



KETTLEMAN CITY ENVIRONMENTAL EXPOSURE ASSESSMENT AND BIRTH DEFECTS INVESTIGATION



The California Environmental Protection Agency (Cal/EPA) together with the California Department of Public Health (CDPH) have investigated environmental exposures and a recent increase in the number of birth defects in Kettleman City, and have published a draft report. Cal/EPA and CDPH are accepting comments on the draft and will hold a meeting in Kettleman City before finalizing the report in December.

Environmental Investigation

WHAT WAS INVESTIGATED?

In January 2010, Gov. Arnold Schwarzenegger directed Cal/EPA and CDPH to try to find out what caused recent birth defects in Kettleman City. Cal/EPA tested the area's air, water and soil. CDPH reviewed birth records and interviewed mothers of the children born with birth defects.

WHAT WAS FOUND?

After testing the air, soil and water around agricultural operations, the Kettleman Hills Hazardous Waste Facility, the Kettleman City Elementary School, illegal dump sites and the community, the investigation did not find a specific cause of the birth defects.

- Analysis and testing of 27 pesticides showed it is very unlikely that pesticides caused the birth defects.
- Air tests found no link between the Kettleman Hills Hazardous Waste Facility and environmental contamination in the town. The ground beneath the facility diverts water away from the town, so wastewater from the facility cannot affect the wells that supply the town's drinking water.
- Testing found levels of arsenic higher than state standards in both wells that supply the town's water and in water from home taps. The arsenic levels were unlikely to cause birth defects, and most of the mothers who were interviewed said they did not drink tap water.
- Testing found low levels of lead in one of the town's wells and in the well that provides water for the elementary school.
- Air tests found benzene near one of the treatment units that removes the chemical from well water before it is distributed to the public.
- Soil and soil gas from a random sample of homes did not contain dangerous levels of contaminants. The only exception was one home where the yard had high levels of the banned pesticide chlordane, which is used to treat termites.
- There was no evidence that illegal dumping of trash or cars exposed the town to contaminants.

WHAT DOES THE REPORT RECOMMEND?

Although the investigation could not find a link between environmental contaminants and the reported birth defects, it found some unrelated issues that could improve the overall health of the Kettleman City environment. The draft report recommends these steps:

- The State will continue its plan for statewide assessments of chlorpyrifos and diazinon, and mitigation for MITC.
- Regulatory agencies will continue efforts to reduce arsenic levels in Kettleman City's drinking water either through improved treatment or a new source of water. This will reduce risks of other health effects related to arsenic.
- While lead was detected in the school and municipal wells, the findings were not consistent with previous tests of the well water. Regulatory agencies will conduct follow-up sampling to verify whether there is lead in the water from two wells.
- Air officials will investigate benzene emissions from a treatment unit at Kettleman City's southwest drinking water well. If the regional air district confirms these findings, the state will work with the district to consider corrective actions.
- Further testing and possible cleanup may be needed at the home where chlordane was found in the yard.

Public Health Investigation

WHAT WAS INVESTIGATED?

For this investigation, we looked at the records from early 2007 through March 31, 2010, and found that there had been 11 children born with a major, structural birth defect during that time. All the mothers of these children had lived in Kettleman City while they were pregnant. The number of birth defects during this period was higher than would be expected.

Six of the eleven mothers agreed to talk to us about their medical and family histories. We also reviewed their medical records.

WHAT WAS FOUND?

We did not find a specific cause or exposure to a chemical among the mothers that would explain the higher number of children born with birth defects in Kettleman City.

- Some of the birth defects may have looked very similar. However, after reviewing the children's medical information, we found that all the babies had different kinds of birth defects. A chemical or drug that causes birth defects will usually cause the same kinds of birth defects in every baby. This suggests that the birth defects in Kettleman City were not all caused by a community-wide exposure to the same chemicals.

- None of the mothers whom we interviewed used tobacco, alcohol, or drugs. These things can cause health problems in babies as well as some kinds of birth defects.
- The mothers had good health care while they were pregnant. Also, the medical histories of the six mothers we interviewed did not explain why they had babies with birth defects.
- Based on what the six mothers told us, we do not think that they had exposures to chemicals at work, pesticides in the home, or chemicals from nearby industrial sources that would have increased their chances of having a baby with a birth defect.

NEXT STEPS:

CDPH will continue to track birth defects in Kettleman City over the next few years. This will help us find out if the number of babies born with birth defects stays high or if it decreases to the lower level seen before 2008. Cal/EPA will continue its efforts to reduce statewide pesticide exposure and will conduct follow-up tests on issues unrelated to the birth defects to address the arsenic and lead.

WHERE CAN I READ THE REPORT?

The draft report is available throughout the town, including copies in both English and Spanish at the local post office, library, and elementary school. You can also view the report at www.calepa.ca.gov/EnvJustice/News/.

WHAT HAPPENS NEXT?

Cal/EPA and CDPH will hold a meeting in Kettleman City on December 2, 2010, to get community input on the draft report. Written comments will be accepted until December 21, 2010. Send comments to Dr. David Siegel of the Office of Environmental Health Hazard Assessment at PO Box 4010, Sacramento, CA 95812.

FOR MORE INFORMATION:

For additional information about the Cal/EPA environmental assessment or to request a free copy, contact Dr. David Siegel at 916-324-2829 or send an e-mail to irab@oehha.ca.gov. For information about the CDPH health report, please contact Tivo Rojas-Cheatham at 510-620-3673 or tivo.rojascheatham@cdph.ca.gov. Para asistencia en español, comuníquese con: Ricardo Martínez al 916-324-7316 o por correo electrónico a rmartinez@calepa.ca.gov.

For additional information about the California Birth Defects Monitoring Program or birth defects in general, please visit the following:

California Birth Defects Monitoring Program
www.cdph.ca.gov/programs/cbdmp/Pages/default.aspx

Birth Defects Information
www.cdph.ca.gov/programs/CBDMP/Pages/BirthDefectInformationOverview.aspx