HUMAN CREMATORY

COMPLIANCE INSPECTION CHECKLIST

Environmental Compliance

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

RE-INSPECTION (FUI) ☐ ARMS COMPLAINT NO:

AIRS ID#: 0090080 **DATE:** 10/19/10 **ARRIVE:** _____ **DEPART:** _____

FACILITY NAME: NORTH BREVARD FUNERAL HOME

FACILITY LOCATION: 1450 NORWOOD AVE

TITUSVILLE 32796

OWNER/AUTHORIZED REPRESENTATIVE: Michael Kelly **PHONE:** (321)269-9222
Email: **Mobile:** (321)403-2410
CONTACT NAME: D'ARCY NARDONE **PHONE:** (321)269-9222
Email: darcy.nardone@carriageservices.com **Mobile:**
ENTITLEMENT PERIOD: 3/26/2009 / 3/26/2014
(effective date) (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): Michael Kelly, D'Arcy Nardone

   Brief Notes: Michael Kellly, General Manager

2. Is the Authorized Representative still GIL CARLSON? ---------- ☐ Yes ☒ No
   If no, who is?: Michael Kelly

   If different, did the facility provide an administrative update within 30 days? ---------- ☐ Yes ☒ No
3. Is the facility contact still D'ARCY NARDONE? ---------- ☒ 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-w/prim/2ndary(afterburner),NG fired, 150#/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: 12/7/09
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: 9/9/09
   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 % 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? ----------	☐ Yes	☒..No
If no, skip a. – b.		
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

Allen Rainey — Inspector's Name (Please Print)

10/29/10 — Date of Inspection

Inspector's Signature

Approximate Date of Next Inspection

COMMENTS: On 10/19/10, Mr. Allen Rainey, Environmental Specialist, performed an INS2 inspection in response to an anonymous complaint about smoke from the crematory stack received 10/11/10. Both Mike Kelly, General Manager and D'Arcy Nardone assisted me in this inspection.

The facility operates a Matthews International All Crematory manufactured before 1989. Mr. Nardone reported that the crematory was heating up to begin a cremation. Mr. Nardone explained that in the past, the crematory took a long time to heat to 1,400 degrees F. by using only the secondary chamber burner, so both the primary and secondary chamber burners were ignited to make it heat faster. The problem was corrected when a Matthews technician replaced the secondary chamber burner. The burner is designed to fire downward into the chamber and replaced the burner that fired horizontally into the chamber. At the same time, the

technician replaced parts of the refractory in the secondary and primary chambers. This work occurred from 10/4/10 to 10/8/10. Presently, only the secondary chamber burner needs to be ignited to heat the unit. On 10/11/10, one of the crematory operators did not know about the repair work and heated the unit with both burners prior to cremating a 300 pound body for the first cremation of the day.

All crematory operators (three full-time, one part-time and management staff) will be receiving refresher training from Matthews. Mr. Rainey asked for documentation of the training. Grove Scientific is scheduled to do a visible emissions test on 10/27/10.

Mr. Rainey requested temperature charts from Jan. 2010 to the present. Mr. Nardone could not locate the charts for January and February but provided March through the present. Mr. Rainey observed that the charts show the crematory used to take up to 4.5 hours to heat to 1,400 degrees F.

Mr. Rainey requested records of the burner and refractory work and obtained copies of the following:
A. Matthews International facsimile dated 5/27/10 quoting work for new refractory and secondary burner.
B. Job Ticket dated 7/29/10 describing refractory, burner installation and chart recorder calibration.
C. Selected temperature charts from March 2010 to the present.

Mr. Rainey requested that the paid invoice (which Matthews has not provided to the facility) be sent to the Department's Central District office.

Mr. Rainey asked Nardone if the work done to replace the secondary chamber burner affected one-second retention time calculations. Mr. Nardone maintained the calculation did not change.

Mr. Rainey performed an EPA Method 9 visible emission observation after the crematory began the scheduled cremation. Mr. Rainey observed 0% opacity during the 12-minute observation.

The facility is in violation of the rule below:
Rule 62-296.401(5)(e), Florida Administrative Code--Failure to take an inefficient unit out of service and failure to operate the burners with a proper air-to-fuel ratio.