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OE1

FOCUSED SITE INVESTIGATION AND REMEDIATION PLAN

Jung-Sung Kim
Department of chemistry Education Daegu University

1. Introduction

The utility of soil-gas surveys is directly proportional to their accuracy in reflecting and representing changes in the subsurface concentrations of source compounds. Passive soil-gas survey results are the mass collected from the vapor-phase emanating from the source. The vapor-phase is merely a fractional trace of the source, so, as a matter of convenience, the units used in reporting detection valued from EMFLUX surveys are smaller than those employed for source-compound concentrations.

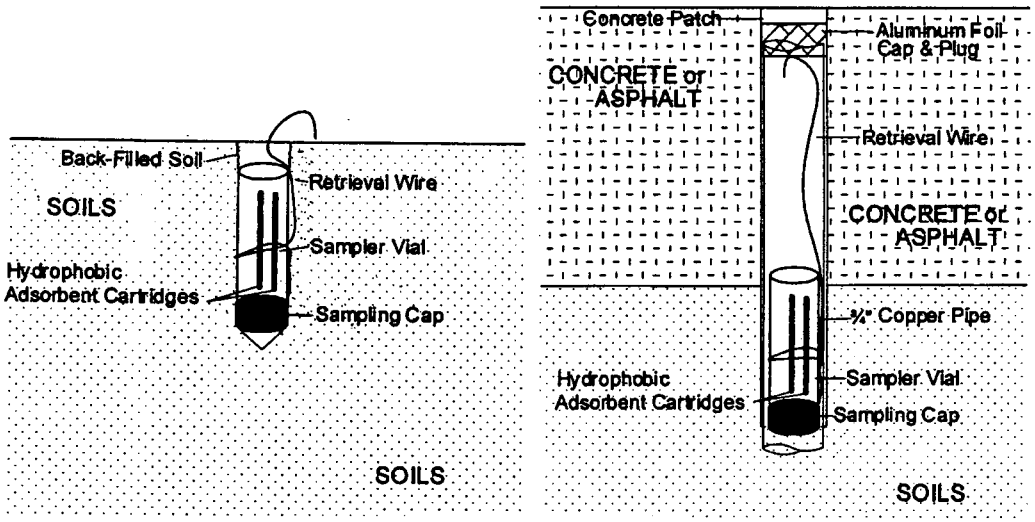
The critical fact is that, whatever the relative concentrations of source and associated soil gas, best results are realized when the of soil-gas measurements to actual subsurface concentrations remains as close to constant as the real world permits. It is the reliability and consistency of this ratio, not the particular units of mass(e,q., nanograms) that determine usefulness. Thus, BEACON emphasizes the necessity of conducting - at minimum - follow - on intrusive sampling at one or two points which show relatively high EMFLUX values to correspondent values furnish the basis for approximating the required ratio. Once that ratio is established, it can be used in conjunction with EMFLUX measurements(regardless of the units adopted) to estimate subsurface contaminant concentrations across the survey field. It is important to keep in mind, however, that specific conditions at individual sample points, including soil porosity and permeability, depth to contamination, and perched ground water, can have significant impact on soil-gas measurements at those locations

When EMFLUX Surveys are handled in this way, the data provide information that can yield substantial savings in drilling costs and in time. They furnish. among other things, a checklist of compounds expected at each survey location and help to determine how and where drilling budgets can most effectively be spent.

2. Experiment

2.1. Material and method

ENFLUX COLLECTOR
DEPLOYMENT IN SOILS



DEPLOYMENT THROUGH CONCRETE OR ASPHALT

3. Result and discussion

Table 1

EMFLUX Passive Soil-Survey

Scot Cleaners

3012 Central Streets

Evanston, IL

Result in Nanograms (ng)

Analysis Completed : July 22, 2002

SAMPLE NO.	1	2	3	4	5	6	7	8
COMPOUNDS								
trans-1,2- Dichloroethene	U	U	U	U	U	U	U	U
cis-1, 2-Dischlorethene	U	U	U	U	U	U	U	U
1, 1, 1-Trichloroethane	U	57	190	U	U	U	30	U
Carbon Tetrachloride	U	U	U	U	U	U	32	U
Trichloroethene	U	73	240	32	85	57	780	550
Tetrachlorethene	88	522	1,200	1,000	880	1,000	1,900	2,100
Toluene	210	41	57	68	32	33	U	U
Ethylbenzene	55	U	U	U	U	U	U	U
Xylenes (total)	240	42	57	66	72	25	U	U
Total BTEX	505	83	114	134	104	58	U	U
Stoddard PDF	U	U	U	U	U	U	U	U

SAMPLE NO.	9	10	11	12
COMPOUNDS				
trans-1,2- Dichloroethene	U	U	94	U
cis-1, 2-Dischlorethene	U	U	320	60
1, 1, 1-Trichloroethane	U	81	39	U
Carbon Tetrachloride	U	U	U	U
Trichloroethene	150	100	1,000	430
Tetrachlorethene	1,200	1,200	2,100	1,700
Toluene	U	31	25	U
Ethylbenzene	U	U	U	U
Xylenes (total)	U	U	U	U
Total BTEX	U	31	25	U
Stoddard PDF	U	U	U	U

Reported Quantitation Level = 25 nanograms

Reported Quantitation Level = 150 nanograms for Stoddard PDF

U = Below Reported Quantitation Level

Note : Data has been adjusted for Stoddard PDF measurement recorded on trip blanks(see section 6)

3. Conclusion

Table 1 provides survey results in nanograms per cartridge by sample-point number and compound name. The quantitation levels represent values above which quantitative laboratory results can be achieved within specified limits of precision and with a high degree of confidence. The quantitation level for each compound, therefore, provides a reliable basis for comparing the relative strength of and detection of that compound.