

NOV 27 1990

SGTB:NLO  
71-9168

Chem-Nuclear Systems, Inc.  
ATTN: Mr. Patrick L. Paquin  
220 Stoneridge Drive  
Columbia, SC 29210

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Dear Mr. Paquin:

As requested by Chem-Nuclear Systems, Inc. application dated November 2, 1990, and pursuant to 10 CFR Part 71, Certificate of Compliance No. 9168 for the Model CNS 8-120B package is amended to authorize additional contents as follows:

Three secondary containers with no more than one secondary container per package and not to exceed 3685 A<sub>2</sub> per package, as described in the Chem-Nuclear Systems, Inc., application dated November 2, 1990. The leak rate for packagings used to transport the three secondary containers must not exceed 1.04 x 10<sup>-6</sup> atm-cm<sup>3</sup>/sec, as determined within the 12 month period prior to shipment, using a test method with a sensitivity of 5.20 x 10<sup>-7</sup> atm-cm<sup>3</sup>/sec or less.

All other conditions of Certificate of Compliance No. 9168 shall remain the same.

This authorization shall expire May 31, 1991.

Sincerely,

Original Signed by

Charles E. MacDonald, Chief  
Transportation Branch  
Division of Safeguards and  
Transportation, NMSS

Enclosure:  
Approval Record

cc w/encl:  
Mr. Michael E. Wangler  
Department of Transportation

|                      |                 |                  |                         |                          |
|----------------------|-----------------|------------------|-------------------------|--------------------------|
| OFC :SGTB <i>NLO</i> | :SGTB <i>MG</i> | :SGTB <i>HWL</i> | :SGTB <i>CRChappell</i> | :SGTB <i>CEMacDonald</i> |
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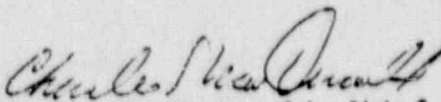
UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

APPROVAL RECORD  
Model No. CNS 8-120B Package  
Certificate of Compliance No. 9168

By application dated November 2, 1990, Chem-Nuclear Systems, Inc. requested an amendment to Certificate of Compliance No. 9168, for the Model CNS 8-120B package. The request was to permit the shipment of three secondary containers (SDS vessels) which exceed the maximum quantity of material permitted per package specified in the Certificate of Compliance. The maximum quantity of material per package specified in the Certificate of Compliance is 2000 times a Type A quantity. The secondary containers have contents of 3685 A<sub>2</sub>, 3367 A<sub>2</sub>, and 2221 A<sub>2</sub>. The isotopic distribution is given in the application. One secondary container will be shipped per package. The decay heat and weight of the secondary containers are within limits specified in the Certificate of Compliance.

An evaluation was performed to show that the containment requirements of 10 CFR Part 71 would be met for the secondary containers. The evaluation was based on calculating a lower allowable leak rate for the package, based on the higher quantity of radioactivity of the contents. The evaluation was performed in accordance with ANSI N14.5, and was consistent with the containment evaluation provided in the Safety Analysis Report for the Package. For the highest activity secondary container, the maximum allowable leak rate was calculated as  $1.04 \times 10^{-6}$  atm-cm<sup>3</sup>/sec. The leak test used to demonstrate that this leak rate is met must have a sensitivity of  $5.20 \times 10^{-7}$  atm-cm<sup>3</sup>/sec or less. The leak test must be performed within the 12 month period prior to each shipment.

This change does not affect the ability of the package to meet the requirements of 10 CFR Part 71.

  
Charles E. MacDonald, Chief  
Transportation Branch  
Division of Safeguards and  
Transportation, NMSS

Date NOV 27 1990