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JUN 19 2012

ANIMAL CREMATORIES
AIR GENERAL PERMIT EXAMPLE REGISTRATION WORKSHEET

DIVISION OF AIR
RESOURCE MANAGEMENT

Facility Identification Number - If known (seven digit number)

1050297-002

Registration Type

Check one:

INITIAL REGISTRATION - Notification of intent to:

- Construct and operate a proposed new facility.
- Operate an existing permitted facility not currently using an air general permit (e.g., a facility proposing to go from an air operation permit to an air general permit). If the facility currently holds one or more air operation permits, such permit(s) must be surrendered by the owner or operator upon the effective date of this air general permit. (See "Surrender of Existing Air Operation Permit(s)" below.)
- Operates an existing facility not currently permitted or using an air general permit.

RE-REGISTRATION (for facilities currently using an air general permit) - Notification of intent to:

- Continue operating the facility after expiration of the current term of air general permit use.
- Continue operating the facility after a change of ownership.
- Make an equipment change requiring re-registration pursuant to Rule 62-210.310(2)(e), F.A.C.
- Any other change not considered an administrative correction under Rule 62-210.310(2)(d), F.A.C.

Surrender of Existing Air Operation Permit(s) - For Initial Registrations Only, if Applicable

All existing air operation permits for this facility are hereby surrendered upon the effective date of this air general permit; specifically permit number(s):

n/a

General Facility Information

Facility Owner/Company Name (Name of corporation, agency, or individual owner who or which owns, leases, operates, controls, or supervises the facility.)

Polk County Sheriff's Office Animal Control Section

Site Name (Name, if any, of the facility site; e.g., Plant A, Metropolis Plant, etc. If more than one facility is owned, a complete registration must be submitted for each.)

PCSO Animal Control Facility

Facility Location (Physical location of the facility, not necessarily the mailing address.)

Street Address: 7115 De Castro Road

City: Winter Haven

County: Polk

Zip Code: 33880

1057

Facility Start-Up Date (Estimated start-up date of proposed new facility.)(N/A for existing facility.)

7/16/2011

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Facility Contact

<u>Name and Position Title</u> (Plant manager or person to be contacted regarding day-to-day operations at the facility.) Print Name and Title: <u>Steven Horstman, Lieutenant</u>		
<u>Facility Contact Telephone Numbers</u> Telephone: <u>863-577-1721</u> Fax: <u>863-499-2603</u> Cell phone: <u>863-514-9153</u> E-mail: <u>shorstman@polksheriff.org</u>		
<u>Facility Contact Mailing Address</u> Organization/Firm: <u>PCSO Animal Control Section</u> Mailing Address: <u>7115 De Castro Road</u> City: <u>Winter Haven</u> County: <u>Polk</u> Zip Code: <u>33880</u>		

Correspondence Contact/Representative (to serve as additional Department contact)

<u>Name and Position Title</u> Print Name and Title: <u>Kimberly Epperson, Kennel Supervisor</u>		
<u>Correspondence Contact/Representative Telephone Numbers</u> Telephone: <u>863-499-2600</u> Fax: <u>863-499-2603</u> Cell phone: <u>863-559-7978</u> E-mail: <u>kepperson@polksheriff.org</u>		
<u>Correspondence Contact/Representative Mailing Address</u> Organization/Firm: <u>PCSO Animal Control Section</u> Mailing Address: <u>7115 De Castro Road</u> City: <u>Winter Haven</u> County: <u>Polk</u> Zip Code: <u>33880</u>		

Government Facility Code (check only one)

<input type="checkbox"/>	Facility not owned or operated by a federal, state, or local government.
<input type="checkbox"/>	Facility owned or operated by the federal government.
<input type="checkbox"/>	Facility owned or operated by the state.
<input checked="" type="checkbox"/>	Facility owned or operated by the county.
<input type="checkbox"/>	Facility owned or operated by the municipality.
<input type="checkbox"/>	Facility owned or operated by a water management district.

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Emission Unit Details

MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	RATED CAPACITY**
Biomass Marketing Assoc	BMA1200	BMA 1200	150 lbs/hr maximum

**** Note: Any animal crematory unit at the facility shall not exceed a design capacity of 500 lbs/hour.**

Design Calculations

If this is an initial registration for a proposed new animal crematory unit, provide design calculations to confirm a sufficient volume in the secondary chamber combustion zone to provide for at least a 1.0 second gas residence time at 1800 degrees F.

Design calculations attached.

Registration is not for proposed new animal crematory unit(s).

Helpful Definitions

“Animal Crematory” - Any combustion apparatus used solely for the cremation of animal remains.
“Biomedical Waste” - Any solid or liquid waste which may present a threat of infection to humans, including nonliquid-tissue, body parts, blood, blood products, and body fluids from humans and other primates; laboratory and veterinary wastes which contain human disease-causing agents; and discarded sharps. The following are also included:
1. Used absorbent materials saturated with blood, blood products, body fluids, or excretions or secretions contaminated with visible blood; and absorbent materials saturated with blood or blood products that have dried.
2. Non-absorbent, disposable devices that have been contaminated with blood, body fluids, or secretions or excretions visibly contaminated with blood, but have not been treated by a method listed in Section 381.0098, F.S., or a method approved pursuant to Rule 64E-16, F.A.C.
“Department” or “DEP” - The State of Florida Department of Environmental Protection.
“Emissions Unit” - Any part or activity of a facility that emits or has the potential to emit any air pollutant.
“Facility” - All of the emissions units which are located on one or more contiguous or adjacent properties, and which are under the control of the same person (or persons under common control).
“Owner” or “Operator” - Any person or entity who or which owns, leases, operates, controls or supervises an emissions unit or facility.

BMA1200 Gasification Process

1. The waste batch is loaded into the primary chamber. It remains there until the gasification process is complete. Heat is transferred into the waste mass through the hearth which acts as the ceiling of the secondary afterburning chamber.
2. The waste mass is evaporated by intense heat and the fumes or off gases are directed to the mixing zone. This gaseous mixture is highly combustible. The fumes travel through the mixing zone where secondary air is added. A burner system provides the initial energy.
3. The gasification system uses a triggering method to cause the oxidization to occur suddenly. The cracking zone is a cornering structure that changes the gas velocity and creates conditions for flame front formation. It is this design feature that gives the very high resolution or efficacy of oxidization that is needed to allow it to meet the emission standards required today.

An energy loop is formed whereby the energy generated in the afterburning chamber is fed back into the waste mass to help continue the volatilizing process.

Gasification technology is a safe and effective alternative to problems facing people everywhere, such as mortality at county and municipal animal shelters.

BMA 1200 Secondary Chamber Dimensions and Calculations:

The SECONDARY Chamber is 27"H x 25"W x 66"D (25.7 cubic feet)

The burner operates with a fan rated at 134 cfm motor but generates 226 scfm during combustion when exhaust temps in chimney are about 600 deg (as typically observed) during 1800 deg secondary chamber temps.

That equated to 3.7 cubic feet of air per second during 1800 degree combustion.

This means: 25.7 cubic foot volume would be at 1800 degrees for 6.9 seconds minimum (volume between combustion and temperature probe where secondary combustion is occurring).

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Air emissions summary report by URS Corp.

Table I. Summary of Emissions Testing for PM, CPM, NO_x, CO and SO₂
(BMA Gasifier, October 2004)

Run#	PM		CPM		NO _x		CO		SO ₂	
	gr/dscf @7% O ₂	lb/hr	gr/dscf @7% O ₂	lb/hr	ppmV @7% O ₂	lb/hr	ppmV @7% O ₂	lb/hr	ppmV @7% O ₂	lb/hr
1	0.014	0.009	0.011	0.008	458	0.258	215	0.074	12.7	0.010
2	0.017	0.015	0.028	0.025	503	0.375	235	0.107	24.3	0.025
3	0.014	0.011	0.018	0.013	478	0.300	234	0.090	54.1	0.047
Average	0.015	0.012	0.019	0.015	480	0.311	228	0.090	30.4	0.028

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ANIMAL CREMATORIES

Air General Permit Example Registration Worksheet

The Department of Environmental Protection has established an "air general permit" at Florida Administrative Code ("F.A.C.") Rule 62-210.310(5)(d) for animal crematories. An air general permit is an authorization by rule to construct or operate a specific type of air pollutant emitting facility. Use of such authorization by any individual facility does not require action by the Department. The terms and conditions of the air general permit are set forth in the rule, rather than in a separately issued air construction or air operation permit.

If you are the owner or operator of an eligible facility comprising one or more animal crematories, you may register to use the air general permit at Rule 62-210.310(5)(d), F.A.C., by following the general procedures given at subsections 62-210.310(2) and 62-210.310 (3), F.A.C. To register, use the Department's electronic registration system (currently under development) or submit all the information specified in the above rules to either of the following addresses, along with the air general permit registration processing fee (\$100.00), payable to FDEP.

Regular USPS Mail Delivery

Department of Environmental Protection
Receipts or
Post Office Box 3070
Tallahassee, Florida 32315-3070

Overnight Delivery (FedEx, UPS, DHL, etc.)

Department of Environmental Protection
3800 Commonwealth Blvd.
Mail Station 77
Tallahassee, Florida 32399

If you properly register to use an air general permit, and are not denied use of the air general permit by the Department, you are authorized to construct and operate the facility in accordance with the general terms and conditions of Rule 62-210.310, F.A.C., and the specific terms and conditions of Rule 62-210.310(5)(d), F.A.C. Your facility may vary, so be sure your registration describes the operations at your facility in sufficient detail to demonstrate the facility's eligibility for use of the air general permit and to provide a basis for tracking any future equipment or process changes. Your registration should describe all air pollutant-emitting processes and equipment at the facility, and it should identify any air pollution control measures or equipment used.

The rules do not require any specific format for the registration. This worksheet, however, has been designed to assist owners and operators. Using it as a template for a general permit registration will help ensure that all necessary information is submitted.

Additional information can be found on the Department's air general permit program website (http://www.floridadep.org/air/emission/air_gp.htm) or by calling the Small Business Environmental Assistance Program Hotline at 1-800-SBAP-HLP (1-800-722-7457).

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
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PERMITS & AIR QUALITY
REGISTRATION