



Colonial Pipeline Maintenance June 30, 2008

The Georgia Division of Public Health (GDPH) received two Material Safety Data Sheets (MSDSs) on compounds used in re-coating fuel pipelines. Because of recent pipeline re-coating activity near a resident's home in Austell, GA resulting in fugitive fumes, the resident was concerned about health effects from odors generated from Colonial Pipeline Company's re-coating of their pipeline near his home. GDPH reviewed the MSDSs on the pipeline coating material to determine whether his acute exposure to the paint fumes was likely to lead to adverse health effects.

To give the resident a little background information on pipeline re-coating, we informed him that the coating material was used for corrosion protection of new pipelines and for older pipeline rehabilitation. The coating is applied in a two step process; the actual coating, followed by a hardening agent. The coating is a liquid epoxy and polyurethane that contains no volatile organic compounds (VOCs). Once hardened, the coating forms a heat, impact, and corrosion resistant barrier for pipeline protection.

Because of the corrosive and irritating nature of the coating material, its application requires the use of personal protective equipment such as gloves, a respirator, eye protection, protective clothing and footwear. Such measures are needed because skin contact with the coating material can cause severe irritation, may cause burns, and allergic skin reactions. Eye contact may cause burns and severe irritation, and inhalation can cause irritation of the respiratory tract. However, the coating material is not known to be carcinogenic (cancer causing) or teratogenic (causing birth-defects).

Personal protective gear should always be worn while applying the coating material because chronic exposure (i.e. more than 365 days) can lead to lung damage, skin sensitization, dermatitis, and respiratory sensitization. The primary paint coating contains crystalline silica (sand), which if inhaled excessively, may cause the lung disease, silicosis that has symptoms of coughing, shortness of breath, and reduced pulmonary function. Countermeasures used for inhalation exposure include the removal of the exposed person to fresh air.

The above serve as protection measures for persons applying the coating to pipeline because of their close proximity to the fumes. The resident was unlikely to have been exposed to fumes at concentrations that could cause adverse health effects. The reason for this is that the concentration of the coating material was being diluted greatly, by the surrounding atmosphere, and exposure to the fumes would have been on a very short-term basis.