From:	Bob Thomson <rthomson@hyde-env.com>
Sent:	Friday, December 09, 2016 3:03 PM
To:	Grittner, Paul V - DNR
Cc:	jtarvin@ramboll.com; Jim Lindemann
Subject:	Soil Vapor Sampling Results - DRAFT Shurline, St. Francis, BRRTS No. 02-41-183146
Attachments:	Vapor Summary Table.DRAFT. 2016.pdf; VI Sampling Loc.pdf

Paul—

Please find attached a summary of the results (Table 1) from four vapor samples collected at the Shur-line facility (BRRTS No. 02-41-183146) this last September and November. The sampling locations are presented in the attached Figure 1. These samples were collected as described in a Work Plan (February 2015) and Work Plan Addendum#1 (November 3, 2015). We'd like to set up a call to discuss the results with the Department. Please advise on your availability. We are available as soon as Monday morning (December 12th).

Thanks,
Bob

Robert B. Thomson
Hyde Environmental, Inc.
www.hyde-env.com

W175 N11163 Stonewood Drive, Suite 110
Germantown WI 53022-6501
(262) 250-1226
Fax (262) 317-9171

This email has been checked for viruses by Avast antivirus software.
www.avast.com

TABLE 1 - VAPOR SAMPLING SUMMARY

Shur-Line, St. Francis, WI

TO-15 - Volatile Organic Compounds	Exterior West Alley Samples - Sub Slab				Interior Factory Samples - Sub Slab				US EPA Industrial Air Screening Levels	Basis of RSL	WI Large Commercial / Industrial Indoor Air Vapor Action Level (VAL)		WI Large Commercial / Industrial Buildings Dilution Factor - Sub-Slab Vapor	**WI Large Commercial / Industrial Vapor Risk Screening Level (VRSL) (Sub-Slab)**	WI Residential Indoor Air Vapor Action Level (VAL)		WI Residential Dilution Factor - Sub-Slab Vapor	**WI Residential Vapor Risk Screening Level (VRSL) (Sub-Slab)**
	V-1		V-2		V-3		V-4											
	9/9/2016				11/8/2016													
	(µg/m3)										(µg/m^3)			(µg/m^3)	(µg/m^3)			(µg/m^3)
1,1,1-Trichloroethane	0.76	J	0.31	J	9600		13000		22,000	n	22,000	*	100	2,200,000	5,200	*	33	171,600
1,1,2-Trichloro-1,2,2-trifluoroethane	0.53	J	0.52	J	<11000		<2100		130,000	n	130,000		100	13,000,000	31,000		33	1,023,000
1,1-Dichloroethane	1.4		<0.11		<4700		<920		7.7	c	77	*	100	7,700	18	*	33	594
1,1-Dichloroethene	0.36	J	<0.13		8500	J	4200	J	880	n	880	*	100	88,000	210	*	33	6,930
1,2,4-Trimethylbenzene	18		89		<14000		<6300		31	n	31	*	100	3,100	7.3	*	33	241
1,3,5-Trimethylbenzene	4.3		21		<14000		<2800		--	-	--	*	--	--	--	*	--	--
1,4-Dichlorobenzene	<0.064		0.46	J	<17000		<3400		1.1	c	11		100	1,100	0.26		33	8.6
1,4-Dioxane	<0.080		3.9	J	<13000		<2500		2.5	c	25		100	2,500	0.56		33	18.5
2-Butanone (MEK)	5.6		31		<26000		<5100		22,000	n	22,000		100	2,200,000	5,200		33	171,600
4-Methyl-2-pentanone (MIBK)	3.8		4.5		<8200		<1600		13,000	n	13,000		100	1,300,000	3,100		33	102,300
Acetone	66	cn	150	cn	<150000		<29000		140,000	n	140,000		100	14,000,000	32,000		33	1,056,000
Benzene	8.6		8.3		<7900		<1600		1.6	c	16	*	100	1,600	3.6	*	33	119
Carbon disulfide	3.5		18		<4300		<840		3,100	n	3,100		100	310,000	730		33	24,090
Carbon tetrachloride	0.41	J	0.43	J	<11000		<2100		2.0	c	20	*	100	2,000	4.7	*	33	155
Chlorobenzene	0.92		<0.23		<10000		<2000		220	n	220		100	22,000	5.2		33	172
Chloroethane	0.097	J	0.19	J	<4100		<810		--	-	--		--	--	--		--	--
Chloroform	0.22	J	0.30	J	<8200		<1600		0.53	c	5.3	*	100	530	1.2	*	33	40
Chloromethane	1.0		1.6		<15000		<2900		390	n	390	*	100	39,000	94	*	33	3,102
cis-1,2-Dichloroethene	12		0.28	J	220000		2700	J	--	-	--		--	--	--		--	--
Cyclohexane	2.6		5.2		<6100		<1200		4,400	n	4,400		100	440,000	6300		33	207,900
Dichlorodifluoromethane	2.5		2.5		<15000		<2900		440	n	440	*	100	44,000	100	*	33	3,300
Ethylbenzene	14		32		<13000		<2600		4.9	c	49	*	100	4,900	11	*	33	363
Hexane^	10		24		<5000		<980		3,100	n	3,100		100	310,000	730		33	24,090
Isopropyl alcohol	8.1	J	17		<10000		<2000		--	-	--		--	--	--		--	--
Isopropylbenzene	0.94	J	2.5	J	<13000		<2600		--	-	--		--	--	--		--	--
Methyl tert-butyl ether	0.79	J	2.1	J	<27000		<5400		47.0	c	470	*	100	47,000	110	*	33	3,630
Methylene Chloride	5.3	B	22	B	25000	JB	5400	JB	2,600	n	2,600	*	100	260,000	630	*	33	20,790
Naphthalene	<0.090		8.5		<21000		<4100		--	-	3.6	*	100	360	0.83	*	33	27
Styrene	0.35	J	1.4		<11000		<2200		4,400	n	4,400		100	440,000	1,000		33	33,000
Tetrachloroethene (PCE)	2.8		0.58	J	<12000		3300	J	47	c	470		100	47,000	11		33	363
Tetrahydrofuran	0.36	J	2.4	J	<8200		<1600		--	-	--		--	--	--		--	--
Toluene	100		160	E	<20000		<3900		22,000	n	22,000	*	100	2,200,000	5,200	*	33	171,600
trans-1,2-Dichloroethene	1.5		<0.20		<8800		2700	J	--	-	-		--	--	--	*	--	--
Trichloroethene (TCE)	32		4.8		5800000		760000		3.0	c	8.8	*	100	880	2.1	*	33	69
Trichlorofluoromethane	1.3		2.0		<6000		<1200		--	-	--		--	--	--	*	--	--
Vinyl chloride	2.0		<0.18		<8000		<1600		2.8	c	28	*	100	2,800	1.7	*	33	56
Xylenes, Total	64		160		<12000		<2300		440	n	440	*	100	44,000	100	*	33	3,300
m-Xylene & p-Xylene	47		120		<12000		<2300		440	n	440	*	100	44,000	100	*	33	3,300
o-Xylene	17		45		<12000		<2300		440	n	440	*	100	44,000	100	*	33	3,300

Notes:

WI Vapor Action Levels (VALs) are set by multiplying the U.S.EPA cRCL values by 10 for carcinogens, or applying RSLs equivalent to HI=1 for non-carcinogens.

(*) Denotes WI Quick Look-Up Table Indoor Air Vapor Action Levels and Vapor Risk Screening Levels (May 2016). All other compounds from EPA RSL table.

RSL = Risk Screening Level

ug/m3 = Micrograms per cubic meter

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

-- = No standard

E = Result exceeded calibration range.

cn = Results are biased high and should be considered estimated. See lab narative.

B = Compound found in blank and sample

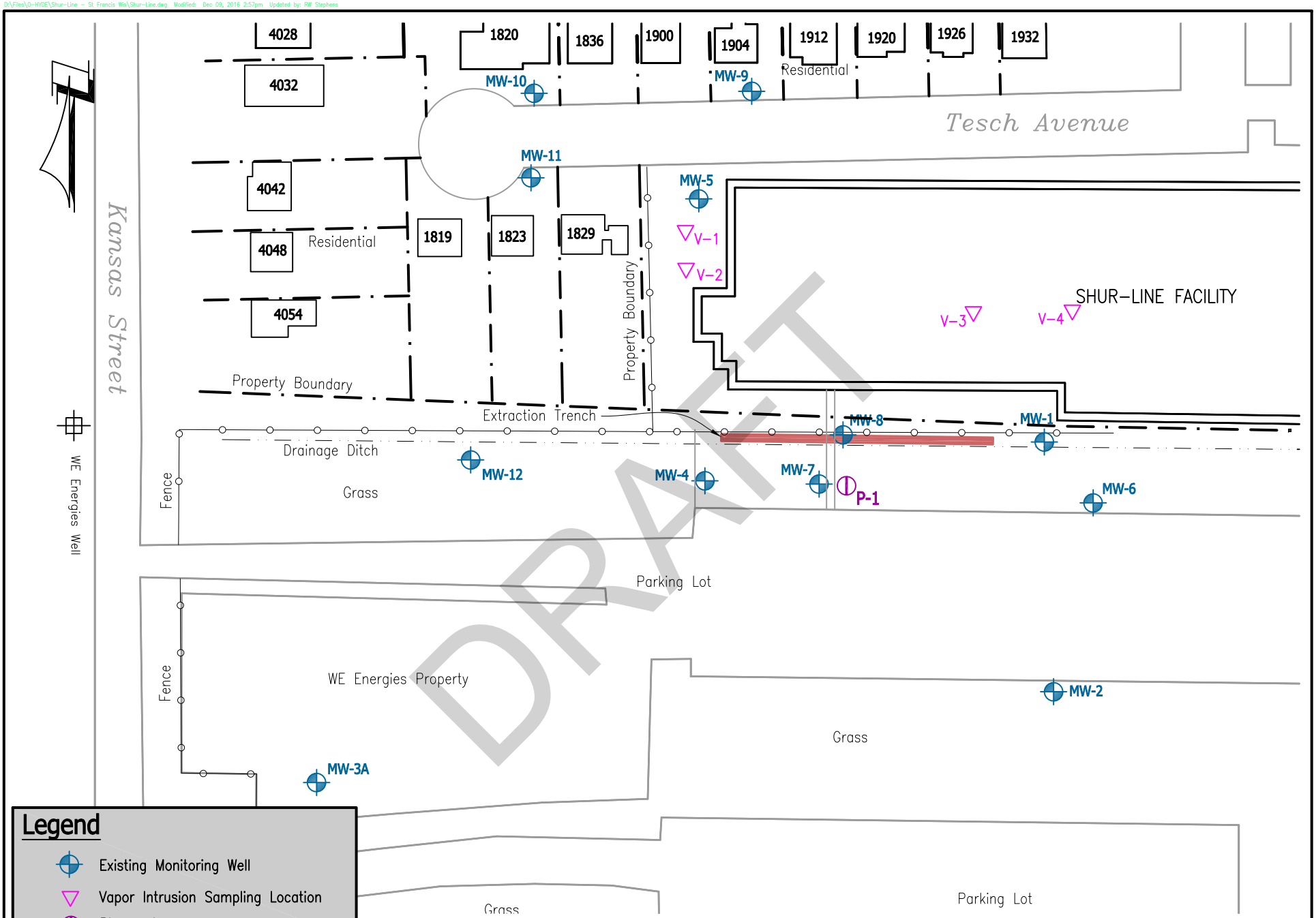
n = Noncancer

c = Cancer

^ Based on EPA Hexane, N Industrial RSL.

DRAFT

D:\Files\O-HYDE\Shur-Line - St Francis Wis\Shur-Line.dwg Modified: Dec 09, 2016 2:57pm Updated by: RW Stephens



Legend

- Existing Monitoring Well
- Vapor Intrusion Sampling Location
- Piezometer

Note:
1. Site plan based on map prepared by Arcadis (1 May 2003)

0 100'
SCALE

HYDE ENVIRONMENTAL, INC.

Figure 1

VAPOR INTRUSION SAMPLING LOCATIONS

SHUR-LINE FACILITY
St. Francis, Wisconsin