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west virginia department of environmental protection

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Division of Water and Waste Management  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone: (304) 926-0470  
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Harold D. Ward, Cabinet Secretary  
dep.wv.gov

**CONSENT ORDER  
ISSUED UNDER THE  
ABOVEGROUND STORAGE TANK ACT  
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 30**

TO: Union Carbide Corporation  
Attn.: Ana G. Marino  
437 MacCorkle Avenue SW  
South Charleston, WV 25303

DATE: July 18, 2024

ORDER NO.: AST-25-001

**INTRODUCTION**

This Consent Order is issued by the Director of the Division of Water and Waste Management (hereinafter “Director”), under the authority of West Virginia Code, Chapter 22, Article 30, Section 1 et seq. to Union Carbide Corporation (hereinafter “Union Carbide”).

**FINDINGS OF FACT**

In support of this Order, the Director hereby finds the following:

1. Union Carbide is the owner/operator of one hundred thirty-eight (138) aboveground storage tanks (ASTs) located in South Charleston, Kanawha County, West Virginia. Forty-two (42) ASTs are Level 1 and ninety-six (96) are register and label. This facility operates under WV Reference Identification Nos. 2014-0004247, 2014-0004250, 2014-0013348, and 2014-0013459.
2. On April 25, 2024, West Virginia Department of Environmental Protection (WVDEP) performed an inspection of the facility. No deficiencies were noted during the inspection.
3. On May 6, 2024, Union Carbide personnel conducted a conference call with WVDEP personnel to report that a permeability test for the secondary containment for WVDEP Tank ID Nos. 020-00001259 and 020-00001260 had failed to meet the seventy-two (72) hour containment requirements. Union Carbide had recently performed repairs to the

Promoting a healthy environment.

secondary containment after a recent visual inspection identified several cracks within the walls of the dikes. Subsequent permeability testing of the dikes after repairs revealed that the secondary containments held for approximately twenty-four (24) hours, not the required seventy-two (72) hours. WVDEP advised Union Carbide that the secondary containment failure is a violation of 47CSR63-10.2.c and pursuant to 47CSR63-10.2.g.1.A that a Level 1 AST must have materials removed from it when the secondary containment is found to be defective and is not repairable within seventy-two (72) hours unless the tank owner or operator requests an extension for good cause shown. Union Carbide advised the Agency of their intent to file an extension request under 47CSR63-10.2.g.1.A.

4. On May 13, 2024, Union Carbide indicated that it would submit a Plan of Corrective Action (POCA) with milestones within thirty (30) days to address the planned repairs to the secondary containment structures and it filed an extension request under 47CSR63-10.2.g.1.A citing the following:
  - a. The tanks are Level 1 due to their storage capacity, not based on hazards of the materials (polyalkylene glycols) stored within the tanks.
  - b. Internal inspections of both tanks were completed in 2018 and both ASTs were found to be in good condition with no structural concerns identified.
  - c. The facility is manned twenty-four (24) hours per day, seven (7) days per week with visual walkthroughs occurring during each operating shift (at least twice per day) which theoretically would detect a release into the secondary containment if one occurred.
  - d. The ASTs are monitored with continuous level monitors. Any unexpected tank level deviation results in an alarm which would immediately be investigated for a possible release.
  - e. In the event of an actual release, Union Carbide could open the dike valves to divert flow from the secondary containments to process sewer which could be diverted to a one-million (1,000,000) gallon holding tank located at the South Charleston Wastewater Treatment Plant. From the time of alarm to the point of flow diversion would be approximately one (1) hour. Permeability testing has shown that the containments would hold material for twenty-four (24) hours; therefore, in the event of an actual release from the tank materials can be diverted and captured, preventing a release to the environment.
5. On May 22, 2024, WVDEP responded to Union Carbide's May 13, 2024 request for an extension indicating that Union Carbide had provided good cause for why the material did not need to be removed from the ASTs in accordance with the requirements of 47CSR63-10.2.g.1.A. WVDEP advised Union Carbide that it shall submit a POCA within thirty (30) days of receipt of WVDEP's May 22, 2024, extension approval letter. WVDEP noted that the POCA shall address any enhanced monitoring that will be performed while repairs to the secondary containment were being performed and a schedule of periodic reports related to the repairs as well as tank system operations and conditions.
6. On June 10, 2024, Union Carbide provided a POCA to WVDEP addressing a schedule for repairs of the secondary containment, interim protective measures to be taken, and

submission of quarterly updates documenting the repairs and tank system operations and conditions. WVDEP reviewed the submission and found the POCA to be satisfactory.

**ORDER FOR COMPLIANCE**

Now, therefore, in accordance with Chapter 22, Article 30, Section 1 et seq. of the West Virginia Code, it is hereby agreed between the parties, and ORDERED by the Director:

1. The aforementioned approved POCA (attached), dated June 10, 2024, and associated schedule is incorporated into and has become part of this Order. Failure to adhere to the approved POCA and associated schedule is a violation of this Order.
2. Upon the effective date of this Order, Union Carbide agrees to the following stipulated penalties. Stipulated penalties, as outlined below, shall end twelve (12) months after the date of the last compliance milestone in the approved POCA.
  - a. Compliance Milestones – The following stipulated penalties will accrue per violation per day for failing to achieve any compliance milestone of the POCA.

Period of Noncompliance	Penalty Per Day per Violation
1 <sup>st</sup> through 14 <sup>th</sup> Days	\$500
15 <sup>th</sup> through 30 <sup>th</sup> Days	\$1,000
31 <sup>st</sup> Day and beyond	\$1,500

- b. Reporting Requirements – The following stipulated penalties will accrue per violation per day for each violation of any reporting requirement of the POCA.

Period of Noncompliance	Penalty Per Day per Violation
1 <sup>st</sup> through 14 <sup>th</sup> Days	\$200
15 <sup>th</sup> through 30 <sup>th</sup> Days	\$400
31 <sup>st</sup> Day and beyond	\$600

Union Carbide shall pay any stipulated penalty within thirty (30) days of receiving WVDEP’s written demand. Payments made pursuant to this paragraph are not tax-deductible for purposes of State or federal law. Payment shall be paid to WVDEP for deposit in the Aboveground Storage Tank Administrative Fund and shall be mailed to:

**Chief Inspector  
Environmental Enforcement - Mail Code #031328  
WVDEP  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304**

### **OTHER PROVISIONS**

1. Union Carbide hereby waives its right to appeal this Order under the provisions of Chapter 22, Article 30, Section 18 of the Code of West Virginia. Under this Order, Union Carbide agrees to take all actions required by the terms and conditions of this Order and consents to and will not contest the Director's jurisdiction regarding this Order. However, Union Carbide does not admit to any factual and legal determinations made by the Director and reserves all rights and defenses available regarding liability or responsibility in any proceedings regarding Union Carbide other than proceedings, administrative or civil, to enforce this Order.
2. The Director reserves the right to take further action if compliance with the terms and conditions of this Order does not adequately address the violations noted herein and reserves all rights and defenses which he may have pursuant to any legal authority, as well as the right to raise, as a basis for supporting such legal authority or defenses, facts other than those contained in the Findings of Fact.
3. If any event occurs which causes delay in the achievement of the requirements of this Order, Union Carbide shall have the burden of proving that the delay was caused by circumstances beyond its reasonable control which could not have been overcome by due diligence (i.e., force majeure). Force majeure shall not include delays caused or contributed to by the lack of sufficient funding. Within three (3) working days after Union Carbide becomes aware of such a delay, notification shall be provided to the Director/Chief Inspector and shall, within ten (10) working days of initial notification, submit a detailed written explanation of the anticipated length and cause of the delay, the measures taken and/or to be taken to prevent or minimize the delay, and a timetable by which Union Carbide intends to implement these measures. If the Director agrees that the delay has been or will be caused by circumstances beyond the reasonable control of Union Carbide (i.e., force majeure), the time for performance hereunder shall be extended for a period of time equal to the delay resulting from such circumstances. A force majeure amendment granted by the Director shall be considered a binding extension of this Order and of the requirements herein. The determination of the Director shall be final and not subject to appeal.
4. Compliance with the terms and conditions of this Order shall not in any way be construed as relieving Union Carbide of the obligation to comply with any applicable law, permit, other order, or any other requirement otherwise applicable. Violations of the terms and conditions of this Order may subject Union Carbide to additional penalties and injunctive relief in accordance with the applicable law.
5. The provisions of this Order are severable and should a court or board of competent jurisdiction declare any provisions to be invalid or unenforceable, all other provisions shall remain in full force and effect.
6. This Order is binding on Union Carbide, its successors and assigns.
7. This Order shall terminate upon Union Carbide's notification of full compliance with the "Order for Compliance" and verification of this notification by WVDEP.

Ana Marino

Ana G. Marino, Responsible Care Director  
Union Carbide Corporation

7-29-24

Date

Public Notice begin:

\_\_\_\_\_  
Date

Public Notice end:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Jeremy W. Bandy, Director  
Division of Water and Waste Management

\_\_\_\_\_  
Date



**Union Carbide Corporation**  
A Subsidiary of The Dow Chemical Company  
U.S.A.

Certified Mail – Return Receipt Requested

Chief Inspector  
Environmental Enforcement  
West Virginia Department of Environmental Protection (WVDEP)  
601 57th Street SE  
Charleston, WV 25304

June 10, 2024

RE: Union Carbide Corporation (UCC)  
Facility ID # 2014-0004250 – South Charleston  
Plan of Corrective Action  
WVDEP Tank ID# 020-00001259 & 020-00001260  
(MACHS Tanks 9562 and 9563) Secondary Containment

As a follow up to our May 6, 2024, conference call, UCC's submittal dated May 13, 2024, and the WVDEP's response dated May 22, 2024, please see the following Plan of Corrective Action for your review, regarding secondary containment for the above referenced Above Ground Storage Tanks.

## **Introduction**

The above referenced tanks are UCC registered 110,000-gallon capacity tanks classified Level 1 regulated tanks under the West Virginia Above Ground Storage Tanks rule (the rule). Secondary containment construction for these tanks consists of brick and concrete walls with earthen floors. Permeability of the secondary containment for these tanks was first tested to meet compliance with Section 10.2 of the rule on November 14, 2017, and were found to meet the seventy-two (72) hour containment requirements. Additionally, these dikes drain to the site's 77 sump/process sewer, which is part of the secondary containment system for the plant.

Recent visual inspection of the dikes identified several cracks within the walls of the dikes, which were promptly repaired. To test the repairs UCC repeated the permeability test but found that the containment structures held for approximately twenty-four (24) hours, not the required seventy-two (72) hours.

Section 10.2.g.1.A. of the rule requires immediate removal of material from affected tanks if the secondary containment is found to have a deficiency that cannot be repaired with seventy-two (72) hours, however, it also provides that the owner may request an extension by demonstrating good cause. Products stored in these tanks are higher volume and require positive displacement pumps, so finding alternate storage with needed volumes and pump style would be difficult and negatively impact plant operations.

These tanks are Level 1 tanks due to the storage capacity, not based on the hazards of the materials stored. Materials stored in these tanks are finished products known as miscellaneous polyalkylene glycols, which are non-hazardous/non-EPA listed materials.

WVDEP has concurred with UCC that the containment deficiency does not immediately adversely affect human health and the environment and that UCC has in place mechanisms to address releases in their response dated May 22, 2024.

### **Plan of Corrective Action with Timeline (POCA)**

1. Engineering evaluations for containment repair options are to be completed by August 31, 2024.
2. Capital authorization request for 2025 spending cycle input is due by September 30, 2024.
3. Engineering work begins. This date will be determined based on capital allocation and be provided as part of the quarterly updates.
4. Site preparation work will begin no later than June 30, 2026. This will include sloping, grating prior to resurfacing to improve drainage to the process sewer.
5. Date of full completion of project by no later than December 31, 2026.
6. UCC will submit quarterly updates documenting repairs progress and current tank system operations and conditions in compliance with POCA requirements within thirty days after the end of each calendar quarter until corrective actions are completed.

### **Interim Protective Measures**

1. These tanks are monitored with continuous liquid level monitors. Any unexpected tank level deviation results in an alarm, alerting operations of a mass balance difference between level readings. In the event of an unexpected level drop alarm, the tank and dike area will immediately be investigated for possible unplanned release conditions.

Time from the point of the alarm to the point of flow diversion would be approximately one hour. The secondary containment test demonstrated that the containment would hold for at least twenty-four (24) hours, so any release would be found with appropriate action taken well within time, resulting in no adverse effect to the environment.

2. The plant is continuously manned with visual walkthroughs occurring during each operating shift. Inspections that comply with the requirements of 47 CFR 63-5.1(a) are documented weekly. In addition, until full compliance is achieved the secondary containment will be inspected and documented in the South Side Plant Surveillance Checklist during each operating shift (twice daily).
3. In the event of an actual release, operations will open the dike valves to divert flow to the 77 sump/process sewer and immediately notify the South Charleston Wastewater Treatment plant to divert the process sewer flow to a one-million-gallon EM holding tank to allow for the safe treatment of the material.

UCC appreciates your time and consideration of this plan of corrective action. If you have any questions, or need additional information, please contact Iris Songer at (304) 389-7440.

Sincerely



Ana G. Marino  
Responsible Care Leader for WVO

cc: Joe Sizemore, WVDEP\*  
Ruth Porter, WVDEP\*  
Cleve Honaker, WVDEP\*  
Joshua Griffin, WVDEP\*

\*electronically