



# DESERT BREEZE

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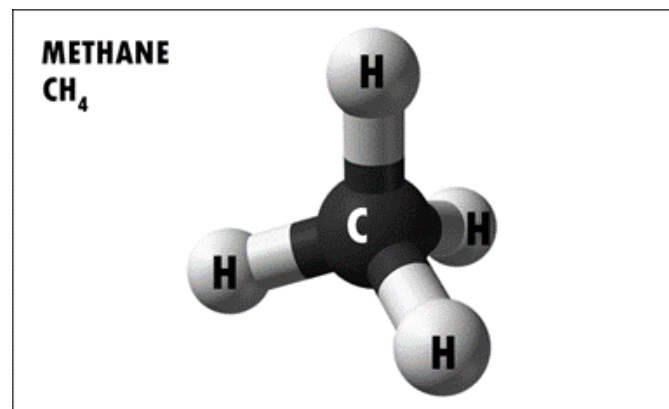
## Pollutant of the Quarter: Greenhouse Gas –Methane

### Greenhouse Effect? What is it?

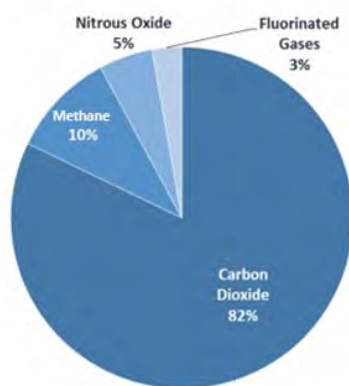
Have you ever been inside a greenhouse on a cold winter day? While it might be cold outside, green plants flourish in the warmth and sunshine inside the greenhouse. Greenhouses are made of glass and are designed to hold heat inside. Similar to a greenhouse, our planet also traps heat energy with the presence of gases in the atmosphere. Gases that can trap energy in our atmosphere are called greenhouse gases.

### Methane (CH<sub>4</sub>)

Methane is one of four types of greenhouse gases identified by United States Environmental Protection Agency (EPA). The other three types of greenhouse gases are carbon dioxide (CO<sub>2</sub>), Nitrous oxide (N<sub>2</sub>O), and fluorinated gases such as hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. Methane is an odorless, colorless, flammable gas. It is used primarily as fuel to make heat and light since it is the primary component of natural gas. Methane is not included in 186 hazardous air pollutants identified by EPA; therefore, it is not toxic.



### U.S. Greenhouse Gas Emissions in 2015



### Sources of Methane Emissions

According to EPA, methane accounted for about 10 percent of all U.S. greenhouse gas emissions in 2015 as described in the figure to the left. Most methane emission comes from human activities - energy industries, livestock and other agricultural practices, and waste management activities. Natural gas systems and coal mining are the major sources of methane emissions in energy industries. Livestock produces large amount of methane as part of their normal digestive process. Additionally, methane is produced when animals' manure is stored or managed in lagoons or holding tanks. In fact, livestock and manure emissions are the largest source of methane gas emissions.

Methane is also generated in landfills as waste decomposes and in the treatment of wastewater.

Pollutant of the Quarter (continued from page 1)

Fun Fact – Methane Emissions from Cows

According to researchers at New Zealand’s Crown Research Institute, up to 95 percent of methane emissions comes from the cow’s mouth rather than its behind.



Mitigating Methane Emissions

California Air Resource Board (ARB) recently adopted the nation’s strictest rule called Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facility on March 23, 2017. California Department of Food and Agriculture provides grants for installation of dairy digesters to reduce methane emissions for dairy and livestock operations. ARB also adopted a landfill regulation in 2010 that will reduce methane emissions from landfills. Therefore, State regulations and grants are being implemented to reduce methane emissions in order to achieve climate benefits for all.

By: *Wunna Aung*

## Pesticides: Telone II

Telone II is a product registered to Dow AgroSciences. Chemically, Telone II is 97.5% 1,3 Dichloropropene and 2.5% 1,3,3-trichloropropene. Functionally, Telone II is a soil fumigant. It is an effective fumigant to control all major species of nematodes, including root knot, lesion, stubby root, dagger, ring, and cyst nematodes. Telone II is injected into the soil as a liquid and immediately converts to a gas, creating a zone of protection around developing roots. Telone II is used for the following crops:

Sugar Beet	Cranberry	Blackberry	Carrot
Corn	Cotton	Cropland	Field Crops
Fruit (citrus and stone)	Loganberry	Mint	Nursery Crops
Nuts (all types)	Onion	Peach	Peanut
Pineapple	Potatoes	Raspberry (black and red)	Strawberry
Vegetables			

Telone II is dangerous to use; it can be absorbed through the skin, swallowed, or inhaled. Therefore, application is required 14-days before planting a crop, and entering an area after application for at least 5-days without protective gear is not recommended. Additionally, application of Telone II requires a 1.5-meter buffer zone to prevent contamination. The main active ingredient in Telone II, 1,3 Dichloropropene (chloropicrin), is listed in California as a toxic air contaminant. Therefore, care must be used during manufacturing, storage, packaging, and using Telone II to prevent unnecessary toxic exposure. However, Telone II will degrade in the environment naturally from minutes to weeks (depending on the location {air, soil or water} and conditions {temperature, humidity, etc.}).

**Pesticides: Telone II** (continued from page 2)



In our modern society, where we seek to produce higher yields from crop, and to produce more food and textiles from the same crop footprint, you can, easily, see how Telone II is necessary. In Kern County a permit (with specific conditions) is required before one can apply Telone II. In Kern County, Telone II can be used for many crops including, but not limited to: cotton, carrots, nuts, and corn. The Eastern Kern Air Pollution Control District has one facility that packages and ships Telone II. It has operated for the past decade without incident. Utilizing proper safety, Telone II can continue to be used, safely, without harm to the community.

*By: Glen Stephens*

## 12 TIPS TO ENJOY YOUR FIREPLACE SAFELY

1. The National Fire Protection Association recommends that chimneys be swept at least once a year at the beginning of the winter to remove soot and debris.
2. Inspect chimney cap regularly and replace when needed.
3. Watch for soot buildup in the chimney of your wood burning fireplace.
4. If possible, burn hardwoods like maple, oak, ash, and birch. The advantages of hard wood are that they burn hot and long; have less pitch and sap, making them cleaner to handle; and tend to cause less creosote buildup.
5. Consider installing a stainless steel liner that will withstand even the highest temperatures and will keep the fire and its embers contained.
6. Burn firewood and only firewood! Crates, lumber, construction scraps, painted wood, or other treated wood releases chemicals into your home.
7. Install carbon monoxide detectors and smoke detectors in your house—near your wood fireplaces as well as in bedroom areas.
8. To burn a fire safely, build it slowly, adding more wood as it heats. Keep the damper of your wood fireplace completely open to increase draw in the early stages. Burn the fire hot, at least occasionally—with the damper all the way open to help prevent smoke from lingering in the fireplace and creosote

- from developing.
9. Be certain the damper of flue is open before starting a fire. Keeping the damper or flue open until the fire is out will draw smoke out of the house. The damper can be checked by looking up into the chimney with a flashlight or mirror.
10. Never leave a fire in the fireplace unattended. Make sure it is completely out before going to bed or leaving the house.
11. Keep a fire extinguisher on hand.
12. Allow ashes to cool fully before you dispose them, and best to leave them in your fireplace until the following morning if you've enjoyed a fire the night before.



## 2018 DMV GRANT PROGRAM IS NOW OPEN!

The District is accepting applications for the 2018 DMV Grant Program. Grantees can receive up to \$50,000 for eligible projects that reduce oxides of nitrogen (NOx), reactive organic gas (ROG), or particulate matter (PM10) emissions from on-road motor vehicle related activities within Eastern Kern County.

**Eligible 2018 Projects Include:**

- ★ Installation of Level II or Level III public EV charging station
- ★ Installation of Public CNG refilling station
- ★ Public Education courses geared toward reducing emissions
- ★ Video Conferencing
- ★ Vanpool
- ★ Park & Ride Facilities
- ★ Bike Path

2018 DMV Grant Program Guidelines & Applications can be downloaded from the District's website: [www.kernair.org](http://www.kernair.org) or by contacting the District at: (661) 862-5250 or [ekapcd@kerncounty.com](mailto:ekapcd@kerncounty.com) and requesting a copy be sent to you.

Board of Directors

- Ed Grimes, Chair (Mayor, Tehachapi)
- Don Parris, Vice Chair (Councilman, California City)
- Eddie Thomas (Vice Mayor, Ridgecrest)
- Mick Gleason (KC 1st District Supervisor)
- Zack Scrivner (KC 2nd District Supervisor)

Board of Directors usually meet once every two months starting in January at the Tehachapi Police Department Community Room.

Air Pollution Control Officer

Glen E. Stephens, P.E.

Hearing Board Members

- William Deaver
- Doris Lora
- Dr. Wallace Kleck
- Chris Ellis
- Charles Arbaut



Happy Holidays!

For news updates and other information, please visit the Eastern Kern APCD website at [www.kernair.org](http://www.kernair.org)

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