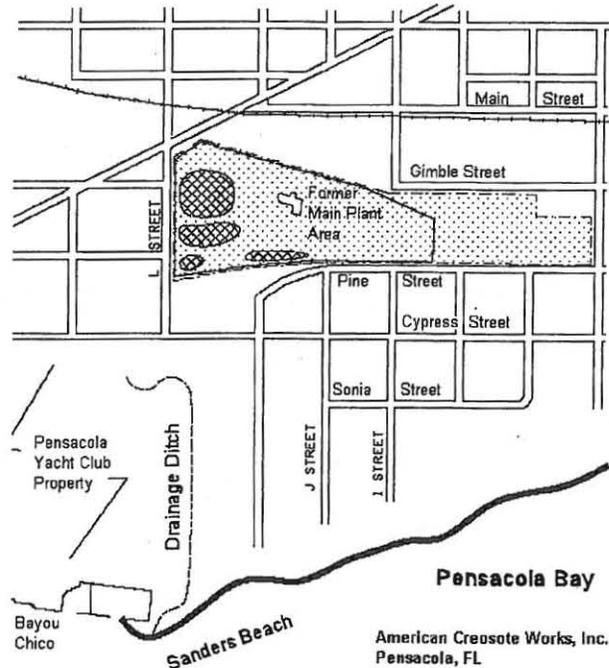


American Creosote Works, Inc. Sanders Beach Community Soil Health Consultation

Background

American Creosote was a wood treatment business from 1902 until 1981 in Pensacola (see map.) The company used creosote, pentachlorophenol, and diesel fuel to treat telephone poles, railroad ties, and fence posts. The company used two lagoons for waste water. The lagoons overflowed during rainstorms. The runoff would then go into Pensacola Bay. Wastewater also went directly into the ground through the sandy soil. In 1980, utility workers found contamination in the ground water. American Creosote closed in 1981 and filed for bankruptcy. The Environmental Protection Agency (EPA) added the site to the Superfund list in 1983. In 1986, the Agency for Toxic Substances and Disease Registry (ATSDR) wrote a health assessment. They said a large clean up of soil and water was not needed to protect public health. A health consultation was written by our office, the Florida Department of Health (FDOH), in 1992. The report said that the site did pose a public health threat from past and current chemical exposures. FDOH recommended EPA take steps to keep people off the site, clean the soil on and off the site, limit the use of ground water, and control dust during site cleanup.



Based on the FDOH report, EPA collected more than 100 soil samples during 1996 and 1997. Most samples were taken from the Sanders Beach community, next to the American Creosote site. Using those data, our office wrote a health consultation to see if there is a public health threat from soil in the Sanders Beach neighborhood. This fact sheet explains those findings.

Soil Sampling

The EPA took more than 100 surface soil samples. Surface soil is in the top three inches of soil. EPA also took five subsurface soil samples. Those samples were taken two to three feet below the surface. The samples were all from a 22-block area in the Sanders Beach community.

Health Models

To figure possible health risks, we use the "worst-case" model. This means they use the highest measured amounts found in the samples for each chemical. Children and the elderly are more sensitive to chemicals. Because of this, we take these groups into account when looking at public health risks.

For cancer-causing chemicals, we use a lifetime exposure model. "Lifetime" is considered a 70-year period. We considered "exposure" as eating small amounts of soil and breathing dust.



May 1998



ATSDR/FDOH Superfund Program Community Health Information

Results

EPA looked for chemicals that might have come from wood treatment plants. They measured polycyclic aromatic hydrocarbons (PAHs) and dioxin/furans. PAHs are a mixture of many chemicals. Some of them may cause cancer. Dioxins and furans are another mixture of many chemicals.

Polycyclic Aromatic Hydrocarbons (PAHs)

Surface soil: Using the highest amount of PAHs found in two surface soil samples, we calculated possible cancer risks. If someone ate small amounts every day of soil with the highest PAH level, they would have a low increase in the risk of cancer. Eating soil daily with the next highest amount of PAH would cause no increase in cancer risk. Both soil samples with the highest PAH levels were taken near a newly-paved street. New pavement is high in PAHs, so those samples may not represent soil in the area. No other surface soil samples had PAH levels of health concern.

Subsurface soil: Using the highest amount of PAHs measured, we found a low increase in cancer risk. However, people are not likely to eat soil two to three feet down in the ground. Therefore, the public health risk from the subsurface soil is very low.

Dioxins and Furans

The health effects from dioxin are not well documented. There is a lot of disagreement among scientists. EPA is reviewing their dioxin standards, but has not yet finalized a new report. This makes it hard to assess health threats from dioxin. Therefore, to estimate health effects, we used guidelines currently used by ATSDR and EPA.

Surface soil: Only one sample was slightly above the ATSDR and EPA guidelines. This sample was on Pine Street between "I" and "J" Streets. Based on these findings, the public health risk from dioxin surface soil is very low.

Subsurface soil: The highest subsurface soil sample was well below the guidelines. Based on these findings, the public health risk from dioxin in subsurface soil is very low.

Conclusions

The soil in the Sanders Beach Community south of the American Creosote site is not a public health threat.

We recommend that the EPA clean up the area where the surface soil had higher levels of dioxin. That area is the soil near Pine Street between "I" and "J" Streets. We also recommend that people avoid contact with soil two to three feet below the surface soils near the southwest corner of the American Creosote site.

More Information

For more information on the Sanders Beach Community health consultation or a copy of the report, please contact:

E. Randall Merchant
Florida Department of Health
Bureau of Environmental Toxicology
1317 Winewood Boulevard
Tallahassee, FL 32399-0700
(850) 488-3385