

December 2, 2016

Mr. Michael Belveg
Project Manager
NYSDEC Region 7
615 Erie Boulevard West
Syracuse, New York 13204

Re: Pass and Seymour AOC-1 Passive Soil Gas Sampling

Dear Mr. Belveg;

The purpose of this letter is to present the results of passive soil gas sampling described in a workplan submitted to you on August 27, 2016. The purpose of this sampling was to better define probable locations of source material within a portion of AOC-1 at the Pass and Seymour Brownfield site C734102 located at 50 Boyd Ave, Solvay New York.

As you are aware, groundwater impacted with Trichloroethene (TCE) and related compounds was treated in 2009 and again in 2012 with Potassium and Sodium Permanganate in two portions of the site designated as AOC-1 both overburden and bedrock plus AOC-2. Much of the groundwater impact with solvent contamination has responded well to the chemical oxidation process with many of the impacted wells showing declines of 90%. However a core area of bedrock wells in AOC-1 has shown persistent high concentrations of TCE and Dichloroethene (DCE), particularly in four wells: OW1-1, OW1-2, OW1-3 and BR09-37. These wells, shown on the attached figure, are clustered in an area between the former manufacturing building and the existing office building. The zone that includes these wells and the impacted groundwater is approximately fifty feet across (east-west) and one hundred feet long (north-south).

Passive Soil Gas Sampling Method

The attached figure shows the location of Passive Soil Sampling Points installed at the Pass and Seymour site. The actual number of points installed was fourteen instead of the twelve points originally proposed. The addition of two sampling points was intended to better define probable source areas within AOC-1 of the site. Each sampling point was marked with a wooden stake that remains at each location. Each location was also referenced with tape and compass measured against other fixed reference points particularly the four wells listed above. At each sample location a 1.5 inch boring was completed and lined with a one foot aluminum sleeve. From 2-3 feet the boring was continued with a ½ inch bit. A sorbent cartridge was suspended within the aluminum sleeve and the top of each sleeve was plugged with aluminum foil and backfilled with soil to original grade. Sampling devices were installed on October 26, 2016 and removed on November 7, 2016. Samples were shipped to Beacon Environmental Services for Analysis on November 8, 2016.

Sampling Results

Sampling results are included on Table 1 and depicted graphically on figure 1. The size of each sample icon and the color represent the concentration of Trichloroethene detected at each location. The results of this effort are indicators of the probable existence of source material in the subsurface. Concentrations range from a high of 81,695 ng to a low of 221ng. The highest and second highest concentrations are locations 4 and 5 which are adjacent points. The fourth highest concentration is due south. It is reasonable to assume that these concentrations reflect a source that is close to point 4 but does not substantively impact points 2, 3, 7 and 8. An area of secondary impact seems to be located in the vicinity of 11 and 14. What is not known is the depth at which impacted material exists.

Recommendations

Soil Vapor sampling has revealed a primary and secondary hotspot within AOC-1. In order to define the depth, and more exact location and concentration of solvent impact, it is recommended that soil borings should be completed as a next step.

Please call me or email me if you have questions or comments.

Very Truly Yours,

David W. Stoner
President



TABLE 1
SOIL VAPOR SURVEY
RESULTS: Detectable Volatile Organic Compounds for Soil Vapor Points 1-14
(Results are reported in nanograms)

Analytes	Trip Blank	PSSV-1	PSSV-2	PSSV-3	PSSV-4	PSSV-5	PSSV-6	PSSV-7
1,1,2 Trichlorofluoroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,1 Dichloroethene	ND	13	ND	ND	64	48	ND	ND
Trans 1,2 Dichloroethene	ND	13	ND	ND	50	38	ND	ND
Cis 1,2 Dichloroethene	ND	16	ND	ND	1324	141	ND	ND
Trichloroethene	ND	5738	221	411	81,695	34,310	470	661
Benzene	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	25	18	18	2552	559	13	13
Toluene	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1 Trichloroethane	ND	55	ND	ND	363	82	ND	ND

Analytes	PSSV-8	PSSV-9	PSSV-10	PSSV-11	PSSV-12	PSSV-13	PSSV-14
1,1,2 Trichlorofluoroethane	ND	ND	ND	ND	ND	ND	26
1,1 Dichloroethene	ND	ND	ND	28	ND	ND	10J
Trans 1,2 Dichloroethene	ND	ND	ND	24	ND	ND	9J
Cis 1,2 Dichloroethene	5J	ND	29	40	7J	83	6J
Trichloroethene	1038	1918	537	10,672	1498	1336	5030
Benzene	ND	ND	ND	ND	ND	ND	66
Tetrachloroethene	14	10	ND	91	ND	6J	12
Toluene	ND	34	ND	ND	ND	ND	ND
1,1,1 Trichloroethane	ND	ND	ND	ND	ND	ND	39