



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

September 19, 2016

EA-16-154

Mr. Robert Rouse
Radiation Safety Officer
CQM, Inc.
2679 Continental Drive
Green Bay, WI 54311-6627

SUBJECT: NRC ROUTINE INSPECTION REPORT NO. 03033465/2016002(DNMS) –
CQM, INC.

Dear Mr. Rouse:

On July 15, 2016, an inspector from the U.S. Nuclear Regulatory Commission (NRC) conducted a routine inspection at a temporary jobsite in Monticello, Indiana. The purpose of the inspection was to review activities performed under your NRC license to ensure that activities were being performed in accordance with NRC requirements. Mr. Robert Gattone of my staff conducted a final exit meeting with you and a member of your staff on August 23, 2016, to discuss the inspection findings.

During this inspection, the NRC staff examined activities conducted under your license 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 license. 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 this inspection, one apparent violation of NRC requirements was identified and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The apparent violation concerned the licensee's failure to 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, as required by Title 10 of the *Code of Federal Regulations* (CFR) Part 30.34(i).

Because the NRC has not made a final determination in this matter, the NRC is not issuing a Notice of Violation for this inspection finding at this time. The circumstances surrounding this apparent violation, the significance of the issue, and the need for lasting and effective corrective action were discussed with you and a member of your staff during the inspection exit meeting on August 23, 2016.

Before the NRC makes its enforcement decision, we are providing you an opportunity to either: (1) respond in writing to the apparent violation addressed in this inspection report within 30 days of the date of this letter; or (2) request a Predecisional Enforcement Conference (PEC). **Please contact Mr. Aaron T. McCraw at 630-829-9650 or Aaron.McCraw@nrc.gov within ten days of the date of this letter to notify the NRC of your intended response.**

If you choose to provide a written response, it should be clearly marked as "Response to the Apparent Violation in NRC Inspection Report No. 03033465/2016001(DNMS); EA-16-154," and should include, for the 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 to avoid further violations; and (4) the date when full compliance was or will be achieved. 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 violation. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be useful in preparing your response. You can find the information notice on the NRC's website at: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1996/in96028.html>. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. 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, it will afford you the opportunity to provide your perspective on the apparent violation and any other information that you believe the NRC should take into consideration before making an enforcement decision. The topics discussed during the PEC may include the following: 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 to be taken. If a PEC is held, it will be open for public observation, and the NRC will issue a press release to announce the time and date of the conference.

Because your facility has not been the subject of escalated enforcement action within the last two years or two inspections, a civil penalty may not be warranted in accordance with Section 2.3.4 of the Enforcement Policy. In addition, based upon the NRC's understanding of the facts and your corrective actions, it may not be necessary to conduct a PEC in order to enable the NRC to make a final enforcement decision. Our final decision will be based on your confirming on the license docket that the corrective actions previously described to the staff have been or are being taken.

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

R. Rouse

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Please feel free to contact Mr. Robert Gattone if you have any questions regarding this inspection. Mr. Gattone can be reached at 630-829-9823.

Sincerely,

/RA/

John B. Giessner, Director
Division of Nuclear Materials Safety

Docket No. 030-33465
License No. 48-26564-01

Enclosure:
IR 03033465/2016002(DNMS)

cc w/encl: State of Indiana

R. Rouse

-3-

Please feel free to contact Robert Gattone of my staff if you have any questions regarding this inspection. Mr. Gattone can be reached at 630-829-9823.

Sincerely,

/RA/

Jack Giessner, Director
Division of Nuclear Materials Safety

Docket No. 030-33465
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Enclosure:
IR 03033465/2016002(DNMS)

cc w/encl: State of Indiana

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

Docket No. 030-33465

License No. 48-26564-01

Report No. 03033465/2016002(DNMS)

EA No. EA-16-154

Licensee: CQM, Inc.

Facility: 8635 IN-16, Monticello, Indiana

Inspection Date: July 15, 2016

Exit Meeting Date: August 23, 2016

Inspector: Robert G. Gattone, Jr.
Senior Health Physicist

Approved By: Aaron T. McCraw, Chief
Materials Inspection Branch
Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

CQM, Inc. NRC Inspection Report No. 03033465/2016002(DNMS)

CQM, Inc. (licensee) is authorized under U.S. Nuclear Regulatory Commission (NRC) Materials License No. 48-26564-01 to use licensed material for measuring physical properties of materials with nuclear gauging devices. The licensee possessed and used a Troxler portable gauge at a temporary job site in NRC jurisdiction. This was an unannounced inspection at a temporary jobsite in Monticello, Indiana on July 15, 2016.

During this inspection, the inspector identified an apparent violation of 10 CFR 30.34(i) involving the licensee's failure to 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. The inspector determined that the root cause of the apparent violation was a fundamental misunderstanding of the requirement. Specifically, an authorized gauge user (AU) thought that the gauge was secured inside of its gauge transportation case (case) in an open bed of a truck pursuant to 10 CFR 30.34(i) because a lid hasp was padlocked; however, he did not realize that there was only one physical barrier to prevent the gauge from being removed from the case in the open truck bed. A contributing factor was that the licensee previously provided training regarding compliance with 10 CFR 30.34(i); however, the training did not provide much detail about how to secure the gauge.

As corrective action on July 15, 2016, the inspector observed the AU wrap and lock another cable through the top case handle and around the width of the case. The AU demonstrated that with the case lid hasp open but the cable in place, he was able to open the case only about 2 inches such that he could not remove the portable gauge from the case. The AU committed to use the new cable and the locked case hasp to secure the portable gauge in the open truck bed as a means to comply with 10 CFR 30.34(i). In addition, the licensee's radiation safety officer issued a memo to the AUs stating that the gauge case must be locked such that two locked barriers prevent unauthorized removal of the gauge from the case, and the case containing the gauge must be locked such that two locked barriers prevent unauthorized removal of the case with the gauge in it. The memo also discussed the importance of maintaining constant control and surveillance of the gauge, and a picture was provided showing an example of how one can form a physical barrier to prevent unauthorized removal of the gauge from its case. In addition, the licensee committed to conduct annual 10 CFR 30.34(i) training beginning in February 2017 that will contain details on how to secure portable gauges.

REPORT DETAILS

1 Program Overview and Inspection History

CQM, Inc. (licensee) is authorized under NRC Materials License No. 48-26564-01 to use licensed material for measuring physical properties of materials with portable nuclear gauging devices. Licensed material is authorized to be used at temporary job sites of the licensee anywhere in the United States where the NRC maintains jurisdiction for regulating the use of licensed material. The licensee possessed and used a Troxler Model 3440 portable gauge at the temporary jobsite. The gauge contained cesium-137 and americium-241 sealed sources. The licensee had one AU at the temporary jobsite.

The last NRC inspection of the licensee was conducted at the licensee's corporate office in Green Bay, Wisconsin, on June 17, 2016. The previous two NRC inspections of the licensee were conducted on September 17, 2010, and September 6, 2005. All three of those inspections resulted in no identified violations of NRC regulatory requirements.

2 Portable Gauge Security

2.1 Inspection Scope

The inspector assessed how the licensee secured portable gauges at the temporary job site by interviewing the AU and observing him demonstrate how he had secured the portable gauge at the temporary job site.

2.2 Observations and Findings

a. Gauge Security in the Licensee's Trailer at the Temporary Job Site

The inspector observed the AU demonstrate how he had secured the gauge in the licensee's trailer at the temporary job site. Inside of the trailer was a locked room where the gauge was stored in its transportation case (case). The AU threaded cables through both case handles and padlocked the cables to a built-in cabinet. In addition, the AU padlocked a case lid hasp. The keys used to secure the gauge were limited to the AU. As such, there were two independent physical controls that formed tangible barriers to secure the portable gauge from unauthorized removal whenever portable gauges were not under the control and constant surveillance of the licensee.

b. Gauge Security in a Vehicle at the Temporary Job Site

The inspector observed the AU demonstrate how he had secured the gauge in the open bed of a truck at the temporary job site. The AU threaded a cable through the case (containing the gauge) handle on the right side and then through an eyebolt fastened to the open truck bed. The AU also threaded a cable through the case handle on the left side and then through an eyebolt fastened to the open truck bed.

In addition, the AU padlocked a hasp on a case lid. The only barrier to prevent the gauge from being removed from the case was a single padlock on the case hasp. The AU stated that almost daily, including on July 14 and 15, 2016, he did not maintain control and constant surveillance of the gauge when it was secured in the open truck bed. Specifically, the gauge was left unattended during 30-second intervals, when the AU left the vehicle and walked to the licensee's trailer, at the temporary job site; and when the AU walked to the licensee's client's office building. When the AU arrived at the licensee's trailer at the temporary job site and the licensee's client's office building, the AU maintained constant control and constant surveillance of the gauge when it was secured in the open truck bed through windows of the trailer and the office building.

Title 10 CFR 30.34(i) states 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. The licensee's failure to 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 is an apparent violation of 10 CFR 30.34(i).

The inspector determined that the root cause of the apparent violation was licensee oversight. Specifically, the licensee did not realize that the transportation case containing the portable gauge had only one physical barrier to prevent removal of the gauge from the case in the open bed truck.

As corrective action on July 15, 2016, the inspector observed the AU wrap and lock another cable through the top case handle and around the width of the case. The AU demonstrated that with the case lid hasp open but the cable in place, he was able to open the case only about 2 inches such that he could not remove the portable gauge from the case. The AU committed to use the new cable in addition to the aforementioned means of securing the portable gauge in the open truck bed as a means to comply with 10 CFR 30.34(i). In addition, on July 18, 2016, the licensee's radiation safety officer issued a memo to its gauge users stating that the gauge case must be locked such that two locked barriers prevent unauthorized removal of the gauge from the case, and the case containing the gauge must be locked such that two locked barriers prevent unauthorized removal of the case with the gauge in it. The memo also discussed the importance of maintaining constant control and surveillance of the gauge. The licensee committed to conduct annual 10 CFR 30.34(i) training beginning in February 2017 that will contain details on how to secure portable gauges.

c. Gauge Security During Use at the Temporary Job Site

The inspector observed the AU use the gauge at the temporary jobsite. The inspector observed that the AU positioned himself a few feet from the gauge and that he maintained constant surveillance and control of the gauge during use.

2.3 Conclusions

The inspector identified an apparent violation of 10 CFR 30.34(i) involving the licensee's failure to use a minimum of two independent physical controls that form tangible barriers to secure a gauge from unauthorized removal when the gauge was in a vehicle and not under the control and constant surveillance of the licensee at a temporary job site. The licensee implemented immediate and long-term corrective actions to restore compliance and prevent further violations of 10 CFR 30.34(i).

3 **Other Areas Inspected**

3.1 Inspection Scope

The inspector reviewed other areas of the licensee's radiation protection program by reviewing selected records, interviewing selected licensee employees, and touring the licensee's trailer stationed at the temporary jobsite.

3.2 Observations and Findings

a. Radiation Protection Program

1. Postings

The inspector observed that the interior of the licensee's trailer was posted as required, including NRC Form 3 and a "Caution Radioactive Materials" sign near the storage room containing the gauge.

2. Independent Survey

The inspector used an NRC-owned, calibrated Canberra UltraRadiac survey instrument to measure a maximum of 5 milliroentgens per hour at the surface of the cesium-137 shutter that was closed. The survey measurement was as expected based on the applicable Sealed Sources and Devices Registry Sheet.

3. Dosimetry

The inspector observed the AU wear his whole body dosimeter as required. The licensee's dosimeter badges were at the licensee's office in Green Bay, Wisconsin. Those records were not available at the temporary jobsite; however, on June 17, 2016, an NRC routine inspection was done at the licensee's office in Green Bay, Wisconsin, and it included personnel dosimetry reports for the AUs based in Indiana.

4. Emergency Response

The inspector observed the AU demonstrate how he would respond to a damaged gauge event scenario posed by the inspector. In addition, the inspector reviewed the licensee's portable gauge emergency response procedure. The AU stated that there were no damaged gauge events, fires

involving licensed material, floods involving licensed material, theft of licensed material, overexposures, or loss of licensed material.

5. Authorized User Training

The inspector reviewed records showing that the AU received portable gauge safety training and hazmat training on June 3, 2015.

6. Inventory Control

The inspector noted that the AU used a utilization log for gauge inventory control.

7. Leak Tests

The inspector reviewed gauge leak test records from March 2013 through March 2016.

3.3 Conclusions

The inspector did not identify any violations of NRC regulatory requirements pertinent to postings, independent surveys, dosimetry, emergency response, AU training, inventory control, and leak tests.

4 Exit Meeting Summary

The NRC inspector presented preliminary inspection findings following the onsite inspection on July 15, 2016. The licensee did not identify any documents or processes reviewed by the inspectors as proprietary. On August 23, 2016, the inspector conducted a final exit meeting by telephone with the licensee's radiation safety officer. The licensee acknowledged the findings presented.

LIST OF PERSONNEL CONTACTED

^# Bob Rouse, RSO

Joe Sutton, Authorized User

Attended preliminary exit meeting on July 15, 2016

^ Participated in final telephonic exit meeting on August 23, 2016

INSPECTION PROCEDURES USED

87124: Fixed and Portable Gauge Programs