



GAFFNEY ROAD AREA-WIDE INVESTIGATION

Alaska Department of Environmental Conservation • Division of Spill Prevention and Response

Site Description

DEC is investigating the level and extent of ground water contamination in the Gaffney Road Area. The investigation area centers upon Gaffney Road between Noble and Turner Streets in downtown Fairbanks. Additional ground water investigation has been conducted hydrologically upgradient on the south side of Airport Road and the area downgradient northwest towards the Golden Heart Utility (GHU) municipal wells along the Chena River.

Threats and Contaminants

The primary contaminants of concern are tetrachloroethylene, also known as perchloroethylene or PCE, and its degradation products including trichloroethylene (TCE) and dichloroethylene (DCE). Both PCE and TCE were widely used as industrial solvents, including dry cleaning, and degreasing agents. The primary threat posed by the contaminants is groundwater contamination.

Public Health and Environmental Concerns

The Fairbanks public uses water from the GHU wells for its drinking water. There is a potential threat to these wells. Investigation has shown that there are no private drinking water wells still in use in the area. There is a possibility of inhalation or ingestion of contaminants if there is contaminated surface soil in source areas.

Response Actions

Groundwater contamination by chlorinated solvents was found during investigation of leaking Underground Storage Tanks (USTs) in the Gaffney Road area during the early 1990's. In response, DEC has conducted state lead investigations which include:

- A Phase I groundwater investigation within public right of ways in fall 1997 which showed widespread contamination by PCE and its degradation products along Gaffney Road and extending downgradient to 11th Avenue in the northwest. The pattern of contamination is consistent with release via sanitary sewer lines. A survey found no private wells used for drinking water in that area. Results were presented at a public meeting in early 1998.
- During fall 1998 a Phase II groundwater investigation extended the area of study within public ROWs both upgradient and downgradient of Gaffney Road. Results from the installation of 22 additional monitoring wells indicated two dissolved PCE plumes, originating in the Gaffney Road area. The eastern plume extended to 12th Ave. and the western extended to Kellum Street. The highest levels of PCE were found near Stacia Street and Gaffney at 1.85 mg/L and decreased rapidly towards the northwest. (The groundwater cleanup standard is .005 mg/L.) Three sentinel wells between the plume's leading edge and the GHU wells did not show evidence of contamination. A second public meeting was held in March 1999 to present results. The monitoring wells were resampled in April 1999. Results were consistent with the fall 1998 sampling.
- A Phase III investigation began in August 1999. The Phase III focus is to identify

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possible contaminant source(s) on private property along the south side of Gaffney Road. Full voluntary access was obtained from 12 property owners, but only limited permission for 3 soil gas samples was given by one property owner. Additional monitoring wells were drilled, based upon soil gas results, to obtain soil and groundwater samples from the private parcels. A private well survey to cover the entire extent of the plumes was completed and, once again, showed no private wells in use for drinking water or showering.

Current Status

- The Phase III report is scheduled to be completed in March 2000. The report will discuss results and make recommendations for any future department actions. It will be presented at a public meeting, tentatively scheduled for March.