

Tel: 608-838-9120

Ronald and Sandy Lippitt 1509 Elm Street Boscobel, Wisconsin 53805

RE: Vapor Intrusion Sampling Carriage House - 1509 Elm Street Former Highway Cleaners Boscobel, Wisconsin



Dear Mr. and Mrs. Lippitt:

Thank you for your cooperation with our investigation of the former Highway Cleaners. As you are aware we conducted both subslab sampling and indoor air sampling at your property in February 2015. Vapor samples were analyzed for chlorinated volatile organic compounds, which are the contaminants of concern at dry cleaning facilities.

Data collected in February 2015 is consistent with previously collected information. I have attached a table of our results including the data collected in July 2014. Low levels of tetrachloroethene (PCE) are present in the <u>indoor</u> air. The concentrations are below the established hazard levels for indoor air. However, the contaminant levels were much higher in the samples collected from below the building slab. One of the subslab samples contained PCE in excess of the acceptable level in subslab vapors on both sampling occasions. This sample, SS-1, was collected from the changing room/bathroom in the southeast corner of the building. This is near the sanitary sewer outlet and the presumed location of the former dry cleaning machinery.

Based on the high PCE level in the subslab vapors we believe that the WDNR will require that a sub-slab depressurization system be installed at the building to ensure that hazardous levels of the dry cleaning chemicals do not accumulate inside. If you have any questions please feel free to give Mark Fryman or me a call at (608) 838-9120 anytime. If you want to speak to someone at the WDNR the project manager is Jeff Ackerman (608) 275-3323.

Sincerely, Seymour Environmental Services

Robyn Seyncom

Robyn Seymour (rseymour@chorus.net) Hydrogeologist

cc: Jeff Ackerman, Wisconsin Department of Natural Resources Jeff Miesen, Mound City Bank

TABLE 1 SUMMARY OF VAPOR INTRUSION SAMPLING RESULTS Carriage House 1509 Elm Street - Boscobel, Wisconsin									
Location	Sample ID	Tetrachloroethene (ppbv)	Trichloroethene (ppbv)	cis 1,2 dichloroethene (ppbv)	trans 1,2 dichloroethene (ppbv)	Vinyl chloride (ppbv)			
Carriage House	SS-1	15000	<130	<130	<130	<130			
Carriage House 1509 Elm Street (July 7, 2014)	SS-2	87	3.1	<2.1	<2.1	<2.1			
(July 7, 2014)	Indoor	2.9	0.16	<0.085	<0.085	<0.085			
Carriage House	SS-1	15000	<260	<260	<260	<260			
1509 Elm Street	SS-2	32	<2.1	<2.1	<2.1	<2.1			
(Feb 3, 2015)	Indoor	1.7	<0.085	<0.085	<0.085	<0.085			
Indoor Air Standa non-resider		27	1.6	ne	65	11			
Subslab Standar non-resider (Attenuation fac	ntial	270	16	ne	650	110			



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division WDNR LAB ID: 113133790 NELAP LAB ID: E37658

EPA LAB ID:

WI00007 WI DATCP ID: 105-415

13810

WSLH Sample: 178504005

Report To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558

Field #: CARRIAGE HOUSE SS-1 Project No: Collection End: 2/3/2015 1:52:00 PM Collection Start: 02/03/15 1320 Collected By: MDF/MRS Date Received: 2/5/2015 Date Reported: 2/17/2015 Sample Reason: ID#: Sample Location: Sample Description: Sample Type: SB-SUB SLAB Waterbody: Point or Outfall: Sample Depth: Program Code: Region Code: County:

Invoice To:

P.O. BOX 398

Customer ID:

SEYMOUR ENV SERVICES

MCFARLAND, WI 53558

2531 DYRESON RD

Sample Comments

MOUND CITY BANIZ/ HIGHWAY CLEMENS

OC-Volatiles

Analyte		Analysis Method	Result	Units	LOD	LOQ
Prep Date 02/11/15	Analysis Date	02/11/15				
Vinyl chloride		EPA TO-15	ND	ppbv	260	840
trans-1,2-Dichloroethene		EPA TO-15	ND	ppbv	260	840
cis-1,2-Dichloroethene		EPA TO-15	ND	ppbv	260	840
Trichloroethene		EPA TO-15	ND	ppbv	260	840
Tetrachloroethene		EPA TO-15	15000	ppbv	260	840

The internal standard QC limit is exceeded.



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

WI00007

Environmental Health Division

WDNR LAB ID: 113133790

NELAP LAB ID: E37658 EPA LAB ID:

WI DATCP ID: 105-415

WSLH Sample: 178504005

The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

List of Abbreviations: LOD = Level of detection LOQ = Level of quantification ND = None detected. Results are less than the LOD F next to result = Result is between LOD and LOQ Z next to result = Result is between 0 (zero) and LOD if LOD=LOQ, Limits were not statistically derived

*Test results for NELAP accredited tests are certified to meet the requirements of the NELAC standards. For a list of accredited analytes see http://www.slh.edu/nelap/

Responsible Party



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division WDNR LAB ID: 113133790 NELAP LAB ID: E37658

EPA LAB ID:

WI DATCP ID: 105-415

WSLH Sample: 178504006

Report To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558 Invoice To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558 Customer ID: 13810

WI00007

Field #: CARRIAGE HOUSE INDOOR Project No: Collection End: 2/4/2015 3:30:00 PM Collection Start: 02/03/15 1524 Collected By: MDF/MRS Date Received: 2/5/2015 Date Reported: 2/17/2015 Sample Reason: ID#:

Sample Location: Sample Description: Sample Type: AI-INDOOR AIR Waterbody: Point or Outfall: Sample Depth: Program Code: Region Code: County:

Sample Comments

MOUND CITY BANIZ/ HIGHWAY CLEMENS

OC-Volatiles

Analyte		Analysis Method	Result	Units	LOD	LOQ
Prep Date 02/10/15	Analysis Date	02/10/15				•
Vinyl chloride		EPA TO-15	ND	ppbv	0.085	0.28
trans-1,2-Dichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
cis-1,2-Dichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
Trichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
Tetrachloroethene		EPA TO-15	1.7	ppbv	0.085	0.28

The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

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Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division

WDNR LAB ID: 113133790

NELAP LAB ID: E37658 EPA L

EPA LAB ID: WI00007

WI DATCP ID: 105-415

WSLH Sample: 178504006

Responsible Party



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division WDNR LAB ID: 113133790 NELAP LAB ID: E37658

58 EPA LAB ID:

LAB ID: WI00007

Invoice To:

P.O. BOX 398

Customer ID:

SEYMOUR ENV SERVICES

MCFARLAND, WI 53558

13810

2531 DYRESON RD

WI DATCP ID: 105-415

WSLH Sample: 178504007

ID#:

Report To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558

Field #: CARRIAGE HOUSE SS-2 Project No: Collection End: 2/3/2015 2:10:00 PM Collection Start: 02/03/15 1336 Collected By: MDF/MRS Date Received: 2/5/2015 Date Reported: 2/17/2015 Sample Reason:

Sample Location: Sample Description: Sample Type: SB-SUB SLAB Waterbody: Point or Outfall: Sample Depth: Program Code: Region Code: County:

Sample Comments

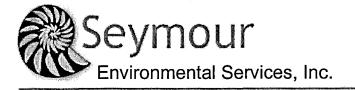
MOUND CITY BANIZ/ HIGHWAY CLEMENS

OC-Volatiles

Analyte		Analysis Method	Result	Units	LOD	LOQ
Prep Date 02/10/15	Analysis Date	02/10/15				
Vinyl chloride		EPA TO-15	ND	ppbv	2.1	7.0
trans-1,2-Dichloroethene		EPA TO-15	ND	ppbv	2.1	7.0
cis-1,2-Dichloroethene		EPA TO-15	ND	ppbv	2.1	7.0
Trichloroethene		EPA TO-15	ND	ppbv	2.1	7.0
Tetrachloroethene		EPA TO-15	32	ppbv	2.1	7.0

The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

List of Abbreviations: LOD = Level of detection LOQ = Level of quantification ND = None detected. Results are less than the LOD F next to result = Result is between LOD and LOQ Z next to result = Result is between 0 (zero) and LOD if LOD=LOQ, Limits were not statistically derived



Tel: 608-838-9120

Frederick and Madeline Staskal 308 Dwight Street Boscobel, Wisconsin 53805

RE: Vapor Intrusion Sampling 308 Dwight Street Former Highway Cleaners Boscobel, Wisconsin

Dear Mr. Jones:

Thank you for your cooperation with our investigation of the former Highway Cleaners. As you are aware we conducted vapor sampling in the crawl space at your property in February 2015. The sample was collected in the crawl space since your home is constructed with a perimeter frost wall with stick framing and does not have a concrete slab as part of the foundation.

The sample was analyzed for chlorinated volatile organic compounds, which are the primary contaminants of concern at dry cleaning facilities. No analytes were detected in the air in the crawl space. Thus, it appears that significant levels of dry cleaning related chemicals have <u>not</u> migrated beneath your home. I have attached a table of our results along with the established hazard levels for indoor air at residential properties.

The WDNR does not apply any adjustment factor for hazardous vapor migration limitation through a wood floor as you have in your house. Thus, the sample collected in the crawl space is considered to be indoor air. We will be submitting the results of the sampling to the WDNR in early March. At this time we believe that additional assessment of the vapor intrusion potential at your property will not be required.

If you have any questions please feel free to give Mark Fryman or me a call at (608) 838-9120 anytime. If you want to speak to someone at the WDNR the project manager is Jeff Ackerman (608) 275-3323.

Sincerely, Seymour Environmental Services

Rokyn Sugneow

Robyn Seymour (rseymour@chorus.net) Hydrogeologist

cc: Jeff Ackerman, Wisconsin Department of Natural Resources Jeff Miesen, Mound City Bank

TABLE 1 SUMMARY OF VAPOR INTRUSION SAMPLING RESULTS (Feb. 3, 2015) Staskal Property 308 Dwight Street - Boscobel, Wisconsin									
Location	Sample ID	Tetrachloroethene (ppbv)	Trichloroethene (ppbv)	cis 1,2 dichloroethene (ppbv)	trans 1,2 dichloroethene (ppbv)	Vinyl chloride (ppbv)			
Staskal 308 Dwight Street	Dwight	<0.085	<0.085	<0.085	<0.085	<0.085			
Indoor Air Stan residential				ne	16	0.62			
Subslab Standard (ppbv) residential property (Attenuation factor 0.1)		62	3.9	ne	160	6.2			
- Bold Values exceed - Shaded Values exc									



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division WDNR LAB ID: 113133790 NELAP LAB ID: E37658

EPA LAB ID:

WI DATCP ID: 105-415

WSLH Sample: 178504004

ID#:

Sample Location:

Waterbody:

Point or Outfall:

Sample Depth:

Program Code:

Region Code: County:

Sample Description:

Sample Type: AI-INDOOR AIR

Report To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558 Invoice To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558 Customer ID: 13810

WI00007

Field #: DWIGHT Project No: Collection End: 2/4/2015 12:58:00 PM Collection Start: 02/03/15 1243 Collected By: MDF/MRS Date Received: 2/5/2015 Date Reported: 2/17/2015 Sample Reason:

Sample Comments

MOUND CITY BANIZ/ HIGHWAY CLEMENS

OC-Volatiles

Analyte		Analysis Method	Result	Units	LOD	LOQ
Prep Date 02/10/15	Analysis Date	02/10/15				
Vinyl chloride		EPA TO-15	ND	ppbv	0.085	0.28
trans-1,2-Dichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
cis-1,2-Dichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
Trichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
Tetrachloroethene		EPA TO-15	ND	ppbv	0.085	0.28

The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

List of Abbreviations: LOD = Level of detection LOQ = Level of quantification ND = None detected. Results are less than the LOD F next to result = Result is between LOD and LOQ Z next to result = Result is between 0 (zero) and LOD if LOD=LOQ, Limits were not statistically derived



Tel: 608-838-9120

Ryan Jones Jones Chevrolet 2035 Highway 14 East Richland Center, Wisconsin 53581

RE: Vapor Intrusion Sampling NAPA Auto - 1507 Elm Street Former Highway Cleaners Boscobel, Wisconsin

Dear Mr. Jones:

Thank you for your cooperation with our investigation of the former Highway Cleaners. As you are aware we conducted subslab and indoor air sampling at your property in February 2015. Vapor samples collected were analyzed for chlorinated volatile organic compounds the primary contaminants of concern at dry cleaning facilities.

Dry cleaning related contaminants were detected in the sub slab vapor sample collected in the utility room, no analytes were detected in the subslab sample collected in the garage area. In the utility room tetrachloroethene (PCE) was present in the subslab vapor sample but the concentration present was below WDNR action levels. Low levels of dry cleaning related chemicals were present in the indoor air samples collected in both July 2014 and February 2015. Indoor air levels present were below WDNR standards. It appears that dry cleaning related chemicals have migrated beneath your building but the levels present do not appear to be a significant vapor intrusion risk. I have attached a table of our results (we also included the results of the air sample collected in July 2014).

We will be submitting the results of the sampling to the WDNR in early March. At this time we are not sure whether additional vapor intrusion potential assessment will be required at your site.

If you have any questions please feel free to give Mark Fryman or me a call at (608) 838-9120 anytime. If you want to speak to someone at the WDNR the project manager is Jeff Ackerman (608) 275-3323.

Sincerely, Seymour Environmental Services

Rokyn Suprion

Robyn Seymour (rseymour@chorus.net) Hydrogeologist

cc: Jeff Ackerman, Wisconsin Department of Natural Resources Jeff Miesen, Mound City Bank

Seymour Environmental 2531 Dyreson Road P.O. Box 398 McFarland, WI 53558

TABLE 1 SUMMARY OF VAPOR INTRUSION SAMPLING RESULTS NAPA AUTO 1507 Elm Street - Boscobel, Wisconsin									
Location	Sample ID	Tetrachloroethene (ppbv)	Trichloroethene (ppbv)	cis 1,2 dichloroethene (ppbv)	trans 1,2 dichloroethene (ppbv)	Vinyl chloride (ppbv)			
	SS-1 (garage area)	<0.085	<0.085	<0.085	<0.085	<0.085			
NAPA AUTO	SS-2 (utility room)	5.1	<0.085	<0.085	<0.085	<0.085			
1507 Elm Street	Indoor (July 7, 2014)	1.8	0.19	0.22	3.0	<0.085			
	Indoor (Feb. 3, 2015)	0.49	<0.085	<0.085	0.47	<0.085			
Indoor Air Star non-resid		27	1.6	ne	65	11			
Subslab Stand non-resid (Attenuation	dential	270	16	ne	650	110			
- Bold Values excee - Shaded Values exc									



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division WDNR LAB ID: 113133790 NE

NELAP LAB ID: E37658 EPA

EPA LAB ID: WI00007

Invoice To:

P.O. BOX 398

Customer ID:

SEYMOUR ENV SERVICES

13810

MCFARLAND, WI 53558

2531 DYRESON RD

WI DATCP ID: 105-415

WSLH Sample: 178504001

ID#:

Sample Location:

Waterbody: Point or Outfall:

Sample Depth:

Program Code:

Region Code: County:

Sample Description:

Sample Type: SB-SUB SLAB

Report To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558

Field #: NAPA SS-1 Project No: Collection End: 2/3/2015 12:21:00 PM Collection Start: 02/03/15 11:39 Collected By: MDF/MRS Date Received: 2/5/2015 Date Reported: 2/17/2015 Sample Reason:

Sample Comments

MOUND CITY BANIZ/ HIGHWAY CLEMENS.

OC-Volatiles

Analyte		Analysis Method	Result	Units	LOD	LOQ
Prep Date 02/10/15	Analysis Date	02/10/15				
Vinyl chloride		EPA TO-15	ND	ppbv	0.085	0.28
trans-1,2-Dichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
cis-1,2-Dichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
Trichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
Tetrachloroethene		EPA TO-15	ND	ppbv	0.085	0.28

The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

List of Abbreviations: LOD = Level of detection LOQ = Level of quantification ND = None detected. Results are less than the LOD F next to result = Result is between LOD and LOQ Z next to result = Result is between 0 (zero) and LOD if LOD=LOQ, Limits were not statistically derived



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

WI00007

Environmental Health Division

WDNR LAB ID: 113133790

NELAP LAB ID: E37658 EPA LAB ID:

WI DATCP ID: 105-415

WSLH Sample: 178504001

Responsible Party



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division WDNR LAB ID: 113133790 NELAP LAB ID: E37658

8 EPA LAB ID:

WI00007 WI DATCP ID: 105-415

WSLH Sample: 178504002

Report To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558 Invoice To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558 Customer ID: 13810

Field #: NAPA SS-2 Project No: Collection End: 2/3/2015 12:52:00 PM Collection Start: 02/03/15 1211 Collected By: MDF/MRS Date Received: 2/5/2015 Date Reported: 2/17/2015 Sample Reason: ID#:

Sample Location: Sample Description: Sample Type: SB-SUB SLAB Waterbody: Point or Outfall: Sample Depth: Program Code: Region Code: County:

Sample Comments

MOUND CITY BANIZ/ HIGHWAY CLEMENS.

OC-Volatiles

Analyte		Analysis Method	Result	Units	LOD	LOQ
Prep Date 02/10/15	Analysis Date	02/10/15		· · · Vi ttime		х х
Vinyl chloride		EPA TO-15	ND	ppbv	0.085	0.28
trans-1,2-Dichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
cis-1,2-Dichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
Trichloroethene		EPA TO-15	ND	ppbv	0.085	0.28
Tetrachloroethene		EPA TO-15	5.1	ppbv	0.085	0.28

The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

List of Abbreviations: LOD = Level of detection LOQ = Level of quantification ND = None detected. Results are less than the LOD F next to result = Result is between LOD and LOQ Z next to result = Result is between 0 (zero) and LOD if LOD=LOQ, Limits were not statistically derived



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division

WDNR LAB ID: 113133790

NELAP LAB ID: E37658 EPA

EPA LAB ID: WI00007

WI DATCP ID: 105-415

WSLH Sample: 178504002

Responsible Party



Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Charles D. Brokopp, Dr.P.H., Director

Environmental Health Division WDNR LAB ID: 113133790 NEL

NELAP LAB ID: E37658 EPA

EPA LAB ID: WI00007

Invoice To:

P.O. BOX 398

Customer ID:

SEYMOUR ENV SERVICES

MCFARLAND, WI 53558

13810

2531 DYRESON RD

WI DATCP ID: 105-415

WSLH Sample: 178504003

ID#:

Sample Location:

Waterbody:

Point or Outfall: Sample Depth:

Program Code:

Region Code: County:

Sample Description:

Sample Type: AI-INDOOR AIR

Report To: SEYMOUR ENV SERVICES 2531 DYRESON RD P.O. BOX 398 MCFARLAND, WI 53558

Field #: NAPA INDOOR Project No: Collection End: 2/4/2015 12:26:00 PM Collection Start: 02/04/15 1216 Collected By: MDF/MRS Date Received: 2/5/2015 Date Reported: 2/17/2015 Sample Reason:

Sample Comments

MOUND CITY BANIZ/ HIGHWAY CLEMENS

OC-Volatiles

Analyte			Analysis Method	Result	Units	LOD	LOQ
Prep Date	02/10/15	Analysis Date	02/10/15				
Vinyl chlori	de		EPA TO-15	ND	ppbv	0.085	0.28
trans-1,2-D	ichloroethene		EPA TO-15	0.47	ppbv	0.085	0.28
cis-1,2-Dic	hloroethene		EPA TO-15	ND	ppbv	0.085	0.28
Trichloroet	nene		EPA TO-15	ND	ppbv	0.085	0.28
Tetrachloro	ethene		EPA TO-15	0.49	ppbv	0.085	0.28

The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

List of Abbreviations: LOD = Level of detection LOQ = Level of quantification ND = None detected. Results are less than the LOD F next to result = Result is between LOD and LOQ Z next to result = Result is between 0 (zero) and LOD if LOD=LOQ, Limits were not statistically derived