

GUIDANCE DOCUMENT

University of Nebraska
UNMC College of Public Health study of the
Impact of contamination at the AltEn plant in Mead, NE, on human health and the environment

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June 2022

The University of Nebraska Medical Center (UNMC) College of Public Health through the \$1 million federal American Rescue Plan Act funding appropriated in LB1068 will assess and evaluate the impact of toxic chemicals present at the AltEn ethanol plant in Mead, NE, on human health and the environment.

The purpose of this project, as originally outlined in LB 1048 (2022), is to assess and evaluate the environmental and human health effects of the toxic chemicals contained in the dry residue (“wetcake”) and wastewater produced and stored at the AltEn ethanol-production plant in Mead, Nebraska. Ethanol production at the AltEn plant continued until February 8, 2021, and most of the solid byproduct and the wastewater produced daily are still stored on site (84,000 tons of wet-cake and 176 million gallons of wastewater) or field-applied near the community, leading to high concentrations of pesticides in the area.

This proposed assessment and evaluation of the contaminants and potential health effects of the activities and stored waste at the AltEn site is being conducted by faculty members at UNMC, the University of Nebraska-Lincoln (UNL), and Creighton University. As appropriate, we plan to continue working with the town of Mead, Saunders County, the Lower Platte North NRD, and UNL-ENREC. The project is divided into four main approaches: in one, samples of air/dust, water (surface water, groundwater and domestic water) and soil will be sampled to determine whether the water, soil, wildlife and people living near the AltEn plant or near fields where wetcake or wastewater were field-applied are being exposed to hazardous levels of insecticides and/or fungicides. In the second, adults living near the AltEn plant or near fields where wetcake or wastewater was field-applied will be asked to complete a survey of perceived adverse health effects and to provide blood and urine samples for analysis of the compounds. In the third arm, insects (pollinators), vegetation and wildlife will be sampled for contaminants from the plant and their effects. Last, a medical registry will be established in early 2022 to track potential long-term health effects caused by exposure to contaminants from the AltEn plant. Enrollment in the registry will be offered to people living in Saunders County; we plan to monitor the long-term health effects quarterly in the registry for 10 years. These four arms of the study will be connected so that we can determine off-site migration of the possibly toxic contaminants, particularly in water, from the AltEn plant, and whether exposure to these contaminants may have adverse effects on people’s (and animals’) health.

We will disseminate the findings of our work to the public. People living and working in the area are concerned about the contamination of air, water and soil in the vicinity of the plant. Contamination of streams southeast of the plant is a particular concern because that water flows toward the Platte River. The results of the project can provide the citizens of Saunders County information critical to planning how to protect themselves and their environment. In addition, the human health information can help citizens know whether their health is at risk.

This project will also help the State of Nebraska identify and deal with the contamination of waterways, and possibly groundwater, to protect the health of the citizens of the State and our natural resources needed for agricultural production and other industries.