

March 6, 2000

Mr. Joseph J. Buggy
[]
Westinghouse Savannah River Company
Building 703-A
Road 1
Aiken, SC 29802

EA-2000-02

Subject: Preliminary Notice of Violation and Proposed Imposition of Civil Penalty
\$110,000 (NTS-SR--WSRC-ALABF-1999-0001)

Dear Mr. Buggy:

This letter refers to the Department of Energy's (DOE) evaluation of quality assurance deficiencies with the procurement of items for use at nuclear facilities under your control. DOE conducted an investigation and issued an Investigation Summary Report on December 21, 1999, detailing its findings. An Enforcement Conference was held with management of the Westinghouse Savannah River Company (WSRC) to discuss these matters on January 11, 2000. The Enforcement Conference Summary Report is enclosed.

Based upon DOE's investigation and the information that WSRC provided at the Enforcement Conference, DOE concluded that violations of 10 CFR 830.120 (Quality Assurance Rule) occurred. These violations are described in the enclosed Preliminary Notice of Violation (PNOV).

Section I of the PNOV describes multiple breakdowns in the work processes, procurement processes and design control processes with the procurement of items used for the movement and storage of nuclear waste. In one case described in the PNOV, WSRC procured four TRUPACT-II Standard Waste Boxes (SWB) for onsite transportation and storage of transuranic waste. WSRC did not require the supplier of the boxes to implement quality controls to ensure that the boxes met the technical requirements in the Purchase Order for DOT 7A Type A containers. Furthermore, WSRC provided the vendor with conflicting specifications for the boxes. WSRC determined that the boxes were of indeterminate quality only after the boxes had been filled with TRU waste and transported from one onsite facility to another.

Section II of the PNOV describes violations of the quality improvement provision of the Quality Assurance Rule. The breakdowns cited in this section demonstrate a failure by WSRC to correct long-standing quality problems in the areas of procurement and

acceptance of nuclear items. In November 1997, DOE issued PNOV EA-97-11 to WSRC, describing violations of procurement and quality improvement requirements. In this case, WSRC failed to assure the quality of safety grade [gas] components purchased from a subcontractor. Problems with welds on the components became known only after some welds cracked and began to leak. Another violation cited in the attached PNOV involves the procurement and acceptance for use of 36 safety class concrete culverts used to store nuclear waste from a supplier who did not have a WSRC approved quality assurance process. WSRC accepted these items without the required Commercial Grade Dedication.

In accordance with the General Statement of Enforcement Policy, 10 CFR Part 820, Appendix A, the violations described in Sections I and II of the enclosed PNOV are classified as Severity Level II violations. In determining the Severity Level of these violations, DOE considered the actual and potential safety significance of the violations and the recurring nature of the breakdowns. According to your own safety documentation, the nuclear waste containers provide protection to the workers and public from uncontrolled radioactive releases that could result from an accident. Adequate quality controls are necessary to ensure these waste containers are structurally sound and leak tight. Fortunately, the quality problems were identified and the violations did not result in any actual consequences to workers or the public. However, DOE is concerned because the violations demonstrate a significant and recurring lack of adherence with your established processes for ensuring that items important to safety perform as intended.

To emphasize DOE's concern regarding the failure to adequately identify and correct in a timely manner recurring deficiencies in the procurement of items important to safety, I am issuing the enclosed PNOV and Imposition of Civil Penalty in the amount of \$110,000. DOE has determined that no mitigation is warranted for self-identification and reporting of these problems. The Office of Enforcement and Investigation identified the TRUPACT-II SWB quality problems to WSRC. The assessments performed by WSRC of the TRUPACT-II SWB and the procurement process were not sufficiently comprehensive to fully identify the quality problems and the causes. Furthermore, WSRC reported the problems into the Noncompliance Tracking System (NTS) only after being informed by the Office of Enforcement and Investigation of its intention to enter a report on the issue into the NTS.

DOE is concerned that quality problems with your procurement process identified to you in 1998 have not been adequately corrected. Along with your response to this PNOV, DOE requires that you provide a comprehensive corrective action plan, addressing the quality problems with your procurement process, to the DOE Savannah River Operations Office.

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 NTS.

You should enter into the NTS (1) any additional actions you plan 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 in addition to the results of future assessments or inspections, DOE will determine whether further enforcement action is necessary to ensure compliance with DOE nuclear safety requirements.

Sincerely,



David Michaels, PhD, MPH
Assistant Secretary
Environment, Safety and Health

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

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

cc: B. Costner, S-1
M. Zacchero, EH-1
S. Carey, EH-1
K. Christopher, EH-10
S. Hurley, EH-10
D. Stadler, EH-2
O. Pearson, EH-3
J. Fitzgerald, EH-5
C. Huntoon, EM-1
L. Vaughan, EM-5
M. Wangler, EM-70
M. Dayani, DOE-SR PAAA Coordinator
K. Thames, DOE-SR PAAA Coordinator
R. Farrell, DOE-CA PAAA Coordinator
M. Italiano, DOE-CA PAAA Coordinator
G. Rudy, WSRC
G. Bell, WSRC-Contractor PAAA Coordinator
R. Azzaro, DNFSB
Docket Clerk, EH-10

PRELIMINARY NOTICE OF VIOLATION
NTS-SR--WSRC-ALABF-1999-0001

Westinghouse Savannah River Company

EA-2000-02

As a result of a Department of Energy (DOE) evaluation of the events and circumstances associated with the implementation of quality assurance controls and requirements to ensure that nuclear items and services are designed and procured to appropriate standards and perform their intended functions, violations of DOE nuclear safety requirements were identified. In accordance with 10 CFR 820, Appendix A, "General Statement of Enforcement Policy," DOE issues this Preliminary Notice of Violation and proposes to impose civil penalties pursuant to Section 234A of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2282a, and 10 CFR 820. The particular violations are set forth below.

I. Quality Assurance Violations Associated with Procurement

- A. 10 CFR 830 (c)(2)(i) *Work Processes* requires that work shall be performed to established technical standards and administrative controls using approved instructions, procedures, or other appropriate means. Items shall be identified and controlled to ensure their proper use.
- B. 10 CFR 830 (c)(2)(ii) *Design* requires that items and processes shall be designed using sound engineering/scientific principles and appropriate standards. Design work, including changes, shall incorporate applicable requirements and design basis. Design interfaces shall be identified and controlled.
- C. 10 CFR (c)(2)(iii) *Procurement* requires that procured items and services shall meet established requirements and perform as specified. Prospective suppliers shall be evaluated and selected on the basis of specified criteria. Processes to ensure that approved suppliers continue to provide acceptable items and services shall be established and implemented.

Contrary to the above,

1. On April 23, 1997, WSRC issued Purchase Order Number AB85282A to Vulcan Industries for the fabrication of four TRUPACT-II Standard Waste Boxes (SWBs) "in accordance with specification NUPACK TRUPACT-II SAR, Rev 0." The

Purchase Order required that the SWBs comply with DOT Type A container regulations. DOT regulations for Type A containers require that specific performance requirements of the container be established by tests (49 CFR 173.465) or by using alternate methods authorized by 49 CFR 173.461(a).

2. WSRC failed to ensure that the four SWBs complied with the DOT performance requirements for Type A containers. Specifically, the NUPACK TRUPACK-II SAR was not listed as a prototype tested and documented in the DOE *Test and Evaluation Document for the U.S. Department of Transportation Specification 7A Type A Packaging*, DOE/RL-96-57, nor was the NUPACK TRUPACK-II SAR specification tested to demonstrate the performance requirements required by 49 CFR 173.465.
3. WSRC issued Procurement Requisition 1A2824 on April 16, 1997, requisitioning four SWBs. The Procurement Requisition required that WSRC perform a dimensional check of the SWBs during receipt inspection. WSRC failed to conduct the dimensional check of the four SWBs during receipt inspection.
4. WSRC Manual 1Q, Procedure 7-2, requires that a Safety Class system, structure, or component (SSC) is to be procured at a Procurement Level 1 or be dedicated for Safety Class using the Commercial Grade Dedication process in Manual 1Q, QAP 7-3. Between June 1997 and June 1998, WSRC procured 36 concrete culverts for use at the Solid Waste Management Facility. The Solid Waste Management Facility SAR designates the concrete culverts as Safety Class structures. WSRC procured the concrete culverts as Procurement Level 2 items and used a supplier who was not on the WSRC Qualified Suppliers List. WSRC did not perform Commercial Grade Dedication prior to acceptance of the concrete culverts as Safety Class structures, as required for safety class items not procured at a Procurement Level 1.
5. WSRC Manual 1Y Procedure 8.01 requires that a quality review by the Cognizant Quality Function for Safety Class for safety class work packages for both pre and post work. A Program Deficiency Report issued by WSRC on March 23, 1999, identified that work packages BRPXR, BVYDK, BSQFC, and BSQCZ issued for the repair the Safety Class culverts did not receive the required quality review.
6. WSRC Manual 1Q, Procedure QAP 13-1, requires that items identified with a Storage Level C requirement be stored and protected from exposure to the environment. In February 1998, WSRC issued Purchase Requisition Number 2A6868 for 12 SWBs. The requisition identified Storage Level C requirements for the SWBs. However, WSRC failed to store ten of these SWBs in a manner to protect them from exposure to the environment. Specifically, WSRC stored the ten SWBs outside Building 772-F without protection from the elements, as identified in Program Deficiency Report Number 99-PDR-06-014 dated June 23, 1999.

7. WSRC Manual 11Q, Procedure 1.05, Nuclear Facility Unreviewed Safety Questions (USQ), requires that the USQ process be initiated for discovery of a discrepancy between the facility physical configuration and that assumed in the authorization basis and if it is desired to retain the as-built configuration. Contrary to this requirement:
 - a. In February 1998, initiated Container Approval Request, Number CAR-SWE-98-0012, to prepare to move four SWBs filled with transuranic waste to the Standard Waste Management Facility. As part of the Container Approval Request, WSRC performed USQ number USQ-SWE-980031. WSRC identified a negative USQ. In reaching this determination, WSRC used " Section 2.5.4.1 of the [Solid Waste Management Facility] SAR, [which] approves use of WIPP Standard Waste Boxes" as part of the justification for the negative USQ. In May 1998, after identifying a negative USQ, WSRC became aware of fabrication problems with the vendor supplying the SWBs and in September 1998, WSRC initiated a Nonconformance Report which identified these SWBs as potentially failing to meet WIPP design requirements for SWBs. The identification of the potentially defective SWBs rendered the USQ determination invalid. However, WSRC failed to initiate the USQ process to evaluate this discrepancy or to re-evaluate the prior USQ determination.
 - b. On April 6, 1999, WSRC issued a report titled Assessment of Westinghouse Procurement Programs which identified that 36 Safety Class concrete culverts placed into service at the Solid Waste Management Facility were neither procured at Procurement Level 2 nor underwent Commercial Grade Dedication, as required by WSRC Manual 1Q, Procedure 7-2. WSRC failed to initiate the required USQ determination upon discovery of the problem with the concrete culverts.

Collectively, these violations represent a Severity Level II problem.
Civil Penalty - \$55,000

II. Quality Assurance Violations Associated with Quality Improvement

10 CFR 830.120 (c) (1) (iii) Quality Improvement requires that processes to detect and prevent quality problems shall be established and implemented. Items, services, and processes that do not meet established requirements shall be identified, controlled, and corrected according to the importance of the problem and the work affected. Correction shall include identifying the causes of the problem and working to prevent recurrence.

Contrary to this requirement, WSRC has not implemented a Quality Improvement process such that quality problems are identified and corrected, in that—

1. In November 1997, DOE issued Preliminary Notice of Violation Number EA 97-11 to WSRC. EA 97-11 described violations of procurement and quality

improvement requirements of the Quality Assurance Rule (10 CFR 830.120 associated with safety grade [Gas] Systems placed into operation at the Defense Waste Processing Facility. In this case, despite previously identified quality problems, WSRC placed into operation safety grade that did not comply with design requirements.

2. On May 26, 1998, WSRC reported that it had sent a shipping container to another DOE site in which incorrect gasket material was used for the O-Ring. WSRC reported that it improperly procured the gasket as a Level 3 procurement. Nuclear Regulatory Commission requirements call for WSRC to procure the gasket at a Level I or provide an equivalent level of assurance for the item by using the Commercial Grand Dedication Program.
3. WSRC Procedure QAP 15-1, Control of Nonconforming Items, requires a Nonconformance Report when an item does not satisfy a technical or quality requirement, is of indeterminate quality, or has document deficiencies which render the item indeterminate. This procedure also requires that nonconforming items be controlled. Contrary to this requirement–
4. WSRC failed to issue a Nonconformance Report when it became aware around May of 1998 that the SWBs it procured from Vulcan Industries were of indeterminate quality.
5. WSRC failed to issue a Nonconformance Report and control 36 Safety Class concrete culverts. These concrete culverts were procured and accepted between June 1997 and June 1998 without the required commercial grade dedication (CGD). A WSRC Assessment Team identified that facility personnel were aware of the failure to implement the CGD and were backfitting the CGD package.
6. On October 13, 1999, WSRC reported suspect weld quality in B-12/B-25 radioactive waste containers after two WSRC generators issued Nonconformance Reports. WSRC identified in this report that vendor corrective actions initiated after the first Nonconformance Report was not successful in preventing shipment of boxes to SRS with poor weld quality.

Collectively, these violations represent a Severity Level II problem.
Civil Penalty - \$55,000

Pursuant to the provision of 10 CFR 820.24, Westinghouse Savannah River Company is hereby required within 30 days of the date of this Preliminary Notice of Violation (Notice) to submit a written statement or explanation to the Director, Office of Enforcement and Investigation, Attention: Office of the Docketing Clerk, P.O. Box 2225 Germantown, MD 20874-2225. Copies should also be sent to the Manager, DOE Savannah River Operations Office, and to the cognizant DOE Secretarial Office for the facility that is the subject of this Notice. 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 violation; (2) the reasons for the violations if admitted or, if denied, the reasons they are not correct; and (3) the corrective actions that have been taken and the results achieved. The contractor will enter the following into the Noncompliance Tracking System: the corrective actions that have been or will be taken to avoid further violations and the target completion dates when full compliance will be achieved. In the event the violation set forth in this Preliminary Notice of Violation are admitted, this Notice will constitute a Final Notice of Violation in compliance with the requirements of 10 CFR 820.25.

Any request for remission or mitigation of the 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 this Notice and Civil Penalty, unless the violations are denied, or remission or mitigation is requested, Westinghouse Savannah River Company shall pay the civil penalty of \$110,000 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 Enforcement and Investigation, Attention: Office of the Docketing Clerk at the above address. Should Westinghouse Savannah River Company fail to answer within the time specified, the contractor will be issued an order imposing the civil penalty.

If requesting mitigation of the proposed civil penalty, Westinghouse Savannah River Company should address the adjustment factors described in Section VIII of 10 CFR 820, Appendix A.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Michaels", written in a cursive style.

David Michaels, PhD, MPH
Assistant Secretary
Environment, Safety and Health

Dated at Washington, DC
this 6th day of March 2000

ENFORCEMENT CONFERENCE SUMMARY
NTS-SR--WSRC-ALABF-1999-0001

The Office of Enforcement and Investigation (EH-Enforcement) held a follow-up Conference with representatives of the Westinghouse Savannah River Company (WSRC) on January 11, 2000, at the Department of Energy (DOE), Germantown, Maryland. EH-Enforcement held the meeting to discuss quality assurance deficiencies with the WSRC procurement program.

The conference was called to order by R. Keith Christopher, Director, EH-Enforcement. A list of attendees is attached.

WSRC acknowledged deficiencies in its procurement program and stated a commitment to correcting the problems and to demonstrating improvement in this area. WSRC also acknowledged that the extent of the problem might be greater than the specific occurrences described by DOE in its Investigation Summary Report.

WSRC stated that it was in general agreement with the issues described in the Investigation Summary Report but differed with DOE in specific technical areas. DOE discussed its position with respect to quality assurance requirements for containers for onsite shipment of radioactive material and provided WSRC with documentation to support DOE's position. (On March 13, 2000, EH-Enforcement received word from WSRC that the technical issues that it had raised were no longer applicable in light of the documentation provided by DOE at the Enforcement Conference).

WSRC focused the remainder of the Enforcement Conference on discussing procurement deficiencies and its corrective action plan. WSRC provided a handout detailing the areas that it discussed. A copy of the handout is attached. Keith Christopher then adjourned the conference.

**Enforcement Conference
Westinghouse Savannah River
Procurement Quality Issues**

**January 11, 2000
List of Attendees**

DOE EH-Enforcement

R. Keith Christopher, Director
Sharon Hurley, Supervisory Investigator
Richard Day, Enforcement Specialist
Tony Weadock, Enforcement Specialist
Steve Hosford, Technical Advisor

DOE EM Program Office

Michael Wangler, Health Physicist
Joseph Payer, Environmental Protection Specialist

DOE Savannah River

T. F. Heenan, Assistant Manager for Environmental Programs
Jeffrey Allison, Assistant Manager for Health Safety and Technical Support

Westinghouse Savannah River Company

Bob Pedde, []
Sam Formby, []
Andrew Vincent, []
Bill Luce, []