ISSUE PAPER

ESTABLISHMENT OF A VAPOR CONTAMINATION, MITIGATION, and STEWARDSHIP CLEANUP FUND

Funding Sustainability EAG Subgroup

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This proposal and recommendations were developed by the Remediation and Redevelopment External Advisory Group and members of the public, and do not necessarily represent the opinions or the position of the Wisconsin Department of Natural Resources or other state agencies.

ISSUE STATEMENTS

According to the Wisconsin Department of Health Services (DHS), the vapor intrusion pathway poses a significant risk to human health. Acute risks from contaminants of concern (specifically perchloroethene [PCE] and trichloroethene [TCE]) necessitate immediate corrective action consistent with the EPA Regional Removal Management Users Guide. An immediate corrective action is a short-term clean up intended to stabilize or clean up a site that poses an imminent and substantial threat to human life and the environment.[1]

Currently, there are no dedicated funding programs in place to provide financial assistance for the identification, investigation, mitigation, long-term monitoring and stewardship of properties affected by harmful chemical vapors associated with abandoned drycleaners, manufacturing facilities, automobile maintenance/repair, or any other facility or operation that used and released volatile organic compounds (specifically PCE and TCE) to the environment.

The current Dry Cleaner Environmental Response Fund (DERF) is insolvent and is not able to keep up with the existing reimbursement requests. Governor Evers' FY26-27 budget proposed establishment of a new funding program (Revitalize Wisconsin) intended to replace DERF and provide financial assistance in the form of grants or direct services to local governments, dry cleaners, and private parties, and others. This budget proposal was not enacted.

PROPOSAL

This proposal is for the establishment of a vapor contamination, mitigation and stewardship cleanup fund to address the risks to human health associated with the vapor intrusion pathway. This proposal includes a discussion on:

[1] EPA Regional Removal Management Levels (RMLs) Users Guide; November 2024.

- A site scoring matrix model for determining eligibility criteria for selecting sites to receive funding;
- Specifying sensitive populations exposed to intrusive vapors; and
- Identifying unresolved issues and recommendations associated with previous funding mechanisms.

BACKGROUND

According to the DHS, the vapor intrusion pathway poses a significant risk to human health. Numerous studies have demonstrated that the air in buildings overlying soil or groundwater contaminated with toxic vapor-forming substances may contain potentially harmful concentrations of these contaminants due to vapor intrusion.[2]

Vapor Intrusion Health Risks

Vapor intrusion refers to subsurface contamination that can volatilize and the vapors enter the breathing space of buildings. Vapor intrusion may also occur when contaminated groundwater infiltrates buildings, and contaminants directly volatilize into the indoor air. Vapors can migrate through air space in permeable soils, fractures in bedrock or clay till, utilities, sumps, or cracks in the building foundation.

Chlorinated solvents like PCE and TCE do not degrade in the vadose zone[3] when volatilized and can migrate long distances from the source of contamination via groundwater in a dissolved phase or via preferential pathways in the vapor phase. Additionally, PCE and TCE are known to have potential health effects at low concentrations that cannot be detected by their odor.

There is a significant risk to human health associated with inhaling volatile organic vapors, specifically from chlorinated solvents PCE and TCE migrating from contaminated soil and groundwater into buildings. Vulnerable groups for PCE and TCE exposure include children, the elderly and especially persons who can be or are pregnant and unborn children. With exposure to PCE or TCE the following pregnancy and fetal development health effects have been found: choanal atresia,[1,2] eye defects,[1,2] low birth weight,[3,4] fetal death,[1,3,5] major malformations,[6,7] miscarriage,[8,9] neural tube defects,[1,2,3] oral cleft defects,[1,2,3] and small for gestational age.[1] Additionally, breast,[10] cervical,[11] and ovarian[11] cancer were found in women exposed to PCE or TCE. Lastly, esophageal cancer,[12,13,14] lung cancer,[15] Hodgkins disease,[11] prostate cancer,[11] rectal cancer,[14] impaired immune systems function,[16] neurological effects,[9] neurobehavioral performance deficits,[16,17] and severe generalized hypersensitivity disorder[18] were all associated with elevated PCE or TCE exposure.

[2] EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings. EPA Publication EPA 530-R-10-002 (March 2012).

[3] The vadose zone, also known as the unsaturated zone, is the area between the upper land surface and the top of the water table. *Groundwater*; Freeze & Cherry 1979.

The nature and extent of the health risks associated with acute and long-term exposure to volatile organic vapors (especially PCE and TCE) have also been presented to the DNR in a series of interdepartmental letters from DHS. These letters are attached as reference confirming the risks associated with acute and chronic exposure to chlorinated solvent vapors in air, particularly TCE.

Long Term Stewardship

One concern regarding vapor intrusion sites is identifying someone who can maintain and monitor a vapor mitigation system long term. This is an issue for sites with viable RPs and those without. Currently, there are no funding mechanisms available for long term operation, monitoring and maintenance (OM&M) of vapor mitigation systems for sites without a viable RP. DNR is only able to fund OM&M of existing vapor mitigation systems in a very limited number of cases using state environmental repair funds. In addition, sites with a viable RP typically do not pay for long-term OM&M beyond case closure. The need to ensure protection of human health after an interim action to install the vapor mitigation system or beyond closure is very important. The current system of assigning continuing obligations that the property owner must follow is generally not effective with regards to successfully maintaining vapor mitigation systems.

VAPOR CONTAMINATION, MITIGATION, AND STEWARDSHIP CLEANUP FUND SCOPE OF WORK

Objectives

The Funding Sustainability subgroup of the EAG proposes the fund to be a stand-alone program that provides financial relief for the investigation, mitigation, and long-term OM&M of systems designed to reduce the concentrations of vapors as result of historical and existing releases of volatile organic vapors (especially PCE and TCE) to the environment as well as to reduce the mass and source of contamination. As proposed, the fund will provide financial assistance for:

- Source identification (soil, groundwater, and vapor investigations);
- Protection of building occupants (design, installation, and commissioning of vapor mitigation systems);
- Long-term stewardship of vapor mitigation systems, including OM&M costs (pre- and post-case closure); and
- Source cleanup/reduction to reduce or eliminate need for vapor mitigation.

As proposed, the fund will be administered by the DNR. The DNR has experience managing funding programs including the Petroleum Environmental Cleanup Fund Act (PECFA), the Drycleaner Environmental Response Fund (DERF), Wisconsin Assessment Monies (WAM) and Ready for Reuse. The DNR could establish similar forms, procedures and staff to administer this new fund.

Site Eligibility

The Funding Sustainability EAG Subgroup (FS Subgroup) proposes criteria for site selection based on a Site Selection Scoring-Matrix that provides a tool for relative comparative analysis of sites that apply for funding under this program.

The Site-Selection – Scoring Matrix simplifies the site eligibility determination by utilizing human health risk-based criteria as the basis for fund award prioritization.

For the sake of fund eligibility, an innocent landowner is defined as a bona fide purchaser of an inactive hazardous substance or waste disposal site without knowledge or without reasonable basis for knowing that hazardous substance or waste disposal had occurred or a person whose interest or ownership in the inactive hazardous substance or waste disposal site is based on or derived from a security interest in the property.[4]

Site Selection - Scoring Matrix

A model for a site Scoring Matrix is proposed as a screening tool for relative comparative analysis to determine which sites would be eligible for funding. Scores ranging from 0 to 10 points were assigned to a site based on three categories and ten subcategories. Sites with the highest scores would be the ones eligible for funding. An example of the type of scoring matrix that could be used is attached.

The Scoring Matrix was divided into these three separate categories:

- Site Specific
- Regulatory/Compliance
- Public Interest

Factors considered for the Site-Specific assessment included a cumulative hazard index, occupancy, unmitigated exposure levels, and type of building. Regulatory/compliance considerations based on whether or not the source area was defined or delineated, if a RP was identified, the financial solvency of the RP and if access agreements were in place to complete any inspections or site assessment work. The sites selection process should also consider other public policy goals stated in law .

Sensitive Populations

The impact of intrusive vapors, even at short exposure durations, can have a disproportional detrimental effect on sensitive populations that may result in adverse health impacts or even hazardous conditions. Sensitive populations are more likely than other persons in the general population to experience illness due to exposure to intrusive vapors.

[4] Notification of an Inactive Hazardous Substance or Waste Disposal Site. North Carolina Department of Environmental Quality.

As a result of their health condition, age, or previous exposure to intrusive vapors, members of the sensitive population may spend more time inside buildings than out. Examples of intrusive vapor exposure pathways for the sensitive population includes:

- A legally permitted residence, including, but not limited to, a private home, apartment, condominium unit, group home, dormitory unit, retirement home, or shelter
- A health care facility, including, but not limited to, any hospital, medical clinic, community clinic, medical center, nursing home, elderly housing, long-term care facility, hospices, convalescent facility, or similar live-in housing
- A school, including, but not limited to, preschool, prekindergarten, or school maintaining kindergarten or any of grades 1 to 12, inclusive
- A licensed daycare facility
- A community center
- An established community place of worship
- A public playground, public recreation field, or public recreation center

This program should be created to consider targeting funding to sites based in part on the risk of vapor exposure to sensitive populations. The site scoring matrix should include consideration of exposure to sensitive populations.

Potential Funding Sources

To accomplish the objectives listed above, the subgroup also proposes the following funding mechanisms for consideration.

- Reintroduction of Revitalize Wisconsin (former Assembly Bill 1055);
- Creation of an Environmental Stewardship tax credit program for companies doing business in the State of Wisconsin;
- Capture gas tax revenue used on former PECFA program;
- Lottery Credits/Funding;
- Movement of fees for environmental programs (matching funds, cost-recovery, fines) from general fund back to DNR;
- Stand-alone program funded though legislative/statutory process;
- Vapor Mitigation System Inspection Fees;
- Create Environmental Bonding Authority exclusively for Environmental Repair Sites;
- Environmental surcharges for development at non-brownfield sites; and
- Prime Real Estate development fees.

Some of these revenue sources would require additional research/analysis as well as additional resources for fee collection and implementation. It is the opinion of this subgroup that legislative support is needed to establish the fund as a solution to the vapor intrusion health risks discussed in this issue paper.

FUND Awards

Developers, private property owners, tribes and local units of government will be eligible to apply for funding as long as the applicant did not cause the hazardous substance discharge. The intent of the fund is to provide protection of human health from harmful intrusive vapors under risk scenarios as ranked by the Site Selection – Scoring Matrix. An applicant would need to demonstrate financial need via a thorough vetting process and according to their Site Selection – Scoring Matrix ranking.

Since the potential health risks may be unknown, use of the fund can also be accessed by local and state government administrative staff (e.g., local health departments, DNR). Administrative fund use would apply to any of the direct services determined by the governing agency. Administrative fund use would include investigation, remediation and long-term OM&M costs.

All of the money used under the fund would be subject to cost-recovery either via a RP, insurance policy reimbursement or formal legal action or other mechanism not identified here. Entities that apply for funding that have assets above threshold values (to be determined) may utilize the fund but would be subject to cost recovery with an interest component. Any funds obtained from the cost recovery process would come back to the DNR to be used for administrative support (FTE/LTE) and fund program continuation.

Funds dispersed would be in the form of:

- Grants
- Short-term loans
- Cost reimbursement (similar to PECFA)
- Any method previously employed by the DNR from previous program administration

RECOMMENDATIONS

The FS Subgroup recommends:

- Not to redefine the terms that are already defined in state and federal statutes;
- Agency Discretion similar to that of the EPA Enforcement Discretion be employed to determine the eligibility of an innocent landowner under the fund;
- A first-in/first-out policy is **not** implemented for the fund. First-in/first-out can limit funding opportunities for the general public and create funding inequities in the fund seen in other programs; and
- Funding should also be available to innocent landowners required to mitigate hazardous vapors as part of an emergency response.
- The establishment of the fund would support remediation and continuing obligation system OM&M at all sites, not just those that are desirable for redevelopment.

RESOURCES NEEDED

Bipartisan Legislative support is needed to establish the fund as a mechanism to provide financial relief support and resources to the DNR to administer the program.

The fund proposal and recommendations were created under the assumptions that the Funding Sustainability Subgroup was to approach the issue statements from a high level. It would be the DNR's responsibility for refining the recommended methods and implementation of the fund.

ATTACHMENTS

Attachment A: DHS letters to the DNR

Attachment B: Site Scoring Matrix

Attachment C: DNR Comments

SOURCES

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[20] Notification of an Inactive Hazardous Substance or Waste Disposal Site. North Carolina Department of Environmental Quality.

ATTACHMENT A: DHS LETTERS TO THE DNR

ATTACHMENT B: SCORING MATRIX

Possible Scoring Matrix

Cumulative Hazard	Occupancy
Multiple Contaminants - 10 Single with High hazard index -5 Single with Low hazard index – 3	High Risk Occupants – 10 Occupied Space 10+ hours/day – 10 Occupied Space 5-9 hrs/day -5 Average intermittent occupation (< 5 hrs/day) 3
Unmitigated Exposure Level	**Type of Building**
5x's calculated exposure limit – 10 2-4 x's calculated exposure limit – 5 At or below calculated exposure limit - 1	Residence – 10 Business – 5 Intermittently occupied space -3

ATTACHMENT C: DNR COMMENTS

The RR Program appreciates the efforts of the Fees and Funding Sustainability Subgroup.

Statutory and rule changes would be required to implement some of the options presented. Recommendations in this proposal will require careful consideration of the RR Program's ability to implement, such as capacity for increased workload and whether the program could acquire the expertise to determine financial need.

Responsible parties (RPs) are required by Wis. Stat § 292.11 and the Wis. Admin. Rule Series NR 700-799 to address vapor intrusion on the source property, in rights-of-way (ROWs) and any affected off-site properties. As a result, many sites are investigated, remediated and mitigated for vapor intrusion effectively by the RP. Also, some brownfield properties that are cleaned up and redeveloped by local governments and the private sector include vapor intrusion concerns that are addressed as part of the site cleanup and redevelopment. However, many sites with significant health concerns are not of interest for redevelopment and there are a large number of sites that do not have a financially viable RP to address vapor intrusion.

The DNR has federal funds from its EPA Brownfields Assessment Grant to conduct a limited amount of vapor investigation work at properties that are suspected to be highly contaminated due to historical uses. This funding is only available for a limited time and not sufficient to address all locations with health concerns. These brownfields grant funds are restricted to address properties with historical use of chlorinated solvent, with the initial effort looking at only three out of hundreds of historical dry cleaner locations in the city of Milwaukee.

The DNR also has a limited amount of state environmental repair fund dollars that are used statewide for vapor assessment and mitigation at open sites with significant health concerns that are not moving forward by the identified RP. The environmental repair funds are used:

1. to sample sub-slab and indoor air at residential properties potentially impacted by vapor intrusion and
2. to sample soil gas and sanitary sewers to evaluate the extent of the vapor issues in the ROW.

DNR investigated five sites in FY 2023 as described above, four sites in FY 2024 and two sites in 2025. Additional sites may be investigated if funding is available. DNR is aware of more than 100 open sites with known or potential VI impacting residential properties that are not being adequately addressed.

Remediation and Redevelopment External Advisory Group

ISSUE PAPER

CONCEPTUAL SITE MODELS AND SITE INVESTIGATIONS

NR 700 EAG Subgroup

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This proposal and recommendations were developed by the Remediation and Redevelopment External Advisory Group and members of the public, and do not necessarily represent the opinions or the position of the Wisconsin Department of Natural Resources or other state agencies.

TYPE OF RECOMMENDATION

This issue paper includes recommendations for revising DNR administrative rules, creating or revising DNR guidance materials, and instituting changes to internal DNR processes.

BACKGROUND

The goal of this issue paper is to explore specific issues that arise under ch. NR 716 and identify solutions for improving clarity and regulatory efficiency.

This issue paper identifies seven topics for future action:

1. Conceptual Site Model
2. Site Investigation Scoping and Work Plan Preparation
3. DNR Technical Review Requests
4. Groundwater
5. Lab Data Interpretation
6. Visual Aids
7. Iterative Site Investigation (SI) & Comprehensive Site Investigation Report (SIR)

This issue paper summarizes results and recommendations; **Attachment A** provides full background and detailed proposals on each topic.

PROPOSAL

This issue paper identifies topics for administrative rule development, guidance template development, or for DNR internal process adjustments. **Attachment A** provides full background and detailed proposals on each topic.

RESOURCES NEEDED

Items identified within this issue paper for administrative rulemaking are, as a single rulemaking effort, estimated to take approximately 2,000 staff hours. The rulemaking also involves the support of an appointed rule advisory committee during rule development, public communications and involvement during the rule development, economic impact, and public hearing processes.

Guidance development involves staff time and public input. The amount of staff time for these activities varies widely based on the type of guidance (template, form, guidance) and whether it is new or revised.

Changes to internal DNR processes involve staff time and vary depending on the nature/impact of the change. In some cases, changes to internal DNR processes may involve the need for additional staff.

DRAFT

COMMENTS

Changes proposed in this paper are intended to improve regulatory efficiency, which would benefit regulated parties through time/cost savings and improves the DNR's ability to carry out its statutory duties under Wis. Stat. § 292.11. Improvements are anticipated to benefit Wisconsin residents, through better protection of human health and the environment by:

- Reducing responses to insufficient documentation (reports);
- Identifying potential exposures to receptors earlier in the cleanup process;
- Creating documents or diagrams that may be used to communicate environmental issues at a site;
- Allowing more efficient responses to potential exposures to contamination; and
- Reducing the time spent on investigation (getting to cleanup faster).

Parts of this proposal contemplate that administrative rule revisions would result in increased fees for DNR technical assistance under Wis. Admin. Code chs. NR 700-799. During issue paper drafting, the participants raised the following concerns:

- The impact of requiring DNR approvals for additional reports, along with DNR review fees, may disproportionately affect smaller entities (under B. Site Investigation (SI) Scoping).
- Concerns with the identified approach of instituting a graduated scale for expediting reviews, such that regulated parties may pay a higher DNR technical assistance fee for faster review (under C. DNR technical review requests).

Increased or graduated-scale DNR service fees could have a disparate impact on small businesses and organizations that cannot compete with larger, better-resourced businesses and organizations. Overall communities would benefit broadly from better protection of human health and the environment.

ATTACHMENTS

Attachment A: Background

Attachment B: DNR Comments

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ATTACHMENT A: BACKGROUND

CONCEPTUAL SITE MODEL (CSM)

Issue background (CSM):

Interstate Technology and Regulatory Council (ITRC) defines a CSM as "a three-dimensional visualization of site conditions that allows for evaluation of contaminant sources and affected media, migration pathways and potential receptors".

Administrative code does not explicitly name a CSM as a requirement, although many components of a CSM are necessary to complete a site investigation in accordance with ch. NR 716. A CSM is an ongoing/living model or diagram that starts during site investigation scoping and builds with each iteration of the investigation and when remedial actions are taken. However, administrative code does not define CSMs and does not clarify when CSM development should begin or how to present a CSM as part of the site investigation (SI) process, the remedial action options report (RAOR), the remedial action plan (RAP), or case closure request.

Wis. Admin. Code § NR 716.15(3)(a) requires the SI report to include the scoping information identified in § NR 716.07.

Typically, RPs do not submit a Site Investigation Work Plan (SIWP) to the DNR, nor is a presentation of the § NR 716.07 scoping information included in the SI report; therefore, it is difficult for the DNR to understand what is being investigated, how the history of the site is related to the reported contamination, potential receptors, etc.

The CSM is critical to developing a complete SI report. A CSM in a flexible format is needed with updates throughout the investigation, remedy, and closure. Further, examples for simple vs. complex sites and well-defined parameters are needed. The results and data interpretation sections of the SI report should rely heavily on and reference the CSM.

With exception to scenarios when immediate or interim action is appropriate, the RP should demonstrate that the SI is complete before conducting remediation/response action and before case closure is requested. It is common that the SI is not complete prior to initiating remedial action. Many SI reports are submitted with or just prior to case closure and without enough information to demonstrate that the SI is complete. Also, frequently the case closure request is the first submittal received with a request for DNR technical assistance review (with fee) and response. Most cases are not closed following the initial case closure request, because additional SI work is needed.

Proposal (CSM):

Administrative code changes and guidance development are recommended.

- Code changes could require the development of a CSM as defined by ITRC. This definition, which specifically calls for a three-dimensional visualization, may require clarification so that regulated parties have the flexibility to present a CSM that is

appropriate for the complexity of the site. Proposed code language would clarify that a plan view and a section view is required; however, a complex 3-D visual computer model is not required.

- Code changes could require a CSM to be developed and maintained as a communication and decision- making tool throughout the Wis. Admin. Code chs. NR 700-799 process. Code changes could outline the following potential CSM steps:
    - Begin developing a CSM when a hazardous substance discharge is reported.
    - Evolve the CSM as scoping information is gathered.
    - Include the initial CSM in the submittal of an SIWP and include updated CSMs with subsequent submittals throughout process, including closure.
    - As site investigation data are collected, update the CSM.
    - Include the CSM in the SIR and show the nature, degree, and extent of contamination in all affected media, migration pathways, and receptors of contamination.
    - The CSM directly supports the RAOR/RAP in evaluating remedial options.
    - Include the CSM in the closure application to demonstrate that the site investigation is complete, how the response/remedial actions addressed the contamination, and that engineering controls address residual contamination in a manner that is protective of human health and the environment.
- Guidance could supplement code revisions to assist regulated parties. CSM examples as part of a guidance document could be created for simple and complex sites. Templates may be needed.

SITE INVESTIGATION (SI) SCOPING AND WORK PLAN PREPARATION

Issue background (SI Scoping):

The Site Investigation Work Plan (SIWP) requires scoping information (NR 716.09). Responsible parties do not submit SIWPs to the DNR for most cases, although they are required for the initial investigation and desired for iterations of investigation when the initial investigation indicates more work is needed. Regulated parties risk a delay in the cleanup process due to an incomplete SI if they do not submit a SIWP. If no SIWP is submitted, it is difficult for the DNR to understand how and why an investigation was scoped and other DNR document reviews and responses can take longer as DNR staff work to understand site conditions and work plan decisions. Submittal of work plans should be required for each iteration of site investigation. The SI can expand in detail and complexity over time. It is difficult and time-consuming to determine compliance based on multiple SIWP reviews that don't include previous scoping information or provide the evolving understanding of the site conditions.

The Site Investigation Report (SIR) requires scoping information (NR 716.15, NR 716.07). SIWP and SIRs are difficult for the DNR to review without adequate background information and presentation of general site conditions.

The pace of the investigation should be considered when developing a SIWP. For investigations where the responsible party needs to move forward quickly, but multiple field iterations are anticipated, consider stepped or dynamic work plan approaches that outline

how an RP will move forward with additional investigation based on the initial fieldwork (e.g., stepping out monitoring wells based on specific pre-defined criteria).

Phase I ESA /AAI or desktop ESA-like documents could provide background information. Other states like Minnesota and Indiana require a Phase I ESA as part of entry into some programs.

Proposal (SI Scoping):

Administrative code revisions are recommended:

- Require submission of SIWPs and scoping information, including CSM info. Leave flexibility in code to add certain scoping information only when relevant to the site.
- Require SIWPs to be submitted for DNR technical assistance/review (with fees) when additional SI field work is proposed.
- Require subsequent SIWPs to be submitted with a DNR technical assistance fee (per plan) when additional investigation steps are proposed.
- Enable the DNR to outline the content of SIWPs (e.g., SIWP checklist) which may include quality assurance information or sampling and analysis strategies.
- Enable DNR to require iterative SIWPs to contain all previous background data and evolving understanding of site conditions based on field investigation results and/or clarify whether additional SIWPs require all previous background data that was submitted as part of previous SIWP.

Further research and potential inclusion as administrative rule changes is recommended for the following:

- For required scoping information, consider requiring information the history of site, the receptors, and its status as a wetland, archeological site or other special consideration plus site specific climatologic information).
- Research requirements regarding “sensitive receptors” in other states and consider these approaches for inclusion in administrative rule changes.
- Consider inclusion of a requirement to submit Sampling and Analysis Plans (SAPs).
- Consider inclusion of a requirement to submit Standard Operating Procedures (SOPs) for fieldwork.
- Consider including the ability for DNR to request Quality Assurance Project Plans (QAPPs) at specific sites in addition to the quality assurance and control information currently required under NR 716.13.
- Consider establishing a combined DNR technical assistance fee for SI/RAORs and RAOR/RAPs.

DNR TECHNICAL REVIEW REQUESTS

Issue background (DNR technical review requests):

The DNR receives very few technical assistance requests (with fees) for SIWPs, SIRs, or RAORs. The lack of DNR technical oversight for these submittals may compound issues and delays and reduce efficiency in cleanup.

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Requiring technical assistance (with fee) for all SIWP submittals is likely to result in feedback to the RP that ensures compliance with administrative code early on and keeps the project on track. However, under the current requirements the RP may be disincentivized to submit an SIWP with a fee for DNR review. The regulatory scheme outlines that for non-fee based SIWP review, field work may not begin for up to 30 days after submittal of SIWP. For fee based SIWP review the field investigation shall be initiated within 60 days after DNR approval of the work plan.

Requiring a graduated fee for expediting technical assistance reviews (i.e., paying a higher fee provides faster turnaround time from the DNR) may partially address the efficiency issue. However, a graduated fee may not be the best method to prioritized technical assistance and may result in prioritizing RPs that can afford a higher fee, which is unequitable to small business and parties with limited resources. For example, an individual property owner may not have means to pay a fee, much less a larger fee, to expedite technical assistance for their case, whereas a large real estate developer may be able to do so.

Consideration for expedited technical assistance based on human health risk may be more appropriate. For example, a faster turnaround for a site with TCE contamination and human receptors, for example, is likely to result in better health outcomes.

Proposal (DNR technical review requests):

Administrative rule revisions are recommended for consideration:

- Provide a consistent timeframe (begin field work 60 days following submittal) for submittals that request DNR technical assistance (with fee) and those that do not request DNR technical assistance (with fee)
- Incentivize submittal of a technical assistance request (with fee) by reversing the current waiting period to begin field work (e.g., set review time to 90/180 days without a DNR technical assistance request and 30/60 days with a DNR technical assistance request).
- Reconsider review timeframes based on feasibility and impacts, i.e., staff capacity and construction project timeframes as many projects are not able to wait 90/180 days for DNR response.
- Require DNR technical assistance with fees for SIWPs, SIRs, RAORs, and RAPs.
- Allow a graduated scale for expediting DNR turnaround time (i.e., paying higher fee provides faster DNR review, or higher risk sites receive priority DNR turnaround time). Consider the inclusion of certain high-risk prioritization criteria or an exemption should allow such sites to receive priority without an increased fee.
- Establishing (or maintaining) the payment of fees on a payment-per-report basis.
- Consider available strategies for addressing documents that are submitted to the DNR without a fee (for example, declining to review these documents, or requiring all document fees be paid prior to closure.)

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GROUNDWATER

Issue background (Groundwater):

Natural Attenuation: Wis. Admin. Code § NR 716.13(13) requires natural attenuation parameters to be collected during the SI with analysis and interpretation of geochemical indicators and parameters. Often when natural attenuation is a potential remedy or partial remedy, the consultant's justification of natural attenuation as a remedy is limited to decreasing contaminant concentrations and does not include interpretation of geotechnical indicators and parameters. This issue occurs frequently enough to merit addressing. If natural attenuation will likely be a component of the remedial action (which is true in many cases), the SIWP should include collection of natural attenuation parameters. The SI report should summarize the natural attenuation parameters and the sub-surface conditions that are present to support contaminant degradation. Field parameters at a minimum should be included, along with hydraulic conductivity information.

Temp wells: It is unclear that the correct use of temporary wells (i.e., wells that do not comply with NR 141 construction requirements) and grab samples are for field screening purposes. These results are generally not considered to be representative of groundwater conditions and are not sufficient for regulatory compliance (i.e., the results may not be used to demonstrate that concentrations of contaminants in groundwater are below an enforcement standard). Administrative code requires DNR approval for a temp well variance (for wells not complying with ch. NR 141) prior to use in a site investigation.

Also note that industry terms and DNR definition of temporary wells differ.

There is opportunity to define temp wells and clarify time frames in ch. NR 141. Also, this issue affects the SIWP, which should include methods or standard operating procedures prior to significant implementation of work.

Whether permanent or temporary, the focus for wells in this context should be on collection of groundwater samples that are free of sediment and representative of the water unit.

Proposal (Groundwater):

Administrative rule revisions are recommended for consideration:

- Clarify when field monitoring of dissolved oxygen, oxidation-reduction potential, pH, temperature, and alkalinity is required under state administrative code and clarify that it must be submitted as part of SI report.
- Require that certain MNA parameters be included in the SIWP based on contaminants identified during discharge notice. Require field parameters along with hydraulic conductivity information.
- Add clarity regarding temporary groundwater monitoring wells and grab samples; clarify terminology to be consistent with industry terms.
- Further clarify types of temporary wells used by industry and when pre-approval is required for use of monitoring points that are not compliant with ch. NR 141.

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Guidance may also be considered in addition or as an alternative for the following items:

- Temporary well guidance could be reestablished (possibly following respective changes in ch. NR 141).
- Further clarify types of temporary wells used by industry and when pre-approval is required for use of monitoring points that are not appropriate for comparison with groundwater quality standards (non- compliant with ch. NR 141).

DNR internal procedure recommendations may be considered:

- MNA shortcomings could be addressed during DNR response to SIWP (in addition to other approaches). Based on contaminant identified during discharge notice, certain MNA parameters could be identified.

LAB DATA INTERPRETATION

Issue background (lab data interpretation):

Data interpretation: Most site investigation reports (SIRs) do not include the interpretation of data required under § NR 716.15(3)(h). Often, the results are presented, but there is no discussion of how the nature, degree and extent has been defined in all environmental media and impacts to receptors, or how field conditions, laboratory results, data gaps and other limiting conditions affect the data interpretation.

J-flagged lab data: If lab results are estimated or "J-flagged," those lab results require interpretation; however, there is typically no discussion of how the RP/consultant considered the J-flagged data to be representative of site conditions. At times when they are discussed, the consultant dismisses the results due to the J-flag (i.e., misinterprets that they are non-detect due to the flag or that the flag renders the results as low concentrations, without consideration to either the laboratory's detection and reporting limits or the regulatory standards).

Method Detection Limits: Increased method detection limits (e.g., due to dilution or interference) that result in "no detect" (or J-flags) of a contaminant of concern when the method detection limit is at or above the residual contaminant level (RCL) or enforcement standard.

Exceptions noted by the lab during analysis of environmental samples: The SIR should discuss any samples noted by the lab as not being received in an appropriate condition (e.g., sediment in water, air in VOC vial, outside temperature limits). Many times when the lab identifies that the environmental samples have been received in a condition that may affect the results, it is not discussed in the SIR. For example, if the samples were not received on ice or there is air in a sample vial, the data results may be affected. Many other states require a QAQC discussion and evaluation in reports.

Proposal (lab data interpretation):

Data interpretation: Further discussion of the issue, causes, and potential resolutions for lack

of interpretation of data required under NR 716.15 (3)(h) is needed. Some approaches that have been identified for consideration are:

- Consider whether administrative review for completeness applies (DNR internal process change)
- Define status report in ch. NR 700 and expectations (rule change)
- Use the SI outline and dictate results interpretation
- If no interpretation is made, the DNR may state that the site will be considered "out of compliance" and a template response letter is generated stating a standard time frame to come back into compliance (with a fee assessed).

J-flagged lab data: Further discussions of issues ("J-flagged" interpretation and discussion of how data is representative of site conditions), causes, and potential resolutions is needed.

- What would data interpretation include? Compare laboratory detection and reporting limits to regulatory standards (residual contaminant levels, enforcement standards).

Some approaches identified are:

- Consider administrative rule changes requiring a data interpretation section in SI Report.
- Consider administrative rule changes defining a "j-flag" to be treated the same as non-j- flag until evidence is given in the contrary (e.g., not detected anywhere else, no source, and not in groundwater and soil, both lab detection and reporting limits are below cleanup standards).
- This would all be part of a sampling and analysis plan and quality assurance project plan. Define a Quality Assurance and Quality Control (QA/QC) process.

Method Detection Limits:

- Direct the RR program to work with DNR's lab certification program to define how the lab manages this information in its QA/QC program.
- Incorporate this information into a QA/QC document submitted with initial site report.
- Include elevated detection limits in report
- Clarify whether this will this be interpreted as above the RCL standard (see NR 720.07(2))
- Consider requiring data validation section in SI Report

Exceptions noted by the lab during analysis of environmental samples: Administrative rule revisions are recommended:

- Require QA/QC report discussion and data validation section in SIR

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VISUAL AIDS

Issue background (Visual Aids):

Variability in Flow Direction. Variations in flow direction must be illustrated on water table and potentiometric surface maps under NR 716.15(4)(b)1, however, typically, only one flow direction map is provided with no discussion of variability in flow direction, which can affect receptors and remedial options. Lack of data is often related to lack of MNA information.

Isoconcentration Maps. Maps should include data to support illustration/depiction of the extent of contamination displayed as isoconcentration lines. See NR 716.15(4)(c). Maps should include both isoconcentration lines and data.

Cross Sections. Include data to support illustration/depiction of extent of contamination displayed as isoconcentration lines. See NR 716.15(4)(d). Cross sections should pass through the source area(s) and along potential/known migration pathways to potential receptors.

Photographs. Photographs are required, but rarely submitted, to document site work (§ NR 716.15(4)(f)). Occasionally, DNR staff have learned through site visits that site work was reported inaccurately. Photos may assist in documenting completed work.

Proposal (Visual Aids):

Further discussion of issues, causes, and potential resolution(s) is needed. Some approaches identified are:

Administrative rule changes:

- Clarify exactly what DNR wants for visual aids and update "visual aids" and other terms to be consistent with current federal and state usage.
- Clarify when photographs are appropriate and what types of photos DNR is requesting.
- Require a figure and table numbering scheme similar to that for closure submittals. As the SI expands, updates to these figures would be required.
- Grant monies for implementing and maintaining a database for laboratory data, similar to the GEMS monitoring well network, for which the date of event and lab data are uploaded based on Facility ID and associated with a single monitoring well to allow swift downloading and platting.
- DNR may be able to provide a consistent list of visual aids and items to include, but site variability and complexity need to be considered if additional/other information is needed.
- Put the data on the map.
- For contaminated media affected by seasonality, data is required in each season.

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DNR internal process changes:

- Consider whether administrative review for completeness applies.
- In combination with an administrative rule requirement (listed above) for a figure and table numbering format, consider whether grant monies or other financial resources may be available for implementing and maintaining a GEM-style data portal where data is uploaded based on Facility ID.

ITERATIVE NATURE OF SI & COMPREHENSIVE SIR

Issue background (Iterative Nature of SI & Comprehensive SIR):

Often, multiple SI reports are submitted to the DNR. The DNR recognizes that the SI is an iterative process; however, if multiple SIRs and technical reports with SI data have been submitted, a comprehensive report is needed to integrate and interpret all the data that has been collected to respond to the hazardous substance discharge. Frequently, DNR staff must review multiple reports to determine if the degree and extent of contamination has been defined in all environmental media. A requirement to provide summary figure(s) and table(s) that include all the site data from multiple rounds of sampling for any SI submittal would be more efficient and allow for a much less time-consuming review process.

Proposal (Iterative Nature of SI & Comprehensive SIR):

Further discussion of issues, causes, and potential resolutions is needed. Some approaches identified include the following administrative rule revisions:

- Revise administrative code to clarify the requirement for submission of a comprehensive SI that consists of all relevant data and visual aids, considering the time gap between sampling events, as applicable.
- Consider code revisions that would allow for hourly assessed DNR technical assistance fees at a “cost not to exceed” for any submittal. Base on established submittal templates.

Consider clarification in guidance of the following:

- Issues surrounding contamination crossing property lines, including entry permissions and liability issues.

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ATTACHMENT B: DNR Comments

The RR Program appreciates the efforts of the NR 700 Subgroup and the recognition that a site investigation that adequately characterizes the nature, degree and extent of contamination is an essential step prior to selecting a remedy and eventually seeking case closure at a contaminated site in Wisconsin.

CSMs

A conceptual site model would aid the DNR in reviewing site investigations and remedial actions completed by RPs by presenting a whole picture of site characteristics, geological and hydrogeological conditions, transport pathways, and receptors that may be affected by contamination. Conceptual site models may also property owners, communities and the public understand how contamination was discharged, where it migrated, and how effective cleanup efforts were. They may also serve as communication tools that reduce uncertainties for prospective purchasers and developers who desire to reuse contaminated properties. Conceptual site models vary in complexity based on site-specific characteristics and the type of discharge to the environment.

Site Investigations

- Although it is required in administrative code (Wis. Admin. Code § NR 716.09(1)), many RPs do not submit site investigation work plans to the DNR prior to proceeding with a field investigation. In addition, it is not clear if subsequent site investigation activities (field investigation) require additional work plan submittals under administrative code.
- Site investigation work plans and site investigation reports that are submitted to the DNR are often lacking required scoping information (Wis. Admin. Code § NR 716.07).
- Site investigation work plans and site investigation reports are often submitted to the DNR without a request (and fee) for DNR review.
- Site investigation workplans completed in accordance with administrative code base the proposed field investigation activities upon a baseline understanding of site conditions, transport pathways and receptors. Moving forward with field investigation activities without that baseline information may result in incomplete site investigations, which delays an RP's path to case closure.
- In addition, when the DNR receives a site investigation report but does not receive the scoping information that is required in both the site investigation workplan and the site investigation report, it is difficult to assess both the rationale behind the field work and the completeness of the investigation. This may result in the DNR not approving the site investigation.
- Phase I environmental site assessments are only required for properties in the voluntary party liability exemption program.

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DNR Technical Review Requests

- Rule changes would be required to implement some of the options presented.
- SI work plan review timelines It is likely that a change in incentivization for fee submittals would increase the amount of technical reviews by the DNR. An unintended consequence could be that the RR program has more work than staff capacity and response expectations will not be met.
- Recommendations in this proposal will require careful consideration of the RR Program's ability to implement, such as capacity for increased workload.

Lab Data Interpretation

Rule changes would be required to implement some of the options presented.

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ISSUE PAPER

RR PROGRAM FEES AND FUNDING SUSTAINABILITY

NR 700 Subgroup

Contributors: Bill Nelson (Godfrey & Kahn), Mark Rutkowski (Shannon & Wilson), Ed Buc (Terracon), Frank Dombrowski (WEC), Ray Tierney (SCS), Chris Valcheff (True North Consultants), Chris Bonniwell (TetraTech)

This proposal and recommendations were developed by the Remediation and Redevelopment External Advisory Group and members of the public, and do not necessarily represent the opinions or the position of the Wisconsin Department of Natural Resources or other state agencies.

TYPE OF RECOMMENDATION

This issue paper includes recommendations for revising DNR administrative rules, creating or revising guidance, and instituting changes to internal DNR processes.

BACKGROUND

The RR program oversees the investigation and cleanup of environmental contamination, provides a broad range and depth of staff expertise, and when requested with an appropriate fee submittal, provides technical reviews of documents. Wis. Stat. ch. 292 authorizes the DNR to collect fees for a variety of submittals that categorically include:

- Negotiated agreements;
- Liability clarification letters;
- Technical assistance (including review of submitted work plans and reports);
- Voluntary party liability exemption oversight; and
- Department database listings.

Responsible parties may submit most required reports without a fee if they do not seek DNR technical review. Fees associated with requested submittal reviews and other assistance range from $350 for reviewing a construction documentation report to $1,400 for a negotiated agreement or a lease liability clarification letter for multiple properties. The complete DNR Fee Schedule is provided in Table 1 of s. NR 749.04, Wis. Admin. Code.

Over time the cost of providing these services has continued to increase due to inflation and other factors; however, program revenues from fees are fixed and have remained unchanged for over a decade. This issue paper examines alternatives for providing funding sustainability and program capacity with a focus on DNR technical assistance/services fees under Wis. Admin. Code ch. NR 749.

PROPOSAL

This paper identifies topics for administrative rule development, guidance or template development, and DNR internal process adjustments. This issue paper recommends four (4)

topics for future consideration:

1. Increasing current ch. NR 749 Fees
2. Increasing the number of documents that must be submitted with a fee for review
3. Charging a premium for expedited reviews
4. Streamlining the structure of ch. NR 749 fees by reducing fee categories

Attachment A provides full background and detailed proposals on each topic. Additionally, **Attachment B** lists other items considered by the group that were deferred for further consideration.

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RESOURCES NEEDED

Items identified within this issue paper for administrative rulemaking are estimated to take approximately 2,000 staff hours as a single rulemaking effort. The rulemaking also involves the support of an appointed rule advisory committee during rule development and public support and involvement during the rule development, economic impact, and public hearing processes.

Guidance development also involves staff time and public input. The amount of staff time for these activities varies widely based on the type of document (template, form, guidance) and whether the guidance is new or revised.

Changes to internal DNR processes involve staff time and vary depending on the nature/impact of the change.

COMMENTS

Notable comments from the issue paper draft writing process and alternative approaches included the following comments.

The changes proposed in this paper are intended to improve the RR Program's financial sustainability, which would support the DNR's ability to carry out statutory duties under the Hazardous Substance Spill Law, Wis. Stat. s. 292.11. Generally, actions that support the DNR's ability to carry out its duties in administering the Hazardous Substance Spill Law are anticipated to benefit all communities and Wisconsin residents through better protection of human health and the environment.

Most proposals discussed in this paper include policy changes that would increase fees. Increasing fees may have a disparate impact on certain entities' ability to pay, such as small businesses that are cleaning up a contaminated site under Wis. Admin. Code chs. NR 700-799. During issue paper drafting, the group and/or meeting participants raised concerns regarding the impact of increased fees on smaller entities including property owners with limited resources.

Group participants raised concerns with the third proposal, 3. *Charging a premium for expedited reviews*. Allowing deep-pocketed entities to purchase expedited DNR reviews would have a disparate impact on entities that are cleaning up contaminated sites under Wis. Admin. Code chs. NR 700-799. It would also have the effect of prioritizing DNR reviews according to the economic circumstance of the regulated party rather than the potential health and environmental impacts from the contamination being addressed. Potential impacts on sites where the responsible party is economically challenged may be reduced by allowing parties paying the expedited fee to self-select as economically challenged. The fee would then revert to the standard fee, but the submittal would be treated as expedited. This self-selection is used in other areas (e.g., grant applications) and could be verified. Eligibility criteria could be adopted from an already established source that DNR recognizes, such as the ability to pay screening process. One member noted that an income-based sliding scale

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fee could be considered. Regarding the impact of fee increases, the group commented that large companies may be more capable of adapting to fee increases than small businesses and individuals. Rulemaking that impacts small businesses in Wisconsin must seek review from the DOA Small Business Regulatory Review Board. A grant program may be an option to help fiscally challenged regulated parties; however, legislative action would be required for DNR to implement.

Generally, proposals with minimal administrative complexity (i.e., low cost to implement) are more likely to achieve the goal of increased funding sustainability for the RR program. The first topic, *1. Increasing current ch. NR 749 fees*, includes multiple proposals for increased fees. A one-time fee increase in fees is simple to implement; however, a sliding-scale fee based on the level of staff effort may be difficult to implement due to the variation in staff expertise and the variability in complexity from one site to the next.

ATTACHMENTS

Attachment A: Topics Proposed for Consideration

Attachment B: Deferred Topics

Attachment C: DNR comments

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ATTACHMENT A: TOPICS PROPOSED FOR CONSIDERATION

INCREASING CURRENT CH. NR 749 FEES

Issue background:

Chapter NR 749, Wis. Adm. Code, "Fees for Providing Assistance; Remediation and Redevelopment Program," establishes fees for assistance requested by those undertaking cleanup and redevelopment of contaminated properties subject to Wis. Admin. Code chs. NR 700 - 799. The fee amounts under Wis. Admin. Code s. NR 749.04, Table 1, were initially based on the average amount of time necessary to perform reviews. Review times are currently being reassessed. The fees under Wis. Admin. Code ch. NR 749 have not been revised since 2013, meaning that the flat fees for program services listed in the schedule have not increased within the last 10 years. While Wis. Admin. Code ch. NR 749 fees have remained fixed, RR program's costs for providing services have continued to increase due external factors such as inflation and the labor market and is further discussed below. The result is that customers are paying less, relatively, for these services over time while the DNR's costs are steadily increasing.

Additionally, fees are not a stable source of revenue in part because most fees are not required for document submittals unless DNR review is requested. Responsible parties can choose to submit documents without fees at most project milestones and continue without RR staff review. Over the last three years, there has been significant fluctuation in fee revenues each year. Total fiscal Year (FY) 2023 fees were higher than the previous three years. Notably, case closure fees decreased by 40% in FY2023 compared to FY2020, due to legislative changes to program structure (the sunset of the PECFA program in FY2020).

The RR program prioritizes the use of limited funding to meet statutory and administrative responsibilities. Fee-based work, with established deadlines, is a high priority. RR program staff aim to provide timely customer service, clear, helpful, and consistent responses, with a greater amount and diversity of staff expertise. Several reasons exist why RR program's personnel costs have increased for fee-based work. For example, the program has begun using peer review groups to ensure consistency following the initial review by the project manager. Additionally, due to the complexity of some sites as well as the status of emerging contaminants, a staff specialist may become involved as needed for certain impacted media or substances (e.g., vapor intrusion, soil management, PCBs). The fee schedule establishes many of the fees at a flat $700 or$350 for time spent by two to three staff with high levels of experience and expertise. The cost of staff time exceeds the flat fee amount. If, as a matter of policy, customers should pay for the actual cost of services rendered by DNR staff, then an increase in the fee schedule is needed.

DNR input during the investigation, remediation and closure process is beneficial to streamlining and ensuring requirements are not skipped during the NR 700 process. The current fees are a good value, and are significantly less that rates charged by regulators in many other states. Continued quality and timely responses must be delivered by the DNR if

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rates are increased. When implementing any of the proposals below, DNR should consider the level of staffing needed to maintain quality and timely responses.

Proposal(s):

Increasing Wis. Admin. Code ch. NR 749 fees is one potential path toward improving funding sustainability; fee increases would require administrative rule revisions. Options to explore include:

- An across-the-board one-time increase in fees, either by amount or percentage.
- A built-in percentage increase that is tied to inflation or another directly relevant external factor that increases "automatically" over time (without requiring additional rulemaking). For example, tying an annual increase in fees to the Consumer Price Index.
- Set fees to match the level of effort required for DNR review and response.
- A combination of these approaches.

INCREASING THE NUMBER OF DOCUMENTS THAT MUST BE SUBMITTED WITH FEE FOR REVIEW

Issue background:

Increasing the number and type of documents that must be submitted with fees for DNR review may improve funding sustainability and may secondarily benefit regulatory efficiency. The cleanup process under Wis. Admin. Code chs. NR 700-799 was designed to be independently implemented ("self-implementing") by regulated parties. Generally, code does not require regulated parties to pay fees for DNR reviews; however, it does require regulated parties to submit certain reports and information to the DNR.

DNR service fees typically apply only when a DNR technical or liability review is requested by a regulated party. Some DNR reviews may be required under code conditionally/occasionally, for example some remedial actions, if selected by the regulated party, will require a DNR fee-based review and approval. Case closure requests under Wis. Admin. Code ch. NR 726 require a fee and although the code requires regulated parties to meet closure requirements, the code does not require regulated parties to seek case closure.

Code does require regulated parties to submit certain reports regardless of whether regulated parties are requesting DNR review. Code requires the submission of a Site Investigation Workplan (SIWP) and a Site Investigation Report (SIR). Code requires a Remedial Action Plan for all remedial actions. If no review is requested, fees are not required for SIWPs SIRs and certain Remedial Action Plans.

In addition to addressing funding sustainability, adding certain reports to the list of items that must be submitted with a fee may address a frequent issue that impedes timely closure. Often, when sites get to closure, there is a gap in the completeness of the site investigation. Detailed DNR review of SIWP and SIR submittals is not completed unless a fee is submitted

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with the documents. Requiring a fee review of the SIR may help catch incomplete site investigations early in the process rather than at the end of the process, helping regulated parties avoid unanticipated delays that could have been resolved ahead of the closure request. Alternatively, fees could be required for only submittals involving sites that present an acute risk (for example, a site with residents affected by TCE vapor contamination), or in another way that is proportionately tied to risk. This approach would promote the expenditure of staff time on the sites that present high risk to the public.

Conversely, adding certain reports to the list of items that must be submitted with a fee may reduce the extent to which regulated parties are able to independently implement the cleanup process under code, and regulated parties may have concerns regarding cost and delay experienced while regulated parties wait for DNR review responses.

Proposal:

Administrative rule revisions recommended for consideration include a mix of the following:

- Revise code to require entities that are conducting cleanup under chs. NR 700-799 to pay the fee for DNR review and approval of a Site Investigation Workplan.
- Revise code to require entities that are conducting cleanup under chs. NR 700-799 to pay the fee for DNR review and approval of a Site Investigation Report.
- Revise code to require entities that are conducting cleanup under chs. NR 700-799 to pay the fee for DNR review and approval of all Remedial Action Plans.
- Revise code to allow fees to be charged for subsequent iterations of work plans and reports and/or revise code to limit the number of report iterations allowed per a single review fee, with consideration of any disparate impacts on smaller regulated entities.
- Consider higher fees for more complex sites, with complex criteria to include sites with acute VI risk, groundwater contamination that migrates offsite, contaminant migration in fractured bedrock, free product and similar.
- Consider hourly fees for a very limited number of extremely complex and/or high risk sites if these sites can be determined objectively and if the need for a differing fee structure for these sites outweighs the administrative burden.
- If Site Investigation Work Plans, Site Investigation Reports, and Remedial Action Plans are required to be submitted with fee for review, consider instituting one fee per document that covers all revisions required to obtain approval, and consider identifying which additional documents would be subject to required reviews (to preserve expediency and promote certainty).
- If SIWP, SIR, and RAP are required to be submitted with fee for review, consider instituting one fee per site that covers all revisions required to obtain approval, and consider identifying which additional documents would be subject to required reviews (to preserve expediency and promote certainty).
- Promote the use of technical assistance meetings and develop strategies for allowing these meetings to be held expeditiously.
- Consider clarifying and standardizing the terms used to describe reporting requirements in code, in line with how other states and the federal government use

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similar terms. Ch. NR 722 requires an evaluation of the remedial options first, then a Remedial Action Plan, but only requires submission of a Remedial Action Options Report. Ch. NR 724 asks for a remedial action Design Report, which may not clearly signal inclusion of excavation and disposal (as activities requiring a "design").

CHARGING A PREMIUM FOR EXPEDITED REVIEWS

Issue background

Allowing for expedited reviews at an increased rate may provide increased funding sustainability. Allowing for expedited reviews, i.e., a faster review turnaround for a higher fee, would also accommodate external needs. Certain time-sensitive submittals that are frequently related to property transactions, such as a No Action Required (NAR) and No Further Action (NFA), could be prioritized for this type of policy and other reviews may also be considered. Factors for consideration prior to implementation include administrative considerations regarding staffing, costs and commensurate expectations, and fairness to responsible parties with limited resources. Implementation should include internal measures and controls to ensure that the prioritization of expedited reviews continues to allow adequate staff time available for non-expedited reviews.

Proposal

Administrative rule revisions are recommended for consideration:

- Revise code to allow for expedited reviews at an increased rate for certain types of reviews such as NAR, NFA, and other submittals that are required to support time sensitive property transactions and site development actions.
- Require expedited reviews (and increased fees) for sites with acute risk concerns or otherwise based on risk.
- Ensure fair and equitable expedited review of sites for fiscally challenged responsible parties financed partially through these increased rates.

STREAMLINING THE STRUCTURE OF CH. NR 749 FEES BY REDUCING FEE CATEGORIES

Issue background

The table of fees within Wis. Admin. Code ch. NR 749 (s. NR 749.04, Table 1) establishes over twenty different fees of varying amounts for different types of assistance offered through the DNR RR program. This fee structure contemplates rare and exceptional circumstances, and the values in the chart are based on outdated calculations. Many of the fees could be combined, and the current fee schedule could be simplified and/or streamlined in a way that is easier to understand and administer.

One option for streamlining the fee structure would be to revise the structure of the entire table. A streamlined approach could entail a total of three to four items. One example of a

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restructure could be for fees to be redistributed into three categories of total value/amount: 1) pre-closure fees, 2) closure fees and liability clarification letter fees 3) post closure fees.

Another option for streamlining fees would be to focus on smaller streamlining adjustments. For instance, Wis. Admin. Code s. NR 749.04, Table 1.(d) lists fees for recording information on the DNR database (BRRTS).

The list provides five fees that must be paid depending on the type of site and the type of database entry; however, four of the five fees are for similar actions and amounts. These fees could be simplified into fewer options, and database fees overall could be streamlined.

In either approach, streamlining fee structure for efficiency may help offset foreseeable concerns related to cost implementation of increasing fees across the board. Other factors to consider prior to implementation include the ease and clarity of tracking and reporting fees, and consistency with other approaches used by the state.

Proposal

Further discussion and examination of feasibility is recommended. Streamlining can be accomplished through administrative rule changes. Guidance development following administrative code changes is recommended.

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ATTACHMENT B: DEFERRED TOPICS

This issue paper recommends deferring three topics from further consideration at this time:

1. Restructure fees from flat rate to hourly rate
2. Developing a Long-Term Stewardship Fee
3. Developing an Authorized Environmental Professional Program to decrease staff workload

RESTRUCTURE FEES FROM FLAT RATE TO HOURLY RATE

Issue background

Another option for structuring fees to increase fee revenue is allowing for a system of billing for project manager and/or document reviews directly. This approach may result in more equitable apportionment of costs for sites of varying size and complexity, by determining costs according to staff time spent on a review. The Voluntary Party Liability Exemption (VPLE) program is currently run on this type of system. VPLE allows for quarterly billing under a billing rate that is reviewed each fiscal year (July 1). Staff code time to site work and rates include overhead costs. The VPLE rate as of July 1, 2024, is $125 an hour.

A similar model could be used where the DNR bills the responsible party and/or applicant on a quarterly basis. Some states use this framework successfully; however, for the RR program, switching to this new system for all sites versus VPLE sites would require a significant change in the administrative structure of the program. Between 2020 and 2022, the VPLE program processed one or fewer VPLE certificates of completion per year, whereas the RR program processed approximately 260 site closures yearly.

Increased administrative workload would include staff time for invoicing, issuing reminders, cost tracking, and more. A cost-benefit analysis is needed prior to implementing this type of approach to ensure that benefits from increased program revenue outweigh the increased administrative costs. Factors that may be considered for changes to an hourly fee structure include billing to reasonable and necessary staff, hourly rates as they may vary by staff level, yearly rate escalators, billing rate multipliers versus raw labor costs, established maximums for services, and methods of estimating review costs.

Changing the fee structure may be achievable through changes in administrative code; however, administrative and staffing changes needed to implement this system may require approval through budgetary/legislative approval processes.

Rationale for deferral

Further discussion of this approach is not recommended due to high administrative costs and comparatively low benefits.

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DEVELOPING A LONG-TERM STEWARDSHIP FEE

Issue background

Another option for improving funding sustainability through fees would be the development of long-term stewardship fees. The need to ensure protection for human health and the environment continues past closure for sites with residual contamination; however, the RR program does not impose fees past closure. Long term stewardship fees should be developed to apply to sites that close with residual contamination. Development of a long-term fee may be achieved through administrative rule reviews in most cases; however, some approaches may also require legislative approval (e.g., the liability protection approach).Administrative rule revisions are recommended for consideration that could structure a post closure fee for sites closed with residual contamination. Several options for structuring this type of fee could include:

- Establish a five-year review/audit/assessment structure using a funding agreement, up-front payments on five-year increments, and an invoicing system for labor costs.
- Require financial assurance such as insurance – similar to the approach for the VPLE program.
- Require financial assurance similar to the engineered control contaminated sediment model (Wis. Admin Code ch. NR 756).
- Raise soil and groundwater database/GIS fees to cover the post closure audits/long-term site monitoring.
- Develop a liability protection approach in which the state provides a "covenant not to sue" in exchange for the regulated party's payment of a one-time fee for site that will have residual impacts. North Carolina allows for this type of covenant through a "Brownfields Agreement" with a developer, with the cost of the agreement tailored to the site conditions, the existing site data, and the proposed land use.
- Develop/implement a Risk Management Program (RMP) similar to the U.S. EPA's for sites that have residual contamination left in place. Fees paid for review and long term maintenance would be based on the degree of risk using U.S. EPA risk models or similar evaluation of risk (both human health and environmental).

Rationale for deferral

Further discussion of this approach is deferred to allow the RR Program EAG Funding Sustainability Subgroup an opportunity to further develop this issue and provide an analysis of costs and benefits affecting all stakeholders, including responsible parties.

DEVELOPING AN AUTHORIZED ENVIRONMENTAL PROFESSIONAL PROGRAM TO DECREASE STAFF WORKLOAD

Issue background

The group looked at the option of developing an Authorized Environmental Professional Program to approach funding sustainability through decreasing staff workload. An Authorized

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Professional Program would allow environmental professionals to administer certain reviews that are currently done by DNR staff after completing training and certification, similar to how the DNR Waterways Program allows private professionals to become Assured Wetland Delineators. Consultants could pay a fee and meet certain established professional requirements to be granted the authority to perform certain regulatory tasks, such as soil management plan approvals, historical fill approvals, and some types of site investigation approvals. This approach to funding sustainability is presumed to benefit customers by increasing over all capacity to review regulatory submittals, which may help expedite reviews. The DNR would provide peer review and oversight to ensure that decisions are consistent and statutory goals are met.

Further evaluation of this approach is needed, including evaluation of whether this program would present its participants (professional) with conflicts of interest and/or liability. Further research on the efficacy of similar programs in other states and consideration of costs to responsible parties is recommended prior to implementation.

This proposal would require a statutory change and an administrative rule change for implementation. The Wisconsin State Legislature has designated the Department of Natural Resources as the state agency responsible for the state's duties under Wis. Stat. ch. 292. Many responsibilities are further delegated to the RR program under Wis. Admin. Code chs. NR 700-799.

Rationale for deferral

Further discussion of this approach is not recommended due to the necessity of legislative changes prior to implementation and due to the low likelihood of improved funding sustainability outcomes for the RR program.

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ATTACHMENT B: DNR COMMENTS

The RR Program appreciates the efforts of the Fees and Funding Sustainability Subgroup and the recognition that the current fee structure does not cover the cost of completing its work.

It is likely that fees would have to increase significantly to cover the actual cost for the DNR to complete a technical review. If the fee increase doesn't cover the cost, thereby allowing for additional staff capacity, and there is an increase in the number of regulatory submittals requiring review and approval, the unintended consequence could be that the RR program has more work than staff capacity and response expectations will not be met.

Recommendations in this proposal will require careful consideration of the RR Program's ability to implement, such as capacity for increased workload and whether the program could acquire the expertise to determine financial need.

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Remediation and Redevelopment External Advisory Group

ISSUE PAPER

ESTABLISHMENT OF A MITIGATION CONTRACTOR CERTIFICATION PROGRAM

Vapor Intrusion Subgroup

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This proposal and recommendations were developed by the Remediation and Redevelopment External Advisory Group and members of the public, and do not necessarily represent the opinions or the position of the Wisconsin Department of Natural Resources or other state agencies.

TYPE OF RECOMMENDATION - LEGISLATIVE

This issue paper is to document the business need for mitigation contractor certification in Wisconsin and related issues for consideration. A mitigation certification program is being considered to address issues with contractor qualifications and accountability identified in Wisconsin with both radon and vapor intrusion mitigation systems. The National Radon Proficiency Program (NRPP), which is administered by the Indoor Environments Association (IEA), also known as AARST, is working to develop and finalize a credential for vapor intrusion mitigation on a national level. The goal of mitigation contractor certification is to ensure soil gas mitigation systems, designed and installed by qualified personnel according to established industry consensus standards, are protective of the health of occupants and limit potentially harmful exposures. Recommendations by the DNR's Remediation and Redevelopment External Advisory Group (RR EAG) will not be developed until the NRPP vapor intrusion mitigation credential has been finalized and subsequently reviewed by Wisconsin stakeholders. Information memorialized in this issue paper will be further considered at that time.

BACKGROUND

Need for a Mitigation Certification Program in Wisconsin

While harmful soil gases such as radon present long-term health concerns, exposure to certain chemical vapors may present acute health concerns. Petroleum volatile organic compounds (VOCs) such as benzene can cause acute respiratory, gastrointestinal, and neurological impacts, while chlorinated VOCs like trichloroethylene (TCE) can cause both acute central nervous system impacts and developmental harm in as little as an 8-24 hour exposure period.

The most effective long-term method to interrupt vapor exposures is the installation and maintenance of an effective vapor mitigation system. However, there are no regulations providing consumer protection or accountability with respect to mitigation services in

Wisconsin. A collective body of regulatory and public sector evidence is growing to show that mitigation needs to be performed by qualified personnel. The work should be compliant with established national standards and in a system where the qualified personnel will be held accountable for their work. Since Wisconsin is primarily surrounded by states that license radon mitigators (MN, IA, IL & IN), it is important both within Wisconsin and regionally for Wisconsin to require credentials.

Regulation through Certification. The simplest path forward is to leverage the regulation through certification (RtC) approach established for radon mitigation as a result of various efforts by the U.S. Environmental Protection Agency (EPA), other states, and national industry-led non-profit organizations. Radon policies in 10 of the 20 states that presently regulate radon services use the RtC model. This approach relies on certification by existing EPA-recognized national proficiency programs to qualify personnel for eligibility to have a state license. Licensing supplements the proficiency qualification process to enable in-state compliance and enforcement activities, and supports any customization needed to match local conditions. States that enact new regulatory policies can leverage established proficiency systems rather than create new mechanisms for job definitions and task analyses, qualifications, examination item development, exam delivery and proctoring, training approvals, renewal eligibility requirements, and other components of credentialing.

Current Standards. There is no current mitigation standard in Wisconsin. Nationally, the ten RtC states and four other regulated states require compliance with EPA-recommended American National Standards Institute ANSI/AARST[1] standards for radon measurement and soil gas mitigation, while the other six regulated states continue to use legacy standards that were created by the state or EPA, or a combination of ANSI/AARST and legacy standards. The only relevant consensus standards that cover both radon and vapor mitigation are:

1. The ANSI/AARST soil gas mitigation standards:
    a. Soil Gas Mitigation Standards for Existing Homes, (SGM-SF-2023) and
    b. Soil Gas Mitigation Standards for Existing Multifamily, School, Commercial and Mixed-Use Buildings (SGM-MFLB-2023)
2. The ANSI/AARST Operation, Monitoring and Maintenance (SG-OMM) standard under development.
3. The ANSI/AARST new construction standard: Soil Gas Control Systems in New Construction of Multifamily, School, Commercial and Mixed-Use Buildings (CC-1000-2018 Rev. 5/23)

The AARST Consortium on National Standards is an ANSI-accredited standards development organization.

Current Proficiency Programs. The two proficiency programs currently recognized by EPA are the NRPP (administered by the IEA) and the National Radon Safety Board (NRSB). In March 2023, the EPA released Proposed Radon Credentialing Criteria which will help align and encourage consistency across radon credentialing programs operated by certification

bodies and states. The criteria are designed to support establishment and maintenance of a base level of organizational and program-specific competencies, grounded in third-party accreditation to International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 17024:2012. Finalization of EPA's approval criteria may change future recognized credentialing programs.

Oversight Board. The IEA (AARST) model RtC legislation relies on an oversight licensure board, such as a plumbing board, medical examining board, or geologist board that involves volunteer industry members and empowers them to insist on oversight and impose penalties for non-performance. A possible approach in Wisconsin would be to establish a board within Wisconsin Department of Safety and Professional Services (DSPS) to oversee all mitigation professionals. From a national perspective, Kentucky enacted this approach in its radon law. Advocates in Maryland, Missouri and North Carolina include a board in their proposed radon laws. IEA's Virginia Chapter is seeking to move regulatory oversight from the Health Department to the Asbestos and Lead Board in the state's Department of Professional and Occupational Regulation.

Additionally, Chapter 15 of the Wisconsin Statute, Structure of the Executive Branch, grants the creation of DSPS and its authority to host examining boards and councils for various professional services. DSPS leads administrative activities that help each board and council achieve its goals, including managing the issuance and denial of licenses and license applications. While DSPS does not currently have a soil gas-related board, current infrastructure exists that could support development of such a board at DSPS.

State Agency Roles and Interrelationships

The Wisconsin Department of Health Services (DHS) and Wisconsin Department of Natural Resources (DNR) overlap in their respective duties to ensure public protection from harmful naturally occurring and chemical soil gas exposures. The DHS has long-standing federally funded programs that support prevention of exposure to radon and vapor intrusion through human health risk assessment, expert consultation, and statewide health education and outreach efforts. The DNR, through the Remediation and Redevelopment Program, regulates chemical vapors from spills under the authority in Wis. Stat. § 292.11. The DHS and DNR collaborate to ensure Wisconsin citizens are sufficiently protected from chemical vapors resulting from hazardous spills.

In 2023, the Wisconsin Department of Children and Families (DCF) enacted new rules to protect children enrolled in licensed childcare from exposure to high levels of radon gas. Together, the DHS, DNR, and DCF work to promote the safety of children enrolled in licensed childcare and their caretakers and prevent harmful soil gas exposures at and near contaminated sites. In the absence of state regulation ensuring that mitigation service providers who perform work in childcare facilities are qualified and adhering to industry consensus standards, the DCF relies on the DHS's radon expertise to provide on-going radon-related guidance to childcare providers and child care licensing staff.

The design and installation of vapor intrusion mitigation systems are administered through Wisconsin Administrative (Wis. Admin.) Code chs. NR 700-799. The DNR's *Vapor Intrusion Guidance* (RR-800) also provides information on vapor intrusion mitigation systems. However, there is not a uniform standard for design and installation of vapor intrusion mitigation systems. As discussed above, regulation of radon in Wisconsin is currently limited to testing and mitigation associated with licensed family and group childcare providers, as established by DCF. DHS provides information with respect to radon but does not regulate radon measurement or mitigation. The State of Wisconsin does not require contractors performing radon mitigation work to hold a national certification.

There are no regulations providing consumer protection or accountability with respect to mitigation services in Wisconsin. Collaboration between the DNR and DHS is efficient and necessary considering the significant overlap in regulation over radon and vapor intrusion mitigation. Because all state agencies with roles and responsibilities related to radon and vapor intrusion routinely interact with each other on these issues, an umbrella law requiring oversight and credentialing of radon and vapor intrusion mitigation contractors could integrate well among the agencies' independent and shared responsibilities and interests.

Current Status and Challenges of Mitigation

The absence of a license requirement for radon or vapor intrusion mitigation systems has contributed to several challenges:

Inadequate Design. While standards for soil gas mitigation systems have been developed by the AARST Consortium on National Standards, the standards are applied unevenly by designers and installers. With respect to vapor intrusion mitigation, the lack of required use of national standards or proof of qualification to perform the work has led to project delays when the DNR must request revisions to designs or already installed mitigation systems. Inadequate mitigation systems do not accomplish the required protection of human health from exposure to chemical vapors (See Health Implications for Certification).

Challenges in Regulated Child Care. In March of 2023, the DCF enacted new rules that require licensed childcare centers to test for radon and mitigate when levels exceed the EPA Action Level of 4 picocuries per liter (pCi/L). Centers must conduct at minimum one radon test in the lowest level used by children at least seven hours per week and for a minimum of 48 hours with the center's windows being closed. The DCF rules do not require compliance with the applicable ANSI/AARST standard, specify which types of tests are acceptable, or require qualifications for testing and mitigation. These rules are further outlined in Wis. Admin. Code, § DCF 250.06 for family childcare centers (typically in-home based) and Wis. Admin. Code, § DCF 251.06 for group childcare centers (typically based in larger, commercial spaces).

Without a license requirement for radon service providers in Wisconsin, childcare centers are unable to verify whether contractors are qualified for testing or mitigation to meet childcare licensing requirements. This may lead to problems where industry consensus

standards are not followed. These problems include but are not limited to an insufficient number of test kits placed in the facility, incorrect device placement, use of less accurate or poor performing radon measurement devices, inadequate mitigation system installations, and lack of quality assurance and quality control checks. These issues may lead to unintended radon exposures, undermining the State's goal to eliminate harmful exposures among children enrolled in licensed care, and their staff.

Consumer Protection. Consumers do not have the appropriate expertise to properly vet mitigation system installers. They are unlikely to be aware of the potential dangers posed by inadequate construction practices or faulty installation of soil gas mitigation systems or understand if a mitigation system fails due to poor or improper installation. Early failure of mitigation systems is unlikely to be detected by the average consumer, as many soil gases have negative health effects without a detectable presence. While harmful soil gases such as radon present long-term health concerns, exposure to certain chemical vapors may present acute health concerns. See *Health Implications*. A certification process protects consumer health by ensuring knowledge of and adherence to an established set of guidelines during the evaluation, installation, assessment, and maintenance phases and serves to minimize the costs associated with this work when qualified contractors are assured.

It is essential that mitigation systems are installed properly the first time, and a certification/licensure process will ensure a minimum standard for this process that protects human health throughout Wisconsin. Implementing this process will ensure the protection of communities during the development, installation, assessment, and maintenance of mitigation systems. By establishing clear standards and accountability measures, a certification/licensure framework can ensure that environmental practices are transparent and accessible to communities.

Worker Health. Conditions before a mitigation system is installed may be hazardous to health. Certification of contractors ensure they are equipped with knowledge to protect their health during the installation process. This includes a need to have adequate knowledge of health protection for vapor intrusion sites. This is typically achieved by the U.S. Occupational Health and Safety Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) training and certification courses. In addition to potential exposure to environmental contamination, modifications to mitigate existing buildings may include the need for asbestos and/or lead-based paint assessments in advance.

Summary of Challenges. The net result of the common issues listed above is a high presence of unqualified contractors, inadequate installations, no or insufficient performance monitoring, ineffective mitigation systems, etc., resulting in:

- uncontrolled and increased potential for exposure to contaminated vapors and other hazards to building occupants and contractors, and

- additional costs associated with diagnosing/repairing sub-standard mitigation systems.

Health Rationale for Certification

Exposures to chemical vapors can pose both an acute and chronic health risk. Petroleum VOCs such as benzene can cause acute respiratory, gastrointestinal, and neurological impacts, while chlorinated VOCs like TCE can cause both acute central nervous system impacts and developmental harm, as has been outlined in a series of memos from the DHS to DNR[2]. Specifically, for TCE, in the June 6, 2022, memo from the DHS to DNR, the DHS states that an 8-hour period of exposure for occupational settings and a 24-hour period for residential settings constitutes a single exposure, since the potential developmental harms of cardiac malformations may occur early on in pregnancy, potentially before the person may have confirmation that they are pregnant. As such, reliable continuous and effective mitigation is necessary.

The most effective long-term method to interrupt vapor exposures is the installation and maintenance of an effective vapor mitigation system. While short-term measures may need to be taken to immediately interrupt exposures to chemicals such as TCE when there are acute risks, such as temporary relocation or using air purifying units, these rapid response actions are intrusive to residents and unsustainable.

Across Wisconsin, there are sites where there have been acute health risks exacerbated by inadequate mitigation installations by unqualified mitigators. At one highly complex industrial-to-residential conversion with extensive TCE contamination, 150 residents were ordered to evacuate after the developer occupied the building before it was adequately mitigated; an active system was in place, but it was insufficient for protection from the significant levels of subsurface contamination and had not been properly commissioned (i.e., verified effective in protecting against hazardous vapors). In another example, a home with two short-term rental units was improperly mitigated, such that re-entrainment of TCE into living spaces was likely through balconies and the bedroom windows. In each of these cases, a certified mitigator with the appropriate training and knowledge, working with environmental professionals, could have installed controls to prevent human exposures.

Continuing education is essential as a component of a mitigation certification requirement to fortify practitioner expertise. As the science continues to develop, new mitigation techniques and potential health risk knowledge may modify the best practices for mitigation over time. Continued education ensures that any consumer whose home, business or public space (e.g., library, school) needs mitigation will have access to mitigators equipped with the best available information.

NRPP Certification Development

The NRPP, which is administered by the IEA (also known as AARST), is developing a vapor intrusion mitigation credential separate from the existing radon mitigation credential. The vapor intrusion mitigation credential would add to the current array of NRPP certifications:[3]

- Radon Measurement Professional,
- Radon Mitigation Specialist,
- Radon Measurement Field Technician,
- Radon Mitigation Installer, and
- Soil Gas Mitigation Compliance Inspector.

Additional certifications are under development for commercial radon professionals.

It is anticipated that a vapor intrusion mitigator certification will be available to personnel who are both qualified to perform mitigation and knowledgeable about HAZWOPER but have not necessarily been trained or certified in radon mitigation (or measurement).

NRPP follows a rigorous process to develop a certification to fully fulfill its accreditation by the ANSI National Accreditation Board under ISO/IEC 17024:2012 (See Current Proficiency Programs). The definition of the role and related job tasks, eligibility pathways, assessment/certification process, exam format, recertification interval and requirement are among the steps in certification creation. Current practitioners are surveyed to learn the extent to which tasks within the Job Task Analysis are necessary and important. Exam content is developed through volunteer committees of exam item writers and item reviewers. Once the exam is delivered in pilot format, the effectiveness of the items is evaluated to ensure that the items are technically correct and assess knowledge important to the job, and the passing score is established. It is anticipated that pilot testing for the VI Mitigation Specialist examination will occur by the end of 2025.

Preventing Conflicts with Existing Regulations

Initial discussions with IEA included certification provisions that may be applicable to mitigation system designers and performance verification. While limited regulations exist in Wisconsin with respect to radon, the Wis. Admin. Code NR 700 rule series includes several areas that guide and define site investigation, interim/immediate action, and regulatory closure at sites where a hazardous substance discharge to the environment has occurred. For example, Wis. Admin. Code ch. NR 712 establishes personnel qualifications for conducting environmental response actions. The scope of mitigation licensure based on private certifications must not conflict with these or other existing regulations. Previous discussions expressly deferred to the Wis. Admin. Code NR 700 rule series for vapor intrusion investigation.

NRPP certifications may also include provisions for system commissioning, which would likely include air monitoring. Laboratory accreditation is regulated by the DNR under Wis. Admin. Code ch. NR 149. However, the DNR does not currently regulate the analysis of air samples in Wisconsin by laboratories. Adoption of certification programs must recognize the absence of such accreditation. NRPP is not currently pursuing an ANSI/AARST vapor intrusion sampling credential since there is not yet a related national consensus standard.

Applicability of Certifications to Subcontractors

It is common to engage various trades, such as plumbers and electricians, during the installation of mitigation systems. If the adoption of mitigation certification programs is pursued in Wisconsin, work by these subcontractors should either be supervised by certified mitigators or be certified mitigators themselves. Construction managers (e.g., general contractors, owners' representatives) not performing hands-on work should not be required to be certified mitigators but to engage certified mitigators to verify installation of mitigation systems are in accordance with the design specifications. It may be appropriate to create a series of certifications similar to the DHS Lead Certification program where certification requirements range from a minimum 8-hour course and fee to a 40-hour course, experience, fee and exam. Lead and asbestos abatement-related rules in Wisconsin also have safety requirements during work to prevent exposure to the hazard that may serve as an example for development of mitigation certification in Wisconsin.

Additional Considerations

The U.S. Department of Housing and Urban Development (HUD) Multifamily Accelerated Processing (MAP) Guide (https://www.hud.gov/sites/dfiles/OCHCO/documents/4430GHSGG.pdf), which covers several major Federal Housing Authority Multifamily lending programs, includes a requirement to perform a vapor encroachment screening to determine if a there is potential for vapors to occur in the subsurface below existing and/or proposed on-site structures. Radon must be considered, and mitigated if above 4.0 pCi/L, within the environmental review for any proposed HUD project subject to HUD's contamination regulations, regardless of the HUD program. While HUD requires properties to be free of these hazardous or radioactive substances, or for administrative controls to be in place for protection, HUD defers to the applicable local, state, tribal or federal jurisdiction for regulation, including testing and mitigation. Without a requirement for mitigators to be certified, there is a notable gap in regulatory oversight in Wisconsin of this work and no assurance HUD requirements are met.

Development of a mitigation certification program in Wisconsin also needs to address potential for loopholes to regulation by marketing for services that are intended to address radon or vapor intrusion mitigation but are advertised differently to avoid regulation, such as "radon resistant," "moisture reduction," "off-gas" systems, etc. Focusing regulation on the *performance* rather than the product name may address these concerns. Performance-based language may include "protection from or reduction of soil gas" (includes both radon and vapor intrusion), "any form of depressurization for protection from soil gas," etc.

PROPOSAL

This issue paper recommends continued evaluation of a certification program for mitigation in Wisconsin. Discussions by the RR EAG, including local and national industry stakeholders, will continue following NRPP's completion of credentials for vapor intrusion mitigation.

RESOURCES NEEDED

Future evaluation by the RR EAG may include engaging additional related professionals from a variety of perspectives for a holistic evaluation, such as real estate agents, home inspectors, home builders, healthy homes advocates, mitigation installers, etc. Alternatively, these professionals may be included as stakeholders during a future phase of mitigation certification development beyond the RR EAG.

COMMENTS

There are no additional comments at this time.

REFERENCES

[1] https://standards.aarst.org/

[2] https://www.atsdr.cdc.gov/toxprofiles/tp3.pdf,
https://www.atsdr.cdc.gov/toxprofiles/tp19.pdf,
https://dnr.wisconsin.gov/sites/default/files/topic/Brownfields/vapor/vi-tce-dhs-letter.pdf,
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[3] https://nrpp.info/certification/types-of-certification/

ATTACHMENTS

Attachment A: DNR Comments

ATTACHMENT A: DNR COMMENTS

TBD