

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

January 14, 1994

MEMORANDUM FOR: G.W. Cunningham, Technical Director

COPIES: Board Members

FROM: Robert F. Warther

SUBJECT: Report on Review of Order Compliance at the Savannah River Site (SRS) HB-Line

1. **Purpose:** This purpose of this trip was to review Westinghouse Savannah River Company's (WSRC) adherence to safety-related DOE Orders at the SRS HB-Line and identify actions taken by the DOE Savannah River Field Office to implement Recommendation 90-2. The review was conducted from January 10, 1994 through January 12, 1994 by DNFSB staff members M. Merritt, J. Schapira, R. Warther, and outside expert R. West.
2. **Summary:** The HB-Line order compliance self-assessment program for adherence was implemented in late November. The program is sound, and if implemented well, will result in a viable orders and standards compliance self-assessment program. Two fundamental observations were noted with the program as currently implemented:
 - a. The assessors assigned to conduct the adherence self-assessments received limited training concerning the conduct of detailed assessments. As a result, assessment quality and rigor varied substantially. NMPD manual 1E7 Procedure A-301 states that performance-based assessments are based on document reviews, walkdowns, interviews, and observations of activities. Some compliance packages reviewed were very complete and thorough. At the other extreme, some were very weak. Most of the adherence assessment packages were between these two extremes, and consisted of (1) document certification reviews or (2) limited operator interviews.
 - b. Many assessment requirement cards did not contain sufficient details to meet all safety statements contained in the DOE orders. As a result, adherence assessments intended to fully satisfy a functional area or portion of a functional area were not completely assessed against all safety significant order statements.
3. **Background:** In December 1992 and January 1993, the Board conducted public hearings and held deliberations regarding the restart of the SRS HB-Line. One of the outcomes of this hearing and deliberations was a commitment for HB-Line personnel to assess compliance with DOE Orders of interest to the Board in accordance with DOE's DP-AP-202, *Order Compliance Self-Assessment Instruction*. WSRC worked throughout most of 1993 to assess their compliance with the orders at the HB-Line. Scheduling delays encountered by DOE and WSRC were reported to the Board at various times during 1993.

In a letter dated November 8, 1993, DOE stated that some of the HB-Line order compliance assessments were ready for DNFSB review. The DNFSB staff conducted a review from November 30 through December 2, 1993 and identified several fundamental deficiencies. DOE committed to expeditiously correct these deficiencies. On December 17, 1993, DOE-SR and DOE-Headquarters advised the DNFSB staff that WSRC and DOE-SR had demonstrated administrative order compliance for the HB-Line, and that most DOE review and approval actions were complete. The DNFSB staff conducted a second order compliance review from December 20 through 21, 1993. Following this trip and an unrelated brief to the Board regarding order compliance in the DOE complex, the staff was tasked to return to SRS to determine the status of HB-Line adherence with the DOE orders and determine the extent of DOE Field Office involvement in the process.

4. **Discussion:** Most of the DNFSB staff and M&O contractor efforts to assess implementation of Recommendation 90-2 have been focused on ensuring plans, programs, policies and procedures are in place to support order requirements. The purpose of this review at HB-Line was to determine the extent to which those plans, programs, policies and procedures are adhered to during plant operations. WSRC has drafted a procedure manual (1E7 A-301 Rev 0) to define the process to be used by the Nuclear Material Processing Division (NMPD) to conduct self-assessments. This procedure integrates the *Operational Readiness Functional Area Requirements* (WSRC 2S) manual, and *Facility Monitoring Program* (WSRC-SCD-4) manual. The 2S manual requires functional managers to assess performance in their areas of responsibility through facility inspections. The SCD-4 manual provides 22 functional areas of safety and operations for management inspections, and establishes requirements to assess adherence to requirements in the 22 functional areas.

Functional area managers have been assigned to all 22 functional areas. These managers have divided each functional area into portions that are to be assessed. For example, in the area of quality assurance, WSRC has established 18 assessment requirement cards that correspond to the 18 elements of ANSI/ASME NQA-1. The management assessment cards are designed to include performance criteria to evaluate the applicable portion of a functional area. The assessment requirement cards include periodicity information to ensure that reviews are conducted on a regular basis. Most of the 18 QA elements are reviewed quarterly. This is a sound approach that should result in a viable self-assessment program for adherence to the orders.

Based on the DNFSB staff's review, two fundamental deficiencies were noted. First, the document SCD-4 does not provide sufficient guidance to ensure that assessors perform a rigorous assessment. Second, management assessments were often insufficiently detailed to ensure that requirements in the functional area were adhered to during operations.

- c. SCD-4 guidance: SCD-4 establishes requirements to conduct self-assessments in a manner similar to the method in which the preventive maintenance system establishes maintenance requirements. Periodicities for assessment requirements have been established on cards, and initial baseline assessments have been completed for many

order statements. The establishment of periodicities should ensure an ongoing program to ensure compliance with the orders. However, schedules for continuing assessments have not been completed. These are expected to be completed by the end of February.

The DNFSB staff noted that SCD-4 will require modifications in several areas. For example, SCD-4 does not provide sufficient guidance to ensure that the requirements contained in the DOE Radiological Control Manual have been adequately implemented. Other examples include the following:

- i. The objectives for assessment requirements are not consistent for all cards. For example, several cards had objectives to verify issuance of directives, including a procedure to define qualification requirements and procedures for written, oral examinations and operational evaluations. These cards were not performance-based.
 - ii. Cards in the environmental protection area stated that procedures are to be developed, but did not contain specific performance criteria to evaluate the use of those procedures. DP-AP-202 defines development of procedures without associated performance criteria to be administrative compliance, not adherence compliance.
 - iii. In some cases, the cards contained performance criteria not applicable to the HB-Line. These performance criteria have not been replaced by additional performance criteria that are applicable to the HB-Line.
- d. Management assessments: The following was observed during the staff's review of the management assessments:
- i. Most assessors were trained prior to conducting the reviews. However, the separations area manager noted that retraining will be required based on the reviews.
 - ii. Based on comment 4.a.ii above, some individuals performing assessments only verified the existence of implementing procedures and that operators were using the procedures. In other instances assessors observed the operators to ensure the procedures were adequate and followed.
 - iii. Some management reviews were limited to confirming information rather than assessing compliance.
 - (1) Conversations were used in place of reviewing objective evidence during the assessment of technical support training requirements and fissionable material handling operator and supervisor required training subjects.

- (2) A review of management involvement in ALARA documented that Radiological Work Procedures (RWPs) have been reviewed, and discussions with the maintenance personnel indicated that they had an understanding of ALARA principles. Radiological work was not observed as part of the review.
 - (3) A conduct of operations review concluded that procedures were adhered to because all operators were qualified to operate the equipment according to training records.
 - (4) Evidence of adherence with hoisting and rigging preventive maintenance consisted of ensuring inspection stickers were affixed to the equipment.
- iv. In some cases, incorrect information was assessed. It is not clear if this was due to inadequate cards, inadequate training, or both.
- (1) One inspection statement requires a list of specific technical training support personnel positions to evaluate if required facility-specific subject areas are included as appropriate to the position. The assessor obtained a list of support personnel and did not evaluate if training had been defined for each position.
 - (2) The objective of one assessment card was to assess qualification requirements for personnel in each functional area. DOE Order 5480.20 requires qualification requirements for personnel in each functional LEVEL. This error was not noted by the assessor as should have occurred during his review of the reference document. As a result the Order requirement was not assessed.
- c. Commitment tracking system: All deficiencies identified during WSRC's initial assessment were entered into a commitment tracking system. Specific individuals responsible for correcting the deficiencies are included in the system, but due dates have not been assigned. Some deficiencies were not reviewed by management prior to entry into the system. As a result, the system will have to be reviewed carefully prior to use by the manager. In its current state, there has been no demonstration of the effectiveness of the use of this system in correcting noted deficiencies.
- d. Quality Assurance: The WSRC QA organization did not follow WSRC procedure SCD-4 to determine the extent of adherence with the QA or other orders. QA personnel have prepared a schedule of reviews that addresses many of the functional areas, but this schedule does not completely envelope all functional areas. Furthermore, virtually all the QA reviews on the schedule are requested by either site QA or line management. In general, area QA personnel

do not schedule reviews. This brings into question the independence of the area QA organization.

- e. **DOE Management:** DOE has not documented a thorough review of the WSRC assessments. DOE attended the presentations to the DNFSB staff, but did not participate in the assessment compliance reviews. Based on discussions with senior DOE personnel, DOE SR will have a program in place to review the contractor's compliance with DOE orders by the end of March 1994.
- 5. Future Actions:** The staff plans a follow-on trip to review the status of adherence with the orders at HB-Line by mid-April. The staff will include a review of DOE SR implementation of Recommendation 90-2 at this time.