



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PA 19406-2713

February 14, 2022

EA-21-114

Toby Scholl, EH&S Leader  
Union Carbide Corporation  
A Subsidiary of the Dow Chemical Company  
437 MacCorkle Avenue  
South Charleston, WV 25303

**SUBJECT: UNION CARBIDE CORPORATION - NOTICE OF VIOLATION - NRC  
INSPECTION REPORT NO. 03038844/2021001**

Dear Mr. Scholl:

This letter refers to the routine inspection conducted on July 22, 2021, with continued in-office review through September 2, 2021, of activities performed under the U.S. Nuclear Regulatory Commission (NRC) license issued to Union Carbide Corporation (Union Carbide). Based on the results of the inspection, the NRC identified apparent violations (AVs) of NRC requirements. The most significant AV involved the failure to maintain a qualified Radiation Safety Officer (RSO) on your NRC license. Additional AVs involved: a failure to retain records of the radiation protection program, including physical inventories; a failure to perform a prospective evaluation demonstrating that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits in 10 CFR Part 20; and a failure to conduct periodic radiation surveys. NRC staff discussed the AVs with Mr. Justin Ricks of your organization during a telephonic exit meeting on October 20, 2021, and described the AVs in the NRC inspection report sent to you with a letter dated November 18, 2021 (ML21322A319)<sup>1</sup>.

In the letter transmitting the inspection report, we informed you that one of the AVs identified in the report was being considered for escalated enforcement action. We requested that you provide information about corrective actions for this and the other AVs by either providing a written response or attending a predecisional enforcement conference before we made our final enforcement decision. The NRC noted that, in a letter dated July 20, 2021 (ML21225A570), you had requested a license amendment to name a new RSO. That individual was determined to be qualified and the license amendment was approved on August 20, 2021. In a letter dated December 15, 2021 (ML22025A284), you provided a written response that described the actions taken and planned by Union Carbide to address the RSO issue, as further described below. Your response did not discuss the other AVs.

Based on the information identified during the inspection and the information that your staff provided in the Union Carbide letter dated December 15, 2021, the NRC has determined that violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. As described above, the first violation involved the failure to maintain a

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<sup>1</sup> Designation in parentheses refers to an Agency-wide Documents Access and Management System (ADAMS) accession number. Documents referenced in this letter are publicly-available using the accession number in ADAMS.

qualified RSO on your NRC license. Specifically, after the RSO named on the license left Union Carbide's employment in June 2017, a replacement was identified, but Union Carbide failed to submit an amendment request to add the new RSO to the license. After the replacement RSO left your employment in March 2020, another replacement was identified, but Union Carbide again did not amend the license, and the new replacement was subsequently determined not qualified to be an RSO. Compliance was restored on August 20, 2021, when the NRC approved Union Carbide's July 20, 2021, license amendment request to name a qualified RSO on the license. The NRC considered the violation to be significant because the NRC relies on the RSO to oversee licensed activities and to maintain communication with the NRC about the licensed program. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III (SL III).

In accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$8000 is considered for a SL III violation. Because your facility has not been the subject of escalated enforcement actions within the last two inspections, the NRC considered whether credit was warranted for *Corrective Action* in accordance with the civil penalty assessment process in Section 2.3.4 of the Enforcement Policy. The NRC staff determined that credit for corrective action is warranted. Namely, the individual identified to be the RSO received the required training to be qualified for the position and Union Carbide submitted an amendment request to name this individual on the NRC license. Additionally, Union Carbide created a formal tasking for the company's Environmental Health & Safety Manager to verify the RSO and NRC license on a quarterly basis.

Therefore, to encourage prompt and comprehensive correction of violations, and in recognition of the absence of previous escalated enforcement action, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty. In addition, issuance of this SL III violation constitutes escalated enforcement action that may subject you to increased inspection effort.

As described above, three additional violations were identified that are being assessed at SL IV. Those violations involved a failure to retain physical inventory records, a failure to provide a prospective evaluation showing that unmonitored individuals receive less than the limits in 10 CFR 20.1502, and a failure to perform periodic radiation surveys as directed by Union Carbide's Radiation Safety Program. The violations are cited in the enclosed Notice because they were identified by the NRC.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made available electronically for Public inspection in the NRC Public Document Room and in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your

response that deletes such information. If you request withholding of such information, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). The NRC also includes significant enforcement actions on its Web site at (<http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/>).

If you have any questions concerning this matter, please contact Juan Ayala of my staff at 610-337-6927 or [Juan.Ayala@nrc.gov](mailto:Juan.Ayala@nrc.gov).

Sincerely,

Raymond K. Lorson  
Deputy Regional Administrator

Docket No. 03038844  
License No. 47-00260-03

Enclosure: Notice of Violation

SUBJECT: UNION CARBIDE CORPORATION - NOTICE OF VIOLATION - NRC  
INSPECTION REPORT NO. 03038844/2021001 Dated February 14, 2022

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**ML22007A152**

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## NOTICE OF VIOLATION

Union Carbide Corporation  
South Charleston, West Virginia

Docket No. 03038844  
License No. 47-00260-01  
EA-21-114

During an NRC inspection conducted on July 22, 2021, with continued in-office review through September 2, 2021, violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

### A. ESCALATED VIOLATION

Condition 12 of NRC License No 47-00260-03, Amendment 2, dated November 28, 2016, authorized a specific individual to fulfill the duties and responsibilities of the Radiation Safety Officer (RSO) for the license.

Contrary to the above, from June 2017 to August 30, 2021, the individual specifically authorized as the RSO in Condition 12 of NRC License No. 47-00260-03, Amendment 2, dated November 28, 2016, did not fulfill the duties and responsibilities of a RSO. Specifically, the RSO left the employment of the licensee in June 2017. Union Carbide Corporation appointed new RSOs in 2017, 2020, and 2021 but did not submit a license amendment request until July 20, 2021, and the new RSO was not approved until August 30, 2021.

This is a Severity Level III violation (Enforcement Policy 6.3.c.5.a)

### B. NON-ESCALATED VIOLATIONS

1. License Condition 15 of NRC License 47-00260-03, Amendment 2, dated November 28, 2016, requires, in part, that records of inventories be maintained for three years from the date of each inventory.

Contrary to the above, from January 2018 through December 2020, the licensee failed to maintain records of physical inventories to account for all sources and/or devices received and possessed under the license. Specifically, while the licensee stated that inventories were conducted every six months, the licensee maintained a "living file" that, when updated, overwrote any previous data. As a result, any records of past inventories were subsequently erased and not available for inspection.

This is a Severity Level IV violation (NRC Enforcement Policy Example 6.3.d.3)

2. License Condition 23 of NRC License 47-00260-03, Amendment 2, dated November 28, 2016, requires, in part, that the licensee perform a prospective evaluation demonstrating that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits in 10 CFR Part 20.

Contrary to the above, the licensee failed to provide a prospective evaluation showing that unmonitored individuals receive less than the limits in 10 CFR 20.1502. Specifically, the licensee did not monitor authorized users, and was not able to provide an evaluation that unmonitored individuals would not receive 10 percent of regulatory limits.

This is a Severity Level IV violation (NRC Enforcement Policy Example 6.3.d.3)

3. License Condition 23 of NRC License 47-00260-03, Amendment 2, dated November 28, 2016, requires that the licensee conduct its program in accordance with the statements, representations, and procedures contained in the Application dated June 10, 2015.

Section 10 of the Application dated June 10, 2015, "Radiation Safety Program," states, in part, that the licensee will develop, implement, maintain, and distribute operating and emergency procedures for the radiation safety program.

The Union Carbide Corporation Radiation Safety Program, in part, requires performance of periodic surveys every six months (not to exceed 7 months) of the radiation fields around the sources to assure that radiation exposure is within established limits. These surveys will document that no one in the vicinity of a source will receive a dose greater than 100 mrem/yr.

Contrary to the above, from 2018 to 2021, the licensee failed to perform periodic radiation surveys as directed by the Union Carbide Corporation Radiation Safety Program. Specifically, the licensee did not perform periodic radiation surveys of radiation fields around the sources to assure that radiation exposure is within established limits.

This is a Severity Level IV violation (NRC Enforcement Policy Example 6.3.d.3)

Pursuant to the provisions of 10 CFR 2.201, Union Carbide Corporation is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, Region I, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation; EA-21-114" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued requiring information as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time. If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Your response will be made available electronically for Public inspection in the NRC Public Document Room or in the NRC's ADAMS, accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 14<sup>th</sup> day of February, 2022.