

**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 47851**

I. INTRODUCTION

This Class II, synthetic minor air quality control operating permit is for the operation of a concrete batch plant with co-located crushing and screening plant and wash plant. The facility operates entirely on supplied commercial electric power. The facility is owned and operated by Hanson Aggregates of Arizona. This is a portable facility that can be operated statewide except for Maricopa County. This is a renewal of Permit No. 27739.

A. Company Information

Facility Name: Hanson Aggregates - Plant 22 - Prescott
Facility Address: 5899 Wilkinson Drive
Prescott, AZ 86301
Mailing Address: 4127 East Van Buren Street, Suite 205
Phoenix, AZ 85008

B. Learning Sites Evaluation

In accordance with ADEQ's Environmental Permits and Approvals Near Learning Sites Policy, the Department conducted 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 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 two miles of the facility.

II. FACILITY DESCRIPTION

The facility consists of a concrete batch plant with a rated capacity of 300 tons per hour, two crushing and screening plants with a maximum capacity of 400 tons per hour and 200 tons per hour, respectively, and a wash plant with a maximum capacity of 300 tons per hour. The facility is prohibited from operating in Maricopa County. Spray bars, water trucks and baghouses will be used as air pollution control devices.

The crushing and screening plants produce aggregate by processing large rocks through various size crushers to reduce them to a smaller size. The crushed rocks are sent through a series of screens and are sorted out based on size. This resulting rock aggregate is then sent to the concrete batch plant. The process of the concrete batching involves combining aggregate with water and cement. Each of these constituents are feed into weigh hoppers which combine the proper amounts of material.

III. AIR POLLUTION CONTROLS

The Permittee is required to maintain and operate spray bars at all times to control visible emissions from concrete batch plant, handling, transporting, and conveying of materials. Also,

the Permittee is required to operate and maintain a baghouse to control emissions vented by the cement storage silo, fly ash storage silo, lime silo, and emissions vented by the loading of product mix into the mixer trucks.

IV. EMISSIONS

Table 1: PTE of Facility

| Pollutant | Facility Potential to Emit (tons/year) |
|------------------|--|
| PM ₁₀ | 36.23 |
| PM | 84.12 |
| NO _x | 4.09 |
| CO | 0.69 |
| VOC | 0.07 |

V. APPLICABLE REGULATIONS

Table 2 identifies applicable regulations and verification as to why that standard applies.

Table 2: Verification of Applicable Regulations

| Unit | Control Device | Rule | Verification |
|-------------------------------|----------------|--|--|
| Crushing and Screening Plants | Spray Bars | 40 CFR 60.672(b) 40 CFR 60.672(c) 40 CFR 60.672(h) | Requirements and conditions for Metallic Mineral Processing Equipment subject to NSPS for equipment with a primary crusher capacity greater than 150 tons per hour and date of manufacture post August 1983. |
| Lime Silo | Baghouse | A.A.C. R18-2-702.B A.A.C. R18-2-702.C A.A.C. R18-2-730.A A.A.C. R18-2-730.B | General Provisions; Standards of Performance for Unclassified Sources |
| Concrete Batch Plant | Baghouse | A.A.C. R18-2-614 A.A.C. R18-2-702 A.A.C. R18-2-723 | Evaluation of Nonpoint Source Emissions; General Provisions: Standards of Performance for Unclassified Sources; Standards of Performance for Existing Concrete Batch Plants |
| Fuel Burning Equipment | N/A | A.A.C. R18-2-724.C.1 A.A.C. R18-2-724.J | Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment |

| Unit | Control Device | Rule | Verification |
|---|--|--|---|
| Gasoline Dispensing Facility | Seals; Submerged filling devices | A.A.C. R18-2-710.B A.A.C. R18-2-710.D A.A.C. R18-2-710.E.1 40 CFR 60.11113(a)1 40 CFR 60.11113(a)2 40 CFR 60.11113(b) 40 CFR 60.11116(a)1 40 CFR 60.11116(a)2 40 CFR 60.11116(a)3 40 CFR 60.11116(a)4 40 CFR 60.11116(b) | Loading of gasoline storage tanks at gasoline dispensing facilities is subject to Standards of Performance for Existing Storage Vessels for Petroleum Liquids; National Emission Standards for Hazardous Air Pollutants for Gasoline Dispensing Facilities is applicable because the gasoline tanks at the facility are expected to dispense gasoline into fuel tanks of motor vehicles on-site. |
| Fugitive Dust Sources | Water and other reasonable precautions. | A.A.C. R18-2-604.A,B A.A.C. R18-2-605.A,B A.A.C. R18-2-606 A.A.C. R18-2-607.A,B A.A.C. R18-2-614 A.A.C. R18-2-702.B | Open Areas, Dry Washes, or River Beds; Roadways and Streets; Material Handling; Storage Piles; Evaluation of Nonpoint Source Emissions; General Provisions |
| Mobile Sources | N/A | A.A.C. R18-2-801.A,B A.A.C. R18-2-802.A,B A.A.C. R18-2-804.A,B | Emissions from Mobile Sources (New and Existing) |
| Other Periodic Activities | Wet blasting; Dust collecting equipment; Other approved methods; Enclosures | A.A.C. R-18-2-702.B A.A.C. R-18-2-726 A.A.C. R-18-2-727.A A.A.C. R-18-2-727.B A.A.C. R-18-2-727.C A.A.C. R-18-2-727.D A.A.C. R18-2-1101.A.8 | General Provisions; Standards and Performance for Sand Blasting Operations; Standards of Performance for Spray Painting Operations; Applicable to any asbestos related demolition or renovation operations. |
| Additional Conditions for Operation Inside Pima County | | P.C.C §§17.16.380 P.C.C §§17.16.060 P.C.C §§17.16.080 P.C.C §§17.16.090 P.C.C §§17.16.100 P.C.C §§17.16.010.C P.C.C §§17.16.040 P.C.C §§17.16.050 | These standards and conditions are applicable to operations inside Pima County. |
| Additional Conditions for Operation Inside Pinal County | | Pinal Code §3-1-082 Pinal Code §3-1-081 Pinal Code §8-1-030.A.3 Pinal Code §4-2-040 Pinal Code §5-5-190.C Pinal Code §3-1-083 | These standards and conditions are applicable to operations inside Pinal County. |

VI. PREVIOUS PERMIT CONDITION

Table 4 compares the substantive conditions in Permit #27739 with the conditions in this renewal

permit and cross-references the previous permit conditions to their location in the renewal permit.

Table 4: Comparison of Previous and Current Permit Conditions

| Condition # in Permit No. 27739 | Determination | | | | Comments |
|---------------------------------|---------------|------|---------|-------------|--|
| | Deleted | Kept | Revised | Streamlined | |
| Attachment A | | | X | | This Attachment has been revised and the most recent Attachment "A" is used for this permit. |
| Attachment B | | | | | |
| Condition I | | | X | | Facility Wide Limitations has been revised to represent most recent language. |
| Condition I.A | | | X | | Operating Limitations now include requirements for operation and maintenance instructions or an operations and maintenance plan. |
| Condition I.B | | | X | | Recordkeeping Requirements now include monitoring and reporting requirements. |
| Condition II | | X | | | Crushing and Screening Plants are subject to NSPS standards and conditions. |
| Condition II.C | | | X | | Monitoring and Recordkeeping Requirements now require monthly and quarterly surveys. |
| Condition III | | | X | | Lime Silo is now included as a separate section. |
| Condition III | | | X | | Concrete Batch Plant has been revised to represent most recent language. |
| Condition III.A.2 | | | X | | Emission Standards for Open Areas, Dry Washes, or Riverbed, Roadways and Streets, Material Handling, and Storage Piles are now covered under Fugitive Dust Requirements. |
| Condition III.C, D | | | X | | Monitoring and Recordkeeping now require monthly and quarterly surveys. |
| Condition IV | | X | | | Conditions Applicable for Portable Sources has been revised to represent most recent language |
| Condition IV | | | X | | Fuel Burning Equipment is now included as a new Section |
| Condition V | | | X | | Mobile Sources has been revised to represent most recent language |
| Condition V | | | X | | Gasoline Storage Tanks are now included as a new Section |

| Condition # in Permit No. 27739 | Determination | | | | Comments |
|---------------------------------|---------------|------|---------|-------------|--|
| | Deleted | Kept | Revised | Streamlined | |
| Condition VI | | X | | | Fugitive Dust Requirements is now included as a new Section |
| Condition VI | | X | | | Fugitive Dust Requirements has been revised to represent most recent language |
| Condition IX | | | X | | Other Periodic Activities is now included as a new Section |
| Attachment C | | X | | | Conditions for Operation Inside Pima County-Section and language are retained. |
| Attachment D | | X | | | Conditions for Operation Inside Pinal County-Section and language are retained. |
| Attachment E | | | X | | The Equipment List has been revised to include conveyors, stackers, gasoline storage tanks and the water heater. |

VII. MONITORING, RECORDKEEPING, AND RECORDING REQUIREMENTS

A. Facility Wide

1. Along with the semiannual compliance certification, the Permittee is required to submit reports of all recordkeeping, monitoring and maintenance required by the permit.
2. The Permittee is required to maintain, on-site, records of the manufacturer's specifications or an Operation and Maintenance Plan for all equipment listed in the permit.

B. Crushing and Screening, Wash Plant, Lime Silo, and Concrete Batch Plant

1. The Permittee is required to conduct a survey of visible emissions emanating from the crusher plants, wash plant, lime silo, and the concrete batch plant. If the opacity of the emissions observed appears to exceed the opacity limit, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee is required to keep records of the survey and any EPA Reference Method 9 observations performed, including date, time and name of the observer. If the observation results in an exceedance of the opacity limit, the Permittee is required to take corrective action and log all such actions. Any exceedance must be reported to ADEQ as an "excess emission".
2. The Permittee is required to conduct a quarterly EPA Reference Method 9 observation of emissions emanating from the crusher plants, wash plant, lime silo, and concrete batch plant. The Permittee is required keep a record the results of the observation including date, time and name of the observer. If the observation results in an exceedance of the opacity limit, the Permittee is required to take corrective action and log all such actions. Any exceedance must be reported to ADEQ as an "excess emission".

C. Fuel Burning Equipment

1. The Permittee is required to keep records of fuel supplier certifications to demonstrate compliance with the PM limit specified in the permit. The certification shall contain information regarding the name of fuel supplier and lower heating value of the fuel. These records shall be made available to ADEQ upon request.
2. The Permittee is required to report all 6-minute periods during which the visible emissions exceed 15 percent opacity, as required under Section XII of Attachment "A" of the permit.

D. Gasoline Dispensing Facilities

1. The Permittee is required to maintain records of the Reid pressure of the gasoline, dates of storage in the tank, and dates when the tank is empty.
2. The Permittee is required to keep records of monthly throughput of gasoline through each dispensing facility.
3. The Permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time.

E. Fugitive Dust

1. The Permittee is required to keep record of the dates on which any of the dust control measures contained in Attachment "B", Conditions X.B.1.a.iii.(a) through X.B.1.a.iii.(h) in the permit are employed.
2. The Permittee is required to show compliance with the opacity standards in Attachment "B", Section X by having a Method 9 certified observer perform surveys of visible emissions from fugitive dust sources. The observer is required to conduct a 6- minute Method 9 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.

F. Mobile Sources

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

G. 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, and quantity of paint used, any applicable MSDS, 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.

LIST OF ABBREVIATIONS

| | |
|------------------|--|
| A.A.C. | Arizona Administrative Code |
| ADEQ | Arizona Department of Environmental Quality |
| CFR | Code of Federal Regulations |
| CO | Carbon Monoxide |
| HAPS | Hazardous Air Pollutants |
| MSDS | Material Safety Data Sheet |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NO _x | Nitrogen Oxides |
| NSPS | New Source Performance Standards |
| PM | Particulate Matter |
| PM ₁₀ | Particulate Matter with an aerodynamic diameter less than 10 microns |
| PTE | Potential-to-Emit |
| SO ₂ | Sulfur Dioxide |
| TPY | Tons per Year |
| VOC | Volatile Organic Compound |

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