# HUMAN CREMATORY

## COMPLIANCE INSPECTION CHECKLIST

Environmental Compliance

**INSPECTION TYPE:** ANNUAL (INS1, INS2) ☒ COMPLAINT/DISCOVERY (CI) ☐
RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO:

**AIRS ID#:** 0870057 **DATE:** 06-23-2011 **ARRIVE:** _____ **DEPART:** _____

**FACILITY NAME:** BIG COPPITT CREMATORY

**FACILITY LOCATION:** U.S. HIGHWAY 1, MM 10.5
BIG COPPITT KEY 33040

**OWNER/AUTHORIZED REPRESENTATIVE:** J DEAN **PHONE:** (305)294-1066
**Email:** **Mobile:**
**CONTACT NAME:** J DEAN **PHONE:** (305)294-1066
**Email:** **Mobile:**
**ENTITLEMENT PERIOD:** 10/9/2009 (effective date) / 10/9/2014 (end date)

## Facility Section

**PART I: INSPECTION COMPLIANCE STATUS** (check ☑ only one box)

☐ IN COMPLIANCE ☒ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

**PART II: ONSITE INTRODUCTORY MEETING** (check ☑ only one box for each question)

1. Name(s) of facility representative(s): Peter, Crematory Operator

   Brief Notes: Bill and Kaye Arlington, Arlington Environmental Services, Inc., performed a VE test

2. Is the Authorized Representative still J DEAN? ---------- ☒ Yes ☐ No
   If no, who is?: _____
   If different, did the facility provide an administrative update within 30 days? ---------- ☐ Yes ☐ No
3. Is the facility contact still J DEAN? ---------- ☒ Yes ☐ No
   If no, who is?: _____
4. Will facility be conducting VE test(s) during today's inspection? ---------- ☒ Yes ☐ No
   If yes, was the compliance authority notified at least 15 days in advance? ---------- ☒ Yes ☐ No

## Emissions Unit Section

**1 – Human Crematory-prim/2ndary chambers, LP fired, 100 lbs/hr**

**PART I: FILE REVIEW PRIOR TO INSPECTION** (check ☑ only one box for each question)

1. a. Complete AC application or, if no AC permit, initial GP registration received on or after August 30, 1989? ☒ Yes ☐ No
   b. If yes, were design calculations provided then 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 Fahrenheit? ☒ Yes ☐ No
2. Crematory unit installed after February 1, 2007? ☐ Yes ☒ No
3. Date of last inspection: 07-08-2010
4. Past Visible Emissions (VE) tests:
   a. Was a VE test performed within each of the past 4 calendar years? ☒ Yes ☐ No
   b. Has a VE test been performed yet within the current calendar year? ☒ Yes ☐ No
   c. If first year of operation, was a VE test performed within 30 days of commencing operation? ☐ N/A ☐ Yes ☐ No
   d. Date of last VE test: 07-08-2010
   e. Was the VE test report filed with the compliance authority no later than 45 days after the test? ☒ Yes ☐ No
   f. Did the facility demonstrate compliance during the last VE test? ☒ Yes ☐ No
   If no, what was the problem (if known)?

**PART II: VISIBLE EMISSIONS TESTING** (check ☑ only one box for each question)

1. **Was a visible emissions test conducted by the facility for this unit during this site visit?** ☒ Yes ☐ No
   a. Was the test conducted with the unit operating at a capacity of one adult-sized cadaver? ☒ Yes ☐ No
   b. Was the visible emissions test conducted according to EPA Method 9? ☒ Yes ☐ No
   c. The visible emission test resulted in an opacity of 0 % for the highest six minute average.
   d. Did the visible emission test demonstrate compliance with the limit? ☒ Yes ☐ No
   (5% opacity, six-minute average, except that visible emissions not exceeding 15% opacity shall be allowed for up to six minutes in any one-hour)
2. **Was a visible emissions test conducted by the inspector during this site visit?** ☒ Yes ☐ No
   a. Was the test conducted with the unit operating at a capacity of one (1) adult-sized cadaver? ☒ Yes ☐ No
   b. Was the visible emissions test conducted according to EPA Method 9? ☒ Yes ☐ No
   c. The visible emission test resulted in an opacity of 0 % for the highest six minute average.
   d. Did the visible emission test demonstrate compliance with the limit? ☒ Yes ☐ No
3. **Is there any reason to ask for a special test to determine compliance with the PM and CO standards?** ☐ Yes ☒ No

   If yes, what reason?

**PART III: MONITORING/RECORDKEEPING REQUIREMENTS** (check ☑ only one box for each question)

1. **Were there any objectionable odors detected?** ☐ Yes ☒ No
   An upwind/downwind survey of the facility was conducted. The observed parameters were:
   Downwind odor level detected- Wind direction - Upwind odor level detected- (1-10)
2. **Continuous Monitoring Systems** –

a Is a continuous temperature monitoring system installed on each unit to record temperatures in the secondary chamber in accordance with the manufacturer's instructions? ☒ Yes ☐ No

b Is the temperature probe properly placed, at least at the distance where the 1.0 second gas residence time at ☒ 1,800[1] ☐ 1,600[2] degrees was determined? ☒ Yes ☐ No

(Application or initial notification: [1] received on or after 8/30/89; [2] received before 8/30/89)

**PART III: MONITORING/RECORDKEEPING REQUIREMENTS** (continued)

c. Are the following records kept on file, available for inspection, for at least the past two years?

| | | |
|---|---|---|
| 1) All temperature measurements | ☒ Yes | ☐ No |
| 2) all continuous monitoring systems, monitoring devices, and performance testing measurements; monitoring system all continuous performance evaluations | ☒ Yes | ☐ No |
| 3) All CEMS or monitoring device calibration checks (last performed on ( ) | ☒ Yes | ☐ No |
| 4) Adjustments | ☒ Yes | ☐ No |
| 5) Preventive maintenance performed on systems/devices | ☒ Yes | ☐ No |
| 6) Corrective maintenance performed on systems/devices | ☒ Yes | ☐ No |

| | | |
|---|---|---|
| d. Are the temperature charts properly documented with operator name, operator indication of when cremation in the primary chamber was begun, date, time, and temperature markings | ☒ Yes | ☐ No |
| e. Was the crematory unit installed after **2/1/07**? If no, skip e.(1) – (3) | ☐ Yes | ☒ No |
| (1) Is the crematory unit equipped and operated with a pollutant monitoring system to automatically control combustion based on continuous in-stack opacity measurement? | ☐ Yes | ☐ No |
| (2) Is the system calibrated to restrict combustion in the primary chamber whenever any opacity exceeds 15% opacity ? | ☐ Yes | ☐ No |
| (3) Has the opacity measurement system been cleaned and checked for proper operation in accordance with the manufacturer's recommended maintenance schedule? | ☐ Yes | ☐ No |

**PART IV: SECONDARY COMBUSTION ZONE TEMPERATURES** (check ☑ only one box for each question)

| | | |
|---|---|---|
| 1. If the application to construct was **BEFORE** August 30, 1989 is the: | | |
| a. actual operating temperature of the secondary chamber combustion zone no less than **1400°F** throughout the combustion process in the primary chamber? | ☐ Yes | ☐ No |
| b. secondary chamber combustion zone temperature equal to or greater than **1400°F** before the cremation process begins in the primary chamber? | ☐ Yes | ☐ No |
| 2. If the application to construct **ON** or **AFTER** August 30, 1989 is the: | | |
| a. the actual operating temperature of the secondary chamber combustion zone no less than **1600°F** throughout the combustion process in the primary chamber? | ☐ Yes | ☒ No |
| b. secondary chamber combustion zone temperature equal to or greater than **1600°F** before the cremation process begins in the primary chamber? | ☒ Yes | ☐ No |

**PART V: ALLOWED MATERIALS** (check ☑ only one box for each question)

| | | |
|---|---|---|
| 1. *Other than* human or fetal remains with appropriate containers or clothing, are any materials, including biomedical wastes, incinerated in the unit? | ☐ Yes | ☒ No |
| 2. Do cremation containers contain no more than 0.5 % (percent) by weight chlorinated plastics as certified by the manufacturer? | ☒ Yes | ☐ No |
| If yes, is the certifying documentation from the manufacturer kept on file for at least 2 years from use? | ☐ Yes | ☐ No |

**PART VI: EQUIPMENT MAINTENANCE**

(check ☑ only one box for each question)

| | | |
|---|---|---|
| 1. Is the crematory unit maintained in accordance with the manufacturer's specifications? ---------- | ☐ Yes | ☐ No |
| 2. Is there a written plan onsite which addresses the operating procedures during startup, shutdown and malfunction? ---------- | ☒ Yes | ☐ No |
| 3. Does the crematory allow for a visible check on the flame characteristics? ---------- If no, skip a. – b. | ☐ Yes | ☒ No |
| a. Was the flame characteristic visually checked at least once during each operating shift? ---------- | ☐ Yes | ☐ No |
| b. Was the flame adjusted when necessary? ---------- | ☐ Yes | ☐ No |

**PART VII: EU INSPECTION COMPLIANCE STATUS** (check ☑ only one box)

☐ IN COMPLIANCE ☒ MINOR Non-COMPLIANCE ☐ SIGNIFICANT Non-COMPLIANCE

## Facility Section (continued)

**SPECIAL CONDITIONS AND PROCEDURES**

(check ☑ only one box for each question)

Administrative Changes:

| | | |
|---|---|---|
| 1. Were there any changes in the name, address, or phone number of the facility or authorized representative not associated with a change in ownership or with a physical relocation of the facility or any emissions units or operations comprising the facility; or any other similar minor administrative change at the facility? ---- | ☐ Yes | ☒ No |
| 2. If yes, did the facility provide written notification within 30 days of the change? ---------- | ☐ Yes | ☐ No |

New or Modified Process Equipment or Change in Ownership:

| | | |
|---|---|---|
| 3. Since the last registration form submittal has there been ---------- | ☐ Yes | ☐ No |
| a. Installation of any new process equipment? ---------- | ☐ Yes | ☒ No |
| b. Alterations to existing process equipment without replacement? ---------- | ☐ Yes | ☒ No |
| c. Replacement of existing equipment with equipment that is substantially different? ---------- | ☐ Yes | ☒ No |
| d. A change in ownership? ---------- | ☐ Yes | ☒ No |
| If the any answer to 3a. – d. is Yes , was a new registration form and the appropriate fee submitted 30 days prior to the change? ---------- | ☐ Yes | ☐ No |

Barbara Nevins — Inspector's Name (Please Print)

06-23-2011 — Date of Inspection

Barbara Nevins — Inspector's Signature

06-23-2012 — Approximate Date of Next Inspection

**COMMENTS:** No emissions, only heat waves, were observed during the 60 minute VE test. At the end of the test, the consultant and I checked the temperature gauge and chart recorder, finding the temperature below 1600 degrees and dropping. The VE test was started when the cremation started, and the cadaver was 160 lbs. At 100 lbs per hour, the data indicated that the crematory cooled off earlier than needed to complete the cremation. The operator was no longer on site to explain.

I did not observe any alarm lights lit on the control panel. I did observe a switch marked" pollution control" in the off position.

Crematory building with stack on roof

Temperature 1336 degrees after approximately 1 hr 10 minutes



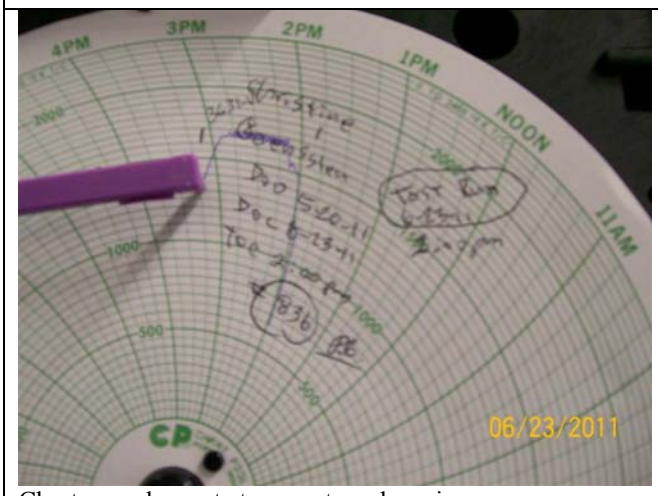

Chart recorder, note temperature dropping

Control panel, close-up in next photo frame

Note pollution control switch in off position