



RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
LANSING



C. HEIDI GREYER  
DIRECTOR

October 30, 2018

VIA EMAIL and U.S. MAIL

Ms. Sylwia Scott  
Environmental Manager  
Michigan Disposal Waste Treatment Plant  
49350 North I-94 Service Drive  
Belleville, Michigan 48111

Dear Ms. Scott:

**SUBJECT:** Second Completeness Review Notice of Deficiency: Hazardous Waste Management Facility Operating License Application; Michigan Disposal Waste Treatment Plant, Belleville, Michigan; MID 000 724 831

The Michigan Department of Environmental Quality (MDEQ), Waste Management and Radiological Protection Division (WMRPD), has finished a second completeness review of the Michigan Disposal Waste Treatment Plant (MDWTP) hazardous waste management facility operating license application submitted pursuant to Part 111, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and its administrative rules. Our review included the September 29, 2017; October 30, 2017; and December 8, 2017, revisions. MDWTP submitted the revisions to correct application deficiencies identified in the MDEQ *Completeness Review Notice of Deficiency*, dated August 28, 2017.

In the revisions, MDWTP included a request to add new storage and treatment activities that were not previously authorized in its current hazardous waste management facility operating license. The inclusion of the new activities changed the application category from a renewal application to an application for expansion. Additional information requirements apply to applications for expansion. MDWTP included the additional information in the revisions.

Based on our review, the MDEQ has determined that the application is deficient. A list of deficiencies is enclosed. Revisions correcting the completeness deficiencies must be submitted by January 18, 2019, to:

Mr. Allan B. Taylor, Manager  
Hazardous Waste Section  
MDEQ - WMRPD  
P.O. Box 30241  
Lansing, Michigan 48909-7741

Please be aware that the MDEQ Director shall deny an application if the applicant fails to submit sufficiently detailed or accurate information to enable the MDEQ Director to make reasonable judgments as to whether the license should be granted (R 299.9518 (2)(c)).

The MDEQ, in collaboration with the United States Environmental Protection Agency (U.S. EPA), performed a more in-depth review of the proposed *Chemical and Physical Waste Analysis Plan* (WAP). The WAP was also determined to be deficient. Due to the significant nature and number of WAP deficiencies, the MDEQ and the U.S. EPA will communicate the WAP deficiencies to MDWTP in a separate letter with a different deadline for response.

Please submit revisions in hardcopy and electronic formats. When submitting the hardcopies, please use the replacement page format including the revision date in the footer of each page. Pages should be three-hole punched and numbered correctly so that they can be placed directly into the existing application binders. Submit four copies of the revisions to the MDEQ, Lansing office and one hard copy to each of the following:

1. Mr. James Blough, U.S. EPA, Land and Chemicals Division, Resource Conservation and Recovery Act Branch, Mail Code LR-17J, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507.
2. Mr. Matthew Best, Van Buren Charter Township, Clerk Office, 46425 Tyler Road, Van Buren Township, Michigan 48111.
3. Mr. Michael Busse, Environmental Quality Analyst, MDEQ, WMRPD, Southeast Michigan District Office, 27700 Donald Court, Warren, Michigan 48092.
4. Mr. Leo Parks, MDEQ Onsite Coordinator for Wayne Disposal, Inc. and Michigan Disposal Waste Treatment Plant (hand deliver).

When submitting the electronic version, please make each license attachment file less than 10 MB so they can be uploaded to the MDEQ website for public accessibility.

If you have any questions, please contact Ms. Kimberly M. Tyson, Environmental Engineer Specialist, Hazardous Waste Section, WMRPD, at 517-284-6574; tysonk@michigan.gov; or MDEQ, WMRPD, P.O. Box 30241, Lansing, Michigan 48909-7741.

Sincerely,



Allan B. Taylor, Manager  
Hazardous Waste Section  
Waste Management and Radiological  
Protection Division  
517-614-7335

Enclosure

cc/enc: Mr. Matthew Best, Van Buren Charter Township  
Mr. Jim Blough, U.S. EPA  
Mr. Todd Ramaly, U.S. EPA  
Ms. Lisa Graczyk, U.S. EPA  
Mr. Chris Lambesis, U.S. EPA  
Ms. Tracy Kecskemeti, MDEQ  
Ms. Virginia Himich, MDEQ  
Mr. Joe Rogers, MDEQ  
Ms. Kimberly M. Tyson, MDEQ  
Mr. Michael Busse, MDEQ  
Mr. Paul Schleusener, MDEQ  
Mr. Clay Spencer, MDEQ  
Mr. Leo Parks, MDEQ  
Operating License File

**Attachment**  
**Second Completeness Review Notice of Deficiency**  
**Hazardous Waste Management Facility Operating License Application**  
**Michigan Disposal Waste Treatment Plant, Belleville, Michigan**  
**MID 000 724 831**

**Completeness Comments from the Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD)**

The MDEQ, AQD, needs the following additional information to determine whether Michigan Disposal Waste Treatment Plant's (MDWTP) proposed changes meet the Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, requirements. Without the following information, the AQD will advise the Waste Management and Radiological Protection Division (WMRPD) that we are unable to determine that the requested license modifications will comply with Part 55. For each proposed change, MDWTP must provide the following:

1. Indicate whether the proposed change is allowed by the current Part 55 AQD permit, or whether it falls under an exemption from the requirement of Rule 201 (R 336.1201) to obtain a Permit to Install.
2. If MDWTP believes the proposed change is allowed by the current Part 55 AQD permit, please provide an analysis describing why the permit allows the proposed change. Please include the specific parts of the permit that allow the proposed change, including specific permit conditions/requirements, as applicable.
3. If MDWTP believes the proposed change falls under an exemption from the requirement of Rule 201 to obtain a Permit to Install, please provide the following information:
  - a. A description of the exempt process or process equipment involved in the change.
  - b. The specific exemption that MDWTP believes applies to the proposed change.

The following item applies to the combination of all the proposed changes:

4. If any exemption is cited under item 3 above, please provide an analysis demonstrating that Rule 278 (R 336.1278) does not apply to the collection of processes and process equipment involved in all the proposed changes combined.

The following item applies to the request to treat D003 reactive sulfide waste. The facility's renewable operating permit (ROP) provides that wastes containing diethyl sulfide and dimethyl sulfide may not be processed in FG\_WEST or in FGLIQWASTETKS.

5. Please describe how MDWTP proposes to ensure compliance with these ROP requirements while treating D003 reactive sulfide waste.

The following items apply to all the requests to treat additional waste codes (D003, F020-F023, F026-F028, K043, and K099):

6. Please describe which equipment at the facility will be used to treat each of these waste codes and estimate the emissions expected from treating each waste code, based on the maximum possible throughput that would be allowed, considering the proposed change and

the existing limits of the ROP. Include emission calculations and the underlying assumptions used for the calculations.

7. Recognizing that one purpose of the facility's ambient air monitoring program is to confirm that waste treatment has proceeded appropriately, please recommend compounds that should be considered to be added to the program due to processing these wastes. If either dioxins or sulfides are not proposed, please explain why these should not be added to the ambient air monitoring program.

### **Completeness Comments from the MDEQ, WMRPD**

Please revise the application to respond to deficiencies identified below. The regulatory basis for the requested information is included for your reference.

#### *Section A.5. Inspection Schedule [R 299.9504(1)(c) and Title 40 of the Code of Federal Regulations (CFR) 270.14(b)]*

1. Include procedures for inspecting the electronic level indicators on the vertical tanks.

MDWTP's response states "*visual inspection of the tank is compared to the level indicator. Major discrepancies in the volume indicate a malfunction of the indicator*". The MDEQ understands that tanks 16-19 are steel cylindrical vertical tanks and tanks 25 and 27 are fiberglass cylindrical vertical tanks. The tanks are completely enclosed. Therefore, the MDWTP must clarify how a visual inspection of the outside of the tanks provides enough information to make a comparison to the level indication. Also, the Hi-Level indicators under Tank Storage Farm (vertical 16-19, 21, 25-27) & aboveground piping were removed from the daily inspection schedules as items to be inspected. The owner or operator must develop and follow a written schedule for inspecting monitoring equipment according to 40 CFR 264.15(b)(1). The Hi-Level indicators are monitoring equipment and they must be inspected.

2. Identify the methods MDWTP plans to use to detect vapor or gaseous leaks (e.g. photoionization detector or flame ionization detector) in the piping system for the vertical tanks.

MDWTP's response states "*The vertical tanks and all piping are all within the secondary containment. Visual inspection is used to detect leaks as indicated on the MDWTP HW Daily Inspection form.*" The MDEQ's intention was to get MDWTP to identify the methods they use for detecting vapors or gaseous leaks. Visual inspections may not be appropriate to detect leaks of volatile organic compounds (VOC) or other gases.

#### *Section A.7 Contingency Plan [R 299.9504(1)(c) and 40 CFR 270.14(b)]*

3. Include a list of all emergency equipment at MDWTP (such as fire extinguishing system, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required in the contingency plan. This list must include the location and a physical description of each item on the list, and a brief outline of its capabilities as required by 40 CFR 264.52(e).

This information is missing for MDWTP. MDWTP's response states "*the locations of the emergency and decontamination equipment are shown in evacuative figures provided in A7.2*". The figures provided in A7.2 show emergency equipment key for the Wayne Disposal Landfill, the Maintenance Garage, the Receiving Building, and US Ecology Michigan Operations Area. None of the figures include the treatment plant where hazardous

waste processing and storage occur. Attachment A7.3, Emergency Equipment Description, does not list or describe all emergency equipment at Wayne Disposal, Inc. and MDWTP. This list is limited. It does not include any mention of the communications and alarm systems or decontamination equipment.

4. Include an evacuation plan for facility personnel where there is a possibility that evacuation would be necessary in the contingency plan, as required by 40 CFR 264.52(f). An evacuation route for employees who may be working in the treatment plant at the time of an emergency would be necessary.

MDWTP's response states "*a map with emergency evacuation routes is attached.*" The map(s) do not include evacuation routes from inside the treatment plant.

*Section A.10 Personnel Training [R 299.9504(1)(c) and 40 CFR 270.14(b)(12)]*

5. Include an outline of the training program used at the facility and a brief description of how the training program is designed to meet actual job tasks in accordance with the requirements of 40 CFR 264.14(a)(3).

MDWTP's response states the information was previously provided and included generalized statements about job specific training that does not address actual job tasks. For example, how does the training program help the hazardous waste operators, the laboratory staff, waste spotter, or any other staff that are responsible for waste handling? Please provide specific details that correlate to actual job tasks and not generalized statements, such as, "training may include procedures such as those outlined in attachments A2 Chemical and Physical Waste Analysis Plan, C4 Treatment and A7 Contingency Plan." What specific procedures are being referred to in those attachments?

*Section A.11 Closure Plan [R 299.9504(1)(c) and 40 CFR 270.14(b)(13)]*

6. Include a schedule to close each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for the intervening closure activities, which will allow tracking of the progress of partial and final closure.

MDWTP's response states this information has already been provided in section A.11.A.3. The only information provided in section A.11.A.3 was the total time of 180 days to complete closure. This timeframe appears to be for closure of the entire facility. The deficiency comment seeks the timeframe it takes to close the vertical tanks as a unit, each container storage area separately as a unit, the in-ground treatment tanks as a unit, the decontamination of the truck dock, and any other areas where hazardous waste was managed at the facility. It is possible for any unit to undergo closure before final facility closure. Also, for final facility closure, the closure plan must specify closure procedures for the on-site laboratory where hazardous waste is also managed, and the well abandonment procedures for any groundwater monitoring wells.

7. Include a detailed description of other activities necessary, during the closure period, to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, run-on and run-off control as required by 40 CFR 264.112(b)(5).

MDWTP's response states this information has already been provided in section A.11.A.6. This section provides information to be included in the closure certification report. Other activities that may be encountered during closure may include removal and transportation of

all concrete, asphalt, or soil for off-site disposal, and sample(s) analysis (i.e. construction debris, soils, decontamination washwaters, etc.). These activities may add additional time to the closure schedule. Please consider each tank and container storage area separately during the analysis of what additional activities are necessary for closure.

*Section B.2. Corrective Action [R 299.9504(1)(c) and 40 CFR 270.14(d)]*

8. Include the location of each solid waste management unit at the facility, on the topographic map, as required by 40 CFR 270.14(b)(19).

MDWTP's response states topographic maps have been provided in Attachment A13. The topographic map does not include the location of each solid waste management unit at the facility.

9. Include the general dimensions of, and structural description of, the solid waste management unit as required by 40 CFR 270.14(d)(iii).

MDWTP's response states this information has been provided in various attachments of the application. The application must be revised to provide the general dimensions and structural description in Section B.2., or provide a reference to the exact location in the application where the requested information may be found.

10. Include the specifications of all wastes that have been managed at each solid waste management unit as required by 40 CFR 270.14(d).

MDWTP's response states this information has been provided in Section B2.A.1, History and Description of Ownership and Operation. The information regarding waste specification was not provided in Section B2.A.1. and the application must be revised to provide this information.

*Section C.1 Containers [R 299.9504(2) and 40 CFR 270.15]*

11. **C1.A. Description of Containers.** Include a description of the number, types, and specification for containers to be stored in each container storage area. Include a description of the types of wastes to be stored in containers. This information must be included for *each* container storage area separately. Section C.1 must identify where MDWTP proposes to store the F020-F023, F026-F028, K043, and K099 waste codes. Section A2.C.1(b) of the WAP states that F020, F021, F022, F023, F026, and F027 waste streams with, or without, free liquids will only be stored in concrete container storage areas. Please specifically list which concrete container storage area(s) is being referred to and repeat this information in Section C.1.A, or include a reference to Section A2.C.1(b) once the section has been accurately revised.
12. **C1.C. Compatibility of Waste With Containers.** Include a description of what materials the containers or containers liners are constructed of (e.g. a Michigan Department of Transportation description). Demonstrate that containers are made of, or lined with, materials that will not react with, and are otherwise compatible with, the hazardous waste to be stored in them, so that the ability of the containers to contain the waste are not impaired.
13. **C1F.1.(a). Requirement for Base or Liner.**
  - a. Include a description of the containment system to demonstrate compliance with 40 CFR 264.175. This section must be revised to describe the specific details of the containment system for each container storage area separately. The generalized

description provided does not represent the details of each containment area, especially for the entire Southeast Container Storage Area, because portions of it are asphalt and portions are concrete.

- b. The description must include at least basic design parameters, dimensions, and materials of construction for each containment system.

The introduction section in C1 includes dimensions that cannot be verified by any of the engineering design plans submitted for the container storage areas. Drawing A7, Michigan Disposal Waste Treatment Plant, "Container" Storage Areas, Topographical Survey, fails to visually identify the dimensions of the East Container Storage Area and the North Container Storage Area. This drawing provides no measurements for any of the trenches or containment areas. Therefore, the basis of design is unverifiable. Information that would be helpful to evaluate the proposal includes: the defined boundaries of each container storage area (i.e. the length and width), the width of each container row, the width of the aisles, etc. The boundaries should be depicted on the map. At one point, the MDWTP reserved some space in the North Container Storage Area for reagent storage. This space is not designated on the drawings. Will this reagent storage area no longer exist in the North Container Storage Area?

MDWTP proposes to increase the storage capacity of the North Container Storage Area, East Container Storage Area, and the Southeast Container Storage Area. Approval of such an increase must be based on MDWTP's demonstration that the container storage areas can actually store the increased number of containers, and the containment systems have the required volume to hold spills and precipitation based on the proposed increased capacity. Due of the lack of dimensions provided in Attachment C1 and on Drawings A7 and A6, it is difficult for the MDEQ to evaluate the proposal. Also, please note that Drawing A7 shows containers stored on top of the containment trenches. This is not allowable. Therefore, those container volumes can not be counted toward an increase in capacity.

Drawing A7 need to be corrected to accurately reflect the physical conditions of the East Container Storage Area. Based on aerial photos of the East Container Storage Area, there appears to be a wall separating a portion of the East Container Storage Area from the Tank Farm. Please confirm that absence of the wall on the Drawing A7 does not misrepresent the placement of containers, and thus the number of containers that can be stored in the area.

Include the actual calculations for the containment volumes verifiable by dimensions on Drawing A7 or some other engineering drawing. Revise Drawing A7 to identify the location of the North Container Storage Area Auxiliary Trench and its dimensions. Drawing A7 should also delineate the length and width of traffic lane(s) and the boundaries of the storage areas.

- c. Include engineering drawings that can be used to verify the information provided for the storage and containment capabilities.
14. Include an explanation on how MDWTP will maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment in the North, East, and Southeast Container Storage Areas, as proposed in an emergency, unless it can be demonstrated that aisle space is not needed for

any of these purposes. Based on the placement of the containers shown on Drawing A7, Container Storage Areas Topographical Survey, and Drawing A6, Southeast Container Storage Area Proposed Design Changes, it does not appear that all containers can be accessed in the event of a fire or spill. Please specify the width of aisle space to be maintained in each container storage area and how this width will accommodate emergency equipment and personnel. Consultation with the local fire department regarding proposed storage configuration may assist MDWTP with determining appropriate aisle space width.

*Section C.4 Treatment Procedures [R 299.9504(5)]*

15. Include the procedures for performing each proposed treatment process, in each proposed container storage area. Specify and identify on the engineering drawings the exact location, within the boundaries of each container storage area, where treatment is proposed to be performed. These areas should also be identified on the map of the container storage areas with dimensions in feet or inches. Specify the type of immobilization treatment process proposed to be performed in each container storage area. Identify the waste streams restricted to treatment in the treatment tanks, and the waste streams that may be treated in the container storage areas, and the precautions required to perform the treatment. Specify the exact treatment capacity for each proposed treatment process for each container storage area. Include verifiable calculations to support the proposed treatment capacities. Specify how each treatment process will be conducted to prevent run-off, damage or interference with waste containers in storage, release of hazardous waste or treatment reagents to air, soil, and/or surface water, which could threaten human health or the environment.

The application must include specific details, methods, and actions to be taken by MDWTP personnel in response to this deficiency. Generalized descriptions are not acceptable because they do not provide the specific details the MDEQ needs to evaluate whether the proposed activities comply with the requirements of Part 111 and its administrative rules.

16. Include the procedures MDWTP proposes to use to treat D003 sulfide waste streams and a demonstration that those procedures will effectively treat the new waste stream.
17. Include the identity of the treatment tanks MDWTP will use to treat D003 sulfide waste streams. Include a discussion on how MDWTP will address any gaseous emissions generated during the treatment of D003 sulfide waste streams. If existing air pollution controls will be relied upon to control the emissions, the application must include a demonstration that those air pollution controls will effectively manage the gaseous emissions, or include a discussion on the installation of other air pollution controls.
18. Include the information required by R 299.9504(5). This information is required to be included in the application for applicants proposing to treat hazardous waste, and must be provided for *each* (i.e. existing and proposed) treatment process. MDWTP's response to address the treatment information deficiencies included generalized statements that do not include all of the specific information required by R 299.9504(5) and repeated below.

*(a) A demonstration of how the method and process proposed for the treatment of each hazardous waste will do any of the following:*

*(i) Change the physical, chemical, or biological character or composition of the waste.*

*(ii) Neutralize the waste.*

*(iii) Recover energy or material resources from the waste.*

*(iv) Render the waste nonhazardous, safer for handling or transport, amenable to recovery, amenable to storage, or reduced in volume.*

*(v) Chemically bind or render the toxic constituents nonhazardous rather than only diluted.*

*(b) The proper treatment technique, the proper feed rates of treatment chemicals or reagents, and the proper operating conditions, such as temperature, pressure, and flow rate, for the types of hazardous wastes proposed for treatment, and the accuracy of the devices intended to measure these parameters.*

*(c) If the hazardous waste or treatment chemicals or reagents will have any detrimental effect on the materials used for construction, such as causing corrosion, dissolution, saltings, or sealings. If detrimental effects are possible, then the method of controlling them shall be specified.*

*(d) If the hazardous waste contains any constituents or contaminants that may interfere with the intended treatment process or decrease the effectiveness of the treatment and, if so, how the interferences will be controlled.*

*(e) If the hazardous waste contains constituents or contaminants that may cause the release of toxic gases or fumes during the intended treatment and, if so, how they will be controlled.*

*(f) If the hazardous waste contains constituents or contaminants that may form toxic constituents with the treatment chemicals or reagents during the intended treatment and, if so, how they will be controlled.*

*(g) Trial tests, including bench scale, pilot plant scale, or other appropriate tests, on each hazardous waste that is new or significantly different from hazardous waste previously treated to verify the information required in subdivision (b) of this subrule.*

19. Please include page numbers for Attachment C4, Treatment.

Several of the comments below recommend expanding the discussion on individual methods of treatment. Each method should be discussed in detail as to how it would be applied for use at the facility and what would prompt its use over another treatment technology.

20. **Fourth paragraph on the first page; last sentence.** It would be helpful to cite the specific location within the WAP where the subject of "Chemical compatibility evaluation" can be located.

21. **Section C4.A.1 Stabilization, Precipitation, Chemical Reduction.** Within this section are three short paragraphs that briefly describes what each of these technologies consists of. More information is needed *for each of the three methods in this section* that explains when one technology is used over another, whether there are standard reagent blends applicable to specific wastes or waste types, how the treatment methods are used, application procedures, mixing/treatment time durations, verification methods/sampling of treatment efforts, decontamination between treatment events, health and safety precautions, etc. The MDEQ recognizes some of this information may be considered sensitive or confidential by MDWTP. To that end, confidentiality will be maintained, if requested by MDWTP.

22. **Section C4.A.2 Chemical Oxidation.** The same concerns, as mentioned above in Section C4.A.1, also apply to this comment.

One additional point of discussion lies within MDWTP's comment that some of the reactions can be mildly exothermic. Please provide a discussion as to how MDWTP intends on controlling those types of reactions so they do not overreact. Include safety measures currently used should an extreme reaction occur.

23. **Section C4.A.3 Deactivation.** Please list and describe the methods used as part of this technology, similar to Section C4.A.1 above, such as what triggers its use over another treatment technology, etc. The MDEQ understands that a reference to 40 CFR 268, Appendix VI, was listed in the WAP. However, the MDEQ is requesting that the pertinent information contained within this CFR reference be included in the WAP, so that it is readily available and easily accessible to the reader. This request to include pertinent information from the CFR in the WAP should apply to all areas where the CFR was referenced in the WAP, as appropriate.

This section also requests the ability to treat D003 sulfide waste streams. The MDEQ must provide supporting justification that this waste type can be treated safely and effectively. A detailed discussion should be provided that explains all pertinent handling procedures associated with MDWTP's proposed treatment of this waste type, as well as a means to evaluate its effectiveness and specific handling precautions.

24. **C4.A.4 Neutralization.** The types of acids and bases should be detailed, as well as the conditions prompting their use. Any specific safety precautions should also be noted within this, and other discussions of treatment technologies that will be used.
25. **C4.A.5 Solidification.** A detailed discussion should be provided as to the types of reagents and solid waste that will be used during the solidification process. The MDEQ is not looking for any specific information regarding sensitive mixing recipes or other proprietary information. However, it is reasonable for the MDEQ to request more specific information regarding when and how solidification will be used, and how it will be evaluated post treatment.
26. **C4.A.6 Immobilization.** Similarly, as listed above, more information should be provided to elaborate on the use of immobilization technology at the facility. The document lists the technologies in 40 CFR 268.45 as ones being utilized here. The MDEQ recommends listing all immobilization technologies that would be anticipated for use, as well as the scenarios for their individual use, and the methods used to evaluate these efforts post treatment.
27. **C4A.6(b) Microencapsulation.** As mentioned in several items above, more information is needed regarding this technology. For example, more detail is needed regarding what triggers its use, specifics involved with selecting the type of microencapsulation, and post treatment evaluation.
28. **C4.A.6(c) Sealing.** This section states that the types of products selected for use will be submitted to the MDEQ for approval. Please note that the MDEQ will not select the appropriate products so we do not assume any liability should they fail. US Ecology should evaluate the types of sealing products available and select all that would apply to use at the facility. Additional information regarding the different types, benefits for use, selection triggers, post treatment evaluation, and procedures should be provided.

29. **C4.B.1 Treatment Sequence.** The specific sequence for each treatment technology, as applicable, should be provided, along with their respective methodology, and a discussion on how the success of treatment will be evaluated following application of each technology.
30. **C4.B.2 Reagent Addition.** The specific reagents expected for use, the basis for determining which reagent will be used, as well as their appropriate application methodologies, should be detailed.
31. **C4.B.3 Well-Designed Controlled Mixing.** A discussion should be provided regarding how it will be determined that a sufficient amount of treatment reagent has been added to the waste, and that those reagents have been thoroughly mixed.

Also, within this subsection are several tables that apparently list the mixing sequence according to sections within each treatment tank. These tables are confusing and should be further explained. The MDEQ would suggest using illustrations to support the text of how the waste will be mixed and the sequence that it will occur.

32. **C4.B.5 Prevention of an Adverse Reaction.** A detailed procedure should be provided regarding the steps that will be taken in the event that incompatible compounds are added to the waste, such that adverse reaction(s) occurs. Procedures should be listed that will assure adverse reactions do not occur.
33. **C4.B.6 Treatability.** Treatability studies should be provided for all anticipated treatment technologies used at the facility. Each study should be detailed enough that the reader understands what specifically will happen when a technology is evaluated. The format for each treatability study should be consistent to the extent possible.

*Section C.11 Air Emissions Subpart AA/BB/CC [R 299.9504(13) and (16), and 40 CFR 270.25 and 40 CFR 270.27]*

34. Include the specific part B information requirements for equipment listed in 40 CFR 270.25.

MDWTP's response states that since the vertical tanks are restricted to less than 500 parts per million, it is not plausible for emissions from the equipment to exceed the number of VOCs in the waste. During the December 12, 2017, meeting with the MDEQ, United States Environmental Protection Agency (U.S. EPA), and US Ecology, the U.S. EPA stated that this approach was seeking an equivalence that may not be provided for in the regulations and may not be supported by the chemistry. Therefore, MDWTP's response fails to prove the ancillary equipment for the vertical tanks are not subject to the Subpart BB requirements. Unless proven otherwise, the Subpart BB requirements may apply to any ancillary equipment (e.g. valves, pumps, compressors, pressure relief devices, open-end valves or lines, sampling ports, flanges or other connectors, and any control devices or systems required by Subpart AA (64 FR 3389; January 21, 1999) containing or contacting hazardous waste with organic concentrations of at least 10 percent by weight.

35. Include the procedures MDWTP will use during waste transfer operations to minimize VOC emissions to the atmosphere. Waste transfers include from container to container or tank to containers.

MDWTP's response states "If transfer actions are necessary for containers subject to 40 CFR 264 Subpart CC the transfer will occur in the East Side. C11.C.3(b) has been modified to reflect this." This statement is inconsistent with other statements in the

application where MDWTP proposes to bulk and consolidate hazardous waste in all container storage areas. If all transfer activities for waste subject to Subpart CC requirements will occur in the East Treatment building, please revise the affected sections of the application to accurately state how MDWTP will manage its waste transfer operations, when waste subject to the Subpart CC requirements are involved.

*Section C.2 Tanks [R 299.9504(3) and 40 CFR 270.16]*

36. Include verifiable calculations that prove the facility has the treatment tank capacity to treat the waste volumes proposed in the application. The MDEQ must be able to duplicate and verify the calculations from the engineering drawings, the tank specifications and its narrative, and any other supporting information in the application.