

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

B561964394

FACILITY: KOREX CORP		SRN / ID: B5619
LOCATION: 50000 PONTIAC TRAIL, WIXOM		DISTRICT: Warren
CITY: WIXOM		COUNTY: OAKLAND
CONTACT: Collin Rankin , Quality Assurance Manager		ACTIVITY DATE: 07/29/2022
STAFF: Noshin Khan	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: scheduled, announced inspection		
RESOLVED COMPLAINTS:		

On July 29, 2022, I (Noshin Khan, EGLE-Air Quality Division), conducted a scheduled, announced inspection of the Korex Corporation located at 50000 Pontiac Trail, Wixom, Michigan 48393. The purpose of the inspection was to determine the facility'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 Quality Division (AQD) administrative rules, and the conditions of Permit to Install (PTI) No. 539-96. Sebastian Kallumkal, EGLE-AQD, joined me for the inspection. Collin Rankin, Quality Assurance Manager and new facility contact, met us in the parking lot.

Collin led us to a conference room where Sebastian and I shared our credentials and discussed the facility's operations. Korex produces powder and liquid detergents that are formulated, packaged, and labeled as specified by the customer/brand. Systems 1, 2, and 3 are detergent production lines that feed into packing lines T, U, and V. System 1 is no longer operated and is not capable of operation. System 2 produces powdered dish washing detergent that exclusively feeds to packing line T. System 3 produces laundry detergent and other detergents that feed into packing lines U and V. Since the last inspection, Lines 4 and 5 have been added to the system. Line 4 began operation in 2017 and is utilized for packing Tide washing machine cleaner pouches. Line 5 is a liquid detergent packing line that was built in 2021 but is not yet operational. Since Line 5 is a liquid packing line, potential emissions are not expected. Line 4 involves powder packing and has the potential to emit air pollutants regulated by the Clean Air Act and is therefore subject to Rule 201. The facility is in violation of this rule since installation of this line was not authorized with a permit to install.

We began the facility walkthrough on the first floor of the main building, where we observed the packaging lines for dry powder detergents. Manual palletizing is also done in this area and packed items are moved to the warehouse in Building 2 for storage.

We were joined by Jeff Hewitt, Maintenance Technician, before we climbed to the 8th floor, where we were shown the dust collector for System 2. Collin and Jeff explained that soda ash, the base material for the detergents, is stored on the roof and is drawn down. Surfactants are added to soda ash on upper floors and other components are added as soda ash is transferred down the system. On the 5th floor, we observed grinders and mixers. After all components are added, the product is dried in a fluid bed dryer before being conveyed to the packaging lines for powder detergents or to Building 2 for liquid detergent production and packing.

Ken Underwood, Process Supervisor, joined us as we walked to the control room. Here, we observed the magnehelic pressure differential gauges for bag filters that control particulate emissions from material silos. During the inspection, System 2 was running and the associated gauges showed measurements within marked gauge limits, indicating that the bags were operating

properly. The gauge for silo 7 showed a pressure differential near the lower marked limit, and Collin confirmed that the associated bag was being pulsed.

Next, we walked to Building 2, where Collin showed us liquid detergent packing lines including ones for toilet bowl cleaner and glass cleaner. Here, detergent base from Building 1 is mixed with deionized water and other liquid components in mixing tanks and transferred to batch storage tanks. Liquid detergent is conveyed from these tanks into filling and packing lines.

Per PTI 539-96 Special Condition (S.C.) 2, the particulate emissions from the facility shall not exceed 16.9 lbs per hour nor 56.8 tons per year based on a rolling 12-month sum. The emissions calculations provided by the facility assume that the facility dust collectors emit 0.01 lbs particulate per 1000 lbs of exhaust gas. The facility calculations indicate that its highest particulate emissions during 2020 and 2021 were 0.75 lbs per hr and 0.80 tpy in December 2021, based on a 12-month rolling total. Since both of these values are under permitted limits, the facility appears to be in compliance with this condition. Based on AQD records, it does not appear that the facility has had testing to confirm particulate emission rates from its dust collectors.

Per PTI 539-96 S.C. 3, there shall be no visible emissions from the system. During our visit, we did not observe any visible emissions from the silos or stacks and the facility appears to be in compliance with this condition.

Per PTI 539-96 S.C. 6, the facility is required to monitor and record the pressure drop across all fabric filter collectors daily, keep readings on file for a period of at least two years, and make these records available to the AQD upon request. Sebastian and I asked Collin about these logs during our pre-inspection meeting, and Collin said no written records are kept for pressure drop readings, just that facility staff log which filters are on or off every time a system is turned on. The facility is, therefore, in violation of this condition.

Per PTI 539-96 S.C. 8, the facility shall not operate all equipment for more than 560 hours per month based on a rolling 12-month average and records for hours of operation shall be kept on file for a period of at least 2 years. According to records provided by the facility, the highest monthly hours of operation for the dust collectors during 2020 and 2021 was 461.3 hours in October 2021, so the facility is in compliance with this requirement.

Per PTI 539-96 S.C. 9, the facility is required to follow a maintenance program like the recommended one attached in the permit. As discussed for S.C. 6, the facility does not currently perform daily checks and recordings of pressure differential readings which are also required by S.C. 9. According to Jeff Hewitt, filter bags and dust collectors are inspected as needed rather than a regular schedule. The facility does not have a written log for maintenance checks. The facility appears to be in violation of this condition as a regular maintenance schedule has not been sustained.

Per PTI 539-96 S.C. 10, the heater and boilers shall not exceed the following emission limits: for NO_x, 4.4 lb/hr and 15.0 tpy based on a rolling 12-month sum; for CO, 1.2 lb/hr and 4.0 tpy based on a rolling 12-month sum. The spreadsheet provided by the facility did not have NO_x or CO emissions data from April 2019 onwards, so I am unable to verify compliance with this condition. According to AQD records, the facility has 3 boilers rated at 3.5 MMBTU/hr and one therminol heater rated at 14 MMBTU/hr. The facility's boilers may be subject to 40 CFR Part 63, Subpart JJJJJJ. Compliance with

this rule was not evaluated since the AQD has not accepted delegation to implement or enforce the rule for this area source.

Based on our on-site inspection and records review, the facility is in violation of Special Conditions 6, 9, and 10 of PTI 539-96, as well as Rule 201 for the installation of an emission unit without a permit to install.

NAME Nashir Khan

DATE 9/27/2022

SUPERVISOR K. Kelly