteria pollutants, which are the most common air pollutants found in the United States. These pollutants are regulated by the Environmental Protection Agency (EPA). The EPA has developed human health-based and environmentally-based criteria for setting permissible levels for these six criteria pollutants, which are ozone, particulate matter, lead, nitrogen oxides, sulfur dioxide and carbon monoxide. Carbon Monoxide is colorless, odorless and can be harmful to your health. CO is a naturally occurring chemical due to photochemical reactions in the troposphere, the lowest portion of the Earth's atmosphere, but mobile sources, such as cars, are a huge producer of carbon monoxide as well. In 1970 motor vehicles were responsible for two-thirds of CO emissions, and even higher in some urban areas. In the home, carbon monoxide is mostly found in fuel burning appliances such as gas stoves, gas space heaters, fireplaces and generators to name a few. CO can reduce the oxygen carrying capacity of the blood to the body's organs, which can present many health problems and even be deadly.



How do I know if I have been exposed to Carbon Monoxide?

Symptoms of CO exposure are shortness of breath, headaches, dizziness or nausea. Seniors, pregnant women and those with cardiac or respiratory issues are most vulnerable to CO poisoning. Your pets are also susceptible to CO poisoning.

What should I do if I believe I am experiencing Carbon Monoxide poisoning?

If you are experiencing some of the symptoms listed above, turn off all appliances and open windows to allow for fresh air to enter your home. You may want to step outside as well.

How do I prevent Carbon Monoxide poisoning?

Have gas appliances inspected periodically for leaks. Installing a CO monitor, which is now mandatory for all new homes, can also be helpful, but should not take the place of fixing any improperly working appliances. Do not idle your car inside of your garage. Avoid burning charcoal or using a generator indoors, CO can quickly build up to life threatening amounts in enclosed spaces. Using your gas range or oven to heat up your home is also dangerous and can expose you to harmful amounts of CO.

What has been done to decrease the amount of Carbon Monoxide produced by motor vehicles?

Cars are now equipped with catalytic converters with oxygen sensors that are designed to convert carbon monoxide to carbon dioxide. In 1984 the Smog Check program was implemented. These tests check emission amounts for multiple pollutants, including Carbon Monoxide. The emissions from motor vehicles have greatly decreased in the last few decades. In the 1950s, carbon monoxide emissions from vehicles were as high at 87 grams per mile. Today's limits, set by the EPA and California Air Resources Board (CARB) limit the emissions of CO to less than four grams per mile. Many car manufacturers are making hybrid vehicles that use both, electric battery and gasoline. Zero Emission Vehicles (ZEV) are becoming more popular as well. These new technologies will help us continue to improve the quality of our air.

What can I do to decrease the amount of Carbon Monoxide in our environment?

Carpooling is a great option to help decrease the production of carbon monoxide. Not only will you be helping the environment but it will cut down on gas costs as well. Public transportation and biking are also great options to help spare the air.

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Board of Directors usually meet once every two months starting in January at various locations.

Air Pollution Control Officer

Glen E. Stephens, P.E.

Hearing Board

Bill Deaver

Herb Roraback

Doris Lora

Dr. Wallace Kleck

James Bell

For news updates and other information, please visit the Eastern Kern APCD website at www.kernair.org

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