TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 101128

I. INTRODUCTION

This Class II synthetic minor new permit is for the construction and operation of Fisher Sand & Gravel Co.'s portable crushing and screening, hot mix asphalt, wash, and lime marination plant. A Class II synthetic minor is required because the uncontrolled emissions from this facility are greater than the significance levels identified in A.A.C. R18-2-101.131 and exceed the major source thresholds defined by A.A.C. R18-2-101.75a. However, the Permittee has elected to impose voluntary limitations to bring the controlled emissions of the facility below major source thresholds as allowed by R18-2-306.01. 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: Yuma Foothills (US-95)

Mailing Address: 1302 W Drivers Way, Tempe, AZ 85284

Facility Location: 14875 E 31st Street, Yuma, AZ 85367

B. Attainment Classification

The facility will be initially located in Yuma county, which is an area of nonattainment for both PM_{10} and Ozone.

II. PROCESS DESCRIPTION

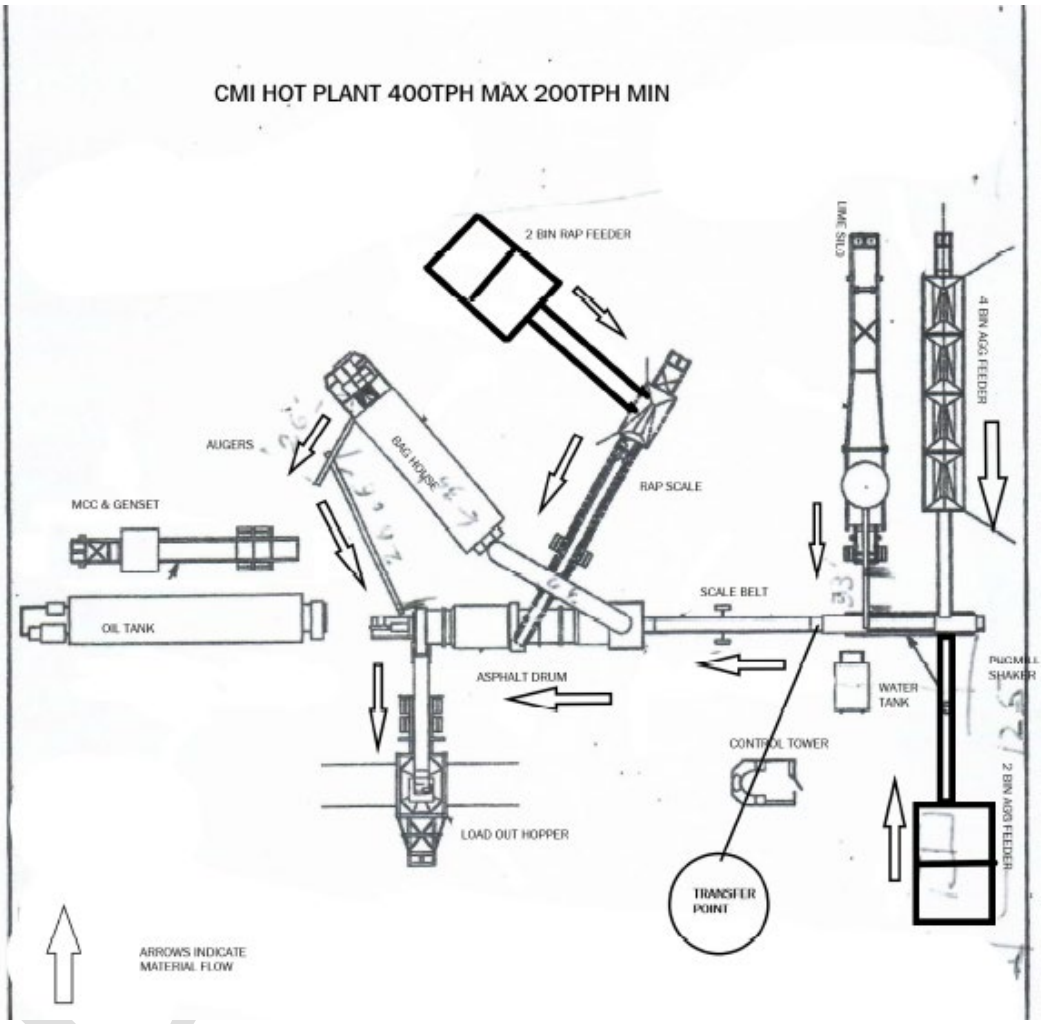
A. Process Equipment

Material from mining operations is fed to the feed hopper by a loader. The material is transferred via conveyor belts to a stacker or a jaw crusher. Material from the stacker is collected in a stockpile. Material from the jaw crusher is conveyed to a screen, then a cone crusher, then another screen, then to a stockpile. The material is then loaded into trucks which haul the material to the wash plant where it is then conveyed into stockpiles. The hot mix asphalt plant runs material through a pugmill before being process through a drum mixer and an asphalt heater. The product hot mix asphalt is then stored in a storage silo before being hauled offsite. To reduce potential moisture damage in the asphalt, hydrated lime is sometimes added to the asphalt mixtures. At the lime marination plant, material and lime are conveyed to a pugmill and mixed before being stored in a silo to await use in the hot mix asphalt plant.

B. Control Devices

The facility utilizes a baghouse and spray bars to reduce potential emissions during operations.

C. Process Flow Diagram(s)



III. EMISSIONS

The facility's potential to emit (PTE) was calculated using voluntary throughput limitations and using AP 42 Table 11.19.2-2 and the ADEQ hot mix asphalt general permit guidance document.

The facility has a potential-to-emit (PTE) more than the permitting exemption and significant thresholds of particulate matter less than 2.5 μm nominal aerodynamic diameter ($PM_{2.5}$) and particulate matter less than 10 μm nominal aerodynamic diameter (PM_{10}) The facility's proposed PTE with accepted voluntary emission limitations is provided in Table 2 below:

Table 1: Potential to Emit (tpy)

Pollutant	PTE	Permitting Exemption Threshold	Significant Threshold	Minor NSR Triggered?
NO_X	9.38	20	40	N
PM_{10}	7.44	7.5	15	N
$PM_{2.5}$	4.36	5	10	N
CO	17.03	50	100	N
SO_2	7.28	20	40	N
VOC	8.16	20	40	N
HAPs	1.26 combined	N/A	10 (single)/ 25 (combined)	N

IV. MINOR NEW SOURCE REVIEW (NSR)

Minor new source review is required if the emissions of a new source have the potential to emit any regulated air pollutant at an amount greater than or equal to the permitting exemption threshold (PET) in Table 2 above.

Voluntary emission limitations and control methods were taken to meet minor new source review requirements and to avoid the need to conduct modeling efforts with consideration to the nonattainment area the facility will initially operate in. The facility will utilize a water suppression system and water trucks to maintain adequate moisture content of the stockpiles, haul road, and the material processed in the crushing & screening, hot mix asphalt, and lime plants in order to maintain compliance with federal and local opacity standards identified in New Source Performance Standard (NSPS) Subpart OOO for Non-Metallic Mineral Processing Plants.

A baghouse will be utilized to control emission of particulate matter from the drum dryer, asphalt silos, and lime silo at the facility to meet emissions standards identified in NSPS Subpart I for Standards of Performance for Hot Mix Asphalt Facilities.

V. VOLUNTARILY ACCEPTED EMISSION LIMITATIONS AND STANDARDS

The permit contains the following voluntary emission limitations and standards:

A. The crushing and screening plant shall not be operated such that the throughput exceeds 1,400,000 tpy based on a 12-month rolling total.

B. The wash plant shall not be operated such that the throughput exceeds 500,000 tpy of aggregate based on a 12-month rolling total.

C. The hot mix asphalt (HMA) plant shall not be operated such that the throughput exceeds 250,000 tpy based on a 12-month rolling total.

D. The lime marination plant shall not be operated such that the throughput exceeds 250,000 tpy based on a 12-month rolling total.

The voluntary emission limitations were taken to meet minor new source review requirements and to avoid the need to conduct modeling efforts with consideration to the nonattainment area the facility will initially operate in.

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

Emissions Unit	Control Device	Rule	Discussion
Crushing, screening, and material handling operations.	Dust collecting equipment and water suppressant systems.	40 CFR 60 Subpart OOO	These standards are applicable to affected facilities in nonmetallic mineral processing plants: crushers, screens, conveyor belts, transfer points, storage bins, enclosed storage areas, truck loading and unloading activities.

Emissions Unit	Control Device	Rule	Discussion
Hot mix asphalt operations.	Dust collecting equipment and water suppressant systems.	40 CFR 60 Subpart I	New Source Performance Standard (NSPS) Subpart I "Standards of Performance for Hot Mix Asphalt Facilities" applies to the following operations associated with a hot mix asphalt plant constructed after June 11,1973: dryers, systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.
Asphalt Heater		A.A.C. R18-2-724	A.A.C. R18-2-724 "Standards of Performance for Fossil-fuel fired Industrial and Commercial Equipment" applies to industrial and commercial installations rated in aggregate greater than 500,000 Btu per hour, but less than 250,000,000 Btu per hour, in which fuel is burned for the primary purpose of producing steam, hot water, hot air or other liquids, gases, or solids and in the course of doing so the products of combustion do not come into direct contact with process materials and are not subject to NSPS.

Emissions Unit	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.

VII. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Table 6 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 Permittee is required to demonstrate compliance with the emission limits in the permit. Records are required be kept for a minimum of 5 years as outlined in Section XII of Attachment "A" of the permit.

Table 3: Permit No. 101128

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Hot Mix Asphalt Plant	PM	20% opacity	Conduct weekly opacity monitoring of visible emissions from the Hot Mix Asphalt Plant	Maintain records of "on specification" used oil fuel analysis from supplier, production rate of hot mix asphalt, and percentage of recycled asphalt in the aggregate.	If the opacity of the observation exceeds 20%, submit an excess emissions report.
Asphalt Heater	PM	15% opacity	Weekly monitoring of visible emissions from the stack of the asphalt heater.		Report all 6-minute periods which the opacity exceeded 15%.
	SO_2	1.0 lb/MMBtu		Maintain records of fuel supplier certifications including sulfur content of the fuel.	
Crushing and Screening Operations	PM	12% opacity	Conduct weekly opacity monitoring of crushing	Maintain records of all visible emission surveys.	Report any 6-minute periods in which the opacity limit was exceeded.

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
			and screening equipment. Conduct monthly inspections of water suppression systems.		
Fugitive Dust	PM	40% Opacity	A Method 9 observer is required to conduct a weekly survey of visible emissions.	Record of the dates and types of dust control measures employed, and if applicable, the results of any Method 9 observations, and any corrective action taken to lower the opacity of any excess emissions.	If the opacity of the observation exceeds 40%, submit an excess emissions report.
Abrasive Blasting	PM	20% Opacity	No monitoring required.	Record the date, duration and pollution control measures of any abrasive blasting project.	No reporting required.
Spray Painting	VOC	20% Opacity Control 96% of the overspray	No monitoring required.	Maintain records of the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.	No reporting required.

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Demolition/ Renovation	Asbestos	N/A	No monitoring required	Maintain records of all asbestos related demolition or renovation projects including the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents	No reporting required.

VIII. LEARNING SITE EVALUTATION

In accordance with ADEQ's Environmental Permits and Approvals near Learning Sites Policy, the Department is required to conduct an evaluation to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools in the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

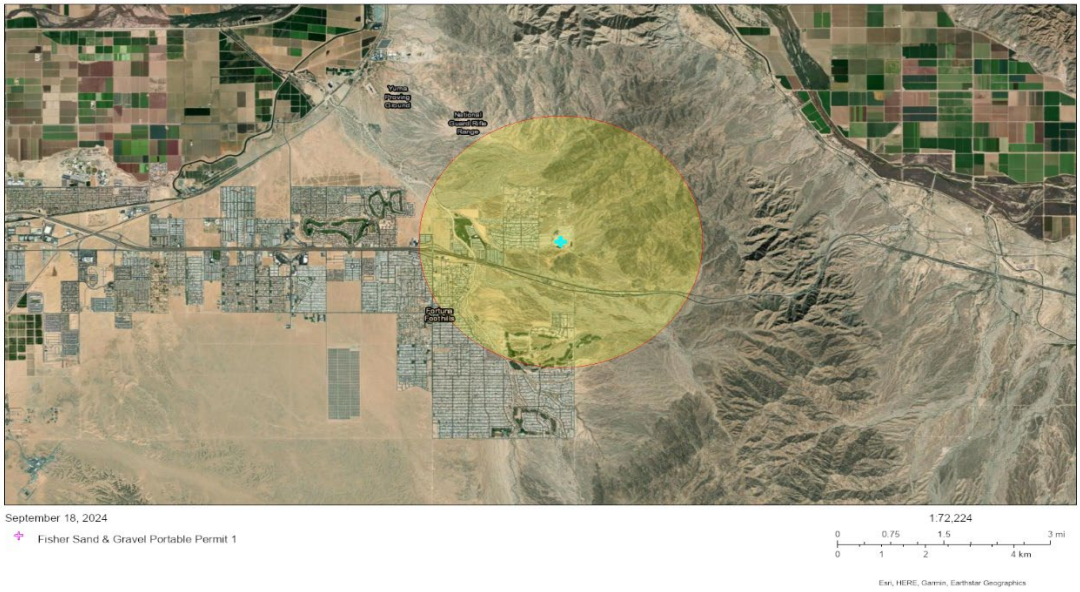
There are no learning sites within 2 miles of the facility. Therefore, it is exempt from a learning sites evaluation.

IX. ENVIRONMENTAL JUSTICE ANALYSIS

The EPA (Environmental Protection Agency) 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.

The EPA developed EJSCREEN, a publicly available tool that uses nationally consistent data, to produce maps and reports detailing environmental and demographic indicators that can be used to evaluate EJ concerns. The EPA selected an 90th percentile threshold for this action to evaluate the potential for EJ concerns in a community, meaning that if the area of interest exceeds the 90th percentile for one or more of the EJ indexes, the EPA considers that area to have a high potential for EJ concerns. The ADEQ mapped the location of Fisher Sand & Gravel Portable Permit 1 and reviewed a two-mile radius around the facility for potential environmental justice concerns (see Figure 1 in the following page).

Figure 1: 2-Mile Radius from the Fisher Sand & Gravel Portable Permit 1



A. Demographics

The ADEQ relied on data from the EPA EJ Screen tool to assess the demographics of the communities near the initial location for this proposed facility. The EJSCREEN report shows that the Demographic Indicators; Minority Population, Low Income Population, Linguistically Isolated Population, and Population Under 5 years of age, and Population with Less Than High School Education are all below the 90th percentile threshold. The report also shows that Population over 64 years of age are above the 90th percentile threshold. Additionally, ADEQ posts a notice in two newspapers of general circulation within the surrounding community, as well as publishes the notice electronically to ensure that the community has ample opportunity to provide comments on the draft documents prior to a final permitting decision.

B. Summary of Air Quality

All air quality related environmental indicators within a 2-miles radius of the facility were below the 90th percentile for both Arizona and the USA averages.

C. Conclusion

The ADEQ concludes that the protections afforded by Arizona Revised Statutes (A.R.S.) § 49-426, which is imposed through the permit, ensure that the public health and environment in Arizona are protected and that the public notice and

comment opportunities afforded to the community on this new permit application satisfy the public participation component of the EPA EJ Guidance.

X. LIST OF ABBREVIATIONS

A.A.C. ..... Arizona Administrative Code
ADEQ ..... Arizona Department of Environmental Quality
AQD ..... Air Quality Division
A.R.S. ..... Arizona Revised Statutes
Btu/ft^3 ..... British Thermal Units per Cubic Foot
CFR ..... Code of Federal Regulations
CO ..... Carbon Monoxide
EPA ..... Environmental Protection Agency
HAP ..... Hazardous Air Pollutant
hp ..... Horsepower
NAAQS ..... National Ambient Air Quality Standard
NO_X ..... Nitrogen Oxides
NO_2 ..... Nitrogen Dioxide
NSPS ..... New Source Performance Standards
O_3 ..... Ozone
PM ..... Particulate Matter
PM10 ..... Particulate Matter less than 10 µm nominal aerodynamic diameter
PM2.5 ..... Particulate Matter less than 2.5 µm nominal aerodynamic diameter
PTE ..... Potential to Emit
SIL ..... Significant Impact Level
SO_2 ..... Sulfur Dioxide Significant Impact Levels
TPY ..... Tons per Year
VOC ..... Volatile Organic Compound
yr ..... Year