

October 27, 2023

The Honorable Dr. Michal Freedhoff
Assistant Administrator
Office of Pollution Prevention and Toxics
United States Environmental Protection Agency
1200 Pennsylvania Avenue N.W.
Washington, DC 20460



Re: Supplemental Comments of Covestro LLC, submitted on *Methylene Chloride; Regulation Under the Toxic Substances Control Act (TSCA)* (Proposed Rule) (Docket No. EPA-HQ-OPPT-2020-0465)

Covestro LLC
1 Covestro Circle
Pittsburgh, PA 15205
USA

Dear Dr. Freedhoff:

Robert Skoglund, PhD, DABT, CIH,
CPPS
Director, Product Safety &
Regulatory Affairs (North America)

Thank you again for your continued engagement with the polycarbonate manufacturing industry on the Proposed Rule for Methylene Chloride. We appreciate that, at a meeting with the American Chemistry Council's Polycarbonate/BPA Global Alliance on September 18, 2023, the U.S. Environmental Protection Agency (EPA) agreed to allow polycarbonate industry companies to provide additional data to support the conclusion that the polycarbonate industry can meet the proposed Workplace Chemical Protection Program (WCPP) for methylene chloride.

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As Covestro LLC (Covestro) has stated in multiple comments and interactions with EPA, we safely use methylene chloride, and we believe the new data further demonstrates that Covestro can meet the proposed WCPP for methylene chloride. In the past several months, Covestro has validated that we can measure workplace exposures to below the proposed occupational exposure limits and has documented with new data that our existing exposure control plan is already largely compliance with the WCPP. The data shows that 87% of the sampled exposure scenarios (47 of 54 samples) had results that were at or below the proposed Existing Chemical Exposure Limit (ECEL) of 2 ppm as an 8-hour time-weighted average (TWA) or the EPA Short Term Exposure Limit (EPA STEL) of 16 ppm as a 15-minute TWA. For the six samples that exceeded the EPA STEL, employees were properly equipped with PPE, which is a permissible approach under the proposed rule. We therefore request that EPA include these additional data in the rulemaking docket and allow the continued use of methylene chloride in polycarbonate production and as a non-contact heat-exchange fluid under the WCPP.

The additional data collection began in August 2023 with the accredited Covestro Industrial Hygiene Laboratory reviewing and revalidating its analysis process for methylene chloride to confirm that our limit-of-quantification (LOQ) are adequate to confidently measure at levels below the WCPP exposure limits. As you know, the LOQ is dependent on sampling conditions; our LOQ for the ECEL for this set of samples was a maximum of 0.028 ppm and for the EPA STEL was a maximum of 1.6 ppm. Both are appropriate for demonstrating compliance with the WCPP ECEL and EPA STEL. Next,

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the Covestro Baytown Industrial Hygiene staff revisited the Job Hazard Analyses for the polycarbonate unit and updated the sampling plan. We were determined to provide new data by the end of October 2023, and this set of data represents the sampling and analyses that could be accomplished in this period. Finally, samples were taken at various locations along the fenceline to measure potential exposure to the community.

The four appendices to this letter provide the results of the recent sampling. Appendix I contains the results from four area samples taken near the closed loop refrigeration unit that uses methylene chloride as a heat exchanger. Appendix II contains the results from nine full-shift TWA personal samples from activity in the polycarbonate unit. Appendix III contains the results from forty-five STEL personal samples from specific tasks in the polycarbonate unit. Appendix IV contains nine outdoor area samples collected along the fenceline of our Baytown, TX facility.

These data show that Covestro can meet the proposed WCPP for methylene chloride. Covestro considers these data to be our initial exposure monitoring results for compliance with the proposed WCPP for methylene chloride. We continue to use the Hierarchy of Controls to evaluate exposures above the action level and will develop a compliant exposure control plan within one year of publication of the final rule. Consistent with the proposed rule, we plan to implement administrative and engineering controls to reduce exposures and our dependence on PPE wherever feasible and appropriate.

These data and the narrative were developed with input from the Covestro methylene chloride workgroup, the industrial hygiene staff at our Baytown, TX facility, and laboratory staff at the Pittsburgh, PA campus. These data are not considered confidential.

If you have any questions or would like to discuss further, please contact me at robert.skoglund@covestro.com or 412-413-6347.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. Skoglund', written in a cursive style.

Robert Skoglund, Ph.D. DABT, CIH, CPPS
Director, Product Safety & Regulatory Affairs (North America)

cc: Ingrid Feustel

Appendix I. Area samples from near the methylene chloride-based heat-exchanger.

This table contains the results from four area samples. These areas are outdoors but are covered by a roof to protect the equipment from rain. The table contains sample ID, identification of the areas that were sampled, the duration of the sampling in minutes, the required PPE, and the measured concentrations. No special PPE are required to enter these areas and the measured values were all lower than the proposed WCPP 8-hour TWA value.

| Sample Number | Area | Sample Time - minute | Required PPE | Result |
|-----------------|---|----------------------|--------------|----------|
| BTN-09132023-01 | Methylene chloride heat-exchange condenser - west side | 587 | • None | 0.82 ppm |
| BTN-09132023-02 | Methylene chloride heat-exchange condenser - east side | 585 | • None | 0.93 ppm |
| BTN-09132023-03 | South of secondary methylene chloride heat-exchange condenser | 584 | • None | 0.81 ppm |
| BTN-09132023-04 | North of secondary methylene chloride heat-exchange condenser | 579 | • None | 1.1 ppm |

Appendix II. Full-shift TWA personal samples from activity in the polycarbonate unit

This table contains the results from nine full-shift TWA personal samples. The table contains sample ID, identification of the activities that were completed, the duration of the sampling in minutes, the required PPE, and the measured concentration. Seven of the measured concentrations were lower than the proposed WCPP 8-hour TWA value. One sample (BTN-10032023-01) was equal to the WCPP 8-hour TWA value and one sample (BTN-10032023-02) exceeded the WCPP 8-hour TWA (2.3 ppm vs 2 ppm). While the 2.3 ppm result is still OSHA compliant, this exceedance over the proposed ECEL underscores the importance of a thorough analysis of job tasks and the implementation of engineering and administrative controls when the rule is published as final.

| Sample Number | Activities | Sample Time - minute | Required PPE | Result |
|-----------------|---|----------------------|---|----------|
| MJD100523-02 | <ul style="list-style-type: none"> • Took unit readings • Die Change • Housekeeping tasks | 579 | <ul style="list-style-type: none"> • Flame Resistant Clothing (FRC) • Leather Gloves (LG) | 0.47 ppm |
| MJD100523-01 | <ul style="list-style-type: none"> • Collected 7 process samples • Tank farm readings • Decant solvent tank | 550 | <ul style="list-style-type: none"> • FRC • Full face supplied air respirator (FFSAR) • Tychem 6000 suit (Ty6000) • Chemical resistant gloves (CRG) • Rubber Boots (RB) | 0.52 ppm |
| MJD100423-01 | <ul style="list-style-type: none"> • Perform walkthroughs for outage jobs • Housekeeping of 163 area | 544 | <ul style="list-style-type: none"> • FRC • LG | 0.60 ppm |
| BTN-10042023-02 | <ul style="list-style-type: none"> • Perform lock-out of radiation sources • Work in the Polycarbonate Technician (PCT) shop | 513 | <ul style="list-style-type: none"> • FRC • LG | 0.68 ppm |
| BTN-10042023-01 | <ul style="list-style-type: none"> • Pull heater plates from line 6 • Worked in warehouse • Worked on Line 6 heater plates | 515 | <ul style="list-style-type: none"> • FRC • LG | 0.80 ppm |
| MJD100323-02 | <ul style="list-style-type: none"> • Collected 8 process samples • Recover filter change • Tank farm readings | 562 | <ul style="list-style-type: none"> • FRC • FFSAR • Ty6000 • CRG | 1.9 ppm |

Appendix II. Continued.

| Sample Number | Activities | Sample Time - minute | Required PPE | Result |
|-----------------|--|----------------------|---|---------|
| MJD100323-01 | <ul style="list-style-type: none"> • Performed Die Change • Pulled Goobers • Walked out line 6 project • Separated strands on Line 5 | 562 | <ul style="list-style-type: none"> • FRC | 1.8 ppm |
| BTN-10032023-01 | <ul style="list-style-type: none"> • Removed heater plates | 574 | <ul style="list-style-type: none"> • FRC • LG | 2.0 ppm |
| BTN-10032023-02 | <ul style="list-style-type: none"> • Pulled heater plates • Various maintenance activities during line outage | 570 | <ul style="list-style-type: none"> • FRC • LG | 2.3 ppm |

Appendix III. Short-term personal samples from activity in the polycarbonate unit.

This table contains the results from forty-five short-term personal samples. The table contains sample ID, identification of the tasks that were completed, the duration of the sampling in minutes, the required PPE, and the measured concentration. Thirty-nine of the measured concentrations were lower than the proposed WCPP 15-minute TWA value. Six samples exceeded the WCPP 15-minute STEL. In each of the exposure scenarios where the WCPP 15-minute STEL value was exceeded, the required PPE included full-face-supplied-air-respirators or self-contained-breathing apparatus which is permissible under the Proposed Methylene Chloride Rule, specifically Table 2 - *Respiratory Protection Conditions and Requirements*. See 83 Fed. Reg. 28284 (May 3, 2023).

| Sample Number | Task | Sample Time - minute | Required PPE | Result |
|-----------------|---|----------------------|---|-----------|
| BTN-09072023-01 | <ul style="list-style-type: none"> Methylene Chloride Truck Unloading Hose connection and sample collection (2 taken) | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG RB Ty6000 | 18 ppm |
| BTN-09202023-05 | <ul style="list-style-type: none"> Methylene Chloride Solvent Disposal | 15 | <ul style="list-style-type: none"> FRC Self-Contained Breathing Apparatus (SCBA) CRG Ty6000 | 4.8 ppm |
| BTN-09212023-05 | <ul style="list-style-type: none"> Methylene Chloride Solvent Disposal | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 3.2 ppm |
| BTN-09202023-01 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC | <0.39 ppm |
| BTN-09202023-02 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 5.9 ppm |
| BTN-09202023-03 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 2.3 ppm |

Appendix III. Continued.

| Sample Number | Task | Sample Time - minute | Required PPE | Result |
|-------------------|---|----------------------|---|-----------|
| BTN-09202023-04 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 3.7 ppm |
| BTN-09212023-01 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC | <0.38 ppm |
| BTN-09212023-02 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 3.4 ppm |
| BTN-09212023-03 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 4.2 ppm |
| 10BTN-09212023-04 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 4.3 ppm |
| BTN-09252023-05 | <ul style="list-style-type: none"> Methylene Chloride Solvent Disposal | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 6.6 ppm |
| BTN-09262023-05 | <ul style="list-style-type: none"> Methylene Chloride Solvent Disposal | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 4.2 ppm |
| BTN-09272023-05 | <ul style="list-style-type: none"> Methylene Chloride Solvent Disposal | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 3.2 ppm |
| BTN-09282023-05 | <ul style="list-style-type: none"> Methylene Chloride Solvent Disposal | 10 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 52 ppm |

Appendix III. Continued.

| Sample Number | Task | Sample Time - minute | Required PPE | Result |
|-----------------|---|----------------------|---|-----------|
| BTN-09252023-01 | <ul style="list-style-type: none"> Process Sample Collection | 19 | <ul style="list-style-type: none"> FRC | <0.30 ppm |
| BTN-09252023-02 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 0.76 ppm |
| BTN-09252023-03 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 4.2 ppm |
| BTN-09252023-04 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 2.7 ppm |
| BTN-09262023-01 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC Ty6000 CRG | 2.2 ppm |
| BTN-09262023-02 | <ul style="list-style-type: none"> Process Sample Collection | 14 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 6.1 ppm |
| BTN-09262023-03 | <ul style="list-style-type: none"> Process Sample Collection | 14 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 3.5 ppm |
| BTN-09262023-04 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 1.7 ppm |
| BTN-09272023-01 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC CRG | 1.0 ppm |

Appendix III. Continued.

| Sample Number | Task | Sample Time - minute | Required PPE | Result |
|-----------------|---|----------------------|---|----------|
| BTN-09272023-02 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 1.1 ppm |
| BTN-09272023-03 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 3.7 ppm |
| BTN-09272023-04 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 6.5 ppm |
| BTN-09282023-01 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC | 5.2 ppm |
| BTN-09282023-02 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 1.5 ppm |
| BTN-09282023-03 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 4.7 ppm |
| BTN-09282023-04 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC FFSAR CRG Ty6000 | 2.0 ppm |
| BTN-9302023-01 | <ul style="list-style-type: none"> Equipment Draining | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | <1.6 ppm |
| BTN-9302023-02 | <ul style="list-style-type: none"> Equipment Draining | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 28 ppm |

Appendix III. Continued.

| Sample Number | Task | Sample Time - minute | Required PPE | Result |
|------------------|--|----------------------|--|----------|
| BTN-10052023-01 | <ul style="list-style-type: none"> Process Sample Collection | 18 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 28 ppm |
| BTN-10022023-01 | <ul style="list-style-type: none"> Process Sample Collection | 17 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 25 ppm |
| MJD100323-06 | <ul style="list-style-type: none"> Line Breaking | 15 | <ul style="list-style-type: none"> FRC SCBA Ty6000 | <1.3 ppm |
| MJD100323-05 | <ul style="list-style-type: none"> Line Breaking | 15 | <ul style="list-style-type: none"> FRC SCBA Ty6000 | <1.3 ppm |
| MJD100323-04 | <ul style="list-style-type: none"> Line Breaking | 15 | <ul style="list-style-type: none"> FRC FFSAR Ty6000 | <1.3ppm |
| MJD100323-03 | <ul style="list-style-type: none"> Line Breaking | 15 | <ul style="list-style-type: none"> FRC FFSAR Ty6000 | <1.3 ppm |
| BTN-10032023-03 | <ul style="list-style-type: none"> Process Sample Collection | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 | 6.6 ppm |
| BTN-10032023-04D | <ul style="list-style-type: none"> Methylene Chloride Truck Unloading Dump bucket into waste drum Finish offload | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 RB | 11 ppm |
| BTN-10032023-04C | <ul style="list-style-type: none"> Methylene Chloride Truck Unloading Lined up valve for off-load Drained hose into bucket and cleared line to de-pressure hose | 15 | <ul style="list-style-type: none"> FRC SCBA CRG Ty6000 RB | 101 ppm |

Appendix III. Continued.

| Sample Number | Task | Sample Time - minute | Required PPE | Result |
|------------------|---|----------------------|--|----------|
| BTN-10032023-04B | <ul style="list-style-type: none">• Methylene Chloride Truck Unloading• Connected hose to MeCl truck• Flushed hose to bucket• Collect quality sample for the lab• Dump bucket into waste drum | 15 | <ul style="list-style-type: none">• FRC• SCBA• CRG• Ty6000• RB | 6.3 ppm |
| BTN-10032023-04A | <ul style="list-style-type: none">• Methylene Chloride Truck Unloading• Make hose connection to truck | 15 | <ul style="list-style-type: none">• FRC• SCBA• CRG• Ty6000• RB | <1.3 ppm |
| BTN-10042023-03 | <ul style="list-style-type: none">• Process Sample Collection | 18 | <ul style="list-style-type: none">• FRC• SCBA• Ty6000• CRG• RB | 9.2 |

Appendix IV. Area samples from near the fenceline.

This table contains the results from eight area samples collected along the fenceline of the Baytown, TX facility. These areas are outdoors. The table contains sample ID, identification of the area that was sampled, the duration of the sampling in minutes, the required PPE, and the measured concentration. No PPE are required to enter these areas. All fenceline samples were lower than our LOQ which was approximately 0.028 ppm.

| Sample Number | Location | Sample Time - minute | Required PPE | Result |
|-----------------|--|----------------------|--------------|------------|
| BTN-09122023-01 | Fence line – North of Firehouse | 727 | • None | <0.027 ppm |
| BTN-09122023-02 | Fence line – North of Visitor's Gate | 735 | • None | <0.027 ppm |
| BTN-09122023-03 | Fence line – South of Truck Gate | 721 | • None | <0.027 ppm |
| BTN-09122023-04 | Fence line -West of Chlor-Alkali Turnstile | 706 | • None | <0.028 ppm |
| BTN-09132023-05 | Fence line – West of Gate 4 | 721 | • None | <0.027 ppm |
| BTN-09132023-06 | Fence line – North of Visitor's Gate | 721 | • None | <0.027 ppm |
| BTN-09132023-07 | Fence line – South of Truck Gate | 721 | • None | <0.027 ppm |
| BTN-09132023-08 | Fence line -West of Chlor-Alkali Turnstile | 720 | • None | <0.027 ppm |