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March 3, 2016

Mr. Qu Qi
Central Region Unit Supervisor
Inactive Hazardous Site Branch - SF Section - DWM
North Carolina Department of Environmental Quality
1646 Mail Service Center
Raleigh, NC 27699-1646

RE: Soil Vapor Assessment Addendum
IHSB Identification No. NONCD0002633
GeoSci Project No. 97.144

Dear Mr. Qi:

Geoscience and Technology, P.A. (GeoSci), on behalf of Trinity American Corporation (TAC), is submitting this addendum to a Soil Vapor Assessment dated February 23, 2016.

Purpose

This purpose of this addendum is to discuss the significance of isopropyl alcohol (2-propanol) that was present in the air sample designated SV-2 in the Soil Vapor Assessment.

Soil Vapor Protocol & Sampling

'Tenting' the canister and the incoming line from the test well and placement of an isopropyl alcohol-soaked rag within the tent was used to provide leak testing of the canisters during the course of the tests. Based on the presence of $6.7x10^4$ ug/m^3 of 2-propanol in sample SV-2, it appears that there was a leak of ambient air into the sample canister.

The following calculations were used to quantify the percentage of ambient air that was introduced into the SV-2 canister by the apparent leak:

Concentration of 2-propanol in the 'tent':

The partial pressure of 2-propanol is 10mm Hg at 2°C (the ambient air temperature at the time of sampling). This yields a concentration of 0.035 g of 2-propanol in 1.0 L of air in the tent. The concentration of 2-propoanol in the SV-2 sample is $6.7x10^{-5}$ g/L (or 6.7x104 ug/m^3).

Volume of the Canister Sample:

The sample canister volume is 1.0 L. The starting vacuum was 29 inches of Hg and the ending pressure was 2 inches of Hg; therefore, the actual collection volume was 0.93 L.

Leak Dilution:

2-propanol C (sample) X Volume (sample) = 2-propanol C (tent air) X Volume (tent air leaked into sample).

Therefore: $6.7x10^{-5}$ g/L X 0.93 L = 0.035 g/L X Volume of leaked air = $1.8x10^{-3}$ L.

This volume represents 0.19% of the original 0.93 L sample. Therefore, it appears that the laboratory results are 0.19% too low.

Sampling Results Adjusted for Dilution from Leak

The table below indicates sampling results for SV-2 adjusted by 0.19%

Table 1: Adjusted January 2016 Soil Vapor Analytical Results for SV-2

Parameter	Original SV-2 ug/m^3	Adjusted SV-2 ug/m^3	Non-residential screening level ug/m^3
Propylene	**190**	**190.342**	**2.63E+5**
1,3-Butadiene	**28**	**28.0504**	**175**
Chloroethane	**18**	**18.0324**	**NLE**
Isopropyl Alcohol	6.7E+4	6.71E+04	**1.75E+4**
1,1-Dichloroethene	3.1+4	3.11E+04	**1.75E+4**
1,1-Dichloroethane	**2.4E+3**	**2.40E+03**	**7.67E+3**
2-Butanone (MEK)	**22**	**22.0396**	**4.38E+5**
1,1,1-Trichloroethane	**9.4E+3**	**9.42E+03**	**4.38E+5**
Trichloroethene	**77**	**77.1386**	**175**

NLE = No Limit Established
Concentrations exceeding Non-residential screening limits in Red type face

SUMMARY AND CONCLUSIONS

Based on the dilution calculations and adjusted concentrations above, the leak does not appear to have altered the laboratory results significantly. Therefore, the results as reported in the original assessment appear to be valid.

Please contact us at (336) 896-1300, or via email (phd@geotec.com) if you have any questions or comments with regards to this report.

Sincerely,
GEOSCIENCE AND TECHNOLOGY, P.A.

Peter H. DeVries
Project Geologist

Steve E. Mason, P.G.
Principal Hydrogeologist