



March 23, 2022

FID # 268696560  
Waukesha County  
SW/Correspondence

Mr. Brett Coogan  
Orchard Ridge Recycling & Disposal Facility  
W124 N9355 Boundary Road  
Menomonee Falls, WI 53051

Subject: Incompleteness Determination for the Plan of Operation for the Orchard Ridge Recycling & Disposal Facility (RDF) Eastern Expansion, Southern Unit, License #4491

Dear Mr. Coogan:

The Department of Natural Resources (department) has reviewed for completeness a report and set of plan sheets submitted on behalf of Waste Management of Wisconsin, Inc. (WMWI) by TRC entitled: "Plan of Operation, Orchard Ridge RDF Eastern Expansion, Southern Unit, Village of Menomonee Falls, Waukesha County Wisconsin", dated February 18, 2022, and received by the department on February 21, 2022. The feasibility determination was issued on July 30, 2021. Based on our review, the department has determined the plan of operation is not complete since the minimum requirements of ch. NR 514, Wis. Adm. Code and the conditions of the department's July 30, 2021 feasibility determination have not been met.

Part A of this letter identifies the information needed to fulfill the minimum plan of operation requirements. Part B lists additional information the department needs to make a plan of operation decision. Part C provides additional comments the department has on specific aspects of the plan of operation.

#### A. INFORMATION REQUIRED TO COMPLETE THE PLAN OF OPERATION

The following information must be provided in order for the department to issue a determination that your plan of operation is complete:

1. **Noncompliance with Plans or Orders [s. 289.34, Stats. and s. NR 514.04(3), Wis. Adm. Code]:** Please review the related information you provided in your recent feasibility report, update it as necessary to reflect current conditions, and indicate whether or not all plan approvals and orders relating to the identified facilities are being complied with.
2. **Condition 5 of the department's July 30, 2021 feasibility determination:** The report did not include a description of the health and safety protocols to be used during the Boundary Road Landfill (BRL) exhumation process.
3. **Condition 9 of the department's July 30, 2021 feasibility determination:** The report did not include a plan to evaluate for potential endangered or threatened wildlife species that may be impacted during construction events before each construction event and how any potential impacts would be addressed.
4. **Condition 14 of the department's July 30, 2021 feasibility determination:** The report did not include a clear proposal for drainage of granular or silty soil encountered at subbase grades as necessary to allow

removal of the granular or silty soils and replacement with compacted clay soils. Different methods are mentioned within the report but are not explained how or when they would be used.

5. **Condition 16 of the department's July 30, 2021 feasibility determination:** The report did not include a detailed description of subbase construction methods in the area of BRL waste exhumation and the BRL pond removal.
6. **Condition 18 of the department's July 30, 2021 feasibility determination:** The report did not include a detailed proposal of methods to continuously remove leachate from the existing leachate sump during the extension of the sump riser pipe and manhole to be located in the Triangle Area. Also, not all of the information provided in the April 1, 2021 Addendum #2 was provided in this report.
7. **Condition 23 of the department's July 30, 2021 feasibility determination:** The storm water pollution prevention plan did not adequately address storm water pollution prevention measures related to the exhumation of BRL, including the transport of exhumed waste between landfills.
8. **Condition 26 of the department's July 30, 2021 feasibility determination:** The report did not include an evaluation of the existing gas header pipe to determine if modifications are needed to manage the additional landfill gas generated by the expansion.
9. **Condition 27 of the department's July 30, 2021 feasibility determination:** The report did not address the abandonment procedures for gas extraction wells in the area outside of BRL; specifically, gas extraction wells which are abandoned in areas with final cover.
10. **Condition 30 c. and d. of the department's July 30, 2021 feasibility determination:** The report did not include a detailed description of the phased development, filling, and closure sequencing that minimizes the time and area outer side slopes are under intermediate cover and filling so final grades are reached as soon as possible.
11. **Condition 34 of the department's July 30, 2021 feasibility determination:** The report did not provide a clear plan for protecting wetlands and waterways from indirect impacts. The response to condition 34 differs from other areas of the report, such as 3.2.1.
12. **Geocomposite Lined Landfills [s. NR 504.06(3)(e), Wis. Adm. Code]:** The report did not include information regarding geomembrane panels being welded by double-tracked, fusion welding machines for all linear seams, corners, butt seams and long repairs.
13. **Leachate Collection System [s. NR 504.06(5)(j)5, Wis. Adm. Code]:** The report did not include information regarding the area of the sump and depth of gravel fill being sized to allow remedial installation of access and hardware for removal of leachate in the event of failure of the sideslope riser and pump system.
14. **Active Gas Extraction [s. NR 504.08(2)(a), Wis. Adm. Code]:** Plan sheet 18 did not include vertical gas extraction wells throughout the entire landfill with a maximum radius of influence of 150 feet per well.
15. **Active Gas Extraction [s. NR 504.08(2)(b)-(f) and (l), Wis. Adm. Code]:** The report did not include the information regarding vertical gas extraction wells.

16. **Miscellaneous [s. NR 504.09(2)(g), Wis. Adm. Code]:** The report did not include information regarding the landfill being designed such that final waste grades are reached as soon as possible, and open refuse filling area is minimized.
17. **Leachate Recirculation [s. NR 504.095(1)(f), Wis. Adm. Code]:** The report did not include specific information regarding operations expected in all weather and seasons of operation.
18. **Existing Conditions [s. NR 514.05(2), Wis. Adm. Code]:** The drawings did not include an existing condition plan which included a detailed topographic map of the existing Orchard Ridge Eastern Expansion Landfill. The drawing should also depict the existing leachate forcemain on the south side of the Eastern Expansion.
19. **Waste Final Grades [s. NR 514.05(7), Wis. Adm. Code]:** The drawings did not include a final waste plan which shows final waste grades without the 5% intermediate waste grades.
20. **Design Rationale [s. NR 514.06(3), Wis. Adm. Code]:** The report did not include design rationale for phases of landfill development and closure specifically relating to construction of Phases 3B and 4C, how delaying that construction impacts final cover placement, and justification for the exhumation of the Boundary Road Landfill occurring over 6 to 8 years. Also, include a revised construction sequencing table (Section 6.1) with total acres open/closed after each construction event and review calculations that utilize the acreage for the maximum open area.
21. **Stormwater Management [s. NR 514.06(5)(d), Wis. Adm. Code]:** The report did not include a list of anticipated actions and materials needed for sediment and erosion control.
22. **Long-Term Care [s. NR 514.06(11), Wis. Adm. Code]:** The report did not include a discussion of inspection procedures, such as an inspection checklist, for monitoring devices during the long-term care period.
23. **Design Calculations [s. NR 514.06(14), Wis. Adm. Code]:** The report did not include refuse to cover balance computations.
24. **Financial Responsibility [s. NR 514.06(15), Wis. Adm. Code]:** The report did not include assumptions used in developing the cost estimates and rationale for the selected cost factors.
25. **Closure of Landfills with Composite Liners and Composite Caps [s. NR 514.07(3)(b), Wis. Adm. Code]:** The report did not include the information regarding no additional waste placement in areas which have reached final grades and received intermediate cover.
26. **Other Requirements [s. NR 514.07(6)(c), Wis. Adm. Code]:** The report did not include information relating to pump selection based on highest leachate flow rate which includes leachate recirculation.
27. **Extended Collection Lines [s. NR 514.07(8)(c)1, Wis. Adm. Code]:** The report did not include pipe strength calculations for wet unit weights, densified waste after consolidation and decomposition, and the potential use of leachate recirculation.

## B. INFORMATION NEEDED FOR PLAN OF OPERATION APPROVAL

The information below is not required for a completeness determination, but the department will need to receive it in order to make a plan of operation decision:

1. Provide clarification on the landfill name and expansion name and use consistent references throughout the report. The feasibility report refers to the existing landfill as the Orchard Ridge RDF East Expansion (East Expansion) and the proposed expansion as the Eastern Expansion, Southern Unit (Southern Expansion). Throughout the report there are references to the Eastern Expansion and Southern Unit.
2. Provide additional information/justification to demonstrate that the exemption request is a special case and will not cause environmental pollution in accordance with s. NR 500.08(4), Wis. Adm. Code which includes the following:
  - a. Venting of manholes – describe actions that will be taken to protect health and safety where manholes would not be vented; describe environmental impacts/benefits; and other specific information that supports the request.
  - b. Slope transitions greater than 4:1 – provide information (calculations, length of slope, etc.) for slopes that require transitions greater than 4:1 and request an exemption to the requirements of s. NR 504.09(2)(g), Wis. Adm. Code with supporting justification. Alternatively, the request could be withdrawn and requested at a later date when specific information would be available to support the exemption.
3. Provide discussion on the history, design, and depth of the cutoff wall on the south side of BRL. Also include discussion on how the cutoff wall will be removed or if left in place how it may impact construction of the landfill liner.
4. Provide clarification on the use of screening berms. Page 2-6 says soil excavated from areas not in contact with the BRL waste will be used for several things including screening berms. There was no other discussion of screening berms or locations/details in the plan sheets.
5. Provide clarification on the underdrain collection sumps. Page 2-8 says there will be underdrain collection sumps along the western toe of slope but does not have any narrative about the underdrain header pipe shown on detail 3/26.
6. Provide discussion on the location and construction of the existing leachate forcemain on the south side of the East Expansion and how it may be impacted by the Southern Unit expansion.
7. Provide additional information on the horizontal directional drilling proposed for the leachate forcemain which includes the following:
  - a. A more detailed explanation of where and when the directional drilling will occur.
  - b. Discuss specific methods for protection of the wetland and watery areas.
  - c. Explain/show where the drilling fluids will be released/collected during the drilling process.
  - d. Explain how forcemain directional drilling construction will be documented.

8. Provide clarification on haul road grades. Page 2-31 says that the haul roads over the waste typically have a maximum grade of 10 percent and Page 3-27 says that the perimeter and internal roads have grades less than 10 percent. NR 504.09(2)(d) say that all access roads which are used by over the highway vehicles shall be designed with a maximum grade no greater than 10 percent.
9. Clarify how the largest open area was calculated for the leachate generation calculations and revised closure cost estimates. The acreages used do not appear to correlate with the acreages included in the report and on the phasing plan sheet. Revise the calculations, report, and plan sheets, as appropriate.
10. Provide revised long-term care costs which include pumping of groundwater from the underdrain system and pump replacement. Because the horizontal portion of the Southern Expansion is not a zone of saturation landfill, the underdrain system pumping may not be discontinued.
11. Provide the ability to collect samples and provide a sampling plan for individual underdrain sumps in each phase of the Southern Expansion.
12. Provide clarification on whether WMWI is requesting a public meeting be held as part of this plan of operation review for the acceptance of dredge waste. Under s. 289.54, Wis. Stats. the department may not approve a request to dispose of dredge materials that contain PCBs or heavy metals unless the department holds a public meeting. The Eastern Expansion does not currently have an approval to accept dredge material.
13. Provide a revised environmental monitoring plan sheet 19 which includes the following:
  - a. Include leachate line televising to the long-term care activities table.
  - b. Remove the leachate head well location within waste and label the leachate head well sampling location at the edge of waste.
14. Provide an explanation of the cross section on plan sheet 20. The cross section shows a change in grade at the center of the landfill base grades.
15. Provide clarification on where detail 1/29 – Delineation Berm Type A with the leachate pipe is used. Based on the phasing plan sheets it appears that the west end of Phase 7 Module 2, where the only leachate header pipe is used, is constructed at the same time as Phase 7 Module 1 and so the leachate pipe would not need to be capped.
16. Provide a revised plan sheet 41. The gas header details (2/41 and 3/41) show waste slopes of 2:1. Section NR 504.09(2)(g), Wis. Adm. Code allows a maximum waste grade of 4:1.
17. Provide details on plan sheet 40 or 41 of the gas system belly collectors, side slope gas extraction collectors, and horizontal gas wells discussed in Section 2.14.3.
18. Provide a revised Boundary Road Landfill Property Redevelopment Plan (Appendix C) which includes the following:
  - a. Discussion of removing BRL waste that may be beyond the proposed expansion waste limits shown on the plan sheets.

- b. Discussion of restoration of areas of BRL exhumation that are outside the proposed waste limits.
  - c. Address the testing of soils below BRL for PCBs. The Figure 3 – Soil Below Waste flow diagram for soil evaluation and classification indicates soils will be analyzed for PCBs, but the report does not discuss this.
  - d. Section 6.2.3 of the redevelopment plan states soil from below the base of the landfill that is visually or otherwise noticeably impacted by waste products will be excavated and classified as Type 2 soil without testing, for use within the lined landfill. Type 2A and 2B soils must be compared to RCL limits for classification prior to use within the landfill; therefore, testing is required.
  - e. If Type 2A soils are proposed for use in the final cover for the Orchard Ridge Landfill (ORL), this needs to be addressed within the final cover design section of the report.
  - f. Provide additional details on the screening procedures and documentation that will be used during active waste excavation, including information on what is meant by “other field evidence of significant impacts” in section 4.3.1 of the plan.
  - g. Provide clarification on waste screening described in section 4.3.1 of the plan, such as whether confirmation samples will be collected from waste in the immediate vicinity of samples indicating the potential for characteristically hazardous waste.
  - h. Provide additional rationale and clarification on whether special consideration will be given to waste surrounding crushed or empty drums, which section 4.3.5 of the plan states will “not be segregated from the waste and will be handled in the same manner as the general excavated waste”. Crushed drums were documented in the WCIR and in at least one boring indicating the potential for hazardous waste.
  - i. Provide clarification on why “the bulk suspicious materials most likely to be encountered are waste or soils containing high concentrations of VOCs”, as stated in section 4.3.6 of the plan. For example, additional explanation on why this is not the case for contaminants such as lead or PCBs, and/or what information in the WCIR supports this approach.
  - j. Provide additional details on the information provided in section 4.5.1 of the plan on what will happen if air monitoring results are above screening levels (e.g., department notification).
  - k. Discussion or revisions to address comments listed in Attachment 1 of this letter.
19. Provide clarification on the special waste plan (Appendix D). The plan of operation report lists alternate daily cover (ADC) materials that were approved for the East Expansion; however, an Addenda to the East Expansion plan of operation stated that WMWI would be submitting a revised plan to address those materials. The department approved those materials in the interim with the understanding that a plan would be provided to address those materials. Clarify whether the revised special waste acceptance plan will be applied for determining suitable ADC materials, or if WMWI intends to rely on past plans/approvals for those materials than provide a copy of the prior plans/approvals for each of the materials, which were under the Orchard Ridge RDF, Lic. #3360.

20. Provide a revised Quality Assurance Manual (Appendix H) which includes the following:
  - a. Clarification on the compactor foot length. Page 3-8 says the foot length will be as long as the loose lift height and page 25 of the Quality Assurance Manual says the compactor foot length will be a minimum 6 inches.
  - b. Clarification on providing guidance for machine operators placing soil on geomembrane. Page 3-11 include discussion on the item; however, it is not discussed in the Quality Assurance Manual.
  - c. Addition of a section for installation of the clay wedge that discusses construction of the wedge over the drainage blanket stone, prevention of the drainage blanket from being contaminated with clay and documentation of observations by the quality assurance personnel.
  
21. Provide a revised leachate recirculation plan (Appendix L) and research, development and demonstration (RDD) plan (Appendix M) which includes the following:
  - a. The RDD and leachate recirculation plans need to address limitations due to the placement of BRL waste and/or how the acceptance of liquid waste will be integrated with the acceptance of BRL waste. Also, capacity and geotechnical calculations need to consider that the characteristics of BRL waste may be different than the incoming waste stream.
  - b. If dredge material containing free liquids will be accepted, clarify the volumes anticipated and address the stability and operational procedures for placement of dredge waste within the landfill. Also, a public meeting is required prior to department approval of dredge material as noted above.
  - c. The plan of operation (Section 3.5.4.1) states that drilling fluids will be disposed of or recycled per the Special Waste Management Plan. Note that the disposal of drilling fluids with free liquids would only be allowable if covered under an approved RDD plan.
  - d. Other than being aqueous phase and meeting TCLP limits, address acceptance protocol and monitoring to ensure the disposal of liquid waste will not interfere with landfill chemistry and normal waste degradation. Note EPA's guidance titled, Monitoring Approaches for Landfill Bioreactors, indicates potential problems with the following waste streams: surfactant-based waste streams, pickling waste streams, streams related to aluminum dross, and waste streams with high sulfate concentrations, in addition to oily or low pH waste.
  - e. Rapid infiltration trenches are not allowed under s. NR 504.095(2)(a), Wis. Adm. Code. Provide additional information for evaluating the use of rapid infiltration trenches under the RDD plan, if proposed.
  - f. Under warning symptoms, clarify what is meant by excessively acidic leachate chemistry.
  - g. If proposing to add contact water or potentially contaminated liquids from BRL, address how the contact water or potentially contaminated underdrain liquids will be evaluated for hazardous waste characteristics.

- h. The plan of operation discusses the addition of leachate and liquids within the lower 10-feet of waste. Note that Condition 34 of the plan of operation approval for the East Expansion requires a minimum separation of 10-feet from the leachate drainage blanket and a minimum separation of 50-feet from gas well gravel mounds.

Note: The department is reviewing the revised plan as part of the plan of operation review, but the department is not considering this a renewal request because the annual/final report for the test period and other information required by s. NR 514.10, Wis. Adm. Code has not been provided. Due to the complexity of the plan of operation, it would be best to submit the final report/renewal request separately in advance of the expiration date.

22. Provide additional information to address the following comments regarding the organic stability plan (Appendix N):
  - a. Clarify what is meant by continuing in-landfill anaerobic decomposition under Section 3.0. Describe how this is different from normal landfill operations.
  - b. The timeframe of the proposed delay in final cover placement needs to be clearly laid out as previously noted. Note that the plan of operation for the East Expansion only approved delaying final cover placement up to 2 years after attaining final waste grades to allow for settlement, not as an organic stability measure.
23. Provide information/clarification to address the following comments regarding the groundwater monitoring and response actions in sections 4.1 through 4.1.7 and 4.6 through 4.7.1.4:
  - a. Provide rationale for annual VOC sampling in September, rather than March. The department understands the March event to be intended as the “wet” season and likewise the September event as the “dry” season, in which case there are concerns whether this schedule would sufficiently evaluate contamination within the capillary fringe area (“smear zone”).
  - b. Provide an explanation of what the difference is between the grayed symbols and the dark symbols separated with “or” provided under the “Existing” column in the Features section of the Standard Legend on plan sheet 2.
  - c. Provide clarification on what considerations or thresholds would be used by WMWI to identify “groundwater quality changes” as mentioned in section 4.7.1 of the plan of operation submittal. It states that it “presents a comprehensive plan of action to be taken in the event that groundwater quality changes are detected”.
  - d. Provide additional information on what WMWI would consider “a significantly elevated concentration of a monitoring parameter” over the course of two consecutive sampling events, as stated in section 4.7.1.3 of the plan of operation submittal.
  - e. Provide an explanation of potential actions concerning ES exceedances. Section 4.7.1.3 of the plan of operation submittal states one would be to “[r]esample and obtain additional analytical data for the affected monitoring well(s) to verify concentrations”. Without an adequate explanation of an anomalously high concentration in the first place (e.g., cross-contamination),



the department does not necessarily believe the second sample would be any more representative than the first.

- f. Provide a plan to evaluate if the completion of the BRL waste relocation project improves groundwater quality to the extent which would warrant rescission of any NR 140 groundwater standard exemptions and removal of approved ACLs as well as lowering any approved PALs for indicator parameters. The proposed plan should consider time for concentrations to stabilize after waste removal is completed by waiting a period of time such as 5 years and again at 10 years to do the evaluation following complete relocation of the BRL waste.
24. Provide information/clarification to address the following comments regarding the groundwater sampling and analytical plan (Appendix R):
- a. Confirmation that each of the required groundwater parameters will be analyzed by a Wisconsin-certified laboratory in accordance with ch. NR 149, Wis. Adm. Code.
  - b. Provide additional information on any examples of WMWI having performed alternative purge water management at adjacent WMWI facilities (e.g., East Expansion), and/or an explanation of what criteria are used to determine “highly impacted” groundwater. The sampling plan provided as Appendix R states the results from past sampling events “may prevent disposal of purge water to the ground”, and if “groundwater is highly impacted at a location”.

### C. ADDITIONAL COMMENTS ON THE PLAN OF OPERATION

The department noted the following additional issues with the plan of operation during our review. Should the department approve the plan of operation, these issues may result in conditions of approval if not addressed.

1. The plan in Appendix R states the water level used for static water level measurements “should be recorded to the nearest hundredth of a foot”. Be advised that section 2.2.1 of the department’s *Groundwater Sampling Desk Reference* states static water levels “must be accurate and precise to  $\pm 0.01$  foot ( $\pm 0.25$  cm)”.
2. The plan in Appendix R states that for wells that go dry, “the sample will be obtained after water recharges to acceptable sample volume”. Be advised that section 2.5.3 of the department’s *Groundwater Sampling Desk Reference* states that if time permits, “purge the well a second time and collect samples within 24 hours”.
3. The plan in Appendix R states that “samples should ideally be cooled to 4 degrees Celsius”. Unless there are extenuating circumstances (e.g., sample collected very recent to laboratory’s receipt), be advised that section 2.9.2 of the department’s *Groundwater Sampling Desk Reference* states that samples “must remain at or below 4C throughout handling, storage and shipping”.

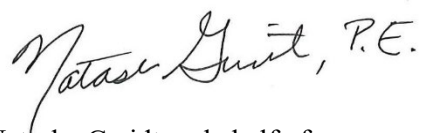
Due to the complexity of the plan of operation report, the department may have additional incompleteness items and/or additional information requests as the review of the report continues. Note that the BRL redevelopment plan is currently under review by the Remediation and Redevelopment program.

This incompleteness determination is not a denial of your proposal, but merely indicates that additional information is needed to continue the department’s review. Submittal of this information does not ensure

approval, nor does it preclude the department from requiring additional information if continued review indicates it is needed.

If you have any question regarding this letter, please contact Ann Bekta at (608) 287-4492 or email at [Ann.Bekta@wisconsin.gov](mailto:Ann.Bekta@wisconsin.gov) or David Buser at (414) 550-8189 or email at [david.buser@wisconsin.gov](mailto:david.buser@wisconsin.gov).

Sincerely,



Natasha Gwidt on behalf of:  
James C. Delwiche  
Waste and Materials Management Program Supervisor  
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Mike Ellenbecker – DNR/WA (e-copy)  
Kendra Fisher – DNR/AM (e-copy)  
Pete Wood – DNR/WT (e-copy)  
Erin Endsley – DNR/RR (e-copy)  
Bruce LeRoy – DNR/RR (e-copy)  
Sharon Fandel – DNR/NH (e-copy)

**Attachment 1**  
**Comments provided by the Hazardous Waste Program on the Boundary Road Landfill Property  
Redevelopment Plan (Appendix C)**

**Section 1.1**

**WMWI**

“This document is intended to serve as a guide to establishing the procedures for appropriately characterizing, handling, and relocating soil and waste materials.”

**Hazardous Waste Program**

The concern is that the term ‘guide’ does not necessarily mean that the document has to be followed. Perhaps replace with plan, which is used in the next paragraph.

**Section 2.2**

**Hazardous Waste Program**

When making a hazardous waste determination s. NR 662.011 Wis. Adm. Code must be followed. The Property Redevelopment Plan is not a substitute for the hazardous waste determination steps specified in s. NR 662.011 Wis. Adm. Code for when encountering suspicious wastes.

**WMWI**

“As explained further below, for waste characterization purposes in the execution of this project, waste characterization would occur upon exhumation of the BRL material because that is when the waste is "generated" for waste characterization purposes in a remediation context.”

**Hazardous Waste Program**

The act of excavation does not necessarily cause the generation of waste. It is when placement occurs.

**WMWI**

“If documentation of the source of contamination is unavailable or inconclusive and obvious evidence of the waste origin is not found with the waste, then the waste or soil can be assumed not to contain a listed hazardous waste.”

**Hazardous Waste Program**

Does ‘waste origin’ mean who generated the waste and/or how the waste was generated. If waste origin is limited to who generated the waste, then add language discussing how the waste was generated. For example, a label on a drum could state ‘waste toluene solvents from paint cleaning operation’ This can show that the drum contains a F005 listed hazardous waste; however, it does not point to the origin of who generated the waste. This issue is addressed in the next paragraph.

**WMWI**

“In situ soil excavated from below the waste would be classified as a hazardous waste only if it exceeds a TCLP limit when excavated, because that is when the waste is generated. Soil mixed with waste will be managed in the same manner as the waste.”

**Hazardous Waste Program**

It is not exhumation that causes the waste to be generated. It is placement.

**WMWI**

“Bulk waste or contaminated soil that is classified as characteristic hazardous waste, based on TCLP testing, will be treated on site and rendered non-hazardous prior to disposal in ORL or it will be transported off site for treatment and/or disposal at a facility licensed to accept it. Waste or soil identified as hazardous waste must be treated to meet the RCRA Land Disposal Restrictions (LDRs) prior to disposal in ORL, as described in Section 4.3.6.”

**Hazardous Waste Program**

The sample collected for TCLP testing must be representative.

Activities in which placement (e.g., In-situ management) does not occur do not trigger RCRA. Activities in which placement occur trigger RCRA.

#### **WMWI**

“Wastes in intact drums or containers will be evaluated for a hazardous waste determination as described in **Section 4.3.5** and will be managed as hazardous wastes, if appropriate.”

#### **Hazardous Waste Program**

Under RCRA container also include pumps, thermometers, manometers, batteries, and ampuls.

#### **Section 2.3.1**

##### **WMWI**

“Regulatory options for ex situ treatment without triggering hazardous waste treatment licensing requirements include treatment in containers, which is exempt by rule, or treatment under the terms of a remediation variance.”

##### **Hazardous Waste Program**

The code that allows treatment in container and tanks without a license is s. NR 670.001(3)(b)11. Wis. Adm. Code.

#### **Section 2.3.3**

##### **WMWI**

“The AOC policy will not be used with regard to the final placement of BRL waste, but will allow exhumed wastes and contaminated soil from the BRL site to be temporarily stockpiled within the BRL footprint, without triggering hazardous waste testing requirements or LORs.”

##### **Hazardous Waste Program**

What is meant by ‘final placement of BRL waste’ with regards to the AOC policy will not be used?

#### **Section 3.2**

##### **WMWI**

“The waste excavation and relocation or processing phases are estimated to occur over a 6- to 8-year period, starting in 2022 following approval of the Eastern Expansion, Southern Unit POO.”

##### **Hazardous Waste Program**

Remediation variances issue under s. NR 670.079 Wis. Adm. Code are limited to 5 years.

#### **Section 4.2**

##### **WMWI**

“Waste will generally be removed in lifts, similar to the typical filling procedure in reverse. The surface of the waste lift will be sloped to the interior and will drain to temporary sumps excavated in the waste to facilitate leachate collection and removal.

##### **Hazardous Waste Program**

The leachate is subject to the waste determination requirements under s. NR 662.011 Wis. Adm. Code.

##### **WMWI**

“Like the landfill final cover material, asphalt and the underlying gravel base will be assumed to be uncontaminated unless the visual appearance or odor indicates potential impact.”

##### **Hazardous Waste Program**

The concern is that visual appearance or odor are the factors being used in making a determination. Is there a reason why these materials may be impacted with hazardous constituents?

#### **Section 4.3**

### **Hazardous Waste Program**

Who will be doing these waste procedures? What type of training or background do they have in these waste procedures?

#### **Section 4.3.2**

##### **WMWI**

“If typical waste materials are waterlogged with leachate when excavated, they will be allowed to drain and/or be mixed with drier waste prior to loading into trucks to prevent the separation of liquids from the waste during transportation or placement, unless the disposal of BRL leachate in ORL is approved under the ORL Research, Development, and Demonstration (RD&D) Plan.”

##### **Hazardous Waste Program**

Mixing a hazardous waste with drier waste may constitute impermissible dilution (i.e., treatment) under RCRA.

#### **Section 4.3.5**

##### **WMWI**

“A technician will be onsite working with the operator(s) and documenting the waste removal process, but the technician will not be in the excavation area monitoring during active waste removal due to safety concerns.”

##### **Hazardous Waste Program**

It was our understanding that based on January 6 virtual meeting with SCS that a technician would also be present during the excavation. Safety concerns could be addressed by having the technician located an appropriate distance away from the excavator and wearing a high visibility vest.

##### **WMWI**

“Non-intact drums that appear to contain water or leachate based on field observations and/or field screening (i.e., liquid most likely accumulated after disposal) will be managed as non-suspicious waste and transferred with the surrounding waste to ORL for disposal.”

##### **Hazardous Waste Program**

Explain how field observation can differentiate water or leachate from a liquid that is not water or leachate.

##### **WMWI**

“Intact drums and containers segregated from the waste and staged in the secure storage area will be screened in the storage area using a combination of visual observation of physical characteristics and fingerprint analysis.”

##### **Hazardous Waste Program**

Explain what the combination of visual observation of physical characteristics and fingerprint analysis will consist of.

##### **WMWI**

“Labeling, if any, will be evaluated to identify whether the contents may be a listed waste.”

##### **Hazardous Waste Program**

What training does the person evaluating the label have in detriment if the contents of the container are a listed hazardous waste?

##### **WMWI**

“Stockpiles of otherwise inert materials will not be covered for short-term storage.”

##### **Hazardous Waste Program**

These would be suspicious material which could be a hazardous waste. The concern is runoff from the stockpile (i.e., leachate) could be a hazardous waste. This issue is somewhat addressed in the next paragraph.

## WMWI

“Based on the site history, characterization to determine the need for treatment prior to disposal in ORL will be limited to VOCs unless field screening (i.e., visual or odor) indicates a significant likelihood that the material could fail the TCLP test for metals or semivolatile compounds. Based on the WCIR data, the single occurrence of metals in excess of TCLP limits appears to be lead that may have been associated with paint waste.”

### **Hazardous Waste Program**

Several concerns with this sentence:

- Site history is limited.
- That characterization is limited to VOC field screening (i.e., visual or odor).
- What would indicate a significant likelihood that the material could fail the TCLP test for metals or semivolatile compounds.
- How does WCIR data compare to this site given the site’s limited site history.

Explain how this meets the waste determination requirements under s. NR 662.011 Wis. Adm. Code.

## 4.3.6

### WMWI

“The minimum goal of on-site treatment will be to reduce contaminant concentrations to below the TCLP limits, so that it meets the ORL acceptance limits. For disposal, the RCRA LDR treatment standards will also apply.”

### **Hazardous Waste Program**

It is the LDR treatment standard and not the TCLP limits that determines if a waste can be land disposed. Arsenic (D004), Mercury (D009), and selenium (D010) have LDR standards that are equal to greater than the TCLP limit. These waste – even if the LDR standard is meet – must go to a hazardous waste landfill.

### WMWI

“For contaminated soil, including suspicious waste that is primarily soil, the alternative LDR treatment standards for contaminated soil ins. NR 668.49, Wis. Admin. Code, will apply.”

### **Hazardous Waste Program**

The hazardous waste program will need to do regulatory research to determine if a mixture of mostly soil and wastes would still be eligible for the alternative treatment standard that apply to soils.

## 4.7

### WMWI

“Leachate and/or groundwater that is encountered during excavation of BRL, including contact water that is generated by precipitation falling on the waste, will be collected to the extent possible, and will be discharged to the sanitary sewer or another approved discharge option as discussed in Section 5.1.”

### **Hazardous Waste Program**

Water in contact with waste requires a hazardous waste determination per under s. NR 662.011 Wis. Adm. Code.

## 6.1.1

### WMWI

“Excavated soils will be classified into types as defined below, based on the contaminant concentrations, with the allowable reuse options defined for each type. Laboratory testing parameters for soil may include: ...”

### **Hazardous Waste Program**

Since ‘may include’ Is not a must/shall. If testing is not done how will the soils be classified?

## 6.2.2

### WMWI

“Based on the soil sampling performed for the WCIR, the BRL grading layer soils will primarily be classified as Type 2A soils. Most samples from the grading layer contained at least one petroleum

compound at a concentration exceeding the Ch. NR 720, Wis. Adm in. Code, RCL for the groundwater pathway, but none exceeded the Ch. NR 720, Wis. Admin. Code, RCL for the industrial direct contact pathway or the TCLP limit.”

**Hazardous Waste Program**

It is the LDR treatment standard and not the TCLP limits that determines if a waste can be land disposed.

**6.2.5**

**WMWI**

“Metals and PCB analysis on deeper samples will be performed only if the concentrations in the upper sample exceed RCLs established for the project.”

**Hazardous Waste Program**

In section 6.2.3 it states “The shallowest sample collected in each boring will be analyzed for VOCs, RCRA metals, and PCBs. Metals and PCB analysis on deeper samples will be performed only if the concentrations in the upper sample exceed RCLs established for the project.”

Why are VOCs eliminated in section 6.2.5?