



Department of Energy

Washington, DC 20585

October 28, 2013

Mr. Thomas W. Gilmore
Vice President
LVI Services, Inc.
9908 Giverny Circle
Knoxville, Tennessee 37922

WEL-2013-03

Dear Mr. Gilmore:

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 September 13, 2012, hazardous energy control event that occurred at the Department of Energy (DOE) Portsmouth Gaseous Diffusion Plant (PORTS) in Piketon, Ohio. Workers in the area could have been exposed to hazardous electrical energy when an excavator struck an energized 480-volt overhead power line. The Office of Enforcement and Oversight conducted the onsite portion of the investigation April 8-12, 2013. Investigation activities included a review of relevant documentation, a tour of the event scene, and personnel interviews.

Fluor-B&W Portsmouth, LLC (FBP), the DOE construction contractor that performs decontamination and decommissioning and environmental remediation work at PORTS, contracted with LVI Services, Inc. (LVI) to perform work for the X-100 Complex Demolition Project under work order number PO 0004510. To perform requirements stipulated in the work order, LVI provided personnel, materials, equipment, and supplies.

The hazardous energy control event occurred when an excavator rented by LVI from its subcontractor struck a 480-volt overhead electrical line in the X 206B south main parking lot during daylight hours. The energy in the line is controlled by a photovoltaic cell that allows electrical current to flow through the line when the ambient lighting reaches a specific level of darkness; subsequently, this line has no applied voltage during daylight. However, the electrical system was not deenergized (i.e., electrically isolated in accordance with 29 C.F.R. § 1910.147) and thereby placed in a safe configuration at the time of the event. LVI had previously elected to maintain the required minimum distance of 10 feet for the rated voltage rather than place the system in a safe configuration. The LVI subcontractor moved the excavator to a location in the parking lot close to the power line to facilitate the installation of a concrete processor attachment. An LVI subcontractor mechanic/operator assisted the excavator operator in making preparations to install the attachment. The rising sun and the brim of his hardhat obstructed the operator's view of the overhead line while he moved the excavator.



LVI has general supervisory authority for the X-100 Complex Demolition Project. FBP approved the LVI Health and Safety Plan (document 0004510-004, revision 1, dated July 31, 2012), which documents safety and health requirements that LVI and its subcontractors must follow while performing work at the X-100 Complex Demolition Project. Under the plan, LVI adopted implementing procedures that FBP uses to achieve compliance with 10 C.F.R. Part 851, *Worker Safety and Health Program*. According to the LVI Health and Safety Plan, LVI has responsibility for safe working conditions during all phases of the project, including mobilizing, loading, and unloading equipment in the parking lot. The Office of Enforcement and Oversight concluded that LVI did not ensure that work was performed safely and in compliance with applicable requirements of Part 851 and its invoked Occupational Safety and Health Administration (OSHA) standards, the LVI Health and Safety Plan, and FBP implementing procedures. Specific examples include:

- LVI did not brief the subcontractor on the requirements of the LVI Health and Safety Plan, which states that LVI must brief subcontractors on its requirements and that subcontractors must acknowledge in writing that they have received the briefing.
- LVI did not conduct a pre-job walkdown of the staging area with the subcontractor employees to evaluate the area and consider potential changing conditions, overhead hazards, and visibility issues. Procedure FBP-NSE-PRO-00070, *Work Planning and Control Process* (revision 4, dated August 23, 2012) requires FBP subcontractors to perform pre-job walkdowns to ensure that adequate safety controls are identified and effectively implemented to mitigate potential hazards.
- LVI performed a daily pre-job briefing on September 13, 2012, which the subcontractor employees attended, that did not address hazards specifically associated with the staging area that were identified on the Safety Task Assignment form. Furthermore, LVI performed a full pre-job briefing for the X-100 Complex Demolition Project on September 11, 2012, that the subcontractor workers did not attend. Procedure FBP-NSE-PRO-00002, *Pre-Job Briefing and Post-Job Review* (revision 3, dated May 24, 2012) states that contractors must perform one full briefing and subsequent daily pre-job briefings for ongoing and repetitive work. The briefings must involve the subcontractor employees who perform the work.
- LVI did not verify that the subcontractor excavator operator was qualified by training or experience in accordance with 29 C.F.R. § 1926.20, *General safety and health provisions*. LVI did not request training documentation to evaluate the competency of the subcontractor excavator operator and mechanic/spotter and confirm that all training for the subcontractor was current before performing work. The X-100 Complex Demolition *Special Environmental, Safety, Health, Quality and Fire Protection Requirements* document requires

contractors operating mobile equipment to submit certificates of OSHA equivalent training.

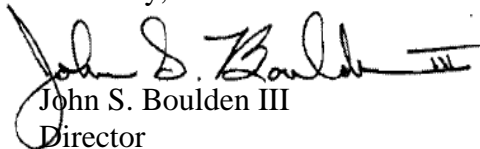
- LVI did not effectively implement the equipment spotter safety requirements stated in the job hazard analysis associated with the X-100 Complex Demolition Work Plan and 29 C.F.R. § 1926.600, *Equipment*. LVI did not ensure that a spotter was available to observe the clearance between the excavator and power lines and to provide timely warning if the operator might find it difficult to maintain the minimum clearance of 10 feet for lines rated 50 kilovolts or less to prevent physical contact with the line.

The Office of Enforcement and Oversight acknowledges LVI's involvement in developing and implementing a corrective action plan to address the potential violations identified from this event and to preclude recurrence. However, the corrective actions appear to focus on event-specific causes and do not examine potential weaknesses in LVI subcontractor oversight at DOE sites, including evaluating subcontractor training and conducting effective pre-job briefings. LVI should apply sufficient rigor to ensure that requirements, controls, and expectations are appropriately communicated so that subcontractors understand and properly implement them.

The Office of Enforcement and Oversight is issuing this enforcement letter to LVI to provide our feedback on the regulatory issues associated with this event and communicate other areas that LVI could consider to prevent a more significant safety occurrence. In recognition of LVI's prompt response to implement compensatory measures and work with FBP in resolving the noncompliances associated with this event, DOE is electing to exercise discretion and not pursue enforcement action against LVI in this matter. The Office of Enforcement and Oversight and the DOE Portsmouth/Paducah Project Office will closely monitor LVI's effectiveness in preventing worker exposures to hazards and successfully implementing Part 851 requirements for work performed at DOE sites.

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) 903-0100.

Sincerely,



John S. Boulden III
Director

Office of Enforcement and Oversight
Office of Health, Safety and Security

cc: William Murphie, Portsmouth/Paducah Project Office
Douglas Fogel, Fluor-B&W Portsmouth