



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

May 20, 2008

Docket No. 03031593  
EA-08-093

License No. 37-28492-01

Ward McMasters, P.E.  
President & Radiation Safety Officer  
Earth Engineering, Inc.  
115 West Germantown Pike  
East Norriton, PA 19401

**SUBJECT:** INSPECTION 03031593/2008001, EARTH ENGINEERING, INC., EAST NORRITON, PENNSYLVANIA SITE, EMMAUS, PENNSYLVANIA SITE, WEST BERLIN, NEW JERSEY SITE, AND THE TEMPORARY JOB SITES IN PLYMOUTH MEETING, GREEN LANE, LEHIGH VALLEY, AND COLLEGEVILLE, PENNSYLVANIA; EXERCISE OF ENFORCEMENT DISCRETION AND NOTICE OF VIOLATION

Dear Mr. McMasters:

On February 27-28 and March 6, 2008, Kathy Modes of this office conducted a safety inspection at the above address, and at the following locations: 149 Main Street, Emmaus, Pennsylvania, 403 Commerce Lane, West Berlin, New Jersey, and temporary job sites located in Plymouth Meeting, Green Lane, Lehigh Valley, and Collegeville, Pennsylvania, of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The findings of the inspection were discussed with you and members of your staff at the conclusion of the inspection on May 6, 2008.

Based on the results of this inspection, it appears that your activities were not conducted in full compliance with NRC requirements. A Notice of Violation (Notice) is enclosed that categorizes each violation by severity level. Two violations were identified including a violation of 10 CFR 30.34(i) for failing to secure a portable gauge by using two independent physical controls to prevent unauthorized removal of a portable gauge as described in the attached Notice. Although the lack of two physical controls on a portable gauge when not under constant surveillance is normally categorized at Severity Level III and considered for escalated enforcement action, because: (1) one physical control existed to prevent loss or theft of the portable gauges; (2) you retained possession of the gauges; (3) you took appropriate action to correct the violation and prevent recurrence of similar violations in the future; and (4) the violation was not willful, we are exercising enforcement discretion to categorize this violation at Severity level IV. However, any future violations of 10 CFR 30.34(i) will be categorized at Severity Level III and evaluated for a civil penalty in accordance with Section VI.C. of the Enforcement Policy. The other cited violation is for the failure to have emergency response information readily available when transporting the portable gauges. This is a violation of 10 CFR 71.5(a), per the requirements of 49 CFR 177.817(e).

The NRC has concluded that information regarding the reason for the violations, and corrective actions taken and planned to correct the violations and prevent recurrence is already adequately addressed on the docket in the inspection documentation and in your memorandum dated March 10, 2008 (ADAMS Accession No. ML080730162). Therefore, you are not required to respond to this letter unless the description therein 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.

As part of this inspection we also reviewed your corrective actions, including your office policy on allowing gauge users to store the gauges in their vehicles at their residences for extended periods. As you are aware, portable gauges have been stolen from residences. The NRC policy, as described in NUREG-1556, Volume 1, Revision 1, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses," states that the NRC does not consider long-term storage in vehicles or personal residences not listed on the license an acceptable practice. While this guidance is not a specific requirement of your license, your license does need to accurately reflect the long-term storage of your licensed material. Based on the additional information you provided during our telephone conversation on May 6, 2008, we understand that you have performed an audit of the storage of gauges in personal vehicles and at personal residences to assure that the gauges are secured in accordance with 10 CFR 30.34(i) and 10 CFR 20.1801, and controlled by only authorized gauge users. Further, you have revised your policy regarding storage at personal residences, which now requires gauges to be returned to your facility over the weekend, and you have submitted an amendment to your license to add a temporary job site storage location.

Current NRC regulations are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **Nuclear Materials; Medical, Academic, and Industrial Uses of Nuclear Material**; then **Regulations, Guidance, and Communications**. The current Enforcement Policy is included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **About NRC; Organization and Functions; Office of Enforcement; About Enforcement**; then **Enforcement Policy**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 7:00 a.m. to 8:00 p.m. EST, Monday through Friday (except Federal holidays).

Please contact Kathy Modes at (610) 337-5251 for any questions regarding this matter.

Sincerely,  
***Original signed by Brian Holian***

Brian E. Holian, Director  
Division of Nuclear Materials Safety

Enclosure:  
Notice of Violation

cc:  
Commonwealth of Pennsylvania  
State of New Jersey

The NRC has concluded that information regarding the reason for the violations, and corrective actions taken and planned to correct the violations and prevent recurrence is already adequately addressed on the docket in the inspection documentation and in your memorandum dated March 10, 2008 (ADAMS Accession No. ML080730162). Therefore, you are not required to respond to this letter unless the description therein 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.

As part of this inspection we also reviewed your corrective actions, including your office policy on allowing gauge users to store the gauges in their vehicles at their residences for extended periods. As you are aware, portable gauges have been stolen from residences. The NRC policy, as described in NUREG-1556, Volume 1, Revision 1, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses," states that the NRC does not consider long-term storage in vehicles or personal residences not listed on the license an acceptable practice. While this guidance is not a specific requirement of your license, your license does need to accurately reflect the long-term storage of your licensed material. Based on the additional information you provided during our telephone conversation on May 6, 2008, we understand that you have performed an audit of the storage of gauges in personal vehicles and at personal residences to assure that the gauges are secured in accordance with 10 CFR 30.34(i) and 10 CFR 20.1801, and controlled by only authorized gauge users. Further, you have revised your policy regarding storage at personal residences which now requires gauges to be returned to your facility over the weekend and have submitted an amendment to your license to add a temporary job site storage location.

Current NRC regulations are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **Nuclear Materials; Medical, Academic, and Industrial Uses of Nuclear Material**; then **Regulations, Guidance, and Communications**. The current Enforcement Policy is included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **About NRC; Organization and Functions; Office of Enforcement; About Enforcement**; then **Enforcement Policy**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 7:00 a.m. to 8:00 p.m. EST, Monday through Friday (except Federal holidays).

Please contact Kathy Modes at (610) 337-5251 for any questions regarding this matter.

Sincerely,  
**/RA/**  
 Brian E. Holian, Director  
 Division of Nuclear Materials Safety

Enclosure:  
 Notice of Violation

cc:  
 Commonwealth of Pennsylvania  
 State of New Jersey  
Distribution w/encl:  
 D. J. Holody, RI  
 A. DeFranciso, RI

L. Lopez, OE  
 S. Woods, OE

DOCUMENT NAME: C:\FileNet\ML081420304.wpd

**SUNSI Review Complete: KModes**

After declaring this document "An Official Agency Record" it will be released to the Public.

**To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy**

OFFICE	DNMS/RI	N	DNMS/RI	DNMS/RI	RI/ORAOE
NAME	KModesKAD		MMiller MTM	BHolian BEH	DHolody RJS for
DATE	5/7/2008		5/7/08	5/13/08	5/16/08
OFFICE	DNMS/RI	N			
NAME	B Holian beh				
DATE	5/20/08				

## NOTICE OF VIOLATION

Earth Engineering, Inc.  
East Norriton, PA

Docket No. 03031593  
License No. 37-28492-01  
EA-08-093

During an NRC inspection conducted on February 27-28 and March 6, 2008, two violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. 10 CFR 30.34(i) requires that each portable gauge licensee 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.

Contrary to the above, as of February 28, 2008, the licensee failed to use a minimum of two independent physical controls that form tangible barriers to secure a portable moisture-density gauge from unauthorized removal when the gauge was not under the control and constant surveillance of the licensee.

1. Specifically, portable gauges were stored in vehicles outside of the licensee's facility, at temporary job sites, and at gauge user's residences, with only one tangible barrier to prevent unauthorized removal (e.g., locked trunk or vehicle doors), for periods of time ranging from minutes to hours when the portable gauges were not under the control and constant surveillance of the licensee.
2. Specifically, portable gauges were stored in a locked storage facility with only one tangible barrier to prevent unauthorized removal (e.g., locked door), when the portable gauges were not under the control and constant surveillance of the licensee.

This is a Severity Level IV violation (Supplement VI).

- B. 10 CFR 71.5(a) requires that a licensee who transports licensed material outside of the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR Parts 170 through 189.

49 CFR 177.817(e) requires, in part, that the driver of a motor vehicle containing hazardous material ensure that the shipping paper is readily available to, and recognizable by, authorities in the event of accident or inspection. Specifically, (i) when the driver is at the vehicle's controls, the shipping paper shall be: (a) within his immediate reach while he is restrained by the lap belt; and (b) either readily visible to a person entering the driver's compartment or in a holder which is mounted to the inside of the door on the driver's side of the vehicle; (ii) when the driver is not at the vehicle's controls, the shipping paper shall be: (a) in a holder which is mounted to the side of the door on the driver's side of the vehicle; or (b) on the driver's seat in the vehicle.

Pursuant to 49 CFR 172.101, radioactive material is classified as a hazardous material.

Contrary to the above, on February 27 and 28, 2008, the licensee transported portable nuclear moisture-density gauges containing cesium-137 and americium-241 sealed sources, outside the site of usage, as specified on the NRC license, or on a public highway, and the driver of the vehicle did not ensure that the shipping paper was readily available in the driver's compartment, as required. Specifically, for several different shipments, the shipping papers could either not be found, were retrieved from the glove box or center console, or were in the gauge carrying case which was located in the vehicle's trunk.

This is a Severity Level IV violation (Supplement V).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance will be achieved is already adequately addressed on the docket in the inspection record. You are, however, 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," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001 with a copy to the Regional Administrator, Region I, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

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 document 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.

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

Dated This 20<sup>th</sup> day of May 2008