In the event the Licensee requests a hearing as provided above, the issues to be considered at such hearing shall be:

(a) Whether the Licensee was in violation of the Commission's requirements set forth in Violations I.B.1 and I.B.2, as set forth in the Notice, and

(b) Whether, on the basis of such violations and the additional violations set forth in Section I of the Notice that the Licensee admitted, this Order should be sustained.

Dated at Rockville, Maryland this 27th day of February 1995.

For the Nuclear Regulatory Commission. Hugh L. Thompson, Jr.,

Deputy Executive Director for Nuclear Materials Safety, Safeguards and Operations Support.

Appendix-Evaluations and Conclusion

On October 21, 1994, a Notice of Violation and Proposed Imposition of Civil Penalty (Notice) was issued for violations identified during NRC inspections conducted on June 1-July 1, 1994, July 1-8, 1994, and July 1-August 9, 1994. Babcock and Wilcox Naval Nuclear Fuel Division (Licensee) responded to the Notice with a reply and an answer, both dated November 20, 1994. The Licensee admitted Violations I.A.1, I.A.2, II.A, and II.B, denied Violations I.B.1, I.B.2, and II.C, protested the proposed imposition of the civil penalty, disagreed with NRC statements concluding that the violations represented a Severity Level III problem, and disagreed with the application of the escalation and mitigation factors. The NRC's evaluations and conclusion regarding the Licensee's requests are as follows:

I. Evaluation of Violations Assessed a Civil Penalty

Restatement of Violation I.B.1

License Condition No. S–1 of SNM–42 requires that licensed material be used in accordance with statements, representations, and conditions contained in Sections I through IV of the application dated February 22, 1982, and supplements thereto.

Section III, Paragraph 2.0, of the application requires that the design of equipment and establishment of operating safety limits consider the pertinent process conditions and known modes of failure. Certain conditions may be deemed incredible if specifically excluded by experimental evidence or design considerations.

Section II, Paragraph 3.1, of the application states that the Change Review Board (CRB) reviews the effect on nuclear criticality safety, radiation protection, and other regulatory requirements of new and revised facilities, equipment and processes involving special nuclear material and ensures appropriate safety controls are considered.

Contrary to the above, pertinent process conditions and known modes of failure were not adequately considered in establishing operating safety controls or limits in that:

1. On June 7, 1990, the CRB reviewed and approved License Evaluation Request 89–155 based on a nuclear criticality safety analysis of acceptable material types, but failed to consider pertinent process conditions related to the operation of the drum counter system that were not excluded by experimental evidence or design considerations. This resulted in a failure to accurately measure quantities of U–235 in 2-liter bottles.

Summary of Licensee's Response to Violation I.B.1

In its reply to the Notice, the Licensee denies that a violation occurred as stated. The Licensee states that its nuclear criticality safety (NCS) evaluation did consider pertinent process conditions and known modes of failure in establishing operating safety limits for the low-level dissolution process in Uranium Recovery, and that the Nuclear Licensing Board (NLB), now CRB, did review the effect on NCS from processing materials measured by the drum counter in low-level dissolution and did ensure that appropriate safety controls were considered. The Licensee states that its Licensee Evaluation Request 89–155 was submitted, evaluated, and approved only because of the drum counter measurement problem which resulted in the low-level dissolution NCS limit being exceeded in 1989 and that the purpose of the NCS evaluation and NLB review and approval was to consider the pertinent process conditions and known modes of failure identified by the 1989 problem. The Licensee also states that the violation statement that pertinent process conditions and known modes of failure were not considered cannot be true since these were the only issues that were considered.

The Licensee further suggests that the evaluation was adequate in that the LER requested approval of processing only certain material types in low-level dissolution based on drum count measurements and only those types were approved for processing based upon the information in the LER. Further, the Licensee states that none of these material types were inaccurately measured by the drum counter subsequent to the approval, and the processing of these material types did not result in NCS limit violations.

The Licensee states that the scope of the LER was the use of drum counter measurements to comply with NCS limits for low-level dissolution and that no restraints were placed on the measurement of materials when the LER was approved; rather, restraints were placed only on the use of the measurements. The Licensee states that restraints on measuring materials by drum counting would be inappropriate. The Licensee adds that the primary purpose of the drum counter is to measure materials for material control and accountability and that the accuracy of the drum counter measurements is not a safety issue unless the measurements are used to meet safety limits. The Licensee adds that the NLB appropriately prohibited the use of the measurements of certain material types to meet safety limits for low-level dissolution, but also appropriately did not prohibit the measurement of any materials using the drum counter.

NRC Evaluation of Licensee's Response to Violation I.B.1

The NRC does not agree with the Licensee's statements that the Licensee

considered pertinent process conditions and known modes of failure in establishing operating safety limits for the low-level dissolution process in Uranium Recovery and that the NLB reviewed the effect on NCS of the approval of processing materials measured by the drum counter in low-level dissolution. The Licensee was presented with a known mode of failure regarding a system that was used to demonstrate compliance with NCS limits. The known mode of failure was that the drum counter measurements could underestimate the amount of U–235 in a container.

The Licensee failed to consider pertinent process conditions such as scrap/waste generation, packaging, labeling, and storage that could affect the drum counter system's U–235 measurement accuracy and, therefore, did not ensure that pertinent and appropriate operating safety controls were considered to prevent the known failure. Thus, the review and approval of LER 89–155 was not considered adequate in establishing operating NCS controls or limits.

With respect to the Licensee's statement regarding the adequacy of its review of LER 89–155, the NRC notes that the review of the specific items in the single LER as presented may have been adequate for the very narrow and limited conditions of the LER presented; however, the license requires the Licensee to consider pertinent process conditions and known modes of failure in establishing NCS safety controls and limits and the Licensee failed to consider such conditions and known modes of failure.

The NRC agrees with the Licensee's statement that the primary purpose of using the drum counter is to measure materials for material control and accountability. However, in this case the Licensee was relying on the drum counter measurements to ensure that NCS limits were not exceeded. Given the nature of the Licensee's use of the measurements, the Licensee did fail to consider all failure modes that were not specifically excluded by experimental evidence or design considerations because, despite the Licensee's knowledge that drum counter mesaurements were inaccurate, such measurements were used for estimating quantities of U-235 in 2-liter bottles.

The NRC concludes that the Licensee did not provide bases to withdraw the violation; therefore, the violation occurred as stated.

Restatement of Violation I.B.2

License Condition No. S–1 of SNM–42 requires that licensed material be used in accordance with statements, representations, and conditions contained in Sections I through IV of the application dated February 22, 1982, and supplements thereto.

Section III, Paragraph 2.0, of the application requires that the design of equipment and establishment of operating safety limits consider the pertinent process conditions and known modes of failure. Certain conditions may be deemed incredible if specifically excluded by experimental evidence or design considerations.

Section II, Paragraph 3.1, of the application states that the Change Review Board (CRB) reviews the effect on nuclear criticality safety, radiation protection, and other