

Former Stapler Manufacturing Facility

Long Island City, New York

The former manufacturing facility site (Site) is a 1.8-acre parcel located in Long Island City of Queens, New York. The Site's building formerly housed a manufacturing operation for staplers and stapler components, which involved the use of various paints, thinners, solvents and cleaners. The Site was enrolled in the New York State Department of Environmental Conservation Voluntary Cleanup Program and FLS was contracted as the lead environmental consultant to oversee remediation and navigate the project through the program requirements. FLS provided technical support during remedial investigation and action, administrative support to ensure environmental closure and post-remedial monitoring services.

The Site has undergone multiple Remedial Investigations (RI) by FLS and other firms which have confirmed the presence of chlorinated solvents, specifically trichloroethylene (TCE), in soil, soil gas, and groundwater. Several interim remedial measures have been implemented at the Site including soil vapor extraction, air sparging, ozone injection and *in situ* chemical oxidation.

However, based on a Supplemental RI conducted by FLS in 2013, TCE contamination remains in shallow and intermediate groundwater that has not penetrated the basal clay layer below.

FLS prepared a Remedial Action Work Plan detailing the proposed remedy using Electrical Resistance Heating (ERH) to address onsite contamination and enhanced *in situ* bioremediation to address the adjacent offsite contamination. The goal of the remedy is to achieve TCE concentrations of 100 ppb or less within the treatment

area. This remedy targets the source contamination area (approximately 9,700 square feet) and limits the treatment footprint to the area containing the highest concentrations of chlorinated VOCs. In addition to the ERH enhanced *in situ* bioremediation is the proposed remedy for the residual dissolved phase TCE offsite. With the source area remediated, natural attenuation will likely degrade any residual TCE slowly over time. The enhanced *in situ* bioremediation proposed under this alternative would accelerate the degradation of TCE. During ERH operation, the existing SVE system will be retrofitted into an active SSDS. Upon conclusion of ERH operation, the SSDS will be extended to fully protect the existing building from vapor intrusion. Remediation is ongoing and upon completion of remedy, FLS will continue monitoring as directed by a Site Management Plan.



Installation of electrode to be used for Electrical Resistance Heating.



Overview of Site prior to implementation of remedial measures.