

**Summary of Investigation into the Occurrence of Cancer
Zip Code 77879, Somerville
Burleson County Texas
1993-2002
November 2, 2004**

Background:

Concern about a possible excess of cancer prompted the Cancer Epidemiology and Surveillance (CES) Branch of the Texas Department of State Health Services to examine the occurrence of cancer in zip code 77879, Somerville, Texas. Local residents were concerned that a local creosote plant may be causing cancer among residents. The CES evaluated 1995-2001 incidence data and 1993-2002 mortality data for cancers of the female breast, prostate, lung and bronchus, colon and rectum, bladder, corpus and uterus, kidney and renal pelvis, non-Hodgkin's lymphoma, oral cavity and pharynx, esophagus, stomach, larynx, melanoma, total leukemia, and selected leukemia subtypes. According to the scientific literature, creosote has shown a possible association with cancers of the oral cavity, larynx, esophagus, stomach, bladder, skin, kidney and renal pelvis, and leukemia. The remaining cancer sites were requested by the customer. Only melanomas of the skin are reportable and only mortality is shown for melanoma due to incidence under-reporting. Incidence data are the best indicator of the occurrence of cancer in an area because they show how many cancers were diagnosed each year. Cancer mortality data are used as a supplemental measure and are complete for the entire state through 2002. The rest of this report examines the investigative methods the CES used, the results of the investigation, recommendations, and general information on cancer risk factors.

Methodology:

According to the National Cancer Institute, a cancer cluster is a greater than expected number of cancers among people who live or work in the same area and who develop or die from the same cancer within a short time of each other. The cancer cluster investigation is the primary tool used by the CES to investigate the possibility of excess cancer in a community. The cancer cluster investigation is not used to prove that cancer was caused by environmental or other risk factors because it is extremely difficult to determine exactly what causes a particular cancer in a particular individual. Individuals are often exposed to many cancer-causing agents over their lifetime and not everyone who is exposed will get cancer. Instead, the cancer cluster investigation is specifically intended to answer the question "Is there an excess of cancer in the area or population of concern?" Two other questions that must be answered before an environmental hazard can be possibly associated with the cancer are: 1) Is there evidence of exposure to hazardous substances, and 2) Can the exposure and the cancer type be linked by a statistical association? To answer these questions, the CES often works with the Environmental & Injury Epidemiology and Toxicology Branch, the Spatial Approaches to Health Outcomes program within the Texas Department of State Health Services, and other state and federal agencies.

The CES follows guidelines recommended by the Centers for Disease Control and Prevention for investigating cancer clusters.¹ To determine if a true excess of cancer is occurring and if further study is warranted at the time of the initial investigation, biologic and epidemiologic evidence is considered. Such evidence may include documented exposures; the toxicity of the exposures; plausible routes by

