

Freeway air pollution linked to brain damage in mice

By Louis Sahagan, staff writer

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It is well known that air pollution from cars and trucks on Southern California freeways -- a combination of soot, pavement dust and other toxic substances -- can cause respiratory disease, heart attacks, cancer and premature death.

Now, exposure to pollution particles roughly one-thousandth the width of a human hair has been linked to brain damage in mice, including signs associated with memory loss and Alzheimer's disease, according to a USC study in the journal *Environmental Health Perspectives*.

In a statement, senior author Caleb Finch, an expert on the effects of inflammation and holder of USC's ARCO/William F. Kieschnick Chair in the Neurobiology of Aging, said "You can't see them, but they are inhaled and have an effect on brain neurons that raises the possibility of long-term brain health consequences of freeway air."

The study relied on a unique technology developed at USC for collecting particulates in a liquid suspension and recreating air laden with freeway particulate matter in the laboratory, which enabled scientists to conduct controlled experiments on cultured brain cells and live animals.

Exposure lasted a total of 150 hours, spread over 10 weeks, in three sessions per week lasting five hours each.

How can we protect the millions of people who live alongside freeways from this type of toxicity?

In an interview, lead author Todd Morgan, a research professor in gerontology at USC, said, "Our data would suggest that freeway pollution could have a profound effect on the development of neurons and brain health in children and young kids, especially those who attend schools built alongside freeways."

"So limiting one's exposure -- especially children's exposure -- to freeway pollution is essential to control asthma, cardiovascular conditions and cognitive development," Morgan said.

The study was prompted by earlier research by a separate group in Mexico that noted significant differences in brain samples collected from children and young-adult accident victims in smog-laden Mexico City compared with those in Veracruz, which has cleaner air.

The brain tissue collected in Mexico City showed more extensive inflammation, oxidized DNA and other pathological markers of Alzheimer's disease, Morgan said.

"As a society, we need to figure out ways to minimize the level of the very, very nasty particulates we are dumping into the air we breathe," Morgan said. "It's having terrible consequences."

Lemoore weighs in on land-use plan

By Mike Eiman

Hanford Sentinel, Wednesday, April 6, 2011

The Lemoore City Council took steps Tuesday to ensure Lemoore Naval Air Station's Joint Land Use Study includes comments regarding the history of the city's west side.

The draft document, available for public comment until April 27, makes 19 recommendations to the city that aim to allow development without encroaching on LNAS. Those recommendations include planning future transportation infrastructure to avoid encroachment and updating the city's general plan to strengthen land uses compatible with base operations.

The council approved a letter to be signed by Mayor Willard Rodarmel and sent to Joe Neves, JLUS Policy Committee chairman. The letter describes the annexation of the 1,432 acres of land west of Highway 41 in June 1997, following approval of an environmental impact report for West Hills College Lemoore. The annexed land's western border was set between 21st and 22nd avenues, with Industry Way and Iona Avenue at the north and south borders, respectively.

The letter refers to a scoping meeting for the impact report held in November 1996, which was attended by two representatives of the U.S. Department of Navy. During the impact report process, however, the city received no comments from the Navy or LNAS regarding the annexation or the proposed land uses.

When the city prepared a comprehensive update to the Lemoore General Plan in 2006, NASL personnel participated on the steering committee. The 2030 General Plan adopted on May 6, 2008 subsequently made several land-use changes to the annexed land.

Among those changes was a reduction in residential development density from 15,000 people to 10,000 spread out over a larger area and rigid noise mitigation policies for residential areas. The document also moved the western border away from LNAS by about a half-mile.

LNAS commanding officer Capt. James Knapp asked the council to consider conducting a "micro study," focusing specifically on Lemoore, in addition to the JLUS. He also noted safety concerns associated with building housing directly beneath flight patterns.

"We'd just like to make a note that the General Plan, as adopted in 2008, was not agreed to by the naval air station or the Department of the Navy," Knapp said.

Lemoore landowner Craig Pedersen complained about the amount of scrutiny imposed by the base. "What confuses me is the Navy hasn't gotten the answer it wants, so now they're asking for a micro study," Pedersen said.

Regarding safety issues, Rodarmel cited his 30 years with the Lemoore Volunteer Fire Department during which he could only recall two jet crashes. "I think NAS Lemoore has an excellent safety record," Rodarmel said.

[In other action, the council nominated Mayor Pro Tem John Plourde for appointment to the San Joaquin Valley Air Pollution Control District board, which develops air-management strategies in the Central Valley. The board, consisting of 15 members from eight Valley counties, has a vacancy that must be filled by a council member from a city within Kings County. Plourde was the only applicant in the county.](#)

EPA to limit coal-fired power plants' toxic emissions

Renee Schoof - McClatchy Newspapers

Merced Sun-Star and Sacramento Bee, Thursday, April 7, 2011

WASHINGTON — Toxic air pollutants such as mercury, which can lower the IQ of children who get high doses early in life, will be reduced from coal-fired power plants under a major air pollution regulation that the Environmental Protection Agency unveiled Wednesday.

The proposed rule also would reduce other forms of air pollution that cause heart attacks, asthma attacks and other serious health conditions. The EPA estimates that 17,000 lives would be saved by the new rule every year, and thousands of people would avoid missing work and visiting an emergency room.

The nation has never had a national limit on the 386,000 tons of hazardous air pollutants that coal-fired plants put out each year. Vast parts of the country and millions of Americans are affected, because more than 400 coal-fired plants are scattered across 46 states, and their emissions spread over hundreds of miles.

The same equipment that cuts the toxic pollutants such as mercury also captures fine particle pollution. That dirty air, or soot, causes premature death, heart attacks and lung diseases. The

EPA estimates that the additional reduction of particle pollution would prevent 11,000 heart attacks and 120,000 childhood asthma attacks annually.

The Electric Reliability Coordinating Council, the leading electric-power industry trade group, issued a statement opposing the rule. It said the new regulation on toxic pollution is too expensive and that there are no health benefits from reducing hazardous pollutants other than mercury.

"Such controls are extraordinarily costly with profound impacts on electricity supply and price, and job creation," the group said.

The EPA, however, said that other toxic metals emitted from the plants, including arsenic, chromium and nickel, can cause cancer.

"Today we're taking an important step forward in EPA's efforts to safeguard the health of millions of Americans," EPA Administrator Lisa Jackson said in a packed auditorium at her agency's headquarters, where the audience included a class of second graders from a Washington school.

American Academy of Pediatrics President O. Marion Burton spoke to them.

"I think you already know that this rule is about you and for you," he said. "Dirty air makes children sick. That's the long and the short of it."

Burton said he expected industry criticism about the costs the rule would impose on them, but argued that inaction costs society more. "If you think it's an expensive process to put a scrubber on a smokestack," he said, "you should see how much it takes over a lifetime to treat a child with a preventable birth defect."

About half the nation's electricity comes from plants that burn coal. According to EPA data, 44 percent of such plants have no advanced pollution-control equipment. Some other plants already meet at least part of the proposed standards, because they've had to meet state regulations.

Congress ordered the toxic-emissions reductions 20 years ago. The EPA reduced mercury emissions from all other big sources except power plants. A court threw out a mercury reduction plan for power plants that was proposed, but not put into practice, under President George W. Bush.

"Our nation has waited a long time for this day," said American Lung Association president and CEO Charles Connor. He said the EPA is closing "a toxic loophole."

The EPA plans to issue a final rule at the end of this year or early next year, Jackson said. In the meantime, it will take public comments on this proposal. The rule could be changed before it's finalized. The agency then will give utilities four years to add the pollution controls.

Coal-fired power plants emit more hazardous pollutants than any other industrial power source, the American Lung Association said in a report last week. The EPA said power plants that run on coal, plus a much smaller number that use oil, are the source of half the mercury, more than half of the acid gas emissions and 25 percent of toxic metals in U.S. air pollution.

The EPA estimated only the health benefits from the particle pollution reductions, and not from the elimination of mercury and other hazardous pollutants. It estimated that for every dollar spent on pollution controls, the public would gain \$5 to \$13 in health benefits.

Environmental groups cheered the proposal, as did one group of electric utilities, the Clean Energy Group, made up of Calpine Corp., Constellation Energy, Exelon Corp., PG&E Corp., Public Service Enterprise Group Inc. and Seattle City Light.

The group's president, Michael Bradley, said in an interview that some old coal plants might close rather than add the pollution controls. That would include plants more than 50 years old that are less efficient than new ones. Bradley said that natural gas plants that aren't operating at capacity would be able to fill the gap.

Companies have been planning ahead and anticipating the new regulations for a long time, Bradley said. He also said that industry and the EPA have been exchanging data and discussing the rule announced Wednesday for the past 18 months.

Senate votes down effort to weaken EPA authority

By Halimah Abdullah and Renee Schoof
Modesto Bee, Thursday, April 7, 2011

WASHINGTON -- The Senate voted Wednesday against a measure that would have blocked the Environmental Protection Agency from issuing new regulations on greenhouse gasses - a move that further cripples efforts by lawmakers to weaken the agency's regulatory authority.

The measure failed to net the 60 votes needed to pass and the vote, which was 50 for and 50 against, fell largely along party lines.

Senate Minority Leader Mitch McConnell, whose home state of Kentucky relies heavily on coal production, and lawmakers from other mining and manufacturing states have often clashed with the administration over environmental policy.

McConnell, speaking on the Senate floor Wednesday, said his amendment "would give businesses the certainty that no unelected bureaucrat at the EPA is going to make their efforts to create jobs even more difficult than the administration already has."

McConnell's amendment was based on legislation by Sen. James Inhofe, R-Okla. It advocates an outright block on the EPA's power to issue new regulations on greenhouse gases. The amendment, much like the Inhofe bill, would have overturned a scientific finding that heat-trapping gases from fossil fuels are changing the climate in ways that will be harmful to human health and the environment.

The finding was made by the EPA during the George W. Bush administration but was made public by the Obama administration. The finding is also in line with the consensus view of the vast majority of the world's climate experts, the National Academy of Sciences and similar top government science advisory groups in other countries.

Rep. Ed Whitfield, R-Ky., along with Rep. Fred Upton, R-Mich., have similar legislation in the House of Representatives, which is due for a vote Thursday. Though the Upton-Whitfield measure may pass the Republican-dominated House the legislation may not survive opposition in the other chamber.

Earlier this week, the Office of Management and Budget issued a statement regarding the Upton-Whitfield measure in the House, saying that if the president were presented with that legislation "his senior advisers would recommend that he veto the bill."

In a statement, the White House said Wednesday's Senate vote "rejected an approach that would have increased the nation's dependence on oil, contradicted the scientific consensus on global warming, and jeopardized America's ability to lead the world in the clean energy economy."

Several other similar measures in the Senate failed, including an amendment by Senate Finance Committee Chairman Max Baucus, D-Mont., which would have exempted smaller businesses and farms from new EPA greenhouse gas regulations. The EPA has said it has no plan to impose any carbon controls on farms and small businesses.

An amendment by Sen. Jay Rockefeller, D-W.Va., which would have imposed a two-year delay on implementing greenhouse gas emission regulations, also failed.

Manufacturing and mining groups, such as the National Mining Association, that have been deeply critical of the EPA expressed disappointment over Wednesday's Senate vote.

"EPA's ill-considered regulation, if left unchallenged, will drive up electricity costs," National Mining Association President Hal Quinn said in a recent statement.

Health officials and environmental groups waded into the fray and applauded lawmakers who voted against measures that would weaken the EPA's regulatory authority.

"It's all about denying clear science," said David Doniger, climate policy director at the National Resources Defense Council. "Republicans have a lot of power to change the nation's laws, but they can't change the laws of nature."

The root of the tension goes back to partisan interpretations of a 2007 Supreme Court ruling, *Massachusetts v. EPA*, which held that the agency should regulate greenhouse gases under the Clean Air Act. Republicans often accuse the Obama administration of interpreting the ruling too broadly, while Democrats counter that it's sound science, not the EPA, that's guiding policy.

Court orders have also pushed the EPA to enforce some Clean Air Act amendments that Congress passed on a bipartisan basis in 1990. Under one such requirement, the EPA earlier last month proposed the first federal regulation of mercury from its largest source - coal-fired power plants.

"The American people support EPA's efforts to safeguard us from polluters, and I will continue to fight any effort to weaken the Clean Air Act," said Sen. Barbara Boxer, D-Calif.