



Department of Energy

Washington, DC 20585

October 7, 2010

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Mark R. Breor
Vice President and Project Manager
Parsons Infrastructure & Technology Group, Inc.
1080 Silver Bluff Road
Aiken, South Carolina 29803

WEA-2010-06

Dear Mr. Breor:

This letter refers to the Office of Health, Safety and Security's Office of Enforcement investigation into the facts and circumstances surrounding the October 6, 2009, hand injury event that occurred while a worker was performing crane lubrication at the Salt Waste Processing Facility (SWPF), located at the U.S. Department of Energy's (DOE) Savannah River Site (SRS). The results of the investigation were provided to Parsons Infrastructure & Technology Group, Inc. (Parsons) in an Investigation Report dated June 18, 2010.

DOE considers the hand injury to a Parsons worker that resulted in the loss of three fingers and the associated violations to be of high safety significance. DOE's investigation of the event revealed that Parsons did not assess and control the potential and actual hazards of non-routine crane maintenance activities, such as crane wire rope lubrication. Parsons incorrectly categorized the hand lubrication task as skill of the craft, thus permitting workers to circumvent the applicable work planning and control procedures appropriate for the high risk nature of the hand swabbing technique that was used. DOE also found that none of the workers involved in the crane maintenance activity received training or performed the hand lubrication method before October 6, 2009, nor were they provided hazard information in a pre-job briefing. These deficiencies were significant contributing factors to the conditions that ultimately resulted in the worker's hand injury.

DOE believes that this event could have been prevented had Parsons taken broad and effective corrective actions to address the worker safety and health noncompliances associated with the January 2009 form wood fire event at SRS, which was the subject of a July 13, 2009, DOE enforcement letter. Parsons has recognized the similarities in root causes between these two events and initiated corrective actions to ensure hazard assessment and abatement processes are applied consistently and commensurate with the risk of the planned activity.

Notwithstanding the serious nature of these issues, DOE acknowledges Parsons' prompt response to the event and self-critical investigation and management assessment. Parsons also



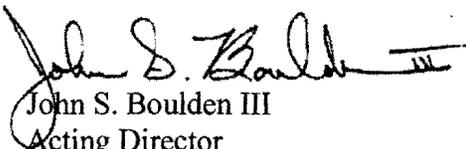
conducted a review of all SWPF craft work activities to identify any skill of the craft work that required a more rigorous job hazard analysis. The corrective actions developed and implemented by Parsons appear to address the deficiencies from the DOE Type B accident investigation report for this event, the weaknesses from Parsons' internal evaluations, and the noncompliances identified from the Office of Enforcement's investigation of this matter. These measures, if effectively implemented by Parsons at the SWPF, will establish conditions that should prevent recurrence of a similar event and future violations of DOE's worker safety and health regulations.

Based on an evaluation of the evidence in this matter, DOE has concluded that violations of 10 C.F.R. Part 851, *Worker Safety and Health Program*, by Parsons have occurred. Accordingly, DOE is issuing the enclosed Preliminary Notice of Violation (PNOV) to Parsons with two Severity Level I violations and a total base civil penalty of \$140,000. In light of the promptness and extent of Parsons' response to the event and consistent with the factors established in Appendix B to 10 C.F.R. Part 851, *General Statement of Enforcement Policy*, DOE has decided to grant 50 percent mitigation of the base civil penalty for both Severity Level I violations. As a result, the total proposed civil penalty is reduced to \$70,000.

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 no reply is submitted within 30 days, in accordance with 10 C.F.R. § 851.42(d), any right to appeal any matter in the PNOV will be relinquished and the PNOV will constitute a final order. You may also request that the Director, Office of Enforcement, convene an enforcement conference to discuss this PNOV, but such a request does not relieve Parsons of its obligation to reply to this PNOV within 30 days.

After reviewing your response to the PNOV, including any additional corrective actions entered into DOE's Noncompliance Tracking System, DOE will determine whether further action is necessary to ensure compliance with worker safety and health requirements. DOE will continue to monitor the completion of corrective actions until these matters are fully resolved.

Sincerely,


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

Enclosure

cc: William Luce, Parsons
Jack R. Craig, SR

Preliminary Notice of Violation

Parsons Infrastructure & Technology Group, Inc.
Salt Waste Processing Facility
Savannah River Site

WEA-2010-06

A U.S. Department of Energy (DOE) investigation into the facts and circumstances associated with the worker hand injury event that occurred at the Savannah River Site, Salt Waste Processing Facility (SWPF) construction site, on October 6, 2009, identified violations of DOE worker safety and health requirements by Parsons Infrastructure & Technology Group, Inc. (Parsons). A Parsons apprentice/oiler received a severe injury to his left hand while performing crane lubrication on a moving wire rope, resulting in the loss of three fingers. The violations involved deficiencies in hazard assessment and abatement related to crane maintenance operations, and worker training and information.

DOE has grouped and categorized the deficiencies as two Severity Level I violations, and in consideration of the mitigating factors, imposes a total proposed civil penalty of \$70,000. As required by 10 C.F.R. § 851.42(b) and consistent with Part 851, Appendix B, *General Statement of Enforcement Policy*, the violations are listed below. Parsons may be required to post a copy of this Preliminary Notice of Violation (PNOV) in accordance with 10 C.F.R. § 851.42(e).

VIOLATIONS

I. Hazard Assessment and Abatement

Title 10 C.F.R. § 851.10, *General requirements*, at paragraph (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*, at paragraph (a), states that “[c]ontractors must establish procedures to identify existing and potential workplace hazards and assess the risk of associated worker injury and illness. Procedures must include methods to: (1) [a]ssess workers exposure to chemical, physical, biological, or safety workplace hazards through appropriate workplace monitoring; (2) [d]ocument assessment for chemical, physical, biological, and safety workplace hazards using recognized exposure assessment and testing methodologies and using of accredited and certified laboratories; . . . (5) [e]valuate operations, procedures, and facilities to identify workplace hazards; [and] (6) [p]erform routine job activity-level hazard analyses.” In accordance with subsection (c) of the same section, “[c]ontractors must perform [these activities] initially to obtain baseline information and as often thereafter as necessary to ensure compliance with [the requirements of 10 C.F.R. Part 851, subpart C].”

Title 10 C.F.R. § 851.22, *Hazard prevention and abatement*, at paragraph (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.” Under this subsection, “(1) [f]or hazards identified . . . during the development of procedures, controls must be incorporated in the appropriate . . . procedure” and “(2) [f]or existing hazards identified in the workplace, contractors must: . . . (iii) [p]rotect workers from dangerous safety and health conditions.” Paragraph (b) states that “[c]ontractors must select hazard controls based on the following hierarchy: (1) [e]limination or substitution of the hazards where feasible and appropriate; (2) [e]ngineering controls where feasible and appropriate; (3) [w]ork practices and administrative controls that limit worker exposures; and (4) [p]ersonal protective equipment.”

Contrary to these requirements, Parsons failed to implement procedures to identify and abate existing and potential workplace hazards associated with crane boom wire rope lubrication activities, and failed to assess and control the risk of employee exposure to a sheave pinch-point hazard and moving wire rope during the application of lubricant using a hand swabbing technique. Specific examples are listed below:

- A. Parsons did not follow the implementing procedures for assessing and documenting construction workplace hazards in accordance with the *SWPF Construction Health and Safety Plan* (document No. S-CIP-J-00005, revision 4, dated June 22, 2009) and *Construction Safety Manual* (document No. PM-SH-4301, revision 11, dated September 30, 2009), as required by section 6.2 of the *Salt Waste Processing Facility Project 10 C.F.R. 851 Worker Safety and Health Plan* (document No. S-CIP-J-00003, revision 3, dated March 27, 2009).
 1. Parsons did not perform a hazard analysis for the crane boom wire rope lubrication activity and incorporate the analysis in a Safe Work Plan Brief. Parsons incorrectly applied the provisions contained in the *Job Hazard Analysis* (document No. PP-SH-4364, revision 1, dated June 1, 2009) implementing procedure by categorizing the lubrication task as skill of the craft work rather than standard work, which would have required a more rigorous hazard analysis and work control process.
 2. Parsons did not issue a work order and associated job hazard analysis (JHA) for the crane wire rope lubrication activity as required by its *Construction Work Release Procedure* (document No. PP-CS-7201, revision 9, dated September 30, 2009). Document PP-CS-7201 defines roles and responsibilities for preparing, approving, and conducting construction-related hazard analyses and is an implementing procedure incorporated into S-CIP-J-00003.
- B. Parsons did not evaluate and implement readily available alternative work practices to perform crane lubrication that would reduce or eliminate employee exposure to the wire rope and pinch-point hazards. Parsons failed to consider preventive measures that would prohibit workers from using their hands to lubricate moving wire ropes, sheaves, drums or other similar components, and Parsons did not effectively render inoperative all crane controls and operating features prior to lubrication.

Collectively, these deficiencies constitute a Severity Level I violation. As explained in 10 C.F.R. Part 851, appendix B, section VI (b) (1), “[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.”

Proposed Civil Penalty - \$35,000

II. Training and Information

Title 10 C.F.R. § 851.25, *Training and information*, at paragraph (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.” Paragraph (c) states that “[c]ontractors must provide training and information to workers who have worker safety and health program responsibilities that is necessary for them to carry out those responsibilities.”

Contrary to these requirements, Parsons failed to ensure that workers were properly qualified, trained, and provided information on the safety-related work practices necessary to perform crane boom wire rope lubrication activities in accordance with work control procedures. Specific examples are listed below:

- A. Parsons did not ensure that the experience, knowledge, skills, and abilities of the workers assigned to the Manitowoc crawler crane, Model No. 888, were commensurate with the hazards associated with the crane boom wire rope lubrication activity performed on October 6, 2009.
 1. Parsons did not ensure that workers met minimum education, training, and experience requirements to perform lubrication activities in accordance with the *Competence Commensurate with Responsibilities* procedure (document No. PP-TR-1800, revision 0, dated April 30, 2008), as required in section 6.0 of S-CIP-J-00003. The second year apprentice/oiler who was injured performing lubrication activities on the crane had no formal crane lubrication training or experience before October 6, 2009, and had not received instruction on the wire rope lubricant spraying method during his apprenticeship program. Neither the foreman in charge of the second shift nor the journeyman crane operator had performed hand swabbing lubrication operations at SWPF before October 6, 2009, and their experience was limited to spray lubricants.
 2. Parsons did not ensure that the crane operator was qualified to direct an apprentice in crane lubrication safe work practices, including the hazards and work controls associated with the hand swabbing technique.

- B. Parsons did not provide crew members with work instructions and supporting JHAs that identified crane maintenance requirements or procedures associated with wire rope lubrication practices and hazard controls. The work packages and associated JHAs that were identified to workers as applicable to crane maintenance activities did not include hazard assessment and control information for the wire rope lubrication task.
- C. Parsons did not implement the provisions in the *Construction Safety Manual, Safe Work Brief* (SWB) procedure (document No. PP-SH-4365, revision 1, dated May 19, 2009) to communicate to workers the work scope and associated hazards and controls for the wire rope lubrication activity. Document PP-SH-4365 required Parsons to pause work and re-brief workers on the task steps, hazards, and controls introduced by the change in the lubricant application method, which placed the apprentice/oiler closer to the sheave and significantly increased the worker's exposure to the pinch point hazard. The crane crew had been briefed on the use of a man-lift to perform the lubrication operation to supplement the hand swabbing technique. Before commencing work, Parsons did not discuss with workers the scope, hazards, expected outcomes, and controls of the crane boom wire rope lubrication activity in accordance with the SWB procedure. The SWB did not include a detailed discussion on the hand swabbing technique that was selected, including the position of the apprentice/oiler in relation to the wire rope and sheave; whether the lubricant would be applied to a stationary or moving rope; and whether the crane boom would be lowered to eliminate the potential of a sheave pinch-point hazard.

Collectively, these deficiencies constitute a Severity Level I violation.

Proposed Civil Penalty - \$35,000

REPLY

Pursuant to the provisions of 10 C.F.R. § 851.42, Parsons is hereby obligated, within 30 calendar days of receipt of this PNOV, to submit a written reply. The reply should be clearly marked as a "Reply to the Preliminary Notice of Violation."

If Parsons concurs with the violations set forth in this PNOV and the proposed remedy, the reply should state that Parsons waives the right to contest any aspect of the PNOV and the proposed remedy. In such cases, the civil penalty of \$70,000 must be paid 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. This PNOV will constitute a final order upon the filing of the reply and receipt of payment.

If Parsons disagrees with any aspect of this PNOV or the proposed remedy, then as applicable and in accordance with 10 C.F.R. § 851.42(c)(1), the reply must: "(i) [s]tate any facts, explanations and arguments that support a denial of the alleged violation; (ii) [d]emonstrate any extenuating circumstances or other reason why the proposed remedy should not be imposed or should be [further] mitigated; (iii) [d]iscuss 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 “[c]opies of all relevant documents must be submitted with the reply.”

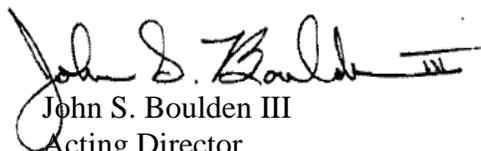
Corrective actions that have been or will be taken to avoid further violations should be delineated with target and completion dates in DOE’s Noncompliance Tracking System.

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

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

A copy of the reply should also be sent to the Assistant Secretary for Environmental Management and the Manager of the Savannah River Operations Office.

Pursuant to 10 C.F.R. § 851.42(d), if Parsons does not submit a written reply within 30 calendar days of receipt of this PNOV, Parsons relinquishes any right to appeal any matter in this PNOV and this PNOV, including the proposed remedy, will constitute a final order.



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

Washington, DC
this 7th day of October 2010