

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

P137271130

FACILITY: BIO-MED LLC	SRN / ID: P1372
LOCATION: 256 EXECUTIVE DRIVE, TROY	DISTRICT: Warren
CITY: TROY	COUNTY: OAKLAND
CONTACT:	ACTIVITY DATE: 11/03/2023
STAFF: Iranna Konanahalli COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: FY 2024 Scheduled Inspection of Bio-med LLC (P1372) ("Bio-med")	
RESOLVED COMPLAINTS:	

BIO-MED LLC (P1372)

256 Executive Drive

Troy, MI 48083-4530

Contacts:

1. **Christopher A. Dreckmann** (Phone: 248-397-8020 x104; Cell: 248-330-4656; Fax: NA; [E-mail: ChrisD@getbiomed.com](mailto:ChrisD@getbiomed.com)), President & CEO.

Active PTI: PTI No. 99-23 dated August 10, 2023, 1,125 pounds of waste per batch Mark-Costello (Model: AS515; Serial No. 563) Single Door Autoclave with a high-volume AS515 pull-out drawer for the waste materials. The Autoclave condensate (water), upon filtration, is discharged to a floor drain and into the sewer system. Hurst natural gas-fired boiler (4.28 << 50 MM BTU per hour) provides the required steam at a maximum rate of 3,450 pounds of steam per hour. The steam autoclave is not located at a hospital, but it will process medical waste from hospitals. Bio-Med is prohibited from processing mercury (Hg) containing medical waste. Of two different types of autoclaves: static and dynamic, BioMed has installed static autoclave. Medical waste that has been sterilized by the autoclave will be packaged for transport to a licensed disposal facility such as a municipal waste landfill. The autoclave does not vent directly to outside ambient air. Air contaminants are unlikely to be generated by enclosed and air-tight autoclave. No stack is present. Hurst natural gas-fired boiler of maximum heat input of 4.28 MM BTU per hour will generate some products of combustion pollutants. The autoclave operates in a batch mode.

Emission Unit ID	Emission Unit Description	Flexible Group ID
EUAUTOCLAVE	Mark-Costello AS515 Single Door Autoclave Capacity: 1,125 lbs. Charge: Regulated medical waste and sharps Steam is generated by a 4.28 MM BTU per hour (3,450 pounds of steam per hour) natural gas fired boiler.	NA
Any waste in EUAUTOCLAVE other than Medical/Infectious Waste is prohibited. Hazardous wastes, liquid industrial by-product wastes, any waste containing mercury, etc. are prohibited as well.		

Boiler: The boiler has not been installed yet based upon my conversations with Dreckmann on January 23, 2024. The boiler vendor has been tardy, and the business has been suffering a loss of money.

On November 03, 2023, I conducted a level-2 FY 2024 Scheduled Inspection of Bio-med LLC (P1372) (“Bio-med”), a regulated medical waste processor using steam, located at 256 Executive Drive, Troy, MI 48083-4530. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451; and Environment, Great Lakes and Energy, Air Quality Division (EGLE-AQD) administrative rules.

On November 03, 2023, I confirmed that Autoclave had been on site. Hurst Steam boiler had not arrived yet in November 2023. Based upon my conversation of January 23, 2024, with Dreckmann the boiler had not showed up as of January 23, 2024. The boiler is expected to arrive in a couple of months. A repeat inspection is necessary in FY 2025 when the boiler installation is completed, and the autoclave process achieved a steady state.

Biomed neither takes pathological waste nor performs sterilization for reuse of the materials. Biomed renders a hospital waste suitable for landfilling as a municipal waste. i.e., the autoclave renders regulated medical waste safe for waste disposal into landfills.

Mark-Costello Autoclave sterilizes medical waste using 320 °F & 75 psi steam(3,450 pounds of steam per hour). A condensate (water) filter will be installed, and filtered water (upon removing liquid phase particulate matter) will be discharged to municipal sewer. Under steam pressure (75 psi) and temperature (320 °F) pathogens are destroyed in few minutes so that regulated medical waste (generated at health care facilities such as hospitals, clinics, blood banks, etc.) is turned into normal municipal solid waste.

A circular chart recorder for autoclave temperature is present. I asked Chris Dreckmann to install an electronic data logger and replace the chart recorder for reliability and labor cost saving. One temperature (T) reading per 10-15 minutes (4-6 equally time-spaced readings per hour) will suffice.

Conclusion

The Autoclave is expected to be in compliance with the permit (PTI No. 99-23) upon installation of the boiler. Repeat inspection is necessary when the process achieves a steady state.

NAME *J. S. Marshall* DATE 03/19/2024 SUPERVISOR *Joyce*