

**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Program**

33 N. Stone Avenue. ▪ Suite 700 ▪ Tucson, AZ 85701 ▪ Phone: (520) 243-7400

**GENERAL AIR QUALITY
OPERATING PERMIT**

For

Class III Generators

(Non-NSPS Generators)

APPLICATION PACKAGE



TABLE OF CONTENTS

Introduction	2
Instructions	3
Standard Permit Application Form	5
Form 2: Equipment List	6
Form 3: Emissions Calculations	7
Form 4: Synthetic Emissions Limitation Calculation	10
Form 5: Other Activities Declaration	11
Form 6: Statement of Compliance	12



INTRODUCTION

The Pima County Department of Environmental Quality (PDEQ) has created this general permit application for generators to streamline the permitting process for the large number of sources which would otherwise require substantially similar individual source permits. This action shall reduce PDEQ's workload and afford decreased permitting timeframes. To obtain coverage under this general permit, the applicant shall complete the general permit application form in order to obtain an *Authorization to Operate (ATO)*.

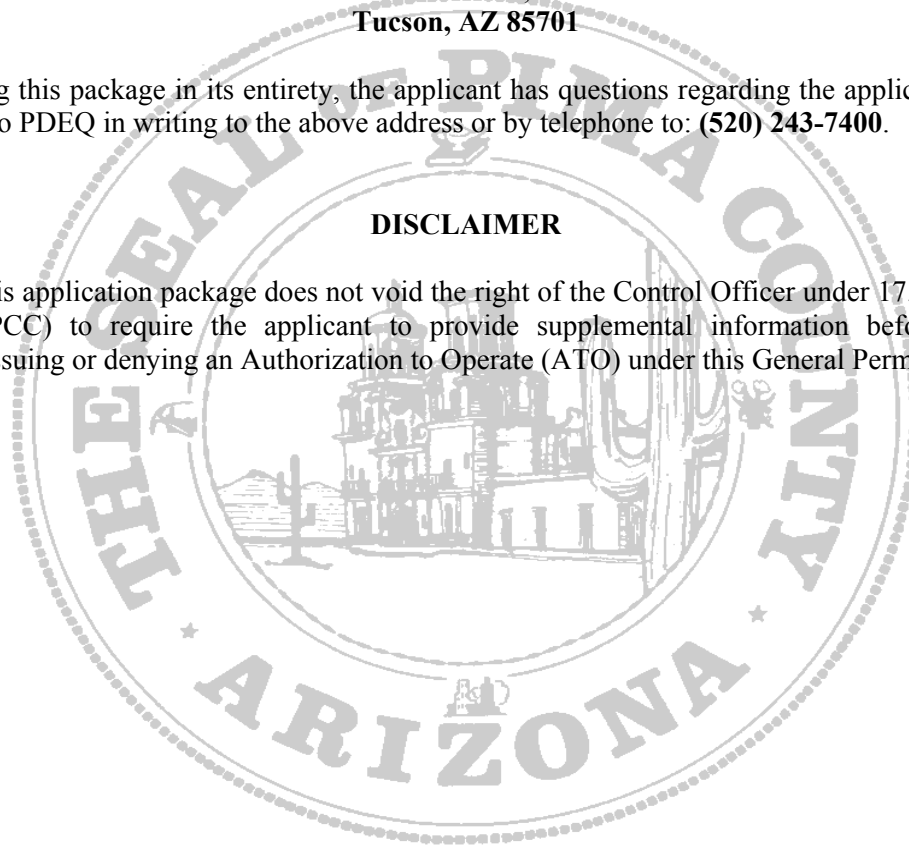
This application package has been created to aid the applicant in submitting an application for this general permit. Applicants must complete and submit this application package with an application fee in the form of a check or money order payable to PDEQ in the amount of \$540. Please mail the application package and fee to:

**Pima County Department of Environmental Quality
Air Program
33 N. Stone Avenue, Suite 700
Tucson, AZ 85701**

If, after reviewing this package in its entirety, the applicant has questions regarding the application process, they may be directed to PDEQ in writing to the above address or by telephone to: **(520) 243-7400**.

DISCLAIMER

Completion of this application package does not void the right of the Control Officer under 17.12.165 of the Pima County Code (PCC) to require the applicant to provide supplemental information before processing the application and issuing or denying an Authorization to Operate (ATO) under this General Permit.



INSTRUCTIONS

Step 1: Determine whether or not you qualify for this general permit.

You qualify for this general permit if you meet all of the following conditions:

- There are no *stationary*¹ generators subject to New Source Performance Standards (NSPS);
- The sum horsepower of all *stationary*¹ generators is greater than or equal to 325 brake-horsepower and/or your generators have the potential to emit significant emissions²;
- Other than those units to be covered by this general permit, there are no other emission units co-located at the facility with the generator(s) that (1) *are subject to a permitting requirement*³ and/or (2) *emit significant quantities of any pollutant*;²
- There are no operations or activities conducted on site which (1) *otherwise require an individual permit*⁴ and/or (2) *emit significant quantities of any pollutant*;² and
- *If necessary*, you are willing to accept restrictions on hours of operation to ensure your source does not become a major source.

Step 2: Complete and sign the STANDARD PERMIT APPLICATION FORM (Page 5 of this package).

Step 3: Complete FORM 2: Equipment List (Page 6 of this package).

- a. Include all requested information for each generator for which you are seeking coverage. All stationary generators located on-site must be listed regardless of capacity (including those less than 325 horsepower on an individual basis).
- b. Capacity must be listed in *maximum* rated horsepower.⁵ To convert from:
 - i. kW: multiply by 1.341 hp/kW.
e.g. (300 kW) x (1.341 hp/kW) = 402.3 hp;
 - ii. Gal/hr diesel: multiply by 53.86 hp-hr/gal_D.
e.g. (7.5 gal_D/hr) x (53.86 hp-hr/gal_D) = 404 hp;
 - iii. Gal/hr gasoline: multiply by 51.11 hp-hr/gal_G.
e.g. (7.5 gal_G/hr) x (51.11) = 383 hp;
 - iv. SCF/hr natural gas: multiply by 0.413 hp-hr/SCF.

¹ A stationary unit is one which is not relocated according to need, but is expected to remain in one location (one contiguous property) for at least 12 consecutive months.

² Significant emissions are: CO – 100 tons per year (tpy), NO_x – 40 tpy, SO_x – 40 tpy, VOC – 40 tpy, PM₁₀ – 15 tpy, any individual HAP – 10 tpy, and any combination of HAPs – 25 tpy. **Use form 3 to determine potential emissions.**

³ Such equipment includes, but is not limited to, most crushing and screening equipment, incinerators, asphalt concrete plants, concrete batch plants, petroleum liquid storage vessels, etc. Such equipment, if appropriately demonstrated may not exempt your source from coverage under this General Permit.

⁴ Such activities include, but are not limited to, surface coating, reinforced plastic composites production, degreasing with TCE, and so on. Such activities, if demonstrated to not be significant, may not exempt your source from coverage under this General Permit.

⁵ Anticipated operational horsepower is *not* an acceptable substitute.

e.g. $(1000 \text{ SCF/hr}) \times (0.413 \text{ hp-hr/SCF}) = 413 \text{ hp}$; or

v. Btu/hr natural gas: multiply by 0.000393 hp-hr/Btu.

e.g. $(1,000,000 \text{ Btu/hr}) \times (0.000393 \text{ hp-hr/Btu}) = 393 \text{ hp}$.

c. If an individual unit is expected to fire more than one fuel, list all applicable fuels.

Step 4: Complete FORM 3: Emissions Calculation Form (Pages 7-9 of this package). Form 3 may be completed by hand using the forms provided or may be completed electronically using a spreadsheet provided by PDEQ. The electronic form can be requested by calling PDEQ at 520-740-3340.

If an individual unit will fire more than one fuel, then the applicant must determine and use for the potential to emit (PTE) calculation and synthetic emissions limitation (SEL) calculation the highest potential emissions of NO_x and CO with each combination of fuel declared. The highest value must be considered for these calculations.⁶ Such sources may be required to submit additional/separate calculations and may not be able to use the spreadsheet provided by PDEQ.

Step 5: Complete FORM 4: Synthetic Emissions Limitation calculation (Page 10 of this package). Complete this form only if you meet criteria stated in the introduction to Form 4. Form 4 may be completed by hand using the forms provided or may be completed electronically using a spreadsheet provided by PDEQ. The electronic form can be requested by calling PDEQ at 520-740-3340.

Step 6: Complete FORM 5: Other Activities Declaration Form (Page 11 of this package). If you have no such equipment or activities on site, please state the fact.

Step 7: Review this application package and sign FORM 6: Statement of Compliance (Page 12 of this package).

Step 8: Submit this completed application package with the \$540 application fee payable to PDEQ, and any supplementary documents as required to:

**Pima County Department of Environmental Quality
Air Program
33 N. Stone Avenue, Suite 700
Tucson, AZ 85701.**

⁶ Practically, this may mean that an individual unit may be considered with one fuel for NO_x and with another for CO. E.g. a 600 hp unit would have a NO_x and CO PTE of 63.1 and 14.5 tpy, respectively, while firing diesel fuel; but while firing natural gas would have a NO_x and CO PTE of 26.9 and 24.6, respectively. In such a case the PTE must consider diesel for NO_x emission and natural gas for CO emissions.

STANDARD PERMIT APPLICATION FORM FOR GENERAL PERMITS

(As required by A.R.S. § 49-480, and Title 17 of the Pima County Code)

1. Permit to be issued to (Arizona Corporate Commission Registered Name): _____

2. Mailing Address: _____
City: _____ State: _____ ZIP: _____
3. Name (or names) of Owner or Operator: _____
FAX #: _____ Phone: _____
Email: _____
4. Name of Owner's Agent: _____
FAX #: _____ Phone: _____
5. Plant Name (if different than item #1): _____
6. Proposed Equipment/Plant Location Address: _____
City: _____ State: _____ ZIP: _____
7. Plant Manager/Contact Person (if different than item #3): _____
FAX #: _____ Phone: _____
Email: _____
8. General Nature of Business: _____
Standard Industrial Classification Code: _____ State Permit Class: _____ III
9. Type of Organization: Corporation Individual Owner Partnership Government Entity Other
10. Permit Application Basis (Check all that apply): New Source Renewal Portable Source
Revision: Administrative Minor Significant Existing Permit # _____
Date of Commencement of Construction or Modification: _____
Is any of the equipment to be leased to another individual or entity? Yes No
11. Typed or Printed Name of Responsible Official (RO): _____
Official Title of RO: _____
RO Fax #: _____ RO Phone #: _____ RO Email: _____
12. Signature of Responsible Official of Organization: _____ Date: _____

Form 2: Equipment List

The following table should include all generators utilized at the facility and be complete with all data requested. The date of manufacture or modification must be included in order to determine Non-NSPS applicability. Make additional copies of this form if necessary.

Manufacturer	Model	Serial Number/ Equipment ID #	Capacity (Maximum Rated Horsepower) ⁷	Fuel(s)	Date of Manufacture/ Modification

(Duplicate as necessary)

⁷ To convert to horsepower from:
 kW – multiply by 1.341;
 Gal/hr diesel – multiply by 53.86;
 Gal/hr gasoline – multiply by 51.11;
 SCF/hr natural gas – multiply by 0.413; or
 Btu/hr natural gas – multiply by 0.000393.

Form 3: Emissions Calculations

Calculate the maximum aggregate capacity of all units in each of the following categories and write the total (maximum aggregate capacity) in the total horsepower column. If there are no generators in a particular category, then write N/A in the total horsepower column. **Use these figures in Tables 2 – 5.**

Table 1. – Generator Category

Category Number	Category Type	Total Horsepower in Category
1	All individual diesel-fired units \geq 600 hp each	
2	All individual diesel-fired units < 600 hp each	
3	All natural gas-fired units	
4	All gasoline-fired units	

For PDEQ Use Only	
Reviewer	Date

Tables 2 through 5 – Emissions from Each Generator Category

Use the following tables to calculate emissions in tons per year from the generator(s). List total horsepower capacity (from category 1, 2, 3, or 4 above, as appropriate) in column (a); multiply this value by the respective emission factor for each pollutant in column (b), and by the conversion factor in column (c).

These emission factors can be found in AP-42 chapter 3, sections 3 and 4. If the applicant can supply emission data from the manufacturer or certified lab tested data with lower emission factors, then those emission factors can be used in place of these values. In such cases insert the specific emission factor in the appropriate box and complete the calculation. If necessary, additional calculations may be attached to this application (e.g. if source-specific emission factors are not in lb/hp-hr). Furthermore, applicants who desire to use alternate emission factors must submit official copies of such data along with the specifications of each affected generator.

Table 6 – Sum Emissions from All Generators

After completing Tables 2 through 5, sum the values of each pollutant and record them in Table 6.

Table 2: Emissions from Category 1 (Diesel-Fired Generators \geq 600 hp):

Pollutant	(a) Aggregate Maximum Rated Horsepower (total from Category 1 of table 1)	(b) Emission Factor (lb/hp-hr)	(c) Conversion Factor	(a)x(b)x(c) Category 1 Emissions (tons/yr)
NO _x		0.024	4.38	
CO		0.0055	4.38	

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Reviewer	Date

Form 3: Emissions Calculations (Cont.)

Table 3: Emissions from Category 2 (Diesel-Fired Generators < 600 hp):

Pollutant	(a) Aggregate Maximum Rated Horsepower (total from Category 2 of table 1)	(b) Emission Factor (lb/hp-hr)	(c) Conversion Factor	(a)x(b)x(c) Emissions (tons/yr)
NO _x		0.031	4.38	
CO		0.00668	4.38	

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Reviewer	Date

Table 4: Emissions from Category 3 (Natural Gas-Fired Generator):

Pollutant	(a) Aggregate Maximum Rated Horsepower (total from Category 3 of table 1)	(b) Emission Factor (lb/MMBtu)	(c) Conversion Factor	(a)x(b)x(c) Emissions (tons/yr)
NO _x		4.08	0.011	
CO		3.72	0.011	

For PDEQ Use Only	
Reviewer	Date

Table 5: Emissions from Category 4 (Gasoline-Fired Generators):

Pollutant	(a) Aggregate Maximum Rated Horsepower (total from Category 4 of table 1)	(b) Emission Factor (lb/hp-hr)	(c) Conversion Factor	(a)x(b)x(c) Emissions (tons/yr)
NO _x		0.011	4.38	
CO		0.439	4.38	

For PDEQ Use Only	
Reviewer	Date

Form 3: Emissions Calculations (Cont.)

Table 6: Total Emissions from All Units:

Pollutant	Category 1 Emissions from Table 2	Category 2 Emissions from Table 3	Category 3 Emissions from Table 4	Category 4 Emissions from Table 5	Total Emissions from all categories (tons/year) Tables 2 + 3 + 4 + 5
NOx					
CO					

For PDEQ Use Only	
Reviewer	Date



Form 4: Synthetic Emission Limitation Calculation

Complete Table 7 *only* if the total emissions of NO_x and/or CO exceed 100 tons per year in Table 6. Table 7 indicates the maximum number of hours each individual unit can operate in any 12-consecutive month period. Divide column (a), the Synthetic Emissions Limitation by column (b), the sum of emissions for each pollutant derived from Table 6, and multiply by 8760. Insert the *lesser* of the two figures in the final box labeled *Synthetic Emissions Limitation*.

Should the applicant desire a unique synthetic emissions limitation for each unit, the applicant shall recommend such limits and attach calculations to this application that justify his or her proposal.

Table 7: Total Emissions from All Units with a Synthetic Emissions Limitation

Pollutant	(a) Synthetic Emissions Limitation (tons/year)	(b) Total Emissions from all categories (Table 6) (tons/year)	(a) / (b) x 8760 Allowable Hours of Operation (hr/yr)
NO _x	90		
CO	90		

For PDEQ Use Only	
Reviewer	Date

Synthetic Emissions Limitation (hr/yr)	
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For Sources whose potential emissions are greater than 100 tpy for NO_x and/or CO and would prefer an hourly restriction other than the above Synthetic Emission Limitation or specific hours on different generators, please state the fact, provide a brief explanation and attach documentation that shows calculations with the preferred hourly restrictions:

Form 6: Statement of Compliance

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it files a complete application, but prior to release of a proposed permit. Should there be any discrepancies between this application package and Title 17 of the Pima County Code (PCC), the PCC shall be preferred.

This statement must be signed by a Responsible Official. Applications without a signed statement will be deemed incomplete.

The responsible official is defined as a person who is in charge of principal business functions or who performs policy or decision making functions for the business. This may also include an authorized representative for such persons. For a complete definition, see Pima County Air Quality Control, Title 17, Section 17.04.340(A)(199).

I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by the Pima County Department of Environmental Quality (PDEQ) as public record. I also attest that I am in compliance with the applicable requirements and will continue to comply with such requirements and any future requirements that become effective during the life of my permit. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with the requirements of Title 17 of the Pima County Code and any permit issued thereof.

Name (Print/Type): _____ Title: _____
(Signature): _____ Date: _____

Certification of Truth, Accuracy, and Completeness

17.12.165(H) - Certification of Truth, Accuracy, and Completeness. Any application form, report, or compliance certification submitted pursuant to this Chapter shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, accurate, and complete.

By my signature I,(Name) _____, hereby certify that based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

(Signature): _____

Title: _____ Date: _____