

SUBGROUP: Vapor Intrusion

Remediation and Redevelopment External Advisory Group



Meeting Minutes

Remediation and Redevelopment External Advisory Group – Vapor Intrusion

Tues. Dec. 5, 2023 | 2-3:30 p.m. | Milwaukee Water Commons | Adams Garden Park
1836 W. Fond Du Lac Ave. | Milwaukee, WI 53205

Action items/assignments for next meeting

- Ad hoc committee opportunity on outreach to local governments. Email Jennifer.Borski@wisconsin.gov with interest to participate.
- Ad hoc committee opportunity on certification of mitigation contractors. Email Jennifer.Borski@wisconsin.gov with interest to participate.
- **DNR:** finalize workplan based on discussion.
- **ALL:** Subscribe to the [RR EAG listserv](#) to receive information about future meeting dates, agendas, resources, and other EAG-relevant items. Zoom attendees are automatically added to the listserv; if you would like to opt out, please email Jodie.Thistle@wisconsin.gov.

Introductions

In-person attendees

- Chris Bonniwell, Chairperson, TetraTech
- Mark Rutkowski, Shannon & Wilson, Inc
- Judy Fassbender, DNR
- Cory Katzban, The Sigma Group
- Alyssa Sellwood, DNR
- Michael Prager, DNR
- Jodie Thistle, DNR
- Jody Irland, DNR
- Jennifer Borski, DNR
- Rob Hoverman, DNR
- Molly Schmidt, DNR
- Danika Hills-Paulus, Milwaukee Health Department
- Ryan Honeck, Milwaukee Health Department
- Steve Meer, The Sigma Group
- Michelle Norma, DNR
- Kraig Sadowiskow, American Construction Services Inc., American Architectural Group, Inc.
- Jim Walden, DNR

Zoom attendees

- Ashely Wagner, Cedar Corporation
- Timm Speerschneider, DeWitt LLP
- Susan Petrofske, Ramboll
- Grant Neitzel, DNR
- Michelle Cook, City of Racine
- Adam Roder, GeoSyntec Alex Amundson, WEC Energy Group
- Nathan Kloczko, DHS
- Heather Herr, GEI Consultants
- Jeremiah Yee, DHS
- Gregory Small, Minnesota Pollution Control Agency
- Heidi Woelfel, GZA
- Joseph Martinez, DNR
- Ray Tierney, SCS Engineers
- Jason Lowery, DNR
- Donald Gallo, Donald Gallo Law
- Andrea Lorenz, Foth
- Chris Valcheff, True North Consultants
- Lanette Altenbach, AECOM Technical Services
- Chad Rogness, Lifetime Radon
- Donna Volk, Ramboll
- Curtis Hedman, Department of Health Services (DHS)

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DNR Updates

- VI Mitigation Certification is being developed by the National Radon Proficiency Program (NRPP) and ANSI/AARST standards are free for viewing on AARST website.

Review Takeaways from Previous Meetings

- [Meeting notes and materials from Sept. 7, 2023](#)

Draft Work Plan Discussion (See attached)

Development of timeline, process, and recommendations for mitigation, commissioning,

- Attendees supported this item
- Developers need to know the timeline and process for database, mapping tools, and testing prior to occupancy so it can be incorporated into schedules.
- Local governments need education on the mitigation process and recommendations (e.g., occupancy after fully commissioned but at minimum after indoor air sampled once after mitigation installation).
- Department of Safety & Professional Services could be included in recommendation in permitting, process to ensure environmental issues are considered. Same with local government permitting.

Long-term stewardship

- Need to increase compliance with the long-term stewardship of vapor mitigation systems (VMSs)
- Suggestion to look into whether annual VMS inspection could become part of the local fire inspection process (similar to elevator and fire extinguisher inspections).
- Could develop an info sheet for local governments on how to protect its citizens with awareness on vapor intrusion and VMS long-term stewardship needs. DNR is gathering known local ordinances to potentially draft a model ordinance on vapor intrusion for local governments.
- Could develop outreach for realtors, bankers, and insurance agencies about environmental contamination concerns and the importance of operating VMS for protection of public health. Residential Real Estate disclosure law and VMSs.

Continuing obligations (COs)

- DNR has authority to assign vapor intrusion COs at interim action under Wisconsin Statutes 292.12(2). DNR is piloting to assign vapor intrusion COs after VMS is installed and commissioned.
- Development of procedures for assigning COs at interim action are included in proposed rule scope statement. COs replace deed restrictions with an enforceable document to the responsible party/property owner and RR databases (BOTW/RRSM).
- More outreach is needed to real estate agents about COs and BOTW/RRSM.

General discussion

- NR 726 requirement for remedy to reduce the mass and concentration if a vapor risk screening level (VRSL) is exceeded. Remediation is needed to reduce the reliance on VMS for protection.
- DHS Choose Safe Places forms are sent out to daycares by Department of Children and Family Services. Discussed if this would be an appropriate opportunity to include DNR fact sheets on environmental contamination.
- Discussed concerns with Wisconsin being a non-certified state for mitigators (radon or vapor intrusion) and possible benefits of certification and/or licensing for this field.

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- Recognized the need to prioritize trichloroethylene (TCE) due to acute risk, also tetrachloroethylene (PCE).
- Pressure field extension (PFE) testing is not a requirement in Wisconsin but it is a best practice and is included in the ANSI/AARST standards. PFE testing prior to mitigation enhances the trust in the overall design. This could be an area to consider for NR 700 in future.
- Wisconsin is currently a leader in vapor intrusion with a focus on being protective, educating, and developing partnerships to increase protection.

Next meeting date

- Remediation and Redevelopment External Advisory Group (EAG) – Jan. 25, 2024
- RR EAG Subgroup Series – Feb. 28, 2023

Adjourn

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Vapor Intrusion Subgroup Work Plan

| Chairperson | DNR Representatives | Participants* |
|-----------------------------|------------------------------------|---|
| Chris Bonniwell, Tetra Tech | Jennifer Borski Judy Fassbender | Chad Rogness, Lifetime Radon Solutions Heidi Woelfel, GZA GeoEnvironmental, Inc. Nathan Kloczko, DHS Curtis Hedman, DHS Rob Hoverman, DNR Jodie Thistle, DNR Joshua Davenport, KPRG and Associates, Inc. Michael Prager, DNR Chris Valcheff, Truth North Consultants Corey Pagels, Shannon & Wilson, Inc. Stephen Meer, The Sigma Group James Walden, DNR Andrea Lorenz, Foth Jeramiah Yee, DHS Kurt McClung, SET Environmental Lanette Altenbach, AECOM Technical Services Toni Schoen, The Sigma Group Jacob Krause, SCS Engineers Lynelle Caine, Stantec |

*Participants who attended the Sept. 7, 2023 RR EAG Vapor Intrusion subgroup meeting. All meetings are open to the public.

PURPOSE/OBJECTIVE

The Wisconsin Administrative Code chs. 700-799 (“NR 700”) rules are the road map for the restoration of contaminated sites in Wisconsin. Relevant program policies and guidance that promote consistent application of NR 700 rules and protection of public health from environmental contamination are essential to the RR Program’s success and sustainability. Proactive education and communications for awareness of potential chemical vapor intrusion (VI) from reported and unreported contamination is essential for protection of Wisconsin citizens from VI. The objectives of the VI subgroup are to:

- (1) advise on legislative action related to vapor intrusion affecting the program,
- (2) enhance communication and education with the regulated community, including municipalities, responsible parties, affected property owners, environmental consultants and mitigators,
- (3) assure best management practices are utilized for mitigation of vapor intrusion, and
- (4) enhance resources for more efficient communications related to vapor intrusion.

Meeting these purposes/objectives includes providing recommendations for implementation that consider and incorporate environmental justice.

DELIVERABLES AND MILESTONES

- Municipality education to develop better relationships with communities so vapor intrusion is thought about in many stages – occupancy to consider all environmental hazards, redevelopment, permitting, planning, etc.
- Communication on general chemical use from occupants.

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- Off-site property owner education including non-English speakers.
- Uniform reporting format for sharing building-specific results with diagram.
- Mitigation regulation through certification.
- Education and incentives for telemetry.
- Long-term stewardship of vapor mitigation systems including on-line reporting for confirmation of system effectiveness.
- Database and mapping tools to communicate with municipality databases for better consideration of vapor intrusion at all stages of municipal work.
- Enhance partnership with Department of Safety and Professional Services (DSPA) regarding regulated entities related to vapor intrusion (e.g., building inspectors, plumbers, electricians).
- Enhance partnerships with Department of Health Services (DHS) and Department of Children and Families (DCF) regarding radon in relation to potential chemical vapor intrusion.

EXPECTED OUTCOMES

- Advise on legislative actions affecting the program
- Provide feedback on needed and proposed policy revisions
- Enhanced partnerships with state agencies and other stakeholders
- Mitigation regulation through certification
- Enhanced database and reporting
- EJ incorporated into policy revisions and implementation

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Remediation & Redevelopment External Advisory Group Vapor Intrusion Subgroup

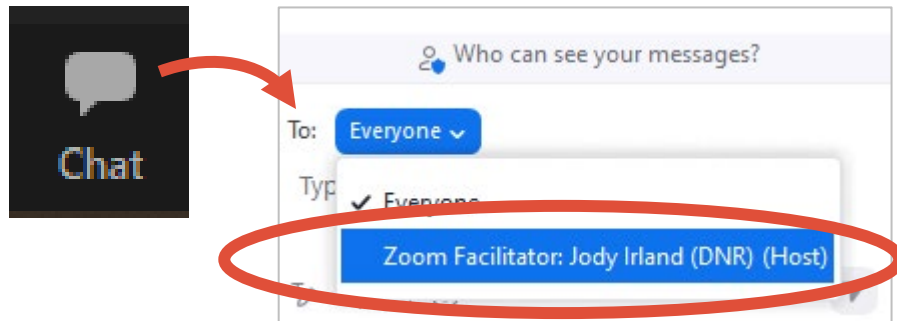
December 5, 2023

Zoom Meeting Logistics

All attendees are muted

Written Comments/Questions

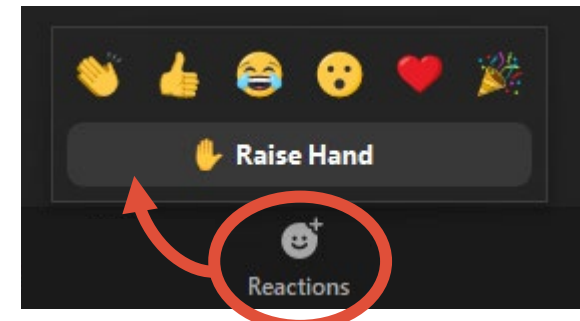
- Use **chat** and select Zoom facilitator in the “To” dropdown
- Remarks will be read out loud by facilitator



(direct message)

Verbal Comments/Questions

- **Raise hand** to request a turn to talk (* 9 on phone)
- Please unmute when your name is called (*6 on phone)



Agenda

- Introductions
- DNR Updates
- Review Takeaways from Previous Meetings
 - Summary of the EAG VI Subgroup Path
- Draft Work Plan Discussion
- Next Steps and Assignments
- Adjourn

Find agenda and meeting materials at
[dnr.wisconsin.gov/topic/
brownfields/rreag](https://dnr.wisconsin.gov/topic/brownfields/rreag)
under “meetings”

Future Meeting Dates

➤ Sign up
to receive notifications for RR EAG
and subgroups
dnr.wi.gov/topic/brownfields/rreag

RR EAG - January 25, 2024

- 1 – 4 p.m.

Subgroup Series – Feb. 28

- 10 a.m. – 5:30 p.m.
- Madison GEF 2

RR EAG - April 11, 2024

- 1 – 4 p.m.

Subgroup Series – May 29

- 10 a.m. – 5:30 p.m.
- Madison GEF 2

RR EAG - July 25, 2024 (tentative)

Introductions



DNR Updates

DNR Vapor Intrusion Web Resources

Vapor Intrusion topic page includes:

- VI Resources for Public - **existing**
- VI Resources for Local Governments - **new**
- VI Resources for Environmental Consultants – **existing**
- Vapor Intrusion Prevention and Partnership Toolkit – **existing**
- Fact Sheet: What is Vapor Intrusion, RR-982 – 2014 version
- Vapor Intrusion 101 Video - **existing**
- Mini tiles to most used resources

dnr.wisconsin.gov/topic/vapor

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

HOME FINDING PAGES CLIMATE ENVIRONMENT FORESTRY LICENSES NEWS ABOUT CONTACT

VAPOR INTRUSION

Chemicals used in commercial activities – such as dry cleaning chemicals, chemical degreasers and petroleum products like gasoline – are known as volatile organic compounds (VOCs). Spilled or disposed VOCs can leak into soil and groundwater and stay for decades. VOCs can become a gas or vapor and enter buildings. This process is known as vapor intrusion which has been linked to some short- and long-term health effects.

HELP FOR PROPERTY OWNERS, OCCUPANTS AND THE PUBLIC

RESOURCES FOR LOCAL GOVERNMENTS

RESOURCES FOR ENVIRONMENTAL PROFESSIONALS

VAPOR INTRUSION PREVENTION AND PARTNERSHIP TOOLKIT

WHAT IS VAPOR INTRUSION?

VAPOR INTRUSION 101

DRY CLEANING CONTAMINATION

PUBLICATIONS & FORMS

TRAININGS AND PRESENTATIONS

GREEN TEAM ASSISTANCE

REGENERATION & REDEVELOPMENT (RR) PROGRAM

PUBLIC INPUT OPPORTUNITIES

EXTERNAL ADVISORY GROUPS

Report Spills Immediately
1-800-943-8003
Wisconsin's 24-hour Emergency Hotline

RR Submitted Portal

RR Report Newsletter

WISCONSIN DEPARTMENT OF NATURAL RESOURCES | DNR.WI.GOV

DNR Vapor Intrusion Web Resources

VI Resources for Local Governments webpage includes:

- VI overview
- Occupancy authority
- VI contacts
- Vapor Toolkit (VIPPI)
- Vapor Sources
- Investigation info
- Mitigation including NRPP-certified mitigator experienced with VI
- Health

dnr.wisconsin.gov/topic/Vapor/LocalGovtResources.html

The screenshot shows the Wisconsin Department of Natural Resources website page for 'VAPOR INTRUSION RESOURCES FOR LOCAL GOVERNMENTS'. The page includes a navigation bar with links for 'HUNTING', 'FISHING', 'PARKS', 'CLIMATE', 'ENVIRONMENT', 'FORESTRY', 'LICENSES', 'NEWS', 'ABOUT', and 'CONTACT'. The main content area features a title 'VAPOR INTRUSION RESOURCES FOR LOCAL GOVERNMENTS' and a sub-header 'TOPIC: VAPOR INTRUSION'. The text explains that certain chemicals can enter buildings through cracks and other openings, and that contaminated vapors can accumulate and become a health risk. It also mentions that the DNR does not have the authority to regulate building occupancy, which is typically regulated by local authorities. A diagram illustrates various sources of vapor intrusion, including leaking underground petroleum storage tanks, old dry cleaning facilities, and soil vapor migration. The diagram shows a house with people inside, and arrows indicating vapor entering through cracks in the floor and through a utility line. Below the house, the ground is shown with a utility line, soil, and groundwater. Labels include 'Utility line', 'Vapor intrusion through floor wall cracks', 'Vapor intrusion through air vent discharging solvents from old dry cleaning facilities', 'Soil contaminated with VOCs', 'Soil vapor migration', 'Groundwater plume of VOCs', and 'Bedrock'. A caption below the diagram states 'Vapors can enter a building from many sources and locations.' The page also includes a 'For more information, contact:' section with contact information for Jennifer Borski and Jim Walden. At the bottom, there is a table of contents with expandable sections: CONTACTS, FINDING CONTAMINATED SITES IN YOUR COMMUNITY, SOURCES, DEFINING THE PROBLEM, MITIGATION FOR VAPOR INTRUSION, and HEALTH.

Indoor Environments (formerly AARST) 2023 Radon & Vapor Intrusion Symposium

- Jennifer Borski, DNR, presented on Wisconsin's Vapor Intrusion Zone Contract (VIZC)
- Update on national chemical vapor intrusion mitigation certification
- Mitigation technology updates
- New Department of Health Services (DHS) Radon Coordinator – Amanda Bagin
- American National Standards Institute (ANSI) / American Assoc. of Radon Scientists & Technologists (AARST) Standards – **updates effective 12/1/2023**
 - Single Family Mitigation
 - Multi-Family, Schools & Large Buildings Mitigation (combined)
 - New Construction
 - *Coming in April 2024: Operations Monitoring & Maintenance (OM&M) (long-term stewardship)*
 - *Forming: Soil Gas Sampling (VI)*



Assoc of Vapor Intrusion Professionals (AVIP) 2023

- Jim Walden presented on passive samplers
- Jennifer Borski presented on VI in the news and subsequent VI communications efforts
- Regulator Updates from AL, MI, MN, NC, TN, WI
- U.S. EPA Updates: Environmental Justice, Risk Assessment, Office of Research & Development
- University of Kentucky Research: new plumbing that passes inspection leaks vapors
- AVIP Workgroups 2023-2024:
 - Active & Passive Samplers
 - VI Conceptual Site Model
 - Existing Buildings
 - New Buildings



Summary of EAG VI Subgroup Path

Initial idea
during EAG

July 2023

Sep. 2023

Chairperson
announced

Oct.. 2023

Next task:
Finalize the VI
subgroup work
plan

Inaugural
subgroup meeting

- Introduction to VI
- Discussed initial work plan ideas

DNR VI Priorities

- Provide education for a variety of stakeholders and protect the public health
- Identify and prioritize high risk sites
- Assess public risk for stalled chlorinated solvent sites
- Increase success of vapor mitigation installations and long-term stewardship of systems
- Identify locations of potential historical chlorinated solvent sources for local government planning purposes



July – Sept 2023 EAG VI Work Plan Goals

- Process for DNR to proactively reach out to local governments without data in-hand first
- Expand opportunities and community partnerships for DNR sponsored continuing education
- Enhance partnerships with chemical vapor intrusion mitigation professionals

Draft Work Plan Discussion

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Next Steps and Assignments

