# DEPARTMENT OF ENVIRONMENTAL QUALITY AIR QUALITY DIVISION

**ACTIVITY REPORT: Scheduled Inspection** 

P008331413

FACILITY: Daniels Sharpsmart, Inc.		SRN / ID: P0083
LOCATION: 5770 Hix Rd, WESTLAND		DISTRICT: Detroit
CITY: WESTLAND		COUNTY: WAYNE
CONTACT: Darren Whitman , Regional Operations Manager		ACTIVITY DATE: 09/08/2015
STAFF: Jill Zimmerman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Target Inspection	1	
RESOLVED COMPLAINTS:		

DATE OF INSPECTION

September 8, 2015

TIME OF INSPECTION

11:30 am

LEVEL OF INSPECTION

1

NAICS CODE

562998

**EPA POLLUTANT CLASS** 

VOC

**INSPECTED BY** 

Jill Zimmerman

PERSONNEL PRESENT

Darren Whitman, Director of Compliance

Jason Baker, Plant Manager

FACILITY PHONE NUMBER

734-306-8153

E-MAIL

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JBaker@danielshealth.com

### **FACILITY BACKGROUND**

Daniels Sharpsmart, Inc. treats and disposes of regular medical waste, including sharps, nonpathogenic material, trace chemotherapy, and nonhazardous pharm waste. The facility installed an autoclave with a boiler, which began operating on August 22, 2014. The facility operates two ten hour shifts, five days a week, or about twenty hours per day. The facility will work additional time when needed. After the medical waste is cleaned in the autoclave, it is safe to dispose in a landfill, though it is still placed an identifiable location. The treated waste is trucked to the landfill, with a truck picking up the waste usually on a daily basis. The sharps waste are sent to a facility in Georgia, where the plastic is separated from the needles. This company recycles the plastic. The facility has been operating at this location for about 5 years.

## COMPLAINT/COMPLIANCE HISTORY

During the week of September 15, 2014 AQD received about 3 odor complaints. The complainants described the odor as dead body odors with ammonia odors. One complainant was also concerned with the handling of the medical waste after it was treated in the autoclave. I referred the complaint to Andrew Shannon with the Solid Waste Section of the Office of Waste Management and Radiological Protection. At the time of the complaints, I did verify the odors. I then met with the facility, which was in the process of making process changes to correct the odors. The facility raised the exhaust stack from six feet above roof level, to eighteen feet about building level. The facility also changed the process slightly so that more steam will condense and exit into the sewer system instead of through the roof stack.

## PROCESS EQUIPMENT AND CONTROLS

The facility operates a conveyor system where the sharps waste is brought into the facility. The waste is dumped into larger autoclave containers. The sharp containers pass through a cleaning station, where water heated to about 185F cleans the

containers. Employees then inspect the containers to ensure that they were cleaned properly. The containers are then dried and then ready to be returned to the customer to be filled again. The medical waste is then treated in a multiple stage closed system autoclave. The waste is heated in a three stage process. The first two stages heat the waste to 275F for one minute each. The last stage heats the waste to 275F for 10 minutes. The steam used to treat the waste enters the condenser, where it contacts cooling water. The water and all condensate exit through the sewer. Any remaining steam exits the building through a roof stack that is 18 feet about roof level. The facility operates a natural gas fired boiler with 2 water storage tanks to heat the steam. The treated waste, after passing through the compactor, is placed in a Waste Management roll off bin. Waste Management picks up the roll off containers about once a day. Currently the roll off container is uncovered.

In an effort to reduce the odors, the facility implemented some changes to the process. The facility has installed low flow nozzles for the condenser. These nozzles slow the flow of steam into the condenser, so that more steam could condense and enter the sewer system instead of being discharged though the roof stack. The facility also extended the roof stack from 6 feet about roof level to 18 feet about roof level. Lastly, the facility has a compactor to store the treated waste. This will store the waste in a covered container until Waste Management takes the waste to the landfill.

### **INSPECTION NARRATIVE**

On Tuesday September 8, 2015 I spoke with Mr. Darren Whitman, Regional Operations Manager and Jason Baker, Plant Manager, to discuss the process and preform an inspection of the facility. Together we discussed the process, and Mr. Whitman explained that no changes had been made since the changes made to address the odors. The autoclave and boiler system has been installed and began operating on August 22, 2014. I reviewed the chart record which records the temperature, pressure and time for each day. These daily records are kept on file on site.

Next, we walked through the facility. First we walked through the area of the plant where the sharps containers are dumped into an autoclave bin. The containers are cleaned and sent to the customer to be reused. Once the autoclave bin is full, it is placed inside the autoclave to be treated. At the time of the inspection, the autoclave was in a cooling stage between the second and third heating cycle. The unit was operating at 251 F and 2 psi. The unit will drop the pressure to -7 psi and then raise the pressure to 7 psi. There were no visible emissions observed to be coming from the autoclave. The sorting operating at the facility had not changed other than the sharps are now placed into the autoclave bins to be treated onsite. Any pathogen material that is brought to this facility is shipped off site where it can be properly treated.

### APPLICABLE RULES/PERMIT CONDITIONS

The facility has installed a boiler and an autoclave. This equipment is permitted by PTI 60-10 which was issued on September 29, 2010. The facility received an 18 month extension to begin construction of this equipment, which would have expired on September 28, 2013.

#### **EUAUTOCLAVE**

I. Emission Limits – Compliance. During the onsite inspection, no visible emissions were observed coming from the autoclave while it was operating.

- II. Material Limits Compliance. The facility does not treat any hazardous waste. The facility treats red bag waste, such as materials soaked with blood or other bodily fluids. The facility also treats sharps waste and trace chemotherapy waste.
- III. Process / Operational Restrictions The facility appears to be following the proper maintenance plan for the autoclave.
- IV. Design / Equipment Parameters
  - Compliance The carbon control system is installed and operating properly. This
    system is tested about once every six months. Results from the test in February
    2015 so that the system was operating properly. The system was tested about a
    week before the onsite inspection, and the results should be sent to the company
    soon.
  - 2. Compliance The steam passes through cold water to condense more steam, with the water being discharged into the sewer system. This discharge water is tested by the company about once per quarter. Also, the municipality responsible for the sewer frequently preforms inspections at this facility, testing the water each time. The facility also follows up these inspections with an additional water test.
  - Compliance The facility has installed mercury saturation indicators as part of the carbon control system. This system is operating properly and is tested every six months.
- V. Testing / Sampling Compliance The carbon control system is tested about once every six months. The system was tested in February 2015 with all samples below the detectable limit for mercury. The system was tested on September 3, 2015 and the results should be submitted to the facility today or tomorrow.
- VI. Monitoring / Recordkeeping
  - Compliance The facility has a chart recorder on the autoclave. This records the time, pressure of the unit and the temperature. These completed records are then kept on site for review. During the onsite inspection I saw the recorder operating properly.
  - 2. Compliance The facility maintains manifests of all waste that enters the facility.
  - 3. Compliance The facility keeps a daily record of the temperature, pressure and time each day the autoclave operates. This record is kept on site.
  - 4. Compliance The facility tests the carbon control system every six months. The system was last tested on September 3, 2015. Results from the February 2015 test showed that no mercury was detected in the test.
  - 5. Compliance The facility maintains a record of the mercury testing on site.
- VII. Reporting NA
- VIII. Stack / Vent Restrictions NA
- IX. Other Requirements NA

### MAERS REPORT REVIEW

NA

## FINAL COMPLIANCE DETERMINATION

Daniels Sharpsmart appears to be operating in compliance with all state and federal regulations at this time. The facility appears to be operating in compliance with all permit conditions as well. There have not been any odor complaints since the facility raised the stack and preformed other process changes. Periodical odor surveillance in the area has not confirmed any odors being emitted from this facility.

NAME VIDCE

DATE 925/15 SUPERVISOR\_\_\_\_\_