

*Docket  
File*

NOV 3 1978

SGMC:JB  
70-687

Union Carbide Corporation  
Sterling Forest Research Center  
ATTN: Mr. J. J. McGovern  
P.O. Box 324  
Tuxedo, New York 10987

Gentlemen:

We have reviewed and accepted the revised measurement control plan submitted with your letter dated June 23, 1978 and the revisions dated September 18 and 28, 1978, all of which were submitted pursuant to 10 CFR 70.57(1) and to our request dated November 17, 1977.

In order to incorporate your measurement control program as a condition of license and to withdraw obsolete license conditions, Special Nuclear Material License No. SNM-639 is hereby amended to incorporate Materials and Plant Protection Amendment MPP-3 (Enclosure), effective thirty (30) days after the date of this letter. When this amendment becomes effective it will supersede in its entirety Amendment MPP-2 which was previously issued to this license.

Amendment MPP-3 contains the following changes. License Condition 1.3 is deleted. License Condition 2.1 is revised to incorporate the measurement control plan as a condition of license; existing license conditions in 4.0 are deleted with the exception of License Condition 4.9, to be renumbered License Condition 4.2; License Condition 4.1 grants relief from 10 CFR 70.57(b)(4) with respect to sampling systematic error and engineering tests in accordance with guidance provided the licensee; and License Condition 4.3 grants relief from 10 CFR 70.57(b)(8)(ii) to run a replicate program, relief the licensee presently has.

We have determined that your initial and revised measurements control plans of November 14, 1975, May 30 and June 23, 1978 and the revisions of September 18 and 28, 1978 contain information of a type specified in 10 CFR 2.790(d). Accordingly, pursuant to Section 2.790(d)(1), such information

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is deemed to be commercial or financial information within the meaning of 10 CFR 9.5(a)(4) and shall be subject to disclosure only in accordance with the provisions of 10 CFR 9.12.

Sincerely,

/s/

James G. Partlow, Chief  
Material Control Licensing Branch  
Division of Safeguards

Enclosure:  
License Amendment MPP-3

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Enclosure

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 requirements for the control, accounting, and physical security of special nuclear material.

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Licensee

Name: Union Carbide Corporation

License No. SNM-639

Address: Sterling Forest Research Center  
P.O. Box 324  
Tuxedo, New York 10987

Amendment No. MPP-3 super-  
seding all previous safeguards  
amendments

Docket No. 70-687

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CONDITIONS

1.0 FACILITY ORGANIZATION

1.1 The Manager, Health Physics shall have the responsibility for the overall planning, coordination, and administration of the material control functions for special nuclear material (SNM).

1.2 All delegations of material control and accounting responsibilities shall be in writing by the Manager, Nucleonics.

2.0 FACILITY OPERATION

2.1 The licensee shall follow the fundamental nuclear material control plan dated July 1, 1975; as amended June 23, 1978 and revised September 18 and 28, 1978; and as revised in accordance with the provisions of 10 CFR 70.32(c).

- 2.2 No statement in the licensee's Plan identified in Condition 2.1 shall relieve the licensee of a requirement of 10 CFR 70 unless granted in a specific exemption or exception set forth as a condition of this license.
- 2.3 Operations involving special nuclear materials which are not described 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.
- 2.4 All SNM not in transit shall be physically within an MBA or an ICA.
- 2.5 The custody of all special nuclear material within each MBA and ICA shall be the responsibility of a single designated individual. Each MBA shall have a different custodian and no individual shall be the custodian of an MBA and an ICA.
- 3.0 MEASUREMENTS
- 3.1 The licensee or his designated agent shall measure, except as specified in Conditions 3.1.1 and 3.1.2, the uranium and U-235 content of all special nuclear material receipts, shipments, waste discards, and material inventoried.
- 3.1.1 Measurements are not required on sealed PuBe sources, and those samples intended for analysis and testing which have been determined by other means to contain less than ten grams U-235 each.
- 3.1.2 Enrichment factors determined from plating solution materials can be applied to U-235 values for sealed targets for purposes of obtaining uranium values.
- 3.2 All internal transfers of uranium from MBAs shall be based on measurements for element and isotope, except as specified in Conditions 3.1.1 and 3.1.2.
- 4.0 MEASUREMENT CONTROL
- 4.1 Notwithstanding the requirements in 10 CFR 70.57(b)(4) to provide sampling systematic errors and to conduct engineering tests on all material types, the licensee shall follow the Plan identified in License Condition 2.1.

- 4.2 Notwithstanding the requirement in 10 CFR 70.51(e)(4)(i) to calculate the associated limit of error of material unaccounted for (LEMUF), the calculation of the LEMUF is not required provided the Plant MUF is less than 150 grams of uranium or U-235.
- 4.3 Notwithstanding the requirement in 10 CFR 70.57(b)(8)(ii) to have a replicate program for the determination of random errors, this replicate program is not required provided the plant MUF is less than 150 grams of uranium or U-235.
- 5.0 INVENTORY
- 5.1 The licensee shall follow the material control and accounting plan entitled, "SNM Measurements, Statistical Controls and Inventory," dated October 17, 1974, and revised December 5, 1974, with the exception of section 4, paragraphs 5.4 and 5.11 including the figures and tables, section 6 except paragraph 6.6, and the appendices, and as revised in accordance with the provisions of 10 CFR 70.32(c).
- 5.2 No statement in the licensee's material control and accounting plan shall relieve the licensee of a requirement of 10 CFR Part 70 unless granted in a specific exemption or exception set forth as a condition of this license.
- 6.0 RECORDS AND REPORTS
- 6.1 The licensee shall use his or his designated agent's measured values for SNM accounting, except as specified in Condition 3.1.1.
- 6.2 The licensee shall report on a monthly basis all intentional discards and material unaccounted for. The MUF shall be that which has been determined during the month as a result of completing a material balance around a single operation, a number of operations, or the entire plant. This report shall be made within fifteen (15) days after the end of the month in which the discard was made or the material unaccounted for was determined. Reports shall be sent to the NRC Regional Office.
- 6.3 All accounting records, including measurement source data documents and internal transfer records, shall be included in the accounting records retained for five years.

6.4 In lieu of the requirement in 10 CFR 70.54 that the Form NRC-741 be completed and distributed within 10 days after receipt of nuclear material, the licensee may use a Form NRC-284 to acknowledge receipt where measurements cannot be completed in the time specified. Receipt measurements shall be completed and reported on the Form NRC-741 within 30 days after receipt of material.

7.0 INTERNAL CONTROL

7.1 The same individual shall not sign a document as both the Shipper and Receiver.

7.2 Accurate records shall be established and maintained which provide on a daily basis knowledge of the identity, location, and quantity of all SNM within the plant in discrete items and containers.

8.0 MANAGEMENT

8.1 Any apparent loss of a discrete item or container of special nuclear material which cannot be resolved by an immediate investigation shall be reported to the Manager, Health Physics, who shall promptly notify the Regional Office of the Nuclear Regulatory Commission, and shall conduct an investigation of the loss. The Manager, Health Physics shall document the results of his investigation and maintain the record for five years.

8.2 Deficiencies noted during an audit shall be investigated immediately and a summary report on the corrective action taken, including the date when action was completed, shall be appended to the audit report.

FOR THE NUCLEAR REGULATORY COMMISSION



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J. G. PARTLOW, CHIEF  
MATERIAL CONTROL LICENSING BRANCH  
DIVISION OF SAFEGUARDS

Effective Date of Amendment  
MPP-3 NOV 3 1978