

THE RILEY GROUP, INC.

Geotechnical Environmental Wetland Services

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Technical Memorandum

Date: July 20, 2012

To: Kite Realty Group

From: Jerry Sawetz

c.o. Mr. David George

Re: Four Corners Cleaners
23866 SE Kent-Kangley Road
Maple Valley, Washington 98038
RGI Project #: 2003-165H

cc: Mr. Wade Achenbach (Kite Realty Group)
Mr. Paul Riley (The Riley Group)

☐ **Urgent** ☒ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Dear Mr. George:

The Riley Group, Inc. (RGI) has completed a Limited Phase II Subsurface Investigation (Phase II) of the Four Corners Cleaners located at 23866 Kent-Kangley Road in Maple Valley Washington. Per US Banks request, the Phase II focused on investigating soil and groundwater quality down-gradient to the north and west of the former Four Corners Cleaners location and down-gradient to the north of the current Four Corners Cleaners location. The Phase II also investigated soil and soil gas adjacent to the south of the current dry cleaning machine. The subsurface primarily consisted of sand, gravel and cobbles and groundwater was encountered between approximately 21 and 23 feet below ground surface (bgs). The Phase II investigation area along with locations of soil, soil gas and groundwater samples are depicted on Figure 2. Soil, groundwater and soil gas analytical data are summarized in Tables 1, 2 and 3, respectively.

During the Phase II, a total of 16 soil samples and three groundwater grab samples were submitted to Friedman & Bruya, Inc. in Seattle, WA for the following analysis:

- Halogenated volatile organic compounds (VOCs) using Method 8260B.

In addition, one soil gas sample was submitted to H & P Mobile Geochemistry Inc. in Carlsbad, CA for the following analysis:

- Halogenated VOCs using EPA Method TO-15.

Cc:

July 20, 2012

Analytical data obtained from soil and groundwater grab samples indicated that no concentrations of target analytes were detected at concentrations above compound-specific laboratory detection limits in the current or former dry cleaner locations.

Tetrachloroethene (PCE) and trichloroethene (TCE) were detected in soil gas at concentrations of 1,000 micrograms/cubic meter ($\mu\text{g}/\text{m}^3$) and 11 $\mu\text{g}/\text{m}^3$, respectively in a location adjacent to the south of the current dry cleaning machine.

The details pertaining to the Phase II investigation activities along with conclusions and recommendations will be presented in the forthcoming *Limited Phase II Subsurface Investigation Report*.

We would like to set up a time to discuss these findings with you next week if possible. Please do not hesitate to contact us at (425) 415-0551.

Regards,

THE RILEY GROUP, INC.

Attachments

Figure 2

Tables 1, 2 and 3

**Table 1. Summary of Soil Sample Analytical Laboratory Results
Four Corners Cleaners**

23866 Southeast Kent-Kangley Road, Maple Valley, Washington 98038

The Riley Group, Inc. Project #2003-165H

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Sample Number	Sample Depth	Sample Date	PID	VC	Trans-1,2-DCE	cis-1,2-DCE	TCE	PCE	Other HVOCs
B-1:2	2	07/05/12	2.3	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-1:5	5	07/05/12	0.3	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-1:10	10	07/05/12	0.3	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-1:15	15	07/05/12	0.1	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-1:20	20	07/05/12	0.3	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-1:25	25	07/05/12	0.3	----	----	----	----	----	----
B-2:5	5	07/05/12	2.2	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-2:10	10	07/05/12	2.6	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-2:15	15	07/05/12	3.4	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-2:20	20	07/05/12	2.1	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-2:25	25	07/05/12	2.8	----	----	----	----	----	----
B-3:2	2	07/06/12	3.8	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-3:5	5	07/06/12	2.8	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-3:10	10	07/06/12	1.1	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-3:15	15	07/06/12	1.8	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-3:20	20	07/06/12	1.0	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
B-3:25	25	07/06/12	1.2	----	----	----	----	----	----
P-1:1	1	07/06/12	2.4	----	----	----	----	----	----
P-1:2	2	07/06/12	1.8	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
P-2:0.5	0.5	07/06/12	2.2	ND<0.05	ND<0.05	ND<0.05	ND<0.03	ND<0.025	ND
MTCA Method A Soil Cleanup				240¹	1,600¹	160¹	0.03	0.05	Analyte Specific

All results and detection limits are given in mg/kg; equivalent to parts per million (ppm).

Sample Depth = Soil sample depth interval in feet below ground surface (bgs).

PID = Photoionization Detector.

VC (Vinyl Chloride), Trans-1,2-DCE (Trans-1,2-Dichloroethene), cis-1,2-DCE (cis-1,2-Dichloroethene), TCE (Trichloroethene), PCE (Tetrachloroethene) and other HVOCs (Halogenated Volatile Organic Compounds) determined using EPA Test Method 8260C.

ND = Not Detected at noted analytical detection limit.

---- = Not analyzed or not applicable.

¹ Method A Cleanup Level was not available. Therefore, the MTCA Method B Cleanup Level is referenced.

MTCA Cleanup Level, Ecology Model Toxics Control Act Method A Soil Cleanup Levels for Unrestricted Land Use (WAC 173-340-900, Table 740-1).

Bold & yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Soil Cleanup Levels.

Table 2. Summary of Groundwater Grab Sample Results

Four Corners Cleaners

23866 Southeast Kent-Kangley Road, Maple Valley, Washington 98038

The Riley Group, Inc. Project #2003-165H

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Sample Number	Sample Date	Depth to Water (bgs)	VC	Trans-1,2-DCE	cis-1,2-DCE	TCE	PCE	Other HVOCs
B-1W	07/05/12	21	ND<0.2	ND<1	ND<1	ND<1	ND<1	ND
B-2W	07/05/12	21.5	ND<0.2	ND<1	ND<1	ND<1	ND<1	ND
B-3W	07/06/12	23	ND<0.2	ND<1	ND<1	ND<1	ND<1	ND
MTCA Method A Groundwater Cleanup Levels			0.2	160 ¹	16 ¹	5	5	Analyte Specific

Samples collected by RGI field staff using a submersible pump under low flow conditions.

Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion (ppb). VC (Vinyl Chloride), Trans-1,2-DCE (Trans-1,2-Dichloroethene), cis-1,2-DCE (cis-1,2-Dichloroethene), TCE (Trichloroethene), PCE (Tetrachloroethene) and other HVOCs (Halogenated Volatile Organic Compounds) determined using EPA Test Method 8260C.

ND = Not Detected at noted analytical detection limit.

---- = Not analyzed or not applicable.

¹ Method A Cleanup Level was not available. Therefore, the MTCA Method B Cleanup Level is referenced.

MTCA Cleanup Level = Ecology Model Toxics Control Act Method A Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1).

Bold & yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Groundwater Cleanup Levels.

Table 3. Summary of Soil Vapor Sample Analytical Laboratory Results
Four Corners Cleaners
23866 Southeast Kent-Kangley Road, Maple Valley, Washington 98038
The Riley Group, Inc. Project #2003-165H

DRAFT

Sample Number	Sample Date	VC	Trans-1,2-DCE	cis-1,2-DCE	TCE	PCE	HVOCs
SG-1	07/06/12	ND<2.6	ND<8.0	ND<4.0	11	1,000	ND

Unless otherwise noted, all analytical results are given in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

VC (Vinyl Chloride), Trans-1,2-DCE (Trans-1,2-Dichloroethene), cis-1,2-DCE (cis-1,2-Dichloroethene), TCE (Trichloroethene), PCE (Tetrachloroethene) and other HVOCs (Halogenated Volatile Organic Compounds) determined using EPA Method TO-15.

ND = Not Detected above the laboratory detection limit.

Bold and highlighted concentrations, if any, are above the Ecology draft Method B sub-slab soil gas screening levels.