



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

OCT 29 1980

SGML:CWE  
70-371

United Nuclear Corporation  
Naval Products  
ATTN: Mr. W. F. Kirk, Manager  
Nuclear and Industrial Safety  
67 Sandy Desert Road  
Uncasville, Connecticut

Gentlemen:

This is in response to your letter dated October 3, 1980 which transmitted revised pages to Chapter 3.0 of your Fundamental Nuclear Material Control Plan.

We have determined that the requirements of License Condition 3.2 have been satisfied in that descriptions of the measurement systems for the identified scrap materials have now been included in the Plan. Accordingly, we are deleting License Condition 3.2 and incorporating the new pages by revising License Condition 2.1 of Amendment MPP-1 to Special Nuclear Material License No. SNM-368, as set forth in the enclosure, effective immediately. We have determined that the enclosure to your letter dated October 3, 1980 contains information of a type specified in 2.790(d).

Accordingly, pursuant to Section 2.790(d)(1), such information 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,

A handwritten signature in dark ink, appearing to read "J. G. Partlow".

James G. Partlow, Chief  
Material Control and Accountability  
Licensing Branch

Enclosure:  
As stated

8011180006

Enclosure 2

Revision of Sections 1.0 Through 8.0 In Their  
Entirety To Materials and Plant Protection Amendment MPP-1  
To License No. SNM-368

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Effective October 28, 1980

1.0 FACILITY ORGANIZATION

- 1.1 Review/audit results shall be documented and communicated to management in accordance with the following criteria:
- Deficiencies which seriously weaken the material control system shall be reported to management immediately upon identification and corrective actions initiated,
  - A summary of review/audit results and recommendations shall be verbally communicated to management at the conclusion of the activity but in no case more than ten (10) working days after completion of the review/audit,
  - Within thirty (30) working days after completion of the review/audit, a schedule shall be developed for corrective actions.

2.0 FACILITY OPERATION

- 2.1 The licensee shall follow the UNC Naval Products Fundamental Nuclear Material Control Plan, Revision 1 dated September 1, 1980 and as revised October 3, 1980 and 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 Part 70 unless granted in a specific exemption or exception set forth as a condition of this license.
- 2.3 Operations involving special nuclear material 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.

3.0 MEASUREMENTS

- 3.1 The licensee or his designated agent shall measure, except as specified in 70.58(e) and in License Condition 5.1, the uranium and uranium-235 content of all special nuclear material receipts, shipments, waste discards and material inventoried.

4.0 MEASUREMENT CONTROL

- 4.1 The licensee shall perform appropriate process and engineering tests to establish the validity of sampling whenever:
- (a) a change in process parameter affects the physical properties of the material, and
  - (b) the sampling technique or the sampling equipment is changed.
- 4.2 The licensee shall assure that all measurements, including those performed to establish correction factors applied due to (1) non-representativeness between reference standards and process materials and (2) variability in measurement conditions, are traceable to national standards or nationally accepted measurement systems.
- 4.3 Notwithstanding the requirements of 10 CFR 70.57(b)(8) to measure standards and replicates for volume systems, to not provide de minimis quantities for bias calculations, bias corrections and systematic errors, to determine separate random errors for sampling and analytical, to generate random errors for bulk and NDA from replicate measurements of process materials, to perform replicate isotopic analyses and to perform replicate sampling and replicate analyses of liquid and stack discards, the licensee shall follow Sections 4.2.2, 4.2.4, and 4.4 of the Plan identified in License Condition 2.1.
- 4.4 Notwithstanding the requirements of 10 CFR 70.57(b)(4) to determine systematic sampling error and to conduct engineering tests on all material types, the licensee shall follow Section 4.3 of the Plan identified in License Condition 2.1.
- 4.5 Notwithstanding the requirements of 10 CFR 70.57(b)(11) to use control charts to monitor the quality of each program measurement, for control of scales and balances, the licensee shall follow Section 4.5.1.1 of the Plan identified in License Condition 2.1.
- 4.6 All identifiable covariance affects shall be taken into account in the calculation of LEID.
- 4.7 All measurement systems utilized for material control and accounting purposes shall be included in the comprehensive measurement control program.

## 5.0 PHYSICAL INVENTORY

- 5.1 Notwithstanding the requirement of 10 CFR 70.58(e) to measure the special nuclear material on inventory in standpipes, the licensee shall follow Section 5.5 of the Plan identified in License Condition 2.1 for the SSNM holdup in the standpipes in MBA-5. The SSNM shall be cleaned out every other inventory, measured and the quantity reconciled with that projected to be present.
- 5.2 Each plant ID and LEID determination shall be verified by any individual not involved in the original calculations.

## 6.0 RECORDS AND REPORTS

- 6.1 The licensee shall report on a monthly basis all intentional discards and Inventory Differences (ID). The ID 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 ID was determined. Reports shall be sent to the Region Office of the Nuclear Regulatory Commission.
- 6.2 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.
- 6.3 Shippers' values may be posted in the accounting records provided:
- 6.3.1 Shippers' limit of error values on grams uranium and uranium-235 are less than 0.5% for each material type in each shipment.
  - 6.3.2 Independent receiver measurements shall be made for the total element and isotope content with limit of error values less than 0.5% for each material type in each shipment.
  - 6.3.3 Shipper-receiver differences are not statistically significant at the 95% confidence level for each line item and for the total shipment.

- 6.3.4 Shippers' values are posted as a standard procedure subject to Conditions 6.3.1, 6.3.2 and 6.3.3.
- 6.4 If the licensee posts shippers' values in his accounting record pursuant to Condition 6.4, the following procedures shall be followed in completing the Form NRC-741:
- 6.4.1 The results of the receiver's measurements made pursuant to Condition 6.4.2 shall be recorded on Form NRC-741 in accordance with Condition 6.3.
- 6.4.2 The licensee shall clearly certify on Form NRC-741 that shippers' values are accepted on the basis of independent measurement verification.

#### 7.0 INTERNAL CONTROL

- 7.1 At least two individuals shall attest to the contents of containers, equipment, and vaults at the time of tamper-safing. The "attesting to" declarations shall be documented and shall pertain to as many of the characteristics listed below as possible:
- (a) container and/or seal numbers
  - (b) material type or form
  - (c) nothing other than the stated material type or form placed in the container (i.e., no foreign material or shielding added) during loading
  - (d) nothing added or removed from container since loading or since previous seal broken
  - (e) gross weight
  - (f) net weight
  - (g) inner item(s) integrity still valid when replacing broken seal on outer container
  - (h) material not concealed and/or shielded within equipment to avoid detection
  - (i) quantity of material added or removed from a vault or container (when re-sealing a vault door or container)
  - (j) correctness of current vault record (i.e., listing)
- 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 each plant in discrete items and containers.

7.3 Notwithstanding the requirement of 10 CFR 70.58(i)(2) that all scrap measured with an uncertainty greater than + 10 percent be processed and recovered within six months, the licensee may accumulate up to two (2) kilograms of such scrap for a period not to exceed twelve (12) months.

#### 8.0 MANAGEMENT

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