Department of Energy
Washington, DC 20585

April 6, 2004

Mr. Robert A. Pedde, [ ]
Westinghouse Savannah River Company
Savannah River Site
Building 730-1B
Aiken, SC 29808

EA 2004-03

Subject: Preliminary Notice of Violation and Proposed Imposition of Civil Penalty $206,250

Dear Mr. Pedde:

This letter refers to the Department of Energy's Office of Price-Anderson Enforcement (OE) investigation of the facts and circumstances concerning the unnecessary radiation exposure of three Westinghouse Savannah River Company (WSRC) personnel and the subsequent falsification of radiation dose records. The radiation exposures occurred at the FB-Line facility during material repackaging activities on the morning of July 29, 2003.

OE initiated an investigation of the event with a full review of relevant documentation. In addition, discussions that involved Department of Energy Savannah River Operations Office (DOE-SR) and WSRC personnel took place at the Savannah River Site on January 13-14, 2004. Our findings were provided to you in an Investigation Summary Report dated February 25, 2004. An Enforcement Conference was held with you and members of your staff on March 17, 2004, to discuss these findings and to ascertain the WSRC response to identified noncompliances. An Enforcement Conference Summary is enclosed.

Based upon our evaluation of the facts and information obtained during the course of our investigation and the information that you provided during the Enforcement Conference, DOE has concluded that violations of 10 CFR 830 Subpart A (Quality Assurance Requirements), 10 CFR 835 (Occupational Radiation Protection), and 10 CFR 820.11 (Information Requirements) occurred. These violations are described in the enclosed Preliminary Notice of Violation (PNOV).

The enclosed PNOV describes numerous violations of nuclear safety requirements related to your operations at the FB-Line. Specifically, noncompliances were identified in the following areas: (1) work processes, in which work was not properly planned or adequately controlled by WSRC management, shift turnover was severely lacking, and

pre-job briefs failed to address key safety issues, (2) As Low As is Reasonably Achievable (ALARA) practices, which were less than adequate in that workers failed to use lead jackets to reduce radiation exposure and known radiological hazards were not fully analyzed or controlled, (3) adherence to radiation protection-related written procedures, to include failure to wear required extremity dosimetry and inadequate response to Electronic Personal Dosimeter (EPD) alarms, (4) quality improvement, in which there was a failure to sustain corrective actions associated with the 1999 FB-Line event, (5) maintaining accurate radiological dose records, and (6) management assessment, in which inadequacies impeded the WSRC ability to identify precursor related events at FB-Line.

In accordance with the *General Statement of Enforcement Policy*, 10 CFR 820, Appendix A, the violations described in the enclosed PNOV have been classified as seven Severity Level II violations. In determining the Severity Level of these violations, DOE considered the actual and potential safety significance associated with the noncompliances and the recurring nature of the problems.

To emphasize the importance of maintaining a comprehensive quality program for DOE nuclear activities, I am issuing the enclosed PNOV and Proposed Civil Penalty in the amount of $206,250. DOE evaluated the WSRC actions in timely identifying and promptly reporting the noncompliances. Although WSRC did promptly report the noncompliances associated with the unnecessary radiation exposures of the three WSRC personnel, OE views this event to be self-disclosing in that the worker exposures would have been readily detectable even in the absence of the subsequent falsification issues. However, OE has given 25 percent mitigation for the 10 CFR 820.11 violation due to the diligence of WSRC personnel in quickly identifying the falsification of worker radiological dose records.

DOE also evaluated the adequacy of corrective actions taken by WSRC in response to the unnecessary radiation exposures and subsequent falsification of radiological dose records. The actions taken by WSRC to include the accident investigation, root cause analysis, extent of condition review, and corrective actions taken demonstrate a commitment by WSRC to address the fundamental problems contributing to the events that unfolded on the morning of July 29, 2003, and to assure that similar problems are addressed elsewhere at the Savannah River site. Thus, DOE has determined that 50 percent mitigation is warranted for corrective actions taken for all Severity Level II violations with the exception of the quality improvement violation. With regard to that violation, both the WSRC and DOE investigations into the recent unnecessary exposure event noted the similarities between the current event and the 1999 FB-Line bagless can uptake event. Both events involved deficiencies in the areas of conduct of operations, radiological controls, hazard recognition, and response to alarms. DOE is concerned that corrective actions taken in response to the 1999 event, which were initially viewed as effective, were allowed to degrade or be modified to the point that they were no longer effective in preventing a recurrent event. A specific quality improvement citation has been included in the PNOV to address this weakness, and based on the above circumstances, it would be inappropriate to provide any mitigation

for your planned corrective actions with regard to this citation. DOE's expectation is that senior WSRC management will ensure that corrective actions taken in response to the more recent event will be sustained and remain effective. Towards that end, OE in conjunction with DOE-SR intends to closely monitor the WSRC corrective actions and their effectiveness over time.

You are required to respond to this letter and 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 Noncompliance Tracking System (NTS). You should enter into the NTS (1) any actions that have been or will be taken to prevent recurrence and (2) the target and completion dates of such actions.

After reviewing your response to the PNOV, including your proposed corrective actions, in addition to the results of future assessments or inspections, DOE will determine whether future enforcement action is necessary to ensure compliance with DOE nuclear safety requirements.

Sincerely,

Stephen M. Sohinki
Director
Office of Price-Anderson Enforcement

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

cc: J. Allison, DOE-SR
J. Crenshaw, DOE-SR
J. Roberson, EM-1
L. Vaughan, EM-5
A. Acton, IG-33
B. Cook, EH-1
A. Kindrick, EH-1
B. Luce, WSRC
R. Azzaro, DNFSB
R. Day, OE
T. Weadock, OE
Docket Clerk, OE

Preliminary Notice of Violation
and
Proposed Imposition of Civil Penalty

Westinghouse Savannah River Company
FB-Line Facility

EA 2004-03

In January 2004, the Office of Price-Anderson Enforcement (OE) conducted an investigation and reviewed pertinent documentation concerning the unnecessary radiation exposure of three Westinghouse Savannah River Company (WSRC) personnel and the subsequent falsification of radiological dose records on the morning of July 29, 2003, at the Savannah River Site FB-Line facility. Following an Enforcement Conference held on March 17, 2004, the Department of Energy (DOE) concluded that violations of DOE nuclear safety requirements have occurred and are set forth below with the associated civil penalties. 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.

In accordance with 10 CFR 820, Appendix A, *General Statement of Enforcement Policy*, DOE issues this Preliminary Notice of Violation (PNOV), with proposed civil penalty, pursuant to section 234a of the *Atomic Energy Act of 1954*, as amended, 42 USC 2282a, and 10 CFR 820.

I. Violations Pertaining to Work Processes (Communications)

10 CFR 830.122(e)(1) requires that work be performed consistent with technical standards, administrative controls, and other hazard controls adopted to meet regulatory or contract requirements, using approved instructions, procedures, or other appropriate means.

Contrary to the above, between July 28-29, 2003, work was not performed consistent with technical standards, administrative controls, and other regulatory or contract requirements, using approved instructions, procedures, or other appropriate means. Specific examples include the following:

A. Procedure 2S.4.1, *Shift Turnover*, Revision No. 3, section *Responsibilities*, dated March 31, 1996, states that, “Shift Managers are responsible for ensuring that a

proper turnover is made by ALL shift personnel." However, on the evening of July 28, 2003, the on-coming Shift Operations Manager (SOM) did not communicate to the First Line Managers (FLM) or other personnel involved in processing the material that high dose rate material had been placed in the 6/8 cabinets and that the personnel who had placed the material in the cabinets had worn lead jackets to minimize radiation exposure.

B. Procedure 2S.4.1, *Shift Turnover*, Revision No. 3, section F.7.2.2, dated March 31, 1996, states that the shift turnover checklist is to include "any unusual or unexplained variations in performance" and "any personnel or equipment safety problems or concerns that have occurred or that still exist." Further, the checklist includes sections for documenting changes in radiological conditions and the latest status of any significant changes in radioactivity levels since the previous shift. However, the FLM shift turnover checklists on the evening of July 28, 2003, did not indicate the unusually high dose rates associated with the material in the 6/8 cabinets, and there is no mention of the use of lead jackets to minimize radiation exposure.

C. Procedure S2.203, *Person-In-Charge*, Revision 0, section 4.2, dated October 7, 2002, states that the SOM is responsible for notifying "the PIC of changing conditions that may have an impact on the evolution/activity in progress." However, the SOM on duty that evening did not notify the Person In Charge (PIC) of the known high dose rate material to be processed and did not discuss the use of lead jackets by personnel on the previous shift.

D. Procedure S2.203, *Person-In-Charge*, Revision 0, section 4.3, dated October 7, 2002, requires that the PIC ensure that the information they and the other workers need to effectively perform the work assignment, per the pre-job briefing, is understood and that the work team understands and is confident of facility conditions, work instructions/procedures, radiological work permits, abnormal conditions and stopping points, prior to beginning the job. However, the PIC at the time of the event failed to (1) adequately communicate to the workers the radiological hazards associated with the job, (2) provide clear guidance on exceedance of suspension guides in the Job Specific Radiological Work Permit (JSRWP), (3) discuss proper response to Electronic Personal Dosimeter (EPD) alarms, and (4) discuss the proper use of personal dosimetry and Personal Protective Equipment (PPE).

E. Procedure SOP 221-FAC-1459, *Pre-Job Briefing Determination and Performance; Accessing High Radiation Areas; Accessing Areas With CAS Inaudibility*, Revision 51, section 3.1.5, dated July 28, 2003, states that the "RCO will provide a review of the applicable RWP requirements and room radiological conditions based on latest RSLS information." However, during the pre-job briefing that took place on the evening of July 28, 2003, the Radiological Control Operations FLM failed to discuss Radiological Work Permit (RWP) requirements such as EPD alarms, exceedance of

suspension guides, dosimetry, and PPE. In addition, radiological conditions, based on the latest Radiation Survey Log Sheet (RSLS) were not discussed.

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

II. Violations Pertaining to Work Processes (Other)

10 CFR 830.122(e)(1) requires that work be performed consistent with technical standards, administrative controls, and other hazard controls adopted to meet regulatory or contract requirements, using approved instructions, procedures, or other appropriate means.

Contrary to the above, between July 28-29, 2003, work was not performed consistent with technical standards, administrative controls, and other regulatory or contract requirements, using approved instructions, procedures, or other appropriate means. Specific examples include the following:

A. Procedure S2.203, *Person-In-Charge*, Revision 0, section 4.1 and 4.2, dated October 7, 2002, states that the Facility Manager is to "Ensure PIC assignments are established commensurate with activity/scope to be performed." In addition, the SOM is to "Maintain awareness of and concur with the choice of designated PIC commensurate with activity/scope to be performed." However, both the Facility Manager and the SOM failed to ensure that a PIC assignment was made for the material repackaging work to take place in the 6/8 cabinets on the evening of July 28, 2003, and the morning of July 29, 2003.

B. Procedure S2.203, *Person-In-Charge*, Revision 0, section 3.0, dated October 7, 2002, states that "The PIC shall be positioned to physically be part of or observe the work activity. If the assigned PIC must leave a work site, an alternate PIC (e.g., operator, mechanic, radiological control inspector, etc.) who has been identified in the pre-job briefing shall assume responsibilities of the PIC." However, the PIC left the work area during the material characterization job evolution without having an alternate PIC in place. In addition, the PIC was not positioned to physically be part of or observe the work taking place on the morning of July 29, 2003, in the Dissolver Maintenance Room (DMR).

C. The DOE Administrative Records Schedule 18: Security, Emergency Planning, and Safety Records, requires that the pre-job briefing records be maintained for 75 years. However, the completed pre-job briefing form for the pre-job briefings conducted on the evening of July 28, 2003, and on the morning of July 29, 2003, could not be located.

D. Procedure SOP 221-FB-1128-A-NS, *Preparing Items For H-Canyon Dissolution*, Revision 1, section 5.3.3.C, dated July 14, 2003, requires that a survey of the inner can be performed and if that inner can exceeds the RWP suspension limits, then

work is to be stopped and supervision is to be contacted. However, during the repackaging activity on the morning of July 29, 2003, several inner cans exceeded the RWP suspension limits (now termed guides), but work was not stopped and supervision was not notified.

E. Procedure 2S.1.1, *Procedure Administration*, Revision 7**,** section entitled *Procedure* and section II.C.1.a, dated March 17, 2003, states that "Under no circumstances are procedures to be altered, changed, or revised without a proper review and approval process." Further it is stated that, "Intent change revisions that involve manipulation of systems or equipment require validation of the entire procedure." However, during the job evolution to repackage the radiological material on the morning of July 29, 2003, changes to the procedure involving manipulation of equipment (i.e., use of non-prescribed tubes to facilitate bag-out) were made without proper review, validation, and approval.

F. Procedure SOP 221-FB-1128-A-NS, *Preparing Items For H-Canyon Dissolution,* Revision 1, section 3.4, dated July 14, 2003, states that, "Notification of the Shift Operations Manager is required prior to performance of this procedure." However, the SOM was not notified of performance of the procedure on the morning of July 29, 2003, prior to repacking radiological material in the 6/8 cabinets.

G. Procedure 1Q1-2, *Stop Work,* Revision 4, section *Responsibilities,* dated October 9, 2001, states that WSRC personnel are responsible for stopping work when hazardous conditions to personnel are present. However, upon recognition of the hazardous conditions present during the material repackaging activity on the morning of July 29, 2003, the Radiation Control Inspector (RCI) failed to stop work. It is noted that several other WSRC personnel (e.g., PIC, RCO FLM, SOM) were aware of the hazardous conditions present but did not execute their stop work authority.

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

III. Violations Pertaining to As Low As is Reasonably Achievable (ALARA) Practices

10 CFR 835.1001 requires that measures shall be taken to maintain radiation exposure in controlled areas As Low As is Reasonably Achievable (ALARA) through physical design features and administrative control.

Contrary to the above, effective measures were not taken and the ALARA process was not effectively utilized to limit occupational exposures to workers performing material bag-out operations from the 6/8 cabinets in the FB-Line facility on July 29, 2003. Specific examples include the following:

A. Despite the higher than usual radiation dose rates associated with the material, two operators and a RCI failed to wear lead jackets while performing material repackaging and bag-out operations. These lead jackets were readily available and had been worn by workers performing similar activities on the prior shift. As a result, the two operators and RCI received occupational radiation exposures significantly higher than anticipated or necessary to perform the work activity.

B. Work planning and hazard control measures established to control the material repackaging activity were not effective in controlling the work activity and ensuring occupational exposures were maintained ALARA. During earlier repackaging activities in March 2003, it was identified that this material (Rocky Flats scrub alloy) had greater associated radiation dose rates than those routinely experienced during material repackaging. However, despite this recognition, no specific ALARA review for the repackaging activity was performed and no specific RWP was developed to control the higher dose work. Instead, the work was performed using a JSRWP and ALARA review that had previously been established for routine material processing activities in the FB-Line 6/8 cabinets. No substantive changes were made to these documents to provide more effective controls over external exposure. A specific control with demonstrated effectiveness for external exposure (lead jackets) was left as an option in the JSRWP, rather than a mandated control. This lack of specific controls contributed to the inconsistent implementation and use of lead jackets between the two shifts performing the material repackaging.

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

IV. Violations Pertaining to 10 CFR 835 (Written Procedures)

10 CFR 835.104 requires that "written procedures shall be developed and implemented as necessary to ensure compliance with 10 CFR 835, commensurate with the radiological hazard created by the activity and consistent with the education, training, and skills of the individuals exposed to those hazards."

Contrary to the above, formal contractor procedures established to ensure compliance with the requirements of 10 CFR 835 were not effectively implemented in conjunction with the July 29, 2003, unnecessary radiation exposure event at the FB-Line facility. Specific examples include the following:

A. WSRC Manual 5Q1.1, procedure 507, *Departure from Administrative Control Limits*, Revision 7, section 5.1, dated January 6. 2003, describes the site process for establishing Savannah River Site Administrative Control Levels (ACL) to administratively control and reduce individual and collective radiation dose. Section 5.1 requires that "these levels shall not knowingly be exceeded without prior appropriate approvals." For 2003, an ACL of 1500 millirem had been established for FB-Line Packaging Operators. However, as a result of the unnecessary exposure event on July 29, 2003, one of the two involved FB-Line operators exceeded the site

ACL without prior approval. This operator received an estimated exposure of 840 millirem for the event, which coupled with the operator's prior yearly exposure exceeded the applicable ACL of 1500 millirem.

B. Manual 5Q1.1, procedure 504, *Radiological Work Permit*, Revision 11, section 5.1.3, dated June 12, 2003, discusses RWP suspension guides. The section requires that if an RWP suspension guide is reached, the Radiological Control Organization (RCO) will provide guidance for transition to a safe/low dose area. Section 5.1.3 also requires that "…**IF** no additional engineering controls, dosimetry, and/or PPE are required, **THEN PROCEED** with the task with approval from the RCO FLM and the PIC." Radiological surveys taken during the first half of the evening of July 28, 2003, identified several cans with dose rates in excess of the RWP dose rate suspension guide. This information was communicated to the RCO FLM during the pre-job briefing held on the morning of July 29, 2003. However, although clearly warranted by expected radiological dose rates, additional engineering controls and PPE (i.e., lead jackets) were not required and implemented. The work crew returned to work and proceeded with the material bag-out, thereby receiving higher than anticipated and unnecessary occupational exposure.

C. Procedure 5Q1.3-518C, *Operation and Use of the Siemens Neutron Electronic Personal Dosimeter, Model EPD-N*, section 5.0, dated January 15, 2002, requires the EPD be worn "simultaneously with the primary dosimeter and located on the chest area between the waist and the neck." However, both operators involved in the July 29, 2003, unnecessary exposure event failed to wear their EPDs co-located with the primary dosimeter (TLD) on their chest. Rather, one operator wore the EPD at the waist, and the other wore their EPD in their modesty clothing pants pocket.

D. Procedure 5Q1.3-518C, *Operation and Use of the Siemens Neutron Electronic Personal Dosimeter, Model EPD-N*, Revision 0, attachment 3, dated January 15, 2002, requires that upon actuation of the EPD dose alarm, affected personnel are to exit the area immediately and report to the RCO. However, during the July 29, 2003, bag-out operation all members of the work party (one RCI, two operators) experienced EPD dose alarms yet failed to exit the area and instead continued working.

E. JSRWP 03-FBL-112, Revision 2, dated June 26, 2003, stated that "extremity dosimetry is required for cabinet glove work." However, during the July 29, 2003, unnecessary exposure event two of the three workers (the RCI and one operator) failed to wear required extremity (hand) dosimetry.

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

V. Violation Pertaining to Quality Improvement

10 CFR 830.122(c)(2) requires the identification, control, and correction of items, services, and processes that do not meet established requirements.

10 CFR 830.122(c)(3) requires the identification of causes of problems and work to prevent recurrence as a part of correcting the problem.

Contrary to the above, between September 1999 and July 2003, the identification, control, and correction of items, services, and processes that do not meet established requirements, as well as the identification of causes of problems and work to prevent recurrence as a part of correcting the problem did not occur in that WSRC failed to adequately sustain corrective actions directed at preventing recurrence of known operational deficiencies. Specifically:

In 1999, FB-Line suffered from an event involving the unplanned release of [radioactive material } through a defect in a bagless transfer can. Multiple workers received intakes, with one worker exceeding the annual occupational exposure limit of 5 rem committed effective dose equivalent (CEDE). As part of its investigation into the current 2003 event, WSRC analyzed the 1999 bagless can event and noted similar deficiencies in conduct of operations, radiological controls, hazard recognition, and alarm response. OE investigators also noted strong similarities between the two events.

OE considered the root cause analysis and corrective actions taken by WSRC in response to the 1999 FB-Line event to be adequate in preventing future recurrence. However, due to process changes undertaken by WSRC in the intervening years to promote efficiency in operations, some of the corrective actions taken in 1999 were either modified or eliminated. It is this failure to sustain effective corrective actions that contributed to the recurrence of similar deficiencies observed in the material repacking activity that took place on the morning of July 29, 2003, at the FB-Line.

This violation constitutes a Severity Level II problem.
Civil Penalty - $55,000

VI. Violation Pertaining to 10 CFR 820.11 (Falsification of Radiation Dose Records)

10 CFR 820.11(b) states that no person involved in a DOE nuclear activity shall conceal or destroy any information concerning a violation of a DOE Nuclear Safety Requirement, a Nuclear Statute, or the Act.

Contrary to the above, on the morning of July 29, 2003, WSRC personnel concealed information concerning a violation of a DOE nuclear safety requirement. Specifically, after exiting the DMR two operators were required to enter their EPD dose readings into the EPD log. Prior to doing this the operators met with the RCO FLM on duty at the time of the event and he advised them that they should record values of less than 100 mrem. The operators heeded his advice and recorded values of less than 100 mrem.

The actual readings on their EPDs were 378 mrem and 229 mrem. Shortly thereafter they encountered an RCI, unrelated to the event, and he stated that their EPDs were set at mid-range and that the EPD alarm would have actuated at 35 mrem. The two operators then changed their EPD logbook entries to 36.9 mrem and 33.4 mrem, respectively.

This violation constitutes a Severity Level II problem.
Civil Penalty - $13,750

VII. Violation Pertaining to Management Assessments

10 CFR 830.122(i) requires that managers assess their management processes and identify and correct problems that hinder the organization from achieving its objectives.

Contrary to the above, between September 1999 and July 2003, FB-Line management failed to adequately identify and correct problems that hindered their organization from achieving its objectives. Specifically, assessment results varied in quality, and there were a large number of "no finding" or positive assessments. Thus, although precursors to the deficiencies associated with the 2003 event were noted in specific assessments, these tended to be washed or balanced out by the large number of positive assessment results. Consequently, facility assessments were ineffective in providing an accurate representation of facility performance. Thus, deficiencies associated with the repackaging activities on July 28 -29, 2003, went undetected and uncorrected.

This violation constitutes a Severity Level II problem.
Civil Penalty - $27,500

Pursuant to the provisions of 10 CFR 820.24, WSRC is hereby required within 30 days of the date of the Preliminary Notice of Violation and Proposed Imposition of Civil Penalty, to submit a written statement or explanation to one of the following addresses:

(if sent by U.S. Postal Service):

Director, Office of Price-Anderson Enforcement
Attention: Office of the Docketing Clerk
EH-6, 270 Corporate Square Building
U.S. Department of Energy
1000 Independence Avenue, SW
Washington DC 20585-0270

(if sent by overnight carrier):

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 Road
Germantown, MD 20874-1290

A copy should also be sent to the Manager, DOE Savannah River Operations Office. 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 in this PNOV which you believe are not correct, and (3) the reasons for the violations if admitted, or if denied, the basis for denial. Corrective actions that have been or will be taken to avoid future violations should be delineated with target and completion dates in OE's Noncompliance Tracking System.

In the event the violations set forth in the Preliminary Notice of Violation are admitted, this PNOV will constitute a Final Order in compliance with the requirements of 10 CFR 820.24.

Any request for remission or 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 the 30 days after the issuance of the PNOV and civil penalty, unless the violations are denied, or remission or additional mitigation is requested, WSRC shall pay the civil penalty of $206,250 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 one of the above addresses. If WSRC 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, WSRC 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 Germantown, MD
this 6th day of April 2004

ENFORCEMENT CONFERENCE SUMMARY

Unnecessary Radiation Exposure of Workers and Subsequent Falsification of Radiation Dose Records

(NTS-SR--WSRC-FBLINE-2003-0001)

On March 17, 2004, the Office of Price-Anderson Enforcement (OE) held an Enforcement Conference with Westinghouse Savannah River Company (WSRC), in Germantown Maryland. The meeting was called to discuss the facts, circumstances, and corrective actions pertaining to the July 29, 2003, event at FB-Line in which three WSRC workers received a greater than anticipated radiation exposure while repackaging radioactive material and the subsequent falsification of radiation dose records. Mr. Stephen Sohinki, Director of the Office of Price-Anderson Enforcement, called the meeting to order. Mr. Sohinki stated that OE had convened the meeting to (1) address issues discussed in the February 25, 2004, Investigation Summary Report, (2) discuss corrective actions taken to prevent recurrence, and (3) discuss mitigation factors for OE consideration. Information and key areas discussed at the conference are summarized below, and material provided by WSRC during the conference was incorporated into the docket.

Mr. Bill Johnson, WSRC Executive Vice-President, began the WSRC presentation by stating that WSRC recognizes and accepts its responsibility to conduct work safely and in compliance with requirements. He went on to state that performance demonstrated during this event was unacceptable. Mr. Johnson then continued by stating that WSRC agreed with the factual accuracy of the Investigation Summary Report and that the technical inquisitiveness on the part of WSRC was instrumental in the identification of the event, which led to a timely and thorough investigation. Mr. Johnson then summarized the event, addressed WSRC senior management actions taken in response to the event, and discussed significant institutional management issues identified through the course of their investigations to include issues related to (1) culture, (2) process change management, (3) quality improvement/assessments, and (4) human performance.

Mr. Bob McQuinn, WSRC F Area Closure Manager, provided a more detailed overview of these management issues as they relate to FB-Line and discussed corrective actions associated with each issue. Mr. McQuinn then discussed the extent of condition review undertaken by WSRC to include a discussion of the process used by WSRC to identify areas of weakness and associated corrective

actions identified and implemented. Mr. McQuinn then addressed some of the actions taken by WSRC management in response to the initial and final extent of condition review. Mr. McQuinn then focused his discussion on the WSRC view of the safety significance of the event. He stated that although the actual radiation exposure to the workers was well below regulatory limits, WSRC is concerned with the (1) extensive breakdowns in their Conduct of Operations and Radiation Control Programs, (2) failures in their Quality Improvement and Management Assessment Programs, and (3) falsification of radiation dose records.

Mr. Bill Luce, WSRC PAAA Coordinator, then discussed the mitigation aspects of the event by stating that the problem was identified proactively by the RCO Facility Manager and that timely and effective corrective actions were identified and taken by WSRC by conducting a complete and comprehensive event investigation and extent of condition review.

Mr. Johnson then concluded the WSRC presentation by noting that (1) the event was identified through management inquisitiveness, (2) the safety significance and severity of the event was immediately understood, and (3) the event was thoroughly investigated.

Mr. Sohinki stated that OE would consider the information presented by WSRC together with the entire record when OE undertakes its enforcement deliberations. Mr. Sohinki then adjourned the conference.

March 17, 2004

Unnecessary Radiation Exposure of Workers and Subsequent Falsification of Radiation Dose Records

Enforcement Conference List of Attendees

DOE – Office of Price-Anderson Enforcement

Stephen M. Sohinki, Presiding Officer
Richard Day, Enforcement Specialist
Tony Weadock, Enforcement Specialist

DOE – Office of Environmental Management

Larry Vaughan, PAAA Coordinator

DOE – Savannah River Operations Office

Charlie Anderson, Deputy Manager
Robert Edwards, Senior Facility Representative
William Bell, FB-Line Facility Representative

Westinghouse Savannah River Company

Bill Johnson, Executive Vice-President
Leo Sain, Deputy Closure Manager
Bob McQuinn, F Area Closure Manager
Phil Breidenbach, H Area Completion Manager
Bill Luce, PAAA Coordinator