**HUMAN CREMATORY**

**COMPLIANCE INSPECTION CHECKLIST**

Environmental Compliance

**INSPECTION TYPE:** ANNUAL (INS1, INS2) ☒ COMPLAINT/DISCOVERY (CI) ☐

RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO: _____

**AIRS ID#:** 1030096 002 **DATE:** 6/5/08 **ARRIVE:** 11:45 A.M **DEPART:** 3:00 P.M

**FACILITY NAME:** Curlew Hills Memory Gardens, Inc.

**FACILITY LOCATION:** 1750 Curlew Rd.

Palm Harbor, FL

**RESPONSIBLE OFFICIAL:** **Keenan L. Knopke?** **PHONE:** 787-7890

**CONTACT NAME:** David Tremland**?** **PHONE:** 787-7890

**REMITTANCE YEAR: N/A** **ENTITLEMENT PERIOD: 12/8/07** / 12/8/12
(effective date) (end date)

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

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

**PART II: TESTING/RECORDKEEPING REQUIREMENTS – Rule 62-296.401, F.A.C.**
(check □ appropriate box(es))

1. Were there any objectionable odor(s) detected?---------- ☐Yes ☒ No
2. Was a visible emissions test conducted during this site visit according to EPA Method 9 (Ref.: Chapter 62-297, F.A.C.)?---------- ☐Yes ☒ No
3. In order to demonstrate individual source compliance, was an annual visible emissions test conducted 60 days prior to the AGP Notification form submission, and within 60 days prior to each anniversary date? (Rule 62-296.401(5)(i), F.A.C.)---------- ☒Yes ☐ No
4. In order to demonstrate individual source compliance were the remaining applicable standards testing completed within 60 days prior to the AGP Notification form submission? (Rule 62-210.300(4), F.A.C.) ☒Yes ☐ No
   a) Carbon Monoxide (CO) emissions equal to or below the requirements of 100 parts per million by volume, dry basis, corrected to 7% $O_2$ on an hourly average basis and tested according to EPA Method 10 (Ref.: Chapter 62-297, F.A.C.)?---------- ☒Yes ☐ No
   b) Oxygen test performed according to EPA Method 3 (Ref.: Chapter 62-297, F.A.C.)?---------- ☒Yes ☐ No
   c) Particulate matter emissions test with results equal to or below the requirements of 0.080 grains per dry standard cubic foot ($ft^3$)of flue gas, corrected to 7% $O_2$ and tested according to EPA Method 5 (Ref.: Chapter.62-297, F.A.C.)?---------- ☒Yes ☐ No
5. Was all emissions testing conducted with the source operating at the manufacturers recommended capacity?---------- ☒Yes ☐ No
6. Was CO & PM compliance demonstrated by submission of a test report for an identical crematory unit? ☐Yes ☐ No
7. Was the Department notified at least 15 days prior to the date of the last formal compliance test?---------- ☒Yes ☐ No
8. Was the required test report filed with the Department as soon as practical, but no longer than 45 days after the test was completed?---------- ☒Yes ☐ No

**PART III: OPERATING/RECORDKEEPING REQUIREMENTS – Rule 62-296.401, F.A.C.**

(check □ appropriate box(es))

1. Is there **Continuous Emissions Monitoring System** (CEMS) equipment installed on each unit to record temperatures in the primary and secondary chambers where there is a 1.0 second gas residence time in the secondary chamber combustion zone in accordance with the manufacturer's instructions?---------- ☒ Yes ☐ No
   a) Do temperature probes seem to be properly placed?---------- ☒ Yes ☐ No
   b) Are the following records kept on file, available for inspection for at least two years following the recording of such measurements, maintenance, reports and records?
      1) All measurements (including CEMS)---------- ☒ Yes ☐ No
      2) Monitoring device---------- ☒ Yes ☐ No
      3) Performance Testing Measurements ---------- ☒ Yes ☐ No
      4) CEMS Performance Evaluation---------- ☒ Yes ☐ No
      5) All CEMS or monitoring device calibration checks---------- ☒ Yes ☐ No
      6) Adjustments---------- ☒ Yes ☐ No
      7) Preventive maintenance performed on systems/devices---------- ☒ Yes ☐ No
      8) Corrective maintenance performed on systems/devices---------- ☒ Yes ☐ No
2. Was this crematory unit constructed: **(check only one □ box)**
   a) ☐ **BEFORE** August 30, 1989? **(If this box checked, continue on to #3 and skip #4)**
   b) ☐ **ON** or **AFTER** August 30, 1989? **(If this box checked, skip #3 and continue on to #4)**

3. If constructed **BEFORE** August 30, 1989 is the:
   a) secondary chamber combustion zone providing at least a 1.0 second gas residence time @ **1600°F**? ☐ Yes ☐ No
   b) actual operating temperature of the secondary chamber combustion zone no less than **1400°F** throughout the combustion process in the primary chamber?---------- ☐ Yes ☐ No
   c) cremation in the primary chamber begun after the secondary chamber combustion zone temperature is equal to or greater than **1400°F**?---------- ☐ Yes ☐ No
   d) required monitoring equipment installed and operational, and providing continuous monitoring to record the temperature at the point or beyond where 1.0 second gas residence time is obtained in the secondary chamber combustion zone according to the manufacturer's instructions?---------- ☐ Yes ☐ No

4. If constructed **ON** or **AFTER** August 30, 1989 is the:
   a) volume in the secondary combustion zone sufficient to provide at least a 1.0 second gas residence time @ **1800° F?**---------- ☒ Yes ☐ No
   b) 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
   c) secondary chamber combustion zone temperature equal to or greater than **1600°F** before the cremation process begins in the primary chamber?---------- ☒ Yes ☐ No
5. Are appropriate cremation containers containing no more than 0.5 % (percent) by weight chlorinated plastics used during the cremation of dead human bodies?---------- ☒ Yes ☐ No
   a) If the answer to question 4 above is YES, is certifying documentation from the manufacturer that they are composed of 0.5% or less by weight chlorinated plastics kept on file at the site for the duration of their use and for at least two years after their use?---------- ☒ Yes ☐ No
   b) Are there any other materials, including biomedical wastes (Rule 62-210.200, FAC) incinerated at this location?---------- ☐ Yes ☒ No
6. Have all crematory operators been trained and certified by a Department-approved training program? ☒ Yes ☐ No
   a) Are copies of the training certificates for all crematory operators kept on file at the facility for the duration of the operator's employment & for an additional two years after termination of employment?----- ☒ Yes ☐ No

**PART IV: SPECIAL CONDITIONS AND PROCEDURES – Rule 62-296.401, F.A.C.**

**A. New or Modified Process Equipment**

1. Since the last inspection has there been
   a) installation of any new process equipment?---------- ☐ Yes ☒ No
   b) alterations to existing process equipment without replacement?---------- ☐ Yes ☒ No
   c) replacement of existing equipment substantially different than that noted on the most recent notification form?---------- ☐ Yes ☒ No
   d) If you answered **YES** to any of the above, did the owner submit a new and complete notification form and appropriate fee (Rule 62-4.050, F.A.C.) to the appropriate DEP or local program office?---------- ☐ Yes ☐ No
2. If a crematory unit has been modified to the extent that a Department air construction permit was required, have all operators been retrained to operate the modified unit?---------- ☐ Yes ☐ No
3. In the case of new or modified equipment, where a Department air construction permit was required, has the owner submitted copies of all operator training certificates?---------- ☐ Yes ☐ No
   a) submitted within the 15 day required window following the training?---------- ☐ Yes ☐ No

Mike Ojo Thomas

Inspector's Name (Please Print) — Date of Inspection: 6/5/08

Inspector's Signature — Approximate Date of Next Inspection

**COMMENTS:** See the attached Pinellas County inspection report form for additional information

# Human Crematory

| | | | |
|---|---|---|---|
| **FACILITY:** **Curlew Hills Memory Gardens, Inc.** | | **PERMIT ID:** | **552** |
| | | **DISTRICT:** | Southwest |
| **ADDRESS:** 1750 Curlew Rd.<br>Palm Harbor, FL | | **CONTACT PHONE:** | 787-7890 |
| **ARMS NO:** **1030096 002** | **PERMIT NO:** **1030096-004-AG** | **Expiration Date:** | 12/8/12 |
| | | **Renewal Date:** | 11/8/12 |
| | | **Test Date:** | 1/4/00 |

***EMISSION UNIT DESCRIPTION:*** Human Crematory: B&L Systems, Inc., Model Phoenix II, Serial No. 418-201-98, 350 lb maximum batch. Secondary Chamber 1,600 degrees minimum

| ***INSPECTION DATE:*** | ***ARMS INSPECTION TYPE:*** | ***COMPLIANCE STATUS:*** |
|---|---|---|
| 6/5/2008 | ☒INS2 or ☐INS_____ | ☒IN ☐MNC ☐SNC |

Type of Inspection: ☒Initial ☐Re-inspection ☐Complaint ☐Drive-by ☐Quarterly

**A. General Review:**

| | | |
|---|---|---|
| 1. | Permit File Review | ☒Yes ☐No |
| 2. | Introduction and Entry<br>_____<br>***Comments:*** **This emission unit was inspected to determine the annual compliance status. I met with the crematory manager, Dave Schramel the incinerator operator, for the inspection of the facility and emission unit.** | ☒Yes ☐No |
| 3. | Administrative Corrections. Within thirty (30) days of any minor changes requiring corrections to information contained in the registration form, the owner or operator shall notify the Department in writing. Such changes shall include:<br>1. Any change 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<br>2. Any other similar minor administrative change at the facility.<br>**Is the Authorized Representative still: Keenan L. Knopke?** ☒ Yes ☐ No<br>**Is the facility contact still:** David Tremland**?** ☒ Yes ☐ No<br>**[**62-210.310(2)(d), F.A.C.]<br>***Comments****: Mr. Knopke stills the Authorized Representative and Mr. Tremland stills the facility contact.* | |

| IN | MNC | SNC | B. Specific Conditions |
|---|---|---|---|
| ☒ | ☐ | ☐ | **Visible emissions** - Visible emissions shall not exceed five percent (5%) opacity, six (6) minute average, except that visible emissions not exceeding fifteen percent (15%) opacity shall be allowed for up to six (6) minutes in any one (1) hour period. [Rule 62-296.401(5)(b)1, F.A.C.]<br><br>***Comments:*** *The last annual visible emissions test, conducted on **1/04/08** demonstrated an opacity of* **0%.**<br>*An AQD VE test was performed during this site visit* ☒*Yes or* ☐*No. An opacity of* **0%** *was observed.* |
| ☒ | ☐ | ☐ | **Operating Temperature** - Human crematory units shall operate with a secondary chamber temperature of no less than :<br>(☒ 1600 degrees Fahrenheit throughout the combustion process in the primary chamber, for construction applications received by the Department on or after August 30, 1989. Cremation in the primary chamber shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than 1600 degrees Fahrenheit. [Rule 62-296.401(5)(c), F.A.C.], or<br>☐ 1400 degrees Fahrenheit throughout the combustion process in the primary, for construction applications received by the Department prior to August 30, 1989. Cremation in the primary chamber shall not begin unless the secondary chamber combustion zone temperature is equal to or greater than 1400 degrees Fahrenheit. [Rule 62-296.401(5)(c), F.A.C.]<br><br>***Comments****: Facility is required to operate at a temperature of **_1600 ° F based** on* ☐ *identical stack testing,* ☐*source specific stack testing and visible emissions tests, or* ☐*rule. Based on record reviews, the lowest operating temperature* |

| IN | MNC | SNC | B. Specific Conditions |
|---|---|---|---|
| | | | *observed was **1630° F*** |
| ☒ | ☐ | ☐ | **Allowed Materials** - Human crematory units shall cremate only human or fetal remains with appropriate containers. The remains may be clothed. The containers shall contain no more than 0.5 percent by weight chlorinated plastics as demonstrated by the manufacturer's data sheet. If containers are incinerated, documentation from the manufacturer certifying that they are composed of 0.5 percent or less by weight chlorinated plastics shall be kept on-file at the site for the duration of their use and for at least two (2) years after their use. No other material, including biomedical waste as defined in Rule 62-210.200, F.A.C., shall be incinerated. [Rule 62-296.401(5)(d), F.A.C.]<br><br>***Comments:*** *Reviewed records for the months of* **6/1/07 to 6/5/08.** ***The highest reported chlorine content was 0%. Supporting documentation was verified (☒ Yes or ☐ No)***<br>***The material data sheets for the products used at the facility document they are using the containers with less than the 0.5% chlorinated plastics.*** |
| ☒ | ☐ | ☐ | **Equipment Maintenance** -All human crematory units shall be maintained in proper working order in accordance with the manufacturer's specifications to ensure the integrity and efficiency of the equipment. If a crematory unit contains a defect that affects the integrity or efficiency of the unit, the unit shall be taken out of service. No person shall use or permit the use of that unit until it has been repaired or adjusted. Repair records on all crematory units shall be maintained onsite for at least two years. A written plan with operating procedures for startup, shutdown and malfunction of each crematory unit shall be maintained and followed during those events. Each unit's burners shall be operated with a proper air-to-fuel ratio. If the unit so allows, the burners' flame characteristics shall be visually checked at least once during each operating shift and adjusted when warranted by the visual checks. [Rule 62-296.401(5)(e), F.A.C.]<br><br>***Comments****: The facility (☒ does/ ☐does not) have a written plan for* operating procedures for startup, shutdown and malfunction.<br>Repair records were r*eviewed for the months of* **6/1/7/07 to 6/5/08.** *The records were available and maintained on site for a period of 2005.*<br>The crematory unit *(☒ does/ ☐does not)* allow, the burners' flame characteristics shall be visually checked. The flame *(☒ was/ ☐*was *not/☐ NA) observed during each shift.* |
| ☒ | ☐ | ☐ | **Frequency of Testing.**<br>1. The owner or operator of any human crematory unit using an air general permit shall have a performance test conducted for visible emissions no later than thirty (30) days after the unit commences operation, and annually thereafter.<br>2. The owner or operator of any human crematory unit operating under the authority of an air construction permit or air operation permit shall have a performance test conducted for visible emissions prior to submitting the application for an initial air operation permit, and annually thereafter.<br>3. The owner or operator of any human crematory unit shall not be required to have performance tests conducted for carbon monoxide and particulate matter, except as provided at paragraph 62-297.310(7)(b), F.A.C.<br>[Rule 62-296.401(5)(h), F.A.C.]<br><br>***Comments:*** *The last test was conducted on **1/4/08**. This( ☒is / ☐is not) within the allowable 60 day window.* |
| ☒ | ☐ | ☐ | **Test Notification** - The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.<br>[62-297.310(7)(a)9. F.A.C.]<br><br>***Comments:*** *The County was notified on **_1/2/2008**, for the test that was conducted on **_1/4/2008**.*<br>*This( ☒is / ☐is not) within the allowable 15 day window.* |
| ☒ | ☐ | ☐ | **Test Reports** - The required test report shall be filed with the PCDEM as soon as practical but no later than 45 days after the test is completed. [62-297.310(8), F.A.C.]<br><br>***Comments:*** *The last test was conducted on _1/4/08, and the test results were submitted on 1/15/2008.*<br>*This( ☒is / ☐is not) within the allowable 45 day window.* |

| IN | MNC | SNC | B. Specific Conditions |
|---|---|---|---|
| | | | |
| ☒ | ☐ | ☐ | **Continuous Monitoring Requirements**- Each crematory unit shall be equipped and operated with a continuous monitor to record temperature at the point or beyond where 1.0 second gas residence time is obtained in the secondary chamber combustion zone in accordance with the manufacturer's instructions. In addition, each crematory unit installed after February 1, 2007, shall be equipped and operated with a pollutant monitoring system to automatically control combustion based on continuous in-stack opacity measurement. Such system shall be calibrated to restrict combustion in the primary chamber whenever any opacity exceeding 15% opacity is occurring. A complete file of all temperature measurements; all continuous monitoring systems, monitoring devices, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; and all adjustments, preventive maintenance, and corrective maintenance performed on these systems or devices, shall be recorded in a permanent legible form available for inspection. Continuous temperature monitoring documentation shall include operator name, operator indication of when cremation in the primary chamber was begun, date, time, and temperature markings. Pollutant monitoring system documentation shall include indication of when the opacity measurement system was cleaned and checked for proper operation in accordance with the manufacturer's recommended maintenance schedule. The file shall be retained for at least two (2) years following the recording of such measurements, maintenance, reports, and records. [Rule 62-296.401(5)(i), F.A.C.]<br><br>***Comments:*** *Reviewed temperature charts for the months of 6/1/07 to 6/5/08. The last calibration on the temperature chart was on 1/14/08. The temperature probe appears properly placed (☒ Yes or ☐No).*<br>*This facility (☐ was/ ☒was no)t installed after February 1, 2007, therefore (☐ must/ ☒does no)t have to be equipped and operated with a pollutant monitoring system to automatically control combustion based on continuous in-stack opacity measurement.*<br>*The system( ☒ is/ ☐*is not/☐ *NA) calibrated to restrict combustion in the primary chamber whenever any opacity exceeding 15% opacity is occurring.* |
| ☒ | ☐ | ☐ | **Process Rate**<br><br>***Comments:*** **The maximum load for this crematory unit is 350 pounds. The largest body cremated during this review period was 400 pounds. Inquired as to what procedures they follow during their largest cremation. Mr. Schvamel stated the 400 pounds human remains was first cremation of the day. He stated they preheat emission unit 1600 degrees F and then load head first, placed burner switch to ignition position. The operator appears to follow the manufacturer recommendation during the largest body cremation.** |

| IN | MNC | SNC | C. Selected General Conditions and Procedures |
|---|---|---|---|
| ☒ | ☐ | ☐ | **Periods of Noncompliance** - If, for any reason, the owner or operator of any facility operating under an air general permit pursuant to Rule 62-210.300(4)(a), F.A.C., does not comply with or will be unable to comply with any condition or limitation of the permit, the permittee shall immediately provide the Department with the following information:<br>1. A description of and cause of noncompliance; and<br>2. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result.<br>[62-210.310(3)(i), F.A.C.]<br><br>***Comments:*** **The emission unit operations/maintenance record log book and temperature charts did not reveal any upset condition.** |
| ☒ | ☐ | ☐ | **Valid Permit**<br>To avoid lapse of authority to operate, an owner or operator intending to use, or continue to use, an air general permit must submit the proper registration form and processing fee at least thirty (30) days prior to expiration of the facility's existing air operation permit or air general permit.<br>[62-210.310(2)(c)2., F.A.C.]<br><br>*Comments:* **The permit expires on 12/8/12. A new notification form is required to be submitted no later than 11/8/12.** |

| IN | MNC | SNC | C. Selected General Conditions and Procedures |
|---|---|---|---|
| ☒ | ☐ | ☐ | **Equipment Changes** - The owner or operator shall maintain records of all equipment changes. In the case of installation of new process or air pollution control equipment, alteration of existing process or control equipment without replacement, or replacement of existing process or control equipment with equipment substantially different in terms of capacity, method of operation, material processed, or intended use than that noted on the most recent registration form, the owner or operator shall submit a new and complete air general permit registration form for the facility with the appropriate fee pursuant to Rule 62-4.050, F.A.C. to the Department, provided, however, that any change that would constitute a new major stationary source, major modification, or modification that would be a major modification but for the provisions of paragraph 62-212.400(2)(a), F.A.C., shall require authorization by air construction permit. [62-210.310(2)(e)., F.A.C.]<br><br>*Comments:* ***The facility had not added any additional emission unit or made any changes to the existing emission unit.*** |

| D. Other: | |
|---|---|
| Closing Conference | ☒Yes ☐No |
| *Comments:* ***During the closing conference, I informed Mr.*** **Knopke, facility appears to be in compliance at this time.** | |
| Other Comments: | |
| **Inspector(s)**: Mike Ojo Thomas, Pinellas County, Air Quality Division | |
| **Signature(s)** | Date: 6/10/08 |

**CONTACT LOG**? ___ye____, **ACCESS?** ___yes_____, **ARMs**? ___yes_____