PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY

33 N. Stone Avenue, Suite 700, Tucson, Arizona 85701, Phone: (520) 724-7400

Proposed Permit

GENERAL AIR QUALITY OPERATING PERMIT

For

HUMAN AND ANIMAL CREMATORIES

This air quality operating permit does not relieve applicant of responsibility for meeting all air pollution regulations

THIS GENERAL PERMIT ISSUED SUBJECT TO THE SPECIFIC AND ADMINISTRATIVE CONDITIONS IDENTIFIED IN THIS PERMIT.

PDEQ GENERAL PERMIT NUMBER **6085**, PERMIT CLASS **III**

ISSUED: **May XX, 2015** EXPIRES: **May XX, 2020**

Rupesh Patel, Air Permit Manager, PDEQ

SIGNATURE TITLE

DEFINITIONS

Words, phases and terms used in this permit shall have the following meanings except where narrative portion specifically indicates otherwise: [PCC 17.04.340, ARS 32-1301 & EPA.Gov/Glossary]

Word, Phase or Term	Definition
Afterburner	A burner installed in the secondary combustion chamber or stack for the purpose of incinerating smoke, fumes, gases, unburned carbon, and other combustible material not consumed during primary combustion.
Charging rate	Crematory design charge rate in lbs/hr.
Hazardous Waste	Pima County Code 17.04.340.A.103: Means a hazardous waste as defined in 40 CFR 261, or a waste or combination of wastes which because of its quantity, concentration, or physical, chemical or infectious characteristics may either: a. Cause or significantly contribute to an increase in mortality or an increase in serious, irreversible or incapacitating reversible illness; or b. Pose a serious present or potential hazard to human health or the environment if improperly disposed.
Hospital Waste	As defined in Federal regulations; Means discards generated at a hospital, except unused items returned to the manufacturer. The definition of hospital waste does not include human corpses, remains, and anatomical parts that are intended for interment or cremation.
Medical/Infectious Waste	As defined in the Federal regulations; Means waste capable of causing infections in humans, including: contaminated animal waste; human blood and blood products; isolation waste, pathological waste; and discarded sharps (needles, scalpels or broken medical instruments).
Opacity	The degree to which emissions reduce the transmission of light and obscure the view of an object in the background.
Primary Charging Chamber	The chamber in the crematory unit that receives the human or animal remains, in which the remains are ignited, and from which ash is removed.
Radioactive Waste	Any waste that emits energy as rays, waves, streams or energetic particles. Radioactive materials are often mixed with hazardous waste, from nuclear reactors, research institutions, or hospitals.
Secondary Combustion Chamber	A component of the crematory unit that receives combustion gases from the primary chamber and in which the combustion process is completed.
Startup	The period of time between the activation of the crematory unit and the first charge to the unit.

Proposed Permit

SPECIFIC CONDITIONS

I. Introduction

This general permit applies to human and animal crematories operating in Pima County authorized under Title 17 of the Pima County Code. The facility covered by this permit constitutes a **Class III; True Minor Stationary Source** based on 4380 hours of operation per year (sunrise to sunset).

Owners/operators of crematories may obtain coverage under this General Permit in lieu of an individual permit. Such parties shall do so by obtaining an Authorization To Operate (ATO) that identifies each crematory unit which will attest to their formal agreement to abide by all conditions contained in this permit.

II. General Requirements

The Permittee shall ensure that the crematory facility covered under this General Permit meets all the following requirements:

1. Each cremator shall be a dual-chamber design, consisting of a primary charging chamber and a secondary chamber (or afterburner), with burners located in each chamber;

2. Each cremator stack shall be designed and maintained such that there are no obstructions to stack flow, such as rain caps, unless such devices are designed to automatically open when the cremator unit is operated. Properly installed and maintained spark arrestors are not considered obstructions;

3. The Permittee shall not cremate any hospital, medical infectious, radioactive or hazardous waste;

4. Container of caskets used for the cremation shall meet Arizona Administrative Code R4-12-613.C;

5. Each cremator shall fire only natural gas or liquefied petroleum gas.

6. The Permittee shall follow all applicable provisions of the Arizona Revised Statutes, Title 32, Chapter 12, Article 6 “Crematories; Standards of Practice”;.

7. Upon issuance of the permit the Permittee shall implement the operations and maintenance plan submitted with the permit application and approved by the Control Officer. The plan shall:

    a. Provide adequate information to properly operate and maintain the equipment in good working order;

    b. Be specific to each cremation unit;

    c. Detail procedures to be followed when the unit is not operating in good working order.

8. Changes to the operation and maintenance plan shall be required to be submitted and approved by the Control Officer prior to implementation.

Proposed Permit

III. Emission Limitations and Standards

A. Particulate Matter Standard

Emissions from the cremation unit(s) stack shall not exceed 0.08 grains per cubic foot, based on dry flue gas at standard conditions, corrected to 12 percent carbon dioxide, except for not more than 30 seconds in any 60 minute period. [PCC 17.16.170.C.1 & PCC 17.16.170.E.1]

B. Opacity Limitation

The Permittee shall not cause, allow, or permit to be emitted into the atmosphere, from any type of incinerator (cremator), smoke, fumes, gases, particulate matter or other gas-borne material which exceeds 20 percent opacity. Crematories shall be exempt from opacity requirements for a period not more than 30 seconds in any 60 minute period. [PCC 17.16.040, PCC 17.16.170.B & PCC 17.16.170.E.1]

C. Odor Limiting Standard

The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution. [PCC 17.16.030]

D. Operating Requirements

1. Hour Limitation

The Permittee shall only operate the crematory unit(s) between the hours of official sunrise and sunset. [PCC 17.16.170.A]

2. Firing/Charging Rate Limitation

The Permittee shall operate the crematory unit(s) in such a way that the firing/charging rate shall not exceed the firing/charging capacity of the crematory unit(s). [PCC 17.12.185.A.2]

3. Temperature Measuring Device

Prior to beginning operation of the crematory unit(s), the Permittee shall install a fixed and functional temperature measuring device that at all times during operation shows the operating temperature of the secondary combustion chamber. [PCC 17.12.185.A.2]

4. Temperature Control

Prior to ignition of the primary burner to start cremation, the secondary combustion chamber temperature, as indicated by a temperature measuring device, shall be maintained at operating levels specified by the manufacturer (typically 1400ºF or greater and a minimum residence time for combustion gases of at least one second). [PCC 17.12.185.A.2]

E. Air Pollution Control Equipment

Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution are discharged to adjoining property, the Control Officer may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the owner or operator thereof to a degree that will adequately reduce or eliminate the discharge of air pollution to adjoining property. [PCC 17.16.020.B]

Proposed Permit

F. Facility Changes

Before installing additional crematory units, modifying existing emission equipment or switching fuels, the Permittee shall apply for the appropriate revision pursuant to PCC 17.12.240, PCC 17.12.255 or PCC 17.12.260.

IV. Monitoring Requirements [PCC 17.12.185.A.3]

A. Particulate Matter

A demonstration to show compliance with the emission limitation for particulate matter in III.A of the Specific Conditions shall not be required unless the Control Officer has reason to believe that conditions may exist which have the potential to cause a violation of the applicable requirement. The Permittee shall operate and maintain the crematory unit(s) at all times - including periods of startup, shutdown, and malfunction - in a manner consistent with good air pollution control practices and consistent with manufacturers' guidelines.

B. Opacity

To demonstrate compliance with the opacity limitation in III.B of the Specific Conditions, the Permittee shall conduct daily visible emissions checks on the exhaust stack of the crematory unit(s) while the unit(s) is/are operating. For the purposes of this permit, a visible emissions check is verification that abnormal emissions are not present at the crematory stack(s). The opacity checks shall be conducted by a person who is familiar with the emissions from the crematory (but does not need to be Method 9 certified). If the observer sees a plume that, on an instantaneous basis, appears to exceed 20%, then the Permittee shall take immediate corrective action to prevent emissions from exceeding 20% opacity.

C. Operation (Hours and Firing/Charging Rate)

To assure compliance with the operational limitations in III.D.1 and III.D.2 of the Specific Conditions, the Permittee shall monitor the charging rate, time of operation and hours of operation of the crematory unit(s) per day.

D. Operation (Temperature)

The Permittee shall be considered in compliance with III.D.3 & III.D.4 of the Specific Conditions by installing and maintaining a temperature-measuring device to continuously read out the secondary combustion chamber temperature in degrees Fahrenheit during operation of the crematory unit(s). The Permittee shall monitor and record the temperature of the secondary combustion chamber by means of either a temperature chart recorder or manual records immediately prior to charging each batch in the crematory unit(s) and once again before the completion of each burn.

V. Recordkeeping Requirements [PCC 17.12.185.A.4]

A. Opacity

The Permittee shall record all observations made under opacity monitoring described in IV.B of the Specific Conditions including; the date and time of the check, the name of the person conducting the check, the results of the check and the type of corrective action taken (if required). If no visible emissions are observed, the record shall state so.

Proposed Permit

B. Operation (Operational Log)

The Permittee shall maintain an operation log for the crematory unit(s) showing; the charging rate, hours of startup and shutdown of the crematory unit(s), including the date, starting time (in hours and minutes), the shutting down time (in hours and minutes) and the duration of the burn. [PCC 17.16.170.F]

C. Operation (Operational Log Update)

The operation log shall be updated at the end of each operating day. (See Attachment 3 for an example of what a logging form could look.)

D. Retention of Records (Duration)

All records required by this permit shall be retained for at least five years. [PCC 17.12.185.A.4.b]

E. Retention of Records (Location)

The Permittee shall retain all records relating to this permit and a copy of the permit at the permit site. If it is not feasible to maintain a copy of the permit onsite, the Permittee may request, in writing, to maintain a copy of the permit at an alternate location. Upon written approval by the Control Officer, the Permittee must maintain a complete copy of the permit at the approved alternative location. [PCC 17.12.080]

VI. Reporting Requirements

All reporting requirements are identified in the Additional Permit Requirements section of this permit. [PCC 17.12.185.A.5]

VII. Testing Requirements

For purposes of demonstrating compliance, the following tests and test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed. [PCC 17.12.050 & PCC 17.20.010]

A. Particulate Matter

When required, EPA Test Method 4 and 5 shall be performed to determine the concentration of particulate matter and associated moisture content in II.A. [PCC 17.12.185.A.3.a, PCC 17.16.170.G.1.a. & PCC 17.20.010]

B. Opacity

When required, the Permittee shall perform EPA Method 9 visible emissions observations on the facility operations to demonstrate compliance with the opacity standard in III.B of the Specific Conditions. [PCC 17.12.040.B & PCC 17.20.010]

C. Alternative Test Method

The Permittee may submit an alternate and equivalent test method(s) that is listed in 40 CFR Subpart 60, Appendix A, to the Control Officer in a test plan, for approval by the Control Officer. [PCC 17.12.045.D]

Proposed Permit

ADDITIONAL PERMIT REQUIREMENTS

I. COMPLIANCE WITH PERMIT CONDITIONS [PCC 17.12.185.A.7.a & b]

A. The Permittee shall comply with all conditions of this permit including all applicable requirements of Arizona air quality statutes and the air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.

B. The Permittee shall report to the Control Officer any emissions in excess of the limits established by this permit. The report shall be in 2 parts as specified below: [PCC 17.12.185.A.5 & PCC 17.12.040]

1 Notification by telephone or facsimile within 24 hours of the time the Permittee first learned of the occurrence of excess emission that includes all available information pursuant to PCC 17.12.040.B. To report excess emissions call **520-724-7400**or fax to **520-838-7432.**

2. Detailed written notification by submission of an excess emissions report within 72 hours of the notification in I.B.1 above. **Send to PDEQ 33 N. Stone Avenue, Suite 700, Tucson, Arizona 85701.**

C. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. The permit does not convey any property rights of any sort, or any exclusive privilege to the permit holder.

E. The Permittee shall pay fees to the Control Officer pursuant to PCC 17.12.510.
[PCC 17.12.185.A.8 & PCC 17.12.510]

II. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE [PCC 17.12.185.A.7.c]

The permit may be revised, reopened, revoked and reissued, or terminated for cause pursuant to PCC 17.12.270. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

III. DUTY TO PROVIDE INFORMATION [PCC 17.12.165.G & PCC 17.12.185.A.7.e]

A. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish a copy of such records to the Control Officer along with a claim of confidentiality.

B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

IV. SEVERABILITY CLAUSE [PCC 17.12.185.A.6]

The provisions of this permit are severable. If any provision of this permit is held invalid, the remainder of this permit shall not be affected thereby.

Proposed Permit

ATTACHMENT 1: APPLICABLE REGULATIONS

Pima County Code Title 17, Chapter 17.16:

17.16.010	Local rules and standards; Applicability of more than one standard
17.16.030	Odor limiting standards
17.16.040	Standards and applicability
17.16.050	Visibility limiting standard
17.16.170	Incinerators [Cremator(s)]
17.20.010	Source Sampling, Monitoring, and Testing

Proposed Permit