



## Department of Energy

Washington, DC 20585

December 15, 2022

Mr. Rex D. Johnston, Jr.  
President and Chief Executive Officer  
Advanced Industrial Services, Inc.  
7831 Alondra Boulevard  
Paramount, California 90723

WEA-2022-04

Dear Mr. Johnston:

This letter refers to the Department of Energy's (DOE) investigation into the facts and circumstances associated with an abrasive blasting injury that occurred during work performed by Advanced Industrial Services, Inc. (AIS) at the Lawrence Berkeley National Laboratory (LBNL) on February 12, 2020. The DOE Office of Enterprise Assessments' Office of Enforcement provided the results of the investigation to AIS in an investigation report dated May 16, 2022. An enforcement conference was convened virtually on August 31, 2022, with you and members of your staff to discuss the report's findings and AIS's response. A summary of the enforcement conference and attendance roster are enclosed.

DOE considers the abrasive blasting injury to be of high safety significance. Specifically, an AIS worker severely injured their right forearm, requiring in-patient hospitalization for six days and skin graft treatments. In addition, the injured worker had to climb down a 25-foot ladder without adequate fall protection, exposing them to fall hazards that could have resulted in more serious injury or death. The event revealed deficiencies in: (1) management responsibilities, (2) hazard prevention and abatement, (3) construction safety, and (4) emergency response.

Based on an evaluation of the evidence in this matter, including information presented at the enforcement conference, DOE concludes that AIS 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 base civil penalty, before mitigation, of \$106,000.00.

DOE acknowledges that AIS promptly reported the occurrence to the DOE management and operating contractor, the Regents of the University of California (UC). After the event, UC did not permit AIS to conduct additional abrasive blasting work at the LBNL site. AIS fully cooperated with DOE's investigation of this event, and conducted its own investigation, as well as contracted with



Surface Preparation Solution, Inc., to investigate the event. AIS also developed corrective actions that, if adequately implemented and maintained by AIS, appear to be sufficient to comprehensively prevent recurrence and broadly address areas of concern.

In recognition of AIS'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 civil penalty mitigation based on contractor staffing size at the time of the events. For contractors with 26-100 employees, DOE applied mitigation of 40 percent of the base civil penalty, consistent with DOE's worker safety and health enforcement policies and past practice regarding small business entities. As a result, the total proposed civil penalty, after mitigation, is \$10,600.00.

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 assessment, will constitute a final order.

Sincerely,

A handwritten signature in black ink, appearing to read 'Anthony C. Pierpoint', with a long horizontal flourish extending to the right.

Anthony C. Pierpoint  
Director  
Office of Enforcement  
Office of Enterprise Assessments

Enclosures: Preliminary Notice of Violation (WEA-2022-04)  
Enforcement Conference Summary  
Enforcement Conference Attendance Roster

cc: Paul Golan, SC-BSO  
Michelle Flynn, The Regents of the University of California  
Matthew Tasch, Superior Tank Solutions, Inc.

**Preliminary Notice of Violation**

Advanced Industrial Services, Inc.  
Lawrence Berkeley National Laboratory

WEA-2022-04

A U.S. Department of Energy (DOE) investigation into the facts and circumstances associated with an injury that occurred on February 12, 2020, during abrasive blasting inside tank 82 at the Lawrence Berkeley National Laboratory (LBNL) revealed violations of DOE worker safety and health requirements by Advanced Industrial Services, Inc. (AIS), which was under a blanket subcontract agreement with Superior Tank Solutions, Inc. (STS). The event resulted in the injury of a worker's right forearm, requiring in-patient hospitalization for six days and skin graft treatments.

DOE provided AIS with an investigation report dated May 16, 2022, and convened a virtual enforcement conference on August 31, 2022, with AIS representatives to discuss the report's findings and AIS's response. A summary of the conference and attendance roster are enclosed.

Pursuant to Section 234C of the Atomic Energy Act of 1954, as amended, and DOE regulations set forth at 10 C.F.R. Part 851 (Part 851), *Worker Safety and Health Program*, DOE hereby issues this Preliminary Notice of Violation (PNOV) to AIS. The violations include deficiencies in management responsibilities, hazard prevention and abatement, construction safety and emergency response. DOE has grouped and categorized the violations as one Severity Level I violation.

Severity Levels are explained in Part 851, Appendix B, *General Statement of Enforcement Policy*. Subparagraph VI(b)(1) states that "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, DOE imposes a total proposed civil penalty of \$10,600.00.

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

## I. VIOLATIONS

### A. Management Responsibilities, Hazard Prevention and Abatement, Construction Safety, and Emergency Response

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: (1) [p]rovide a place of employment that is free from recognized hazards that are causing or have the potential to cause death or serious physical harm to workers; and (2) [e]nsure that work is performed in accordance with: (i) [a]ll applicable requirements of [Part 851]; and (ii) [t]he worker safety and health program for that workplace.”

Title 10 C.F.R. § 851.20, *Management responsibilities and worker rights and responsibilities*, subsection (a) states that “[c]ontractors are responsible for the safety and health of their workforce and must ensure that contractor management at a covered workplace:...(3) [a]ssign worker safety and health program responsibilities, evaluate personnel performance, and hold personnel accountable for worker safety and health performance.”

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.” Subsection (a), paragraph (2), subparagraph (iii) states that “[f]or existing hazards in the workplace, contractors must, protect workers from dangerous safety and health conditions.” In addition, subsection (c) states that “[c]ontractors must address hazards when selecting or purchasing equipment, products, and services.”

Title 10 C.F.R. § 851.23, *Safety and health standards*, subsection (a) states that “[c]ontractors must comply with the following safety and health standards that are applicable to the hazards at their covered workplace...(7) Title 29 [C.F.R.] Part 1926, ‘*Safety and Health Regulations for Construction*.’”

Title 10 C.F.R. § 851.24, *Functional areas*, subsection (a) states that “[c]ontractors must have a structured approach to their worker safety and health program which at a minimum, include provisions for the following applicable functional areas in their worker safety and health program: construction safety; fire protection....” Subsection (b) states that “[i]n implementing the structured approach required by [subsection] (a) of this section, contractors must comply with the applicable standards and provisions in appendix A of this part, entitled ‘Worker Safety and Health Functional Areas.’”

Title 29 C.F.R. 1926, subpart AA, *Confined Spaces in Construction*, section 1926.1205, *Permitting process*, subsection (b) states that “[b]efore entry begins, the entry supervisor identified on the permit must sign the entry permit to authorize entry.” Subsection (e), paragraph (2) states that “[t]he entry supervisor must suspend or cancel the entry permit and fully reassess the space before allowing reentry when a condition that is not allowed under

the entry permit arises in or near the permit space and that condition is temporary in nature and does not change the configuration of the space or create any new hazards within it.”

Title 29 C.F.R. 1926, subpart E, *Personal Protective and Life Saving Equipment*, section 1926.95, *Criteria for personal protective equipment (PPE)*, subsection (c), *Design*, states that “[a]ll personal protective equipment shall be of safe design and construction for the work to be performed.”

Title 29 C.F.R. 1926, subpart M, *Fall Protection*, section 1926.501, *Duty to have fall protection*, subsection (a), *General*, paragraph (2) states that “[t]his section sets forth requirements for employers to provide fall protection systems. All fall protection required by this section shall conform to the criteria set forth in 1926.502 of this subpart.”

The Regents of the University of California (UC) *Environment Safety & Health (ES&H) Manual* (PUB-3000), chapter 10, *Construction Safety*, revised March 2015, section 10.7, *Required Work Processes*, Work Process C, *Review Selected Subcontractors’ EHS Submittal Package(s)*, states that “[l]ower-tier subcontractors must use and abide by the general contractor's written site-specific safety program.”

The STS site specific safety plan (SSSP), part 1, section 3, *Acknowledgement of 10 CFR 851*, approved by UC on April 30, 2019 and amended on January 10, 2020, states that “[a]s a subcontractor to LBNL, while your workers are physically located at LBNL, you must meet the requirements of Title 10, *Code of Federal Regulations*, ‘Energy’, Part 851, ‘Worker Safety and Health Program’ (10 CFR 851). As such, you must be aware of, and comply with, the requirements of this regulation.”

*STS Water Tank Inspection SSSP Addendums: Tank 82 Revised Scope*, approved by UC on January 10, 2020, part 1, *Mobilization and Equipment Setup*, section 1.1 states that “[a]ll equipment will be properly maintained and in good working order...with all...operating guidelines.”

*AIS Abrasive Blasting Standard Operating Procedures*, revised August 2017, *Program*, *Abrasive Blasting Equipment* section, states that “Advanced Industrial Services, Inc. adopts Schmidt abrasive blasting manuals as the primary source for maintenance and operation procedures....”

Schmidt® Bulk Blaster Model 1600, *Bulk Abrasive Blaster Operation and Maintenance Manual*, dated July 2010, section 1.23 states: “[d]o not operate this equipment without a pressure relief device in place.”

Marco Group International, Inc. (Marco) *Blastmaster® 156E Remote Control Switch Operators Manual*, dated June 20, 2019, page 4, *Hazard Identifications*, *Warning*, states that “[u]se of Marco remote-control switches with another manufacturer’s remote-control systems could cause unintended activation of remote-control systems, resulting in the release of high-speed abrasive and compressed air.”

Contrary to the above requirements, AIS failed to adequately ensure that work was performed in accordance with all applicable requirements of Part 851, the DOE-approved worker safety and health program (WSHP), and the UC-approved SSSP for the workplace. Specific examples include:

1. AIS did not properly prepare a permit-required confined space (PRCS) entry permit for abrasive blasting within tank 82. Specifically, the AIS PRCS permit did not contain: (1) a comprehensive identification of the safety and health hazards associated with abrasive blasting operations inside tank 82; (2) the measures used to isolate, eliminate, or control the identified hazards of the operation within the PRCS; and (3) the required signatures authorizing the permit's use. Additionally, AIS did not suspend the permit (i.e., stop work) when the PRCS attendant left the manway entrance of tank 82 to assist in troubleshooting the malfunctioning blasting equipment.
2. AIS did not develop an emergency response plan that considered access and retrieval of an injured or incapacitated worker on a 25-foot scaffold within a PRCS (i.e., tank 82). Specifically, AIS did not confirm that the Alameda County Fire Department had the training, equipment, and capability to perform an emergency rescue of this type.
3. AIS did not ensure that abrasive blasting operators were protected in the event of a fall from a height of more than 6 feet. For example, AIS allowed abrasive blasting operators to perform abrasive blasting at a height of approximately 25 feet, without certified personal fall arrest anchor points that supported at least 5,000 pounds (per worker). Instead, AIS permitted the abrasive blasting operators to anchor their personal fall arrest system to the guard rails of an unsecured (i.e., mobile) scaffold that was not permitted by the manufacturer or certified as a designed anchorage point to be used as a fall protection system.
4. AIS did not ensure that the abrasive blast operators were wearing appropriate personal protective equipment while performing abrasive blasting in tank 82. Specifically, the workers performing abrasive blasting were wearing cotton work shirts and wrist-length leather work gloves, leaving the workers' forearms unprotected from abrasive blasting material.
5. AIS did not ensure that employees were using the abrasive blasting equipment in accordance with the operator manuals. Specifically, AIS operated the equipment without the required pressure relief device. In addition, AIS did not use dead-man switches from the manufacturer, but instead used electrical remote-controlled switches from a different manufacturer.

Collectively, these noncompliances constitute a Severity Level I violation.

Base Civil Penalty – \$106,000.00

Proposed Civil Penalty (as adjusted) – \$10,600.00

## II. REPLY

Pursuant to 10 C.F.R. § 851.42(b)(4), AIS 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 AIS chooses not to contest the violations set forth in this PNOV and the proposed remedy, then the reply should state that AIS waives the right to contest any aspect of this PNOV and the proposed remedy. In such case, the total proposed civil penalty of \$10,600.00 must be remitted 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. To remit the civil penalty by electronic funds transfer (EFT), please have your accounting department contact the Office of Enforcement’s Docket Clerk at (301) 903-7707 for EFT wiring instructions. This PNOV will constitute a final order upon the filing of the reply.

If AIS disagrees with any aspect of this PNOV, including the proposed civil penalties, 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 penalties should not be imposed or should be further 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.

If AIS fails to submit a written reply within 30 calendar days of receipt of this PNOV, then pursuant to 10 C.F.R. § 851.42(d), AIS relinquishes any right to appeal any matter in this PNOV and this PNOV will constitute a final order.

Please submit your reply to the Director, Office of Enforcement by email to [enforcementdocketclerk@hq.doe.gov](mailto:enforcementdocketclerk@hq.doe.gov).

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

## III. CORRECTIVE ACTIONS

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.

A handwritten signature in black ink, appearing to read 'Anthony C. Pierpoint', with a long horizontal flourish extending to the right.

Anthony C. Pierpoint  
Director  
Office of Enforcement  
Office of Enterprise Assessments

Washington D.C.  
This 15th day of December 2022