State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

# Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 10/21)



RECEIVED
JUN 04 2025
By

**Notice:** Use this form to request **a written response (on agency letterhead)** from the Department of Natural Resources (DNR) regarding technical assistance, a post-closure change to a site, a specialized agreement or liability clarification for Property with known or suspected environmental contamination. A fee will be required as is authorized by s. 292.55, Wis. Stats., and NR 749, Wis. Adm. Code., unless noted in the instructions below. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records law [ss. 19.31 - 19.39, Wis. Stats.].

## Definitions

**"Property"** refers to the subject Property that is perceived to have been or has been impacted by the discharge of hazardous substances.

**"Liability Clarification"** refers to a written determination by the Department provided in response to a request made on this form. The response clarifies whether a person is or may become liable for the environmental contamination of a Property, as provided in s. 292.55, Wis. Stats.

**"Technical Assistance"** refers to the Department's assistance or comments on the planning and implementation of an environmental investigation or environmental cleanup on a Property in response to a request made on this form as provided in s. 292.55, Wis. Stats.

**"Post-closure modification"** refers to changes to Property boundaries and/or continuing obligations for Properties or sites that received closure letters for which continuing obligations have been applied or where contamination remains. Many, but not all, of these sites are included on the GIS Registry layer of RR Sites Map to provide public notice of residual contamination and continuing

## Select the Correct Form

This from should be used to request the following from the DNR:

- Technical Assistance
- Liability Clarification
- Post-Closure Modifications
- Specialized Agreements (tax cancellation, negotiated agreements, etc.)

**Do not use this form if one of the following applies:**

- Request for an **off-site liability exemption or clarification** for Property that has been or is perceived to be contaminated by one or more hazardous substances that originated on another Property containing the source of the contamination. Use DNR's Off-Site Liability Exemption and Liability Clarification Application Form 4400-201.
- Submittal of an Environmental Assessment for the **Lender Liability Exemption**, s 292.21, Wis. Stats., **if no response or review by DNR is requested**. Use the Lender Liability Exemption Environmental Assessment Tracking Form 4400-196.
- Request for an **exemption to develop on a historic fill site** or licensed landfill. Use DNR's Form 4400-226 or 4400-226A.
- **Request for closure** for Property where the investigation and cleanup actions are completed. Use DNR's Case Closure - GIS Registry Form 4400-202.

**All forms, publications and additional information are available on the internet at:** dnr.wi.gov/topic/Brownfields/Pubs.html.

## Instructions

1. Complete sections 1, 2, 6 and 7 for all requests. Be sure to provide adequate and complete information.
2. Select the type of assistance requested: Section 3 for technical assistance or post-closure modifications, Section 4 for a written determination or clarification of environmental liabilities; or Section 5 for a specialized agreement.
3. Include the fee payment that is listed in Section 3, 4, or 5, unless you are a "Voluntary Party" enrolled in the Voluntary Party Liability Exemption Program **and** the questions in Section 2 direct otherwise. Information on to whom and where to send the fee is found in Section 8 of this form.
4. Send the completed request, supporting materials and the fee to the appropriate DNR regional office where the Property is located.

   See the map on the last page of this form. A paper copy of the signed form and all reports and supporting materials shall be sent with an electronic copy of the form and supporting materials on a compact disk. For electronic document submittal requirements see: http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf"

## Section 1. Contact and Recipient Information

### Requester Information

This is the person requesting technical assistance or a post-closure modification review, that his or her liability be clarified or a specialized agreement and is identified as the requester in Section 7. DNR will address its response letter to this person.

| Last Name | First | MI | Organization/ Business Name | | |
|---|---|---|---|---|---|
| Amundson | Alex | | WEC Energy Group - Business Services | | |
| Mailing Address | | | City | State | ZIP Code |
| 333 W. Everett St., A231 | | | Milwaukee | WI | 53203 |
| Phone # (include area code) | Fax # (include area code) | | Email | | |
| (414) 221-2344 | | | alex.amundson@wecenergygroup.com | | |

The requester listed above: (select all that apply)

- [x] Is currently the owner
- [ ] Is considering selling the Property
- [ ] Is renting or leasing the Property
- [ ] Is considering acquiring the Property
- [ ] Is a lender with a mortgagee interest in the Property
- [ ] Other. Explain the status of the Property with respect to the applicant:

### Contact Information (to be contacted with questions about this request)

[x] Select if same as requester

| Contact Last Name | First | MI | Organization/ Business Name | | |
|---|---|---|---|---|---|
| Amundson | Alex | | WEC Energy Group - Business Services | | |
| Mailing Address | | | City | State | ZIP Code |
| 333 W. Everett St., A231 | | | Milwaukee | WI | 53203 |
| Phone # (include area code) | Fax # (include area code) | | Email | | |
| (414) 221-2344 | | | alex.amundson@wecenergygroup.com | | |

### Environmental Consultant (if applicable)

| Contact Last Name | First | MI | Organization/ Business Name | | |
|---|---|---|---|---|---|
| Johnson | Jeremiah | | Geosyntec Consultants | | |
| Mailing Address | | | City | State | ZIP Code |
| 10600 North Port Washington Rd. Suite 100 | | | Mequon | WI | 53092 |
| Phone # (include area code) | Fax # (include area code) | | Email | | |
| (262) 834-0228 | | | jpjohnson@geosyntec.com | | |

## Section 2. Property Information

| Property Name | | | FID No. (if known) | | |
|---|---|---|---|---|---|
| WEC Substation Retirement | | | 241329000 | | |
| BRRTS No. (if known) | | | Parcel Identification Number | | |
| 07-41-582805 | | | | | |
| Street Address | | | City | State | ZIP Code |
| 333 W EVERETT ST | | | Milwaukee | WI | 53203 |
| County | Municipality where the Property is located | | Property is composed of: | | Property Size Acres |
| Milwaukee | (•) City ( ) Town ( ) Village of Milwaukee | | ( ) Single tax parcel (•) Multiple tax parcels | | |

1. Is a response needed by a specific date? (e.g., Property closing date) Note: Most requests are completed within 60 days. Please plan accordingly.

◉ No ○ Yes

Date requested by: _____

Reason:

2. Is the "Requester" enrolled as a Voluntary Party in the Voluntary Party Liability Exemption (VPLE) program?

◉ No. **Include the fee that is required for your request in Section 3, 4 or 5.**

○ Yes. **Do not include a separate fee.** This request will be billed separately through the VPLE Program.

**Fill out the information in Section 3, 4 or 5 which corresponds with the type of request:**
**Section 3. Technical Assistance or Post-Closure Modifications;**
**Section 4. Liability Clarification; or Section 5. Specialized Agreement.**

## Section 3. Request for Technical Assistance or Post-Closure Modification

Select the type of technical assistance requested: **[Numbers in brackets are for WI DNR Use]**

- ☐ No Further Action Letter (NFA) (Immediate Actions) - NR 708.09, [183] - Include a fee of $350. Use for a written response to an immediate action after a discharge of a hazardous substance occurs. Generally, these are for a one-time spill event.
- ☐ Review of Site Investigation Work Plan - NR 716.09, [135] - **Include a fee of $700.**
- ☐ Review of Site Investigation Report - NR 716.15, [137] - **Include a fee of $1050.**
- ☒ Approval of a Site-Specific Soil Cleanup Standard - NR 720.10 or 12, [67] - **Include a fee of $1050.**
- ☐ Review of a Remedial Action Options Report - NR 722.13, [143] - **Include a fee of $1050.**
- ☐ Review of a Remedial Action Design Report - NR 724.09, [148] - **Include a fee of $1050.**
- ☐ Review of a Remedial Action Documentation Report - NR 724.15, [152] - **Include a fee of $350**
- ☐ Review of a Long-term Monitoring Plan - NR 724.17, [25] - **Include a fee of $425.**
- ☐ Review of an Operation and Maintenance Plan - NR 724.13, [192] - **Include a fee of $425.**

Other Technical Assistance - s. 292.55, Wis. Stats. [97] (For request to build on an abandoned landfill use Form 4400-226)

- ☐ Schedule a Technical Assistance Meeting - **Include a fee of $700.**
- ☐ Hazardous Waste Determination - **Include a fee of $700.**
- ☐ Other Technical Assistance - **Include a fee of $700.** Explain your request in an attachment.

Post-Closure Modifications - NR 727, [181]

- ☐ Post-Closure Modifications: Modification to Property boundaries and/or continuing obligations of a closed site or Property; sites may be on the GIS Registry. This also includes removal of a site or Property from the GIS Registry. **Include a fee of $1050, and:**
  - ☐ Include a fee of $300 for sites with residual soil contamination; and
  - ☐ Include a fee of $350 for sites with residual groundwater contamination, monitoring wells or for vapor intrusion continuing obligations.

  Attach a description of the changes you are proposing, and documentation as to why the changes are needed (if the change to a Property, site or continuing obligation will result in revised maps, maintenance plans or photographs, those documents may be submitted later in the approval process, on a case-by-case basis).

## Section 4. Request for Liability Clarification

Select the type of liability clarification requested. Use the available space given or attach information, explanations, or specific questions that you need answered in DNR's reply. Complete Sections 6 and 7 of this form. **[Numbers in brackets are for DNR Use]**

☐ "Lender" liability exemption clarification - s. 292.21, Wis. Stats. [686]

❖ **Include a fee of $700.**

Provide the following documentation:

(1) ownership status of the real Property, and/or the personal Property and fixtures;

(2) an environmental assessment, in accordance with s. 292.21, Wis. Stats.;

(3) the date the environmental assessment was conducted by the lender;

(4) the date of the Property acquisition; for foreclosure actions, include a copy of the signed and dated court order confirming the sheriff's sale.

(5) documentation showing how the Property was acquired and the steps followed under the appropriate state statutes.

(6) a copy of the Property deed with the correct legal description; and,

(7) the Lender Liability Exemption Environmental Assessment Tracking Form (Form 4400-196).

(8) If no sampling was done, please provide reasoning as to why it was **not** conducted. Include this either in the accompanying environmental assessment or as an attachment to this form, and cite language in s. 292. 21(1)(c)2.,h.-i., Wis. Stats.:

h. The collection and analysis of representative samples of soil or other materials in the ground that are suspected of being contaminated based on observations made during a visual inspection of the real Property or based on aerial photographs, or other information available to the lender, including stained or discolored soil or other materials in the ground and including soil or materials in the ground in areas with dead or distressed vegetation. The collection and analysis shall identify contaminants in the soil or other materials in the ground and shall quantify concentrations.

i. The collection and analysis of representative samples of unknown wastes or potentially hazardous substances found on the real Property and the determination of concentrations of hazardous waste and hazardous substances found in tanks, drums or other containers or in piles or lagoons on the real Property.

☐ "Representative" liability exemption clarification (e.g. trustees, receivers, etc.) - s. 292.21, Wis. Stats. [686]

❖ **Include a fee of $700.**

Provide the following documentation:

(1) ownership status of the Property;

(2) the date of Property acquisition by the representative;

(3) the means by which the Property was acquired;

(4) documentation that the representative has no beneficial interest in any entity that owns, possesses, or controls the Property;

(5) documentation that the representative has not caused any discharge of a hazardous substance on the Property; and

(6) a copy of the Property deed with the correct legal description.

☐ Clarification of local governmental unit (LGU) liability exemption at sites with: (select all that apply)

☐ hazardous substances spills - s. 292.11(9)(e), Wis. Stats. [649];

☐ Perceived environmental contamination - [649];

☐ hazardous waste - s. 292.24 (2), Wis. Stats. [649]; and/or

☐ solid waste - s. 292.23 (2), Wis. Stats. [649].

❖ **Include a fee of $700, a summary of the environmental liability clarification being requested, and the following:**

(1) clear supporting documentation showing the acquisition method used, and the steps followed under the appropriate state statute(s).

(2) current and proposed ownership status of the Property;

(3) date and means by which the Property was acquired by the LGU, where applicable;

(4) a map and the ¼, ¼ section location of the Property;

(5) summary of current uses of the Property;

(6) intended or potential use(s) of the Property;

(7) descriptions of other investigations that have taken place on the Property; and

(8) (for solid waste clarifications) a summary of the license history of the facility.

## Section 4. Request for Liability Clarification (cont.)

☐ Lease liability clarification - s. 292.55, Wis. Stats. [646]

❖ **Include a fee of $700 for a single Property, or $1400 for multiple Properties and the information listed below:**

(1) a copy of the proposed lease;

(2) the name of the current owner of the Property and the person who will lease the Property;

(3) a description of the lease holder's association with any persons who have possession, control, or caused a discharge of a hazardous substance on the Property;

(4) map(s) showing the Property location and any suspected or known sources of contamination detected on the Property;

(5) a description of the intended use of the Property by the lease holder, with reference to the maps to indicate which areas will be used. Explain how the use will not interfere with any future investigation or cleanup at the Property; and

(6) all reports or investigations (e.g. Phase I and Phase II Environmental Assessments and/or Site Investigation Reports conducted under s. NR 716, Wis. Adm. Code) that identify areas of the Property where a discharge has occurred.

General or other environmental liability clarification - s. 292.55, Wis. Stats. [682] - Explain your request below.

❖ **Include a fee of $700 and an adequate summary of relevant environmental work to date.**

☐ No Action Required (NAR) - NR 716.05, [682]

❖ **Include a fee of $700.**

Use where an environmental discharge has or has not occurred, and applicant wants a DNR determination that no further assessment or clean-up work is required. Usually this is requested after a Phase I and Phase II environmental assessment has been conducted; the assessment reports should be submitted with this form. This is not a closure letter.

☐ Clarify the liability associated with a "closed" Property - s. 292.55, Wis. Stats. [682]

❖ **Include a fee of $700.**

- Include a copy of any closure documents if a state agency other than DNR approved the closure.

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Use this space or attach additional sheets to provide necessary information, explanations or specific questions to be answered by the DNR.

## Section 5. Request for a Specialized Agreement

Select the type of agreement needed. Include the appropriate draft agreements and supporting materials. Complete Sections 6 and 7 of this form. More information and model draft agreements are available at: dnr.wi.gov/topic/Brownfields/lgu.html#tabx4.

☐ Tax cancellation agreement - s. 75.105(2)(d), Wis. Stats. [654]

❖ **Include a fee of $700, and the information listed below:**

(1) Phase I and II Environmental Site Assessment Reports,

☐ Agreement for assignment of tax foreclosure judgement - s.75.106, Wis. Stats. [666]

❖ **Include a fee of $700, and the information listed below:**

(1) Phase I and II Environmental Site Assessment Reports,

☐ Negotiated agreement - Enforceable contract for non-emergency remediation - s. 292.11(7)(d) and (e), Wis. Stats. [630]

❖ **Include a fee of $1400, and the information listed below:**

(1) a draft schedule for remediation; and,

## Section 6. Other Information Submitted

Identify all materials that are included with this request.

**Send both a paper copy of the signed form and all reports and supporting materials, and an electronic copy of the form**

**and all reports, including Environmental Site Assessment Reports, and supporting materials on a compact disk.**

**Include one copy of any document from any state agency files that you want the Department to review as part of this request. The person submitting this request is responsible for contacting other state agencies to obtain appropriate reports or information.**

- ☐ Phase I Environmental Site Assessment Report - Date: _____
- ☐ Phase II Environmental Site Assessment Report - Date: _____
- ☐ Legal Description of Property (required for all liability requests and specialized agreements)
- ☐ Map of the Property (required for all liability requests and specialized agreements)

Analytical results of the following sampled media: Select all that apply and include date of collection.

☐ Groundwater ☐ Soil ☐ Sediment ☐ Other medium - Describe: _____

Date of Collection: _____

- ☐ A copy of the closure letter and submittal materials
- ☐ Draft tax cancellation agreement
- ☐ Draft agreement for assignment of tax foreclosure judgment
- ☒ Other report(s) or information - Describe: MIO Characterization Tech Memo

For Property with newly identified discharges of hazardous substances only: Has a notification of a discharge of a hazardous substance been sent to the DNR as required by s. NR 706.05(1)(b), Wis. Adm. Code?

- ◯ Yes - Date (if known): _____
- ◯ No

**Note:** The Notification for Hazardous Substance Discharge Form - Non-Emergency Only (Form 4400-225) is accessible through the RR Program Submittal Portal application. Directions for using the form and the Submittal Portal application are available on the Submittal Portal web page.

## Section 7. Certification by the Person who completed this form

- ☒ I am the person submitting this request (requester)
- ☐ I prepared this request for: _____
  Requester Name

I certify that I am familiar with the information submitted on this request, and that the information on and included with this request is true, accurate and complete to the best of my knowledge. I also certify I have the legal authority and the applicant's permission to make this request.

Signature

6-18-25
Date Signed

Environmental Consultant
Title

(414) 221-2344
Telephone Number (include area code)

## Section 8. DNR Contacts and Addresses for Request Submittals

Send or deliver one paper copy and one electronic copy on a compact disk of the completed request, supporting materials, and fee to the region where the property is located to the address below. Contact a DNR regional brownfields specialist with any questions about this form or a specific situation involving a contaminated property. For electronic document submittal requirements see: http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf.

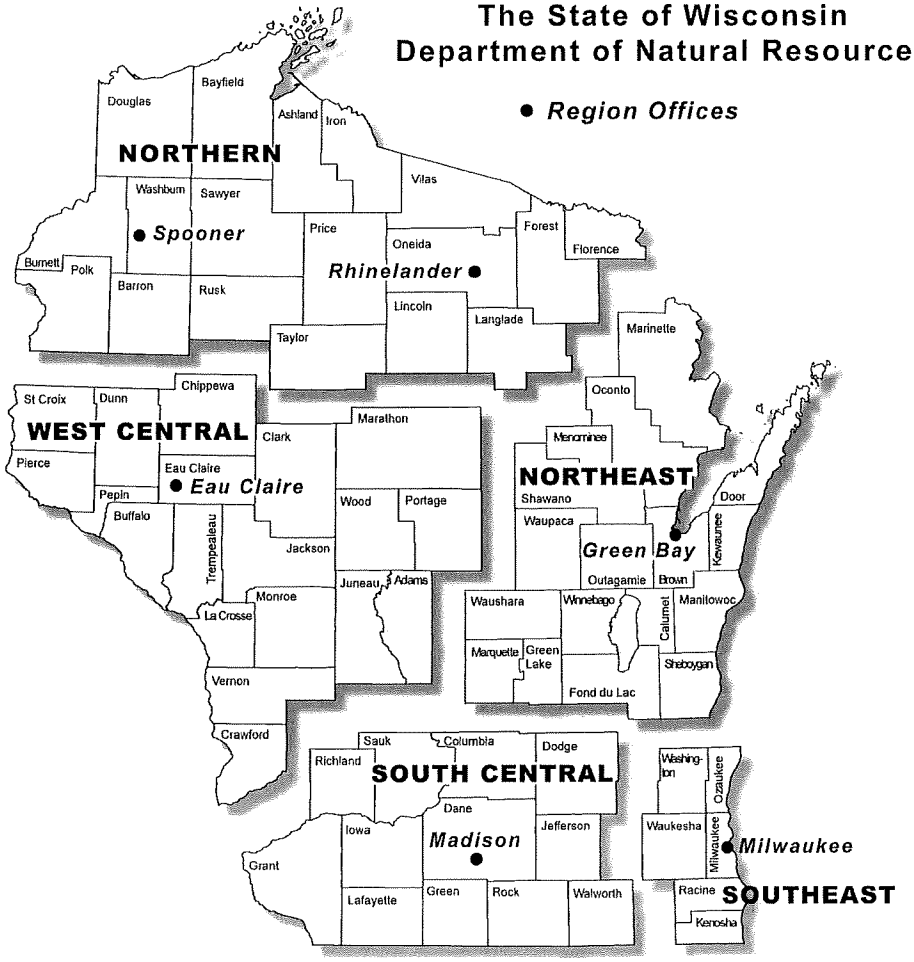
**DNR NORTHERN REGION**
Attn: RR Program Assistant
Department of Natural Resources
223 E Steinfest Rd Antigo, WI 54409

**DNR NORTHEAST REGION**
Attn: RR Program Assistant
Department of Natural Resources
2984 Shawano Avenue
Green Bay WI 54313

**DNR SOUTH CENTRAL REGION**
Attn: RR Program Assistant
Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg WI 53711

**DNR SOUTHEAST REGION**
Attn: RR Program Assistant
Milwaukee DNR Office
1027 West St. Paul Ave
Milwaukee WI 53233

**DNR WEST CENTRAL REGION**
Attn: RR Program Assistant
Department of Natural Resources
1300 Clairemont Ave.
Eau Claire WI 54702




*Note: These are the Remediation and Redevelopment Program's designated regions. Other DNR program regional boundaries may be different.*

| DNR Use Only | | | |
|---|---|---|---|
| Date Received | Date Assigned | BRRTS Activity Code | BRRTS No. (if used) |
| DNR Reviewer | Comments | | |
| Fee Enclosed? ◯ Yes ◯ No | Fee Amount $ | Date Additional Information Requested | Date Requested for DNR Response Letter |
| Date Approved | Final Determination | | |

| | |
|---|---|
| **From:** | Amundson, Alex |
| **To:** | McIlheran, Adam S - DNR |
| **Cc:** | Prasad, Narendra M; Fassbender, Judy L - DNR; Endsley, Erin A - DNR; Mylotta, Pamela A - DNR; Kenny, Patrick |
| **Subject:** | RE: Review of 2/20/2025 WEC Draft SOP for Substation Retirements |
| **Date:** | Thursday, June 12, 2025 11:26:55 AM |
| **Attachments:** | image001.png<br>image002.png<br>image003.png<br>image004.png<br>image006.png<br>WEC SubStation SOP 06-12-2025 WEC Comments.docx<br>2025.6.10_MIO Characterization_Final Tech Memo.docx<br>WEC SubStation SOP 06-12-2025 Comments Accepted.docx<br>DRAFT - MIO SOP Attachment B.pdf |

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**CAUTION: This email originated from outside the organization.**
**Do not click links or open attachments unless you recognize the sender and know the content is safe.**

Adam,

Please see the following documents attached; MIO SOP (comments accepted), MIO SOP (all comments/current comments), Attachment A (MIO SSRCL Summary Document), and Attachment B (Tier Criteria).

Only minor clarifications to the MIO SOP document were added. Attachment B was also updated to more closely mirror the MIO SOP. The technical review fee for the MIO SSRCL Summary Document is on its way as well. If you have any questions please reach out, and thank you for your help working through this.

**Alex H. Amundson, P.G.**
Environmental Consultant
WEC Energy Group – Business Services
mobile: 262-490-2037
office: 414-221-2344
alex.amundson@wecenergygroup.com

*Serving WEC Energy Group, We Energies, Wisconsin Public Service, Michigan Gas Utilities, Minnesota Energy Resources, Peoples Gas and North Shore Gas*

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**From:** McIlheran, Adam S - DNR <Adam.McIlheran@wisconsin.gov>
**Sent:** Monday, April 14, 2025 3:52 PM
**To:** Amundson, Alex <Alex.Amundson@wecenergygroup.com>
**Cc:** Prasad, Narendra M <narendra.prasad@wecenergygroup.com>; Fassbender, Judy L - DNR <Judy.Fassbender@wisconsin.gov>; Endsley, Erin A - DNR <erin.endsley@wisconsin.gov>; Mylotta, Pamela A - DNR <Pamela.Mylotta@wisconsin.gov>
**Subject:** Review of 2/20/2025 WEC Draft SOP for Substation Retirements

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Alex,

DNR has completed a review of the WEC SOP Draft version received on 2/20/2025. Comments and suggested revisions are in the attached document version for the SOP and accompanying table.

Main themes of the SOP use and submittal process are:

- Creation of a MIO SSRCL justification/application document, a copy of which would be submitted along with the SOP for any site the SOP is applied to, per listed criteria and in which the MIO SSRCL is proposed to be used at the site. This would be submitted and approved by DNR prior to final version of SOP being approved by DNR.
- Common reporting requirements for all sites that are to follow the SOP and creation of a checklist (perhaps based on the SOP attachment table) or site summary cover letter submitted with the discharge notification for each site, stating how the site meets criteria to use the SOP and the Tier the site is proposed to follow. Using this process would facilitate DNR review of SOP applicability and minimize review time for adherence to NR 700 code requirements for specific sites.

In addition, SOP tier naming and format should be revised to better reflect the intention of using NR 708 process for efficient review of Tier I & II sites and NR 716-726 for Tier III sites.

Once you have reviewed this latest version and comments, feel free to give me a call if you have any questions or clarifications are needed for incorporating the changes or in creating the MIO SSRCL justification document. A technical assistance form and fee ($1050 for approval of Site-Specific Soil Cleanup Standard) should be included when submitting that document for review and approval. As noted in the SOP comments, the document should be a brief and concise summary for the justification of the use of 500 ppm as an site-specific RCL for MIO using the data and conclusions in documents previously submitted and discussed as part of SOP development.

Regards,

Adam McIlheran
Hydrogeologist – Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
Southeast Region, Milwaukee Service Center
1027 West St. Paul Avenue
Milwaukee, WI 53233
Phone: (414) 207-2179
Adam.Mcilheran@wisconsin.gov

dnr.wi.gov

Our core values include professionalism, integrity, and customer service.

Please visit our survey to provide feedback on your experience interacting with any DNR employee.

WEC Energy Group, Inc.
231 W. Michigan St.
Milwaukee, WI 53203

DRAFT

# Standard Operating Procedure

Electrical Substation Retirement
Investigation, Remediation and Reporting Protocol
2025

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The purpose of this Standard Operating Procedure (SOP) is to document the process for the investigation, remediation and Wisconsin Department of Natural Resources (WDNR) reporting protocol for WEC Energy Group (WEC) substation retirements.

This SOP provides salient background information, the overall objective and a description of a multi-tier process for the investigation, remediation and reporting of substation retirements.

## 1.0 BACKGROUND

WEC electrical substations are typically fenced operating facilities constructed at minimum one foot above the surrounding area that contain a control house or power distribution center (PDC), power transformers, and various switching, protection and control equipment. The substations may also be enclosed by structural walls or buildings.

Select substation equipment contains mineral insulating oil **(MIO).** This MIO-containing equipment often includes, but is not limited to, transformers, circuit breakers, reclosers, capacitor banks, and voltage regulators. For older equipment, the MIO may contain or may have previously contained polychlorinated biphenyls (PCBs). Most new circuit breakers and reclosers do not contain oil. The majority of equipment containing MIO with PCBs has either been replaced or refilled with non-PCB MIO.

MIO is a non-volatile insulating oil consisting primarily of aliphatic hydrocarbons in the C11 - C33 range and is used for its dielectric, cooling and other beneficial properties in electrical equipment. MIO is a highly-refined petroleum hydrocarbon product similar to food-grade mineral oil and is stable at high temperatures. The MIO mixture is relatively immobile in the subsurface and partitioning to groundwater or other media is typically negligible due to the mineral oil's high soil sorption coefficient, low water solubility and low vapor pressure.

Over time, WEC substations are retired, often on a time-critical basis. MIO and other soil impacts may be encountered during these activities, particularly at older substations. These impacts are typically the result of incidental, low volume MIO releases over time. If painted structures are present at the site and the paint surfaces are deteriorated (i.e., flaking), lead-based paint (LBP) impacts in surface soils may also be encountered during retirement activities. Due to the many similarities in the constituents of concern, the nature and extent of impacts, investigation and remediation methods, equipment configuration and other factors, retirement activities at most substation sites are typically very similar.

## 2.0 SOP OBJECTIVE

This SOP's objective is to establish a more efficient and streamlined process for investigating, remediating, and reporting for WEC substation sites undergoing retirement that allows for maintaining time-sensitive, critical-path construction schedules while satisfying applicable WDNR regulatory requirements.

## 3.0 MULTI-TIER PROCESS DESCRIPTION

### 3.1 Process Establishment

Three tiers of investigation, remediation and reporting have been established to meet the above objective.

- Tier 1 - Response Action - NR 708 Reporting & Closure
- Tier 2 - Remedial Action – NR 700 Reporting/NR708 Closure~~Streamlined NR 700 Reporting~~
- Tier 3 - Remedial Action - Standard NR 700 Reporting & Closure

The tier of investigation, remediation and reporting will be site-specific and established based on the following types of information (and subsequent initial subsurface investigation, if warranted):

- Age of the substation;
- Volume of known soil impacts above state regulatory standards;
- Current and historical equipment MIO sampling data (PCB content);
- Visual observation of potential impact s (e.g., MIO ground surface staining, flaking paint on structures or equipment);
- Presence of unusual or complex site conditions; and,
- Previous environmental assess-ment information.

**Commented [AM1]:** Case closure under NR 708 is a less complex and time-consuming process for both the RP and the DNR than closure under NR 726. Since Tier 1 and Tier 2 are structured so that closure under NR 708 is possible and efficiency is a goal of the SOP, consider renaming the Tiers in such a way to reflect their different pathways to closure, such as:
Tier 1- Response Action - NR 708 Reporting & Closure
Tier 2- Response Action - NR 700 Reporting/ NR 708 Closure
Tier 3- Response Action - NR 700 Reporting & Closure

If the above information does not indicate a release or potential release, no further assessment will be conducted. At WEC's discretion, sampling may be conducted for soil management and disposal purposes.

If a release or potential release is identified, an initial subsurface investigation will be conducted to further assess the extent of impacts. This initial investigation will include limited sampling to establish whether MIO, PCB and/or LBP soil impacts are present and the physical character of the subsurface (e.g., shallow soil physical characteristics and, if necessary, the elevation of the surficial water bearing unit).

In most cases, the initial subsurface investigation sampling will be conducted in areas of apparent or suspected surface staining and the vicinity of MIO-containing equipment soil samples will be analyzed for PCBs, and DRO as MIO if VOCs/PAHs are not analyzed, VOCs/PAHs may be analyzed as part of Tier 3 as defined below. In areas of equipment or structures with flaking paint, soil samples will be collected for lead analysis.

If a release is confirmed by the initial subsurface investigation sampling, WDNR will be notified (via either the Spills Hotline or Form 4400-225) and the risk level will be established (i.e., "low-risk site" or "non-low-risk site"). The site will be considered a "low-risk" site if all of the following conditions are present:

- Soil impacts greater than WDNR residual contaminant levels (RCLs) or MIO SSRCL are confined to the site property;
- Impacts greater than WDNR RCLs or MIO SSRCL are confined to surficial soils (0 - 4 ft. bgs);
- Groundwater was not encountered within the zone of soil impacts greater than WDNR RCLs or MIO SSRCL;
- The impacted soil is not located within a floodplain; or the substation site can be demonstrated to show that the design and construction are above the 100 year flood plain (WEC's design criteria for all substations is to construct one foot above the 100 year flood plain); and
- The impacted soil at the site is not located adjacent and/or upgradient of a wetland, critical habitat area or navigable river, stream, lake, pond or flowage.

Most substation sites will be designated low-risk sites based on WEC experience and the above conditions.

Low-risk sites will follow the Tier 1, ~~or~~ or Tier 2 process described below. The Tier 1 and Tier 2 classification will be based on the anticipated remediation volume. The Tier 1 and Tier 2 implementation processes will be differentiated primarily by the scope of WDNR reporting. Sites that are not classified as low-risk sites (i.e., "non-low-risk sites") will follow the Tier 3 process.

Notification requirements common to all sites proposed to follow the SOP: Included with the discharge notification form will be a cover page summary ~~or checklist~~ indicating how the site meets criteria to

follow the SOP, proposed use of the MIO SSRCL for that site, and which Tier criteria the site meets. For all sites which the use of the SOP is requested, a copy of the SOP, MIO SSRCL document (Attachment A), and DNR MIO SSRCL approval letter is to be attached to all submittals.

The three-tier process is summarized in Attachment ~~A~~ B and described in the following sections.

**Commented [AA2]:** Is this part of the notification process? WEC proposes to use the MIO SSRCL and Tiered process with the supporting documents?

**Commented [AM3]:** This document should be created and submitted to DNR for review along with a $1050 review fee now, so it can be approved with the SOP, and then submitted when it will be used for specific sites. Review and approval of the SSRCL would not then be needed for each site (nor a separate fee for each site), as long as the site fits SOP criteria.

The document should be a brief and concise summary for the justification of the use of 500 ppm as an site-specific RCL for MIO using the data and conclusions in documents previously submitted and discussed as part of SOP development.
The document should cite the previously submitted reports, data, and DNR decisions applicable to MIO found under BRRTS# 07-41-582805, such as AC99 11/10/2022, AC99 3/14/2023, AC99 5/2/2024.

**Commented [AM4]:** Since SSRCL document is to be added to the SOP, revise so that all attachments are correctly referenced and named accordingly.

### 3.2 Tier 1 - Response Action - NR 708 Reporting & Closure

The Tier 1 (Response Action) process will generally be conducted pursuant to NR 708.05(3) (non-emergency immediate action).

Site Conditions

The Tier 1 process will be implemented for low-risk sites with an estimated soil remediation volume of approximately 250 cubic yards or less and for which no WDNR "continuing obligations" or listing on DNR online database as having residual contamination above applicable standards. ~~apply or inclusion on the WDNR online database of contaminated sites would not be required~~.

Investigation

The Tier I investigation will be conducted to refine the horizontal and vertical extent of MIO, PCBs (if applicable) and LBP impacts established during the initial subsurface investigation. Typically, the investigation of MIO impacts will consist of Geoprobe® soil borings advanced to depths of approximately 5 to 10 feet bgs and the investigation of LPB impacts will consist of soil boring borings advanced to depths up to 3 feet bgs. Two to three soil samples will typically be collected for laboratory analysis from each soil boring location. In limited access areas, hand auger borings may be advanced in lieu of Geoprobe® borings. In some cases, soil sampling may instead be completed following excavation with samples being collected at the excavation limits.

Soil samples collected to assess MIO impacts will be analyzed for PCBs, using analytical method USEPA Method SW 846 3541~~0~~C and DRO using USEPA Method 8015D ~~as MIO~~ (C10-C28). PCBs would not be included for analysis if it can be shown or documented that they were not in any MIO used or stored onsite. Soil samples collected to assess LBP impacts will be analyzed for total lead (USEPA -Method SW 846).

Select soil samples may be analyzed for toxicity characteristic leaching procedure (TCLP) benzene, TCLP Resource Conservation and Recovery Act (RCRA) metals, and/or other target analytes for waste characterization (disposal profiling), as required by the applicable disposal facility.

Remediation

Remediation will generally consist of excavation and off-site disposal at a licensed landfill. The limits of impacted soil removal will be based on the investigation results and the following cleanup levels, as applicable:

**Commented [AM5]:** See page 2 comment

**Commented [AM6]:** All sites are on the DNR database, however NFA sites do not have a notification on RR Sites Map that there is residual contamination onsite above soil or groundwater standards. If there was, that would be a continuing obligation and not qualify for NFA.

**Commented [AA7]:** This has been updated to reflect the method we have been using and planned to use. The 3540C was required for USWAG Approval, but is no longer required

**Commented [AM8]:** State the DRO analytical method, to be consistent.

| | |
|---|---|
| MIO | PCBs (Aroclor-specific) Less than WDNR non-industrial direct contact RCLs. |
| | PCBs (total) Less than Groundwater Residual Contaminant Levels (GWRCLs). |
| | DRO Less than 500 mg/kg. |
| LBP | Lead (total) Less than BTV (Background Threshold Value). If above BTV, volume is insignificant, horizontal and vertical delineation of soil less than ≤BTV, or groundwater sample ≤less than Preventative Action Limit (PAL) will need to be demonstrated |

Confirmation soil samples will be collected from the base and sidewalls of the soil removal excavations to document that the above cleanup levels are met. A minimum of one base sample and four sidewall samples will typically be collected with no greater distance than 15 feet between samples or any other reasonable distance to be determined depending on the size of the excavation (unless physical or safety constraints are present). Confirmation soil samples shall be collected as discrete (individual) samples. Composite sampling methods will not be used for confirmation samples.

For excavations of PCB remediation waste (PCBs > 1 mg/kg), PCB composite sampling will be conducted in general accordance with Subpart O of 40 CFR 761. In general, this sampling will consist of a composite of nine aliquots within each 3-meter (10-foot) by 3-meter (10-foot) grid.

~~The~~ Eexcavated PCB impacted soil will be disposed as a non-TSCA waste (at a licensed Subtitle D landfill facility) if the PCB concentration is less than 50 mg/kg in accordance with the June 10, 2014 EPA "Risk-Based Approvals to Dispose of Polychlorinated Biphenyl (PCB) Remediation Waste" for Utility Solid Waste Activities Group (USWAG) member companies. If PCB concentrations are greater than or equal to 50 mg/kg, the soil will be disposed as a TSCA-regulated waste in accordance with 40 CFR 761.61.

WDNR Communications and Reporting

WDNR communication and reporting for the Tier 1 process will consist of the following 3 steps (in chronological order):

- WDNR notification pursuant to NR 706.05 via the Spills Hotline or, using "Notification For Hazardous Substance Discharge (Non-Emergency Only)" (Form 4400-225). If notification is done via email, notification of consultant, results of the initial subsurface investigation and ~~"WEC SOP Tier 1 (Response Action)" will be noted in the comments section of the form.~~
- Notification requirements common to all sites proposed follow the SOP: Included with the discharge notification form will be a cover page summary indicating how the site meets a specific tier in the SOP, proposed use of the MIO SSRCL for that site, and which tier criteria the site meets. For all sites which the use of the SOP is requested a copy of the SOP, MIO SSRCL document (Attachment A), and DNR MIO SSRCL Approval letter is to be attached to all submittals.
- Update WDNR PM or Regional Spills Coordinator via email upon completion of response action field activities (investigation and remediation).

**Commented [AM9]:** Revise: See the common reporting requirements added on page 3 for what to include with the Discharge Notification form.

- Submit documentation ("No Further Action" letter) pursuant to NR 708.05(6). This will be accompanied by WDNR Technical Assistance form 4400-237 with the appropriate fee ~~for approval of a Site-Specific Soil Cleanup Standard (use of the MIO SSRCL)~~ and request for a written No Further Response Action (NFA) determination from WDNR pursuant to NR 708.09.

Remediation of soil classified as a PCB remediation waste under TSCA (i.e., PCBs as found in impacted soil > 1 mg/kg) will be conducted pursuant to 40 CFR 761.61(b) "performance-based disposal." EPA notification, reporting, and approvals are not required for performance-based disposal. ~~As~~Where ~~A~~applicable, ~~it is understood that~~ WDNR will conduct any EPA notifications deemed necessary pursuant to RR 786 ("PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement").

**Commented [AA10]:** This was re added. Ran into this scenario at Glendale SS and received clarification the WDNR will conduct this notification

### 3.3 Tier 2 - Remedial Action ~~–~~ NR 700 Reporting/NR 708 Closure~~Streamlined NR 700 Reporting~~

**Commented [AM11]:** See page 2 comment regarding tier naming.
Also, check/correct the Attachment B Summary Table so that Tier 2 sites are closed through NR 708 NFA and not NR 726 with a closure packet. The Tier 2 reporting process in the SOP text is correct.

The Tier 2 (Remedial Action - Streamlined NR 700 Reporting) process will be conducted in accordance with NR 716 through NR 726, except that WDNR reporting requirements will be streamlined, as described below.

Site Conditions

The Tier 2 process will be implemented for low-risk sites with an estimated soil remediation volume of greater than approximately 250 cubic yards and no WDNR "continuing obligations" or listing on the WDNR online database. An adequate number of samples will be collected to show residual soil impacts are insignificant in volume. ~~Concurrence between the WDNR and WEC will be determined on a case-by-case basis for sites to meet Tier 2 criteria.~~

**Commented [AA12]:** Remnant from previous SOP Revisions

Investigation

The Tier 2 investigation procedures will be the same as the Tier 1 procedures described in Section 3.2.

Remediation

The Tier 2 remediation procedures will be the same as the Tier 1 procedures described in Section 3.2.

WDNR Communications and Reporting

WDNR communication and reporting for the Tier 2 process will consist of the following three submittals (in chronological order):

- WDNR notification pursuant to NR 706.05 using "Notification For Hazardous Substance

Discharge (Non-Emergency Only)" (~~Form~~ Form 4400-225). Notification of consultant, results of the initial subsurface investigation and "WEC SOP Tier 2 (Remedial Action - Streamlined NR 700 Reporting)" will be noted in comments section of the form and follow the process outlined about in Tier 1.

- Site Investigation, Remedial Action Options and Remedial Design Report pursuant to NR 716.15 , NR 722.13, and NR 724.09 with Form 4400-237 and appropriate fee for WDNR concurrence site meets Tier 2 criteria of SOP and use of the Site-Specific Soil Cleanup Standard (MIO SSRCL).
- Construction Documentation Report pursuant to NR 724.15 and Form 4400-237 with a No Further Action Request. This will be accompanied by WDNR Technical Assistance form 4400-237 with the appropriate fee and request for a written No Further Response Action (NFA) determination from WDNR pursuant to NR 708.09 ~~and appropriate fee for WDNR concurrence the site meets criteria for~~ no further action with no continuing obligations. ~~or inclusion on the WDNR residual contamination database.~~

Remediation of soil classified as a PCB remediation waste under TSCA (PCBs > 1 mg/kg) will be conducted pursuant to 40 CFR 761.61(b) "performance-based disposal." EPA notification, reporting, and approvals are not required for performance-based disposal. As applicable, it is understood that WDNR would conduct any EPA notifications deemed necessary pursuant to RR-786 ("PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement").

### 3.4 Tier 3 - Remedial Action - Standard NR 700 Reporting & Closure

The Tier 3 (Remedial Action - Standard NR 700 Reporting) process will be conducted in accordance with NR 716 through NR 726.

Site Conditions

The Tier 3 process will be implemented for non-low-risk sites with or without WDNR "continuing obligations". ~~or inclusion on WDNR online database.~~

Investigation

The Tier 3 investigation procedures will be documented in a Site Investigation Work Plan pursuant to NR 716.09. In addition to the Tier l procedures for investigating MIO and LBP soil impacts, the investigation procedures would be supplemented, as necessary, to address non-low- risk site considerations (e.g., groundwater, historic fill material, and/or impacts from other constituents of concern or non-typical site conditions). Degree and extent of all contaminants of concern will be defined to applicable RCLs, SSRCL, or BTVs as appropriate for contaminant sources.

Remediation

The Tier 3 remediation process will be consistent with the Tier 2 process described in Section 3.3, with following adjustments to the cleanup levels, as applicable:

**Commented [AM13]:** See the common reporting requirements added on page 3 for what to include with the Discharge Notification form.

**Commented [AM14]:** Note: Fee would be a technical assistance fee if you desire written concurrence the site meets Tier 2. SIR fee would apply if you want it reviewed to code requirements. A request with fee would not be needed for use of SSRCL if site meets SOP criteria, since the SSRCL will be approved with approval of the SOP prior to implementation of the SOP for all sites.
Note: SIR/RAOR should reference MIO SSRCL where appropriate.

**Commented [PM15]:** Could they just write this similar to how they described the request under Tier 1 sites?

**Commented [AM16]:** See page 2 comment regarding Tier naming.

| | |
|---|---|
| MIO | PCBs (Aroclor-specific) Less than WDNR non- industrial or industrial direct contact RCLs or<br>Performance Standards (capping) |
| | PCBs(total) Less than TSCA regulatory level ( 1 mg/kg) or self-implementing cleanup levels [40<br>CFR 761.61(a)] |
| | MIO SSRCL of 500 ppm DRO could only be used if/where MIO impacts are distinct and not co-mingled with other discharges/sources of VOCs/PAHs. |
| LBP | Lead (total) Less than WDNR non-industrial or industrial direct contact RCLs or Performance<br>Standards (capping) |

As necessary for other cleanup components (e.g., historic fill material/or and commingled petroleum, solvent and/or metals impacts), cleanup levels will include WDNR non-industrial or industrial direct contact RCLs, protection of groundwater RCLs, and/or Performance Standards (capping) depending on the ongoing land use classification of the parcel, and include investigation parameters and methods relevant to additional sources of contamination on the site if present.~~.~~

WDNR Communications and Reporting

WDNR communication and reporting for the Tier 3 process will consist of the following submittals (in chronological order):

- WDNR notification pursuant to NR 706.05 using "Notification For Hazardous Substance Discharge (Non-Emergency Only)" (Form 4400-225) with summary page or checklist confirming site meets and will follow SOP criteria and use of MIO SSRCL and follow the process outlined above in Tier 1 and Tier 2.~~.~~
- Consultant hiring notification letter.
- Site Investigation Work Plan pursuant to NR 716.09.
- Site Investigation and Remedial Action Options Report pursuant to NR 716.15 and NR 722.13.
- Remedial Design Report pursuant to NR 724.09.
- Construction Documentation Report pursuant to NR 724.15.
- Case Closure form pursuant to NR 726.09. This will ~~be~~ include a WDNR fee submittal for WDNR to issue a written Case Closure determination (with or without continuing obligations).
- Any other submittals, reviews, or applicable Ch. NR 749 review fees deemed necessary by DNR or EPA prior to achieving case closure, dependent upon site-specific conditions for each Tier 3 site and applicable regulatory requirements.

WEC understands the need for WDNR concurrence, however, depending on timing of retirements WEC may move ahead with cleanup and remediation prior to concurrence with WDNR understanding the potential need for further investigation and remediation.

Remediation of soil classified as a PCB remediation waste under TSCA (PCBs > 1 mg/kg) will be conducted pursuant to 40 CFR 761.61(b) " performance- based disposal" or pursuant to 40 CFR 761.61(a) "self-implementing on-site cleanup and disposal." Self-implementing on- site cleanup and disposal notification/reporting would include: "Notification of Self-Implementing Cleanup" to EPA pursuant to 40 CFR 761(a)(3) and a post-implementation "Cleanup Completion Summary Report" to EPA. As applicable, it is understood that WDNR would conduct any EPA notifications deemed necessary pursuant to RR-786 ("PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement").

*****

**Commented [PM17]:** And will include investigation parameters and methods relevant to additional sources of contamination on the site.

**Commented [AM18]:** See the common reporting requirements added on page 3 for what to include with the Discharge Notification form.

**Commented [AM19]:** Note: SIR/RAOR should reference MIO SSRCL where appropriate.

**Commented [PM20]:** Should they include a statement about including appropriate review fees in accordance with Ch. NR 749, if DNR reviews are requested prior to closure submittal review?

**Commented [AA21R20]:** Is this covered in the last bullet point above?

## 5.0 References


1. Chemical Characterization of Transformer Mineral-Insulating Oils. Isaac R. Kaplan, Jimmy Rasco, and Shan-Tan Lu. *Environmental Forensics,* 11:117-145, 2010.
2. Method for Determining Diesel Range Organics, Wisconsin Department of Natural Resources, Publication PUBL-SW-141, September 1995.
3. Method AK 103. For Determination of Residual Range Organics. Version 04/08/02, Alaska Department of Environmental Conservation.
4. ISO 16703:2004, Soil quality -- Determination of content of hydrocarbon in the range C1Oto C40 by gas chromatography, 2004.
5. Transformer Oil Spill Former Bronnleys Factory Radstone Road, Brackley, Northants, NN13 5AU. Environmental Assessment Report SLR Ref: 402.04531.00002, July 2014.
6. Development of Human Health PCLs for Total Petroleum Hydrocarbon Mixtures. Texas Commission on Environmental Protection. PublicationRG-366/TRRP-27, January 2010.
7. Duval, M., and Lamarre, C. 1977. The characterization of electrical insulating oils by high-performance liquid chromatography. IEEE Transactions on Electrical Insulation, EI-12(5): 340-348. doi:10.1109/TEI.1977.298040.
8. Toxicological Profile for Total Petroleum Hydrocarbons (TPH). Section 3, Identity and Analysis of Total Petroleum Hydrocarbons. Agency for Toxic Substances and Disease Registry. September, 1999.
9. A Forensic Approach for Assessing Modes of Subsurface Petroleum Releases. John A. Anton, and Gil Oudijk, 2016. Journal of Environmental Protection, 2016, 7, 312-322.
10. Soil Residual Contaminant Level Determinations Using the U.S. EPA Regional Screen Level Web Calculator. https://dnr.wi.gov/files/PDF/pubs/rr/RR890.pdf

**DRAFT ATTACHMENT A**

**ELECTRICAL SUBSTATION RETIREMENT - INVESTIGATION, REMEDIATION, AND REPORTING PROTOCOL SUMMARY**

| Tier | Site Conditions, Investigation, and Remediation | WDNR Communications and Reporting | |
|---|---|---|---|
| **Tier 1: Response Action - NR 708 Reporting** | • Low-Risk Site (1). No other sources or impacts of VOCs/PAHs besides MIO.<br>• ≤ 250 cubic yards of impacted soil<br>• MIO (PCB) Cleanup Level: ≤ WDNR non-industrial direct contact RCLs (Aroclor-specific)<br>MIO (Total PCB) Cleanup Level:<WDNR GWRCL<br>MIO (DRO) Cleanup Level: < 500 mg/kg by DRO (C10-28) (2)<br>• Lead Cleanup Level: ≤ WDNR BTV<br>• non-TSCA Disposal [< 50 mg/kg per EPA/USWAG Risk-Based Approval (3)] and/or TSCA Disposal (≥50 mg/kg)<br>• | NR 706.05(1)<br>NR 708.05(3)(3)<br>NR 708.05(6)(6)<br>NR 708.09<br>40 CFR 761.61(b) | Notification via Spills Hotline or Form 4400-225 (SOP Tier I Response Action and consultant notification noted in comments section)<br>Response Action (Non-Emergency Immediate Action) Update correspondence with WDNR PM<br>Documentation/Final Report (NR 708 "NFA" letter) (WDNR fee submittal for written No Further Response Action from WDNR)<br>WDNR issues No Further Response Action letter<br>Performance-based disposal (5) |
| **Tier 2: Remedial Action - Streamlined NR 700 Reporting** | • Low-Risk Site (1). No other sources or impacts of VOCs/PAHs besides MIO.<br>• > 250 cubic yards of impacted soil (or other volume as approved by WDNR)<br>MIO (PCB) Cleanup Level: : ≤ WDNR non-industrial direct contact RCLs<br>• (Aroclor-specific)<br>• MIO (Total PCB) Cleanup Level:<WDNR GWRCL<br>• MIO (DRO) Cleanup Level: < 500 mg/kg by DRO (C10-28) (2)<br>• Lead Cleanup Level: ≤ WDNR BTV<br>non-TSCA Disposal [< 50 mg/kg per EPA/USWAG Risk-Based Approval<br>• (3)] and/or TSCA Disposal (≥50 mg/kg)<br>• No WDNR "Continuing Obligations" (4) | NR 706.05(1), NR 716.09<br>NR 716.14, NR 716.15, NR 722.13, NR 724.09<br>NR 724.15<br>NR 726.09<br>40 CFR 761.61(b) | Notification [and results of initial subsurface investigation, consultant hiring notification and Tier 2 site investigation standard operating procedure]<br>Site Investigation, Remedial Action Options, and Remedial Design Reports<br>Construction Documentation Report and Case Closure Request form (WDNR fee submittal)<br>WDNR issues Case Closure (with no "continuing obligations")<br>Performance-based disposal (5) |

| | | | |
|---|---|---|---|
| **Tier 3: Remedial Action - Standard NR 700 Reporting** | • Non-Low-Risk Site **(1).** Other sources or impacts of VOC/PAHs onsite.<br>• MIO (PCB) Cleanup Level: S WDNR non-industrial or industrial direct contact RCLs (Aroclor-specific) or Performance Standard (capping)<br>■ MIO (PCB) Cleanup Level: <TSCA regulatory level (1 mg/kg) or self-implementing cleanup levels [40 CFR 761.61(a)]<br>■ MIO (DRO) Cleanup Level: < 500 mg/kg by DRO (C10-28) (2) Can.<br>• Lead Cleanup Level: ≤ WDNR non-industrial direct contact RCL or WDNR industrial direct contact RCL or Performance Standard (capping)<br>• non-TSCA Disposal [< 50 mg/kg per EPA/USWAG Risk-Based Approval **{3)|** and/or TSCA Disposal ((>50 mg/kg)<br>■ With or without WDNR "continuing obligations" (4) | NR 706.05(1)<br>NR 716.09<br>NR 716.14, NR 716.15, NR 722.13<br>NR 724.09<br>NR 724.15<br>NR 726.09<br>40 CFR 761.61(b) or 40 CFR 761(a) | Notification (and consultant hiring notification)<br>Site Investigation Work Plan<br>Site Investigation and Remedial Options Report<br>Design Report<br>Construction Documentation Report<br>Case Closure Request form (WDNR fee submittal)<br>WDNR issues Case Closure (with or without "continuing obligations")<br>Performance -based disposal (5) or Self-implementing on-site cleanup and disposal {6) |

~~(1) Low-Risk Site Criteria: Soil impacts greater than WDNR residual contaminant levels (RCLs) are confined to the site property; soil impacts greater than WDNR RCLs are less than approximately 5 feet below ground surface (bgs); groundwater was not encountered within the zone of soil impacts greater than WDNR RCLs; the site is not located within a floodplain; and the site is not located adjacent to and upgradient of a wetland, critical habitat area, navigable river, stream, lake, pond, or flowage.~~

~~(2) **MIO (DRO) Analysis: Modified** DRO as MIO Method Used. Non-MIO VOCs or PAHs interference cannot be present to use MIO SSRCL.~~

~~(3) **EPA/USWAG Risk-Based Approval:** June 10, 2014 "Risk-Based Approvals to Dispose of Polychlorinated Biphenyl (PCB) Remediation Waste" by EPA for Utility Solid Waste Activities Group (USWAG) member companies.~~

~~(4) **WDNR "continuing obligations":** Continuing obligation responsibilities and notifications pursuant to NR 727.05 and NR 725.07.~~

~~(5) **40 CFR 761.GI(b), Performance-based disposal notification/reporting:** EPA/40 CFR 761 notification/reporting not required to implement. EPA notification by WDNR pursuant to RR-786 ("PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement"), as applicable.~~

~~(6) 40 CFR 761.GI(a), Self-implementing on-site cleanup and disposal notification/reporting: "Notification of Self-Implementing Cleanup" to EPA pursuant to 40 CFR 761(a)(3). EPA notification by WDNR pursuant to RR-786 ("PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement"), as applicable. Post-implementation "Cleanup Completion Summary Report" to EPA.~~

~~10/03/2024~~

Geosyntec consultants

10600 N. Port Washington Road, Suite 100
Mequon, WI 53092
PH 262.377.9828
www.geosyntec.com

# ATTACHMENT B - TECHNICAL MEMORANDUM

Date: June 10, 2025

To: Alex H. Amundson, P.G., Environmental Consultant
WEC Energy Group - Business Services

From: Geosyntec Consultants
Jeremiah Johnson, P.G., Senior Geologist
Greg Johnson, P.G., P.H., P.E., Senior Engineer
Project Number CHE8094VU1

Subject: **Mineral-Insulating Oil (MIO) Characterization**
Electrical Substation Sites
BRRTS#: 07-41-582805

This technical memorandum was prepared by Geosyntec Consultants (Geosyntec) for WEC Energy Group - Business Services (WEC) to document the following:

- Mineral-insulating oil (MIO) characterization activities including the collection and laboratory analysis of MIO and soil samples from three (3) WEC Energy Group Wisconsin substation sites to develop the understanding of the chemical composition of transformer MIO;
- An evaluation of the most appropriate MIO surrogate for identifying and investigating the nature and extent of potential transformer MIO releases at substation sites; and
- Development of a MIO soil residual contaminant level (RCL) for substation sites that is protective of human health and the environment.

The MIO characterization and evaluation documented herein supplements the findings of a previous MIO study conducted by META Environmental, Inc. (META) for WEC Energy Group (META, 2022). The findings of the META study report, which was previously provided to the Wisconsin Department of Natural Resources (WDNR) on November 10, 2022, are based on the evaluation of data from 65 MIO samples including eight (8) WEC samples. The META study report also incorporates a series of MIO studies conducted by the Electric Power Research Institute (EPRI).

## 1. MIO CHARACTERIZATION

The MIO characterization activities were conducted pursuant to WDNR's March 14, 2023 email request to WEC ("MIO Next Steps") and the subsequent June 2023 *Mineral-Insulating Oil (MIO) Characterization Work Plan* (Work Plan) (Geosyntec, 2023).

## 1.1 Scope and Procedures

Pursuant to the June 2023 Work Plan, MIO and soil data were collected from the following three (3) substation sites where elevated diesel range organics (DRO) concentrations were detected in previous soil samples[1]:

| Substation Site | Transformers | Location(s) and Depths of Elevated DRO Detections in Soil |
|---|---|---|
| 65th Street Substation<br>Kenosha, WI<br>(constructed between 1967 and 1970) | T5 and T6 (1) | ▪ north side of T5 [2,440 milligrams per kilogram (mg/kg)]; 0-1 foot below ground surface (ft bgs)<br>▪ NE side of T6 (14,100 mg/kg); 0-1 ft bgs<br>▪ NW side of T6 (8,560 mg/kg) side; 0-1 ft bgs |
| Ellington Substation<br>Shiocton (Town of Ellington), WI<br>(constructed between 1964 and 1970) | T8 (1) | ▪ west side of T8 (26,700 mg/kg); 0-1 ft bgs |
| Southport Substation<br>Kenosha, WI<br>(constructed between 1963 and 1967) | T5 | ▪ south side of T5 (4,710 mg/kg); 0-1 ft bgs<br>▪ north side of T5 (870 mg/kg); 0-1 ft bgs |
| *Notes:* (1) MIO ground surface staining observed. None of these substation sites contain historic fill materials. | | |

Two (2) MIO samples were collected from each of the transformers identified in the table above [from the transformer main tank (MT) and from the load tap changer (LTC) valves]. Two (2) to three (3) surface soil samples (0 to 1 ft bgs) were collected from each substation site from the area where elevated DRO concentrations were previously detected in soil as indicated in the table above.

The MIO and soil samples were submitted to Eurofins Lancaster Laboratories Environment Testing, LLC (Eurofins) for laboratory analysis of the following parameters pursuant to WDNR's March 14, 2023 request:

| MIO and Soil Parameters | Laboratory Method | Sample Type |
|---|---|---|
| DRO (C10-C28) | EPA 8015D | MIO and soil |
| Total petroleum hydrocarbon (TPH) ID | EPA 8015C_ID | MIO |
| TPH (1) | EPA 8015D TPH | soil |
| Volatile Organic Compounds (VOCs) | EPA 8260D | MIO and soil |
| Semi-Volatile Organic Compounds (SVOCs) | EPA 8270E | MIO and soil |
| Butylated hydroxytoluene (BHT) and butylated hydroxyanisole (BHA)(2)(3)(4) | EPA 8270E | MIO and soil |
| *Notes:*<br>(1) Fuel Oil #4, #2 Diesel Fuel, kerosene, mineral spirits, motor oil (>C24-C36), Fuel Oil #6, coal tar oil, gasoline.<br>(2) BHT and BHA are documented MIO oxidation inhibitors.<br>(3) BHA is a mixture of two isomeric compounds (2-tert-butyl-4-hydroxyanisole and 3-tert-butyl-4-hydroxyanisole)<br>(4) Target identified compounds (TICs); laboratories currently lack consistent analytical methods and laboratory reference standards for BHT and BHA | | |

[1] The previous soil samples were collected to support substation improvement construction soil management (i.e., disposal profiling).

## 1.2 Sample Results

The MIO and soil sample analytical laboratory data are summarized below and in **Table 1 (Attachment 1)**. The laboratory reports are included in **Attachment 2**.

MIO Sample Data

- DRO (C10-C28) was detected in each of the eight (8) MIO samples at concentrations ranging from 770,000 to 1,100,000 mg/kg.
- TPH ID results indicate that each of the eight (8) MIO samples fall within the range of C10 to C32 (with 6 of the 8 samples within the C10 to C28 range) and that most of the MIO mass is centered around (peak) between C18 and C20.
- VOCs were detected seven (7) of the eight (8) MIO samples with total VOC concentrations ranging from 3.9 to 20.3 mg/kg. The detected VOCs include petroleum-related and chlorinated VOCs. BTEX (benzene, toluene, ethylbenzene and/or xylene) were the primary petroleum VOCs detected (7 of 8 samples). Tetrachloroethene (PCE) was the primary chlorinated VOC detected (3 of 8 samples).
- SVOCs were detected in five (5) of eight (8) MIO samples at total SVOC concentrations ranging from 94 to 519 mg/kg. The detected SVOCs were primarily polycyclic aromatic hydrocarbons (PAHs).
- BHT was detected in five (5) of eight (8) MIO samples at concentrations ranging from 2,100 to 3,200 mg/kg.

Soil Sample Data

- DRO was detected in each of the seven (7) soil samples at concentrations ranging from 1,500 to 42,000 mg/kg. TPH (>C24-C36) was detected in each of the seven (7) soil samples at concentrations ranging from 1,300 to 38,000 mg/kg.
- No VOCs were detected in soil samples with the exception of trace concentrations of acetone [two (2) of the seven (7) soil samples] and methyl acetate [six (6) of the seven (7) soil samples].
- No SVOCs were detected in soil samples with the exception of trace PAH concentrations in one (1) of seven (7) soil samples (SS-05 at 65th Street Substation). None of the detected PAHs in this sample were detected in any of the MIO samples.
- BHT and BHA were detected in the three (3) soil samples collected at 65th Street Substation at concentrations ranging from 0.045 to 7.3 mg/kg and 0.340 and 2.0 mg/kg, respectively.

## 1.3 Data Evaluation

This section provides an evaluation of the MIO characterization sample data.

DRO/TPH

The MIO TPH ID results indicate that each of the MIO samples fall within the range of C10 to C32 (with 6 of the 8 samples within the C10 to C28 range). Further, most of the MIO mass is centered (peak) between C18 and C20.

The similar concentrations of DRO (C10 to C28) and TPH (>C24-C36) detected in soil samples

suggest that weathered MIO soil impacts likely substantially fall within the range of C24 to C28.

VOCs

The VOCs detected in MIO samples were not detected in soil samples at any of the three (3) substations. The presence of chlorinated VOCs in MIO, specifically PCE, are likely remnants of past transformer retro-filling.[2]

VOCs were not detected in soil samples with the exception of trace concentrations of acetone and methyl acetate. Neither of these compounds were detected in MIO at any of the three (3) substations. Therefore, these VOC detections are considered unrelated to MIO.

These data suggest no correlation between VOCs in MIO and VOCs in soil. Therefore, VOCs are not considered applicable COCs for identifying or investigating the nature and extent of MIO releases.

SVOCs

The SVOCs detected in MIO samples were not detected in soil samples at any of the three (3) substations. SVOCs were detected in one soil sample (SS-05 at 65th Street Substation). The detected SVOCs in this soil sample were not detected in any of the MIO samples and do not correlate to comparatively higher DRO or TPH concentrations in soil. In fact, the detected DRO and TPH concentrations at SS-05 were comparatively lower. Therefore, these SVOC detections are considered unrelated to MIO.

These data suggest no correlation between SVOCs in MIO and SVOCs in soil. Therefore, SVOCs are not considered applicable COCs for identifying or investigating the nature and extent of MIO releases.

BHT/BHA

BHT/BHA was detected in MIO and soil at two (2) of the three (3) substation sites. BHT and BHA are documented MIO oxidation inhibitors not commonly found in fuel oils or other light mineral oils (META, 2022).

The soil data for 65th Street Substation indicate an apparent correlation between BHT/BHA concentration and DRO concentration (i.e., an increase in BHT/BHA concentration with an increase in DRO concentration).

BHT and BHA have established WDNR direct contact residual contaminant levels (RCLs)[3]. The detected BHT soil concentrations (0.045 to 7.3 mg/kg) and BHA soil concentrations (0.340 to 2.0 mg/kg) are at least two orders of magnitude less the WDNR RCLs.

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[2] Wecosol® a PCE-based retro-fill transformer fluid, was manufactured by Westinghouse from the early 1980s to the early 1990s (it is no longer manufactured or available). The PCE-based fluid was used to flush out the Askarel from the solid insulation of the transformer so that it could be reclassified as non-PCB. The PCE-based fluid was mostly intended to be a temporary fluid (https://www.sdmyers.com/knowledge-vault/age-testing-part-1/).
[3] BHT and BHA WDNR industrial direct contact RCLs (638 and 11,500 mg/kg, respectively), non-industrial direct contact RCLs (151 and 2,710 mg/kg, respectively).

Further, laboratories currently lack consistent analytical methods and laboratory reference standards for BHT and BHA which may limit their use as reliable COCs.

## 2. MIO SURROGATE

The following MIO characterization results confirm that DRO (C10 to C28) is an appropriate MIO surrogate for identifying and investigating the nature and extent of potential transformer MIO releases at substation sites:

- MIO sample TPH ID results fall within the range of C10 to C32 (with six (6) of the eight (8) samples within the C10 to C28 range). Further, most of the MIO mass is centered (peak) between C18 and C20.
- Similar concentrations of DRO (C10 to C28) and TPH (>C24-C36) detected in soil samples suggest that weathered MIO soil impacts likely substantially fall within the range of C24 to C28.

Consistent with these MIO characterization results, the META study report documents that "*Nearly 100% of the mass of all the MIO samples discussed in this report fall in the DRO range as defined by WDNR*".

## 3. MIO SOIL RESIDUAL CONTAMINANT LEVEL (RCL)

A soil RCL for MIO surrogate DRO was established based on the findings of the META study and WDNR's March 14, 2023 "MIO Next Steps".

The META study report documents a risk-based corrective action (RBCA) evaluation that indicates that "*Based on RBCA-type calculations, MIO dilution estimates, solubility estimates, and leaching tests, up to 3,600 mg/kg of MIO could remain in residential soil without posing a human health risk. Similarly, up to 14,600 mg/kg of MIO could remain in commercial/industrial soil. Further, at 3,600 mg/kg residual MIO, all applicable RCLs for direct contact and protection of groundwater in nonindustrial soil would be met*".

The META report also documents a comparison of individual MIO chemical constituent concentrations (for a range of MIO concentrations) to WDNR direct contact and protection of groundwater RCLs. The findings of this evaluation indicate "*even at a MIO concentration of 5,000 mg/kg, all of the individual compounds detected in WEC MIO were orders of magnitude lower than the associated non-industrial (residential) RCL*" (direct contact RCL) and "*that substantial concentrations of MIO can remain in soil without potentially impacting groundwater quality. The lowest calculated residual MIO concentration was 5,420 mg/kg based on the benzene RCL*" (protection of groundwater RCL).

Based on these evaluations, MIO concentrations in soil up to approximately 5,000 mg/kg are protective of the direct contact exposure pathway and are protective of groundwater.

WDNR suggests in their March 14, 2023 email request to WEC ("MIO Next Steps") that the established MIO RCL should provide a "*factor of 10 level of safety*"; therefore, a MIO soil RCL

of 500 mg/kg was established based on DRO (C10-C28) laboratory analysis by Method Wisconsin Modified DRO.

## 4. REFERENCES

Geosyntec (2023). *Mineral Insulating Oil (MIO) Characterization Work Plan*, WEC Energy Group Wisconsin Electrical Substation Sites; prepared for WEC Energy Group - Business Services; June 2023.

META Environmental (2022). *Mineral Insulating Oil (MIO)*; prepared for WEC Energy Group; October 24, 2022.

## 5. LIST OF ATTACHMENTS

Attachment 1 - Tables
Attachment 2 - Laboratory Reports

WEC Energy Group, Inc.
231 W. Michigan St.
Milwaukee, WI 53203

DRAFT

# Standard Operating Procedure

## Electrical Substation Retirement
## Investigation, Remediation and Reporting Protocol
## 2025

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The purpose of this Standard Operating Procedure (SOP) is to document the process for the investigation, remediation and Wisconsin Department of Natural Resources (WDNR) reporting protocol for WEC Energy Group (WEC) substation retirements.

This SOP provides salient background information, the overall objective and a description of a multi-tier process for the investigation, remediation and reporting of substation retirements.

## 1.0 BACKGROUND

WEC electrical substations are typically fenced operating facilities constructed at minimum one foot above the surrounding area that contain a control house or power distribution center (PDC), power transformers, and various switching, protection and control equipment. The substations may also be enclosed by structural walls or buildings.

Select substation equipment contains mineral insulating oil **(MIO).** This MIO-containing equipment often includes, but is not limited to, transformers, circuit breakers, reclosers, capacitor banks, and voltage regulators. For older equipment, the MIO may contain or may have previously contained polychlorinated biphenyls (PCBs). Most new circuit breakers and reclosers do not contain oil. The majority of equipment containing MIO with PCBs has either been replaced or refilled with non-PCB MIO.

MIO is a non-volatile insulating oil consisting primarily of aliphatic hydrocarbons in the C11 - C33 range and is used for its dielectric, cooling and other beneficial properties in electrical equipment. MIO is a highly-refined petroleum hydrocarbon product similar to food-grade mineral oil and is stable at high temperatures. The MIO mixture is relatively immobile in the subsurface and partitioning to groundwater or other media is typically negligible due to the mineral oil's high soil sorption coefficient, low water solubility and low vapor pressure.

Over time, WEC substations are retired, often on a time-critical basis. MIO and other soil impacts may be encountered during these activities, particularly at older substations. These impacts are typically the result of incidental, low volume MIO releases over time. If painted structures are present at the site and the paint surfaces are deteriorated (i.e., flaking), lead-based paint (LBP) impacts in surface soils may also be encountered during retirement activities. Due to the many similarities in the constituents of concern, the nature and extent of impacts, investigation and remediation methods, equipment configuration and other factors, retirement activities at most substation sites are typically very similar.

## 2.0 SOP OBJECTIVE

This SOP's objective is to establish a more efficient and streamlined process for investigating, remediating, and reporting for WEC substation sites undergoing retirement that allows for maintaining time-sensitive, critical-path construction schedules while satisfying applicable WDNR regulatory requirements.

## 3.0 MULTI-TIER PROCESS DESCRIPTION

### 3.1 Process Establishment

Three tiers of investigation, remediation and reporting have been established to meet the above objective.

- Tier 1 - Response Action - NR 708 Reporting & Closure
- Tier 2 - Remedial Action – NR 700 Reporting/NR708 Closure
- Tier 3 - Remedial Action - Standard NR 700 Reporting & Closure

The tier of investigation, remediation and reporting will be site-specific and established based on the following types of information (and subsequent initial subsurface investigation, if warranted):

- Age of the substation;
- Volume of known soil impacts above state regulatory standards;
- Current and historical equipment MIO sampling data (PCB content);
- Visual observation of potential impact s (e.g., MIO ground surface staining, flaking paint on structures or equipment);
- Presence of unusual or complex site conditions; and,
- Previous environmental assessment information.

If the above information does not indicate a release or potential release, no further assessment will be conducted. At WEC's discretion, sampling may be conducted for soil management and disposal purposes.

If a release or potential release is identified, an initial subsurface investigation will be conducted to further assess the extent of impacts. This initial investigation will include limited sampling to establish whether MIO, PCB and/or LBP soil impacts are present and the physical character of the subsurface (e.g., shallow soil physical characteristics and, if necessary, the elevation of the surficial water bearing unit).

In most cases, the initial subsurface investigation sampling will be conducted in areas of apparent or suspected surface staining and the vicinity of MIO-containing equipment soil samples will be analyzed for PCBs, and DRO as MIO if VOCs/PAHs are not analyzed, VOCs/PAHs may be analyzed as part of Tier 3 as defined below. In areas of equipment or structures with flaking paint, soil samples will be collected for lead analysis.

If a release is confirmed by the initial subsurface investigation sampling, WDNR will be notified (via either the Spills Hotline or Form 4400-225) and the risk level will be established (i.e., "low-risk site" or "non-low-risk site"). The site will be considered a "low-risk" site if all of the following conditions are present:

- Soil impacts greater than WDNR residual contaminant levels (RCLs) or MIO SSRCL are confined to the site property;
- Impacts greater than WDNR RCLs or MIO SSRCL are confined to surficial soils (0 - 4 ft. bgs);
- Groundwater was not encountered within the zone of soil impacts greater than WDNR RCLs or MIO SSRCL;
- The impacted soil is not located within a floodplain; or the substation site can be demonstrated to show that the design and construction are above the 100 year flood plain (WEC's design criteria for all substations is to construct one foot above the 100 year flood plain); and
- The impacted soil at the site is not located adjacent and/or upgradient of a wetland, critical habitat area or navigable river, stream, lake, pond or flowage.

Most substation sites will be designated low-risk sites based on WEC experience and the above conditions.

Low-risk sites will follow the Tier 1, or Tier 2 process described below. The Tier 1 and Tier 2 classification will be based on the anticipated remediation volume. The Tier 1 and Tier 2 implementation processes will be differentiated primarily by the scope of WDNR reporting. Sites that are not classified as low-risk sites (i.e., "non-low-risk sites") will follow the Tier 3 process.

Notification requirements common to all sites proposed to follow the SOP: Included with the discharge notification form will be a cover page summary indicating how the site meets criteria to follow the SOP,

proposed use of the MIO SSRCL for that site, and which Tier criteria the site meets. For all sites which the use of the SOP is requested, a copy of the SOP, MIO SSRCL document (Attachment A), and DNR MIO SSRCL approval letter is to be attached to all submittals.
The three-tier process is summarized in Attachment Band described in the following sections.

### 3.2 Tier 1 - Response Action - NR 708 Reporting & Closure

The Tier 1 (Response Action) process will generally be conducted pursuant to NR 708.05(3) (non-emergency immediate action).

Site Conditions

The Tier 1 process will be implemented for low-risk sites with an estimated soil remediation volume of approximately 250 cubic yards or less and for which no WDNR "continuing obligations" or listing on DNR online database as having residual contamination above applicable standards. .

Investigation

The Tier I investigation will be conducted to refine the horizontal and vertical extent of MIO, PCBs (if applicable) and LBP impacts established during the initial subsurface investigation. Typically, the investigation of MIO impacts will consist of Geoprobe® soil borings advanced to depths of approximately 5 to 10 feet bgs and the investigation of LPB impacts will consist of soil boring borings advanced to depths up to 3 feet bgs. Two to three soil samples will typically be collected for laboratory analysis from each soil boring location. In limited access areas, hand auger borings may be advanced in lieu of Geoprobe® borings. In some cases, soil sampling may instead be completed following excavation with samples being collected at the excavation limits.

Soil samples collected to assess MIO impacts will be analyzed for PCBs, using analytical method USEPA Method SW 846 3541C and DRO using USEPA Method 8015D (C10-C28). PCBs would not be included for analysis if it can be shown or documented that they were not in any MIO used or stored onsite. Soil samples collected to assess LBP impacts will be analyzed for total lead (USEPA Method SW 846).

Select soil samples may be analyzed for toxicity characteristic leaching procedure (TCLP) benzene, TCLP Resource Conservation and Recovery Act (RCRA) metals, and/or other target analytes for waste characterization (disposal profiling), as required by the applicable disposal facility.

Remediation

Remediation will generally consist of excavation and off-site disposal at a licensed landfill. The limits of impacted soil removal will be based on the investigation results and the following cleanup levels, as applicable:

| | |
|---|---|
| MIO | PCBs (Aroclor-specific) Less than WDNR non-industrial direct contact RCLs. |
| | PCBs (total) Less than Groundwater Residual Contaminant Levels (GWRCLs). |
| | DRO Less than 500 mg/kg. |
| LBP | Lead (total) Less than BTV (Background Threshold Value). If above BTV, volume is insignificant, horizontal and vertical delineation of soil less than BTV, or groundwater sample less than Preventative Action Limit (PAL) will need to be demonstrated |

Confirmation soil samples will be collected from the base and sidewalls of the soil removal excavations to document that the above cleanup levels are met. A minimum of one base sample and four sidewall samples will typically be collected with no greater distance than 15 feet between samples or any other reasonable distance to be determined depending on the size of the excavation (unless physical or safety constraints are present). Confirmation soil samples shall be collected as discrete (individual) samples. Composite sampling methods will not be used for confirmation samples.

For excavations of PCB remediation waste (PCBs > 1 mg/kg), PCB composite sampling will be conducted in general accordance with Subpart O of 40 CFR 761. In general, this sampling will consist of a composite of nine aliquots within each 3-meter (10-foot) by 3-meter (10-foot) grid.

Excavated PCB impacted soil will be disposed as a non-TSCA waste (at a licensed Subtitle D landfill facility) if the PCB concentration is less than 50 mg/kg in accordance with the June 10, 2014 EPA "Risk-Based Approvals to Dispose of Polychlorinated Biphenyl (PCB) Remediation Waste" for Utility Solid Waste Activities Group (USWAG) member companies. If PCB concentrations are greater than or equal to 50 mg/kg, the soil will be disposed as a TSCA-regulated waste in accordance with 40 CFR 761.61.

## WDNR Communications and Reporting

WDNR communication and reporting for the Tier 1 process will consist of the following 3 steps (in chronological order):

- WDNR notification pursuant to NR 706.05 via the Spills Hotline or, using "Notification For Hazardous Substance Discharge (Non-Emergency Only)" (Form 4400-225). If notification is done via email, notification of consultant, results of the initial subsurface investigation and
- Notification requirements common to all sites proposed follow the SOP: Included with the discharge notification form will be a cover page summary indicating how the site meets a specific tier in the SOP, proposed use of the MIO SSRCL for that site, and which tier criteria the site meets. For all sites which the use of the SOP is requested a copy of the SOP, MIO SSRCL document (Attachment A), and DNR MIO SSRCL Approval letter is to be attached to all submittals.
- Update WDNR PM or Regional Spills Coordinator via email upon completion of response action field activities (investigation and remediation).
- Submit documentation ("No Further Action" letter) pursuant to NR 708.05(6). This will

be accompanied by WDNR Technical Assistance form 4400-237 with the appropriate fee and request for a written No Further Response Action (NFA) determination from WDNR pursuant to NR 708.09.

Remediation of soil classified as a PCB remediation waste under TSCA (i.e., PCBs as found in impacted soil > 1 mg/kg) will be conducted pursuant to 40 CFR 761.61(b) “performance-based disposal." EPA notification, reporting, and approvals are not required for performance-based disposal. Where applicable, WDNR will conduct any EPA notifications deemed necessary pursuant to RR 786 (“PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement”).

### 3.3 Tier 2 - Remedial Action – NR 700 Reporting/NR 708 Closure

The Tier 2 (Remedial Action - Streamlined NR 700 Reporting) process will be conducted in accordance with NR 716 through NR 726, except that WDNR reporting requirements will be streamlined, as described below.

Site Conditions

The Tier 2 process will be implemented for low-risk sites with an estimated soil remediation volume of greater than approximately 250 cubic yards and no WDNR "continuing obligations" or listing on the WDNR online database. An adequate number of samples will be collected to show residual soil impacts are insignificant in volume.

Investigation

The Tier 2 investigation procedures will be the same as the Tier 1 procedures described in Section 3.2.

Remediation

The Tier 2 remediation procedures will be the same as the Tier l procedures described in Section 3.2.

WDNR Communications and Reporting

WDNR communication and reporting for the Tier 2 process will consist of the following three submittals (in chronological order):

- WDNR notification pursuant to NR 706.05 using "Notification For Hazardous Substance Discharge (Non-Emergency Only)" (Form 4400-225). Notification of consultant, results of the initial subsurface investigation and "WEC SOP Tier 2 (Remedial Action - Streamlined NR 700 Reporting)" will be noted in comments section of the form and follow the process outlined about in Tier 1.
- Site Investigation, Remedial Action Options and Remedial Design Report pursuant to NR 716.15 , NR 722.13, and NR 724.09 with Form 4400-237 and appropriate fee for WDNR concurrence site meets Tier 2 criteria of SOP and use of the Site-Specific Soil Cleanup Standard (MIO SSRCL).Construction Documentation Report pursuant to NR 724.15 and

Form 4400-237 with a No Further Action Request. This will be accompanied by WDNR Technical Assistance form 4400-237 with the appropriate fee and request for a written No Further Response Action (NFA) determination from WDNR pursuant to NR 708.09

Remediation of soil classified as a PCB remediation waste under TSCA (PCBs > 1 mg/kg) will be conducted pursuant to 40 CFR 761.61(b) "performance-based disposal." EPA notification, reporting, and approvals are not required for performance-based disposal. As applicable, it is understood that WDNR would conduct any EPA notifications deemed necessary pursuant to RR-786 ("PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement").

### 3.4 Tier 3 - Remedial Action - Standard NR 700 Reporting & Closure

The Tier 3 (Remedial Action - Standard NR 700 Reporting) process will be conducted in accordance with NR 716 through NR 726.

Site Conditions

The Tier 3 process will be implemented for non-low-risk sites with or without WDNR "continuing obligations".

Investigation

The Tier 3 investigation procedures will be documented in a Site Investigation Work Plan pursuant to NR 716.09. In addition to the Tier l procedures for investigating MIO and LBP soil impacts, the investigation procedures would be supplemented, as necessary, to address non-low- risk site considerations (e.g., groundwater, historic fill material, and/or impacts from other constituents of concern or non-typical site conditions). Degree and extent of all contaminants of concern will be defined to applicable RCLs, SSRCL, or BTVs as appropriate for contaminant sources.

Remediation

The Tier 3 remediation process will be consistent with the Tier 2 process described in Section 3.3, with following adjustments to the cleanup levels, as applicable:

| | |
|---|---|
| MIO | PCBs (Aroclor-specific) Less than WDNR non- industrial or industrial direct contact RCLs or<br>Performance Standards (capping) |
| | PCBs(total) Less than TSCA regulatory level ( 1 mg/kg) or self-implementing cleanup levels [40<br>CFR 761.61(a)] |
| | MIO SSRCL of 500 ppm DRO could only be used if/where MIO impacts are distinct and not co-mingled with other discharges/sources of VOCs/PAHs. |
| LBP | Lead (total) Less than WDNR non-industrial or industrial direct contact RCLs or Performance<br>Standards (capping) |

As necessary for other cleanup components (e.g., historic fill material/or and commingled petroleum,

solvent and/or metals impacts), cleanup levels will include WDNR non-industrial or industrial direct contact RCLs, protection of groundwater RCLs, and/or Performance Standards (capping) depending on the ongoing land use classification of the parcel, and include investigation parameters and methods relevant to additional sources of contamination on the site if present.

WDNR Communications and Reporting

WDNR communication and reporting for the Tier 3 process will consist of the following submittals (in chronological order):

- WDNR notification pursuant to NR 706.05 using "Notification For Hazardous Substance Discharge (Non-Emergency Only)" (Form 4400-225) with summary page or checklist confirming site meets and will follow SOP criteria and use of MIO SSRCL and follow the process outlined above in Tier 1 and Tier 2.
- Consultant hiring notification letter.
- Site Investigation Work Plan pursuant to NR 716.09.
- Site Investigation and Remedial Action Options Report pursuant to NR 716.15 and NR 722.13.
- Remedial Design Report pursuant to NR 724.09.
- Construction Documentation Report pursuant to NR 724.15.
- Case Closure form pursuant to NR 726.09. This will include a WDNR fee submittal for WDNR to issue a written Case Closure determination (with or without continuing obligations).
- Any other submittals, reviews, or applicable Ch. NR 749 review fees deemed necessary by DNR or EPA prior to achieving case closure, dependent upon site-specific conditions for each Tier 3 site and applicable regulatory requirements.

WEC understands the need for WDNR concurrence, however, depending on timing of retirements WEC may move ahead with cleanup and remediation prior to concurrence with WDNR understanding the potential need for further investigation and remediation.

Remediation of soil classified as a PCB remediation waste under TSCA (PCBs > 1 mg/kg) will be conducted pursuant to 40 CFR 761.61(b) " performance- based disposal" or pursuant to 40 CFR 761.61(a) "self-implementing on-site cleanup and disposal." Self-implementing on- site cleanup and disposal notification/reporting would include: "Notification of Self-Implementing Cleanup" to EPA pursuant to 40 CFR 761(a)(3) and a post-implementation "Cleanup Completion Summary Report" to EPA. As applicable, it is understood that WDNR would conduct any EPA notifications deemed necessary pursuant to RR-786 ("PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement").

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## DRAFT ATTACHMENT B
## ELECTRICAL SUBSTATION RETIREMENT - INVESTIGATION, REMEDIATION, AND REPORTING PROTOCOL SUMMARY

| Tier | Site Conditions, Investigation, and Remediation | | WDNR Communications and Reporting | |
|---|---|---|---|---|
| **Tier 1: Response Action - NR 708 Reporting & Closure** | ■ Low-Risk Site **(1)** No other sources or impacts of VOCs/PAHs besides MIO | → | NR 706.05(1) | Notification (and consultant hiring notification) |
| | ■ ≤ 250 cubic yards of impacted soil | | | Update correspondence with WDNR PM |
| | ■ MIO (PCB) Cleanup Level: < WDNR non-industrial direct contact RCLs (Aroclor-specific) | | NR 708.05(3)(3) | Response Action (Non-Emergency Immediate Action) |
| | ■ MIO (Total PCB) Cleanup Level: < WDNR GWRCL | | | Update correspondence with WDNR PM |
| | ■ MIO (DRO) Cleanup Level: < 500 mg/kg by DRO (C10-28) **(2)** | | NR 708.05(6)(6) | Documentation/Final Report ("45-day letter report") (WDNR-fee submittal for concurrence of MIO SSRCL use at this site and written No Further Response Action from WDNR) |
| | ■ Lead Cleanup Level: < WDNR BTV **(3)** | | NR 708.09 | WDNR issues No Further Response Action |
| | ■ non-TSCA Disposal [< 50 mg/kg per EPA/USWAG Risk-Based Approval **(4)**] and/or TSCA Disposal (≥ 50 mg/kg) | | 40 CFR 761.61(b) | Performance-based disposal **(5)** |
| **Tier 2: Remedial Action - Streamlined NR 700 Reporting/NR 708 Closure** | ■ Low-Risk Site **(1)** No other sources or impacts of VOCs/PAHs besides MIO | → | NR 706.05(1), NR 716.09 | Notification (and consultant hiring notification) |
| | ■ > 250 cubic yards of impacted soil (or other volume as approved by WDNR) | | | |
| | ■ MIO (PCB) Cleanup Level: < WDNR non-industrial direct contact RCLs (Aroclor-specific) | | NR 716.14, NR 716.15, NR 722.13, NR 724.09 | Site Investigation, Remedial Action Options, and Design Report |
| | ■ MIO (Total PCB) Cleanup Level: < WDNR GWRCL | | NR 724.15 | Construction Documentation Report |
| | ■ MIO (DRO) Cleanup Level: < 500 mg/kg by DRO (C10-C28) **(2)** | | NR 726.09 | WDNR fee submittal for written No further Response Action from WDNR |
| | ■ Lead Cleanup Level: < WDNR BTV | | | WDNR issues No Further Response Action |
| | ■ non-TSCA Disposal [< 50 mg/kg per EPA/USWAG Risk-Based Approval **(4)**] and/or TSCA Disposal (≥ 50 mg/kg) | | 40 CFR 761.61(b) | Performance-based disposal **(6)** |
| | ■ No WDNR "Continuing Obligations" **(5)** | | | |
| **Tier 3: Remedial Action - Standard NR 700 Reporting & Closure** | ■ Non-Low-Risk Site **(1)** | → | NR 706.05(1) | Notification (and consultant hiring notification) |
| | ■ MIO (PCB) Cleanup Level: ≤ WDNR non-industrial or industrial direct contact RCLs (Aroclor-specific) or Performance Standard (capping) | | NR 716.09 | Site Investigation Work Plan |
| | ■ MIO (PCB) Cleanup Level: < TSCA regulatory level (1 mg/kg) or self-implementing cleanup levels [40 CFR 761.61(a)] | | NR 716.14, NR 716.15, NR 722.13 | Site Investigation and Remedial Action Options Report (7) |
| | ■ MIO (DRO) Cleanup Level: < 500 mg/kg by DRO (C10-28) **(2)** | | NR 724.09 | Design Report |
| | ■ Lead Cleanup Level: < WDNR non-industrial direct contact RCL or WDNR industrial direct contact RCL or Performance Standard (capping) | | NR 724.15 | Construction Documentation Report |
| | ■ non-TSCA Disposal [< 50 mg/kg per EPA/USWAG Risk-Based Approval **(4)**] and/or TSCA Disposal (≥ 50 mg/kg) | | NR 726.09 | Case Closure Request form (WDNR fee submittal) |
| | ■ With or without WDNR "continuing obligations" **(5)** | | | WDNR issues Case Closure (with or without "continuing obligations") |
| | | | 40 CFR 761.61(b) or 40 CFR 761(a) | Performance-based disposal **(6)** or Self-implementing on-site cleanup and disposal **(7)** |

(1) **Low-Risk Site Criteria**: Soil impacts greater than WDNR residual contaminant levels (RCLs) are confined to the site property; soil impacts greater than WDNR RCLs are less than approximately 4 feet below ground surface (bgs); groundwater was not encountered within the zone of soil impacts greater than WDNR RCLs; the site is not located within a floodplain; or the substation can be demonstrated to show that the design and construction are above the 100 year flood plain; and the impacted soil at the site is not located adjacent and/or upgradient of a wetland, critical habitat area, navigable river, stream, lake, pond, or flowage.

(2) MIO (DRO) Analysis: Modified DRO as MIO Method Used. Non-MIO VOCs or PAHs interference cannot be present to use MIO SSRCL.

(3) If above BTV, volume is insignificant, horizontal and vertical delineation of soil less than BTV or groundwater sampl less than Preventative Action Limit (PAL) will need to be demonstrated

(4) **EPA/USWAG Risk-Based Approval**: June 10, 2014 "Risk-Based Approvals to Dispose of Polychlorinated Biphenyl (PCB) Remediation Waste" by EPA for Utility Solid Waste Activities Group (USWAG) member companies.

(5) **WDNR "continuing obligations"**: Continuing obligation responsibilities and notifications pursuant to NR 727.05 and NR 725.07.

(6) **40 CFR 761.61(b), Performance-based disposal notification/reporting**: EPA/40 CFR 761 notification/reporting not required to implement. EPA notification by WDNR pursuant to RR-786 ("PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement"), as applicable.

(7) **40 CFR 761.61(a), Self-implementing on-site cleanup and disposal notification/reporting**: "Notification of Self-Implementing Cleanup" to EPA pursuant to 40 CFR 761(a)(3). EPA notification by WDNR pursuant to RR-786 ("PCB Remediation in Wisconsin under the One Cleanup Program Memorandum of Agreement"), as applicable. Post-implementation "Cleanup Completion Summary Report" to EPA.