

APPENDIX A
COMPOSITION CODES

COMPOSITION CODES

The codes listed below are for use in completing blocks 26h or 27h on DOE/NRC Form 741. If your installation has been notified by letter from the NRC, as provided in 10 CFR 75.11, that it has been identified under the U.S./IAEA Safeguards Agreement, enter the appropriate code from the list developed during the formulation and negotiation of your Facility Attachment or Transitional Facility Attachment (after the document has been provided to you under 10 CFR 75.8).

Note: In accordance with 10 CFR 75.11, any change in facility operations or processes that would result in any changes to, additions to or deletions from the list should be communicated to the NRC in writing, to the extent provided in your license conditions, at least 70 days in advance of the changes so that new composition codes can be assigned. For additional composition codes see NMMSS Report D-25 and American National Standard Institute (ANSI) Codes Report D-50A-109.

UNENCAPSULATED (except scrap)

Code

032	U ₃ O ₈ (Oxide product)
048	UO ₃ (Trioxide product)
770	Carbides
455	Other oxides product (For all oxides not otherwise identified)
064	Tetrafluorides (Tetrafluoride product)
083	UF ₆ (Hexafluoride product)
095	Enriching process
100	Hexafluorides—Commercial feed
101	Hexafluorides—Interplant Feed
102	Hexafluorides—in Enriching Process
103	Hexafluoride Product
104	Hexafluorides—Long-Term Storage
105	Hexafluorides—Non-USEC
106	DOE cascade feed

- 107 Uranium in cascades—Holdup
- 120 UF₆ Feed
- 773 UF₆ heels
- 363 In Reactor product
- 409 Nitrate Solutions product
- 786 Acetate Solutions product
- 701 Unalloyed Metal product
- 702 Alloyed Metal product
- 771 Samples and Standards
- 637 Sintered Products

UNENCAPSULATED SCRAP (for recovery)*+

- 375 Irradiated Recyclable Fuel

WASTE (for disposal)

Waste material should be described by an appropriate scrap category.*

*American National Standard Institute codes for plutonium scrap may be used in lieu of these codes.

+Where a number of dissimilar items of scrap are put into the same container, use the composition code for the predominant scrap category.

ENCAPSULATED

- 291 Fabricated Fuel Elements (pins, rods, plates)
- 309 Fuel assemblies (Assembled items product)
- 481 Sealed sources (Fabricated Sources Product)

OTHER

- 776 Other Products
- E04 Miscellaneous Noncombustibles (Uranium)

Note: U/Th and Pu/U mixed oxide fuels should be reported either as fuel elements (code 291) or as fuel assemblies (code 309) as applicable.

Report the different material types in the mixed oxide fuels on separate lines.

APPENDIX B

IAEA INVENTORY CHANGE TYPE CODES FOR COMPLETING BLOCKS 26c AND

27c OF DOE/NRC FORM 741

IAEA INVENTORY CHANGE TYPE CODES

All inventory change type (ICT) codes on transaction reports consist of two alphabetic or numeric characters. The accounting entry type codes used on Material Balance Reports (MBRs) consist of two digits. In the following pages the number(s) in parentheses following the alphabetic code represent the MBR line for which the transaction entries correspond. The standard inventory changes and other entry type are listed below. In transaction reports, all transactions and operations are understood to be related to individual batches. In MBRs, corresponding the same codes denote consolidated entries; i.e., the sums of all individual operations with the same code over the material balance period. In addition, MBRs include entries related to inventory data and adjustments not reported on transaction reports.

Gains or losses of material which occur based on the total inventory or in which individual effects to inventories by country of obligation code cannot be determined, should be reported as a loss to all country obligation balances by applying a one to one ratio by percent of the country of obligation to the amount of inventory affected to the amount of inventory change. For example, if decay is reported for plutonium within a reactor and the plutonium balance represents several different country of obligation balances the following calculations would determine the amount of decay to apply to each country of obligation code balance.

	<u>Element</u>	<u>Isotope</u>
Amount of inventory for which decay applies	1,202, 239	950,947
Calculated decay for the period	998	998

Balance by Country Obligation Code

<u>OBLIGATION CODE</u>	<u>ELEMENT</u>	<u>ISOTOPE</u>	<u>% Ratio to Total Inventory</u>
33	200,000	158,196	$200,000/1,202,239 = .166 \times 100 = 17\%$
34	509,321	402,863	$509,321/1,202,239 = .424 \times 100 = 42\%$
32	<u>492,918</u>	<u>389,888</u>	$492,918/1,202,239 = .410 \times 100 = 41\%$
Total Pu Balance	1,202, 239	950,947	100%

Amount of decay to apply to each country of obligation code balance

33	998 x 17% = 169.66 rounded to the nearest gram = 170
34	998 X 42% = 419.16 rounded to the nearest gram = 419
32	998 x 41% = 409.18 rounded to the nearest gram = $\frac{409}{998}$

The following should also be followed used for the isotope balances.

TRANS. MBR
CODE LINE

EXPLANATION

REQUIREMENT FOR
BLOCKS 26c AND 27c

RF (11, 13, 30, 38, 39)	Nuclear material imported into the United States (Receipt Foreign)	Make no entry
RD (11, 13, 30, 38, 39)	Domestic receipt of nuclear material from another domestic RIS (Receipt Domestic)	Make no entry
RN (11, 13, 30, 38, 39)	Domestic receipt of nuclear material from activity not subject to 10 CFR Part 74	Make no entry
NP (21)	Production of fissionable material in a reactor (Pu, U ²³³)	Entry required by licensee
DU (76)	Reapplication of safeguards in nuclear material previously exempted therefrom pursuant to Article 38 of the Agreement after being exempted based on use (Licensees subject to 10 CFR Part 75 only)	Entry required only after notification by NRC
DQ (76)	Reapplication of safeguards in nuclear material previously exempted therefrom pursuant to Article 38 of the Agreement after being exempted based on quantity (Licensees subject to 10 CFR Part 75 only)	Entry required only after notification by NRC
SF (42, 43, 51, 58, 59)	Export of nuclear material out of the United States	Make no entry
SD (42, 43, 51, 58, 59)	Domestic transfer of nuclear material from another Domestic RIS	Make no entry
SN (42, 43, 51, 58, 59)	Domestic transfer of nuclear material from a facility subject to 10 CFR Part 75 to a waste management facility	Entry required
SN (42, 43, 51, 58, 59)	Domestic transfer of nuclear material from a facility subject to 10 CFR Part 75 to a facility other than a waste management facility	Make no entry

TRANS. MBR CODE LINE	EXPLANATION	REQUIREMENT FOR BLOCKS 26c AND 27c
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LN* (73)	Consumption of nuclear material due to its transformation into other elements or isotope(s) as a result of nuclear reactions (burnup)	Entry required by licensee
*NOTE: When calculating weight % isotope in the case of burnup or decay, report the same weight % isotope for decay and burnup as the weight % of the beginning inventory for the period.		
TN* (72)	Consumption of nuclear material due to its transformation into other elements or isotope(s) as a result of nuclear reactions (decay)	Entry required by licensee
*NOTE: When calculating weight % isotope in the case of burnup or decay, report the same weight % isotope for decay and burnup as the weight % isotope of the original inventory for the period.		
LD (74)	Normal operational loss/measured discard; i.e., loss of a measured or estimated (on the basis of measurement) quantity of nuclear material from processing which has been disposed of in such a way that it is not suitable for further nuclear use	Entry required by licensee
TW (74)	Transfer to the retained waste category of measured nuclear material which is deemed to be irrecoverable, to be stored at the MBA and to be deleted from the inventory of the MBA	Entry required by licensee
FW (51)	Retransfer of material which has been stored at the MBA as retained waste to the nuclear material inventory. This applies whenever material in the retained waste category is removed from storage either for processing at the MBA or for retransfer from the MBA.	Entry required by licensee
EU (76)	Exemption of nuclear material from safeguards pursuant to Article 36 of the Agreement (Licensees subject to 10 CFR Part 75 only)	Entry required only after notification by NRC

TRANS. MBR
CODE LINE

EXPLANATION

REQUIREMENT FOR
BLOCKS 26c AND 27c

EQ (76)	Exemption of nuclear material from safeguards pursuant to Article 37 of the Agreement (Licensees subject to 10 CFR Part 75 only)	Entry required only after notification by NRC
TU (76)	Termination of safeguards on nuclear material pursuant to Articles 13 and 35 of the Agreement (Licensees subject to 10 CFR Part 75 only)	Entry required only after notification by NRC
LA (75)	Irretrievable and inadvertent loss of a known quantity of nuclear material as the result of an operational accident	Entry required by licensee
GA (75)	Nuclear material unexpectedly found to be present in the MBA, except when detected in the course of a physical inventory taking	Entry required by licensee
DI (N/A)	The difference between the batch quantity reported as received (always on shipper's data) and the quantity of the same batch as measured by the operator of the receiving MBA (Licenses subject to 10 CFR Part 75 only)	Make no entry
RM (N/A)	The quantity by which the batch mentioned in the entry is diminished in cases of rebatching (Licensees subject to 10 CFR Part 75 only)	Licensee entry required, if applicable
RP (N/A)	The quantity of material added from another batch to the batch mentioned in the entry (Licensees subject to 10 CFR Part 75 only)	Licensee entry required, if applicable

TRANS. MBR
CODE LINE

EXPLANATION

REQUIREMENT FOR
BLOCKS 26c AND 27c

<p>EN ED NE ND DE DN EE (22, 71)</p>	<p>Category Change - The quantity of uranium which has changed category as a result of blending, enrichment, depletion, or burnup. The first letter denotes the original, the second letter the resulting category (E=enriched, N=natural (or "normal"), D=depleted uranium, EE=change of enrichment). The material type codes should be those for both the original and the resulting material. The weight data should be provided both for the originating and for the resulting category.</p> <p>These entries should be consolidated into the material balances for both categories. For any of these changes line pairing is required, one line denotes the original material and the other denoting the resulting material.</p>	<p>Entry required by licensee</p>
<p>MF (77)</p>	<p>Inventory difference: this should be calculated as the difference between the book inventory and the ending physical inventory</p>	<p>Entry required by licensee</p>
<p>PB (N/A)</p>	<p>Beginning physical inventory: it should be equal to the ending physical inventory of the previous MBR relating to the same material</p>	<p>Make entry required</p>
<p>BA (83)</p>	<p>The algebraic sum of the beginning physical inventory and of the inventory changes over the period, adjusted to take account of the shipper-receiver differences</p>	<p>Make entry required</p>
<p>PE (N/A)</p>	<p>The sum of all measured and derived batch quantities of nuclear material on hand on the date of the physical inventory taking. These entries should be consolidated</p>	<p>Make entry required</p>

TRANS. MBR
CODE LINE

EXPLANATION

REQUIREMENT FOR
BLOCKS 26c AND 27c

<p>RAXX (N/A)</p>	<p>Applicable to licensees subject to the 10 CFR Part 75 only - The quantity that has to be added to the rounded sum to make it equal to the sum of the rounded terms. A rounding adjustment is made to an entry in the MBR of which the IAEA has been informed differently through Inventory Change Reports (ICRs) and Physical Inventory Lists (PILs), in order to bring the MBR entry into agreement with the corresponding figures established on the basis of ICRs and PILs. In the case of the book inventory and the inventory difference (ID) or material unaccounted for (MUF), the following formulae should be used respectively.</p> $RABA = PB + ICR_{MBR} - DI - BA, \text{ and}$ $RAMF = BA - PE - MF$ <p>where ICR_{MBR} is the sum of the consolidated inventory changes as reported in the MBR, taken with the appropriate sign if they represent decreases. All other notations are as defined for this data element.</p> <p>No rounding adjustment is needed for the beginning physical inventory.</p> <p>The rounding adjustment should be coded RAXX where XX stands for the code of the entry to which the rounding adjustment pertains, e.g., RALN means a rounding adjustment to the consolidated entry on the nuclear loss.</p>	<p>Entry by licensee required only if applicable</p>
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TRANS. MBR
CODE LINE

EXPLANATION

REQUIREMENT FOR
BLOCKS 26c AND 27c

34 (30)	Receipts - Miscellaneous. Enter quantities of material received in two-party transactions where only receiver's data or receipts of quantities of material falling below the reporting level are reported and now cumulatively total 1 gram or more for SNM or 1 kilogram or more for source material. Examples include receipts of material (not reported elsewhere) from facilities that have not been assigned a reporting identification symbol, and receipts from licensees that are not required to document or report transactions.	Licensee entry required
37	Procurement by others. Enter quantities of material purchased by the facility for its own account from in-situ material which it had been holding or, material which the facility is processing for another licensee.	
54 (51)	Shipments - Miscellaneous. Enter quantities of material shipped in two-party transactions where only shipper's data are reported or shipments of quantities of material falling below the reporting level are reported and now cumulatively total 1 gram or more of SNM or 1 kilogram or more for source material. Examples are shipments of material (not reported elsewhere) from facilities that have not been assigned a reporting identification symbol and shipments from licensees that are not required to document or report transactions.	Licensee entry required
65	Rounding Bias	Make no entry

APPENDIX C

EXAMPLES OF DOCUMENTS CORRECTING SHIPPER AND RECEIVER DATA

(BLOCKS 26 AND 27)

EXAMPLES OF DOCUMENTS CORRECTING SHIPPER AND RECEIVER DATA (BLOCKS 26 AND 27)

EXAMPLE 1 - INITIAL REPORT

On May 16, 2002, shipper XXX transferred to receiver XXY fabricated fuel elements containing:

<u>Line</u>		<u>Element</u>	<u>Isotope</u>
1	natural uranium	2 kg	
2	1.7080% enriched uranium	5,429 g	93.00 g
3	2.0110% enriched uranium	8,220 g	65.00 g
4	2.2180% enriched uranium	5,469 g	21.00 g

On May 23, 2002, receiver XXY acknowledged receipt of the shipment and accepted the shipper's weights without further measurement.

These transactions were reported on XXX/XXY/2.

EXAMPLE 2 - CORRECTION 1

On July 30, 2002, the shipper corrected the element weights for lines 1 and 3 to reflect the adjusted element weights of 3 and 9220, respectively.

This correction was reported on XXX/XXY/2/1.

EXAMPLE 3 - CORRECTION 3

On December 31, 2002, the receiver reported an adjustment to the weight percent isotope on line 2 of the initial report.

This correction was reported on XXX/XXY/2/3.

EXAMPLE 4 - INITIAL REPORT (ACTION CODE M)

On September 30, 2002, facility XXX reported decay and production.

These inventory changes were reported on XXX/XXX/2.

EXAMPLE 5 - CORRECTION 1 TO ACTION CODE M

On March 31, 2002, facility XXX corrected the element and isotope weights on lines 3 and 4. In addition, the element and isotope weights on line 6 were corrected and three new lines was added.

EXAMPLE 6 - INITIAL REPORT

On May 30, 2002, shipper XXX transferred material to receiver RYYY.

EXAMPLE 7 - CORRECTION 1

On May 30, 2002, the shipper realized the export license number was incorrect (block 15). Correction one was issued to negate the values in block 26. The back reference number listed in block 26a is 001.

EXAMPLE 8 - CORRECTION 2

Correction 2 was issued showing the correct number in block 15. Block 26 values are restated as they were listed on the initial report. The back reference number listed in block 26a is 101.

Matching correction documents would be required for the receiving facility.

EXAMPLE 9 - INITIAL REPORT (with a single foreign obligation)

On January 1, 2002, shipper XXX transferred natural uranium to receiver YYY:

<u>Line</u>	<u>Element</u>	<u>Isotope</u>
1	natural uranium	12,008 kg

On January 1, 2002, receiver YYY acknowledged receipt of the shipment and accepted the shipper's weights without further measurement.

These transactions were reported on XXX/YYYY/1.

EXAMPLE 10 - WR MATERIAL (no foreign obligation)

On January 1, 2002, shipper RYYY transferred enriched uranium to receiver YYY:

<u>Line</u>	<u>Element</u>	<u>Isotope</u>
1	UF ⁶ cylinder	1,500,000 kg 74,250

On January 7, 2002, receiver RYYY acknowledged receipt of the shipment and accepted the shipper's weights without further measurement.

These transactions were reported on RYYY/YYYY/1.

EXAMPLE 11 - INITIAL REPORT (multiple foreign obligations)

On January 1, 2002, shipper RYYY transferred enriched uranium to receiver YYY:

<u>Line</u>	<u>Element</u>	<u>Isotope</u>
1	UF ⁶ cylinder	1,400,000 kg 61,600
2	UF ⁶ cylinder	1,450,000 kg 62,350
3	UF ⁶ cylinder	1,500,000 kg 66,000

On January 10, 2002, receiver YYY acknowledged receipt of the shipment and accepted the shipper's weights without further measurement.

These transactions were reported on RYYY/YYYY/2.

List of Examples:

- Example 1: DOE/NRC Form 741 - Initial report
- Example 2: DOE/NRC Form 741 - Correction 1 (shipper adjusting lines 01 and 03 of the initial transaction)
- Example 3: DOE/NRC Form 741 - Correction 3 (receiver adjusting line 02 of the initial report)
- Example 4: DOE/NRC Form 741 - Initial report (action code M)
- Example 5: DOE/NRC Form 741 - Correction 1 (action code M)
- Example 6: DOE/NRC Form 741 - Initial report
- Example 7: DOE/NRC Form 741 - Correction 1
- Example 8: DOE/NRC Form 741 - Correction 2
- Example 9: DOE/NRC Form 741 - Initial report (single foreign obligation)
- Example 10: DOE/NRC Form 741 - Receipt of WR material (no foreign obligation)
- Example 11: DOE/NRC Form 741 - Receipt of source material (with foreign obligation)

APPENDIX D

GLOSSARY

GLOSSARY

Accountability—The determination of, and current record maintenance of, special nuclear material (SNM) and source material quantities associated with transfers, measured discards, inventories, and inventory differences that might result from theft, diversion, or other unidentified loss mechanisms.

Agreement State—Any State of the U.S. with which NRC, or its predecessor, the Atomic Energy Commission, has entered into an agreement under Section 274b of the Atomic Energy Act of 1954, as amended.

Book Inventory—The algebraic sum of the most recent physical inventory of the material balance area and of all inventory changes that have occurred since the physical inventory was taken.

Concise Note—Additional nuclear material transaction, material balance, or inventory data supplied to the IAEA, in free text format, by facilities engaged in the import and/or export of nuclear materials and by facilities selected under the provisions of the Agreement between the United States of America and the IAEA for the application of safeguards in the U.S./IAEA Safeguards Agreement.

EURATOM—As of January 2002, an organization consisting of the following member countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

Foreign obligated nuclear material—Source material or special nuclear material which is subject to the terms and conditions of an Agreement that the U.S. Government has entered into with another government or group of governments.

Highly enriched uranium (HEU)—Uranium enriched to 20 percent or greater in the isotope uranium-235.

International Nuclear Materials Tracking System (INMTS)—A database and information support system used to manage information on the quantity and location of U.S.-supplied nuclear materials in foreign countries.

Inventory difference (ID)—The arithmetic difference between a book inventory and the corresponding physical inventory that closes the material balance period. It is calculated by subtracting the ending inventory (EI) and removals from inventory (R) from the beginning inventory (BI) and additions to inventory (A) during the period between physical inventories. Mathematically ID can be expressed as:

$$ID = (BI + A - R) - EI$$

where (BI + A - R) is the book inventory.

Inventory reconciliation—The adjustment of the book record quantity of both elements and fissile isotopes to reflect the results of a physical inventory. In a broad sense, inventory reconciliation involves the activities of calculating (1) the ID for the material balance period in question, (2) the uncertainty value associated with the ID, (3) the active inventory for the period, and (4) any bias adjustment and/or prior period adjustment associated with the ID value.

Low-enriched uranium (LEU)—Uranium enriched below 20 percent in the isotope uranium-235.

Material balance period—The time span to which a material or physical inventory pertains.

Nuclear Materials Management and Safeguards System (NMMSS)—The national database and information system for select nuclear materials controlled by the U.S. Government. This system was created to support national safeguards and management objectives in domestic and international programs. The system stores data on nuclear material transactions and inventories, and produces a wide range of printed reports for use by DOE and NRC and those the licensees they regulate. The system is used to satisfy the nuclear materials information requirements of agreements between the U.S. and foreign entities. In addition, the system provides the reporting interface between facilities selected under the provisions of the U.S./IAEA Safeguards Agreement.

Physical inventory—A physical determination of the quantity of nuclear material on hand at a given time. The methods of physical inventory and the associated measurements vary, depending on the material to be inventoried and the process involved. A book inventory between physical inventory takings can be determined based on the physical inventory quantity from the prior period together with all subsequent inventory changes associated with the determination of that book inventory. The primary purpose of a physical inventory is to confirm the absence of (or to detect) a loss, theft, or diversion of SNM.

Reporting identification symbol (RIS)—A unique combination of three or four letters which is assigned to each reporting organization by the Department of Energy or the NRC for the purpose of identification in the NMMSS database.

Shipper-receiver difference (SRD)—The difference between what a shipper claims was contained in a shipment of SNM and what the receiver claims was received, where both the shipper's and receiver's values are based on measurement.

Source material—Uranium or thorium, or any combination thereof, in any physical or chemical form; or ores that contain by weight one-twentieth of 1 percent (0.05%) or more of uranium, thorium, or any combination thereof. Source material includes depleted uranium and natural uranium, but not special nuclear material.

Special nuclear material (SNM)—Plutonium, uranium-233, and uranium enriched in the isotope 233 or 235; any other material that the NRC, pursuant to the provisions of Section 51 of the Atomic Energy Act of 1954 (as amended) determines to be SNM; and any material artificially enriched with any of the foregoing materials, but not source material.

APPENDIX E

**DOE/NRC FORM 740M, "CONCISE NOTE" (BLANK), AND
DOE/NRC FORM 741, "NUCLEAR MATERIAL TRANSACTION REPORT" (BLANK)**

APPENDIX F

**SUPPLEMENTAL INSTRUCTIONS FOR COMPLETING
BLOCKS 17, 18, 19, 20, AND 21 ON DOE/NRC FORM 741**

SUPPLEMENTAL INSTRUCTIONS FOR COMPLETING BLOCKS 17, 18, 19, 20, AND 21 ON DOE/NRC FORM 741

1. INTRODUCTION

Special procedures must be used to implement some of the reporting requirements of the U.S. Bilateral Agreements for Peaceful Nuclear Cooperation. These Agreements for Cooperation are one means to satisfy Section 123 of the Atomic Energy Act of 1954 and allow the U.S. nuclear industry to trade with foreign countries/entities. The Agreements require that the U.S. track and report foreign-obligated nuclear materials and nuclear material produced from obligated material from these countries/entities. A foreign obligation is a commitment by one government to another to treat nuclear materials, nonnuclear materials, and equipment and components in a manner consistent with the Agreement signed between the two governments.

In addition to these Agreements for Cooperation, the U.S. is also required (pursuant to the U.S./Russian Agreement concerning the disposition of HEU extracted from nuclear weapons), to track and report to Russia the imports, exports, and use of Former Soviet Union down-blended highly enriched uranium. Although not a U.S. Bilateral Agreement for Peaceful Nuclear Cooperation, this Agreement contains similar reporting requirements and will be tracked as such. Facilities that are importers and/or exporters of nuclear material should also comply with the Agreement.

2. IMPORTS

For U.S. facilities importing nuclear material with foreign obligations, the relevant obligation information will be supplied by the appropriate Government agency [DOE, Department of State (DOS) or NRC] in advance of the receipt. DOE, DOS, or NRC will notify U.S. facilities exporting nuclear material with foreign obligations of the relevant obligation information in advance of the nuclear materials receipt at the facility. The notification will provide the information necessary to complete blocks 17 through 21, if applicable.

- a. For imports, the foreign obligation information can be (1) the country/entity from which the nuclear material was shipped and/or (2) the country/entity attaching "third-party obligations." In most cases, for imports from a country that has made the entire shipment subject to the Agreement, the total import quantity will be obligated. If only a portion of the shipment is subject to an Agreement (third-party obligation), that amount will be clearly specified on the documentation.
- b. The Government notification will supply the following information for the completion of blocks 17- 21: (1) the country/entity of obligation, (2) the material type, and (3) the amount obligated. See Table 1 below for country/entity codes. See Table 2 below for reportable obligated material types and quantities.

Table 1

<u>Obligation Code</u>	<u>Country/Entity</u>
31	Australia
32	Canada
33	EURATOM
34	Japan
35	People's Republic of China
36	Czech Republic
91	Australia and EURATOM
92	Canada and EURATOM
WR	Former Soviet Union Weapons

NOTE: For any other obligation codes, contact the NMMSS for further instructions.

Table 2

Reportable Material Types (MTs) and Source and Special Nuclear Material

<u>Type</u>	<u>Domestic Code</u>
Normal uranium	MT 81
Depleted uranium	MT 10
Thorium	MT 88
Plutonium	MT 50
Highly enriched uranium	MT 20 ≥ 20%
Low-enriched uranium	MT 20 < 20%
Uranium ²³³	MT 70

c. Completion of Obligation Information

Block 17: LINE NUMBER - The shipper will enter a sequential number (01 through 99) for each obligated country or material. If there is more than one separate obligation or more than one obligated material type, enter the appropriate numbers in the subsequent lines.

Block 18: COUNTRY OF OBLIGATION - For each line enter the code in Table 1 that represents the country/entity of obligation.

Block 19: MATERIAL TYPE - For each line enter the domestic code in Table 2 that represents the material obligated.

Block 20: OBLIGATED ELEMENT WEIGHT - For each line enter the weight obligated in the reportable quantity specified in Table 2.

Block 21: OBLIGATED ISOTOPE WEIGHT (For Enriched Uranium Only) - For each line of enriched uranium, enter the obligated isotope weight in grams. (Obligated U²³⁵ is restricted to uranium enriched to 5 percent or less, unless higher enrichment is authorized or approved by the U.S. GOVT.)

3. DOMESTIC TRANSFERS, INTERNAL TRANSACTIONS, AND EXPORTS

For U.S. facilities shipping or exporting material with foreign obligations, or for the reporting of onsite gains and losses, the obligations on the material must be stated as such in blocks 17-21.

- a. For domestic transfers, blocks 17 through 21 are filled out as for imports (Section 2 above). However, the obligation information will not be supplied by a government notification. The U.S. shipper will assign the appropriate obligations on the material, if any, and complete the line number, country/entity of obligation, material type, and obligated weight, if applicable. The U.S. receiver will complete the matching obligation information as assigned by the shipper.
- b. For internal transactions (i.e., burnup, decay, production, measured discards, accidental losses or gains, category changes, fission and transmutation, inventory differences, etc.), enter the line number, country/entity of obligation, material type, and obligated weights, if applicable, for the material.
- c. For exports, the U.S. shipper will complete both the shipper's and receiver's DOE/NRC Form 741. If the U.S. shipper is exporting foreign obligated material, the U.S. shipper will complete blocks 17 through 21 for each obligated country/entity or material exported.
NOTE: If the export requires an NRC export license, the license must specifically permit the export of that obligated material on the face of the license.

