

**TECHNICAL REVIEW AND EVALUATION  
OF APPLICATION FOR  
AIR QUALITY PERMIT No. 92038**

**I. INTRODUCTION**

This Class II synthetic minor permit is issued to Henrietta Mine, LLC, the Permittee, for the continued operation of a crushing and screening plant. In addition, the facility uses three diesel generators to support their operations. This permit supersedes Registration No. 79926.

**A. Company Information**

Facility Name: Henrietta Mine  
Mailing Address: 3417 South Valerie Drive  
Chandler, AZ 85286  
Facility Location: 5850 Henrietta Mine Road  
Mayer, AZ 86333

**B. Attainment Classification**

The facility is located in Yavapai County, an area classified as attainment for all criteria pollutants.

**II. PROCESS DESCRIPTION**

The facility processes waste rock and other material which consist of metallic minerals from previous mining activities conducted by others.

**A. Process Equipment**

Existing stockpiles of waste rock and other material are located on the site. The material is transferred to a jaw crusher. Once the material has undergone primary crushing, it is conveyed to a screener. The screener separates the material into two different conveyors. One that is ready to be stockpiled. One that requires further crushing. The one that requires further crushing is sent to a cone crusher. Once the material undergoes secondary crushing, it is conveyed back to the screener. In addition, the facility uses three diesel generators to support their operations.

**B. Control Equipment**

Dust suppression via water spraying from a 4,000-gallon water truck is conducted to control emissions.

**III. LEARNING SITE EVALUATION**

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 K-12 levels, 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.

The facility is not within 2 miles of a learning site and thus, this permitting action is exempt from a learning site evaluation.

#### **IV. COMPLIANCE HISTORY**

Since the issuance of Registration No. 79926, the facility has had three (3) complaint inspections and six (6) partial inspections. The facility has submitted zero (0) annual compliance certifications. In addition, one (1) Notice of Violation (NOV) has been issued to the facility.

##### **A. Complaint No. 17579**

On March 10, 2021, ADEQ conducted a complaint inspection. Dust was generated from vehicles arriving and departing the facility. According to the complaint, the facility was not using their water truck. In addition, it was noted that the facility was operating diesel generators.

##### **B. Case No. 196419**

On March 15, 2021, ADEQ issued an NOV regarding Complaint No. 17579. It requested the facility to submit a registration application. On March 30, 2021, the facility submitted a registration application to add the diesel generators.

##### **C. Complaint No. 17885**

On June 17, 2021, ADEQ conducted a complaint inspection. The facility had been shut down for a couple of weeks and as it was being restarted, dust was generated everywhere. When the inspectors arrived, the facility was not operating.

##### **D. Complaint No. 18391**

On January 18, 2022, ADEQ conducted a complaint inspection. Dust was generated from vehicles going back and forth every half hour. The facility stated that the U.S. Forest Service was working on a reclamation project down the road.

The last partial inspection was conducted on March 7, 2022.

#### **V. EMISSIONS**

The facility's potential to emit (PTE) was calculated using AP-42 as well as voluntarily accepted emission limitations as illustrated in Table 1:

**Table 1: PTE (tpy)**

Pollutant	Emissions
PM <sub>10</sub>	9.86
PM <sub>2.5</sub>	2.85
NO <sub>x</sub>	19.93
CO	7.24
SO <sub>2</sub>	0.01
VOCs	0.74
HAPs	0.02

## VI. VOLUNTARILY ACCEPTED EMISSION LIMITATIONS AND STANDARDS

The permit contains the following voluntarily accepted emission limitations and standards:

### A. Crushing and Screening Plant Equipment

On January 29, 2020, the facility accepted processing rate limits. The facility is not allowed to process more than 1,000 tons per day of waste rock and other materials. In addition, the facility is limited to 210,000 tons based on a 12-month rolling total. These were added during Registration No. 79926.

### B. Non-Emergency CI ICEs

Only diesel can be fired in all the non-emergency compression ignition (CI) ICEs.

During this permitting action, the facility accepted hours of operation limits on their non-emergency CI ICEs. GEN01 is limited to 1,500 hours based on a 12-month rolling total. GEN05 is limited to 2,500 hours based on a 12-month rolling total. In addition, the facility is not allowed to operate GEN02 and GEN03.

## VII. APPLICABLE REGULATIONS

Table 2 identifies applicable regulations along with verifications as to why each standard applies:

**Table 2: Applicable Regulations**

Unit (Year)	Control Device	Rule	Discussion
All Crushing and Screening Plant Equipment (Varies)	Water Trucks; Dust Suppressants	NSPS 40 CFR Part 60 Subpart LL	All crushing and screening plant equipment is subject to NSPS 40 CFR Part 60 Subpart LL for Metallic Mineral Processing Plants as identified in Attachment "C" of the permit.

Unit (Year)	Control Device	Rule	Discussion
Non-Emergency CI ICEs Subject to State Requirements (1989, 2005)	N/A	A.A.C. R18-2-719	Some of the non-emergency CI ICEs are subject to A.A.C. R18-2-719 for Standards of Performance for Existing Stationary Rotating Machinery as identified in Attachment "C" of the permit.
Non-Emergency CI ICEs Subject to NESHAP Requirements (1989, 2005)	N/A	NESHAP 40 CFR Part 63 Subpart ZZZZ	Some of the non-emergency CI ICEs are subject to NESHAP 40 CFR Part 63 Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines as identified in Attachment "C" of the permit.
Non-Emergency CI ICE Subject to NSPS Requirements (2014)	N/A	NSPS 40 CFR Part 60 Subpart IIII	The non-emergency CI ICE is subject to NSPS 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines as identified in Attachment "C" of the permit.
Fugitive Dust	Water Trucks; Dust Suppressants	A.A.C. R18-2-Article 6	Any non-point source of fugitive dust is subject to A.A.C. R18-2-Article 6.
Abrasive Blasting	Wet Blasting; Dust Collecting Equipment; Other Approved Methods	A.A.C. R-18-2-702; A.A.C. R-18-2-726	Any abrasive blasting operation is subject to these rules.
Use of Paints	Enclosures	A.A.C. R18-2-702; A.A.C. R-18-2-727	Any spray painting operation is subject to these rules.
Demolition/Renovation	N/A	A.A.C. R18-2-1101.A.12	Any asbestos related demolition or renovation is subject to these rules.

### VIII. PREVIOUS PERMIT REVISIONS AND CONDITIONS

**A. Previous Permit Revision**

On March 30, 2021, the facility submitted a registration application to revise Registration No. 79926. The facility could not determine how it was going to operate the non-emergency CI ICEs. Hence, a withdrawal was requested to allow the facility to derive a plan. Revised Registration No. 88626 was withdrawn on April 30, 2021.

**B. Changes to Current Registration**

Table 3 addresses the changes that were made to the sections and conditions from Registration No. 79926:

**Table 3: Previous Registration Conditions**

Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "A"	X			General Provisions – Added to include permit expiration and renewal conditions, emissions inventory questionnaire and compliance certification due dates, excess emission, permit deviation and emergency reporting instructions, etc.
Att. "B", Section I	X			Facility-Wide Requirements – Added to include opacity standards and other requirements.
Att. "B", Section II		X		Crushing and Screening Equipment Plant – Revised subsection headings. Added applicability statements. Updated monitoring and recordkeeping requirement. Updated cross-reference. Added permit shield.
Att. "B", Section III	X			Non-Emergency ICEs – Added subsection headings and applicability statements. Added emission limitations and standards. Added operation and maintenance requirements. Added monitoring, recordkeeping and reporting requirements. Added cross-references and citations. Added permit shields.
Att. "B", Section IV		X		Fugitive Dust – Updated monitoring and recordkeeping requirements. Added permit shield.
Att. "B", Section V	X			Other Periodic Activities – Added abrasive blasting conditions. Added use of paints conditions. Added demolition/renovation conditions. Added monitoring, recordkeeping and reporting requirements. Added cross-references. Added permit shield.
Att. "C"		X		Equipment List – Added non-emergency CI ICEs. Revised "A.A.C. / NSPS / NESHAP" column.

**IX. 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 Permittee is required to demonstrate compliance with Permit No. 92038.

**Table 4: Permit No. 92038**

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
All Crushing and Screening Plant Equipment	PM	<1,000 tons per day of waste rock and other materials  <210,000 tons based on a 12-month rolling total of waste rock and other materials  Operation prohibited of high pressure grinder roller and beneficiation equipment  10% opacity	Conduct a weekly survey of visible emissions.	Maintain daily processing rates and 12-month rolling totals of waste rock and other materials processed in tons by the crushing and screening plant equipment.	N/A
All Non-Emergency ICEs	Products of Combustion (POC)	Only diesel can be fired.  <i>GEN01</i> <1,500 hours based on a 12-month  <i>GEN05</i>	N/A	Record the date, the starting time, and the stopping time of periods of use.  Maintain a monthly record of hours and 12-month rolling totals.	N/A

		<p>&lt;2,500 hours based on a 12-month rolling total</p> <p>Operation prohibited of GEN02 and/or GEN03</p>		<p>Keep records of fuel supplier certifications or other documentation.</p>	
<p>Non-Emergency ICEs Subject to State Requirements</p>	<p>POC</p>	<p>40% opacity</p>	<p>Conduct a weekly survey of visible emissions.</p>	<p>Keep records of fuel supplier certifications or other documentation.</p>	<p>Report any daily period during which the sulfur content of the fuel being fired exceeds 0.8%.</p>
<p>Non-Emergency CI ICEs Subject to NESHAP Requirements</p>	<p>POC</p>	<p>Emission limitations and standards in NESHAP 40 CFR Part 63 Subpart ZZZZ.</p>	<p>Conduct a weekly survey of visible emissions.</p>	<p>Keep records of the parameters that are analyzed as part of the oil analysis program (if applicable).</p> <p>Keep a copy of each notification and report submitted to comply with 40 CFR Part 63 Subpart ZZZZ.</p> <p>Keep records of the occurrence and duration of each malfunction.</p> <p>Keep records of the initial and subsequent performance tests including evaluations.</p> <p>Keep records of actions taken during periods of</p>	<p>Submit a notification to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1).</p> <p>Submit each report in Table 7 of 40 CFR Part 63 Subpart ZZZZ that applies.</p>

				<p>malfunction to minimize emissions.</p> <p>Keep records of all required maintenance performed.</p> <p>Keep records of the hours of operation that are recorded through the non-resettable hour meters.</p>	
Non-Emergency CI ICE Subject to NSPS Requirements	POC	Emission limitations and standards in NSPS 40 CFR Part 60 Subpart III.	N/A	Keep records of any corrective action taken from backpressure monitor notifications (if applicable).	N/A
Fugitive Dust	PM	40% opacity	Conduct a weekly survey of visible emissions.	Record the dates and types of dust control measures employed.	N/A
Abrasive Blasting	PM	20% opacity	Conduct a quarterly survey of visible emissions (if applicable).	Record the date, duration and type of control measures employed for any abrasive blasting project.	N/A
Use of Paints	VOCs	20% opacity	Conduct a quarterly survey of visible emissions (if applicable).	Record the date, duration and type of control measures employed, Safety Data Sheets for all paints and solvents used and the amount of paint	N/A



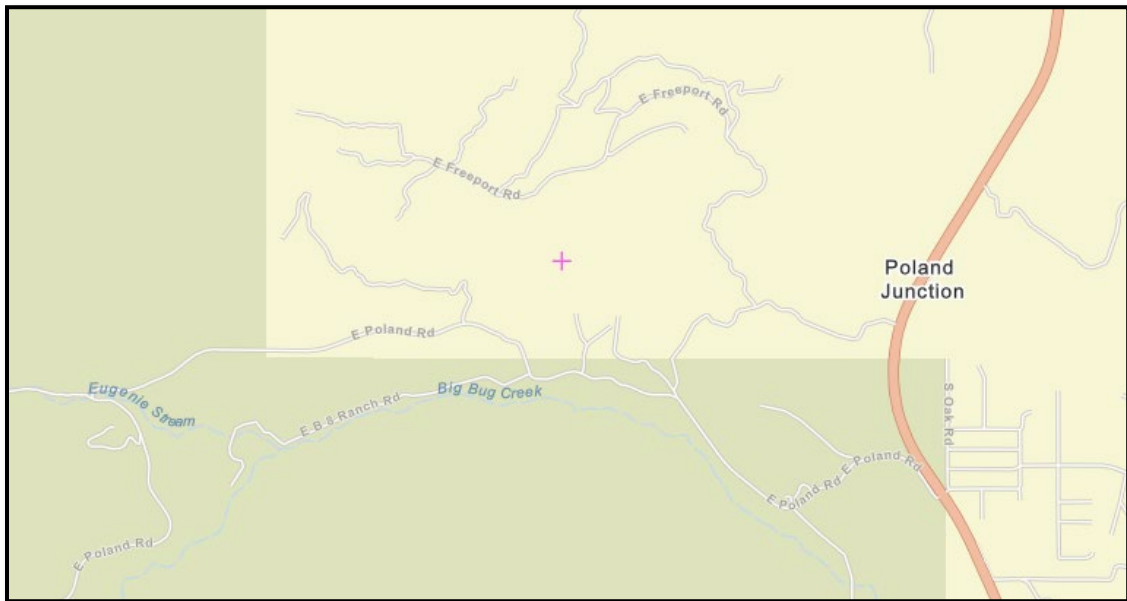
				consumed for any spray painting operation.	
Demolition/ Renovation	Asbestos	N/A	N/A	Maintain records of all asbestos related demolition/renovation including the “NESHAP Notification for Renovation and Demolition Activities” form and all supporting documents.	N/A

**X. ENVIRONMENTAL JUSTICE ANALYSIS**

The Environmental Protection Agency (EPA) defines environmental justice (EJ) as 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 policies. The EJ analysis is meant to provide overburdened communities with the opportunity to meaningfully participate in the permitting process. Overburdened communities describe minority, low-income, tribal and indigenous populations or geographic locations that potentially experience disproportionate environmental harms and risks.

The EPA released EJSCREEN to the public in 2015. EJSCREEN uses national data to produce maps and reports detailing demographic and environmental indicators. These indicators can be used to perform an EJ analysis. The EPA selected an 80th percentile threshold to evaluate the potential for EJ concerns in an area. This means that if an area of interest exceeds the 80th percentile for one or more of the EJ indicators, the EPA considers that area to have a high potential for EJ concerns. Below is the facility’s location which was mapped to analyze potential EJ concerns for this permitting action.

**Figure 1: Henrietta Mine’s Location**



Demographic and environmental indicators were used to screen the communities surrounding the facility’s location. The EJSCREEN report demonstrated the following:

**Table 5: Demographic Indicators**

Demographic Indicator	AZ Average	U.S. Average
People of Color	<80th percentile threshold	<80th percentile threshold

Demographic Indicator	AZ Average	U.S. Average
Low Income	<80th percentile threshold	<80th percentile threshold
Linguistically Isolated	<80th percentile threshold	>80th percentile threshold
Less than High School Education	<80th percentile threshold	<80th percentile threshold
Under Age 5	<80th percentile threshold	>80th percentile threshold
Under Age 64	>80th percentile threshold	>80th percentile threshold

**Table 5: Environmental Indicators**

Environmental Indicator	AZ Average	U.S. Average
Ozone	<80th percentile threshold	>80th percentile threshold

This EJ analysis specifies how demographic and environmental indicators are impacted. The public can use this information to provide comments on the permitting action. A public notice will be published in two (2) local newspapers that are distributed among the communities surrounding the facility’s location. The application, draft permit and technical support document will be available at [azdeq.gov/notices](http://azdeq.gov/notices). This EJ analysis strives to ensure that the public has the resources they need to provide comments during the 30-day public notice period. It is important to note that the EJSCREEN report is not intended to provide a risk assessment.

**XI. LIST OF ABBREVIATIONS**

- A.A.C. .... Arizona Administrative Code
- ADEQ ..... Arizona Department of Environmental Quality
- AZ ..... Arizona
- CFR..... Code of Federal Regulations
- CI ..... Compression Ignition
- CO ..... Carbon Monoxide
- EJ ..... Environmental Justice
- EPA ..... Environmental Protection Agency
- HAPs..... Hazardous Air Pollutants
- ICE ..... Internal Combustion Engine
- N/A..... Not Available
- NESHAP ..... National Emission Standards for Hazardous Air Pollutants
- NOV ..... Notice of Violation

NO <sub>x</sub> .....	Nitrogen Oxides
NSPS .....	New Source Performance Standards
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
POC .....	Products of Combustion
PTE .....	Potential to Emit
SO <sub>2</sub> .....	Sulfur Dioxide
tpy .....	Tons per Year
U.S. ....	United States
VOCs .....	Volatile Organic Compounds
yr .....	Year