



Modified Ohio Hazardous Waste Facility Installation and Operation Permit

Division of Environmental Response and Revitalization

Permittee:	Clean Harbors Recycling Services of Ohio, LLC	U.S. EPA ID:	OHD 980 587 364
Facility Name:	Clean Harbors Recycling Services of Ohio, LLC		
Mailing Address:	581 Milliken Drive SE		
City:	Hebron	State:	OH Zip: 43025 — 9657
Operator Name:	Clean Harbors Recycling Services of Ohio, LLC		
Mailing Address:	581 Milliken Drive SE		
City:	Hebron	State:	OH Zip: 43025 — 9657
Facility Street Address:	581 Milliken Drive SE		
City:	Hebron	State:	OH Zip: 43025 — 9657

Permit Modification

This Modified Ohio Hazardous Waste Facility Installation and Operation Permit is issued pursuant and subject to Section 3734.05(I) of the Ohio Revised Code and Rule 3745-50-51(D) of the Ohio Administrative Code.

The Ohio Hazardous Waste Facility Installation and Operation Permit for the facility with the above-referenced ID number as issued by the Ohio Environmental Protection Agency and journalized on November 18, 2015, and as subsequently modified by the Ohio Environmental Protection Agency, is hereby incorporated by reference in its entirety, except as it may be modified herein. This modification of the permit shall remain in effect until such time as the Ohio Hazardous Waste Facility Installation and Operation Permit is renewed, modified, withdrawn, suspended, or revoked.

The Permittee shall comply with all requirements of the modified permit application as amended or supplemented on March 28, 2016, December 16, 2016, May 1, 2017 and May 23, 2017. The information contained in the modified permit application is incorporated herein by reference. Specifically, all written statements regarding the specifications, locations, or capabilities of the processes, equipment, containment devices, safety devices or programs, or other matters made by the applicant in the permit modification application are hereby incorporated as express, binding terms and conditions of this modified permit.

The modified Terms and Conditions of this permit are attached hereto and are incorporated herein by reference. The modified Terms and Conditions supersede and replace the corresponding pages found in the November 18, 2015 renewal permit.

Permit Modification Approval

Entered into the Journal of the Director on:

[Click here to enter a date](#)

Date:

Craig W. Butler, Director
Ohio Environmental Protection Agency

MODULE A - GENERAL PERMIT CONDITIONS

A. GENERAL PERMIT CONDITIONS

A.1 Effect of Permit

ORC Sections 3734.02 (E) and (F) and 3734.05

Ohio Administrative Code (OAC) Rule 3745-50-58(G)

(a) The Permittee is authorized to store hazardous waste in containers and tanks in accordance with the terms and conditions of this Ohio hazardous waste permit (hereinafter “permit”), ORC Chapter 3734, all applicable Ohio hazardous waste rules, all applicable regulations promulgated under the Resource Conservation and Recovery Act (RCRA), as amended, and the permit application. The permit application, as submitted to Ohio EPA on December 19, 2014 and last updated on April 10, 2015, is hereby incorporated into this permit. In the instance of inconsistent language or discrepancies between the above, the language of the more stringent provision shall govern.

(b) Any management of hazardous waste not authorized by this permit is prohibited, unless otherwise expressly authorized or specifically exempted by law. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, or invasion of other private rights. Compliance with the terms and conditions of this permit does not obviate Permittee's obligation to comply with other applicable provisions of law governing protection of public health or the environment including but not limited to the Community Right-to-Know law under ORC Chapter 3750.

A.2 Permit Actions

OAC Rule 3745-50-58(F)

This permit may be modified or revoked as specified by Ohio law. The filing of a request by the Permittee for a permit modification, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay any permit term or condition.

A.3 Permit Effective/Expiration Date

OAC Rule 3745-50-54

The effective date of this permit is the date the permit is entered into the Director's Journal. The permit expiration date is ten (10) years after the effective date.

A.4 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

A.5 Duty to Comply

OAC Rule 3745-50-58(A)

The Permittee must comply with all applicable provisions of ORC Chapter 3734, all applicable Ohio hazardous waste rules, and all terms and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by the laws of the State of Ohio. Any permit noncompliance, other than noncompliance authorized by the laws of the State of Ohio, constitutes a violation of ORC Chapter 3734 and is

grounds for enforcement action, revocation, modification, denial of a permit renewal application or other appropriate action.

A.6 Duty to Reapply and Permit Expiration

OAC Rules 3745-50-40(D), 3745-50-58(B), 3745-50-56 and ORC Section 3734.05(H)

- (a) If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee must submit a completed permit application for a hazardous waste facility installation and operation permit renewal and any necessary accompanying general plans, detailed plans, specifications, and such information as the Director may require, to the Director not later than one hundred eighty (180) days prior to the expiration date of this permit, unless a later submittal date has been authorized by the Director upon a showing of good cause.
- (b) The Permittee may continue to operate in accordance with the terms and conditions of the expired permit until a renewal permit is issued or denied if:
 - (i) The Permittee has submitted a timely and complete permit application for a renewal permit under OAC Rule 3745-50-40; and
 - (ii) Through no fault of the Permittee, a new permit has not been issued pursuant to OAC Rule 3745-50-40 on or before the expiration date of this permit.
- (c) The Corrective Action obligations contained in this permit will continue regardless of whether the facility continues to operate or ceases operation and closes. The Permittee is obligated to complete facility-wide Corrective Action under the conditions of this permit regardless of the operational status of the facility. The Permittee must submit an application for permit renewal at least 180 days before the expiration date of this permit pursuant to OAC Rule 3745-50-40(D) unless: a) the permit has been modified to terminate the Corrective Action schedule of compliance and the Permittee has been released from the requirements for financial assurance for Corrective Action; or b) a later submittal date has been authorized by the Director.

A.7 Need to Halt or Reduce Activity Not a Defense

OAC Rule 3745-50-58(C)

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce a permitted activity in order to maintain compliance with the conditions of this permit.

A.8 Duty to Mitigate

OAC Rule 3745-50-58(D)

The Permittee must take all reasonable steps to minimize releases to the environment and must carry out such measures as are reasonable to prevent significant adverse impact on human health or the environment resulting from noncompliance with this permit.

A.9 Proper Operation and Maintenance

OAC Rule 3745-50-58(E)

The Permittee must at all times properly operate and maintain the facility (and related appurtenances) to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective management practices, adequate funding, adequate operator staffing and training, and where appropriate,

adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of this permit.

A.10 Duty to Provide Information
OAC Rule 3745-50-58(H)

The Permittee must furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying or revoking, or to determine compliance with, this permit. The Permittee must also furnish to the Director, upon request, copies of records required to be kept by this permit.

A.11 Inspection and Entry
OAC Rules 3745-50-58(I), 3745-49-03 and 3745-50-30, and ORC Section 3734.07

- (a) The Permittee must allow the Director, or an authorized representative, upon stating the purpose and necessity of the inspection and upon proper identification, to:
- (i) Enter, at reasonable times, upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the terms and conditions of this permit;
 - (ii) Have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
 - (iii) Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the terms and conditions of this permit; and
 - (iv) Sample, document, or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by ORC Chapter 3734 and the rules adopted thereunder, any substances or parameter at any location.
- (b) Any record, report or other information obtained under the hazardous waste rules or Chapter 3734 of the Revised Code shall not be available to the public upon the Permittee's timely submittal of a trade secret claim and satisfactory showing to Ohio EPA that all or part of the information would divulge methods or processes entitled to protection as trade secrets pursuant to Ohio Trade Secret Law and OAC Rules 3745-49-03 and 3745-50-30.

A.12 Monitoring and Records
OAC Rule 3745-50-58(J)

- (a) Any sample and measurement taken for the purpose of monitoring must be representative of the monitored activity. Further, a sample must be a representative sample, as such term is defined and used in the Ohio hazardous waste rules. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of OAC Rule 3745-51-20, Laboratory Methods. Laboratory methods must be those specified in Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods, EPA Publication SW-846, Third Edition (November 1986), as amended by Updates I, II, IIA, IIB, III and IIIA, and additional supplements or editions thereof; Standard Methods for the Examination of Water and Wastewater: Twentieth Edition, 1999; or an equivalent method as specified in the approved waste analysis

plan, or as this term is defined and used in the Ohio hazardous waste rules.

- (b) Records of monitoring information must specify the:
 - (i) Date(s), exact place(s), and time(s) of sampling or measurements;
 - (ii) Individual(s) who performed the sampling or measurements;
 - (iii) Date(s) analyses were performed;
 - (iv) Individual(s) who performed the analyses;
 - (v) Analytical technique(s) or method(s) used; and
 - (vi) Results of such analyses.

A.13 Signatory Requirement and Certification of Records
OAC Rules 3745-50-58(K) and 3745-50-42

All applications, reports or information must be properly signed and certified in accordance with OAC Rule 3745-50-58(K).

A.14 Retention of Records and Information Repository
OAC Rules 3745-50-40(G), 3745-50-58(J), 3745-50-58(M) and 3745-50-58(N)

- (a) The Permittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, the certification required by OAC Rule 3745-54-73(B)(9), and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, certification, or application.
- (b) The record retention period may be extended by request of the Director at any time and is automatically extended during the course of any unresolved enforcement action regarding the facility.
- (c) The Permittee must maintain, in accordance with the Ohio hazardous waste rules, records of all data used to complete the permit application and any amendments, supplements or modifications of such application. The Permittee must retain a complete copy of the current application for the effective life of the permit as indicated in Permit Condition A.3.
- (d) The Permittee must maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility, and for disposal facilities for the post-closure care period as well.
- (e) The Director may require the permittee to establish and maintain an information repository at any time, based on the factors set forth in OAC Rule 3745-50-39(C)(2). The information repository will be governed by the provisions in OAC Rules 3745-50-39(C)(3) through (C)(6).
- (f) Corrective Action records must be maintained at least three (3) years after all Corrective Action activities have been completed.

A.15 Planned Changes

OAC Rules 3745-50-51 and 3745-50-58(L)(1)

The Permittee must give notice to the Director as soon as possible of any planned physical alterations or additions to the facility. All such changes must be made in accordance with OAC Rule 3745-50-51.

A.16 Waste Shipments

OAC Rules 3745-52-12 and 3745-53-11, ORC Section 3734.15(C)

The Permittee must only use properly registered transporters of hazardous waste to remove hazardous waste from the facility, in accordance with all applicable laws and rules.

A.17 Anticipated Noncompliance

OAC Rule 3745-50-58(L)(2)

The Permittee must give advance notice to the Director of any planned changes in the permitted facility or operations which may result in noncompliance with the terms and conditions of this permit. Such notification does not waive the Permittee's duty to comply with this permit pursuant to Permit Condition A.5.

A.18 Transfer of Permits

OAC Rules 3745-50-52, 3745-50-58(L)(3) and 3745-54-12

(a) The permit may be transferred to a new owner or operator only if such transfer is conducted in accordance with ORC Chapter 3734 and the rules adopted thereunder. This permit may be transferred by the Permittee to a new owner or operator only if the permit has been modified under OAC Rule 3745-50-51. Before transferring ownership or operation of the facility, the Permittee must notify the new owner or operator in writing of the requirements of ORC Chapter 3734 and the rules adopted thereunder (including all applicable Corrective Action requirements).

(b) The Permittee's failure to notify the new owner or operator of the requirements of the applicable Ohio law or hazardous waste rules does not relieve the new owner or operator of its obligation to comply with all applicable requirements.

A.19 Compliance Reports

OAC Rules 3745-50-58(L)(5) and 3745-50-50

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule (developed in accordance with OAC Rule 3745-50-50) of this permit must be submitted to the Director not later than fourteen (14) days following each scheduled date.

A.20 Immediate Reporting of Noncompliance

OAC Rule 3745-50-58(L)(6)

(a) The Permittee must report orally to Ohio EPA's Division of Environmental Response and Revitalization within twenty-four (24) hours from the time the Permittee becomes aware of any noncompliance with this permit, ORC Chapter 3734 or the rules adopted thereunder, which may endanger human health or the environment, including:

- (i) Information concerning the release of any hazardous waste that may cause an endangerment to public drinking water supplies; and
 - (ii) Any information of a release or discharge of hazardous waste or a fire or explosion from the hazardous waste facility which could threaten the environment or human health outside the facility.
- (b) The report must consist of the following information (if such information is available at the time of the oral report):
- (i) Name, address, and telephone number of the owner or operator;
 - (ii) Name, address, and telephone number of the facility;
 - (iii) Date, time, and type of incident;
 - (iv) Name and quantity of material(s) involved;
 - (v) The extent of injuries, if any;
 - (vi) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
 - (vii) Estimated quantity and disposition of recovered material that resulted from the incident.

A.21 Follow-Up Written Report of Noncompliance
OAC Rule 3745-50-58(L)(6)(c)

- (a) A written report must also be provided to Ohio EPA's Division of Environmental Response and Revitalization and the Division of Environmental Response and Revitalization, Central District Office within five (5) days of the time the Permittee becomes aware of the circumstances reported in Permit Condition A.20.
- (b) The written report must address the items in Permit Condition A.20 and must contain a description of such noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and, if not, the anticipated time it is expected to continue; and steps taken or planned to minimize the impact on human health and the environment and to reduce, eliminate, and prevent recurrence of the noncompliance.
- (c) The Permittee need not comply with the five (5) day written report requirement if the Director, upon good cause shown by the Permittee, waives that requirement and the Permittee submits a written report within fifteen (15) days of the time the Permittee becomes aware of the circumstances.

A.22 Other Noncompliance
OAC Rules 3745-50-58(L)(10) and 3745-50-58(L)(4)

The Permittee must report to the Director all other instances of noncompliance not provided for in Permit Conditions A.19 and A.20. These reports must be submitted within thirty (30) days of the time at which the Permittee is aware of such noncompliance. Such reports must contain all information set forth within Permit Condition A.20.

A.23 Reserved

A.24 Other Information
OAC Rule 3745-50-58(L)(11)

If at any time the Permittee becomes aware that it failed to submit any relevant facts, or submitted incorrect information to the Director, the Permittee must promptly submit such facts, information or corrected information to the Director.

A.25 Confidential Information
OAC Rules 3745-49-03 and 3745-50-30

In accordance with ORC Chapter 3734 and the rules adopted thereunder, the Permittee may request confidentiality for any information required to be submitted by the terms and conditions of this permit, or any information obtained by the Director, or an authorized representative, pursuant to the authority provided under Permit Condition A.11.

A.26 Ohio Annual Permit, Disposal, and Treatment Fees
OAC Rules 3745-50-33 through 3745-50-36

- (a) The fees for the off-site disposal and/or treatment of hazardous wastes, calculated pursuant to OAC Rules 3745-50-33 and 3745-50-35, and payable to the Treasurer of the State, must be submitted to the Director on or before the fortieth day after the end of the month to which the return applies. The permittee subject to these requirements must prepare and file with the director monthly returns showing the total tonnage disposed and/or treated and the total amount of the fee to be submitted to the director.
- (b) The annual permit fee, calculated pursuant to OAC Rule 3745-50-36 and payable to the Treasurer of the State, must be submitted to the Director on or before the anniversary of the date of issuance during the term of the permit. For the purpose of the payment of the Ohio Annual Permit Fee, the date of issuance is the date the permit was entered into the Journal of the Director of Ohio EPA.

A.27 Compliance Schedule - Documents
OAC Rules 3745-50-50 and 3745-50-51

- (a) The previous permit required submittal of a risk assessment report, for the development of risk-based cleanup levels for soil and groundwater at the facility. This report was received by Ohio EPA on June 4, 2013. The Permittee must submit, within one hundred and twenty (120) days of Ohio EPA approval of the risk assessment report referenced above, a Class 3 permit modification request to Ohio EPA in accordance with OAC Rule 3745-50-51. This modification must integrate the ground water monitoring requirements for the UST post closure care and site-wide corrective action at the facility. The modification must establish a ground water corrective action monitoring program that is effective in determining compliance with the ground water containment standards at the point of compliance, and must include the following elements:
 - (i) The program must add any confirmed, non-background constituents not identified in Condition J.2(a) to Section 4.0 of Appendix 5.1 of the Permittee's Part B permit application and implement any changes to current remedial measures necessary to effectively address newly identified constituents detected during the sampling for a modified list of appendix to OAC Rule 3745-54-98 constituents (VOCs, SVOCs, and metals) completed in the following wells as of the date of the Tier II data validation completion (October 19, 2011):

H-1S, H-1DD, H-4SR, H-7S, H-8S, H-9S, H-10S, H-11S, H-12S, H-12D, H-14S, H-15D, H-19S, H-20S, and H-22D.

- (ii) The program must define the extent of contamination;
 - (iii) The program must establish ground water containment standards;
 - (iv) The program must establish objective criteria or measures by which the effectiveness of the corrective action program will be regularly assessed;
 - (v) The program must identify the monitoring wells to be sampled and the parameters to be analyzed for during each ground water sampling event; and
 - (vi) The program must include updates to the Operation and Maintenance Plans (O&M plans) referenced in Permit Conditions E.9(a)(i) and (ii), Corrective Measures Implementation. The O&M plans must be revised to include (1) contingency procedures to address system breakdowns and operational problems; (2) alternate procedures to be implemented if the corrective measure suffers complete failure and release or threatened releases of hazardous waste or constituents may endanger human health and the environment or exceed media cleanup standards; (3) notification procedures in the event of a major breakdown or complete failure of the corrective measure; and (4) procedures to be implemented if the corrective measure is experiencing major operational problems, is not performing to design specifications or will not achieve the cleanup goals in the expected time frame (including that design plans would be developed for the secondary measure if the primary corrective measure fails). The O&M plans must describe the process and criteria for determining when corrective measures have achieved media cleanup goals and when maintenance and monitoring may cease.
- (b) The Permittee must submit, within ninety (90) days after journalization of the Class 3 Permit Modification submitted in accordance with the requirements of Permit Condition A.27(a), the following documents:
- (i) A plan for conducting a data-driven investigation to define the extent of contamination in each water-bearing zone (shallow and deep), pursuant to the requirements of Permit Condition A.27(a)(ii), and a schedule for implementation of the plan. The Permittee must receive approval from Ohio EPA on the work plan. The Permittee must incorporate the approved work plan through a Class 1A Permit Modification in accordance with Ohio Administrative Code Chapter 3745-50-51.
 - (ii) A plan for development of additional remedial measures, in accordance with the Interim Measures process in Permit Condition E.6, as necessary to comply with the corrective action requirements of Permit Condition Z.9 and Groundwater Containment Standards in Permit Condition Z.2, including an effectiveness monitoring plan for each new interim measure and a schedule for implementation, for approval by Ohio EPA.
- (c) The Permittee must submit, within sixty (60) days after Ohio EPA approval of the work plan required by Permit Condition A.27(b)(i), a permit modification request in accordance with OAC Rule 3745-50-51 to incorporate the following documents into the permit application:
- (i) Updated Integrated Post-Closure/Corrective Action Cost Estimate
OAC Rule 3745-54-101(B)

Section 9 of the permit application containing the financial assurance mechanism for closure must be updated to include a copy of the current post-closure/corrective action cost estimate set forth in OAC Rules 3745-54-101(B) and 3745-55-44.

- (ii) Updated Financial Assurance Mechanism for Post-Closure and Site-Wide Corrective Action
OAC Rule 3745-54-101(B)

Section 9 of the permit application containing the financial assurance mechanism for closure must be updated to include a copy of the current financial assurance mechanism, as set forth in OAC Rule 3745-54-101(B), and as specified by the wording requirements of OAC Rule 3745-55-51. The value of the financial assurance mechanism must reflect at least the current amount of the post-closure care/corrective action cost estimate.

- (d) The Permittee must submit, within sixty (60) days after Ohio EPA approval of a permit modification to implement a selected remedy pursuant to Permit Condition E.9, a permit modification request in accordance with OAC Rule 3745-50-51 to incorporate updated financial assurance documentation listed in Permit Conditions A.27(c)(i) and A.27(c)(ii). The financial assurance must be adequate to implement the selected remedy as required by Permit Condition E.9(c).
- (e) The Permittee must submit, within sixty (60) days after permit journalization, a permit modification request to Ohio EPA in accordance with OAC Rule 3745-50-51 to incorporate the following documents into the permit application:

- (i) Updated Closure and Post-Closure Care Cost Estimates
OAC Rules 3745-55-42 and 3745-55-44

Section 9 of the permit application containing the financial assurance mechanism for closure and post-closure care must be updated to include a copy of the current closure cost estimates as set forth in OAC Rules 3745-55-42 and 3745-55-44.

- (ii) Updated Financial Assurance Mechanism for Closure
OAC Rule 3745-55-43 and 3745-55-45

Section 9 of the permit application containing the financial assurance mechanism for closure and post-closure care must be updated to include a copy of the current financial assurance mechanism, as set forth in OAC Rules 3745-55-43 and 3745-55-45, and as specified by the wording requirements of OAC Rule 3745-55-51. The value of the financial assurance mechanism must reflect at least the current amount of the closure and post-closure care cost estimates.

During the life of the permit the facility may change the financial assurance mechanism as stated in OAC Rules 3745-55-43 and 3745-55-45. The facility must submit the financial assurance mechanism documentation to the Director of Ohio EPA in accordance with the parameters set forth in OAC Rules 3745-55-43 and 3745-55-45.

- (iii) Updated Liability Requirements
OAC Rule 3745-55-47

Section 9 of the permit application containing the mechanism used to demonstrate third party liability coverage must be updated to include a copy of the current liability mechanism as set forth in OAC

Rule 3745-55-47 and as specified by the wording requirements of OAC Rule 3745-55-51.

During the life of the permit the facility may change the mechanism used to demonstrate liability coverage as stated in OAC Rule 3745-55-47. The facility must submit the liability mechanism documentation to the director of Ohio EPA in accordance with the parameters set forth in OAC Rule 3745-55-47.

A.28 Information to be Maintained at the Facility
OAC Rule 3745-54-74

- (a) Unless otherwise specified by the hazardous waste rules, the Permittee must maintain at the facility, until closure is completed and certified by an independent, registered professional engineer, pursuant to OAC Rule 3745-55-15, and until the Director releases the Permittee from financial assurance requirements pursuant to OAC Rule 3745-55-43, the following documents (including amendments, revisions and modifications):
- (i) Waste analysis plan, developed and maintained in accordance with OAC Rule 3745-54-13 and the terms and conditions of this permit;
 - (ii) Contingency plan, developed and maintained in accordance with OAC Rule 3745-54-53 and the terms and conditions of this permit;
 - (iii) Closure plan, developed and maintained in accordance with OAC Rule 3745-55-12 and the terms and conditions of this permit;
 - (iv) Cost estimate for facility closure, developed and maintained in accordance with OAC Rule 3745-55-42 and the terms and conditions of this permit;
 - (v) Personnel training plan and the training records, developed and maintained in accordance with OAC Rule 3745-54-16 and the terms and conditions of this permit;
 - (vi) Operating record, required by OAC Rule 3745-54-73 and the terms and conditions of this permit; and
 - (vii) Inspection schedules, developed in accordance with OAC Rules 3745-54-15, 3745-55-74 and 3745-55-95 and the terms and conditions of this permit.
 - (viii) Post-closure plan, as required by OAC Rule 3745-55-18(A) and the terms and conditions of this permit.
 - (ix) Annually-adjusted cost estimate for facility closure and post-closure, as required by OAC Rules 3745-55-42 and 3745-55-44 and the terms and conditions of this permit.
 - (x) All other documents required by Module A, Permit Condition A.12, and;
 - (xi) Ground water monitoring results and reports, as required by OAC Rule 3745-54-74.
- (b) The Permittee must maintain copies of all inspection logs at the facility for a period not less than three (3) years from the date of inspection.

A.29 Waste Minimization Report

OAC Rules 3745-54-73 and 3745-54-75

- (a) The Permittee must submit a Waste Minimization Report describing the waste minimization program required by OAC Rules 3745-54-75(H), (I), and (J); 3745-54-73(B)(9); and 3745-52-20(A) at least once every five years. The provisions of OAC Rules 3745-54-75(H), (I) and (J) must be satisfied biennially. The provisions of OAC Rule 3745-54-73(B)(9) must be satisfied no less often than annually.
- (b) The Permittee must submit the Waste Minimization Report to Ohio EPA's Office of Compliance Assistance and Pollution Prevention within one hundred eighty (180) days of the effective date of this permit, and must submit updates to this report once every five years thereafter.

MODULE B - GENERAL FACILITY CONDITIONS

B. GENERAL FACILITY CONDITIONS

B.1 Design and Operation of Facility OAC Rule 3745-54-31

- (a) The Permittee must design, construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, ground water or surface waters which could threaten human health or the environment.
- (b) The Permittee must not accept more than 162,129 tons of hazardous waste in any one calendar year from off-site sources during the life of the permit, until such time as this permit condition is modified or renewed. This is a facility wide limitation and includes all units.

B.2 Required Notices OAC Rule 3745-54-12

(a) Hazardous Waste from Off-Site Sources

When the Permittee is to receive hazardous waste from an off-site source (except where the Permittee is also the generator), the Permittee must inform the generator in writing that it has the appropriate permits, and will accept the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record.

(b) Hazardous Wastes from Foreign Sources

The Permittee must notify the U.S. EPA regional administrator in writing at least four weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source, as required by OAC Rule 3745-54-12(A). Notice of subsequent shipments of the same waste from the same foreign source is not required.

B.3 General Waste Analysis Plan OAC Rule 3745-54-13

- (a) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or nonhazardous wastes if applicable under OAC Rule 3745-55-13(D), the owner or operator must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with the requirements of Chapters 3745-54 to 3745-57, 3745-205, and 3745-270 of the Administrative Code.
- (b) The Permittee must follow the procedures described in the waste analysis plan found in Section 3 of the permit application and the terms and conditions of this permit.
- (c) The Permittee must verify the analysis of each waste stream annually as part of its quality assurance program, in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, or equivalent methods approved by the Director. At a minimum, the Permittee must maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to

perform analyses, then the Permittee must inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this permit.

B.4 Security
OAC Rule 3745-54-14

The Permittee must comply with the security provisions of OAC Rules 3745-54-14(B)(1) and (2) and (C) and Section 6.1 of the permit application.

B.5 General Inspection Requirements
OAC Rules 3745-54-15 and 3745-54-73

The Permittee must inspect the facility in accordance with OAC Rule 3745-54-15 and the inspection schedule set forth in Section 6.2 of the permit application. The Permittee must remedy any deterioration or malfunction discovered by an inspection, as required by OAC Rule 3745-54-15(C). Records of inspection must be kept for a minimum of three years from the date of inspection. These records must be a part of the facility's operating record as required by OAC Rule 3745-54-73.

B.6 Personnel Training
OAC Rule 3745-54-16

The Permittee must conduct personnel training, as required by OAC Rule 3745-54-16. This training program must contain at least the elements set forth in Section 8 of the permit application. The Permittee must maintain training documents and records as required by OAC Rule 3745-54-16(D) and (E).

B.7 General Requirements for Ignitable, Reactive, or Incompatible Wastes
OAC Rule 3745-54-17

- (a) The Permittee must comply with the requirements of OAC Rule 3745-54-17 and must follow the procedures for handling ignitable, reactive, and incompatible wastes set forth in Section 6.5 of the permit application.
- (b) The Permittee must provide electrical grounding for all containers, tanks, and transport vehicles during all operations involving the handling of ignitable or reactive wastes.
- (c) The Permittee must provide, and require the use of, spark proof tools during all operations involving the handling of all ignitable or reactive wastes.
- (d) The Permittee must prohibit smoking and open flames in each area where ignitable, reactive, or incompatible hazardous wastes are managed and must post appropriate signs.
- (e) Reserved

B.8 Reserved

B.9 Required Equipment
OAC Rule 3745-54-32

At a minimum, the Permittee must maintain at the facility all the equipment required by OAC Rule 3745-54-32 and the equipment set forth in the contingency plan contained in Section 7 of the permit application.

B.10 Testing and Maintenance of Equipment
OAC Rule 3745-54-33

The Permittee must inspect, test and maintain the equipment required by Permit Condition B.9 as necessary to assure its proper operation in time of emergency, as specified in OAC Rule 3745-54-33, Section 6.2 of the permit application and the terms and conditions of this permit.

B.11 Access to Communications or Alarm System
OAC Rule 3745-54-34

The Permittee must maintain access to the communications and alarm systems, as required by OAC Rule 3745-54-34, Section 6.3 of the permit application and the terms and conditions of this permit.

B.12 Required Aisle Space
OAC Rule 3745-54-35

At a minimum, the Permittee must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, as required by OAC Rule 3745-54-35.

B.13 Arrangements with Local Authorities
OAC Rule 3745-54-37

- (a) The Permittee must comply with the requirements of OAC Rule 3745-54-37(A) by making a diligent effort to:
- (i) Make arrangements and familiarize all emergency response agencies which are likely to respond in an emergency with the location and layout of the facility, properties of hazardous waste managed at the facility and associated hazards, places where facility personnel will normally be working, entrances to and roads inside the facility, and possible evacuation routes, as depicted and explained in Section 7 of the permit application;
 - (ii) Make arrangements with Ohio EPA emergency response teams, emergency response contractors, and equipment suppliers;
 - (iii) Make arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and types of injuries or illnesses which could result from fires, explosions, or releases at the facility; and
 - (iv) Make agreements designating primary emergency authority to a specific police and a specific fire department and make agreements with any others to provide support to the primary emergency authority, where more than one police and fire department may respond to an emergency.
- (b) Where authorities decline to enter into such agreements or arrangements set forth in OAC Rule 3745-54-37(A), the Permittee must document the refusal in the operating record as required by OAC Rule 3745-54-37(B).

B.14 Implementation of Contingency Plan
OAC Rules 3745-54-51 and 3745-54-56

The Permittee must immediately carry out the provisions of the contingency plan and follow the emergency procedures described in OAC Rule 3745-54-56 whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment.

In regard to spills and related toxic gas releases, the plan must describe the criteria to be used by the emergency coordinator to determine when the plan will be implemented. At a minimum, the plan must be implemented in the following situations:

- (a) Any fire involving hazardous waste; or
- (b) Any explosion involving hazardous waste; or
- (c) Any uncontrolled hazardous waste reaction that produces or has the potential to produce hazardous conditions, including noxious, poisonous, flammable and/or explosive gases, fumes, or vapors; harmful dust; or explosive conditions; or
- (d) Any hazardous waste release, outside of a secondary containment system, that causes or has the potential to cause off-site soil and/or surface water contamination; or
- (e) Any hazardous waste release that produces or has the potential to produce hazardous conditions, including noxious, poisonous, flammable and/or explosive gases, fumes, or vapors; harmful dust; or explosive conditions.

B.15 Content of the Contingency Plan
OAC Rule 3745-54-52

The Permittee must comply with OAC Rule 3745-54-52 and the contingency plan, as set forth in Section 7 of the permit application.

B.16 Contingency Plan - Released Material and Emergency Response Material and By-products
OAC Rule 3745-54-56(G)

- (a) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.
- (b) All liquid or solid material resulting from fire, explosion, released material or emergency response material and by-products that the Permittee is required to evaluate to determine whether such material is hazardous waste in accordance with OAC Rule 3745-52-11, must be collected and managed as a hazardous waste unless the Permittee can demonstrate that such waste is not hazardous in accordance with OAC Rules 3745-51-03(C) and (D).

B.17 Amendments to Plan
OAC Rule 3745-54-54

The Permittee must review the contingency plan at least annually and upon the occurrence of any event listed in

OAC Rule 3745-54-54. If necessary or appropriate, the Permittee must amend the contingency plan as required by OAC Rule 3745-54-54 in accordance with OAC Rule 3745-50-51.

B.18 Copies of Plan
OAC Rule 3745-54-53

- (a) The Permittee must comply with the requirements set forth in OAC Rule 3745-54-53 regarding contingency plan distribution. The Permittee must maintain at the facility a copy of the contingency plan and all revisions to the plan.
- (b) The Permittee must, in accordance with OAC Rule 3745-54-53, submit a copy of the contingency plan to all local police departments, fire departments, hospitals and local emergency response teams that may be called upon to provide emergency services. The Permittee must notify such agencies and the local authorities, in writing, within ten (10) days of the effective date of any amendments of, revisions to, or modifications to the contingency plan.
- (c) The Permittee must, in accordance with OAC Rule 3745-54-53, submit a copy of the contingency plan to the Ohio EPA's Division of Environmental Response and Revitalization.

B.19 Emergency Coordinator
OAC Rule 3745-54-55

The Permittee must comply with the requirements set forth in OAC Rule 3745-54-55 regarding the emergency coordinator.

B.20 Emergency Procedures
OAC Rule 3745-54-56

The Permittee must comply with the requirements regarding emergency procedures set forth in OAC Rule 3745-54-56, Section 7 of the permit application and the terms and conditions of this permit.

B.21 Availability, Retention and Disposition of Records
OAC Rule 3745-54-74

All records shall be furnished by the Permittee upon request to, and made available at all reasonable times for inspection by, Ohio EPA, in accordance with OAC Rule 3745-54-74.

B.22 Operating Record
OAC Rule 3745-54-73

The Permittee must comply with the requirements set forth in OAC Rule 3745-54-73 regarding an operating record, including information to be recorded and the maintenance thereof.

B.23 Contingency Plan Records
OAC Rule 3745-54-56(J)

The Permittee must note in the operating record the time, date, and details of any incident that requires the implementation of the contingency plan. Within fifteen (15) days after any such incident, the Permittee must

submit to the Director a written report of the incident containing the elements set forth in OAC Rule 3745-54-56(J).

B.24 Manifest System

OAC Rules 3745-54-70, 3745-54-71, 3745-54-72 and 3745-54-76

- (a) In managing waste at the facility, the Permittee must comply with OAC Chapter 3745-52 and OAC Rules 3745-54-71, 3745-54-72 and 3745-54-76 with regard to the manifest system.
- (b) Manifest discrepancy report. If a significant discrepancy in a manifest is discovered, the Permittee must attempt to reconcile the discrepancy. If not resolved with fifteen (15) days after receiving the waste, the Permittee must submit a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest, to the Director in accordance with OAC Rule 3745-54-72.
- (c) Unmanifested waste report. If the Permittee receives unmanifested waste which is not excluded from the manifest requirements of OAC Rule 3745-51-05, then the Permittee must submit an unmanifested waste report to the Director within fifteen (15) days after receipt of the waste. The report must include the information required under OAC Rule 3745-54-76.

B.25 Biennial Report and Additional Reports

OAC Rules 3745-54-75 and 3745-54-77

The Permittee must comply with the report requirements set forth in OAC Rule 3745-54-75 and the additional report requirements set forth in OAC Rule 3745-54-77.

B.26 Closure Performance Standard

OAC Rule 3745-55-11

During facility closure, the Permittee must implement the provisions of the closure plan found in Section 9 of the permit application in such a manner as to achieve compliance with OAC Rule 3745-55-11.

B.27 Closure Plan

OAC Rules 3745-55-10, 3745-55-11 and 3745-55-13

The Permittee must implement those procedures detailed within Section 9 of the permit application, in accordance with OAC Rules 3745-55-10 through 3745-55-20.

B.28 Amendment of Closure Plan

OAC Rules 3745-55-12 and 3745-50-51

Should a change in the facility closure plan become necessary, the Permittee must amend the closure plan in accordance with OAC Rules 3745-55-12(C) and 3745-50-51.

B.29 Content of Closure Plan

OAC Rule 3745-55-12

The Permittee must maintain at the facility the closure plan which contains the elements set forth in OAC Rule 3745-55-12 and all elements required by the terms and conditions of this permit.

B.30 Notification of Closure
OAC Rule 3745-55-12

The Permittee must notify the Director in writing at least forty-five (45) days prior to the date on which it expects to begin final closure of a facility, as required by OAC Rule 3745-55-12(D).

B.31 Time Allowed For Closure
OAC Rule 3745-55-13

Within ninety (90) days after receiving the final volume of hazardous waste, the Permittee must remove from the facility, or treat or dispose of on-site, all hazardous waste in accordance with the closure plan. The Director may approve a longer closure period if the Permittee complies with all applicable requirements for requesting a modification to the permit as set forth in OAC Rule 3745-55-13(A). The Permittee must complete all closure activities within one hundred eighty (180) days after receiving the final volume of hazardous waste in accordance with OAC Rule 3745-55-13. The Director may approve a longer closure period if the Permittee complies with all applicable requirements for requesting a modification to the permit as set forth in OAC Rule 3745-55-13 (B).

B.32 Disposal or Decontamination of Equipment, Structures, and Soils
OAC Rule 3745-55-14

- (a) The Permittee must decontaminate or dispose of all contaminated facility equipment, structures, and soils, as required by OAC Rule 3745-55-14, the closure plan and the terms and conditions of this permit.
- (b) The Permittee must notify the Ohio EPA Central District Office within five (5) working days prior to all rinseate and soil sampling.

B.33 Certification of Closure
OAC Rule 3745-55-15

The Permittee and an independent, registered professional engineer must certify that each hazardous waste management unit or the facility has been closed in accordance with the specifications in the closure plan and the terms and conditions of this permit, as required by OAC Rule 3745-55-15. The Permittee must furnish to the Director, upon request, documentation supporting the certification.

B.34 Survey Plat
OAC Rule 3745-55-16

The Permittee must submit a survey plat to the Director and the local zoning authority not later than the submittal of certification of closure of each hazardous waste disposal unit, in accordance with OAC Rule 3745-55-16.

B.35 General Post-Closure Requirements
OAC Rules 3745-55-17, 3745-55-18, 3745-55-19 and 3745-55-20

(a) Post-Closure Care Period

The Permittee must begin post-closure care for each hazardous waste management unit closed as a landfill after completion of closure of the unit and continue for 30 years after that date. Post-closure care must be in accordance with OAC Rule 3745-55-17 and the post-closure plan.

(b) Post-Closure Security

The Permittee must maintain security at the facility during the post-closure care period, in accordance with the post-closure plan and OAC Rule 3745-55-17(B).

(c) Amendment to Post-Closure Plan

The Permittee must amend the post-closure plan, when necessary, in accordance with OAC Rule 3745-55-18(D).

(d) Post-Closure Notices

- (i) Not later than sixty (60) days after certification of closure of each hazardous waste disposal unit, the Permittee must submit to the Director and the local zoning authority records of the type, location, and quantity of hazardous waste disposed of within each cell or disposal unit, in accordance with OAC Rule 3745-55-19(A).
- (ii) Within sixty (60) days of certification of closure of the first hazardous waste disposal unit and within sixty (60) days of certification of closure of the last hazardous waste disposal unit, the Permittee must do the following:
 - (1) Record a notation on the deed to the facility property, or on some other instrument which is normally examined during title search, which contains the information required by OAC Rule 3745-55-19(B)(1).
 - (2) Submit to the Director a certification that the Permittee has recorded the notation and submit a copy of the document in which the Permittee placed the notation.
 - (3) The Permittee must request and obtain a permit modification prior to post-closure removal of hazardous wastes, hazardous waste residues, liners, or contaminated soils, in accordance with OAC Rule 3745-55-19(C).

(e) Certification of Completion of Post-Closure Care

Not later than sixty (60) days after completion of the established post-closure care period for each hazardous waste disposal unit, the Permittee must certify that the post-closure care period was performed in accordance with the specifications in the post-closure plan and the terms and conditions of this permit, as required by OAC Rule 3745-55-20. The Permittee must furnish to the Director, upon request, documentation supporting the certification.

B.36 Cost Estimate for Facility Closure, Post Closure and Corrective Action
OAC Rules 3745-55-11(B), 3745-55-42 and 3745-55-44

- (a) The Permittee's most recent closure, post closure, and corrective action cost estimates, prepared in accordance with OAC Rules 3745-55-11(B), 3745-55-42, and 3745-55-44, are specified in Section 9 of the permit application.
- (b) The Permittee must adjust the closure, post closure, and corrective action cost estimates for inflation within sixty (60) days prior to the anniversary date of the establishment of the financial instrument(s) used to comply

with OAC Rules 3745-55-11(B), 3745-55-43 and 3745-55-45.

In case the Permittee is using the financial test or corporate guarantee, the Permittee must adjust the closure cost estimate, post-closure cost estimate, and corrective action cost estimate for inflation within thirty (30) days after the close of the Permittee's fiscal year and before submission of updated information to the Director, as specified in OAC Rule 3745-55-42(B) and 3745-55-44(B).

- (c) The Permittee must revise the closure cost estimate, post-closure cost estimate, or corrective action cost estimate whenever there is a change in the facility's closure plan, post-closure plan, or corrective action plan that increases the cost of closure, post-closure, or corrective action, as required by OAC Rules 3745-55-11(B), 3745-55-42(C) or 3745-55-44(C).
- (d) The Permittee must submit to Ohio EPA and keep at the facility the latest closure cost estimate, post-closure cost estimate, and corrective action cost estimate as required by OAC Rules 3745-55-11(B), 3745-55-42(D) and (E) and 3745-55-44(D) and (E).

B.37 Financial Assurance for Facility Closure, Post Closure and Corrective Action
OAC Rules 3745-55-43, 3745-55-45 and 3745-55-46

The Permittee must maintain continuous compliance with OAC Rules 3745-55-43, 3745-55-45, and 3745-55-46 and provide documentation of financial assurance, which meets the requirements of OAC Rule 3745-55-51, in at least the amount of the cost estimates required by Permit Condition B.36.

B.38 Liability Requirements
OAC 3745-55-47

The Permittee must maintain continuous compliance with the requirements of OAC Rule 3745-55-47 and the documentation of liability by providing liability coverage which meets the requirements of OAC Rule 3745-55-51 for sudden accidental occurrences in the amount of at least \$1 million per occurrence, with an annual aggregate of at least \$2 million, exclusive of legal defense costs.

B.39 Incapacity of Owners or Operators, Guarantors, or Financial Institutions
OAC Rule 3745-55-48

The Permittee must comply with requirements set forth in OAC Rule 3745-55-48 regarding the incapacity of owners, operators, guarantors or financial institutions.

B.40 General Requirements for Land Disposal Restrictions
OAC Chapter 3745-270

The Permittee must comply with all applicable regulations regarding land disposal prohibitions and restrictions as required by OAC Chapter 3745-270.

MODULE C - CONTAINER STORAGE AND TREATMENT

C. CONTAINER STORAGE AND MANAGEMENT

The Permittee operates five (5) storage areas for the storage of hazardous waste in containers (S01). The maximum amount of container storage allowed in Container Storage Area No. 1 is 158,400 gallons. The maximum amount of container storage allowed in Container Storage Area No. 2B is 6,150 gallons. The maximum amount of container storage allowed in Container Storage Area No. 2E is 8,070 gallons. The maximum amount of container storage allowed in Truck Station No. 1 is 13,200 gallons and the maximum amount of container storage allowed in Truck Station No. 2 is 13,200 gallons.

Container Storage Area No. 1 is constructed of a reinforced concrete pad with twelve-inch high curbs at the east and west ends, and variable height curbs along the north and south ends (six-inch minimum in the middle and increasing as the elevation of the pad decreases).

The secondary containment capacity of Container Storage Area No. 1 is 33,690 gallons. The pad is sloped with a one sixteenth-inch per foot slope to direct the flow of any leakage or spillage to sumps located at the east and west ends of the storage area. Each sump is twenty-four inches in diameter by two feet deep and has a capacity of 47 gallons. This storage area is covered by a roof to prevent precipitation from entering the storage area. Precipitation run-on is controlled by the dike surrounding the storage area.

Container Storage Area No. 2 is constructed of reinforced concrete and is divided into areas 2B, 2C, 2D and 2E. These areas are within an enclosed building, and there is a concrete berm to keep precipitation run-on away from the building. Areas 2C and 2D are to be used for container staging only, and are not permitted for hazardous waste storage. Containers may be staged in areas 2C and 2D for up to 24 hours before they must be moved to a permitted storage area. Area 2B has a secondary containment capacity of 705 gallons, while Area 2E has a secondary containment capacity of 808 gallons.

Truck Station 1 and 2 are constructed of reinforced concrete with an average curb height of 4.5 inches. The floor slopes to a 43-cubic foot catch basin, and a 16 foot by 1 foot trench runs across each bay to the sump. The average depth of the trench is 4 inches. Truck Station No. 1 has a secondary containment capacity of 5,382 gallons and Truck Station No. 2 has a secondary containment capacity of 5,382 gallons. These areas are within an enclosed building, and the driveway into and out of the building slopes upward to keep precipitation run-on out of each area.

The waste codes listed in Permit Condition C.3(a) may be stored in containers. Ignitable waste is only permitted to be stored in Container Storage Areas No. 1, No. 2B, and No. 2E. The types and sizes of containers are described in Section 4 of the permit application.

C.1 Container Storage/ Quantity Limitation

- (a) The Permittee is authorized to store 199,020 gallons of hazardous waste at any given time in the Permitted Container Storage Areas No. 1, No. 2B, No. 2E, Truck Station No.1 and Truck Station No. 2.
- (b) For the purpose of compliance with the capacity limitation of this permit, each container will be considered to be storing an amount of hazardous waste equal to its capacity, regardless of the actual quantity stored in the container.
- (c) Permit Conditions C.1(a) and C.2 shall not apply to the Permittee's activities as a generator accumulating

hazardous waste on-site in compliance with OAC Rule 3745-52-34 and 40 CFR Part 265, subparts AA, BB, and CC.

However, when accumulating waste within the permitted container storage area, in accordance with OAC Rule 3745-52-34 and 40 CFR Part 265, subparts AA, BB, and CC, the Permittee must not, for the total amount of hazardous waste stored and accumulated, exceed the maximum container storage inventory established under this permit condition.

C.2 Reserved

C.3 Waste Identification

The Permittee must store in containers only the hazardous waste codes specified below:

D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043, F001, F002, F003, F004, F005, F006, K006, K016, K022, K030, K048, K049, K050, K051, K052, K060, K085, K086, K087, K095, K096, K105, K141, K142, K143, K144, K145, K147, K148, U002, U003, U019, U031, U037, U044, U051, U052, U055, U056, U057, U068, U069, U070, U071, U072, U075, U077, U078, U079, U080, U083, U084, U108, U110, U113, U117, U118, U121, U124, U140, U154, U159, U161, U162, U165, U169, U171, U188, U191, U196, U210, U211, U213, U220, U226, U227, U228, and U239.

C.4 Condition of Containers

OAC Rule 3745-55-71

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee must transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permit and the hazardous waste facility chapters of the OAC.

C.5 Compatibility of Waste with Containers

OAC Rule 3745-55-72

The Permittee must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

C.6 Management of Containers

OAC Rule 3745-55-73

- (a) The Permittee must keep all containers closed during storage, except when it is necessary to add or remove waste, and must not open, handle, or store containers in a manner which may rupture the container or cause it to leak.
- (b) In the event lab-pack wastes are generated they must be handled in compliance with applicable storage requirements.
- (c) In the event lab-pack wastes are generated they must be packaged in drums containing absorbent material that is compatible with the waste.

C.7 Containment Systems
OAC Rule 3745-55-75

- (a) The Permittee must maintain the containment system in accordance with the plans and specifications contained in Section 4 of the permit application.
- (b) The Permittee must maintain the containment system as described in the permit application, designed with sufficient capacity to contain ten percent of the total volume of the containers or the volume of the largest container, whichever is greater. The containment system must be free of cracks and gaps and sufficiently impervious to contain leaks and spills and accumulated precipitation until the collected material is detected and removed.
- (c) The base of the containment system must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.
- (d) Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in Permit Condition C.7(b) above.
- (e) Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in a timely manner. This time period is not to exceed twenty-four (24) hours from the time spilled and/or leaked waste is discovered to have reached the hazardous waste pad sumps.

C.8 Reserved

C.9 Inspection Schedules and Procedures
OAC Rules 3745-54-15 and 3745-54-73

The Permittee must inspect the container storage area in accordance with the inspection schedule contained in Section 6 of the permit application and in accordance with OAC Rule 3745-54-15. The inspection schedule must be designed to detect for leaking containers, deteriorating containers, and/or containment systems. The Permittee must note the results of these inspections in the inspection log along with any remedial action taken.

Areas subject to spills, such as loading or unloading areas, shall be inspected daily when in use pursuant to the inspection procedure described in Section 6 of the permit application. The Permittee must maintain these inspection results in the facility operating record.

C.10 Recordkeeping
OAC Rule 3745-54-73

The Permittee must comply with all recordkeeping requirements of OAC Rule 3745-54-73 as part of the facility operating record.

C.11 Special Container Provisions for Ignitable or Reactive Waste
OAC Rules 3745-54-17 and 3745-55-76

- (a) The Permittee must not store ignitable or reactive waste except in accordance with OAC Rules 3745-54-17 and 3745-55-76.

- (b) The Permittee must not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line.
- (c) The Permittee must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste and shall follow the storage procedures specified in Section 6.5 the permit application.

C.12 Special Container Provisions for Incompatible Waste
OAC Rules 3745-54-17(B) and 3745-55-77

- (a) The Permittee must not store incompatible waste except in accordance with OAC Rules 3745-54-17(B) and 3745-55-77.
- (b) The Permittee must not place hazardous waste in an unwashed container that previously held an incompatible waste or material.
- (c) The Permittee must separate or protect (by means of a dike, berm, wall, or other device) a storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments.

C.13 Reserved

C.14 Closure and Post-Closure
OAC Rules 3745-55-10 through 3745-55-20, and 3745-55-78

At closure of the container area, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system, in accordance with the procedures in the closure plan set forth in Section 9 of the permit application.

MODULE D - TANK STORAGE, TREATMENT, AND MANAGEMENT

D. MODULE HIGHLIGHTS

The Permittee operates four (4) areas for the storage of hazardous waste in tanks (SO2). Tank Farm 1 is used for flammable waste solvents and storage is permitted in 30 tanks (595,000 gallons). Tank Farm 2 is used for chlorinated waste solvents and storage is permitted in 37 tanks (525,000 gallons). Tank Farms 4 and 6 are used for other types of hazardous waste solvents; storage is permitted in 4 tanks (60,000 gallons) in Tank Farm 4 and 4 tanks (57,500 gallons) in Tank Farm 6. In addition, fourteen (14) of the above-mentioned tanks (2 in Tank Farm 1, 6 in Tank Farm 2, 4 in Tank Farm 4, and 2 in Tank Farm 6) are also permitted for treatment for fuel blending. All tanks are considered existing tanks based on their ages and/or installation dates (1984 or 1986; see Attachment 4-5 of the permit application).

All tanks and ancillary equipment are above-ground. Transfers of waste are monitored through a master control board that continuously monitors the level in each tank. This control board is equipped with warning lights tied to high-level alarms in each tank set at 95% of tank capacity. When 95% of tank capacity is reached, all high volume pumps are disabled. Low volume pumps do not automatically shut down and must be manually shut off at the pump location after the high-level alarm sounds. Level gauges are present on each tank and level readings are recorded in daily facility records. All tanks are vented directly to the atmosphere through pressure/vacuum vents. Tanks for chlorinated organics are equipped with conservation vents to prevent influx of water and HCl generation.

Each tank system, except for some ancillary equipment, is contained by concrete external liners. The net secondary containment capacities per Attachment 4-6 of the permit application are: 62,588 gallons on the east side and 73,958 gallons on the west side for Tank Farm 1; 133,067 gallons for Tank Farm 2; 31,335 gallons for Tank Farm 4; and, 23,952 gallons for Tank Farm 6. All concrete liners have been provided an impermeable coating that is compatible with the wastes stored. All waste codes listed in Permit Condition D.1(c) may be stored in tanks.

D.1 Tank Storage Quantity Limitation/Waste Identification

- (a) The Permittee may store a total volume of 1,237,500 gallons of hazardous waste in 75 tanks, subject to the terms of this permit and as detailed in the table below.

The Permittee shall store in tanks only the hazardous waste codes specified in the permit application and summarized below:

Tank Farm No. & Tank No.	Capacity (Gallons)	Dimensions of Tank	Type of Construction	Typical Description of Hazardous Waste	Hazardous Waste No.
Tank Farm 1 32	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 33	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below

Tank Farm No. & Tank No.	Capacity (Gallons)	Dimensions of Tank	Type of Construction	Typical Description of Hazardous Waste	Hazardous Waste No.
Tank Farm 1 34	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 35	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 36	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 37	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 39	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 40	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 41	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 42	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 43	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 44	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 45	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 49	20,000	10 ft 6 in (Diam) x 32 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 50	20,000	10 ft 6 in (Diam) x 32 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 51	30,000	12 ft (Diam) x 35 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 52	30,000	12 ft (Diam) x 35 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below

Tank Farm No. & Tank No.	Capacity (Gallons)	Dimensions of Tank	Type of Construction	Typical Description of Hazardous Waste	Hazardous Waste No.
Tank Farm 1 53	30,000	12 ft (Diam) x 35 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 56	15,000	10 ft 6 in (Diam) x 24 ft	8.25 ft skirt CS-CB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 57	15,000	10 ft 6 in (Diam) x 24 ft	CS-CB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 58	15,000	10 ft 6 in (Diam) x 24 ft	8 ft skirt CS-CB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 59	30,000	12 ft (Diam) x 35 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 60	30,000	12 ft (Diam) x 35 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 61	30,000	12 ft (Diam) x 35 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 63	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 65	15,000	10 ft 6 in (Diam) x 24 ft	8.25 ft skirt CS-CB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 66	15,000	10 ft 6 in (Diam) x 24 ft	8.25 ft skirt CS-CB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 67	30,000	12 ft (Diam) x 35 ft	CS-FB	Mineral Spirits Ignitable	See Permit Condition D.1(c), below
Tank Farm 1 68	30,000	12 ft (Diam) x 35 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below
Tank Farm 1 69	30,000	12 ft 6 in (Diam) x 35 ft	CS-FB	Flammable/Ignitable Solvents	See Permit Condition D.1(c), below

Tank Farm No. & Tank No.	Capacity (Gallons)	Dimensions of Tank	Type of Construction	Typical Description of Hazardous Waste	Hazardous Waste No.
Tank Farm 2 80	15,000	10 ft 6 in (Diam) x 24 ft	8 ft skirt CS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 81	15,000	10 ft 6 in (Diam) x 24 ft	8 ft skirt CS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 82	15,000	10 ft 6 in (Diam) x 24 ft	8 ft skirt CS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 83a	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 83b	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 84a	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 84b	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 85	15,000	10 ft 6 in (Diam) x 24 ft	8 ft skirt CS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 86	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below

Tank Farm No. & Tank No.	Capacity (Gallons)	Dimensions of Tank	Type of Construction	Typical Description of Hazardous Waste	Hazardous Waste No.
Tank Farm 2 87	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 88	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 89a	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 89b	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 90	15,000	10 ft 6 in (Diam) x 24 ft	7.8 ft CS skirt SS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 91	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 92a	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 92b	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 93	15,000	10 ft 6 in (Diam) x 24 ft	8 ft skirt CS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below

Tank Farm No. & Tank No.	Capacity (Gallons)	Dimensions of Tank	Type of Construction	Typical Description of Hazardous Waste	Hazardous Waste No.
Tank Farm 2 94a	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 94b	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 95	15,000	10 ft 6 in (Diam) x 24 ft	8 ft CS skirt SS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 100	15,000	10 ft 6 in (Diam) x 24 ft	7.8 ft CS skirt SS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 101	15,000	10 ft 6 in (Diam) x 24 ft	8 ft skirt CS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 102a	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 2 102b	7,500	10 ft 6 in (Diam) x 11 ft + 5.25 ft (cone) Total tank height is 32 ft 6 in	8 ft skirt CS-CB/PB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below

Tank Farm No. & Tank No.	Capacity (Gallons)	Dimensions of Tank	Type of Construction	Typical Description of Hazardous Waste	Hazardous Waste No.
Tank Farm 2 103	15,000	10 ft 6 in (Diam) x 24 ft	7.8 ft CS skirt SS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below

Tank Farm No. & Tank No.	Capacity (Gallons)	Dimensions of Tank	Type of Construction	Typical Description of Hazardous Waste	Hazardous Waste No.
Tank Farm 2 104	15,000	10 ft 6 in (Diam) x 24 ft	7.8 ft skirt SS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 105	15,000	10 ft 6 in (Diam) x 24 ft	8 ft skirt CS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 106	30,000	12 ft (Diam) x 35 ft	CS-FB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 107	30,000	12 ft (Diam) x 35 ft	SS-FB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 108	15,000	10 ft 6 in (Diam) x 24 ft	7.8 ft CS skirt SS-FB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 109	15,000	10 ft 6 in (Diam) x 24 ft	7.8 ft skirt SS-DB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 110	15,000	10 ft 6 in (Diam) x 24 ft	8 ft skirt CS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 111	30,000	12 ft (Diam) x 35 ft	SS-FB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 112	30,000	12 ft (Diam) x 35 ft	SS-FB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 113	15,000	10 ft 6 in (Diam) x 24 ft	7.8 ft CS skirt SS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 2 114	15,000	10 ft 6 in (Diam) x 24 ft	6.5 ft skirt CS-CB	Chlorinated Solvents	See Permit Condition D.1(c), below
Tank Farm 4 203	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 4 204	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 4 205	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below

Tank Farm No. & Tank No.	Capacity (Gallons)	Dimensions of Tank	Type of Construction	Typical Description of Hazardous Waste	Hazardous Waste No.
Tank Farm 4 209	15,000	10 ft 6 in (Diam) x 24 ft 6 in	8 ft skirt CS-CB	Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 6 96	12,000	11 ft (Diam) x 17 ft	CS-FB	Mineral Spirits Ignitable Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 6 97	20,000	12 ft (Diam) x 24 ft	CS-FB	Mineral Spirits Ignitable Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Tank Farm 6 98	20,000	10 ft 6 in (Diam) x 32 ft 6 in.	CS-FB	Mineral Spirits Ignitable Chlorinated Solvents Toxic	See Permit Condition D.1(c), below
Bin #2	5,500	6.6 ft x 12 ft x 9.5 ft deep	CS-Square	Toxic	See Permit Condition D.1(c), below
CS - CARBON STEEL SS = STAINLESS STEEL PB = PIGGY-BACK			CB - CONE BOTTOM FB - FLAT BOTTOM DB - DISHED BOTTOM L = LINED		

- (b) During any calendar year, the Permittee must not manage through tank storage hazardous waste in excess of the maximum annual quantity set forth in Permit Condition B.1(b).
- (c) The Permittee shall store in tanks only the hazardous waste codes specified in the permit application and summarized below:

D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043, F001, F002, F003, F004, F005, F006, K006, K016, K022, K030, K048, K049, K050, K051, K052, K060, K085, K086, K087, K095, K096, K105, K141, K142, K143, K144, K145, K147, K148, U002, U003, U019, U031, U037, U044, U051, U052, U055, U056, U057, U068, U069, U070, U071, U072, U075, U077, U078, U079, U080, U083, U084, U108, U110, U113, U117, U118, U121, U124, U140, U154, U159, U161, U162, U165, U169, U171, U188, U191, U196, U210, U211, U213, U220, U226, U227, U228, and U239.

D.2 Limitations on Treatment of Hazardous Waste in Tanks

- (a) The Permittee is authorized to treat hazardous waste in the tanks specified in the table below. The Permittee shall treat in tanks only the hazardous waste codes specified in the permit application and summarized below:

Tank No.	Capacity (Gallons)	Treatment Type	Dimensions of Tank	Secondary Containment Volume(Gallons)	Description of Hazardous Waste	Hazardous Waste No.
37	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	62,588	Mineral Spirits Ignitable	See Permit Condition D.1(c)
45	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	62,588	Mineral Spirits Ignitable	See Permit Condition D.1(c)
81	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	133,067	Chlorinated Solvents	See Permit Condition D.1(c)
82	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	133,067	Chlorinated Solvents	See Permit Condition D.1(c)
86	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	133,067	Chlorinated Solvents Toxic	See Permit Condition D.1(c)
87	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	133,067	Chlorinated Solvents Toxic	See Permit Condition D.1(c)
91	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	133,067	Chlorinated Solvents Toxic	See Permit Condition D.1(c)
95	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	133,067	Chlorinated Solvents	See Permit Condition D.1(c)
203	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	31,335	Chlorinated Solvents Toxic	See Permit Condition D.1(c)
204	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	31,335	Chlorinated Solvents Toxic	See Permit Condition D.1(c)
205	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	31,335	Chlorinated Solvents Toxic	See Permit Condition D.1(c)

Tank No.	Capacity (Gallons)	Treatment Type	Dimensions of Tank	Secondary Containment Volume(Gallons)	Description of Hazardous Waste	Hazardous Waste No.
209	15,000	Fuel Blending	10.5 ft (Diam) x 24.5 ft	31,335	Chlorinated Solvents Toxic	See Permit Condition D.1(c)
97	20,000	Fuel Blending	12 ft (Diam) x 24 ft	23,952	Mineral Spirits Ignitable Chlorinated Solvents Toxic	See Permit Condition D.1(c)
98	20,000	Fuel Blending	10.5 ft (Diam) x 32.5 ft	23,952	Mineral Spirits Ignitable Chlorinated Solvents Toxic	See Permit Condition D.1(c)

- (b) The provision of Condition D.2(a) shall not apply to the Permittee's activities as a generator treating hazardous waste in tanks on-site in compliance with the provisions of OAC Rule 3745-52-34.

D.3 Reserved

D.4 Containment and Detection of Releases.
OAC Rule 3745-55-93

(a) New Tank Systems

The Permittee must construct and operate the secondary containment system in accordance with the requirements of OAC Rules 3745-55-93(B) through (F), and Section 4.3 of the permit application.

(b) Existing Tank Systems with Secondary Containment

The Permittee must design, construct, and operate the secondary containment system in accordance with the detailed design plans and descriptions contained in Section 4 of the permit application. If needed, repair of secondary containment must be performed as soon as concrete surface temperatures exceed 38° F for the applicable curing period. Currently all permitted storage tanks at the facility are existing tanks.

D.5 Operating Requirements
OAC Rule 3745-55-94

- (a) The Permittee must not place hazardous wastes or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail.

- (b) The Permittee must prevent spills and overflows from the tank or containment systems using the methods described in the permit application. The Permittee must comply with the requirements of OAC Rule 3745-55-96 if a leak or spill occurs in the tank system.

D.6 Inspection Schedules and Procedures
OAC Rule 3745-55-95

- (a) The Permittee must inspect the tank systems, in accordance with the Inspection Schedule found in Section 6 of the permit application, and must complete the items in Permit Conditions D.6(b) and D.6(c) as part of those inspections.
- (b) The Permittee must inspect the overfill controls in accordance with the procedure and schedule in the permit application.
- (c) The Permittee must inspect the following components of the tank system once each operating day:
 - (i) Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;
 - (ii) Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design, and;
 - (iii) Construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system, to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).
- (d) Tank Preventative Maintenance:
 - (i) For all permitted hazardous waste storage tanks, ultrasonic thickness testing must be conducted using the procedures in Section 4.3.1 of the permit application.
 - (ii) If a tank system or component is found to be leaking or unfit for use as a result of the ultrasonic testing, the Permittee must comply with Permit Condition D.7 and notify the Director, in accordance with Permit Condition D.8.
- (e) The Permittee must document compliance with Permit Condition D.6 in the operating record of the facility.

D.7 Response to Leaks or Spills
OAC Rule 3745-55-96

- (a) In the event of a leak or a spill from the tank system or from a secondary containment system, or if a system becomes unfit for continued use, the Permittee must remove the system from service immediately and complete the following actions:
 - (i) Immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.
 - (ii) If the release was from the tank system, the owner/operator must, within twenty-four hours after detection of the leak, or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous

waste to the environment and to allow inspection and repair of the tank system to be performed.

If the material released was to a secondary containment system, all released materials must be removed within twenty-four hours or in as timely a manner as possible to prevent harm to human health and the environment.

- (iii) The Permittee must immediately conduct a visual inspection of all releases to the environment and, based on that inspection: (1) prevent further migration of the leak or spill to soils or surface water and; (2) remove and properly dispose of any visible contamination of the soil or surface water.
- (b) Unless the requirements of Permit Conditions D.7(b)(i) through D.7(b)(iii) are satisfied, the Permittee must close the tank system in accordance with OAC Rule 3745-55-97 and the closure plan if there has been a leak or spill from the tank system or from a secondary containment system, or if a system becomes unfit for continual use.
 - (i) For a release caused by a spill that has not damaged the integrity of the system, the Permittee must remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the tank system to service.
 - (ii) For a release caused by a leak from the primary tank system to the secondary containment system, the Permittee must repair the primary system prior to returning it to service.
 - (iii) For a release to the environment caused by a leak from a component of the tank system that is below ground and does not have secondary containment, the Permittee must provide this component with secondary containment that meets the requirements of OAC Rule 3745-55-93 before the component can be returned to service.
- (c) For all major repairs (e.g., installation of an internal liner, repair of a ruptured tank, or repair or replacement of a secondary containment vault) to eliminate leaks or restore the integrity of the tank system, the Permittee must obtain a certification by an independent, qualified, registered professional engineer in accordance with OAC Rule 3745-50-42(D)(1) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. This certification must be submitted to the Director within seven (7) days after returning the tank system to use.

D.8 Recordkeeping and Reporting

OAC Rules 3745-55-96, 3745-55-91(A), and 3745-55-92(G)

- (a) The Permittee must report to the Director, within 24 hours of detection, when a leak or spill occurs from the tank system or secondary containment system to the environment. A leak or spill of one pound or less of hazardous waste, that is immediately contained and cleaned-up, need not be reported. Releases that are contained within a secondary containment system need not be reported.
- (b) Within thirty (30) days of detecting a release to the environment from the tank system or secondary containment system, the Permittee must report the following information to the Director:
 - (i) Likely route of migration of the release;
 - (ii) Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

(iii) Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee should provide the Director with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires;

(iv) Proximity of down gradient drinking water, surface water, and populated areas; and

(v) Description of response actions taken or planned.

(c) Reserved

(d) The Permittee must keep on file at the facility the written assessment of the tank system's integrity.

(e) The Permittee must maintain at the facility a record of the results of leak tests and integrity tests conducted in accordance with Permit Conditions D.4(d)(i) through D.4(d)(ii).

D.9 Closure and Post-Closure Care
OAC Rule 3745-55-97

(a) At closure of the tank system(s), the Permittee must follow the procedures in the closure plan in Section 9 of the permit application.

(b) If the Permittee demonstrates that not all contaminated soils can be practically removed or decontaminated, in accordance with the closure plan, then the Permittee must close the tank system(s) and perform post-closure care following the procedures in the closure plan in Section 9 of the permit application. For the UST unit closed as a landfill, the Permittee must comply with the post-closure plan approved by Ohio EPA on September 30, 1992 and the terms and conditions of this permit.

D.10 Special Tank Provisions for Ignitable or Reactive Wastes
OAC Rule 3745-55-98

(a) The Permittee must not place ignitable or reactive waste in the tank system or in the secondary containment system, unless the procedures specified in the permit application are followed. The Permittee must document compliance with this condition and place it in the operating record.

(b) The Permittee must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in Tables 2-1 to 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1996 or most recent edition) incorporated by reference in OAC Rule 3745-50-11.

D.11 Reserved

D.12 Reserved

MODULE E - CORRECTIVE ACTION REQUIREMENTS

E. RCRA CORRECTIVE ACTION

On November 27, 1985, a fire occurred in the Aboveground Storage Tank farm, which formerly existed east of well H-11S at the Wastewater Treatment Plant site, resulting in the destruction of the tank farm and a release of an unknown quantity of solvent to soil, surface water and ground water. Emergency response measures were implemented to contain the release, prevent off-site discharge and clean up solvent-affected media on site. The release caused ground water contamination as a result of: 1) infiltration of contaminants into the Underground Storage Tank (UST) backfill; 2) infiltration of contaminants in the storm sewer and storm sewer backfill, and; 3) permeation of native soil by contaminated surface runoff. After the fire, the United States Environmental Protection Agency (U.S. EPA) Region V negotiated an Administrative Order on Consent (AOC) with the Permittee (then Safety-Kleen Systems, Inc.)¹ to address the company's corrective action obligations for this release; the final order was issued by U.S. EPA on March 16, 1989. In 1987, interim corrective measures were implemented by the Permittee, including installation of three recovery wells (RW-1, RW-2, and RW-3) and an air stripping tower.

In May 1989, the Permittee submitted its first RFI Workplan; the June 1991 Final RFI Workplan was approved by U.S. EPA with conditions on July 24, 1991. In December of 1991, the Permittee initiated RFI activities to evaluate the nature and extent of releases of hazardous waste and hazardous constituents from the fire (i.e. to identify the types, quantities and locations of contaminants). Activities included sampling of soil gas, surface water, stream sediments and subsurface soils; soil borings and monitoring wells were installed (both on facility and adjacent properties) and geotechnical sampling occurred. A biological survey of the South Fork of the Licking River, and a literature review of subsurface hydrogeology and typical climatological conditions in the area was conducted.

In January 1993, the draft RCRA Facility Investigation Report (RFI) was submitted to U.S. EPA; the final report and RFI Addendum Volumes 1-6 were submitted in June 1993. U.S. EPA approved the RFI final report, with modifications, in June 1993. In August 1993, the Proposed Interim Corrective Measures and Workplan for Proposed Interim Corrective Measures was submitted; the workplan was approved by U.S. EPA on August 31, 1993. In September 1993, a soil vapor extraction system (SVE) pilot test was conducted to determine the feasibility of reducing VOC concentrations in unsaturated soils. This system was pilot tested from October 1993 to January 1994. In November 1993, the Permittee submitted the Interim Corrective Measures Work Plan for Interim Corrective Measure Ground Water Barrier and Recovery System to U.S. EPA; approval of this plan was received in January 1994. Installation of the ground water recovery system (including a sheet pile wall) commenced in March 1994 and was completed in May 1994, when operation of the system began. Two additional recovery wells (RW-4 and RW-5) were installed and the original recovery wells (RW-1 and RW-2) were taken off-line.

In August 1994, a draft proposed Corrective Measure Plan was submitted to U.S. EPA. Revisions to the plan were required over the next year, and the final Draft Corrective Measures Study was submitted in September 1995. On November 3, 1995, the revised Risk Based Cleanup Level Development Report was received by U.S. EPA. In December 1995, the air stripping tower was replaced with a low maintenance, low profile unit, and two existing

¹ On March 21, 2008 ownership of the facility was transferred from Safety-Kleen Systems, Inc. to Clean Harbors Recycling Services of Ohio, LLC.

recovery wells (RW-1 and RW-2) were re-activated.

A draft action approving the Corrective Measures Study was issued for public comment in January 1998. On June 5, 1998, U.S. EPA issued a RCRA Final Decision that included the Final Decision, Response to Comments, Statement of Basis and Index to the Administrative Record. The Permittee was notified at this time that all terms of the March 16, 1989 AOC had been satisfied and that the AOC was terminated. Transition of corrective action authority at the facility from U.S. EPA to Ohio EPA occurred with the issuance of the Part B Permit on June 30, 1998. Implementation of the selected remedies and remaining corrective action activities was required as a condition of this permit. Additionally, Clean Harbors submitted a Revised Human Health Risk Assessment in November 2014, a Remedial Systems Evaluation Report on July 20, 2015, and an Alternate Source Demonstration. The Alternate Source Demonstration was denied, pursuant to Permit Condition J.11, in a letter from Ohio EPA dated May 4, 2016.

In January 1999, installation of a separate water and soil vapor extraction (WSVE) system was completed to further reduce VOC concentrations in site soil and ground water. In January 1999, recovery wells RW-6 and H-21S were activated to further remove and contain VOCs on site, and continues to operate the ground water recovery system. Site-wide ground water monitoring and reporting continue to occur as specified in Module Z. In July 2001, Ohio EPA received from the Permittee as-built plans, construction completion reports, and operation and maintenance plans for the two treatment systems. Also included in this submittal were a Health and Safety Plan and a Public Involvement Plan.

After conducting a pump test and system evaluation in 2003, the Permittee submitted a Remediation Systems Evaluation Report in November of 2003. A Proposed Future Activities report was received by Ohio EPA on May 21, 2004.

All corrective action documents referenced above are hereby incorporated into this permit and will be governed by applicable corrective action rules. Section 10 of the permit application details the findings of the site-wide RCRA facility investigation and the corrective action activities that have occurred or are ongoing.

In this permit and until such time as the Permittee requests a permit modification in accordance with Permit Condition A.27, Ohio EPA is requiring continued implementation of corrective measures consistent with the remedy selected by the U.S. EPA. The U.S. EPA-selected remedy and reporting schedule have been incorporated into the terms and conditions of this permit as condition E.9.

E.1 Corrective Action at the Facility
OAC Rules 3745-50-10 & 3745-54-101

In accordance with OAC Rule 3745-50-10 waste management unit means any discernible unit at which solid waste, hazardous waste, infectious waste (as those terms are defined in ORC Chapter 3734), constructions and demolition debris (as defined in ORC Chapter 3714) industrial waste, or other waste (as those terms are defined in ORC Chapter 6111), has been placed at any time, irrespective of whether the unit was intended for the management of waste or hazardous waste. Such units include any area at a facility at which wastes have been routinely and systematically released. For the purpose of Corrective Action, facility is defined as all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA. The terms Interim

Measure (IM), RCRA Facility Investigation (RFI), Corrective Measures Study (CMS) and Corrective Measure Implementation (CMI) are defined in U.S. EPA's Corrective Action Plan (CAP) (OSWER Directive 9902.3-2A, May 1994).

The Permittee must institute Corrective Action as necessary to protect human health and the environment for all releases of hazardous wastes or hazardous constituents from any waste management units (WMUs) at the Facility, regardless of the time at which waste was placed in such units.

E.2 Corrective Action Beyond the Facility Boundary
OAC Rule 3745-54-101

The Permittee must implement Corrective Action beyond the Facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of Ohio EPA that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the Facility boundary where off-site access is denied. On-site measures to address such releases will be addressed under the RFI, CMS, and CMI phases, as determined to be necessary on a case-by-case basis.

E.3 Identification of WMUs
OAC Rules 3745-50-44(D) and 3745-54-101

As indicated in the Corrective Action Summary, the Permittee is currently addressing contamination from releases from the Aboveground Storage Tank farm due to the fire in 1985 and from the UST unit that was closed as a landfill in 1993 in a site-wide corrective action. The following conditions (E.5 - E.8) only apply in the event new WMUs are identified or releases from existing WMUs occur, in accordance with conditions E.10 and E.11.

E.4 Reserved

E.5 RCRA Facility Investigation (RFI)
OAC Rule 3745-54-101

The Permittee must conduct an RFI to thoroughly evaluate the nature and extent of the release of hazardous wastes and hazardous constituents from all applicable WMUs identified in Permit Condition E.3 above and Permit Condition E.10. The major tasks and required submittal dates are shown below. The scope of work for each of the tasks is found in U.S. EPA's CAP.

(a) RFI Workplan

The Permittee must submit a written RFI Workplan to Ohio EPA within 90 days after the effective date of this permit or, in case of a newly discovered waste management unit, on a time frame established by Ohio EPA.

- (i) Within 45 days of receipt of any Ohio EPA comments on the RFI Workplan, the Permittee must submit either an amended or new RFI Workplan that incorporates Ohio EPA's comments.

- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new RFI Workplan. The RFI Workplan, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved RFI Workplan must be authorized by Ohio EPA.

(b) RFI Implementation

The Permittee must implement the RFI Workplan according to the terms and schedule in the approved RFI Workplan.

(c) RFI Final Report

Within 60 days after the completion of the RFI, the Permittee must submit an RFI Final Report to Ohio EPA. The RFI Final Report must describe the procedures, methods, and results of the RFI. The Final Report must contain adequate information to support further decisions concerning Corrective Action at the Facility.

- (i) Within 45 days of receipt of any Ohio EPA comments on the RFI Final Report, the Permittee must submit either an amended or new RFI Final Report that incorporates Ohio EPA's comments.
- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new RFI Final Report. The RFI Final Report, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved RFI Final Report must be authorized by Ohio EPA.

E.6 Interim Measure (IM)

In the event the RFI Final Report or other information documenting a release of hazardous waste or constituents to the environment, Ohio EPA may require (or the Permittee may propose) the development and implementation of additional IM(s) (this may include an IM Workplan) at any time during the life of the permit to mitigate or eliminate a threat to human health or the environment. The Permittee must implement the IM upon a time frame established by Ohio EPA.

E.7 Determination of No Further Action

(a) Permit Modification

Based on the results of the completed RFI and other relevant information, the Permittee may submit an application to Ohio EPA for a permit modification under OAC Rule 3745-50-51 to terminate the Corrective Action tasks of the Schedule of Compliance. Other tasks identified in the Schedule of Compliance shall remain in effect. This permit modification application must conclusively demonstrate that there are no releases of hazardous waste or constituents from WMUs at the Facility that pose an unacceptable risk to human health and the environment.

If, based upon review of the Permittee's request for a permit modification, the results of the completed RFI, and other information, Ohio EPA determines that releases or suspected releases which were investigated either are nonexistent or do not pose an unacceptable risk to human health and the environment, Ohio EPA will approve the requested modification. Decisions regarding the completion of RCRA Corrective Action and no further action may be made for the entire Facility, for a portion of the Facility, or for a specific unit or release.

(b) Periodic Monitoring

A determination of no further action shall not preclude Ohio EPA from requiring continued or periodic monitoring of air, soil, ground water, or surface water, if necessary to protect human health and the environment, when site-specific circumstances indicate that a potential or an actual release of hazardous waste or constituents exists.

(c) Further Investigations

A determination of no further action shall not preclude Ohio EPA from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates that a release or potential release from a WMU at the Facility may pose an unacceptable risk to human health or the environment. In such a case, Ohio EPA shall initiate a modification to the terms of the permit to rescind the determination made in accordance with Permit Condition E.7(a). Additionally, in the event Ohio EPA determines that there is insufficient information on which to base a determination, the Permittee, upon notification, is required to develop a Work Plan and upon Ohio EPA approval of that Work Plan, perform additional investigations as needed.

E.8 Corrective Measures Study (CMS)

If Ohio EPA determines, based on the results of the RFI and any other relevant information, that corrective measures are necessary, Ohio EPA will notify the Permittee in writing that the Permittee must conduct a CMS either as described below or as described in Ohio EPA's notification to the Permittee. The purpose of the CMS will be to develop and evaluate the corrective action alternative(s) and to outline one or more alternative corrective measure(s) that will satisfy the performance objectives specified in Permit Condition E.9.

(a) CMS Workplan

The Permittee must submit a written CMS Workplan to Ohio EPA within 90 days from the notification by Ohio EPA of the requirement to conduct a CMS.

- (i) Within 45 days of receipt of any Ohio EPA comments, the Permittee must submit either an amended or new CMS Workplan that incorporates Ohio EPA's comments.
- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new CMS Workplan. The CMS Workplan, as approved or as modified and approved, must be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved CMS Workplan

must be authorized by Ohio EPA.

(b) CMS Workplan Implementation

The Permittee must implement the CMS Workplan according to the terms and schedule in the approved CMS Workplan.

(c) CMS Final Report

Within 60 days after the completion of the CMS, the Permittee must submit a CMS Final Report to Ohio EPA. The CMS Final Report must summarize the results of the investigations for each remedy studied and must include an evaluation of each remedial alternative.

- (i) Within 45 days of receipt of any Ohio EPA comments, the Permittee must submit either an amended or new CMS Final Report that incorporates Ohio EPA's comments.
- (ii) Ohio EPA will approve or modify and approve, in writing, the amended or new CMS Final Report. The CMS Final Report, as approved or as modified and approved, must be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved CMS Final Report must be authorized by Ohio EPA.

E.9 Corrective Measures Implementation (CMI)

Based on the results of the CMS, the Permittee must implement one or more of the Corrective Measures authorized by Ohio EPA. Ohio EPA will authorize one or more of the Corrective Measures in the CMS, and will notify the Permittee in writing of the decision. The Corrective Measure selected for implementation must: (1) be protective of human health and the environment; (2) attain media cleanup standards; (3) control the source(s) of releases so as to reduce or eliminate further releases of hazardous waste(s) (including hazardous constituent[s]); and (4) comply with all applicable standards for management of wastes.

If two or more of the Corrective Measures studied meet the threshold criteria set out above, Ohio EPA will authorize the Corrective Measures Implementation by considering remedy selection factors including: (1) long-term reliability and effectiveness; (2) the degree to which the Corrective Measure will reduce the toxicity, mobility or volume of contamination (3) the Corrective Measure's short-term effectiveness; (4) the Corrective Measure's implementability; and (5) the relative cost associated with the alternative.

(a) Selected Remedy

Based on the selection criteria above, the Director has selected the following remedy for implementation in the matter of the contamination from releases indicated in the Corrective Action Summary. All final documents or reports, as approved or as modified and approved, become an enforceable condition of this permit.

Soil and ground water contamination has been identified as a result of the 1985 fire and destruction of the

Aboveground Storage Tank farm, and was also found during the closure of four underground storage tanks. As identified in the Corrective Action Summary, the Permittee has implemented and must continue to operate the following remedies to address site-wide contamination:

- (i) The ground water recovery system, consisting of a low-profile air stripper, a sheet pile wall, and five recovery wells (RW-1, RW-2, RW-4, RW-5 and RW-7), must be operated to contain/remediate contaminated ground water on-site and to treat the ground water prior to discharge to the Hebron POTW. Operation and maintenance of this system must be conducted as outlined in the Operation and Maintenance Plan submitted for the system in July 2001.
- (ii) Reserved
- (iii) The Health and Safety and Public Involvement Plans submitted in July 2001 must be implemented as long as corrective measures are required.
- (iv) Reserved
- (v) Reserved

(b) Permit Modification

Ohio EPA will initiate a permit modification, as provided by OAC Rule 3745-50-51, to require implementation of any additional corrective measure(s) required for newly identified units or releases from existing units as necessary.

The Permittee shall not implement the corrective measure until the permit is modified pursuant to OAC Rule 3745-50-51.

(c) Financial Assurance

OAC Rule 3745-54-101

The Permittee must provide financial assurance in the amount specified in Section 9 of the permit application as necessary to implement the selected remedy described in condition E.9(a) of this permit, including current and future operation and maintenance costs.

As part of any future modification of this permit to incorporate additional corrective measures, the Permittee must provide financial assurance in the amount determined by the Director as necessary to implement the additional corrective measures as required by OAC Rule 3745-55-011(B) and (C).

E.10 Newly Identified WMUs or Releases
OAC Rule 3745-54-101

(a) General Information

The Permittee must submit to Ohio EPA, within 30 days of discovery, the following information regarding any new WMU identified at the Facility by Ohio EPA or the Permittee:

- (i) The location of the unit on the site topographic map;
- (ii) Designation of the type of unit;
- (iii) General dimensions and structural description (supply any available drawings);
- (iv) When the unit was operated; and
- (v) Specification of all waste(s) that have been managed at the unit.

(b) Release Information

The Permittee must submit to Ohio EPA, within 30 days of discovery, all available information pertaining to any release of hazardous waste(s) or hazardous constituent(s) from any new or existing WMU.

E.11 Corrective Action for Newly Identified WMUs and Releases
OAC Rule 3745-54-101

If Ohio EPA determines that a RFI is required for newly identified WMUs, the Permittee must submit a written RFI Workplan to Ohio EPA upon a time frame established in written notification by Ohio EPA in accordance with Permit Condition E.5. This determination will be made based on the information submitted in accordance with Permit Condition E.10.

Further investigations or corrective measures will be established by Ohio EPA.

Permittee must make such submittal in accordance with time frames established by Ohio EPA.

E.12 Completion of Corrective Action
OAC Rule 3745-54-101

After completing Corrective Action as necessary to protect human health and the environment for all releases of hazardous wastes or hazardous constituents from any WMUs at the Facility, the Permittee shall submit a Corrective Measures Completion of Work (CMCW) Report. The CMCW Report shall document that Corrective Action construction is complete, cleanup objectives and standards have been met, and any releases of hazardous waste or constituents no longer pose an unacceptable risk to human health and the environment. The CMCW Report may be submitted for any part of the Facility for which corrective measures are complete, or for the entire

Facility. The CMCW Report must be submitted as a request for permit modification pursuant to OAC Rule 3745-50-51.

E.13 Documents Requiring Professional Engineer Stamp
ORC Section 4733.01

Preparation of the following Corrective Action documents constitutes the "practice of engineering" as defined by ORC Section 4733.01:

Final Interim Measures Report
Corrective Measures Final Design
Corrective Measures Construction Completion Report
Corrective Measures Attainment of Groundwater Performance Standards Report
Corrective Measures Completion of Work Report

As such, the Permittee must ensure that these documents, as submitted to Ohio EPA, are stamped by a Professional Engineer licensed to practice in the State of Ohio.

MODULE F – POST-CLOSURE CARE

F. POST-CLOSURE CARE

The Underground Storage Tank (UST) area (former location of tank #s 18, 19, 20, and 21) was closed in accordance with the Permittee's interim standards closure/post-closure plan approved by Ohio EPA on September 30, 1992. The Permittee had to close this unit as a landfill due to residual waste constituents found in the tank cavity (soil and ground water) that could not be removed at the time the closure occurred. A landfill cap was never required since the cap would interfere with ongoing site-wide corrective action activities that were designed to address both the UST area contamination and site-wide contamination that resulted from the 1985 fire at the facility.

The post-closure care period for the unit began on March 29, 1993, the date that the Permittee completed closure of the unit. The notices required to be filed pursuant to OAC 3745-55-16 and 3745-55-19 were completed prior to Ohio EPA's acceptance of the Permittee's closure certification for the UST area. Post-closure care requirements for the UST area and any additional hazardous waste management units that must be closed with waste in place are covered by this module.

F.1 Unit Identification

The Permittee must provide post-closure care for the following hazardous waste management units, subject to the terms and conditions of this permit:

Type of Waste Unit	Unit No. or Other Designation	Maximum Waste Inventory	Description of Wastes Contained	Hazardous Waste No.	Year Post-closure began
Underground tank storage	UST #s 18, 19, 20, and 21	40,000 gallons	Distillation bottoms oil and sludge (tanks 18 and 19) and mineral spirits bottom sediment, water and process wastewater (tanks 20 and 21)	F002, D001, D006, D008, D018, D021, D027, D035, D039, and D040	1993

F.2 Post-closure Procedures and Use of Property OAC Rule 3745-55-17

- (a) The Permittee must conduct post-closure care for each hazardous waste management unit listed in Permit Condition F.1 above, to begin after completion of closure of the unit and continue for 30 years after that date. The 30-year post-closure care period may be shortened upon application and demonstration approved by Ohio EPA that the reduced period is sufficient to protect human health and the environment. The 30-year

post-closure care period may be extended if the Director finds that the extended period is necessary to protect human health and the environment.

- (b) The Permittee must maintain and monitor the ground water monitoring system and comply with all other applicable requirements of OAC Rules 3745-54-90 thru 3745-54-101 during the post-closure period.
- (c) The Permittee must implement the integrated groundwater monitoring requirements identified in Permit Condition Z. All other post-closure care activities must be conducted in accordance with the provisions of the post-closure plan.

F.3 Inspections

OAC Rule 3745-55-18(B)

The Permittee must inspect the components, structures, and equipment at the facility in accordance with the inspection schedule found in the post-closure plan.

F.4 Notices and Certification

OAC Rules 3745-55-19 and 3745-55-20

- (a) Not later than sixty (60) days after certification of closure of each hazardous waste disposal unit, the Permittee must submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Director, a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit of the facility. For hazardous wastes disposed of before January 12, 1981, the Permittee must identify the type, location, and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.
- (b) Within sixty (60) days after certification of closure of the first and the last hazardous waste disposal unit, the Permittee must:
 - (i) Record, in accordance with Ohio law, a notation on the deed to the facility property (or on some other instrument that is normally examined during the title search) that will in perpetuity notify any potential purchaser of the property that:
 - (1) The land has been used to manage hazardous wastes;
 - (2) Its use is restricted under OAC Rules 3745-55-10 thru 3745-55-20; and
 - (3) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility have been filed with the Director and Union Township, Licking County.
 - (ii) Submit a certification to the Director, signed by the Permittee, that the Permittee has recorded the notation specified in Permit Condition F.4(b)(i), including a copy of the document in which the notation has been placed.

- (c) If the Permittee wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, then the Permittee must request a modification to this permit in accordance with the applicable requirements in OAC Rules 3745-50-40 to 3745-50-66. The Permittee must demonstrate that the removal of hazardous wastes will satisfy the criteria of OAC Rule 3745-55-17(C).

By removing hazardous waste, the Permittee may become a generator of hazardous waste and must manage it in accordance with all applicable hazardous waste requirements.

If the Permittee is granted a permit modification or otherwise granted approval to conduct such removal activities, the Permittee may request that the Director approve either:

- (i) The removal of the notation on the deed to the facility property or other instrument normally examined during title search, or;
 - (ii) The addition of a notation to the deed or instrument indicating the removal of the hazardous waste.
- (d) Not later than sixty (60) days after completion of the established post-closure care period for each hazardous waste disposal unit, the Permittee must submit to the Director, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the Permittee and an independent, qualified, registered professional engineer. Documentation supporting the independent, qualified, registered professional engineer's certification must be furnished to the Director upon request until the Director releases the Permittee from the financial assurance requirements for post-closure care under OAC Rule 3745-55-45.

F.5 Financial Assurance
OAC Rule 3745-55-45

- (a) The Permittee must maintain financial assurance during the post-closure period and comply with all applicable requirements of OAC Rules 3745-55-40 through 3745-55-51.
- (b) The Permittee must demonstrate to the Director that the value of the financial assurance mechanism exceeds the remaining cost of post-closure care, in order for the Director to approve a release of funds.
- (c) The Permittee must submit itemized bills to the Director when requesting reimbursement for post-closure care.

F.6 Post-closure Permit Modifications
OAC Rule 3745-55-18(D)

The Permittee must request a permit modification to authorize a change in the approved post-closure plan. This request must be in accordance with applicable requirements of OAC Rules 3745-50-40 through 3745-50-66, and must include a copy of the proposed amended post-closure plan for approval by the Director. The Permittee must

request a permit modification whenever changes in operating plans or facility design affect the approved post-closure plan, there is a change in the expected year of final closure, or other events occur during the active life of the facility that affect the approved post-closure plan. The Permittee must submit a written request for a permit modification at least sixty (60) days prior to the proposed change in facility design or operation, or not later than sixty (60) days after an unexpected event has occurred which has affected the post-closure plan.

DRAFT

MODULE J - GROUND WATER MONITORING

J. RESERVED

[Please note that Module J was incorporated into Module Z – INTEGRATED GROUND WATER MONITORING]

DRAFT

MODULE Z - INTEGRATED GROUND WATER MONITORING

Z. INTEGRATED GROUND WATER MONITORING

This module presents permit conditions addressing the requirements for an integrated monitoring program at the Clean Harbors, Hebron (Clean Harbors) facility. Ground water contamination from the hazardous waste management units (HWMUs) regulated under OAC Rules 3745-54-90 through 3745-54-100 has commingled with ground water contamination from solid waste management units (SWMUs) regulated under OAC Rule 3745-54-101 at the site. Therefore, it is not practical to separate the HWMUs and SWMUs either for ground water monitoring purposes or remedial efforts. A more efficient multifaceted approach is to combine the relevant portions of OAC Rules 3745-54-100 and 54-101 for these areas. This combined approach is hereafter referred to as the Integrated Ground Water Monitoring Program or IGWMP.

The following Module Z integrates Clean Harbors, Hebron's monitoring programs for the Underground Storage Tank (UST) area (former location of tank #s 18, 19, 20, and 21), currently in post-closure care, with the Site-Wide Corrective Action monitoring program. Ground water monitoring is conducted in the interconnected shallow and deep sand and gravel hydrostratigraphic zones, which constitute the uppermost aquifer water-bearing zones.

Z.1 Applicability OAC Rule 3745-54-101

(a) The Permittee must comply with the applicable requirements in OAC Rule 3745-54-101 and institute corrective action as necessary to protect human health and the environment for all releases of hazardous wastes or constituents from any waste management unit/area at the facility, regardless of the time at which waste was placed in such unit/area for the following units/areas:

(i) The Underground Storage Tank (UST) area (former location of tank #s 18, 19, 20, and 21).

The UST Area was closed on September 30, 1992, in accordance with the interim standards of OAC Rule 3745-55. The area has been in post-closure as a landfill since March 29, 1993, due to residual waste constituents found in the tank cavity that could not be removed at the time of closure. The area has been previously monitored under OAC Rule 3745-54-91 to OAC Rule 3745-54-100.

(ii) Site-Wide Corrective Action Waste Management Unit (WMU)

The site-wide corrective action WMU consists of all contiguous property under the control of the owner or operator at the time of Permit issuance in accordance with Subtitle C of RCRA. The area is undergoing a risk-based investigation and cleanup under OAC Rule 3745-54-101 and Permit Conditions E.9(a).

(b) Present Ongoing Investigations – Reserved

- (c) The owner or operator must implement corrective actions beyond the facility property boundary, where necessary, to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the director that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for such action must be provided.

Z. 2 Ground Water Remediation Standard (GWRS)

The GWRS has been established in this Permit due to hazardous constituents being detected in the ground water. The GWRS is comprised of four components: the list of hazardous constituents to be monitored; a “containment” (clean-up) standard for each of those constituents; the point on the property where compliance with those standards must be met; and the time period during which the GWRS must be met. The Permittee must ensure that the hazardous constituents, or constituents detected in the ground water from a unit/area listed in this Permit Condition do not exceed the containment standards in the uppermost aquifer underlying the units/areas beyond the compliance point during the permit period. If an exceedance does occur, the Permittee must respond with any necessary corrective action to bring the ground water back into compliance with those standards.

(a) List of Hazardous Constituents and Ground Water Containment Standards

The Permittee must monitor the ground water to determine whether units/areas are in compliance with the GWRS. The hazardous constituents listed in the Appendix to OAC Rule 3745-54-98 detected in the ground water above their respective PQLs underlying a unit/area and reasonably expected to be contained in or derived from the waste contained in the unit/area to which the GWRS applies and their ground water containment standards are listed in Table 1 below:

Table 1

Constituent	CAS	Risk-Based Numbers ^a		MCL ^d (µg/L)	Groundwater Containment Standard (µg/L)
		Non-Cancer ^b (µg/L)	Cancer ^c (µg/L)		
Acetone	67-64-1	14,000	NA		1.4E+04
Acetonitrile	75-05-8	130	NA		1.3E+02
Acetophenone	98-86-2	1,900	NA		1.9E+03
Benzene	71-43-2	33	4.6	5	5.0E+00
Benzyl Alcohol	100-51-6	2,300	NA		2.0E+03
Bis(2-ethylhexyl)phthalate	117-81-7	400	56	6	6.0E+00
2-Butanone (MEK)	78-93-3	5,600	NA		5.6E+03
Butylbenzene, n-	104-51-8	1,000	NA		1.0E+03
Butyl Benzyl Phthalate	85-68-7	1,700	160		1.6E+02
Carbon Disulfide	75-15-0	810	NA		8.1E+02
Chloroethane	75-00-3	21,000	NA		2.1E+04
Dichlorobenzene, 1,4-	106-46-7	570	4.8	75	7.5E+01
Dichloroethane, 1,1-	75-34-3	3,800	28		2.8E+01
Dichloroethane, 1,2-	107-06-2	1.7	13	5	5.0E+00
Dichloroethylene, 1,1-	75-35-4	280	NA	7	7.0E+00
Dichloroethylene, 1,2-cis-	156-59-2	36	NA	70	7.0E+01
Dichloroethylene, 1,2-trans-	156-60-5	360	NA	100	1.0E+02
Dioxane, 1,4-	123-91-1	570	4.6		4.6E+00
Methylene Chloride	75-09-2	110	110	5	5.0E+00
Methyl-2-pentanone, 4- (MIBK)	108-10-1	6,300	NA		6.3E+03
Naphthalene	91-20-3	6.1	1.7		1.7E+00
Pyridine	110-86-1	20	NA		2.0E+01
Tetrachloroethylene	127-18-4	41	110	5	5.0E+00
Thallium	7440-28-0	0.2	NA	2	2.0E+00
Toluene	108-88-3	1,100	NA	1,000	1.0E+03

Table 1 (continued)

Constituent	CAS	Risk-Based Numbers ^a		MCL ^d (µg/L)	Groundwater Containment Number (µg/L)
		Non- Cancer ^b (µg/L)	Cancer ^c (µg/L)		
Trichlorobenzene, 1,2,4-	120-82-1	4.0	12	70	7.0E+01
Trichloroethane, 1,1,1-	71-55-6	8,000	NA	200	2.0E+02
Trichloroethane, 1,1,2-	79-00-5	2.8	4.9	5	5.0E+00
Trichloroethylene	79-01-6	2.8	4.9	5	5.0E+00
Trimethylbenzene, 1,2,4	95-63-6	15	NA		1.5E+01
Trimethylbenzene, 1,3,5-	108-67-8	120	NA		1.2E+02
Vinyl Chloride	75-01-4	44	0.19	2	2.0E+00
Xylenes	1330-20-7	190	NA	10,000	1.0E+04

Notes:

- If more than one constituent with a risk-based groundwater containment number is detected, a cumulative adjustment must be conducted.
Constituents with non-cancer endpoints must not exceed a cumulative Hazard Index of 1.
Constituents with a cancer end point must not exceed a cumulative Cancer Risk of 1.0E-05.
- Non-Cancer values derived at a target hazard quotient of 1.
- Cancer values derived at a target cancer risk of 1.0E-05.
- Constituents with an MCL are not to be cumulatively adjusted.
- Metals and semi-volatile constituents will only be monitored once every 3 years.

In addition to the hazardous constituents listed above, the Permittee must monitor the following parameters:

Ground Water Quality or Field Parameters:

Temperature, specific conductance, and pH.

For each of these field constituents, the Permittee shall present a graph of analysis results versus time (current analysis result and all applicable historical analysis results) and provide a qualitative discussion concerning any anomalies, trends, or changes in ground water quality.

(b) Point of Compliance (POC)

The Permittee has integrated the ground water monitoring programs site-wide due to their close proximity to each other. The combined POC at which the GWRS applies is identified in Table 2. The Permittee must monitor the following wells: H-4SR, H-6SR, H-7S, H-8S, H-8D, H-14SR, H-15S, H-15D, H-22DR, and P-2 representing the quality of ground water passing the POC.

The Permittee must also monitor the ground water, as necessary, between the POC and the downgradient

property boundary to determine if the containment standard has been exceeded at any point between the POC and the downgradient property boundary.

(c) Permit Period

The permit period, during which the GWRS applies, is equal to 10 years. The permit period must begin November 18, 2015, and must end on November 17, 2025. During the permit period, the Permittee must establish and implement a monitoring program that will detect, respond, and report as necessary to protect human health and the environment from all releases of hazardous constituents above the containment standards at the POC and between the POC and the downgradient facility boundary. The Permittee shall implement corrective action beyond the facility property boundary, where necessary, to protect human health and the environment.

Z.3. Well Location, Installation, Maintenance, and Removal

(a) The Permittee's ground water monitoring system must consist of a sufficient number of wells, installed and screened at appropriate locations and depths to yield ground water samples from the shallow and deep zones which are considered to be the uppermost aquifer. The samples must:

- (i) Represent the quality of background water that has not been affected by leakage from the units/areas;
- (ii) Represent the quality of ground water passing the POC, between the POC and the downgradient property boundary, and beyond the property boundary, where necessary, to protect human health and the environment;
- (iii) Allow for the detection and measurement of contamination for all potential release pathways to the uppermost aquifer from the waste management units/areas based on site-specific hydrogeologic characterization when hazardous constituents have migrated from the unit/area to the uppermost aquifer; and
- (iv) Demonstrate the effectiveness of any corrective action program. The well system should be as effective in determining compliance with the GWRS and in determining the success of the corrective action program.

(b) The monitoring system consists of the ground water wells on the following list in Table 2:

Table 2		
Well Identifier	Upgradient/Downgradient	Purpose

H-1S	Upgradient	Background
H-1DDR	Upgradient	Background
H-4SR	Downgradient	POC
H-6SR	Downgradient	POC
H-7S	Downgradient	POC
H-8S	Downgradient	POC
H-8D	Downgradient	POC
H-9S	Downgradient	OEW
H-10S	Downgradient	OEW
H-11S	Downgradient	OEW
H-12S ²	On-Site Downgradient	Beyond POC ²
H-12D ²	On-Site Downgradient	Beyond POC ²
H-14SR	Downgradient	POC
H-15S	Downgradient	POC
H-15D	Downgradient	POC
H-19SR ²	Downgradient	Beyond POC ²
H-20S	On-Site Downgradient	Beyond POC
H-20D	On-Site Downgradient	Beyond POC
H-22DR	Downgradient	POC
H-23S	On-Site Downgradient	Beyond POC
H-24S	On-Site Downgradient	Beyond POC
H-25D ²	Off-Site Downgradient	Off-Site CA ²
H-26S	Off-Site Downgradient	Off-Site CA
H-26D	Off-Site Downgradient	Off-Site CA
H-28S	Downgradient	OEW
H-28D	Downgradient	OEW
H-29S	Off-Site Downgradient	Off-Site CA
H-29D	Off-Site Downgradient	Off-Site CA
H-30S ²	Off-Site Downgradient	Off-Site CA ²
H-30D ²	Downgradient	Off-Site CA ²
P-2	Downgradient	POC
RW-1	Downgradient	Recovery Well
RW-2	Downgradient	Recovery Well
RW-4	Off-Site Downgradient	Recovery Well
RW-5	Off-Site Downgradient	Recovery Well
RW-6 ^{1,2}	Downgradient	Recovery Well ^{1,2}
RW-7	Downgradient	Recovery Well

Notes: POC = Point of Compliance

Beyond POC = Between POC and the downgradient property boundary

OEW = Onsite Effectiveness Monitoring Well (corrective measures)

Off-Site CA = Off-Site Corrective Action Effectiveness Monitoring

¹ = Recovery Well Not Currently Operating

² = Wells subject to reduced sampling frequency (to be sampled annually)

Well Name Suffixes: S = shallow zone, D = deep zone, R = replacement well

- (c) Wells identified in Permit Condition Z.3(b) must be cased in a manner that maintains the integrity of the monitoring well bore hole and complies with the detailed plans and specifications presented in Section 5 of the Permit Application. The casing must be screened and packed with gravel or sand, where necessary, to enable collection of ground water samples. The annular space above the sampling depth must be sealed to prevent contamination of samples and the ground water.

Section 5, Appendix 5-2 of the Permit Application contains ground water monitoring well construction diagrams which illustrate compliance with this Permit Condition.

- (d) The Permittee must remove or replace any monitoring well in Permit Condition Z.3(b) in accordance with the Appendix to OAC Rule 3745-50-51 permit modification process. Each change must be accompanied by a revised map.
- (e) Whenever any of the wells specified in Permit Condition Z.3(b) are replaced, the Permittee must demonstrate to Ohio EPA that the ground water quality at the replacement well meets the criteria in Permit Condition Z.3(a) within a ninety (90) day period of the date of replacement using means appropriate to the reason for replacement.

Z.4. Sampling and Analysis Procedures

- (a) The Permittee must implement an IGWMP per Section 5, Appendix 5-1 of the Permit Application. This program includes consistent sampling and analysis procedures designed to ensure monitoring results that provide a reliable indication of ground water quality below the units/areas and is in compliance with this Permit Condition.
- (b) The Permittee's IGWMP per Section 5, Appendix 5-1 of the Permit Application includes sampling and analytical methods that are appropriate for ground water sampling and that accurately measure hazardous constituents in ground water samples.
- (c) Field and analytical data must be validated in a manner as comprehensive as the procedures specified in Ohio EPA's Tier I data validation guidance.

Z.5. Ground Water Surface Elevation

The Permittee must determine the ground water surface elevation at each well identified in the table in Permit Condition Z.3(b) each time ground water is sampled using the methods in Section 5 of the Permit Application.

Z.6. Sampling Frequency

Data on each hazardous constituent specified in Permit Condition Z.2(a) will be collected from all wells listed in Permit Condition Z.3(b). The sampling procedure and interval for each constituent are described in Section 5 of the Permit Application.

- (a) The number and kinds of samples collected to establish background must be appropriate for the form of statistical test employed, following generally accepted statistical principles.
- (b) The sample size must be as large as necessary to ensure with reasonable confidence that a contaminant release to ground water from a facility will be detected.
- (c) Background data must be updated as necessary in accordance with Section 5 of the Permit Application to provide an accurate representation of background ground water quality. New or revised background values must be established in the permit through the permit modification process in OAC Rule 3745-50-51.

Z.7. Statistical Procedures

The Permittee must use the following statistical procedures in evaluating ground water monitoring results for each hazardous constituent in Permit Condition Z.2(a) in each well in Permit Condition Z.3(b) to identify statistically significant evidence of contamination, the exceedance of a containment standard, and/or the effectiveness of corrective action:

- (a) For those constituents for which background values have not been collected and established at the time of Permit Application, the Permittee must choose and submit to Ohio EPA the appropriate statistical method within 45 days after the receipt of the last background sampling event data through the permit modification process in OAC Rule 3745-50-51.

For those constituents with previously collected background values, the Permittee must conduct statistical procedures as presented in Section 5 of the Permit Application.

- (b) The Permittee's statistical procedures must be protective of human health and the environment, provide reasonable confidence that the migration of hazardous constituents from a unit/area into and through the aquifer will be indicated, and will determine whether such leakage of hazardous constituents into the ground water exceeds specified containment standards. The statistical procedures must be as protective as those recommended in the U.S. EPA's March 2009, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities (Unified Guidance)* and must comply with the following performance standards:
 - (i) The statistical evaluation of ground water monitoring data must be conducted separately for each hazardous constituent specified in Permit Condition Z.2(a) in each well.
 - (ii) The statistical method must be appropriate for the distribution of the data used to establish background or containment standards. If the distribution of the constituents differ, more than one statistical method may be needed.
 - (iii) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentration or a containment standard, the test must be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type 1 experimentwise error rate for each testing period must be

no less than 0.05; however, the Type 1 error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance and prediction intervals or control charts.

The statistical method must provide a reasonable balance between the probability of falsely identifying a non-contaminating and/or exceeding unit/area and the probability of failing to identify a contaminating and/or exceeding unit/area.

- (iv) If a control chart approach is used, the specific type of control chart and its associated parameter values must be proposed by the Permittee and approved in the permit.
- (v) If a tolerance or prediction interval procedure is used, the levels of confidence, and for tolerance intervals, the percentage of the population that the interval must contain, must be proposed by the Permittee and approved in the permit. These parameters must be determined after considering the number of samples in the background data base, the data distribution, and the range of concentration values for each constituent of concern.
- (vi) The statistical method must account for data below the limit of detection with one or more statistical procedures. Any practical quantitation limit (PQL) approved in the permit that is used in the statistical method must be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the Permittee.
- (vii) If necessary, the statistical method must include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

Z.8. Operating Record and Reporting
OAC Rules 3745-50-58 (H-L); 3745-54-73(B)(5&6); 54-77(C); 3745-54-97(J) and 54-100(G)

(a) Operating Record

The Permittee must enter all of the following information obtained in accordance with Permit Module Z. in the operating record:

- (i) Ground water monitoring data collected in accordance with this permit including actual levels of constituents.
- (ii) The laboratory results from each of the wells and their associated qualifiers including the laboratory sheets for the full volatile and semi-volatile analyses (must include method codes, method detection limits, and units of measurement);
- (iii) The date each well was sampled (tabulated);
- (iv) The date, time, and identification of all blanks and duplicates;

- (v) Any field log documentation of deviation from the procedures in the, Sampling and Analysis Plan procedures in Section 5 of the Permit Application, including documentation of parameter omissions during the sampling event;
- (vi) The date the Permittee received the results from the laboratory;
- (vii) The date the owner or operator completed their review of the analytical laboratory's verification of the accuracy and precision of the analytical data and determined its quality;
- (viii) The results of the data validation review per Permit Condition Z.8(a)(vi) including: report completeness, chain of custody, sample receipt form, signed statement of validity, technical holding time review, data qualifiers including their definitions, dilutions, blank data, spikes, spike recovery %, surrogate recovery, and an explanation of any rejected results;
- (ix) Results of all blanks and duplicates (trip, field, equipment, and method);
- (x) Results of the field parameters;
- (xi) The statistical evaluation of the data (must include all computations, results of statistical tests, and date the statistical evaluation was completed);
- (xii) Any change in well status (i.e., going from unaffected to affected status and vice versa);
- (xiii) Ground water surface elevations taken at the time of sampling each well;
- (xiv) Data and results of the annual determination of the ground water flow rate and direction;
- (xv) The results of the last three years of all inspections required under OAC Rule 3745-54-15(D) related to ground water monitoring and equipment as required under OAC Rule 3745-54-73(B)(5);
- (xvi) Evaluation of the efficiency of any corrective actions performed to bring the ground water quality into compliance with the GWRS per Permit Condition Z.2.

(b) Annual, Semi-Annual & Other Periodic Required Reporting

(i) Required Annual Reporting

The Permittee must submit an annual report to the Director by March 1st of the following year. The annual reports must reference the titles and dates of any other periodic reports required by the permit or any updates to those reports but generally do not need to include duplicates of hard copies previously submitted.

The annual reports must include, at a minimum, the analytical results required by Permit Conditions

Z.6 and Z.9, the ground water elevation data required by Permit Condition Z.5 and Z.8(a)(xii) & (xiii), and the results of any statistical analyses required by Permit Condition Z.7 and Z.9. In addition, a copy on disk of all ground water and blank data must be submitted electronically in the format supplied by the Director, a hard copy of well-specific information (location (latitude and longitude), depth, construction, etc.) for any new/replacement wells, and any other information specified in the instructions for the annual report not addressed in this Permit Condition must be submitted in accordance as required by OAC Rules 3745-54-97(J).

(ii) Required Corrective Action Annual Reporting

The Permittee must report, in writing, annually to the Director on the effectiveness of the corrective action program. This report must be submitted on March 1st of each year until the corrective action program has been completed. Each report must reference the titles and dates of any other periodic reports required by the permit or any updates to those reports, but generally does not need to include duplicates of hard copies previously submitted. The annual reports must include, at a minimum, the analytical results required by Permit Conditions Z.5, Z.6, and Z.9, and the results of the statistical analyses required by Permit Condition Z.7.

(iii) Other Reports

The Permittee must comply with any other reporting requirements that become necessary under Permit Condition Z.9 in accordance with the schedules covered by that permit condition and as required by OAC Rule 3745-54-77(C).

Z.9. Integrated Ground Water Monitoring Program
OAC Rules 3745-54-101

- (a) The Permittee is required to establish and implement a ground water corrective action program under OAC Rule 3745-54-101 and must take corrective action, as necessary, to ensure that units/areas are in compliance with the GWRS as specified in Permit Condition Z.2.
- (b) The Permittee must implement, as necessary, a corrective action program that prevents hazardous constituents specified in Permit Condition Z.2(a) from exceeding their respective containment standards specified in Permit Condition Z.2(a) at the POC specified in Permit Condition Z.2(b), between the POC and the downgradient property boundary, and beyond the property boundary during the permit period specified in Permit Condition Z.2(c) by removing the hazardous constituents or by treating them in place.

The corrective action shall include the operation of the ground water recovery system in Permit Condition E.9(a).

(c) Site Characterization - Reserved

- (d) The Permittee must establish and implement a ground water monitoring program to fully characterize the contaminated ground water as required by OAC Rule 3745-50-44(B)(8)(a) and to demonstrate the

effectiveness of the corrective action program. Ground water monitoring must be effective in determining compliance with the GWRS in Permit Condition Z.2 and in determining the success of any corrective action program in this condition. The ground water monitoring program must include:

- (i) Installation and maintenance of a ground water monitoring system at the POC as defined in Permit Condition Z.2(b), and, as necessary to protect human health and the environment, between the POC and the downgradient property boundary and beyond the property boundary. The ground water monitoring system must comply with the requirements in Permit Condition Z.3.
- (ii) Collection, preservation, and analysis of samples pursuant to Permit Conditions Z.4, Z.5, and Z.6. Statistical analysis must be conducted pursuant to Permit Condition Z.7.
- (iii) The Permittee must conduct a sampling program semi-annually for each chemical parameter and hazardous constituent specified in Permit Condition Z.2(a) from each well specified in Permit Condition Z.3(b) during the permit period and any extensions due to corrective action implementation.

Any additional sampling shall be taken at an interval (frequency) that assures, to the greatest extent feasible, that an independent sample is obtained, by reference to the uppermost aquifer's effective porosity, hydraulic conductivity, hydraulic gradient, and the fate and transport characteristics of the potential contaminants.

- (iv) The Permittee shall compare the concentration of each hazardous constituent measured at each well at the POC specified in Condition Z.2(b), between the POC and the downgradient facility boundary, and beyond the facility boundary, with its containment standard each time water quality is determined in accordance with procedures specified in Condition Z.7.

Wells beyond the property boundary shall be sampled where necessary to protect human health and the environment, unless the Permittee demonstrates to the Agency that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such action. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis.

- (v) The Permittee must maintain a record of ground water analytical data as measured and in a form necessary for the determination of statistical significance under Permit Conditions Z.7 and Z.8 for the permit period.
- (vi) The Permittee must determine the ground water flow rate and direction in the uppermost aquifer at least annually using the procedures specified in Section 5 of the Permit Application.
- (vii) Annual Appendix IX Sampling - Reserved

(e) Response Action

- (i) Based on the results of the Permittee's ground water monitoring program, the containment standards detailed in Permit Condition Z.2(a) are not presently being exceeded at the POC. Therefore, the Permittee shall continue under routine IGWMP monitoring until such time as the GWRS detailed in Permit Condition Z.2 is exceeded;
- (ii) If the GWRS, detailed in Permit Condition Z.2, is exceeded, the Permittee must submit a schedule within ninety (90) days from the date of determination of exceedance for the submittal of detailed plans and an engineering report describing the corrective actions to be taken and a description of how the ground water monitoring program will assess the adequacy of the corrective action;
- (iii) The Permittee must submit the results of the schedule activities in Permit Condition Z.9(e)(ii) within one-hundred twenty (120) days from the date of determination of exceedance of the GWRS;
- (iv) Corrective actions shall be implemented within one-hundred eighty (180) days from the time the GWRS was exceeded to remove or treat in place any hazardous constituents specified in Permit Condition Z.2(a) that exceed their respective containment standards specified in Permit Condition Z.2(a) at the POC;
- (v) The Permittee must continue corrective action measures during the permit period to the extent necessary to ensure that the GWRS is not exceeded. If the Permittee is conducting corrective action at the end of the period, the Permittee must continue corrective action for as long as necessary to achieve compliance with the GWRS.
- (vi) Once all containment standards listed in Permit Condition Z.2(a) have not been exceeded for three consecutive years at any well in Permit Condition Z.3(b) at the POC or downgradient beyond the POC for any parameter listed in Permit Condition Z.2(a), then the Permittee may submit a permit modification under OAC Rule 3745-50-51 to cease corrective action monitoring and continue under a reduced monitoring program.
- (f) The Permittee must report in writing to the Director on the effectiveness of the corrective action monitoring program annually according to Permit Condition Z.8.
- (g) If the Permittee determines the corrective action program established by this permit no longer satisfies the requirements of OAC Rule 3745-54-101, the Permittee must, within ninety (90) days of that determination, submit an application for a permit modification per OAC Rule 3745-50-51 to make any appropriate changes to the program.
- (h) Other Source Demonstrations

If the Permittee determines, pursuant to Permit Condition Z.9(a), (b), (c) or (d), that either a hazardous constituent, not previously detected in a specific well, has been confirmed in that well, or a containment standard specified in Permit Condition Z.2(a) has been exceeded at any well, a demonstration may be submitted to the Director that an off-site source caused the presence or exceedance or that the presence or

exceedance resulted from error in sampling, analysis, or evaluation. In such cases, the Permittee must:

- (i) Notify the Director in writing within seven (7) days of determining the presence or exceedance that such a demonstration will be made.
- (ii) Within 90 days of determining the presence or exceedance, submit a report to the Director which successfully demonstrates that a source other than a regulated unit caused the presence or exceedance, or that the presence or exceedance resulted from error in sampling, analysis, or evaluation.
- (iii) Within 90 days of determining the presence or exceedance, submit to the Director an application for a permit modification to make any appropriate changes to the monitoring program at the facility.
- (iv) The Permittee may make this demonstration in addition to, or in lieu of, submitting a permit modification application for changes to the corrective action ground water monitoring program. However, the same period of ninety (90) days is required for both a successful “Other Source Demonstration” and the submittal of the permit modification application. The Permittee is not relieved of the ninety (90) day requirement to submit a permit modification unless the “Other Source Demonstration” is deemed successful by Ohio EPA prior to the ninety (90) day time limit.
- (v) Continue to monitor in accordance with the approved IGWMP at the facility.

END OF PERMIT CONDITIONS