



Quarterly Report 2021-Q4

FEBRUARY 2022

Odor Task Force



Executive Summary

Per City of Kalamazoo Commission action taken September 2020, the Odor Task Force presents this Quarterly Report for the fourth quarter, 2021. The members of the Odor Task Force continue to work collaboratively to develop solutions to community concerns with odors generated within the control of the members. Odor Task Force meetings have been scheduled for approximately every six weeks, or two per quarter. In quarter four of 2021 only one Odor Task Force meeting was held. The meetings are now scheduled on an adjusting basis to accommodate the dynamic schedules of the members.

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HISTORY

Formally originated in 2018, the Odor Task Force (OTF) is a technical workgroup of members from Graphic Packaging International, Inc., community committees, local and State agencies, elected officials, and the City of Kalamazoo. The primary goal of the OTF is to provide a collaborative forum to discuss the community's concerns with and potential mitigation efforts regarding industrial odors emitted from the City of Kalamazoo Water Reclamation Plant (KWRP) and Graphic Packaging International, Inc. (GPI) as both industrial facilities have the potential to emit odors of differing compounds and of differing concentrations. Odors emitted to or generated within a community falls under the regulatory jurisdiction of the Michigan Department of Environment, Great Lakes, and Environment (EGLE) Air Quality Division.

CITY OF KALAMAZOO PRIOR ACCOMPLISHMENTS

Investments have been made completing projects leading up to the origination of the OTF. Various investments in treatment processes operations of increased byproduct hauling offsite and point source chemical treatments have been piloted with some implemented as part of the current odor mitigation efforts. The City has continued its investment in capital improvement projects specifically targeted at odor emission mitigation. Currently under construction, is the construction of four carbon scrubbers to treat odors at the source of generation, one of which is currently operational. In addition, the KWRP implemented the EnviroSuite odor management with e-Nose monitoring technology for the real-time monitoring, historic investigation and forecasting of the fugitive odor transmission of those generated at the KWRP. In the pursuit of continuous odor source identification and mitigation opportunities, the KWRP commissioned J&H to conduct an initial study to identify additional point sources of odors within City owned infrastructure followed by a detailed odor analytical report also conducted by J&H. Pilot trials of various chemical treatments to mitigate emitted odors has also been conducted with varying degrees of success. These are only a few of the prior accomplishments and investment commissioned and completed by the City.

The first quarter of 2021 brought several milestone accomplishments in the mitigation of emitted odors from the KWRP. The KWRP expanded the Envirosuite sensor network with the addition of three community monitoring locations; The Northside Association; Krom / Prouty Park; and Rockwell Park. The three additional sensors came online January 20th 2021. The Rockwell Park sensor experienced early technical difficulties which were rectified February 13th 2021. At Envirosuite's recommendation, all deployed sensors were updated to the current model in January 2021. The City Manager's Office approved a 1-year Pilot with SmartCover for the deployment of their H2Scents real time sanitary sewer H2S monitoring. The community online odor complaint form has received additional refinement prior to deployment with the inclusion of sanitary sewer network on the form. With the end of the first quarter 2021, the Envirosuite system now has year over year datasets for comparison and evaluation. The focus of the first quarter of 2021 was on actionable data obtainment and data source diversification.

The KWRP has several investments underway, proposed, and in the planning phases to aid in the identification and mitigation of odors emitted from the KWRP and City owned sanitary sewer collections system. The remaining three KWRP process point source carbon scrubbers underwent startup and began beneficial use in Q2 2021, a quarter ahead of schedule. The biofilter treatment technology request for proposal was issued with procurement recommendation submitted to Commission for approval in early Q3 2021. Continued management and monitoring of hauling offsite of process byproducts along with the monitoring and source investigation utilizing the EnviroSuite system. The deployment of the SmartCover H2Scents Pilot has been completed. Staff is currently monitoring the deployment sites to gain confidence in the technology and data. Chemical treatment of the KWRP's dewatered solids and screenings continues. The KWRP continues scoping to determine if studies are necessary to determine if odors are being generated and emitted into the community from additional sanitary sewer interceptors owned by the City. The inclusion of an additional three community monitoring locations is also in the scoping phase to determine potential value added data set locations which fit into the goals of the program. The community online odor complaint form is in final draft stage. The web link has been shared with the

Environmental Concerns Committee as well as select community members to beta test form before full scale launch.

Michigan Department of Health and Human Services (MDHHS), in partnership with Michigan Department of Environment, Great Lakes, and Energy (EGLE) and Environment Protection Agency (EPA), performed air sampling within the community. The agencies utilized the Agency for Toxic Substances and Disease Registry (ATSDR) for technical assistance. A community townhall meeting, coordinated by the above partnership, was scheduled.

- The biofilter treatment technology procurement recommendation was approved by City Commission in early Q3 2021.
- The biofilter treatment technology construction bid has been publicly posted with a bid opening early Q3 2021 and an anticipated recommendation submittal to City Commission Q4 2021.
- The biofilter design team determined a previously scoped fan study wouldn't bring the anticipated value to the Project as previously believed. As the design continued to develop, the team determined the existing planned infrastructure design requirements achieve the goals of the Project without incurring the additional cost to nor resultant delay to the Project.
- The City is proceeding forward with the biofilter project under a Michigan Department of Environment, Great Lakes and Energy – Air Quality Division Permit to Install exemption as detailed in the Air Permit to Install Exemption Handbook, Michigan Air Pollution Control Rules, R336.1278-R336.1291 (Rules 278 – 291) February 2020, specifically R336.1285 Permit to install exemptions; Rule 285(2)(f).
- The City conducted a three week, 9/13/2021 – 10/1/2021, H2S Odor Logger air sampling data capture in the region near Krom Prouty Park. Results are anticipated to be provided in the next Quarterly Report.
- The City conducted a one week laboratory air sampling data capture which included grab samples every two hrs, 7am – 7pm on 9-20, 9-21, 9-22, and 9-23, The City also conducted 24 hour composites laboratory air sampling data capture on 9-20, 9-21, 9-22, and 9-23.

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- Continued management and monitoring of hauling offsite of process byproducts along with the monitoring and source investigation utilizing the EnviroSuite system.
 - The data from the SmartCover H2Scents Pilot has been reviewed with possible H2S level timings aligning with industrial discharges. Further investigation into possible connections is required prior to determining a source.
 - Chemical treatment of the KWRP’s dewatered solids and screenings continues.
 - The inclusion of an additional five EnviroSuite community monitoring locations has been determined to provide value added data set locations which fit into the goals of the program. The deployment locations are expected to be based on community input through various communication medium.
 - The community online odor reporting form has been finalized. Beta testing provided great feedback for implementation into the final product. A citizen is encouraged to report an observed odor via the website:
<https://observation.envirosuite.com/Kalamazoo/>

When we started pulling data from EnviroSuite, we pulled the H2S Raw data value to use in our data comparisons. In January 2021 three new monitors were ordered. When we added these monitors to the data pull, the H2S Raw value was also the value that was used for the data comparisons. In recent talks with EnviroSuite we have learned that the new monitors don’t function the same as the older ones. Due to “communication limitations” the value that is in the raw data is scaled to 0 – 250 which actually corresponds to a 0 – 1000 ppb value. Enclosed is all of the data that for January 2021 through August 2021 showing the multiplying by 4 of the raw value to get the ppb value. Values for Krom and Prouty are not considered reliable for 7/1/21 through 8/31/21 per EnviroSuite. Values for the Northside monitor are not considered reliable as of 3/25/21 per EnviroSuite.

Michigan Department of Health and Human Services (MDHHS), in partnership with Michigan Department of Environment, Great Lakes, and Energy (EGLE) and Environment Protection Agency (EPA), performed air sampling within the community. The agencies utilized the Agency for Toxic Substances and Disease Registry (ATSDR) for technical assistance. A community townhall meeting, coordinated by the above

partnership, is scheduled for October 5th, 2021. More information may be obtained from the website: https://www.michigan.gov/egle/0,9429,7-135-3310_70314_102145--,00.html

CITY OF KALAMAZOO CURRENT QUARTER ACCOMPLISHMENTS

- The KWRP intends to continue the venture in fugitive odor reduction.
- The online odor complaint form, in conjunction with the existing H2Scents in sewer sensors along with the Envirosuite sensors, will be used to aid in developing future operational and investment needs to mitigation fugitive emissions from City infrastructure.
- Beta testing the Kalamazoo Community Odor Observation Collaboration website to publicly view 15 minute average sensor readings from the Envirosuite system.
- Obtained approval for an additional five (5) Envirosuite sensors to be deployed within the community.
- Received bids for the Biofilter construction. Received bids were over budget. City intends to rebid in next quarter after design refinement is complete.

CITY OF KALAMAZOO UPCOMING ANTICIPATED ACCOMPLISHMENTS

- Obtain, evaluate, and submit a recommendation for the procurement of professional services to evaluate areas of odor emission within the collections system.
- The City intends to deploy the Kalamazoo Community Odor Observation Collaboration website where individuals can view, in real time, the readings from the Envirosuite monitors. This website will also provide access to historical data since deployment.
- Deploy additional five (5) Envirosuite sensors within the community.

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- Yearly scheduled Envirosuite sensor replacement maintenance.
 - Bid opening for Biofilter construction rebid followed by a City Commission recommendation.

GRAPHIC PACKAGING INTERNATIONAL, INC UPDATE

Appendices

The full report with appendices is available on the City's website at:

<https://www.kalamazoo-city.org/odortaskforce/q4-2021-report>