



**TECHNICAL REVIEW AND EVALUATION  
OF APPLICATION FOR  
AIR QUALITY PERMIT No. 91920**

**I. INTRODUCTION**

This Class II new permit is for the operation of Ecology Recycling Services, LLC, the Permittee, for the operation of their Ecology Recycling Services facility.

**A. Company Information**

Facility Name: Ecology Recycling Services  
Mailing Address: 13750 E. Imperial HWY Santa Fe Springs, CA 90670  
Facility Location: 59260 HWY 72 Salome, AZ 85348, La Paz County

**B. Attainment Classification**

The facility is located in an area that is in attainment for all criteria pollutants.

**II. PROCESS DESCRIPTION**

This facility is primarily engaged in the merchant wholesale distribution of automotive scrap, industrial scrap, and other recyclable materials. Included in this industry are auto wreckers primarily engaged in dismantling motor vehicles for the purpose of wholesaling scrap. The scrap and recycled materials are brought on site via trucks. The materials are unloaded and excess trash is removed manually. Large pieces are removed, then the recycled material is sized through rotary screen. Smaller materials go through the eddy currents to separated out scrap aluminum and larger material goes through wire sorters and is separated by material type. The final separated products are put in bins and sold. Residual scrap materials are sent to the county landfill for disposal. The facility also utilizes rotary screens for composting, recycling, and topsoil reclamation.

**A. Process Equipment**

**1. Rotary Screens**

Ecology Recycling Services currently utilizes two (2) rotary screens, and will be installing a third screen at the time issuance of Permit No 91920. Two of the screens are rated at 100 cubic yards per hour, and the last is rated at 200 cubic yards per hour. These units are limited to 12 hours of operation per day to ensure compliance with the National Ambient Air Quality Standards (NAAQS). The rotary screens are used for composting, recycling, and topsoil reclamation.

**2. Engines**

Ecology Recycling Services currently utilizes three (3) diesel engines at the facility, and will be installing a fourth at the time issuance of Permit No 91920. Three engines are used to power the rotary screens. These units are rated at 66, 75,

and 134 horsepower (hp). The fourth engine is used as a fire pump engine used in fire suppression situations and is rated at 174 hp.

3. Unclassified Material Handling Operations

Ecology Recycling Services utilizes various vibrators, belts, eddy current separators, and wire sorters to sort and process recycled and metal scrap materials.

### 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 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.

An analysis was conducted and the Department concluded there is no Impacted Learning Sites within 2.0 miles of the source's location. Hence the facility is exempt from the learning sites evaluations.

### IV. COMPLIANCE HISTORY

On August 17, 2021 an ADEQ inspector performed an inspection at Ecology Recycling Services. During that inspection, the ADEQ inspector observed that the site operates two (2) rotary screens, a fire pump, and various material handling operations. On October 5, 2021, based on information submitted by Ecology Recycling Services, ADEQ completed a Permit Determination which revealed that Ecology Recycling Services requires a Class II Air Quality Permit.

A notice of violation (NOV), case ID No. 200762, was issued on October 12, 2021 for failure to obtain a permit from ADEQ prior to operating a source subject to regulation per A.R.S. § 49-426(A)(2) and A.A.C. R18-2-302(A).

- A. Pursuant to the NOV No. 200762, Ecology Recycling Services was required to complete the following:
1. Effective immediately upon receipt of the notice, begin recording the following:
    - a. The operating hours and cubic yards of material processed for each day of operation for each Trommel.
    - b. The operating hours for each day of operation for the fire pump engine.
  2. Within 10 calendar days of receipt of the Notice, submit a notice to ADEQ with acknowledgement and understanding of the requirements of this notice and the commitment to comply by the due dates stipulated in the notice.

On November 8, 2021 Ecology Recycling Services submitted a written acknowledgement of the NOV.

3. Within 30 calendar days of receipt of the Notice, submit the facility's historical operating records as listed below:
  - a. Installation date for each Trommel and the fire pump engine.
  - b. Annual operating days and cubic yards of material processed, starting from the date of installation above until start of the operating log required in condition 1, for each Trommel.

On November 8, 2021 Ecology Recycling Services submitted the requested records.

4. Within 30 calendar days of receipt of the Notice, submit an administratively complete permit application to ADEQ, Air Permits Unit.

On October 19, 2021, Ecology Recycling Services submitted an administratively complete application for a registration. However, ADEQ was informed an additional screen was planning to be installed and the registration would no longer be appropriate for the facility. On November 8, 2021 Ecology Recycling Services withdrew the registration application and submitted a Class II application on November 12, 2021.

5. Within 30 calendar days of receipt of the Notice, submit a signed and executed Consent Order that contains the measures necessary to assure compliance with regulatory requirements.

Consent Order No. A-03-21 was signed and executed on December 7, 2021.

- B.** Consent Order No. A-03-21 requires Ecology Recycling Services to comply with the following compliance schedule:

1. Effective immediately, Ecology Recycling Services, LLC shall monitor and record the daily operating hours for each engine and the daily operating hours and throughput in tons for each rotary screen.
2. Within thirty (30) days of the effective date of this order, Ecology Recycling Services, LLC shall submit to ADEQ an administratively complete Class II Permit Application.
3. Within thirty (30) days of the effective date of this order, Ecology Recycling Services, LLC shall register at least one employee, to be available on site or on call, to be certified in U.S. EPA Reference Method 9 (Smoke School). Registration shall be completed for the earliest date feasible and proof of registration shall be submitted to ADEQ.

- a. Certification of at least one employee shall be completed by no later than four (4) months after the effective date of this order.
- b. The first operating day following certification in Reference Method 9 as required above, Ecology Recycling Services, LLC shall begin conducting daily visible emissions observations on each operation to verify compliance with the following opacity limits. All opacity observed above these required limits shall be reported to ADEQ within twenty-four (24) hours of occurrence.
- c. Opacity of emissions from any fugitive dust non-point source shall not be greater than 40% as measured in accordance with Reference Method 9.
- d. Opacity of emissions from any screening, conveying, transfer point, or storage bins shall not be greater than 20% as measured in accordance with Reference Method 9.

#### 4. Status Reports

Ecology Recycling Services, LLC agrees to submit a written status report to ADEQ by the 10th of every month, beginning the first month following the effective date of this consent order, until this Consent Order terminates.

## V. EMISSIONS

Emission were calculated using AP-42 Chapter 11.19 for Crushed Stone Processing and Pulverized Mineral Processing, EPA engine family, engine tier standards, and daily hours limits.

The facility has a potential-to-emit (PTE) more than the significant thresholds of PM<sub>2.5</sub>. The facility's PTE is provided in Table 1 below:

**Table 1: Potential to Emit (tpy)**

Pollutant	Emissions	Permitting Exemption Threshold	Significant Thresholds	Minor NSR Triggered?
NO <sub>x</sub>	7.21	20	40	No
PM <sub>10</sub>	11.98	7.5	15	Yes
PM <sub>2.5</sub>	11.87	5	10	Yes
CO	9.76	50	100	No
SO <sub>2</sub>	0.02	20	40	No
VOC	0.96	20	40	No
Pb	0	0.3	0.6	No
HAPs (combined)	0.04	N/A	10 (single)/ 25 (combined)	No

**VI. 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 1 above.

The facility elected to undergo air dispersion modeling to demonstrate compliance with minor NSR Requirements. A discussion of the modeling analysis can be found in Section IX.A below.

**VII. APPLICABLE REGULATIONS**

Table 2 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**

<b>Unit</b>	<b>Control Device</b>	<b>Rule</b>	<b>Discussion</b>
Engines	N/A	40 CFR 60 Subpart IIII	The applicability date for New Source Performance Standards (NSPS) Subpart IIII is April 1, 2006 for compression ignition engines. All the internal combustion engines were manufactured after to April 1, 2006. Therefore, NSPS Subpart IIII does apply.
Rotary Screens	N/A	A.A.C. R18-2-722	A.A.C. R18-2-722 applies to screens at existing sources as defined by R18-2-701.16. R18-2-701.16 defines an existing source as any source which does not have an applicable NSPS under Article 9 of A.A.C. R18-2. The screens are not applicable to any NSPS. Therefore, A.A.C. R18-2-722 applies.  NSPS OOO does not apply to facilities without crushers or grinding mills. Ecology Recycling Services does not have crushers at their facility. Therefore, NSPS OOO does not apply.

<b>Unit</b>	<b>Control Device</b>	<b>Rule</b>	<b>Discussion</b>
Unclassified Sources	Cyclones	A.A.C. R18-2-730	This equipment is not subject to any NSPS or another standard of performance under Article 7. Therefore, this equipment is subject to R18-2-730, standards of performance for unclassified sources.
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.

**VIII. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS**

Table 3 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.

**Table 3: Permit No. 91920**

<b>Emission Unit</b>	<b>Pollutant or Process</b>	<b>Emission Limit</b>	<b>Monitoring Requirements</b>	<b>Recordkeeping Requirements</b>
Rotary Screens	Hours	12 Hours Per Day		Record of the daily hours of operation of each rotary screen.
	PM	20% Opacity	A Method 9 observer is required to conduct a weekly survey of visible emissions.	Record the results of any Method 9 observations, and any corrective action taken to lower the opacity of any excess emissions.
Unclassified Sources	PM	20% Opacity	A Method 9 observer is required to conduct a monthly survey of visible emissions.	Record the results of any Method 9 observations, and any corrective action taken to lower the opacity of any excess emissions.
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.

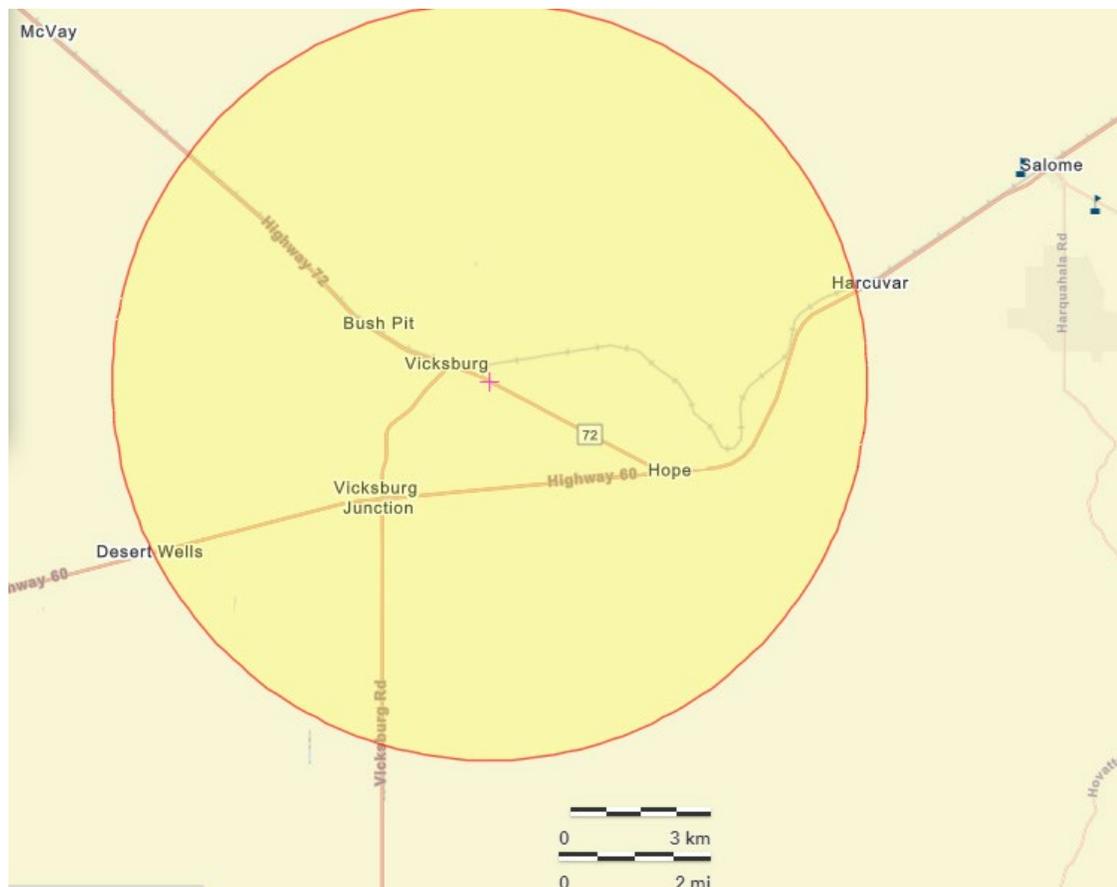
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<b>Emission Unit</b>	<b>Pollutant or Process</b>	<b>Emission Limit</b>	<b>Monitoring Requirements</b>	<b>Recordkeeping Requirements</b>
Abrasive Blasting	PM	20% Opacity		Record the date, duration and pollution control measures of any abrasive blasting project.
Spray Painting	VOC	20% Opacity Control 96% of the overspray		Maintain records of the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.
Demolition/ Renovation	Asbestos			Maintain records of all asbestos related demolition or renovation projects including the “NESHAP Notification for Renovation and Demolition Activities” form and all supporting documents

## 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 policies. 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 80th percentile threshold for this action to evaluate the potential for EJ concerns in a community, meaning that if the area of interest exceeds the 80th 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 Ecology Recycling Services and reviewed a five-mile radius around the facility for potential environmental justice concerns (see Figure 1 below).



**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, Population with Less Than High School Education, and Population Under 5 years of age are all below the 80th percentile threshold. The Demographic Indicator for Population over Age 64 was over the 80th percentile compared to Arizona average. ADEQ performed air quality dispersion modeling to ensure that the emissions from the facility do not contribute to any exceedances of the National Ambient Air Quality Standards (NAAQS). 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 5-miles radius of the facility were below the 80th percentile for both Arizona and the USA averages. Additionally, ADEQ conducted air quality dispersion modeling to determine if emissions from Ecology Recycling Services will contribute to a NAAQS exceedance. A complete review of the air quality analysis can be found in Section IX.A below. Based on the modeling analysis results, ADEQ has determined that the issuance of the Air Quality Permit for Ecology Recycling Services will not interfere with attainment of the NAAQS, and will not have an adverse impact on the community.

**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. The dispersion modeling ADEQ conducted further concludes that Ecology Recycling Services demonstrates compliance with the NAAQS and that the emissions from the facility will not result in any significant environmental or public health impacts.

**X. AMBIENT AIR IMPACT ANALYSIS**

ADEQ performed regulatory dispersion modeling to demonstrate that the facility's emissions will not interfere with attainment and maintenance of NAAQS for PM<sub>10</sub> and PM<sub>2.5</sub>.

ADEQ used the most recent version (v21112) of American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) model for the ambient impact analysis. Using the most recent version of AERMET (v21112), ADEQ processed the most recent five-years of meteorological data (2016-2020) collected at the Blythe Airport, California. ADEQ used the AERMAP terrain processor (v18081) to process the National Elevation Data (NED) 1/3 arc second data to generate the receptor elevations and hill heights. ADEQ used the maximum 24-hour average emission rates to model both PM<sub>10</sub> and PM<sub>2.5</sub>. ADEQ selected the Alamo Lake monitor, a regional

scale monitor operated by ADEQ, for determining background concentrations. The facility is required to limit operations of the rotary screens to 12 hours per day per unit to ensure compliance with the NAAQS.

Table 4 summaries the modeled results for PM<sub>10</sub> and PM<sub>2.5</sub>. Representative background concentrations were added to modeled impacts and the total concentrations were then compared to the NAAQS. As shown in Table 4, emissions from the facility will not cause or contribute to a violation of the NAAQS under the operational limits and conditions as proposed in the draft permit.

**Table 4: Modeled Results for PM<sub>10</sub> and PM<sub>2.5</sub>**

Pollutant	Averaging Period	Modeled Concentration (µg/m <sup>3</sup> )	Background Concentration (µg/m <sup>3</sup> )	Maximum Ambient Concentration (µg/m <sup>3</sup> )	NAAQS (µg/m <sup>3</sup> )
PM <sub>10</sub>	24-hour	78.2	67 <sup>1</sup>	145.2	150
PM <sub>2.5</sub>	24-hour	22.2	9.7 <sup>2</sup>	31.9	35
	Annual	4.3	4.2 <sup>3</sup>	8.5	12

<sup>1</sup> Average of the 2nd highest yearly values for 2018, 2019, and 2020; two dust storm events were excluded.

<sup>2</sup> Average of the 98th percentile 24-hour values for 2018, 2019 and 2020.

<sup>3</sup> Average of the annual values for 2018, 2019, and 2020.

**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
CFR.....	Code of Federal Regulations
CH <sub>4</sub> .....	Methane
CO.....	Carbon Monoxide
EPA.....	Environmental Protection Agency
ft.....	Feet
g.....	Gram
GHG.....	Greenhouse Gases
HAP.....	Hazardous Air Pollutant
HHV.....	Higher Heating Value
hp.....	Horsepower
hr.....	Hour

IC.....	Internal Combustion
kW.....	Kilowatt
MW.....	Megawatts
NAAQS.....	National Ambient Air Quality Standard
NO <sub>x</sub> .....	Nitrogen Oxides
NO <sub>2</sub> .....	Nitrogen Dioxide
N <sub>2</sub> O.....	Nitrous Oxide
NSPS.....	New Source Performance Standards
O <sub>3</sub> .....	Ozone
Pb.....	Lead
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
sec.....	Seconds
TPY.....	Tons per Year
VOC.....	Volatile Organic Compound
yr.....	Year