EXHIBIT 7

APPLICATION FOR CLASS II PERMIT TO CONSTRUCT
(it Pu li ti e)

Edit: Application Tracking

Air Case ID: 12444 Permit Id: 4608

FIN No.: A2651

Company Name: MEDIWASTE DISPOSAL, LLC

HA Basin No: N/A

Increment Tracked ☐

Permit No: AP49534771 * Select a Permit No

Date App. Received: 04/24/2025 *

Permit Writer: Not Assigned (NA) *

Case Type: Class 2 New w/Public Notice *

Default ODS Date: 05/08/2025 *

Actual ODS Date:

Date App. to be Closed: 08/06/2025 *

Stop Days: **Actual Date App. to be Closed:** 8/6/2025

App. Incomplete? ☐

Date App. Closed:

Fee Paid ($): 5000 *

Case Description:

Comments:

Flag (For Class 4) : None

Update Cancel

Nevada
Environmental Protection
APR 24 2025
BAPC/BAQP

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APR 24 2025
ENVIRONMENTAL PROTECTION

April 21, 2025

Nevada Division of Environmental Protection
Bureau of Air Pollution Control, Class II Permitting Branch
901 South Stewart Street, Suite 4001
Carson City, NV 89701

RE: Application for a Class II Permit to Construct– MediWaste Disposal LLC

Dear Sir or Madam,

MediWaste Disposal LLC (MediWaste) is proposing to construct a new medical waste pyrolysis facility (the Facility) to be located at 1850 E. Basin Avenue, Pahrump, Nevada (Nye County). The Facility will be located within the jurisdiction of the Nevada Department of Environmental Protection (NDEP).

Enclosed is the permit application for a Class II Permit to Construct (the Permit). Based on the control equipment and type of operations, the Facility will be classified as a minor source of emissions, as all pollutants retain a potential to emit below Class I thresholds.

Per NAC 445B.287, an owner or operator of a new Class II stationary source should apply for and obtain a permit to construct according to NAC 445B.3611 to 445B.3689 requirements. This Class II permit to construct application includes a detailed air quality and regulatory analysis associated with the proposed project and satisfies the requirements stipulated in NAC 445B.295, 445B.3453, and 445B.346. This application package includes all the information necessary for a Class II permit to construct application.

If you have any questions or comments about the information presented in this application, please do not hesitate to call me at (714) 401-3327 or Matthew Tarnoff (Trinity Consultants) at (775) 242-3200.

Sincerely,

Ryan Oganesian
President
MediWaste Disposal LLC

Enclosure

cc: Matthew Tarnoff, Trinity Consultants, Inc.

CLASS II PERMIT TO CONSTRUCT APPLICATION

MediWaste Disposal LLC | Nye County, NV

MEDIWASTE DISPOSAL
Medical Waste Management Services

Nevada Division of Environmental Protection

Prepared By:

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April 2025

Project 0242901.0052

Trinity Consultants

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1. EXECUTIVE SUMMARY

MediWaste Disposal LLC (MediWaste) is proposing to construct a new medical waste pyrolysis facility (the Facility) to be located in Pahrump, Nevada. The Facility will be located within Nye County, within the jurisdiction of the Nevada Department of Environmental Protection (NDEP). MediWaste is proposing to construct a new Class II source (the Project) at the Facility consisting of seven (7) pyrolysis systems and the associated seven (7) thermal oxidizers.

With this application package, MediWaste is seeking a Class II air quality permit application for the proposed Facility. Based on the control equipment and type of operations, the Facility will be classified as a minor source of emissions, as all pollutants retain a potential to emit below Class I thresholds, post application of control efficiencies. This application package includes all the information necessary for a Class II air quality permit application, pursuant to the requirements of NDEP.

The Facility will be located in Hydrographic Area (HA) 162, also referred to as Basin HA162 or Pahrump Basin. The Pahrump Basin located in Nye County is currently designated as unclassifiable and/or attainment for all regulated air pollutants.[1] The proposed Facility will be a minor source under the Prevention of Significant Deterioration (PSD) program. The baseline date for HA162 has not yet been triggered for any pollutants.[2]

The proposed Facility's emission profile will consist of combustion emissions from the natural gas-fired burners for the pyrolysis units and their individual thermal oxidizers, as well as volatile organic emissions from the pyrolyzed medical waste. As shown in the potential to emit in Section 3 of this permit application, the proposed facility-wide Potential-to-Emit (PTE) are below the PSD major source threshold of 250 tons per year (tpy) for all criteria pollutants, as well as under the Class I thresholds of 100 tons per year for all criteria pollutants. Proposed emissions of any single Hazardous Air Pollutant (HAP) or cumulative HAP are also below the major source thresholds of 10 and 25 tpy, respectively.

The facility will process medical waste including cytotoxic drug & chemical waste (colloquially referred to as black bins), soiled waste (infected dressings, POP casts – referred to as red bins), anatomical waste (placenta, pathological waste & body parts – referred to as yellow bins), infected plastics (syringes, gloves & plastic waste – blues bins).

Per NAC 445B.287, an owner or operator of a new Class II stationary source should apply for and obtain a permit to construct pursuant to NAC 445B.3611 to 445B.3689 requirements. This Class II permit to construct application includes a detailed analysis of pertinent air quality and regulatory analysis associated with the proposed project and satisfies the requirements stipulated in NAC 445B.295, 445B.3453, and 445B.346. Applicable NDEP permitting forms are included in Appendix C. Additionally, per NAC 445B.327.1(e) a check in the amount of $5,000 has been included with this application.

[1] EPA Green Book, accessed January 2025. Nevada Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants | Green Book | US EPA

[2] PSD Tiggered Planning Areas accessed at https://ndep.nv.gov/uploads/documents/westar_psd_trigger_areas.pdf

2. FACILITY DESCRIPTION

The Facility will be located at 1850 E. Basin Avenue, Pahrump, Nevada (Nye County) and the site maps are included in Appendix A. As discussed in Section 1, proposed operations will be located in Hydrographic Area 162, also referred to as Basin HA162 or Pahrump Basin. This area is currently designated as unclassifiable and/or attainment for all criteria pollutants.[3] The Standard Industrial Classification (SIC) code for the facility is 4953 (Refuse Systems) and the North American Industry Classification System (NAICS) code is 562213 (Solid Waste Combustors and Incinerators).

The facility will process medical waste including cytotoxic drug & chemical waste (colloquially referred to as black bins), soiled waste (infected dressings, POP casts – referred to as red bins), anatomical waste (placenta, pathological waste & body parts – referred to as yellow bins), infected plastics (syringes, gloves & plastic waste – blues bins). The facility receives these containers, does not open or manipulate the containers in any way, and places them directly into the thermal destruction process as received.

The medical waste will be loaded into the system (including packaging and pallets) in a batch process. Once the waste is loaded into the system, the door is closed and sealed, and the thermal destruction process begins. There are three separate unit operations to ensure pyrolysis of the waste, packaging, pallets, and wrapping. The first step heats the waste and packaging material until it is converted to smaller volatile fragments (vapors). The pyrolysis process also generates a small amount of hydrated ash residue (approximately 2-5% of the volume of the input material) which is conservatively estimated to have 2.5% moisture content. Next, the vapors are sent to the second stage where they are formed into plasma, then oxidated utilizing the thermal oxidizer to form carbon dioxide and water vapor. The third and final step will send the carbon dioxide and water vapor to a vent where the inert gasses are then exhausted from the stack. All steps occur in a fully enclosed system with no transfer points or fugitive emissions.

The Facility proposed in this application will have the following emission units:

- Seven (7) self-contained pyrolysis systems each with:
  - One (1) 2 MMBtu/hr natural gas-fired pyrolysis unit and a one (1) 2 MMBtu/hr natural gas-fired thermal oxidizer to control the emissions of volatile organic compounds (VOCs).
- One (1) material transfer point for the disposal of hydrated ash.

The units are specifically designed to avoid pressurization events for which the result would be an explosion. From the start of the thermal process to the thermal oxidizer exit, the system is built open to atmosphere. The gasified wastes travel without blockage or ways for pressure to build up. In addition, safety systems on the burners are set to immediately shut off the heat source (and therefore interrupt the gasification process resulting in the process stopping and no VOC development) at a backpressure of 1/3 PSI. Any released emissions would be minimal as the batch process takes ~8 hours to completely volatilize the waste.

In the event of an emergency where power loss results in loss of controls, all systems have a high/low pressure limiting switch. Once power to the system is lost, heat to the system stops, and the pyrolysis reaction stops. The system is endothermic (requires heat input to operate) and so without any heat source,

[3] EPA Green Book, accessed February 2025. http://www.epa.gov/airquality/greenbook/phistory_nv.html

the process ends. The reaction chamber will stay closed until the condition resolves and a full pyrolysis cycle can be conducted from start to finish.

Further equipment specifications can be found in Appendix D and detailed emissions calculations can be found in Section 3 and Appendix B.

3. EMISSIONS INFORMATION

3.1 Facility Emissions Summary

The natural gas-fired pyrolysis units and natural gas-fired thermal oxidizers that comprise each of the seven pyrolysis systems will be sources of nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter (PM), particulate matter with an aerodynamic diameter of less than 10 microns (PM_{10}), particulate matter with an aerodynamic diameter of less than 2.5 microns ($PM_{2.5}$), sulfur dioxide (SO_2), volatile organic compounds (VOC), hazardous air pollutant (HAP), and greenhouse gas (GHG) emissions. The thermal oxidizer (TO) systems control technology will be used to reduce the emissions of VOC from the pyrolysis processes by a conservative 99.5%. Potential emissions are calculated using the methodologies described in the following sections, detailed calculations are provided in Appendix B of this report, and the equipment specifications are included in Appendix D.

Table 3-1 below provides the proposed Facility's potential-to-emit (PTE). This table demonstrates that the Facility does not require a Class I operating permit and meets the requirements for a Class II source permit pursuant to NDEP NAC 445B.3453. Additionally, the proposed Facility-wide PTE is less than the 25 tpy thresholds for an environmental evaluation per NAC 445B.310. Detailed emission calculations are included in Appendix B.

Table 3-1. Proposed Facility Wide PTE Summary

	Total PM	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC	HAP	GHG
Pre-Project Facility-Wide PTE (tpy)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Project PTE[1] (tpy)	18.75	12.37	12.36	20.56	2.40	14.07	3.54	3.87	14,360.83
NDEP Class II Thresholds[2] (tpy)	--	5.00	5.00	5.00	50.00	5.00	20.00	-	-
NDEP Class I Thresholds[3] (tpy)	--	100.00	100.00	100.00	100.00	100.00	100.00	25/10	--
Prevention of Significant Deterioration (PSD) Thresholds (tpy)[4]	--	250.00	250.00	250.00	250.00	250.00	250.00	--	--
Does Post-Project PTE Exceed Class II Thresholds?	--	Yes	Yes	Yes	No	Yes	No	No	--
Does Post-Project PTE Exceed 25 tpy?[5]	--	No	No	No	No	No	No	No	--
Does Post-Project PTE Exceed Class I Thresholds?	--	No	No	No	No	No	No	No	--

1. Project PTE includes seven (7) pyrolysis units, their individual thermal oxidizers, and material transfers.
2. The Class II thresholds are defined in NAC 445B.037. Emissions less than these thresholds may not require a permit.
3. The Class I thresholds are defined in NAC 445B.036 [40CFR 52.21] as 100 tpy of any air contaminant and 10 tpy of any individual HAP or 25 tpy of combined HAP.
4. PSD threshold per 40 CFR 52.21(b)(1)(i).
5. Per NAC 445B.310, the 25 tpy threshold determines the applicability of an environmental evaluation.

3.2 Pyrolysis Units

PM, PM_{10}, $PM_{2.5}$, NO_x, VOC, SO_2, CO and HAP emissions are calculated for the pyrolysis systems using emission factors from compliance reports of a like-kind process using a pyrolysis unit and thermal oxidizer from the same manufacturer. The thermal oxidizer provides 99.5% control efficiency for VOCs. Emission factors for PM_{10} and $PM_{2.5}$ are conservatively assumed equivalent to the emission factor for PM. Emissions were calculated on a continuous (though batch) operating basis, assuming 8,760 hours per year of operation for all pyrolysis systems.

GHG pollutants expected to be emitted from the natural gas fired burners include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Standard emission factors for CO_2, N_2O and CH_4 are provided in 40 CFR Part 98, Subpart C, Table C-1 and Table C-2. The global warming potential (GWP) for each relevant pollutant is obtained from 40 CFR Part 98, Subpart A, Table A-1. Calculations for GHG pollutants are based on the emission factor for each GHG pollutant, relevant global warming potential, annual hours of operation, and the maximum heat input of the burners.

3.3 Hydrated Ash Disposal

MediWaste conservatively assumes that a maximum of 5% of the total material throughput will remain as hydrated ash in the system after pyrolysis. PM, PM_{10}, and $PM_{2.5}$ emission factors are calculated using particle size multipliers from EPA AP-42, Section 13.2.4, Page 13.2.4-4 and Equation 1 from EPA AP-42, Section 13.2.4. The average moisture content of the material is 2.5%. The residual ash is transferred to a dumpster on site from the pyrolysis chamber using a front loader. The four-sided dumpster represents a 70% control efficiency for a partial enclosure per TCEQ Draft Rock Crushing Plants Guidance, February 2002; EPA Draft Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities, March 1998. Emissions are calculated using the emission factors, the hourly and annual material throughput, and the partial enclosure control efficiency.

3.4 Paved Roads Emissions

Emissions from the truck traffic are based on a maximum of 5 – 18 wheel trucks (17.5 tons empty) for incoming material and 5 – 18 wheel trucks (40 tons full) for outgoing ash per day. The truck route for trucks on the property consists of a 0.18 mile long truck route. Emission factors for pounds per vehicle mile traveled (lb/VMT) were developed using the AP-42 Section 13.2.1 (Paved Roads) parameters. Detailed emissions are included with Appendix B of this report.

4. REGULATORY REVIEW

MediWaste is subject to federal, state, and local air regulations. This section summarizes the air permitting requirements and the key air quality regulations that apply to the proposed installations at the Facility. Specifically addressed are Federal New Source Review (NSR), Prevention of Significant Deterioration (PSD), New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and state and local-specific requirements. Applicability to certain general provisions is not detailed in this narrative summary.

4.1 Federal Regulations

4.1.1 NSR Applicability

The NSR permitting program generally requires a stationary source to obtain a permit and undertake other obligations prior to construction of any project at an industrial facility if the proposed project results in emission increases in excess of certain threshold levels. The NSR program is comprised of two elements: Non-Attainment NSR (NNSR) and Prevention of Significant Deterioration (PSD). The NNSR program potentially applies to new construction or modifications that result in emission increases of a particular pollutant for which the area in which the facility is located is classified as "nonattainment" for that pollutant. The PSD program applies to project increases of those pollutants for which the area the facility is located in is classified as "attainment" or "unclassifiable".

4.1.2 Non-Attainment New Source Review

The proposed Facility will be located in Hydrographic Area 162, also referred to as Basin HA162 or Pahrump Basin. Pahrump Basin is currently designated as unclassifiable and/or attainment for all criteria air pollutants. Therefore, NNSR is not applicable.

4.1.3 Prevention of Significant Deterioration

The proposed Facility will be located in Hydrographic Area 162, also referred to as Basin HA162 or Pahrump Basin. Pahrump Basin is classified as unclassifiable and/or attainment for all criteria pollutants. As such, the Facility is potentially subject to PSD requirements. Per NAC 445B.0945 [which references 40 CFR 52.21(b)(1)], a stationary source is considered "major" for PSD if it has the potential to emit either (1) 100 tons per year or more of a regulated pollutant if the source is classified as one of 28 designated industrial source categories, or (2) 250 tons per year or more of any regulated pollutant for unlisted sources. Given that medical waste pyrolysis facilities are not on the List of 28 industrial source categories and the site-wide PTE for all regulated pollutants (NO_X, SO_2, $PM_{10}/PM_{2.5}$ and CO) are under the 250 tons per year threshold for PSD, the Facility is not subject to PSD major source requirements.

4.1.4 New Source Performance Standards

NSPS require new, modified, or reconstructed sources to control emissions to the level achievable by the best-demonstrated technology as specified in the applicable provisions. Moreover, any source subject to an NSPS is also subject to the general provisions of NSPS Subpart A, unless specifically excluded.

4.1.4.1 NSPS Subpart A – General Provisions

All affected sources are subject to the general provisions of NSPS Subpart A unless specifically excluded by the source specific NSPS. Subpart A requires initial notification and performance testing, recordkeeping,

monitoring, provides reference methods, and mandates general control device requirements for all other subparts as applicable. As the MediWaste facility is not subject to any NSPS, this subject is not applicable.

4.1.4.2 NSPS Subpart DDDD - Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units

Subpart DDDD *Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units* regulates emissions from commercial and industrial solid waste incineration units (CISWI) and air curtain incinerators (ACI).

The pyrolysis units at the facility destruct medical waste. Incineration units are exempt to provisions of NSPS Subpart DDDD as defined in §60.2555(c) if they combust medical waste. Medical waste incineration unit exemptions under the subpart are described as;

"§60.2555(c) Medical waste incineration units. *Incineration units regulated under subpart Ec of this part (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ca of this part (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators)."*

The pyrolysis units at the Facility pyrolyze medical waste and do not meet the definition of medical waste incineration units. Therefore, the units are not subject to NSPS Subpart DDDD.

4.1.4.3 NSPS Subpart CCCC - Standards of Performance for Commercial and Industrial Solid Waste Incineration Units

Subpart CCCC *Standards of Performance for Commercial and Industrial Solid Waste Incineration Units* establishes new source performance standards for commercial and industrial solid waste incineration units (CISWIs) and air curtain incinerators (ACIs) effective on August 7, 2013. Incineration units subject to this subpart are defined in §60.2010 of the Subpart as;

"(a) Your incineration unit is a new incineration unit as defined in § 60.2015;

(b) Your incineration unit is a CISWI as defined in § 60.2265, or an ACI as defined in § 60.2265; and

(c) Your incineration unit is not exempt under § 60.2020."

Incinerations units are exempt from provisions of NSPS Subpart CCCC as defined in §60.2020(c) of the Subpart if they combust medical waste. MediWaste will be operating pyrolysis units. Medical waste incineration unit exemptions under the subpart;

"§60.2020(c) Medical waste incineration units. *Incineration units regulated under subpart Ec of this part (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ce of this part (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators)."*

The pyrolysis units at the Facility pyrolyze medical waste and do not meet the definition of medical waste incineration units. Therefore, the units are not subject to NSPS Subpart CCCC.

4.1.4.4 NSPS Subpart EEEE - Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006

Subpart EEEE *Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006* established new source performance standards for other solid waste incineration (OSWI) units. OSWIs are very small municipal waste combustion units and institutional waste incineration units. OSWIs subject to this subpart are defined in §60.2885 of the Subpart as;

"(a) Your incineration unit is a new incineration unit as defined in § 60.2886.

(b) Your incineration unit is an OSWI unit as defined in § 60.2977 or an air curtain incinerator subject to this subpart as described in § 60.2888(b). Other solid waste incineration units are very small municipal waste combustion units and institutional waste incineration units as defined in § 60.2977.

(c) Your incineration unit is not excluded under § 60.2887."

Incinerations units are exempt from provisions of NSPS Subpart CCCC as defined in §60.2885(c) of the Subpart if they are excluded under §60.2887 of the Subpart;

"§60.2887(f) Hospital/medical/infectious waste incinerators. *Your unit is excluded if it is regulated under subparts Ce or Ec of this part (New Source Performance Standards and Emission Guidelines for Hospital/Medical/Infectious Waste Incinerators)."*

The pyrolysis units at the Facility pyrolyze medical waste and do not meet the definition of medical waste incineration units. Therefore, the units are not subject to NSPS Subpart EEEE.

4.1.4.5 NSPS Subpart FFFF - Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units that Commenced Construction On or Before December 9, 2004

Subpart FFFF *Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units that Commenced Construction On or Before December 9, 2004* established new source performance standards for other solid waste incineration (OSWI) units that commenced construction on or before December 9, 2004.

The pyrolysis units at the Facility pyrolyze medical waste and do not meet the definition of medical waste incineration units. Additionally, the units are being constructed after December 9, 2004. Therefore, the pyrolysis units are not subject to NSPS Subpart FFFF.

4.1.4.6 NSPS Subpart Ec - Standards of Performance for New Stationary Sources: Hospital/Medical/Infectious Waste Incinerators

NSPS Ec, *Standards of Performance for New Stationary Sources: Hospital/Medical/Infectious Waste Incinerators* apply to each individual hospital/medical/infectious waste incinerator (HMIWI) for which construction is commenced after December 1, 2008.

§60.50c(f) of the Subpart states "*any pyrolysis unit (defined in § 60.51c) is not subject to this subpart*".

§60.51c of the Subpart defines a pyrolysis unit as *"means the endothermic gasification of hospital waste and/or medical/infectious waste using external energy."*

The pyrolysis units at the Facility operate using endothermic gasification of hospital waste and/or medical/infectious waste using external energy and therefore meet the definition of pyrolysis unit. As such, the pyrolysis units are the Facility are exempt from NSPS Subpart Ec.

4.1.4.7 NSPS Subpart Ce - Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators

NSPS Ce, *Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators* apply to each hospital/medical/infectious waste incinerator(s) (HMIWI) for which construction was commenced after June 20, 1996 but no later than December 1, 2008, or for which modification is commenced after March 16, 1998 but no later than April 6, 2010.

As the pyrolysis units at the Facility will commence construction after December 1, 2008, the units are not subject to NSPS Subpart Ce.

4.1.5 National Emission Standards for Hazardous Air Pollutants (NESHAP)

NESHAPs are established in 40 CFR Part 63 to control the emissions of HAPs. The Facility is an area source of HAPs (i.e., the Facility will not emit more than 25 tons of total HAPs or more than 10 tons of any single HAP). Following a thorough review of the NESHAP area source regulations, the Facility is not subject to any NESHAPs.

4.2 NDEP Application Requirements and Regulations

As stated previously in this Application, MediWaste is submitting this application pursuant to the requirements of NDEP. The following is a summary of the NDEP requirements in ***italic, bold*** text as well as MediWaste's action to meet each requirement in standard text.

NAC 445B.295 and NAC 445B.3363 outline requirements for content on applications for an operating permit/permit to construct. The regulatory text from NAC 445B.295, NAC 445B.3453 and NAC 445B.346 is included in ***italic, bold*** text. This section also includes MediWaste's action to meet each requirement in plain text.

NAC 445B.295 Application: General requirements. (NRS 445B.210, 445B.300)

Except as otherwise provided in NAC 445B.33637, an application for an operating permit must include:

1. Information to identify the applicant, including the name and address of the company or the name and address of the plant if different from that of the company, the name of the owner of the company and the owner's agent, and the name and telephone number of the manager of the plant or another appropriate person to contact;

Please refer to the Class II Operating Permit to Construct form in Appendix D for identifying information.

2. A description of the stationary source's processes and products by Standard Industrial Classification Code, including any processes and products associated with an alternative operating scenario identified by the owner or operator;

Please refer to Section 2 of the application and Class II Operating Permit to Construct form for this information.

3. A description of the fuels, fuel use and raw materials to be used and the rates of production and operating schedules for each emission unit which is a part of the stationary source;

Please refer to Sections 2 and 3 of the application for this information.

4. An identification and a description of any equipment for the control of air pollution and any devices or activities for monitoring compliance with emission limitations;

As noted in Section 3, thermal oxidizer units are designed to reduce the emissions of VOCs. Please refer to the Combustion Equipment Form and the detailed emissions calculations for more information.

5. Limitations on the operation of the stationary source or any standards for work practices which affect emissions for all regulated air pollutants at the stationary source;

There are no limitations on the operation of the stationary source or any standards for work practices which affect emissions for all regulated air pollutants at the stationary source.

6. An explanation of any proposed exemption from any applicable requirement;

There are no proposed exemptions from any applicable requirement.

7. The location of any records that the applicant must keep pursuant to the requirements of the operating permit, if the records are kept at a location other than the emitting facility; and

All compliance related records will be retained on-site.

8. Other specific information that the Director determines is necessary to carry out, enforce and determine the applicability of all legal requirements.

MediWaste will provide, as requested, any additional information requested by the NDEP to meet this requirement.

NAC 445B.3453 Application: General requirements. (NRS 445B.210, 445B.300)

1. Except as otherwise provided in subsection 3, an owner or operator of any Class II source must submit an application for and obtain a Class II operating permit.

MediWaste will submit the application package for the Class II operating permit.

2. For a proposed Class II source or a proposed modification to a Class II source, an owner or operator must file an application and obtain a Class II operating permit or a revision to an

existing Class II operating permit before commencing construction of the proposed stationary source or the proposed modification.

MediWaste will submit the application package for the Class II operating permit prior to commencing construction.

3. The owner or operator of a thermal unit that emits mercury which is located at a Class II stationary source shall comply with the provisions of NAC 445B.3611 to 445B.3689, inclusive. As used in this subsection, "thermal unit that emits mercury" has the meaning ascribed to it in NAC 445B.3643.

MediWaste does not operate a stationary source that conducts precious metals mining per NAC445B.3641, therefore it does not have thermal units that emit mercury.

NAC 445B.346 Required contents of permit. (NRS 445B.210, 445B.300)

In addition to the conditions set forth in NAC 445B.315, Class II operating permits must contain, as applicable:

1. Emission limitations and standards, including those operational requirements and limitations that ensure compliance with the conditions of the operating permit.

MediWaste will comply with limitations and standards that ensure compliance with the conditions of the permit.

2. All requirements for monitoring, testing and reporting that apply to the stationary source.

MediWaste will follow all requirements for monitoring, testing and reporting that apply to the stationary source.

3. A requirement that the owner or operator of the stationary source promptly report any deviations from any requirements of the operating permit.

MediWaste will promptly report any deviations from any requirements of the operating permit.

4. The terms and conditions for any reasonably anticipated alternative operating scenarios identified by the owner or operator of the stationary source in his or her application and approved by the Director. Such terms and conditions must require the owner or operator to keep a contemporaneous log of changes from one alternative operating scenario to another.

This is not applicable for MediWaste.

5. A schedule of compliance for stationary sources that are not in compliance with any applicable requirement or NAC 445B.001 to 445B.390, inclusive, at the time the operating permit is issued, including:

(a) Semiannual progress reports and a schedule of dates for achieving milestones;

(b) Prior notice of and explanations for missed deadlines; and

(c) Any preventive or corrective measures taken.

MediWaste will create a schedule of compliance if any applicable requirement is not met at the time the operating permit is issued.

APPENDIX A. SITE MAPS

APPENDIX B. DETAILED EMISSION CALCULATIONS

Table 1. Facility Wide Potential to Emit (PTE) Summary

	Total PM	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG
Pre-Project Facility-Wide PTE (tpy)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Project PTE[1] (tpy)	18.75	12.37	12.36	20.56	2.40	14.07	3.54	3.87	14,360.83
NDEP Class II Thresholds[2] (tpy)	--	5.00	5.00	5.00	50.00	5.00	20.00	-	-
NDEP Class I Thresholds[3] (tpy)	--	100.00	100.00	100.00	100.00	100.00	100.00	25/10	--
Prevention of Significant Deterioration (PSD) Thresholds (tpy)[4]	--	250.00	250.00	250.00	250.00	250.00	250.00	--	--
Does Post-Project PTE Exceed Class II Thresholds?	--	Yes	Yes	Yes	No	Yes	No	No	--
Does Post-Project PTE Exceed 25 tpy?[5]	--	No	No	No	No	No	No	No	--
Does Post-Project PTE Exceed Class I Thresholds?	--	No	No	No	No	No	No	No	--

1. Project PTE includes seven (7) pyrolysis units, their individual thermal oxidizers, and material transfers. Additionally paved road emissions for truck traffic have been included at NDEP's request.
2. The Class II thresholds are defined in NAC 445B.037. Emissions less than these thresholds may not require a permit.
3. The Class I thresholds are defined in NAC 445B.036 [40CFR 52.21] as 100 tpy of any air contaminant and 10 tpy of any individual HAP or 25 tpy of combined HAP.
4. PSD threshold per 40 CFR 52.21(b)(1)(i).
5. Per NAC 445B.310, the 25 tpy threshold determines the applicability of an environmental evaluation.

Table A-1. Pyrolysis System Parameters

Emission Unit Number:	TBD1-TBD7
Source Description:	Each Pyrolysis Unit Includes a 2.0 MMbtu/hr burner for Pyrolysis and a 2.0 MMbtu/hr burner for the Thermal Oxidizer
Source Control:	Seven (7) Thermal Oxidizers with 99.5% VOC Destruction or Removal Efficiency
Hours of Operation	8,760
Number of Pyrolysis Systems	7

Table A-2. Each Pyrolysis System PTE

Pollutant	Uncontrolled Emission Factor[1,3] (lb/hr)	Controlled Emission Factor[2,3] (lb/hr)	Uncontrolled Annual PTE[4] (lb/yr)	Controlled Annual PTE[4] (lb/yr)	Uncontrolled Annual PTE[5] (ton/yr)	Controlled Annual PTE[5] (ton/yr)
Total PM	0.61	0.61	5,337	5,337	2.67	2.67
PM_{10}/ $PM_{2.5}$	0.40	0.40	3,530	3,530	1.76	1.76
SO_2	0.46	0.46	4,021	4,021	2.01	2.01
CO[1]	0.08	0.08	684	684	0.34	0.34
NOx[1]	0.67	0.67	5,874	5,874	2.94	2.94
VOC	23.08	0.12	202,176	1,011	101.09	0.51
Lead	1.12E-03	1.12E-03	10	10	4.90E-03	4.90E-03
Mercury	3.48E-05	3.48E-05	0.30	0.30	1.52E-04	1.52E-04
Total HAP	0.13	0.13	1,105	1,105	0.55	0.55

1. Uncontrolled emissions factors are back calculated based on a manufacturer guarantee of 99.5% destruction efficiency for VOC provided by the Thermal Oxidizer;

A 4 x Safety Factor has been included in the emission factors.

2. Controlled Emission Factors are based on performance test data from a like-kind medical waste facility, including the control provided by the Thermal Oxidizer;

A 4 x Safety Factor has been included in the emission factors.

3. Uncontrolled and Controlled Hourly Emissions (lb/hr) = Emission Factor (lb/hr) for Uncontrolled and Controlled Hourly Emissions

4. Uncontrolled and Controlled Annual Emissions (lb/yr) = Uncontrolled or Controlled Hourly Emissions (lb/hr) * 8,760 Hours per year

5. Uncontrolled and Controlled Annual Emissions (tpy) = Uncontrolled or Controlled Hourly Emissions (lb/hr) * 8,760 Hours per year / 2,000 lb/ton

Table A-3. All Pyrolysis Systems PTE

Pollutant	Uncontrolled Annual PTE[1] (lb/yr)	Controlled Annual PTE[1] (lb/yr)	Uncontrolled Annual PTE[2] (ton/yr)	Controlled Annual PTE[2] (ton/yr)
Total PM	37,357	37,357	18.68	18.68
PM_{10}/ $PM_{2.5}$	24,709	24,709	12.35	12.35
SO_2	28,144	28,144	14.07	14.07
CO[1]	4,791	4,791	2.40	2.40
NOx[1]	41,118	41,118	20.56	20.56
VOC	1,415,234	7,076	707.62	3.54
Lead	68.57	68.57	3.43E-02	3.43E-02
Mercury	2.13	2.13	1.07E-03	1.07E-03
Total HAP	7,732	7,732	3.87	3.87

1. Uncontrolled and Controlled Annual Emissions (lb/yr) = Uncontrolled or Controlled Hourly Emissions (lb/hr) * 8,760 Hours per year * 7 Units

2. Uncontrolled and Controlled Annual Emissions (tpy) = Uncontrolled or Controlled Hourly Emissions (lb/hr) * 8,760 Hours per year / 2,000 7 Units

Table B-1. Pyrolysis Systems Natural Gas Burner Parameters

Emission Unit Number:	TBD1-TBD7
Source Description:	Burners (Natural Gas)
Max Design Heat Input per Integrated Pyrolysis System (MMBtu/hr)[1]	4.0
Max Design Heat Input for All Integrated Pyrolysis System (MMBtu/hr)[2]	28.0
Heat Content of Natural Gas (MMBtu/MMscf)[3]	1,020
Max Natural Gas Consumption for all Pyrolysis Systems[4] (MMscf/hr)	2.75E-02
Annual Operating Hours	8,760
Max Natural Gas Consumption[5] (MMscf/yr)	240.47

1. Heat input rating per pyrolysis system of 4 - 500,000 Btu burners for Pyrolysis and 1 - 2,000,000 Btu burner for Thermal Oxidizer per Pyrolysis system
2. There are seven (7) Pyrolysis Systems at 4 MMBtu/hr per system totaling 28 MMBtu/hr of natural gas burners at the Facility.
3. Natural gas heat content per AP-42 Table 1.4-2
4. Natural gas consumption (MMscf/hr) = Max design heat input (MMBtu/hr) / Heat content of natural gas (MMBtu/MMscf)
5. Natural gas consumption (MMscf/yr) = Max design heat input (MMBtu/hr) / Heat content of natural gas (MMBtu/MMscf) *8,760 hours per year

Table B-2. Pyrolysis Systems Natural Gas Burners PTE

Pollutant	Emission Factor[1] (lb/MMscf)	Hourly PTE[3,4] (lb/hr)	Annual PTE[5] (ton/yr)
CO_2	120,000	3,294.12	14,428.24
CH_4	2.3	6.31E-02	0.28
N_2O	2.2	6.04E-02	0.26
CO_2e^2	117	3278.73	14,360.83

1. Emission factors from Table 1.4-2, 1.4-3, 1.4-4 of AP-42 Section 1.4, Natural Gas Combustion.
2. Emission Factor for CO_2e is in lb/MMBtu
3. Hourly PTE (lb/hr) = Emission Factor (lb/MMscf) * max natural gas consumption rate (MMscf/hr)
4. Hourly PTE (lb/hr) = Emission Factor (lb/MMBtu) * max heat input (MMBtu/hr)
5. Annual PTE (tpy) = Hourly PTE (lb/hr) * 8,760 (hr/yr) / 2,000 (lb/ton)

Table B-3. Pyrolysis Systems Natural Gas Burners Greenhouse Gas Emission Factor

Pollutant	Global Warming Potential[1]	Emission Factor (kg/MMBtu)[2]	GHG equivalent (kg/MMBtu)[3]	GHG Equivalent (lb/MMBtu)[4]
CO_2	1	53	53	117
CH_4	28	1.00E-03	2.80E-02	0.06
N_2O	265	1.00E-04	2.65E-02	0.06
Total GHG equivalent (lb/MMBtu):				117

1. Global Warming Potentials (GWP) are obtained from Subpart A of 40 CFR 98, Table A–1 "Global Warming Potentials."
2. GHG emissions factors for the natural gas burners are per 40 CFR Part 98 Subpart C Table C-1 and C-2 (natural gas usage).
3. GHG equivalent (CO_{2e}) (kg/MMBtu) = Emission Factor (kg/MMBtu) * Global Warming Potential.
4. GHG equivalent (CO2e) (lb/MMBtu) converted using 1kg = 2.205 lbs.

Table C-1. Hydrated Ash Material Transfer Parameters

Emission Unit Number:	FUG_TBD
Source Description:	Hydrated Ash Disposal
Type of Transfer Point	Front Loader Drop to Dumpster (Material Handling)
Max Annual Facility Throughput (tpy)	15330
Amount of Ash Transferred[1] (tpy)	767
Amount of Ash Transferred (ton/hr)	0.09
Type of Control[2]	Partial Enclosure
Control Efficiency[2]	70%

1. Mediwaste conservatively assumes a maximum of 5% of the total waste pyrolyzed will remain as solid hydrated ash.
2. Material transfer control efficiency per TCEQ Draft Rock Crushing Plants guidance, February 2002; EPA Draft Technical Background Document on Control of Fugitive Dust at Cement Manufacturing Facilities, March 1998

Table C-2. Hydrated Ash Material Transfer Particulate Matter PTE

PM Emissions[1]			
Uncontrolled[2,3]		**Controlled[4,5]**	
(lb/hr)	**tpy**	**(lb/hr)**	**tpy**
2.68E-04	1.18E-03	1.88E-04	8.23E-04
PM_{10} Emissions[1]			
Uncontrolled[2,3]		**Controlled[4,5]**	
(lb/hr)	**tpy**	**(lb/hr)**	**tpy**
1.83E-05	8.00E-05	1.28E-05	5.60E-05
$PM_{2.5}$ Emissions[1]			
Uncontrolled[2,3]		**Controlled[4,5]**	
(lb/hr)	**tpy**	**(lb/hr)**	**tpy**
4.57E-06	2.00E-05	3.20E-06	1.40E-05

1. PM, PM_{10}, $PM_{2.5}$ emission factors based on the table and equation below

Pollutant	k (Particle Size Multiplier)[1]	Emission Factor Hydrated Ash (lb/ton)
PM	0.74	0.00
PM_{10}	0.05034	0.00
$PM_{2.5}$	0.01259	0.00

Particle size multiplier for PM obtained from EPA AP-42, Section 13.2.4, Page 13.2.4-4
Emission factor calculated using EPA AP-42, Section 13.2.4, Equation 1:

$$E = k * (0.0032) * ((U/5)^{1.3})/(M/2)^{1.4})$$

where:

U: mean wind speed (mph) =	7.76	Mean wind speed (mph)
M: material moisture content (%) =	2.5	Ash at the facility

2. Uncontrolled Emissions (lb/hr) = Emission Factor (lb/ton) * Hydrated Ash throughput (ton/hr)
3. Uncontrolled Emissions (tpy) = Emission Factor (lb/ton) * Hydrated Ash throughput (tpy) / 2,000 (lb/ton)
4. Controlled Emissions (lb/hr) = Emission Factor (lb/ton) * Hydrated Ash throughput (ton/hr) * 70% control efficiency
5. Controlled Emissions (tpy) = Emission Factor (lb/ton) * Hydrated Ash throughput (tpy) * 70% control efficiency / 2,000 (lb/t

Table D-1. Paved Road Emissions

Short-term Paved Road Emissions

Source	Vehicles per Day	Average Vehicle Weight (tons)	Road Length (miles)	VMT per day	Avg VMT per hour	Paving Controlled Emissions (lb/hr)		
						PM	PM10	PM2.5
Paved Road Vehicle Travel	10	28.8	0.18	2	0.1	0.0159	0.0032	0.0008

Annual Paved Road Emissions

Source	Vehicles per Year	Average Vehicle Weight (tons)	Road Length (miles)	VMT per year	Paving Controlled Emissions (tpy)		
					PM	PM10	PM2.5
Paved Road Vehicle Travel	3,650	28.8	0.18	657	0.070	0.014	0.003

Emission factors for vehicular traffic on paved roads per U.S. EPA AP-42, Section 13.2.1 (Paved Roads), January 2011.

$$E = k\,(sL)^{0.91} x\,(W)^{1.02}$$

where
E = Particulate emission factor (having units matching the units of k),
k = Particle size multiplier for particle size range (lb/VMT)
sL = road surface silt loading (grams per square meter) (g/m2)
sL = 0.6 g/m^2 per Table 13.2.1-2 for roads with less than 500 vehicles per day
W = average weight (tons) of the vehicles traveling the road
W = 28.8 tons

	PM	PM_{10}	$PM_{2.5}$
k (lb/VMT) =	0.011	0.0022	0.00054

Short-term Emission

Source	Emissions (lb/hr)		
	PM	PM10	PM2.5
Paved Road Vehicle Travel	0.02	0.00	0.00

Annual Emission

Source	Emissions (tpy)		
	PM	PM10	PM2.5
Paved Road Vehicle Travel	0.07	0.01	0.00



APPENDIX C. NDEP FORMS

Class II Air Quality Operating Permit Application Form

Facility Name: MediWaste Disposal

Existing Facility ID: A N/A

Existing Class II AQOP: AP N/A

Type of Facility: Medical Waste Pyrolysis Facility

Number of Units (including IA's) in Facility: 8

If a Revision, Number of Units (including IA's) Affected in Action: N/A

Application Type:

☒ **New AQOP**

☐ **Revision of Existing AQOP**

☐ **Renewal of Existing AQOP**

NDEP

Please Submit Application to:

Nevada Division of Environmental Protection
Bureau of Air Pollution Control, Class II Permitting Branch
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701-5249
Phone (775) 687-9349

September 2024
(Ver. 6)

IMPORTANT INFORMATION

- The Application packet contains:
  - General Company Information Form
  - Industrial Process Form
  - Combustion Equipment Form
  - Storage Silo Form
  - Liquid Storage Tanks Form
  - Insignificant Activities Form
  - Facility-Wide Potential to Emit Table
  - Surface Area Disturbance Form
  - Plant Boundary Coordinates Form
  - Plant Building Parameters Form
  - Application Certification Document with Required Attachments

- Please see the Guidance Document for additional instructions on how to complete the application.
- A printed copy of the application must be submitted (mailed or hand delivered), along with an electronic version.
- The application filing fee required by Nevada Administrative Code (NAC) 445B.327 must be submitted with the completed application. Checks must be made payable to the "Nevada State Treasurer, Environmental Protection" with "BAPC" noted in the memo line. Fees may also be submitted electronically at https://epayments.ndep.nv.gov/.
- This application shall be used for new Class II sources, revisions to existing Class II Air Quality Operating Permits, and the renewal of Class II Air Quality Operating Permits. This application packet is not for use for an Administrative Renewal, Administrative Amendment, a general permit, a stand-alone Surface Area Disturbance (SAD) permit, nor for a Request for Change of Location Approval permit for a temporary source.
- An application for a Class II Air Quality Operating Permit must be signed by the Responsible Official, as defined in NAC 445B.156. The certification/signature page is the last page of the application and the original "wet" signature must be provided.
- All items in the application must be addressed. If an item does not apply "N/A" or similar notation must be entered in the appropriate blank. All other information must be provided. Incomplete applications will be returned to the Responsible Official within 10 working days of receipt of the application.
- For the renewal of a Class II Operating Permit, a complete application and corresponding processing fee must be submitted in accordance with NAC 445B.3473, prior to the expiration date of the current permit. The BAPC suggests that the application be submitted well in advance of the timeline outlined in NAC 445B.3473 to ensure the application is deemed complete.
- If the facility applies for a permit that has not previously held a Class I of Class II operating permit, is located within 1,000 feet of a school, hospital, or residential area, or the Director determines that the change to the stationary source results in an increase in allowable emissions that exceeds the thresholds in NAC 445B.3457, the BAPC shall establish a 30-day period for public participation.

GENERAL COMPANY INFORMATION FORM

1. **Briefly describe the permitted facility's process and include the Standard Industrial Classification (SIC) number and North American Industry Classification System (NAICS). Add details in the attached Process Narrative.**

   The Facility will pyrolyze medical waste. NAICS Code 562213 "Solid Waste Combustors and Incinerators, SIC Code 4953 "Refuse Systems"

2. **Company Name and Address that are to appear on the operating permit [NAC 445B.295(1)]:**

   Name: MediWaste Disposal LLC
   Address: 1850 E. Basin Avenue
   City: Pahrump
   State: Nevada Zip Code: 89060

3. **Owner's Name and Address [NAC 445B.295(1)]:**

   Name: Same as above
   Address:
   City:
   State: Zip Code:

4. **Facility Name and Address, if different from #2 [NAC 445B.295(1)]:**

   Name: Same as above
   Address:
   City:
   State: Zip Code:

5. **If records are required under the operating permit will be kept at a location other than the facility, specify that location [NAC 445B.295(7)]:**

   Name: N/A
   Address:
   City:
   State: Zip Code:

GENERAL COMPANY INFORMATION FORM (continued)

6. Responsible Official Name, Title and Mailing Address [NAC 445B.295(1)]:

Name: Ryan Oganesian
Title: President
Address: 1850 E. Basin Avenue
City: Pahrump
State: Nevada Zip Code: 89060
Phone Number: (714) 401-3327
Fax Number: (xxx) xxx-xxxx
E-mail Address: ryan@medi-waste.com

Is this a new Responsible Official? ☒ Yes ☐ No

If yes, and the Responsible Official (RO) does not meet the definition under NAC 445B.156 then please fill out the "Responsible Official Identification/Designation/Change Request Form" and mail it in. (https://ndep.nv.gov/air/permitting/download-permit-forms)

7. Plant Manager or other appropriate Contact Name, Title and Address [NAC 445B.295(1)]:

Name: Same as above
Title:
Address:
City:
State: Zip Code:
Phone Number: (xxx) xxx-xxxx
Fax Number: (xxx) xxx-xxxx
E-mail Address:

8. Location and Driving Directions to the Facility (For Example: From Elko, Nevada, 4 miles south of I-80 at xx Interchange) [NAC 445B.295(8)]:

Hydrographic Basin (HA) Number: HA162
HA Basin Name: Pahrump Basin

Township(s): 20S N; Range(s): 53E E; Section(s): 11

UTM Coordinates for the Front Gate of the Facility (NAD 83, Zone 11):
4008852.78 m North; 591533.26 m East;

Nearest City: Pahrump
County: Nye

Driving Directions from nearest city to the Facility: From Highway 160 in Pahrump, turn East on Basin Avenue.

GENERAL COMPANY INFORMATION FORM (continued)

9. **Emission Cap Requested [NAC 445B.070 and NAC 445B.296(2)]:**

   ☐ Yes ☒ No (If yes, provide details in the attached Process Narrative)

10. **Important note** for completing the Industrial Process, Combustion Equipment, Storage Silo, and Liquid Storage Tank Application forms: forms need to be included for permitted emission units and insignificant activities. Provide additional forms as needed. All items in the application must be addressed. If an item does not apply then "N/A" or similar notation must be entered in the appropriate blank (TBD, unknown, etc.).

11. **Is the Facility located within 1,000 feet of a school, hospital, or residential area?**
    ☐ Yes ☒ No

12. **Does the Facility require controls or other limit restrictions to remain a Class II source?**
    ☒ Yes ☐ No

13. **Has the facility provided modeling for each non-combustion baghouse individually? (See Testing Determination System for Baghouses Guidance Document)**
    ☐ Yes ☒ No

INDUSTRIAL PROCESS APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **TBD**

Emission Unit Description: **Disposal of Hydrated Ash**

Alternative Operating Scenario: ☐ **Yes** ☒ **No**

Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____

Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☐ **Yes** ☒ **No** If yes, identify in attached Process Narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001, PF1.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	2601020000
	Manufacturer		N/A
	Date Manufactured		N/A
	Model Number		N/A
	Equipment Dimensions (LxWxH)	feet	N/A
	Drop Length *if applicable*	feet	N/A
	Drop Height *if applicable*	feet	6 feet
	The drop height is measured from the ☒ top of the drop length ☐ middle of the drop length ☐ bottom of the drop length, in reference to the ground. *Choose one, if applicable*		
	Drop Horizontal Dimension 1 *if applicable*	feet	N/A
	Drop Horizontal Dimension 2 *if applicable*	feet	N/A
	Emissions Released Inside building?	yes/no	No
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4,008,858.45
	UTM Easting (NAD 83, Zone 11)	m	591,568.48
Operating Parameters	Material Type Processed		Hydrated Ash
	Batch Process *if applicable*	*unit* /batch	N/A
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		Inherent moisture and 4 sided enclosure
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	N/A
Stack Parameters	Stack Height	feet	N/A
	Stack Inside Diameter	feet	N/A
	Stack Temperature	°F	N/A
	Stack Exit Velocity	feet/second	N/A
	Actual Gas Volume Flow Rate	acfm	N/A
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	N/A
	Stack Release Type		☐ vertical ☐ capped ☐ horizontal

1. How will throughput be monitored for this emission unit? Identify if the throughput will be monitored at this emission unit or at another emission unit and the method (e.g. weigh belt).
   Weight hopper scales

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **TBD**
Emission Unit Description: **Pyrolysis Unit #1**
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____
Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☐ **Yes** ☒ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	50600253
	Manufacturer		Vulcan Systems
	Date Manufactured		TBD
	Model and Serial Number		Model BUR-B-25-4 Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		N/A
	Date Constructed	month/day/yr	N/A
	Cylinder Displacement	liter/cylinder	N/A
	EPA Tier #		N/A
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4008860.52
	UTM Easting (NAD 83, Zone 11)	m	591597.19
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	.0015
	Heat Content	Btu/*unit*	4 MMBtu/hr (2 MMBtu/hr for Burner & 2 MMBtu/hr for Thermal Oxidizer)
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		Vulcan Systems
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	Yes
Stack Parameters	Stack Height	feet	25.0
	Stack Inside Diameter	feet	1.0
	Stack Temperature	°F	318
	Stack Exit Velocity	feet/second	70.0
	Actual Gas Volume Flow Rate	acfm	3283
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	2126
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Pyrolysis Unit #1**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by manufacturer

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **TBD**
Emission Unit Description: **Pyrolysis Unit #2**
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____
Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☐ **Yes** ☒ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	50600253
	Manufacturer		Vulcan Systems
	Date Manufactured		TBD
	Model and Serial Number		Model BUR-B-25-4 Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		N/A
	Date Constructed	month/day/yr	N/A
	Cylinder Displacement	liter/cylinder	N/A
	EPA Tier #		N/A
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4008855.85
	UTM Easting (NAD 83, Zone 11)	m	591597.03
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	.0015
	Heat Content	Btu/*unit*	4 MMBtu/hr (2 MMBtu/hr for Burner & 2 MMBtu/hr for Thermal Oxidizer)
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		Vulcan Systems
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	Yes
Stack Parameters	Stack Height	feet	25.0
	Stack Inside Diameter	feet	1.0
	Stack Temperature	°F	318
	Stack Exit Velocity	feet/second	70.0
	Actual Gas Volume Flow Rate	acfm	3283
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	2126
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Pyrolysis Unit #2**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by manufacturer

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **TBD**
Emission Unit Description: **Pyrolysis Unit #3**
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____
Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☐ **Yes** ☒ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	50600253
	Manufacturer		Vulcan Systems
	Date Manufactured		TBD
	Model and Serial Number		Model BUR-B-25-4 Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		N/A
	Date Constructed	month/day/yr	N/A
	Cylinder Displacement	liter/cylinder	N/A
	EPA Tier #		N/A
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4008848.00
	UTM Easting (NAD 83, Zone 11)	m	591594.00
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	.0015
	Heat Content	Btu/*unit*	4 MMBtu/hr (2 MMBtu/hr for Burner & 2 MMBtu/hr for Thermal Oxidizer)
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		Vulcan Systems
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	Yes
Stack Parameters	Stack Height	feet	25.0
	Stack Inside Diameter	feet	1.0
	Stack Temperature	°F	318
	Stack Exit Velocity	feet/second	70.0
	Actual Gas Volume Flow Rate	acfm	3283
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	2126
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Pyrolysis Unit #3**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by manufacturer

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **TBD**
Emission Unit Description: **Pyrolysis Unit #4**
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____
Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☐ **Yes** ☒ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID. S2.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	50600253
	Manufacturer		Vulcan Systems
	Date Manufactured		TBD
	Model and Serial Number		Model BUR-B-25-4 Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		N/A
	Date Constructed	month/day/yr	N/A
	Cylinder Displacement	liter/cylinder	N/A
	EPA Tier #		N/A
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4008848.00
	UTM Easting (NAD 83, Zone 11)	m	591590.00
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	.0015
	Heat Content	Btu/*unit*	4 MMBtu/hr (2 MMBtu/hr for Burner & 2 MMBtu/hr for Thermal Oxidizer)
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		Vulcan Systems
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	Yes
Stack Parameters	Stack Height	feet	25.0
	Stack Inside Diameter	feet	1.0
	Stack Temperature	°F	318
	Stack Exit Velocity	feet/second	70.0
	Actual Gas Volume Flow Rate	acfm	3283
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	2126
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Pyrolysis Unit #4**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by manufacturer

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **TBD**
Emission Unit Description: **Pyrolysis Unit #5**
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____
Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☐ **Yes** ☒ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	50600253
	Manufacturer		Vulcan Systems
	Date Manufactured		TBD
	Model and Serial Number		Model BUR-B-25-4 Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		N/A
	Date Constructed	month/day/yr	N/A
	Cylinder Displacement	liter/cylinder	N/A
	EPA Tier #		N/A
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4008848.00
	UTM Easting (NAD 83, Zone 11)	m	591585.00
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	.0015
	Heat Content	Btu/*unit*	4 MMBtu/hr (2 MMBtu/hr for Burner & 2 MMBtu/hr for Thermal Oxidizer)
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		Vulcan Systems
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	Yes
Stack Parameters	Stack Height	feet	25.0
	Stack Inside Diameter	feet	1.0
	Stack Temperature	°F	318
	Stack Exit Velocity	feet/second	70.0
	Actual Gas Volume Flow Rate	acfm	3283
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	2126
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Pyrolysis Unit #5**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by manufacturer

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **TBD**
Emission Unit Description: **Pyrolysis Unit #6**
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____
Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☐ **Yes** ☒ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	50600253
	Manufacturer		Vulcan Systems
	Date Manufactured		TBD
	Model and Serial Number		Model BUR-B-25-4 Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		N/A
	Date Constructed	month/day/yr	N/A
	Cylinder Displacement	liter/cylinder	N/A
	EPA Tier #		N/A
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4008848.00
	UTM Easting (NAD 83, Zone 11)	m	591581.00
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	.0015
	Heat Content	Btu/*unit*	4 MMBtu/hr (2 MMBtu/hr for Burner & 2 MMBtu/hr for Thermal Oxidizer)
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		Vulcan Systems
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	Yes
Stack Parameters	Stack Height	feet	25.0
	Stack Inside Diameter	feet	1.0
	Stack Temperature	°F	318
	Stack Exit Velocity	feet/second	70.0
	Actual Gas Volume Flow Rate	acfm	3283
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	2126
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Pyrolysis Unit #6**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by manufacturer

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT

System Number and Name: **TBD**
Emission Unit Description: **Pyrolysis Unit #7**
Alternative Operating Scenario: ☐ **Yes** ☒ **No**
Insignificant Activity: ☐ **Yes** ☒ **No** If yes, identify exemption regulation: _____
Subject to a Federal Regulation (40 CFR Part 60, 61, or 63): ☐ **Yes** ☒ **No** If yes, identify in process narrative.

Description			Data
Equipment Description	BAPC Emission Unit ID *Applicable for Renewal or Revision*	eg. Unit ID: S2.001	TBD
	Source Classification Code (SCC)	e.g. *3-03-024-04 for Conveyors*	50600253
	Manufacturer		Vulcan Systems
	Date Manufactured		TBD
	Model and Serial Number		Model BUR-B-25-4 Serial # TBD
	Emissions Released Inside building?	yes/no	No
For Reciprocating Internal Combustion Engines (RICE) Only	Type of Engine Code (See Notes*)		N/A
	Date Constructed	month/day/yr	N/A
	Cylinder Displacement	liter/cylinder	N/A
	EPA Tier #		N/A
Location of Emission Source	UTM Northing (NAD 83, Zone 11)	m	4008848.00
	UTM Easting (NAD 83, Zone 11)	m	591577.00
Operating Parameters /Fuel Usage	Fuel Type		Natural Gas
	Fuel Flow Meter Installed?	yes/no/NA	No
	Sulfur Content	%	.0015
	Heat Content	Btu/*unit*	4 MMBtu/hr (2 MMBtu/hr for Burner & 2 MMBtu/hr for Thermal Oxidizer)
	Start Time *if operating less than 24 hours/day*	hour:minute	N/A
	End Time *if operating less than 24 hours/day*	hour:minute	N/A
Control Equipment	Manufacturer		Vulcan Systems
	Manufacturer's Guarantee Included? *If "yes", attach manufacturer's sheets immediately after these forms.*	yes/N/A	Yes
Stack Parameters	Stack Height	feet	25.0
	Stack Inside Diameter	feet	1.0
	Stack Temperature	°F	318
	Stack Exit Velocity	feet/second	70.0
	Actual Gas Volume Flow Rate	acfm	3283
	Dry Gas Volume Flow Rate *If not included in detailed calculations.*	dscfm	2126
	Stack Release Type		☒ vertical ☐ capped ☐ horizontal

Notes*

Code	Description	Code	Description
LU	Limited Use	E-SI	Emergency Spark Ignition
LDG	Landfill/Digester Gas	SI4SRB	Spark Ignition 4-Stroke Rich Burn
NECI	Non-Emergency Compression Ignition	SI4SLB	Spark Ignition 4-Stroke Lean Burn
ECI	Emergency Compression Ignition	SI2SLB	Spark Ignition 2-Stroke Lean Burn

COMBUSTION EQUIPMENT APPLICATION FORM
CLASS II OPERATING PERMIT (continued)

Emission Unit Description: **Pyrolysis Unit #7**

1. How will fuel consumption be monitored for this emission unit? (e.g. maximum fuel consumption rate supplied by manufacturer, fuel flow meter).
   Maximum fuel consumption rate supplied by manufacturer

2. Does this unit have the capability to bypass air pollution controls in an emergency situation as defined under NAC 445B.056?:
   ☐ **Yes** ☒ **No**

INDUSTRIAL PROCESS AND STORAGE SILO DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Throughput			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
	System No. & Name:													
	See detailed emissions calculations in Appendix B													
	System No. & Name:													
									PM					
									PM_{10}					
									$PM_{2.5}$					
	System No. & Name:													
									PM					
									PM_{10}					
									$PM_{2.5}$					
	System No. & Name:													
									PM					
									PM_{10}					
									$PM_{2.5}$					
	System No. & Name:													
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									$PM_{2.5}$					
	System No. & Name:													
									PM					
									PM_{10}					
									$PM_{2.5}$					
	System No. & Name:													
									PM					
									PM_{10}					
									$PM_{2.5}$					

*Exact format may be changed, but requested information is still required.

COMBUSTION EQUIPMENT DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Power Output		Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Amount	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
System No. & Name:																		
See detailed emissions calculations in Appendix B																		
System No. & Name:																		
													PM					
													PM_{10}					
													$PM_{2.5}$					
													SO_2					
													NO_X					
													CO					
													VOC					
													Pb					
													Hg					
													H_2S					
System No. & Name:																		
													PM					
													PM_{10}					
													$PM_{2.5}$					
													SO_2					
													NO_X					
													CO					
													VOC					
													Pb					
													Hg					
													H_2S					

*Exact format may be changed, but requested information is still required.

GREENHOUSE GASES (GHG) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions						References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	GWP Multiplier	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
System No. & Name:																	
See detailed emissions calculations in Appendix B																	
System No. & Name:																	
											CO_2		1				
											CH_4		25				
											N_2O		298				
System No. & Name:																	
											CO_2		1				
											CH_4		25				
											N_2O		298				
System No. & Name:																	
											CO_2		1				
											CH_4		25				
											N_2O		298				
System No. & Name:																	
											CO_2		1				
											CH_4		25				
											N_2O		298				
System No. & Name:																	
											CO_2		1				
											CH_4		25				
											N_2O		298				
System No. & Name:																	
											CO_2		1				
											CH_4		25				
											N_2O		298				
System No. & Name:																	
											CO_2		1				
											CH_4		25				
											N_2O		298				
System No. & Name:																	
											CO_2		1				
											CH_4		25				
											N_2O		298				
System No. & Name:																	
											CO_2		1				
											CH_4		25				
											N_2O		298				

*Exact format may be changed, but requested information is still required.

HAZARDOUS AIR POLLUTANTS (HAPS) DETAILED CALCULATIONS

Unit No.	Unit Description	Operating Hours		Heat Input (MMBtu)		Fuel Usage			Controls		Emissions					References
		Daily	Annual	Hourly	Annual	Hourly	Annual	Units	Type	Efficiency or Dry Volume Flow Rate	Pollutant	Factor	Unit	Hourly Rate (lbs/hr)	Yearly Rate (tons/yr)	
System No. & Name:																
See detailed emissions calculations in Appendix B																

*Exact format may be changed, but requested information is still required.

FACILITY-WIDE POTENTIAL TO EMIT TABLE
(FOR ALL SOURCES INCLUDING INSIGNIFICANT ACTIVITIES)
(POUND/HOUR AND TON/YEAR)

Pollutant	Facility-Wide Potential to Emit (pound/hour)	Facility-Wide Potential to Emit (ton/year)
Total Particulate Matter (PM)	4.28	18.75
Total PM_{10}	2.82	12.37
Total $PM_{2.5}$	2.82	12.36
Total Sulfur Dioxide (SO_2)	3.21	14.07
Total Carbon Monoxide (CO)	0.55	2.40
Total Oxides of Nitrogen (NO_X)	4.69	20.56
Total Volatile Organic Compounds (VOC)	0.81	3.54
Total Lead (Pb)	7.83E-03	3.43E-02
Total Hydrogen Sulfide (H_2S)	N/A	N/A
Total Sulfuric Acid Mist (H_2SO_4)	N/A	N/A
Total Hazardous Air Pollutants (HAPs)	0.88	3.87
Total Greenhouse Gases (CO_{2e})	3,278.73	14,360.83
Other Regulated Pollutants (Specify)	N/A	N/A

REVISION TABLE

Please complete the table below if this application is for a **Revision** of an existing Class II Air Quality Operating Permit. Add more columns if needed for any other applicable regulated pollutants. All Potential To Emit (PTE) must be in tons per year (TPY) [NAC 445B.3457(5)(b)]

Description	Pollutants									
	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	CO	VOC	HAPs	CO_{2e}	Other
Permitted Facility-Wide PTE (TPY)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Proposed Facility-Wide PTE (TPY)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Change in Facility-Wide PTE (TPY)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

PLANT BOUNDARY COORDINATES FORM *if applicable*

Corner Number	UTM Easting	UTM Northing
1	591529.62	4008808.54
2	591526.54	4008993.66
3	591617.89	4008996.19
4	591617.44	4008810.26

PLANT BUILDING PARAMETERS FORM *if applicable*

Building Parameters
Building Name: Building 1 **Building Tier :** _____
Roof Height (ft): 20 **Building Diameter (ft):** _____

Building UTM Coordinates

UTM Easting	UTM Northing	UTM Easting	UTM Northing
591541.43	4008834.38		
591541.49	4008868.08		
591550.52	4008868.50		
591551.15	4008874.90		
591564.58	4008845.12		
591562.84	4008833.86		

Building Parameters
Building Name: Building 2 **Building Tier :** _____
Roof Height (ft): 20 **Building Diameter (ft):** _____

Building UTM Coordinates

UTM Easting	UTM Northing	UTM Easting	UTM Northing
591564.30	4008851.31		
591573.86	4008852.28		
591574.13	4008864.25		
591595.89	4008864.19		

APPLICATION CERTIFICATION DOCUMENT

(With Required Attachments)

Please check all applicable boxes below to indicate the information provided in your application submittal:

- ☒ General Company Information Form
- ☒ Industrial Process Application Form(s)
- ☒ Combustion Equipment Application Form(s)
- ☐ Storage Silos Application Form(s)
- ☐ Liquid Storage Tank Application Form(s)
- ☒ Manufacturer's Guarantee
- ☒ Facility-Wide Potential to Emit Table
- ☐ Surface Area Disturbance Form (not applicable)
- ☒ Plant Boundary Coordinates Form *if applicable*
- ☒ Plant Building Parameters Form *if applicable*
- ☒ Detailed Emission Calculations (for all emission units including IA units)
- ☒ Source Testing Data (if referenced in calculations)
- ☒ Process Narrative
- ☐ Process Flow Diagram(s)
- ☐ Site Plan(s) showing the locations (UTM coordinates), dimensions, and heights of buildings on the site
- ☒ Maps:
  - ☒ Vicinity Map of where the facility is located in the State
  - ☒ Area Map of the Facility (including location of all emission units, building locations (with UTMs), location of front gate, and fence line/site boundary (with UTMs))
- ☐ Environmental Evaluation (AERMOD Air Dispersion Modeling) *if applicable* [NAC 445B.310]
- ☒ Manufacturer's Guarantee *if applicable*
- ☒ Equipment Specifications *if applicable*
- ☐ TANKs Modeling Output *if applicable*
- ☒ Application Fee Attached or Electronically Submitted
- ☒ Digital Copy of Application on CD or Thumb Drive
- ☒ Application Certification Document with Original Responsible Official Signature

APPLICATION CERTIFICATION DOCUMENT (CONTINUED)

(With Required Attachments)

PLEASE NOTE THE FOLLOWING REQUIREMENTS WHICH APPLY TO PERMIT APPLICANTS DURING THE APPLICATION PROCESS:

A. A permit applicant must submit supplementary facts or corrected information upon discovery [NAC 445B.297(1)(b)].

B. A permit applicant is required to provide any additional information which the Director requests in writing within the time specified in the Director's request [NAC 445B.297(1)(c)].

C. Submission of fraudulent data or other information may result in prosecution for an alleged criminal offense [NRS 445B.470].

CERTIFICATION:

I certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete.



Signature of Responsible Official

Ryan Oganesian PRESIDENT

Print or Type Name and Title

4/21/2025

Date

APPENDIX D. MANUFACTURER SPECIFICATIONS

Cc: svillamagna@gmail.com
Subject: RE: I-Quest Quote

Received, thank you Fortunato. We will reach out with any follow up questions.

Thanks!

Jenna Kube
Senior Consultant

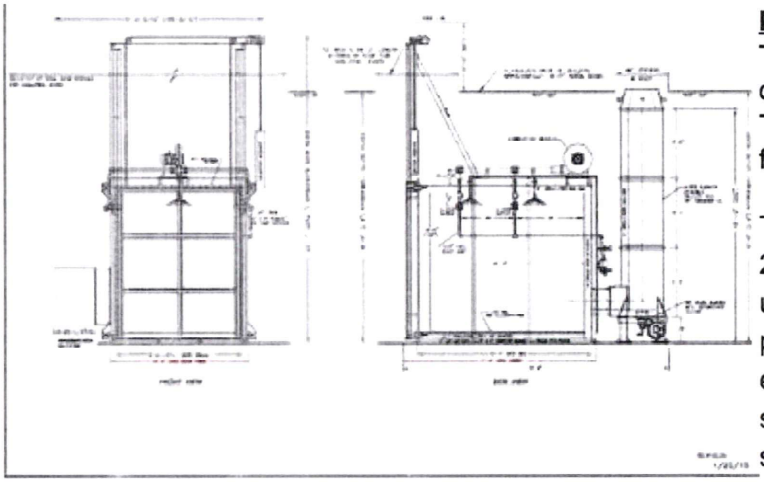
M 720.879.1670
7919 Folsom Blvd, Suite 320, Sacramento, CA 95826
Email: jenna.kube@trinityconsultants.com

From: Fortunato Villamagna <fvillamagna@msn.com>
Sent: Sunday, December 15, 2024 11:35 AM
To: Matthew Tarnoff <MTarnoff@trinityconsultants.com>; Jenna Kube <Jenna.Kube@trinityconsultants.com>
Cc: svillamagna@gmail.com
Subject: RE: I-Quest Quote

Hello Matt & Jenna,

A bit late with responses, but hopefully that will be OK. The oven system we will be using in this project is the **Vulcan Systems Model BUR-B-25-4** in combination with the thermal oxidizer model **Vulcan Systems IFTO-E-10** shown below:

These are preliminary renderings; proper drawings will be provided.



Emission Calculations
The main oven will hold up to 4,000 pounds of medical waste.
Thermal oxidizer attached (IFTO) is rated for 10,000 CFM operation.

The provided performance tests (February 2016, February 2019, & Dec 2022) can be used to obtain the basic emission parameters. As far as VOC destruction efficiency is concerned, there have been several improvements implemented in this system, and VOC destruction should be 99.5% or greater.

Process Description
This is a batch system, where waste is added to the system on pallets and contained in Gaylord (1 cubic yard) Cardboard Containers or polypropylene bulk bags.
Palletized waste (pallet and all – no disassembling, no shredding, no segregation, etc.) are placed in the system, the system door closed, sealed, and the system started. The process logic control (PLC)

systems started, and the process begins. The system is monitored by the PLC and an operator.

The **Vulcan System** utilizes a thermal destruction process in which the waste, packaging, pallets, wrapping, etc. is destroyed in three separate unit operations that take place on the same equipment skid.

- No effluents are produced.
- No biochar or liquid fuel is produced.
- The system is capable of operating to full oxidation, thereby eliminating all carbon-containing compounds. What remains are the fillers in the cardboard/paper (Chinese cardboard is notorious for high clay content), fillers in plastic (TiO2 and CaCO3), glass vials, and any metals.

The first unit operation is carried out in the primary pyrolytic chamber in which waste is heated with an external heat source to the point where molecular torsion and cracking takes place. The materials are generally heated for a period of time based on water content, but generally six (6) to twelve (12) hours at high temperature. This heat induced torsion breaks large molecules down to smaller volatile fragments (vapors). This process repeats itself until all the paper, plastic, and all other components of the waste are converted to vapors. The system is fully enclosed, with massive stainless-steel piping conveying the vapors out of the pyro system.

The vapors are then received by the second stage – where a plasma forms. Under similar conditions as the pyrolytic chamber, this section of the system takes the VOCs - the volatile molecules - and further reduce them in size through a free radical process as well as traditional torsional and vibrational strain. Following this point in the process, excess air is quantitatively introduced to begin the oxidation process converting the VOCs to carbon dioxide and water vapor. The last tertiary operation in the process is the vent. The vent provides increased residence time to allowing the remaining vapors and solid particulates to react. The benign and inert exhaust gases from the vent are then exhausted through the stack.

These steps take place in situ in a fully closed system. No leaks are possible nor fugitive emissions. There are no transfer points of removal of streams.

The utilities required for operation are natural gas or liquid propane and 480-volt electrical power supply. When processing solid waste, a 2-5 % volume of ash residue is expected to be recovered and sent to a Class I landfill for final disposal. The ash is captured in the pyrolytic chamber and removed periodically based on accumulation. Before the ash is sent to the landfill full TCLP tests are carried out to evaluate the suitability of sending that ash to the correct landfill – always requested by the landfill operator as well. Should the operator deem that the reaction can be terminated early (as determined by spontaneous cooling), some additional inert char may be present in the ash.

System Specifications & Burners

- Burnout Oven Model BUR-B-25-4B
- Thermal Oxidizer Model IFTO-E-10B
- Internal Chamber Space: 8' wide x 10' tall x 12' long burnout oven with thermal oxidizer complete. Overall footprint is 19 feet deep x 10' wide x 18' tall.
- Oven fabricated from 3/16" steel with reinforced angles and channels for durable construction and long-term life. Stack discharge height is 17 feet from grade. Stack extension through the roof is included to 24 feet total from grade. Building roof hole, roof seal are not included in this pricing.
- Oven insulated with 8" ceramic fiber throughout and brick hearth floor throughout. Fiber shall be coated with a high temperature coating to protect the fiber surface.
- The oven will be equipped with (4) 500,000 BTU / Medium velocity burners rated for 500,000 BTU each. Burners come with a combustion air fan, NFPA fuel train and throttling actuator / butterfly

valve, spark igniter, UV scanners, flame safeguard systems complete.

- The oven is equipped with manually operated front door with hand valves to fully seal the door during operations.
- Oven chamber will be equipped a pneumatic water misting system that includes 304SS nozzles in the oven chamber, piping manifold, pressure gauge, hand valve and solenoid valve for water/air - on/off control as required. The water misting system shall be on a timer for maximum duration to cool chamber then auto shut-off.
- One initial and consumable metal tray to be provided inside the oven chamber
- NEMA 12 Control Panel with disconnect, circuit breakers, relays, digital temperature controllers, digital high limit controllers, variable frequency inverters for fan motors, lights, switches and terminal strips for wires.

- 10,000 CFM Thermal Oxidizer chamber for processing off gases is located on back of the oven.
- Oxidizer is equipped with an ambient air fan to add air as required during thermal processing to cool chamber temperatures.
- Thermal Oxidizer chamber is made from 3/16" steel and reinforced flanges for long term durability and life.
- 76 inch diameter IFTO stack for enhanced mixing.
- Thermal Oxidizer is lined with 8" ceramic fiber throughout.
- Thermal Oxidizer comes with a 2,000,000 BTU packaged burner, with NFPA fuel train, actuator, gauges, spark igniter and UV scanner, flame safeguard complete. The system is painted complete and comes with a twelve-month warranty on overall system functionality (see warranty section for details).