



Department of Energy

Washington, DC 20585

February 12, 2015

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Shelley Keltner
Chief Executive Officer
Pacific Data Electric, Inc.
9970 Bell Ranch Drive #109
Santa Fe Springs, California 90670

WEA-2015-02

Dear Ms. Keltner:

This letter refers to the Office of Enterprise Assessments' Office of Enforcement investigation into the facts and circumstances associated with a 277-volt electrical shock received by a Pacific Data Electric (PDE) apprentice electrician at the Lawrence Berkeley National Laboratory (LBNL) General Purpose Laboratory (GPL) on November 19, 2013. The Office of Enforcement provided PDE with an investigation report dated September 8, 2014, and convened an enforcement conference on October 15, 2014, with PDE representatives to discuss the report's findings and PDE's response. A summary of the conference and list of attendees is enclosed.

The Department of Energy (DOE) considers the electrical shock sustained by the apprentice electrician and the associated violation to be of high safety significance. DOE's evaluation of the circumstances concluded that PDE did not appropriately plan and control the work associated with the apprentice electrician consistent with LBNL procedures and requirements in the National Fire Protection Association (NFPA) Code 70E (2004), *Standard for Electrical Safety in the Workplace*. Furthermore, PDE failed to effectively coordinate the work with its subcontractor Lutron Electronics involving the building system energization and de-energization process, a factor that eventually contributed to the electrical shock.

Based on an evaluation of the evidence in this matter, including information presented at the enforcement conference, DOE has concludes that PDE violated requirements prescribed under 10 C.F.R. Part 851, *Worker Safety and Health Program*. Accordingly, DOE hereby issues the enclosed Preliminary Notice of Violation (PNOV), which cites one Severity Level I violation with a total proposed base civil penalty, before mitigation, of \$75,000.

DOE acknowledges PDE's response to the incident and collaboration with LBNL personnel in the development of corrective actions to address the potential



violations. DOE finds that PDE's corrective actions and the GPL restart plan appears to address deficiencies identified in the investigation and root cause analysis completed in January 2014 by an external team as well as the violation cited in this PNOV. DOE recognizes PDE's progress in implementing a redeveloped safe work plan that include retraining employees in NFPA 70E, and designating a lockout/tagout supervisor and responsible individual who will provide additional electrical safety oversight. In addition to the original corrective action plan, PDE enhanced mandatory qualified electrical worker requirements and expanded the company's training resources.

In recognition of PDE's overall response to the event, including corrective actions, DOE has chosen to grant 50 percent mitigation of the base civil penalty for the Severity Level I violation. DOE grants an additional 40 percent mitigation based on employer size. As a result, the total proposed civil penalty is \$7,500.

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, will constitute a final order.

After reviewing your reply to the PNOV, including any proposed additional corrective actions, DOE will determine whether further action is necessary to ensure compliance with DOE worker safety and health requirements. DOE will continue to monitor the completion of corrective actions until this matter is fully resolved.

Sincerely,



Steven C. Simonson

Director

Office of Enforcement

Office of Enterprise Assessments

Enclosures: Preliminary Notice of Violation (WEA-2015-02)
Enforcement Conference Summary and List of Attendees

cc: Kimberly Budil, UC
Paul Golan (Acting), BSO
Bill Wells, LBNL

Preliminary Notice of Violation

Pacific Data Electric, Inc.
Lawrence Berkeley National Laboratory

WEA-2015-02

A U.S. Department of Energy (DOE) investigation into the facts and circumstances associated with a 277-volt electrical shock received by an apprentice electrician at the Lawrence Berkeley National Laboratory (LBNL), General Purpose Laboratory (GPL) on November 19, 2013, revealed violations of DOE worker safety and health requirements. The apprentice electrician was an employee of Pacific Data Electric, Inc. (PDE), a UC subcontractor performing work at the GPL. DOE provided PDE with an investigation report dated September 8, 2014, and convened an enforcement conference on October 15, 2014, with PDE representatives to discuss the report's findings and PDE's response. The investigation identified deficiencies by PDE in electrical hazard identification, assessment, prevention, and abatement, in violation of DOE worker safety and health requirements. A summary of the conference and list of attendees is enclosed.

Pursuant to section 234C of the Atomic Energy Act of 1954, as amended, and DOE regulations set forth a 10 C.F.R. Part 851 (Part 851), *Worker Safety and Health Program*, DOE hereby issues this Preliminary Notice of Violation (PNOV) to PDE. The PNOV cites a violation in the area of electrical hazard identification, assessment, prevention, and abatement. DOE has categorized the violation as one Severity Level I violation.

Severity Levels are explained in Part 851, Appendix B, *General Statement of Enforcement Policy*. Section VI(b)(1) states that “[a] 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 and size of the company, DOE imposes a total proposed civil penalty of \$7,500.

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 PDE may be required to post a copy of this PNOV in accordance with 10 C.F.R. § 851.42(e).

I. VIOLATIONS

A. Electrical Hazard Identification, Assessment, Prevention and Abatement

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: . . . (2) [e]nsure that work is performed in accordance with: (i) [a]ll applicable requirements of [10 C.F.R. Part 851]; and (ii) [w]ith the worker safety and health program for that workplace.”

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. Procedures must include methods to: (1) [a]ssess worker exposure to chemical, physical, biological, or safety workplace hazards through appropriate workplace monitoring; [and] (5) [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.” Paragraph (a)(2) of this section requires that “[f]or existing hazards identified in the workplace, contractors must: . . . (iii) [p]rotect workers from dangerous safety and health conditions.”

Title 10 C.F.R. § 851.23, *Safety and health standards*, at paragraph (a)(14), requires contractors to comply with the National Fire Protection Association (NFPA) 70E (2004), *Standard for Electrical Safety in the Workplace*.

NFPA 70E, Section 110.7, *Electrical Safety Program*, at paragraph (G)(1), General, states that “[b]efore starting each job, the employee in charge shall conduct a job briefing with the employees involved. The briefing shall cover such subjects as hazards associated with the job, work procedures involved, special precautions, energy source controls, and personal protective equipment requirements.”

NFPA 70E, Article 120, *Establishing an Electrically Safe Work Condition*, at section 120.1, *Process of Achieving an Electrically Safe Work Condition*, states that “[a]n electrically safe work condition shall be achieved when performed in accordance with the procedures of 120.2 and verified by the following process:

- (1) Determine all possible sources of electrical supply to the specific equipment. Check applicable up-to-date drawings, diagrams, and identification tags.
- (2) After properly interrupting the load current, open the disconnecting device(s) for each source.
- (3) Wherever possible, visually verify that all blades of the disconnecting devices are fully open or that drawout-type circuit breakers are withdrawn to the fully disconnected position.

- (4) Apply lockout/tagout devices in accordance with a documented and established policy.
- (5) Use an adequately rated voltage detector to test each phase conductor or circuit part to verify they are de-energized. Test each phase conductor or circuit part both phase-to-phase and phase-to-ground. Before and after each test, determine the voltage detector is operating satisfactorily.
- (6) Where the possibility of induced voltages or stored electrical energy exists, ground the phase conductors or circuit parts before touching them. Where it could be reasonably anticipated that the conductors or circuit parts being de-energized could contact other exposed energized conductors or circuit parts, apply ground connecting devices rated for the available fault duty.”

Contrary to these requirements, PDE failed to evaluate hazards and implement safety controls consistent with the provisions described in LBNL document PUB-3851, *Worker Safety and Health Program* (Revision 2.2, dated March 2012); LBNL implementing procedures, and safety and health standards, including document PUB-3000, *Environment, Health and Safety Manual*, and NFPA 70E; and PDE’s *Safety Manual and Injury & Illness Prevention Program* (IIPP). Specific examples include the following:

1. PDE did not appropriately identify and document in the Pre-Task Hazard Analysis (PTHA) dated November 19, 2013, potential workplace hazards and safety controls associated with the work by a PDE apprentice involving lighting branch circuit number 5 out of panel number 635A1A4A32A in the GPL third floor stairwell. After the release of lockout/tagout (LOTO) permit LP-960 (the circuit was reenergized) on November 18, PDE did not stop work, re-evaluate the hazards, and incorporate those hazards and controls in the PTHA for the work to be performed by its employees on November 19, 2013.
2. PDE did not implement the medical emergency procedures described in PUB-3000 and the IIPP following the electrical shock event on November 19, 2013. The apprentice was not evaluated immediately at LBNL nor immediately transported to a nearby hospital. Instead, PDE sent the apprentice for medical evaluation on his own via a taxi cab on November 20, 2013.
3. PDE did not comply with the provisions described in NFPA 70E and PUB-3000 that required PDE to:
 - a. Place circuit number 5 in an electrically safe work condition to prevent employees from working on or near the energized circuit after the release of LP-960 associated with the GPL lobby 300 light fixtures programming and troubleshooting activity.
 - b. Conduct a job briefing with the PDE journeyman and apprentice before commencing work on circuit 5 following the release of LP-960 on November 18, 2013. In addition, PDE did not communicate to its workers the work location and information associated with the circuits to be worked on that were affected by the release of LP-960.

Collectively, these noncompliances constitute a Severity Level I violation.
Base Civil Penalty - \$75,000
Proposed Civil Penalty (as adjusted) - \$7,500

II. REPLY

Pursuant to 10 C.F.R. § 851.42(b)(4), PDE 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 PDE chooses not to contest the violations set forth in this PNOV and the proposed civil penalty, then the reply should clearly state that PDE waives the right to contest any aspect of this PNOV, including the proposed civil penalty. In such case, the total proposed civil penalty of \$7,500 must be remitted within 30 calendar days after receipt of this PNOV. Payment of the civil penalty must be made by check, draft, or money order payable to the Treasurer of the United States (Account 891099) and mailed to the address provided below. This PNOV will constitute a final order upon the filing of the reply.

If PDE disagrees with any aspect of this PNOV, including the proposed civil penalty, 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 penalty should not be imposed or should be mitigated; and (3) discuss the relevant authorities that support the position asserted, including rulings, regulations, interpretations, and previous decisions issued by DOE. In addition, 10 C.F.R. § 851.42(c)(2) requires that the reply include copies of all relevant documents.

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, MD 20874-1290

A copy of the reply should also be sent to the Manager of the Berkeley Site Office.

Pursuant to 10 C.F.R. § 851.42(d), if PDE fails to submit a written reply within 30 calendar days of receipt of this PNOV, PDE relinquishes any right to appeal any matter in this PNOV and this PNOV, including the proposed civil penalty, will constitute a final order.


Steven C. Simonson
Director
Office of Enforcement
Office of Enterprise Assessments

Washington D.C.
This 12th day of February 2015