Dry winter sparks increase in Valley burn bans

By Sabra Stafford
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When the San Joaquin Valley's Check Before You Burn Program comes to a close in two weeks it will cap off a season that has seen a record number of banned burning days and some of the worst wintertime air quality.

The dry and relatively wind-free weather that has been routine for most of this winter has had an adverse affect on the region's air quality and sparked an increase in the number of no-burn days issued by the San Joaquin Valley Air Pollution Control District.

Check Before You Burn, which runs from November through February each winter, determines when residential wood burning will add dangerous levels of particulate matter – tiny pieces of soot, ash, dust and other materials – to the Central Valley's air, and prohibits the use of residential wood-burning devices. Wood-burning forecasts are issued by county each day.

There are two forecast levels, depending on air quality: "Wood-burning Prohibited" and "Please Burn Cleanly." When a prohibition is declared, burning any solid fuel in a residential fireplace or wood-burning device is not permitted and violations may result in fines. Backyard chimaeras and fire pits are also subject to the prohibitions. There are two exemptions: If the residence does not have access to natural-gas service, even if propane is available; or if burning solid fuel is the sole source of heat for the residence.

When burning is allowed, the air district recommends using manufactured fire logs or dry, seasoned wood to minimize emissions.

So far this season there has been 51 burn prohibitions issued in Stanislaus County. For the entire 2010/11 season there were 25 issued in Stanislaus County. Merced County has had 33 issued so far, compared to 23 last season. San Joaquin County has had 29, up from just seven for all of the last winter season.

"The number of no-burn prohibitions this season is completely out of the norm," said air district spokesman Anthony Presto. "The dry, stagnant weather we've been experiencing means the air pollution doesn't have a chance to disperse."

Citations can be issued by the district for those ignoring the prohibitions. A first time offense nets a fine of $50, but the fine can be waived if the resident completes the district's air pollution exam. A second offense costs $150; additional fines can run up to $1,000.

"People usually don't make the mistake a second time," Presto said.

Most violations are discovered by residents calling in to report neighbors burning on non-burn days, as opposed to a team driving around looking for tell-tale smoke.

The air district has issued 836 notices of violations so far this winter.

While ozone is the dominant pollutant in the Central Valley during the summer months, the main winter pollutant is fine particulate matter and wood-burning devices produce more of it than the average vehicle driving around, Presto said. The air pollution from burning solid fuel in fireplaces and stoves releases fine particulate pollutants that can be harmful to the lungs and heart.

"Fine particulate pollution settles deep in the lungs and because it is so fine it can pass through the cell walls and into the blood stream," Presto said.

High levels of particulate pollution can have serious health effects, including bronchitis, lung disease and increased risk of heart attacks and stroke. Young children, elderly people and people with existing respiratory and coronary disease are especially vulnerable.

Particulate pollution doesn't naturally drift away, but instead remains in the air unless it is cleared away by rain and wind — a weather pattern largely absent this year in the Central Valley.

Prior to this season, the Central Valley had seen improvements in the air quality during the winter months.

“The past two winters have been exceptionally clean, in large part because of the public’s support of Check Before You Burn,” said Seyed Sadredin, the air district’s executive director and air pollution control officer.

Tehachapi cement plant has one of nation's highest mercury emission levels

By Sam Pearson, California Watch
In the Bakersfield Californian, Wednesday, Feb. 15, 2012

TEHACHAPI -- At the end of an empty road just north of Highway 58 and past the outfield wall of an abandoned high school looms the towering Lehigh Southwest Cement plant -- a behemoth kiln that belches mercury and other toxics into the air, as it has for decades.

Over the years, the mercury emissions have been a particular source of concern -- and contention. Historically high, Lehigh's reported output of mercury fell sharply after a round of news stories and public outcry in 2006. But now, the emissions have spiked back up to some of the highest in the nation.

The Lehigh Tehachapi plant produced 872 pounds of mercury in 2010, according to the Environmental Protection Agency's Toxics Release Inventory data -- the most of any cement plant in California and the second-highest among all cement plants in the United States. In 2007, mercury emissions had dropped to 144 pounds, and then began climbing again.

Inside the plant, workers burn coal -- at more than 2,600 degrees -- to cook limestone mined from the nearby hillside. Both materials contain mercury, which then escapes into the atmosphere. Once in the air, scientists say, the mercury settles on the ground and contaminates the soil and water -- and, eventually, fish that are eaten by humans.

Mercury, a potent neurotoxin, has an impact that is difficult to quantify, but is believed to be most dangerous for pregnant women and small children. It can contaminate bodies of water and cause fish to be unsafe for human consumption; it also causes other symptoms like reduced IQs, behavioral problems and heart conditions.

California is one of the country's largest producers of cement, with eight production facilities on the EPA's list of mercury emitters. As such, a debate in Congress over controlling emissions from cement plants could have a major impact on the industry here.

The Obama administration and the EPA have imposed strict limits on some of the most harmful pollutants emitted from cement plants, including mercury. Under the new regulations, which are scheduled to begin in September 2013, plants will be banned from emitting more than 55 pounds of mercury per million tons of cement produced.

The cement industry said complying with the regulations could cost as much as $3.4 billion and force the closure of some plants, but federal regulators put the cost at less than $1 billion.

An industry review of cement plants considered most vulnerable to closure under the new regulations did not include Lehigh's Tehachapi plant.

However, given the size of the Lehigh plant, the new regulations are expected to require a substantial decrease in mercury emissions from the facility. The limestone mined from the volcanic earth near Tehachapi is naturally high in mercury, the company notes, and transportation costs prohibit importing limestone from great distances.

"We're looking at a number of technologies and operating systems to see how we can best meet" the new mercury emissions standards, said Tom Chizmadia, a spokesman for the cement company based in Texas.

Despite the federal mandate, environmental activists remain skeptical that anything substantial will get done after decades of pollution and what they said is inattentive oversight by local air pollution boards.

Jim Pew, a lawyer with the environmental group Earthjustice, said, "These plants were supposed to be in compliance over a decade ago. They have so successfully played the system that they have avoided these standards for years."

Glenn Baumann, a Tehachapi resident who has been involved in monitoring the plant, said he understands the cement companies' need to stay in business. But, he said, "just don't make us sick or kill us."

In most cases, state and federal EPA authorities have done the lion's share of the policing of California's cement plants.

In December, the CalPortland Co. agreed to pay a fine of $1.42 million for Clean Air Act violations at its plant in Mojave, about 11 miles from Lehigh's Tehachapi plant. In a settlement with the EPA, CalPortland said it would install equipment to reduce its nitrogen oxide and sulfur dioxide pollution, which are linked to asthma and cardiovascular diseases.

A long history

Built to provide cement for the Los Angeles Aqueduct in 1908, Lehigh Southwest's Tehachapi plant has emitted startlingly high levels of mercury ever since. According to EPA records, until 2005 the plant emitted the most mercury of any cement plant in the nation.

Since 2004, mercury emissions had been declining: 697 pounds in 2005, 586 pounds in 2006 and finally down to the 144 pounds in 2007.

Air district officials said at the time that the decline showed that Lehigh was making progress in reducing its mercury problem.

But the numbers spiked again -- in 2008, emissions reached 944 pounds, and in 2010, the plant's mercury emissions were 872 pounds.

Various explanations have been offered for why the plant's mercury emissions have varied so widely. The explanations offer a window into the complicated nature of measuring mercury emissions as the Obama administration pursues its new regulations.

Lehigh's Chizmadia said the plant in 2008 switched to a newer method of calculating mercury emissions. Instead of a traditional test that measures a snapshot in time, now the mercury content in their limestone is measured before production. The mercury in the plant's waste byproduct is tested after production, and the difference is assumed to be the emission levels.

Chizmadia and David Jones, air pollution control officer for the Eastern Kern Air Pollution Control District, said the plant stopped using silica from the mine that contained high levels of mercury, and this had contributed to lower levels. The silica is now imported from another source with less mercury, Chizmadia said.

The threat to industry

Andy O'Hare, vice president for regulatory affairs at the Portland Cement Association, which represents cement plants that use the "Portland" method of cooking limestone in kilns, said a cement industry study concluded that 18 cement plants could be forced to shut down because of the new regulations, with a total of 3,000 to 4,000 jobs lost.

"Once you close down an industrial facility like this," O'Hare warned, "you're not going to reopen them."

Earthjustice lawyer Pew said cement makers were simply playing politics by using the threat of a shutdown as leverage to escape pollution controls.

"The argument is so disingenuous," he said. "All of the control technologies have been available for decades that will let them reduce their emissions by 90 percent."

But the cement association said it's not that simple -- a lot depends on the raw materials used in production and the age and makeup of each facility. O'Hare said the cement industry study looked at each plant individually and calculated whether it would be cost-effective for the plant to purchase new equipment to reduce emissions.

If there really were no way to comply, Southern California environmental activist Jane Williams said the goal of the Clean Air Act would be to force the most toxic industrial plants to stop operating.

"Chemicals that are a danger to human health should be reduced in the environment," said Williams, executive director of California Communities Against Toxics. Williams argued that if the Lehigh plant in Tehachapi shut down, its production simply would shift to other cement plants that emitted less mercury.

Many environmentalists believe that the actual levels of mercury emissions could be significantly higher than what EPA data suggests. Earthjustice has argued that continuous emissions monitoring should be required for all plants to ensure accuracy.

A bill that passed the House of Representatives in October would remove the EPA's effort to tighten regulation of cement plants. The measure passed the House 262-161, with 25 Democrats voting to support it and two Republicans opposing it. The bill's fate in the Senate is uncertain, but Obama has vowed to veto any attempts to weaken the new standards.

Environmental groups said the effort to kill the regulations is misguided.

There is "no credible reason to delay that implementation, except that the Portland Cement Association is upset that this will cost their plants extra money," said Diane Bailey, spokeswoman for the National Resources Defense Council.

"The public health and air quality benefits from these proposed regulations are tremendous," she said. "Really, we're talking about literally thousands of lives that would be saved by implementing these regulations."

O'Hare said that argument might make sense in the present economic climate, in which there is little demand for cement because construction has slowed. But he said that when the economy eventually rebounds, all existing cement plants would need to be operating to meet demand.

If they could not, O'Hare argued, the production would be replaced by imported cement from places like China -- where comparable pollution standards do not exist.