DIRECTIONAL
Technologies, Inc
Horizontal Remediation Well Services

HORIZONTAL REMEDIATION WELL CASE STUDY

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HORIZONTAL WELLS PROTECT INDOOR AIR

Impacts from a former dry cleaning facility created air quality issues at a strip mall. To address this issue, it was necessary to install a sub-slab depressurization (SSD) system. The problem with a conventional SSD system was accessing several businesses in the mall and core drilling through the foundation. This type of remedial construction was very disruptive. For many small business owners, shutting down for several days to weeks was not a viable option.

Approaching the problem horizontally, a vapor extraction well was installed from the exterior of the building. This was accomplished utilizing Horizontal Directional Drilling (HDD) technology to non-intrusively drill and install a horizontal remediation well (HRW) below the slab. The HRW was installed using entry/exit installation methods.

A layout of the horizontal SSD well underneath the occupied businesses is shown in Figure 1.

Figure 1: Layout of Horizontal SSD Well

For this strip mall site, equipment was setup in open space on the side of the building. The structure had a raised foundation allowing for core drilling through the concrete foundation wall. The horizontal SSD well was constructed of 3 inch HDPE and spanned 310 feet across the building.

It was discovered, through field monitoring, that the planned borehole was crossing through a clay section that was not consistent with boring logs. Quick adjustments were made by the experienced environmental field crew to ideally locate the horizontal SSD well in the more permeable sand/gravel layer. The horizontal well screen was installed at approximately 1 foot below the building's foundation.

A series of pressure monitoring points were installed at intervals perpendicular from the horizontal SSD well. It was found that the single horizontal SSD well under the center of the building had sufficient vacuum to actively mitigate vapor intrusion concerns and protect indoor air quality.

Using Directional Technologies' 20+ years of experience installing HRWs, field adjustments were made to ensure optimal performance and placement to meet the client's remedial goals.

Call us at 877-788-4HRW or email us at drilling@directionaltech.com to bring this level of experience and knowledge to your next project.