

# Department of Energy

Washington, DC 20585

July 16, 2010

## <u>CERTIFIED MAIL</u> <u>RETURN RECEIPT REQUESTED</u>

Mr. Joseph Nemec, President Bechtel Jacobs Company LLC Building K-1225/MS-7294 P.O. Box 4699 East Tennessee Technology Park Oak Ridge, Tennessee 37831-7294

WEA-2010-01

Dear Mr. Nemec:

This letter refers to the U.S. Department of Energy's (DOE) Office of Health, Safety and Security's Office of Enforcement investigation into the facts and circumstances surrounding the March 19, 2009, electrical arc incident in building K-1210 at the East Tennessee Technology Park. The results of the investigation were provided to Bechtel Jacobs Company, LLC (BJC) in an investigation report dated December 2, 2009. An enforcement conference was not held.

Based on an evaluation of the evidence in this matter, DOE has concluded that violations of 10 C.F.R. Part 851, *Worker Safety and Health Program*, by BJC occurred. Accordingly, DOE is issuing the enclosed Preliminary Notice of Violation (PNOV) with three Severity Level I violations and one Severity Level II violation. DOE elected to handle this matter through a fee reduction on January 20, 2010, in the amount of \$1,200,000 pursuant to the Conditional Payment of Fee clause under contract number DE-AC05-98OR22700 between DOE and BJC. Therefore, no civil penalty is proposed for the violations identified in this PNOV in accordance with 10 C.F.R. § 851.5(c).

DOE considers this event as a near miss to an electrocution and, therefore, of high safety significance. Multiple breakdowns in BJC procedures for performing high voltage electrical work contributed to a worker approaching within several inches of equipment energized to 13,800 volts without donning appropriate personal protective equipment. In addition, workers in the area could have suffered severe flash burns from the high energy electrical arc flash that was released. The circumstances surrounding this event were directly attributable to deficiencies in planning, supervising, and controlling the work activity as well as a lack of procedural adherence by the involved BJC workers. The investigation identified multiple violations of electric power distribution regulations promulgated by the Occupational Safety and Health Administration that are invoked as requirements



by 10 C.F.R. Part 851. These requirements, which apply to private sector employers as well as to DOE contractors, prescribe electric power distribution industry standards for identifying, communicating, and controlling electrical hazards. However, BJC relied primarily on workers performing these tasks as skill-of-the-craft activities with limited consideration of regulatory requirements, a perfunctory analysis of electrical hazards, and minimal supervisory oversight.

BJC missed several prior opportunities to rigorously institutionalize corrective actions from prior events that could have prevented the conditions associated with this event. Root causes from events that occurred in 2007 and 2008 included inadequate supervisory oversight of work activities, and instances where BJC workers did not perform a zero energy verification before starting work. These deficiencies, as well as other electrical safety program weaknesses identified by the Oak Ridge Office in its June 2009 electrical safety work practices assessment, are indicative of significant and fundamental breakdowns in electrical safety compliance and program performance.

Notwithstanding these issues, DOE acknowledges BJC's thorough and timely investigation and reporting of this event and other related electrical safety program deficiencies. BJC developed a corrective action plan (CAP) that DOE has determined addresses the violations identified in this PNOV and their contributing causes. The CAP was developed using an innovative approach that is designed to measure the effectiveness of each corrective action in fully addressing the causal factor, and therefore 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 no reply is submitted within 30 days, in accordance with 10 C.F.R. § 851.42(d)(2), this 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, a determination will be made on whether further action is necessary to ensure compliance with worker safety and health requirements. DOE will continue to monitor the completion of corrective actions until these matters are resolved.

Sincerely,

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

Enclosure

cc: Mark Holowczak, Bechtel Jacobs Company, LLC

#### Enclosure

## **Preliminary Notice of Violation**

Bechtel Jacobs Company, LLC East Tennessee Technology Park

WEA-2010-01

As a result of a U.S. Department of Energy (DOE) investigation into the facts and circumstances surrounding the electrical arc event that occurred in building K-1210 at the East Tennessee Technology Park (ETTP) on March 19, 2009, multiple violations of DOE worker safety and health requirements by Bechtel Jacobs Company, LLC (BJC) were identified. The violations involved deficiencies in electrical hazard identification and assessment of existing conditions; electrical hazard verification and control; training and information; and implementation of the BJC electrical safety program.

The violations have been determined to be three Severity Level I violations and one Severity Level II violation. As agreed to by the Acting Director, Office of Enforcement, the Oak Ridge Office administered a fee reduction in the amount of \$1,200,000 pursuant to the Conditional Payment of Fee clause under contract number DE-AC05-98OR22700 between DOE and BJC in accordance with 10 C.F.R. § 851.5(b) as the remedy for these violations. In accordance with 10 C.F.R. 851.42(b), and Part 851, Appendix B, *General Statement of Enforcement Policy*, the violations are listed below. BJC may be required to post a copy of this Preliminary Notice of Violation (PNOV) in accordance with 10 C.F.R. § 851.42(e).

## VIOLATIONS

I. Electrical Hazard Identification and Assessment of Existing Conditions

Title 10 C.F.R. § 851.10, *General requirements*, at subparagraph (a)(2), states that "...the contractor must: [e]nsure that work is performed in accordance with: (i) [a]ll applicable requirements of [Part 851]; and (ii) [w]ith the worker safety and health program for that workplace."

Title 10 C.F.R. § 851.21, *Hazard identification and assessment*, at paragraph (a), states that "[c]ontractors must establish procedures to identify existing and potential workplace hazards and assess the risk of associated workers injury and illness." These procedures "must include methods to: (1) [a]ssess worker exposure to chemical, physical, biological, or safety workplace hazards through appropriate workplace monitoring; . . . (5) [e]valuate operations, procedures, and facilities to identify workplace hazards; [and] (6) [p]erform routine job activity-level hazard analyses." In accordance with subsection (c) of the same section, contractors "must perform

[these activities] initially to obtain baseline information and as often thereafter as necessary to ensure compliance with [the requirements of 10 C.F.R. Part 851, Subpart C]."

Title 10 C.F.R. § 851.23, *Safety and health standards*, at subparagraph (a)(3) requires contractors to comply with 29 C.F.R. Part 1910, *Occupational Safety and Health Standards*. Section 1910.269, *Electric power generation, transmission, and distribution*, at subparagraph (a)(3), *Existing conditions*, states that "[e]xisting conditions related to the safety of the work to be performed shall be determined before work on or near electric lines or equipment is started. Such conditions include, but are not limited to, the nominal voltages of lines and equipment, the maximum switching transient voltages, the presence of hazardous induced voltages, the presence and condition of protective grounds and equipment grounding conductors, the condition of poles, environmental conditions relative to safety, and the locations of circuits and equipment, including power and communication lines and fire protective signaling circuits."

Title 29 C.F.R. §1910.269, at subparagraph (u)(6), item (ii), states that "[t]he job briefing required by paragraph (c) of [section 1910.269] shall cover such additional subjects as the location of energized equipment in or adjacent to the work area and the limits of any deenergized work area."

Contrary to these requirements, BJC failed to identify existing and potential workplace electrical hazards and assess the risk of worker exposure to high voltage electrical energy and subsequent injury or shock. Specific examples are listed below:

- A. BJC did not implement methods to assess worker exposure to workplace hazards and perform routine job activity-level hazard analyses for high voltage work. BJC's Worker Safety and Health Program (BJC/OR-1745/R9, dated May 16, 2007) requires the hazard assessment to be written at the activity/task level and provide a detailed, job-specific hazard assessment that addresses each step of the work process, the hazards involved, and the controls for those hazards. The BJC Work Control Process (BJC-FS-1001, dated November 3, 2008) specifies that the work package shall identify the starting and ending points of the task and the major items to be completed as the task progresses, and provide enough information so that others can understand the material, equipment, and workforce needed to complete the work. The work package for the power distribution system work covered a one-year period and did not provide any details regarding the scope of work and associated hazards for the tasks to be performed on March 19, 2009, at K-1210. Workers were provided a work package that identified the scope as "K-1200 area: Install poles, lines and electrical services to substations" and instruction via a pre-job briefing form to perform the specific tasks at K-1210. Hazards associated with these tasks were included with those applicable to all of the other tasks under the work package, including installing utility poles and electrical cabling, and excavation work. BJC did not provide workers with information concerning the specific hazards applicable to their work.
- B. BJC did not implement the requirements for classifying the K-1210 task as low risk "minor maintenance" in accordance with the instructions for the BJC *Minor Maintenance/Low Risk Work Authorization Form* (BJCF-789, revision 3, dated February 2009). A risk analysis of the work activities is required when selecting this work code (0011) in order to identify and

assess actual and potential workplace hazards. The work package (WP-08-ET20464, dated May 5, 2008) that served as the hazard identification and control mechanism for the task at K-1210 on March 19, 2009, did not identify the conditions and limitations of the work activity, and BJC did not consult subject matter expertise as required by BJC procedure *Hazard Assessment* (BJC-EH-2010, revision 10, dated March 10, 2009).

- C. BJC did not consider work on high voltage equipment as having the potential to cause serious worker injury before it is verified to be deenergized and grounded. BJC categorized work on high voltage electrical equipment as "low risk" based primarily on the assumption that work will be performed on deenergized equipment by qualified electricians on a routine and repetitive basis. However, BJC procedure *Electrical Safety* (BJC-EH-2009, revision 5, dated July 8, 2008), requires workers to consider electrical equipment energized until it is verified as being deenergized, and BJC-EH-2010 defines high risk as "activities that have a high hazard probability or high severity consequence for unmitigated hazards that could result in significant [personal] injury...."
- D. BJC did not determine the electrical configuration of lines and equipment at the job site before beginning work. Workers were not provided with up-to-date as-built drawings at the job site to determine which equipment and lines were part of the existing electrical configuration and the conditions under which work was to be performed. In addition, BJC did not make existing power distribution work permits pertaining to the assigned task available at the job site to inform workers of the configuration of deenergized equipment.

Collectively, these deficiencies constitute a Severity Level I violation. As explained in Part 851, appendix B, section VI(b)(1), "[a] Severity Level I violation is a serious violation. A serious violation shall be deemed to exist in a place of employment if there is a potential that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use, in such place of employment."

II. Electrical Hazard Verification and Control

Title 29 C.F.R. § 1910.269, at paragraph (g), *Personal protective equipment*, requires personal protective equipment (PPE) to meet the requirements of Subpart I of Part 1910. Subpart I at § 1910.132, *General Requirements*, paragraph (d), *Hazard assessment and equipment selection*, item (1)(i) requires the employer to "[s]elect, and have each affected employee use, the types of PPE that will protect the affected employee from the hazards identified in the hazard assessment."

Title 10 C.F.R. § 1910.269, at subparagraph (m)(3), item (i), states that "[a] designated employee shall make a request of the system operator to have the particular section of line or equipment deenergized. The designated employee becomes the employee in charge (as this term is used in paragraph (m)(3) of this section) and is responsible for the clearance." Subparagraph (m)(3), item (v) states that "[a]fter the applicable requirements in paragraphs (m)(3)(i) through (m)(3)(iv) of this section have been followed and the employee in charge of the work has been given a clearance by the system operator, the lines and equipment to be worked shall be tested to

ensure that they are deenergized." Subparagraph (m)(3), item (vi) states that "[p]rotective grounds shall be installed as required by paragraph (n) of this section." Section 1910.269(n)(2), *General*, states that "[f]or the employee to work lines or equipment as deenergized, the lines or equipment shall be deenergized under the provisions of paragraph (m) of this section and shall be grounded as specified in paragraphs (n)(3) through (n)(9) of [§ 1910.269]."

Title 10 C.F.R. § 851.23, at paragraphs (a)(13) and (14), requires contractors to comply with National Fire Protection Association (NFPA) 70, *National Electrical Code*, 2005 Edition, and NFPA 70E, *Standard for Electrical Safety in the Workplace*, 2004 Edition. NFPA 70E, Section 130.3, *Flash Hazard Analysis*, requires that "[a] flash hazard analysis shall be done in order to protect personnel from the possibility of being injured by an arc flash. The analysis shall determine the Flash Protection Boundary and the personal protective equipment that people within the Flash Protection Boundary shall use." Section 130.3 also states that "[a]s an alternative, the PPE requirements of 130.7(C)(9) shall be permitted to be used in lieu of the detailed flash hazard analysis approach described in 130.3(A)." Table 130.7(C)(9)(a) specifies that when working with metal clad switchgear 1 kilovolt (kV) and above, hazard/risk category (HRC) 4 protective clothing and equipment is required for work on energized parts. NFPA 70, Section 110.3, *Examination, Identification, Installation, and Use of Equipment*, states that "[1]isted or labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling."

Title 10 C.F.R. § 851.24, *Functional areas*, at paragraph (a) states that "[c]ontractors must have a structured approach to their worker safety and health program" and under paragraph (b) requires that in implementing this structured approach, "[c]ontractors must comply with the applicable standards and provisions in [A]ppendix A of [Part 851], *Worker Safety and Health Functional Areas*." Appendix A, Paragraph 10, *Electrical Safety*, states that "[c]ontractors must implement a comprehensive electrical safety program appropriate for activities at their site. This program must meet the applicable electrical safety codes and standards referenced in § 851.23." BJC has documented its electrical safety program in procedure BJC-EH-2009, which invokes American National Standards Institute C-2, *National Electrical Safety Code* (NESC). NESC (2007 Edition), Section 42, *General rules for employees*, at subsection 421(B)(2)(b), states that "[w]hen working in one section where there is a multiplicity of such sections, such as one panel of a switchboard, one compartment of several, or one portion of a substation, employees shall mark the work area conspicuously and place barriers to prevent accidental contact with energized parts in that section or adjacent sections."

Title 10 C.F.R. § 851.22, *Hazard prevention and abatement*, at paragraph (a), requires contractors to "establish and implement a hazard prevention and abatement process to ensure that all identified and potential hazards are prevented or abated in a timely manner." Under this subsection, "(1) [f]or hazards identified . . . during the development of procedures, controls must be incorporated in the appropriate procedure" and "(2) [f]or existing hazards identified in the workplace, contractors must: . . . (iii) [p]rotect workers from dangerous safety and health conditions." Under subsection (b), contractors must "select hazard controls based on the following hierarchy: (1) [e]limination or substitution of the hazards where feasible and

appropriate; (2) [e]ngineering controls where feasible and appropriate; (3) [w]ork practices and administrative controls that limit worker exposures; and (4) [p]ersonal protective equipment."

Contrary to these requirements, BJC failed to establish and implement hazard prevention and abatement procedures and controls to ensure that high voltage electrical equipment was verified to be deenergized and grounded prior to the start of work. The BJC minor maintenance/low risk work planning and approval process did not incorporate the applicable requirements for designating an employee in charge, testing lines and equipment to verify the absence of voltage, and installing protective grounds. Specific examples are listed below:

- A. BJC did not perform an absence of voltage verification for building K-1210 electrical equipment before commencing work to ensure that the lines and equipment to be worked were deenergized. BJC procedure *Power Distribution Work Permit* (ET-3013, revision 3, dated October 1, 2004) does not require workers to perform an absence of voltage verification when working under a standing Power Distribution Work Permit (PDWP).
- B. BJC did not verify that known sources of energy were opened, tagged, and tested for absence of voltage, and inform the workers of this information. While ET-3013 requires the service supervisor to inform employees working on the equipment of the boundaries and limits of hazardous energy controls, this was not done on the day of the event. Three PDWPs that provided the necessary information on the status of the equipment and lines associated with this task were available but were not used to inform the workers.
- C. BJC did not designate an employee in charge to issue clearance to work at the job site on the day of the event. The system operator accepted two of the three PDWP's applicable to the K-1210 area work as the employee in charge in April 2008. The immediate supervisor of the three workers accepted the third PDWP as the employee in charge in January 2009. Neither the system operator nor immediate supervisor was present at the job site on the day of the event to fulfill the responsibility of the employee in charge.
- D. BJC did not install appropriate grounds for employee protection for the task. The ground switch for feeder 213 was not closed, although the pre-check switching order stated that the ground switch was to be maintained in the closed position. In addition, the work package did not indicate that equipment or system grounding was required for hazard mitigation.
- E. BJC did not identify and implement specific hazard controls for the work to be performed at K-1210 on March 19, 2009. Worker interviews indicated that some of the hazard controls specific to the work were communicated verbally during a plan of the day meeting earlier in the day, but BJC relied on worker knowledge to select and implement the appropriate hazard controls from among those identified on BJCF-789. The work package established hazard controls for all of the tasks to be performed for the K-1210 power distribution system upgrade project. The work package did not identify specific controls to be implemented for individual tasks, including the work to be accomplished on the day of the event, or provide instruction on selecting appropriate controls for each task. For example, it did not specify requirements for wearing PPE while working in K-1210, installing protective grounds, or marking and barricading the work area.

- F. The worker who should have performed the absence of voltage verification was not wearing appropriate PPE for the task. BJC did not conduct a flash hazard analysis or evaluate NFPA 70E section 130.7(C)(9) tables and corresponding table notes to determine the appropriate PPE. The work package did not specify use of HRC 4 protective clothing for work on high voltage equipment above 1kV.
- G. BJC did not mark the work area (e.g., with caution tape or signs) and place barriers to prevent accidental contact with other energized sections of high voltage electrical equipment in building K-1210 in accordance with the requirements of BJC-EH-2009 and the NESC.
- H. BJC did not maintain electrical equipment in accordance with the manufacturer's design, which is intended as a means of hazard control. The cover on the interrupting switch to transformer 32 in building K-1210 was designed to be held in place by 16 bolts. Only two of the sixteen bolts were installed on the cover.

Collectively, these deficiencies constitute a Severity Level I violation.

III. Training and Information

Title 29 C.F.R. § 1910.269, at subparagraph (a)(2), *Training*, states that "(i) [e]mployees shall be trained in and familiar with the safety-related work practices, safety procedures, and other safety requirements in this section that pertain to their respective job assignments. Employees shall also be trained in and familiar with any other safety practices, including applicable emergency procedures . . . that are not specifically addressed by this section but that are related to their work and are necessary for their safety . . . (vi) The training shall establish employee proficiency in the work practices required by this section and shall introduce the procedures necessary for compliance with this section. (vii) The employer shall certify that each employee has received the training required by paragraph (a)(2) of this section. This certification shall be made when the employee demonstrates proficiency in the work practices involved and shall be maintained for the duration of the employee's employment."

Title 29 C.F.R. § 1910.269, at subparagraph (a)(2), item (iii), also states that "[t]he employer shall determine, through regular supervision and through inspections conducted on at least an annual basis, that each employee is complying with the safety-related work practices required by this section." Subparagraph (a)(2), item (iv) requires that "[a]n employee shall receive additional training (or retraining) under any of the following conditions: (A) If the supervision and annual inspections required by paragraph (a)(2)(iii) of this section indicate that the employee is not complying with the safety-related work practices required by this section, or (B) If new technology, new types of equipment, or changes in procedures necessitate the use of safety-related work practices that are different from those which the employee would normally use, or (C) If he or she must employ safety-related work practices that are not normally used during his or her regular job duties."

Title 10 C.F.R. § 851.25, *Training and information*, at paragraph (b), requires that "[t]he contractor must provide (1) [t]raining and information for new workers, before or at the time of initial assignment to a job involving exposure to a hazard; (2) [p]eriodic training as often as necessary to ensure that workers are adequately trained and informed; and (3) [a]dditional training when safety and health information or a change in workplace conditions indicates that a new or increased hazard exists." Paragraph (c) states that "[c]ontractors must provide training and information to workers who have worker safety and health program responsibilities that is necessary for them to carry out those responsibilities."

Contrary to these requirements, BJC failed to implement an electrical worker safety and health training program that ensured that workers were familiar with and proficient in the safety-related work practices applicable to the high voltage work performed by the Power Integration Group (PIG). In addition, BJC failed to ensure that workers who have worker safety and health program responsibilities received training and information commensurate with their assigned support and oversight roles. Specific examples are listed below:

- A. BJC did not establish employee proficiency in high voltage work practices through high voltage training provided to electrical utility workers. Neither *High Voltage Safety*, Module 11234, nor *Safe Work Practices for High Voltage Safety Requal* Rev. 2, Module 50249490, provided students with hands-on training or the opportunity to develop and demonstrate the skills necessary for their respective job assignments.
- B. BJC did not certify that each employee was proficient in the high voltage work practices associated with their job assignments. BJC maintained individual employee training records but did not perform certification of employee proficiency.
- C. BJC did not verify employee compliance with high voltage work practices through a documented annual inspection. BJC did not implement procedures for verifying through regular supervision and annual inspections that each employee was complying with safety-related work practices.
- D. BJC did not provide the PIG with worker safety and health program support commensurate with the hazards and risks associated with high voltage power distribution work. BJC did not ensure that the PIG safety and health (S&H) representative was adequately trained and qualified to assist in implementing the high voltage electrical safety program and carry out the responsibilities associated with the position. BJC-FS-1001 requires the S&H representative to serve as a technical resource by ensuring that the appropriate hazard analysis has occurred and appropriate controls have been identified for the work. BJC-EH-2009 assigns the S&H representative the responsibility to perform oversight of projects by performing electrical safety assessments. However, the PIG S&H representative did not demonstrate sufficient knowledge of applicable regulatory requirements and work practices to provide proper guidance to PIG workers and supervisors based on the complexity and risk associated with power transmission and distribution work. For example, the S&H representative did not perform appropriate assessments and inspections of high voltage electrical work that ensured that applicable regulatory requirements were being met. In addition, the BJC occupational safety subject matter expert (which includes electrical safety),

was not qualified based on experience or training to provide effective independent oversight and technical support to PIG consistent with the requirements in BJC-EH-2009.

Collectively, these deficiencies constitute a Severity Level I violation.

IV. Electrical Safety Program

Title 10 C.F.R. § 851.24, *Functional areas*, at paragraph (a) states that "[c]ontractors must have a structured approach to their worker safety and health program" and under paragraph (b) requires that in implementing this structured approach, "[c]ontractors must comply with the applicable standards and provisions in [A]ppendix A of [Part 851], *Worker Safety and Health Functional Areas*." Appendix A, Paragraph 10, *Electrical Safety*, states that "[c]ontractors must implement a comprehensive electrical safety program appropriate for activities at their site. This program must meet the applicable electrical safety codes and standards referenced in § 851.23."

Contrary to these requirements, BJC failed to implement an electrical safety program appropriate for the activities at the site that articulates the difference in purpose, scope, responsibilities, and implementing procedures between high voltage power distribution activities and electric power utilization. In addition, BJC did not develop and implement procedures that reflected the regulatory requirements applicable to the high voltage work performed by PIG.

- A. BJC-EH-2009 did not distinguish between the high voltage power distribution and utility operations work performed by PIG and the remainder of electrical utilization work performed at ETTP. High voltage power distribution work is governed primarily by 29 C.F.R. § 1910.269; 29 C.F.R. Part 1926, Subpart V; and the NESC; whereas electrical utilization is governed primarily by 29 C.F.R. Part 1910, Subpart S, and NFPA 70E. BJC-EH-2009 provides the elements of the utilization program, such as the BJC procedure *Hazardous Energy Control (Lockout/Tagout)* (BJC-EH-2002, dated October 24, 2008), but does not refer to ET-3013, which is the equivalent procedure to deenergize lines and equipment in utility operations.
- B. ET-3013 defined the steps for issuing and releasing a PDWP, identifying and documenting lines and equipment that have been deenergized for the protection of workers, verifying the boundaries of the PDWP, and informing employees working on the equipment of the boundaries and limits of protection when the PDWP is issued. However, neither ET-3013 nor other BJC electrical safety documents provided procedures for workers to verify isolation points or verify absence of voltage for individual tasks performed under a long-term PDWP.
- C. ET-3013 is the only procedure that pertains to routine PIG operations. The procedure is not comprehensive in that it does not identify responsibilities for the functions performed by the group, required training and on-the-job training requirements for various categories of workers, or requirements for performing inspections and oversight of high voltage work.

Collectively, these deficiencies constitute a Severity Level II violation. As explained in Part 851, appendix B, section VI(b)(2), "[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."

#### REPLY

Pursuant to the provisions of 10 C.F.R. § 851.42, BJC 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." 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 the alleged violations; and (2) discuss the relevant authorities that support the position asserted, including rulings, regulations, interpretations, and previous decisions issued by DOE. Copies of all relevant documents shall be submitted with the reply. Corrective actions that have been or will be taken to avoid further violations should be delineated with target and completion dates in DOE's Noncompliance Tracking System.

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

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

A copy of the reply should also be sent to the Assistant Secretary for Environmental Management in Washington, DC, and the Assistant Manager for Environmental Management in the Oak Ridge Office.

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

- S. Bould

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

Washington, D.C. This 16<sup>th</sup> day of July 2010