

NOTE: The following Maintenance Plan template has been slightly revised to follow the structure for Maintenance Plan Attachment D found in Form 4400-202, Case Closure – GIS Registry. References to the closure form are in BOLD, and are just reminders. (June, 2013)

### **Maintenance Plan Example Template For a Straightforward Site**

This maintenance plan example template may be used to begin developing an actual plan at straightforward sites that have only certain post-closure features. Sites that are more complex or contain different features should not use this template. Additional guidance on the content of Operation and Maintenance Plans can be found in “Guidance for Cover Systems as Soil Performance Standard Remedies”, [PUB-RR-709](#).

This example template can be used to begin developing an actual maintenance plan at a simple site that:

- Is closed with contaminated soil remaining that contains contaminants exceeding NR 720 RCLs and the soil presents a direct contact and/or migration to groundwater pathway threat;
- Uses a soil performance standard cover or barrier to address the direct contact and/or migration to groundwater pathway(s);
- Uses a cover or barrier that is pavement and/or a building(s); and
- Can be closed with natural attenuation addressing the groundwater pathway where contaminated soil remains that can leach contaminants into groundwater. Often a cover or barrier is a necessary part of the overall remedial approach to assure natural attenuation continues successfully after closure, because it provides some level of infiltration reduction that should not be changed. These maintenance plans should be developed to assure that occurs after closure is granted.

In some cases, DNR may request the signature of the property owner, to acknowledge the responsibility for maintenance of a remedy. This is generally limited to the situation where someone other than the responsible party is maintaining a cap or engineered control.

(Maintenance Plan Attachment D, parts D.1. – D. 5. of Form 4400-202)

## COVER (BARRIER OR CAP) MAINTENANCE PLAN

[ DATE]

Property Located at:

[ACTIVITY ADDRESS]

[FID # (if known), WDNR BRRTS/Activity #]

[LEGAL DESCRIPTION] [TAX #]

### Introduction

This document is the Maintenance Plan for a [insert type of cover/barrier/cap] at the above-referenced property in accordance with the requirements of s. NR 724.13(2), Wisconsin Administrative Code. The maintenance activities relate to the existing [insert type of cover/barrier/cap] occupying the area over the contaminated groundwater plume or soil on-site.

More site-specific information about this property may be found in:

- The case file in the DNR [Region name] regional office
- BRRTS on the Web (DNR's internet based data base of contaminated sites):  
[dnr.wi.gov/botw/SetUpBasicSearchForm.do](http://dnr.wi.gov/botw/SetUpBasicSearchForm.do)
- GIS Registry PDF file for further information on the nature and extent of contamination:  
[dnrmaps.wisconsin.gov/imf/imf.jsp?site=brts2](http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=brts2); and
- The DNR project manager for \_\_\_\_\_ County.

### Description of Contamination

**(Form 4400-202, Attachment D. Part 2. – brief description of the type, depth and location of residual contamination.)**

Soil contaminated by [describe the type of contaminants, e.g., petroleum, metals, chlorinated, etc.] is located at a depth of \_\_\_\_\_ feet at [describe location, including any off-property location]. Groundwater contaminated by [describe the type of contaminants] is located at a depth of [describe the location, including any off-property location]. The extent of the soil [and groundwater] contamination is shown on the attached [map(s)] [drawings(s)] [label multiple attachments as figures or maps 1, 2, 3 etc].

### Description of the [Cover/Barrier/Cap] to be maintained

The [Cover/Barrier/Cap] consists of [describe materials, thicknesses of layers]. It is located [describe location, including any off-property location] as shown on the **attached [map(s)]** [drawings(s)] [label multiple attachments as figures or maps 1, 2, 3 etc].

**(Form 4400-202, Attachment D. Part 1. - Show the feature that requires maintenance; the location of the feature that requires maintenance – on and off the source property; the extent of the structure or feature(s) to be maintained, in relation to other structures or features on the site; the extent and type of residual contamination; and all property boundaries.)**

[For engineered features: A copy of the engineering specifications for the [cover system or describe the feature] is attached.]

## Cover [and [Building] [Slab]] Barrier Purpose

The [insert type of cover/barrier/cap] over the contaminated [groundwater plume] [or soil] serve as a barrier to prevent direct human contact with residual soil contamination that might otherwise pose a threat to human health. [These [insert type of cover/barrier/cap] also act as a partial infiltration barrier to minimize future soil-to-groundwater contamination migration that would violate the groundwater standards in ch. NR 140, Wisconsin Administrative Code.] Based on the current and future use of the property, the barrier should function as intended unless disturbed.

## Annual Inspection

The [insert type of cover/cap] overlying the [contaminated groundwater plume] [or soil] and as depicted in [Figure \_\_\_\_] will be inspected once a year, normally in the spring after all snow and ice is gone, for deterioration, cracks and other potential problems that can cause [additional infiltration into] [or exposure to] underlying soils. The inspections will be performed by the property owner or their designated representative. The inspections will be performed to evaluate damage due to settling, exposure to the weather, wear from traffic, increasing age and other factors. Any area where soils have become or are likely to become exposed [[and] where infiltration from the surface will not be effectively minimized] will be documented. A log of the inspections and any repairs will be maintained by the property owner and is included as Exhibit B, Cap Inspection Log. The log will include recommendations for necessary repair of any areas where underlying soils are exposed [[and] where infiltration from the surface will not be effectively minimized]. Once repairs are completed, they will be documented in the inspection log. A copy of the inspection log will be kept at the address of the property owner and available for submittal or inspection by Wisconsin Department of Natural Resources ("WDNR") representatives upon their request.

*[Note: The WDNR may, in some instances, require in the case closure letter that the inspection log be submitted at least annually after every inspection. If the case closure letter requires that, then add the following sentence to the paragraph above: A copy of the inspection log must be submitted to the WDNR at least annually after every inspection.]*

## Maintenance Activities

**(Form 4400-202, Attachment D. part 3. – Description of Maintenance Actions required for maximizing effectiveness of the engineered control, vapor mitigation system (see Vapor Mitigation Checklist), feature or other action for which maintenance is required.)**

If problems are noted during the annual inspections or at any other time during the year, repairs will be scheduled as soon as practical. Repairs can include patching and filling or larger resurfacing or construction operations. In the event that necessary maintenance activities expose the underlying soil, the owner must inform maintenance workers of the direct contact exposure hazard and provide them with appropriate personal protection equipment ("PPE"). The owner must also sample any soil that is excavated from the site prior to disposal to ascertain if contamination remains. The soil must be treated, stored and disposed of by the owner in accordance with applicable local, state and federal law.

In the event the [insert type of cover/cap] overlying the [contaminated groundwater plume] [or soil] are removed or replaced, the replacement barrier must be equally impervious. Any replacement barrier will be subject to the same maintenance and inspection guidelines as outlined in this Maintenance Plan unless indicated otherwise by the WDNR or its successor.

The property owner, in order to maintain the integrity of the [insert type of cover/cap], will maintain a copy of this Maintenance Plan on-site and make it available to all interested parties

(i.e. on-site employees, contractors, future property owners, etc.) for viewing.

#### Prohibition of Activities and Notification of DNR Prior to Actions Affecting a Cover or Cap

The following activities are prohibited on any portion of the property where [pavement, a building foundation, soil cover, engineered cap or other barrier] is required as shown on the attached map, unless prior written approval has been obtained from the Wisconsin Department of Natural Resources: 1) removal of the existing barrier; 2) replacement with another barrier; 3) excavating or grading of the land surface; 4) filling on capped or paved areas; 5) plowing for agricultural cultivation; or 6) construction or placement of a building or other structure.

#### Amendment or Withdrawal of Maintenance Plan

This Maintenance Plan can be amended or withdrawn by the property owner and its successors with the written approval of WDNR.

#### **(Form 4400-202, Attachment D. Part 5.) Contact Information, including the name, address and phone number of the individual or facility who will be conducting the maintenance.**

Contact Information  
[MONTH & YEAR]

Site Owner and Operator:     [NAME]  
  [ADDRESS]  
  [PHONE #]

Signature: \_\_\_\_\_

(DNR may request signature of affected property owners, on a case-by-case basis)

Property Owner:               [NAME]  
  [ADDRESS]  
  [PHONE #]

Signature: \_\_\_\_\_

Consultant:                    [NAME]  
  [ADDRESS]  
  [PHONE #]

WDNR:                         [PROJECT MANAGER NAME]  
  [ADDRESS]  
  [PHONE #]

**Exhibit B**  
***Barrier INSPECTION and MAINTENANCE LOG***  
**(Form 4400-202, Attachment D. Part 4.)**

<b>Inspection Date</b>	<b>Inspector</b>	<b>Condition of Cap</b>	<b>Recommendations</b>	<b>Has recommended maintenance from previous inspection been implemented?</b>