



**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 97152**

I. INTRODUCTION

This Class II synthetic minor permit is issued to CEMEX Construction Materials South, LLC, the Permittee, for the continued operation of a stationary crushing and screening plant as well as the concrete batch plant located in Camp Verde, AZ. The uncontrolled emissions from this facility are greater than the major source thresholds identified in Arizona Administrative Code (A.A.C.) R18-2-401.13. The facility has taken voluntary limits in order to reduce its potential to emit to a level below these thresholds. Therefore, a Class II synthetic minor air quality permit is required for this facility in accordance with A.A.C. R18-2-302.B.2.a.

A. Company Information

Facility Name: CEMEX – Camp Verde Plant
Mailing Address: 5555 E. Van Buren Street, Suite 155, Phoenix, AZ 85008
Facility Location: 3600 Old Highway 279, Camp Verde, AZ 86322

B. Attainment Classification

The facility is located in Yavapai County which is an area that is designated as attainment or unclassified for all criteria pollutants.

II. PROCESS DESCRIPTION

CEMEX Construction Materials South, LLC operates a crushing and screening plant as well as concrete batch plant. The crushing and screening plant consists of 3 crushers, 2 screens and 17 belts. The concrete bath plant has a capacity of 240 cubic yards per hour. During this renewal, a portable crushing plant was added to the aggregate operations. The plant will be used to crush return concrete for a temporary period and will then move on to other CEMEX locations.

III. COMPLIANCE HISTORY

During the previous permit term, the Arizona Department of Environmental Quality (ADEQ) conducted 5 annual compliance certification report reviews and 6 physical inspections. No deficiencies were noted during any of the report reviews or physical inspections.

IV. EMISSIONS

The facility's potential to emit (PTE) was calculated using AP-42, *Compilation of Air Pollutant Emissions Factors*. Changes in emissions are due to the addition of a temporary portable horizontal shaft impact (HSI) crushing and screening plant. The increase in emissions is below Minor New Source Review (NSR) thresholds and therefore, it does not trigger minor NSR.

The facility has the PTE more than the significant level threshold for PM₁₀. The facility's PTE is provided in Table 1 below:

Table 1: Potential to Emit (tpy)

Pollutant	PTE (Latest Permitting Action)	Change in PTE	PTE (Current Permitting Action)	Permitting Exemption Thresholds	Minor NSR Triggered?
NO _x	0	0	0	20	No
PM ₁₀	11.81	+7.43	19.24	7.5	No
PM _{2.5}	1.80	+1.54	3.34	5	No
CO	0	0	0	50	No
SO ₂	0	0	0	20	No
VOC	0	0	0	20	No

V. VOLUNTARILY ACCEPTED EMISSION LIMITATIONS AND STANDARDS

The permit contains the following voluntary emission limitations and standards:

A. Crushing and Screening Plant

The facility has accepted a voluntary throughput limit of 5,000 tons per day for the crushing and screening plant to remain below major source thresholds as well as to comply with the National Ambient Air Quality Standards (NAAQS). The limit was incorporated into Permit No. 50376 issued back in 2013.

B. Concrete Batch Plant

The facility has accepted a voluntary throughput limit of 3,840 cubic yards per day for the concrete batch plant to remain below major source thresholds as well as to comply with the NAAQS. The limit was incorporated into Permit No. 50376 issued back in 2013.

C. Portable HSI Crushing and Screening Plant

During this renewal, the facility accepted a voluntary throughput limit of 615,000 tons per year for the portable HSI crushing and screening plant in order to avoid triggering minor NSR.

VI. APPLICABLE REGULATIONS

Table 2 identifies applicable regulations and verifications as to why each standard applies. The table also contains a discussion of any regulations the emission units are exempt from.

Table 2: Applicable Regulations

Unit	Control Device	Rule	Discussion
Crushing and Screening Equipment	Wet Suppression System	A.A.C. R19-2-722; 40 CFR 60 Subpart 000	Standards of Performance for Existing Gravel or Crushed Stone Processing Plants are applicable to the crushing and screening equipment. In addition, Standards of Performance for Nonmetallic Mineral Processing Plants are applicable to the crushing and screening equipment manufactured after August 31, 1983.
Concrete Batch Plant	Baghouse and Dust Collector	A.A.C R18-2-723	Standards of Performance for Existing Concrete Batch Plants are applicable since the facility is expected to follow the requirements in A.A.C R18-2-604 through 607.
Propane Water Heater	N/A	A.A.C. R18-2-724	Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment are applicable to the propane water heater. Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources are not applicable to gas-fired heaters.
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.12	This standard is applicable to any asbestos related demolition or renovation operations.

VII. PREVIOUS PERMIT REVISIONS AND CONDITIONS

A. Changes to Current Renewal

Table 3 addresses the changes made to the sections and conditions from Permit No. 70156:

Table 3: Previous Permit Conditions

Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "A"		X		General Provisions: Revised to represent the most recent template language.
Att. "B" Section I		X		Facility-Wide Requirements: Revised to represent the most recent template language.
Att. "B" Condition I.B.1 & .2			X	Facility-Wide Requirements: Removed duplicative conditions
Att. "B" Condition I.B.3			X	Facility-Wide Requirements: Removed condition as this is a stationary source.
Att. "B" Conditions I.B.3 & .4		X		Facility-Wide Requirements: Revised citation.
Att. "B" Condition I.B.3	X			Facility-Wide Requirements: Added yearly throughput limit for new portable HSI Crushing and Screening Plant.
Att. "B" Condition I.B.4	X			Facility-Wide Requirements: Added condition specifying that boneyard equipment shall not be operated
Att. "B" Condition I.C.6	X			Facility-Wide Requirements: Added recordkeeping requirements for new portable HSI Crushing and Screening Plant.
Att. "B" Condition II.B.1.d		X		Crushing and Screening Operations – NSPS: Revised citation.
Att. "B" Condition II.B.2.a		X		Crushing and Screening Operations – NSPS: Changed opacity monitoring frequency from monthly to weekly.
Att. "B" Condition III.B.3.a		X		Crushing and Screening Operations – Non-NSPS: Changed opacity monitoring frequency from monthly to weekly.
Att. "B" Condition IV.B.2		X		Concrete Batch Plant Requirements: Revised citations.
Att. "B" Section V			X	Deleted wash plant section because wash plant does not produce emissions.

Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "B" Condition V.C.1		X		Water Heater Requirements: Revised citation.
Att. "B" Condition V.B.1		X		Water Heater Requirements: Revised citation.
Att. "C"		X		Equipment List: Revised to reflect the most recent equipment operating at the facility, and to include equipment information provided.

VIII. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Table 4 contains an inclusive but not an exhaustive list of the monitoring, recordkeeping and reporting requirements prescribed by the air quality permit. The table below is intended to provide insight to the public for how the facility is required to demonstrate compliance with the emission limits in the permit.

Table 4: Permit No. 97152

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Crushers (Constructed / Modified August 31, 1983 - April 22, 2008)	PM	15% Opacity	An EPA Method 9 observer is required to conduct a weekly survey of visible emissions.	Record the dates and types of dust control measures employed, and if applicable, the results of any EPA Method 9 observations, and any corrective action taken to lower the opacity of any excess emissions.	Submit written reports of all performance tests.
Crushers (Constructed / Modified after April 22, 2008)	PM	12% Opacity			
Grinding Mills, Screening Operations, Bucket Elevators, Transfer Points on Belt Conveyors, Bagging Operations, Storage Bin, Enclosed Trucks or Railcar Loading Stations (Constructed / Modified August 31, 1983 - April 22, 2008)	PM	10% Opacity			

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Gravel or Stone Crushing Processes	PM	20% Opacity	An EPA Method 9 observer is required to conduct a monthly survey of visible emissions.	Record the dates and types of dust control measures employed, and if applicable, the results of any EPA Method 9 observations, and any corrective action taken to lower the opacity of any excess emissions.	N/A
Crushing and Screening Operations	PM	8,700 tons per day throughput	Operate monitoring devices with an accuracy of plus or minus 5 percent over their operating range to determine the daily process weight of sand, gravel or crushed stone produced.	Maintain total daily production records.	N/A
Portable HSI Crushing and Screening Equipment	PM	615,000 tons per year throughput			
Concrete Batch Plant	PM	3,000 cubic yards per day throughput	N/A		
Water Heater	PM	15% Opacity	N/A	Maintain fuel supplier documentation.	Report all 6-minute periods which the opacity exceeded 15%.
Fugitive Dust	PM	40% Opacity	An EPA Method 9 observer is required	Record the dates and types of dust control measures	N/A

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
			to conduct a monthly survey of visible emissions.	employed, and if applicable, the results of any EPA Method 9 observations, and any corrective action taken to lower the opacity of any excess emissions.	
Abrasive Blasting	PM	20% Opacity	N/A	Record the date, duration and pollution control measures of any abrasive blasting project.	N/A
Spray Painting	VOC	20% Opacity Control 96% of the overspray	N/A	Maintain records of the date, duration, quantity of paint used, any applicable material safety data sheet (MSDS), and pollution control measures of any spray painting project.	N/A
Demolition / Renovation	Asbestos	N/A	N/A	Maintain records of all asbestos related demolition or renovation projects including the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.	N/A

IX. ENVIRONMENTAL JUSTICE ANALYSIS

The Environmental Protection Agency (EPA) defines Environmental Justice (EJ) to include the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and polices. The goal of completing an EJ assessment in permitting is to provide an opportunity for overburdened populations or communities to allow for meaningful participation in the permitting process. Overburdened is used to describe the minority, low-income, tribal and indigenous populations or communities that potentially experience disproportionate environmental harms and risks due to exposures or cumulative impacts or greater vulnerability to environmental hazards.

This renewal does not allow or permit any significant increases in emissions and thus, it will not result in any additional impacts.

X. AMBIENT AIR IMPACT ANALYSIS

During Permit No. 50376, an air dispersion modeling analysis using AERMOD was conducted. The analysis demonstrated that emissions of criteria pollutants from the facility, as permitted, will not cause or contribute to a violation of any applicable NAAQS. The changes associated with this renewal did not trigger any updates to the existing ambient air impact analysis. A summary of the results can be found in Table 7 below.

Table 7: NAAQS Modeling Analysis Results

Pollutant	Averaging Period	Background Concentration ($\mu\text{g}/\text{m}^3$)	Total ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)	Exceed NAAQS?
PM ₁₀	24-hr	46	149.7	150	No
PM _{2.5}	Annual	6.1	12	15	No
	24-hr	12.7	33.9	35	No
SO ₂	3-hr	15.7	419.8	1,300	No
NO ₂	Annual	36.1	69.2	100	No
CO	1-hr	1,725	2,054	40,000	No
	8-hr	1,150	1,431	10,000	No

XI. LIST OF ABBREVIATIONS

A.A.C. Arizona Administrative Code
 ADEQ Arizona Department of Environmental Quality
 AERMOD AMS/EPA Regulatory Model
 AERMET AERMOD Meteorological Preprocessor

AMS	American Meteorological Society
AQD	Air Quality Division
AQRV	Air Quality Related Values
ARM	Ambient Ratio Method
A.R.S.	Arizona Revised Statutes
BACT	Best Available Control Technology
Btu/ft ³	British Thermal Units per Cubic Foot
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emissions Monitoring System
CFR	Code of Federal Regulations
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO _{2e}	CO ₂ equivalent basis
EPA	Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
FLM	Federal Land Manager
°F	degrees Fahrenheit
ft	Feet
g	Gram
GHG	Greenhouse Gases
HAPs	Hazardous Air Pollutants
HHV	Higher Heating Value
hp	Horsepower
hr	Hour
IC	Internal Combustion
kW	Kilowatt
MSDS	Material Safety Data Sheet
MW	Megawatts
NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen Oxides
NO ₂	Nitrogen Dioxide
N ₂ O	Nitrous Oxide
NSPS	New Source Performance Standards
O ₃	Ozone
Pb	Lead
PM	Particulate Matter
PM ₁₀	Particulate Matter less than 10 µm nominal aerodynamic diameter
PM _{2.5}	Particulate Matter less than 2.5 µm nominal aerodynamic diameter
PSD	Prevention of Significant Deterioration
psia	Pounds per square Inch (absolute)
PTE	Potential to Emit
sec	Seconds
SF ₆	Sulfur Hexafluoride
SIA	Significant Impact Area
SIL	Significant Impact Level
SO ₂	Sulfur Dioxide Significant Impact Levels
TPY	Tons per Year
VOCs	Volatile Organic Compounds

yr Year