

October 14, 2021

Christopher Cone
Human Society of Cowlitz County
PO Box 172
Longview, WA 98632

RE: Final Air Discharge Permit for Replacement Pet Cremation Unit

Dear Mr. Cone:

A final determination to issue Air Discharge Permit (ADP) 21-3482 has been completed for ADP Application CO-1042 pursuant to Section 400-110(4) of the General Regulations for Air Pollution Sources of the Southwest Clean Air Agency (SWCAA). Public notice for ADP Application CO-1042 was published in the permit section of SWCAA's website on September 22, 2021. SWCAA did not receive a request for a public comment period in response to the public notice and has concluded that significant public interest does not exist for this determination. Therefore, a public comment period will not be provided for this permitting action. Electronic copies of ADP 21-3482 and the associated Technical Support Document are available for public review in the "Recent Air Discharge Permits" section under the "Air Permits" link on SWCAA's website (<http://www.swcleanair.org>). Original copies are enclosed for your files.

ADP 21-3482 may be appealed directly to the Pollution Control Hearings Board (PCHB) at P.O. Box 40903, Olympia, Washington 98504-0903 within thirty (30) days of receipt as provided in Revised Code of Washington (RCW) 43.21B.

If you have any questions or comments, or desire additional information, please contact me or Danny Phipps at (360) 574-3058, extension 124.

Sincerely,



Uri Papish
Executive Director

UP:dp

Enclosure: Technical Support Document and Air Discharge Permit 21-3482





**AIR DISCHARGE PERMIT
21-3482**

Issued: October 14, 2021

Humane Society of Cowlitz County
909 Columbia Boulevard
Longview, WA 98632

SWCAA ID – 517

REVIEWED BY: *Clinton Lamoreaux*
Clinton Lamoreaux, Acting Chief Engineer



APPROVED BY: *Uri Papish* for Uri Papish
Uri Papish, Executive Director

TABLE OF CONTENTS

1. Equipment/Activity Identification 1

2. Permit Requirements..... 1

 Emission Limits 1

 Operating Limits and Requirements 1

 Monitoring and Recordkeeping Requirements 3

 Emission Monitoring and Testing Requirements 3

 Reporting Requirements 3

3. General Provisions 4

Appendix A Emission Monitoring Requirements

1. Equipment/Activity Identification

ID No.	Equipment/Activity	Control Equipment/Measure
1	Crematory Incinerator (Therm Tec model S-27-T)	Afterburner, controlled combustion

2. Permit Requirements

The following tables detail the specific requirements of this Air Discharge Permit (ADP). In addition to the requirements listed below, equipment at this facility may be subject to other federal, state, and local regulations. The requirement number is identified in the left-hand column. The text of the permit requirement is contained in the middle column. The emission unit, equipment, or activity to which the permit requirement applies is listed in the right-hand column.

ADP 21-3482 supersedes ADP 06-2635 in its entirety.

Emission Limits

Req. No.	Emission Limits	Equipment/Activity ID No.																					
1.	<p>Emissions from the crematory must not exceed any of the following:</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th colspan="2">Emission Limit</th> </tr> <tr> <td></td> <th>Annual</th> <th>Short-term</th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>0.56 tpy</td> <td>140 ppmv</td> </tr> <tr> <td>CO</td> <td>0.09 tpy</td> <td>40 ppmv</td> </tr> <tr> <td>VOC (as C₃H₈)</td> <td>0.01 tpy</td> <td>—</td> </tr> <tr> <td>PM, total</td> <td>0.03 tpy</td> <td>—</td> </tr> <tr> <td>SO₂</td> <td>0.08 tpy</td> <td>—</td> </tr> </tbody> </table> <p>The long-term emission limit is the 12-month rolling sum calculated consistent with Section 6 of the Technical Support Document for this ADP. The short-term emission limits are determined as a 1-hour average, corrected to 7% O₂.</p>	Pollutant	Emission Limit			Annual	Short-term	NO _x	0.56 tpy	140 ppmv	CO	0.09 tpy	40 ppmv	VOC (as C ₃ H ₈)	0.01 tpy	—	PM, total	0.03 tpy	—	SO ₂	0.08 tpy	—	1
Pollutant	Emission Limit																						
	Annual	Short-term																					
NO _x	0.56 tpy	140 ppmv																					
CO	0.09 tpy	40 ppmv																					
VOC (as C ₃ H ₈)	0.01 tpy	—																					
PM, total	0.03 tpy	—																					
SO ₂	0.08 tpy	—																					
2.	<p>Visible emissions from the final exhaust stack must not exceed the following for more than three (3) minutes in any 1-hour period as determined by a Certified Observer in accordance with SWCAA Method 9.</p> <p>(a) 5% opacity for the first 15 minutes of the cremation cycle; and</p> <p>(b) 0% opacity for the remainder of the cremation cycle.</p>	1																					

Operating Limits and Requirements

Req. No.	Operating Limits and Requirements	Equipment/Activity ID No.
3.	Reasonable precautions must be taken at all times to prevent and minimize fugitive emissions from plant operations.	Facility-wide

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
4.	Operations that cause or contribute to a nuisance odor must use recognized good practice and procedures to reduce these odors to a reasonable minimum.	Facility-wide
5.	Emission units and activities identified in this ADP must be maintained and operated in total and continuous conformity with the conditions identified in this ADP. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this ADP, including directing the facility to cease operations until corrective action can be completed.	Facility-wide
6.	Each pollution control device must be operated whenever the processing equipment served by that air pollution control device is in operation. Control devices must be operated and maintained in accordance with the manufacturer's specifications. Furthermore, air pollution control devices must be operated in a manner that minimizes emissions.	Facility-wide
7.	The crematory must be fired on natural gas.	1
8.	A temperature gauge capable of continuously monitoring the temperature in the secondary combustion chamber must be installed in the crematory.	1
9.	The temperature of the afterburner while in use must be maintained at or above 1,500°F.	1
10.	A warm-up period must be performed before each use to allow the temperature of the afterburner to reach a minimum of 1,600°F prior to utilizing the cremator.	1
11.	All exhausts must be discharged vertically into the ambient air at a minimum height of 21.5 ft. above ground level. Any device that obstructs or prevents vertical discharge is prohibited.	1
12.	The crematory may be operated up to 24 hours per calendar day at a maximum weekly charge rate of 100 lb/hr, up to 3,000 hours per calendar year.	1
13.	Whenever emission monitoring results for the Crematory indicate emission concentrations in excess of applicable permit limits, the permittee must either perform additional monitoring to more accurately quantify CO and NO _x emissions or initiate corrective action. Additional monitoring or corrective action must be initiated no later than 3 days after excess emissions are identified. Corrective action includes, but is not limited to, tuning, service by maintenance personnel, limitation of unit load, or other action taken to achieve compliance with permitted limits. Emission monitoring must be performed subsequent to completion of corrective action to confirm effectiveness.	1
14.	Waste material burned in the incinerator must only consist of animal remains, anatomical parts, and/or tissue, bag/containers used to collect and transport material, and animal bedding.	1

Monitoring and Recordkeeping Requirements

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
15.	With the exception of data logged by a computerized data acquisition system, each record required by this ADP must include the date and the name of the person making the record entry, at minimum. If a control device or process is not operating, a record must be made to that effect.	1
16.	All records required by this ADP must be kept for a minimum period of no less than three (3) years and must be maintained in a form readily available for inspection by SWCAA representatives.	1
17.	Excess emissions and upset conditions must be recorded for each occurrence.	1
18.	Crematory operations must be monitored and recorded as follows: (a) Hours of operation of the cremator Must be recorded weekly; (b) Natural gas consumption Must be recorded monthly; (c) Number of cycles of operation Must be recorded weekly; (d) Total weight of remains cremated Must be recorded weekly; (e) Average temperature of the afterburner Must be recorded at the beginning during each use end of each cycle; and (f) Maintenance activities on cremator or afterburner must be recorded upon each occurrence.	1

Emission Monitoring and Testing Requirements

Req. No.	Emission Monitoring Requirements	Equipment/ Activity ID No.
19.	Emission monitoring of the crematory must be conducted within ninety (90) calendar days of initial operation. Subsequent emission monitoring must be conducted every sixty (60) months in accordance with Appendix A.	1

Reporting Requirements

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
20.	Upset conditions must be reported to SWCAA as soon as possible after discovery. Outside of normal business hours, upset conditions may be reported to SWCAA by electronic mail, facsimile, or a telephone message.	Facility-wide

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
21.	Excess emissions must be reported to SWCAA as follows: a) As soon as possible, but no later than twelve (12) hours after discovery for emissions that represent a potential threat to human health or safety; b) As soon as possible, but no later than forty-eight (48) hours after discovery for emissions which the Permittee wishes to claim as unavoidable pursuant to SWCAA 400-107(1); and c) No later than thirty (30) calendar days after the end of the month of discovery for all other excess emissions.	1
22.	All air quality related complaints received by the Permittee must be reported to SWCAA within three (3) calendar days of receipt. Complaint reports must include the date and time of the complaint, the name and contact information (if available) for the complainant, the nature of the complaint, and any actions taken by the Permittee to address the complaint.	1
23.	The following operational data must be reported to SWCAA by March 15 for the previous calendar year: (a) Annual emissions of NO _x , CO, VOC, PM, PM ₁₀ , PM _{2.5} , SO ₂ , TAPs, and HAPs; (b) Annual hours of cremator operation and number of cycles of operation; (c) Total weight of animals (including containers) cremated; (d) Space heater natural gas consumption; and (e) Annual air emissions.	1
24.	Emission monitoring results must be reported to SWCAA in writing within fifteen (15) calendar days of completion.	1
25.	The date of the initial start-up of the crematory must be reported to SWCAA, in writing, within ten business (10) days of the startup.	1

3. General Provisions

Req. No.	General Provisions
A.	For the purpose of ensuring compliance with this ADP, duly authorized representatives of the Southwest Clean Air Agency must be permitted access to the Permittee's premises and the facilities being constructed, owned, operated and/or maintained by the Permittee for the purpose of inspecting said facilities. These inspections are required to determine the status of compliance with this ADP and applicable regulations and to perform or require such tests as may be deemed necessary.
B.	The provisions, terms, and conditions of this ADP bind the Permittee, its officers, directors, agents, servants, employees, successors and assigns, and all persons, firms, and corporations acting under or for the Permittee.
C.	The requirements of this ADP survive any transfer of ownership of the source or any portion thereof.
D.	This ADP must be posted conspicuously at or be readily available near the source.

Req. No.	General Provisions
E.	This ADP will be invalid if construction or installation of any new or modified equipment has not commenced within eighteen (18) months from date of issuance, if construction is discontinued for a period of eighteen (18) months or more, or if construction is not completed within a reasonable time.
F.	This ADP does not supersede requirements of other Agencies with jurisdiction and further, this ADP does not relieve the Permittee of any requirements of any other governmental Agency. In addition to this ADP, the Permittee may be required to obtain permits or approvals from other agencies with jurisdiction.
G.	Compliance with the terms of this ADP does not relieve the Permittee from the responsibility of compliance with SWCAA General Regulations for Air Pollution Sources, previously issued Regulatory Orders, RCW 70A.15, Title 173 WAC or any other applicable emission control requirements, nor from the resulting liabilities and/or legal remedies for failure to comply.
H.	If any provision of this ADP is held to be invalid, all unaffected provisions of the ADP will remain in effect and be enforceable.
I.	No change in this ADP will be made or be effective except as may be specifically set forth by written order of the Southwest Clean Air Agency upon written application by the Permittee for the relief sought.
J.	The Southwest Clean Air Agency may, in accordance with RCW 70A.15 impose such conditions as are reasonably necessary to assure the maintenance of compliance with the terms of this ADP, the Washington Clean Air Act, and the applicable rules and regulations adopted under the Washington Clean Air Act.

Appendix A
Emission Monitoring Requirements
Therm Tec, Inc. Crematories

1. Background

The purpose of this testing is to quantify emissions from the crematory incinerator and to provide an adequate assurance of compliance with the terms and conditions of this ADP.

2. Test Constituents and Test Methods

- a. Oxygen (O₂) using a calibrated portable combustion analyzer or EPA Methods 3 or 3A;
- b. Nitrogen oxides (NO_x) using a calibrated portable combustion analyzer or EPA Method 7E;
- c. Carbon monoxide (CO) using a calibrated portable combustion analyzer or EPA Method 10; and
- d. Temperature at the:
 - (1) Primary chamber;
 - (2) Secondary chamber; and
 - (3) Stack exhaust.

Combustion analyzers include electrochemical cell combustion analyzers, analyzers used for reference method testing, or other analyzers pre-approved by SWCAA.

3. Monitoring Requirements

Dates. Initial monitoring of the new unit must be conducted within ninety (90) calendar days of initial operation. Subsequent monitoring must be conducted no later than December every five (5) years thereafter. Monitoring performed earlier than September do not satisfy the monitoring requirements without prior written approval by SWCAA. Monitoring must be conducted unless the crematory is not in use during that year or a reference method source test was conducted on the crematory during that year.

- b. Location and Source Operation. The Permittee will provide the necessary platform and sampling ports for emission monitoring personnel to perform monitoring of an emission unit.
 - (1) The outlet of the exhaust stack (after control equipment) must be monitored for all constituents listed in 2.a, 2.b, 2.c, and 2.d.3 above.
 - (2) Crematory operation during monitoring must be representative of current intended operating conditions. Additional information (2.d.1 and 2.d.2) may be obtained from the crematory readout or verified independently.
- c. Data Collection.
 - (1) Following a "ramp up" phase, monitoring will consist of at least sixty (60) minutes total immediately following the ramp up phase. The ramp-up phase ends when analyzer readings have stabilized (less than 5% per minute change in emission concentration). Emission concentrations must be recorded at least once every thirty (30) seconds during the data collection phase. All data collected following the ramp-up phase must be reported to SWCAA.
 - (2) The analyzer(s) response to span gas of a known concentration must be determined before and after monitoring. No more than twelve (12) hours may elapse between span gas response checks. The results of the analyzer response will not be valid if the

Appendix A
Emission Monitoring Requirements
Therm Tec, Inc. Crematories

pre- and post-response check results vary by more than 10% of the known span gas value.

- (3) The CO and NO_x span gas concentrations must be no less than 50% and no more than 200% of the emission concentration corresponding to the permitted emission limit. A lower concentration span gas may be used if it is more representative of measured concentrations. Ambient air may be used to zero the CO and NO_x cells/analyzer(s) and span the oxygen cell/analyzer.
- (4) If the monitoring results from any monitoring event indicate that emission concentrations exceed the permitted emission limits for the unit, the Permittee must either perform sixty (60) minutes of additional monitoring to more accurately quantify CO and NO_x emissions, or initiate corrective action. Additional monitoring or corrective action must be initiated as soon as practical but no later than three (3) calendar days after the exceedance is identified. Corrective action includes maintenance by service personnel, limitation of unit load, or other action taken to maintain compliance with permitted limits. Monitoring of unit emissions must be conducted within three (3) calendar days following completion of any corrective action to confirm that the corrective action has been effective. Initiation of corrective action does not shield the Permittee from enforcement.

4. Reporting Requirements

Monitoring results must be reported to SWCAA within fifteen (15) calendar days of monitoring completion. The average of the results of each run is evaluated against the requirements of ADP 21-3482. Results must be submitted on forms provided by SWCAA or in an alternative format previously approved by SWCAA. The report must include the following information:

- a. A description of the emission unit including manufacturer, model number and facility designation;
- b. Time and date of the emissions evaluation;
- c. Identification of the personnel involved;
- d. A summary of collected data, calculations, and final results, reported in units consistent with the applicable emission standard or limit.
- e. Final concentrations will be corrected to 7% O₂;
- f. A summary of control system or equipment operating conditions;
- g. A description of the evaluation methods or procedures used, including all field data, quality assurance/quality control procedures and documentation; and
- h. Calibration error checks documentation.

A spreadsheet version of the SWCAA Combustion Equipment Monitoring Data Sheet is available at <http://www.swcleanair.org/>.

5. Changes to Testing Requirements

The source test must be conducted as specified in the sections above. The Permittee may submit a written request to SWCAA for approval of minor modifications to the requirements above or the testing schedule. Upon review of the request and in accordance with EPA delegation, SWCAA will inform the Permittee in writing of any approved modification.