



Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

4/29/2011

JOHN SLUTZ
JMW Transfer Station
512 - 45TH STREET SW
CANTON, OH 44706

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1576051900
Permit Number: P0107253
Permit Type: Initial Installation
County: Stark

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 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. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. 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, OH 43215

If you have any questions, please contact Canton City Health Department at (330)489-3385 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPCWeb page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Canton



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
JMW Transfer Station**

Facility ID:	1576051900
Permit Number:	P0107253
Permit Type:	Initial Installation
Issued:	4/29/2011
Effective:	4/29/2011
Expiration:	4/29/2021



Division of Air Pollution Control
Permit-to-Install and Operate
for
JMW Transfer Station

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Authorization

Facility ID: 1576051900
Application Number(s): A0040783
Permit Number: P0107253
Permit Description: Initial permit for the handling and stockpiling of bulking materials (e.g., automotive shredder residue and flyash) to be used for solidification of liquid and/or semi-solid wastes in order to render them suitable for acceptance at an off-site MSW landfill facility.
Permit Type: Initial Installation
Permit Fee: \$1,250.00
Issue Date: 4/29/2011
Effective Date: 4/29/2011
Expiration Date: 4/29/2021
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

JMW Transfer Station
1800 ALLEN AVE SE
Canton, OH 44707

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

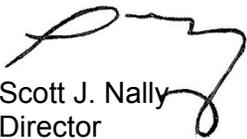
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544
(330)489-3385

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section 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 described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0107253

Permit Description: Initial permit for the handling and stockpiling of bulking materials (e.g., automotive shredder residue and flyash) to be used for solidification of liquid and/or semi-solid wastes in order to render them suitable for acceptance at an off-site MSW landfill facility.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:

F004

Company Equipment ID:

Bulking Facility - mat'l storage pile & transfer operations

Superseded Permit Number:

General Permit Category and Type:

Not Applicable

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Canton City Health Department in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

¹ Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.

C. Emissions Unit Terms and Conditions



1. F004, Bulking Facility - material storage pile & transfer operations

Operations, Property and/or Equipment Description:

Fugitive particulate emissions due to loading, unloading and stockpiling of bulking materials (e.g., automotive shredder residue, flyash, etc.) used to solidify liquid and/or semi-solid wastes. Controls include tarping of storage piles and minimizing drop heights.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01 [Best Available Technology (BAT)]	0.7 tons/year of fugitive particulate matter of 10 microns or less (PM10). 1.4 tons/year of fugitive particulate emissions (PE). No visible emissions of fugitive dust 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 (see b)(2)c. through b)(2)d.).

b.	OAC rule 3745-31-05(A)(3), as effective 12/01/06 [Less than 10 ton/yr BAT exemption]	See b)(2)g.
c.	OAC rule 3745-17-07(B)(6) (This emissions unit is located in an area identified in Appendix A of OAC rule 3745-17-08)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3) as effective 11/30/01. See b)(2)g. and b)(2)g.ii.
d.	OAC rule 3745-17-08(B) (This emissions unit is located in an area identified in Appendix A of OAC rule 3745-17-08)	The control measures specified by this rule are equivalent to the control measures established pursuant to OAC rule 3745-31-05(A)(3) as effective 11/30/01. See b)(2)g. and b)(2)g.iii.

(2) Additional Terms and Conditions

- a. The material handling operations that are covered by this permit and subject to the above mentioned requirements for this emissions unit are listed below:
 - i. unloading of bulking materials from trucks or rolloff containers onto the concrete pad in front of the bulking tanks or directly into the bulking tanks for immediate use;
 - ii. unloading of bulking materials from trucks or rolloff containers into the designated stockpile area for later use;
 - iii. transferring bulking materials from the stockpile area into the bulking tanks for immediate use.
- b. The following materials are permitted to be handled in this emissions unit. For the purposes of this emissions unit and this permit, the word “bulking materials” shall refer to any of the following materials:
 - i. automotive shredder residue (aka auto fluff);
 - ii. flyash; and
 - iii. non-hazardous absorbing type materials, including but not limited to solid waste that is not Municipal Solid Waste (MSW).
- c. The permittee shall employ best available control measures for all unloading and transferring operations of bulking materials for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance

with the permittee's application, the permittee has committed to maintain minimal drop heights for all applicable operations.

- 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 application, the permittee has committed to covering all storage piles (e.g., with tarps) to the maximum extent possible (i.e., all portions of the pile(s) at all times except for those portions of the piles actively involved in a transfer process) in order to ensure compliance and to keep the bulking material as dry as possible. (Keeping the material dry will further reduce emissions by minimizing the amount of bulking material needed for the bulking operation.) Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- e. All bulking materials shall be inspected and all shipping papers reviewed prior to unloading to assure that no undesirable materials are included in the shipment. No Municipal Solid Waste (MSW), Regulated Asbestos-Containing Materials (RACM) (as defined in 40 CFR Part 61, Subpart M, Section 141 amended November 20, 1990, or any subsequent revisions or in any U.S. EPA interpretive ruling concerning the NESHAP for asbestos), hazardous wastes, infectious wastes, materials contaminated with radioactive materials, or materials contaminated with PCBs shall be handled in this emissions unit.
- f. With the emissions limits and control measures mentioned in term b)(1) a. above, the permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC rule 3745-31-05(A)(3), as effective November 30, 2001. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform with ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for sources having potential to emit, taking into account controls, less than ten tons per year of emissions of an NAAQS pollutant or precursor. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirements to satisfy BAT still exist as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then the emission limits listed above in b)(1)a. no longer apply. See next section, b)(2)g.
- g. This term only applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan. In that case only, the following Terms and Conditions will apply instead of those listed under b)(1)a.:
 - i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PM₁₀ emissions from this air contaminant source (i.e., this emissions unit) since the calculated annual emission rate for PM₁₀ is less than 10 tons per year taking into account the maximum operational limitation of 328,500 tons of bulking material transferred per year (see term c)(1) below).

- ii. There shall be no visible emissions of fugitive dust from the bulking material storage piles except for a period of time not to exceed 13 minutes during any 60-minute observation period. [OAC 3745-17-07(B)(6)]
 - iii. Control measures that are sufficient to minimize visible emissions of fugitive dust shall be utilized as described in terms b)(2)c. through b)(2)d. above, not under BAT requirements, but rather as compliance with the requirements of OAC rule 3745-17-08(B); i.e. reasonably available control measures for fugitive dust in Appendix A areas.
- c) **Operational Restrictions**
- (1) The permittee shall be limited to receiving no more than 328,500 tons of bulking material per calendar year in this emissions unit. This amount of material is in addition to the amounts of material permitted to be received and transferred in other emissions units at the overall facility (Facility ID 1576051900).
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from this emissions unit. 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 location and color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of the visible emissions incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.
 - (2) The permittee shall maintain daily, monthly and annual records of the total amount of bulking materials received (in tons) in this emissions unit, itemized by the following three

categories: 1. Automotive shredder residue (aka auto fluff); 2. Flyash; and 3. Other – with description.

e) Reporting Requirements

(1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. The permittee shall also identify the following information in the annual permit evaluation report:

- a. all days during which any visible emissions of fugitive dust were observed as a result of the daily checks required in term d)(1) above;
- b. any corrective actions taken to minimize or eliminate the visible emissions;
- c. each day during which a daily check was not performed by the required frequency; and
- d. the total amount of bulking materials (in tons) received in the previous calendar year in this emissions unit, itemized by the following three categories: 1. Automotive shredder residue (aka auto fluff); 2. Flyash; and 3. Other – with description. The report shall include monthly and annual totals for each category, plus monthly and annual totals for all categories combined.

f) Testing Requirements

(1) Compliance with the emissions limitations in b)(1) and/or b(2) of these terms and conditions, if applicable, shall be determined in accordance with the following methods:

a. Emissions Limitations:

If term b)(1)a. above is applicable (BAT limitation) the following limitations apply:

0.7 tons/year of fugitive PM10

1.4 tons/year of fugitive PE

If term b)(1)b. above (< 10 tpy BAT exemption) is applicable rather than b)(1)a, then the above emissions limitations do not apply. Skip to Emissions Limitation f)(1)b.

Applicable Compliance Method:

Compliance with fugitive PM10 and PE limitations shall be determined as the sum of two separate estimates:

1. Emissions during the loading/unloading/transfer (i.e., material handling) of the bulking materials; and

2. Emissions due to wind erosion of the bulking material stockpile(s).

First, emissions during the loading/unloading/transfer of the bulking materials shall be determined by using the emission factor equations in AP-42, Section 13.2.4 – Aggregate Handling and Storage Piles, as revised November 2006. [AP-42, Fifth Edition, *Compilation of Air Pollutant Emission Factors*, Volume 1: Stationary Point and Area Sources, U.S. EPA.]

Second, emissions due to wind erosion of the bulking material stockpile(s) shall be determined by using the equation from *Control of Open Fugitive Dust Sources*, U.S. EPA, September 1998. In order to be conservative, it will be assumed that flyash is the predominant material to be stored.

In the future, should the referenced AP-42 section and/or U.S. EPA document be revised or other relevant information become available, then the most current equations shall be used to estimate emissions for the material handling operations and wind erosion effects at this emissions unit.

Part 1 - uncontrolled emissions during material handling:

The emission factor (EF) for uncontrolled emissions during material handling is calculated from Equation (1), AP-42, Section 13.2.4, as revised November 2006, and information provided by the permittee in the permit application:

$$EF = k \times (0.0032) \times [(U/5)^{1.3} \div (M/2)^{1.4}] \text{ per transfer point}^*$$

* Each unit of material is handled twice (unloading and transfer operations), so there are two transfer points. Therefore, the above equation must be multiplied by 2 as follows:

$$EF_{TOTAL} = 2 \times k \times (0.0032) \times [(U/5)^{1.3} \div (M/2)^{1.4}]$$

where: EF = emission factor in lb/ton (i.e., lb_{emissions}/ton_{material handled})

k = particle size multiplier from AP-42, page 13.2.4-4

= 0.35 for PM10

= 0.74 for PM30

(Note: the assumption will be made later that PM30 ≈ PE)

U = 9.9 mph mean wind speed (source: EAC form 3112 instructions, pg 2, data for closest city: Akron)

M = 4% material moisture content as provided by the permittee as a conservative estimate based on mixed C&DD, non-combustible.
(*Integrated Solid Waste Management, Engineering Principles and Management Issues*, McGraw-Hill, Inc., 1993, Table 4-1)

[Units as shown above have been built into the EF equation.]

Applying the values shown above to the equation (including the factor of 2):

$$EF_{TOTAL} = 0.00206 \text{ lb/ton for PM10}$$

$$EF_{\text{TOTAL}} = 0.00436 \text{ lb/ton for PM}_{30}$$

Based on the maximum estimated quantity of bulking material received per year of 328,500 tons (which has also been set at the permit limit), the total uncontrolled emissions from the material handling operations are estimated to be:

For PM₁₀:

$$E_{10} = 328,500 \text{ ton/yr} \times 0.00206 \text{ lb/ton} \div 2000 \text{ lb/ton} = 0.34 \text{ tons/yr, which the permittee has requested be rounded up to 0.4 tons/yr}$$

For PM₃₀:

$$E_{30} = 328,500 \text{ ton/yr} \times 0.00436 \text{ lb/ton} \div 2000 \text{ lb/ton} = 0.72 \text{ tons/yr, which the permittee has requested be rounded up to 0.8 tons/yr}$$

Part 2 - uncontrolled emissions due to wind erosion of the stockpiles:

Uncontrolled emissions due to wind erosion of the bulking material stockpiles handling are calculated from the equation in *Control of Open Fugitive Dust Sources*, U.S. EPA, September 1998, and information provided by the permittee in the permit application:

$$E_{30} = 1.7 \times (s/1.5) \times [(365 - p)/365] \times (f/15) \times 365 \times A/2000$$

where: E_{30} = total annual emissions of PM₃₀ in tons/yr

(Note: the assumption will be made later that PM₃₀ ≈ PE)

s = silt content of stored material = 80% for flyash (conservative assumption)

p = number of days with > 0.01 in precipitation per year = 145

f = percent of time wind speed > 12 mph = 30% (default value)

A = total surface area of pile(s) = 0.1 acres

[Units as shown above have been built into the above equation for E_{30} .]

$$E_{30} = 1.7 \times (80/1.5) \times [(365 - 145)/365] \times (30/15) \times 365 \times 0.1/2000 = 2.0 \text{ ton/yr}$$

A further assumption is made for flyash that PM₁₀ ≈ PM₃₀ ÷ 2.1

$$\text{Therefore, } E_{10} = 2.0 \text{ ton/yr} \div 2.1 = 0.95 \approx 1.0 \text{ ton/yr}$$

Estimated Total Uncontrolled Emissions:

$$\text{PM}_{10}: \quad 0.4 \text{ ton/yr} + 1.0 \text{ ton/yr} = 1.4 \text{ ton/yr}$$

$$\text{PM}_{30} \approx \text{PE}: \quad 0.8 \text{ ton/yr} + 2.0 \text{ ton/yr} = 2.8 \text{ ton/yr}$$

Estimated Total Emissions After Controls:

The overall reduction in emissions due to the use of control measures consisting of minimizing drop height and tarping the piles (see terms b)(2)c. and b)(2)d. above) is estimated to be 50%.

For PM10: $1.4 \text{ ton/yr} \times 50\% = 0.7 \text{ ton/yr}$

PM30 \approx PE: $2.8 \text{ ton/yr} \times 50\% = 1.4 \text{ ton/yr}$

b. Emissions Limitation:

If term b)(1)a. above is applicable (BAT limitation): There shall be no visible emissions of fugitive dust from the bulking material storage piles except for a period of time not to exceed one (1) minute during any 60-minute observation period.

If term b)(1)b. above is applicable (< 10 tpy BAT exemption), then OAC rule 3745-17-07(B)(6) applies, as shown in term b)(2)g.ii. above: There shall be no visible emissions of fugitive dust from the bulking material storage piles except for a period of time not to exceed 13 minutes during any 60-minute observation period

Applicable Compliance Method:

If required, compliance with the visible emissions limitation for the fugitive dust identified in this permit shall be determined in accordance with U.S. EPA Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60, with the following modifications as specified in OAC rule 3745-17-03(B)(4):

- i. If the observer's view is obscured and observations must be terminated prior to completing the necessary or desired observation period, the observer shall clearly note this fact on the observation form. When the observer's view of the source is no longer obscured, the observations shall recommence to complete the observation period;
- ii. The observer shall identify on the observation form all interruptions due to rest breaks;
- iii. For the purpose of determining compliance with the applicable visible emission limitation, the observations, excluding break periods and periods of obscured vision, shall be considered continuous.

g) **Miscellaneous Requirements**

- (1) None.