



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: 01-08432**

**CERTIFIED MAIL**

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

**DATE: 9/20/2001**

Arrow Concrete Company  
Douglas Rexroad  
816 McKinley Ave  
Columbus, OH 43222

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, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: USEPA

CDO



**Permit To Install  
Terms and Conditions**

**Issue Date: 9/20/2001  
Effective Date: 9/20/2001**

**FINAL PERMIT TO INSTALL 01-08432**

Application Number: 01-08432  
APS Premise Number: 0125042406  
Permit Fee: **\$1100**  
Name of Facility: Arrow Concrete Company  
Person to Contact: Douglas Rexroad  
Address: 816 McKinley Ave  
Columbus, OH 43222

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**816 McKinley Ave  
Columbus, Ohio**

Description of proposed emissions unit(s):  
**Arrow Stevens 54321.**

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 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 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**

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	2.7

**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 - Material handling with load-in and load-out of storage piles	OAC rule 3745-31-05(A)(3)	There shall be no visible PE from material handling operations except for a period of time not to exceed one minute during any sixty-minute observation period.  Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See sections A.2.b, A.2.c and A.2.f.
Wind erosion from storage piles (Modification of PTI 01-07980)	OAC rule 3745-31-05(A)(3)	There shall be no visible PE from storage piles except for a period of time not to exceed one minute during any sixty-minute observation period. see sections A.2.d through A.2.f.  Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.
Load-in and load-out of storage piles and wind erosion from storage piles (Modification of PTI 01-07980)	OAC rule 3745-31-05(A)(3)  OAC rule 3745-17-07 (B)  OAC rule 3745-17-08 (B)	Particulate emissions (PE) shall not exceed 0.54 ton per year.  See section A.2.e below.  See section A.2.f below

## 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:
- Sand and aggregate storage 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 wet suppression to ensure compliance. 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 wet suppression to ensure compliance. 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 measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05(A)(3).
- 2.g** Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.

**2.h** Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to the fugitive emissions from this emissions unit.

**2.i** This PTI replaces PTI 01-7980, as issued June 23, 1999, and represents net decrease of 1.09 ton particulate emission per year from material handling operations.

**B. Operational Restrictions**

1. The maximum annual production shall not exceed 120,000 tons per year throughput under P001.

**C. Monitoring and/or Recordkeeping Requirements**

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

<u>storage pile identification</u>	<u>minimum load-in inspection frequency</u>
Sand and aggregate piles	Daily

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

<u>storage pile identification</u>	<u>minimum load-out inspection frequency</u>
Sand and aggregate piles	Daily

3. Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

<u>storage pile identification</u>	<u>minimum wind erosion inspection frequency</u>
Sand and aggregate piles	Daily

4. 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.

5. 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.

6. The above-mentioned inspections shall be performed during representative, normal operating conditions.
7. 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.
8. 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;
  - c. the dates the control measure was implemented; and
  - d. on a calendar quarter basis, the total number of days the control measure was 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.

The information in 8.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 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.
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. Emission Limitation-  
PE shall not exceed 3.24 pounds per hour and 0.54 ton per year.

Applicable Compliance Method-

Compliance shall be determined by calculation and summing the following products for sand and aggregate material handling:

- i. Sand/aggregate load-in/load-out storage pile emission factor (AP-42, Section 13.2-4)

$$E = k(0.0032)(U/5)^{1.3}/(M/2)^{1.4} \text{ lbs/ton}$$

E = emission factor for aggregate unloading

k = particle size multiplier = 0.74 for PE

U = mean wind speed (mph) = 8.7

M = material moisture content = 2.5%

$$E = 0.74(0.0032)(8.7/5)^{1.3}/(2.5/2)^{1.4} \text{ lbs/ton} = 0.0036 \text{ lbs PE/ton sand}$$

$$ER = 900 \text{ tons} * 0.0036 \text{ lbs/ton} = 3.24 \text{ lbs PE/hr}$$

$$ER = 120,000 \text{ tons} * 0.0036 \text{ lbs/ton} * 1 \text{ ton}/2,000 \text{ lbs} = 0.22 \text{ ton PE/yr}$$

- ii. Storage piles-wind erosion (0.5 acres)

AP-42 emission factor, 3.5 lb/acre/day (Table 11.12-2 SCC 3-05-011-99)

$$0.5 \text{ acres} * 3.5 \text{ lb/acre} * 365 \text{ day/yr} * 1 \text{ ton}/2000 \text{ lb} = 0.32 \text{ ton PE/yr.}$$

- 2. Emission limitation

There shall be no visible particulate emissions except for a period of time not to exceed one minute during any sixty-minute observation period from storage piles.

#### Applicable Compliance Method

Compliance with the visible emission limitation for the storage piles identified above 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)(c) of OAC rule 3745-17-03.

## F. Miscellaneous Requirements

None

**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 - New paved and unpaved roadways and paved parking areas (Modification of PTI 01-07980)	OAC rule 3745-31-05(A)(3)	PE shall not exceed 0.53 ton per year. See section A.2.a  Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See sections A.2.c, A.2.e, and A.2.g through A.2.i.  There shall be no visible PE except for a period of 1 minute during any 60 minute observation period from a paved roadway.  Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust . See sections A.2.d and A.2.e through A.2.j.  There shall be no visible PE except for a period of 3 minutes during any 60 minute observation period from an unpaved roadway.
	OAC rule 3745-17-07(B)(4)	See section A.2.k. below.
	OAC rules 3745-17-08(B), (B)(8), (B)(9)	See section A.2.l. below.

## 2. Additional Terms and Conditions

- 2.a** The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

paved roadways:  
plant entrance

- 2.b** The unpaved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

unpaved roadways:  
plant endloader working area

- 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. In accordance with the permittee's permit application, the permittee has committed to treat the paved roadways and parking areas by watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.d** 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 at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.e** 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.f** 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.g** 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.h** 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.i** 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.j** The use of used oil as a dust suppressant is prohibited per OAC rule 3745-279-82.
- 2.k** Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.
- 2.l** Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to the fugitive emissions from this emissions unit.
- 2.m** This PTI replaces PTI 01-7980, as issued June 23, 1999, and represents net decrease of 14.73 ton PE per year from roadways.

**B. Operational Restrictions**

- 1. A maximum speed limit of 5 miles per hour for vehicular traffic shall be posted and enforced on the roadways and parking areas of this facility.
- 2. The permittee shall employ sweeping and water to control dust, as needed.

**C. Monitoring and/or Recordkeeping Requirements**

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

<u>paved roadways and parking areas</u>	<u>minimum inspection frequency</u>
plant entrance	daily
<u>unpaved roadways and parking areas</u>	<u>minimum inspection frequency</u>
plant endloader working area	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 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 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:
  - 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 limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation- PE shall not exceed 0.53 ton per year.

Applicable Compliance Method-

Compliance shall be determined by calculation using AP-42 equations:

Paved roadways

$$E = k(s/12)^{0.65} (W/3)^{1.5} \text{ lbs/VMT}$$

k = particle size multiplier = 10 (PM-30 Table 13.2.2-2 AP-42)

s = surface material silt content = 1% (supplied by permittee)

W = average vehicle weight (tons) = 15 (concrete), 10 (cement, aggregate truck), 10 (endloader)

$$E = 0.082(1/12)^{0.65} (12.5/3)^{1.5}$$

$$E = 0.0163(4.1)^{1.5} = 0.135 \text{ lb/VMT}$$

Maximum miles traveled = 1,220 miles

$$0.135 \text{ lb/VMT} * 1,220 \text{ miles/yr} * 1 \text{ ton}/2,000 \text{ lbs} = 0.08 \text{ ton PE per year paved area}$$

Unpaved roadways endloader

AP-42 emission factor section 13.2.2

$$E = (k(s/12)^{0.8} (W/3)^{0.5}) / (M/0.2)^{0.4} \text{ lbs/VMT}$$

k = particle size multiplier = 10 (PM-30 Table 13.2.2-2 AP-42)

s = surface material silt content = 12% (for similar operation)

W = average vehicle weight (tons) = 10 (endloader)

M = surface material moisture content = 5% (assumed based on content as delivered)

$$E = 10(12/12)^{0.65} (10/3)^{0.5} / (5/0.2)^{0.4} * (365-120)/365 * (1-0.5) \text{ control efficiency-water}$$

$$E = 10(1.4/3.6) * (0.67) * (0.5) = 1.3 \text{ lb/VMT (unpaved area)}$$

Maximum miles traveled per year = 700 (endloader)

$$1.3 \text{ lb/VMT} * 700 \text{ miles/yr} * 1 \text{ ton}/2,000 \text{ lbs} = 0.45 \text{ ton PE per year}$$

Total PM emissions from paved and unpaved roadways F002 = 0.53 ton PM/yr

**Arrow Concrete Company**  
**PTI Application: 01-08432**  
**Issued: 9/20/2001**

**Facility ID: 0125042406**  
**Emissions Unit ID: F002**

**F. Miscellaneous Requirements**

None

**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>
P001 - Concrete batch plant with cement and fly ash silos	OAC rule 3745-31-05(A)(3)	PE shall not exceed 4.42 pounds per hour and 1.62 ton per year. See section A.2.a. below.  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 sections A.2.d., A.2.e., and C.1. below.
Pneumatic transfer of cement to elevated silo w/fabric filter	OAC rule 3745-31-05(A)(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. See sections A.2.d. and C.1. below.
Weigh hopper loading of cement, sand and aggregate	OAC rule 3745-31-05(A)(3)	The weigh hopper shall be adequately enclosed to eliminate visible emission of fugitive dust to the extent possible with good engineering design. See section A.2.d.
Central-mix loading	OAC rule 3745-31-05(A)(3)	The hopper discharge area and central-mix drum opening shall be enclosed sufficiently to minimize or eliminate visible emissions of

OAC rule 3745-17-07(B)	fugitive dust to the extent possible with good engineering design. See section A.2.d.
OAC rule 3745-17-08(B)(3)	See section A.2.b.
OAC rule 3745-17-11(B) OAC rule 3745-17-07(A)(1)	See section A.2.c.  The emissions limitations specified by these rules are less stringent than or equal to the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a** The 4.42 lb 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** Pursuant to paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) do not apply to this emissions unit.
- 2.c** Since this emissions unit is not located in an Appendix A area, pursuant to paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) do not apply to the fugitive emissions from this emissions unit.
- 2.d** The visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.
- 2.e** The visible particulate emissions at the stack shall not exceed 20 percent opacity as a 6-minute average.
- 2.f** This PTI replaces PTI 01-7980, as issued June 23, 1999, with no increase in particulate emissions per year.

**B. Operational Restrictions**

- 1. The maximum annual production shall not exceed 120,000 tons of concrete during any 12-month period.

**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.
2. The permittee shall maintain monthly records of the concrete produced in this emissions unit.

**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.
2. The permittee shall submit annual reports that identify any exceedances of the annual production rate limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.

**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 -  
Particulate emissions shall not exceed 4.42 pounds per hour and 1.62 ton per year.

Applicable Compliance Method -  
Compliance shall be determined by summing the following products:

- i. Sand/aggregate emission factor - AP-42,11.12-2, SCC 30501106;  
 $E = 0.029$  pounds PM/ton sand and aggregate handled (enclosure)  
 $ER = 0.029 * 100$  tons agg/hr = 2.9 pounds PE/hr  
 $ER = 0.029 * 100,000$  ton agg/yr \* 1 ton/2,000 lb = 1.45 tons PE/yr
- ii. Pneumatic unloading of cement to silo:  
AP-42 factor 0.27 lb/ton (Table 11.12-2 , SCC 30501107))  
 $ER = 0.27 * 225$  tons cement/hr \* (1 - 0.98) = 1.22 lb/PE/hr  
 $ER = 0.27 * 26,500$  tons cement/yr \* (1 - 0.98) \* 1 ton/2,000 lbs = 0.07 ton PE/yr  
enclosure control factor of 98% (1-0.98)
- iii. Pneumatic unloading of fly ash to silo:  
AP-42 factor 0.27 lb/ton (Table 11.12-2 , SCC 30501107))

$$ER = 0.27 * 45 \text{ tons fly ash/hr} * (1 - 0.98) = 0.24 \text{ lb/PE/hr}$$

$$ER = 0.27 * 26,500 \text{ tons cement/yr} * (1 - 0.98) * 1 \text{ ton}/2,000 \text{ lbs} = 0.07 \text{ ton PE/yr}$$

enclosure control factor of 98% (1-0.98)

iv. Weigh Hopper Loading:

AP-42 factor 0.027 lb/ton (Table 11.12-2 , SCC 30501108))

$$ER = 0.027 * 18 \text{ tons cement/hr} * (1 - 0.98) = 0.01 \text{ lb/PE/hr}$$

$$ER = 0.027 * 26,500 \text{ tons /yr} * (1 - 0.98) * 1 \text{ ton}/2,000 \text{ lb} = 0.007 \text{ ton PE/yr}$$

enclosure control factor of 98% (1-0.98)

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

AP-42 factor 0.02 lb/ton (Table 11.12-2 , SCC 30501109))

$$ER = 0.02 * 120 \text{ tons cement/hr} * (1 - 0.98) = 0.05 \text{ lb/PE/hr}$$

$$ER = 0.02 * 80,000 \text{ tons /yr} * (1 - 0.98) * 1 \text{ ton}/2,000 \text{ lb} = 0.02 \text{ ton PE/yr}$$

enclosure control factor of 98% (1-0.98)

The emission rate for each of the four areas are summed to determine compliance with the 4.42 lbs/hr and 1.62 tons/yr emission limitation.

b. Emission limitation-

There shall be no visible PE from cement silo bag house during pneumatic loading

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.

c. Emission Limitation -

The visible emissions of fugitive dust shall not exceed 20 percent opacity as a 3-minute average.

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.

d. Emission Limitation -

The visible particulate emissions at the stack shall not exceed 20 percent opacity as a 6-minute average.

**Arrow Concrete Company**

**PTI Application: 01-08432**

**Issued: 9/20/2001**

**Facility ID: 0125042406**

**Emissions Unit ID: P001**

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