OhioEPA

State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

RE: FINAL PERMIT TO INSTALL
FRANKLIN COUNTY
Application No: 01-8036

CERTIFIED MAIL

	TOXIC REVIEW
	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: November 10, 1999

Oberfield's, Inc. Plant #4
Dan Hodge
528 London Road
Delaware, OH 43015

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
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA
DAPC, CDO

FINAL PERMIT TO INSTALL 01-8036

Application Number: 01-8036

APS Premise Number: 0125042418

Permit Fee: **$4000**

Name of Facility: Oberfield's, Inc. Plant #4

Person to Contact: Dan Hodge

Address: 528 London Road
Delaware, OH 43015

Location of proposed air contaminant source(s) [emissions unit(s)]:
1221 Alum Creek Drive
Columbus, **Ohio**

Description of proposed emissions unit(s):
CONCRETE BLOCK PLANT #4 W/STORAGE BINS, ENCLOSED TRANSFER AND MIXER, AND PAVED AND UNPAVED ROADWAYS.

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 Related to Monitoring and Recordkeeping 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 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)

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 are inadequate 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 prove to be inadequate 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 application must be made to the Director for the installation or modification of any other emissions unit(s).

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.

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 thirty (30) 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

Pollutant	Tons Per Year
Particulate Matter	17.7

PART II: SPECIAL TERMS AND CONDITIONS

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Concrete Block Plant #4(P001)	OAC rule 3745-31-05	Particulate emissions shall not exceed 1.5 pounds per hour and 6.6 tons per year. See A.2.a., below.
Delivery and transfer of sand and aggregate to elevated bins	OAC rule 3745-17-07(B)	The visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.
	OAC rule 3745-17-08(B)	The sand and aggregate shall be delivered to an enclosed hopper and conveyed within an enclosure to minimize or eliminate visible emissions of fugitive dust. See C.1., below.
Pneumatic transfer of cement to three elevated silos w/baghouses	OAC rule 3745-17-08(B)(3)	The silo shall be adequately enclosed and vented to the fabric filter; pneumatic unloading shall be done at such a rate to eliminate visible particulate emissions from the silo and fabric filter. The fabric filter shall achieve an outlet emission rate of no greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible emissions from the outlet, whichever is less stringent. See C.1.,below.
	OAC 3745-17-11	See A.2.b.
Weigh hopper loading of cement, sand and aggregate	OAC rule 3745-17-08(B)(3)	The weigh hopper shall be adequately enclosed to eliminate visible emission

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		of fugitive dust to the extent possible with good engineering design.
Central-mix loading	OAC rule 3745-17-07(B)	The visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.
	OAC rule 3745-17-08(B)(3)	The hopper discharge area and central-mix drum opening shall be enclosed sufficiently to minimize or eliminate visible emissions of fugitive dust to the extent possible with good engineering design.
	OAC rule 3745-17-07(B)	The visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.

2. Additional Terms and Conditions

2.a The 1.5 lbs PM/hr limitation was established for PTI purposes to reflect the potential to emit for material unloading, transfer and mixing. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

2.b The emission limitations established pursuant to OAC rule 3745-31-05 are more stringent than the emission limitations established by this rule.

B. Operational Restrictions

None.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform checks for any visible particulate emissions from the fabric filter control systems for the cement silo, while silo is pneumatically loaded the emissions unit is in operation. The presence or absence of any visible emissions shall be noted in an operations log. If any visible emissions are observed, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

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D. Reporting Requirements

1. The permittee shall submit, on a semi-annual basis, a report which (a) identifies all days during which any visible particulate emissions were observed from the fabric filter control on the cement silos and (b) describes the corrective actions taken to eliminate the visible emissions. These reports shall be submitted by January 31 and July 31 of each year to the Central District Office

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

   a. Emission Limitation -

      0.03gr/dscf from cement silo bin vent

      Applicable Compliance Method -

      If required, compliance with the mass emission limitation shall be based on stack testing per OAC rule 3745-17-03(B)(7).

   b. Emission Limitation -

      1.5 pounds particulate matter per hour

      Applicable Compliance Method -

      Compliance shall be determined by summing the following products:

      i. Sand and aggregate transfer to elevated bin:

         The AP-42 emission factor of 0.029 lb/ton (Table 11.12-2 , 5th edition 1995) shall be multiplied by a partial enclosure control factor of 50% (1-0.50) (RACM Table 2.13-3.1 August 1983) resulting in a controlled emissions factor of 0.014 lb/ton. This factor is then multiplied by the maximum production rate of 33 ton/hr resulting in a controlled emissions rate 0.46 lb PM/hr.

      ii. Pneumatic unloading of cement to silo:

         The AP-42 emission factor of 0.27 lb/ton (Table 11.12-2 , 5th edition 1995) shall be multiplied by a fabric filter control factor of 99% (1-0.99) resulting in a controlled emission rate of 0.003 lb/ton. This factor is then multiplied by the maximum production rate of 33 tons/hr resulting in a controlled emission rate of 0.01 lb/hr.

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iii. Weigh Hopper Loading:

The AP-42 emission factor of 0.02 lb/ton (Table 11.12-2, 5th Edition, January, 1995) shall be multiplied by a partial enclosure control factor of 50% (1-0.50) (RACM Table 2.13-3.1 August 1983) resulting in a controlled emission factor of 0.01 lb/ton. This factor is than multiplied by the maximum hourly production rate of 33 tons/hr resulting in a controlled emission rate of 0.33 lb PM/hr.

iv. Mixer Load-in (central-mix):

The AP-42 emission factor of 0.04 lb/ton (Table 11.12-2, 5th Edition, January, 1995) shall be multiplied by a partial enclosure control factor of 50% (1-0.50) (RACM Table 2.13-3.1 August 1983) resulting in a controlled emission factor of 0.02 lb/ton. This factor is than multiplied by the maximum hourly production rate of 33 tons/hr resulting in a controlled emission rate of emission rate of 0.67 lb PM/hr.

The lb/hr emission rate for each of the four areas are summed to determine compliance with the 1.5 lbs/hr emission limitation.

c. Emission Limitation -

6.6 tons PM/yr

Applicable Compliance Method -

Compliance shall be determined by the following:

The annual limit was developed by multiplying the 1.5 pound per hour emission limitation by the maximum potential operating schedule of 8,760 hours per year.

d. Emission limitation-

no visible stack emissions from cement silo bag house during pneumatic unloading

Applicable Compliance Method -

Compliance shall be demonstrated by visible emissions monitoring performed in accordance with OAC rule 3745-17-03 (B)(7) using the methods and procedures specified in USEPA Method 22.

e. Emission Limitation -

20 percent opacity as a 3-minute average

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Applicable Compliance Method -

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Method 9.

F. Miscellaneous Requirements

None.

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PART II: SPECIAL TERMS AND CONDITIONS [Continued]

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
Paved roadways, unpaved roadways and loading areas	OAC rule 3745-31-05	Particulate emissions shall not exceed 11.1 tons per year. There shall be no visible particulate emissions except for a period of one minute during any 60 minute observation period from a paved roadway. There shall be no visible particulate emissions except for a period of three minutes during any 60 minute observation period from an unpaved roadway.
	OAC rule 3745-17-07 (B)	The visible particulate emission limitation established pursuant to OAC rule 3745-31-05 are more stringent than the emission limitations established by this rule.
	OAC rule 3745-17-08(B)	See A.2.a. below

2. Additional Terms and Conditions

2.a The permittee shall employ best available control measures on all paved 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 paved roadways and parking areas by applying 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.

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2.b The permittee shall employ best available control measures on the unpaved roadways and loading 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 loadings areas by application of 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 permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

2.d 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 a paved or 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.e 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 with the control measure(s) specified above for paved surfaces. 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 the visible emission limitation for paved roadways and parking areas.

2.f 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.g 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.h 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 rule 3745-17-08.

2.i The use of used oil as a dust suppressant is prohibited per OAC rule 3745-279-82.

B. Operational Restrictions

1. A maximum speed limit of 10 miles per hour for vehicular traffic shall be posted and enforced on the roadways and parking areas of this facility.

2. The permittee shall apply chemical dust suppressants to unpaved roadways and loading areas at a minimum of two times per year.

C. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of all the roadways and parking areas 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 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 Ohio EPA Central 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, 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 kept separately for (i) the paved roadways and parking areas and (ii) the unpaved roadways and parking areas, 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 deviation reports that identify any of the following occurrences:

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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.

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

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation-

11.1 tons particulate matter/year.

Applicable Compliance Method-

Compliance shall be determined by:

Paved roadways (Area #1) AP-42 emission factor section 13.2.1

$E = k(sL/2)^{0.65} (W/3)^{1.5}$ lbs/VMT
k = particle size multiplier = 0.082 lb/VMT (PM-30 Table 13.2.1-1 AP-42)
sL = silt loading on road surface = 0.4 gm/m^2 * 1.43 gr/ft^2 = 0.6 gr/ft^2 (Table 13.2.1-2)
W = average vehicle weight (tons) = 35 (semi-truck) & 25 (block truck) & 2 (pickup)

$E = 0.082(0.6/2)^{0.65} (21/3)^{1.5} = 0.082 * 0.45 * 18.5 = 0.7$ lb/VMT (average for area # 1)
0.7 lb/VMT * (503 mile/yr + 1,304 mile/yr + 150) * 1 ton/2,000 lb = 0.7 ton PM per year

Annual emissions = 0.7 ton PM per year for area # 1

Unpaved roadways (Area #2) AP-42 emission factor section 13.2.2

$E = ((k(s/12)^{0.8} (W/3)^{0.5)}/(M/0.2)^{0.4)}$ lbs/VMT
k = particle size multiplier = 10 (PM-30 Table 13.2.2-2 AP-42)
s = surface material silt content = 12% (supplied by permittee)
W = average vehicle weight (tons) = 35 (semi-truck) & 25 (block truck) & 2 (pickup)
M = surface material moisture content = 5% (assumed based on content as delivered)

$E = 10(12/12)^{0.65} (21/3)^{0.5}/(5/0.2)^{0.4}$ * (365-120)/365) * (1-0.4) control efficiency-oiling
E = 10(2.6/3.6)* (0.67) * (0.6) = 2.9 lb/VMT (average for area #2)

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Maximum miles traveled = 87 (semi-truck) + 1,340 (block truck) + 150 (pickup) = 1,577 miles

2.9 lbs/VMT * 1,577 miles/yr * 1 ton/2,000 lbs = 2.3 ton PM per year for area # 2

Unpaved roadways (Area #3) AP-42 emission factor section 13.2.2

$E = (k(s/12)^{0.8}(W/3)^{0.5})/(M/0.2)^{0.4}$ lbs/VMT
k = particle size multiplier = 10 (PM-30 Table 13.2.2-2 AP-42)
s = surface material silt content = 12% (supplied by permittee)
W = average vehicle weight (tons) = 35 (semi-truck)
M = surface material moisture content = 5% (assumed based on content as delivered)

$E = 10(12/12)^{0.65}(35/3)^{0.5}/(5/0.2)^{0.4}$ * (365-120)/365) * (1-0.4) control efficiency-oiling
E = 10(3.4/3.6)* (0.67) * (0.6) = 3.8 lb/VMT (average for area #3)

Maximum miles traveled per year = 108 miles (semi-truck)
3.8 lbs/VMT * 108 miles/yr * 1 ton/2,000 lbs = 0.20 ton PM per year area #3

Unpaved roadways (Area #4)AP-42 emission factor section 13.2.2

$E = (k(s/12)^{0.8}(W/3)^{0.5})/(M/0.2)^{0.4}$ lb/VMT
k = particle size multiplier = 10 (PM-30 Table 13.2.2-2 AP-42)
s = surface material silt content = 12% (supplied by permittee)
W = average vehicle weight (tons) = 10 (forklift)
M = surface material moisture content = 5% (assumed based on content as delivered)

$E = 10(12/12)^{0.65}(10/3)^{0.5}/(5/0.2)^{0.4}$ * (365-120)/365) * (1-0.4) control efficiency-oiling
E = 10(1.8/3.6)* (0.67) * (0.6) = 2.0 lb/VMT (average for area #5)

Maximum miles traveled per year = 1,670 miles (forklift)

2.0 lbs/VMT * 1,670 miles/yr * 1 ton/2,000 lbs = 1.7 ton PM per year

Unpaved roadways (Area #5)AP-42 emission factor section 13.2.2

$E = (k(s/12)^{0.8}(W/3)^{0.5})/(M/0.2)^{0.4}$ lbs/VMT
k = particle size multiplier = 10 (PM-30 Table 13.2.2-2 AP-42)
s = surface material silt content = 12% (supplied by permittee)
W = average vehicle weight (tons) = 10 (forklift)
M = surface material moisture content = 5% (assumed based on content as delivered)

$E = 10(12/12)^{0.65}(10/3)^{0.5}/(5/0.2)^{0.4}$* (365-120)/365) * (1-0.4) control efficiency-chemical suppressant
E = 10(1.8/3.6)* (0.67) * (0.6) = 2.0 lb/VMT (average for area #5)

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Maximum miles traveled per year = 1,670 miles (forklift)

2.0 lbs/VMT * 1,670 miles/yr * 1 ton/2,000 lbs = 1.7 ton PM per year

Unpaved roadways (Area #6)AP-42 emission factor section 13.2.2

$E = (k(s/12)^{0.8} (W/3)^{0.5)}/(M/0.2)^{0.4}$ lbs/VMT
k = particle size multiplier = 10 (PM-30 Table 13.2.2-2 AP-42)
s = surface material silt content = 12% (supplied by permittee)
W = average vehicle weight (tons) = 35 (semi-truck) & 25 (block truck)
M = surface material moisture content = 5% (assumed based on content as delivered)

$E = 10(12/12)^{0.65} (30/3)^{0.5}/(5/0.2)^{0.4}$ * (365-120)/365)* (1-0.4) control efficiency-chemical suppressant
E = 10(3.2/3.6)* (0.67) * (0.6) = 3.5 lb/VMT (average for area # 6)

Maximum miles traveled per year = 2,412 miles (block truck) & 156 (semi-truck) = 2,568 miles
3.5 lb/VMT * 2,568 miles/yr * 1 ton/2,000 lbs = 4.5 ton PM per year for area #6
Total PM emissions from paved and unpaved roadways F003 = 11.1 ton PM/yr

2. Emission limitation-

There shall be no visible emissions except for a period not to exceed one minute during any 60 minute observation period from paved roadways.

Applicable Compliance Method-

Compliance with the emission limitation for the paved roadways and parking areas shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

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3. Emission limitation-

There shall be no visible emissions except for a period not to exceed three-minutes during any 60 minute observation period from paved roadways..

Applicable Compliance Method-

Compliance with the emission limitation for the unpaved roadways and parking areas shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

F. Miscellaneous Requirements

None.

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