

Health Consultation

ST. LUCIE

ST. LUCIE, ST. LUCIE COUNTY, FLORIDA

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Agency for Toxic Substances and Disease Registry

Division of Health Assessment and Consultation

Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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HEALTH CONSULTATION

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Prepared by:

Exposure Investigation and Consultation Branch
Division of Health Assessment and Consultation
Agency for Toxic Substances and Disease Registry

BACKGROUND AND STATEMENT OF ISSUES

The Florida Department of Health requested the Agency for Toxic Substances and Disease Registry (ATSDR) to review the results of environmental samples collected from several residential yards in St. Lucie County, Florida, and to evaluate the possible health implications associated with exposure to the substances reported.

On September 30, 1998, the Florida Department of Health analyzed water samples, soil, and sediment samples from 12 residential yards (ID# 03, 05, 07, 08, 10, 12, 16, 17, 19, 30, 31 and 32), for various semi-volatile organic pollutants. The water samples were collected from the pumphead (well water), or spigot from inside the residence. The results indicate that most of the chemicals analyzed were not detected. The only chemicals that were detected were in soil and sediment samples. The soil and sediment samples were collected from depth of six inches to ten inches. No chemicals were detected in water samples. The maximum levels of these chemicals included benzo(a)anthracene at 0.260 milligrams per kilogram (mg/kg), benzo(b)fluoranthene at 0.470 mg/kg and Di-n-octyl phthalate at 3.5 mg/kg.

DISCUSSION

At this site, most of the chemicals analyzed in soil and sediment samples were not detected. In addition, chemicals were not detected in the water samples. Currently, there are no comparison values for benzo(a)anthracene and benzo(b)fluoranthene. However, there is an Environmental Media Exposure Guide (EMEG) for Di-n-octyl phthalate of 160 mg/kg. Environmental Media Exposure Guides are media specific guides used to select contaminants of concern at hazardous waste sites. They are derived from Minimal Risk Levels which are based on non-carcinogenic toxic effects of chemicals. Di-n-octyl phthalate was detected at 3.5 mg/kg in soil and sediment samples which is well below its EMEG. Furthermore, benzo(a)anthracene and benzo(b)fluoranthene were detected at less than 1 mg/kg. Background urban soil concentrations of benzo(a)anthracene and benzo(b)fluoranthene range from 0.169 mg/kg to 59 mg/kg and 15 mg/kg to 62 mg/kg respectively [2]. Human exposure to these contaminants is unlikely, because it is not likely that anyone would go to the same location where these samples were collected and ingest the soil or sediment on a daily basis. Therefore, there is no concern for exposure to chemicals at this site.

CONCLUSIONS

There were no contaminants of public health concern detected in the water samples. The chemical concentrations detected in soil and sediment samples do not pose a health threat to the general public. This is based on the premise that there is limited opportunity for exposure, and the chemical levels detected are not elevated.

RECOMMENDATION

No follow-up investigations are recommended. If further clarification is necessary, or if additional sampling data become available, ATSDR is available to assist upon request.

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Toxicologist

Bob Safay

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REFERENCES

1. Chemical Analysis Report for St. Lucie County Cancer Cluster Investigation, prepared by the Florida Department of Environmental Protection, Tallahassee, Fl., November 2, 1998.
2. ATSDR's Toxicological Profile for Di-n-octyl phthalate (Draft), December 12, 1994.