



## Department of Energy

Washington, DC 20585

October 3, 2011

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. David A. Pethick  
Group General Manager  
URS-Washington Division  
Global Management & Operations Services  
106 Newberry Street SW  
Aiken, South Carolina 29801

WEA-2011-01

Dear Mr. Pethick:

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 October 4, 2010, hoisting incident that occurred when a telescopic hydraulic gantry system (THGS) tipped while lifting a 7,800-pound shield plug at the Sodium Bearing Waste Treatment Project (SBWTP) located at the U.S. Department of Energy (DOE) Idaho National Laboratory. The noncompliances associated with this event were reported into DOE's Noncompliance Tracking System (NTS) report NTS-ID--CWI-IWTU-2010-0007, *Hydraulic Telescoping Gantry System Tipped Against Building Structure when Lifting Shield Door*. The results of the investigation were provided to URS-Washington Division (URS-WD) in an Investigation Report dated April 20, 2011. An enforcement conference was held on June 28, 2011, with URS-WD representatives to discuss the report's findings and the URS-WD corrective action plan. A summary of the conference and list of attendees is enclosed.

DOE considers the THGS hoisting incident to be a near miss to a serious worker injury and the associated violations to be of high safety significance. The event revealed multiple breakdowns in job execution and work controls, including the absence of the applicable Construction Work Control Package at the worksite; the lack of a critical lift plan; the bypassing of a work package hold point; and the absence of management oversight and field presence for a first-time evolution. URS-WD placed undue reliance on skill-of-the-craft abilities for the shield plug lift and did not provide workers with the necessary training and qualifications to operate the THGS. These deficiencies were significant contributing factors to the conditions that ultimately led to the hoisting incident.

DOE believes that this event could have been averted had URS-WD instituted appropriate measures to address the field usage of work package documentation at the SBWTP, an issue that the DOE Idaho Operations Office (DOE-ID) communicated in a letter titled *Significant Conditions Adverse to Quality at the Sodium Bearing Waste*



*Project (EM-FMDP-10-013)*, dated February 5, 2010. Among the concerns, the DOE-ID letter cites the unavailability of work packages in the field where the work was being performed. Additionally, an effective pre-job briefing to review and ensure a thorough understanding of every part of the work package, as well as proper compliance with the THGS manufacturer's operating instructions, could have helped to prevent this incident.

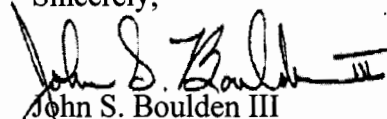
Based on an evaluation of the evidence in this matter, DOE has concluded that violations of 10 C.F.R. Part 851, *Worker Safety and Health Program*, by URS-WD have occurred. Accordingly, DOE is issuing the enclosed Preliminary Notice of Violation (PNOV) to URS-WD with two Severity Level I violations and a total base civil penalty of \$150,000.

Because the violations were identified through a self-disclosing event, DOE is not granting mitigation for timely self-identification and reporting. DOE acknowledges URS-WD's post-incident measures, which included a recovery plan to place the gantry system and shield door in a safe position, and the retention of a subject matter expert to perform an onsite review of the THGS. However, DOE determined that URS-WD's initial casual analysis lacked an appropriate level of rigor and depth to understand the latent organizational weaknesses associated with the event and respond with a comprehensive set of corrective actions that would prevent recurrence. In addition, DOE assessed the URS-WD's corrective action plan and found that most of the corrective actions were either not completely implemented or were not appropriately documented. After consideration of these factors, DOE has concluded that mitigation for corrective actions is not warranted. As a result, the total proposed civil penalty is \$150,000.

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 calendar 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.

After reviewing your response to the PNOV, including any additional corrective actions entered into NTS, 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  
Director

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

Enclosures: Preliminary Notice of Violation WEA-2011-01  
Enforcement Conference Summary and List of Attendees

cc: Richard Provencher, DOE-ID  
Thomas Dieter, CWI  
Lee Fife, CWI

Preliminary Notice of Violation

URS-Washington Division  
Sodium Bearing Waste Treatment Project  
Idaho National Laboratory

WEA-2011-01

A U.S. Department of Energy (DOE) investigation into the facts and circumstances associated with the October 4, 2010, hoisting incident that occurred when a telescopic hydraulic gantry system (THGS) tipped while lifting a 7,800-pound shield plug at the Sodium Bearing Waste Treatment Project (SBWTP) located at the DOE Idaho National Laboratory, identified multiple violations of DOE worker safety and health requirements by URS-Washington Division (URS-WD). The violations involved deficiencies in hazard assessment and abatement, and worker training and information.

DOE has grouped and categorized the violations as two Severity Level I violations with a total proposed civil penalty of \$150,000. As required by 10 C.F.R. § 851.42(b) and consistent with 10 C.F.R. Part 851, Appendix B, *General Statement of Enforcement Policy*, the violations are listed below. URS-WD 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 paragraph (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 paragraph, “(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 (c) of this section states that “[c]ontractors must address hazards when selecting or purchasing equipment, products, and services.”

Contrary to these requirements, URS-WD failed to implement procedures to identify and abate existing and potential workplace hazards associated with the hoisting of shield plug P50 using a THGS, and URS-WD did not appropriately assess and control the risk of employee exposure to hoisting and rigging hazards. Specific examples are listed below:

- A. URS-WD did not assess and control construction workplace hazards consistent with implementing procedures 2A-2.0 (revision 10, dated August 26, 2010), *Construction Work Control Process*; 5A-1.0 (revision 2, dated July 10, 2008), *Integrated Safety Management System*; and DOE-STD-1090-2004, *Hoisting and Rigging* (dated June 2004), as required by URS-WD’s approved *Environmental, Safety and Health Plan* (document 1P-5.0, revision 2, dated February 11, 2008). URS-WD did not develop a lift plan for the shield plug P50 hoisting activity as required by Construction Work Control Package (CWCP) 100145 (revision 0, dated August 16, 2010), *Install the Concrete Filled Shield Plugs in the 4-Pack*. CWCP 100145 required a lift plan meeting the critical lift requirements of DOE-STD-1090 for lifting and handling shield plug P50. URS-WD incorrectly allowed ironworkers to use skill-of-the-craft methods to perform the critical lift, which by procedure must be controlled by a work package.
- B. URS-WD did not ensure that work was performed in strict accordance with the work steps set out in CWCP 100145. Work step 200 of CWCP 100145 is a hold point that cannot be bypassed and must be signed off as acceptable before proceeding with work. URS-WD bypassed the hold point and performed the shield plug P50 hoisting activity without the required lift plan.
- C. URS-WD did not complete and incorporate all necessary attachments to CWCP 100145, including lift plans, when the approved CWCP was released for the start of work.
- D. URS-WD did not ensure that the job hazard analysis (JHA) and the ironworkers’ job safety analysis (JSA) associated with CWCP 100145 conformed to the detailed hazard identification and control requirements in procedures 2A-2.0 and 5A-1.0. The JHA did not incorporate a detailed discussion of hazards specific to the THGS hoisting and rigging work activity, and the safety measures used to mitigate the hazards. The JSA did not reference the THGS manufacturer operator’s manual, which contained recommendations and safety precautions that were not followed during the shield plug P50 hoisting activity.

- E. URS-WD did not implement the critical lift requirements contained in DOE-STD-1090, Chapter 2, *Critical Lifts*, during the THGS hoisting and rigging activity involving shield plug P50. URS-WD did not appoint a person-in-charge to direct the safe completion of the activity to ensure that: (1) the critical lift documentation was completed and discussed during the pre-lift meeting; and (2) the operators were trained and qualified, and properly followed operating procedures and special instructions relative to the THGS.

Collectively, these noncompliances constitute a Severity Level I violation.

Base Civil Penalty - \$75,000

Proposed Civil Penalty - \$75,000

## 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, URS-WD failed to ensure that workers were properly qualified and trained in the safety-related work practices necessary to perform the shield plug P50 hoisting and rigging activity using a THGS, and did not effectively communicate to workers the CWCP 100145 work scope and the associated hazards and controls for the activity.

- A. URS-WD did not ensure that the ironworkers and the ironworker general foreman assigned to perform the activity met the minimum requirements for qualification and training for operating hoisting and rigging equipment at the SBWTP as prescribed in URS-WD’s *Personnel Qualifications and Training* procedure (URS-WD procedure 1A-5.0, revision 0, dated February 9, 2007).
- B. URS-WD did not ensure that the ironworkers and their foreman had relevant experience, knowledge, skills, and abilities commensurate with their responsibilities for operating the THGS, and did not ensure that workers understood the potential consequences of improper work execution.
- C. URS-WD did not ensure that the equipment operator and riggers were familiar with and trained in the manufacturer operator’s manual associated with the THGS in a manner consistent with the personnel qualifications and training requirements contained in Chapter 2 and Section 15.2, *Personnel Qualifications*, of DOE-STD-1090. As a result, URS-WD did not ensure that the workers were knowledgeable about planning the lift; the THGS’ operating characteristics, capabilities, and limitations; and requirements for securing the work area.
- D. URS-WD did not ensure that the ironworkers thoroughly understood all expectations associated with CWCP 100145, particularly activities potentially requiring special safety

precautions, hazards associated with the work package, safety controls for each task (including hold points), and the implementation of CWCP-required documents, such as critical lift plans, in accordance with the pre-job briefing provisions in procedure 2A-2.0.

Collectively, these noncompliances constitute a Severity Level I violation.

Base Civil Penalty - \$75,000

Proposed Civil Penalty - \$75,000

## **REPLY**

Pursuant to the provisions of 10 C.F.R. § 851.42, URS-WD 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 URS-WD concurs with the violations set forth in this PNOV and the proposed remedy, the reply should state that URS-WD waives the right to contest any aspect of the PNOV and the proposed remedy. In such cases, the civil penalty of \$150,000 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.

If URS-WD 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.”

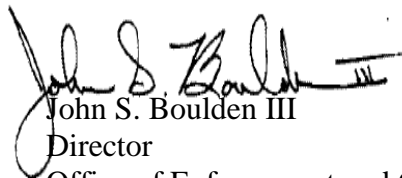
Corrective actions that have been or will be taken to avoid further violations should be delineated with target and completion dates in DOE’s Noncompliance Tracking System.

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

Director, Office of Enforcement and Oversight  
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 DOE Idaho Operations Office.

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

A handwritten signature in black ink, appearing to read "John S. Boulden III". The signature is written in a cursive style with a horizontal line at the end.

John S. Boulden III

Director

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

Washington, DC  
this 3rd day of October 2011