

Elements of A Successful Remediation Project

Voke School
Buildings B & C

Conceptual Site Model

- Completed Comprehensive Environmental Site Assessment prior to remediation.
- Very good understanding of site conditions.
- Project Goals: Permanent Solution/Regulatory Site Closure, Reduce Potential Risk and Protect Human Health and the Environment.

One RTN

- Separate Releases (separate USTs at Building B and C) but one release tracking number (RTN).
- One RTN = Less Reporting.

Key Results of Site Assessment

- Separate phase petroleum at Building C (infeasible to excavate due to buildings), much less petroleum at Building B.
- Groundwater flow direction well established with petroleum (VPH/EPH) below applicable standards at downgradient monitoring wells.
- Separate phase petroleum fingerprinted as heavy #6 heavy oil, limited mobility and volatility (think tar!).

Key Results of Site Assessment

- Bedrock not significantly contaminated (limited weathering of bedrock observed).
- Petroleum in soils and groundwater at 10-16 feet below grade (not in bedrock or shallow soils).

Historical Fill

- Historical fill (ash) present on site due to over 300 years of site use.
- Remediation of historical fill (background) not required.

Remediation

- Over 1,000 cubic yards of petroleum-impacted soils excavated and shipped to asphalt batch plant (following demo!). Excavation and dewatering during December and January (cold!).
- Post excavation groundwater monitoring indicated no separate phase product and substantial reduction in dissolved hydrocarbons.
- Limited quantity of petroleum impacted soil under Building C (inaccessible due to four story building) soil at Building B below applicable standards.

Final Site Closure

- Soil sampling under Building C indicated no upper concentration limits (UCLs) exceeded. Soil gas monitoring (before and after remediation) indicated no volatile compounds under foundation slab (heavy petroleum, no basement, very thick slab).
- Notice of Activity and Use Limitation filed for very limited area of site. AUL requires soil management plan and health and safety plan for future excavation. Closure of Building C release via preparation of partial Class A3 RAO. Closure of Building B release via partial Class A2 RAO, no AUL required. Two separate RAOs for same RTN (due to separate and discrete releases).
- DEP audit – minor corrections to AUL.
- Complex project completed on time and under budget.





questions

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