



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

February 28, 2022

EA-22-002

Mr. Patrick Engels
Core Engineering & Consulting, Inc.
22700 Bad Nation Road
PO Box 654
Fort Thompson, SD 57339

SUBJECT: NRC INSPECTION REPORT 030-37747/2021-001 AND NOTICE OF VIOLATION

Dear Mr. Engels:

This letter refers to the inspection conducted on August 30 and 31, 2021 at your facility in Fort Thompson, South Dakota. The purpose of the inspection was to examine activities conducted under your license as they relate to public health and safety and to confirm compliance with the U.S. Nuclear Regulatory Commission (NRC) rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of an examination of selected procedures and representative records, observations of activities, and interviews with personnel. The enclosed report (Enclosure 2) presents the results of this inspection. The inspector discussed the preliminary inspection findings with you on August 31 at the conclusion of the on-site portion of the inspection. A final exit briefing was conducted telephonically with you on February 25, 2022.

Based on the results of this inspection, two apparent violations were identified and are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The apparent violations involved the failures to: (1) secure portable gauges from unauthorized removal while not under constant control or surveillance; and (2) confine possession and use of byproduct material to locations authorized on NRC License 40-29299-01. The circumstances surrounding these apparent violations, the significance of the issues, and the need for lasting and effective corrective action were discussed with you during the telephonic exit meeting on February 25, 2022.

Before the NRC makes its enforcement decision, we are providing you an opportunity to: (1) respond in writing to the apparent violations addressed in the inspection report within 30 days of the date of this letter, (2) request a predecisional enforcement conference (PEC), or (3) request Alternative Dispute Resolution (ADR). If a PEC is held, it will be open for public observation and the NRC may issue a press release to announce the time and date of the conference. Please contact Dr. Lizette Roldán-Otero, Chief, Materials Inspection Branch, at 817-200-1455 or by email at Lizette.Roldan-Otero@nrc.gov within 10 days of the date of this letter to notify the NRC of your intended response to either provide a written response, participate in a PEC, or pursue ADR. A PEC should be held within 30 days and an ADR session within 45 days of the date of this letter.

If you choose to provide a written response, it should be clearly marked as a "Response to Apparent Violations in NRC Inspection Report 030-37747/2021-001; EA-22-002" and should include for each apparent violation: (1) the reason for the apparent violation or, if contested, the basis for disputing the apparent violation; (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 previously docketed correspondence if the correspondence adequately addresses the required response. Your written response, should you choose to provide one, should be sent to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with identical copies mailed to Ms. Mary Muessle, Director, Division of Nuclear Materials Safety, Region IV, 1600 East Lamar Boulevard, Arlington, TX 76011, and emailed to R4Enforcement@nrc.gov, within 30 days of the date of this letter. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a PEC.

If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on these matters and any other information that you believe the NRC should take into consideration before making an enforcement decision. The decision to hold a PEC does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference would be conducted to obtain information to assist the NRC in making an enforcement decision. The topics discussed during the conference may include information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned. In presenting your corrective actions, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violations. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be helpful in preparing your response. You can find the Information Notice using Agencywide Documents Access and Management System (ADAMS) Accession No. [ML061240509](#).

In lieu of a PEC or written response, you may also request ADR with the NRC in an attempt to resolve this issue. Alternative Dispute Resolution is a general term encompassing various techniques for resolving conflicts using a neutral third party. The technique that the NRC has decided to employ is mediation. Mediation is a voluntary, informal process in which a trained neutral mediator works with parties to help them reach resolution. If the parties agree to use ADR, they select a mutually agreeable neutral mediator who has no stake in the outcome and no power to make decisions. Mediation gives parties an opportunity to discuss issues, clear up misunderstandings, be creative, find areas of agreement, and reach a final resolution of the issues. Additional information concerning the NRC's program can be obtained at <http://www.nrc.gov/about-nrc/regulatory/enforcement/adr.html>. The Institute on Conflict Resolution (ICR) at Cornell University has agreed to facilitate the NRC's program as a neutral third party. Please contact ICR at 877-733-9415 within 10 days of the date of this letter if you are interested in pursuing resolution of this issue through ADR.

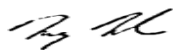
Please be advised that the number and characterization of apparent violations described in Enclosure 2 may change as a result of further NRC review. You will be advised by separate correspondence of the results on our deliberations in this matter.

In addition, the NRC has determined, in accordance with the NRC Enforcement Policy, that one Severity Level IV violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Enclosure 1) because it was identified by the NRC during the inspection. The violation is regarding your failure to provide hazmat employees training at least once every 3 years. The circumstances surrounding this violation are described in the inspection report, Enclosure 2. You are required to respond to the Severity Level IV violation within 30 days of the date of this letter and should follow the instructions specified in the enclosed Notice of Violation when preparing your response. If you have additional information that you believe the NRC should consider, you should provide it in your response to the Notice of Violation. 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 "Agency Rules of Practice and Procedure," a copy of this letter, its enclosures, and 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 website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the public without redaction.

If you have any questions concerning this matter, please contact Dr. Lizette Roldán-Otero of my staff, at 817-200-1455.

Sincerely,



Signed by Muessle, Mary
on 02/28/22

Mary C. Muessle, Director
Division of Nuclear Materials Safety

Docket No. 030-37747
License No. 40-29299-01

Enclosures:

1. Notice of Violation
2. NRC Inspection Report 030-37747/2021-001

cc w/Enclosures:

John Priest
South Dakota Department of Health
Licensure & Certification
4101 W. 38th St.
Sioux Falls, SD 57106

Nick Emme
Dept of Environment & Natural Resources
523 East Capital Avenue
Pierre, SD 57501

**SUBJECT: NRC INSPECTION REPORT 030-37747/2021-001 AND NOTICE OF VIOLATION
DATED FEBRUARY 28, 2022**

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ADAMS ACCESSION NUMBER –**ML22053A292**

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NAME	KBischoff	LRoldanOtero	JGroom	DCylkowski	MMuessle				
SIGNATURE	/RA/ E	/RA/ E	/RA/ E	/RA/ E	/MCM				
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OFFICIAL RECORD COPY

NOTICE OF VIOLATION

Core Engineering & Consulting, Inc.
Fort Thompson, South Dakota

Docket No. 030-37747
License No. 40-29299-01
EA-22-002

During an NRC inspection conducted on August 30 and 31, 2021, one violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 71.5(a) requires, in part, that each licensee who transports licensed material outside of the site of usage, as specified in the NRC license, shall comply with the applicable requirements of the U.S. Department of Transportation regulations in 49 CFR Parts 107, 171 through 180, and 390 through 397.

49 CFR 172.704(c)(2) requires, in part, that a hazmat employee must receive the training required by 49 CFR 172 Subpart H at least once every three years.

Contrary to the above, on August 31, 2021, two hazmat employees did not receive the training required by 49 CFR 172 Subpart H at least once every three years. Specifically, one hazmat employee had last received training in December 2014, and the other hazmat employee had last received training in May 2017. Both hazmat employees had transported licensed material outside of the site of usage as specified in the NRC license on multiple occasions in 2020 and 2021, more than three years since the employees' last training required by 49 CFR 172 Subpart H.

This is a Severity Level IV violation (NRC Enforcement Policy Section 6.3.d.4).

Pursuant to the provisions of 10 CFR 2.201, Core Engineering & Consulting, Inc. 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 Ms. Mary Muessle, Director, Division of Nuclear Materials Safety, Region IV, 1600 East Lamar Boulevard, Arlington, TX 76011, and emailed to R4Enforcement@nrc.gov within 30 days of the date of the letter transmitting this Notice of Violation. This reply should be clearly marked as a "Reply to a Notice of Violation; EA-22-002" and should include for the 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 of Violation, 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, U.S. 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 Agencywide Documents Access and Management System

(ADAMS), accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, your response should not include any personal privacy or proprietary 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, then 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 material, 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).

Dated this 28th of February 2022

**U.S. NUCLEAR REGULATORY COMMISSION
REGION IV**

Docket No.:	030-37747
License No.:	40-29299-01
Inspection Report No.:	030-37747/2021-001
EA No.:	EA-22-002
Licensee:	Core Engineering & Consulting, Inc.
Location Inspected:	22700 Bad Nation Road Fort Thompson, SD 57339
Inspection Dates:	August 30-31, 2021
Exit Meeting Date:	February 25, 2022
Inspector:	Ryan Craffey Senior Health Physicist Materials Inspection Branch Division of Nuclear Materials Safety, Region III
Approved By:	Lizette Roldán-Otero, PhD Chief, Materials Inspection Branch Division of Nuclear Materials Safety, Region IV
Attachment:	Supplemental Inspection Information

EXECUTIVE SUMMARY

Core Engineering & Consulting, Inc. NRC Inspection Report 030-37747/2021-001

Program Overview

The U.S. Nuclear Regulatory Commission (NRC) performed a routine inspection of Core Engineering & Consulting, Inc. (licensee) on August 30 and 31, 2021. Core Engineering & Consulting, Inc. is authorized under NRC License 40-29299-01 to possess and use byproduct material (cesium-137 and americium-241) for measuring physical properties of materials with portable nuclear gauging devices. The scope of the inspection was to examine the activities conducted under the license and to confirm compliance with the NRC rules and regulations and with the conditions of the license.

Inspection Findings

The inspection identified two apparent violations of NRC requirements involving the failures to: (1) secure portable gauges from unauthorized removal stored in controlled or unrestricted areas; and (2) confine possession and use of byproduct material to locations authorized on NRC License 40-29299-01. In addition, the inspection identified one Severity Level IV violation involving the failure to provide hazmat refresher training to hazmat employees as required by 49 CFR 172.704(c)(2).

Corrective Actions

After being notified of the unsecured gauge, the licensee immediately contacted a representative that was able to secure the gauge adequately while the NRC inspectors were on site. Additionally, on September 2, 2021, the licensee submitted an Amendment Request to add the current location of storage to its license. The licensee resubmitted the amendment request with a new letter date on September 15, 2021, and provided additional information in an email dated September 16, 2021. The NRC issued Amendment No. 3 to NRC License 40-29299-01 on November 17, 2021, and the licensee is now authorized to possess and store material at the Fort Thompson location.

REPORT DETAILS

1 Program Overview (Inspection Procedure (IP) 87124)

Core Engineering & Consulting, Inc. (licensee) is authorized under NRC License 40-29299-01 to possess and use byproduct material (cesium-137 and americium-241) for measuring physical properties of materials with portable nuclear gauging devices.

2 Inspection Overview

2.1 Inspection Scope

The purpose of this inspection was to review licensed activities to determine if licensed programs were being conducted in accordance with NRC requirements and the conditions of the license. Inspection activities consisted of an examination of procedures and representative records, radiation survey measurements, and interviews with licensee personnel.

2.2 Background

Core Engineering & Consulting, Inc. is a construction engineering firm in Fort Thompson, SD, previously authorized by the NRC to store portable gauges at offices in Chamberlain and Yankton, SD and to use them at temporary job sites. The licensee has five gauges and three individuals authorized to use them. Last spring, the licensee relocated from Chamberlain to Fort Thompson, but did not receive NRC approval prior to doing so, as described below.

On August 30, 2021, NRC inspectors visited the licensee's new office in Fort Thompson. The inspectors had previously announced the inspection to the licensee's radiation safety officer (RSO) and their intention to visit that afternoon, but earlier that morning the RSO told the inspectors that he would not be able to meet on account of ongoing field work. The inspectors decided to visit the office to confirm that no safety or security issues were readily apparent.

The inspectors arrived to find no one present. Of the several vehicles parked there, one (a sport utility vehicle (SUV)) had a Troxler gauge transportation case in the rear storage area (Troxler 3430, serial number 21570, nominally containing 9 millicuries of cesium-137 and 44 millicuries of americium-241). The inspector performed a survey outside the vehicle and confirmed that a gauge was inside. The inspectors could see through the rear window that there were no locks on the lid of the case, and through the front passenger window, could see a set of keys which appeared to belong to the vehicle. The inspectors then tested the front passenger door and found it unlocked.

The inspectors called the RSO and notified him of their findings. At first, the RSO suggested that the case should be empty; however, when notified of survey meter readings to the contrary, the RSO contacted an individual to assist with resolving the potentially unsecured gauge. The inspectors maintained visual surveillance of the vehicle until the individual arrived.

The individual attempted to open the back hatch of the vehicle and found that it was also unlocked. The inspectors visually confirmed that a Troxler 3400 series gauge was inside

and that the case was braced by a ratchet strap fed through the lid's handle but was not otherwise locked or secured. The inspectors concluded that the gauge was not secured from unauthorized removal or access, as there were no independent physical controls to secure the gauge while not under the control and constant surveillance of licensee personnel.

According to the RSO on August 30, 2021, the gauge had been in this condition since the day before, when the technician who had been using the vehicle returned to the office. The RSO stated that the technician had begun to put away his equipment and had removed all locks from the gauge case but then became distracted and did not complete the task of returning the gauge to its designated storage location. On August 31, 2021, the inspectors toured the facility in Fort Thompson to evaluate the licensee's measures for materials security, hazard communication, and exposure control. The licensee otherwise stored its gauges in a locked locker inside a locked and posted storage room, providing at least two barriers. Independent and confirmatory surveys in the vicinity of the gauges returned no unusual or excessive readings. No other hazards to the gauges appeared to be present.

During the inspection, the licensee produced a draft letter dated March 4, 2020, on a computer, that requested the NRC update the physical and contact address to the one in Fort Thompson; however, Region IV never received this notification. This draft letter was addressed to the Region IV office but contained the wrong address. The licensee was provided with current contact information for the Region IV office and shown how to find this information on the NRC public website.

On September 2, 2021, the licensee submitted an amendment request to Region IV. The licensee resubmitted the amendment request with a new letter date on September 15, 2021, and provided additional information in an email dated September 16, 2021. The NRC approved the amendment and issued the revised license on November 18, 2021, to show the new location.

3 Observations and Findings

During the inspection, two apparent violations and one Severity Level IV violation of NRC requirements were identified as follows:

3.1 Apparent Violation of 10 CFR 30.34(i) and 10 CFR 20.1801

Title 10 CFR 30.34(i) requires that each portable gauge licensee shall use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee.

Title 10 CFR 20.1801 requires that licensees secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas.

Contrary to the above, on August 30, 2021, the licensee failed to use a minimum of two independent physical controls that form tangible barriers to secure a portable gauge from unauthorized removal when the portable gauge was not under the control and constant surveillance of the licensee and failed to secure from unauthorized removal or access licensed materials that were stored in an unrestricted area. Specifically, an

unlocked portable gauge was discovered in the back of an unlocked and unattended SUV outside the licensee facility, which was an unrestricted area.

The failure to secure portable gauges from unauthorized removal that were stored in controlled or unrestricted areas was identified as an apparent violation of 10 CFR 30.34(i) and 10 CFR 20.1801. (030-37747/2021-001-01)

3.2 Apparent Violation of 10 CFR 30.34(c)

Title 10 CFR 30.34(c) requires, in part, that each person licensed by the Commission pursuant to the regulations in 10 CFR Part 30 and Parts 31 through 36 and 39 shall confine the possession and use of the byproduct material to the locations and purposes authorized in the license.

License Condition 10 of Materials License 40-29299-01, Amendment 2, requires, in part, that licensed material may be used or stored at the licensee's facilities located at: (A) 115 West Beebe Avenue, Chamberlain, South Dakota, 57325; (B) 1603 Locust Street, Yankton, South Dakota, 57078; or (C) at temporary job sites.

Contrary to the above, from approximately March 2020 to November 17, 2021, the licensee failed to confine the possession and use of the byproduct material to the locations and purposes authorized in the license. Specifically, the licensee stored licensed material at 22700 Bad Nation Road, Fort Thompson, South Dakota, 57339, a location of use not authorized on the license. The license was amended on November 18, 2021, to indicate the new storage location of the licensed material.

The failure to confine possession and use of byproduct material to locations authorized on NRC License 40-29299-01 was identified as an apparent violation of 10 CFR 30.34(c) and License Condition 10. (030-37747/2021-001-02)

3.3 Severity Level IV Violation of 10 CFR 71.5(a)

The inspectors also identified a violation of 10 CFR 71.5(a) for failure to comply with the hazmat refresher training requirements in 49 CFR 172.704(c)(2). On multiple occasions in 2020 and in 2021, gauge users transported portable gauges without current hazmat transportation training. The users that transported the gauges had previously received the proper hazmat training but had failed to take any refresher training.

This violation is being cited in the enclosed Notice of Violation (Enclosure 1) as a Severity Level IV violation of 10 CFR 71.5(a). (030-37747/2021-001-03)

4 **Corrective Actions**

The RSO discussed the issue regarding the unsecured gauge and the relevant requirements with the technician. The RSO has also implemented weekly tailgate talks where he and staff will review relevant safety and security requirements prior to dispatching staff on any projects involving portable gauge use. The RSO has also increased his oversight of the staff's use of gauges, including checking vehicles more frequently to confirm gauges are properly secured and confirming with staff during end-of-day discussions that they have properly secured the gauge and filled out utilization logs.

The Apparent Violation of 10 CFR 30.34(c) was corrected on November 18, 2021, when the NRC issued Amendment 3 to NRC License 40-29299-01, adding the new Fort Thompson address as an approved storage location.

5 Exit Meeting Summary

On February 25, 2022, a final telephonic exit meeting was conducted with the RSO, Mr. Engels, to discuss the inspection findings. The NRC representatives discussed the content of the inspection report, described the NRC's enforcement process, and described the options for the licensee to: (1) respond in writing to the apparent violations described in the inspection report, (2) request a predecisional enforcement conference, or (3) request alternative dispute resolution. The licensee did not dispute the inspection findings as described by the inspector.

Supplemental Inspection Information

LIST OF PERSONS CONTACTED

Patrick Engels, Radiation Safety Officer

INSPECTION PROCEDURES USED

Inspection Procedure 87124: Fixed and Portable Gauge Programs

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

030-37747/2021-001-01	AV	Failure to secure portable gauges from unauthorized removal stored in controlled or unrestricted areas (10 CFR 30.34(i) and 10 CFR 20.1801)
030-37747/2021-001-02	AV	Failure to confine possession and use of byproduct material to locations authorized on NRC license 40-29299-01 (10 CFR 30.34(c))
030-37747/2021-001-03	VIO	Failure to provide hazmat refresher training (10 CFR 71.5(a))

Closed

None

Discussed

None

LIST OF ACRONYMS AND ABBREVIATIONS USED

ADAMS	Agencywide Documents Access and Management System
ADR	Alternative Dispute Resolution
AV	Apparent Violation
CFR	<i>Code of Federal Regulations</i>
NOV	Notice of Violation
NRC	Nuclear Regulatory Commission
PEC	Predecisional Enforcement Conference
RSO	Radiation Safety Officer
SUV	Sport Utility Vehicle
VIO	Violation