



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, ILLINOIS 60532-4352

March 16, 2020

EA-20-014  
EN 54310  
NMED No. 190492 (Closed)

Mr. William Witzig  
Radiation Safety Officer/Owner  
Alt and Witzig Engineering, Inc.  
4105 West 99<sup>th</sup> Street  
Carmel, IN 46032

SUBJECT: NRC SPECIAL INSPECTION REPORT NO. 03035111/2019001(DNMS)  
ALT AND WITZIG ENGINEERING, INC.

Dear Mr. Witzig:

On October 23, 2019, an inspector from the U.S. Nuclear Regulatory Commission (NRC) conducted a special inspection at your Carmel, Indiana, location with continued in-office review through March 2, 2020. The purpose of the inspection was to review the circumstances surrounding a reportable event in which a portable moisture/density gauge was stolen at the residence of a gauge user in Indianapolis, Indiana, on October 3, 2019. The in-office review included a review of the written report describing the event. Mr. Luis Nieves of my staff conducted a final exit meeting by telephone with Mark Herber of your staff on March 2, 2020, to discuss the inspection findings.

Based on the results of this inspection, two apparent violations of NRC requirements 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's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The apparent violations concerned the licensee's failure to (1) secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas, as required by Title 10 of the *Code of Federal Regulations* (CFR) 20.1801 and 10 CFR 30.34(i) and (2) report immediately after its occurrence became known to the licensee, any stolen material greater than 1,000 times Appendix C quantity, as required by 10 CFR 20.2201(a)(1)(i).

Since the apparent violations involve the loss of a device containing 10 millicuries of cesium-137 and 50 millicuries of americium-241/beryllium, the NRC is considering proposing imposition of a civil monetary penalty. Section 2.3.4, Civil Penalty, of the NRC Enforcement Policy states that for violations where a licensee has lost required control of its regulated licensed material for any period of time, the NRC normally will impose at least a base civil penalty. The base civil penalty amount is based on approximately three times the expected average cost of authorized disposal; however, the NRC may exercise its discretion to mitigate or escalate a civil penalty amount based on the merits of a specific case. Therefore, you may provide information regarding the actual expected cost of authorized disposal that you believe the NRC should

consider in making a final enforcement decision. However, NRC will not normally decrease the civil penalty to an amount below the lowest base civil penalty for such cases (i.e., \$8,500)

Before the NRC makes its enforcement decision, we are providing you an opportunity to either: (1) respond in writing to the two apparent violations addressed in this 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). **Please contact Mr. Robert Ruiz at 630-829-9732 within 10 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 Apparent Violations in NRC Inspection Report No. 03035111/2019001(DNMS); EA-20-014," and should include, for the apparent violations: (1) the reasons for the apparent violations, or, if contested, the basis for disputing the apparent violations; (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, the conference 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 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.

In lieu of a PEC, you may also request ADR with the NRC in an attempt to resolve these issues. ADR is a general term encompassing various techniques for resolving conflicts using a third party neutral. The technique that the NRC has decided to employ is mediation. Mediation is a voluntary, informal process in which a trained neutral (the "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.

In addition, 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.

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.

Please feel free to contact Luis Nieves of my staff if you have any questions regarding this inspection. Mr. Nieves can be reached at 630-829-9571.

Sincerely,

***/RA Christine A. Lipa Acting For/***

David L. Pelton, Director  
Division of Nuclear Materials Safety

Docket No. 030-35111  
License No. 13-18685-02

Enclosure:  
IR No. 03035111/2019001(DNMS)

cc w/encl: Mark Herber, Senior Project  
Engineer  
State of Indiana

Letter to William Witzig from David Pelton dated March 16, 2020.

SUBJECT: NRC SPECIAL INSPECTION REPORT NO. 03035111/2019001(DNMS)  
ALT AND WITZIG ENGINEERING, INC.

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

Docket No(s): 030-35111

License No.: 13-18685-02

Report No.: 03035111/2019001(DNMS)

EA No./NMED No.: EA-20-014/190492

Licensee: Alt and Witzig Engineering, Inc.

Facility: 4105 West 99<sup>th</sup> Street  
Carmel, Indiana 46032

Inspection Date(s): October 23, 2019- March 2, 2020

Exit Meeting Date: March 2, 2020

Inspector(s): Luis Nieves, Health Physicist

Approved By: Robert Ruiz, Chief  
Materials Inspection Branch  
Division of Nuclear Materials Safety

Enclosure

## **EXECUTIVE SUMMARY**

### **Name of licensee NRC Inspection Report 03035111/2019001(DNMS)**

On October 23, 2019, an inspector from the U.S. Nuclear Regulatory Commission (NRC) conducted a special inspection of Alt and Witzig Engineering, Inc. (licensee), with continued in-office review through March 2, 2020, to review the circumstances surrounding a reportable event in which a portable moisture/density gauge was stolen on October 3, 2019. The gauge was a CPN model MC-1DR-P containing 10 millicuries of cesium-137 and 50 millicuries of americium-241/beryllium. The event occurred when an authorized gauge user who was transporting the gauge left it on his truck for the night inside of an overpack without locking either of the two locks of the overpack and subsequently the gauge was stolen in Indianapolis, Indiana. The gauge user became aware of the stolen gauge the next morning when he saw the gauge was missing. He immediately proceeded to call his supervisor, who notified the police department at 11:30 a.m. but did not notify the NRC immediately of the lost gauge, instead notifying the NRC's Headquarters Operations Office at 4:00 p.m. The gauge was later recovered abandoned next to the road. The gauge was inside its transportation box, which was still locked, and had not been disturbed.

As a result of the inspection, the inspectors identified two apparent violations of NRC requirements. The first was an apparent violation of Title 10 of the *Code of Federal Regulations* (CFR) 20.1801, which requires that the licensee secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas, and 10 CFR 30.34(i), which 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. The root cause of the apparent violation was individual human error. Specifically, the gauge user forgot to lock his overpack. As corrective action to prevent recurrence of a similar event and to address the apparent violation, the licensee retrained the authorized gauge users at each branch office on the importance of security and handling of the gauges. The licensee restricted the authorized gauge user involved in the event from access to and use of the licensee's portable moisture/density gauges for 60 days.

The second apparent violation was of 10 CFR 20.2201(a)(1)(i) which requires that the licensee notify the NRC immediately after occurrence becomes known to the licensee of a stolen quantity of licensed material above 1,000 times the Appendix C quantities under such circumstances that it appears to the licensee that an exposure could result to a person in unrestricted areas. The root cause of the apparent violation was that the licensee was unaware of the immediate notification requirement.

## **REPORT DETAILS**

### **1 Program Overview and Inspection History**

Alt and Witzig Engineering was authorized under NRC Materials License No. 13-18685-02 to use licensed material for measuring physical properties of materials with nuclear gauging devices. Licensed material is authorized to be used anywhere in the United States in areas of NRC jurisdiction. The licensee uses the gauges on a daily basis for construction engineering projects throughout Indiana. The licensee uses several Troxler model 3400 series and CPN model MC gauges.

From May 21, 2018, to June 8, 2018, the NRC conducted a routine inspection of the licensee. The previous inspection was a routine inspection conducted on June 18, 2013. Neither inspection resulted in any violations identified.

### **2 Sequence of Events**

#### **2.1 Inspection Scope**

On October 23, 2019, with continued in-office review through March 2, 2020, the inspector conducted a special inspection to review the facts and circumstances surrounding the licensee's report of a portable gauge that was stolen on October 3, 2019. The special inspection consisted of interviews of licensee staff, a review of the sequence of events, and a review of the actions taken to investigate the theft of the licensee gauge.

#### **2.2 Observations and Findings**

On October 3, 2019, the licensee gauge user stored the gauge in an overpack container on his work truck and forgot to lock the overpack when he left the job site. The gauge was a CPN model MC-1DR-P containing 10 millicuries of cesium-137 and 50 millicuries of americium-241/beryllium. The overpack used to transport the gauge is a metal box bolted to the bed of the pickup truck and has a lid with two padlocks. The gauge user then drove home and parked the truck outside with the unlocked overpack containing the gauge. The gauge user arrived at his home around 7:00 p.m. and did not return to the vehicle until the next day at around 8:00 a.m. Upon returning to the vehicle, he noticed the overpack lid was open and the gauge had been stolen. At that point, he reported the stolen gauge to his supervisor, who was working at a remote job site. The supervisor left the job site and returned to the office, taking approximately 3.5 hours, before contacting the local police department. The licensee estimates that the gauge could have been stolen at any point from October 3, 2019, at 7:00 p.m. to October 4, 2019, at 8:00 a.m. The gauge user openly admitted to forgetting to lock either of the two locks of the overpack.

The authorized gauge user's failure to lock the overpack overnight is an apparent violation of 10 CFR 20.1801, which requires that the licensee secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas, and 10 CFR 30.34(i), which 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. The root cause of the event and associated

apparent violation was individual error by the authorized gauge user, who forgot to lock his overpack.

As corrective action to prevent recurrence of a similar event and to address the apparent violation, the licensee retrained the authorized gauge users at each branch office on the importance of security and handling of the gauges. The licensee restricted the authorized gauge user involved in the event from access to and use of the licensee's portable moisture/density gauges for 60 days.

## **2.3 Conclusions**

The inspector identified an apparent violation of 10 CFR 20.1801, which requires that the licensee secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas, and 10 CFR 30.34(i), which 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.

## **3 Reporting the Event**

### **3.1 Inspection Scope**

The inspector reviewed the reporting of the event for the stolen gauge by interviewing the licensee's staff and evaluating the required 30-day written report documenting the incident.

### **3.2 Observations and Findings**

On October 4, 2019, Region III received a call at approximately 9:30 in the morning from the Explosives Department of the Indianapolis Metropolitan Police inquiring about a found radioactive device (portable gauge inside a transportation box) on the side of the road in a residential subdivision. The police were seeking assistance from Region III Materials Inspection Branch in determining what the device was and to whom it belonged. The gauge case, which was found unopened with the lock still intact, had a nameplate indicating what radioactive materials it contained. The case was taken into police custody and secured at the station. At approximately 11:30 a.m., the licensee (gauge user Supervisor) reported the portable gauge stolen to the police. The police department called the licensee at 12:45 p.m. to notify them that their gauge was found and for them to go pick it up. The licensee then reported to the NRC's Headquarters Operations Office at 4:00 p.m. on October 4, 2019, that one of their gauges was stolen and recovered.

The licensee's failure to report the lost/stolen gauge timely is an apparent violation of 10 CFR 20.2201(a)(1)(i), which requires that each licensee report by telephone, immediately after its occurrence becomes known to the licensee, any lost, stolen, or missing licensed material in an aggregate quantity equal to or greater than 1,000 times the quantity specified in Appendix C to Part 20 under such circumstances that it appears to the licensee that an exposure could result to a person in unrestricted areas. The licensee stated that at the time of discovering the gauge was stolen, they were concerned that an exposure could result to a person in unrestricted areas. The root



cause of the apparent violation was that the licensee was unaware of the immediate notification requirement.

### 3.3 Conclusions

The inspector identified an apparent violation of 10 CFR 20.2201(a)(1)(i), which requires that each licensee report by telephone, immediately after its occurrence becomes known to the licensee, any lost, stolen, or missing licensed material in an aggregate quantity equal to or greater than 1,000 times the quantity specified in Appendix C to Part 20 under such circumstances that it appears to the licensee that an exposure could result to a person in unrestricted areas.

## 4 **Exit Meeting Summary**

The NRC inspectors presented the preliminary inspection findings following the onsite portion of the inspection on October 23, 2019, and the final inspection findings via telephone on March 2, 2020. The licensee did not identify any documents or processes reviewed by the inspectors as proprietary. The licensee acknowledged the findings presented.

### **LIST OF PERSONNEL CONTACTED**

#^ Mark Herber, Senior Project Engineer

# Keith Pearman, gauge user

# Attended preliminary exit meeting on October 23, 2019.

^ Participated in telephonic exit on March 2, 2020.

### **INSPECTION PROCEDURES USED**

87124: Fixed and Portable Gauge Programs

87103: Materials Licensees Involved in an Incident or Bankruptcy Filing