



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, ILLINOIS 60532-4352

August 9, 2022

EA-22-056

Robert Craven  
Plant Manager, Fermi 2  
DTE Electric Company  
6400 N. Dixie Hwy.  
Newport, MI 48166

SUBJECT: NRC ROUTINE INSPECTION REPORT NOS. 03004803/2022001(DNMS), 03004804/2022001(DNMS), 03010445/2022001(DNMS), 03018047/2022001(DNMS), NON-ROUTINE INSPECTION REPORT NO. 03037798/2022001(DNMS) AND NOTICES OF VIOLATION – DTE ELECTRIC COMPANY

Dear Mr. Craven:

Between January 6, 2022, and March 4, 2022, inspectors from the U.S. Nuclear Regulatory Commission (NRC) conducted routine inspections at four of DTE Electric Company's fossil generating stations in Michigan, with in-office review, including a non-routine inspection of a fifth fossil generating station, through June 29, 2022. The inspectors visited the Trenton Channel Power Plant in Trenton on January 6; Greenwood Energy Center in Avoca on February 23, and the St. Clair and Belle River Power Plants in East China on March 4. The purpose of these inspections was to review activities performed under each facility's NRC byproduct materials license to ensure that activities were being performed in accordance with NRC requirements. The purpose of the in-office review was to evaluate inspection findings and corrective actions, and to evaluate compliance with the conditions of the license issued to the Monroe Power Plant in Monroe. Mr. Ryan Craffey of my staff and I conducted a final exit meeting by telephone with you, Mr. Bruce Rumans, Ms. Jerri Walters, and Ms. Heather Lucier of your staff on July 18, 2022, to discuss the inspection findings. This letter presents the results of the inspection.

During this inspection, the NRC staff examined activities conducted under your licenses related to public health and safety. Additionally, the staff examined your compliance with the Commission's rules and regulations as well as the conditions of your licenses. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of these inspections, the NRC has determined that eleven Severity Level IV violations of NRC requirements occurred. The violations were evaluated in accordance with the NRC Enforcement Policy, which is available on the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. Five violations concerned the lack of an approved Radiation Safety Officer (RSO), as required by the conditions of each facility's license; three concerned the failure at St. Clair Power Plant, Trenton Channel Power Plant, and Greenwood Energy Center to conduct leak tests of fixed gauges at the manufacturers' specified frequencies, as required by license conditions; two concerned the

failure at Trenton Channel Power Plant and Greenwood Energy Center to perform annual audits of the radiation safety programs, as required by Title 10 of the *Code of Federal Regulations* Section 20.1101(c); and one concerned the failure at St. Clair Power Plant to perform semiannual inventories of sealed sources and devices, as required by license condition. These violations are cited in the enclosed Notices of Violation (Notices), with one Notice per license.

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and to address recurrence, and the date when full compliance will be achieved is already adequately addressed on the docket in this letter and the enclosed report. Therefore, you are not required to respond to this letter unless the description herein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

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

Please feel free to contact Mr. Craffey of my staff if you have any questions regarding this inspection. Mr. Craffey can be reached at 630-829-9655 or [ryan.craffey@nrc.gov](mailto:ryan.craffey@nrc.gov).

Sincerely,



Signed by Kunowski, Michael  
on 08/09/22

Michael A. Kunowski, Chief  
Materials Inspection Branch  
Division of Nuclear Materials Safety

Docket No. 030-04803; 030-04804  
030-10445; 030-18047  
030-37798

License No. 21-02335-05; 21-02335-06  
21-02335-09; 21-02335-12  
21-32707-01

Enclosure:  
Notices of Violation  
Inspection Report

cc (w/encl): State of Michigan  
Heather Lucier  
Bruce Rumans

Letter to R. Craven from M. Kunowski dated August 9, 2022.

SUBJECT: NRC ROUTINE INSPECTION REPORT NOS. 03004803/2022001(DNMS), 03004804/2022001(DNMS), 03010445/2022001(DNMS), 03018047/2022001(DNMS), NON-ROUTINE INSPECTION REPORT NO. 03037798/2022001(DNMS) AND NOTICES OF VIOLATION – DTE ELECTRIC COMPANY

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OFFICE	RIII-DNMS	RIII-DNMS	RIII-EICS	RIII-DNMS
NAME	DPiskura:bw	RCraffey	DBetancourt-Roldan	MKunowski
DATE	8/3/2022	8/4/2022	8/5/2022	8/9/2022

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## NOTICE OF VIOLATION

DTE Electric Company  
St. Clair Power Plant  
East China, MI

License No. 21-02335-05  
Docket No. 030-04803  
EA-22-056

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on March 4, 2022, with continued in-office review through June 29, 2022, three violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. Condition 12 of Amendment No. 28 to NRC License No. 21-02335-05, dated May 11, 2017, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

Contrary to the above, between June 15, 2021, and March 4, 2022, the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone other than the named individual on the license. Specifically, the RSO on the license was reassigned to other duties, and on June 15, 2021, and again on January 27, 2022, the licensee delegated the authority of RSO to replacements without requesting prior approval from the NRC.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

- B. Condition 13.A of Amendment No. 28 to NRC License No. 21-02335-05, dated May 11, 2017, states that sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.

Certificate of Registration Nos. TX-0634-D-902-S, TX-0634-D-901-S, TX-0634-D-900-B, OH-0522-D-115B, KY-512-D-801-B, and NR-522-D-823-S for Texas Nuclear Corporation 5180A, 5181, and 5192; Thermo Process Instruments 5193; Vega Americas SR-A and SH-100; and Ohmart Corporation SHGS-2 fixed gauges, respectively, specify a leak test frequency of 36 months.

Contrary to the above, between September 23, 2016, and May 19, 2021, DTE Electric Company failed to test its Texas Nuclear Corporation 5180A, 5181, and 5192; Thermo Process Instruments 5193; Vega Americas SR-A and SH-100; and Ohmart Corporation SHGS-2 fixed gauges containing sealed sources of cesium-137 for leakage and/or contamination every 36 months. Specifically, the licensee tested these devices for leakage and/or contamination on May 19, 2021, and before that on September 23, 2016, an interval of 55 months.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

- C. Condition 15 of Amendment No. 28 to NRC License No. 21-02335-05, dated May 11, 2017, states that the licensee shall conduct a physical inventory every six months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license.

Enclosure

Contrary to the above, between December 24, 2021, and March 4, 2022, DTE Electric Company failed to conduct a physical inventory every six months to account for all sealed sources and/or devices received and possessed under the license, and no other intervals were approved. Specifically, the licensee last conducted a physical inventory of its fixed gauges containing sealed sources of cesium-137 on June 23, 2021, an interval of over eight months.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in the subject inspection report. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, IR 03004803/2022001(DNMS)" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from 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>. 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.

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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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

Dated this 9th day of August 2022.

## NOTICE OF VIOLATION

DTE Electric Company  
Trenton Channel Power Plant  
Trenton, MI

License No. 21-02335-06  
Docket No. 030-04804  
EA-22-056

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on January 6, 2022, with continued in-office review through June 29, 2022, three violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. Condition 12 of Amendment No. 21 to NRC License No. 21-02335-06, dated May 11, 2017, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

Contrary to the above, between June 15, 2021, and January 6, 2022, the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone other than the named individual on the license. Specifically, the RSO named on the license was reassigned to other duties, and on June 15, 2021, the licensee delegated the authority of RSO to a replacement without requesting prior approval from the NRC.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

- B. Condition 13.A of Amendment No. 21 to NRC License No. 21-02335-06, dated May 11, 2017, states that sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.

Certificate of Registration No. TX-0634-D-901-S for Texas Nuclear Corporation 5181 fixed gauges specifies a leak test frequency of 36 months.

Contrary to the above, between May 4, 2017, and June 3, 2021, DTE Electric Company failed to test its Texas Nuclear Corporation 5181 fixed gauges containing sealed sources of cesium-137 for leakage and/or contamination every 36 months. Specifically, the licensee tested these devices for leakage and/or contamination on May 4, 2017, and after that on June 3, 2021, an interval of 49 months.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

- C. Title 10 of the *Code of Federal Regulations* (10 CFR) 20.1101(c) states that the licensee shall periodically (at least annually) review the radiation protection program content and implementation.

Contrary to the above, as of January 6, 2022, DTE Electric Company, Inc. did not periodically review the content and implementation of its radiation protection program at Trenton Channel Power Plant.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in the subject inspection report. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, IR 03004804/2022001(DNMS)" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from 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>. 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.

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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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

Dated this 9th day of August 2022.

## NOTICE OF VIOLATION

DTE Electric Company  
Greenwood Energy Center  
Avoca, MI

License No. 21-02335-09  
Docket No. 030-10445  
EA-22-056

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on February 23, 2022, with continued in-office review through June 29, 2022, three violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. Condition 12 of Amendment No. 15 to NRC License No. 21-02335-09, dated May 11, 2017, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

Contrary to the above, between June 15, 2021, and February 23, 2022, the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone other than the named individual on the license. Specifically, the RSO on the license was reassigned to other duties, and on June 15, 2021, and again on January 27, 2022, the licensee delegated the authority of RSO to replacements without requesting prior approval from the NRC.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

- B. Condition 13.A of Amendment No. 15 to NRC License No. 21-02335-09, dated May 11, 2017, states that sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.

Certificate of Registration Nos. NR-522-D-882-B and NR-522-D-893-S for Ohmart Corporation SHRH-A and SHRM series fixed gauges, respectively, specify a leak test frequency of 36 months.

Contrary to the above, between July 22, 2016, and February 23, 2022, DTE Electric Company failed to test its Ohmart Corporation SHRH-A and SHRM-PA fixed gauges containing sealed sources of cesium-137 for leakage and/or contamination every 36 months. Specifically, the licensee last tested these devices for leakage and/or contamination on July 22, 2016, 67 months prior to the inspection.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

- C. Title 10 of the *Code of Federal Regulations* (10 CFR) 20.1101(c) states that the licensee shall periodically (at least annually) review the radiation protection program content and implementation.

Contrary to the above, as of January 6, 2022, DTE Electric Company, Inc. did not periodically review the content and implementation of its radiation protection program at Greenwood Energy Center.



This is a Severity Level IV violation (NRC Enforcement Section 6.3).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in the subject inspection. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, IR 03010445/2022001(DNMS)" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from 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>. 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.

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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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

Dated this 9th day of August 2022.

## NOTICE OF VIOLATION

DTE Electric Company  
Belle River Power Plant  
East China, MI

License No. 21-02335-12  
Docket No. 030-18047  
EA-22-056

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on March 4, 2022, with continued in-office review through June 29, 2022, one violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Condition 11 of Amendment No. 15 to NRC License No. 21-02335-12, dated May 11, 2017, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

Contrary to the above, between June 15, 2021, and March 4, 2022, the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone other than the named individual on the license. Specifically, the RSO on the license was reassigned to other duties, and on June 15, 2021, and again on January 27, 2022, the licensee delegated the authority of RSO to replacements without requesting prior approval from the NRC.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in the subject inspection report. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, IR 03018047/2022001(DNMS)" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from 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>. 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.

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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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

Dated this 9th day of August 2022.

## NOTICE OF VIOLATION

DTE Electric Company  
Monroe Power Plant  
Monroe, MI

License No. 21-32707-01  
Docket No. 030-37798  
EA-22-056

Following a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on January 6, 2022, with continued in-office review through June 29, 2022, one violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Condition 12 of Amendment No. 4 to NRC License No. 21-32707-01, dated March 22, 2019, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

Contrary to the above, between June 15, 2021, and January 6, 2022, the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone other than the named individual on the license. Specifically, the RSO on the license was reassigned to other duties, and on June 15, 2021, and again on January 27, 2022, the licensee delegated the authority of RSO to replacements without requesting prior approval from the NRC.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3).

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in the subject inspection report. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, IR 03037798/2022001(DNMS)" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from 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>. 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.

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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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

Dated this 9th day of August 2022.

**U.S. Nuclear Regulatory Commission  
Region III**

Docket Nos. 030-04803; 030-04804; 030-10445;  
030-18047; 030-37798

License Nos. 21-02335-05; 21-02335-06; 21-02335-09;  
21-02335-12; 21-32707-01

Report Nos. 03004803/2022001(DNMS);  
03004804/2022001(DNMS);  
03010445/2022001(DNMS);  
03018047/2022001(DNMS);  
03037798/2022001(DNMS)

EA No. EA-22-056

Licensee: DTE Electric Company

Facilities Inspected: St. Clair Power Plant, East China, MI  
Trenton Channel Power Plant, Trenton, MI  
Greenwood Energy Center, Avoca, MI  
Belle River Power Plant, East China, MI

Inspection Dates: January 6, 2022 – Trenton Channel  
February 23, 2022 – Greenwood Energy Center  
March 4, 2022 – St. Clair and Belle River

Exit Meeting Date: July 18, 2022

Inspector: Deborah Piskura, Senior Health Physicist  
Ryan Craffey, Senior Health Physicist

Approved By: Michael Kunowski, Chief  
Materials Inspection Branch  
Division of Nuclear Materials Safety

## **EXECUTIVE SUMMARY**

**DTE Electric Company  
NRC Inspection Report Nos. 03004803/2022001(DNMS),  
03004804/2022001(DNMS), 03010445/2022001(DNMS),  
03018047/2022001(DNMS), and 03037798/2022001(DNMS)**

This report documents four routine inspections and one non-routine inspection of licensed activities performed under five U.S. Nuclear Regulatory Commission (NRC) Materials Licenses issued to DTE Electric Company, each authorizing the use of byproduct material in fixed nuclear gauging devices at one of five fossil-fueled power plants in eastern Michigan.

As a result of these inspections, eleven Severity Level IV violations of NRC requirements were identified by the NRC. Five violations concerned the lack of an approved RSO, as required by the conditions of each plant's license; three concerned the failure to conduct leak tests of fixed gauges at the manufacturers' specified frequencies, as required by license conditions; two concerned the failure to perform annual audits of the radiation safety programs, as required by Title 10 of the *Code of Federal Regulations* Section 20.1101(c); and one concerned the failure to perform semiannual inventories of sealed sources and devices, as required by license conditions.

The circumstances surrounding the violations, as well as a discussion of the root causes, contributing factors, and the licensee's corrective actions, are discussed in more detail below.

## **REPORT DETAILS**

### **1 Program Overview and Inspection History**

DTE Electric Company (DTE) operates a variety of electric power stations in eastern Michigan, including a nuclear generating plant and coal and natural gas plants. Five of the utility's coal and natural gas plants each maintain an NRC license for the possession and use of several to several dozen fixed nuclear gauges of various makes and models, primarily for coal hopper and/or steam drain level measurements. All contain millicurie quantity sealed sources of cesium-137. The RSO was (and historically has been) a radiation protection engineer at the Fermi 2 Nuclear Power Plant in Monroe. Day-to-day oversight and implementation of the radiation safety programs were provided by one to two individuals at each plant, most of whom also had RSO training.

#### **St Clair Power Plant – East China, MI (030-04803 / 21-02335-05)**

Last inspected by the NRC on February 17, 2011, and July 12, 2016, with no violations noted either time. The coal-fired plant, which came online in 1954, is scheduled to shut down in the fall of 2022. All licensed material is scheduled to be transferred in October 2022, after which DTE intends to terminate the license.

#### **Trenton Channel Power Plant – Trenton, MI (030-04804 / 21-02335-06)**

Last inspected by the NRC on February 14, 2011, and March 1, 2016, with no violations noted. The coal-fired plant, which came online in 1924, shut down in April 2022, and all licensed material was transferred shortly thereafter. DTE requested termination of this license in May 2022.

#### **Greenwood Energy Center – Avoca, MI (030-10445 / 21-02335-09)**

Last inspected by the NRC on February 17, 2011, and July 12, 2016, with no violations noted. The natural gas-fired plant, which came online in 1979, remains operational.

#### **Belle River Power Plant – East China, MI (030-18047 / 21-02335-12)**

Last inspected by the NRC on February 17, 2011, and July 12, 2016, with no violations noted. The coal- and natural gas-fired plant, which came online in 1984, remains operational. Several gauges from the nearby St. Clair Power Plant are expected to be transferred to Belle River after the former closes. Belle River's license was recently amended to accommodate the additional devices.

#### **Monroe Power Plant – Monroe, MI (030-37798 / 21-32707-01)**

Last inspected by the NRC on November 21, 2013, and December 20, 2018. One Severity Level IV (SLIV) violation was noted in 2013 for failure to conduct leak tests of fixed gauges at the manufacturers' specified frequencies, as required by license condition. The coal-fired plant, which came online in 1971, was not physically inspected at this time; however, compliance with the conditions of the license was evaluated in-office, concurrent with the other inspections.

## **2 Trenton Channel Power Plant**

### **2.1 Inspection Scope**

On January 6, 2022, an NRC inspector performed an unannounced routine inspection at the Trenton Channel Power Plant in Trenton, Michigan. The inspector toured the facility, interviewed staff and management, and reviewed a selection of records related to the radiation safety program there.

### **2.2 Observations and Findings**

#### **A. Radiation Safety Officer**

During discussions with staff, the inspector found that the individual listed as RSO on Materials License No. 21-02335-06 no longer served as RSO. The individual, an engineer at Fermi 2, had been reassigned to other duties in the last year. The licensee's executive management had delegated the authority and responsibility of RSO for this license to another individual in a signed memo dated June 15, 2021. The licensee did not, however, request prior approval from the NRC to name the second individual as RSO.

Condition 12 of Amendment No. 21 to NRC License No. 21-02335-06, dated May 11, 2017, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

The fact that the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone else without prior approval from the NRC is a Severity Level (SLIV) violation of Condition 12.

The root cause of the violation was a lack of understanding of NRC requirements. The licensee did not realize that prior NRC approval was required to formally name a new RSO. As corrective action, on April 20, 2022, the licensee submitted a request to name the second individual as RSO on Materials License No. 21-02335-06. The NRC approved this request on June 28, 2022, after finding that the individual was already qualified to serve as RSO. The licensee also indicated that it intended to train and qualify a second individual as RSO as a backup, and to include amendment requests for RSO changes in a tracking system to ensure that the requests would be submitted in a timely manner.

#### **B. Sealed Source Leak Testing**

During a review of records, the inspector noted that the licensee had not tested its fixed nuclear gauges for sealed source leakage and/or contamination at the frequencies specified by the device manufacturers in the respective Sealed Source and Device Registry safety evaluations. The licensee last performed leak tests on June 3, 2021, and before that on May 4, 2017, an interval of 49 months.

Condition 13.A of Amendment No. 21 to NRC License No. 21-02335-06, dated May 11, 2017, states that sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the

certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.

Certificate of Registration No. TX-0634-D-901-S for Texas Nuclear Corporation 5181 fixed gauges specifies a leak test frequency of 36 months.

The licensee's failure to test its Texas Nuclear Corporation 5181 fixed gauges for leakage and/or contamination every 36 months is a SLIV violation of Condition 13.A.

The root cause of the violation was an oversight. The COVID-19 public health emergency and refueling operations at Fermi 2 were noted as contributing factors to the delay. As corrective action, the licensee drafted a triennial work order in an existing preventative maintenance tracking system to ensure that future leak tests would be collected and analyzed periodically as required.

#### C. Program Audits

During a review of records, the inspector found that the licensee had not recently audited the content and implementation of the radiation protection program at Trenton Channel. The licensee could not locate any documentation of such an audit.

Title 10 of the *Code of Federal Regulations* (10 CFR) 20.1101(c) states that the licensee shall periodically (at least annually) review the radiation protection program content and implementation.

The licensee's failure to review the content and implementation of its radiation protection program is a SLIV violation of 10 CFR 20.1101(c).

The root cause of the violation was an oversight. As corrective action, on April 12, 2022, the licensee completed an audit of the program, with no issues noted. The licensee also drafted an annual work order in its preventative maintenance tracking system to ensure that future audits would be completed at least annually.

#### D. Other Areas Inspected

The inspector performed independent surveys of the facility and found no readings above regulatory limits of members of the public. During the period of in-office review, an inspector reviewed sealed source inventories and source transfer documentation.

### 2.3 Conclusions

The inspector identified SLIV violations of Conditions 12 and 13.A of Amendment No. 21 to NRC License No. 21-02335-06, and a SLIV violation of 10 CFR 20.1101(c).

## 3 **Greenwood Energy Center**

### 3.1 Inspection Scope

On February 23, 2022, an NRC inspector performed an unannounced routine inspection at the Greenwood Energy Center in Avoca, Michigan. The inspector toured the facility,



interviewed staff and management, and reviewed a selection of records related to the radiation safety program there.

### 3.2 Observations and Findings

#### A. Radiation Safety Officer

During discussions with staff, the inspector found that the individual listed as RSO on Materials License No. 21-02335-09 no longer served as RSO. The individual had been reassigned to other duties in the last year. The licensee's executive management had delegated the authority and responsibility of RSO for this license to another individual at Fermi 2 in a signed memo dated June 15, 2021. The inspector noted that, as part of its October 2021 renewal application for this (and only this) license, the licensee included a request to update the listed RSO on the license to reflect the reassignment of duties. However, by the time of the inspection, the second individual no longer served as RSO either, as he had already left the licensee's employment for other opportunities. In his place the licensee delegated the authority and responsibility of RSO to a third individual at Fermi 2 in a signed memo dated January 22, 2022. The licensee did not, however, request prior approval from the NRC to name either individual as RSO, nor did it request any update to its pending renewal application in this regard until after the inspection.

Condition 12 of Amendment No. 15 to NRC License No. 21-02335-09, dated May 11, 2017, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

The fact that the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone else without prior approval from the NRC is a SLIV violation of Condition 12.

The root cause of the violation was a lack of understanding of NRC requirements. The licensee did not realize that prior NRC approval was required to formally name a new RSO. As corrective action, on March 25, 2022, the licensee submitted, as part of a response to a request for additional information regarding its pending renewal application, a request to name the third individual as RSO on Materials License No. 21-02335-09. The NRC approved this request on April 18, 2022, after finding that the individual was already qualified to serve as RSO. The licensee also indicated that it intended to train and qualify a second individual as RSO as a backup, and to include amendment requests for RSO changes in a tracking system to ensure that the requests would be submitted in a timely manner.

#### B. Sealed Source Leak Testing

During a review of records, the inspector noted that the licensee had not tested its fixed nuclear gauges for sealed source leakage and/or contamination within the last 36 months, as specified by the device manufacturers in the respective Sealed Source and Device Registry safety evaluations. The licensee last performed leak tests on July 22, 2016, 67 months prior to the inspection, and could not locate documentation of any more recent tests.

Condition 13.A of Amendment No. 15 to NRC License No. 21-02335-09, dated May 11, 2017, states that sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.

Certificate of Registration Nos. NR-522-D-882-B and NR-522-D-893-S for Ohmart Corporation SHRH-A and SHRM series fixed gauges, respectively, specify a leak test frequency of 36 months.

The licensee's failure to test its Ohmart Corporation SHRH-A and SHRM-PA fixed gauges for leakage and/or contamination every 36 months is a SLIV violation of Condition 13.A.

The root cause of the violation was an oversight. As corrective action, on March 15, 2022, the licensee collected and analyzed leak tests of each gauge, with no leakage or contamination noted. The licensee also drafted a triennial work order in an existing preventative maintenance tracking system to ensure that leak tests would be collected and analyzed periodically as required.

#### C. Program Audits

During a review of records, the inspector found that the licensee had not recently audited the content and implementation of the radiation protection program at Trenton Channel. The licensee could not locate any documentation of such an audit.

Title 10 CFR 20.1101(c) states that the licensee shall periodically (at least annually) review the radiation protection program content and implementation.

The licensee's failure to review the content and implementation of its radiation protection program is a SLIV violation of 10 CFR 20.1101(c).

The root cause of the violation was an oversight. As corrective action, on March 18, 2022, the licensee completed an audit of the program, with no issues noted. The licensee also drafted an annual work order in its preventative maintenance tracking system to ensure that future audits would be completed at least annually.

#### D. Other Areas Inspected

The inspector performed independent and confirmatory surveys of the facility and found no readings above regulatory limits of members of the public. The licensee's complete inventory of gauges was inspected; all were properly labeled and in good condition. The inspector reviewed the licensee's radiation safety policy, as well as source transfer documentation, records of semiannual physical inventories and triennial leak tests, and transaction logs for shutter actuations.

### 3.3 Conclusions

The inspector identified SLIV violations of Conditions 12 and 13.A of Amendment No. 15 to NRC License No. 21-02335-09, and a SLIV violation of 10 CFR 20.1101(c).

## **4 St. Clair Power Plant**

### **4.1 Inspection Scope**

On March 4, 2022, an NRC inspector performed an announced routine inspection at the St. Clair Power Plant in East China, Michigan. The inspector toured the facility, interviewed staff and management, and reviewed a selection of records related to the radiation safety program there.

### **4.2 Observations and Findings**

#### **A. Radiation Safety Officer**

During discussions with staff, the inspector found that the individual listed as RSO on Materials License No. 21-02335-05 no longer served as RSO. The individual, an engineer at Fermi 2, had been reassigned to other duties in the last year. The licensee's executive management had delegated the authority and responsibility of RSO for this license to another individual in a signed memo dated June 15, 2021, and to a third individual on January 27, 2022, after the second individual left the licensee's employment for other opportunities. The licensee did not, however, request prior approval from the NRC to name either individual as RSO.

Condition 12 of Amendment No. 28 to NRC License No. 21-02335-05, dated May 11, 2017, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

The fact that the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone else without prior approval from the NRC is a SLIV violation of Condition 12.

The root cause of the violation was a lack of understanding of NRC requirements. The licensee did not realize that prior NRC approval was required to formally name a new RSO. As corrective action, on April 20, 2022, the licensee submitted a request to name the third individual as RSO on Materials License No. 21-02335-05. The NRC approved this request on June 27, 2022, after finding that the individual was already qualified to serve as RSO. The licensee also indicated that it intended to train and qualify a second individual as RSO as a backup, and to include amendment requests for RSO changes in a tracking system to ensure that the requests would be submitted in a timely manner.

#### **B. Sealed Source Leak Testing**

During a review of records, the inspector noted that the licensee had not tested its fixed nuclear gauges for sealed source leakage and/or contamination at the frequencies specified by the device manufacturers in the respective Sealed Source and Device Registry safety evaluations. The licensee last performed leak tests on May 19, 2021, and before that on September 23, 2016, an interval of 55 months.

Condition 13.A of Amendment No. 28 to NRC License No. 21-02335-05, dated May 11, 2017, states that sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in

the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.

Certificate of Registration Nos. TX-0634-D-902-S, TX-0634-D-901-S, TX-0634-D-900-B, OH-0522-D-115B, KY-512-D-801-B, and NR-522-D-823-S for Texas Nuclear Corporation 5180A, 5181, and 5192, Thermo Process Instruments 5193, Vega Americas SR-A and SH-100 and Ohmart Corporation SHGS-2 fixed gauges, respectively, specify a leak test frequency of 36 months.

The licensee's failure to test its Texas Nuclear Corporation 5180A, 5181, and 5192, Thermo Process Instruments 5193, Vega Americas SR-A and SH-100 and Ohmart Corporation SHGS-2 fixed gauges containing sealed sources of cesium-137 for leakage and/or contamination every 36 months is a SLIV violation of Condition 13.A.

The root cause of the violation was an oversight. As corrective action, the licensee drafted a triennial work order in an existing preventative maintenance tracking system to ensure that future leak tests would be collected and analyzed periodically as required.

#### C. Sealed Source Inventories

During a review of records, the inspector found that the licensee had not performed a physical inventory of all sources and devices possessed under the license within the last six months, as required by license conditions. The licensee last performed a physical inventory on June 23, 2021, more than eight months prior to the inspection, and could not locate documentation of any more recent inventories.

Condition 15 of Amendment No. 28 to NRC License No. 21-02335-05, dated May 11, 2017, states that the licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license.

The licensee's failure to perform a physical inventory within every 6 months to account for all sealed sources and devices possessed under the license is a SLIV violation of Condition 15.

The root cause of the violation was an oversight. As corrective action, on March 15, 2022, the licensee completed a physical inventory of all sources and devices possessed under the license. The licensee also drafted a semiannual work order in its preventative maintenance tracking system to ensure that future inventories would be completed at least annually.

#### D. Other Areas Inspected

The inspector performed independent and confirmatory surveys of the facility and found no readings above regulatory limits of members of the public. A large sample of the licensee's inventory of fixed gauges was inspected; all in this sample were properly labeled and in good condition. The inspector discussed non-routine maintenance with the licensee's staff, and reviewed records of semiannual physical inventories and triennial leak tests, as well as transaction logs for shutter actuations.

#### 4.3 Conclusions

The inspector identified SLIV violations of Conditions 12, 13.A, and 15 of Amendment No. 28 to NRC License No. 21-02335-05.

### 5 **Belle River Power Plant**

#### 5.1 Inspection Scope

On March 4, 2022, an NRC inspector performed an announced routine inspection at the Belle River Power Plant in East China, Michigan. The inspector toured the facility, interviewed staff and management, and reviewed a selection of records related to the radiation safety program there.

#### 5.2 Observations and Findings

##### A. Radiation Safety Officer

During discussions with staff, the inspector found that the individual listed as RSO on Materials License No. 21-02335-12 no longer served as RSO. The individual, an engineer at Fermi 2, had been reassigned to other duties in the last year. The licensee's executive management had delegated the authority and responsibility of RSO for this license to another individual in a signed memo dated June 15, 2021, and to a third individual on January 27, 2022, after the second individual left the licensee's employment for other opportunities. The licensee did not, however, request prior approval from the NRC to name either individual as RSO.

Condition 11 of Amendment No. 15 to NRC License No. 21-02335-12, dated May 11, 2017, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

The fact that the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone else without prior approval from the NRC is a SLIV violation of Condition 11.

The root cause of the violation was a lack of understanding of NRC requirements. The licensee did not realize that prior NRC approval was required to formally name a new RSO. As corrective action, on April 20, 2022, the licensee submitted a request to name the third individual as RSO on Materials License No. 21-02335-12. The NRC approved this request on July 1, 2022, after finding that the individual was already qualified to serve as RSO. The licensee also indicated that it intended to train and qualify a second individual as RSO as a backup, and to include amendment requests for RSO changes in a tracking system to ensure that the requests would be submitted in a timely manner.

##### B. Other Areas Inspected

The inspector performed independent and confirmatory surveys of the facility and found no readings above regulatory limits of members of the public. The licensee's complete inventory of gauges was inspected; all were properly labeled and in good condition. The inspector discussed non-routine maintenance and emergency

response preparations with the licensee's staff, and reviewed records of semiannual physical inventories and triennial leak tests, as well as transaction logs for shutter actuations.

### 5.3 Conclusions

The inspector identified a SLIV violation of Condition 11 of Amendment No. 15 to NRC License No. 21-02335-05.

## **6 Monroe Power Plant**

### 6.1 Inspection Scope

Following the first inspection of a DTE materials license on January 6, 2022, the NRC performed a non-routine inspection of Monroe Power Plant, consisting of in-office review to evaluate compliance with the conditions of its license.

### 6.2 Observations and Findings

During this in-office review the NRC found that the individual listed as RSO on Materials License No. 21-32707-01 no longer served as RSO. The individual, an engineer at Fermi 2, had been reassigned to other duties in the last year. The licensee's executive management had delegated the authority and responsibility of RSO for this license to another individual in a signed memo dated June 15, 2021, and to a third individual on January 27, 2022, after the second individual left the licensee's employment for other opportunities. The licensee did not, however, request prior approval from the NRC to name either individual as RSO.

Condition 12 of Amendment No. 4 to NRC License No. 21-32707-01, dated March 22, 2019, states that the Radiation Safety Officer (RSO) for the license is a specifically named individual.

The fact that the named individual was no longer the RSO after DTE Electric Company delegated the authority for the role to someone else without prior approval from the NRC is a SLIV violation of Condition 12.

The root cause of the violation was a lack of understanding of NRC requirements. The licensee did not realize that prior NRC approval was required to formally name a new RSO. As corrective action, on April 20, 2022, the licensee submitted a request to name the third individual as RSO on Materials License No. 21-32707-01. The amendment request was still pending at the time of the exit meeting, following a July 1 request for additional information unrelated to the individual's training, experience, or qualifications to serve as RSO. The licensee also indicated that it intended to train and qualify a second individual as RSO as a backup, and to include amendment requests for RSO changes in a tracking system to ensure that the requests would be submitted in a timely manner.

### 6.3 Conclusions

The inspector identified a SLIV violation of Condition 12 of Amendment No. 4 to NRC License No. 21-32707-01.

## 7 Exit Meeting Summary

An NRC inspector presented preliminary inspection findings following the onsite inspection on July 18, 2022. The licensee acknowledged the findings presented as well as the NRC's characterization of the corrective actions.

### **LIST OF PERSONNEL CONTACTED**

<i>Fermi 2</i>	Robert Craven – Plant Manager * Ronald James – Former Corporate RSO Heather Lucier – Corporate RSO * Bruce Rumans – Radiation Protection Program Supervisor * Jerri Walters – Radiation Protection and Chemistry Manager *
<i>Trenton Channel</i>	David Hughes – Radiation Safety Coordinator Jacob Schraub – Engineering Supervisor
<i>Greenwood</i>	Ben Dunsmore – Engineering Supervisor Brad Morris – Instrument & Control Specialist
<i>St. Clair</i>	Rocky Boynton – Radiation Safety Coordinator
<i>Belle River</i>	Robert Bennatts – Radiation Safety Coordinator Frank Shuler – Instrument & Control Technician A Jason Wilton – Instrument & Control Technician A

\* Attended exit meeting on July 18, 2022

### **INSPECTION PROCEDURES USED**

87124: Fixed and Portable Gauge Programs