

Queens Hospital Center Environmental Site Evaluation for Proposed School Building

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Evaluation by Alessia Eramo
James M. Cervino, PhD
Pace University Biology Department

Summary of Major Points

Site Background

The proposed location for the Gateway School is Lot 1 at Goethals Ave. between 160th and 161st Streets in Jamaica, Queens. The buildings currently on site are used for office space and storage. Compounds typical of fuels, equipment cleaning operations, and chemistry or medical operation have been detected in soil vapor samples, consistent with previous uses of these buildings. The NYC Office of the Chief Medical Examiner formally used the H building; The K Building was formally used for ambulance maintenance; The F Building housed a hospital laundry room; The G Building consisted of a garage, oil separator, gasoline pump, and automotive repairs. A vehicle refueling area consisting of two underground fuel tanks and associated fuel pumps were formally located south of current building locations. These were removed in February 2005. However, current petroleum related contamination in the area south of the buildings is attributed to a former underground storage tank removed in 1997.

The proposed school building is planned to cover approximately 1.6 acres. Several investigations and site assessments took place between 2001 and 2002. At the request of the New York State Department of Environmental Conservation (NYSDEC), the School Construction Authority (SCA) consulted the URS Environmental Corporation for additional collection rounds. A Remedial Action Work Plan (RAWP) was submitted by the SCA. The DEC submitted technical comments that were later satisfactorily addressed by the SCA and the plan was approved.

Current Site Conditions

Groundwater

The second round of environmental data collection conducted by the URS Corporation in 2006 resulted in the detection of two VOCs (Volatile Organic Carbons) in groundwater. Monitoring well 15D detected toluene at a concentration of .49 ug/L on 4/18/06. The DEC limit for this chemical in groundwater is 5 ug/L. Monitoring well 20D detected methyl tert butyl ether at a concentration of .40 ug/L on 4/19/06. The DEC limit for this chemical in the groundwater is 10 ug/L. Only these two locations detected groundwater VOC levels, although other monitoring wells were tested in the second round of collection. Groundwater concern doesn't seem to be a concern for several reasons. Site location groundwater does not supply drinking water, only two monitoring wells detected groundwater contamination for only two VOCs, and the contamination was sharply DEC limits.

Soil Monitoring

Major petroleum related contamination was detected at many soil boring points. These were not included in the presentation because they fell within both practical and proposed major excavation limits. It is assumed that if proper excavation is conducted, the health hazard of this contamination can be eliminated. The only detection point outside the excavation limits where contamination was found was at B25 at 10-12 ft bgs (below ground surface). 44ug/Kg m/p-xylene, a benzene derivative, were detected. 38ug/Kg 1,2,4-trimethylbenzene, another petroleum related VOC, were detected. These levels must be eliminated. If excavation would occur at this location to 10-12 ft, the threat of these contaminants may be eliminated.

Conclusions

The Queens Hospital site for the proposed school building currently contains hazardous chemical compounds. A proper Remedial Action Work Plan can favorably impact the site for school construction.

Previous investigations and those conducted in 2005-06 also indicate that natural attenuation is occurring. The SCA has provided substantial responses to DEC technical comments and supplied a RAWP that would protect humans on-site after construction, given some further excavation clarifications.

Discrepancies and Points for Clarification

Buildings H, K, and on-site portions of the G building are slated for demolition but there does not seem to be an outline for this process in the RAWP. What are the excavation processes for these areas? Will the soil there be tested for contamination? What are the processes for removal of these materials?

Some diagrams require clarification. Does "practical excavation" refer to the building blueprint or former UST area? There is a need for clarification of excavation limits and depths. Though the RAWP indicates ranges of excavation in the northern and southern portion of the site area. However, there are no exact parameters. Where is the division between north and south where different excavation ranges will occur? Exact square footages of locations where the various excavation depths will occur are requested.

There seems to be a major excavation discrepancy between the "estimated extent of practical excavation for petroleum contaminated soil" and "limits of proposed excavation to elevation 68 ft." We believe the party proposed this excavation is the DEC and the party determining practical excavation is the SCA/Environmental Engineer. There are certain areas where the proposed excavation limits are outside the practical limits. What happens in these areas? Additionally, the RAWP does not at all include 68 ft. excavation. We assume a compromise was arranged at 32 ft. How did that come about?

Bentonite, a reducing agent, was utilized in monitoring wells for the detection of chemicals. We understand the DEC model for monitoring wells also utilize this material, but we request an explanation of any potential effects of these pellets on detection.

A sub-slab depressurization system will be installed to eliminate soil gas. Where will the system will the located below the school building and where in the school will the ventilating pipe be located? It will be installed as a passive system and then converted to an active system if necessary. Who will be monitoring the need to convert it to an active system and for how long will testing occur? The issue came up during the discussion that if hazardous gases will be eliminated, why is the system necessary at all? Finally, who will be responsible for maintenance and damage to the system? As indicated at our meeting, NYC doesn't seem to have a record of maintenance and monitoring of such systems.

The final issue mentioned during the presentation was the presence of mercury. It was initially detected and in final investigations not found. We request clarification on the reason for this discrepancy or a more intense investigation on the presence of mercury. It is a heavy metal that is not easily discharged from a system.