

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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LICENSE AMENDMENT  
FOR  
SPECIAL NUCLEAR MATERIAL SAFEGUARDS

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, and Title 10, Code of Federal Regulations, Chapter 1, Part 70, the following amendment to the special nuclear material license identified below is hereby issued, incorporating specific safeguards requirements for special nuclear material.

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Licensee:

Name:	Westinghouse Electric Corp. Nuclear Fuel Division	License No.:	SNM-1107
		Safeguards Amendment:	SG-2
Address:	Drawer R Columbia, South Carolina 29205	Docket No.:	70-1151
A Reissue of SG-1 in its entirety		Date Issued:	April 15, 1985

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CONDITIONS

1.0 FACILITY ORGANIZATION

Currently there are no license conditions in this section. The necessary information has been incorporated into an approved plan.

2.0 FACILITY OPERATION

2.1 The licensee shall follow Chapters 1.0 through 8.0 and Appendices A, B, C, D, and AA of its Fundamental Nuclear Material Control Plan dated April 18, 1984, except as noted in Condition 2.1.2 below; as revised by its submittals dated September 1, 1984, and December 1, 1984; as amended by its submittal (for Appendix AA) dated December 1, 1984; and as may be revised in accordance with the provisions of 10 CFR 70.32(c). All revised pages associated with the above stated revisions are identified by, and are in accordance with, the "Schedule of Revisions" as contained in pages ix through xiii (Revision 2, dated 12/1/84) of the Plan described above.

2.1.1 The licensee shall follow Codes 2. through 7., as applicable, of Transitional Facility Attachment No. 5 dated August 1, 1983, to the Protocol of the US/IAEA Safeguards Agreement.

- 2.1.2 Limited exceptions for full compliance of the Plan identified in Condition 2.1 shall be in accordance with the schedule given in "Addendum A" to the licensee's Plan submittal letter dated April 18, 1984. Dates for full compliance, by Plan section numbers, are as specified in "Addendum A."
- 2.2 Operations involving special nuclear materials which are not referenced in the Plan identified in Condition 2.1 shall not be initiated until an appropriate safeguards plan has been approved by the Nuclear Regulatory Commission.
- 2.3 All SNM not in transit shall be physically located within MBA-31.
- 3.0 MEASUREMENTS
- 3.1 Notwithstanding the requirement of 10 CFR 70.58(e) to measure all SNM receipts, the licensee may follow Sections 7.1.1, 7.1.2 and 7.1.3 of the Plan identified in Condition 2.1 for determining the receipt value of  $UF_6$ , uranyl nitrate solutions, sealed rods, and fuel assemblies.
- 3.2 Notwithstanding 10 CFR 70.58(e) which requires the quantities of element and isotope assigned to SNM to be measured values, the licensee may (1) determine the uranium content of baled waste, barrelled waste, incinerator ash, and laundry using the method described in Section 3.6 of the Plan identified in Condition 2.1, and (2) determine the U-235 content of liquid effluents by applying an average enrichment factor to the measured uranium element value.
- 3.3 Notwithstanding the requirement of 10 CFR 70.57(b)(8)(i) to maintain traceability by calibrating measurement systems with reference standards, calibration of the laser fluorometric method, used for low level effluents from the Advanced Waste Water Treatment process, need not involve the use of calibrated (or certified) glassware with respect to obtaining solution aliquots of the calibration standard, provided: (1) at least one standard aliquot is measured each shift in which the method is used and at least one standard is measured for each three unknowns, (2) a different pipet is used for each standard aliquot and each unknown aliquot, and (3) the SNM quantity contained in AWWT effluents during the material balance period is less than 300 grams U-235.
- 3.4 Notwithstanding the requirement of 10 CFR 70.58(e) which requires the measurement of all opened receipts, the licensee may determine the SNM quantity contained in a repaired, vendor-supplied fuel rod in accordance with Section 7.1.3(b) of the Plan identified in Condition 2.1, provided no more than five pellets are involved in the addition and/or removal of pellets from a given repaired rod.

4.0 MEASUREMENT CONTROL

- 4.1 Notwithstanding the requirements of 10 CFR 70.58(b)(8) to measure standards and replicates for volume systems, to not provide de minimis quantities for bias significance, bias corrections and error significance, to determine separate random errors for sampling and analytical, to generate random errors for weight measurements from replicate weighing of process materials, and to perform replicate measurements for gaseous and service liquid effluents, the licensee shall follow Sections 4.2.2, 4.2.4, and 4.4.1 of the Plan identified in Condition 2.1.
- 4.2 Notwithstanding the requirements of 10 CFR 70.57(b)(4) to determine systematic sampling error and to conduct process and engineering tests on sampling systems for all material types, the licensee shall follow Section 4.3 of the Plan identified in Condition 2.1.
- 4.3 Notwithstanding the requirement of 10 CFR 70.57(b)(11) to establish and maintain control charts and control limits for all SNM accountability measurements, the licensee need not maintain control charts (or logs) and control limits for control standard measurements and/or replicate measurements in those cases where such measurements are shown as "exempt" or "not necessary" in Figures 3.1, 3.2 and 3.3 of the Plan identified in Condition 2.1.
- 4.4 Notwithstanding 10 CFR 70.57(b)(11) which requires all control chart limits to be set at the 0.05 and 0.001 levels of significance, the licensee shall follow Section 4.5.2 of the Plan identified in Condition 2.1, except as noted in Condition 4.4.1 below.
- 4.4.1 Notwithstanding Section 4.5.2(a).1 of the Plan identified in Condition 2.1, the .05 and .001 control limits for scales may be replaced by fixed limits equal to two and three times the scale discrimination, respectfully, only if the standard deviation of the control standard data equals or exceeds 0.80 of the applicable scale discrimination. When the standard deviation of control standard data is less than 0.80 of the applicable scale discrimination, the 0.05 and .001 limits may be replaced by fixed limits equal to one and two times the scale discrimination, respectfully.
- 4.5 Notwithstanding the requirement of 10 CFR 70.57(b)(8) to measure control standards for all measurements systems for the purpose of determining bias, and notwithstanding the requirement of 10 CFR 70.57(b)(11) to maintain a statistical control system to monitor such control standard measurements, the licensee need not measure nor monitor such control standards for point calibrated, bias-free, systems. To be regarded as bias-free, a measurement system must either (1) be calibrated (by one or more measurements of a representative standard) at least once during any eight-hour time frame in

which process unknowns are measured, and the measurement value assigned to a given unknown must either be based on the single most recent calibration or the average of two or more calibrations performed during such eight-hour time frame, or (2) incorporate a bias correction into the measurement response for each process unknown measured (at the time of measurement) where such bias correction is based upon the average of the eight (or more) most recent measurements of a representative standard performed within the past 14 calendar days -- at least one of which was performed within the past eight hours.

When utilizing the approach given in (2) above (which can only be applied in the case of mass or NDA systems), each bias correction must be calculated to the nearest .01 gram (gross weight, tare weight, or grams U-235 as appropriate) and applied to an item before rounding the item's value to its nearest accounting unit (e.g., the nearest tenth of a gram for fuel rods).

- 4.6 Notwithstanding the requirement of 10 CFR 70.57(b)(1) which prohibits measurements performed during the out-of-control situation from being used for accounting purposes, the licensee shall follow Section 4.5.3 of the Plan identified in Condition 2.1.
- 4.7 Notwithstanding the requirement of 10 CFR 70.57(b)(8)(i) to base all measurement system calibrations on reference standards, the licensee may (1) derive gaseous effluent volumes from fan speed calculations, and (2) derive bulk volume measurements from calibrations based on dimensional relationships.
- 4.8 Notwithstanding the requirement of 10 CFR 70.57(b)(4) to perform sampling engineering tests on all measurement systems involving sampling, the licensee need not verify the representativeness of gaseous effluent sampling.
- 4.9 Notwithstanding the requirement of 10 CFR 70.57(b)(8) to determine bias corrections for all measurement systems, the licensee need not calculate, nor apply, bias corrections for those measurement systems that are utilized to measure less than 300 grams uranium, or less than 10 grams U-235, during an inventory period, provided the total of all such exempt systems measure less than 3000 grams uranium and less than 100 grams U-235 during the inventory period.
- 4.10 The licensee shall regard the uncertainty associated with an average tare weight value, as determined by either measurement system "M-7" or "M-10" (as described in Section 3.2 and Figure 3.1 of the Plan identified in Condition 2.1) as systematic error.

- 4.11 Notwithstanding the requirements of 10 CFR 70.57(b)(11) to establish and maintain both .05 and .001 control limits for replicate measurements, and not to use for accounting purposes any measurements generated from a system during a replicate related out-of-control condition, the licensee shall follow Sections 4.5.2(b).1, 4.5.3(c).1, (c).2 and (c).3 of the Plan identified in Condition 2.1.

5.0 INVENTORY

- 5.1 Notwithstanding 10 CFR 70.51(e)(3)(ii) which requires low enriched uranium physical inventories to be conducted at intervals not to exceed six calendar months, the licensee shall follow Section 5.1.3 of the Plan identified in Condition 2.1.
- 5.2 Notwithstanding 10 CFR 70.51(f)(1)(i) which requires a measured value for each item on inventory, the licensee shall follow Section 5.2.2(a) of the Plan identified in Condition 2.1, with respect to determining equipment hold-up quantities.
- 5.3 Notwithstanding the requirement of 10 CFR 70.51(e)(4)(i) to calculate the limit of error for all SNM contained in "material in process", the licensee need not calculate the limit of error on the SNM contained in samples, standards, and other minor material categories provided the total SNM content of such materials, which could affect ID or LEID, is less than 10 kilograms uranium and less than 300 grams U-235.
- 5.4 Notwithstanding the requirements of 10 CFR 70.51(e)(4)(i) to calculate LEID (or LEMUF) values within 30 days following each ending inventory date, and 10 CFR 70.53(b) to submit any reports that may be required by 70.53(b)(1), or (b)(2) within 30 days following the associated ending inventory date, the licensee shall:
- (1) Calculate uranium element and U-235 LEID values for each physical inventory within 40 calendar days following the inventory date, and
  - (2) Submit any report required by either 10 CFR 70.53(b)(1) or 70.53(b)(2) within 50 calendar days, following the date of a physical inventory.
- 5.5 Notwithstanding requirements contained in 10 CFR 70.51(d), (e)(2), and (f), waste discards (both solid and liquid) stored within MBA-31 need not be included in physical inventory listings, nor subject to other inventory requirements, provided such waste has been transferred (accountability-wise via DOE/NRC Form 741) to an official Plant holding account.



- 5.6 Notwithstanding the requirements of 10 CFR 70.51(e)(4)(i) to calculate the limit of error for all SNM contained in "material in process," the licensee may exclude from LEID calculations systematic errors and random errors contributing less than 100 grams U-235 each to the LEID, up to a total contribution of 1000 grams U-235. However, this condition is not to be interpreted as allowing the licensee to actually exceed the 100 and/or 1000 gram limits (specified above) when assuming beforehand that such limits would be met.
- 5.7 Notwithstanding the requirements of 10 CFR 70.51(f)(1)(i) and 10 CFR 70.51(f)(2)(iii) which require the quantity of SNM associated with each item on inventory be a measured value, and the reverification of identity and quantity of contained SNM for each item not tamper-safe sealed at the time of physical inventory, the licensee may follow the procedure contained in "Appendix A" of his letter dated October 17, 1984 (LA 84-101), with regard to inventorying stored samples.
- 6.0 RECORDS AND REPORTS
- 6.1 In lieu of the requirements contained in 10 CFR 70.53(a)(1) and (a)(2) to use the Forms DOE/NRC-742 and 742C, the licensee may use computer generated forms provided all information required by the latest printed instructions for completing the particular form is included.
- 6.2 In lieu of the requirements contained in CFR 70.54 to use the DOE/NRC Form 741, the licensee may use computer generated forms provided all information required by the latest printed instructions for completing the particular form is included.
- 7.0 INTERNAL CONTROL
- 7.1 Notwithstanding 10 CFR 70.58(h) which requires storage and internal controls for all SNM contained in discrete items and containers, the licensee shall follow Section 7.2.1 of the Plan identified in Condition 2.1.
- 7.2 Notwithstanding the requirement of 10 CFR 70.51(f)(2)(iii) to verify the identity and SNM quantity of each item inventoried whose tamper-safing is found to have been compromised, the licensee may follow Section 7.2.1(b).6 of the Plan identified in Condition 2.1.
- 8.0 MANAGEMENT
- Currently there are no license conditions in this section.  
The necessary information has been incorporated into an approved plan.

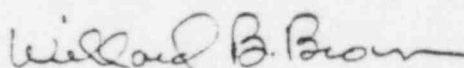
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9.0 FIXED SITE AND IN-TRANSIT PHYSICAL PROTECTION REQUIREMENTS FOR  
SPECIAL NUCLEAR MATERIAL OF LOW STRATEGIC SIGNIFICANCE

- 9.1 The licensee shall maintain and fully implement all provisions of the approved security plan titled, "Site Physical Security Plan, Westinghouse Electric Corporation, Columbia, S.C.," dated March 1980; as amended by letters dated September 2, 1980, April 9, 1981, January 25, September 1, and December 1, 1984, and March 1, 1985; and as may be revised in accordance with the provisions of 10 CFR 70.32(e).

For the Nuclear Regulatory Commission



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Date of Amendment: April 15, 1985