LG Chem
Michigan Inc.

Mr. Cody Yazzie
MDEQ Air Compliance Inspector
Air Quality Division
7953 Adobe Road
Kalamazoo, Michigan 49009-5025

Ms. Jenine Camilleri
Enforcement Unit Supervisor
Department of Environmental Quality
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909-7760

Date: October 08, 2018

RE: Written Response to Violation Notice for SRN: P0087, Allegan County dated September 17, 2018

Dear Mr. Yazzie, and Ms. Camilleri,

This letter is to serve as response to the MDEQ Air Quality Division Violation Notice dated September 17, 2018. Below is a summary of findings from the August 23, 2018 Air Compliance Inspection performed at LG Chem Michigan.

1) EUNMP - Facility is currently not keeping adequate records of the NMP used in the solvent recovery system. The facility is tracking the make-up NMP and not the NMP throughput on a monthly and annual basis. These records make it so that compliance with the material throughput limit cannot be determined.

This issue was brought up during the last inspection. Tracking emissions using material throughput is not consistent with the established material limit, however it is in line with the actual usage. I discussed the issue with Dale Turton, who is now retired. A corrective action response was submitted at the time where Dale Turton was to check into the details whether or not the restriction was a throughput or usage. Since that time I have been tracking throughput off to the side. Throughput and usage have been tracked and compared to the permit limit. At no time either of the methods exceeded the permit limit.

Corrective Actions – Sent Inspector Yazzie the throughput method and usage method records.

Target Completion Date – Completed

2) EUNMP - The facility is using emission factors and was unable to provide where the emission factors were derived from. Facility should be able to provide evidence where the emission factor being used for emission calculations are derived from. The facility is using an emission factor based on operating time. This may not be derived from AP-42, manufacturer's, or test data specified in Special Condition VI.3

Emission factors have been calculated by three outside consultants over the past few years the company was in operation. There is no clear way to know which consulting firm did which calculation.

Corrective Action – Currently in the process of a Permit Modification with a Permit Engineer from MDEQ. All emission rates and calculations will be revised on a batch load basis.

Target Completion Date – November 15, 2018

3) The facility installed an additional electrolyte line in April 2018. The additional electrolyte line is not permitted under PTI No. 64-10A.

The permit does not call out any number of "production lines" associated with EUELECTROLYTE and was categorized as an emission unit rather than a flexible group. The installation of equipment was considered a capacity increase similar to adding another spray gun to a paint booth. The emissions were evaluated with the increase in capacity and were still far below the established permit limit. My interpretation is this doesn't meet the definition of Modification.

Corrective Actions – Need clarification on this issue from Inspector Yazzie

Target Completion Date – November 1, 2018

4) After the battery pouches are filled with electrolyte in the EUELECTROLYTE process. The facility then charges and ages the batteries. LG Chem uses vacuum pumps for pulling excess gases out of the pouches. The small amount of residual solvent in the pouches that is released into the rooms are then emitted outsides via fans.

We have two vacuum pumps rooms at the facility. Most vacuum pumps are dedicated towards pick and place devices on the production line. The remainder pumps remove the small amount of gases that develop inside the battery cells outer covering. The emission is very small and is already accounted for as the emission unit as a whole.

Corrective Actions – Will look into tracking these emissions separately from the emission unit if needed.

Target Completion Date – December 1, 2018

5) EUELECTROLYTE - The facility recorded a breakthrough reading over 20% on May 30, 2018. The facility operated without fresh carbon until July 6, 2018.

Replacement carbon was not on hand and had to be ordered causing the delayed change out. We are currently looking into the cost of maintaining these air scrubber versus the VOC they capture. Estimates are approximately $8,000 per ton of VOC capture per air scrubber.

Corrective Actions – Evaluate the operational costs to run the air scrubbers versus the capture. If needed we will store one change out of carbon on hand to eliminate delays to change out the carbon when break through occurs.

Target Completion Date – December 1, 2018

6) EUELECTROLYTE - The facility is not including VOC emission from Isopropyl Alcohol and Ink VOC used in this emission unit. The Isopropyl Alcohol usage is close to one ton per month preventing an accurate determination of compliance with the 8.5 tons per year VOC limit.

IPA is used as a surface cleaning solvent throughout the plant and not at just one emission unit. IPA usage needs to be tracked by its usage at each emission unit where it is used or as a whole against the facility VOCs.

Corrective Actions – Begin accounting for IPA where it is being used and track it on the related emission record.

Target Completion Date – November 1, 2018

7) FGELECTRODEMIX - The facility is currently installing an additional electrode mix line. The line is currently not operational, but equipment is being installed and not permitted under PTI No. 64-10A.

Communication of future changes needs to be communicated thoroughly.

Corrective Actions – Revise project package to include Environmental Approval so projects can be evaluated by the onsite Environmental Specialist before they start.

Target Completion Date – December 31, 2018

8) FGELECTRODEMIX -The facility recorded a breakthrough reading over 20% on May 30, 2018. The facility operated without fresh carbon until June 15, 2018.

Replacement carbon was not on hand and had to be ordered causing the delayed change out. We are currently looking into the cost of maintaining these air scrubber versus the VOC they capture. Estimates are approximately $8,000 per ton of VOC capture per air scrubber

Corrective Actions – Evaluate the operational costs to run the air scrubbers versus the capture. If needed we will store one change out of carbon on hand to eliminate delays to change out the carbon when break through occurs.

Target Completion Date – December 1, 2018

9) The facility has not calibrated the differential pressure gauges reading the pressure drop across the filter in the dust collector.

Last year an outside contractor confirmed all DP sensors were working properly, however they did not provide any certificate of calibration.

Corrective Actions – Request Calibration Certificates for the DP sensors from the contractor performing the work.

Target Completion Date – December 1, 2018

10) EUSLITTING - The facility installed EUSLITTING3 in July 2018. This is beyond the 18 months from the issuance of PTI 64-10A. The facility needed to reapply for a PTI to install equipment that was not installed during the 18-month period after the issuance of PTI 64-10A.

Communication of future changes needs to be communicated thoroughly.

Corrective Actions – Revise project package to include Environmental Approval so projects can be evaluated by the onsite Environmental Specialist before they start.

Target Completion Date – December 1, 2018

11) FGSLITTING - The facility has not calibrated the differential pressure gauges reading the pressure drop across the filter in the dust collector.

Last year an outside contractor confirmed all DP sensors were working properly, however they did not provide any certificate of calibration.

Corrective Actions – Request Calibration Certificates for the DP sensors from the contractor performing the work.

Target Completion Date – December 1, 2018

12) EUNOTCHING -The facility installed EUNOTCHING5 in July 2018. This is beyond the 18 months from the issuance of PTI 64-10A. The facility needed to reapply for a PTI to install equipment that was not installed during the 18-month period after the issuance of PTI 64-10A.

Communication of future changes needs to be communicated thoroughly.

Corrective Actions – Revise project package to include Environmental Approval so projects can be evaluated by the onsite Environmental Specialist before they start.

Target Completion Date – December 1, 2018

13) FGNOTCHING - The facility has not calibrated the differential pressure gauges reading the pressure drop across the filter in the dust collector. During the inspection one dust collector was reading an error but the notching line was still operating. Records showed that the facility was operating notching lines emitting to dust collector 6 operated while the dust collector was out of typical operating range for about 3 weeks.

Last year an outside contractor confirmed all DP sensors were working properly, however they did not provide any certificate of calibration.

Corrective Actions – Request Calibration Certificates for the DP sensors from the contractor performing the work.

Target Completion Date – December 1, 2018

14) FGDCBOILERS - The facility has not provided written notification of construction and operation of the HHWBBOILERS. The initial notification was to include when operation started, the design heat input capacity of the affected facility and identification of fuels to be combusted, if the applicable a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels, and the annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

Corrective Actions – Information has been sent to Inspector Cody Yazzie

Target Completion Date – Completed

15) FGGENERATORS - The facility was not able to show documentation that the engines for the emergency generators meet the emission limits in PTI No. 64-10A. The facility is required to show documentation that the engines meet emission limits in Special Conditions I.1-4. The documentation is required to be either a certification from the manufacturer or be demonstrated with an initial performance test within one year of engine installation that the emission limits are met.

This was an oversite when the initial permit was developed.

Corrective Actions – Will get the information from the OEM and send it to Inspector Yazzie.

Target Completion Date – Completed

16) FGFACILITY - The facility is reporting emissions that are over the 125 pounds per year of Manganese emission limit. The facility went over the limit in February of 2016. The facility reported 163 pounds per year during the 12-month rolling time period. The facility has been increasing in emissions since that February. The facility is averaging around 477 pounds per year for the 12-month rolling during the 2018 year.

Corrective Actions – Currently in the process of a Permit Modification with a Permit Engineer from MDEQ. All emission rates and calculations will be revised on a batch load basis.

Target Completion Date – November 1, 2018

17) FGFACILITY - The facility is only calculating manganese, nickel, and cobalt emissions from FGELECTRODEMIX and EUNMP. The facility calculates potential emissions of manganese, nickel, and cobalt for EUELECTROLYTE, FGSLITTING, and FGNOTCHING. The facility should be including these emissions as part of the emissions in FGFACILITY. Facility should include any of the exempt equipment that emits these pollutants as a part of the emissions as well.

Corrective Actions – Revising emission database to properly sum the dust from all emission units.

Target Completion Date – November 1, 2018

18) The facility uses feedstock material that has an individual concentration greater than 1.0 percent by weight of Manganese and greater than 0.1 percent by weight of nickel. This subjects the facility to 40 CFR Part 63 Subpart VVVVVV. The facility is required to apply and obtain a Title V permit. The facility should have applied for the Title V permit by December 21, 2013.

Corrective Actions – Will apply for Title V ROP

Target Completion Date – November 1, 2018

LG Chem
Michigan Inc.

In order to improve our environmental performance plant wide we have decided to implement ISO14001:2015 EMS

Please feel free to contact me if you have any questions at 269-804-9226 or by email at rseverns@lgchem.com

Sincerely,

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Senior Environmental Specialist
LG Chem Michigan Inc