



Department of Energy
Under Secretary for Nuclear Security
Administrator, National Nuclear Security Administration
Washington, DC 20585



June 8, 2022

Mr. Lennie Upshaw
General Manager
Centerra-Los Alamos
Los Alamos National Laboratory
P.O. Box 1663, MS G724
Los Alamos, NM 87545

WEA-2022-02

Dear Mr. Upshaw:

This letter refers to the Department of Energy's (DOE) investigation into the facts and circumstances associated with the June 1, 2020, live fire near miss event at Los Alamos National Laboratory. The DOE Office of Enterprise Assessments' Office of Enforcement provided the results of the investigation to Centerra-Los Alamos (CLA) in an investigation report dated August 18, 2021. An enforcement conference was convened on October 13, 2021, with you and members of your staff to discuss the report's findings and CLA's response. A summary of the enforcement conference and attendance roster are enclosed.

DOE's National Nuclear Security Administration (NNSA) considers the live fire near miss event to be of high safety significance. The event was a near miss to a serious injury or fatality which occurred when a worker was moving a utility tractor downrange of the firing line, on a live fire range, while a training instructor was test-firing a repaired M4 carbine with live 5.56 mm frangible ammunition. The event revealed deficiencies in: (1) management responsibilities and firearms safety; and (2) hazard identification, assessment, prevention and abatement, and training and information.

Based on an evaluation of the evidence in this matter, including information presented at the enforcement conference, DOE/NNSA concludes that CLA violated requirements prescribed under 10 C.F.R. Part 851, *Worker Safety and Health Program*. Accordingly, DOE/NNSA hereby issues the enclosed Preliminary Notice of Violation (PNOV) which cites two Severity Level I violations with a total base civil penalty, before mitigation, of \$212,000. DOE/NNSA considers these deficiencies self-disclosing and grants no mitigation for timely self-identification, consistent with DOE's worker safety and health enforcement policies.

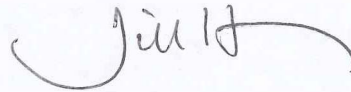
Following the event, CLA conducted a fact-finding investigation and instituted mitigating actions to prevent a recurrence. In addition, Triad National Security, LLC completed an investigation, causal analysis, and extent-of-condition analysis of the event with CLA's support. As a result, comprehensive corrective actions were developed that appear to appropriately address all causal factors of the event; and if effectively implemented should adequately address the conditions that led to the event to prevent a recurrence. Therefore, DOE/NNSA has

granted partial mitigation of 50 percent of the civil penalties for the corrective actions addressing these two violations. As a result, the total proposed civil penalty is \$106,000.

Pursuant to 10 C.F.R. § 851.42, *Preliminary Notice of Violation*, you are obligated to submit a written reply within 30 calendar days of receipt of the enclosed PNOV and to follow the instructions specified in the PNOV when preparing your response. If you fail to submit a reply within the 30 calendar days, then in accordance with 10 C.F.R. § 851.42(d), you relinquish any right to appeal any matter in the PNOV, and the PNOV, including the proposed civil penalty assessment, will constitute a final order.

After reviewing your reply to the PNOV, including any proposed additional corrective actions entered into DOE's Noncompliance Tracking System, DOE/NNSA will determine whether any further activity is necessary to ensure compliance with DOE worker safety and health requirements. DOE/NNSA will continue to monitor the completion of corrective actions until this matter is fully resolved.

Sincerely,

A handwritten signature in black ink, appearing to read "Jill Hruby", with a decorative flourish at the end.

Jill Hruby

Enclosures:

Preliminary Notice of Violation (WEA-2022-02)

Enforcement Conference Summary

Enforcement Conference Attendance Roster

cc: Theodore Wyka, NA-LA
Venessa Chavez, Triad National Security, LLC
Frank Rose, NA-1
James McConnell, NA-1
Douglas Fremont, NA-1
Kenneth Sheely, NA-50
Daniel Sigg, NA-50
Stephen Wallace, NA-50
Anna McCuen, NA-MB-1.3
John Dupuy, EA-1
Anthony Pierpoint, EA-10
Robert Hailstone, EA-11
Kevin Kilp, EA-30
Eric Nicoll, EA-40
Barbara Pruitt, EA-40
Stephen Turner, EA-40
William West, EA-50
Michael Green, EA-50

Preliminary Notice of Violation

Centerra-Los Alamos
Los Alamos National Laboratory

WEA-2022-02

A U.S. Department of Energy (DOE) investigation into the facts and circumstances associated with the June 1, 2020, near miss event on a live fire range (LFR) at the Los Alamos National Laboratory (LANL) revealed violations of DOE worker safety and health requirements by Centerra-Los Alamos (CLA). The event involved a worker who was moving a utility tractor downrange of the firing line, during the firing of live 5.56 mm frangible ammunition.

DOE provided CLA with an investigation report dated August 18, 2021, and convened an enforcement conference on October 13, 2021, with CLA representatives to discuss the report's findings and CLA's response. A summary of the conference and attendance roster are enclosed.

Pursuant to Section 234C of the *Atomic Energy Act of 1954*, as amended, and DOE regulations set forth at 10 C.F.R. Part 851 (Part 851), *Worker Safety and Health Program*, DOE's National Nuclear Security Administration (DOE/NNSA) hereby issues this Preliminary Notice of Violation (PNOV) to CLA. The violations included deficiencies in: (1) management responsibilities and firearms safety; and (2) hazard identification, assessment, prevention and abatement, and training and information. DOE/NNSA has categorized the violations as two Severity Level I violations.

Severity Levels are explained in Part 851, appendix B, *General Statement of Enforcement Policy*. Subparagraph VI(b)(1) states that "Severity Level I violation is a serious violation. A serious violation shall be deemed to exist in a place of employment if there is a potential that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment."

In consideration of the mitigating factors, NNSA imposes a total proposed civil penalty of \$106,000 for the two Severity Level I violations.

As required by 10 C.F.R. § 851.42(b) and consistent with Part 851, appendix B, the violations are listed below. If this PNOV becomes a final order, then CLA may be required to post a copy of this PNOV in accordance with 10 C.F.R. § 851.42(e).

I. VIOLATIONS

A. Management Responsibilities and Firearms Safety

Title 10 C.F.R. § 851.10, *General requirements*, subsection (a), states that “[w]ith respect to a covered workplace for which a contractor is responsible, the contractor must: (1) [p]rovide a place of employment that is free from recognized hazards that are causing or have the potential to cause death or serious physical harm to workers; and (2) [e]nsure that work is performed in accordance with: (i) [a]ll applicable requirements of [10 C.F.R. part 851]; and (ii) [t]he worker safety and health program for that workplace.”

Title 10 C.F.R. § 851.20, *Management responsibilities and worker rights and responsibilities*, subsection (a), states that “[c]ontractors are responsible for the safety and health of their workforce and must ensure that contractor management at a covered workplace: (1) [e]stablish written policy, goals, and objectives for the worker safety and health program....”

Title 10 C.F.R. § 851.24, *Functional areas*, subsection (b), states that “[i]n implementing the structured approach required by paragraph (a) of this section contractors must comply with the applicable standards and provisions in appendix A, of this part, entitled “Worker Safety and Health Functional Areas.” Appendix A of Part 851, section 5, *Firearms Safety*, subsection (a), states that “[a] contractor engaged in DOE activities involving the use of firearms must establish firearms safety policies and procedures for security operations and training to ensure proper accident prevention controls are in place. (1) Written procedures must address firearms safety, engineering and administrative controls....”

Triad National Security, LLC (Triad) document PD-100, *DOE/NNSA Approved LANL 10 CFR 851 Worker Safety and Health Program (WSHP) Description*, revision 4, February 21, 2019, section 2.2, *Applicability*, states that “[t]his document applies to all Laboratory workers. This includes subcontractor employees and lower-tier subcontractor personnel....” Section 4.9, states that LANL responsible line management and subcontractor management “[e]nsures adherence to applicable workplace safety and health requirements, including the methods for implementing those requirements.”

Triad document Exhibit F, *Environmental Safety & Health (ES&H) Requirements for Subcontract No. 269525*, revision 2, December 12, 2018, section F8.4, states that the “[s]ubcontractor shall provide a daily briefing for its workers which specifically addresses the hazards and mitigating controls for work to be performed that day.” Section F56.0, *Firearms Safety*, paragraph 56.1, states “...subcontractors engaged in DOE activities involving the use of firearms must establish firearms safety policies and procedures for security operations and training to ensure proper accident prevention controls are in place. Subcontractor’s written procedures must address firearms safety, engineering, and administrative controls....” Paragraph 56.13 states that “[s]ubcontractor policies and procedures must address all safety aspects of firearms use and all scenarios in which an injury could occur as the result of firearms use....”

CLA document SP220-02, *Firearms Program Standard Operating Procedure (SOP)*, revision 4, January 23, 2020, chapter I, section 4.0, *Responsibilities*, paragraph 4.2, states that the training manager “[e]nsures this procedure is in compliance with all requirements.” Paragraph 4.8, states that the lead instructor/officer in charge “[c]onducts daily plan-of-the-day with rangemasters and assistant instructors.” Section 8.0, *Conducting Live Fire Activities*, paragraph 8.3, states that “[t]raining radios/radio headsets provide on-range control and coordination between range personnel.” Paragraph 8.4, states that “[b]efore any live fire activities can begin on the LFR: a red flag will be raised during daylight hours....” Section 28.0, *Scheduled Activities*, states that “[a]ny deviations to the initial briefing will be coordinated through the [l]ead [i]nstructor.” Chapter II, *Live Fire Range*, section 11.0, *LFR Activation*, paragraph 11.2, *Range Sweep Prior to Live Fire Operations*, states that “[t]raining staff will conduct a physical check of all impact areas and physical safety barriers to ensure they are clear of unauthorized personnel or hazards....”

CLA document SP320-01, *General Safety-Facility Safety Program*, revision 3, November 14, 2019, section 3.0, *Responsibilities*, paragraph 3.3.3, states that managers “[e]nsure personnel under their supervision understand and follow the requirements of the program and supporting procedures.”

CLA document SP320-02, *Firearms Safety Program*, revision 3, April 22, 2020, section 3.0 *Responsibilities*, paragraph 3.8.1, states that all managers, supervisors, and team leaders “[e]nsure personnel adhere to all provisions of 10 C.F.R. 851, DOE O 473.3A, and [c]ompany firearms policies and procedures and ES&H requirements.”

CLA document *Live Fire Range/Indoor Fire Range Hazard Identification Mitigation Plan*, March 17, 2020, section L, *Firearms*, states that “...range personnel will maintain and account for all personnel in the range area during live fire activities....”

Contrary to the above requirements, CLA failed to comply with applicable requirements of Part 851 and the approved WSHP for the workplace. Specific examples include:

1. CLA failed to develop or implement safe and effective range control processes for conducting LFR operations that addressed all safety aspects of firearms use and all scenarios during which an injury could occur as the result of firearms use. Specifically, range control processes were inadequate: to prevent workers from going downrange during live firing activities; to clear LFR surface danger zones of personnel or other hazards prior to re-starting live firing activities on a range that had not been physically monitored by workers; to re-start live firing activities outside of a training evolution; and to identify the operational status (active or inactive) of individual ranges within the LFR complex.
2. CLA failed to establish effective communication methods between range personnel during the conduct of LFR operations. Specifically, CLA did not require workers to wear a radio headset or to carry a hand-held radio for on-range control and coordination between workers. Additionally, the radio headset system in use by the training staff was not operating on a radio frequency compatible with the hand-held radios used by range

maintenance staff. As a result, on the day of the event, the communication methods used to re-start live fire activities were not effective for informing affected workers that live firing was about to begin.

3. CLA failed to conduct a plan-of-the-day briefing with all required personnel on the day of the event, as required by the CLA firearms safety program. The plan-of-the-day briefing for June 1, 2020, range operations was conducted on Friday, May 29, three days prior to the near miss event and not all required personnel were present.

Collectively, these noncompliances constitute a Severity Level I violation.

Base Civil Penalty – \$106,000

Proposed Civil Penalty (as adjusted for 50 percent reduction for CLA’s corrective actions) – \$53,000

B. Hazard Identification, Assessment, Prevention and Abatement, and Training and Information

Title 10 C.F.R. § 851.21, *Hazard identification and assessment*, subsection (a), states that “[c]ontractors must establish procedures to identify existing and potential workplace hazards and assess the risk of associated workers injury and illness. Paragraphs (a)(4) and (5) specify that procedures must include methods to: [a]nalyze designs of new facilities and modifications to existing facilities and equipment for potential workplace hazards; and [e]valuate operations, procedures and facilities to identify workplace hazards.”

Title 10 C.F.R. § 851.22, *Hazard prevention and abatement*, subsection (a), states that “[c]ontractors must establish and implement a hazard prevention and abatement process to ensure that all identified and potential hazards are prevented or abated in a timely manner.”

Title 10 C.F.R. § 851.25, *Training and information*, subsection (a), states that “[c]ontractors must develop and implement a worker safety and health training and information program to ensure that all workers exposed or potentially exposed to hazards are provided with the training and information on that hazard in order to perform their duties in a safe and healthful manner.”

Triad document PD 100, *DOE/NNSA Approved LANL 10 CFR 851 WSHP Description*, revision 4, February 21, 2019, section 3.1, *Hazards*, paragraph 3.1.1, states that “[f]unctional area programs and environment, safety and health (ES&H) processes must direct efforts towards:...[a]nalyzing designs of new facilities and modifications to existing facilities for potential workplace hazards, and [e]valuating operations, procedures, and facilities to identify workplace hazards.” Section 6.2, *Worker Safety and Health Training*, states that “[t]he Laboratory takes a multi-pronged approach to ensure all workers who are exposed or potentially exposed to hazards are provided with training and information in order to perform their duties in a safe and healthful manner....”

CLA document SP320-16, *Hazard Identification and Mitigation Plan (HIMP)*, revision 3, September 25, 2019, section 2.0, *Scope*, paragraph 2.1.1, states that the integrated work

management implementation process "...is intended to assure that [p]otential safety and security hazards are systematically identified; [r]easonable measures to abate or mitigate the hazards are implemented; and [h]azards and controls are evaluated continuously during the course of work to ensure conditions have not changed since the start of work."

CLA document SP220-02, *Firearms Program SOP*, revision 4, January 23, 2020, chapter I, section 25.0, *Kubota Tractor*, states that "[t]he tractor will be used as necessary for programmatic work and must be operated in accordance with the owner's manual. Only personnel that are familiar with the proper operation and have completed the instructor [on-the-job-training] or have written approval by the [t]raining [m]anager are authorized to operate the tractor and implements." Kubota Utility Tractor Manual, *Operator's Manual – Models M6040, M7040, M8540, M9540* (dated 2006) *Safe Operation*, states that "[t]o avoid personal injury: (1) [a]ttach pulled or towed loads to the drawbar only; (2) [u]se the 3-point hitch only with equipment designed for 3-point hitch usage."

Contrary to the above requirements, CLA failed to adequately identify or assess hazards related to a physical modification to a LFR. Furthermore, CLA failed to perform work in accordance with local procedures, and to develop and implement a Part 851 compliant training program for utility tractor operators. Specific examples include:

1. CLA failed to conduct an adequate safety analysis of range conditions after the 2016 installation of the intermediate berm on Range 1. Consequently, line of sight hazards related to the positioning of the intermediate berm were not identified.
2. CLA failed to operate the utility tractor in accordance with the manufacturer's recommendations as required by the approved Firearms SOP. The investigation revealed that CLA routinely attached a vehicle tow strap to the mainframe of the utility tractor's bucket loader to tow target vehicles, contrary to the manufacturer's instructions for towing operations. The manufacturer's instructions indicate that loads should be pulled or towed using the vehicle's drawbar or a 3-point hitch designed specifically for towing. Towing from any other point except the drawbar will increase the risk of serious personal injury or death due to a tractor tip over.
3. CLA failed to require a worker to complete instructor on-the-job training or obtain written approval from the Training Manager, as required by the approved Firearms SOP, prior to the worker operating the utility tractor.
4. CLA failed to develop a utility tractor operator training program that met Part 851 requirements for a training and information program. For example, the CLA operator training program lacked hazard information and limitations of use, as well as periodic re-training to ensure that workers were adequately trained.

This noncompliance constitutes a Severity Level I violation.

Base Civil Penalty – \$106,000

Proposed Civil Penalty (as adjusted for 50 percent reduction for CLA's corrective actions) – \$53,000

II. REPLY

Pursuant to 10 C.F.R. § 851.42(b)(4), CLA is hereby obligated to submit a written reply within 30 calendar days of receipt of this PNOV. The reply should be clearly marked as a “Reply to the Preliminary Notice of Violation.”

If CLA chooses not to contest the violations set forth in this PNOV and the proposed remedy, then the reply should state that CLA waives the right to contest any aspect of this PNOV and the proposed remedy. In such case, the total proposed civil penalty of \$106,000 must be remitted within 30 calendar days after receipt of this PNOV by check, draft, or money order payable to the Treasurer of the United States (Account 891099) and mailed to the address provided below. To remit the civil penalty by electronic funds transfer (EFT), please have your accounting department contact the Office of Enforcement’s Docket Clerk at (301) 903-4033 for EFT wiring instructions. This PNOV will constitute a final order upon the filing of the reply.

If CLA disagrees with any aspect of this PNOV, including the proposed civil penalties, then as applicable and in accordance with 10 C.F.R. § 851.42(c)(1), the reply must: (1) state any facts, explanations, and arguments that support a denial of an alleged violation; (2) demonstrate any extenuating circumstances or other reason why the civil penalties should not be imposed or should be further mitigated; and (3) discuss the relevant authorities that support the position asserted, including rulings, regulations, interpretations, and previous decisions issued by DOE/NNSA. In addition, 10 C.F.R. § 851.42(c)(2) requires that the reply include copies of all relevant documents.

If CLA fails to submit a written reply within 30 calendar days of receipt of this PNOV, then pursuant to 10 C.F.R. § 851.42(d), CLA relinquishes any right to appeal any matter in this PNOV and this PNOV will constitute a final order.

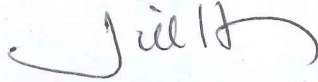
Please send the appropriate reply by overnight carrier to the following address:

Director, Office of Enforcement
Attention: Office of the Docketing Clerk, EA-10
U.S. Department of Energy
19901 Germantown Road
Germantown, Maryland 20874-1290

A copy of the reply should also be sent to my office and the Manager of the DOE/NNSA Los Alamos Field Office.

III. CORRECTIVE ACTIONS

Corrective actions that have been or will be taken to avoid further violations should be delineated with target and completion dates in DOE's Noncompliance Tracking System.



Jill Hruby
Under Secretary for Nuclear Security
Administrator, NNSA

Washington, D.C.

This 8 day of June 2022