

June 1998

ATSDR/FDOH Superfund Program Community Health Information



Health Investigation Funding Request

Wingate Road Municipal Incinerator and Landfill Superfund



The Florida Department of Health (FDOH) is applying for research funding from the Agency for Toxic Substances and Disease Registry (ATSDR). If funded, the Department will conduct a health investigation of the community near the Wingate site.

Background

From 1954, the City of Ft. Lauderdale operated the Wingate Road Municipal Incinerator and Landfill. Ash from the site was stored in a 40-acre on-site landfill. The plant closed in 1978. The Environmental Protection Agency (EPA) declared it a National Priority List Superfund site in 1990. "Superfund" is a federal program for finding and cleaning up the worst hazardous waste sites in the country. Since then, the FDOH has written a health assessment and three health consultations. The FDOH research found no current health threat from the site. Past health threats could not be identified. There are very little data on past air, soil, and water pollution at the site.

Residents around the Wingate Road Municipal Incinerator and Landfill are concerned about their health. During plant operation, ash covered their homes and yards. People report that they had problems breathing and other illness. Residents are concerned that there are higher than normal illness rates in the community. They are concerned that their illnesses were and are caused by the site. To address these concerns, we have applied for funding to conduct two studies. This flyer describes those proposed studies.

We applied for funding from ATSDR in June 1998. We will know in August 1998 if we get funding. If we do, we will conduct a survey to see who wants to be part of each study and to get background data. We will hold a public meeting before the studies start to explain what will happen.

Exposure Study

Our proposed exposure study would look at biological indicators. A biological indicator is a sample taken from a person's body. If funded, these tests tell what the current levels of a chemical are in a person. Since the site has been closed for 20 years, we had to find chemicals that 1) were found on the site; 2) lasted in the soil or a person's body for more than 20 years; and 3) are easy to collect and study. Based on this and the known chemicals on the site, we chose to look at dioxin and arsenic levels. Dioxin lasts a long time in a person's body and arsenic lasts a long time in soil.

Dioxins

Dioxins can enter your body through air, food, soil or other materials. The most common way dioxins can enter your body is by eating food contaminated with dioxins. Dioxins can also be left over in the ashes after burning waste. People who lived near the site may have been exposed to dioxin while it was active. EPA found dioxin in soil, sediments and fish near the site. However, these levels were below federal cleanup levels.

Most people have low levels of dioxins in their body fat and blood. Dioxins stay in a person's body for a long time, at least 7 - 12 years. The dioxin we would measure is called "TCDD." We plan to test 20 people for dioxin levels. This test requires a blood sample. The sample results will be compared to the range for the general population in the United States. That range is from 3 to 7 parts per trillion (ppt) TCDD.

Arsenic

Arsenic is naturally in the earth's crust. It is also in pesticides and is used by industry. Arsenic can get into your body by breathing, eating or skin contact. We measure arsenic in people's hair and fingernails. Low levels of arsenic in the hair are normal. Most arsenic does not stay in a person's hair or fingernails for more than one year. Arsenic stays in the soil for a long time, so people could be exposed through soil. EPA found arsenic in the soils, sediments and fish at the site. The levels were below federal cleanup levels. We found that those levels were not likely to cause health effects.

Since children are smaller and more likely to play outdoors, they are more likely to be exposed to chemicals. Testing children would be a way to find out the highest exposures. We are proposing to collect hair samples from 20 children between the ages of 3 and 20. The test will only show high levels of arsenic exposure from the last 6-12 months. Normal levels in the hair are 1.0 ppm (mg/kg) or less. High levels of arsenic will show children have been exposed to arsenic. It will not predict any current or future health



Disease and Symptom Prevalence Study

If funded, this study will measure the types and amounts of self-reported disease in the Wingate area. It will look at the current health status of residents. We will use information from people who live within one-half mile of the Wingate site. People who are part of the study must have lived in that area at least one year. We will compare that information to a similar, but unexposed, community in Florida.

There are about 15,000 people living within one-half mile of the site. We will select 920 people for the study. This size will make the results meaningful. Specially-trained interviewers will do face-to-face surveys. To verify disease reports, we will need to get permission to look at medical records. Based on past input from the community, we will target the following diseases:

- 1) asthma; 2) bronchitis; 3) pulmonary edema; 4) cataracts; 5) fibroid tumors; 6) psoriasis; 7) glaucoma; 8) keratoses; 9) stillborn births; 10) miscarriages; 11) lupus; 12) blood clotting; 13) heart failure; 14) kidney failure; 15) seizures in children; 16) learning disabilities in children; 17) sarcoidosis; 18) thyroid conditions; 19) chemical allergies; 20) migraines; 21) spina bifida; 22) myasthenia gravis.

Time line

If funded, the studies will take at least one year to conduct.

Exposure Study

During the first three months, we will meet with community leaders to discuss study details. We will plan with them on how to reach the community. During the second three months, we will get participants for the studies. The third three months will be for data collection. The last three months will be for looking at the results, writing reports, and sharing the results with the community.

Disease and Symptom Prevalence Study

The first three months will be spent selecting participants and interviewers and writing interview questions. The next six months will be for training interview staff and doing the interviews. The database of results will be set up by our staff. The last three months will be set aside for looking at the results, writing reports, and sharing the results with the community.

Uses and Limitations of the Studies

Exposure Study

An exposure study will tell us the levels of dioxin and arsenic in people. The dioxin results will tell whether people have been exposed to higher than average levels of dioxin. Arsenic information will tell whether children are currently exposed to arsenic. The arsenic results can only show if a child has had higher than normal exposure to arsenic within the past year. If children have high arsenic levels, we will provide information on reducing arsenic exposure. We will refer anyone with high levels of either chemical to a doctor to be monitored.

This study will not address past exposures to chemicals. It can only tell us what the current levels are in a person's body. The results cannot be used to predict health effects. There are many possible sources of dioxin and arsenic. Dioxin is a by-product of pulp mills and burning materials. Arsenic is in many man made products, such as pesticides and marine paints. The results of this study cannot prove that the levels of chemicals in nearby residents are from the Wingate site.

Disease and Symptom Prevalence Study

This study will let us see if the community's overall health status is different from a control population. It will not be able to tell us about rare diseases. The population is not big enough for comparing very rare diseases. Cancers and birth defects are included in rare diseases. A long-term follow-up study would be needed for those diseases. There are many things that determine a community's health status. The results of this study cannot prove chemicals from the Wingate site affected the community's health status.

More information

For more information on our proposed health studies, please contact:

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