# NR 724 VAPOR INTRUSION O&M

Flipping the Switch and Checking the System

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# **Key Points**

- · Protecting people is the goal
- · Communication is key
- NOT enough to simply install a vapor mitigation system
- Must ensure that:
  - the system is needed
  - the system works
  - the system will continue to work

# **VI ASSESSMENTS**

Q: Are people protected from vapor intrusion?

A:



716.11 722.09 724.09 – 724.17 725.05 726.05 & 726.15

Wis. Admin. §§ NR

#### **VI ASSESSMENTS**

Q: Are people protected from vapor intrusion?



Wis. Admin. §§ NR 714.07 716.11 722.09 724.09 – 724.17 725.05 726.05 & 726.15

BEST FAITH EFFORT

At least two written letters
Final letter from DNR

Personal Contact

Call or in-person Local health assistan

## **PUBLIC OUTREACH**

- · Access to off-site properties
  - Best faith effort
  - Multiple attempts
  - Multiple approaches
- Outreach Tools
- Template letters
- Factsheets (NEW!! RR-067)
- Access agreement examples
- NEW!! Videos

http://dnr.wi.gov/topic/Brownfields/Vapor.html

Code Ref: Wis. Admin. §§ NR 714.07 and NR 725.07

## **PUBLIC OUTREACH: VIDEOS**

- □ <u>Vapor Intrusion 101</u>
- □ The Responsible Neighbor

http://dnr.wi.gov/topic/Brownfields/Vapor.html



## PREEMPTIVE MITIGATION

#### Definition: Mitigation installed prior to vapor sampling\*

- \* Vapor sampling may not be required if hydrogeological conditions make it impracticable.
- · Existing Building
  - RP cannot mitigate in lieu of sub-slab sampling
  - May be allowed if off-site property owner refuses sampling & after best faith effort is documented If sub-slab vapor < VRSLs Mitigation <u>NOT</u> required
- · New Building
  - Include sub-slab vapor ports (recommended)
  - Test sub-slab vapor after construction & prior to mitigation

Code Ref: Wis. Admin. §§ NR 716.11(5) and NR 726.05(8)

#### PREEMPTIVE MITIGATION

RULES & REGULATIONS:

WHY PREEMPTIVE MITIGATION IN LIEU OF SAMPLING ISN'T ALLOWED

Incomplete site investigation: Wis. Admin. § NR 716.11(5)

Does not meet closure requirements: Wis. Admin § NR 726.05(8)

#### **GENERAL:**

WHY PREEMPTIVE MITIGATION IS UNDESIRABLE

Sampling easier than mitigation

Performance verification: Still needed

Long Term OM&M: Optional vs. Required

#### **REMEDIATION AND MITIGATION**

Active Remediation Reduce mass and concentration of source of vapors

Mitigation Interrupt the vapor pathway

Mitigation ≠ Remediation



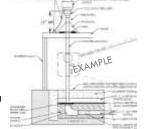
Code Ref: Wis. Admin. §§ NR 722.09(2), NR 724.11, and NR 726.05(8)

# **MITIGATION: OPTIONS**

	MITIGATION CATEGORY		
SETTING	ACTIVE DEPRESSURIZATION	ACTIVE INDOOR AIR CONTROLS	PASSIVE CONTROLS
EXISTING BUILDI	NG		
Residential	Yes	No	No
Lg /Mixed Use	Yes	Depends	No to Depends
Non-Residential	Yes	Depends	No to Depends
NEW CONSTRUC	TION		
Residential	Yes	Depends	Depends
Lg /Mixed Use	Yes	Depends to Yes	Depends
Non-Residential	Yes	Yes	Depends to Yes

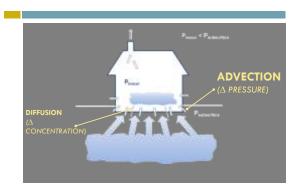
#### **MITIGATION: REQUIREMENTS**

- · Engineering Design
  - Basis of design
  - Design features
  - Performance verification plan
- Commissioning (Documentation Report)
  - Performance verification
  - Baseline conditions
- Long-term Operation, Maintenance, & Monitoring (OM&M) Plan

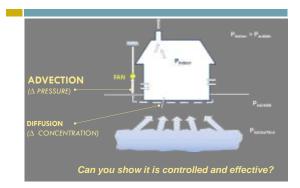


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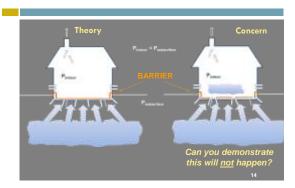
# **MITIGATION: DESIGN BASIS**



## SUBSLAB DEPRESSURIZATION



## **PASSIVE CONTROLS**



# OPERATION, MONITORING & MAINTENANCE

- · Step 1: Commissioning
  - 6 mos. 1 yr.
  - Performance Verification
  - Baseline Conditions
- · Step 2: Long-term OM&M
  - ~5 yr − indefinitely
  - Monitoring
  - Inspection and Maintenance
  - Contingency
  - Annual submittal of inspection form (potentially)

Verify effectiveness and document as-built conditions

Maintain system and check to confirm it meets baseline condition criteria

Code Ref: Wis. Admin. §§ NR 724.13, NR 724.15, NR 724.17, and NR 725.11(2)

#### **OM&M PLANS**

- · When to implement?
  - Right after commissioning
  - Don't wait until closure
  - Can use as the Closure Maintenance Plan
- · Who is user?
  - Before closure = RP
  - After Closure = Property owner
- · Make it user friendly
  - · Explain why needed and how it works
  - Include pictures
  - Provide clear direction



Code Ref: Wis. Admin. §§ NR 724.13, NR 724.17 and NR 725.11(2)

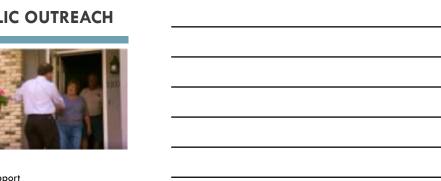
#### **EXAMPLE OM&M PLAN**



# PRO-ACTIVE PUBLIC OUTREACH

- Good for you…
  - Limit confusion and resistance
  - Create trust
  - Save time
- Save money
- · Good for them...
  - Importance understood
  - Better likelihood to do OM&M
  - Health protected
- · DNR & Health available for support

Code Ref: Wis. Admin.  $\$  NR 714.07 and NR 725.07



# **PUBLIC OUTREACH: VIDEOS** □ Vapor Intrusion 101 □ The Responsible Neighbor http://dnr.wi.gov/topic/Brownfields/Vapor.html **Takeaways** · People are the top priority - Talk to them · No preemptive mitigation · OM&M is a long-term commitment · Tools are available: Go to dnr.wi.gov & search "vapor" NEW RR-800 Guidance is coming soon! We want your comments. **Vapor Intrusion Questions**