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## **Stericycle Investigation Report Summary**

*Department of Environmental Quality  
October 21, 2014*

### **Background**

On September 17, 2014, the Department of Environmental Quality (DEQ) was made aware of allegations made to EnviroNews by an anonymous source concerning mismanagement of medical waste at the Stericycle Medical Waste Incineration facility in North Salt Lake, Utah. Information provided by Emerson Urry, the reporter interviewing the anonymous source, indicated that the alleged mismanagement occurred prior to September 2013.

A request was made to EnviroNews to disclose the identity of the source or to produce documentary evidence to corroborate the allegations. To date, EnviroNews has declined to identify the source or to provide any other evidence to substantiate the allegations.

### **Investigation**

In response to these allegations, the Division of Solid and Hazardous Waste, Division of Air Quality, and the Division of Radiation Control conducted an administrative/civil investigation into allegations of operational mismanagement in areas over which DEQ has regulatory jurisdiction. The investigation consisted of the following evaluation and reviews:

- Review of the videotaped interview and transcript to determine, if possible, the nature of the allegations and any supporting evidence provided by the source.
- Evaluation of specific operational practices that were alleged to violate the conditions in Stericycle permits and any applicable state environmental rules. This evaluation consisted of the following investigative activities:
  - Unannounced onsite inspections on September 11, 16, 18, 25, 26, 30 and October 1, 2014
  - Review of operating records and associated data
- Review of allegations with company officials on October 1, 2014, to evaluate any information or data they might have regarding the allegations.

In addition, the Division of Solid and Hazardous Waste and Division of Air Quality conducted comprehensive evaluations of Stericycle's compliance with all other conditions of its permits,



including its solid waste incinerator permit, Title V air quality operating permit, air quality Approval Order, and applicable air quality and waste management rules.

## **Summary of Findings**

The Department found no evidence to support the source's allegations regarding improper operating practices at Stericycle in matters over which the Department has regulatory jurisdiction.

Compliance inspections by the Division of Solid and Hazardous Waste found that Stericycle was in compliance with its solid waste incinerator permit with the following two exceptions, one of which has since been corrected:

- Stericycle is required to maintain three years of incinerator ash analysis data, and the company was only able to provide two years of data.
- Dry storage location did not have adequate aisle space on September 25, 2014. On October 1, 2014, inspectors documented that Stericycle was in compliance with aisle space requirements.

Stericycle was in the process of stack testing during the inspection period to establish the maximum charge rate, or the amount of waste material that can be fed through the incinerator to meet emission rates and pollutant concentrations. DAQ personnel were present throughout the stack testing. The company has 180 days from the initial startup of new pollution control equipment to demonstrate compliance with new emission limits and establish new operating parameters.



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# **Allegations and DEQ Findings**

The following information was collected through multiple facility inspections during September and October 2014, record searches, and comparisons of the requirements in DEQ operating permits with observations by DEQ inspectors of facility operations. Inspectors found Stericycle to be in compliance with its permit requirements and found no evidence to support allegations of mismanagement at the facility.

### **Allegation: Feed Rates Are Exceeded**

#### ***Facts and Findings***

- The maximum amount of material (charge rate) that can be fed into the incinerator is determined through stack testing to ensure that emissions do not exceed pollutant levels specified in the air quality permit.
- Material entering the incinerator is weighed at the top of the belt before it is fed into the incinerator.
- The computer system (Data Acquisition System) records the weight of the materials fed into the incinerator, and the Programmable Logic Controller (PLC) locks the incinerator system when the charge weight is exceeded.

### **Allegation: Incinerator Is Operated Improperly**

#### ***Facts and Findings***

- Incinerator temperatures are controlled by the PLC in the incinerator. If temperatures fall outside the required operating range, the PLC locks the incinerator feed and waste cannot be fed into the incinerator until the temperature returns to the required range.
- The furnace is controlled by the PLC, not a manual thermostat. Employees on the floor cannot change the temperature in the furnace.
- Incinerator operating parameters, including temperatures, pH levels, and flow rates, are continuously monitored and recorded.
- Boiler tubes are cleaned or “punched” approximately every 7 to 10 days. Cleaning the boiler is part of Stericycle’s maintenance program and not a permit requirement.
- Selective Non-Catalytic Reduction (SNCR) air pollution control equipment was installed to control nitrogen oxides (NO<sub>x</sub>), not incinerator ash. The old electrostatic precipitator



that collected fly ash and other particulates has been replaced with a more efficient baghouse.

## **Allegation: Radioactive Material Is Incinerated in Violation of Permit Requirements**

### *Facts and Findings*

- Containers are monitored for radioactivity while being weighed prior to incineration. If containers trigger the radioactive sensor, they are set aside and then checked 24 hours later for radioactive levels. Waste is not incinerated until it meets the permitted levels for radioactivity.
- If radiation levels in materials do not decay to permitted levels, the materials are returned to the entity that generated it.
- Radiation detectors are set to alarm at twice background levels (50 microrems (μReMs)). The detector is checked twice a year and calibrated yearly. Both detectors alarmed when challenged with a Cesium 137 source during inspections to determine whether they were operating properly. Both detectors alarmed when challenged with radioactive materials above permitted levels.

## **Allegation: Records Are Incomplete**

### *Facts and Findings*

- All incineration data are recorded in an electronic Data Acquisition System (DAS).
- Paper radial recorders (wheel charts) record incinerator operating parameters as a backup measure.
- The incinerator operator keeps handwritten logs of operating parameters.
- Records of all required monitoring data and support information must be retained for at least five years.

## **Allegation: Special Preparations Are Made Prior to Inspections that Could Impact Facts and Findings**

### *Facts and Findings*

- Stack tests are scheduled and DAQ personnel are present for the duration of the testing.
- All other inspections are unannounced.



### **Allegation: Supervisors Are Not on Site**

#### *Facts and Findings*

- Supervisors are onsite at all times.
- The solid waste permit requires an employee to be onsite whenever the facility is operating.

### **Allegation: Wastes Are Incinerated without Approval**

#### *Facts and Findings*

- Stericycle incinerates a wide variety of medical wastes as defined under the conditions of their solid waste permit. Special wastes defined in the solid waste permit must receive prior approval from the Director of the Division of Solid and Hazardous Waste before being incinerated.
- Narcotics may be accepted for incineration in accordance with Stericycle's solid waste permit. Narcotics or pharmaceutical wastes meeting the definition of hazardous waste cannot be incinerated at the facility.

### **Allegation: Wastes Are Not Properly Incinerated**

#### *Facts and Findings*

- The solid waste permit does not require the complete destruction of wastes, and they may be disposed of in a landfill without treatment.
- By design, the incinerator does not reduce the waste to ash. Its purpose is to destroy infectious materials.

### **Allegation: Waste Management of Body Parts Is Not in Compliance with Solid Waste Permit**

#### *Facts and Findings*

- The facility is not permitted to accept recognizable fetus remains.
- Body parts, such as arms and legs, may be accepted at the facility but are not managed in open containers.



- No containers are opened by employees.

### **Allegation: Waste Is Stored and Managed Improperly**

#### *Facts and Findings*

- The solid waste permit does not prescribe container types. All waste containers must meet Department of Transportation (DOT) standards.
- The solid waste permit does not limit the areas where waste can be stored, and inspectors found that waste was stored in appropriate locations.
- Operators do not open containers. Any liquid released from containers once on the incinerator load belt is collected in a containment system.

### **Allegation: Wastes Are Weighed and Scanned Improperly**

#### *Facts and Findings*

- Weighing and scanning of bar codes at the bottom of the conveyor are for billing purposes only.
- The weight at the top of the belt is used to show compliance with the feed rate limit in Stericycle's air quality permit.
- Operators would have to manually carry waste to the top of the belt and hand load it into the feed hopper to avoid weight measurements. This practice would be dangerous and far slower than the normal feed operations. DEQ inspectors found no evidence of this practice.

### **Allegation: Workplace Conditions Are Unsafe**

#### *Facts and Findings*

- Stericycle trains employees on a regular basis and keeps records of all training.
- The facility provides appropriate personal protective equipment for all employees.
- Employees cleaning the boiler have training in confined space entry and proper cleaning procedures.
- Employees would be exposed to medical wastes only in the event of spill. DEQ inspectors found no evidence that spill cleanup procedures were not followed and reviewed spill cleanup procedures with company officials.