

**OFFICIAL USE ONLY**

NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

**MATERIALS LICENSE**

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee			
1.	BWX Technologies, Inc. Nuclear Products Division	3.	License Number SNM-42, Amendment 109
2.	P.O. Box 785 Lynchburg, Virginia 24505-0785	4.	Expiration Date September 30, 2005
		5.	Docket No. 70-27 Reference No.

6. Byproduct Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum amount that Licensee May Possess at Any One Time Under This License
A. Uranium enriched in U-235	A. Any enrichment or form, except UF <sub>6</sub>	A. [REDACTED]
B. Uranium enriched in U-235	B. Any enrichment in UF <sub>6</sub>	B. [REDACTED]
C. U-233	C. Any	C. [REDACTED]
D. Plutonium	D. Unencapsulated and unirradiated	D. [REDACTED]

**OFFICIAL USE ONLY**

May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552)

Exemption number \_\_\_\_\_ 2 \_\_\_\_\_

Nuclear Regulatory Commission review required before public release:

\_\_\_\_ Gary S. Janosko, NMSS/FCSS \_\_\_\_\_ /RA/ \_\_\_\_\_

Name and Organization of person making determination:

Date of Determination \_\_\_\_\_ September 16, 2004 \_\_\_\_\_

**OFFICIAL USE ONLY**

OFFICIAL USE ONLY

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

2

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

E.	Plutonium	E.	Encapsulated foils in nuclear accident dosimeters	E.	[REDACTED]
F.	Source material	F.	Any	F.	[REDACTED]
G.	Am-241	G.	Am-Be sealed neutron sources	G.	[REDACTED]
H.	NP-237	H.	Double encapsulated foils	H.	[REDACTED]
I.	Any byproduct materials	I.	Irradiated structural material	I.	[REDACTED]
J.	Byproduct material with At. Nos. 1-83	J.	Any	J.	[REDACTED]
K.	Fission products and transuranium elements	K.	Irradiated fuel	K.	[REDACTED]
L.	Fission products and transuranium elements	L.	Irradiated fuel	L.	[REDACTED]
M.	Fission products and transuranium elements	M.	Irradiated fuel	M.	[REDACTED]
N.	Fission products and transuranium elements	N.	Any	N.	[REDACTED]
O.	In-114m	O.	Sealed sources	O.	[REDACTED]
P.	Yb-169	P.	Sealed sources	P.	[REDACTED]

OFFICIAL USE ONLY

OFFICIAL USE ONLY

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

3

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

- |    |  |    |                |     |            |
|----|--|----|----------------|-----|------------|
| Q. | Cf-252   | Q. | Sealed sources | Q.  | [REDACTED] |
| R. | H-3  | R. | Sealed sources | R.  | [REDACTED] |
| S. | H-3  | S. | Oxide          | S.  | [REDACTED] |
| T. | H-3  | T. | Ni Plated Sc   | T.  | [REDACTED] |
| U. | U-232  | U. | Any            | U.  | [REDACTED] |
| V. | Po-210   | V. | Any            | V.  | [REDACTED] |
| W. | Pu-239 in greater than Class C waste from Parks                | W. | Sealed Sources | W.  | [REDACTED] |
| X. | Transuranium elements in greater than Class C waste from Parks | X. | Any            | X.1 | [REDACTED] |
|    |  |    |                | X.2 | [REDACTED] |
|    |  |    |                | X.3 | [REDACTED] |
9. Authorized place of use: The licensee's existing facilities along the James River approximately 8 miles east of Lynchburg, Virginia, as described in the referenced application.
10. This license shall be deemed to contain two sections: Safety Conditions and Safeguards Conditions. Each section is a part of the license and the licensee is subject to compliance with all listed conditions in each section.

FOR THE NUCLEAR REGULATORY COMMISSION

Date: September 16, 2004

By: /RA/  
Gary S. Janosko, Chief  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards, NMSS  
Washington, DC 20555

**OFFICIAL USE ONLY**

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

4

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

**SAFETY CONDITIONS**

- S-1 Authorized use: For use in accordance with the statements, representations, and conditions in Chapters 1 through 8 of the application submitted by letter dated July 14, 1995; and supplements dated August 4, August 9, August 21, August 29, and November 9, 1995; February 1, March 15, March 20, April 15, May 1 (two letters), September 23, and December 4, 1996; January 31, June 30, July 23, September 26, and October 2, 1997; February 5, March 12, April 15, April 24, May 5, August 27, September 8, October 15, and November 23, 1998; January 7, February 22, March 31, April 8, April 29, May 5, May 10, May 13, May 24, August 18, August 25, October 8, November 18, and November 24, 1999; February 8, February 15, February 28, April 28, June 6, October 11, December 5, December 14, and December 22, 2000; January 5, February 20, March 19, March 22, April 10, June 4, July 5, July 10, August 14, September 12, and December 18, 2001; January 2, May 24, June 11, July 16, August 7, August 30, December 10, December 19, and December 20, 2002; October 9, October 30, December 3, and December 16, 2003; February 18, March 8, April 13, May 5, June 10, July 22, August 9, August 13, and August 19, 2004.
- S-2 The licensee shall maintain and execute the response measures in the Emergency Plan as revised on November 14, 2003, or as further revised by the licensee consistent with 10 CFR 70.32(i).
- S-3 The volume of a [REDACTED] shall be no larger than a nominal 5-gallon container. Multiple containers [REDACTED] shall be specifically shown to be critically safe by the licensee.
- S-4 In [REDACTED], no more than [REDACTED] may be in transit within each cubicle at any one time.
- S-5 Notwithstanding Paragraph 1.10 of Chapter 1 of the license application, the licensee shall perform an Integrated Safety Analysis (ISA) for the facility operations, processes, and structures, to identify hazards and potential accident sequences that could directly or indirectly affect radiation safety, or which might arise as a result of processing licensed nuclear material. These evaluations shall consider chemical and fire hazards as well as radiological and nuclear criticality hazards. These analyses shall assess the risk presented by each hazard and identify whether additional controls are needed to reduce or eliminate the risk.
- S-6 Deleted by Amendment 72, June 2001.
- S-7 The former 10 CFR 20.304, "Old Recovery" disposal area is released for unrestricted use in accordance with letter dated January 31, 1997, A. F. Olsen of B&W to M. F. Weber of NRC.
- S-8 Deleted by Amendment 22, March 1998. This Condition expired October 5, 1997.
- S-9 Deleted by Amendment 39, June 1999.

**OFFICIAL USE ONLY**

OFFICIAL USE ONLY

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

5

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

- S-10 Deleted by Amendment 49, December 1999.
- S-11 The "Cold" Surface Impoundment Pond was surveyed and evaluated in accordance with letters dated April 29 and May 24, 1999, from A.F. Olsen of BWX Technologies, Inc. (BWXT), [REDACTED] to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission (NRC) and documented in Amendment 42 dated June 24, 1999.
- The "Hot" Surface Impoundment Pond was remediated in accordance with the letter dated April 28, 2000, from A.F. Olsen of BWXT, [REDACTED] to the Director, Office of Nuclear Material Safety and Safeguards, U.S. NRC and documented in Amendment 58 dated October 11, 2000.
- The results from the above actions may be reassessed at the time of license termination in order to include any possible dose from these areas in the dose assessment for the entire site. BWXT, [REDACTED], shall control licensed material which could migrate and re-impact the area and shall keep records of all work done in these areas.
- S-12 The licensee may transport uranium-beryllium waste with fission and activation products under the requirements of 10 CFR Part 71. The uranium may be of any enrichment. The licensee may use the fissile material exemption specified in 10 CFR 71.53 with an exemption to the 0.1 percent beryllium-to-fissile mass ratio limit. The waste may contain beryllium in any concentration. The exemption to the 0.1 percent beryllium-to-fissile mass limit is only valid if all of the following criteria are met: (a) the total fissile mass per conveyance is less than or equal to [REDACTED]; (b) the total quantity of fission and activation products in the waste is less than [REDACTED]; (c) the waste is shipped exclusive use; and (d) the waste is shipped prior to June 1, 2002.
- S-13 The Final Status Survey Plan (FSSP) and the Decommissioning Plan (DP) for Industrial Waste Landfill 1 in application dated June 11, 2002, has been reviewed by the NRC staff and determined to meet the requirements of 10 CFR 70.38. BWXT shall submit the Final Status Survey Report by December 1, 2008.
- S-14 The Final Status Survey Report (FSSR) for Industrial Waste Landfills 2A and 2B, submitted in application dated December 22, 2000, has been reviewed by the NRC staff and determined to meet the requirements of 10 CFR 70.38 in that the landfills have been remediated in accordance with a decommissioning plan approved by NRC letter dated February 25, 1998. However, at the time of license termination, the results from the FSSR may be reassessed in order to include any possible dose from these landfills in the dose assessment for the entire site. BWXT shall also control licensed material, which could migrate and re-impact the area, and keep records of all work done in these areas.

OFFICIAL USE ONLY

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

S-15 The licensee is granted an exemption to 10 CFR 20.1201(d) and is authorized to use Annual Limit on Intake (ALI) and Derived Air Concentration (DAC) values based on dose coefficients adopted by the International Commission on Radiological Protection (ICRP) and published in ICRP Publication No. 68.

S-16: BWX Technologies, Inc., is exempt from fissile material classification and from the fissile material package standards of 10 CFR 71.55 and 71.59 for the transport of certain bulk materials. The materials are listed in Table 1 of the attachment to BWX Technologies, Inc., application dated May 23, 2003, as modified by letter dated October 30, 2003, and are subject to the additional limits and controls listed in notes 1 through 11 in Table 1. Shipment of the materials is subject to all other requirements of 10 CFR Part 71.

S-17 Notwithstanding the commitments in Section 4.2.3 of the License Application, (1) a 0.94 Limiting Condition of Operation and a 0.96 Safety Limit (equivalent to a limit of 0.975 when combined with a bias term of 0.015) shall only apply to systems involving [redacted] in which the [redacted] is the reactivity driver of the system; and (2) [redacted] designs subsequent to [redacted] shall meet the 0.92 Limiting Condition of Operation and 0.95 Safety Limit.

"Systems involving [redacted] shall be deemed to include only workstations containing one or more machined and assembled [redacted] by themselves or in conjunction with other components that are not [redacted]. This shall apply to [redacted] areas only.

SAFEGUARDS CONDITIONS

Section 1.0 - ABRUPT LOSS DETECTION

SG-1.1 Notwithstanding the requirement of 10 CFR 74.53(b) to have a process detection capability for each unit process, the licensee shall follow Chapter 1 of the Plan identified in Condition SG-5.1.

Section 2.0 - ITEM MONITORING

SG-2.1 Currently, there are no conditions in this section. The necessary information and commitments are contained in the Plan identified in Condition SG-5.1.

Section 3.0 - ALARM RESOLUTION

SG-3.1 The licensee is authorized to continue material processing operations in Recovery Process Unit 3 under process monitoring alarm conditions. During the continuation of processing operations, the measures described in the letter from A. F. Olsen to T. S. Sherr dated May 31, 1991, which are intended to resolve the alarm and to protect materials and information, shall be implemented.

OFFICIAL USE ONLY

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

7

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

Section 4.0 - QUALITY ASSURANCE

SG-4.1 Notwithstanding the requirements of 10 CFR 74.59(d)(1) to establish and maintain a system of measurements sufficient to substantiate the uranium and plutonium element and the uranium fissile isotope content of all SSNM received, inventoried, shipped, or discarded, the licensee:

(a) may follow Section 4.7.1.3 of the Plan identified in Condition SG-5.1 with respect to mechanical treatment of receipts of certified reactor fuel for the purpose of storage consolidation, without measurement for physical inventory purposes. That is, following mechanical treatment, the original receipt value shall be retained for accounting purposes until the material undergoes chemical processing;

(b) need not measure the total element content of those materials measured by nondestructive assay for [REDACTED] if the calculated element content is based on the measured isotope content divided by a previously established and traceable isotopic abundance (as a weight fraction) measurement at the area of generation;

(c) may, without measurement, process and/or store [REDACTED] and higher tier components which are received with [REDACTED] provided (i) they were manufactured by a DOE contractor, (ii) the [REDACTED] remains intact prior to processing, and (iii) the previous SNM values determined by the manufacturer are assigned to these items;

(d) may follow Section 4.7.1.3 of the Plan identified in Condition SG-5.1 for the measurement of uranium and U-235 content of government-required retainer samples received, provided an unresolved statistically significant shipper-receiver difference does not exist on the parent fuel lot; and

(e) shall follow Section 4.3.1.7 of the Plan identified in Condition SG-5.1 for the measurement of uranium and U-235 content of [REDACTED] in the form of pieces or metallurgical mounts.

SG-4.2 To satisfy the requirements of 10 CFR 74.59(h)(1)(ii) that limits of error be calculated for each shipment, for finished reactor components and cores, the licensee may follow Section 4.7.2 of the Plan identified in Condition SG-5.1.

SG-4.3 Notwithstanding the requirements of 10 CFR 74.59(e)(3) to generate current data on the performance of measurement processes, to measure standards and replicates for bulk volume systems, to perform replicate sampling and replicate analysis for environmental releases, to

OFFICIAL USE ONLY

**OFFICIAL USE ONLY**

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

8

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

perform replicate isotopic analysis, to generate bulk and random errors for process materials, and to generate separate random errors for sampling and analysis on all sampling systems, the licensee shall follow Section 4.4 of the Plan identified in Condition SG-5.1.

- SG-4.4 Notwithstanding the requirements of 10 CFR 74.59(e)(6) concerning bias corrections, the licensee shall follow Section 4.4.2.4 of the Plan identified in Condition SG-5.1.
- SG-4.5 The use of disposable pipettes is limited to those applications listed in Section 4.4.2.2.3 of the Plan identified in Condition SG-5.1.
- SG-4.6 Any in-process measurements performed for the sole purpose of process monitoring and not for accountability shall not be required to meet 10 CFR 74.59(e) requirements.
- SG-4.7 Notwithstanding the requirements of 10 CFR 74.59(e)(5) to statistically evaluate all program data and information, the licensee may exclude secondary weights from the SEID calculation and bias corrections.
- SG-4.8 Notwithstanding the requirements of 10 CFR 74.59(e)(8) to establish and maintain a statistical control system designed to monitor the quality of each type of program measurement, the licensee shall:
- (a) follow Section 4.4.2.3 of the Plan identified in Condition SG-5.1 in lieu of maintaining control charts for control standard measurements associated with scales and balances and nondestructive assay measurement systems; and
  - (b) follow Section 4.4.2.11 of the Plan identified in Condition SG-5.1 in lieu of controlling within-lot sampling errors of [REDACTED] at the .05 and .001 levels of significance.
- SG-4.9 Notwithstanding the requirements of 10 CFR 74.59(e)(3) and (8) to determine and control random and systematic errors, the licensee may exclude the measured discard path for airborne environmental releases from the measurement control program and the SEID calculation.
- SG-4.10 Notwithstanding the requirement of 10 CFR 74.59(e)(3)(i) to measure control standards for all measurement systems for the purpose of determining bias, and notwithstanding the requirement of 10 CFR 74.59(e)(8) to maintain a statistical control system to monitor such control standard measurements, the licensee need not measure nor monitor control standards for point calibrated, bias-free systems. To be regarded as bias-free, a measurement system must be calibrated by one or more measurements of a representative standard each time process unknowns are measured, and the measurement value assigned to a given unknown must be based on that calibration.

**OFFICIAL USE ONLY**

OFFICIAL USE ONLY

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

9

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

- SG-4.11 Deleted by Amendment 15, June 1997. This Condition expired November 30, 1996.
- SG-4.12 Deleted by Amendment 11, October 1996. This Condition expired April 30, 1996.
- SG-4.13 Deleted by Amendment 15, June 1997. This Condition expired November 30, 1996.
- SG-4.14 Deleted by Amendment 18, August 1997. This Condition expired June 7, 1997.
- SG-4.15 Deleted by Amendment 21, November 1997. This Condition expired September 15, 1997.
- SG-4.16 Deleted by Amendment 21, November 1997. This Condition expired October 5, 1997.
- SG-4.17 Deleted by Amendment 24, May 1998. This Condition expired December 15, 1997.
- SG-4.18 Deleted by Amendment 31, November 1998. This Condition expired June 1998.
- SG-4.19 Notwithstanding the commitment, in Section 4.7.1.2 of the Fundamental Nuclear Material Control (FNMC) Plan identified in Condition SG-5.1, to perform receipt measurements and distribute DOE/NRC Form 741 within 30 days of receiving shipments of SNM, the licensee shall have 30 additional days (from the date of material receipt) to fulfill the above stated requirements relative to the [REDACTED] and subsequent material receipts associated with the [REDACTED] which is identified in its letter dated October 7, 1998.
- SG-4.20 Deleted by Amendment 41, June 1999. This Condition expired April 1999.
- SG-4.21 Deleted by Amendment 44, September 1999. This Condition expired June 1999.
- SG-4.22 Notwithstanding the commitment, in Section 4.7.1.2 of the Fundamental Nuclear Material Control (FNMC) Plan identified in Condition SG-5.1, to perform receipt measurements and distribute DOE/NRC Form 741 within 30 days of receiving shipments of SSNM, the licensee shall have 30 additional days (from the date of material receipt) to fulfill the above stated requirements relative to the [REDACTED] identified in its January 3, 2000, letter. This condition shall automatically expire on completion of the last shipment of the subject [REDACTED].
- SG-4.23 Deleted by Amendment 63, January 2001. This Condition expired May 22, 2000.
- SG-4.24 Deleted by Amendment 70, May 2001. This Condition expired February 5, 2001.

OFFICIAL USE ONLY

OFFICIAL USE ONLY

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

10

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

- SG-4.25 Notwithstanding the commitment, in Section 4.7.1.2 of the Fundamental Nuclear Material Control (FNMC) Plan identified in Condition SG-5.1, to perform receipt verification measurements and distribute DOE/NRC Form 741 within 30 days of receiving shipments of strategic special nuclear material (SSNM), the licensee shall have 30 additional days from the date of the material receipt to fulfill the above stated commitment relative to the [REDACTED] identified in the September 6, 2002, request letter. This condition shall automatically expire on completion of the last shipment of the subject [REDACTED].
- SG-4.26 Deleted by Amendment 80, August 2001. This Condition expired August 16, 2001.
- SG-4.27 Deleted by Amendment 80, August 2001. This Condition expired August 20, 2001.
- SG-4.28 Deleted by Amendment 83, October 2001. This Condition expired October 1, 2001.
- SG-4.29 Deleted by Amendment 92, September 2002. This Condition expired October 31, 2001.
- SG-4.30 Deleted by Amendment 103, November 2003. This Condition expired September 23, 2002.
- SG-4.31 Notwithstanding the commitment, in Section 4.7.1.2 of the Fundamental Nuclear Material Control (FNMC) Plan identified in Condition SG-5.1, to perform receipt measurements and distribute DOE/NRC Form 741 within 30 days of receiving shipments of SSNM, the licensee shall have 30 additional days (from the date of material receipt) to fulfill the above stated requirements relative to the [REDACTED] identified in its October 1, 2003, letter. This Condition shall automatically expire on completion of the last shipment of this subject [REDACTED].

Section 5.0 - FNMC PLANS AND SPECIAL REGULATORY ISSUES

- SG-5.1 To achieve the performance objectives of 10 CFR 74.51(a) and maintain the system capabilities of 10 CFR 74.51(b) with respect to all activities involving special nuclear material, the licensee shall follow the General Discussion Chapter and Chapters 1.0 through 4.0 (all pages dated February 20, 2004) of its "Fundamental Nuclear Material Control Plan." Any revisions to this Plan shall be made in accordance with, and pursuant to, either 10 CFR 70.32(c) or 70.34.
- SG-5.2 To achieve the performance objectives of 10 CFR 74.31(a) and maintain the system capabilities of 10 CFR 74.31(c) with respect to all activities involving special nuclear material of low enriched uranium, the licensee shall follow Chapters 1.0 through 10.0 (all pages dated

OFFICIAL USE ONLY

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

11

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

October 12, 2001) of its, "Low Enriched Fundamental Nuclear Materials Control Plan." Any revisions to this Plan shall be made in accordance with, and pursuant to, either 10 CFR 70.32(c) or 70.34.

- SG-5.3 In lieu of the requirements of 10 CFR 74.59(h)(1)(ii) to review and evaluate shipper-receiver differences on a container, lot, or shipment basis for receipts of off-site generated scrap, the licensee shall follow Sections 4.7.1.12, 4.7.2.10, 4.7.2.11, and 4.7.2.12 of the Plan identified in Condition SG-5.1. For this material, the recovered quantities and associated uncertainties for a campaign shall be evaluated in accordance with the requirements of 10 CFR 74.59(h)(1)(ii) relative to all shipments in a campaign and on a cumulative basis for like material.
- SG-5.4 Notwithstanding the requirement of 10 CFR 74.59(h)(2)(ii) to recover any scrap measured with a standard deviation greater than five percent within six months from the end of the inventory period in which it was generated, the licensee may retain up to [REDACTED] in oil, organic, or other mixed scrap with a standard deviation greater than five percent until processes can be developed to eliminate the generation of this scrap or an approved process for the conversion of this scrap to a better measured form is in place.
- SG-5.5 Notwithstanding the requirement of 10 CFR 74.15(a) to complete and distribute a Special Nuclear Material Transaction Report DOE/NRC Form-741 for any transfer of special nuclear material of one gram or more of contained U-235, the licensee may return emptied and cleaned [REDACTED] cans, originally used to ship SNM to its facility, to its original supplier or to a DOE-designated facility without use of a DOE/NRC Form-741, providing that there is no visible [REDACTED] material in or on the [REDACTED] cans and provided that the uranium value calculated from NDA data does not exceed 25 grams contained U-235 per shipment, and averages less than 0.50 gram U-235 per [REDACTED] can within a given shipment.
- SG-5.6 Operations involving special nuclear material which are not described in the Plan identified by Condition SG-5.1 shall not be initiated until an appropriate safeguards plan has been approved by the Nuclear Regulatory Commission.
- SG-5.7 The licensee is authorized to conduct the MC&A activities associated with recovery of zero power scrap described in the January 3, 1990 letter from A. F. Olsen to Martha Williams.
- SG-5.8 The restriction of 10 CFR 74.51(d)(2) is hereby lifted, and based on performance acceptable to the NRC, the licensee is authorized to conduct physical inventories in accordance with the requirements of 10 CFR 74.59(f)(1). The licensee need not calculate the standard error of inventory difference (SEID) for a given plant if the ID for that plant is less than 300 grams U-235 contained in HEU or less than 9,000 grams U-235 contained in LEU.

OFFICIAL USE ONLY

**OFFICIAL USE ONLY**

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

12

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

SG-5.9 Notwithstanding the SNM possession limits allowed by Conditions 6, 7 and 8 of this license, and notwithstanding the material control and accounting (MC&A) requirements that would normally apply to the authorized possession and use of such SNM quantities, the Lynchburg Technology Center (LTC) plant is exempted from the MC&A requirements of 10 CFR Parts 70 and 74 except for those identified below. This exemption is conditional upon compliance with the licensee's commitments, as given in the General Discussion Section of the Plan identified in Safeguards Condition SG-5.1, to [REDACTED]  
[REDACTED] Those MC&A regulatory requirements of Parts 70 and 74 that apply to the LTC are as follows:

10 CFR 70.51(b)(1) through (6); 10 CFR 74.6; 74.11; 74.13(a); 74.15; 74.17(c); 74.59(b)(1) and (2); 74.59(c); 74.59(d)(2); 74.59(e)(3), (4) and (8); 74.59(f); and 74.59(h)(1)(i).

**Section 6.0 - PHYSICAL PROTECTION FOR STRATEGIC SPECIAL NUCLEAR MATERIAL**

SG-6.1 The licensee shall follow the measures described in the physical protection plan titled, "BWX Technologies Nuclear Products Division Physical Protection Plan," revision 3, dated May 28, 2003, and security procedures that are used to comply with the plan as it may be further revised in accordance with the provisions of 10 CFR 70.32(e). The protective measures, referenced as "temporary" in the licensee's letter of April 16, 2003, and supplement dated August 6, 2003, are considered part of the physical protection plan as of the date of issuance of BWXT License Amendment No. 106.

SG-6.2 The licensee shall follow the measures described in the, "Security Training, Qualification, and Equipment Plan, Lynchburg Plant, Revision 10," dated May 15, 2000, and as it may be further revised in accordance with the provisions of 10 CFR 70.32(e).

SG-6.3 The licensee shall follow the measures described in the, "Safeguards Contingency Plan, Lynchburg Plant, Revision 1," dated May 15, 2000, and as it may be further revised in accordance with the provisions of 10 CFR 70.32(g).

SG-6.4 Notwithstanding those portions of 10 CFR 11.11(b)(1) which specify that applications be submitted to and pending before the NRC, the licensee may allow individuals to work at jobs within the criteria of paragraph 11.11(a)(1) provided such individuals were employed in such jobs on October 28, 1985, or are currently in possession of the NRC-L or R access authorization, or an equivalent active Federal security clearance, and provided that each of them has a complete application for a Department of Energy (DOE) Q access authorization which has been submitted to and is pending through DOE.

**OFFICIAL USE ONLY**

**OFFICIAL USE ONLY**

NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

13

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number  
SNM-42

Docket or Reference Number  
70-27

Amendment No. 109

- SG-6.5 The licensee shall follow the, "Low Strategic Significant Special Nuclear Material Security Plan" for the B&W Lynchburg Research Center, dated May 31, 1993, and as the Plan may be further reviewed under the provisions of 10 CFR 70.32(e).
- SG-6.6 Notwithstanding the requirements of 10 CFR 73.40 and 73.50 for the protection of formula quantities of SNM with radiation dose rates greater than that specified in 10 CFR 73.6(b), the licensee shall follow Security Plan B, submitted by letter dated July 21, 1986, and as revised by August 27 and 28, 1986, submittals for SNM identified above. SNM protected by Security Plan B shall be limited to [REDACTED] or equivalent components thereof which have undergone at least 300 days decay since being used as a source of energy in a power reactor. The licensee shall possess SNM which requires the application of Security Plan B at infrequent intervals with no one possession time period exceeding five months.
- SG-6.7 The licensee shall follow the 10 CFR Part 73.67, "Physical Protection Plan for Special Nuclear Material of Moderate and Low Strategic Significance" for the BWXT Building FF, dated December 18, 1998 (letter dated February 2, 1999), and as the Plan may be further reviewed under the provisions of 10 CFR 70.32(e).

**OFFICIAL USE ONLY**