



Evaluation of Public Health Implications Associated with the Redevelopment of a former Manufactured Gas Facility (Sections A and B), Brownfield's Redevelopment

June 2013

This letter health consultation was conducted to evaluate the potential public health implications associated with exposure to site-related contaminants in soil at the former Sterling Manufactured Gas Facility located in Sterling, Logan County, Colorado. This letter health consultation considers the potential public health implications of contaminated soil based on what is currently known of the proposed future land use at the site. Please note that the evaluation of groundwater data is beyond the scope of this letter health consultation.

Site Background

The site under consideration is located at 205 South 3rd Avenue, Sterling, Logan County, Colorado. From around 1931-1951, Central States Gas and Electric Company ran a manufactured gas facility at the site for the first 15 years of operation and distributed propane during the remaining 5 years of ownership. From 1951 to 1986, the site was owned and operated by Iowa Electric Light and Power Company, which used the facility to distribute natural gas. The Public Service Company of Colorado owned the property from 1986 to approximately 2005, which also distributed natural gas to the Sterling community. Former onsite features consisted of at least a 33,000 cubic foot steel gasoline above ground storage tank (AST) that was situated on 3 foot concrete piers; four iron gasoline ASTs, a concrete-lined tar pit/underground storage tank (UST), a tar AST, a 25,000 cubic foot gas holder, a purifier, and numerous other oil and gas ASTs. As per aerial photography, it appears that the majority of the storage tanks had been removed by August 30, 2006 (Google Earth). The last of the onsite buildings were demolished in August 2008, according to the Sterling Public Works Department. The site has remained vacant since that time, consisting only of grass and soil ground-cover. Currently, Land Leasing Company, LLC owns the 1.22 acre parcel under consideration, which is located in a mixed commercial and residential area near downtown Sterling.

In March 2012, Centennial Metal Health Center (CMHC) submitted an application for Targeted Brownfields Assessment assistance to the Colorado Department of Public Health and Environment's Brownfields Program. According to that application, the current owner of the property intends to donate a portion of the land to CMHC, which in turn, plans to develop approximately 2/3 of the vacant lot into a paved parking lot that will be used by employees and clients of the CMHC. The remaining area of the parcel will remain undeveloped at this time and be held for future commercial development. Soil and groundwater contamination has been identified onsite through previous investigations conducted in 2008, 2009, and 2011. In general, the gas manufacturing process produced residues, known as coal tars, primarily composed of polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), phenols and inorganic constituents such as ammonia, lead and cyanide.

What did CCPEHA find in the Health Consultation?

Based on a review of the available environmental data and the evaluation of the public health implications associated with future worker exposures of redevelopment and future use of the former Sterling Manufactured Gas Plant, CCPEHA has reached one conclusion.

Exposure to soil contaminants is not likely to harm the health of future construction workers and commercial industrial workers at the former Sterling Manufactured Gas Plant Brownfields site. This conclusion was reached because the estimated non-cancer and cancer risks are below levels of concern. Specifically, the estimated cumulative non-cancer hazard indices from incidental ingestion and dermal exposure to site-related COPCs are below the benchmark level of 1 for both types of workers. In addition, the estimated lifetime excess cancer risks resulting from worker exposures to soil are well within the EPA target cancer risk range, which indicates a very low increased risk of developing cancer.

It should be noted that the conclusions are based on the current environmental data collected to date and the purported site use at the time this evaluation was conducted. If additional environmental data becomes available or an alternative land-use/exposure scenario is selected in the future, the findings of this health consultation should be reconsidered.

What's next?

- As necessary, CCPEHA will review any additional data collected from the Sterling Manufactured Gas Site.
- Upon request, CCPEHA will provide input to State and Local environmental officials on sampling plans and analysis.
- Upon request, CCPEHA will provide health education on the findings of this health consultation to stakeholders and the community.

FREQUENTLY ASKED QUESTIONS:

What is a health consultation? A health consultation provides advice on a specific public health issue related to real or possible human exposure to toxic material. A Health Consultation is a way for the Colorado Department of Public Health and Environment to respond quickly to a need for health information on toxic substances and to make recommendations for actions to protect the public's health. Health Consultations may consider:

1. The levels (or "concentrations") of hazardous substances;
2. If and how people might be exposed to contamination (through "exposure pathways" such as breathing air, drinking or contacting water, contacting or eating soil, or eating food);
3. The harm the substances might cause to people (or the contaminants' "toxicity");
4. If and how working or living nearby might affect people's health; and
5. Other dangers to people, such as unsafe buildings, explosive hazards, or other physical hazards.

Where can I find this health consultation?

An electronic copy of this health consultation can be found at:

<http://www.cdphe.state.co.us/dc/envtox/ccpehasites.html>

To request a free copy of this health consultation or for more information about the health consultation, please feel free to contact Thomas Simmons, Health Assessor, at 303-692-2961. For other site-related concerns, please call Alissa Schultz, Project Manager, at 303-692-3324.