

GENERAL PERMIT APPLICATION PACKET

FOR

BOILER(S)

**(Less than or equal to 100 Million British Thermal Units per Hour
with or without Internal Combustion Engine(s))**



Arizona Department of Environmental Quality

Air Quality Division

October 6, 2009

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INTRODUCTION

This application packet assists the applicant in determining whether an air quality permit is required for the operation of boiler(s) that are rated at less than or equal to 100 Million British Thermal Units per Hour (MMBtu/hour) with or without internal combustion engine(s). If an air quality permit is required, this application packet assists the applicant in submittal of the information that is required to process the application.

To expedite the processing of an air quality permit application, the Arizona Department of Environmental Quality (ADEQ) has created a general permit for boiler(s) with or without internal combustion engine(s) which significantly expedites the permitting process. Processing time takes approximately one month if a complete application is submitted. The processing time for an individual (source specific) air quality permit application may take at least five to six months to process. Facilities that meet the criteria for and are covered under the general permit will pay lower annual air quality fees than plants covered under an individual air quality permit. If an applicant is interested in applying for coverage under the general permit, this application packet assists the applicant in determining if their facility meets the criteria for coverage under the general permit. If it is determined that the facility meets the criteria for coverage, this application packet assists the applicant in submittal of the information required to process the application.

Applicants wishing to obtain an air quality permit shall apply to the Arizona Department of Environmental Quality (ADEQ), except for facilities which are located in Maricopa, Pima, or Pinal Counties. If the facility is located in Maricopa, Pima, or Pinal Counties, the county agency will process the air quality permit application.

If the applicant has any questions regarding jurisdictional issues, please contact the appropriate agency at the phone number below:

ADEQ: 1-800-234-5677, ext. 771-2337
Maricopa County: (602) 506-6010
Pinal County: (520) 866-6929
Pima County: (520) 740-3340

DISCLAIMER

This application packet does not waive the rights of the Director as provided under Arizona Administrative Code (A.A.C.) R18-2-304 to request that additional information be submitted by the applicant to assist in the processing of the application for an air quality permit. Any applicant who fails to submit the relevant facts or 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, the applicant shall provide additional information necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a proposed permit. If there is any difference between this application packet and Title 18, Chapter 2 of the A.A.C., the A.A.C. shall take precedence.

PERMIT ISSUANCE TIME FRAME

According to A.A.C. R18-1-525, ADEQ has 21 business days to determine if the submitted general permit application is complete. Once the application is determined to be complete, the Department has 103 business days to make a licensing decision on the application. The Department, upon determining that additional information is needed, will suspend the counting of the days. In such case, a letter will be sent informing the applicant that the counting of days has been suspended. The letter will specify what additional information is required to continue processing the application.

APPLICATION INSTRUCTIONS

I. INSTRUCTIONS

Section 1: Standard Permit Application Form

A.A.C. R18-2-304 requires applicants to submit the Standard Application Form and supply all information required by the Instructions. Items 1 through 5 of this application form are fairly self-explanatory. The rest are explained below in detail:

- Item #6 asks for the Plant Site Manager or Contact Person. This should be the person that the Arizona Department of Environmental Quality (ADEQ) may contact for additional information.
- Item #8, the “Equipment Purpose” should describe what is produced at the plant.
- Under Item #9, if the “other” box is checked, please be specific as to the type of organization.
- Item #10 asks for the Permit Application Basis, which indicates what type of permit is necessary. The following steps should be utilized when filling out Item #10:
 - If the equipment has never been permitted earlier, the box titled “New Source” should be checked.
 - If the equipment is already permitted, the box titled “Renewal of Existing Permit” should be checked and the current permit number must be included on the line titled “For renewal or modification, include existing permit number” .
 - If the application is for a new or renewal coverage under the general permit, the box titled “General Permit” should be checked.
 - For new sources the “Date of Commencement of Construction or Modification” is the expected date that construction will begin. For existing sources this date need not be defined.
- The “Responsible Official” referred to in Item #11 is the owner or a partner of the company in most cases. He or she may also be the president or vice-president of larger companies. If there is a question as to who the responsible official is, refer to A.A.C. R-18.2-301.17. You may also contact ADEQ for more information.

Section 2: General Permit Applicability Verification

Form A of this application packet has been developed to determine whether the facility is required to obtain an air quality permit pursuant to Arizona Administrative Code (A.A.C.) R18-2-302 and if so, whether the facility qualifies for the general permit. For the purposes of this applicability verification, it is assumed that the only emission units at the facility are boiler(s) with or without internal combustion engine(s). If the facility has any other emission unit(s), please contact ADEQ's Air Quality Permits Section at (602) 771-2337 for assistance.

Section 3: Emission Calculations

FORMS B and C of this application packet have been created to assist the applicant in determining the amount of regulated air pollutants emitted by the boiler(s) and internal combustion engine(s). The emissions calculated in the tables are to assist the applicant in completion of FORM A. The emission factors in this application are based on the Environmental Protection Agency's (EPA) Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition.

Section 4: Equipment List

FORM D of this application packet is used to provide a list of all boilers and internal combustion engines located at

APPLICATION INSTRUCTIONS

the facility. The list needs to include the type of equipment, make, model, maximum rated capacity, serial number, manufacture date, and equipment identification number (if available) for each piece of equipment. The complete submittal of all requested information concerning equipment details will reduce processing time.

In some cases, the equipment may not have been purchased by the time of application submittal. In such case, the serial number may not be listed, but an equipment identification number will still need to be provided. The equipment identification number must be clearly stenciled on each piece of equipment to be permitted before such equipment is installed.

Section 5: Compliance Certification

FORM E of this application packet must be filled out and signed by the Responsible Official (this is the same person that signs the standard permit application form).

Section 6: Map of Plant Location

A map of the current location, depicting the plant perimeter and point of entry must be provided with the application. This may be a city map, topographical map or any map, which clearly shows the location. Please mark the location of the plant on the map and include driving directions to the plant site from the nearest highway. An example plot and site layout is attached for your reference.

Section 7: Site Diagram

A site diagram must be provided with the application. A site diagram is an aerial view of the plant property drawn to scale or dimensions shown. It should include:

- Property boundaries;
- Adjacent streets or roads;
- Directional arrow;
- Elevation;
- Emission Points;
- Distance between emission points and property boundary; and
- Location of buildings and equipment, and emission points.

Section 8: Process Description

A description of the process must be provided with the application. *A process description is a brief description of the facility i.e. what the boiler(s) and internal combustion engine(s) are used for.*

APPLICATION INSTRUCTIONS

II. FEES

An application fee is required to be submitted under the following conditions:

- An Application Fee of \$500 must be submitted by applicants applying for coverage under the general permit.

Please make your check or money order payable to ADEQ.

III. FILING INSTRUCTIONS

Sources located statewide except in Pima, Pinal and Maricopa Counties, please mail Standard Permit Application Form and Forms A through F of the Application packet and the application fee to the following address:

Arizona Department of Environmental Quality
Air Quality Division
1110 West Washington Street, 3415A-3
Phoenix, Arizona 85007-2935

Remember to make photocopies of the completed application packet prior to mailing for your records/reference.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Air Quality Division
1110 West Washington Street • Phoenix, AZ 85007-2935 • Phone: (602) 771-2338

STANDARD PERMIT APPLICATION FORM

(As required by A.R.S. § 49-426, and Chapter 2, Article 3, Arizona Administrative Code)

1. Permit to be issued to: (Business license name of organization that is to receive permit) _____

2. Mailing Address: _____
City: _____ State: _____ ZIP: _____
3. Previous Company Name: (if applicable) _____
4. Name (or names) of Owners/Principals: _____
Phone #: _____ FAX #: _____
5. Name of Owner's Agent: _____
Phone #: _____ FAX #: _____
6. Plant Site Manager/Contact Person and Title: _____
Phone #: _____ FAX #: _____
7. Plant Site Name: _____
Plant Site Location/Address: _____
City: _____ County: _____ ZIP: _____
Indian Reservation (if applicable, which one): _____
Latitude/Longitude, Elevation: _____
8. Equipment Purpose: _____
Equipment List/Description: _____

9. Type of Organization:
 Corporation Individual Owner
 Partnership Government Entity (Government Facility Code: _____)
 Other _____
10. Permit Application Basis: *(Check all that apply)*
 New Source Revision Renewal of Existing Permit
 Portable Source **General Permit**
For renewal or modification, include existing permit number (and exp. date): _____
Date of Commencement of Construction or Modification: _____
Is any of the equipment to be leased to another individual or entity? Yes No
Standard Industrial Classification Code: _____ 4961 State Permit Class: _____ II
11. Signature of Responsible Official of Organization: _____
Official Title of Signer: _____
12. Typed or Printed Name of Signer: _____
Date: _____ Phone #: _____

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FORM A
GENERAL PERMIT APPLICABILITY VERIFICATION FOR BOILER(S)
WITH OR WITHOUT
INTERNAL COMBUSTION ENGINE(S)

The following questions have been developed to determine (1) if the facility is required to obtain an air quality permit pursuant to A.A.C. R-18-2-302 and (2) if the facility qualifies for covering under the General Permit. For the purpose of this applicability verification, it is assumed that the boiler(s) and internal combustion engine(s) are the only emission units at the facility. If other emission units exist, another application may need to be filled out. In such case, please contact the ADEQ's Air Quality Permits Section at (602) 771-2337.

Question I. Capacity of Boiler(s)

A. Does this facility have boiler(s) with a sustained heat input of more than 1 million Btu per hour?

YES NO **If the answer is YES**, proceed to Question I.B.

If the answer is NO, you may qualify for a permit waiver. Please provide sufficient documentation to demonstrate that the boiler(s) sustained heat input will not exceed 1 million Btu per hour.

B. Is the sustained heat input of any of the boilers more than 100 MMBtu/hr?

YES NO **If the answer is YES**, you do not qualify for a general permit. A standard permit application should be filed.

If the answer is NO, proceed to Question II.

Question II. Capacity of Internal Combustion Engine(s)

A. Does this facility have internal combustion engine(s)?

YES NO **If the answer is YES**, proceed to Question II.B

If the answer is NO, proceed to Question IV.

B. Does this facility have internal combustion engine(s) with a total horsepower rating greater than 750 brake horsepower?

YES NO **If the answer is YES**, you do not qualify for a general permit. Please contact Air Quality Division for assistance. A standard permit application should be filed.

If the answer is NO, proceed to Question III.

Question III. Operating Hours of Internal Combustion Engine(s).

Are you willing to limit the operating hours of each internal combustion engine(s) to 500 hours per year?

YES NO **If the answer is YES**, proceed to Question IV.

If the answer is NO, you do not qualify for a general permit. Please contact the Air Quality Division for assistance.

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FORM A
GENERAL PERMIT APPLICABILITY VERIFICATION FOR BOILER(s)
WITH OR WITHOUT
INTERNAL COMBUSTION ENGINE(s)

Question IV. Potential to Emit

For answer to this question, please fill out Form 'B' and Form 'C'.

Does this facility emit or have the potential to emit more than 90 tons per year of any regulated air pollutants (i.e. Carbon Monoxide (CO), Nitrogen Oxides (NO_x), Sulfur Dioxide (SO₂), Volatile Organic Compounds (VOC), and Particulate Matter less than 10 microns in size, (PM₁₀).

YES NO **If the answer is YES**, you do not qualify for a general permit. Please contact the Air Quality Division for assistance.

If the answer is NO, the facility can be covered under the general permit.

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FORM B

EMISSIONS CALCULATIONS FOR BOILER(s)

Fuel: Natural Gas

The following table must be completed for calculating the emissions from boiler(s) which combust natural gas. Emissions from the boilers are calculated by taking the heat input listed in column (a) and multiplying it by the emission and conversion factors listed in columns (b-g).

Boiler Description: Type: _____ Model: _____ Serial Number: _____

Stack Information: Height above ground (feet): _____ Height above structure (feet): _____

Exit Data: Diameter (feet): _____ Velocity (feet/sec): _____ Temperature (deg. F): _____

Table B.1.1

Max Heat Input Rate (MM Btu/hr) (a)	Emission Factors (lb/MMBtu)					Conversion Factor (hr/year)/(lb/ton) (g)	Emissions (tons per year)				
	PM ₁₀ (b)	SO ₂ (c)	NO _x (d)	CO (e)	VOC (f)		PM ₁₀ (a*b*g)	SO ₂ (a*c*g)	NO _x (a*d*g)	CO (a*e*g)	VOC (a*f*g)
	0.00724	0.000571	0.0952	0.08	0.00524	4.38					

Note: Please make copies of this page if there is more than one boiler using natural gas.

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FORM B

EMISSIONS CALCULATIONS FOR BOILER(s)

Fuel: Butane

The following table must be completed for calculating the emissions from boiler(s) which combust butane. Emissions from the boilers are calculated by taking the heat input listed in column (a) and multiplying it by the emission and conversion factors listed in columns (b-g).

Boiler Description: Type: _____ Model: _____ Serial Number: _____

Stack Information: Height above ground (feet): _____ Height above structure (feet): _____

Exit Data: Diameter (feet): _____ Velocity (feet/sec): _____ Temperature (deg. F): _____

Table B.1.2

Max Heat Input Rate (MM Btu/hr) (a)	Emission Factors (lb/MMBtu)					Conversion Factor (hr/year)/(lb/ton) (g)	Emissions (tons per year)				
	PM ₁₀ (b)	SO ₂ (c)	NO _x (d)	CO (e)	VOC (f)		PM ₁₀ (a*b*g)	SO ₂ (a*c*g)	NO _x (a*d*g)	CO (a*e*g)	VOC (a*f*g)
0.00616			0.216	0.037	0.004106	4.38					

Note: Please make copies of this page if there is more than one boiler using butane.

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FORM B

EMISSIONS CALCULATIONS FOR BOILER(s)

Fuel: Propane

The following table must be completed for calculating the emissions from boiler(s) which combust propane. Emissions from the boilers are calculated by taking the heat input listed in column (a) and multiplying it by the emission and conversion factors listed in columns (b-g).

Boiler Description: Type: _____ Model: _____ Serial Number: _____

Stack Information: Height above ground (feet): _____ Height above structure (feet): _____

Exit Data: Diameter (feet): _____ Velocity (feet/sec): _____ Temperature (deg. F): _____

Table B.1.3

Max Heat Input Rate (MM Btu/hr) (a)	Emission Factors (lb/MMBtu)					Conversion Factor (hr/year)/(lb/ton) (g)	Emissions (tons per year)				
	PM ₁₀ (b)	SO ₂ (c)	NO _x (d)	CO (e)	VOC (f)		PM ₁₀ (a*b*g)	SO ₂ (a*c*g)	NO _x (a*d*g)	CO (a*e*g)	VOC (a*f*g)
0.00663			0.21	0.0354	0.00331	4.38					

Note: Please make copies of this page if there is more than one boiler using propane.

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FORM B

EMISSIONS CALCULATIONS FOR BOILER(s)

Fuel: Diesel

The following table must be completed for calculating the emissions from boiler(s) which combust diesel. Emissions from the boilers are calculated by taking the heat input listed in column (a) and multiplying it by the emission and conversion factors listed in columns (b-g).

Boiler Description: Type: _____ Model: _____ Serial Number: _____

Stack Information: Height above ground (feet): _____ Height above structure (feet): _____

Exit Data: Diameter (feet): _____ Velocity (feet/sec): _____ Temperature (deg. F): _____

Table B.1.4

Max Heat Input Rate (MM Btu/hr) (a)	Emission Factors (lb/MMBtu)					Conversion Factor (hr/year)/(lb/ton) (g)	Emissions (tons per year)				
	PM ₁₀ (b)	SO ₂ (c)	NO _x (d)	CO (e)	VOC (f)		PM ₁₀ (a*b*g)	SO ₂ (a*c*g)	NO _x (a*d*g)	CO (a*e*g)	VOC (a*f*g)
	0.024	0.829	0.146	0.0365	0.0025	4.38					

Notes: Please make copies of this page if there is more than one boiler using diesel.

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FORM B

EMISSION CALCULATIONS FOR INTERNAL COMBUSTION ENGINE(S)

Fuel: Gasoline

The following table must be completed for calculating the emissions from internal combustion engine(s) which have a power output that is less than or equal to 447 KW (600 HP) and use gasoline as fuel. Emissions from the internal combustion engines are calculated by taking the power output of the internal combustion engine in horsepower listed in column (a) and multiplying it by the emission and conversion factors listed in columns (b-g).

Engine Description: Type: _____ Model: _____ Serial Number: _____
Stack Information: Height above ground (feet): _____ Height above structure (feet): _____
Exit Data: Diameter (feet): _____ Velocity (feet/sec): _____ Temperature (deg. F): _____

Table B.2.1

Max Horse Power (HP) (a)	Emission Factors (lb/HP-hr)					Conversion Factor (hr/year)/(lb/ton) (g)	Emissions (tons per year)				
	PM ₁₀ (b)	SO ₂ (c)	NO _x (d)	CO (e)	VOC (f)		PM ₁₀ (a*b*g)	SO ₂ (a*c*g)	NO _x (a*d*g)	CO (a*e*g)	VOC (a*f*g)
	0.000721	0.000591	0.011	0.00696	0.022	0.25					

- Note: 1. Conversion factor is based on 500 operating hours per year.
 2. Please make copies of this page if there is more than one internal combustion engine firing gasoline.

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FORM B

EMISSION CALCULATIONS FOR INTERNAL COMBUSTION ENGINE(S)

Fuel: Diesel

The following table must be completed for calculating the emissions from internal combustion engine(s) which have a power output that is less than or equal to 447 KW (600 HP) and use diesel as fuel. Emissions from the internal combustion engines are calculated by taking the power output of the internal combustion engine in horsepower listed in column (a) and multiplying it by the emission and conversion factors listed in columns (b-g).

Engine Description: Type: _____ Model: _____ Serial Number: _____

Stack Information: Height above ground (feet): _____ Height above structure (feet): _____

Exit Data: Diameter (feet): _____ Velocity (feet/sec): _____ Temperature (deg. F): _____

Table B.2.2

Max Horse Power (HP) (a)	Emission Factors (lb/HP-hr)					Conversion Factor (hr/year)/(lb/ton) (g)	Emissions (tons per year)				
	PM ₁₀ (b)	SO ₂ (c)	NO _x (d)	CO (e)	VOC (f)		PM ₁₀ (a*b*g)	SO ₂ (a*c*g)	NO _x (a*d*g)	CO (a*e*g)	VOC (a*f*g)
	0.0022	0.00205	0.031	0.00668	0.0025	0.25					

- Note: 1. Conversion factor is based on 500 operating hours per year.
 2. Please make copies of this page if there is more than one internal combustion engine firing diesel.

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FORM B

EMISSION CALCULATIONS FOR INTERNAL COMBUSTION ENGINE(S)

Fuel: Diesel

The following table must be completed for calculating the emissions from internal combustion engine(s) which have a power output greater than 447 KW (600 HP) and use diesel as fuel. Emissions from the internal combustion engines are calculated by taking the power output of the internal combustion engine in horsepower listed in column (a) and multiplying it by the emission and conversion factors listed in columns (b-g).

Engine Description: Type: _____ Model: _____ Serial Number: _____

Stack Information: Height above ground (feet): _____ Height above structure (feet): _____

Exit Data: Diameter (feet): _____ Velocity (feet/sec): _____ Temperature (deg. F): _____

Table B.2.3

Max Horse Power (HP) (a)	Emission Factors (lb/HP-hr)					Conversion Factor (hr/year)/(lb/ton) (g)	Emissions (tons per year)				
	PM ₁₀ (b)	SO ₂ (c)	NO _x (d)	CO (e)	VOC (f)		PM ₁₀ (a*b*g)	SO ₂ (a*c*g)	NO _x (a*d*g)	CO (a*e*g)	VOC (a*f*g)
	0.0007	0.00712	0.024	0.0055	0.000705	0.25					

- Note: 1. Conversion factor is based on 500 operating hours per year.
 2. Please make copies of this page if there is more than one internal combustion engine firing diesel.

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FORM C

TOTAL EMISSIONS

The following table must be completed for determining the total amount of regulated air pollutants.

Table C - Total Emissions

	TOTAL EMISSIONS (tons per year)				
	PM₁₀	SO₂	NO_x	CO	VOC
Pollutant total of (Table B.1.1)+ (Table B.1.2) +(Table B.1.3) + (Table B.1.4) +(Table B.2.1)+ (Table B.2.2)+ (Table B.2.3)					

Note: In order to qualify for a General Permit, the emissions of each regulated air pollutant must be below 90 tons per year.

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FORM E

COMPLIANCE CERTIFICATION AND CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS

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

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 ADEQ as public record. I also attest that I am in compliance with the applicable requirements of the General Permit and will continue to comply with such requirements and any future requirements that become effective during the life of the General Permit. I will present a certification of compliance to ADEQ no less than semiannually and more frequently if specified by ADEQ. I further state that I will assume responsibility for the construction, modification, or operation of the source in accordance with Arizona Administrative Code, Title 18, Chapter 2 and any permit issued thereof.

Typed or Printed Company Name: _____

Official Title of Signer: _____

Typed or Printed Name of Signer: _____

Signature of Responsible Official: _____ Date: _____

FEE RULE SUMMARY FOR BOILER GENERAL PERMITS

CLASS II GENERAL PERMIT

TITLE V

NON-TITLE V

**APPLICATION
FEE \$500**

ANNUAL ADMINISTRATIVE FEE

\$4,520

**APPLICATION
FEE \$500**

ANNUAL INSPECTION FEE

\$3,020

There is a \$500 fee for facility changes that require the issuance of new Authorizations to Operate.

There is no fee for transfers, administrative amendments, or facility change notices that do not require a permit revision.

Administrative and Inspection fees are due no later than February 1st of each year.