

**From:** Daniel O'Connell <Dan.Oconnell@omnni.com>  
**Sent:** Tuesday, March 17, 2020 12:20 PM  
**To:** Krueger, Sarah E - DNR  
**Subject:** QuicFrez Vapor Results  
**Attachments:** QuicFrez Vapor Results.pdf

Good afternoon Sarah,

Attached is a summary of the QuicFrez vapor results. Let me know if you have any questions. We'll wait to hear from you with regards to the second round of sampling for rooms B and C.

Regards,

**Daniel J. O'Connell, P.G.**

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Quic Frez  
Table 1 - Vapor Investigation Results Summary  
TO-15 (ug/m3)  
BRRTS #02-20-118383

	WI Residential VRSL based on U.S. EPA RSL (ug/m3) AF=0.03		WI Small Commercial VRSL based on U.S. EPA RSL (ug/m3) AF=0.03		WI Industrial VRSL based on U.S. EPA RSL (ug/m3) AF=0.01		Sample ID/Type Sample Date	U.S. EPA RSL Basis	MH-28-115 Sanitary	MH-28-75A Sanitary	MH-28-73A Sanitary	MH-28-34 Sanitary	MH-28-33A Sanitary	Outdoor-1 Outdoor Air	Indoor-A-1 Area A 1st	Indoor-A2 Area A	VP-5 Area A Sub-Slab	VP-6 Area C Sub-Slab	VP-7 Area B Sub-Slab
	Indoor Air VAL	Sub-Slab Vapor VRSL	Indoor Air VAL	Sub-Slab Vapor VRSL	Indoor Air VAL	Sub-Slab Vapor VRSL			2/17/2020	2/17/2020	2/17/2020	2/17/2020	2/17/2020	3/4/2020	3/4/2020	3/4/2020	3/4/2020	3/4/2020	3/4/2020
Acetone	33000	1100000	140000	4600000	140000	4600000	nc		6.4	12.8	7	6.2	8.5	10.8	26.9	26.7	70	350	12.5
Acrolein	0.021	0.70	0.088	3	0.088	3	nc		<0.094	<b>0.229J</b>	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094	<0.094
Benzene	3.6	120	16	530	16	1600	c		0.57	0.77	0.61	0.57	0.67	0.45	1.76	1.98	1.56	1.15	1.53
Bromomethane	5.2	180	22	730	22	730	nc		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.39J	<0.2	<0.2	<0.2
Carbon Disulfide	730	24000	3100	110000	3100	110000	nc		1.03	1.03	<0.138	0.5	0.53	0.62	0.50	1.56	0.311J	20.5	0.87
Carbon Tetrachloride	4.7	160	20	670	20	2000	c		0.57J	0.57J	0.63J	0.63J	0.63J	0.57J	0.63J	0.88J	<b>91</b>	<b>81</b>	0.50J
Chloroethane	11000	350000	44000	1500000	44000	4400000	nc		<0.159	<0.159	<0.159	<0.159	<0.159	<0.159	<0.159	1.4	<0.159	<0.159	<0.159
chloroform	1.2	10	5.3	180	5.3	530	c		<b>2.24</b>	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	1.07	<b>6.4</b>	<b>8.0</b>	<0.3
Chloromethane	94	3100	390	13000	390	39000	n		1.07J	1.47J	1.05J	1.07J	1.07J	1.09J	1.03J	3.5	<0.831	<0.831	<0.831
Cyclohexane	6300	210000	27000	880000	27000	880000	nc		<0.212	<0.212	<0.212	<0.212	<0.212	<0.212	0.34J	0.34J	5.0	5.2	0.93
Dichlorodifluoromethane	100	3300	440	15000	440	44000	n		2.62	2.72	2.82	2.82	2.82	2.67	2.92	2.97	2.97	2.62	2.72
cis-1,2-Dichloroethene	---	---	---	---	---	---	---		<0.197	0.32J	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197	<0.197
Ethanol	---	---	---	---	---	---	---		3.7	20.9	2.49	3.6	4.3	4.9	14.6	13	26.5	56	65
Ethyl Acetate	73	2500	310	11000	310	11000	nc		<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	1.69	<0.176	<0.176	<0.176	<0.176
Ethylbenzene	11	370	49	1600	49	4900	c		0.26J	<0.203	<0.203	0.26J	0.303J	<0.203	0.82	0.78	1.34	0.78	1.78
4-Ethyloluene	---	---	---	---	---	---	---		0.245J	<0.214	<0.214	0.34J	0.245J	<0.214	0.294J	0.294J	0.294J	<0.214	<0.214
Heptane	420	14000	1800	59000	1800	59000	nc		<0.265	<0.265	<0.265	<0.265	<0.265	<0.265	0.86	0.78J	9.2	5.2	2.98
Hexane	730	25000	3100	110000	3100	110000	nc		<0.235	<0.235	<0.235	<0.235	<0.235	0.60J	2.33	2.64	14.4	10.3	4.3
2-Hexanone	32	1100	140	4400	140	4400	nc		<0.222	<0.222	<0.222	0.286J	0.246J	<0.222	0.82	0.286J	<0.222	<0.222	<0.222
Isopropyl Alcohol	210	70000	880	30000	880	30000	nc		0.57J	2.04	0.91	0.76	0.91	1.23	13.4	2.19	3.6	4.8	3.2
Methyl ethyl ketone (MEK)	5300	180000	22000	730000	22000	730000	nc		2.0	1.95	0.94	2.03	2.48	1.5	6.2	3.6	4.8	8.4	2.03
Methyl isobutyl ketone (MIBK)	3200	110000	14000	440000	14000	440000	nc		<0.168	<0.168	<0.168	<0.168	<0.168	<0.168	0.61	0.41J	0.49J	3.2	0.33J
Methylene chloride	630	21000	2600	87000	2600	260000	n		<15	<15	<15	<15	15.1	<15	<15	<15	<15	<15	<15
Naphthalene	0.83	28	3.6	120	3.6	360	c		<0.675	<0.675	<0.675	0.68J	0.73J	<0.675	<0.675	<0.675	<0.675	<0.675	<0.675
Propene	3200	110000	14000	440000	14000	440000	nc		<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	6.0	<0.079	<0.079	<0.079
Styrene	1100	35000	4400	150000	4400	150000	nc		2.13J	<0.181	<0.181	0.255J	0.213J	<0.181	<0.181	<0.181	<0.181	<0.181	<0.181
Tetrachloroethene	42	1400	180	6000	180	18000	nc		0.41J	<0.278	0.34J	1.09	0.75J	<0.278	<0.278	<0.278	1.29	0.75J	<0.278
Tetrahydrofuran	---	---	---	---	---	---	---		<0.131	<0.131	<0.131	<0.131	<0.131	<0.131	0.97	<0.131	1.59	0.59	<0.131
Toluene	5200	170000	22000	730000	22000	2200000	n		1.47	0.79	0.98	1.17	1.28	0.64	5.2	4.9	4.9	3.09	3.7
Trichloroethene (TCE)	2.1	70	8.8	290	8.8	880	n		<0.237	<b>3.2</b>	<0.237	<0.237	<0.237	<0.237	<0.237	0.59J	<b>18.2</b>	<b>7.0</b>	<0.237
Trichlorofluoromethane	---	---	---	---	---	---	---		1.57	1.57	1.63	1.63	1.63	1.57	1.52	1.52	1.4	1.29	1.46
Trichlorotrifluoroethane	5300	180000	22000	730000	22000	730000	nc		0.61J	0.69J	0.69J	0.69J	0.69J	0.69J	0.69J	0.69J	0.61J	0.61J	0.61J
1,2,4-Trimethylbenzene	63	2100	260	8700	260	26000	n		1.42	0.44J	<0.283	1.67	1.42	0.44J	1.23	1.37	1.32	0.69J	0.78J
1,3,5-Trimethylbenzene	63	2100	260	8700	260	26000	n		0.39J	<0.232	<0.232	0.44J	0.39J	<0.232	0.294J	0.294J	0.34J	<0.232	<0.232
m&p-Xylene	100	3300	440	15000	440	44000	n		1.04J	0.48J	0.43J	1.08J	1J	0.65J	2.64	2.47	2.77	1.47	2.47
o-Xylene	100	3300	440	15000	440	44000	n		0.52J	<2.18	<0.218	0.52J	0.48J	0.303J	1	0.95	1.13	0.65J	1.04

Notes:  
WI Vapor Quick Look-Up Table Indoor Air Vapor Action Levels and Vapor Risk Screening Levels Based on November 2017 U.S. EPA Regional Screening Levels  
U.S. EPA Regional Screening Levels used 3/17/2020  
AF = Attenuation Factor  
VAL = Vapor Action Level  
VRSL = Vapor Risk Screening Level  
--- = Inhalation toxicity values are *not* available from U.S. EPA  
U.S. EPA RSL = Regional Screening Level  
n = noncancer  
c = carcinogenic  
**Bold** = Exceeds WI residential VRSL Indoor Air VAL, Sub-Slab VRSL; WI Small Commercial VRSL Indoor Air VAL, Sub-Slab VRSL; and WI Industrial VRSL Indoor Air VAL, Sub-Slab VRSL