NEIGHBORS ALLIED FOR GOOD GROWTH

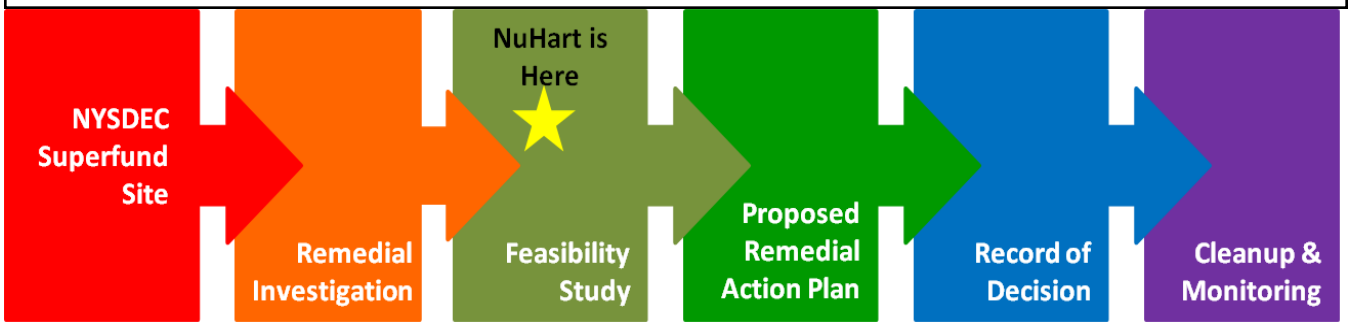
NuHart Plastics State Superfund Site: Remedial Investigation Review



NuHart Plastics Superfund Site Background

NuHart Plastics Manufacturing is a State Superfund Site located in the Greenpoint community of Brooklyn. The Site consists of a vacant industrial building complex and has a long industrial history that includes manufacture of metal, soap, and water-proofing materials. After 1950, the site was used for the production, storage, and shipping of plastic and vinyl products by several tenants, the last of which ceased operation in 2004. Initial environmental site assessments were conducted in 2005 and interim remedial measures began in 2006 under a Resource Conservation and Recovery Act (RCRA) action. Remediation included removal of oil stained trenches; demolition of boilers and silos; asbestos abatement; in-place fill and seal of 17 underground storage tanks (on and off site) which contained fuel oil, plasticizers, acetone; product recovery wells installed to remove contaminated groundwater. These site assessments also determined that groundwater flowed in an overall westerly direction towards the confluence of the East River and Newtown Creek and groundwater is tidally influenced further west of the Site. The site was identified as a NYS Superfund Site by the NYS Department of Environmental Conservation (DEC) in July 2010.

The State Superfund Site Process



A **Remedial Investigation (RI)** has been completed for the NuHart site**,** with a supplemental RI report by the site developer. The RI involves more environmental testing of soil and groundwater, and includes human and ecological assessments to determine unacceptable exposure posed by the contaminants at the site. The developer is currently working on a **Feasibility Study (FS)**, a report that identifies the most effective cleanup technologies suitable for the site. An FS examines the environmental and economic implications of each alternative. An alternative is based on several criteria and the preferred alternative is described in detail in a **Proposed Remedial Action Plan**. The **Record of Decision (ROD)** follows as a legal document and finally, there is the cleanup and long-term monitoring of the site.

Contaminants of Concern at the Site

- Tricloroethylene (TCE) is a volatile organic compound (VOC) impacting groundwater (Figure 10 from the RI), soil, and soil vapor (Figure 3.2.4.1 from the Supplemental RI), on and off site.
- Light non-aqueous phase liquid (LNAPL) consists of phthalate and oil mixtures released from tanks and pipes. LNAPL is impacting soil and the groundwater on and off site (Figure 13 from the RI).

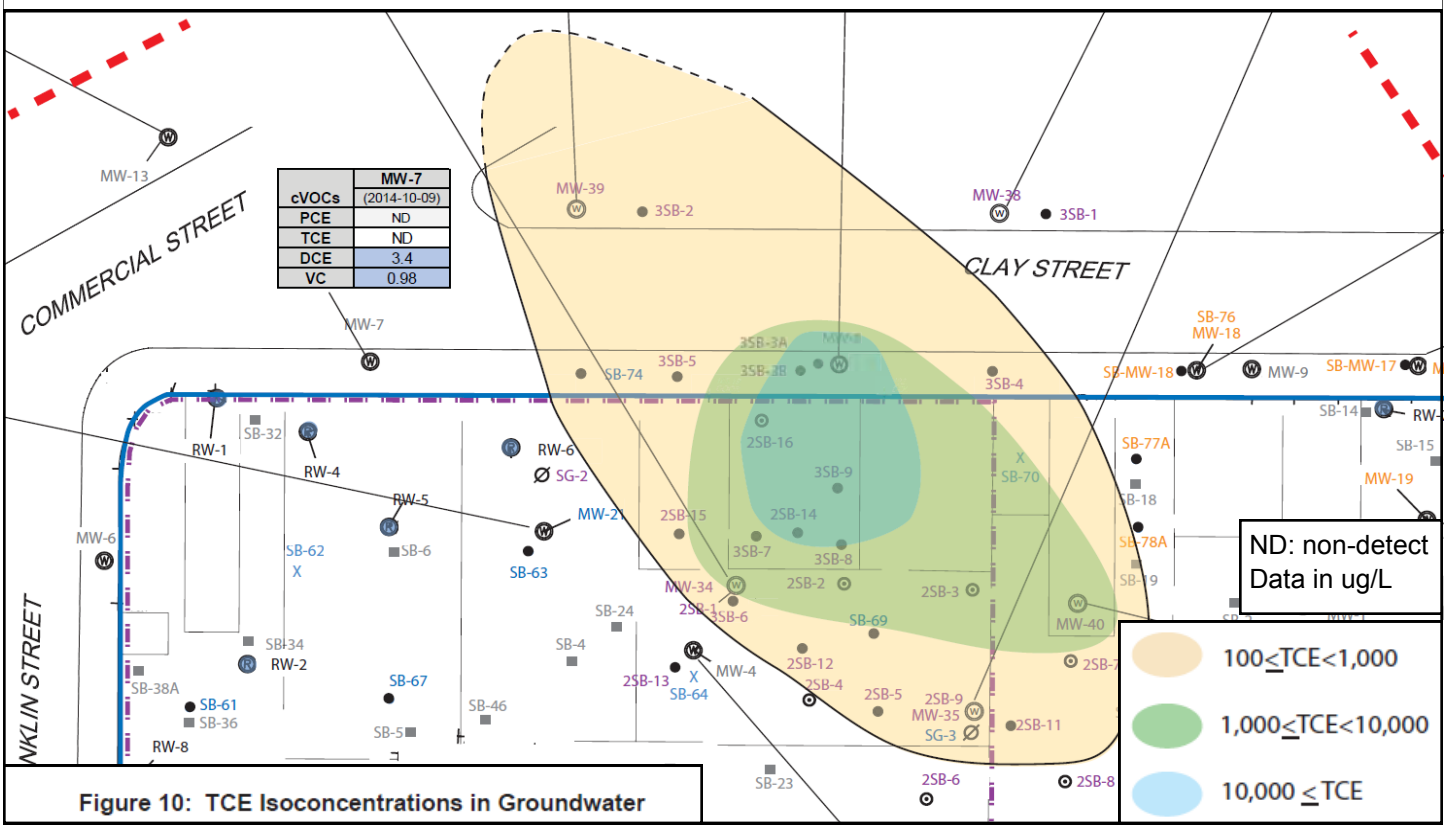


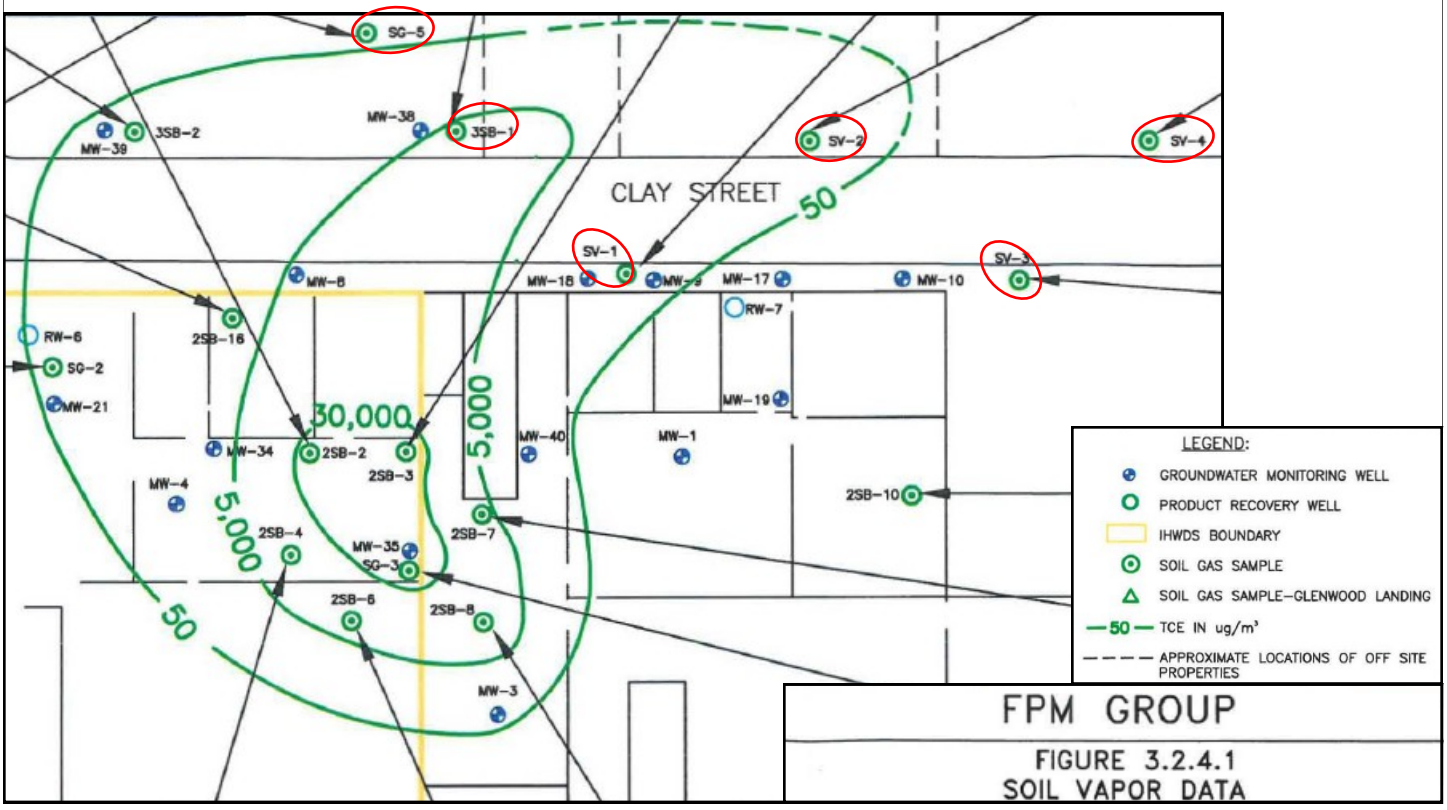
Figure 10: TCE Isoconcentrations in Groundwater

TCE in Groundwater and Soil Vapor

In the TCE source area, groundwater flow appears to be more north/northwest (Figure 10 from the Final Remedial Investigation) and is likely influenced by the proximity of Newtown Creek.

The TCE soil vapor data indicate that TCE detections at SV-1, SV-2, and SG-5 were at levels where monitoring or mitigation could be necessary, depending on associated indoor air concentrations (Figure 3.2.4.1 below from the Supplemental Remedial Investigation). None of the PCE levels were elevated enough to present a potential soil vapor intrusion concern. Vinyl chloride, a further breakdown product of TCE, was found at SV-1 at levels where monitoring or mitigation could be necessary, depending on associated indoor air concentrations. Several petroleum detections at SV-4, including ethylbenzene, xylenes, and toluene, were noted to be somewhat elevated and suggest a potential offsite petroleum source (unrelated to the Site) on the north side of Clay Street. Elevated benzene at SV-1 was found to be higher than elsewhere and is a likely indicator of the petroleum spill on the former NuHart facility located just to the east of the Site.

The soil vapor impacted by TCE and related chlorinated volatile organic compounds (CVOCs) are present beneath the northeastern portion of the Site building and appear to coincide with impacted groundwater in this area. Soil vapor impacts extend offsite to the east beneath a portion of the adjoining NuHart facility, but do not extend to the east end of the building or to the offsite SV-3 location on the south side of Clay Street. Soil vapor impacts extend to the north, across Clay Street, but not as far northward as the north side of Commercial Street, as demonstrated by soil vapor data from Greenpoint Landing. The distribution of TCE on the north side of Clay Street to the east of 3SB-1 does not correlate with groundwater flow and it is possible there is an offsite TCE source on the north site of Clay Street.



LNAPL in Groundwater

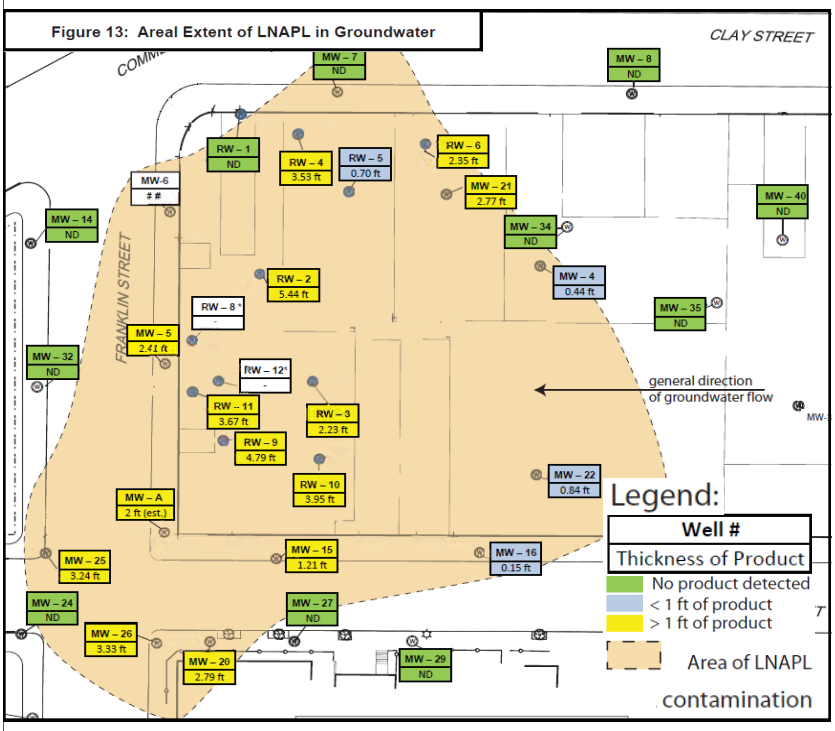
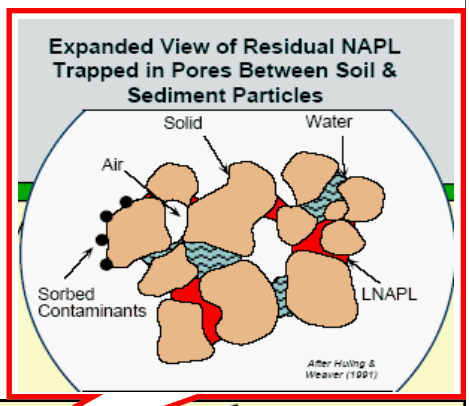
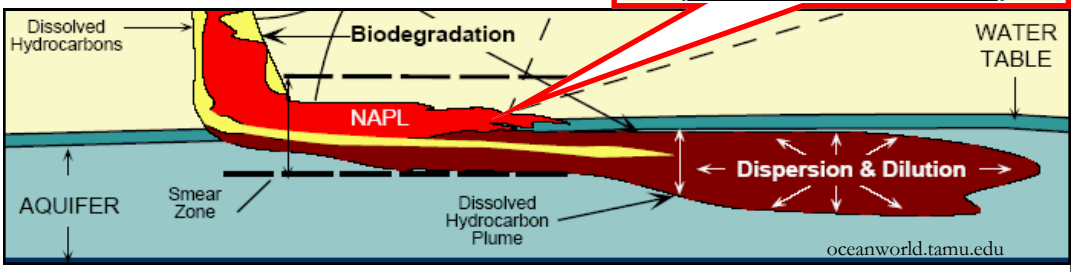


Figure 13: Areal Extent of LNAPL in Groundwater

The thickness of the light non-aqueous phase liquid (LNAPL) found at the surface of the groundwater is shown in Figure 13 from the Final Remedial Investigation. The data seem to indicate LNAPL has moved south/southwesterly. The dissolved portion of the groundwater contamination is limited to phthalates and localized impacts from release of chlorinated solvent. Removal using groundwater wells will need to continue at the site to remove the LNAPL.

Below is a schematic of the LNAPL thickness as it interacts with the groundwater. The inset diagram (right) shows the interaction of the LNAPL (red), groundwater (blue) and the soil (brown) if we could put the dissolved phase groundwater pollution under a microscope.





Future Use of the Site

The Site's future use is expected to be either "restricted-residential" or "mixed use" but no specific redevelopment designs have been determined. ESC recommends cleanup to a residential standard because the developer indicates this site is intended to be a residential property. Cleanup to a residential standard is more stringent than a cleanup standard that includes commercial and industry.

Learn More and Get Involved!

Go to the document repository at the Greenpoint Library to read the Remedial Investigation and other reports on the site. Check out the Neighbors Allied for Good Growth website at **http://nag-brooklyn.org/** and sign up to receive Site-related update emails.

This newsletter was developed by Environmental Stewardship Concepts on behalf of Neighbors Allied for Good Growth (NAG). NAG received a Technical Assistance Grant from the New York State Department of Environmental Conservation.