



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTHEAST MICHIGAN DISTRICT OFFICE



C. HEIDI GREETHER
DIRECTOR

August 3, 2016

Mr. Gerry VanAcker, Chief Operating Officer
Detroit Zoo
8450 West 10 Mile Road
Royal Oak, Michigan 48067

SRN: M4023, Oakland County

Dear Mr. VanAcker:

VIOLATION NOTICE

On June 3, 2016, and July 25, 2016, the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an inspection of the Detroit Zoo located at 8450 West 10 Mile Road, Royal Oak, Michigan. The purpose of this inspection was to determine The Detroit Zoo's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; and the conditions of Permit to Install (PTI) number 37-831.

During the inspection, staff observed the following:

Process Description	Rule/Permit Condition Violated	Comments
Polk Penguin Conservation Center (PPCC) Stationary Emergency Generator	Act 451, Rule 201	The Detroit Zoo has installed/operated an emergency generator located at the PPCC without obtaining appropriate permit coverage. The generator has a heat input greater than 10,000,000 Btu/hr and requires a Permit through the Air Quality Division.
RHINOS, PPCC, and other "unknown" Stationary Emergency Generators (see below for additional information).	40 CFR, Part 60, Subpart IIII	The RHINOS generator has a displacement of 3.9L and therefore does not have emission standards nor does it require performance testing; however, it is subject to maintenance plan/records and must have a log for operating hours. At the time of my inspection, these were not available. The PPCC and potentially the "unknown" generators are subject to emission standards and require initial performance testing; at the time of my inspection, no testing had occurred.

HOSPITAL, ADMIN, GUEST SERVICES, PENGUINS (old penguins building), MAINTENANCE, LIONS, PUDU, and TIGERS Stationary Emergency Generators	40 CFR, Part 60, Subpart JJJJ	<p>The LIONS, PUDU, MAINTENANCE, and TIGERS Stationary Emergency Generators are labeled as certified engines. If operated per the manufacturer's specifications, including required maintenance, these emergency generators do not require performance testing. During my inspection, maintenance plans and records were not available.</p> <p>The HOSPITAL, ADMIN, GUEST SERVICES, PENGUINS generators are subject to emission standards and require initial performance testing; at the time of my inspection, no testing had occurred.</p>
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In addition, the Stationary Emergency Generator associated with the Bio Digester and "unknown" newly installed emergency generator as noted by Ms. Lynn Cox in an email dated July 25, 2016, may be subject to permitting and are subject to Federal Regulations.

The Stationary Emergency Generators are also subject to the following Federal Regulations:

- The federal Nation Emission Standards for Hazardous Air Pollutants (NESHAP) for the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. These standards are found in 40 CFR Part 63, Subpart ZZZZ.
- The federal Standards of Performance for New Sources (NSPS) for Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. These standards are found in Title 40 of the Code of Federal Regulations (CFR) Part 60, Subpart IIII.
- The federal Standards of Performance for New Sources (NSPS) for Standards of Performance Stationary Spark Ignition Internal Combustion Engines. These standards are found in Title 40 of the Code of Federal Regulations (CFR) Part 60, Subpart JJJJ.

All Stationary Emergency Generators at the Detroit Zoo have requirements under these Federal Regulations. These include, but are not limited to:

- Install a non-resettable hours meter to track operating hours
- Maintenance plans and records of maintenance conducted
- Records documenting the hours operated in emergency mode, test mode, and non-emergency mode.
- Emission Standards (as noted above, some require initial performance testing)

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During my inspection, the Detroit Zoo was unable to provide maintenance plans, records of maintenance conducted, records documenting the hours operated in emergency mode, test mode, and non-emergency mode, and records of Initial Performance Testing for Stationary Emergency Generators subject to emission standards.

This is a violation of the recordkeeping and emission limitations specified in Subpart IIII and Subpart JJJJ.

During this inspection, it was also noted that the Detroit Zoo had installed and commenced operation of an unpermitted Stationary Emergency Generator located at the PPCC. The AQD staff advised Ms. Cox on July 25 and 27, 2016, that this is a violation of Act 451, Rule 201.

A program for compliance may include a completed PTI application for the PPCC generator and any other unknown process equipment. An application form is available by request, or at the following website:

http://www.deq.state.mi.us/aps/nsr_information.shtml

Be advised that Rule 201 requires that a permit be obtained prior to installation, construction, operation, reconstruction, relocation, or alteration of any process or process equipment which may be a source of an air contaminant.

In addition, please provide the following:

- A facility-wide Potential to Emit (PTE) demonstration for all pollutants at the source. Information on calculating PTE can be found at the following website: <http://www.michigan.gov/deq/0,4561,7-135-3310---,00.html>
- A current list of all equipment subject to air quality regulations (including exempt emission units).
- An updated stationary emergency generator list including the location, manufacturer, model, serial number, power rating, manufacturer date, install date, fuel type.
- A maintenance plan for all Stationary Emergency Generators.
- A schedule for initial performance testing for all emergency generators subject to testing.
- A copy of the established hour log that will be used to track the mode (emergency, non-emergency, testing) in which each generator has been/will be operated.

Please initiate actions necessary to correct the cited violations and submit a written response to this Violation Notice by August 24, 2016 (which coincides with 21 calendar days from the date of this letter). The written response should include: the dates the violations occurred; an explanation of the causes and duration of the violations; whether the violations are ongoing; a summary of the actions that have been taken and are

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proposed to be taken to correct the violations and the dates by which these actions will take place; and what steps are being taken to prevent a reoccurrence.

If the Detroit Zoo believes the above observations or statements are inaccurate or do not constitute violations of the applicable legal requirements cited, please provide appropriate factual information to explain your position.

Thank you for your attention to resolving the violations cited above and for the cooperation that was extended to me during my inspection of the Detroit Zoo. If you have any questions regarding the violations or the actions necessary to bring this facility into compliance, please contact me at the number listed below.

Sincerely,



Rebecca Loftus
Senior Environmental Quality Analyst
Air Quality Division
586-753-3735

cc/via e-mail: Ms. Lynn Cox, Detroit Zoo
Ms. Rachel Handbury, Detroit Zoo
Ms. Lynn Fiedler, DEQ
Ms. Teresa Seidel, DEQ
Ms. Heidi Hollenbach, DEQ
Mr. Thomas Hess, DEQ
Mr. Chris Ethridge, DEQ