



Department of Energy
Under Secretary for Nuclear Security
Administrator, National Nuclear Security Administration
Washington, DC 20585



September 25, 2014

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dr. Paul Hommert
President and Laboratories Director
Sandia Corporation
Sandia National Laboratories
1515 Eubank SE, MS 0101
Albuquerque, New Mexico 87123

WEA-2014-04

Dear Dr. Hommert:

This letter refers to the Department of Energy's (DOE) investigation into the facts and circumstances related to the lithium fire and explosion at the Plasma Materials Test Facility in Technical Area III, building 6530. The event occurred on August 26, 2011, during final setup for a liquid lithium/helium experiment later that day. The results of the investigation were provided to Sandia Corporation (Sandia) in an investigation report dated April 23, 2013. An enforcement conference was held on July 11, 2013, with you and members of your staff to discuss the report's findings and Sandia's response. A summary of the conference and list of attendees is enclosed.

The National Nuclear Security Administration (NNSA) considers the building 6530 lithium fire and explosion to be of high safety significance. The event was a near miss to serious injury or fatality for at least the two workers who were in room 2 at the time of the explosion. The EB1200 electron beam port was the primary release point for the explosive force, which knocked one worker to the floor. The second worker in the immediate area narrowly averted serious injury or death by moving away from the port on the test cell immediately before the explosion, out of the path of the debris. Three of the four workers in building 6530 reported tinnitus as a result of the explosion.

The explosion caused damage to the EB1200, the test cell, and to building 6530 itself in that it lifted the roof and separated or otherwise damaged the exterior wall in two places. The explosion also displaced building ventilation system ductwork at multiple points and bent one exterior metal door located about 30 feet from the test cell. In addition to its safety significance, the event exhibited many of the same violations and underlying causal factors that were previously identified by the DOE and NNSA for the premature ignition of a rocket motor at the Sandia Technical Area III sled track in 2008. The sled track accident seriously injured one worker.



Based on an evaluation of the evidence in this matter, as documented in the April 23, 2013, investigation report, NNSA has concluded that violations of 10 C.F.R. Part 851, *Worker Safety and Health Program*, by Sandia have occurred. Accordingly, NNSA is issuing the enclosed Preliminary Notice of Violation (PNOV), which cites four Severity Level I violations and three Severity Level II violations with a total proposed base civil penalty of \$412,500. NNSA recognizes that more than three years have elapsed since the event. NNSA also recognizes Sandia's causal analyses and associated corrective actions for this technically complicated event. NNSA is particularly encouraged by the significant and positive steps being taken in recent months to improve Sandia's safety culture, and the degree of personal involvement by senior Sandia leadership. Given these considerations, NNSA is waiving the civil penalty for this incident.

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), you relinquish any right to appeal any matter in the PNOV, and the PNOV will constitute a final order.

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

Sincerely,



Frank G. Klotz

Enclosures:

Preliminary Notice of Violation (WEA-2014-04)
Enforcement Conference Summary and List of Attendees

cc: Geoffrey Beausoleil, NA-SN
Gabriel King, SNL
Richard Reback, DNFSB

Preliminary Notice of Violation

Sandia Corporation
Sandia National Laboratories

WEA-2014-04

A U.S. Department of Energy (DOE) investigation into the facts and circumstances associated with the lithium fire and explosion that occurred on August 26, 2011, at the Plasma Materials Test Facility (PMTF), Technical Area III, building 6530, Sandia National Laboratories (SNL) in Albuquerque, New Mexico, identified multiple violations of DOE worker safety and health requirements by Sandia Corporation (Sandia). The violations included deficiencies in (1) hazard identification and assessment; (2) hazard prevention and abatement; (3) safety and health standards; (4) training and information; (5) management responsibilities; (6) pressure safety; and (7) occupational medicine.

The National Nuclear Security Administration has grouped and categorized the violations as four Severity Level I violations and three Severity Level II violations. As explained in 10 C.F.R. Part 851, Appendix B, *General Statement of Enforcement Policy*, § VI(b)(1), “[a] Severity Level I violation is a serious violation. A serious violation shall be deemed to exist in a place of employment if there is a potential that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment.” Section VI (b)(2) states, “[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.”

As required by 10 C.F.R. § 851.42(b) and consistent with Part 851, Appendix B, the violations are listed below. If this Preliminary Notice of Violation (PNOV) becomes a final order, then Sandia will be required to post a copy of this PNOV in accordance with 10 C.F.R. § 851.42(e).

I. VIOLATIONS

A. Hazard Identification and Assessment

Title 10 C.F.R. § 851.10, *General requirements*, 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*, 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 worker 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; . . . (4) [a]nalyze designs of new facilities and modifications to existing facilities and equipment for potential workplace hazards; (5) [e]valuate operations, procedures, and facilities to identify workplace hazards; (6) [p]erform routine job activity-level hazard analyses; . . . [and] (8) [c]onsider interactions between workplace hazards and other hazards such as radiological hazards.” 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].”

Contrary to these requirements, Sandia failed to establish and implement a work planning and control process that identified and assessed workplace hazards consistent with the applicable requirements and procedures invoked by the approved SNL 10 C.F.R. Part 851 worker safety and health program as documented in the SNL *10 CFR 851 Worker Safety and Health Program Plan (WSHPP)*, PG470246, dated May 2011, and implementing procedures. Specific examples include the following:

1. Sandia did not accurately characterize the potential hazards of the lithium-helium heat exchanger (Li-He HX) experiment in accordance with MN471017, *Safety Basis Manual*, and MN471018, *Work Planning and Control Manual*. Sandia did not ensure that the primary hazard screening (PHS), SNL7A00716-014, *Plasma Materials Test Facility*, which was the project-level hazard assessment for the Li-He HX experiment in the electron beam gun (EB1200) test chamber, accounted for the hazards that contributed to a catastrophic failure of the system.

2. Sandia did not review or update the PHS to reassess potential hazards as work on the Li-He HX experiment was initiated and progressed.
3. Sandia did not factor multiple “operational firsts” and other system changes into the safety analysis for the Li-He HX experiment.
4. Sandia did not adequately consider the potential interactions among workplace hazards and the multiple circumstances that led to the lithium fire and explosion.
5. Sandia did not fully assess the hazard of the EB1200 water/propylene glycol coolant, which provided a higher reactive potential with molten lithium than other options used in past tests, such as the Shell Diala® oil used to cool the EB60 electron beam test unit.
6. Sandia did not adequately assess anomalies that occurred during the Li-He HX experiment setup to determine the potential safety and health impacts.
7. Sandia did not comprehensively evaluate multiple information sources related to PMTF, produced by different Sandia organizations over a period of time, as an integrated whole in order to accurately assess the potential hazards of the worksite.
8. Sandia did not fully assess the potential hazards to personnel re-entering building 6530 immediately following the lithium fire and explosion.

Collectively, these noncompliances constitute a Severity Level I violation.
Base Civil Penalty – \$75,000.00

B. Hazard Prevention and Abatement

Title 10 C.F.R. § 851.22, *Hazard prevention and abatement*, 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.” This paragraph also requires that “(1) [f]or hazards identified either in the facility design or during the development of procedures, controls must be incorporated in the appropriate facility design or procedure” and “(2) [f]or existing hazards identified in the workplace, contractors must: . . . (iii) [p]rotect workers from dangerous safety and health conditions.”

Contrary to these requirements, Sandia failed to implement controls and safety procedures consistent with the applicable requirements invoked by PG470246. For example, Sandia did not protect workers from dangerous safety and health conditions during setup and operation of the Liquid Metal Integrated Test System (LIMITS) for the Li-He HX experiment by instituting controls

including, but not limited to, appropriate safety procedures for system operation during setup/startup phases, and appropriately addressing anomalies in the experiment setup as they arose. Additionally, Sandia did not provide personal protective equipment, such as hardhats and coveralls, to personnel re-entering building 6530 immediately following the lithium fire and explosion.

This noncompliance constitutes a Severity Level I violation.
Base Civil Penalty – \$75,000.00

C. Safety and Health Standards

Title 10 C.F.R. § 851.23, *Safety and Health Standards*, paragraph (a), states that “[c]ontractors must comply with the following safety and health standards that are applicable to the hazards at their workplaces: . . . (3) Title 29 C.F.R. Part 1910, *Occupational Safety and Health Standards* . . . (9) American Conference of Governmental Industrial Hygienists (ACGIH), *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*, (2005) . . . when the ACGIH Threshold Limit Values (TLV) are lower (more protective) than permissible exposure limits in 29 C.F.R. Part 1910.” In accordance with paragraph (b) of the same section, “(b) [n]othing in this part must be construed as relieving a contractor from complying with any additional specific safety and health requirements that it determines to be necessary to protect the safety and health of workers.”

Title 10 C.F.R. Part 851, Appendix A, Section 6, *Industrial Hygiene*, states that: “[c]ontractors must implement a comprehensive industrial hygiene program that includes at least the following elements: (a) [i]nitial or baseline surveys and periodic resurveys and/or exposure monitoring as appropriate of all work areas or operations to identify and evaluate potential worker health risks; (b) [c]oordination with planning and design personnel to anticipate and control health hazards that proposed facilities and operations would introduce; . . . [and] (d) [p]olicies and procedures to mitigate the risk from identified and potential occupational carcinogens.”

Title 29 C.F.R. § 1910.95, *Occupational Noise Exposure*, paragraph (b)(1), states that “[w]hen employees are subjected to sound exceeding those listed in Table G-16, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table G-16, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table.”

Title 29 C.F.R. § 1910.1000, *Air Contaminants*, paragraph (a)(1), states that “[a]n employee’s exposure to any substance in Table Z-1, the exposure limit of which is preceded by a “C”, shall at no time exceed the exposure limit given for that substance.” In accordance with paragraph (a)(2) of the same section, “[a]n employee’s exposure to any substance in Table Z-1, the

exposure limit of which is not preceded by a “C”, shall not exceed the 8-hour Time Weighted Average given for that substance in any 8-hour work shift of a 40-hour work week.”

Title 29 C.F.R. § 1910.1026, *Chromium (VI)*, paragraph (c) states that “[t]he employer shall ensure that no employee is exposed to an airborne concentration of chromium (VI) in excess of 5 micrograms per cubic meter of air ($5 \mu\text{gm}/\text{m}^3$), calculated as an 8-hour time-weighted average (TWA).”

Paragraph (d)(1) of the same section states: “[e]ach employer who has a workplace or work operation covered by this section shall determine the 8-hour TWA exposure for each employee exposed to chromium (VI). This determination shall be made in accordance with either paragraph (d)(2) or paragraph (d)(3) of this section.”

Contrary to these requirements, Sandia failed to conduct assessments of workplace conditions at building 6530 adequate to determine whether worker exposures to the hazardous agents were in compliance with quantitatively delineated safety and health regulations, standards, and specific requirements.

1. Sandia did not determine the necessity of, or assess compliance with, additional specific safety and health requirements to control recognized hazards during cleaning of lithium residue from the LIMITS components, such as, but not limited to, the 2011 American Industrial Hygiene Association Workplace Environmental Exposure Level for lithium hydroxide of $1.0 \text{ mg}/\text{m}^3$ (ceiling value).
2. Sandia did not conduct assessments of worker airborne exposures to chromium (VI), oxides of nitrogen, ozone, or metal fumes during plasma arc cutting on copper and steel metals at building 6530 adequate to determine compliance with the applicable quantitatively delineated safety and health regulations, standards, and requirements.
3. Sandia did not assess worker exposure to noise levels during plasma arc cutting on copper and steel metals at building 6530 adequate to determine compliance with 29 C.F.R. § 1910.95, Table G-16, and did not determine whether to use feasible administrative or engineering controls and/or to provide and use personal protective equipment.

Collectively, these noncompliances constitute a Severity Level I violation.
Base Civil Penalty – \$75,000.00

D. Training and Information

Title 10 C.F.R. § 851.25, *Training and information*, 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 (b) states that “[t]he contractor must provide: . . . (3) [a]dditional training when safety and health information or a change in workplace conditions indicates that a new or increased hazard exists.”

Contrary to these requirements, Sandia failed to institute training consistent with the applicable requirements invoked by the approved SNL worker safety and health program (PG470246) and implementing procedures. Sandia did not develop or conduct training specific to the first-time evolution combining the EB1200 and LIMITS, which resulted in new or increased hazards and changes in workplace conditions. The lithium loop used in the Li-He HX experiment was different from previous experimental configurations, and the system piping implemented new types of supply and return valves. The Li-He HX experiment was the first time a lithium preheater had been used in an experimental setup. Together, these circumstances represented workplace conditions, changed from prior applications, for which Sandia did not provide specific training.

This noncompliance constitutes a Severity Level II violation.
Base Civil Penalty – \$37,500.00

E. Management Responsibilities

Title 10 C.F.R. § 851.20, *Management Responsibilities and Worker Rights and Responsibilities*, paragraph (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.”

Contrary to these requirements, Sandia failed to satisfy management responsibilities for ensuring a safe and healthful workplace consistent with the applicable requirements invoked by the approved SNL worker safety and health program (PG470246) and implementing procedures. Specific examples include the following:

1. Sandia management did not assess PMTF personnel performance and hold them accountable to worker safety and health requirements to ensure implementation of PG470246 and supporting documents in order to accurately identify and abate the hazards of the Li-He HX experiment as it was initiated and moved to completion.
2. Sandia management did not adequately oversee building 6530 conditions to ensure the performance of personnel who were assuming additional duties due to the pending retirement of the existing lab manager. The dual

circumstances of personnel changes, concurrent with the final set-up phase of the uniquely configured Li-He HX experiment, offered the potential for uncontrolled circumstances impacting safety and health in the workplace. Sandia management did not effectively monitor the work evolution under changing conditions; and did not adequately evaluate building 6530 personnel performance and hold them accountable for performing their safety and health program responsibilities.

Collectively, these noncompliances constitute a Severity Level II violation.
Base Civil Penalty – \$37,500.00

F. Pressure Safety

Title 10 C.F.R. Part 851, Appendix A, Section 4, *Pressure Safety*, paragraph (a) states that: “[c]ontractors must establish safety policies and procedures to ensure that pressure systems are designed, fabricated, tested, inspected, maintained, repaired, and operated by trained and qualified personnel in accordance with applicable and sound engineering principles.”

Title 10 C.F.R. Part 851, Appendix A, Section 4, *Pressure Safety*, paragraph (b) states that: “[c]ontractors must ensure that all pressure vessels, boilers, air receivers, and supporting piping systems conform to: (1) [t]he applicable American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (2004); sections I through section XII including applicable Code Cases (incorporated by reference, see § 851.27)[;] (2) [t]he applicable ASME B31 (Code for Pressure Piping) standards as indicated below; and or as indicated in paragraph (b)(3) of this section: . . . (iii) B31.3-2002-Process Piping (incorporated by reference, see § 851.27).”

Title 10 C.F.R. Part 851, Appendix A, Section 4, *Pressure Safety*, paragraph (c) states that: “[w]hen national consensus codes are not applicable (because of pressure range, vessel geometry, use of special materials, etc.), contractors must implement measures to provide equivalent protection and ensure a level of safety greater than or equal to the level of protection afforded by the ASME or applicable state or local code. Measures must include the following: (1) [d]esign drawings, sketches, and calculations must be reviewed and approved by a qualified independent design professional (i.e., professional engineer). Documented organizational peer review is acceptable; (2) [q]ualified personnel must be used to perform examinations and inspections of materials, in-process fabrications, nondestructive tests, and acceptance tests; (3) [d]ocumentation, traceability, and accountability must be maintained for each pressure vessel or system, including descriptions of design, pressure conditions, testing, inspection, operation, repair, and maintenance.”

Contrary to these requirements, Sandia failed to administer an effective pressure safety program consistent with the applicable requirements invoked

by the approved SNL worker safety and health program (PG470246) and implementing procedures. Specific examples include the following:

1. Sandia did not adequately document the design and technical review of fabrication drawings for the lithium preheater that failed on August 26, 2011. Sandia did not include on the fabrication drawings such details as the required weld types and configuration, or the calculations to justify material thicknesses, selection, and configurations.
2. Sandia did not conduct a substantive inspection or test of the lithium preheaters that addressed construction, materials, or suitability for use in the Li-He HX experiment when the preheaters were received and before they were placed into service.
3. Sandia did not ensure the completeness of the *Pressure Safety Data Package 1: Vacuum System and EB-1200 D-Chamber* in that stress calculations were performed only for stresses on the rear access door that would be due to pressure resulting from a possible failure of the helium loop system. Sandia did not develop stress calculations for test cell components, such as the EB1200 gun mounts and vacuum welds, to identify failure modes involving other causes.
4. Sandia did not update *Pressure Safety Data Package 1: Vacuum System and EB-1200 D-Chamber* following system modifications. Sandia did not include in the data package provisions for re-evaluation, re-testing, maintenance requirements, service life calculations, or other documentation to assess the safety of the equipment as the EB1200 and other components were integrated with the test cell.
5. Sandia did not prepare a pressure vessel data package for the LIMITS in accordance with the *Sandia Pressure Safety Manual*, which was serviced by: helium up to 580 psig according to Electron Beam 1200 Work Package 1104-001, *Test Procedure for Ultramet LiHe Heat Exchanger Testing*, Experiment No. 11-02, June 2011, revision 3; and argon up to 30 psig according to Operating Procedure FT007, *Handling of Liquid Metals in PMTF Location (in storage): 6530 Room 1*, dated June 6, 2010.
6. Sandia did not effectively manage all documents related to the Li-He HX experiment. The Sandia Division 1658 personnel involved in the study did not sign the test procedure for the Ultramet LiHe heat exchanger as required by Sandia procedure ESH100.2.Gen.3, *Develop and Use Technical Work Documents*. The PMTF Department Manager; Pressure Safety Advisor; Laboratory Manager; Safety and Fire Protection representative; and Environment Safety and Health Coordinator did not sign Operating Procedure FT007, *Handling of Liquid Metal in PMTF*, as required by ESH100.2.Gen.3.

7. Sandia did not ensure the accuracy of documents related to the Li-He HX experiment. Operating Procedure FT007, *Handling of Liquid Metal in PMTF*, which Sandia provided as applicable to the Li-He HX experiment, was inaccurate in that it referred to the EB60, whereas the EB1200 was the electron beam device used for the Li-He HX experiment. Additionally, the document identified Shell Diala® oil as the cooling fluid for the EB1200, but a water/propylene glycol coolant was actually used.

Collectively, these noncompliances constitute a Severity Level I violation.
Base Civil Penalty – \$75,000.00

G. Occupational Medicine

Title 10 C.F.R. Part 851, Appendix A, Section 8, *Occupational Medicine*, paragraph (a) states that: “[c]ontractors must establish and provide comprehensive medical services to workers employed at a covered work place who: (1) [w]ork on a DOE site for more than 30 days in a 12-month period; or (2) [a]re enrolled for any length of time in a medical or exposure monitoring program required by this rule and/or any other applicable Federal, State, or local regulation or other obligation.” In accordance with paragraph (h) of the same section, “[t]he occupational medicine provider must monitor ill and injured workers to facilitate their rehabilitation and safe return to work and to minimize lost time and its associated costs.”

Title 29 C.F.R. § 1910.95, *Occupational Noise Exposure*, paragraph (g) states that: “(1) [t]he employer shall establish and maintain an audiometric testing program as provided in this paragraph by making audiometric testing available to all employees whose exposures equal or exceed an 8-hour time-weighted average of 85 decibels.”

Contrary to these requirements, Sandia failed to administer an effective occupational medicine program consistent with the applicable requirements invoked by the approved SNL worker safety and health program (PG470246) and implementing procedures. Specific examples include the following:

1. Sandia did not provide timely and comprehensive medical testing and evaluation by a physician for physical injury, including hearing loss, for either of the two workers who were in the immediate area at the time of the explosion, or for the two workers who were in adjacent areas of building 6530. Three of the four affected workers finally self-reported to the Sandia onsite medical clinic more than three hours after the explosion and after at least one of the workers directly impacted by the explosion had left and returned to the site.

2. Sandia did not conduct audiometric testing for all workers impacted by the building 6530 explosion to determine the existence or extent of aural injury, which is a potential outcome from being near an explosion. Sandia failed to offer an audiogram to at least one employee and delayed providing an audiogram to another until three days after the explosion.

Collectively, these noncompliances constitute a Severity Level II violation.
Base Civil Penalty – \$37,500.00

II. ADJUSTMENT

Based on an evaluation of the evidence in this matter, NNSA has concluded that violations of 10 C.F.R. Part 851, *Worker Safety and Health Program*, by Sandia have occurred. Accordingly, NNSA is issuing this Preliminary Notice of Violation (PNOV), which cites four Severity Level I violations and three Severity Level II violations with a total proposed base civil penalty of \$412,500. NNSA recognizes that three years have elapsed since the event. NNSA also recognizes Sandia's causal analyses and associated corrective actions for this technically complicated event. NNSA is particularly encouraged by the significant and positive steps being taken in recent months to improve Sandia's safety culture, and the degree of personal involvement by senior Sandia leadership. Given these considerations, NNSA is waiving the civil penalty for this incident.

III. REPLY

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

If Sandia 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.

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

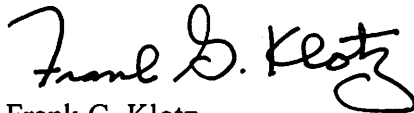
Director, Office of Enforcement
Attention: Office of the Docketing Clerk
U.S. Department of Energy
19901 Germantown Road
Germantown, MD 20874-1290

A copy of the reply should also be sent to my office and the Manager of the Sandia Field Office.

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

IV. 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.



Frank G. Klotz
Under Secretary for Nuclear Security
Administrator, NNSA

Washington, DC

This 25th day of Sep. 2014

**Sandia Corporation
Sandia National Laboratories
Albuquerque, NM
Plasma Materials Test Facility, Building 6530
Lithium Fire and Explosion**

**Enforcement Conference Summary
July 11, 2013**

On July 11, 2013, personnel from the Department of Energy (DOE) Office of Enforcement and Oversight convened an enforcement conference with senior managers from the National Nuclear Security Administration (NNSA), Sandia Field Office (SFO), and Sandia Corporation (Sandia) at the Sandia National Laboratories. The conference was held to discuss potential violations identified in an Office of Enforcement and Oversight investigation report issued on April 23, 2013, as a result of the Plasma Materials Test Facility, building 6530 Lithium Fire and Explosion which occurred on August 26, 2011.

Mr. Steven Simonson, Deputy Director, Office of Enforcement and Oversight, presided over the conference. Following introductions by DOE, NNSA, and Sandia representatives in attendance, Mr. Simonson and Mr. Kevin Dressman, Director, Office of Worker Safety and Health Enforcement, provided an overview of the conference purpose and objectives.

Dr. Paul Hommert, President and Laboratories Director, provided the opening comments from Sandia. Ms. Kimberly Sawyer, Deputy Laboratory Director and EVP for Mission Support, discussed factual accuracy of the investigation report. Mr. Keith Matzen, addressed the causes of the noncompliances and the significance thereof, corrective actions and lessons learned. Mr. Duane Dimos discussed the global perspective and the Work Planning and Control Manual revision to incorporate Engineered Safety principles. Mr. Michael Hazen covered continuous learning. Dr. Hommert provided closing comments and indicated that Sandia would provide a copy their power point presentation and factual accuracy review document, both of which were subsequently received by DOE.

Mr. Simonson summarized the enforcement process that will follow the conference. He stated that the Office of Enforcement and Oversight will review the information presented by Sandia during the enforcement conference in coordination with NNSA and the SFO. The conference was adjourned.

**Sandia Corporation
Sandia National Laboratories
Albuquerque, NM
Plasma Materials Test Facility, Building 6530
Lithium Fire and Explosion**

**Enforcement Conference Summary
July 11, 2013**

DOE – Office of Enforcement and Oversight

Kevin Dressman, Director, Office of Worker Safety and Health Enforcement
Steven Simonson, Deputy Director, Office of Enforcement and Oversight
David Zwolak, Industrial Hygienist, Office of Worker Safety and Health Enforcement

National Nuclear Security Administration

Thomas Williams, NA-SH-40, Office of Corporate Management Systems
Dan Field, NA-SH-70, Lead Industrial Hygienist

Sandia Field Office

Geoffrey Beausoleil, Director
Richard Sena, Deputy
John Franchere, Acting EHS Manager
Donald Brady, Enforcement Coordinator
Michele Reynolds, Legal Counsel
Cynthia Wimberly, Legal Counsel

Sandia Corporation

Paul Hommert, President and Laboratories Director
Kimberly Sawyer, Deputy Lab Director and EVP for Mission Support
Michael Hazen, Vice President Division 4000, Infrastructure Operations
Duane Dimos, Vice President of Research and Development
Sidney Gutierrez, Director of Environmental Safety and Health
Keith Matzen, Center Director 1600
Larry Schneider, Pulsed Power Manager
Amy Blumberg, General Law Counsel
Gabriel King, Enforcement Coordinator
Darlene Moore, Environmental Regulatory Compliance Specialist
Tanya Fitzgerald, ES&H and S&S Compliance Analyst
Randolph Castillo, ES&H and S&S Compliance Analyst
Pamela Maestas, Office Administrative Assistant
Nora Campbell-Domme, Manager Technical Operations