

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

N716464475

<b>FACILITY:</b> Quala		<b>SRN / ID:</b> N7164
<b>LOCATION:</b> 50321 E Russell Schmidt, CHESTERFIELD		<b>DISTRICT:</b> Warren
<b>CITY:</b> CHESTERFIELD		<b>COUNTY:</b> MACOMB
<b>CONTACT:</b> JD Noble , Director, Field Operations		<b>ACTIVITY DATE:</b> 08/25/2022
<b>STAFF:</b> Kerry Kelly	<b>COMPLIANCE STATUS:</b> Non Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> FY 2022 Targeted Inspection		
<b>RESOLVED COMPLAINTS:</b>		

On August 24, 2022, I (Kerry Kelly), Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division (EGLE-AQD), conducted an on-site inspection of Quala located at 50321 Russell Schmidt Drive, Chesterfield, Michigan. This facility is identified by the Air Quality Division with the State Registration Number (SRN) N7164 . The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); Michigan Administrative Rules; and Permit to Install (PTI) No. 79-03C.

### Facility Description

Quala is located in central Macomb County. The surrounding area is densely populated with industrial and residential properties. The nearest residential properties are less than a tenth of a mile west of Quala. The facility is a synthetic minor opt-out for hazardous air pollutants (HAP) and volatile organic compounds (VOC).

At the facility, Quala cleans intermediate bulk containers (IBC), also called totes, used for paint storage. The totes range in size from 200 to 600 gallons. The tote cleaning process involves removing all components (valves, impellers, etc) from the tote, draining residual paint (heel) from the inside of the tote, rinsing the interior of each tote and the components with water, potassium hydroxide, and solvents at various pressures, re-assembling the tote, and cleaning the exterior of the tote by hand using glacial acetic acid and solvent. The interior of each tote goes through four rinse stations. The cleaning solution for the third and fourth rinse station is collected and reused in the first and second rinses. The majority of containers are cleaned using a semi-continuous container cleaning process line (FGPROCESSLINE). The remainder of the containers are cleaned using an "offline" container cleaning process (FGOFFLINE). Valves, impellers, and other components are cleaned in separate wash cabinets (EUIPELLERWASH and EUVALVEWASH). The aforementioned processes are included in PTI 79-03C.

### Inspection and Compliance Evaluation

Brett Kauser, EHS Specialist, Quala, provided emissions and material usage records and safety data sheets (SDS) required in PTI 79-03C via email on September 7, 2022.

### Inspection

I arrived at Quala at approximately 10:15 AM on August 25, 2022. Outside of the facility I observed the bay doors along Russell Schmidt were open. I did not detect solvent odors while standing in the facility parking lot or downwind on the day of the inspection. I entered the office, and introduced myself to Emily Zink, Quala. I signed the visitor log book. Emily introduced me to JD Noble, Director, Field Operations, Quala, and Dylan Stackpoole, General Manager, Quala. I explained the purpose of my visit to the group. JD and Dylan answered questions about facility operations/processes. They indicated that

there are no boilers, emergency generators, or cold cleaners at the facility. Process changes observed and discussed during the inspection include; first rinse changed from 50% water and 50% butyl cellosolve to 20% potassium hydroxide, 10% caustic boost, and 70% water, addition of a rinse station for difficult to clean totes, and use of glacial acetic acid in exterior cleaning.

## **EUEXTERIOR**

According to the PTI, EUEXTERIOR involves cleaning paint and sticker residue from the outside of the tote using the solvent SP 3341.

Quala is limited to 32.7 tons/year of VOC emissions and 9,000 gallons/year cleaning solvent usage for EUEXTERIOR (SC I.1 and II.1 respectively). Brett provided 12-month rolling VOC emissions and cleaning solvent usage records for EU-EXTERIOR, as required in EU-EXTERIOR SC VI.3, for July 2021 through August 2022 (Attachment 1). The records provided indicate the highest 12-month rolling VOC emission during the time period were 15.61 tons reported for the period ending July 2022. The highest 12-month rolling SP-3341 usage was 4,283 gallons reported for the period ending July 2022.

During the permitting process for PTI 79-03C, Chuck Boyd, Quala, commented on preliminary draft conditions, in an email dated 6/10/2020, stating that the facility will no longer use Vinegar (acetic acid) on exterior washes once new permit is issued. The preliminary draft that Chuck reviewed included a 200 gallon/year vinegar limit with a Rule 224 citation. The vinegar throughput limit was removed from subsequent drafts and the final permit. The VOC emissions records do not include emissions from vinegar which is a VOC. I sent Brett an email to let him know that, going forward, the facility should be keeping track of how much glacial acetic acid is being used and the emissions from glacial acetic acid should be included in the VOC emissions calcs for the exterior cleaning process.

Based on the amount of acetic acid used per gallon (5%) and the density of glacial acetic acid (8.75 lb/gallon), VOC emissions from the glacial acetic acid would be approximately 0.44 lb/gallon. With this emission factor, the facility would have had to have used 77,682 gallons of acetic acid/year to reach the VOC limit for EUEXTERIOR. Given that Quala uses a glacial acetic acid container one-tenth the size of the SP-3341 container and only 5% of that container is glacial acetic acid, it's expected that the glacial acetic acid use is less than the maximum 12-month rolling SP-3341 use (4,283 gallons). Therefore, I expect the facility would still be in compliance with the VOC emission limit in EUEXTERIOR SC I.1 for this compliance period.

The permit requires Quala to capture all waste materials from the exterior cleaning process and to store them in closed containers (EUEXTERIOR SC III.1) and to handle all VOC or HAP containing materials in a manner to minimize generation of fugitive emissions (EUEXTERIOR SC III.2). JD showed me the exterior cleaning process. In this area I observed approximately 8 totes, a cart with a 5-gallon plastic pail and an approximately half gallon plastic container each containing a clear liquid. I did not see labels on the containers identifying the contents. According to JD, the liquid in the half gallon container contains 5% glacial acetic acid and 95% water. Both containers were uncovered and there were no workers in the area. According to JD, the workers were on break. I told JD the lid should be covered when the when not in use. JD obtained a lid and covered the pail. A notice of violation will not be issued for the not handling the VOC containing materials in a manner to minimize fugitive emissions because the JD resolved the issue while I was on site by

covering the containers while the workers were on break and notifying the workers to cover the containers while on break.

After the inspection, JD sent a photo of the bulk containers used to fill the exterior cleaning solvent buckets (Attachment 2). In the photo there was a 55-gallon poly drum labeled Glacial Acetic Acid and a 300-gallon poly tote labeled SP-3341.

To clean the exterior, employees dip rags into the 5-gallon bucket of SP-3341 and wipe the exterior of the tote to remove label glue and other residue. The used solvent-laden rags are then transferred to a 300-gallon plastic tote with a rack on the bottom and free solvent is collected in the tote, below the rack. After drying and draining, the rags are transferred to a second 300-gallon cardboard box with a woven poly vinyl cover. The second container was lined with a plastic bag that appeared to have a thickness of 2 mil or greater. The plastic bag was tied shut during the inspection. Both 300-gallon containers were covered during the inspection. Quala appears to be in compliance with EUEXTERIOR SC III.1.

During the previous inspection, conducted on 6/10/2021, the waste rag containers were open and a notice of violation of EUEXTERIOR SC III.1 was issued on 7/21/2021. This violation will be resolved based on my observations during my inspection on August 25, 2022.

Quala is required to keep overhead doors located adjoining the tote cleaning process closed for half hour after tote cleaning operations are complete per SC III.3. I did not see any overhead doors adjoining the exterior cleaning process. I did observe two 4 ft x 4 ft vents near the top of the wall adjacent to the exterior cleaning area. Dylan stated the two vents are air intake vents.

### **FGPROCESSLINE**

FGPROCESSLINE consists of EULINEHEELING, EUIPELLERWASH, EUVALVEWASH, EUFIRSTRINSE, EUSECONDTRINSE, EUTHIRDTRINSE, and EUFINALRINSE. VOC emissions from this process are generated from the 2-butoxyethanol (also know as butyl cellosolve and glycol ether) used to clean the totes and parts and from the removal of residual paint (heel) in totes. HAP emissions are generated from the heel removal process.

Quala is limited to 42.62 tons/year of VOC emissions (SC I.1). Brett provided 12-month rolling VOC emissions records for FGPROCESSLINE, as required in FG-PROCESSLINE SC VI.3, for July 2021 through August 2022 (Attachment 3). The records provided indicate Quala is using the emission factors stated in PTI 79-03C and the VOC emissions from the heel waste and butyl cellosolve emissions are calculated separately for the FGPROCESSLINE. The highest 12-month rolling VOC emissions from butyl cellosolve were 75.25 tons and from heel waste was 20.072 tons for FGPROCESSLINE reported in the 12-month period ending July 2021 for a total of 95.3 tons. The next highest 12-month rolling VOC emissions were 59.25 tons from butyl cellosolve and 17.3 from heel waste for the period ending August 2021 for a total of 76.55 tons. The records also show the VOC emission limit in FGPROCESSLINE SC I.1 was exceeded in the 12-month periods ending August 2021, Sept. 2021, Oct. 2021, Nov. 2021, Dec. 2021, Jan. 2022, Feb. 2022, Mar. 2022, Apr. 2022, and May 2022. This is a violation on FGPROCESSLINE SC I.1.

During the previous inspection, conducted on 6/10/2021, Quala exceeded the 42.62 tons/year VOC limit each month from September 2020 to May 2021 and a notice of violation of FGPROCESSLINE SC I.1 was issued on 7/21/2021. Quala indicated, in the violation

response, that during the month of August 2020, Quala received a customer request to increase the amount of virgin butyl cellosolve used during the final rinse temporarily. The emission exceedances between September 2020 and May 2021 was due to the temporary increase in butyl cellosolve for the fourth rinse in August 2020. The violation response also states that in working with the customer, the amount of butyl cellosolve requested by the customer in the final rinse was determined to be unsustainable. The VOC emissions from August 2020 would now longer be calculated in the 12-month rolling starting with the 12-month period ending August 2021. However, Quala still exceeded the 12-month rolling VOC emission limit in FGPROCESSLINE SC I.1 for the 12-month periods ending August 2021, Sept. 2021, Oct. 2021, Nov. 2021, Dec. 2021, Jan. 2022, Feb. 2022, Mar. 2022, Apr. 2022, and May 2022, after the August 2020 emissions were no longer counted in the 12-month rolling total. A second notice of violation will be issued for FGPROCESSLINE SC I.1.

The permit contains limits of 50,000 gallons/year butyl cellosolve usage and 200,000 gallons heel waste collected for FG-PROCESSLINE (SC II.1 and SC II.2) respectively. Following the approval of PTI 79-03C, EGLE-AQD became aware that the butyl cellosolve and heel waste throughput limits in the permit were not correct. Specifically, using the throughput limits and emission factors in the PTI for FGPROCESSLINE, the 42.62 ton/year VOC emission limit would be exceeded. It appears the butyl cellosolve and heel waste limits were inadvertently carried over from the previous permit (PTI 79-03A). I informed the Quala representatives of the error.

The permit also contains a limit of 25 totes processed per hour and 60,000 totes processed per year (FG-PROCESSLINE SC III.4). This limit was also in the previous permit. Brett provided records of the number of totes cleaned (Attachment 3). These records indicate the highest number of totes processed per hour was 14 on December 21, 2021 and the highest 12-month rolling number of totes cleaned was 23,032 for the period ending July 2021.

Compliance with the butyl cellosolve, heel waste, and totes processed limits were not evaluated because they do not correspond with the applicable VOC limits. The company is keeping records of this information as required in FG-PROCESSLINE SC VI.5, 6, and 7.

JD and Dylan showed me the semi-continuous tote cleaning process during the inspection. FG-PROCESSLINE was being operated during the inspection. Dylan stated during the inspection that potassium hydroxide is used in the process line first rinse and the small parts wash cabinet located on the north side of the process line. The first rinse solution is 20% potassium hydroxide and 80% water. Since the issuance of PTI 79-03C, Quala installed an additional cold water rinse station for FGPROCESSINE that is located near FGOFFLINE, a hot water pressure washer for FGPROCESSLINE located near the FGPROCESSLINE rinse tanks, and a rinse station on FGPROCESSLINE next to the heel waste collection area. According to Dylan, the process changes were being made in an effort to reduce the amount of butyl cellosolve used in the process and to remove more heel at the beginning of FGPROCESSLINE.

I inspected the cold rinse station. According to JD, this station uses only water, has a longer recirculation time, and is used to clean difficult to clean totes. This station has three spray heads and two 300-gallon poly totes. One of the totes was empty and had a label on it that said glycol ether. JD removed the label, stating that the tote typically contains water and that only water is used in this rinse station. The hot water rinse station was installed but not connected nor operational at the time of the inspection. Emily provided a diagram of the current configuration of FGPROCESSLINE during the inspection. According to the diagram,

the new rinse station located next to the heel waste station (Station 2 on FGPROCESSLINE) is a pressure wash station using either Aqualeen/50% water or 100% recirculated butyl cellosolve. The diagram indicates that what was the second rinse in PTI 79-03C using 75% water and 25% butyl cellosolve is now Station 4 (third rinse) using high pressure wash or a combination of water and butyl cellosolve. Emily noted that Station 4 is 95% water.

PTI 79-03C requires Quala to capture all waste materials from the semi-continuous cleaning process and to store them in closed containers (EU-EXTERIOR SC III.2) and to handle all VOC or HAP containing materials in a manner to minimize generation of fugitive emissions (EU-EXTERIOR SC III.3). According to the permit, operations to minimize fugitive emissions shall include, but are not limited to, the following:

- a. Keeping containers covered at all times except when operator access is necessary.
- b. Installing and maintaining a level sensor on the heel waste collection system to ensure only liquid waste is being pumped from the storage trough into the storage tank.
- c. Installing and maintaining a properly operating control valve on the heel waste storage tank to minimize the venting of fugitive emissions.
- d. Inspecting the heel waste collection system, including level sensor and control valve, for proper operation on a daily basis and making repairs in a timely manner.
- e. Inspecting the container cleaning process line, including tanks and valves, for leaks on a daily basis and repairing leaks in a timely manner.
- f. Emptying the containment pit (secondary containment) for the container cleaner process line in a timely manner, not to exceed 24 hours.

Compliance with the inspections required in SC III.2 d) through f) is demonstrated through recordkeeping required in SC VI.8 and SC VI.9. Emily provided the completed inspection checklist for the June 1, 2022 – August 24, 2022 and Brett provided the inspection checklists for December 2021 – May 2021 (Attachment 4). Brett stated that there had been a change of management/personnel and so we are still actively looking for the other requested dates [July 2021 – November 2021].

During the previous inspection, conducted on 6/10/2021, records of the inspections were not being kept and a notice of violation of FGPROCESSLINE SC VI.8 and SC VI.9 was issued on 7/21/2021. This violation will be resolved based on records collected and on my observations during my inspection on August 25, 2022.

JD and Dylan showed me the heel waste station. Heel waste was being collected while I was inspecting the process.

At the heel waste station, heel drains through an opening at the bottom of each tote. From the tote, the heel is collected in an open trough approximately one foot deep, one foot wide, and ten feet long. There is a drain hole at the west end of the trough. A hose with an electric pump is connected to the trough drain hole. The hose from the trough is directed to a 300-gallon waste collection tote. Another hose on the heel waste collection tote diverts air and vapors from the heel waste tote to a second tote filled about 1/3 to 1/2 full with water. There was an approximately 2-inch diameter opening on top of the second tote. JD and Dylan indicated that the second tote is a make-shift scrubber. The vacuum pump was on during the inspection. I did not see any vapors exiting the heel waste collection system as I had observed in previous inspection. In addition, I did not see a

control valve on the heel waste collection tote. JD and Dylan stated that the heel waste collection tote does not have a control valve to minimize the venting of fugitive emissions.

According to JD and Dylan, the heel waste trough does not have a level sensor as required in the permit. The operator manually turns off the pump when there is no liquid in the trough. JD and Dylan stated they had been looking into how to install a level sensor. Their interpretation, in talking with other Quala staff, was that the sensor needed to be on the heel waste tote, not the trough. They were unable to come up with a way to install a level sensor on the heel waste tote. JD and Dylan stated during the inspection that they would be able to install a level sensor on the heel waste trough and a vapor control valve on the heel waste tote. Following the inspection, JD stated he was working on having a new trough construction that would use gravity draining, eliminating the need for the pump. This would also eliminate the need for a level sensor and vapor release valve. On 9/12/2022, JD sent photos of the new construction (Attachment 5). The photos show a trough with a drain hole in the center and a 300-gallon poly tote with an approximately 6-inch diameter hole within about 6 inches from the bottom of the drain hole. The new configuration does not utilize the vacuum pump.

During the previous inspection, conducted on 6/10/2021, the heel waste collection system did not have a level sensor nor a vapor control valve and a notice of violation of FGPROCESSLINE SC III.3 was issued on 7/21/2021. In response to this violation, Quala stated they are having maintenance personnel installing the level sensor on the heel waste trough and a vapor control valve on the heel waste tote. Not having a control valve on the heel waste collection tote and a level sensor on the heel waste trough during the 8/25/2022 inspection is a violation of FG-PROCESSLINE SC III.3. A second notice of violation will be issued for FG-PROCESSLINE SC III.3.b and c. This violation will need to be resolved by either installing level sensor and vapor control valve on the heel waste system to comply with PTI 79-03C or by modifying PTI 79-03C to reflect the new configuration and remove the vacuum pump and the requirements for the level sensor and vapor control valve.

Adjacent to the heel waste station, I observed wash cabinets used to clean lids, impellers, and valves. I saw an employee wiping an impeller, coated with a liquid that appeared to be paint, with a rag. When the rag became saturated, the employee placed the rag in an approximately 55-gallon garbage can that was approximately 1/3 full. This process was added to reduce the time the impeller spent in the wash cabinet and the amount of butyl cellosolve used in the cabinet.

In the same area, one of the cabinets was open and liquid was continuously flowing into the cabinet. I saw an employee rinsing lids in the open cabinet. The other cabinets were closed during the inspection. JD and Dylan stated the open cabinet was used for lid cleaning and contained 80% water, 10% glycol ether, and 10% multiwash. Emily provided the SDS for the multiwash (KMI Multi Purpose Cleaner). According to the SDS for KMI Multi Purpose Cleaner, contains sodium metasilicate (5-15%), ethylene glycol monobutyl ether (<10%), and sodium tripolyphosphate (<5%).

Next to the area with the cabinets I observed an open "containment" pit. The containment pit was filled to about  $\frac{3}{4}$  full with liquid. According to Dylan, one of the rinse tanks had to be emptied into the pit earlier in the day. The permit requires the containment pit be emptied in a timely manner, not to exceed 24 hours. According to Dylan, the pit is emptied into waste totes at the end of each day. Dylan sent photos of the containment pit on August 25, 2022 after it was emptied (Attachment 6). In addition, the inspection records required in

FGPROCESSLINE SC VI.9 indicate the containment pit was emptied each operating day. JD stated the plan is to connect the rinse tanks to storage tanks located outside of the building so they will no longer need to empty the rinse tanks into the containment pit.

During the previous inspection, conducted on 6/10/2021, the containment pit was not being emptied in a timely manner and a notice of violation of FGPROCESSLINE SC III.3 f) was issued on 7/21/2021. This violation will be resolved based on records collected and on my observations during my inspection on August 25, 2022.

From the heel waste station, totes travel along rollers to each rinse station. At the rinse stations, spray heads are attached to the top of each tote and the pressurized cleaning solutions are sprayed into the totes at varying pressures. The first rinse contains 80% water and 20% potassium hydroxide, the second rinse contains water or a combination of water and butyl cellosolve, the third rinse is 100% recycled butyl cellosolve from the fourth rinse, the fourth rinse contains 100% virgin butyl cellosolve. The rinse solutions continuously drain from the bottom of each tote during the rinse cycle. As the liquids drain, they are collected in an open trough with a sump drain located a couple inches from the bottom of the trough. Metal panels and vinyl curtains were in place along the length of the trough during the inspection. The panels and curtains minimize fugitive emissions and splashing from this process. Heavies/sludge accumulate below the sump drain and the remaining cleaning solution is returned to a holding tank for reuse. At the end of each day, Quala collects the heavies/sludge in waste containers for disposal. The recovered rinse solution is run through a fabric filter before being returned to the holding tanks. I saw that the lid to one of the holding tanks was uncovered. JD and Dylan indicated the tank with the open lid contained butyl cellosolve for the third rinse. I informed JD and Dylan that the permit requires Quala to keep containers covered at all times except when operator access is necessary.

The permit requires verification of the butyl cellosolve emission factor from FG-PROCESSLINE to be conducted within 2 years of permit issuance. PTI 79-03C was approved August 17, 2020. AQD has not received a test plan nor test report, required in FGPROCESSLINE SC V.1, indicating Quala has not yet conducted testing to verify the butyl cellosolve emission factor from FG-PROCESSLINE. This is a violation of FGPROCESSLINE SC V.1. A notice of violation will be issued for FGPROCESSLINE SC V.1

Quala is required to keep overhead doors located adjoining the tote cleaning process closed while cleaning totes and for half hour after tote cleaning operations are complete per SC III.5. This condition was added to the PTI to reduce the potential for solvent odors outside of the facility. The two overhead doors adjacent to FG-PROCESSLINE were open about half way during the inspection. I notified JD and Dylan that the permit requires the overhead doors be closed during all tote cleaning operations. Based on the strong odors and the size and location of the air vents I observed inside the facility, it appears the facility has poor indoor air circulation. I told JD and Dylan that I was concerned about the employees' comfort and safety if they were to close the overhead doors to comply with the permit. Dylan stated during the inspection that he is working on improvements to the ventilation at the facility. I also stated I would base issuance of a violation on whether I observed odors downwind of the facility after the inspection. Following the inspection, I conducted odor observations in the parking lot about 40 feet from the overhead doors and about 600 feet downwind and did not detect solvent odors. At this time, I will not issue a notice of violation to Quala for failing to keep the bay doors closed while cleaning was taking place.

## FG-OFFLINE

The offline tote cleaning process includes tote disassembly, heel removal, and two rinses. Totes cleaned in the offline process contain Tufcote Plus Isocyanate Activator which can be reactive and contain chunks of solids. The solvent used in the first rinse is 85% water and 15% butyl cellosolve. n-butyl acetate is used in the second rinse. "SP-752 Isocyanate Cleaner" is used to clean tote lids in FGOFFLINE. n-butyl acetate appears to be a VOC because it is a carbon compound with a boiling point less than 250 C. In addition, the vapor pressure of n-butyl acetate is a range where it can be expected to be emitted. Based on the SDS for SP 752 (Attachment 7), the product contains 100% VOC by weight, of which up to about 15% are HAP (<10% naphthalene and 1-5% ethylene glycol phenyl ether).

The permit requires Quala conduct cleaning by use of an organic solvent if the equipment being cleaned is completely covered or enclosed, except for an opening that is no larger than necessary to allow for safe clearance considering the methods and materials being used (FGOFFLINE SC III.1).

At the offline first rinse station I observed vapors constantly escaping between the spray head lid and the tote while a tote was being rinsed. After the inspection, I asked JD if it was possible, from a process safety standpoint, for the sprayer lid to be tightly closed so that there are no emissions escaping through the space between the lid and tote when cleaning the interior in the offline first rinse. JD responded that it would be difficult to achieve because the mechanical device used to clean and recirculate water or cleaning solutions is mounted below the cover plate. The mechanical device or "Spinner" operates on a two-axis rotation to clean the interior of the totes. JD indicated that he could install an enclosed booth vented through a stack that he could purpose in lieu of trying to create an airtight seal around the top. I informed JD that, though the booth may benefit workers, it does not appear it would minimize ambient air emissions from the offline sprayer lid because emissions would just be discharged through a stack, instead of fugitive.

The permit requires Quala to capture all waste materials and store them in closed containers and to handle all VOC or HAP containing materials in a manner to minimize generation of fugitive emissions, including keeping containers covered at all times except when operator access is necessary (EU-OFFLINE SC III.2 and III.3 respectively).

The operator removed the lid of one of the heel waste drums while I was in the heel removal area. After removing the lid, the operator placed tote on the platform in front of the waste container and drained the heel from the tote into the waste drum. Inside the waste drum I observed what looked like broken, off-white, sheets of ice. The lid to the other waste drum was covered. None of the chemical abstract service (CAS) registry numbers listed in the Tufcote Plus Isocyanate Activator SDS are included in the EPA's list of HAPs.

I observed, at the offline second rinse station, the rinse head, butyl acetate tank, and lid cleaning station. The lid cleaning tank was uncovered. I told JD to keep lids to tanks closed at all times except when operator access is necessary. JD closed the lid to the lid cleaning tank while I was present and placed operating instructions on the cleaner.

The permit contains a limit of 3 totes processed per hour based on a daily average and 4,000 totes processed per year at the offline cleaning station (FGOFFLINE SC III.4). Brett provided records of the number of totes processed at FGOFFLINE, as required in FGOFFLINE SC VI.3, between July 2021 and July 2022. The records indicate Quala

exceeded the hourly average tote limit on April 19, 2022. Quala reported the hourly average totes processed on April 19, 2022 was 4. This is a violation of FGOFFLINE SC III.4. The highest 12-month rolling number of totes process were 2,289 reported for the 12-month period ending June 2022.

FGOFFLINE SC VI.4 requires Quala to keep records of the amount of butyl cellosolve used in EUOFFFIRSTRINSE each calendar month and 12-month rolling time period as determined at the end of each calendar month, as required by SC II.1. Brett provided the butyl cellosolve records for the first rinse, however, FGOFFLINE SC II does not contain any requirements.

### **FGFACILITY**

PTI 79-03C contains a facility-wide individual HAP limit of 9 tons/year (FGFACILITY SC I.1), an aggregate HAP limit of 22.5 tons/year (FGFACILITY SC I.2), and a VOC limit of 80 tons/year (FGFACILITY I.3) .

Brett provided monthly and 12-month rolling VOC and HAP emissions calculations for July 2021 through July 2022 (Attachment 8). Quala is using the HAP emissions factors in Appendix A of PTI 79-03C for process line heel waste emissions. HAP emissions from EUEXTERIOR (SP-3341) and FGOFFLINE (SP-752) are not included in the individual and aggregate HAP emissions calculation. The SDS for SP-3341 indicates it contains up to 9% HAP (0-6% cumene and 0-3% xylene). The SDS for SP-752 indicates it contains approximately 15% HAP (<10% naphthalene and 1-5% ethylene glycol phenyl ether). The records provided indicate the highest 12-month rolling aggregate HAP emissions were 1.6 tons reported in July 2021. Using the highest HAP percentage listed in the SDS EUEXTERIOR (SP-3341) and FGOFFLINE (SP-752) and the 12-month rolling VOC for EUEXTERIOR and FGOFFLINE for the period ending July 2021, the highest aggregate HAP emissions would be approximately 3.39 tons which is still less than the limits in FGFACILITY SC I.1 and I.2.

The monthly and 12-month rolling VOC emissions calculations listed on the facility summary page provided do not include VOC emissions from EUEXTERIOR. The highest reported 12-month rolling VOC emissions on the facility summary page were 95.84 tons reported in July 2021. Adding the 12-month rolling VOC emissions from the EUEXTERIOR page for the period ending July 2021 (11.06 tons) to the 12-month rolling emissions reported in the facility summary page (95.84 tons), the highest 12-month rolling VOC emissions are 106.9 tons which exceeds the permit limit and major source threshold for VOC. In addition, the facility-wide VOC emissions, including EUEXTERIOR, exceed the emission limit in FGFACILITY SC I.3 for the 12-month time periods ending August 2021, Sept. 2021, Oct. 2021, Nov. 2021, Dec. 2021, and Jan. 2022. This is a violation of FGFACILITY SC I.3.

During the previous inspection, conducted on 6/10/2021, Quala exceeded the 80 tons/year VOC limit and a notice of violation of FGFACILITY SC I.3 was issued on 7/21/2021. Quala indicated, in the violation response, that during the month of August 2020, Quala received a customer request to increase the amount of virgin butyl cellosolve used during the final rinse temporarily. The VOC emission exceedances were due to the temporary increase in butyl cellosolve for the fourth rinse in August 2020. The violation response also states that in working with the customer, the amount of butyl cellosolve requested by the customer in the final rinse was determined to be unsustainable. The VOC emissions from August 2020 would no longer be calculated in the 12-month rolling starting with the 12-month period

ending August 2021. However, Quala still exceeded the 12-month rolling VOC emission limit in FGFACILITY SC I.3 for the 12-month periods ending August 2021, Sept. 2021, Oct. 2021, Nov. 2021, Dec. 2021, and Jan. 2022, after the August 2020 emissions were no longer counted in the 12-month rolling total. A second notice of violation will be issued for FGFACILITY SC I.3.

### Michigan Air Emissions Reporting System (MAERS)

Facility-wide VOC emissions reported for RY 2021 were 61.23 tons which is about 20 tons less than indicated in the records submitted for this inspection for calendar year 2021.

MAERS emissions were not calculated as specified in the PTI 79-03C for FGPROCESSLINE nor using a mass balance approach. Specifically, the records submitted with the MAERS report indicate Quala subtracted the amount of butyl cellosolve sent off as waste from the VOC emissions calculated using the emission factor in PTI 79-03C. For mass balance, the amount of waste sent off should be subtracted from the amount of butyl cellosolve used, not from the VOC emissions calculated using the emission factors in PTI 79-03C. Looking at the amount of virgin butyl cellosolve used and sent off as waste for FGPROCESSLINE submitted with the MAERS report, the amount of butyl cellosolve that is not recovered in the process (emitted) ranges between 73% and 93%. The emission factors from the PTI were based on a test conducted at the facility in 2002 that indicated about a quarter of the butyl cellosolve used is unrecovered, and thus considered to be emitted. In addition, the permit contains a credit of 0.36 lb VOC/tote to be subtracted from the amount of butyl cellosolve unrecovered. According to the permit application, the credit is based on the assumption that approximately 10.99 oz of unrecovered butyl cellosolve leaves the facility in the clean totes, and therefore is not emitted.

I sent an email to Courtney Durham and Chuck Boyd, Quala, regarding the MAERS emissions calculations. In the email, I stated the emissions from the process line are equal to 33.79% by weight of virgin butyl cellosolve used according to PTI 79-03C. Therefore, the amount sent off as waste should not be deducted from the 33.79% of virgin butyl cellosolve used. A new PTI application would need to be submitted if Quala would like to use another method to calculate emissions. Courtney sent updated emissions calculations on 6/7/2022. On 6/8/2022, 7/6/2022, and 8/26/2022 I informed Courtney that Quala needs enter the VOC emissions from the updated calculations (102,816 lbs) for the process line in MAERS and re-submit MAERS. As of 9/20/2022, Quala has not re-submitted their RY 2021 MAERS report. Failure to submit the MAERS report will be included in the notice of violation.

### CONCLUSION

Based on information gathered and reviewed for this inspection, a notice of violation will be issued for FGPROCESSLINE SC V.1, FGOFFLINE SC III.4, and MAERS non-submittal. A second notice of violation will be issued for FGPROCESSLINE SC I.1, FG-PROCESSLINE SC III.3.b and c, and FGFACILITY SC I.3.

The following violations included in the notice of violation issued on 7/21/2021 will be resolved based on records collected and on my observations during my inspection on August 25, 2022: EUEXTERIOR SC III.1, FGPROCESSLINE SC III.3 f, FGPROCESSLINE SC VI.8 and SC VI.9.

NAME *K. Kelly*

DATE 9/22/2022

SUPERVISOR *Joyce*