



Union Carbide Corporation
A Subsidiary of The Dow Chemical Company
P.O. Box 8004
437 MacCorkle Avenue, SW
South Charleston, WV 25303
USA

March 15, 2022

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

SUBJECT: Reply to a Notice of Violation; EA-21-114

Dear Mr. Welling:

On February 14, 2022, Union Carbide Corporation received notice that three of the apparent violations (AV) from the review on July 22, 2021, 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. Below is the Union Carbide Corporation response to the three violations.

Failure to retain physical inventory records:

(1) The inventory was being reviewed every 6 months, but the electronic document was being saved over the previous document, not saved as a separate inventory. This caused the record to only have the previous inventory saved. (2) Inventory document is now saved into the folder as a separate document and dated when the inventory was completed. (3) Change in the management of the inventory folder. (4) Inventory for January 2022 was completed, and separate document created to reflect current inventory.

Failure to provide a prospective evaluation showing that unmonitored individuals receive less than the limits in 10 CFR 20.1502

(1) This was not documented in the Radiation Safety Program and monitoring was supposed to be conducted every six months and documented; (2) Monitoring at the radiation source was conducted, the top of the tank exposure is 35 mRem/yr and at the ground level the exposure is 3.5 mRem/yr (3) This will be updated and documented in the Radiation Safety Program and (4) The Radiation Safety Program will go through the site Management of Change (MOC) process and will reflect this update no later than April 30, 2022.

IE07
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Failure to perform periodic radiation surveys as directed by Union Carbide's Radiation Safety Program.

(1) The prior RSO and temporary RSO did not perform these surveys per the Radiation Safety Program. (2) Adding the documented exposure at the Top of the Tank and the Ground Level where all workers and public may have access. (3) Remove the requirement from the Radiation Safety program to survey every 6 months and reference the evaluation conducted for unmonitored individuals. (4) The Radiation Safety Program will go through the site Management of Change (MOC) process and will reflect this update no later than April 30, 2022.

If you have any questions concerning our response to this matter, please contact Justin Ricks at 304-747-1597 or Toby Scholl 304-747-5619.

Sincerely,
Toby Scholl, EH&S Leader
Justin Ricks, RSO



Union Carbide Corporation
A Subsidiary of The Dow Chemical Company
P.O. Box 8004
437 MacCorkle Avenue, SW
South Charleston, WV 25303
USA

December 15, 2021

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

SUBJECT: Response to Apparent Violations in NRC-Inspection Report No. 03038844/2021001; EA-21- 114

Dear Mr. Welling:

On November 18, 2021, Union Carbide Corporation received notice that one of the apparent violations (AV) from the review on July 22, 2021, was being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The AV being considered for escalated enforcement action is related to a failure to maintain a qualified RSO on our NRC license. The reason for this AV is that Deborah Otto was terminated from the company and replaced by Jennifer Whittaker. Jennifer was a certified RSO but did not update our NRC license while employed. Jennifer resigned from the company in early 2020. Due to COVID-19 and travel restrictions, Justin Ricks was not a certified RSO until June 2021. Our license has been amended in accordance with the letter dated July 20, 2021. The corrective steps that will be taken are for the EH&S Leader to verify our site RSO and NRC license on a quarterly basis. This action will be generated in the Dow Compliance Task Tool each quarter and will be closed by the action owner upon verification. We are also updating the site Radiation Program to include the requirement to have a current RSO named in the policy and to have the NRC license match that individual.

If you have any questions concerning our response to this matter, please contact Justin Ricks at 304-747-1597 or Toby Scholl 304-747-5619.

Sincerely,

Toby Scholl, EH&S Leader
Justin Ricks, RSO



**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)¹.

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

¹ 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.

Sincerely,

Raymond K. Lorson
Digitally signed by
Raymond K. Lorson
Date: 2022.02.14
11:37:22 -05'00'
Raymond K. Lorson
Deputy Regional Administrator

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

Enclosure: Notice of Violation

The following information was received from the licensee on 02/14/2022 regarding the violation of 10 CFR 2.390(b)...

The licensee has provided the following information regarding the violation of 10 CFR 2.390(b)...

The licensee has provided the following information regarding the violation of 10 CFR 2.390(b)...

The licensee has provided the following information regarding the violation of 10 CFR 2.390(b)...

NOTICE OF VIOLATION

Union Carbide Corporation Docket No. 03038844
South Charleston, West Virginia 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 licensee.

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.

Notice of Violation

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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 14th day of February, 2022.