State of Wisconsin DEPARTMENT OF NATURAL RESOURCES Oshkosh Service Center 625 East County Road Y, STE 700 Oshkosh, WI 54901-9731

Tony Evers, Governor

Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



February 14, 2024

DAVID LINSKENS 1687 PRINCETON PL #5 GREEN BAY WI 54302

Subject: **Action Required by February 29, 2024,** to Fill & Seal Monitoring Wells & Other Items DNR Site Name: Sandies Dry Cleaners & Laundry (Former), 513 Grand Ave, Little Chute, WI DNR BRRTS #: 02-45-552222

## Dear Mr. Linskens:

The purpose of this letter is to:

- Notify you that action is required by February 29, 2024, to properly fill and seal three monitoring wells and submit documentation within 60 days;
- 2. Provide you with an update of recent activities performed;
- 3. Provide you with notice of upcoming actions;
- 4. Request updated contact information and status of your three vapor abatement systems by February 29, 2024; and
- 5. Remind you that you remain the listed responsible party, are out of compliance and request you hire an environmental consultant by March 15, 2024.

## **Monitoring Wells**

The United States Environmental Protection Agency (USEPA) installed three monitoring wells in 2012 to investigate environmental contamination identified at the former Sandies Dry Cleaners & Laundry (the "Site") at 513 Grand Avenue in Little Chute, Wisconsin (the "Property"). The Department of Natural Resources (DNR) recently observed that these monitoring wells are damaged. In accordance with Wisconsin Administrative Code (Wis. Admin. Code) § NR 141.25(1)(c), the three monitoring wells must be filled and sealed (also referred to as "abandoned") within 15 days from date of this letter (by February 29, 2024).

Following this action, documentation on forms provided by DNR must be submitted to the DNR <u>within 60 days from the date of abandonment</u>.

## 505 Grand Avenue Indoor Air Sampling

DNR copied you on a letter dated September 23, 2023, to Four D Investments, LLC, regarding sub-slab vapor data collected at 505 Grand Avenue on September 5, 2023, where chlorinated solvents were detected well above the vapor risk screening levels. DNR has since sampled indoor air at 505 Grand Avenue in October and December 2023. Tetrachloroethene (PCE) and trichloroethene (TCE) were detected in indoor air but below the vapor action levels. The indoor air results are included in the attached January 19, 2024, letter to Four D Investments, LLC, *Air Sampling Results from 505 Grand Avenue, Little Chute, WI*.



#### Vapor Investigation and Mitigation at Off-Site Properties, Cost Recovery and Lien

DNR notified you on November 18, 2022, that the DNR planned to perform investigation and mitigation activities for the environmental contamination for which you are responsible. This effort will also include assignment of continuing obligations to operate, monitor, and maintain the vapor mitigation system updated by DNR at 135 West Lincoln Avenue. A separate letter will be issued when the work is completed, prior to assigning the continuing obligations.

The DNR is nearing completion of this work and will be sending you a notice of intent to update the lien on the Property for costs incurred. The notice will provide you with 60 days to reimburse the DNR before updating the lien. Note that a lien has already been filed on the Property for \$8,051.90 for work previously performed.

#### Status of 513 Grand Avenue – Contact Info and Vapor Abatement Systems

The DNR sent you a letter dated September 27, 2023, requesting an update to your contact information and the status of the three vapor abatement systems installed by USEPA at the Property in 2012 (crawl space in southwest corner, former dry cleaner room in the northwest room, and former process room on the south side). Specifically, DNR is looking to verify the vapor abatement systems remain operational. DNR's concern stems from the observed vacancy and condition of the Property, communications from the Village of Little Chute that substantial building repairs are necessary prior to re-occupancy of the building, and the need for the vapor abatement systems to be functioning to control contaminated vapors from further off-site migration.

The DNR is requesting that <u>by February 29, 2024</u>, you provide current contact information and status of operations of the three vapor abatement systems at the Property.

#### **Responsibility Reminder**

Please take notice that you remain the responsible party for this environmental contamination and are out of compliance with Wisconsin Statute (Wis. Stat.) chapter 292 and Wis. Admin. Code chapters NR 700 through NR 754. A letter of responsibility was issued to you on August 29, 2008. Since that time, the Department of Health Services (DHS), USEPA and DNR have performed work to investigate the chlorinated solvents, evaluate impacts to human health, protect the public from contaminated vapors migrating from the contamination, and cleanup the contamination. However, substantial investigation and cleanup work remains.

Please be aware that DNR may initiate enforcement action against you for failure to comply with Wis. Stat. ch. 292. Your legal responsibilities are defined both in Wis. Stat. ch. 292 and Wis. Admin. Code chs. NR 700 through 754 and are also described in the August 29, 2008, letter. In particular, Wis. Stat. § 292.11(3), states:

RESPONSIBILITY. A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

DNR's information indicates that you have not performed any required investigation or cleanup activities since 2008.

February 14, 2024 Action Required by February 29, 2024, to Fill and Seal Monitoring Wells and Other Items Re: Sandies Dry Cleaners & Laundry (Former), 513 Grand Avenue, Little Chute, Wisconsin BRRTS # 02-45-552222

Wis. Admin. Code chapters NR 700 through NR 754 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Wis. Admin. Code chapter NR 708 includes provisions for immediate actions in response to limited contamination. Wis. Admin. Code chapter NR 140 establishes groundwater quality standards for contaminants that reach groundwater.

The DNR is requesting that <u>by March 15, 2024</u>, <u>you hire an environmental consultant and submit</u> <u>documentation to the DNR</u>. Following contracting with an environmental consultant, a Site Investigation Work Plan is required under Wis. Admin. Code § NR 716.09.

Please understand that you are in noncompliance and will remain in noncompliance until you fulfill all requirements of the statute. Failure to take the actions required by Wis. Stat. § 292.11 to address this contamination will cause the DNR to review this case for enforcement actions. Additionally, please be advised that the DNR is authorized under Wis. Stat. § 292.94 to assess non-reimbursable fees for any reports you are required to submit as part of additional enforcement actions.

In closing, DNR looks forward to receipt of the following information by the dates listed (in due date order):

- 1. Abandonment of the monitoring wells by February 29, 2024;
- 2. Current contact information and status of operation of the three vapor abatement systems at the Property **by February 29, 2024**;
- 3. Documentation you have hired an environmental consultant **by March 15, 2024**, followed by submittal of a Site Investigation Work Plan; and
- 4. Proper monitoring well abandonment documentation <u>within 60 days</u> from the date of abandonment.

All documentation referenced in this letter is available at the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web (BOTW). See dnr.wi.gov and search "BOTW".

Please contact me with any questions by phone at 920-360-0853 or by email at <u>jennifer.borski@wisconsin.gov</u>.

Sincerely,

Boski

Jennifer Borski Hydrogeologist Remediation & Redevelopment Program

- Att. January 19, 2024, letter to Four D Investments, LLC, *Air Sampling Results from 505 Grand Avenue, Little Chute, WI.*
- cc: David Kittel, Village of Little Chute, David.Kittel@littlechutewi.org

Tony Evers, Governor

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February 14, 2024

## SUSAN DELFUSSE DELSART - corrected 02/21/2024 - J. Borski, DNR

1687 PRINCETON PL #5 GREEN BAY WI 54302

Subject: **Action Required by February 29, 2024,** to Fill & Seal Monitoring Wells & Other Items DNR Site Name: Sandies Dry Cleaners & Laundry (Former), 513 Grand Ave, Little Chute, WI DNR BRRTS #: 02-45-552222

## DELSART - corrected 02/21/2024 - J. Borski, DNR

This letter is being sent as a courtesy to the attention of Ms. Susan Delfusse at the recommendation of the Village of Little Chute. This letter is a duplicate of the letter sent on the same date to the attention of Mr. David Linskens as listed property owner for 513 Grand Avenue in the Village of Little Chute, Wisconsin. No changes have been made to the subject or content of this letter. – Jennifer Borski, DNR

Dear Mr. Linskens:

The purpose of this letter is to:

- Notify you that action is required by February 29, 2024, to properly fill and seal three monitoring wells and submit documentation within 60 days;
- 2. Provide you with an update of recent activities performed;
- 3. Provide you with notice of upcoming actions;
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## Monitoring Wells

The United States Environmental Protection Agency (USEPA) installed three monitoring wells in 2012 to investigate environmental contamination identified at the former Sandies Dry Cleaners & Laundry (the "Site") at 513 Grand Avenue in Little Chute, Wisconsin (the "Property"). The Department of Natural Resources (DNR) recently observed that these monitoring wells are damaged. In accordance with Wisconsin Administrative Code (Wis. Admin. Code) § NR 141.25(1)(c), the three monitoring wells must be filled and sealed (also referred to as "abandoned") within 15 days from date of this letter (by February 29, 2024).

Following this action, documentation on forms provided by DNR must be submitted to the DNR within <u>60 days from the date of abandonment</u>.

## 505 Grand Avenue Indoor Air Sampling

DNR copied you on a letter dated September 23, 2023, to Four D Investments, LLC, regarding sub-slab vapor data collected at 505 Grand Avenue on September 5, 2023, where chlorinated solvents were detected well above the vapor risk screening levels. DNR has since sampled indoor air at 505 Grand



February 14, 2024 **Action Required by February 29, 2024**, to Fill and Seal Monitoring Wells and Other Items Re: Sandies Dry Cleaners & Laundry (Former), 513 Grand Avenue, Little Chute, Wisconsin BRRTS # 02-45-552222

Avenue in October and December 2023. Tetrachloroethene (PCE) and trichloroethene (TCE) were detected in indoor air but below the vapor action levels. The indoor air results are included in the attached January 19, 2024, letter to Four D Investments, LLC, *Air Sampling Results from 505 Grand Avenue, Little Chute, WI*.

## Vapor Investigation and Mitigation at Off-Site Properties, Cost Recovery and Lien

DNR notified you on November 18, 2022, that the DNR planned to perform investigation and mitigation activities for the environmental contamination for which you are responsible. This effort will also include assignment of continuing obligations to operate, monitor, and maintain the vapor mitigation system updated by DNR at 135 West Lincoln Avenue. A separate letter will be issued when the work is completed, prior to assigning the continuing obligations.

The DNR is nearing completion of this work and will be sending you a notice of intent to update the lien on the Property for costs incurred. The notice will provide you with 60 days to reimburse the DNR before updating the lien. Note that a lien has already been filed on the Property for \$8,051.90 for work previously performed.

## Status of 513 Grand Avenue – Contact Info and Vapor Abatement Systems

The DNR sent you a letter dated September 27, 2023, requesting an update to your contact information and the status of the three vapor abatement systems installed by USEPA at the Property in 2012 (crawl space in southwest corner, former dry cleaner room in the northwest room, and former process room on the south side). Specifically, DNR is looking to verify the vapor abatement systems remain operational. DNR's concern stems from the observed vacancy and condition of the Property, communications from the Village of Little Chute that substantial building repairs are necessary prior to re-occupancy of the building, and the need for the vapor abatement systems to be functioning to control contaminated vapors from further off-site migration.

The DNR is requesting that <u>by February 29, 2024</u>, you provide current contact information and status of operations of the three vapor abatement systems at the Property.

#### **Responsibility Reminder**

Please take notice that you remain the responsible party for this environmental contamination and are out of compliance with Wisconsin Statute (Wis. Stat.) chapter 292 and Wis. Admin. Code chapters NR 700 through NR 754. A letter of responsibility was issued to you on August 29, 2008. Since that time, the Department of Health Services (DHS), USEPA and DNR have performed work to investigate the chlorinated solvents, evaluate impacts to human health, protect the public from contaminated vapors migrating from the contamination, and cleanup the contamination. However, substantial investigation and cleanup work remains.

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actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

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The DNR is requesting that <u>by March 15, 2024</u>, you hire an environmental consultant and submit <u>documentation to the DNR</u>. Following contracting with an environmental consultant, a Site Investigation Work Plan is required under Wis. Admin. Code § NR 716.09.

Please understand that you are in noncompliance and will remain in noncompliance until you fulfill all requirements of the statute. Failure to take the actions required by Wis. Stat. § 292.11 to address this contamination will cause the DNR to review this case for enforcement actions. Additionally, please be advised that the DNR is authorized under Wis. Stat. § 292.94 to assess non-reimbursable fees for any reports you are required to submit as part of additional enforcement actions.

In closing, DNR looks forward to receipt of the following information by the dates listed (in due date order):

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All documentation referenced in this letter is available at the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web (BOTW). See dnr.wi.gov and search "BOTW".

Please contact me with any questions by phone at 920-360-0853 or by email at jennifer.borski@wisconsin.gov.

Sincerely,

in Boski

Jennifer Borski Hydrogeologist Remediation & Redevelopment Program

- Att. January 19, 2024, letter to Four D Investments, LLC, *Air Sampling Results from 505 Grand Avenue, Little Chute, WI.*
- cc: David Kittel, Village of Little Chute, David.Kittel@littlechutewi.org

State of Wisconsin DEPARTMENT OF NATURAL RESOURCES Oshkosh Service Center 625 East County Road Y, STE. 700 Oshkosh, WI 54901-9731

Tony Evers, Governor Adam N. Payne, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



January 19, 2024

Four D Investments, LLC Deb Smith 505 Grand Ave Little Chute, WI 54140

 SUBJECT:
 Air Sampling Results for 505 Grand Avenue, Little Chute, WI 

 <u>Contaminants Detected Below DNR Action Levels</u>

 DNR Site Name: Sandies Dry Cleaners & Laundry (Former), 513 Grand Avenue, Little Chute, WI

 DNR BRRTS #02-45-552222

Dear Ms. Smith:

Included are the findings of a recent investigation on your property by the Department of Natural Resources (DNR). This letter is a follow-up to my email on January 18, 2024.

#### Summary

Two chemicals were detected in indoor air in the basement at levels that do not pose a health risk to building occupants. No further air sampling is planned at this time.

#### **Sampling Effort**

As you are aware, this investigation was conducted because of the potential for chemical vapors from the nearby Sandies Dry Cleaners & Laundry (Former) site identified above to migrate through soil and groundwater, accumulate next to and/or beneath the foundation of your building, and possibly enter your indoor air. The chemicals of concern for the investigation are the dry cleaning solvent, tetrachloroethene (PCE), and its breakdown products trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride.

On December 8, 2023, DNR deployed passive air sampling devices in the basement of your business for the collection of indoor air samples and outside for collection of an outdoor air sample. On December 20, 2023, the sample devices were retrieved then submitted to the Wisconsin State Lab of Hygiene – Occupational Health Lab, where they underwent laboratory analysis for PCE, TCE, 1,2-DCE (total) and vinyl chloride.

#### **Test Results**

The results of the air samples are summarized and compared to DNR standards on the table below. A copy of the laboratory report for the indoor and outdoor air samples is also attached.

There were detections of PCE and TCE in both indoor air samples but below the Residential Vapor Action Levels (VALs). This is called "a detection below screening level" and is explained in the enclosed fact sheet, *Understanding Chemical Vapor Testing Results*, RR-977. While there were detections in the indoor air, the concentrations do not pose a health risk to the building occupants. Data is compared to Residential VALs (verses Commercial VALs) due to the second-floor apartment at this location. No other chemicals of concern were detected.





January 19, 2024 Air Sampling Results from 505 Grand Avenue, Little Chute, WI DNR Site Name: Sandies Dry Cleaners & Laundry (Former), 513 Grand Avenue, Little Chute, WI DNR BRRTS # 02-45-552222

#### **Next Steps**

No further air sampling is planned at this time.

Thank you for your cooperation with this sampling effort. Please contact me with any questions regarding the environmental investigation or an update on progress. Please direct any health-related questions to Curtis Hedman, Department of Health Services, at (608) 287-4152.

Sincerely,

Joski

Jennifer Borski Hydrogeologist Remediation & Redevelopment Program 920-360-0853 jennifer.borski@wisconsin.gov.

Copy: Deb Smith – <u>debatbakersoutlet@gmail.com</u> Curtis Hedman, Wisconsin Dept of Health Services, , <u>dhsdphoperations@dhs.wisconsin.gov</u> Natalie Vandeveld, Outagamie County Health, <u>Natalie.Vandeveld@outagamie.org</u> Rob Kondreck, <u>Kondreck.Robert@epa.gov</u>

Attachments:

Laboratory Analytical Report Understanding Chemical Vapor Testing Results (DNR PUB-RR-977)

## Table: Air Data (Indoor and Outdoor) for Chemicals Sampled at 505 Grand Avenue, Little Chute, WI

| All data units in µ                       | /m <sup>3</sup> Air | Concentrations                                    | Air Concentrations                      | Comparison                       |  |  |  |  |
|---|---------------------|---|---|----------------------------------|--|--|--|--|
|   | -                   | .0/19/2023 -                                      | 12/8/2023 –                             | Comparison<br>Vapor Action Level |  |  |  |  |
|   |                     | .0/19/2023 -<br>10/24/2023                        | 12/20/2023 -                            | (Residential)                    |  |  |  |  |
| Contaminant                               |                     | 10/24/2025  | 12/20/2025                              | (Residential)                    |  |  |  |  |
| Contaminant                               |                     | le ID:  | Samala ID:                              |                                  |  |  |  |  |
|   | -                   |   | Sample ID:                              |                                  |  |  |  |  |
|   |                     | AB01_20231024<br>ment beneath                     | 01A_IAB01_20231220<br>(Basement beneath |                                  |  |  |  |  |
|   | •                   |   | •                                       |                                  |  |  |  |  |
|   |                     | apor abatement                                    | the vapor abatement<br>system in north  |                                  |  |  |  |  |
|   | -                   | m in north  | •                                       |                                  |  |  |  |  |
| DOF                                       | room                | ,   | room)                                   | 42                               |  |  |  |  |
| PCE                                       |                     | 1.4   | 8.5                                     | 42                               |  |  |  |  |
| TCE                                       |                     | No Detect   | 0.46                                    | 2.1                              |  |  |  |  |
| 1,2-DCE (Total)                           |                     | No Detect   | No Detect                               | 42                               |  |  |  |  |
| Vinyl Chloride                            |                     | No Detect   | No Detect                               | 1.7                              |  |  |  |  |
|   | •                   | le ID:  | Sample ID:                              |                                  |  |  |  |  |
|   |                     | IAB02_20231024                                    | 01A_IAB02_20231220                      |                                  |  |  |  |  |
|   | •                   | ment center of                                    | (Basement center of                     |                                  |  |  |  |  |
|   | north               | room)   | north room)                             |                                  |  |  |  |  |
| PCE                                       |                     | 0.77  | 11                                      | 42                               |  |  |  |  |
| TCE                                       |                     | 0.52  | 0.61                                    | 2.1                              |  |  |  |  |
| 1,2-DCE (Total)                           |                     | No Detect No Detect                               |   | 42                               |  |  |  |  |
| Vinyl Chloride                            |                     | No Detect No Detect                               |   | 1.7                              |  |  |  |  |
|   | Samp                | le ID:  |   |                                  |  |  |  |  |
|   | 01A_                | OA01_20231024                                     |   |                                  |  |  |  |  |
|   | (Outo               | loor air to                                       |   |                                  |  |  |  |  |
|   | north               | west)   |   |                                  |  |  |  |  |
| PCE                                       |                     | 0.77  |   | 42                               |  |  |  |  |
| TCE                                       |                     | No Detect   |   | 2.1                              |  |  |  |  |
| 1,2-DCE (Total)                           |                     | No Detect   |   | 42                               |  |  |  |  |
| Vinyl Chloride                            |                     | No Detect   |   | 1.7                              |  |  |  |  |
|   |                     |   | Sample ID:                              |                                  |  |  |  |  |
|   |                     |   | 01A_OA02_20231220                       |                                  |  |  |  |  |
|   |                     |   | (Outdoor air to west)                   |                                  |  |  |  |  |
| PCE                                       |                     |   | No Detect                               | 42                               |  |  |  |  |
| TCE                                       |                     |   | No Detect                               | 2.1                              |  |  |  |  |
| 1,2-DCE (Total)                           |                     |   | No Detect                               | 42                               |  |  |  |  |
| Vinyl Chloride                            |                     |   | No Detect                               | 1.7                              |  |  |  |  |
|   | Кеу                 |   |   |                                  |  |  |  |  |
|   | -                   | y<br>/m <sup>3</sup> = micrograms per cubic meter |   |                                  |  |  |  |  |
| Below Vapor Action Level or Not Detected  |                     |   |   |                                  |  |  |  |  |
| Above Vapor Action Level (results bolded) |                     |   |   |                                  |  |  |  |  |
| Above vapor Action Level (results bolded) |                     |   |   |                                  |  |  |  |  |



JENNY BORSKI VAPOR INSTRUSION INVESTIGATION 625 E. CTY RD Y STE 700 OSHKOSH, WI 54901-9731

Lab Workorder ID 715763 Visit/Project ID SANDIES DRY CLEANERS PO BRRTS #02-45-552222 Received December 21, 2023 Reported January 17, 2024 Report ID 11516058 Previous Report IDs

#### Dear JENNY BORSKI:

Enclosed are the analytical results for sample(s) received by the laboratory on December 21, 2023. All samples/specimens received by the laboratory were acceptable for testing. Sample results were not blank corrected, and all quality control met laboratory standards unless otherwise noted in the report narrative. All results apply to the samples as received and reported concentrations were calculated with information supplied by the sample submitter.

Please contact the lab if you have any questions concerning this report.

Sincerely,

Steve Strebel, Laboratory Director

Analyst - SARAH OEMIG



| Lab ID: 715763001   |                                | Sample ID: 01A_IAB01_20231220 |               |                    |          |         |                       | Media: 3M 3501+ or Assay 525 OVM |               |     |  |
|---|--------------------------------|-------------------------------|---------------|--------------------|----------|---------|-----------------------|----------------------------------|---------------|-----|--|
| Sampling Date:  |                                | Matrix: Air                   |               |                    |          |         | Sampled Time: 17545 M |                                  |               |     |  |
| Cis-1,2-Dichloroethene was not detected in Samples 715763001 - 715763003. |                                |                               |               |                    |          | RESULTS |                       |                                  |               |     |  |
| Analyte   | Method                         | Analysis<br>Date              | Air<br>Volume | Reporting<br>Limit | Front    | Rear    | Total                 | Air Concentration                |               | TWA |  |
| 1,2-Dichloroethene(Total)   | OSHA 1001, 1002,<br>1004, 1005 | 1/12/2024                     | 1070 L        | 4.6 ug             |          |         | <4.6 ug               | <0.0043 mg/m3                    | <0.0011 ppm   |     |  |
| Tetrachloroethene   |                                | 1/12/2024                     | 1160 L        | 0.32 ug            |          |         | 9.9 ug                | 0.0085 mg/m3                     | 0.0013 ppm    |     |  |
| Trichloroethene   |                                | 1/12/2024                     | 1280 L        | 0.29 ug            |          |         | 0.59 ug               | 0.00046 mg/m3                    | 0.000086 ppm  |     |  |
| Vinyl chloride  |                                | 1/12/2024                     | 1310 L        | 3.8 ug             |          |         | <3.8 ug               | <0.0029 mg/m3                    | <0.0011 ppm   |     |  |
| Lab ID: 715763002   |                                | ;                             | Sample ID     | : 01A_             | IAB02_20 | 231220  | Ν                     | Media: <b>3M 3501+ or</b>        | Assay 525 OVM |     |  |
| Sampling Date:  |                                | Matrix: Air                   |               |                    |          |         | Sampled Time: 17546 M |                                  |               |     |  |
|   |                                |                               |               |                    |          |         | RESULTS               |                                  |               |     |  |
| Analyte   | Method                         | Analysis<br>Date              | Air<br>Volume | Reporting<br>Limit | Front    | Rear    | Total                 | Air Concentration                |               | TWA |  |
| 1,2-Dichloroethene(Total)   | OSHA 1001, 1002,<br>1004, 1005 | 1/13/2024                     | 1070 L        | 4.6 ug             |          |         | <4.6 ug               | <0.0043 mg/m3                    | <0.0011 ppm   |     |  |
| Tetrachloroethene   |                                | 1/13/2024                     | 1170 L        | 0.32 ug            |          |         | 13 ug                 | 0.011 mg/m3                      | 0.0016 ppm    |     |  |
| Trichloroethene   |                                | 1/13/2024                     | 1280 L        | 0.29 ug            |          |         | 0.78 ug               | 0.00061 mg/m3                    | 0.00011 ppm   |     |  |
| Vinyl chloride  |                                | 1/13/2024                     | 1310 L        | 3.8 ug             |          |         | <3.8 ug               | <0.0029 mg/m3                    | <0.0011 ppm   |     |  |



#### **Final Report**

| Lab ID: <b>715763003</b><br>Sampling Date: |                                | Sample ID:<br>Matrix: <b>A</b> | : 01A_<br>Air | Media: <b>3M 3501+ or Assay 525 OVM</b><br>Sampled Time: <b>17535 M</b> |       |      |          |                   |               |     |
|--|--------------------------------|--------------------------------|---------------|---|-------|------|----------|-------------------|---------------|-----|
|  | RESULTS                        |                                |               |   |       |      |          |                   |               |     |
| Analyte                                    | Method                         | Analysis<br>Date               | Air<br>Volume | Reporting<br>Limit  | Front | Rear | Total    | Air Concentration |               | TWA |
| 1,2-Dichloroethene(Total)                  | OSHA 1001, 1002,<br>1004, 1005 | 1/13/2024                      | 1070 L        | 4.6 ug  |       |      | <4.6 ug  | <0.0043 mg/m3     | <0.0011 ppm   |     |
| Tetrachloroethene                          |                                | 1/13/2024                      | 1160 L        | 0.32 ug   |       |      | <0.32 ug | <0.00027 mg/m3    | <0.000041 ppm |     |
| Trichloroethene                            |                                | 1/13/2024                      | 1280 L        | 0.29 ug   |       |      | <0.29 ug | <0.00023 mg/m3    | <0.000042 ppm |     |
| Vinyl chloride                             |                                | 1/13/2024                      | 1300 L        | 3.8 ug  |       |      | <3.8 ug  | <0.0029 mg/m3     | <0.0011 ppm   |     |

Abbreviations:

mg = milligramsppm or ppmv = parts per million/m3 = per cubic meterug = microgramsppb or ppbv = parts per billionng = nanograms< Less Than. The analyte, if present, is at a level too low to be accurately quantitated by the method used</td>

Displayed values on report have been rounded to 2 significant figures. Please contact the laboratory if you have any questions regarding our result calculation or rounding. All samples were received by the laboratory in acceptable condition unless otherwise noted.

The results in this report apply only to the samples, specifically listed above, and tested at the Wisconsin Occupational Health Laboratory

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## **End of Analytical Report**

# Understanding Chemical Vapor Intrusion Testing Results

RR-977

#### October 2014

#### From the Lab to You

Chemical vapor samples were taken from underneath your house or building and possibly indoors as well. These samples have been tested by a certified laboratory and a report was issued. The Wisconsin Department of Natural Resources (DNR) uses these test results to determine if people in the building are being exposed to chemical vapors coming from nearby contaminated soil or groundwater, and to decide what, if any, action is needed to prevent this exposure.

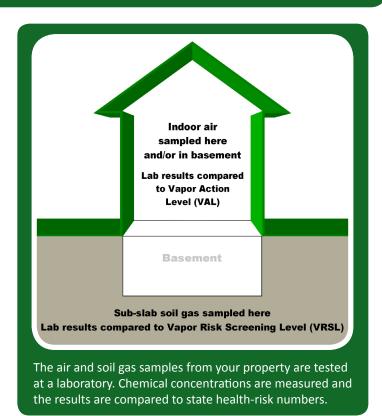
#### **Indoor Air Testing Results**

If indoor air samples were collected in your house or building, test results from the lab will be compared to the state Vapor Action Level (VAL) for chemicals of concern. The VAL is a chemical compound's numerical value that represents a health hazard risk to no more than 1 in 100,000 people during a lifetime of exposure. If test results show chemical concentrations in your air below the VAL then adverse health effects are extremely rare, even if you were to breathe the chemical at this concentration for your entire life.

Test results showing chemical concentrations in the air at or above the VAL prompt DNR to recommend that exposure to these chemical vapors be reduced. If test results show concentrations significantly above the VAL, or more than one type of chemical vapor is identified in your indoor air, the risk from exposure increases. If the concentration of any indoor chemical vapor greatly exceeds the VAL, DNR is concerned about even short-term exposure and will typically require immediate action to address the problem.

The VAL for each chemical is set by scientific research. It is protective of all people, including those who are most susceptible to adverse health effects.

If test results identify chemicals in your air that are not present in nearby soil or groundwater contamination, it is likely that these vapors are coming from some product or activity in or near your house or building. Many everyday consumer products (e.g., cleaners, solvents, polish, adhesives, lubricants, aerosols, insect repellants, etc.); combustion processes (e.g., smoking, home heating); fuels in attached garages; dry cleaned clothing or draperies; and occupant activities (e.g., craft hobbies), also release chemical vapors into the air.



#### **Sub-slab Soil Gas Testing Results**

Soil gas samples were collected from the ground beneath the concrete slab of your building foundation or basement. The lab measured the concentrations of various chemicals in these samples. DNR compares these measurements to the state Vapor Risk Screening Level (VRSL), which identifies the concentration of a chemical in soil gas that scientific research suggests can be a health risk if vapor enters a building. If soil gas measurements exceed the VRSL for a chemical of concern, action to reduce exposure is strongly recommended.

The VRSL is a higher number (higher chemical concentration) than the VAL because it is presumed that concrete building foundations and basement walls will prevent most soil gas from entering a building. Further, any soil gas that does enter a building through cracks, holes, sump pumps, drains, etc., will be diluted to some extent by the indoor air. So, people inside will not be breathing air that includes the full concentration of chemical vapors that exist in the ground.



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DNR generally relies on the test results of the sub-slab soil gas samples when determining what, if any, action should be taken related to chemical vapors coming from nearby soil or groundwater contamination. Indoor air quality is highly variable, and it is difficult to make a definitive decision about vapor intrusion based on indoor air sampling alone.

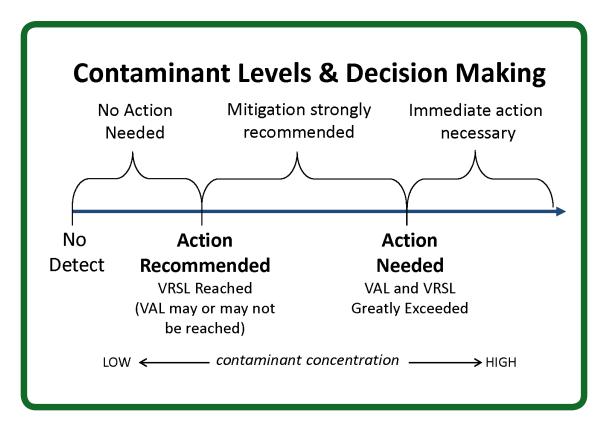
#### **Follow-Up Actions**

If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

When test results show soil gas chemical concentrations above a VRSL, both DNR and the Wisconsin Department of Health Services recommend that owners take action to reduce potential exposure. This typically involves installing a vapor mitigation system that vents chemical vapors from beneath your home or building to the outdoors, similar to a radon mitigation system.

If indoor air concentrations exceed a VAL, but sub-slab concentrations are less than a VRSL, then the chemical vapors are most likely coming from indoor sources. Steps should be taken by the house or building owner to identify the products and practices causing the problem and implement appropriate remedies.

If soil gas mitigation is recommended, a representative of the party who is responsible for the soil or groundwater contamination will contact you to discuss your options.



<u>A Note about Measurement Units</u>: The lab report may include some unfamiliar technical language. The most important point to note is whether or not the test result for a specific chemical exceeds a VAL or VRSL, which are also sometimes referred to, generically, as "screening levels."

The concentration of gaseous pollutants in air is typically described in two different ways: 1) as units of mass per volume, where  $\mu g/m3$  represents micrograms of gaseous pollutant per cubic meter of ambient air; and 2) as parts per billion by volume (ppbv), where the volume of a gaseous pollutant is compared to a set volume of ambient air. These are the numbers that are compared to the VAL and VRSL.

#### For more information, visit dnr.wi.gov/topic/Brownfields/Vapor.html

This document contains information about certain state statutes and administrative rules but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.