

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection**

B707346694

FACILITY: LANSING WWTP	SRN / ID: B7073
LOCATION: 1625 SUNSET AVE, LANSING	DISTRICT: Lansing
CITY: LANSING	COUNTY: INGHAM
CONTACT: Sid Scrimger , Superintendent	ACTIVITY DATE: 10/18/2018
STAFF: Michelle Luplow	COMPLIANCE STATUS: Compliance
SUBJECT: Scheduled compliance inspection to determine compliance with PTI No's 68-74 and 70-86	
RESOLVED COMPLAINTS:	

Inspected by: Michelle Luplow (author) and Dan McGeen (LDO inspector)
Personnel Present: Sid Scrimger, Superintendent (sid.scrimger@lansingmi.gov)

Purpose

Conduct an unannounced, scheduled compliance inspection by determining compliance with City of Lansing Wastewater Treatment Plant (WWTP) Permits to Install (PTI) Nos. 68-74 (2 ozone treatment systems for sludge heat treatment and incinerator) and 70-86 (wet scrubber odor control equipment). This facility was last inspected by the AQD in July 2011.

Facility Background/Regulatory Overview

The City of Lansing Wastewater Treatment Plant (WWTP) treats the city's domestic and industrial wastewater before discharging to the Grand River. Treatment includes preliminary screening and scumming; primary treatment (separation of solids from water), treatment of the waste solids, secondary treatment (clarifiers/aerators); and final-stage sand filtration. Sid Scrimger, Superintendent, said that they no longer use chlorine to disinfect the water; UV light is used instead.

The City of Lansing has the capacity to treat 14 million gallons of wastewater per day.

Dan McGeen discussed with S. Scrimger similarities between Lansing WWTP operations and Flint WWTP operations.

Table 1 contains a list of all exempt and permitted equipment.

Table 1. Equipment List

Equipment	Description	PTI/ Exemption	Compliance Status
Odor Control system – wet scrubber with NaOCl and NaOH	3-stage wet scrubber 1. water 2. sodium hypochlorite 3. sodium hydroxide Treats odorous air from heated sludge storage tank 1, raw sludge storage tanks 2, 4-6, filtrate tank 3, supernatant well, heat treated sludge holding tanks, vacuum pumps, vacuum hoods.	70-86	PTI will be voided – Equipment Removed
2 Ozonators	Located in Sludge Heat Treatment Building and Vacuum Filter and Incinerator Building Used to deodorize ventilating	68-74	PTI will be voided – Equipment Removed

	<p>air from sewage sludge heat treatment and sludge dewatering operations</p> <p>Ozone is diffused in air stream inside baffled contact chamber following which the air will be exhausted through a stack</p>		
8 Hearth Sludge Incinerator	Sludge incinerator	(195-73A)	<p>Although the PTI was voided in 1995, there was question during the previous inspection whether the equipment had been rendered permanently inoperable.</p> <p>D. McGeen and I verified the equipment has been rendered permanently inoperable (a key conveyor has been removed). The unit has not operated in over a decade.</p>
Scum Incinerator		(196-73)	<p>Although the PTI was voided in August 2011, a statement was not made whether the equipment had been removed or rendered permanently inoperable.</p> <p>D. McGeen and I verified that a flange leading to the incinerator has been dismantled to remove its capability of receiving scum.</p>
2 Natural gas-fired hot water boilers Max heat input 8.0 MMBtu/hr each	Used to heat the maintenance building	Rule 282(2) (b)(i)	Compliance with Rule 282 (b)(i): rated less than 50 MMBtu/hr, used for service water heating/space heating
1 natural gas-fired boiler 2.5 MM Btu/hr	Used to heat screener building	Rule 282(2) (b)(i)	Compliance with Rule 282 (b)(i): rated less than 50 MMBtu/hr, used for service water heating/space heating
1 Parts Washer	<p>3.5' x 1.5' (5.25 ft2), less than 10 ft2 stipulated under exemption Rule 281(2)(h)</p> <p>Contains Safety Kleen solvent</p>	Rule 281(2) (h)	<p>Lid was open, S. Scrimger closed the unit and discussed with employee the need to keep the lid closed when not in use.</p> <p>Operating instructions posted, but S. Scrimber requested DEQ orange sticker operating instructions to use instead - sent via mail to S. Scrimger to post on unit.</p>

<p>2 methane-fired combustion engines</p>	<p>Used to combust methane from the digesters.</p> <p>Equipment was only used for a few weeks. Has not been operated since, hours on the engines are near nil. No maintenance or readiness testing is conducted on these units</p> <p>The digesters associated with this unit are present, but have not been used since the 1990's.</p>	<p>Rule 285(2) (g)</p>	<p>Both engines are rated at less than 2 MMBtu/hr and therefore is in compliance with the 10 MMBtu/hr limit specified in the exemption</p>
--	--	-------------------------------	---

Inspection

This was an unannounced scheduled compliance inspection. At approximately 8:15 a.m. on October 18, 2018, Dan McGeen and I met with Sid Scrimger, Superintendent of the WWTP. I provided S. Scrimger with a January 2017 Permit to Install Exemption Handbook, and explained that processes at WWTPs are largely exempt, provided there are no lagoons or other equipment designed to treat VOC process water or wastewater; there are no sludge incinerators or dryers; and there are no heat treatment processes.

S. Scrimger verified that there are no heat treatment processes at this facility. He also verified that the Lansing WWTP no longer operates their sludge incinerator and that no equipment is designed to treat VOCs in process or wastewater.

S. Scrimger provided us with a tour of the entire facility and the treatment of wastewater from receipt to discharge.

PTI No. 68-74 for 2 Ozonators

PTI 68-74 permitted an ozonator located in what the permit calls the "Sludge Heat Treatment Building" (dewatering building) and another ozonator in the "Vacuum Filter and Incinerator Building" (maintenance building). The ozonators were used to generate ozone in sufficient capacity to deodorize the air emitted from the sewage sludge heat treatment and the sludge dewatering operations.

The Zimpro Thermal Sludge Process, under voided PTI 70-86 was used to heat-treat sewage sludge. S. Scrimger said that Lansing WWTP scrapped the Zimpro within the last 12 months. D. McGeen and I verified that the unit had been removed. S. Scrimger stated that the ozonator for this equipment has also been decommissioned.

The sludge dewatering process also no longer has an ozonator; the ozonator has been decommissioned.

Because the ozonators have been decommissioned, along with the associated sludge incinerator, PTI No 68-74 can be voided and any dewatering processes remaining can be operated under Rule 285(2)(m). I will request PTI No 68-74 be voided.

PTI No. 70-86 for Odor Control equipment on heat sludge storage

PTI 70-86 is for a wet scrubber odor control system that uses sodium hypochlorite and sodium hydroxide in stages to control odors from heated sludge tanks.

S. Scrimger stated that Lansing WWTP still has the scrubber, but that they have removed the hypochlorite generator and thus the use of hypochlorite, in addition to eliminating the use of sodium hydroxide. In its place the WWTP utilizes small plastic beads with water to scrub odors from the sludge holding tanks (sludge removed from primary treatment) which S. Scrimger said are no longer heated.

PTI 70-86 will be voided because the permitted equipment has been removed. Additionally, the odor control equipment (water and plastic beads) are exempt under Rule 285(2)(f).

Other Wastewater Treatment Processes

The following processes discussed herein are exempt from obtaining a PTI under Rule 285(2)(m).

Biosolids are treated in the dewatering building. The biosolids are treated via dewatering through a Bell Filter press and subsequent lime stabilization (raising pH) to be sent to the landfill (~60%) for disposal or sent out for use in land applications (~40%).

The screening process is housed within the Screening Building. Raw influent enters the Screening Building and is treated with sodium hypochlorite. The air intake from the influent is scrubbed through a water cascade to remove any odors from the raw influent prior to discharging the air to atmosphere.

Compliance Statement

The Lansing Wastewater Treatment Plant is currently in compliance with all PTI's and applicable exemptions.

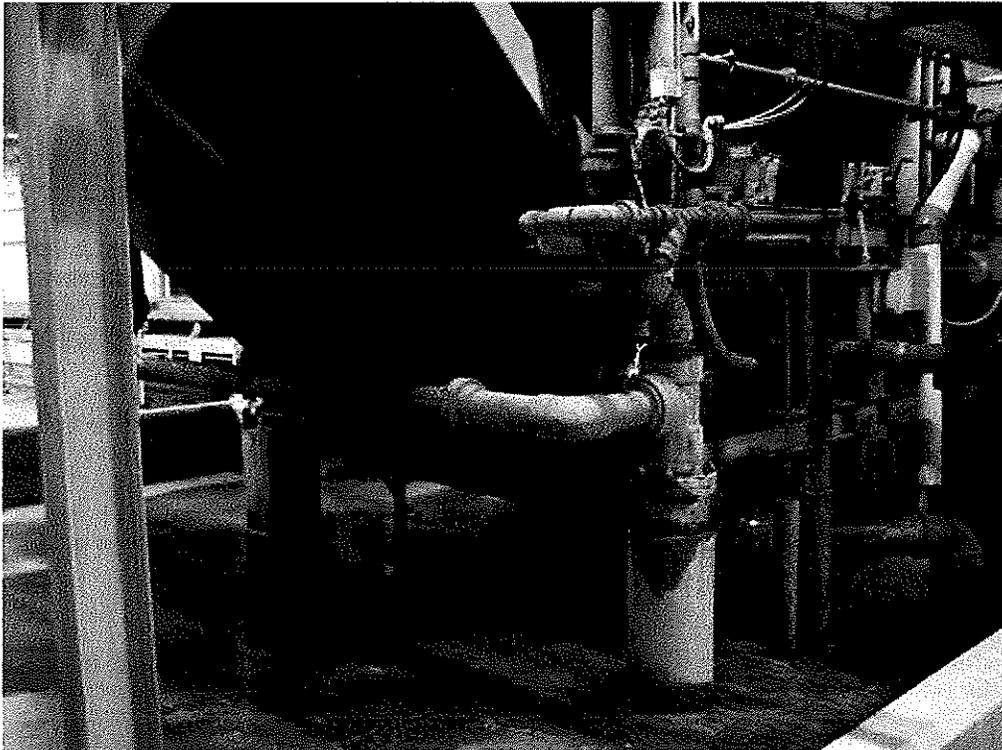


Image 1(Bell Filter Press) : Bell Filter Press used to dewater biosolids (photo credit: D. McGeen)



Image 2(Zimpro Removed) : Location of Zimpro sludge incinerator - unit was removed.

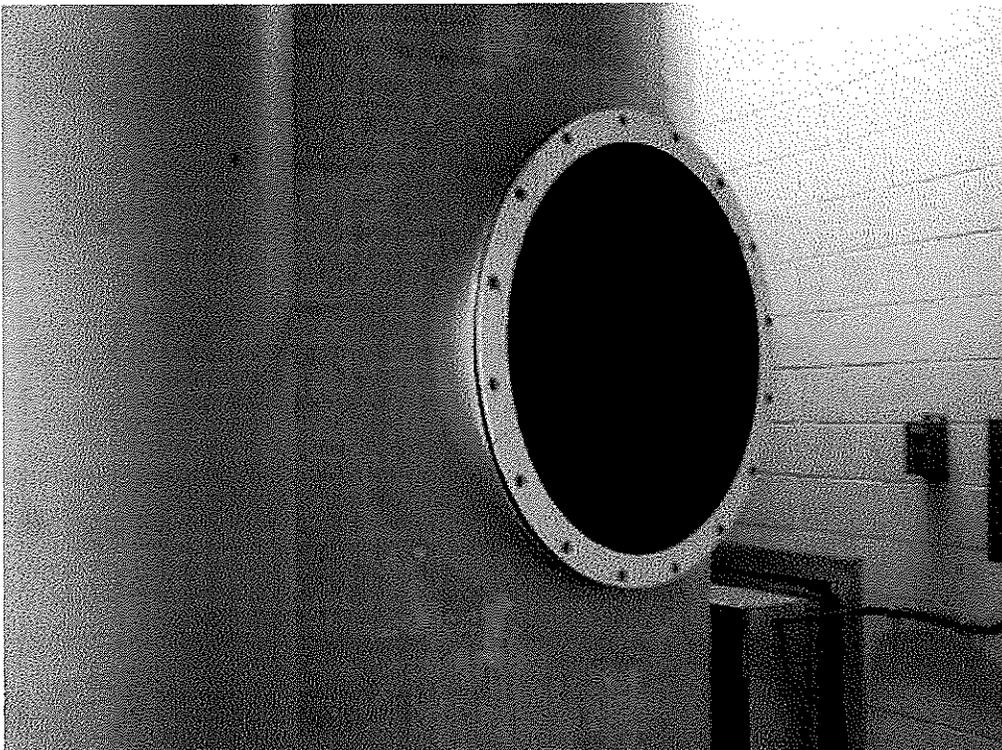


Image 3(Water-Bead Scrubber) : Viewing portal for water-bead scrubber system.

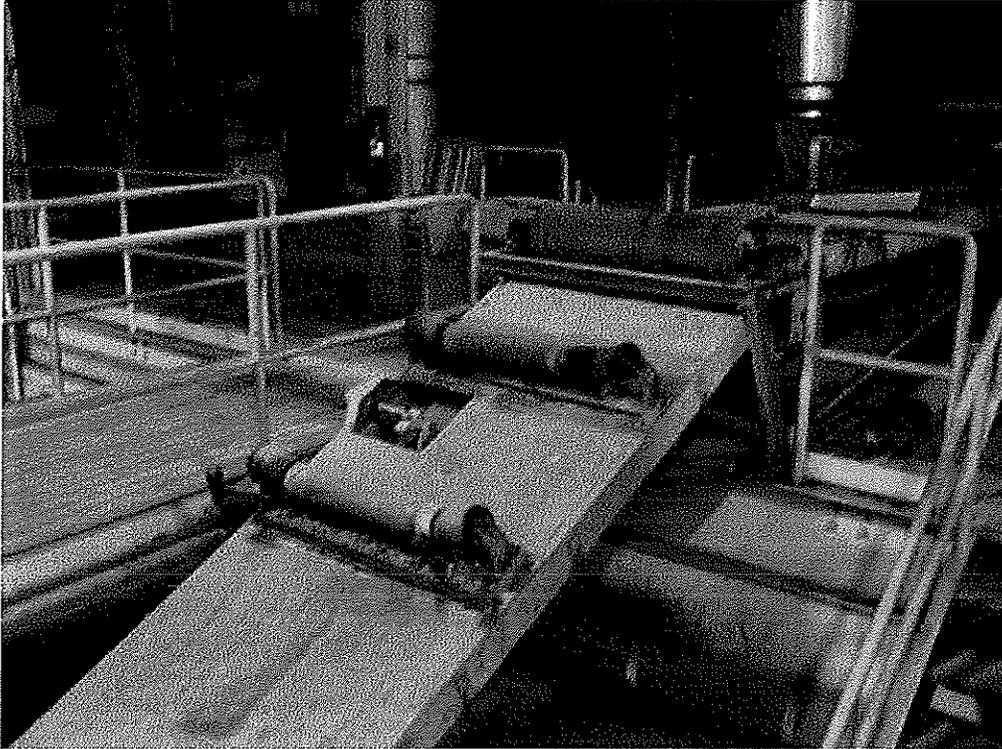


Image 4(8 Hearth Conveyor) : 8 Hearth Incinerator conveyor has been dismantled

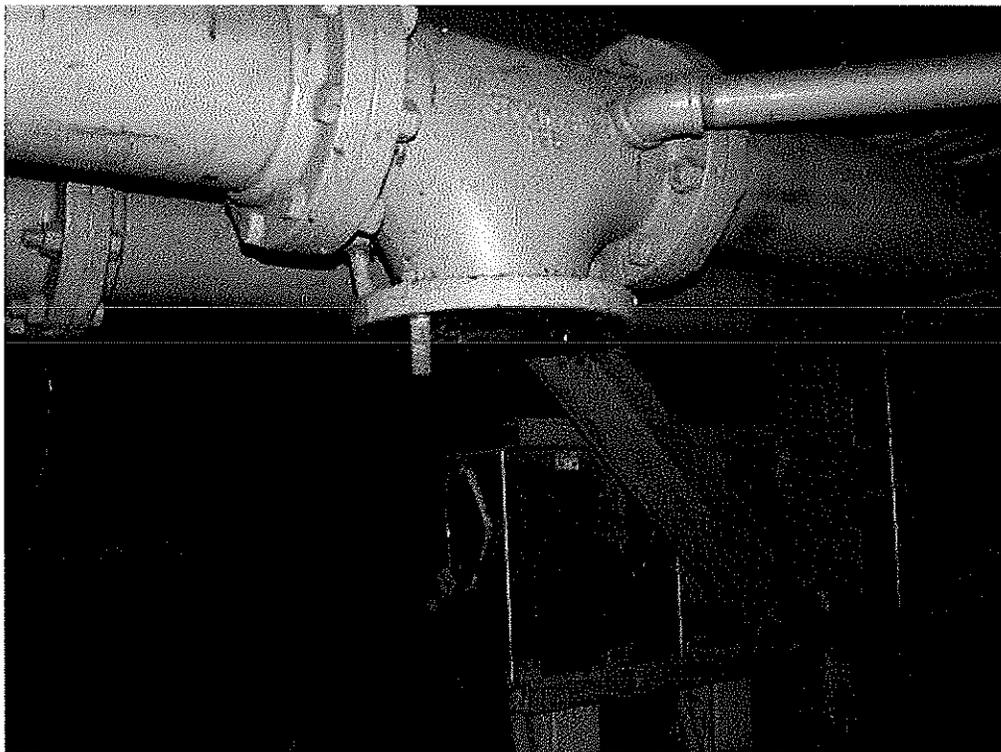


Image 5(Incinerator Flange) : Scum Incinerator flange to direct scum into the incinerator has been removed.

NAME M. M. Lyons

DATE 10/31/18

SUPERVISOR B.M.

