



Remediation and Redevelopment Program **August 2021**

Guidance on the Case Closure Process and Continuing Obligations: Wis. Admin. Code chs. NR 725 to 727

Purpose
 The purpose of this document is to guide users in preparing for a case closure request, particularly at sites where contamination remains after response actions are complete and continuing obligations (COs) are needed to address exposure pathways. This guidance document is intended for use by responsible parties (RPs), consultants or other interested parties, the Wisconsin Department of Natural Resources (DNR) staff and Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) staff.

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Authority
 This document is based on requirements found in Wisconsin Statutes (Wis. Stat.) §§ 292.11, 292.12, 292.13, 292.15 and 292.31, ch. 160, and Wis. Admin. Code chs. NR 700 to 799 (last updated in 2013), NR 140, NR 141, NR 102 to 106 and NR 347.

Abbreviations Used in This Document			
BOTW	BRRTS on the Web	ROW	right-of-way
BRRTS	Bureau for Remediation and Redevelopment Tracking System	RP	responsible party
CO	continuing obligation	RR Program	Remediation & Redevelopment Program
COC	certificate of completion	RRSM	Remediation & Redevelopment Sites Map
DATCP	Wisconsin Department of Agriculture, Trade and Consumer Protection	US	United States
DHS	Wisconsin Department of Health Services	UST	underground storage tank
DNR	Wisconsin Department of Natural Resources	VI	vapor intrusion
DRO	diesel range organics	VMS	vapor mitigation system
ES	enforcement standard	VOC	volatile organic compound
GIS	geographical information system	VPLE	voluntary party liability exemption
GRO	gasoline range organics	VRSL	vapor risk screening level
LGU	local government unit	WI DOT	Wisconsin Department of Transportation
PAL	preventive action limit	Wis.	
PFAS	perfluoroalkyl and polyfluoroalkyl substances	Admin. Code	Wisconsin Administrative Code
RCL	residual contaminant level	Wis. Stat.	Wisconsin Statutes
		WRRD	Wisconsin Remediation and Redevelopment Database

Terms Used in this Document

The definitions listed below are from Wis. Stat. ch. 292, Wis. Admin. Code chs. NR 700 to 799 and others, as noted:

"Case closure" means a determination by the agency with administrative authority, based on information available at the time of the review of the agency with administrative authority, that no further action is necessary at the site (Wis. Stat. § 292.12(1)(b)).

"Contaminated site boundary" or "contaminated site boundaries" means any area within which a hazardous substance has been discharged such that the air, land or waters have been affected by a discharge or where environmental pollution exists. **Note:** *Both the source property and other properties affected by the discharge may be included within the "contaminated site boundary"* (Wis. Admin. Code § NR 700.03(6m) including Note).

"Continuing obligations" are property-specific responsibilities of a property owner that are established either before or after the state approves an environmental cleanup, and that apply to the property regardless of changes of ownership. Continuing obligations include, but are not limited to, environmental limitations or conditions established in the state's closure approval letter (Wis. Admin. Code § NR 714.03(2)).

"Engineering control" means an object or action designed and implemented to contain contamination or to minimize the spread of contamination, including a cap, soil cover or in-place stabilization, but not including a sediment cover (Wis. Stat. § 292.01(3m)).

"Industrial land use" means the utilization of a parcel of real estate for manufacturing operations that use machinery and mechanical power to produce products or services, including electrical power, or for a service business that provides storage facilities, product distribution or maintenance or repair services for machinery. **Note:** *Examples of industrial land uses include manufacturing and assembly plants; warehouses; scrap salvage operations; foundries and forging plants; metal pressing, stamping and spinning plants; electroplating facilities; tanneries; chemical processing facilities; electrical generating plants and electrical substations; slaughter houses and meat processing plants; fertilizer and pesticide packaging plants; bottling plants; wholesale bulk fuel storage and distribution facilities; railroad yards; and businesses that sell and repair motor vehicles, recreational vehicles, transportation containers or construction machinery and equipment* (Wis. Admin. Code § NR 700.03(28m)).

"Ordinary high-water mark" means the point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic. Where the bank or shore at any particular place is of such character that it is difficult or impossible to ascertain where the point of ordinary high-water mark is, recourse may be had to the opposite bank of a stream or to other places on the shore of a lake or flowage to determine whether a given stage of water is above or below the ordinary high-water mark (Wis. Admin. Code § NR 115.03(6)).

"Residual contamination" means that some contamination remains after a cleanup is completed and approved. Residual contamination includes all phases of remaining contamination including vapor, dissolved, adsorbed and free phase (Wis. Admin. Code § NR 700.03(49r)).

"Riparian zone" means the zone adjacent to a navigable stream or other body of water (Wis. Admin. Code § NR 47.12(10)).

"Sediment" means particles in the bed of a navigable water up to the ordinary high-water mark that are derived from the erosion of rock, minerals, soil, and biological materials and from chemical precipitation from the water column and that are transported or deposited by water (Wis. Stat. § 292.01(17g)). The term sediment is applied to materials below the ordinary high-water mark, while materials above the ordinary high-water mark are considered soil.

Terms Used in this Document *(Continued)*

"Sediment cover" means a layer of uncontaminated sand or similar material that is deposited on top of contaminated sediment (Wis. Stat. § 292.01(17m)).

"Site" means:

- (a) any waste site as defined in Wis. Stat. § 292.01(21); or
- (b) any area where a hazardous substance has been discharged (Wis. Admin. Code § NR 700.03 (56)).

A "site" includes all properties affected by contamination, both the property where the source of contamination is found and all properties where the contamination has migrated. A single site may include several properties. However, it is also possible to have more than one hazardous substance discharge site on a single property if there has been more than one hazardous substance discharge incident on a property.

"Smear zone" is the area where free product occurred in the soil and was then smeared across the soil when the water table fluctuated between historical high and low water table elevations. Materials within the smear zone are soil, regardless of the degree of saturation at the time the case closure request is made (DNR publication RR-712, *Smear Zone Contamination*).

"Soil" means unsaturated organic material, derived from vegetation and unsaturated, loose, incoherent rock material, of any origin, that rests on bedrock other than foundry sand, debris and any industrial waste (Wis. Admin. Code § NR 700.03(58)).

"Source property" means the property on which the hazardous substance discharge under investigation or cleanup, originally occurred (Wis. Admin. Code § NR 700.03(59m)).

Minimum Requirements for Case Closure

Response Action Goals

Wis. Admin. Code chs. NR 700 to 799 require RPs to take response actions that are protective of human health and the environment to remedy hazardous substance discharges and environmental pollution ("contamination") that impact soil, surface waters, groundwater, air, sediment and other affected media. Response action goals, per Wis. Admin. Code § NR 726.05(4), are to ensure "the remaining level contamination is not likely to:

- (a) Pose a threat to public health, safety or welfare or the environment.
- (b) Cause a violation of ch. NR 140 groundwater quality enforcement standards at any applicable point of standards application, except where the department has granted an exemption under § NR 140.28 for a specific hazardous substance or the criteria under § NR 726.05 (6) are met.
- (c) Cause a violation of surface water quality standards in chs. NR 102 to 106.
- (d) Cause a violation of air quality standards contained in chs. NR 400 to 499.
- (e) Cause a vapor action level in indoor air to be attained or exceeded."

Applicable Codes, Submittals and Timeframes

Wis. Admin. Code chs. NR 700 to 799 specify the minimum requirements and conditions that must be met before the DNR can determine that recommending case closure is appropriate, and that all media, including sediment, were adequately investigated and remediated. Below is a summary of required submittals and actions that must be completed, unless otherwise directed by the DNR, prior to case closure:

- **Wis. Admin. Code ch. NR 708** – Documentation for any immediate or interim actions taken.
 - An interim action report is required and can be submitted with either the site investigation report or the remedial action report, per Wis. Admin. Code § NR 708.15(1), unless free product from an underground storage tank (UST) was removed.
 - For free product removal, a report is to be submitted within 45 days of confirming a discharge, per Wis. Admin. Code § NR 708.15(2).
- **Wis. Admin. Code ch. NR 712** – Professional certifications and signatures with all applicable submittals.
- **Wis. Admin. Code ch. NR 716** – A site investigation work plan is due to the DNR within 60 days of being notified that a site investigation is required, and a complete site investigation report is due to the DNR within 60 days of completion of the field investigation and receipt of the laboratory data, per Wis.

Admin. Code §§ NR 700.11(1)(bm) and (cm). See DNR forms 4400-316 and 4400-317 and Wis. Admin. Code ch. NR 716 for more information on what is required for a complete site investigation.

- **Wis. Admin. Code ch. NR 720** – If soil is contaminated, a determination of the land use classification for the site (in the site investigation report) is required. Residual contaminant levels for a contaminant of concern may be determined in accordance with Wis. Admin. Code §§ NR 720.08 to 720.12.
- **Wis. Admin. Code ch. NR 722** – A remedial action options report is required within 60 days of submittal of the site investigation report (Wis. Admin. Code § NR 700.14(1)(dm)).
- **Wis. Admin. Code ch. NR 724** – Where remedial actions are taken, design reports, design plans, specifications and operation and maintenance documentation are required. Construction and completion of the remedial action documentation is required within 60 days after construction is complete or is determined to be essentially complete, per Wis. Admin. Code § NR 724.15.
- **Wis. Admin. Code ch. NR 725** – Notifications to parties (and occupants) whose properties or rights-of-way (ROWs) were affected by the hazardous substance discharge. See the “Required Notifications by Responsible Parties” section for more information. For COs to be imposed in riparian zones, notification may be required under Wis. Stat. § 292.12(4).
- **Wis. Admin. Code ch. NR 726** – Documentation required under Wis. Admin. Code § NR 726.09 (and Wis. Admin. Code § NR 726.11, if applicable) that demonstrates the response action(s) met the response action goals of Wis. Admin. Code § NR 726.05(4), and complied with all applicable federal, state and local public health and environmental laws per Wis. Admin. Code § NR 726.05(1).
- **Wis. Admin. Code ch. NR 749** – Applicable fees, including case closure and database fees.

The following Wis. Admin. Code requirements may also apply, depending on the circumstances of the site:

- **Wis. Admin. Code chs. NR 102 to 106** requirements may apply if waters of the state are affected by the contamination.
- **Wis. Admin Code ch. NR 140** establishes groundwater quality standards and requires certain actions be taken to address potential exposure to contaminated groundwater¹.
- **Wis. Admin. Code ch. NR 141** applies to monitoring well construction, filling and sealing.
- **Wis. Admin. Code ch. NR 347** applies if contaminated sediment is removed and disposed of as part of a dredging project under Wis. Stat. ch. 30.
- **Wis. Admin. Code chs. NR 500 to 599 and NR 600 to 699** apply to removal and disposal of contaminated soil, contaminated sediment, solid waste and hazardous waste.

Case Closure Process

Considering the Wis. Stat. and Wis. Admin. Code references in Section 3 and Wis. Admin. Code § NR 726.05 in particular, the RP may conclude that case closure is appropriate. Below is a summary of the steps and legal requirements involved in the case closure process. Additional requirements and details are specified in Wis. Admin. Code chs. NR 725 and NR 726.

Step 1: Case Closure Request Preparation, Notifications and Submittal

1a. The RP prepares the case closure request, using DNR Form 4400-202, *Case Closure*, per Wis. Admin. Code NR § 726.09(1). The closure form allows the RP to explain and justify how the applicable code requirements were met. To demonstrate compliance with the applicable codes and to meet the response action goals, the closure submittal should include all information requested in the closure form.

¹ The Wisconsin Department of Health Services (DHS) may recommend groundwater quality standards at the request of the DNR based on scientific literature and toxicological information. DNR utilizes the recommendations from DHS to promulgate groundwater quality standards. Certain recommendations for groundwater quality standards (e.g., 16 perfluoroalkyl and polyfluoroalkyl substances or PFAS) may be applicable to contaminated sites depending on site-specific circumstances.

Case closure requests must meet the Wis. Admin Code § NR 726.09 documentation requirements, including:

- a description of the investigation and remedial actions completed at a site,
- identification of applicable COs, the land use and exposure assumptions on which they are based and the properties and rights-of-way to which COs will be applied,
- proof of notification of all affected parties, and
- any maintenance plans associated with the remedial action.

Typical COs are described below under Continuing Obligations and summarized in Appendix 1.

1b. Per Wis. Admin. Code ch. NR 725, the RP must send notifications of residual contamination and potential COs to affected property owners, occupants (as appropriate) and ROW holders, for all properties and ROWs affected by remaining contamination, using DNR Form 4400-286, *Notification of Continuing Obligations and Residual Contamination*. For more detail see Required Notifications by Responsible Parties below.

On a case-by-case basis, the DNR may require notification of property owners in affected riparian zones, where the lake or riverbed is not owned by an adjacent property owner, under Wis. Stat. § 292.12(4)).

1c. The RP submits the completed case closure request to the DNR including the applicable Wis. Admin. Code ch. NR 712 professional certifications and Wis. Admin. Code ch. NR 749 fees.

Step 2: Initial DNR Review

2a. Upon receipt, the DNR conducts a review to ensure that all required items, including the review fee and applicable database fees, were included. If required items are missing, the submittal is considered “administratively incomplete.”

2b. If the submittal is administratively incomplete, the RP is notified in writing that the review of the case closure request will not continue until the missing items or fees are received.

2c. Once the case closure request package is complete, the DNR will conduct a technical review. The DNR may request additional or revised information as needed to better understand the specifics of the site and completed cleanup, and to provide a response to the case closure request.

2d. A meeting between the DNR and the RP may be used/recommended to discuss the case closure request. The timing of the meeting (before, during or after technical review) is flexible, and is typically at the discretion of the RP. One meeting is included with the case closure review fee.

Step 3: DNR Technical Review

3a. DNR staff conduct a technical review of the case closure request submittal. Staff discuss data and technical elements of the request. The case closure request is reviewed for compliance with applicable laws. After the technical review, a response letter is sent to the RP.

Related DNR Guidance & Forms

The following documents may also be useful:

- *DNR Case Closure Continuing Obligations: Vapor Intrusion*, RR-042
- *Wis. Admin. Code ch. NR 712: Qualifications and Certifications*, RR-081
- *Wis. Admin. Code ch. NR 726 Case Closure Reconsideration Process*, RR-102
- *RR Guidance for Submitting Documents*, RR-690
- *Guidance for Cover Systems as Soil Performance Standard Remedies*, RR-709
- *Continuing Obligations for Environmental Protection: Responsibilities of Wisconsin Property Owners*, RR-819
- *Remediation and Redevelopment Program Fee Schedule*, RR-966
- *Agreement for Assumption of Responsibility for Monitoring Wells*, RR-970
- *Improve your Closure Request: Maintenance Plans and Maps*, RR-983
- *Post-Closure Modifications – Changes to Property Conditions after a State-Approved Cleanup*, RR-987
- *Case Closure*, Form 4400-202,
- *Notification of Continuing Obligations and Residual Contamination*, Form 4400-286

3b. Possible DNR responses include:

- **Remaining Actions Needed:** A remaining actions needed letter may be sent if minor modifications to the closure request or limited additional work is needed. The letter will indicate the actions needed to receive a case closure recommendation from the DNR. Actions typically required are filling and sealing of monitoring wells and/or system piping, management of investigative wastes, and minor revisions for closure packet errors that do not change the narrative. After completing the actions, the RP provides documentation to the DNR.
- **Closure Approval:** If closure is approved, a case closure letter is provided. If contamination remains, the letter will contain a description of remaining contamination and the COs required to limit exposure. The letter will identify the properties and ROWs to which the COs apply. Note that a case closure letter is a legally enforceable document.
- **Closure Not Recommended:** If the DNR determines the investigation and cleanup are incomplete or adequate information is not available to make a determination, a case closure not recommended letter is sent. The DNR sends the letter to the RP, indicating the reasons why case closure is not recommended and identifying the actions needed to meet any remaining closure requirements. The DNR may include a schedule for completing the actions.

If the case closure request is significantly deficient due to an incomplete site investigation, the letter may include a statement that the case closure review fees submitted will be applied to the site investigation review, and additional case closure review fees will be required when a complete case closure request is subsequently submitted.

The DNR project manager assigned to the site will call the RP to discuss the letter, and a meeting with the RP may be proposed to facilitate a path to case closure. Following completion of the recommended actions, the RP can submit a revised case closure request. If the RP does not agree with the recommendation, they may request reconsideration of the case closure request (see Closure Reconsideration section, below).

Step 4: After Closure Review/Approval

4a. Upon approving a case closure request, the DNR is required to provide notification of case closure approval to certain parties under Wis. Admin. Code § NR 726.13(2). The DNR sends a letter to the property owner and non-Wisconsin Department of Transportation (WI DOT) ROW holder for each property or ROW to which a CO is applied, with a description of the residual contamination and the applicable COs. WI DOT receives email notifications from the DNR regarding closure decisions and COs. Other parties may request to be notified of closure decisions (approvals or closure not recommended), in accordance with Wis. Admin. Code §§ NR 714.05(5) and NR 726.13(2).

4b. The DNR adds the completed case closure request to the DNR database, Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web (BOTW). The site is also shown on a map view on the Remediation and Redevelopment Sites Map (RRSM). Together, BOTW and RRSM provide public notice of residual contamination and COs. Property and ROW specific information is included in the documents in BOTW.

Step 5: Closure Reconsideration

If case closure is not recommended by the DNR, and the RP disagrees with the DNR's determination, the RP may request reconsideration of the recommendation. For more information, see DNR publication RR-102, *Wis. Admin. Code ch. NR 726 Case Closure Reconsideration Process*.

Continuing Obligations

COs are used to prevent exposure to contamination that remains after response actions were taken. The suitability and need for imposing COs on a property should be considered by RPs early in the remedial decision-making process for a site. Response actions must be taken to ensure that all contaminant pathways are addressed, and the

remaining level of contamination is unlikely to pose a threat to human health, safety, welfare and the environment, per Wis. Admin. Code § NR 726.05.

COs include any type of control applied to a property, to maintain the protectiveness of the response actions taken, based on the remaining contamination. COs may include requirements to maintain physical or engineered cover systems or vapor mitigation systems or barriers, to limit land use or to prohibit or require certain actions.

Under Wis. Stat. § 292.12(5), the responsibility for complying with COs applies to the person who owns the property, regardless of when the person obtained the property. Under Wis. Stat. § 292.12(5m), the responsibility for complying with COs (specifically, engineering controls) for sediment applies to the person required to take the cleanup actions.

By considering potential COs early, communicating with the affected parties prior to the case closure request and providing the necessary information to the DNR in the case closure request form, it is more likely that the case closure request will be approved by the DNR. Within the case closure request form, the RP needs to identify any COs that may be necessary and define the specific property, riparian zone and/or ROW to which the COs will be applied, per Wis. Admin. Code § NR 726.09.

Under Wis. Stat. § 292.12 and Wis. Admin. Code ch. NR 726, the DNR is authorized to include COs in the closure approval letter as a condition of closure, or in a remedial action or interim action approval.² COs may also be included as an action required of a local governmental unit under Wis. Stat. § 292.11(9)(e)4. and Wis. Admin. Code § NR 708.17.

For more information on site responsibility and cleanup, see DNR publication RR-819, *Continuing Obligations for Environmental Protection: Responsibilities of Wisconsin Property Owners*.

It is important to note that COs cannot be replaced by local government controls such as zoning ordinances and land use plans, as these can be changed at the local level. The COs described in this document are imposed under state authority, and remain in place until either satisfied, or until other COs are approved for changing site conditions under Wis. Admin. Code ch. NR 727. The DNR approval for well construction or reconstruction is required for any site with residual contamination and COs, under Wis. Admin. Code § NR 812.09(4)(w).

Descriptions of Continuing Obligations

The following are explanations of COs that may be assigned to a property, with recommendations and specific requirements that apply to the particular CO. A summary table is provided in Appendix 1.

Residual Soil Contamination

Authority: Wis. Stat. ch. 289 and § 292.12(2), Wis. Admin. Code § NR 726.15

Maintenance Plan Required: Yes, for covers and for ongoing treatment systems required in an interim action or remedial action approval

A CO for residual soil requires proper management of contaminated soil when excavated in the future. Requirements for sampling, proper handling, management and disposal apply to soil, sediment or other solids excavated from an area with residual contamination.

Sites with residual soil contaminant concentrations that equal or exceed residual contaminant levels (RCLs), as determined under Wis. Admin. Code ch. NR 720, may be granted case closure if:

- soil contamination was adequately characterized for all pathways of concern, per Wis. Admin. Code § NR 726.09(2);

² Prior to June 3, 2006, soil-related COs were imposed through deed notices and deed restrictions at the time of closure. Deed restrictions are also still in place for grants awarded under the Green Space and Public Facilities Grant program to ensure that the grant project area (e.g., park) remains for use by the public for a certain number of years (typically at least 20 years). These grants were awarded from 2003 to 2008. Guidance on extinguishing a deed restriction, typically for satisfaction of COs, is in DNR publication RR-045, *Process to Extinguish an Environmental Deed Restriction*.

- there is no threat to human health or the environment per Wis. Admin. Code § NR 726.05(4); and
- remediation has been completed to the extent technically and economically feasible per Wis. Admin. Code ch. NR 722.

Soil includes materials above the all-time low water table. This refers to the smear zone. To distinguish soil from sediment, soil includes materials above the ordinary high-water mark.

If direct contact RCLs are attained or exceeded, the contaminated soil is either treated, removed or covered. The area for application of direct contact RCLs is generally considered to be within four feet of the ground surface, based on Wis. Admin. Code § NR 726.15(2)(e), but can be a site-specific determination if it is determined by the RP or the DNR there is a potential for direct contact with contaminated soil at a greater depth.

If groundwater pathway RCLs are attained or exceeded, remedial action options available under Wis. Admin. Code ch. NR 720 include use of a cover, natural attenuation (see below) or operation of a treatment system. Other remedial actions may also be considered.

A CO for residual contaminated soil is typically used with COs for a cover and maintenance of industrial soil standards. If soil data are available that indicate contamination, the CO for residual soil may also be applied with a CO for a structural impediment. This is more likely to be applied when some investigation was done, but the remedial action could not be completed due to the presence of a structure that impeded investigation, remedial action, or both.

Covers (for either the direct contact or groundwater pathway) or Engineering Controls for Soil

Authority: Wis. Stat. § 292.12, Wis. Admin. Code § NR 726.15

Maintenance Plan Required: Yes

This CO applies if a protective cover is needed to address soil contamination with concentrations that equal or exceed the applicable direct contact or groundwater pathway RCLs. When a cover serves as the final remedy, a CO is included in the case closure letter that requires maintenance to ensure the remedy will remain effective over time. Covers — soil, engineered or other (e.g., buildings as covers) are considered performance standards under Wis. Admin. Code ch. NR 720. This CO typically is used for soil covers, paved (parking) areas, engineered covers and other types of impermeable barriers. This may include a building, which may also be acting as a structural impediment to completion of a site investigation, remedial action or both. This CO is not used for sediment covers.

For covers, include a site-specific maintenance plan with the case closure request. The maintenance plan should include a location where the inspection reports will be maintained. This is typically either at the source property, or at an address identified by the property owner. The case closure letter will identify conditions regarding documentation, availability and the submittal of the inspection log, and frequency of inspections per Wis. Admin. Code § NR 726.15(1)(d). The typical frequency is annually, but this may vary based on site-specific conditions.

If soil contamination remains that equals or exceeds a direct contact RCL within four feet of the ground surface and a cover serves as the performance standard under Wis. Admin. Code ch. NR 720, then a condition requiring that the cover is not disturbed or excavated in the future is typically included in the closure letter. The CO requires maintenance of the cover, notification to the DNR at least 45 days before making a change to the cover, and written approval from the DNR before conducting any activities prohibited in the case closure letter, per Wis. Admin. Code §§ NR 726.15(2) and NR 727.07(1).

For more information on:

- the design and use of covers, see DNR publication RR-709, *Guidance for Cover Systems as Soil Performance Standard Remedies*.
- the requirements if making changes to a cover, see DNR publication RR-987, *Post-Closure Modifications – Changes to Property Conditions after a State-Approved Cleanup*.

Industrial Soil Standards Applied

Authority: Wis. Stat. § 292.12, Wis. Admin. Code §§ NR 726.15 and NR 727.07(3)

Maintenance Plan Required: No

This CO is used where soil contamination meets or exceeds a non-industrial direct contact RCL but is less than the industrial direct contact RCL. This CO limits the property to industrial use. Per Wis. Admin. Code § NR 727.07, the CO requires that before the property can be used for non-industrial land use, the current property owner must notify the DNR of the intent to change the land use at least 45 days before the change in land use. An investigation and remedial action to meet the applicable RCLs for the intended land use may be required.

To classify the land use of a site or facility as industrial for direct contact RCL determinations under the criteria in Wis. Admin. Code § NR 720.05(5), the site or facility must be currently zoned as industrial or otherwise officially designated for industrial use. In addition to the designated use, it must not be necessary to apply more stringent non-industrial direct contact RCLs to protect public health on or off the site or facility. An industrial land use classification may also be applied to restricted access areas unless more stringent non-industrial direct contact RCLs are necessary to protect public health on or off the site or facility.

For properties that are zoned industrial, but where the land use at the time of the case closure request is vacant, the land use classification will be based on the Wis. Admin. Code § NR 720.05(5) criteria regarding the surrounding land use and access to the vacant property. Upon application of the criteria at most sites, a land use classification of industrial is more likely if the surrounding land use is also industrial and/or access to the property is restricted.

This CO may be used to reduce or eliminate areas for which a cover might otherwise be required, to address direct contact with soils exceeding non-industrial RCLs.

If soil contamination is equal to or greater than an industrial direct contact RCL at a site with industrial land use, either a remedial action is needed to treat soil to below applicable RCLs, or a cover is needed to address potential exposure to the residual contamination.

Structural Impediments

Authority: Wis. Stat. §§ 292.12 and 292.13, Wis. Admin. Code §§ NR 726.15 and NR 727.07(2)

Maintenance Plan Required: Site-specific (if also considered as part of a cover system)

Structural impediments are objects that prevent access to contamination such as buildings, overhead wires, concrete pads, certain utility vaults or pedestals, etc. Sites where structural impediments prevented completion of either the site investigation or a remedial action will have this CO applied. The CO requires notification to the DNR at least 45 days before a structural impediment is removed, and completion of the investigation and/or remediation.

This CO may not be used at properties in the Voluntary Party Liability Exemption (VPLE) program if the structural impediment prevented completion of the site investigation, per Wis. Stat. § 292.15(2).

For sediment sites with a structural impediment, the RP may also need to submit a plan and compliance schedule and provide proof of financial responsibility for future costs of investigation and remediation upon removal of the structural impediment, per Wis. Stat. § 292.12(2).

Residual Groundwater Contamination

Authority: Wis. Stat. ch. 160, Wis. Admin. Code ch. NR 140, Wis. Admin. Code s. NR 726.15

Maintenance Plan Required: No

This CO is applied when residual contaminant concentrations in groundwater meet or exceed the applicable Wis. Admin. Code ch. NR 140 Enforcement Standard (ES) and where no ES exists but contamination impacted the groundwater. For hazardous substance discharges regulated under Wis. Stat. § 292.12, Wis. Admin. Code ch. NR 140 groundwater standards, including the ES and the preventive action limits (PALs), are applied at any point

groundwater is monitored. Under this CO, prior DNR approval is required for potable well construction or reconstruction, per Wis. Admin. Code § NR 812.09(4)(w). Additional casing may be required to prevent contamination of the well.

In accordance with Wis. Admin. Code § NR 726.05(6), sites where groundwater contamination equals or exceeds an ES may be closed if:

- adequate source-control action has been taken; including
 - free product removal where appropriate,
 - a demonstration that natural attenuation is effective in reducing the concentration and mass of contaminants and related breakdown products;
- natural attenuation will bring the groundwater into compliance with standards within a reasonable period of time, considering the criteria in Wis. Admin. Code § NR 722.07;
- the groundwater plume is stable or receding, and groundwater contamination will not migrate beyond the boundaries of properties that either
 - have a PAL exemption or
 - are listed on the department database for meeting or exceeding an ES;
- there is no threat to public health, safety or welfare or the environment; and
- the site is in compliance with all applicable health and environmental laws.

Note that the CO for groundwater is not needed if all compounds are eligible for an exemption under Wis. Admin. Code § NR 140.28. Exemptions are based on several criteria, including background levels. If an exemption to the PAL under Wis. Admin. Code § NR 140.28 is sought, monitoring data from a specific property must be used to demonstrate that the exemption criteria are met.

NR 812: Wis. Admin. Code ch. NR 812 requires DNR approval for well construction, reconstruction or replacement of a well on a property identified by the DNR as having residual contamination and continuing obligations. A note in Wis. Admin. Code § NR 812.03(4) explains that these properties may be found on the DNR's Remediation and Redevelopment Database (i.e., BOTW). It is important to recognize that the Wis. Admin. Code ch. NR 812 language applies to properties, not sites, so the Notification of Closure Approval letters become crucial in providing a clear trail of where this CO is applied. The well construction approval requirement is included as a separate condition of closure in the closure letter rather than as a CO for groundwater, because it applies to any property with residual contamination, not just groundwater contamination. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, the property owner is required to complete and submit Form 3300-254, *Continuing Obligations/Residual Contamination Well Approval Application*, to the DNR Drinking and Groundwater program's regional water supply specialist. A well driller can help complete this form. The form can be obtained at dnr.wi.gov, search "3300-254." Additional casing may be necessary to help prevent contamination of the well.

Natural Attenuation: Use of natural attenuation can be a viable remedial option for sites with compounds that will naturally degrade over time. For sites where an ES is attained or exceeded for such compounds, documentation must be included in the case closure request form of how natural attenuation will meet the applicable Wis. Admin. Code § NR 726.05(6) criteria (summarized above). An estimate of the contaminant mass in the source area is also required for sites using natural attenuation as a response action, per Wis. Admin. Code § NR 716.11(3). To determine if compliance will be achieved within a reasonable period of time, the RP must assess the criteria in Wis. Admin. Code § NR 722.07(3).

For more information on the use of natural attenuation, see DNR publications:

- RR-614: *Guidance on Natural Attenuation for Petroleum Releases*
- RR-699: *Understanding Chlorinated Hydrocarbon Behavior in Groundwater: Investigation, Assessment and Limitations of Monitored Natural Attenuation*

Use of Inferred Data: For sites where contamination equals or exceeds the ES on a source property and a downgradient property, the RP may infer that contaminant concentrations at properties in between also meet or exceed the ES and, therefore, are considered to be within the contaminated site boundaries. On a case-by-case basis, Wis. Admin. Code ch. NR 140 groundwater quality standard exceedances may also be inferred from data obtained on an adjacent property, if collected near the property line.

If an exemption to the PAL under Wis. Admin. Code § NR 140.28 is sought, monitoring data from a specific property must be used to demonstrate that the exemption criteria are met.

Monitoring Well(s) that Have Not Been Properly Filled and Sealed (Abandoned) or will be Retained for Sampling

Authority: Wis. Admin. Code ch. NR 141 and § NR 726.15

Maintenance Plan Required: Yes, if continued groundwater monitoring is approved or required

This CO is applied to sites or properties with one or more of the following three situations:

1. Where one or more monitoring wells were not properly filled and sealed at the time of the closure approval (i.e., could not be located).

This CO requires proper filling and sealing of monitoring wells per Wis. Admin. Code ch. NR 141, once the wells are located. This CO is used only after a reasonable effort has been made to locate the well. Per Wis. Admin. Code § NR 726.09(2)(h), the RP must provide information in the case closure request form about the attempts to locate the well(s) for filling and sealing. This CO can be applied at properties or ROWs without residual contamination.

2. Where a request has been made to retain one or more monitoring wells for continued sampling.

This CO applies when an RP, property owner or ROW holder has requested to keep a monitoring well for continued use with a sampling plan, and the request has been approved following regional review. The CO for this situation requires maintenance and yearly inspections of the monitoring wells under Wis. Admin. Code § NR 715.13(14), and well filling and sealing and submittal of documentation once monitoring is discontinued, under Wis. Admin. Code § NR 141.25. The monitoring wells must be properly maintained so as not to provide a conduit for contaminant migration to groundwater. In this case, a maintenance plan for the monitoring wells is included as part of the case closure request.

Within the case closure request, the RP also must provide documentation from the party requesting to keep the monitoring well(s). The documentation shall include the basis for keeping the monitoring well(s), as this is an exception under Wis. Admin. Code § NR 141.31. Approval of this CO is considered approval of the exception.

The closure approval letter will include a requirement to inspect the monitoring well(s) at least annually to verify the integrity of the well(s), per Wis. Admin. Code § NR 716.13(14)(a), with instructions to keep the log on site or to submit the inspection log to the DNR (or DATCP, if applicable), per Wis. Admin. Code § NR 726.15(2).

3. The agency with administrative authority requires continued monitoring, per Wis. Admin. Code § NR 726.15(2)(c)2.

This CO is used if the agency with administrative authority (DNR or DATCP) requires continued use of monitoring well(s) by the RP requesting approval of a remedial action plan or case closure request. The CO requires continued monitoring per a site-specific schedule (sampling plan) and for maintenance of the monitoring well(s), as required under Wis. Admin. Code § NR 716.13(14)(a). The case closure request must include a maintenance plan with annual inspections per Wis. Admin. Code § NR 716.13(14)(a).

Transfer of Responsibility for Monitoring Well(s): Another condition may be included in the case closure letter if a monitoring well is to be kept and used to collect groundwater data for another site. These are referred to as “transferred” wells. The transfer of responsibility for monitoring wells is not considered a CO. In this case, the responsibility for filling and sealing of the well(s) is transferred to the RP for that site, as a condition for obtaining closure approval for that site. Documentation of acceptance of these monitoring wells (from the party taking responsibility for the wells) should be included in the case closure request form.

See DNR publication RR-970, *Agreement for Assumption of Responsibility for Monitoring Wells*, to aid in documenting acceptance of responsibility for monitoring wells.

Vapor Intrusion-Related COs

Authority: Wis. Stat. § 292.12, Wis. Admin. Code §§ NR 726.15, NR 727.07

Maintenance Plan Required: Yes, for active vapor mitigation systems, barrier systems or hydraulic control systems

A vapor intrusion related CO may be applied when:

1. A vapor mitigation system (VMS) is required due to exceedance of vapor risk screening levels (VRSLs) or based on hydrogeologic conditions, and in some cases, for sites where compounds of concern are still in use (in conjunction with the following CO). A vapor barrier may be used or be a part of a vapor mitigation system.

Contamination source control is required: Under Wis. Admin. Code § NR 726.05(8), if VRSLs are exceeded, remedial action must be taken, and the action must reduce the mass and concentration of volatile compounds to the extent practicable. This may require additional evaluation of remedial action options under Wis. Admin. Code ch. NR 722 and performance of additional remedial actions under Wis. Admin. Code ch. NR 724 beyond what would be acceptable if VRSLs were not exceeded (e.g., natural attenuation) to accomplish this requirement. Use of a VMS does not reduce mass and concentration of volatiles; it only prevents intrusion if properly designed, installed, operated and properly maintained.

This CO may be used in situations where obtaining vapor samples is difficult (e.g., limited air space) but where vapor intrusion is still likely based on existing hydrogeologic conditions such as VOC contamination in groundwater or within groundwater in contact with the building. It may also be used for residences with marginal sub-slab concentrations but where neighboring residences with similar hydrogeologic and contaminant conditions have sub-slab vapor concentrations which exceed VRSLs. In some cases, a hydraulic control system will be necessary in conjunction with the VMS.

This CO may also include the use and maintenance of vapor barriers, including constructed barriers, existing floors and sealed floors.

2. Compounds of concern are in use and typically where a full vapor assessment cannot be completed.

This CO is applied when compounds of concern are being used in an operating commercial or industrial facility. This CO may also be used to limit use to specific commercial or industrial use(s) based on the compounds of concern in use. For example, the property or unit may be limited to commercial businesses that use chlorinated solvents.

This CO requires notification of and approval from the DNR for an evaluation of the vapor intrusion pathway before changing the property use.

3. Hydrogeologic conditions are such that a hydraulic control system or other system is necessary to limit entry of volatiles, or for a vapor mitigation system to operate effectively.

This CO is applied when a dewatering system is used with a VMS (e.g., a sump pump needed to keep the water level low enough for a VMS to work).

This CO requires maintenance of the dewatering system, such as a sump pump or other applicable system. This CO is usually used in conjunction with the CO for a VMS.

4. Site conditions, occupancy or property use is restricted to the exposure assumptions used to determine vapor risk.

This CO is typically applied to sites where the VRSLs used to close the site are based on the current site conditions, occupancy or property use; the future site conditions, occupancy, or property use is restricted to prevent exposure to occupants above the VAL for the applicable occupancy type. For example, this CO may be used to restrict a site to non-residential occupancy if the residential VRSLs were exceeded but concentrations are below VRSLs for large commercial/industrial occupancies. The CO may also require maintenance of the floor and limits to air space and building layout, if those factors were included in the exposure assumptions on which closure was based. (See DNR publication RR-800, *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin* for further information regarding these situations.)

This CO limits site conditions, occupancy or property use and requires notification to the DNR before a change in site conditions, occupancy or property use, such as:

- A change in building layout
- A change in building occupancy from large commercial/industrial to small commercial
- A change in the occupancy or property use from small commercial to residential.

A response action may be required based on the change, depending on the potential exposure with the new or modified site conditions, occupancy or property use.

5. Residual contamination poses a future risk of vapor intrusion to any new buildings constructed, modifications (renovations or expansion of existing buildings, interior remodeling, HVAC adjustments, building additions, etc.) to current buildings or for reconstructed buildings. Maintenance of current building use and layout may be required as a condition of closure.

This CO requires notification to the DNR before construction of a building or renovation or expansion of the existing building(s). Vapor control technologies are required for any new construction unless the property owner provides a vapor assessment that concludes, and the DNR agrees, that current vapor concentrations are protective.

- Residual contamination in either soil, or groundwater or both is considered in applying this CO.
- This CO is applied at the property level (encompassing the entire area within the limits of the property boundaries), rather than just to the area above residual soil/groundwater contamination, due to the nature of vapor movement.

Per Wis. Admin. Code §§ NR 726.15 and NR 727.07, vapor intrusion related COs typically require maintenance of specified conditions or land use, at least a 45-day notice to the DNR before changing a land or property use, and written approval to make changes to the conditions specified in the case closure letter.

See DNR publication RR-042, *DNR Case Closure Continuing Obligations: Vapor Intrusion* for more information on issues to consider when dealing with vapor intrusion.

Site-Specific Continuing Obligations

Authority: Wis. Stat. § 292.12, Wis. Admin. Code §§ NR 726.15 and NR 727.07(7)

Maintenance Plan Required: Varies

A site-specific CO may be applied in accordance with Wis. Admin. Code § NR 726.13(1)(c). The RP should work with the DNR PM before submitting a case closure request or a remedial action plan when a site-specific CO may be required. A site-specific CO may be used for non-typical situations and may be applied to any media as appropriate.

Examples of site-specific COs, which are used in conjunction with other COs, include:

- operation of an active remediation system (groundwater pump and treat, soil vapor extraction, etc.) for the duration of the remedial action;
- long-term groundwater monitoring;
- active gas extraction/methane monitoring (monitoring under a historic fill approval per Wis. Admin. Code chs. NR 500 to 599 to address construction on a historical landfill, or in a solid waste approval);
- fencing to limit access;
- site-specific land use restrictions (recreational, green space);
- maintenance of signage;
- maintenance/pumping of building sump; and
- handling remaining soil contamination as solid waste if/when encountered. This could include compounds without standards, when significant contamination remains. Some examples are animal fats, mineral oil and hydraulic oil.³

Sediment Cap or Sediment-Related Engineered Control

Authority⁴: Wis. Stat. § 292.12 (5m), Wis. Admin. Code ch. NR 756, §§ NR 726.15 and NR 727.07(7)

Maintenance Plan Required: Yes

For sediment sites where an engineering control is used (e.g., a structured capping system), the CO will require maintenance consistent with an approved maintenance plan and compliance schedule. Proof of financial responsibility for the cost of complying with the maintenance approved plan and schedule is also required, per Wis. Stat. § 292.12(2)(d).

Note: A “sediment cover” as defined in Wis. Stat. § 292.01(17m) is not considered an engineered control under Wis. Stat. § 292.12, a performance standard under Wis. Admin. Code ch. NR 720, or a cover or continuing obligation under Wis. Admin. Code ch. NR 726.

Maps and Figures in the Case Closure Request

Ensure that the following information for the COs applicable to the site and affected properties are included on the figures (maps) enclosed with the case closure request form, consistent with the requirements of Wis. Admin. Code ch. NR 726 and § NR 716.15(4):

- Extent of residual soil contamination
- Type, location and extent of cover in relation to residual soil contamination
- Type and location of structural impediment/s
- Location and extent of area where industrial soil standards are met and applied
- Extent of groundwater contamination
- Location of monitoring wells which were not filled/sealed, or remain for sampling

³ This type of contamination is typically found using gasoline range organics (GRO) and/or diesel range organics (DRO) analyses on soils. Wis. Admin. Code ch. NR 700 - 799 no longer contains standards for GRO or DRO. However, Wis. Admin. Code § NR 700.13 (1m) Note recommends that these analyses be used for screening purposes. Compound specific analysis is required for most contaminants. A VOC analysis may also be requested to include n-Nonane when dealing with petroleum products, Stoddard solvents and mineral oil discharges, on a site-by-site basis, to help determine if any compound specific RCLs were exceeded.

⁴ At the time of this publication, revisions to Wis. Admin. Code chs. NR 700 to 799 were pending, including the proposed addition of chs. NR 756 and NR 758. In addition, Wis. Admin. Code ch. NR 756 was adopted as an emergency rule.

- Location and extent of any vapor barrier
- Location and extent of soil/groundwater contamination for vapor-future risk CO
- Location and layout of any buildings currently on the property
- Location and extent as applicable for any site-specific CO

DNR Database for Public Notice of Residual Contamination and Continuing Obligations

Wis. Stat. § 292.12(3) requires the DNR to maintain a database which lists sites that have residual contamination and for which COs were imposed. The COs may be included in either a remedial action or interim action approval, or in a case closure letter. The DNR may also apply COs where the DNR has directed a local governmental unit (LGU) to take an interim action under Wis. Stat. § 292.13 and Wis. Admin. Code § NR 708.17.

As part of the database listing, the DNR must include information about the residual contamination and any COs required under Wis. Stat. § 292.12(2). Information about sites with residual contamination and COs, as well as any site at which a hazardous substance discharge has been reported, can be found in the publicly accessible and searchable database, BOTW. BOTW is useful for accessing a wide variety of information, including actions taken at a site, the types of contaminants found at a site and whether soils, groundwater or other media were impacted. BOTW includes a variety of documents (e.g., CO packets, closure letters, reports and response letters), as well as site status, progress reports and contact information. Sites with residual contamination and COs are viewable as a layer in RRSMS.

Role of Land Use in Continuing Obligation Selection

Land Use at the Time of the Case Closure Request: COs are typically based on the land use classification per Wis. Admin Code § NR 720.05(5) at the time of the case closure request. If a different land use is proposed for application of a CO, the RP should clearly describe the future land use in the case closure request. Identification of current and former land uses are requested in the closure form as part of the site investigation summary. If the property is vacant at the time of the case closure request, the closure recommendation is usually based on the current zoning designation as described in the case closure request.

NR 720.05 RCL Determinations: Identification of the land use classification (for RCLs) and zoning is required in the case closure request form, per Wis. Admin. Code § NR 720.05(5). When determining the RCLs to be used at a site with soil contamination, Wis. Admin. Code § NR 720.05(5) provides criteria for when an industrial land use is to be applied for industrial RCLs. The land use classification applies to all properties within the contaminated site boundaries. Non-industrial RCLs may be applied to a site where the source property is industrial, but where proximity to a non-industrial land use, such as residential housing located across the street, makes a non-industrial land use more appropriate (Wis. Admin. Code § NR 720.05 (5) (b) and Notes).

Exposure Assumptions for Covers and Vapor Intrusion CO options: The use of a property also plays a role in the application of COs for covers and vapor-related COs based on exposure assumptions. For covers, land use may affect the design of the cover, to protect against exposure to residual contamination. For application of commercial/industrial exposure assumptions for vapor intrusion, VRSLs are based on the use of the property and/or size of buildings.

Required Notifications by Responsible Parties

Required Notifications

Under Wis. Stat. § 292.12(4) and Wis. Admin. Code § NR 725.05, prior to requesting closure, the RP is required to notify affected property owners, occupants and ROW holders of residual contamination and proposed COs associated with the site. The notification also advises the affected parties that the site will be listed on the DNR database.

The RP is required to use DNR Form 4400-286 to notify the source property owner (if not the person conducting the cleanup), affected property owners, riparian owners, occupants (as appropriate) and ROW holders, per Wis.

Admin. Code § NR 725.07. The form provides for notification of affected property owners, WI DOT and non-WI DOT ROW holders.

Notification of residual contamination and COs is also required to owners of properties and riparian zones with remaining sediment contamination, and for situations where a sediment cover was used, per Wis. Stat. § 292.12(4).

Notifications are to be sent by certified mail, return receipt requested, or priority mail with signature confirmation, per Wis. Admin. Code § NR 725.07(2). Notifications to WI DOT may be sent electronically, per Wis. Admin. Code § NR 725.07(3). Proof of notification is required to be submitted with the case closure request per Wis. Admin. Code § NR 726.09(3).

The DNR (or DATCP, if the agency with administrative authority) cannot conduct a final closure review until 30 days after receipt of the notification by affected parties, under Wis. Admin. Code § NR 726.13(1)(d). Affected parties may request an extension to the 30-day period for providing comments. The RP may also request that the DNR allow a shorter time frame for comments if all affected parties agree in writing to waive their right to comment on the proposed case closure request and copies are received by the DNR.

Rights-of-Way Notifications

The entity who maintains the ROW is typically responsible for the CO. Where a ROW is accessed through an easement, the entity conducting an action is responsible for exercising due care considering the CO. Under Wis. Admin. Code § NR 725.05, written notification of remaining contamination must be provided to the clerk of the town and county, or village or city, where the ROW is located and the municipal department or state agency that is responsible for maintaining the public street or highway. The same notification must be provided by the RP to the railroad that maintains the railroad ROW. This includes all public streets, highway rights-of-way and railroad rights-of-way that fall within the contaminated site boundary, that have soil or groundwater contamination exceeding the applicable standards in Wis. Admin. Code chs. NR 720 or NR 140, respectively. At the time notification is provided, the RP and the ROW holder may elect to discuss under what conditions future access will be provided and who will pay for additional investigation or remediation if required in the future.

To notify or to determine the correct ROW holder, contact WI DOT if the road is a state trunk or US highway, including business routes. If the ROW affected is part of a connecting highway, county highway or local road, then contact the applicable city, village or county office (wisconsin.gov/Pages/projects/data-plan/plan-res/connecting.aspx).

For sites with contamination remaining in public ROWs, public street and highway ROWs, or railroad ROWs, the location of the ROWs are identified and associated with the source property as part of the case closure letter and supporting documentation in BOTW, at dnr.wi.gov/topic/Brownfields/wrrd.html.

Other Pre-Closure Considerations

While preparing the case closure request, the RP often needs to consider several issues other than compliance with the applicable rules and the potential for COs. Some of the following issues may require more communication with affected parties than would normally be needed to meet case closure requirements. Some instances may also warrant additional documentation be included in the case closure request.

Legally Enforceable Agreements

Under Wis. Stat. § 292.12(5)(a), the property owner is responsible, and under Wis. Stat. § 292.12(5)(b), an occupant may be responsible, for complying with COs. However, under Wis. Stat. § 292.12(5)(c), a property owner or occupant may enter into a legally enforceable agreement, such as a contract, with someone else (such as

the person responsible for the cleanup) to take responsibility for compliance with the COs.⁵ To be enforceable, the agreement must be included in the DNR database.

Under Wis. Stat. § 292.12(5m) for sediment sites, the RP/person who conducted the cleanup is responsible for complying with COs, unless another party has agreed to the responsibilities under a legally enforceable agreement and that document is included in the DNR database.

Maintenance Plans

(Wis. Admin. Code §§ NR 716.13 (14), NR 724.13, NR 726.11 (2), NR 726.11 (3))

Maintenance plans are required under Wis. Admin. Code § NR 724.13, and are necessary for the following situations:

- pavement, an engineered cover or other type of cover (e.g., an existing parking lot or building) is required to reduce or eliminate exposure to residual contamination;
- a building or floor is acting as a barrier to exposure;
- monitoring wells are approved to be kept for further monitoring;
- a vapor mitigation system is needed to minimize exposure;
- a hydraulic control system or other system is needed for effective operation of a vapor mitigation system or to limit entry of volatiles;
- building use and layout remains unchanged for sites with a future concern for vapor intrusion from chlorinated VOCs;
- engineering controls are used for sediment sites (e.g., sediment cap, rip-rap); and
- fencing is used to limit access (when required in conjunction with other actions).

The DNR may require a maintenance plan for other unique situations where contamination remains at a site and specific COs are necessary to protect human health, safety or welfare or the environment, under Wis. Admin. Code § NR 726.11(2).

Information to be included in a maintenance plan is specified in Wis. Admin. Code § NR 726.11(2). The maintenance plan must include the following, at a minimum:

- a map depicting the location of the pertinent features to be maintained in relation to other site features,
- a description of type, location and depth of residual contamination,
- a description of maintenance actions to be performed,
- an inspection log, and
- site contact information.

Photographs of the features to be maintained as required under Wis. Admin. Code § NR 726.11(3), may be included with the maintenance plan. The maintenance plan should also include a description of the land use (e.g., industrial or non-industrial) and zoning at the time the CO is imposed. The DNR can request additional site-specific information be added to the plan. The maintenance plan can be kept on site or at an alternate specified location. A copy needs to be provided to each property owner or ROW holder who will be responsible for maintaining or complying with a CO.

⁵ A legally enforceable agreement between a property owner or occupant and another party to carry out any of the COs does not automatically transfer to a new owner or occupant of the property. If a subsequent property owner or occupant cannot negotiate a new agreement, responsibility for the applicable CO transfers to the current property owner. Under Wis. Stat. § 292.12(5)(c), for non-sediment sites, property owners or occupants that have entered into a legally enforceable agreement with another party (typically the RP) are not required to comply with the COs if the other party is complying with the COs and the agreement is included (as a document) in the database (BOTW). However, if the person with whom any property owner has a legally enforceable agreement fails to comply with the COs, the DNR has the authority to require the property owner to complete the necessary work. (Wis. Stat. § 292.12(5))

Provide a copy of any legally enforceable agreement to the DNR as part of the request for approval of the interim action, remedial action or closure. Inclusion of the agreement in the database is required under Wis. Stat. §§ 292.12(5)(c) and (5m)(b) for sediment sites.

Consideration should be given to structuring the maintenance plan so that the responsibilities for each property owner or ROW holder are clearly defined. For example, when more than one property is affected by a specific CO, plans specific to each property and each ROW can be used to identify the specific responsibilities for each property owner or ROW holder. Structuring a maintenance plan in this way can be useful in future property transactions, property divisions and consolidations.

The DNR recommends an inspection of the pertinent features be done at the time the CO is imposed, conducted with the property owner if possible. When conducting this inspection, include a checklist, instructions for which features to inspect, a description of what the feature should look like and photographs of existing features to be maintained to provide a baseline for future inspections. Document the inspection on DNR Form 4400-305 or 4400-321, as applicable, when required under Wis. Admin. Code ch. NR 726. For vapor mitigation systems, the DNR recommends using the inspection log format in DNR Form 4400-321, *Vapor Mitigation System Inspection Log*.

Under Wis. Admin. Code § NR 726.15(1)(d) and § NR 727.05, the interim or remedial action approval or case closure letter will identify conditions regarding documentation, availability and submittal of the inspection log, and frequency of inspections. The frequency typically is annually but may vary based on site-specific conditions. Therefore, the maintenance plan should reference the applicable approval letter for inspection frequency and log submittal requirements.

See the following DNR publications for further information:

- RR-709, *Guidance for Cover Systems as Performance Standard Remedies*, for information on cover design, construction and operation and maintenance concepts.
- RR-980, *Maintenance Plan Example Template for a Straightforward Site*, provides a template for both a cover and for monitoring well maintenance. Modify the template to include all the pertinent site-specifics before submitting it to the DNR as part of the case closure request.
- RR-983, *Improve your Closure Request: Maintenance Plans and Maps*.
- RR-981, *Maintenance Plans for Vapor Mitigation Systems/Vapor Intrusion Response Actions/Vapor Barriers*. Any maintenance issues not covered by the template or checklist need to be added to the site-specific maintenance plan prior to closure approval.

General Wastewater Permits for Construction-related Dewatering Activities (Wis. Admin. Code ch. NR 200)

Construction-related dewatering activities at sites with residual contamination may produce contaminated water. The DNR's Water Quality Program regulates point source discharges of contaminated water, including discharges to surface waters, storm sewers, pits, or to the ground surface. This includes discharges from construction-related dewatering activities, including utility work and building construction.

If the property owner or any other person plans to conduct such activities, that person must contact the Water Quality Program and, if necessary, apply for the required discharge permit. If residual soil or groundwater contamination is likely to affect water collected in a pit/trench that requires dewatering, a general permit for discharge of *Contaminated Groundwater from Remedial Action Operations* may be needed. If water collecting in a pit/trench that requires dewatering is expected to be free of pollutants other than suspended solids, oil and grease, a general permit for pit/trench *Dewatering Operations* may be needed.

Voluntary Party Liability Exemption (VPLE) Sites

COs can be used at VPLE properties, with the exception of a structural impediment that prevents the full investigation of the property (Wis. Admin. Code § NR 726.15(2)(f)). COs used at a property in the VPLE program are included in the Certificate of Completion (COC) and must be complied with to qualify for the liability exemption.

For more information on COCs and residual contamination and COs at VPLE sites, see DNR publications:

- RR-506, *Voluntary Party Liability Exemption Fact Sheet*
- RR-661, *Insurance for Voluntary Party Liability Exemption Sites using Natural Attenuation – Information and Fee Schedule*

Appendix 1: Scenarios, Authority and Continuing Obligations

Continuing Obligation Scenario (Authority ¹)	Continuing obligations for which the property owner is responsible. ³
1. Residual soil contamination ² (soil contamination equals or exceeds NR 720 RCLs). (<i>Wis. Stat. ch. 289, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Sample to determine if contamination remains. • Manage contaminated soil as a solid or hazardous waste if it is excavated.
2. A cover or engineered control is required over a contaminated area due to soil contamination. <ol style="list-style-type: none"> surfacial soils (typically the upper 4') exceed ch. NR 720 standards for direct contact, or soils at depth (typically below 4') exceed ch. NR 720 standards for protection of groundwater (<i>Wis. Stat. § 292.12, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Maintain an approved cover in accordance with the maintenance plan. • Inspect the cover and record inspections. • Notify the agency with administrative authority at least 45 days before a change to the cover.
3. Soil contamination is at concentrations appropriate for industrial land use only. (<i>Wis. Stat. § 292.12, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Maintain industrial land use. • Notify the DNR or agency with administrative authority at least 45 days beforehand, if planning to change the use. • A new cleanup and closure plan based on non-industrial soil standards may be needed.
4. A structural impediment obstructs full investigation or cleanup. Structural impediments are typically buildings or other structures, such as loading pads or overhead power lines. (<i>Wis. Stat. §§ 292.12, 292.13, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Maintain the structure. • Notify the DNR or agency with administrative authority at least 45 days beforehand, if it is planned to be removed or modified in a way that could affect the contamination. • Additional investigation and cleanup required upon removal of the structural impediment.
5. Groundwater contamination equals or exceeds ch. NR 140 enforcement standard. ³ (<i>Wis. Stat. ch. 160, Wis. Admin. Code ch. NR 140 and § NR 726.15</i>)	<ul style="list-style-type: none"> • Request review and approval from the DNR for water supply well construction or reconstruction.⁴ • Permits may be required for construction-related dewatering activities.⁵
6. Monitoring well needs to be filled and sealed ³ or continued monitoring approved or required. (<i>Wis. Admin. Code ch. NR 141 and § NR 726.15</i>)	<ul style="list-style-type: none"> • Properly fill and seal the monitoring well when it is located, or when required or approved monitoring ends. • Maintenance plan for continued monitoring.
7.A. Maintenance of a vapor mitigation system is required. (<i>Wis. Stat. § 292.12, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Maintain and operate the vapor mitigation system according to the maintenance plan. • Maintain the floor/pavement or other structural features. • Notify the DNR or agency with administrative authority at least 45 days beforehand, if planning changes to the use of the system, structural features, property conditions, use or occupancy, or other conditions upon which closure was based.

Continuing Obligation Scenario (Authority ¹)	Continuing obligations for which the property owner is responsible. ³
7.B. Compounds of concern (for vapor) are still in use. (<i>Wis. Stat. § 292.12, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Maintain site-specific (exposure) conditions. • May be required to operate and maintain a vapor mitigation system. • Notify the DNR or agency with administrative authority at least 45 days beforehand if a compound of concern will no longer be used.
7.C. A hydraulic control system or other system is required to allow for efficient operation of a vapor mitigation system or to limit entry of volatile compounds. (<i>Wis. Stat. § 292.12, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Maintain and operate the vapor mitigation system in accordance with the maintenance plan. • Maintain the floor/pavement or other structural features. • Maintain the hydrogeologic control system • Notify the DNR or agency with administrative authority at least 45 days beforehand if planning to change the use of the system, structural features, property conditions, use or occupancy, or other conditions upon which closure was based.
7.D. Closure is approved with site-specific exposure assumptions applied. (<i>Wis. Stat. § 292.12, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Comply with the specific condition. • Land or property use restrictions may be applied. • Notify the DNR or agency with administrative authority at least 45 days beforehand if a change is considered for use of the building or property.
7.E. Residual contamination poses a vapor intrusion risk for future buildings. (<i>Wis. Stat. § 292.12, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Maintenance of building use and layout is required as at the time of closure approval. • Notify the DNR or agency with administrative authority at least 45 days before a building is constructed. Use of vapor control technologies is required unless an assessment of the potential for vapor intrusion is conducted and the department approves the assessment.
8. A site-specific condition is included in the closure approval letter. (<i>Wis. Stat. § 292.12, Wis. Admin. Code § NR 726.15</i>)	<ul style="list-style-type: none"> • Comply with the specific condition. • Land or property use restrictions may be applied. • Notify the DNR or agency with administrative authority if a change is considered for use of the building or property.
9. A sediment cap or other engineered control for residual sediment contamination is applied (this does not include sediment covers) (<i>Wis. Stat. § 292.12 (5m)</i>)	<ul style="list-style-type: none"> • Maintain the cap or engineered control consistent with the maintenance plan. • Notify the DNR or agency with administrative authority if a change to or removal of the cap or engineered control is considered.
10. A local government is exempt from cleanup but is required to take other action under Wis. Stat. s. 292.11 (9) (e) 4, based on the intended use of the property. (<i>Wis. Stat. § 292.12 (3) (b) 2, Wis. Admin. Code § NR 708.17</i>)	<ul style="list-style-type: none"> • Maintain conditions specified in the general liability clarification letter or other correspondence and prevent substantial threats to health or the environment. • Notify the DNR if changes to the land use or to the CO are considered.

For all of the CO scenarios above:

COs are documented in the interim or remedial action approval or case closure letter, *except* in the case of Local Governmental Units (LGUs). For LGUs, the CO may be documented in a general liability clarification letter, or other correspondence from the DNR. All documentation is available on BOTW.

Under Wis. Admin. Code ch. NR 812, approval from the DNR's Drinking and Groundwater Program is required for well construction or reconstruction for all sites with residual contamination. The property owner should work with the well driller to obtain DNR approval.

"Property owner" refers to the owner of any property upon which a CO is imposed, regardless of when the obligation was imposed. The CO runs with the property, and therefore also applies to future property owners. The property may be either a "source property," on which the contamination originated, or it may be a property affected by contamination that migrated from the source property.

Footnotes:

1. Wis. Stat. § 292.12(3), authorizes creation of an electronic database to track sites with groundwater or soil standard exceedances and sites with COs. The COs for situations 2, 3 and 4, and 7, 8, 9 and 10 are based on Wis. Stat. § 292.12. Authority provided in other statutes or in administrative rules are noted for COs 1, 5 and 6.
2. Most sites with COs 2, 3 and 4 are included in BOTW. Some of these obligations were established in deed notices or in deed restrictions prior to June 3, 2006.
3. When there is a requirement to notify the "agency with administrative authority," the appropriate agency to notify is the agency that prepared and sent the letter imposing the COs. Depending on the site, the DNR or DATCP may have jurisdiction over the site. For situation 10, only the DNR has the authority to direct action.
4. The potable well construction approval requirement applies to all sites with residual contamination, in accordance with Wis. Admin. Code § NR 812.09(4)(w). Work with a well driller on the application form, 3300-254, *GIS Registry Site Well Approval Application*.
5. Permits may also be required for construction-related dewatering activities at sites where water becomes contaminated due to contact with residual contamination at the site.

Other:

Site-specific information about the DNR requirements at remediation sites closed after August 1, 2002, is available via BOTW. Additional site-specific information about DNR requirements at remediation sites closed prior to August 1, 2002, may be recorded at the County Register of Deeds Office in deed restrictions and deed notices.

General information about all open and closed remediation sites is available in DNR files, or via BOTW at dnr.wi.gov, search "WRRD."

This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Chief, Public Civil Rights, Office of Civil Rights, U.S. Department of the Interior, 1849 C. Street, NW, Washington, D.C. 20240.

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