



Department of Energy

Washington, DC 20585

January 9, 2024

Dr. John L. Sarrao
Laboratory Director
SLAC National Accelerator Laboratory
Stanford University
Office of the President
2575 Sand Hill Road
Menlo Park, California 94025

WEA-2024-01

Dear Dr. Sarrao:

This letter refers to the Department of Energy's (DOE) investigation into the facts and circumstances associated with a high-voltage electrical shock injury event that occurred on December 27, 2022, in building 626 at the SLAC National Accelerator Laboratory. The DOE Office of Enterprise Assessments' Office of Enforcement provided the results of the investigation to Stanford University (SU) in an investigation summary dated August 25, 2023. An enforcement conference was convened on September 19, 2023, with you and members of your staff to discuss the report's findings and SU's response. A summary of the enforcement conference and attendance roster are enclosed.

DOE considers the high-voltage electrical shock injury event to be of high safety significance. The event involved a worker receiving a high-voltage electrical shock resulting in severe injuries to their hands and face while preparing an electrical substation for preventive maintenance work. The event revealed deficiencies in: (1) management responsibilities, (2) hazard identification, assessment, prevention, and abatement, (3) electrical safety, (4) training and information, and (5) recordkeeping and reporting.

Based on an evaluation of the evidence in this matter, including information presented at the enforcement conference, DOE concludes that SU violated requirements prescribed under Title 10 C.F.R. Part 851, *Worker Safety and Health Program*, and Title 8 California Code of Regulations (C.C.R.) § 3203, *Injury and Illness Prevention Program*. Accordingly, DOE hereby issues the enclosed Preliminary Notice of Violation (PNOV) which cites four Severity Level I violations and one Severity Level II violation.

DOE withheld \$801,050.25 from SU of earned fee in fiscal year 2023 for safety and health performance deficiencies, which included the high-voltage electrical shock injury event. Therefore, in accordance with 10 C.F.R. § 851.5,



Enforcement, subsection (c) and DOE Acquisition Regulation 48 C.F.R. § 970.5215-3, *Conditional Payment of Fee Clause*, DOE proposes no civil penalty for the violations cited in this PNOV.

SU developed a corrective action plan (CAP) to address the 16 Judgements of Needs (JONs) from the DOE Accident Investigation Board (AIB) Final Report. The Office of Enforcement concluded that SU's corrective actions appear to appropriately address the 16 JONs from the DOE AIB Final Report. If effectively implemented, the corrective actions should adequately address the conditions that led to the event and should prevent recurrence.

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 will constitute a final order.

After reviewing your reply to the PNOV, including any proposed additional corrective actions entered into DOE's Noncompliance Tracking System, DOE will determine whether any further activity 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,



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

Enclosures: Preliminary Notice of Violation (WEA-2024-01)
Enforcement Conference Summary and Attendance Roster

cc: Hanley Lee, SC-SSO
Richard Poliak, SLAC National Accelerator Laboratory

Preliminary Notice of Violation

Stanford University
SLAC National Accelerator Laboratory

WEA-2024-01

A U.S. Department of Energy (DOE) investigation into the facts and circumstances associated with the high-voltage electrical shock injury event that occurred on December 27, 2022, at the SLAC National Accelerator Laboratory (SLAC) revealed five violations of DOE worker safety and health requirements and California injury and illness prevention program requirements by Stanford University (SU). The event involved a worker receiving a high-voltage electrical shock resulting in severe injuries to their hands and face while preparing an electrical substation (ESS) for preventive maintenance (PM).

DOE provided SU with an investigation summary dated August 25, 2023, and convened an enforcement conference with SU representatives on September 19, 2023, to discuss the preliminary findings outlined in the summary and SU's response.

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* and 8 California Code of Regulations (C.C.R.) § 3203, *Injury and Illness Prevention Program (IIPP)*¹ DOE hereby issues this Preliminary Notice of Violation (PNOV) to SU. The violations cited in this PNOV include deficiencies in: (1) management responsibilities, (2) hazard identification, assessment, prevention, and abatement, (3) electrical safety, (4) training and information, and (5) recordkeeping and reporting. DOE has grouped and categorized the violations as four Severity Level I violations and one Severity Level II violation.

Severity Levels are explained in Part 851, Appendix B, *General Statement of Enforcement Policy*. Subparagraph 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.”

¹ In 2019, SLAC was granted a variance by DOE to follow California Occupational Safety and Health Administration's (Cal/OSHA) regulations in lieu of specified portions of Part 851. In cases where the provisions of Part 851 Subpart B, Subpart C, and Appendix A are not adequately covered by Cal/OSHA regulations, SLAC incorporates those specific sections of Part 851 and existing contract provisions into the DOE-approved IIPP as needed, to provide workers a place of employment that is as safe and healthful as would result from compliance with all sections of Part 851.

Subparagraph VI(b)(2) states that “[a] Severity Level II violation is an other-than-serious violation. An other-than-serious violation occurs where the most serious injury or illness that would potentially result from a hazardous condition cannot reasonably be predicted to cause death or serious physical harm to employees but does have a direct relationship to their safety and health.”

DOE withheld \$801,050.25 from SU of earned fee in fiscal year 2023 for safety and health performance deficiencies, which included the high-voltage electrical shock injury event. Therefore, in accordance with 10 C.F.R. § 851.5, *Enforcement*, subsection (c) and DOE Acquisition Regulation 48 C.F.R. § 970.5215-3, *Conditional Payment of Fee Clause*, DOE proposes no civil penalty for the violations cited in this PNOV.

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 SU must prominently post a copy of this PNOV at or near the location where the violation occurred until the violation is corrected in accordance with 10 C.F.R. § 851.42(e).

I. VIOLATIONS

A. Management Responsibilities

Title 10 C.F.R. § 851.23, *Safety and health standards*, subsection (a), states that “[c]ontractors must comply with the safety and health standards that are applicable to the hazards at their covered workplace.” Per SU’s approved variance to Part 851, SU incorporated NFPA [National Fire Protection Association] 70E-2021, *Standard for Electrical Safety in the Workplace*, into the SLAC *IIPP*, as there was no comparable Title 8 C.C.R. requirement.

Title 8 C.C.R. § 3203, *IIPP*, subsection (a), states that “...every employer shall establish, implement and maintain an effective Injury and Illness Prevention Program. The Program shall be in writing and, shall, at a minimum... (2) [i]nclude a system for ensuring that employees comply with safe and healthy work practices.... (3) [i]nclude a system for communicating with employees in a form readily understandable by all affected employees on matters relating to occupational safety and health.... Substantial compliance with this provision includes... labor/management safety and health committees....” Subsection (c) states that “[e]mployers who elect to use a labor/management safety and health committee... shall be presumed to be in substantial compliance with subsection (a)(3) if the committee: (1) [m]eets regularly, but not less than quarterly....”

NFPA 70E-2021 edition (70E-2021), *Standard for Electrical Safety in the Workplace*, section 105.3(A), *Employer Responsibility*, states that “[t]he employer shall have the following responsibilities: (1) establish, document, and implement the safety-related work practices and procedures required by the standard.”

NFPA 70E-2021, section 110.5(M)(1), *Electrical Safety Program Audit*, states that “[t]he electrical safety program shall be audited to verify that principles and procedures of the electrical safety program are in compliance with this standard. Audits shall be performed at intervals not to exceed 3 years.” Section 110.5(M)(2), *Field Work Audit*, states that “[f]ield

work shall be audited to verify that the requirements contained in the procedures of the electrical safety program are being followed.... Audits shall be performed at intervals not to exceed 1 year.” Section 110.5(M)(3), *Lockout/Tagout Program and Procedure Audit*, states that “[t]he lockout/tagout program and procedures required by Article 120 shall be audited by a qualified person at intervals not to exceed 1 year. The audit shall cover at least one lockout/tagout in progress.”

NFPA 70E-2021, section 120.1(B), *Employer Responsibilities*, states that “[t]he employer shall be responsible for...(3) [a]uditing the lockout/tagout program in accordance with [section] 110.5(M)(3), [and] (4) [a]uditing execution of the lockout/tagout procedures in accordance with [section] 110.5(M)(3).”

NFPA 70E-2021, section 205.2, *Single-Line Diagram*, states that “[a] single-line diagram, where provided for the electrical system, shall be maintained in a legible condition and shall be kept current.”

SLAC’s *IIPP*, revision 14, October 13, 2022, section 4.3, *Accountability*, states that “[t]he Laboratory Director has the ultimate responsibility for safety at the Laboratory.... This accountability is then extended to each SLAC line manager...and each individual...working at SLAC.” Section 6.2, *Reporting Hazards*, states that “[e]very worker is responsible for bringing to the attention of his or her immediate supervisor...opportunities for safety improvement. The supervisor is responsible for evaluating the reports and for taking appropriate follow-up action.”

SLAC’s *Environment, Safety, and Health (ESH) Manual*, chapter 1, *General Policy and Responsibilities*, revision 2449, October 26, 2022, section 2.8, *ESH Advisory Committee*, states that “[w]hen...the chief safety officer has special concerns with a particular set of hazards, he or she may appoint an ESH advisory committee, consisting of SLAC personnel possessing special expertise in those hazards. Each such committee recommends and interprets standards, policies, and implementing measures.” Section 2.10, *Local Health and Safety Committee*, states that “[t]he union/management local health and safety committee is established by the labor agreement between Stanford University and the SEIU [Service Employees International Union] Higher Education Workers (HEW) Local 2007.”

SLAC’s *ESH Manual*, chapter 8, *Electrical Safety*, revision 23.5, July 5, 2022, section 2.2, *Electrical Safety Committee*, states that “[t]he ESC [Electrical Safety Committee] may be convened from time to time as the need arises to review major electrical safety program changes or to provide advice on unique, unusual or particularly complex electrical safety concerns.” Section 7.4, *Documentation*, states that “[a] current set of documentation adequate for operation, maintenance, testing, and safety must be available to anyone working on potentially hazardous equipment. Keep drawings and prints current. Dispose of obsolete drawings and be certain that active file drawings have the most current corrections. Archive all drawings in SEDA [SLAC Engineering Drawing Archive].”

SLAC’s *ESH Manual*, chapter 51, *Control of Hazardous Energy*, revision 2510, July 5, 2022, section 2.15, *Control of Hazardous Energy Program Manager*, states that the program

manager “[p]erforms an annual inspection of the CoHE [Control of Hazardous Energy] program; corrects any deviations or inadequacies observed.”

SLAC’s *Conduct of Engineering Policy*, revision 2, December 16, 2022, section 1, *Purpose*, section 3.2.2, *Configuration Management*, states that “[c]onfiguration management is the collection of processes that establishes the requirements and design documentation for a system’s configuration and then maintains the consistency among requirements, documentation and the as-built/as-operational system configuration throughout the course of the system’s life.” Section 3.2.3.5.2, *As-Built Configuration Management*, states that “[a] system or facility’s as-built configuration must be verified against the documented requirements and design. Any variances must be documented and managed in the design documentation repository.” Section 4.5, *Managers*, states that managers ensure “compliance with change control methods and tools for effective configuration management through the life cycle of the configuration (facility, system, structure, etc.).”

Contrary to the above requirements, SU failed to comply with applicable requirements of Part 851, 8 C.C.R. § 3203, NFPA 70E, and the IIPP. Specific examples include the following:

1. SU failed to fully implement a formal configuration management program to manage electrical distribution drawings and revisions to drawings. Additionally, multiple databases were used to obtain electrical distribution configuration drawings for electrical work activities, so high-voltage electricians (HVEs) could not determine where the current version of a single-line drawing was maintained. As this investigation revealed, most workers therefore did not trust electrical distribution configuration drawings. Specifically, posted drawings in the ESSs were not accurate and did not reflect the current configuration of the electrical distribution system. For example:
 - In the building 626 substation (B626SS), the posted manufacturer drawings did not show any connection to the building 16 master substation (B16MSS).
 - In the building 522 substation (B522SS), the posted drawings depicted an outdated 2011 electrical distribution system configuration, where breaker (BRKR) 75 fed both BRKR 340 in the B626SS and BRKR 380 in the B522SS.
 - In the building 726 substation (B726SS), the posted drawing incorrectly showed that BRKR 361 was fed from BRKR 41 in the B16MSS.
2. SU failed to act on safety improvement opportunities reported by workers. Specifically, workers reported that in some cases the insulating covers on the ESS circuit parts were too tight to lift them with an insulated tool, so they had to be lifted by hand. Workers had recommended to SU management that installing ball stud and socket clamp grounding equipment with insulating covers, designed to be removed with an insulating fiberglass hot line stick, would provide a safer way to perform zero voltage verification (ZVV) and install the protective grounds.
3. SU failed to conduct annual field work audits to verify that the electrical safety program (ESP) requirements were being followed and did not have a qualified person conduct annual audits of the lockout/tagout (LOTO) program and procedures or the execution of those procedures.

4. SU failed to conduct a triennial audit of its ESP in 2019 (in chronological order with previous audits from 2013 and 2016). Further, the ESH division director did not approve the audit performed in 2021. Consequently, issues identified in the 2021 audit were not recorded for corrective action assignment and tracking in the SLAC Issues and Improvements Management System.
5. SU failed to conduct regularly scheduled labor/management safety and health committee meetings. Previously, SU conducted monthly meetings with labor/management representatives, but these were discontinued due to lack of ESH leadership.
6. SU failed to convene the ESC to review major ESP changes that occurred when SU previously adopted the 2018 edition of NFPA 70E, which had substantial new requirements and revisions, and failed to provide advice on electrical safety (ES) concerns related to several significant ES events at SLAC and within the DOE complex. Specifically, SU discontinued the ESC in 2010 and had not reconvened it. SU relied on one employee, designated as the Authority Having Jurisdiction and responsible for the ESP and CoHE programs, to review major ESP changes and to provide advice on ES concerns. Consequently, an important mechanism for providing input and differing viewpoints regarding ES to the ESH division and SLAC management was not being utilized.

Collectively, these noncompliances constitute a Severity Level I violation.

B. Hazard Identification, Assessment, Prevention and Abatement

Title 8 C.C.R. § 2940, *General Provisions*, subsection (g) *Job Briefing*, states that “(1) [b]efore each job...(B) [t]he employer shall ensure that the employee in charge conducts a job briefing that meets (g)(2)...[and](g)(4)...of this section with the employees involved before they start each job.” Subsection (g)(2), *Subjects to be covered*, states that “[t]he briefing shall cover at least the following subjects: hazards associated with the job, work procedures involved, special precautions, energy-source controls, and personal protective equipment [PPE] requirements.” Subsection (g)(4)(B), *Extent of briefing*, states that “[a] more extensive discussion shall be conducted: 1. [i]f the work is complicated or particularly hazardous.”

Title 8 C.C.R. § 3203, *IIPP*, subsection (a), states that “...every employer shall establish, implement and maintain an effective Injury and Illness Prevention Program. The Program shall be in writing and, shall, at a minimum...(4) [i]nclude procedures for identifying and evaluating work place hazards including scheduled periodic inspections to identify unsafe conditions and work practices. Inspections shall be made to identify and evaluate hazards: (A) [w]hen the Program is first established;...(B) [w]hen new substances, processes, procedures, or equipment are introduced to the workplace that represent a new occupational safety and health hazard; and (C) [w]hen the employer is made aware of a new or previously unrecognized hazard.”

NFPA 70E-2021, section 110.5(H), *Risk Assessment Procedure*, states that “[t]he electrical safety program shall include a risk assessment procedure...” Subsection (H)(2), *Human Error*, states that “[t]he risk assessment procedure shall address the potential for human error and its negative consequences on people, processes, the work environment, and equipment relative to the electrical hazards in the workplace.”

NFPA 70E-2021, section 110.5(I), *Job Safety Planning and Job Briefing*, states that “[b]efore starting each job that involves exposure to electrical hazards, the employee in charge shall complete a job safety plan and conduct a job briefing with the employees involved.” Subsection (I)(1), *Job Safety Planning*, states that “[t]he job safety plan shall be in accordance with the following: (1) [b]e completed by a qualified person, (2) [b]e documented, (3) [i]nclude the following information:...(b) [i]dentification of the electrical hazards associated with each task, (c) [a] shock risk assessment in accordance with [section] 130.4 for tasks involving a shock hazard, (d) [a]n arc flash risk assessment in accordance with [section] 130.5 for tasks involving an arc flash hazard, [and] (e) [w]ork procedures involved, special precautions, and energy source controls.” Subsection (I)(2), *Job Briefing*, states that “[t]he job briefing shall cover the job safety plan...”

NFPA 70E-2021, section 120.2(B), *Lockout/Tagout Procedure*, states that “[a] lockout/tagout procedure shall be developed on the basis of the existing electrical equipment and system and shall use suitable documentation including up-to-date drawings and diagrams.”

NFPA 70E-2021, section 120.4(A)(1), *Locating Sources*, states that “[u]p-to-date single-line drawings shall be considered a primary reference source for such information. When up-to-date drawings are not available, the employer shall be responsible for ensuring that an equally effective means of locating all sources of energy is employed.” Section 120.4(A)(2), *Exposed Persons*, states that “[t]he plan shall identify persons who might be exposed to an electrical hazard and the PPE required during the executing of the job or task.” Section 120.4(A)(5), *Complex Lockout/Tagout*, states that “...(b) [a]ll complex lockout/tagout procedures shall require a written plan of execution that identifies the person in charge. (c) The complex lockout/tagout procedure shall vest primary responsibility in an authorized employee for employees working under the protection of a group lockout or tagout device.... The person in charge shall be accountable for safe execution of the complex lockout/tagout.”

NFPA 70E-2021, section 130.4(A), *Shock Risk Assessment*, states that “[a] shock risk assessment shall be performed: (1) [t]o identify shock hazards, (2) [t]o estimate the likelihood of occurrence of injury or damage to health and the potential severity of injury or damage to health, [and] (3) [t]o determine if additional protective measures are required, including the use of PPE.” Section 130.4(B), *Estimate of Likelihood and Severity*, states that “[t]he estimate of likelihood of occurrence of injury or damage to health and the potential severity of injury or damage to health shall take into consideration all of the following: (1) [t]he design of the electrical equipment, [and] (2) [t]he electrical equipment operating condition and the condition of maintenance.” Section 130.4(C), *Additional Protective Measures*, states that “[w]hen the additional protective measures include the use of PPE, the following shall be determined: (1) [t]he voltage to which personnel will be exposed, (2) [t]he boundary requirements, [and] (3) [t]he personal and other protective equipment required by this standard to protect against the electric shock hazard.”

NFPA 70E-2021, section 130.5(A), *Arc Flash Risk Assessment*, states that “[a]n arc flash risk assessment shall be performed: (1) [t]o identify arc flash hazards, (2) [t]o estimate the likelihood of occurrence of injury or damage to health and the potential severity of injury or damage to health, [and] (3) [t]o determine if additional protective measures are required, including the use of PPE.” Section 130.5(B), *Estimate of Likelihood and Severity*, states that “[t]he estimate of the likelihood of occurrence of injury or damage to health and the potential severity of injury or damage to health shall take into consideration the following: (1) [t]he design of the electrical equipment, including its overcurrent protective device and its operating time, [and] (2) [t]he electrical equipment operating condition and condition of maintenance.” Section 130.5(C), *Additional Protective Measures*, states that “[w]hen the additional protective measures include the use of PPE, the following shall be determined: (1) [a]ppropriate safety-related work practices, (2) [t]he arc flash boundary, [and] (3) [t]he PPE to be used within the arc flash boundary.”

SLAC’s *IIPP*, revision 14, October 13, 2022, section 4.1, *Safety Policy*, states that “...SLAC’s ISEMS [Integrated Safety and Environmental Management System] is based on the seven guiding principles and five core functions of the Integrated Safety Management System (ISMS)....” Section 7.1, *Identifying Workplace Hazards and Assessing Risk*, states that “[t]he identification and analysis of workplace hazards is part of the Work Planning and Control Process.” Section 7.6, *Activity-Level Hazard Analysis*, states that “[o]perations and procedures are analyzed at the activity level to identify potential worker protection hazards and deficiencies.” Section 8.0, *Hazard Control and Abatement*, states that “SLAC has implemented a hazard prevention and abatement process to ensure that identified and potential hazards are prevented or abated in a timely manner.... The classic hazard control hierarchy is used to minimize worker safety and health risk....”

SLAC’s *ESH Manual*, chapter 2, *Work Planning and Control / Work Planning and Control Procedure*, revision 2333, May 10, 2021, section 2.1.1, *Planning*, states that “[p]lanning consists of defining the scope of work, identifying and analyzing the hazards, and developing and implementing controls.... A visit to the job site may be warranted.... The results are documented in some form of work plan, which forms the basis for authorization and release.” Section 2.1.2.1, *Documentation*, states that “...the purpose of documenting authorization is to address and communicate to the worker unique or specific hazards resulting from the condition of the equipment being worked on, the location of the work, the significance of negative consequences if an intermediate step is omitted or performed out of sequence.” Section 2.2, *Authorization and Release by Type of Work*, states that “[h]ow work is planned, authorized and released depends on the type (*green, yellow, or red*) and the location (office/non-office and resident/non-resident area).... Red work is authorized at the activity level like non-resident yellow work (that is, by the supervisor of the workers involved, using a JSA [job safety analysis] or SOP [standard operating procedure]). In addition, the planning efforts are documented by the work planner with a *work integration plan (WIP)*.” Section 2.4, *Yellow and Red Work Procedure*, step 6, *Worker and authorizer*, states that the “[a]uthorizer ensures a tailgate briefing occurs before start of work with workers and others as appropriate, to ensure that workers understand the work underway in the area and its hazards and controls, including when to verify controls are in place before continuing work activity.”

SLAC's *ESH Manual*, chapter 8, *Electrical Safety*, revision 23.5, July 5, 2022, section 2.4, *Managers and Supervisors*, states that "[m]anagers and supervisors are responsible for maintaining a work environment free from recognized electrical hazards throughout their area of control. Managers and supervisors must...[p]lan activities such that work may be performed in a de-energized state whenever possible." Section 10.1, *General Safety Rules*, states that "[b]efore starting each job, the supervisor or designee must conduct a job-briefing with the employees involved. The briefing must cover subjects such as hazards associated with the job, work procedures involved, special precautions, energy source controls, and PPE requirements. (Refer to NFPA 70E and 8 C.C.R. [§] 2940 for more details)." Section 10.3.3, *Electrical Work Plan and Work Approvals*, states that "[a]n electrical work plan (EWP) that includes a hazard analysis is required for all electrical work activities.... The purpose of the EWP is to document that appropriate safe work practices and PPE are being used.... The EWP must 1. [d]escribe the work to be done, 2. [l]ist the hazards associated with the work, 3. [d]etail how each hazard will be mitigated, for example identifying a. [s]pecific voltages and currents, b. [s]pecific PPE requirements, c. [a]ll other associated safety issues, d. [l]ock and tag requirements."

SLAC's *ESH Manual*, chapter 51, *Control of Hazardous Energy | General Requirements*, revision 2300, June 18, 2021, section 2.4.2.2, *Roles and Responsibilities*, states that "[c]omplex lockouts require designation of a lead authorized worker...who...carries responsibility for the entire group, including addressing worker concerns before work begins." Section 2.4.4.1, *Energy Isolation Plan (EIP) Development*, states that for "[g]roup lockout energy isolation...[the] plan must include [a] unique group identifier that will be applied to all associated forms and tags [;] [a] separate step for locking and tagging each individual isolating device [;] [e]ach device must have its own step [;] [a] separate step for each individual zero energy verification, verification of non-operation, and release of stored energy [;] [e]ach verification/release must have its own step [;] [d]rawings or sketches that identify energy isolating devices, if needed to assist authorized workers in understanding the EIP."

SLAC's *Facilities Operations High Voltage Switching Procedure*, revision 2, December 5, 2013, section 4.3, *Work Preparation*, states that "[s]witching orders must be reviewed and verified accurate by both the preparer and reviewers. Switching orders shall be based on verified, as-built drawings and documentation, or other verified as-built information. If accurate as-built information is not available, then it must be obtained before proceeding with switching activities. The documentation shall be attached to the switching order." Additionally, "[a] documented pre-job briefing is required before the execution of each switching order."

Contrary to these requirements and as evidenced by the following facts, SU failed to update the ESP to incorporate new requirements from NFPA 70E-2021, failed to comply with their own IIPP work planning and control requirements, and failed to adequately identify, assess, prevent and abate electrical hazards.

1. SU's ESP hazard analysis/risk assessment process failed to provide requirements for identifying, assessing, and addressing human error and its negative consequences on

people, programs, processes, the work environment, or an organization. Consequently, SU failed to adequately address the potential for human error within the high-voltage (HV) organization or in the EWP. As a result, HV workers were working in a skill-based human performance mode, rather than a rule-based mode, which led to error precursors. SLAC did provide an optional Human Performance Improvement (HPI) course, which provided students with HPI tools, and the pre-job briefing required a discussion of common HPI error precursors. However, SU failed to recognize error-likely conditions. For example, SU did not adequately act on concerns that HVE-2 and HVE-4 raised about BRKR 342 being energized from two sources (i.e., the B16MSS BRKR 75 and B726SS).

2. SU failed to plan, authorize, and release the electrical work activities as red work. Instead, SU categorized, planned, authorized and released the activities as yellow work in a resident area and included an optional job safety analysis (i.e., the EWP), despite the work scope meeting the red work threshold. Consequently, the planning process was less rigorous than required. For example, for red work, the planner is required to prepare a WIP, which is required to be reviewed by an ESH coordinator. Further, SU contradicted its 2018 categorization of the five-year PM cycle for the B626SS and B522SS as red work.
3. SU failed to prepare an adequate EWP, HV Switching Orders (HVSOs), and EIPs/complex lockout permits for safe execution of the activities to de-energize and lock out the 12.47 kilovolt (kV) switchgear in the B626SS and B522SS. Specifically, the documents had errors, missed steps, and inconsistencies. For example:
 - The *Group Lockout EIP for the B626 PM Generator Install* incorrectly instructed workers to perform ZVV at B626SS, 12.47 kV BRKR 342, which was still energized.
 - The *HV Switching Order for B522-B626 PM* instructed workers to verify open and rack out BRKR 360 in B726SS, which had already been racked out and physically removed a few months earlier.
 - Step numbers in both the *HV Switching Order for B626 Gen Install* and the *HV Switching Order for B522-B626 PM* were out of order, included duplicate step numbers, and were missing step numbers.
 - The *Group Lockout EIP for the B626 PM Generator Install* instructed workers to install grounds at BRKR 360, but the *HV Switching Order for B626 Gen Install* did not instruct workers to install grounds.
 - The *HV Switching Order for B522-B626 PM* instructed the workers to place grounds before all isolations were in place.
 - No single-line drawing for the 12.47 kV equipment was included in the *HV Switching Order for B522-B626 PM*.
4. SU failed to adequately review the EWP, HVSOs, and EIPs/complex lockout permits before authorizing and releasing them. Specifically, the work control authorization process did not identify errors, missed steps, and inconsistencies in the documents.
5. SU failed to adequately authorize and release the EWP. Specifically, persons designated as authorizers/releasers failed to perform all tasks required in the authorizing attestation statement. For example, two workers (HVE-1 and HVE-3) were not in full compliance with SLAC training requirements as required by the attestation statement. Additionally,

the persons releasing the work failed to indicate by checking an appropriate box that they had communicated unique area hazards, boundary conditions, and other required information with the authorizer or listed worker(s) and had coordinated this job with affected occupants.

6. SU failed to assign clear roles and responsibilities for executing the activities to de-energize and lock out the 12.47 kV switchgear in the B626SS and B522SS. Specifically, HVE-1 and HVE-2 were both assigned as Lead Authorized Electrical Workers (LAEWs) for the *EWP F&O EPD, Sub B522-B626 PM December 2022*. HVE-2 was assigned the LAEW for the *Complex Lockout Permit for the B626 PM Generator Install*, and HVE-1 was assigned the LAEW for the *Complex Lockout Permit to de-energize B522 and B626 and downstream loads to perform PM*. This split responsibility introduced uncertainty regarding who had overall responsibility for the EWP, HVSOs, and EIPs/complex lockout permits; in fact, over the course of the day, the LAEW role for the *Complex Lockout Permit for the B626 PM Generator Install* shifted from HVE-2 to HVE-1. Further, the practice of assigning multiple LAEWs does not meet the NFPA 70E-2021 requirement of a person in charge being accountable for safe execution of a complex LOTO.
7. SU failed to document a shock risk assessment for tasks involving a shock hazard. Specifically, the EWP did not identify limited approach boundaries or restricted approach boundaries. Further, the EWP has a column for listing task-specific hazards that is stated to “include shock hazard information from the hazard label affixed to the equipment or from the electrical analysis engineer.” Instead of providing this information, SU only identified these hazards as “electric shock.” Similar EWPs reviewed by the investigation team reflect the same lack of specificity.
8. SU failed to document an arc flash risk assessment for tasks involving an arc flash hazard. Specifically, the EWP did not identify arc flash boundaries. Further, the EWP has a column for listing task-specific hazards that is stated to “include arc flash hazard information from the hazard label affixed to the equipment or from the electrical analysis engineer.” Instead of providing this information, SU only identified these hazards as “arc flash.” Similar EWPs reviewed by the investigation team reflect the same lack of specificity.
9. SU failed to document the required PPE for either a shock hazard or an arc flash hazard on a task basis. Specifically, the EWP has a column for listing task-specific controls that is stated to “include electrical safety PPE based on the electrical hazard information.” Instead of providing this information, SU only identified these controls as “wear proper PPE,” “wear PPE required for substations,” or “wear proper PPE required for arc flash category.” Similar EWPs reviewed by the investigation team reflect the same lack of specificity, essentially assigning responsibility to the worker to determine the hazard and select the required PPE.
10. SU failed to implement methods to eliminate the hazards associated with the electrical work activities in accordance with the hierarchy of controls set out in 10 C.F.R. § 851.22, subsection (b). Specifically, SU failed to adequately plan isolation of the B626SS so that activities could be performed in a de-energized state. In the previous five-year PM cycle, the B626SS switchgear was fully de-energized. Due to an insufficient number of available

workers, environmental conditions, and time constraints related to outage of critical equipment, planners developed an isolation plan that staggered the de-energization of BRKR 75 in the B16MSS to later in the day, leaving the B626SS partially energized.

11. SU failed to conduct an adequate tailgate briefing for the employees involved in the activities to de-energize and lock out the 12.47 kV switchgear in the B626SS and B522SS. Specifically, the tailgate briefing was informal and did not cover the hazards associated with the job, the work procedures involved, special precautions, energy source controls, and PPE requirements. Additionally, SU did not document the pre-job briefing as required.

Collectively, these noncompliances constitute a Severity Level I violation.

C. Electrical Safety

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: ...electrical safety....” 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.’” Per SU’s approved variance to Part 851, SU incorporated the electrical safety functional area requirement for contractors to implement a comprehensive electrical safety program appropriate for the activities at their site, into the SLAC *IIPP*, as there was no comparable Title 8 C.C.R. requirement.

Title 8 C.C.R. § 2940, *General Provisions*, subsection (d), *Observers*, states that “[d]uring the time work is being done on any exposed conductors or exposed parts of equipment connected to high-voltage systems, a qualified electrical worker...shall be in close proximity at each work location to: (1) act primarily as an observer for the purpose of preventing an accident, and (2) render immediate assistance in the event of an accident.”

NFPA 70E-2021, section 110.6(A)(1)(f), *Electrical Safety Training*, states that “[t]he employer shall determine through regular supervision or through inspections on at least an annual basis that each employee is complying with the safety-related work practices required by this standard.”

NFPA 70E-2021, section 120.4(B)(6), *Testing*, states that “[t]he procedure shall establish the following: (1) [t]est instrument to be used, the required PPE, and the person who will use it to verify proper operation of the test instrument on a known voltage source before and after use, (2) [r]equirement to define the boundary of the electrically safe work condition, (3) [r]equirement to test before touching every exposed conductor or circuit part(s) within the defined boundary of the work area, (4) [r]equirement to retest for absence of voltage when circuit conditions change or when the job location has been left unattended....”

NFPA 70E-2021, section 130.5(G), *Incident Energy Analysis Method*, states that “[t]he incident energy analysis shall also be reviewed for accuracy at intervals not to exceed 5

years.” Section 130.5(H), *Equipment Labeling*, states that “[t]he data shall be reviewed for accuracy at intervals not to exceed 5 years.”

NFPA 70E-2021, section 130.7(F), *Look-Alike Equipment*, states that “[w]here work performed on equipment that is de-energized and placed in an electrically safe condition exists in a work area with other energized equipment that is similar in size, shape, and construction, one of the alerting methods in [section] 130.7(E)(1), (2), or (3) shall be employed to prevent the employee from entering look-alike equipment.”

SLAC’s *ESH Manual*, chapter 8, *Electrical Safety*, revision 23.5, July 5, 2022, section 10.3.2, *General Requirements*, states that “[t]he arc flash boundary for a particular situation must be determined by an analysis of the available fault currents and circuit interrupter clearing times.... To aid workers, the results of this analysis [arc flash hazard boundary] must be posted on the electrical equipment. To prevent injury from shock or burn while working within the shock or arc flash approach boundaries, the following precautions must be taken:...determine the shock protection and arc flash protection boundaries for the task.... When placing equipment in the electrically safe condition the following steps must be performed, in the order specified. Perform each step in its entirety before moving on to the next step. a. Perform energy isolation, b. [a]pply LOTO lock and tag, c. [p]erform zero energy checks, including zero voltage verification, when required, d. [a]pply personal protective grounds (medium- and high-voltage equipment only).... Re-verify that equipment is de-energized each time the equipment has been left unattended.”

SLAC’s *ESH Manual*, chapter 51, *Control of Hazardous Energy*, revision 2510, July 5, 2022, section 2.6, *Supervisor/Line Management*, states that the supervisor/line management “[e]nsures that CoHE program requirements are implemented for work activities in his or her organization and facilities.”

SLAC’s *ESH Manual*, chapter 51, *Control of Hazardous Energy | General Requirements*, revision 2300, June 18, 2021, section 2.4.4.1, *Energy Isolation Plan (EIP) Development*, states that “[e]nergy isolation steps must be implemented in the order stated on the EIP unless alternate sequencing is specifically addressed in the plan.” Section 2.4.5.1, *Zero Voltage Verification*, states that “[i]n addition to the zero voltage verification, electrical workers should use a proximity tester or other voltage testing device to periodically confirm absence of voltage...including after pauses in work or if the work site has been left unattended.”

SLAC’s *ESH Manual*, chapter 51, *Control of Hazardous Energy | Authorized Worker Certification Procedure*, revision 2467, September 3, 2021, section 1, *Purpose*, states that “[t]he purpose of this procedure is to certify annually that each authorized worker is familiar with the CoHE program, understands his/her responsibilities under the program, and demonstrates proper lockout technique and lockout procedure compliance when performing a lockout.”

SLAC’s *Facilities Operations High Voltage Switching Procedure*, revision 2, December 5, 2013, section 4.5, *Execution*, states that “[a]ll operations must be performed in the order designated on the switching order. It is recognized that during a switching operation,

conditions and circumstances may make it desirable to deviate from the specified order. In such cases a new switching order must be prepared and approved as described above before proceeding. The existing switching order can be annotated if the changes are initiated by the planner, supervisor, workers and system engineer/electrical group leader/department head.”

Contrary to these requirements and as evidenced by the following facts, SU failed to effectively implement its ESP or CoHE program in accordance with the applicable requirements of Part 851, 8 C.C.R. §§ 2940 and 3203, or NFPA 70E.

1. SU failed to ensure through regular supervision or through annual inspections that the HV organization’s authorized workers were complying with safety-related work practices. Specifically, SLAC’s authorized worker certification procedure allows the supervisor to approve the certification, under certain conditions, without any field verification or practical demonstration to determine whether the worker is complying with required safety-related work practices. Consequently, HVE’s deviations from required safety-related work practices were not identified, and this skill-based performance mode went undetected long enough for procedural non-compliance to become the norm. For example:
 - HVEs did not stop electrical work to revisit the work planning process when site conditions required a change or departure from the plan.
 - HVEs did not follow the sequence of steps in the *HV Switching Order for the B626 PM Gen Install* and deviated from the approved sequence of work to expedite connection of generators.
 - HVEs did not stop subcontractor workers from applying individual locks to the group lockbox for BRKR 342 in the B626SS before reaching the required step in the *HV Switching Order for the B626 PM Gen Install*.
 - HVEs did not sign or record the date and time each step was completed in the EWP and the *HV Switching Order for the B626 PM Gen Install*. Additionally, one worker added the initials of the other workers and drew a line down through the steps completed.
 - HVEs did not retest the B626SS switchgear for absence of voltage when they returned to B626SS after their morning break.
 - HVEs did not use a proximity tester or meter to “test before touch” upon opening the rear cubicle for BRKR 342 in the B626SS.

2. SU failed to incorporate the testing requirements of NFPA 70E-2021, section 120.4(B)(6) into the CoHE program. Specifically, the CoHE program did not require the mandatory use of a proximity tester or testing device to periodically confirm absence of energy, leaving this determination to the discretion of the electrical workers. Additionally, the requirement to “define the boundary of the electrically safe work condition” was not included in SLAC’s ZVV process, and the boundary was not defined on the single line drawings that were attached to the EWP. Further, none of the work plan documents identified that the B626SS remained partially energized. Consequently, HVEs crossed over the energy isolation boundary on the day of the event and did not use a proximity tester or testing device to confirm the absence of energy in the BRKR 342 rear cubicle.

3. SU failed to review the incident energy analysis and electrical equipment labeling for accuracy at intervals not exceeding five years. Specifically, BRKR 341, BRKR 347, and BRKR 363 had arc flash labels dated June 24, 2015. The outdated arc flash label on BRKR 363 indicated BRKR 41 in the B16MSS as a source, however, at the time of the event, it was fed from the building 45 substation. Additionally, arc flash hazard labeling for multiple breakers contained inaccurate incident energy information and inaccurate arc flash boundaries. For example, the arc flash labels on BRKR 340 and BRKR 342 (dated December 17, 2021) incorrectly listed an arc flash incident energy of 16.8 calories per square centimeter (cal/cm²) at a 36-inch working distance, with an arc flash boundary of 64 inches. After the event, SLAC's Electrical Power Department determined that the equipment had an arc flash incident energy of 21.88 cal/cm² at a 36-inch working distance, with an arc flash boundary of 59 feet. Consequently, workers were inside the arc flash boundary of BRKR 342 when they performed remote racking from 15-20 feet away and were not wearing the appropriate arc flash PPE.
4. SU failed to assign a qualified electrical worker to act primarily as an observer for the purpose of preventing an accident while work was being done on exposed conductors and failed to define this role in the ESP or CoHE program. Specifically, the HV Supervisor assigned HVE-3 and HVE-4 to act as floaters/helpers to provide ancillary support to HVE-1 and HVE-2 but not to perform work tasks. Therefore, on the day of the event, HVE-3 and HVE-4 were not acting primarily as observers for the purpose of preventing an accident. For example, HVE-3 applied grounds to the back of BRKR 360, and HVE-4 operated a forklift to assist other workers with setting up test equipment by the pump pad outside the B626SS.
5. SU failed to use an alerting method to prevent HVEs from entering energized look-alike equipment. Specifically, BRKR 342 in the B626SS was not marked, flagged, locked, or otherwise delineated as energized. Consequently, HVE-1 was not prevented from opening the BRKR 342 rear cubicle and contacted an energized circuit. Further, other workers were inside the B626SS and within the arc flash boundary without using the required PPE.

Collectively, these noncompliances constitute a Severity Level I violation.

D. Training and Information

Title 8 C.C.R. § 2940, *General Provisions*, subsection (b), *Employer's Responsibility*, states that "[t]he employer shall furnish such safety devices and safeguards as may be necessary to make the employment or place of employment as free from danger to the safety and health of employees as the nature of the employment reasonably permits....(1)...The employer shall require the use of safety devices and safeguards where applicable. (2) The training shall establish employee proficiency in the work practices required by this section and shall introduce the procedures necessary for compliance with these [HV] Orders."

Title 8 C.C.R. § 3203, *IIPP*, subsection (a)(2), states that employers must "include a system for ensuring that employees comply with safe and healthy work practices. Substantial compliance with this provision includes...training and retraining programs."

Title 8 C.C.R. § 3340, *Accident Prevention Signs*, subsection (c)(1)(A), states that “[d]anger signs shall be used only where an immediate hazard exists.” Subsection (c)(2)(A) states that “[w]arning signs shall be used to indicate a potentially hazardous situation, which, if not avoided, could result in death or serious injury.” Subsection (c)(4), *General safety signs*, states that “[g]eneral safety signs shall be used where there is a need for general instructions and suggestions relative to safety measures.” Subsection (e), *Sign wordings*, states “[t]he wording of any sign shall be easily read....”

NFPA 70E-2021, section 105.3(A), *Employer Responsibility*, states that “[t]he employer shall have the following responsibilities...(2) [p]rovide employees with training in the employer’s safety-related work practices and procedures.”

NFPA 70E-2021, section 110.6(A)(1)(c), *Qualified Person*, states that “[s]uch persons permitted to work within the limited approach boundary shall at a minimum, be additionally trained in all of the following:... (4) [d]ecision-making process necessary to be able to do the following:... d. [s]elect the appropriate risk control methods from the hierarchy of controls identified in [section] 110.5(H)(3)...” Section 110.6(C)(1), *Contact Release*, states that “[e]mployees exposed to shock hazards and those responsible for the safe release of victims from contact with energized electrical conductors or circuit parts shall be trained in methods of safe release. Refresher training shall occur annually.” Section 110.6(C)(2), *First Aid, Emergency Response, and Resuscitation*, states that “(a) [e]mployees responsible for responding to medical emergencies shall be trained in first aid and emergency procedures.” Section 110.6(C)(3), *Training Verification*, states that “[e]mployers shall verify at least annually that employee training required by [section] 110.6(C) is current.”

SLAC’s *IIPP*, revision 14, October 13, 2022, section 10, *Training*, states that “[t]raining is provided to new workers before or at the time of initial assignment, periodic training as often as required or necessary.... This training includes information regarding job hazards, possible health effects, and required work practices and procedures.”

SLAC’s *ESH Manual*, chapter 2, *Work Planning and Control*, revision 2331, May 10, 2021, section 2.3, *Supervisor*, states that the supervisor “[a]uthorizes work by ensuring... [p]ersons assigned to perform work... are properly trained before authorizing them to perform work....”

SLAC’s *ESH Manual*, chapter 8, *Electrical Safety*, revision 23.5, July 5, 2022, section 5.1, *Core Courses*, states that “[c]ore courses are courses formally required by regulations or SLAC policies:... ESH Course 205PRA, *CPR/AED Practical Training for Qualified Electrical Workers*,... ESH Course 274, *Electrical Safety–Low/High Voltage Training*,....” Section 10.2, *Emergency Preparedness*, states that “[a]ll personnel who work on exposed electrical circuitry of greater than or equal to 50 volts (AC or DC) must be trained in emergency response procedures, including CPR.”

SLAC’s *Supervisor Guide, Training at SLAC*, section *Understanding Training Requirements*, item *Activity Restrictions*, states that “[n]umerous laws, regulations, and SLAC policies mandate that training is completed prior to employees performing certain tasks. For courses

with a refresher requirement, training must remain current, or associated tasks may no longer be performed.”

Contrary to these requirements and as evidenced by the following facts, SU failed to comply with 8 C.C.R. §§ 2940, 3203, and 3340; NFPA 70E-2021; and the IIPP for the workplace in relation to training and information requirements.

1. SU failed to provide initial or annual refresher training or information to workers exposed to shock hazards on methods of safe release of victims from contact with energized conductors or circuit parts. Specifically, neither SLAC’s ESH Manual, chapter 8, *Electrical Safety*, nor the required ESH courses contain an emergency response section that includes methods of safe contact release. Consequently, a worker was in danger of becoming a second victim when they grabbed and pulled on the raincoat of their co-worker, who was in contact with an energized circuit. Additionally, SU did not stage emergency response equipment in B626SS to comply with safe contact release requirements, such as an insulated rescue hook that could safely release a victim from an energized conductor or circuit, even though the circuit breaker to de-energize BRKR 342 was in a different building.
2. SU failed to provide training or information to those working on exposed circuitry of greater than or equal to 50 volts (AC or DC) on the expected emergency response procedures to make an accident scene safe after an electrical shock event. Specifically, neither SLAC’s ESH Manual, chapter 8, *Electrical Safety*, nor the required ESH courses include an emergency response section describing actions for making a scene safe after an electrical shock event. Consequently, HVEs at B626SS admitted emergency responders before ensuring that the circuit was open/de-energized. In fact, the shock event did not trip BRKR 75, and the door to the energized cubicle of BRKR 342 was unlatched, making the scene unsafe.
3. SU failed to provide training to work planners and qualified persons on how to select the appropriate risk control methods from the hierarchy of controls identified in NFPA 70E-2021, section 110.5(H).
4. SU failed to restrict the work activities of qualified electrical workers with expired core training. Specifically, HVE-1 was overdue for Course 205PRA, *CPR/AED Practical Training for Qualified Electrical Workers*, by 11 months, and HVE-3 was overdue for Course 274, *Electrical Safety–Low/High Voltage Training*, by 5 months. Even so, HVE-1 and HVE-3 were allowed to perform qualified electrical worker tasks.
5. SU failed to post danger signs or replace faded illegible danger signs on ESS entry doors to signal that an immediate HV electrical hazard existed within the building. For example, the B626SS street-side access door had an illegible danger sign posted, and the back access door had no danger sign posted. The B522SS had no danger signs posted on either access door. Furthermore, the minimum PPE requirement signs posted at the B626SS were illegible, and SU posted arc flash hazard signs with different “signaling” words. For instance, the B626SS street-side access door is posted with a “warning” sign

for an arc flash hazard, while switchgear inside B626SS is posted with a “danger” sign for an arc flash hazard.

Collectively, these noncompliances constitute a Severity Level I violation.

E. Recordkeeping and Reporting

Title 10 C.F.R. § 851.26, *Recordkeeping and reporting*, subsection (b), *Reporting and investigation*, states “[c]ontractors must...(2)[a]nalyze related data for trends and lessons learned.” Per SU’s approved variance to Part 851, SU incorporated this requirement, into the SLAC *IIPP*, as there was no comparable Title 8 C.C.R. requirement.

SLAC’s *IIPP*, revision 14, October 13, 2022, section 7.7, *Reviewing Safety and Health Experience*, states that “...data and information regarding workplace accidents, injuries, and illnesses is collected...and analyzed to identify worker protection problem areas. Analysis techniques may include:...[l]ooking at indicative signs and/or symptoms...[m]ethodologies to analyze data and information to identify and trend accidents, injuries, and illnesses by type and source....”

Contrary to these requirements and as evidenced by the following facts, SU failed to comply with applicable requirements of Part 851 and the *IIPP* for the workplace in relation to reviewing and analyzing workplace accidents, injuries, and illnesses.

SU failed to analyze data from multiple incidents for trends and lessons learned until approximately two months before the high-voltage electrical shock event. Prior to the common cause analysis, SU did analyze precursor events individually and developed corrective actions, but SU failed to analyze these events collectively to identify trends. From October 2021 to 2022, SLAC experienced a sharp increase in the number (18) and severity of reportable operational incidents as compared with the three reported incidents for the previous two full fiscal years. SU conducted a common cause analysis of these 18 incidents and another four non-reportable incidents. The analysis showed that 12 of the 22 incidents involved gaps in the CoHE. The analysis also showed the presence of numerous common error precursors in many incidents and the lack of management awareness of these precursors.

This noncompliance constitutes a Severity Level II violation.

II. REPLY

Pursuant to 10 C.F.R. § 851.42(b)(4), SU 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 SU chooses not to contest the violations set forth in this PNOV, then the reply should clearly state that SU waives the right to contest any aspect of this PNOV. In such case, this PNOV will constitute a final order upon the filing of the reply.

If SU disagrees with any aspect of this PNOV, 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; and (2) 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 SU 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), SU 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. A copy of the reply should also be sent to the Manager of DOE's SSO.

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.



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

Washington, D.C.
This 9th day of January 2024