



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
ASHTABULA COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 02-20662

Fac ID: 0204010458

DATE: 1/17/2006

Ashtabula River Partnership Landfill
Robert W. Rule
450 Montbrook Lane
Knoxville, TN 37919

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

NEDO



**Permit To Install
Terms and Conditions**

**Issue Date: 1/17/2006
Effective Date: 1/17/2006**

FINAL PERMIT TO INSTALL 02-20662

Application Number: 02-20662
Facility ID: 0204010458
Permit Fee: **\$2700**
Name of Facility: Ashtabula River Partnership Landfill
Person to Contact: Robert W. Rule
Address: 450 Montbrook Lane
Knoxville, TN 37919

Location of proposed air contaminant source(s) [emissions unit(s)]:
**600 State Rd.
Ashtabula, Ohio**

Description of proposed emissions unit(s):
Landfill operations, roadways and parking area, and soil storage piles.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon

Ashtabula River Partnership Landfill
PTI Application: 02-20662
Issued: 1/17/2006

Facility ID: 0204010458

the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

Ashtabula River Partnership Landfill
PTI Application: 02-20662
Issued: 1/17/2006

Facility ID: 0204010458

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

Ashtabula River Partnership Landfill
PTI Application: 02-20662
Issued: 1/17/2006

Facility ID: 0204010458

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	57.0
OC	0.88

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F001 - landfill for treated river sediment disposal - soil excavation operation; load-in and load-out operations of soil, aggregate and sand materials; and grading operations of soil, aggregate and sand	OAC rule 3745-31-05(A)(3)	Visible particulate emissions (PE) shall not exceed 10% opacity, as a 3-minute average. Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust must be employed; see Sections A.2.b. through A.2.d. The fugitive PE rate shall be limited to 32.8 tons/year. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-08(B).
	OAC rule 3745-17-07(B)(1)	The visible emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	The requirements established pursuant to this rule are equivalent to the requirements established pursuant to OAC rule 3745-31-05(A)(3).

polymer feed to polymer/water
 mix vessel

OAC rule 3745-31-05(A)(3)

There shall be no visible PE from the stack serving this operation and no visible emissions of fugitive dust. A dust control device must be employed during normal operations. The PE rate shall be limited to 0.0070 lb/hr.

OAC rule 3745-17-07(A)
 OAC rule 3745-17-11

The emission limitations specified by these rules are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

the sediment slurry pipeline
 transfer and geotextile tube
 filling of sediment slurry
 operations

OAC rule 3745-31-05(A)(3)

Best available control measures to minimize organic compound (OC) emissions must be employed; see Sections A.2.e through A.2.g. The fugitive organic compound (OC) emissions shall be limited to 0.88 ton/year.

2. Additional Terms and Conditions

Fugitive Dust Control Measures for Excavation, Load-in/Load-out and Grading Operations

2.a The material handling operation(s) that are covered by this permit and subject to the above-mentioned requirements are listed below:

(Op. No. 1) excavation of soil and sub-soil operation;

(Op. No. 2) load-out of excavated materials operation;

(Op Nos. 4, 6-9, 18, 19, 21 & 23)

load-in and load-out operations during installation of landfill liner and landfill cover, and during installation of construction supports; and

(Op. Nos. 1, 22 & 24) grading of soil, aggregate and sand operations.

- 2.b** The permittee shall employ best available control measures for the above-identified material handling operation(s) for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

<u>material handling operation(s)</u>	<u>control measure(s)</u>
excavation of soil(s)	treat each material with water and/or any other suitable dust suppression chemicals to control dust emissions during excavation operations
load-out of excavated materials	treat each material with water and/or any other suitable dust suppression chemicals to control dust emissions during load-out of excavated materials, and minimize drop height distance from front-end loader to truck bed during loading operations of excavated materials
other load-in & load-out operations	minimize drop height distance from front-end loader to the ground surface during loading operations for installation of landfill liner and landfill cover, and during installation of construction supports
grading operations	treat each material with water and/or any other suitable dust suppression chemicals to control dust emissions during grading operations during landfill liner installation and landfill cover installation

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.c** For each material handling operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during the operation of the material handling operation(s) until further observation confirms that use of the control measure(s) is unnecessary.
- 2.d** Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

OC Emissions Control Measures for Sediment Slurry Pipeline Transfer and

Geotextile Tube Filling of Sediment Slurry Operations

- 2.e A polymer/water mixture will be added in-line to the sediment slurry pipeline prior to sediment slurry feed into geotextile tubes.
- 2.f Geotextile tubes shall be employed for treated sediment disposal. The geotextile tubes shall be of sufficient strength to retain treated sediments and of sufficient quality to retain OC contaminants and metals contaminants.

B. Operational Restrictions

- 1. The permittee shall employ a dust control device whenever polymer material is transferred to the polymer/water mix vessel.

C. Monitoring and/or Recordkeeping Requirements

Excavation, Load-in/Load-out and Grading Operations

- 1. Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

<u>material handling operation(s)</u>	<u>minimum inspection frequency</u>
excavation of soil(s)	daily
load-out of excavated materials	daily
other load-in & load-out operations	daily
grading operations	daily

- 2. The above-mentioned inspections shall be performed during representative, normal operating conditions.
- 3. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
- 4. The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed;
 - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s):

- c. the dates the control measure(s) was (were) implemented; and
- d. on a calendar quarter basis, the total number of days the control measure(s) was (were) implemented.

The information in 4.d. shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

Polymer Feed Operation

- 5. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit and any fugitive egress points. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks would be sufficient to ensure compliance with the above-mentioned applicable requirements.

- 6. The permittee shall maintain daily records that document any time periods when the dust control device was not in service when polymer material was transferred to the polymer/water mix vessel.
- 7. The permittee shall maintain records of the actual operating hours of the soil/sub-soil excavation operation, on a monthly basis.
- 8. The permittee shall maintain records of the actual operating hours of grading operations during the installation of the landfill cover, on a monthly basis.

D. Reporting Requirements

Excavation, Load-in/Load-out and Grading Operations

1. The permittee shall submit quarterly deviation reports that identify any of the following occurrences:
 - a. each day during which an inspection was not performed by the required frequency; and
 - b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

Polymer Feed Operation

2. The permittee shall submit semiannual deviation reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and any fugitive egress points and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month periods.
3. The permittee shall notify the Ohio EPA Northeast District Office in writing of any daily record showing that the dust control device was not in service when polymer material was transferred to the polymer/water mix vessel. The notification shall include a copy of such record and shall be sent to the Northeast District Office within 30 days after the event occurs.

E. Testing Requirements

1. Emission Limitation: Visible emissions of fugitive dust shall not exceed 10 percent opacity as a 3-minute average from the excavation, load-in/load-out and grading operations.

Applicable Compliance Method: If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

2. Emission Limitation: No visible PE from the stack and no visible emissions of fugitive dust egress point(s) serving the polymer feed operation.

Applicable Compliance Method: For both the stack emissions and the fugitive dust

emissions, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22 and the procedures specified in OAC rule 3745-17-03(B)(4).

3. Emission Limitation: 32.8 tons/yr of fugitive PE from the excavation, load-in/load-out and grading operations.

Applicable Compliance Method: Compliance may be based upon the following methods:

- a. Determination of the PE rate from the excavation of soil(s) and subsoil(s) may be based on the following equation(s):

$$\text{PE}_{\text{soils excavation}} = k \times 5.7 \times s^{1.2} \times 1/M^{1.3} \times (1 - \text{CE}) \times \text{HRS/yr} \times \text{ton PE/2000 lbs PE.}$$

where:

PE_{soils excavation} = particulate emissions from soil(s) and subsoil(s) excavation, which is 7.78 ton/yr PE. The calculation is for particulate matter up to a diameter of 30 micrometers (PM₃₀) from overburden removal with a bulldozer, (AP-42) Compilation of Air Pollutant Emission Factors, Vol. I, Fifth Ed., U.S. Environmental Protection Agency, Office of Air & Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, NC. Table 11.9-1, AP-42 Chap. 11.9 (7/98).

k = particle size factor, which is 1.0 for PM₃₀, which is assumed to represent the total suspended particulate, Table 11.9-1, AP-42 Chap. 11.9 (7/98).

s = material silt content, which is 40% as noted in the application for a permit to install.

M = material moisture content, which is 30% as noted in the application for a permit to install.

CE = control efficiency of dust control measure, which is 69% for the application of water and/or any other suitable dust suppression chemicals at a grading operation, Table 3.6 Control Efficiencies for Control Measures from Construction/Demolition found in West Regional Air Partnership (WRAP) Fugitive Dust Handbook.

Emissions Unit ID: **F001**

HRS = hours of operation per year, which could be a maximum of 8760 hrs/yr.

- b. Determination of the PE rate from the worst case load-out of excavated materials may be based on the following equation(s):

$$\text{PE}_{\text{load-out excavation}} = k \times 1.16 \times 1/M^{1.2} \times \text{tons}_{\text{excavation/yr}} \times \text{ton PE}/2000 \text{ lbs PE} \times (1 - \text{CE}).$$

where:

PE_{load-out excavation} = particulate emissions from load-out of excavated materials, which is 0.7 ton/yr PE. The calculation is for PM₃₀ from coal load-out into a truck, Table 11.9-1, AP-42 Chap. 11.9 (7/98).

k = particle size factor, which is 1.0 for PM₃₀, Table 11.9-1, AP-42 Chap. 11.9 (7/98).

tons_{excavation/yr} = maximum excavated material weight per year, which is 392,040 tons/yr as noted in the application for a permit to install.

CE = control efficiency of dust control measure, which is 74% for the application of water and/or any other suitable dust suppression chemicals at construction operations, Table 3.6 Control Efficiencies for Control Measures from Construction/Demolition found in WRAP Fugitive Dust Handbook.

- c. Determination of the PE rate from the load-in and load-out operations during the installation of the landfill liner, the landfill cover and construction supports, may be based on the following equation(s):

$$PE_{\text{LOAD-IN OR LOAD-OUT}} = k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4} \times \text{ton}_{\text{MTLS}}/\text{yr} \times \text{ton PE}/2000 \text{ lb PE} \times (1 - \text{CE}).$$

where:

$PE_{\text{LOAD-IN OR LOAD-OUT}}$ = PE rate from load-in or load-out operations, which are listed as operation nos. 4, 6-9, 18, 19, 21 and 23 in Table 8.1 in the application for a permit to install, and which is a sum total of 0.21 ton/yr PE. The calculation is for PM_{30} from AP-42 Eq. 1, Chap. 13.2.4 (1/95).

k = particle size multiplier, usually 1 for total PE.

U = mean wind speed, which is 10.7 miles/hr as determined from local weather data.

M = material moisture content, which depends on the material.

$\text{ton}_{\text{MTLS}}/\text{yr}$ = the maximum tons per year of each material that is loaded.

CE = control (measure) efficiency, in percent, which is 25% for maintaining a low drop height, (Ohio RACM) Reasonably Available Control Measures for Fugitive Dust Sources, Ohio Environmental Protection Agency, Office of Air Pollution Control, Division of Engineering, Columbus, OH, September, 1980; Ohio RACM Table 2.1.2-8 (9/80).

- d. Determination of the worst case PE rate from grading operations during the installation of the landfill liner and the landfill cover, may be based on the following equation(s):

$$PE_{\text{grading}} = k \times 5.7 \times s^{1.2} \times 1/M^{1.3} \times (1 - \text{CE}) \times \text{HRS}/\text{yr} \times \text{ton PE}/2000 \text{ lbs PE}.$$

where:

PE_{grading} = particulate emissions, which are listed as operation nos. 1, 22 and 24 in Table 8.1 in the application for a permit to install, and which is a sum total of 26.8 ton/yr PE. The calculation is for PM_{30} from overburden removal with a bulldozer, Table 11.9-1, AP-42 Chap. 11.9 (7/98).

k = particle size factor, which is 1.0 for PM_{30} , which is assumed to represent the total suspended particulate, Table 11.9-1, AP-42 Chap. 11.9 (7/98).

s = material silt content.

M = material moisture content.

CE = control efficiency of dust control measure, which is 69% for the application

of water and/or any other suitable dust suppression chemicals at a grading operation, Table 3.6 Control Efficiencies for Control Measures from Construction/Demolition found in WRAP Fugitive Dust Handbook.

HRS = hours of operation per year, which could be a maximum of 8760 hrs/yr.

- e. Determination of the actual, total PE rate, PE_{total}, may be determined from the following equation:

$$\text{PE}_{\text{total}} = \text{PE}_{\text{soils excavation}} + \text{PE}_{\text{load-out excavation}} + \text{PE}_{\text{LOAD-IN OR LOAD-OUT}} + \text{PE}_{\text{grading}}.$$

4. Emission Limitation: 0.0070 lbs/hr PE from the polymer feed operation.

Applicable Compliance Method: Compliance may be based upon the following equation(s) for a determination of the worst case PE rate from the polymer feed operation:

$$\text{PE (Polymer Feed)} = \text{SS} \times \text{Conc}_{\text{Polymer}}/10^6 \times \text{Conc}_{\text{Dust}}/100 \times \text{EF} \times (1 - \text{CE}/100).$$

where:

E(Polymer Feed) = the PE rate from the polymer feed operation, in pounds per hour, which is a maximum of 0.0056 lb PE/hr.

SS = sediment slurry throughput, in lbs/hr, which is a maximum of 18,720,00 lbs slurry/hr as noted in the application for a permit to install.

Conc_{Polymer} = the polymer concentration in the sediment slurry, in ppm (by weight), which is a maximum of 100 ppm as noted in the application for a permit to install.

Conc_{Dust} = the dust concentration of the polymer, in percent by weight, which is a maximum of 3% as noted in the application for a permit to install.

EF = the emissions factor for uncontrolled PE, which is 0.01 lb PE_{UNCTRL}/lb dust, AP-42 Chap. 6.4 (5/83).

CE = the control efficiency of the dust control device, which is a minimum of 99%.

5. Emission Limitation: 0.88 ton/yr fugitive OC emissions from the sediment slurry pipeline transfer and the geotextile tube filling of sediment slurry operations.

Applicable Compliance Method: Compliance may be based upon the following equation(s):

- a. Determination of the worst case fugitive OC emissions rate from the on-site sediment slurry pipeline transfer:

$$OC_{\text{pipeline}} = \{\text{the summation of } OC_i\} \times [(Connectors \times EF_{\text{connector}}) + (Valves \times EF_{\text{valve}})] \times 8760 \text{ hrs/yr} \times \text{ton OC}/2000 \text{ lbs OC}.$$

where:

OC_{pipeline} = the fugitive OC emissions from pipeline transfer, which is 0.08 ton OC/yr as determined in the application for a permit to install.

OC_i = the mass input rate of component , i, in the sediment slurry, in lbs/hr.

Connectors = the number of on-site pipeline connectors, which is 3, as noted in the application for a permit to install.

$EF_{\text{connector}}$ = the uncontrolled OC emissions factor for connectors, which is 0.00024 lb/hr as derived from Table 2-4, "Protocol for Equipment Leak Emissions Estimates (EPA 453/R-95-017, 1995)."

Valves = the number of on-site pipeline connectors, which is 3, as noted in the application for a permit to install.

EF_{valve} = the uncontrolled OC emissions factor for valves, which is 0.00022 lb/hr as derived from Table 2-4, "Protocol for Equipment Leak Emissions Estimates (EPA 453/R-95-017, 1995)."

- b. Determination of the worst case fugitive OC emissions rate from the geotextile tube filling of sediment slurry operations:

$$OC_{\text{geotextile tube}} = (\text{the summation of } OC_i) \times (1 - CE).$$

where:

$OC_{\text{geotextile tube}}$ = the fugitive OC emissions from geotextile tube filling, which is 0.57 ton OC/yr as determined in the application for a permit to install.

OC_i = the mass input rate of component , i, in the sediment slurry, in lbs/hr.

CE = the overall control efficiency of the polymer (flocculent) and the geotextile tube retention efficiency, which is a minimum of 99% as determined from "Lagoon and Ditch Sediment Dewatering Utilizing Geotubes® Preliminary Pilot Demonstration Summary Report, May 30, 2003" performed by Dewatering & Containment Technologies, Inc. with Infrastructure Alternatives, Inc. in cooperation with Michigan Department of Environmental Quality and Weston Consulting.

- c. Determination of the total OC rate may be determined from the following equation:

$$\text{OC}_{\text{total}} = \text{OC}_{\text{pipeline}} + \text{OC}_{\text{geotextile tube}}.$$

where:

OC_{total} = total OC emissions rate, which is 0.65 tons/yr.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic pollutant will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that a new permit to install application would be required for an emissions unit if changes in the composition of the materials or use of new materials would cause the emissions of any pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices"), to increase to above 1.0 ton per year.
2. A TSCA permit, enforced by U.S. EPA, will require that the landfill liner construction be complete before sediment transfer activities begin. The TSCA permit will also require that the sediments are in place in the landfill before the construction of the landfill cap can begin. The allowable PE rate was based on the maximum, controlled PE rates from soil piles materials and wastewater treatment solids load-in operation nos. 18 and 19, and from landfill cap construction operation nos. 21-24.

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F002 - unpaved roadways and an unpaved parking area	OAC rule 3745-31-05(A)(3)	There shall be no visible particulate emissions (PE) except for 3 minutes during any 60-minute period. Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust must be employed; see Sections A.2.b through A.2.h. The fugitive PE rate shall be limited to 22.1 tons/year. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-08(B) and 3745-17-08(B)(2); see Sections A.2.b through A.2.h.
	OAC rule 3745-17-07(B)(5)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08 (B), (B)(2)	The requirements established pursuant to this rule are equivalent to the requirements established pursuant to OAC rule

3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a** The unpaved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:
- unpaved roadways: 0.62 mile gravel perimeter road, segment A
 0.36 mile gravel access road, segment B
 0.04 mile entrance road, segment D
- unpaved parking areas: 500 square foot parking area, area C
- 2.b** The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas with water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.c** The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for an unpaved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
- 2.d** Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled using any combination of flushing, sweeping, and/or watering. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to a visible emission limitation of no visible particulate emissions except for one minute

during any 60-minute period.

- 2.e The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- 2.f Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.
- 2.g Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the best available technology requirements of OAC rule 3745-31-05.
- 2.h A vehicle speed limit of 10 miles/hour shall be maintained at all times. A sign, indicating the speed limit, shall be posted at the entrance.

B. Operational Restrictions

None.

C. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of the unpaved roadways and parking areas in accordance with the following frequencies:

<u>unpaved roadways</u>	<u>minimum inspection frequency</u>
0.62 mile gravel perimeter road, segment A	daily
0.36 mile gravel access road, segment B	daily
0.04 mile entrance road, segment D	daily

<u>unpaved parking areas</u>	<u>minimum inspection frequency</u>
500 square foot parking area, area C	daily

2. The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned

Ashtabula River Partnership Landfill**PTI Application: 02-20662****Issue:****Facility ID: 0204010458****Emissions Unit ID: F002**

applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

3. The permittee may, upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.

4. The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
 - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
 - c. the dates the control measures were implemented; and
 - d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in 4.d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

5. The permittee shall maintain records of the total vehicle miles traveled from all vehicles, involved in site operations, on a monthly basis.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports that identify any of the following occurrences:
 - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
 - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit

E. Testing Requirements

1. Emission Limitation: No visible PE except for 3 minutes during any 60-minute period

Applicable Compliance Method: For the unpaved roadways and parking areas identified above, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22 and the procedures specified in OAC rule 3745-17-03(B)(4).

2. Emission Limitation: 22.1 tons/yr of fugitive PE.

Applicable Compliance Method: Compliance may be based upon the following method(s):

$$PE_{\text{roadways}} = k \times (s/12)^a \times (W/3)^b \times \text{VMT/yr} \times (365 - P)/365 \times \text{ton PE}/2000 \text{ lbs PE} \times (1 - CE).$$

where:

PE_{roadways} = particulate emissions from unpaved, which is 17.7 ton/yr PE. The calculation is for particulate matter up to a diameter of 30 micrometers (PM₃₀) from unpaved roadways, (AP-42) Compilation of Air Pollutant Emission Factors, Vol. I, Fifth Ed., U.S. Environmental Protection Agency, Office of Air & Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, NC. Eqs. 1.a. and 2, AP-42 Chap. 13.2.2. (12/03).

k = particle size factor, which is 4.9 for PM₃₀, Table 13.2.2-2, AP-42 Chap. 13.2.2 (12/03).

s = surface material silt content, which is 6.4%, Table 13.2.2-1, AP-42 Chap. 13.2.2 (12/03).

W = mean vehicle weight, which is 29 tons as noted in the application for a permit to install.

a = a constant, which is 0.7 for PM₃₀, Table 13.2.2-2, AP-42 Chap. 13.2.2 (12/03).

b = a constant, which is 0.45 for PM₃₀, Table 13.2.2-2, AP-42 Chap. 13.2.2 (12/03).

P = number of days/yr with at least 0.01 of precipitation, which is 160 days/yr as derived from (Ohio RACM) Reasonably Available Control Measures for Fugitive Dust Sources, Ohio Environmental Protection Agency, Office of Air Pollution Control, Division of Engineering, Columbus, OH, September, 1980; Figure 2.1.2-2, Ohio RACM Chap. 2 (9/80).

CE = control efficiency of dust control measure, which is 50% for the application of water and/or any other suitable dust suppression chemicals, Table 2.1.3-3, Ohio RACM Chap. 2 (9/80).

Ashtabula River Partnership Landfill
PTI Application: 02-20662
Issue:

Facility ID: 0204010458

Emissions Unit ID: F002

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic pollutant will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that a new permit to install application would be required for an emissions unit if changes in the composition of the materials or use of new materials would cause the emissions of any pollutant that

Ashta**PTI A****Issued: 1/17/2006**Emissions Unit ID: **F002**

has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices"), to increase to above 1.0 ton per year.

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F003 - soil storage piles	OAC rule 3745-31-05(A)(3)	There shall be no visible particulate emissions (PE) except for 1 minute during any 60-minute period. Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust must be employed; see Sections A.2.b, A.2.c and A.2.f. The fugitive PE rate shall be limited to 2.10 tons/year. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-08(B) and 3745-17-08(B)(6); see Sections A.2.b. through A.2.f.
	OAC rule 3745-17-07 (B)(6)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08 (B), (B)(6)	The requirements established pursuant to this rule are

equivalent to the requirements established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a** The storage piles that are covered by this permit and subject to the above-mentioned requirements are listed below:

Soil piles
Sub-soil piles

- 2.b** The permittee shall employ best available control measures on all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to the following control measures to ensure compliance:

- i. minimize drop height distance from front-end loader to the ground surface during loading operations; and
- ii. treat the load-in and load-out material(s) with water and/or any other suitable dust suppression chemicals.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.c** The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.
- 2.d** The permittee shall employ best available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to the following control measures to ensure compliance:

- i. treat each storage pile with water and/or any other suitable dust suppression chemicals via the spray tower at sufficient treatment frequencies; and
- ii. keep each storage pile covered with tarps or use 3-sided enclosures, especially during windy periods, except during load-in and load-out operations, if needed.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.e The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.
- 2.f Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

B. Operational Restrictions

None.

C. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of each operation at each storage pile in accordance with the following frequencies:

<u>Operation</u>	<u>Minimum inspection frequency</u>
load-in operation	daily
load-out operation	daily
wind erosion	daily

2. No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if

precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

3. The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
 - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
 - c. the dates the control measures were implemented; and
 - d. on a calendar quarter basis, the total number of days the control measures were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in 5.d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation reports that identify any of the following

occurrences:

- a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
- b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

E. Testing Requirements

1. Emission Limitation: No visible PE except for 1 minute during any 60-minute period

Applicable Compliance Method: For the material storage piles identified above, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 22 and the procedures specified in OAC rule 3745-17-03(B)(4).

2. Emission Limitation: 2.10 tons/yr of fugitive PE.

Applicable Compliance Method: Compliance may be based upon the following method(s):

- a. Determination of the worst case PE rate from the load-in operations to the material storage piles, may be based on the following equation(s):

$$PE_{LOAD_IN} = k \times 0.0032 \times (U/5)^{1.3} / (M/2)^{1.4} \times \text{ton}_{MTLS}/\text{yr} \times \text{ton PE}/2000 \text{ lb PE} \times (1 - CE).$$

where:

$PE_{LOAD-IN}$ = PE rate from the load-in operation, which is 0.0011 ton/yr PE and is listed as operation no. 3 in Table 8.1 in the application for a permit to install. The calculation is from AP-42 Eq. 1, Chap. 13.2.4 (1/95).

k = particle size multiplier, which is 0.74 for particulate matter up to a diameter of 30 micrometers, PM_{30} .

U = mean wind speed, which is 10.7 miles/hr as determined from local weather data.

M = material moisture content, which is 30% for excavated soil materials.

$\text{ton}_{\text{MTLS}}/\text{yr}$ = the maximum tons per year of material that is loaded in is estimated to be 18,488 tons/yr of excavated soil.

CE = control (measure) efficiency, in percent, which is 25% for maintaining a low drop height, (Ohio RACM) Reasonably Available Control Measures for Fugitive Dust Sources, Ohio Environmental Protection Agency, Office of Air Pollution Control, Division of Engineering, Columbus, OH, September, 1980; Ohio RACM Table 2.1.2-8 (9/80).

- b. Determination of the worst case PE rate from the load-out operations from the material storage piles, may be based on the following equation(s):

$$\text{PE}_{\text{LOAD_OUT}} = k \times 1.16/M^{1.2} \times \text{ton}_{\text{MTLS}}/\text{yr} \times \text{ton PE}/2000 \text{ lb PE} \times (1 - \text{CE}_1) \times (1 - \text{CE}_2).$$

where:

$\text{PE}_{\text{LOAD_OUT}}$ = PE rate from the load-out operation, which is 0.078 ton/yr PE and is listed as operation no. 17 in Table 8.1 in the application for a permit to install. The calculation for PM_{30} is for truck loading of materials from Table 11.9-1, AP-42 Chap. 11.9 (10/98).

k = particle size multiplier, which is 1.0 for PM_{30} .

M = material moisture content, which is 12% for stored soil materials from Table 13.2.4.-1, AP-42 Chap. 13.2.4-1 (1/95).

$\text{ton}_{\text{MTLS}}/\text{yr}$ = the maximum tons per year of material that is loaded out is estimated to be 18,488 tons/yr of stored soil.

CE₁ = control efficiency of dust control measure, which is 74% for the application of water and/or any other suitable dust suppression chemicals at construction operations, Table 3.6 Control Efficiencies for Control Measures from Construction/Demolition found in WRAP Fugitive Dust Handbook.

CE₂ = secondary control (measure) efficiency, in percent, which is 25% for maintaining a low drop height, Ohio RACM Table 2.1.2-8 (9/80).

- c. Determination of the worst case PE rate from wind erosion of material storage piles, may be based on the following equation(s):

Emissions Unit ID: **F003**

$$PE_{WIND} = k_{PM_{30}}/k_{PM_{10}} \times 0.85 \times (s/1.5) \times \text{Days/yr} \times D/235 \times W/15 \times \text{Acres} \times \text{ton PE}/2000 \text{ lb PE} \times (1 - CE).$$

where:

PE_{WIND} = the PE rate from wind erosion, which is 1.28 ton/yr PE and is listed as operation no. 26 in Table 8.1 in the application for a permit to install. The calculation for PM_{10} for the wind erosion factor is from Eq. 3-B, Emissions Inventory Questionnaire (EIQ) Form 2.8 Storage Pile Worksheet & Storage Pile Emissions from Wind Erosion, State of Missouri, Department of Natural Resources, Air Pollution Control Program.

$k_{PM_{30}}/k_{PM_{10}}$ = conversion factor to determine the PM_{30} emissions from PM_{10} emissions estimates, which is 0.74/0.35 as noted in AP-42 Chap. 13.2.4 (1-95).

s = silt content percentage of material piles, which is a maximum of 40 as noted in the application for a permit to install.

Days = storage duration, which is 365 days per year as noted in the application for a permit to install.

D = the number of dry days per, which is 215 as determined from local weather data.

W = percentage time that the wind exceeds 12 miles/hr, which is 12 as determined from local weather data.

CE = control efficiency of dust control measure, which is 90% for the application of water or employing a cover when wind events are declared, Table 9.4 Control Efficiencies for Control Measures from Storage Pile Wind Erosion found in WRAP Fugitive Dust Handbook.

- d. Determination of the worst case, total PE rate, PE_{total} , may be determined from the following equation:

$$PE_{total} = PE_{LOAD_IN} + PE_{LOAD_OUT} + PE_{WIND}.$$

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic pollutant will be less than 1.0 ton. OAC Chapter 3745-31 requires a permittee to apply

Ashta**PTI A****Issued: 1/17/2006**Emissions Unit ID: **F003**

for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that a new permit to install application would be required for an emissions unit if changes in the composition of the materials or use of new materials would cause the emissions of any pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices"), to increase to above 1.0 ton per year.