



**TECHNICAL REVIEW AND EVALUATION  
OF APPLICATION FOR  
AIR QUALITY PERMIT No. 95937**

**I. INTRODUCTION**

This Class II Renewal permit is for the continued operation of McNeil Brothers Inc.'s WEMCO portable batch concrete plant. A class II permit is required because the uncontrolled potential to emit PM<sub>10</sub> will exceed significant thresholds.

**A. Company Information**

Facility Name: WEMCO Portable Concrete Batch Plant  
Mailing Address: 6681 West Allison Street, Chandler, AZ 85226  
Facility Location: Portable

**B. Attainment Classification**

The portable facility has the potential to operate throughout the entire State of Arizona. It is not anticipated to cause non-attainment for any county as it does not have the potential to emit ozone.

**II. PROCESS DESCRIPTION**

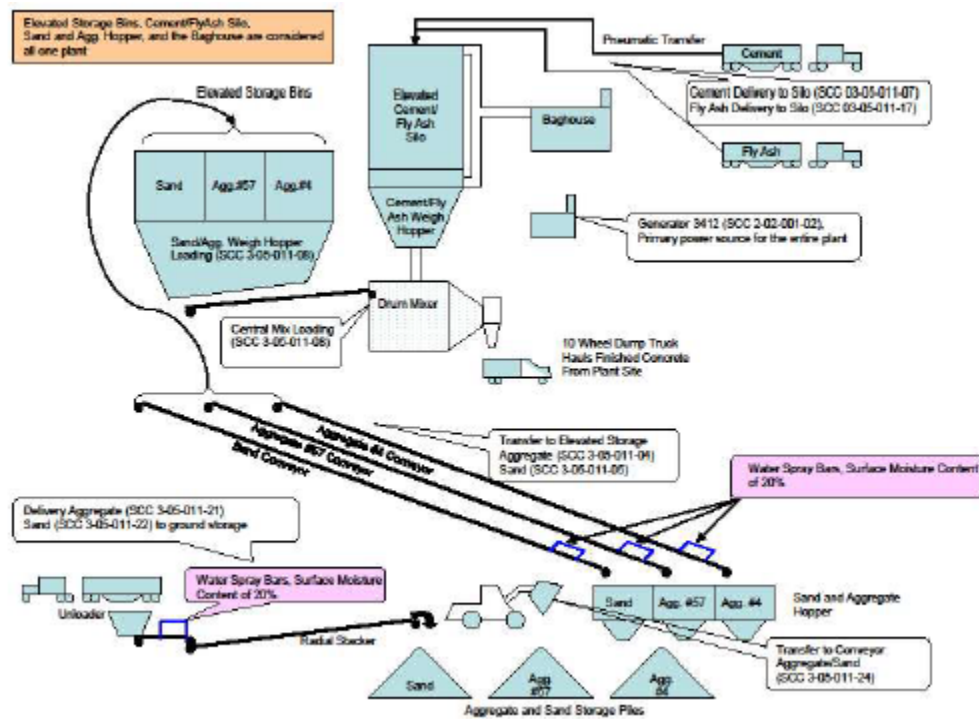
**A. Process Equipment**

The facility operates a portable central mix concrete batch plant capable of producing 250 cubic yards per hour of concrete. Cement powder, fly ash, large and small aggregate, sand and water are mixed to produce concrete. The ready mix concrete is weighed and fed into trucks for delivery.

**B. Control Devices**

A baghouse will be used to control particulate matter emissions from the loading and unloading of the silo and the transfer of material to the cement/fly ash weigh hopper. Spray bars are utilized to control emissions where sand and aggregate are transferred via conveyors. Particulate matter emissions from storage piles, roadways and other various sources will be controlled by water trucks, chemical dust suppressants or equivalent methods as needed.

**C. Process Flow Diagram**



### III. COMPLIANCE HISTORY

There have been no violations cited for this facility during the previous permit term.

### IV. EMISSIONS

Potential to Emit (PTE) calculations were performed using AP-42 emissions factors and through AERMOD dispersion modeling.

The facility has a PTE of more than the permitting exemption thresholds of PM<sub>10</sub>. The facility's PTE is provided in Table 2 below:

**Table 1: Potential to Emit (tpy)**

Pollutant	Uncontrolled Emissions	Controlled Emissions	Previous Permit Controlled Emissions	Increase	Permitting Exemption Threshold	Maricopa County BACT Thresholds
PM	311.50	8.12	24.75	-16.63	-	-
PM <sub>10</sub>	146.08	3.93	10.13	-6.20	7.5	15
PM <sub>2.5</sub>	20.823	0.61	3.74	3.24	5	10

#### V. MINOR NEW SOURCE REVIEW (NSR)

The increase in emissions are below permitting exemption threshold. Minor new source review is not triggered. The change in emissions is due to proposed increase in the amount of material being processed per day.

#### VI. APPLICABLE REGULATIONS

Table 3 identifies applicable regulations and verification as to why that standard applies. The table also contains a discussion of any regulations the emission unit is exempt from.

**Table 2: Applicable Regulations**

Unit & year	Control Device	Rule	Discussion
Fugitive dust sources	Water Trucks, Dust Suppressants	A.A.C. R18-2 Article 6 A.A.C. R18-2-702	These standards are applicable to all fugitive dust sources at the facility.
Abrasive Blasting	Wet blasting; Dust collecting equipment; Other approved methods	A.A.C. R-18-2-702 A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.
Spray Painting	Enclosures	A.A.C. R18-2-702 A.A.C. R-18-2-727	These standards are applicable to any spray painting operation.
Demolition/renovation Operations	N/A	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.
Mobile sources	None	A.A.C. R18-2-801	These are applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently

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Unit & year	Control Device	Rule	Discussion
		Maricopa County Rule 200§410  Pima County Code §§17.12.300	moved during the course of their utilization. County mobile source requirements. The facility is subject to Pima County Code §§17.12.300 but the regulations were streamlined because A.A.C. Article 8 is equivalent.

**VII. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS****A. Facility-Wide**

1. At the frequency specified in the each sections of this permit, the Permittee shall conduct an instantaneous survey of visible emissions from both process stack sources, when in operation, and fugitive dust sources.
2. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.
3. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.

**B. Fugitive Dust**

1. The Permittee is required to keep records of the dates and types of dust control measures employed.
2. The Permittee is required to show compliance with the opacity standards in the fugitive dust section of the permit by having a Method 9 or ALT-082 certified observer perform a monthly survey of visible emission from fugitive dust sources. The observer is required to conduct a six minute Method 9 or ALT-082 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard.
3. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.
4. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.

**C. Periodic Activities**

1. The Permittee is required to record the date, duration and pollution control measures of any abrasive blasting project.
2. The Permittee is required to record the date, duration, quantity of paint used, any applicable SDS, and pollution control measures of any spray painting project.
3. The Permittee is required to maintain records of all asbestos related demolition or renovation projects. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

**D. Mobile Sources**

1. The Permittee is required to keep records of all emission related maintenance performed on the mobile sources.

## VIII. AMBIENT AIR IMPACT ANALYSIS

McNeil Brothers conducted an AERMOD modeling analysis to demonstrate compliance with the NAAQS for this renewal permit using the 2019-2021 PM<sub>10</sub> and PM<sub>2.5</sub> background data with the most recent version of AERMOD (V22112). The 2017-2021 Phoenix Sky Harbor Airport meteorological data was also processed with the most recent version of AERMET (V22112).

Although the plant is portable within the State of Arizona, McNeil Brothers selected a site within Maricopa County for the purpose of air quality modeling. Because ambient PM<sub>10</sub> concentrations within Maricopa County are among the highest reported in the state, demonstrating NAAQS compliance within Maricopa County would infer NAAQS compliance for the plant throughout the state of Arizona. The plant will be limited to 3,600 cubic yards per day of concrete production in this renewal permit. Based on the modeling analysis results, it was determined that the issuance of this renewal permit will not interfere with attainment and maintenance of the NAAQS. Table 4 provides a summary of the modeling results:

**Table 4: Modeling Results**

Pollutant	Averaging Period	Modeled Concentration (µg/m <sup>3</sup> )	Background Concentration (µg/m <sup>3</sup> )	Maximum Ambient Concentration (µg/m <sup>3</sup> )	NAAQS (µg/m <sup>3</sup> )
PM <sub>10</sub>	24-hour	62.2	86.0	148.2	150
PM <sub>2.5</sub>	24-hour	5.03	28.67	33.7	35
	Annual	2.08	9.43	11.51	12

## IX. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
AERMOD	AMS/EPA Regulatory Model
AERMET	AERMOD Meteorological Preprocessor
AMS	American Meteorological Society
BACT	Best Available Control Technology
EPA	Environmental Protection Agency
HAP	Hazardous Air Pollutant
NAAQS	National Ambient Air Quality Standard
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter less than 10 µm nominal aerodynamic diameter
PM <sub>2.5</sub>	Particulate Matter less than 2.5 µm nominal aerodynamic diameter
PTE	Potential to Emit
TPY	Tons per Year