



**TECHNICAL REVIEW AND EVALUATION OF  
APPLICATION FOR AIR QUALITY PERMIT NO. 63691**

**I. INTRODUCTION**

This permit is for the continued operation of a roof coatings manufacturing facility for Henry Company in Kingman, Arizona. This is a renewal of Air Quality Permit #53459.

**A. Company Information**

Mailing/ Facility Address: 4685 Finance Way, Mohave County, Kingman, AZ 86401

**B. Attainment Classification (Source: 40 CFR §81.303)**

Henry Company facility is located in an area which is in attainment or unclassified for all criteria pollutants

**II. PROCESS DESCRIPTION**

The Henry Company facility is a Class II synthetic minor source that manufactures protective roof coatings, emulsions, and paints. The products are made by blending asphalt, solvents (mineral spirits), clay, pigments, soap, wax, lime, and other additives. The products manufactured are either solvent-based (asphalt roof cements) or emulsions-based (driveway sealers, latex paint and wax moisture-proofing coatings). Solvent-based products are manufactured by adding all the raw materials into the mixing tanks. Emulsion based products are manufactured by processing the raw materials in mills. The process is completed in a four-hour batch. Pollution control equipment consists of two baghouses in series, followed by a HEPA filter.

**III. EMISSIONS**

The emission calculations for the permit review process relied upon emission factors derived from the Environmental Protection Agency's (EPA) Compilation of Air Pollution Emission Factors (5<sup>th</sup> Edition).

**Table 1: Facility wide Potential to Emit**

Pollutant	Emissions (tons per year)
PM/ PM <sub>10</sub>	0.31
SO <sub>2</sub>	4.67
CO	1.39
VOC	50*
NO <sub>x</sub>	2.57
Total HAPs	3.55

\* The source has voluntarily accepted an emission cap of 50 tons per year of VOC.

**IV. COMPLIANCE HISTORY**

Inspections are being regularly conducted at the Henry Company to ensure compliance with its applicable permit conditions. The last inspection was conducted on January 15, 2015. No cases or violations have been developed as a result of inspections conducted during the 5 year term of Permit #53459.

**V. APPLICABLE REGULATIONS**

Table 2 identifies the applicable regulations corresponding to every process unit and also provides verification as to why that standard applies.

**Table 2: Verification of Applicable Regulations**

Unit	Date of manufacture	Control Equipment	Applicable Regulations	Verification
Boilers	1992, 2005	None	A.A.C. R18-2 - 724	This rule covers all industrial and commercial fuel burning equipment with a capacity greater than 500,000 Btu/hr. NESHAP Subpart JJJJJ defines ‘Gas-fired boiler’ as any boiler that burns gaseous fuels not combined with any solid fuels, and burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. The boilers at Henry Company use natural gas as the only fuel. The hot oil heater at Henry Company shall be using liquid fuel only in the event of curtailment of natural gas supply. Therefore NESHAP Subpart JJJJJ is not applicable.
Hot Oil Heater	2008	None		

Unit	Date of manufacture	Control Equipment	Applicable Regulations	Verification
Process units (Paints, emulsions, and roof coatings manufacture units)		Two baghouses in series followed by a HEPA filter	A.A.C. R18-2-702.B.3, -730.A.1, B, D, F, and G.	R18-2-730 is applicable to all unclassified sources.
Fugitive dust sources	NA	Water and other reasonable precautions	Article 6 and A.A.C. R18-2-702	These are applicable to fugitive dust sources at the facility.
Abrasive Blasting		Water and enclosure	A.A.C. R-18-2-726	This standard is applicable to any abrasive blasting operation.
Spray painting operations	NA	NA	A.A.C. R-18-2-727	This standard is applicable to any spray painting operation.
Demolition/renovation operations	NA	NA	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.
Mobile sources	NA	Water Sprays/ Water Truck for dust control	Article 8	This is applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently moved during the course of their utilization.

**VI. PREVIOUS PERMIT AND PERMIT CONDITIONS**

**A. Previous Permits**

**Table 3: Details of Previous Permit**

Permit Number	Date of Permit Issuance	Application Basis
53459	August 29, 2011	Operating Permit
56007	August 27, 2012	Administrative Amendment

**B. Previous Permit Conditions**

**Table 4: Operating Permit #53459**

Condition #	Determination				Comments
	Delete	Kept	Revise	Streamline	
Attachment A			x		This has been revised and most recent Attachment "A" is used for this permit.
Attachment B					
I		x			Condition for facility-wide requirements.
II.A		x			Condition for applicability for fuel burning equipment.
II.B		x			Condition for fuel limitation.
II.C		x			Condition for particulate matter and opacity standard.
II.D		x			Condition for SO <sub>2</sub> emission standard when using fuel oil #2 in hot oil heater.
III.A		x			Condition for applicability for roof coatings, emulsions, and paints units.
III.B.1		x			Condition for particulate matter and opacity
III.B.2			x		Condition for Air Pollution Control requirements revised by deleting requirements for asbestos handling since the facility is not handling asbestos any more.
III.B.3	x				Condition for Monitoring/ Recordkeeping/ Reporting requirements revised by deleting requirements for asbestos handling since the facility is not handling asbestos any more.
III.B.4			x		Condition for Permit Shield revised by deleting references from 40 CFR 61.
III.C		x			Condition for VOC emissions from different production units.
IV			x		Condition for "Fugitive Dust Requirements" revised to represent most recent permitting language.
V			x		Condition for "Other Periodic Activities" revised to represent most recent permitting language.

Condition #	Determination				Comments
	Delete	Kept	Revise	Streamline	
VI		x			Conditions specific for mobile sources

**Table 5: Administrative Amendment #56007**

Condition #	Determination				Comments
	Delete	Kept	Revise	Streamline	
Attachment "C"					
Equipment List					Revised per the permit renewal application by adding the lime silos.

**VIII. PERIODIC MONITORING**

**A. Boilers**

The Permittee must keep records of fuel supplier certification including the name of the fuel supplier and lower heating value of the fuel.

**B. Roof Coatings, Emulsions, and Paints Units**

1. Particulate Matter

The Permittee is required to measure daily and maintain records of the pressure loss of the gas stream through the dust collector baghouse.

2. Opacity

A certified EPA Reference Method 9 observer must perform weekly surveys of visible emissions from the dust collection system and process equipment. If the opacity appears to exceed the standard, the observer must conduct a certified EPA Reference Method 9 (Method 9) observation. The Permittee must keep records of initial survey and any Method 9 observations performed. Records must include emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If observation shows a Method 9 opacity reading in excess of the standard, the Permittee must report this to ADEQ as excess emission and initiate appropriate corrective action to reduce opacity below the standard. The Permittee must keep a record of the corrective action performed.

3. VOCs

Volatile Organic Compounds emitted from the facility are limited to a total of 50 tons per year, based on a 12-month rolling total. VOC emissions from combustion of fuel in the boilers is minimal (0.08 tpy). An equation is used to compute monthly VOC emissions from the cutback coatings mixers. This equation is the total of VOC emissions from use of mineral spirits in the cutback coatings mixers and use of other

VOC containing materials in the cutback coatings mixers. VOC emissions from the use of mineral spirits are determined through use of a VOC emission factor of 0.0043 lbs per lbs mineral spirits used. VOC emissions from use of all other VOC containing materials are assumed equal to the amount of VOC used. The total monthly emissions are added to the total monthly emissions for the previous consecutive 11 calendar months to establish rolling 12-month total emissions for the facility.

**C. Fugitive Dust Sources**

Opacity

1. A certified EPA Reference Method 9 observer must conduct monthly visual survey of visible emissions from fugitive dust sources.
2. The Permittee must record the emission point being observed, date, time and the results of all observations made, as well as the name of the observer who conducted the test. In the event of opacity going beyond the limit, the Permittee must keep a record of the corrective action taken to bring the opacity below the standard.

**IX. LIST OF ABBREVIATIONS**

A.A.C.....	Arizona Administrative Code
ADEQ .....	Arizona Department of Environmental Quality
CO .....	Carbon Monoxide
EPA.....	Environmental Protection Agency
HAP .....	Hazardous Air Pollutants
HEPA .....	High Efficiency Particulate Air
hr .....	Hour
MMBtu .....	Million British thermal unit
NO <sub>x</sub> .....	Nitrogen Oxides
PM.....	Particulate Matter
PM <sub>10</sub> .....	Particulate Matter Less than 10 Microns
PTE.....	Potential to Emit
SO <sub>2</sub> .....	Sulfur Dioxide
tpy .....	ton per year
VOC .....	Volatile Organic Compounds