



Department of Energy
Washington, DC 20585

August 4, 2005

Mr. Michael C. Hughes
President and General Manager
Bechtel Jacobs Company, L.L.C.
Building K-1225/MS-7294/RM 107
P.O. Box 4699
East Tennessee Technology Park
Oak Ridge, TN 37831-7294

EA-2005-04

Subject: Preliminary Notice of Violation and Proposed Civil Penalty – \$247,500

Dear Mr. Hughes:

This letter refers to the recent investigation by the Department of Energy's (DOE) Office of Price-Anderson Enforcement (OE) of the May 2004 New Hydrofracture Facility (NHF) transportation event and the August 2004 personnel contamination event at the Hot Storage Garden (HSG) Facility. An Investigation Summary Report describing the results of the OE review was issued to you on May 17, 2005. An Enforcement Conference was held on June 13, 2005, in Germantown, Maryland, with you and members of your staff to discuss these findings. A Conference Summary Report is enclosed.

Based upon our evaluation of these issues and information presented by Bechtel Jacobs Company (BJC) representatives during the Enforcement Conference, DOE has concluded that violations of DOE's *Nuclear Safety Management* Rule (10 CFR 830) and *Occupational Radiation Protection* Rule (10 CFR 835) have occurred. The violations are described in the enclosed Preliminary Notice of Violation (PNOV).

Section I of the PNOV identifies procurement deficiencies. These include inadequacies in BJC oversight of Safety and Ecology Corporation (SEC) activities associated with the NHF project, and deficiencies associated with the Sharp Field Work Plan for the HSG.

Section II of the PNOV identifies examples in which work control documents failed to provide adequate detail or specific controls commensurate with the hazards associated with the work. Examples include the failure of the SEC Decontamination and Decommissioning (D&D) Work Plan to provide adequate direction for solidifying tank contents, and the lack of appropriate radiological controls in the HSG Radiation Work Permits (RWP).

Section III of the PNOV identifies examples in which workers failed to comply with existing work control documents, or in which work progressed beyond the scope of activities authorized by such documents. Examples include failures to comply with the SEC NHF D&D Work Plan and the Sharp HSG Field Work Plan, as well as the exceedance of limiting conditions associated with the HSG RWPs.

Section IV of the PNOV identifies violations of DOE occupational radiation protection requirements contained in 10 CFR 835. Examples include the failure to perform adequate radiological surveys while planning for and conducting work associated with the HSG, and the lack of effective controls allowing the spread of contamination to uncontrolled areas in association with the NHF transportation event.

Section V of the PNOV identifies violations with DOE requirements for Quality Improvement. With respect to the NHF transportation event, multiple examples were noted in which discrepant conditions and/or deviations from procedures were noted, but no formal action or process was implemented for formal resolution of the issue. Regarding both events, the OE investigation noted that the deficiencies in BJC subcontractor oversight associated with both the NHF and HSG events were similar to those cited during a prior enforcement action (EA-2003-09) related to the Building 3038 Sr-90 release in 2002. The persistence of such deficiencies indicates that corrective actions undertaken in response to the 2002 event have not been fully effective.

Section VI of the PNOV identifies violations associated with DOE's Management and Independent Assessment requirements. In recent enforcement cases, OE has been consistently citing assessment program failures to identify discoverable serious problems in order to emphasize the need for assessment programs to be effective in discovering precursor issues before they result in significant safety events. With respect to the NHF transportation event, although assessments were conducted by both BJC and the subcontractor, they were not effective in identifying and resolving the work process issues associated with the event. Regarding the HSG event, OE found that several of the findings of your investigation into the event differed significantly from the conclusions of a contemporaneous BJC Closure Project Evaluation Board (CPEB) assessment of Closure Project facilities. These differing conclusions indicate the need for improvement in the CPEB process.

In accordance with the *General Statement of Enforcement Policy*, 10 CFR 820, Appendix A, the violations described in the PNOV have been classified as one Severity Level I and five Severity Level II problems, with an aggregate civil penalty of \$247,500. In determining these Severity Levels, DOE considered the actual and potential safety significance associated with each event or issue under consideration and the programmatic and recurring nature of the violations.

In some prior enforcement cases involving DOE contractors and their subcontractors, citations and associated civil penalties have been allocated among the participants, based on their level of involvement and responsibility for the violations. In this case, however, DOE views the burden of responsibility as resting with BJC, and has

fashioned this PNOV accordingly. In both events, BJC representatives were involved in the initial review and approval of inadequate subcontractor work control documents. BJC representatives also participated in ongoing communications and oversight related to the subcontractor work activities. However, this oversight was ineffective in preventing the subject events. The most egregious example of this deficient oversight was during the NHF event. In that case, over the course of several days, BJC personnel participated in decisions for subcontractor personnel to deviate from approved work control documents in their attempts to resolve the identified discrepant condition. Based on your personal comments during the OE investigation and subsequent Enforcement Conference, it appears that DOE's opinion of overall responsibility for these events is consistent with your own. Your ready acceptance of ownership for these issues has positively influenced the level and scope of your corrective actions, and DOE has factored these aggressive corrective actions into our consideration of mitigation.

With respect to mitigation for timely identification and reporting, no such mitigation was awarded since the subject violations were associated with self-disclosing events.

OE's analysis of mitigation factors did not include the NHF event investigation since this was performed by DOE. However, DOE found your investigation into the HSG event, and your corrective actions developed in association with both events, to be largely thorough and broad in scope. DOE also notes that your corrective action plans include emphasis on two levels: actions directed at resolving process/procedural issues, and actions directed at resolving more "cultural" issues. DOE views this emphasis as appropriate and has provided full mitigation for corrective actions for all but the Quality Improvement citation discussed below.

As noted in the OE investigation, DOE views the overall deficiencies in BJC subcontractor oversight as a recurrent issue. Enforcement Action 2003-09, issued in response to the 2002 Building 3038 Sr-90 release, cited similar deficiencies. The continued poor performance in this area indicates that BJC corrective actions in response to the earlier enforcement action have not been effective.

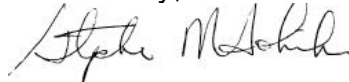
During recent months, OE has communicated to the contractor community the intent to escalate penalties associated with long-standing and recurrent issues. Such an action is necessary to focus contractor management attention on resolving deficiencies the first time they occur. Therefore, in the area of Quality Improvement DOE is issuing a Severity Level I violation, based on the failure to effectively correct long-standing deficiencies related to subcontractor oversight. This results in a total penalty for the violation of \$110,000. Due to the nature of the violation, no mitigation is provided for corrective actions.

You are required to respond to this letter and to follow the instructions specified in the enclosed PNOV when preparing your response. Your response should document any additional specific actions taken to date. Corrective actions will be tracked in the

reports filed in the Noncompliance Tracking System (NTS). You should enter into the NTS (1) any additional actions you plan to take to prevent recurrence, and (2) the target completion dates of such actions.

After reviewing your response to the PNOV, including your proposed corrective actions entered into the NTS, DOE will determine whether further enforcement action is necessary to ensure compliance with DOE nuclear safety requirements. DOE will continue to monitor completion of corrective actions until these matters are resolved.

Sincerely,



Stephen M. Sohinki
Director
Office of Price-Anderson Enforcement

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Enclosures:
Preliminary Notice of Violation
Enforcement Conference Summary
List of Attendees

cc: J. Shaw, EH-1
R. Shearer, EH-1
A. Patterson, EH-1
M. Zacchero, EH-1
L. Young, EH-1
T. Weadock, EH-6
H. Wilchins, EH-6
Docket Clerk, EH-6
R. Lagdon, EH-31
R. Loesch, EH-31
L. Vaughn, EM-3.2
G. Boyd, DOE-ORO
S. McCracken, DOE-ORO/EM
R. Casteel, DOE-ORO PAAA Coordinator
P. Baxter, BJC PAAA Coordinator

**Preliminary Notice of Violation
and
Proposed Imposition of Civil Penalty**

Bechtel Jacobs Company, LLC.
Oak Ridge

EA-2005-04

As a result of a Department of Energy (DOE) evaluation of the May 2004 New Hydrofracture Facility (NHF) transportation event and the August 2004 Hot Storage Garden (HSG) event, multiple violations of DOE nuclear safety requirements were identified. In accordance with 10 CFR 820, Appendix A, "General Statement of Enforcement Policy," the violations are listed below. Citations specifically citing the quality assurance criteria of 10 CFR 830.122 represent a violation of 830.121(a), which requires compliance with those criteria.

I. Procurement

10 CFR 830.122(g), *Procurement*, requires contractors to "...Procure items and services that meet established requirements and perform as specified..." and to "...Establish and implement processes to ensure that approved suppliers continue to provide acceptable items and services."

Contrary to the above, BJC processes to ensure suppliers provided acceptable items and services were found to be ineffective with relation to the NHF and HSG decontamination and decommissioning (D&D) activities. The following specific deficiencies were identified:

- A. With respect to the NHF event, BJC oversight of the Safety and Ecology Corporation (SEC) D&D work control processes and tank characterization activities was inadequate, in that:
1. BJC personnel who observed changes in conditions did not direct work to stop and conditions to be further evaluated;
 2. BJC personnel who observed changes in conditions did not communicate these changes to BJC subject matter experts for evaluation;
 3. BJC oversight personnel who reviewed and approved work controls allowed work to be conducted with these inadequate work controls as noted above; and,

4. BJC personnel were involved in decisions for SEC workers to deviate from approved work control documents. Specifically, Office of Price-Anderson Enforcement (OE) interviews indicated that BJC personnel were involved in meetings to discuss what remedial action should be taken after leakage was identified from Tank T-12. The actions ultimately taken (i.e., adding the “diaper” to the truck, tilting the truck to drain, use of adsorbent) were all outside the approved scope of the *D&D Work Plan* (1335-16-PP9, rev. 5).
- B. With respect to the HSG event, BJC processes were not adequate to ensure that work control requirements established by Sharp contained appropriate detail and controls commensurate with the radiological hazard. Specific deficiencies include the following:
1. The BJC contract with Sharp included a Technical Specification (SPG-000000-A0006) establishing work control requirements. Attachment A to the Technical Specification required work control documents developed for non-routine work activities (such as the HSG D&D) to include the following elements:
 - A detailed scope of work
 - Detailed sequential work instructions
 - Controls to mitigate hazards and security concerns
 - Appropriate inspection requirements (hold points).
- OE’s review of the Sharp HSG-Field Work Plan (FWP) for D&D of Facility 3597 Hot Storage Garden identified that it did not meet the requirements of the contract Technical Specification regarding level of detail and adequacy of controls. OE’s review determined that the FWP provided only a generalized summary of the work to be performed, lacking detailed, sequential work instructions. No hold points were established to require radiological survey of the baskets as they were removed from the wells or prior to size reduction (although this would constitute a key radiological control step in the process). Discussions with Sharp management indicated that the FWP was intentionally developed to be deliberately vague so they would have flexibility when performing the work.
2. OE also determined that no radiation protection personnel were involved in either the development or formal review of the FWP. Although responsible for developing the plan, Sharp had no radiation protection professionals on staff to participate in that development. During the subsequent BJC formal review and approval of the Sharp FWP, no radiation protection personnel were assigned responsibility by the BJC Subcontractor’s Technical Representative (STR) for review of the plan.

Collectively, these violations constitute a Severity Level II problem.
Civil Penalty - \$27,500

II. Work Processes – Procedural Adequacy

10 CFR 830.122(e), *Work Processes*, requires contractors to perform work "... using approved instructions, procedures, or other appropriate means."

10 CFR 835.501, *Radiological areas*, requires that "...(d) Written authorizations shall be required to control entry into and perform work within radiological areas. These authorizations shall specify radiation protection measures commensurate with the existing and potential hazards."

Contrary to the above, several instances were noted in association with the NHF and HSG work activities in which work control documents and/or written radiological authorizations were not adequate to effectively control and limit hazards associated with the work activity. Specific examples include the following:

- A. In support of the NHF project, SEC developed an *Activity Hazards Assessment* (AHA 1335-16-PP10) and a *D&D Work Plan* which were reviewed and approved by BJC. Step 13 of the *D&D Work Plan* was intended to address the liquid in T-12; it instructed the workers to "...solidify existing residual liquid in Tank T-12 using bentonite pellets or similar material..."

OE viewed the work controls established by SEC to address the liquids as inadequate. No characterization of the residual liquid in T-12 was performed prior to the development of the work plan, although specific knowledge related to the volume, constituents, pH, etc., is necessary for successful solidification. Additionally, the work plan did not require the performance of any such characterization, and also failed to provide specific direction for performing the solidification (type and quantity of solidification agent to use, how long to allow to set, required inspections, etc.).

- B. Removal of Tank T-12 from the NHF first required disconnecting of lines to the tank, and then sealing or closing openings to the tank. The work control document for the project was the *D&D Work Plan*, approved by BJC on April 19, 2004. However, no detailed written instructions for adequately sealing or closing openings were included in the approved Work Plan for the job.
- C. In response to the leakage from T-12 and observed water accumulation in the truck bed on May 12, 2004, SEC implemented several additional controls. These included tilting the truck bed to facilitate drainage, the application of a "diaper" to the tailgate to collect the water, and adding absorbent material inside the plastic wrapping around the tank. None of these changes were incorporated into the *D&D Work Plan*, which, therefore, lacked details on how to apply, install and implement the controls.
- D. With respect to Sharp D&D activities at the HSG, OE's review of the two relevant Radiation Work Permits (RWP) used to control the D&D work activities (Nos. 25472 and 25548) identified that they did not specify appropriate monitoring and controls commensurate with the high levels of transuranic and beta-gamma contamination identified during the basket work activity. Specifically, the RWPs did not include

requirements for respiratory protection, containment, ventilation, decontamination, or bioassay monitoring for transuranics.

Collectively, these violations constitute a Severity Level II problem.
Civil Penalty - \$27,500

III. Work Processes – Procedural Implementation

10 CFR 830.122(e), *Work Processes*, requires contractors to perform work "... using approved instructions, procedures, or other appropriate means."

10 CFR 835.104, *Written procedures*, requires that "...Written procedures shall be developed and implemented as necessary to ensure compliance with this part...."

Contrary to the above, several instances were noted in which approved work instructions, procedures or other controlling documents in association with the NHF and HSG D&D work activities were violated. Specific examples include the following:

- A. The BJC approved SEC *New Hydrofracture Facility D&D Waste Management Plan*, dated November 4, 2002, specified two methods for removal of any residual liquid in tanks. These included draining to receiver tank T-13 prior to system isolation or collecting and containerizing liquid wastes after T-13 isolation. Thus the SEC attempt to solidify the liquid in T-12 with concrete on April 14, 2004, was not authorized by, and therefore violated, the Waste Management Plan.
- B. The *D&D Work Plan* approved by BJC on April 19, 2004, required that tank openings be sealed with expandable foam and capped with herculite or similar material. However, on April 14, 2004, a flanged opening to tank T-12 was capped with plywood. This opening was noted to be leaking on April 20, 2004.
- C. The BJC approved *D&D Work Plan* specified in step 14 to "Place tanks in DOT Type A or Strong Tight configuration, fill remaining void spaces with sand or other incompressible material to meet EMWMF WAC requirements, and place in the back of a dump truck or on flatbed for shipment to EMWMF." However, on May 12, 2004, tank T-12 was placed directly into a dump truck without first being placed in a Type A or Strong Tight configuration.
- D. Step 2 of the BJC approved *D&D Work Plan* states that "If new hazards are identified, STOP WORK and modify the appropriate AHA." Several instances occurred where conditions were outside of those covered in the Work Plan and Activity Hazards Analysis (AHA), yet work continued in violation of the Work Plan. These included the following:
 1. On April 20, 2004, during movement of tank T-12 from the cell to a temporary storage location in the T-13 Annex, liquid was noticed leaking from Tank T-12 after steps had been taken to solidify residual liquid in the tank. Work continued without fully investigating the source of the leaks and the possibility that residual water in the tank had not been solidified.

2. On May 12, 2004, liquid was noted to be collecting in the plastic wrapping around T-12 as T-12 was moved from its temporary storage area to the dump truck. During this move, some drops of liquid were noted to leak from the wrapping, and contamination was detected from this liquid. Again, work continued without fully investigating the source of the leak and the potential for residual liquid in T-12 to not be solidified as assumed.
- E. During the performance of the HSG basket size reduction activities on August 9 and 10, 2004, personnel conducted the work using RWP 25472 and 25548. The following instances were noted in which personnel failed to comply with the RWPs.
1. Personnel began basket size reduction activities using a reciprocating saw on August 9, 2004, while signed in on RWP 25472. The stated description of work on that RWP does allow for "demolition activities" while using power/hand tools, but it does not specifically describe size reduction activities or the cutting of contaminated metal.
 2. The stated description of work for RWP 25548 was "Hot Work/Fire Watch activities associated with the demolition of the 3597 facility." The RWP required the use of flame retardant Personal Protective Equipment (PPE) for workers performing hot work and firewatch activities.

The size reduction activities performed on August 10, 2004, were being performed using a reciprocating saw and were not considered hot work. Personnel were not wearing flame retardant PPE. Consequently, the work party and the Radiological Control Technician (RCT) should not have been signed in on RWP 25548.

3. RWP 25548 required a full set of anti-contamination coveralls as PPE and did not include an exception for personnel performing hands-off work. During his entries to the work area on August 10, 2004, the RCT wore only shoe covers and gloves as PPE in addition to his personal clothing.
4. RWP 25548 required workers to perform a whole body frisk (survey) upon exit from the area. After his last exit from the work area on August 10, 2004, the RCT performed a limited frisk of just his hands and feet.
5. RWP 25548 identified limiting contamination conditions (>2000 disintegrations per minute (dpm)/100 cm² alpha, or >20,000 dpm/100 cm² beta-gamma) which, if exceeded, required stopping the work, exiting the area, and notifying the Facility Manager.

The Large Area Wipe (LAW) survey results (1.3 million dpm beta-gamma) taken on the lower section of basket #4 on August 10, 2004, greatly exceeded the limiting condition value of 20,000 dpm/100 cm² beta-gamma, even in consideration of the difference in survey technique (i.e., LAW as compared to a smear). The survey results taken after decontamination of the lower basket

(50,000 dpm/LAW beta-gamma) were more comparable to the limiting condition value, but still exceeded those assumed to be present in the development of the RWP. The BJC investigation team concluded that the RWP limiting conditions were exceeded and that personnel (including Sharp supervision, the Safety and Ecology Corporation RADCON Alliance (SECRA) RCT and supervisor, and the BJC Field Radiological Engineer) failed to stop work as directed by the RWP.

- F. The Sharp *Project Specific QA Plan for the 3597 Hot Storage Garden D&D*, revision 3, section 5.0 requires that "Work processes that affect the quality of the items or services will be controlled in accordance with established procedures...." The Quality Assurance (QA) Plan also states that "...the Field Work Plan describes the work process that is to be followed in the field for sorting, segregating, and packaging the material."

Contrary to these requirements, on August 9 and 10, 2004, work activities outside the scope described in the Field Work Plan (FWP) were performed in conjunction with the HSG D&D activity. Specifically, section 4 of the Field Activities section of the FWP indicates only that the lids and baskets will be "...lifted with the crane, sized to meet ... (applicable) waste acceptance criteria, and placed directly into an intermodal container." During the performance of the actual activity, Sharp personnel performed hand decontamination of the baskets to contamination levels directed by the RCT. Sharp personnel also used a heavy well cap lid to compress the baskets after cutting off the basket bottoms. Neither of these activities was described in the FWP although they presented specific radiological hazards.

Collectively, these violations constitute a Severity Level II problem.
Civil Penalty - \$27,500

IV. Radiological Control Violations

- A. 10 CFR 835.1102, *Control of Areas*, requires that "...(a) Appropriate controls shall be maintained and verified which prevent the inadvertent transfer of removable contamination to locations outside of radiological areas under normal operating conditions."

With respect to the NHF transportation event on May 14, 2004, imposed controls were not adequate to prevent the inadvertent transfer of contamination outside of the controlled areas at NHF. Contamination was spread along public and site roads that were not controlled areas, as well as at various locations at the Environmental Management Waste Management Facility (EMWMF) site. Specific examples in which control measures were not effective included the following:

1. Tank T-12 was known to contain liquid and the tank was identified as a contaminated item. However, no sampling of the liquid was performed to determine the total activity.

2. Prior to dispatching the truck from Melton Valley on May 14, 2004, swipes of exterior surfaces of the truck were made. However, no surveys were conducted of the liquid located within the plastic wrap around the tank to determine if it contained radioactive material.
 3. Inadequate control of the truck occurred when surveyed on arrival at EMWMF. On May 14, 2004, an incoming survey was performed when the truck arrived at the EMWMF. Prior to obtaining the results of the survey, the truck moved from the incoming survey location to the weigh station, further spreading contamination in the EMWMF.
- B. 10 CFR 835.401(a), *General requirements*, identifies objectives associated with required radiological monitoring (or survey) activities. These include the documentation of radiological conditions, the detection of changes in radiological conditions, and the identification and control of potential sources of individual exposure to radiation and/or radioactive material.

With respect to the HSG D&D work, performed radiological monitoring activities were inadequate to effectively support the planning and the conduct of the work activity. Specific examples include the following:

1. RWP development for the work activity relied heavily on an April 2004 characterization survey, which indicated no alpha contamination and relatively minimal beta-gamma contamination in the wells. To conduct the April 2004 survey, RCTs used long handled tools to take smears inside the wells. It was subsequently identified that the tools only reached partway into the wells, and did not sample the bottom of the baskets or wells (where the majority of the contamination had collected). A June 2002 survey was also available and indicated the presence of alpha contamination (at low levels) for two of the wells; however, this survey was not relied upon in RWP development.
2. During the performance of job-support surveys on August 10, 2004, the RCT took LAWs rather than contamination smears. Consequently, the survey results (reported in units of dpm/LAW) were not directly comparable to RWP limiting conditions for contamination, which were stated in values of dpm/100cm². Although useful as a general indicator, the LAW surveys were not adequate for comparison against the RWP limits. Additionally, follow-up smear surveys on the baskets were not taken after the significantly higher than anticipated contamination levels were identified.

Collectively, these violations constitute a Severity Level II problem.
Civil Penalty - \$27,500

V. Quality Improvement Deficiencies

10 CFR 830.122 (c), *Quality Improvement*, requires that the contractor "...(1) Establish and implement processes to detect and prevent quality problems. (2) Identify, control,

and correct items, services, and processes that do not meet established requirements. (3) Identify the causes of problems and work to prevent recurrence as a part of correcting the problem.”

Contrary to the above, with relation to subcontractor work activities associated with the NHF and HSG events, BJC processes to identify, control and correct items not meeting established requirements were not effectively implemented. Additionally, corrective actions established by BJC were not effective in preventing recurrence. Specific examples include the following:

- A. With respect to the NHF transportation event, several deficiencies were identified for which appropriate steps were not taken to correct the problem. Liquid was first observed to be leaking from tank T-12 on April 20, 2004, as it was removed from the mixing cell and placed in the T-13 Annex building. It was also noticed that the leakage was from a penetration on tank T-12 that was capped with plywood; however, the Work Plan called for the penetration to be capped with herculite or similar material. Subsequently on May 12, 2004, when tank T-12 was removed from the T-13 Annex and transferred to the dump truck, several drops of water fell to the ground and surveys showed contamination levels of 60,000 dpm beta-gamma on the ground. Despite these unanticipated conditions or noted deviations from requirements, BJC and SEC workers and management failed to initiate documentation to formally identify and track the deviation. Initiation of such a report would have formalized a review and investigation of the condition, and led to resolution of the adverse condition.
- B. During a prior BJC enforcement action (EA-2003-09, dated November 10, 2003), OE cited deficiencies with the BJC oversight of subcontractor activities related to the unplanned and uncontrolled Sr-90 release from Building 3038 in June 2002. Actions were to be taken by BJC at that time to correct deficiencies in BJC oversight of subcontractor work planning and execution. The current deficiencies in BJC subcontractor oversight demonstrated by both the NHF and HSG events indicate that corrective actions taken by BJC to correct such deficiencies were not effective in preventing recurrence.

Collectively, these violations constitute a Severity Level I problem.
Civil Penalty - \$110,000

VI. Assessments

10 CFR 830.122(i), *Management Assessment*, requires contractors to “Ensure managers assess their management processes and identify and correct problems that hinder the organization from achieving its objectives.”

10 CFR 830.122(j), *Independent Assessment*, requires contractors to “(1) Plan and conduct independent assessments to measure item and service quality, to measure the adequacy of work performance, and to promote improvement.”

Contrary to the above requirements, management and independent assessments performed on BJC subcontractor work activities were not effective in identifying and correcting problems and promoting improvement. Specific deficiencies include the following:

- A. With respect to the D&D work at the NHF, both BJC and SEC conducted independent assessments of SEC ongoing work activities at the NHF. Both BJC and SEC also performed a number of management assessment activities related to the NHF D&D work, including formal assessments and management walk-arounds. These assessment activities were not effective in identifying the systemic deficiencies in work performance (including lack of formality of operations, lack of rigor in work packages, and inadequate oversight by BJC of subcontractor activities) disclosed by the NHF transportation event.
- B. With respect to the HSG D&D work activity, BJC independent assessment activities were not effective in identifying deficiencies in the areas of radiological controls and waste management. In July 2004, BJC conducted a Closure Project Evaluation Board (CPEB) assessment of performance effectiveness within the Balance of Programs/Completion Project (BOP). This assessment evaluated a number of functional areas across a number of BOP facilities and projects, including the HSG project.

OE's review of the CPEB assessment results identified that significant differences existed between the findings and conclusions of the CPEB assessment, and those contained in follow-up investigations to the HSG event. Specifically, the CPEB found that the HSG FWP and associated Activity Hazard Analysis reflected "...adequate work control information." The CPEB reviewed the HSG RWP No. 25472 as part of its review of BOP Project RWPs, and formed the general conclusion that "...available radiological characterization was factored into the project RWPs," and that "...radiological characterization was judged to be accurate for radiation safety purposes." As discussed above, OE determined that the level of information contained in the HSG FWP, and the accuracy and adequacy of radiological characterization associated with the HSG RWPs, was inadequate.

In the area of Waste Management, the CPEB assessment rated the overall functional area as "acceptable," with no deficiencies identified at the HSG. The CPEB report notes that the HSG subcontractor "...developed a Sampling and Analysis Plan for waste at that site...to prove (Waste Acceptance Criteria) attainment at the Y-12 or EMWMF landfills..." In contrast, the BJC investigation of the HSG event identified several deficiencies in the area of Waste Management. These included less than adequate sampling, planning and strategies as well as indefensible waste characterization. The HSG investigation also specifically identifies that "...no sampling and analysis plan was developed or used to ensure data quality for information used to support waste disposition determinations."

Collectively, these violations constitute a Severity Level II problem.
Civil Penalty - \$27,500

Pursuant to the provisions of 10 CFR 820.24, BJC is hereby required within 30 days of the date of this Preliminary Notice of Violation (PNOV), to submit a written reply by overnight carrier to the Director, Office of Price-Anderson Enforcement, Attention: Office of the Docketing Clerk, EH-6, 270 Corporate Square Building, U.S. Department of Energy, 19901 Germantown Rd., Germantown, MD 20874-12190. Copies should also be sent to the Manager of the DOE Oak Ridge Office and to the Assistant Secretary for Environmental Management. This reply should be clearly marked as a "Reply to a Preliminary Notice of Violation" and should include the following for each violation: (1) admission or denial of the alleged violations; (2) any facts set forth which are not correct; and (3) the reasons for the violations if admitted, or if denied, the basis for the denial. Corrective actions that have been or will be taken to avoid further violations will be delineated with target and completion dates in DOE's Noncompliance Tracking System. In the event the violations set forth in this PNOV are admitted, this Notice will constitute a Final Order in compliance with the requirements of 10 CFR 820.24.

Any request for remission or further mitigation of civil penalty must be accompanied by a substantive justification demonstrating extenuating circumstances or other reasons why the assessed penalty should not be paid in full. Within 30 days after the issuance of the PNOV and civil penalty, unless the violations are denied, or remission or additional mitigation is requested, BJC shall pay the civil penalty of \$247,500 imposed under section 234a of the Act by check, draft, or money order payable to the Treasurer of the United States (Account 891099) mailed to the Director, Office of Price-Anderson Enforcement, Attention: Office of the Docketing Clerk, at the above address. If BJC should fail to answer within the time specified, the contractor will be issued an order imposing the civil penalty. Should additional mitigation of the proposed civil penalty be requested, BJC should address the adjustment factors described in section IX of 10 CFR 820, Appendix A.



Stephen M. Sohinki
Director
Office of Price-Anderson Enforcement

Dated at Washington, DC,
this 4th day of August 2005

**Bechtel Jacobs Company New Hydrofracture Facility
and
Hot Storage Garden Events**

Enforcement Conference Summary

On June 13, 2005, the Department of Energy's Office of Price-Anderson Enforcement (OE) held an Enforcement Conference with the Bechtel Jacobs Company, L.L.C., (BJC) in Germantown, Maryland. The conference was held to discuss apparent violations identified in the OE Investigation Summary Report that was provided to BJC on May 17, 2005. Specific events reviewed as part of the OE investigation included the May 14, 2004, transportation event at the New Hydrofracture Facility (NHF) and the August 10, 2004, personnel contamination and uptake at the Hot Storage Garden (HSG) Facility.

The conference was opened by Mr. Stephen Sohinki, Director, Office of Price-Anderson Enforcement, who provided introductions and an overview of the conference's purpose and objectives.

BJC presentations were opened by Mr. Michael Hughes, President, Bechtel Jacobs Company, L.L.C., who provided introductory remarks and provided background on the BJC organizational structure at the time of the events.

Mr. Paul Clay, Deputy General Manager, Bechtel Jacobs Company, L.L.C., provided a brief summary of the events and their associated consequences.

Mr. Hughes then discussed follow-up evaluations that were performed by BJC to determine the extent of deficiencies identified through the events. These included the performance of programmatic reviews in the areas of Radiological Controls, Work Control, and Waste Management/Transportation. BJC determined as a result of these reviews that prior corrective actions undertaken to resolve work control weaknesses had focused on Category 2 and 3 facilities, and performance had improved at these facilities. Conversely, corrective action focus had not extended to below Category 3 facilities, and consequently performance at these facilities was viewed as unsatisfactory.

Mr. Hughes then summarized corrective actions that were being taken in the areas of Work Control, Radiological Controls, Waste Management/Transportation, Hazard Characterization, subcontractor oversight, and assessment. OE noted BJC's corrective action plans included actions to improve the process (procedural revisions, etc.) as well as those directed at improving safety "culture".

During his closing remarks Mr. Hughes reiterated BJC's concern regarding the events, and BJC's commitment to continue to evaluate the effectiveness of improvements.

Mr. Sohinki concluded the conference by indicating that DOE would consider the information presented in its enforcement deliberations. The conference was then adjourned.

June 13, 2005

Bechtel Jacobs Company, L.L.C.
May 2004 New Hydrofracture Facility Transportation Event and
the August 2004 Hot Storage Garden Event

List of Attendees

Office of Price-Anderson Enforcement

Stephen M. Sohinki, Director
Howard M. Wilchins, Counsel
Anthony A. Weadock, Senior Enforcement Specialist
Hank George, Technical Advisor

DOE-Oak Ridge Operations Office

Steve McCracken, Assistant Manager for Environmental Management
J. Dale Jackson, Director
Roger Casteel, PAAA Coordinator

Bechtel Jacobs Company, L.L.C.

Michael C. Hughes, President
Paul Clay, Deputy General Manger
Phil Baxter, PAAA Coordinator