Department of Energy
Washington, DC 20585

October 23, 2012

Mr. Christian Tazzia
President
Controlled Power Company
1955 Stephenson Highway
Troy, Michigan 48083

WEL-2012-02

Dear Mr. Tazzia:

This letter refers to the Office of Health, Safety and Security's Office of Enforcement and Oversight investigation into the facts and circumstances associated with the January 18, 2011, electrical shock near miss that occurred while a Controlled Power Company (CPC) technician was repairing a lighting inverter in the Radiological Laboratory Utility Office Building (RLUOB) at the Los Alamos National Laboratory (LANL). CPC is a second-tier subcontractor to Los Alamos National Security, LLC (LANS), the management and operating contractor for LANL. On February 11, 2011, LANS reported the worker safety and health noncompliances associated with this event in the Department of Energy's (DOE) Noncompliance Tracking System (NTS) in report NTS--LASO-LANS-LANL-2011-0001, *RLUOB LO/TO Noncompliance Results in Near Miss*. DOE provided the results of its investigation to CPC in an Investigation Report dated January 20, 2012. An enforcement conference was held with CPC representatives via telephone on March 20, 2012, to discuss the report's findings. Representatives from the National Nuclear Security Administration (NNSA) and the NNSA Los Alamos Site Office also participated in the call.

The Office of Enforcement and Oversight is issuing this enforcement letter to express concerns associated with CPC's electrical safety program, specifically in the areas of electrical hazard assessment and abatement, and worker training. The electrical shock near miss revealed potential violations of 10 C.F.R. Part 851, *Worker Safety and Health Program,* requirements and its enforceable standards, including 29 C.F.R. Part 1926, *Safety and Health Regulations for Construction*, and National Fire Protection Association (NFPA) standard 70E, *Standard for Electrical Safety in the Workplace* (2004). Specifically:

- CPC did not implement procedures in accordance with NFPA 70E during the repair work on the inverter unit. The CPC technician was trained and knowledgeable of the construction and operation of the equipment. However, the technician did not apply work practices consistent with NFPA 70E general provisions for electrical safety to fully assess the lighting inverter task. These provisions required shock and arc-flash analyses to assist CPC in determining the proper personal protective equipment and required approach boundaries.

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- CPC did not take steps to achieve an electrically safe work condition as required by NFPA 70E before work was performed on the inverter unit. CPC did not deenergize and apply lockout/tagout devices to the controlling circuit breaker located one floor below the work area.

- CPC did not ensure that the technician wore the required hand and arm protection in accordance with NFPA 70E while troubleshooting a lighting inverter that was not placed in an electrically safe work condition.

- CPC did not erect barricades and signs required by Occupational Safety and Health Administration standard 29 C.F.R. Part 1926, and NFPA 70E to prevent access by unauthorized individuals during troubleshooting operations on the lighting inverter.

- CPC did not ensure that the technician knew about or had a complete understanding of the expectations associated with performing repair work on a lighting inverter that was not placed in a safe work mode in accordance with NFPA 70E.

DOE believes that the technician was exposed to potential electrical shock hazards, and thus disagrees with CPC's position, presented during the enforcement conference, that the event should not be categorized as a near miss because the technician shut down the system and no work was performed on or near energized components. NFPA 70E provides that circuit parts are not considered to be in an electrically safe condition until all sources of energy are eliminated; the disconnecting means is under lock and tag; the absence of voltage is verified; and the parts are temporarily grounded if exposure to energized components exist. Because CPC did not implement these NFPA 70E provisions to assure that the equipment was deenergized during the work task, safe work practices appropriate for the circuit voltage and energy level were required to protect workers from arc flash hazards and contact with live electrical parts.

Following the enforcement conference, CPC submitted a letter dated March 28, 2012, to the Office of Enforcement and Oversight with the company's response to the investigation report. In the letter, you stated that CPC was not informed about the policies and procedures described in SD100, *Los Alamos National Laboratory Integrated Safety Management System Description Document with embedded 10 CFR 851 Worker Safety and Health Program.* Furthermore, you indicated that the CPC technician was not provided with any site training or orientation before he was authorized to perform the work.

Notwithstanding these circumstances, the Office of Enforcement and Oversight investigation determined that CPC did not take appropriate measures to protect the health and safety of the company's technician. CPC should have known about the scope and requirements of 29 C.F.R. Part 1926 and NFPA 70E, regardless of the industry sector where the work was performed.

DOE acknowledges the corrective actions that CPC has already taken regarding work at LANL. DOE commends CPC for updating its Safety and Health Policy to strengthen electrical safety procedures. Based on these factors, DOE is electing to exercise discretion and not pursue enforcement action against CPC in this matter. DOE, including NNSA, will continue to closely monitor CPC's initiatives to improve worker safety-related performance at any of the DOE sites where work subject to the requirements of 10 C.F.R. Part 851 is performed.

No response to this letter is required. If you have any questions, please contact me at (301) 903-2178, or your staff may contact Mr. Kevin Dressman, Director, Office of Worker Safety and Health Enforcement, at (301) 903-5144.

Sincerely,

John S. Boulden III
Director
Office of Enforcement and Oversight
Office of Health, Safety and Security

cc: Charles F. McMillan, LANS
Marjorie Gavett, LANS
Kevin Smith, LASO