HUMAN CREMATORY

COMPLIANCE INSPECTION CHECKLIST

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

RE-INSPECTION (FUI) ☒ ARMS COMPLAINT NO:

AIRS ID#: 0870057 **DATE 10-30-07** **ARRIVE: 1330 hours** **DEPART:** _____

FACILITY NAME: FLORIDA KEYS CREMATORY

FACILITY LOCATION: U.S. HIGHWAY 1, MM 10 1/2

BIG COPPITT KEY 33040

RESPONSIBLE OFFICIAL: Jeffrey DEAN **PHONE:** (305)294-1066

CONTACT NAME: Jeffrey Dean **PHONE:**

REMITTANCE YEAR: 2007 **ENTITLEMENT PERIOD:** 10/25/2004 (effective date) / 10/25/2009 (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? **SEE COMMENTs**
      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)**

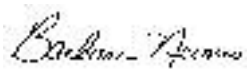
3. If constructed **BEFORE** August 30, 1989 is the:
   a) secondary chamber combustion zone providing at least a 1.0 second gas residence time @ **1600°F**? ☒Yes ☐ No
   b) actual operating temperature of the secondary chamber combustion zone no less than **1400°F** throughout the combustion process 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?----------Not Verified, see comments---------- ☐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

Barbara Nevins	10-30-2007
Inspector's Name (Please Print)	Date of Inspection
	9-21-2008
Inspector's Signature	Approximate Date of Next Inspection

COMMENTS: This facility inspection was in two part, a VE test on 9-21-07, filed as a separate report, and a file review on 10-30-07, documented in this report. The crematory is located on Big Coppitt Key and the Funeral Home office in Key West. At the crematory only the operator's logbook and the operator's training certificates were available. All other records are kept at the Key West office.

On 10-30-07 the files stored at the main office in Key West were reviewed. Random temperature charts were reviewed for the years 2006 and 2007. A few of these charts showed cremations performed without inked recording of temperatures. The ink marks would lighten, disappear, then reappear bold overtime indicating the deficiency was due to lack of ink in the pen. Handwritten entries on the charts showed time and date of cremation, deceased name, date of death, and crematory operator's signature. The missing temperature recordings were discussed with Mr. Jeffrey Dean. He said that he would correct this deficiency for future cremations. All of the temperatures recorded during the cremations were sustained above 1600° F.

Records of composition of the cardboard containers and bags used during the cremations were not available to document less than .5% by weight, chlorinated plastics.

Regarding the boxes: Mr. Dean had requested but not been provided the composition information from the box vendor. He said he was planning on discontinuing the use of the boxes as they were for airplane transport and more durable than he needed for cremation. The problem was not with visible emissions created, but rather with some cardboard ash remaining after the cremation was completed. He was considering using plywood sheets. We discussed this plan. First he would have to determine if the plywood contained any chlorinated plastics. Then he would have to determine if the plywood contained any hazardous materials, for example preservatives with arsenic. While the air permit rules specifically prohibit greater than .5% by weight chlorinated plastics, hazardous waste rules prohibit burning hazardous wastes.

Regarding body bags: Mr. Dean said that he would request an MSDS sheet from the medical examiner's office to document whether there is less than .5% by weight chlorinated plastics.

Repair and maintenance records were not reviewed as they were not stored separately from the other Funeral Home invoices. Mr. Dean offered to make them available, but the time to search through all of their invoices was prohibitive. Invoices from repairs were sent directly to the Funeral Home accounts manager. Suggested that any repairs and preventative maintenance be documented in the operators' logbook at each crematory. If needed, the specific invoice could then be located by the date logged. Mr. Dean said he would do this. He was also going to contact both of the companies that work on the crematories and have them send him records of maintenance for the last two years. He would create a file for keeping these repair records so that it could be easily reviewed.

Summary:

The 9-21-07 VE test revealed compliance with emissions limitations.

The chart recorder pen must be maintained so that temperatures are recorded during each cremation.

Records of composition of containers cremated with the bodies shall be obtained and retained to verify less than .5% chlorinated plastics content by weight. Follow-up contact with Mr. Dean on his proposed plan to use plywood will be made by the Department to determine if this is allowable based on the content of the plywood and Department Rules.

Records of maintenance and repair for the last two years will be obtained by Mr. Dean from his service vendors. It was recommended that future repair and maintenance site visits be documented in the on-site operator's logbook so that the records of repair can be easily located during inspections.

The facility file did not reveal an in-depth records review by the Department in the past, with this permittee. Mr. Dean was very helpful and attentive regarding the deficiencies noted during the file review. He indicated that future record keeping would be in compliance with Department Rules. A non-compliance letter will be sent documenting the deficiencies found and his planned corrective actions.
The facility was returned to compliance without formal enforcement action.

NOTE TO FILE: Reportedly (I located a newspaper article documenting this) a former employee started his own "funeral home" and had cremated bodies illegally, at night. This was discovered by Mr. Dean, and the employee was incarcerated. The employee may have been responsible for some of the problems with the inked recording of temperatures, to hide the illegal activity. Mr. Dean did not mention this or try to use as an excuse for missing readings, however, the possibility of intentional tampering with the ink device (the pen) to hide the illegal cremations is a consideration taken during this inspection for some of the missing readings.