



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

November 30, 2016

Docket No. 03020231
EA-16-224

License No. 47-23065-01

Chad M. Riley
Principal-in-Charge
Thrasher Engineering, Inc.
600 White Oaks Boulevard
Bridgeport, WV 26330

SUBJECT: NRC INSPECTION REPORT NO. 03020231/2016001, THRASHER
ENGINEERING, INC., BRIDGEPORT, WEST VIRGINIA SITE

Dear Mr. Riley:

On September 13, 2016, Steven Courtemanche of this office conducted a reactive inspection at the above address and at a temporary jobsite in Bridgeport, West Virginia, with continuing in-office review through November 9, 2016. The inspection was limited to a review of an incident on September 10, 2016, involving the theft of a portable nuclear gauge (Event Notification 52233) and an observation of licensed activities at a temporary jobsite on September 13, 2016. Additional information provided in your correspondence dated September 28, 2016, and a telephone discussion on October 31, 2016, between Detective William Ramey of the Raleigh County Sheriff's Office and Todd Jackson of this office were also considered as part of the inspection. The findings of the inspection were discussed with Wade Naylor, Acting Radiation Safety Officer, of your staff by telephone at the conclusion of the inspection on November 9, 2016. The enclosed report presents the results of this inspection.

The NRC identified no violations associated with the theft, because the gauge was properly locked and secured in accordance with NRC requirements.

However, based on the results of other observations during this inspection, three apparent violations were identified and are described in Sections II and III of the enclosed report. Two of the apparent violations are being considered for escalated enforcement in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at:

<http://nrc.gov/about-nrc/enforcement/enforce-pol.html>.

The apparent violations being considered for escalated enforcement involved the failure to control and maintain constant surveillance of licensed material as required by 10 CFR 20.1802, and the failure to use a minimum of two independent physical controls that form tangible barriers to secure a portable gauge from unauthorized removal, whenever the portable gauge was not under the control and constant surveillance of the licensee as required by 10 CFR 30.34(i). These were identified during NRC observations at the temporary jobsite. We noted that you took immediate corrective actions and preventive actions to comply with NRC requirements.

The circumstances surrounding these apparent violations, the significance of the issues, and the need for lasting and effective corrective action were discussed with Mr. Naylor at the inspection exit meeting on November 9, 2016. As a result, it may not be necessary to conduct a predecisional enforcement conference (PEC) in order to enable the NRC to make an enforcement decision. In addition, since your facility has not been the subject of escalated enforcement actions within the last two years or the last two inspections, and based on our understanding of your corrective actions, a civil penalty may not be warranted in this case, in accordance with Section 2.3.4 of the Enforcement Policy.

The third apparent violation, which is not being considered for escalated enforcement, involved the failure to submit a written report as required by 10 CFR 20.2201(b) within 30 days after making a telephone report required by 10 CFR 20.2201(a). During the exit meeting, Mr. Naylor stated that he would submit the required report.

Before the NRC makes its enforcement decision, we are providing you an opportunity to either (1) respond to the apparent violations in writing, (2) request a PEC, or (3) accept the violations as characterized in this letter and its enclosure (in which case, the NRC will proceed with its enforcement decision). Please contact Blake D. Welling, Chief, Commercial, Industrial, R&D and Academic Branch at (610) 337-5205 **within 10 days** of the date of this letter, to notify the NRC whether you are interested in providing a written response, attending a PEC, or accepting the violations.

If you choose to provide a written response, it should be sent to the NRC within 30 days of the date of this letter. Your response may reference or include previously docketed correspondence. It should be clearly marked as a "Response to Apparent Violations in Inspection Report No. 03020231/2016001, EA 2016-224" and sent to U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001 with a copy to the Regional Administrator, Region I, 2100 Renaissance Boulevard, Suite 100, King of Prussia, PA 19406-2713.

If you choose to request a PEC, the meeting should be held in our office in King of Prussia, PA within 30 days of the date of this letter. The PEC will afford you the opportunity to provide your perspective on the apparent violations and any other information that you believe the NRC should take into consideration before making an enforcement decision. The topics discussed during the conference may include the following: information to determine whether the violations occurred, information to determine the significance of the violations, information related to the identification of the violations, and information related to any corrective actions taken or planned to be taken. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," is included on the NRC's website at: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notice/1996/in96028.html>, may be helpful. If a PEC is held, it will be open for public observation and the NRC will issue a press release to announce the conference time and date.

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.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Med, Ind, & Academic Uses**; then **Regulations, Guidance and**

Communications. The current Enforcement Policy is included on the NRC's website at www.nrc.gov; select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy (Under 'Related Information')**. 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 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

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 Public Document Room or from the NRC document system (ADAMS), accessible from the NRC website at <http://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 available to the Public without redaction.

Sincerely,

/RA/

James M. Trapp, Director
Division of Nuclear Materials Safety

Enclosure:
Inspection Report No. 03020231/2016001

cc w/encl: Wade Naylor, Acting Radiation Safety Officer
State of West Virginia

www.nrc.gov; select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy (Under 'Related Information')**. 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 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

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Sincerely,

/RA/

James M. Trapp, Director
Division of Nuclear Materials Safety

Enclosure:
Inspection Report No. 03020231/2016001

cc w/encl: Wade Naylor, Acting Radiation Safety Officer
State of West Virginia

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SUNSI Review Complete: SCourtemanche

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OFFICE	DNMS/RI	N	DNMS/RI	R/ORA	DNMS/RI
NAME	SCourtemanche./src*		BWelling/bw*	BBickett/cjc for*	JTrapp/jt
DATE	11/28/16		11/28/16	11/28/16	11/30/16

*see previous concurrence

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 03020231/2016001
Docket No. 03020231
License No. 47-23065-01
EA No. EA-16-224
Licensee: Thrasher Engineering, Inc.
Address: 600 White Oaks Boulevard, Bridgeport, West Virginia
Other Locations Inspected: Temporary jobsite in Bridgeport, West Virginia
Inspection Dates: September 13, 2016 – November 9, 2016

	<i>/RA/</i>	<i>11/28/16</i>
Inspector:	_____ Steven R. Courtemanche Health Physicist Commercial, Industrial, R&D and Academic Branch Division of Nuclear Materials Safety	_____ date
Approved By:	<i>/RA/</i>	<i>11/28/16</i>
	_____ Blake D. Welling, Chief Commercial, Industrial, R&D and Academic Branch Division of Nuclear Materials Safety	_____ date

EXECUTIVE SUMMARY

Thrasher Engineering, Inc.
NRC Inspection Report No. 03020231/2016001

The NRC conducted a reactive inspection at Thrasher Engineering, Incorporated's facility and at a temporary jobsite located in Bridgeport, West Virginia following a report to the NRC on September 10, 2016, (Event Notification 52233) of the theft of licensed material.

Thrasher is an engineering consulting company that possesses and uses portable nuclear moisture/density gauges. Thrasher reported a theft of a gauge from a company vehicle in Beaver, West Virginia. Subsequently, on October 31, 2016, the local law enforcement agency notified the NRC that the gauge had been recovered.

The NRC identified no violations associated with the theft because the device was properly locked and secured in accordance with NRC requirements.

However, based on the inspector's observations at the temporary jobsite, the NRC identified two apparent violations being considered for escalated enforcement:

Failure to control and maintain constant surveillance of licensed material as required by 10 CFR 20.1802.

Failure to use a minimum of two independent physical controls that form tangible barriers to secure a portable gauge from unauthorized removal, whenever the portable gauge was not under the control and constant surveillance of the licensee as required by 10 CFR 30.34(i) (See Section III). The NRC noted that Thrasher took immediate corrective actions to secure the gauge and completed additional actions to prevent recurrence.

Additionally, the NRC identified an apparent violation not being considered for escalated enforcement:

Failure to submit a written report as required by 10 CFR 20.2201(b) within 30 days after making a telephone report required by 10 CFR 20.2201(a) (See Section II). During the exit meeting, the Acting Radiation Safety Officer stated that he would submit the required report.

REPORT DETAILS

I. Organization and Scope of the Program

a. Inspection Scope

The inspector reviewed the organization, management oversight, and scope of the program using Inspection Procedure (IP) 87124.

b. Observations and Findings

Thrasher Engineering, Inc. is authorized under NRC License No. 47-23065-01 to possess and use portable moisture/density gauges containing sealed sources of cesium-137 and americium-241 for measuring the physical properties of materials. The license authorizes storage of these gauges at their facility in Clarksburg, WV and for use at temporary jobsites within NRC jurisdiction. The radiation safety officer (RSO) was knowledgeable of the licensee's safety/security program and was actively involved with the program implementation.

c. Conclusions

No violations were identified.

II. Event Follow-up

a. Inspection Scope

The inspection was conducted using IP 87103, focusing on a portable nuclear moisture/density gauge (gauge) that was reported stolen on September 10, 2016. During the inspection, the inspector reviewed the licensee's records and discussed the implementation of its radiation safety procedures with the RSO, including the transportation of gauges, the security of gauges, and the training of authorized users (AU). The inspector also reviewed the Raleigh County Sheriff's Report (Incident Number 2016-58708) and hotel videotape of the September 10, 2016, incident.

b. Observations and Findings

On September 10, 2016, Thrasher reported a theft of a portable gauge from the bed of a company pickup truck. The theft occurred while the vehicle was parked at a hotel in Beaver, West Virginia. The RSO reported the theft to local law enforcement and the NRC.

The hotel's security camera footage showed an individual in a pickup truck pull up alongside the company vehicle in an adjacent parking spot. The individual took an object and used cutting motions. The individual removed a chain and the transport case containing the gauge from the bed of the vehicle and placed them in the bed of his truck. The individual then drove away from the scene.

The inspector interviewed the AU and the RSO concerning the incident. The AU demonstrated how the gauge was secured to the vehicle by passing a chain through each handle of the transport case and securing the chains to separate locations on the vehicle. The actions of the individual involved in the theft were consistent with the above. The AU also informed the inspector that two hasp locks were put on the transport case to impede immediate access to the gauge.

Based on this information and the security camera footage, the inspector determined that the gauge was properly locked and secured in accordance with NRC requirements.

Subsequently, on October 31, 2016, Detective William Ramey of the Raleigh County Sheriff's Office, near Beaver, WV, notified the NRC Region I office that the portable gauge was recovered in its transport case in a wooded area. On November 9, 2016, Wade Naylor, Acting RSO, informed the inspector that the gauge was returned to the licensee on November 7, 2016. Mr. Naylor stated that a leak test had been performed which did not identify any removable contamination and the gauge was in good working condition.

The inspector noted that, as of November 9, 2016, a 30-day written report of the incident had not been submitted to the NRC. Mr. Naylor stated that he would draft the report and submit it to the NRC.

c. Conclusions

The following apparent violation, which is not being considered for escalated enforcement, was identified:

10 CFR 20.2201(b) requires, in part, that each licensee required to make a report under paragraph (a) of this section shall, within 30 days after making the telephone report, make a written report setting forth the information required by this regulation.

Contrary to the above, as of November 9, 2016, the licensee was required to make a report under paragraph (a) of the above section and did not, within 30 days after making the telephone report, make a written report setting forth the information required by the above regulation. Specifically, the licensee made a telephone report on September 10, 2016, of an incident involving a stolen portable moisture/density gauge but did not submit a written report as of November 9, 2016, a period greater than 30 days.

III. Temporary Jobsite Inspection

a. Inspection Scope

The inspector observed the licensee's use of a gauge at a temporary jobsite in Bridgeport, West Virginia using IP 87124.

b. Observations and Findings

Upon arrival at the temporary jobsite, the inspector observed that the vehicle was parked on a road beside the jobsite, the vehicle was screened from the jobsite by a stand of

trees, and the inspector could not see the AU anywhere near the vehicle. The inspector requested the RSO, who was accompanying the inspector, to check the vehicle's camper top and tailgate and he determined that they were locked.

The inspector requested access to the gauge to check security, required labeling, and the shipping papers. The inspector noted that when the AU opened the cab door, it was unlocked, and that the keys were visible from the outside of the vehicle. The inspector inquired as to purpose of the keys on the key ring. The AU informed the inspector that the keys operated the vehicle, unlocked the cap on the bed of the truck, the tailgate, and the padlocks on the transport case. This situation differs from the incident of September 10, 2016, in that one would only need to retrieve the keys to defeat the tangible barriers.

The inspector observed that the AU was previously engaged in conversation with a construction worker at a distance of about 50 yards from vehicle. The inspector observed that the AU had not been in a direct line-of-sight of the vehicle and; therefore, the licensee failed to control and maintain constant surveillance of the gauge in the vehicle while the keys were uncontrolled in the cab, which resulted in a compromise of both barriers.

c. Conclusions

The following apparent violations were identified:

1. 10 CFR 20.1802 requires that the licensee control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage.

Contrary to the above, on September 13, 2016, the licensee did not control and maintain constant surveillance of licensed material that was in a controlled or unrestricted area and that was not in storage. Specifically, a portable gauge containing licensed material, 8 millicuries of cesium-137 and 44 millicuries of americium-241/Be, was in a vehicle and the keys to the vehicle and access to the portable gauge were not in the control of the licensee and the licensee did not maintain constant surveillance of the vehicle.

2. 10 CFR 30.34(i) requires, in part, 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.

Contrary to the above, on September 13, 2016, the licensee did not use a minimum of two physical controls that formed tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges were not under the control and constant surveillance of the licensee. Specifically, a portable gauge was kept in a company vehicle, while keys to the barriers (i.e., lock for the cap over the bed of the vehicle and the padlocks to prevent opening of the transportation case securing it to the vehicle) were visible in the unlocked cab of the vehicle, and the portable gauge was not under the control and constant surveillance of the licensee.

The licensee performed following corrective and preventive actions:

- a) required the portable gauge user to immediately lock his vehicle;
- b) required the portable gauge user to retain possession of all keys on his person;
- c) provided training to all portable gauge users on the need to keep the vehicle locked, to retain possession of all keys, and to ensure that the portable gauge has two independent means of control that form tangible barriers to secure the portable gauge from unauthorized removal when the portable gauge is not under the control and constant surveillance of the portable gauge user.

Additionally, the licensee made the following changes in its procedures as a result of the incident of September 10, 2016, and the temporary jobsite inspection of September 13, 2016.

- If an AU is given permission to keep a gauge overnight, the gauge and its transport case is to be moved inside the cab of the vehicle which offers additional security as an alarm sounds if an attempt at unauthorized entry into the cab is attempted.
- The transport case is to be secured to the vehicle by two chains attached to two bolts mounted on the frame of the vehicle.
- The transport case is to be covered by a tarp or other covering so it may not be observed from outside of the cab.
- Training was provided to all AU in the revised procedures, reminding them to keep the keys of the vehicle along with the keys to the transport case and gauge on their person at all times, and that they were to keep the vehicle locked.

IV. Exit Meeting

On September 13, 2016, at the end of the on-site inspection, the inspector met with the licensee's management and described the preliminary findings of the inspection and explained the NRC's Enforcement Policy. The licensee reiterated its commitment to continue to abide by all regulatory requirements.

On November 9, 2016, the inspector discussed the inspection findings and apparent violations via telephone with the licensee. The licensee acknowledged the findings and stated that all portable gauge users had been made aware of the event and had been provided additional training regarding the changes in procedures and the security of gauges while transporting and using the gauges at jobsites.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Clayton C. White, Project Manager
Randy Means, Radiation Safety Officer
Chad M. Riley, Principal-in-Charge
Benjamin Harris, Technician
Wade Naylor, Acting Radiation Safety Officer

Non-Licensee

Detective William Ramey, Raleigh County Sheriff's Office

INSPECTION PROCEDURES USED

87103 and 87124

LIST OF DOCUMENTS REVIEWED

Raleigh County Sheriff's Office Report (Incident Number 2016-58708)
E-mail containing Revised Operating and Emergency Procedures
Shipping Papers at temporary jobsite
Training Records of portable gauge users
Event Notification 52233
Nuclear Materials Event Database Report No. 160379