



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL CERTIFIED MAIL
GREENE COUNTY**

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 08-04143

DATE: 3/22/00

Phillips Ready Mix #2
Frank Phillips
PO Box 187 620 Phillips Dr
Alpha, OH 453010000

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

RAPCA



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Issue Date: 3/22/00

FINAL PERMIT TO INSTALL 08-04143

Application Number: 08-04143
APS Premise Number: 0829710595
Permit Fee: **\$1000**
Name of Facility: Phillips Ready Mix #2
Person to Contact: Frank Phillips
Address: PO Box 187 620 Phillips Dr
Alpha, OH 453010000

Location of proposed air contaminant source(s) [emissions unit(s)]:

**620 Phillips Dr
Alpha, Ohio**

Description of proposed emissions unit(s):

concrete batch plant

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

Phillips Ready Mix #2
PTI Application: 08-04143
Issued: 3/22/00

Facility ID: 0829710595

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

Phillips Ready Mix #2
PTI Application: 08-04143
Issued: 3/22/00

Facility ID: 0829710595

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	
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS	
<u>Pollutant</u>	<u>Tons Per Year</u>
particulates	24.10

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.

Operations, Property,
and/or Equipment

ready mix concrete batch plant

cement silo loading

sand, aggregate and cement loading
into concrete trucks

transfer of sand and aggregate to
elevated bins

sand and aggregate weigh hopper
loading

cement weigh hopper loading

8

Phillip

PTI A

Issued: 3/22/00

Emissions Unit ID: **P901**

Applicable Rules/Requirements

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

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

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

9

Phillip
PTI A
Issued: 3/22/00

Emissions Unit ID: **P901**

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

OAC rule 3745-17-11(B)

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

OAC rule 3745-17-11(B)

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

OAC rule 3745-17-11(B)

Applicable Emissions
Limitations/Control Measures

10.65 lbs/hr and 15.98 tons/yr of particulates from the equipment identified below.

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

The drop height of the front-end bucket shall be minimized to the extent possible in order to minimize or eliminate visible emissions of fugitive dust from the conveyor loading area.

The sand and aggregate loaded into the elevated bins shall have a moisture content sufficient to minimize or eliminate visible emissions of fugitive dust from the conveyor and transfer point to bins.

The weigh hopper shall be adequately enclosed; the enclosure shall be sufficient to eliminate visible emissions of fugitive dust at the point of capture.

The emission limit specified in this rule is less stringent than the particulate limit established as BAT under 3745-31-05.

The silo shall be adequately enclosed and vented to a fabric filter; the enclosure shall be sufficient to

eliminate visible emissions of fugitive dust.

The fabric filter shall achieve an outlet emission rate of not greater than 0.020 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.

The emission limit specified in this rule is less stringent than the particulate limit established as BAT under 3745-31-05.

The weigh hopper shall be adequately enclosed and vented to a fabric filter; the enclosure shall be sufficient to eliminate visible emissions of fugitive dust at the point of capture.

The emission limit specified in this rule is less stringent than the particulate limit established as BAT under 3745-31-05.

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

The hopper discharge area and transit-mix truck opening shall be enclosed and vented to a fabric filter; the enclosure shall be sufficient to minimize or eliminate visible emissions of fugitive dust to the extent possible with good engineering design.

The fabric filter shall achieve an outlet

emission rate of not greater than 0.020 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.

The emission limit specified in this rule is less stringent than the particulate limit established as BAT under 3745-31-05.

2. Additional Terms and Conditions

- 2.a** The 10.65 lbs/hr limitation was established for PTI purposes to reflect the potential to emit for this emission unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

B. Operational Restrictions

1. The maximum annual operating hours for this emissions unit shall not exceed 3000 hours.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the operating hours for this emissions unit.
2. The permittee shall perform daily checks while the equipment is in operation for any visible particulate emissions from the fabric filter control systems. The presence or absence of any visible emissions from the fabric filter control systems shall be noted in an operations log. If any visible emissions are observed from either system, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

D. Reporting Requirements

1. The permittee shall submit annual reports of the total operating hours for this emissions unit. These reports shall be submitted by January 31 of each year to the Director (District Office or Local Air Agency).

2. 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 systems and (b) describes the corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted by January 31 and July 31 of each year to the Director (District Office or local air agency).

E. Testing Requirements

1. Compliance Methods

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-
0.020 gr/dscf

Applicable Compliance Method-

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

- b. Emission limitation-
10.65 lbs/hr of particulate

Applicable Compliance Method-

Compliance shall be determined by totaling the following products:

- i. sand and aggregate transfer to elevated bins storage bins:

The maximum hourly production rate of 360 tons/hr is multiplied by the AP-42 emission factor, 0.029 lb/ton. The resulting uncontrolled emission rate, 10.44 lbs/hr, is then multiplied by a moisture emission control factor of 70% (1 - .70), resulting in a controlled emission rate of 3.13 lbs/hr.

- ii. sand and aggregate weigh hopper loading:

The maximum hourly production rate of 360 tons/hr is multiplied by the AP-42 emission factor, 0.02 lb/ton. The resulting uncontrolled emission rate, 7.2 lbs/hr, is then multiplied by a partial enclosure emission factor of 70% (1 - .70), resulting in a controlled emission rate of 2.16 lbs/hr.

- iii. cement silo loading (pneumatic):

The maximum hourly production rate of 360 tons/hr is multiplied by the AP-42 emission factor, 0.27 lb/ton. The resulting uncontrolled emission rate, 97.2 lbs/hr, is then multiplied by a fabric filter control factor of 99% (1 - .95), resulting in a controlled emission rate of 4.86 lbs/hr.

- iv. cement weigh hopper loading:

The maximum hourly production rate of 65 tons/hr is multiplied by the AP-42 emission factor, 0.02 lb/ton. The resulting uncontrolled emission rate, 1.3 lbs/hr, is then multiplied by a fabric filter control factor of 95% (1 - .95), resulting in a controlled emission rate of 0.07 lb/hr.

- v. sand, aggregate and cement loading into concrete trucks (transit mix):

The maximum hourly production rate of 425 tons/hr, is multiplied by the AP-42 emission factor, 0.02 lb/ton. The resulting uncontrolled emission rate, 8.5 lbs/hr, is then multiplied by a fabric filter control factor of 95% (1 - .95), resulting in a controlled emission rate of 0.43 lb/hr.

The lb/hr emission rate for each of the four areas are summed. This is how the 10.65 lbs/hr limitation was developed for the PTI. The above mentioned emission factors are specified in USEPA reference document AP-42, Fifth Edition Section 11.12-2(1/95).

- c. Emission limitation-
15.98 tons/yr of particulate

Applicable Compliance Method-

The 15.98 tons/yr emission limitation was developed by multiplying the 10.65 lbs/hr emission limitation by a maximum annual operating schedule of 3,000 hrs/yr. Therefore, compliance shall be based upon the 12-month maximum summation of the number of operating hours times the 10.65 lbs/hr emission limitation, divided by 2,000 lbs/ton.

- d. Emission Limitation-
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.

Phillips Ready Mix #2
PTI Application: 08 04143
Issued

Facility ID: 0829710595

Emissions Unit ID: **P901**

- e. Emission Limitation-
no visible emissions

15

Phillip

PTI A

Issued: 3/22/00

Emissions Unit ID: **P901**

Applicable Compliance Method-

Compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(4) using the methods and procedures specified in USEPA Method 22.

F. Miscellaneous Requirements

None.

NEW SOURCE REVIEW FORM B

PTI Number: 08-04143 Facility ID: 0829710595

FACILITY NAME Phillips Ready Mix #2

FACILITY DESCRIPTION concrete batch plant CITY/TWP Alpha

SIC CODE 3273 SCC CODE EMISSIONS UNIT ID F001

EMISSIONS UNIT DESCRIPTION paved and unpaved roadways

DATE INSTALLED after PTI

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment		7.97		7.97
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination BAT is determined to be compliance with the applicable OAC rules, specified allowable mass emissions rates, and visible emission opacity limits, watering and wet sweeping, record keeping and reporting.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES x NO

IDENTIFY THE AIR CONTAMINANTS:

NEW SOURCE REVIEW FORM B

PTI Number: 08-04143 Facility ID: 0829710595

FACILITY NAME Phillips Ready Mix #2

FACILITY DESCRIPTION concrete batch plant CITY/TWP Alpha

Emissions Unit ID: **F002**

SIC CODE 3273 SCC CODE 3-05-011-10 EMISSIONS UNIT ID P901

EMISSIONS UNIT DESCRIPTION portable ready mix concrete batch plant

DATE INSTALLED after PTI

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment			10.65 lbs/hr	15.98
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination BAT is determined to be compliance with the applicable OAC rules, specified allowable mass emissions rates, and visible emission opacity limits, use of fabric filters, record keeping and reporting requirements

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES x NO

IDENTIFY THE AIR CONTAMINANTS:

18 NEW SOURCE REVIEW FORM B

PTI Number: 08-04143

Facility ID: 0829710595

FACILITY NAME Phillips Ready Mix #2

FACILITY DESCRIPTION concrete batch plant

CITY/TWP Alpha

Emissions Unit ID: **F002**

SIC CODE 3273

SCC CODE _____

EMISSIONS UNIT ID

F002

EMISSIONS UNIT DESCRIPTION sand and aggregate storage piles

DATE INSTALLED

after PTI

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment		0.15		0.15
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS?

NESHAP?

PSD?

OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination BAT is determined to be compliance with the applicable OAC rules, specified allowable mass emissions rates, and visible emission opacity limits, record keeping and reporting.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? _____

\$ _____

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____

YES

x

NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 08-04143

Facility ID: 0829710595

FACILITY NAME Phillips Ready Mix #2

FACILITY DESCRIPTION concrete batch plant

CITY/TWP Alpha

Emissions Unit ID: F002

Calculations**P901- concrete batch plant****avg. operating hours- 8 hrs/day, 1280 hrs/yr****maximum operating hours- 16 hrs/day, 3000 hrs/yr****sand and aggregate transfer to elevated storage bin****maximum throughput -360 tons/hr, AP-42 11.12-2 (1/95) emission factor 0.029 lb/ton****assume 70% control due to moisture- Air Quality Permits- A handbook for regulators and Industry, section 10 from STAPPA/ALAPCO****Potential emissions****(360 tons/hr)(0.029 lb/ton)= 10.44 lbs/hr uncontrolled****(10.44 lbs/hr)(8760 hrs/yr)(ton/2000 lbs) = 45.73 tons/yr****actual emissions****(33.75 tons/hr)(0.029 lb/ton)(1-.70) =0.29 lb/hr****(0.29 lb/hr)(1280 hrs/yr)(ton/2000 lbs)= 0.19 ton/yr****PTI allowable****(10.44 lbs/hr)(1-.70) = 3.13 lbs/hr****(3.13 lbs/hr)(3000 hrs/yr)(ton/2000 lbs) = 4.69 tons/yr****sand and aggregate weigh hopper loading- emission factor 0.02 lb/ton, 70% control efficiency RACM (1983)****Section 2.1.3-3(partial enclosure)****Potential emissions****(360 tons/hr)(0.02 lb/ton)= 7.2 lbs/hr uncontrolled****(7.2 lbs/hr)(8760 hrs/yr)(ton/2000 lbs) = 31.54 tons/yr****actual emissions****(33.75 tons/hr)(0.02 lb/ton)(1-.70) =0.20 lb/hr****(0.20 lb/hr)(1280 hrs/yr)(ton/2000 lbs)= 0.13 ton/yr****PTI allowable****(7.2 lbs/hr)(1-.70) = 2.16 lbs/hr****(2.16 lbs/hr)(3000 hrs/yr)(ton/2000 lbs) = 3.24 tons/yr****cement silo loading- emission factor 0.27 lb/ton, 95% control efficiency with fabric filter****Potential emissions****(360 tons/hr)(0.27 lb/ton)= 97.2 lbs/hr uncontrolled****(97.2 lbs/hr)(8760 hrs/yr)(ton/2000 lbs) = 425.74 tons/yr**

actual emissions
 $(6.094 \text{ tons/hr})(0.27 \text{ lb/ton})(1-.95) = 0.08 \text{ lb/hr}$
 $(0.08 \text{ lb/hr})(1280 \text{ hrs/yr})(\text{ton}/2000 \text{ lbs}) = 0.05 \text{ ton/yr}$

PTI allowable
 $(97.2 \text{ lbs/hr})(1-.95) = 4.86 \text{ lbs/hr}$
 $(4.86 \text{ lbs/hr})(3000 \text{ hrs/yr})(\text{ton}/2000 \text{ lbs}) = 7.29 \text{ tons/yr}$

cement weigh hopper loading-emission factor 0.02 lb/ton, 95% control efficiency with fabric filter

Potential emissions
 $(65 \text{ tons/hr})(0.02 \text{ lb/ton}) = 1.3 \text{ lbs/hr uncontrolled}$
 $(1.3 \text{ lbs/hr})(8760 \text{ hrs/yr})(\text{ton}/2000 \text{ lbs}) = 5.69 \text{ tons/yr}$

actual emissions
 $(6.094 \text{ tons/hr})(0.02 \text{ lb/ton})(1-.95) = 0.01 \text{ lb/hr}$
 $(0.01 \text{ lb/hr})(1280 \text{ hrs/yr})(\text{ton}/2000 \text{ lbs}) = 0.01 \text{ ton/yr}$

PTI allowable
 $(1.3 \text{ lbs/hr})(1-.95) = 0.07 \text{ lb/hr}$
 $(0.07 \text{ lb/hr})(3000 \text{ hrs/yr})(\text{ton}/2000 \text{ lbs}) = 0.11 \text{ ton/yr}$

sand, aggregate and cement loading into concrete trucks 0.02 lb/ton, 95% control efficiency with fabric filter

Potential emissions
 $(425 \text{ tons/hr})(0.02 \text{ lb/ton}) = 8.5 \text{ lbs/hr uncontrolled}$
 $(8.5 \text{ lbs/hr})(8760 \text{ hrs/yr})(\text{ton}/2000 \text{ lbs}) = 37.23 \text{ tons/yr}$

actual emissions
 $(39.84 \text{ tons/hr})(0.02 \text{ lb/ton})(1-.95) = 0.04 \text{ lb/hr}$
 $(0.04 \text{ lb/hr})(1280 \text{ hrs/yr})(\text{ton}/2000 \text{ lbs}) = 0.03 \text{ ton/yr}$

PTI allowable
 $(8.5 \text{ lbs/hr})(1-.95) = 0.43 \text{ lb/hr}$
 $(0.43 \text{ lb/hr})(3000 \text{ hrs/yr})(\text{ton}/2000 \text{ lbs}) = 0.65 \text{ ton/yr}$

	Potential	Actual	PTI allowable
transfer of sand and aggregate to elevated bins		45.73	0.19
			4.69
sand and aggregate weigh hopper loading	31.54		0.13
			3.24
cement silo loading	425.74		0.05
			7.29

FACILITY DESCRIPTION	concrete batch plant	CITY/TWP	Alpha	
cement weigh hopper loading		5.69	0.01	0.11
sand, agg. and cement loading into concrete trucks		37.23	0.03	0.65
total emissions		545.93	0.41	15.98

**F001- paved and unpaved roadways
PTI allowable 7.97 tons/yr particulate emissions**

**F002- sand and aggregate storage piles
PTI allowable 0.15 ton/yr particulate emissions**

NSR Discussion

Philips Ready Mix #2 has requested this PTI for a ready mix concrete batch plant. This plant will consist of sand and aggregate transfer to elevated bins, sand and aggregate weigh hopper loading, cement silo loading, cement weigh hopper loading and sand, aggregate and cement loading into trucks, storage piles and paved and unpaved roadways.

Allowable emissions are based for the concrete batch plant (P901) on a maximum operating annual schedule of 3000 hours and the maximum hourly production capacities from the equipment. The cement silo loading and the sand, aggregate and cement loading into concrete trucks shall be adequately enclosed and vented to a fabric filter. The applicable rules are 3745-31-05, 3745-17-11(B). The facility is located in a non-appendix A area. Watering and wet sweeping for the roadways and storage piles will be use at sufficient treatment frequencies to ensure compliance with the applicable emissions limitations.

For P901, F001 and F002, BAT is determined to be compliance with the applicable OAC rules, specified allowable emission rates, visible emission opacity limits; record keeping and reporting requirements.

Prepared by: Carlos Lynch