



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

December 16, 2015

EA-15-223

Mr. Rami M. Anabtawi, P.E., Principal  
Geotechnical and Materials Engineers, Inc.  
d/b/a GME Testing  
3517 Focus Drive  
Fort Wayne, IN 46818

SUBJECT: NRC ROUTINE INSPECTION REPORT NO. 03035029/2015001(DNMS) AND  
NOTICE OF VIOLATION – GEOTECHNICAL AND MATERIALS ENGINEERS, INC.

Dear Mr. Anabtawi:

On July 20, 2015, an inspector from the U.S. Nuclear Regulatory Commission (NRC) conducted a routine inspection at your facility in Fort Wayne, Indiana, with continued in-office review through October 29, 2015. 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. The purpose of the additional in-office review was to clarify certain information that was not available during the inspection and to evaluate the significance of the inspection findings. A final exit meeting was held between Mr. Dennis P. O'Dowd of my staff and you by telephone on November 16, 2015, 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, the NRC has determined that three Severity Level IV violations of NRC requirements occurred. The violations were evaluated 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 violations concerned: (1) the failure to ensure completion and documentation of portable gauge training for an individual prior to allowing the individual to independently use a portable gauge, as required by the Condition 12 of NRC License No. 13-32182-01; (2) the failure to maintain licensed material within maximum possession limits specified by Condition 8 of the license, and to possess only portable gauges specified in Condition 9 of the license; and (3) the failure to provide recurrent training that satisfied the requirements in Subpart H to Title 49 of the *Code of Federal Regulations* (CFR) Part 172 every three years for two hazmat employees who transported portable gauges containing sealed sources of radioactive material on public highways on multiple occasions, as required by 10 CFR 71.5(a). These violations are cited in the enclosed Notice of Violation (Notice). The NRC is citing these violations in the enclosed Notice because they were identified by the inspector.

In accordance with Section 6.3 of the NRC Enforcement Policy, normally the first two violations would be cited at Severity Level III. However, the first violation is being cited at Severity Level IV due to the related low safety significance because the individual had received several months of on-the-job training and attended training provided by the State of Indiana's Department of Transportation. The individual was able to demonstrate for the inspector the proper use of gauges, as well as an adequate knowledge and understanding of radiation safety. The second violation is also being cited at Severity Level IV because the increase of radioactive material over the maximum possession limits was not deemed as radiologically significant, as the licensee was already authorized for these materials and was properly controlling the material.

The inspector determined that the root cause of the violations was an incomplete understanding of the requirements in 10 CFR Parts 30 and 71, and the terms and conditions of your license. As corrective actions to restore compliance with the aforementioned requirements: (1) on August 7, 2015, the individual who had been identified as not having completed the required portable gauge users training prior to using the gauge successfully completed this training; (2) on October 26, 2015, upon the issuance of Amendment No. 08 to NRC License No. 13-32182-01, the license was appropriately modified to increase the possession limit and authorize an additional manufacturer and model gauge, in response to amendment application dated July 20, 2015, submitted to the Agency; and, (3) the two gauge users have completed the recurrent DOT hazmat training, as of August 7, 2015.

As corrective actions to address the potential for recurrence, based on our telephonic conversation on November 16, 2015, you have implemented procedures to ensure that only individuals who have completed training as described in your license application may use licensed portable gauges, that prior to acquiring additional gauges you will verify that you are authorized for the specific manufacturer and model gauge(s) and complete calculations to ensure that possession limits will not be exceeded, and that a schedule will be maintained to ensure that refresher DOT hazmat training for employees who transport licensed gauges will be completed within the required period specified by 49 CFR 172.704(a).

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to prevent recurrence, and the date when full compliance was achieved is already adequately addressed in the docket in this letter. 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 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, 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, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made publicly available without redaction.

R. Anabtawi

-3-

Please feel free to contact Dennis P. O'Dowd of my staff if you have any questions regarding this inspection. Mr. O'Dowd can be reached at (630) 829-9573.

Sincerely,

***/RA/***

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

Docket No. 030-35029  
License No. 13-32182-01

Enclosure:  
Notice of Violation

cc w/encl: State of Indiana

R. Anabtawi

-3-

Please feel free to contact Dennis P. O'Dowd of my staff if you have any questions regarding this inspection. Mr. O'Dowd can be reached at (630) 829-9573.

Sincerely,

*/RA/*

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

Docket No. 030-35029  
License No. 13-32182-01

Enclosure:  
Notice of Violation

cc w/encl: State of Indiana

DISTRIBUTION w/encl:

Darrell Roberts  
John Giessner  
Julio Lara  
Richard Skokowski  
Carole Ariano  
Paul Pelke  
Carmen Olteanu  
Jim Clay  
MIB Inspectors

ADAMS Accession Number: ML15351A151

Publicly Available     Non-Publicly Available     Sensitive     Non-Sensitive

To receive a copy of this document, indicate in the concurrence box "C" = Copy without attach/encl "E" = Copy with attach/encl "N" = No copy

OFFICE	RIII-DNMS		RIII-EICS		RIII-DNMS		RIII	
NAME	DO'Dowd AMcCraw for		Rskokowski		AMcCraw			
DATE	12/15/15		12/15/15		12/16/15			

OFFICIAL RECORD COPY

## NOTICE OF VIOLATION

Geotechnical and Materials Engineers, Inc.  
d/b/a GME Testing  
Fort Wayne, Indiana

License No. 13-32182-01  
Docket No. 030-35029  
EA-15-223

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on July 20, 2015, with continued in-office review through October 29, 2015, three violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. Condition 12 of NRC License No. 13-32182-01, Amendment No. 07 states that licensed material shall only be used by, or under the supervision and in the physical presence of, individuals who have received the training described in application dated October 1, 2009.

Item 8 of the application dated October 1, 2009, states that before using licensed materials, authorized users will have successfully completed one of the training course described in Criteria in the section entitled "Training for Individuals Working In or Frequenting Restricted Areas" in NUREG-1556 Vol. 1, Rev. 1, dated November 2001. The Criteria of Section 8.8 of NUREG-1556 Vol. 1, Rev. 1, dated November 2001, describes two courses: a portable gauge manufacturer's course for users; or an equivalent course that meets Appendix D criteria.

Contrary to the above, on July 20, 2015, the licensee failed to ensure that licensed material was only used by, or under the supervision and in the physical presence of, individuals who had received the training described in the application dated October 1, 2009. Specifically, the licensee allowed an individual to use licensed material without supervision at a temporary job site in New Haven, Indiana, and the individual had not completed either a portable gauge manufacturer's course for users, or an equivalent course that meets Appendix D criteria.

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

- B. Condition 8.A. of NRC License No. 13-32182-01, Amendment No. 07 states, in part, the maximum activity the licensee may possess at any one time under this license is 50 millicuries (mCi) total of cesium-137 (Cs-137). Condition 8.B. of the license states the maximum activity the licensee may possess at any one time under this license is 250 mCi total of americium-241 (Am-241).

Condition 9.A. and B. authorizes Cs-137 and Am-241 to be used in Troxler Model 3430 and 3440 portable gauges for measuring physical properties of materials.

Contrary to the above, from December 1, 2014, until October 26, 2015, the licensee failed to limit its possession of licensed material to the maximum activity of 50 mCi of Cs-137 and 250 mCi of Am-241 in Troxler Model 3430 portable gauges. Specifically, on December 1, 2014, the licensee obtained four additional portable nuclear gauges containing a total of 36 mCi of Cs-137 and 160 mCi of Am-241, bringing the total activity possessed by the licensee to 80 mCi of Cs-137 and 320 mCi of Am-241, an amount

Enclosure

exceeding the maximum activity the license may possess at any one time. Additionally, two of the four gauges were Humboldt Model 5001 portable gauges, a make and model not authorized by the license.

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

- C. Title 10 CFR Part 71.5(a) requires, in part, that each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, shall comply with the applicable requirements of the DOT regulations in 49 CFR Parts 107, 171 through 180, and 390 through 397, appropriate to the mode of transport.

Title 49 CFR 172.702 states, in part, that each hazmat employer shall ensure that each hazmat employee is trained and tested, and that no hazmat employee performs any function subject to the requirements of 49 CFR Parts 171-177 unless trained, in accordance with Subpart H of 49 CFR (Part 172.700-704). The terms Hazmat Employer and Hazmat Employee are defined in 49 CFR 171.8.

Title 49 CFR 172.704(a) specifies the elements of hazmat employee training as: (1) general awareness/familiarization training; (2) function-specific training; and (3) safety training; (4) security awareness training; and (5) in-depth security training, if applicable.

Title 49 CFR 172.704(c) requires, in part, that a hazmat employee receive recurrent training at least once every three years.

Contrary to the above, as of July 20, 2015, the licensee failed to provide recurrent training for hazmat employees that satisfied the requirements in Subpart H to 49 CFR Part 172 at least once every three years, and the licensee otherwise meets the definition of a hazmat employer in 49 CFR 171.8. Specifically, two of the licensee's hazmat employees of the licensee had not received recurrent training in the last three years that satisfied the requirements of 49 CFR 172.704(a) and transported a portable gauge containing sealed sources of radioactive material on public highways on multiple occasions. The most recently trained of the two employees last received hazmat training in June 2008, which expired in June 2011.

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

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 letter transmitting this Notice of Violation (Notice). 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 03035029/2015001(DNMS); EA-15-223" 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'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, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made publicly available 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 16<sup>th</sup> day of December 2015.