

D-23

Personal Computer Data Input for Department Of Energy Contractors

Effective Date
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A booklet of guidance for data submissions to
NMMSS using electronic formats

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D-23

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1. INTRODUCTION

1.1. Reporting Guidelines

Refer to the **DOE M 474.1-2, Manual for Nuclear Materials Management and Safeguards System Reporting and Data Submission** for specific Department of Energy (DOE) requirements in reporting data to the Nuclear Materials Management Safeguards System (NMMSS). This document specifies that data submissions should be made in acceptable electronic forms to the NMMSS and provides the information necessary for completing the source documents (forms) referenced in this directory.

1.2. Purpose

This directory provides formatting requirements for the reporting of nuclear material information in electronic file formats to the NMMSS in accordance with the DOE guidelines. A reporting facility has the option to prepare reported data in an electronic file using the formats presented here using a variety of text editors, XML editors, or programmatically in Material Control and Accountability Systems. This data is then saved as a text file and sent to NMMSS via diskette, CD, Zip disk, SIMEX, Direct Link, or electronic mail.

1.3. Acceptable Electronic Formats

The primary formats accepted by NMMSS for electronic data transfer are eXtensible Markup Language (XML) and 80-column file format files created in the MSDOS or Windows based environments. New technologies are constantly being developed to improve data management. As these methods are tested and analyzed by NMMSS staff, revisions may be made to data input procedures and guidelines. Visit the NMMSS website, www.hss.energy.gov/nmmss, for the latest information and guidelines.

A third alternative for submitting electronic data to NMMSS is the use of the Safeguards Management Software (SAMS) for transcribing reported data into a machine readable format. This software is currently available at no charge from NMMSS.

1.3.1. Extensible Markup Language (XML) File Format

The XML format may also be referred to as tagged data as it is based upon the use of tags (words bracketed by '<' and '>') and attributes (of the form name="value"). The NMMSS XML data submission format uses specific tags to establish the limits of units of data. An advantage of using XML is that data is represented by tags which identify the values being reported; however, these tags must be entered exactly as specified or they will not be recognizable to the import programs.

The rules for XML files are strict. The following conditions will cause a failure in an XML data import:

- ❑ **A tag entered incorrectly (For example; using the wrong tag name, inserting spaces, or using improper capitalization).**
- ❑ **A missing tag.**
- ❑ **A missing end tag indicator (designated by “/”) for every opening tag.**
- ❑ **A data attribute without surrounding double quotes.**

Field sizes of reported data may be adjusted to fit the value, instead of requiring additional spaces to meet the allocated size as seen in the 80-column file formats. The reported data is entered into double quotes to the right of the attribute tag. Then, the file is saved as a text file using a file extension of **.xml** and submitted to NMMSS.

The use of the following characters inside the double quotes surrounding the value may be forced to be accepted by substituting the following code shown in the table below in place of the character. For example; to report a text comment such as

Insert batch id

 'Batch6a' in block 24D the tag value would need to be expressed as

"Insert batch id

'Batch6a' in block 24D.".

Character	Code
'	'
"	"
&	&
<	<
>	>

Each type of reported data; Inventory, Transaction, and Material Balance, has specific tags as shown in more detail under each section of this document. Data codes are necessary to identify the data in the 80-column file format. Data codes are inferred by the XML tag structure and therefore are not required. Refer to the individual data sections for additional details. Additional resources are available about XML online from the following websites:

- ❑ www.w3schools.com
- ❑ www.ucc.ie/xml/

1.3.2. 80-Column File Format

The 80-column file format is a method for submitting data to NMMSS that directly correlates the columnar position of data in a text file with the related hardcopy data submission forms. In the 80-column file format the identity of the data is interpreted by its columnar position in the file. For each type of reported data, the data is entered according in a precise position within a text file that is then saved and submitted to NMMSS. Each line of data begins with basic identifying information and a data code (sometimes called a record type indicator) that indicates the type of information on the rest of the line. The repetition of the basic identifying information on each line allows the data to be linked with the new information. Allocated spaces for each data field are constant and cannot be adjusted. See the sections in this directory for each specific type of reported data and the precise placement and format of 80-column file.

1.4. Understanding the Format Presentation

Within each format table presented in this directory the form identifier is listed along with the block identification number or number character combination found on the form. The 80-column file formatting will list the range of columns where the corresponding block of data is to be placed within the text file. **XML** tables will display the tag identifier (XML attribute) to be used for this block.

The **Type** column defines the form and length of the accepted data. For example, 'Char(1)' indicates that the data will consist of a single character (letter or number) and 'Char(20)' indicates that the data will consist of a combination of 20 characters, letters, and numbers. Generally, character based data fields are set to the left side of the allocated columns in an 80-column file format; i.e. left justified. 'Date' indicates that the data is a calendar date and will be accepted in a specified format. 'Num(11,2)' indicates the data is restricted to numbers and has an overall length of 11 numbers of which two are to the right of the decimal. Generally, this data is set to the right side of the allocated columns in an 80-column file format; i.e. right justified. A numeric value can be specified with or without the decimal in the 80-column format. Note that the decimal portion of the number is a part of the number length. For example, if the type is specified as Num(11,2) and the number value to be submitted is the whole number 15; entering 15 into 80-column will be interpreted as 0.15. The whole number 15 should be entered as 1500 (translates to 15.00). In the XML format, a numeric value must contain a decimal. For example, if the type is specified as Num(12,3) and the number value to be submitted is the whole number 15; enter 15 as 15.00 (translates to 15.000).

The **Note** column lists any remarks that will indicate special instructions, such as the format to be used or a value that remains constant. Note that all dates are to be entered in the format MMDDYYYY in 80-column and MM/DD/YYYY in XML formatted file. This means that dates will be reported with their two-digit month indication followed by the two digit day indication and then the four digit year. Note also that negative numbers are generally permitted and indicated by the placement of a minus sign (-) to the left of the number. The minus sign (-) in front of the number and a decimal point are a part of the number length (Ex. Num(10,2): -123456.90). **Negative Number Conversion characters will no longer be accepted by NMMSS.**

1.5. File Creation

In order to process electronic data without creating reporting errors the data must be created in data files that are free of formatting characters. Tabs are one of the formatting characters that will introduce errors into a file. Always use the space bar to create delineation between data fields. Many text editors such as Microsoft Word or Word Perfect, will add symbols to a file saved by the default method in order to maintain a finished look. This is overcome by saving the file (in any text editor) specifying the SAVE AS option and designating the file as a text file which removes the formatting characters. This will prevent most extraneous characters from being added to the file. Always review each data file created to verify that no extraneous characters were added. An example of an 80-column file format inventory data file that has been saved with extraneous formatting characters is shown in Example 1. The correct format using the same data is shown in Example 2.

2. TRANSACTION DATA

2.1. Requirements for DOE/NRC Form 741 and Concise Notes

2.1.1. XML File Formatting

An example of transaction submission in XML format is shown below. Additional examples are shown in Appendix B along with the corresponding DOE/NRC forms.

```
<TRANSACTIONS>
  <SHIPMENT SHIPPERRIS="ABC" RECEIVERRIS="DEF" TRANSFERNUMBER="00000131" CORRECTION=""
  PROCESSCODE="A" ACTIONCODE="A" NUMBEROFLINES="1" NATUREOFTRANSACTION="W" SHIPPEDFORRIS="FGG"
  SHIPPEDTORIS="HIJ" TRANSFERAUTHORITY="" UKFLAG="N" ACTIONDATE="12/31/2002" LICENSENUMBER="987654321"
  TOTALGROSSWEIGHT="20081" TOTALVOLUME="45645" SEALEDSOURCE="" TOTRANSFERAUTHORITY="">
    <CONCISENOTE LINENUMBER="1" ENTRYREFERENCE="Whole report" TEXTOFCONCISENOTE="Note text goes here">
    </CONCISENOTE>
    <OBLIGATION>
      <MATERIAL LINENUMBER="1" COUNTRYCODE="32">
        <ELEMENT ELEMENTWEIGHT="12333.00" UNIT="">
          <ISOTOPE MATERIALTYPE="10" ISOTOPEWEIGHT="999.00" UNIT=""/>
        </ELEMENT>
      </MATERIAL>
    </OBLIGATION>
    <MATERIAL PROJECT="ACD1209873" COEILINENUMBER="809" TYPEINVENTORYCHANGE="" OWNER="G"
    KEYMEASUREPOINT="W" MEASUREBASIS="E" OTHERMEASUREPOINT="R" MEASUREMETHOD="T"
    GROSSWEIGHT="100.00" NETWEIGHT="100.00" TOPROJECT="" TOCOEILINENUMBER="" BACKREFLINENUMBER="001"
    LINENUMBER="1" BATCH="Batch 0411h" NUMBEROFITEMS="5">
      <ELEMENT ELEMENTWEIGHT="45555.00" ELEMENTLOE="5" UNIT="">
        <ISOTOPE MATERIALTYPE="10" WEIGHTPERCENT="16.0000" ISOTOPEWEIGHT="456.00" ISOTOPELOE="65"
        UNIT="">
      </ISOTOPE>
    </ELEMENT>
  </MATERIAL>
</SHIPMENT>
</TRANSACTIONS>
```

Root Tag <TRANSACTIONS>

Header Information <SHIPMENT>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Shipper RIS	1	SHIPPERRIS	Char(4)	
Receiver RIS	2	RECEIVERRIS	Char(4)	
Transaction/Transfer Number	3	TRANSFERNUMBER	Char(8)	Right justified Zero fill blanks
Correction Number	4	CORRECTION	Char(1)	
Process Code	5	PROCESSCODE	Char(1)	See Appendix A.
Action Code	6	ACTIONCODE	Char(1)	
Number of Data Lines	10	NUMBEROFLINES	Num(5)	
TI Code/Nature of Transaction	11	NATUREOFTRANSACTION	Char(1)	
RIS For Account	12b	SHIPPEDFORRIS	Char(4)	
RIS To Account	13b	SHIPPEDTORIS	Char(4)	
Transfer Authority	14	TRANSFERAUTHORITY	Char(17)	

IAEA UK Reportable ¹	23c	UKFLAG	Char(1)	
Action Date	22	ACTIONDATE	Date	MM/DD/YYYY
License Number	15	LICENSENUMBER	Char(10)	
Total Gross Weight	24	TOTALGROSSWEIGHT	Num(10)	Whole numbers
Total Volume ²	25	TOTALVOLUME	Num(10)	Whole numbers
Sealed Source		SEALEDSOURCE	Char(10)	List tag only
Receiving Transfer Authority		TOTRANSFERAUTHORITY	Char(17)	List tag only

Concise Note Information <CONCISENOTE>

Note: If concise note information is not reported, there is no need to include a Concise Note section.

<u>Field Description</u>	<u>740M</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Line Number	7a	LINENUMBER	Num(2)	
Entry Reference	7b	ENTRYREFERENCE	Char(20)	
Concise Note Text	7c	TEXTOFCONCISENOTE	Char(60)	

Material Description Information <MATERIALDESCRIPTION>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Description		DESCRIPTION	Char(1000)	

Miscellaneous Information <MISCELLANEOUS>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Text		TEXT	Char(1000)	

Obligation Information <OBLIGATION>

Note: If obligated data is not reported, there is no need to include an Obligation section.

Obligation Information <MATERIAL>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Line Number	17	LINENUMBER	Num(5)	
Country ³	18	COUNTRYCODE	Char(2)	

Obligation Information <ELEMENT>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Obligated Element Weight ⁴	20	ELEMENTWEIGHT	Num(15,3)	Value must include a decimal point.
Unit of Measure		UNIT	Char(4)	List tag only

Obligation Information <ISOTOPE>

<u>Field Description</u>	<u>741</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Material Type	19	MATERIALTYPE	Char(2)	
Obligated Isotope Weight ^{5,6}	21	ISOTOPEWEIGHT	Num(15,3)	

¹ The IAEA UK reportable indication is only required for transactions involving United Kingdom facilities. Reporting 'R' indicates that the UK data is reportable to the IAEA. Reporting 'N' indicates that the UK data is not reportable to the IAEA. Leave this field blank for data that does not involve the United Kingdom facilities.

² Report total volume in cubic feet for material transferred to or from a nuclear waste management facility.

³ Call NMMSS or go to the NMMSS website for the latest list of obligation country.

⁴ The RIS must attain authorization from DOE to report to the 3rd decimal. Three decimal reporting is only allowed when reporting Source Material.

Value must include a decimal point.

Isotope Limit of Error	26/27 r	ISOTOPELOE	Num(5)	Whole numbers
Unit of Measure		UNIT	Char(4)	List tag only

Detail Information (Data Code 2)

<u>Field Description</u>	<u>741</u>	<u>80-Column File Format Position</u>		<u>Type</u>	<u>Note</u>
		<u>Begin</u>	<u>End</u>		
Shipper RIS	1	1	4	Char(4)	Left justified
Receiver RIS	2	5	8	Char(4)	Left justified
Transaction/Transfer Number	3	9	14	Char(6)	Right justified Zero fill blanks
Correction Number (Change Digit)	4	15	15	Char(1)	
Process Code	5	16	16	Char(1)	See Appendix A.
Action Code	6	18	18	Char(1)	
Data Code	-	19	19	Num(1)	Value is 2
Line Number	26/27 b	20	21	Num(2)	Right justified
Type of Inventory Change	26/27 c	22	23	Char(2)	
Batch Name/Identification	26/27 d	24	39	Char(16)	Left justified All Caps
Number of Items	26/27 e	40	43	Num(4)	Right justified
Project Number ¹²	26/27 f	44	53	Char(10)	Left justified
Material Type	26/27 g	54	55	Char(2)	Left justified
Composition-Facility Code	26/27 h	56	59	Char(4)	Left justified
Owner Code	26/27 i	61	61	Char(1)	
Key Measurement Point	26/27 j	70	71	Char(2)	Left justified
Measurement Basis	26/27 k1	72	72	Char(1)	
Other Measurement Point	26/27 k2	73	74	Char(2)	Left justified
Measurement Method	26/27 k3	75	75	Char(1)	
Back Reference Number ¹³	26/27 a	76	78	Char(3)	Zero fill blanks

Note: If both the element weight and isotope weight are zero, there is no need to submit a data line for data code 2 and 5.

Visual representation of field placement in 80-column file formatting of transaction detail information:																																																																															
741A Detail Information (Data Code 2)																																																																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
Shipper RIS				Receiver RIS				Transfer Num				CoPC		ACDC[Line#]		TIC		Batch ID																																																													
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																								
# Items				Project #				MT		Comp Code		O																																																																			

¹² Project numbers are reported only for government owned material.

¹³ Back Reference Number; the first character is the correction identifier. The second and third characters are the line number referenced. When reported, insert zeros for blank values.

Quantitative Detail Information (Data Code 5)

<u>Field Description</u>	<u>741</u>	<u>80-Column File Format Position</u>				<u>Note</u>
		<u>Begin</u>	<u>End</u>	<u>Type</u>		
Shipper RIS	1	1	4	Char(4)	Left justified	
Receiver RIS	2	5	8	Char(4)	Left justified	
Transaction/Transfer Number	3	9	14	Char(6)	Right justified Zero fill blanks	
Correction Number (Change Digit)	4	15	15	Char(1)		
Process Code	5	16	16	Char(1)	See Appendix A.	
Action Code	6	18	18	Char(1)		
Data Code	-	19	19	Num(1)	Value is 5	
Line Number	26/27 b	20	21	Num(2)	Right justified	
Gross Weight	26/27 l	22	26	Num(5)	Right justified	
Net Weight	26/27 m	27	31	Num(5)	Right justified	
Element Weight	26/27 n	43	53	Num(11,2)	Right justified	
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>						
Element Limit of Error	26/27 o	54	58	Num(5)	Right justified	
Weight Percent Isotope/Parts Per Million	26/27 p	59	64	Num(6,4) ¹⁴	Right justified	
<i>The value can contain a decimal point.</i>						
Isotope Weight	26/27 q	65	75	Num(11,2)	Right justified	
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values</i>						
Isotope Limit of Error	26/27 r	76	80	Num(5)	Right justified	

Note: If both the element weight and isotope weight are zero, there is no need to submit a data line for data code 2 and 5.

Visual representation of field placement in 80-column File formatting of transaction detail information:																																													
741A Detail Information (Data Code 5)																																													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40						
Shipper RIS				Receiver RIS				Transaction Num				CoPC		AQDC		Line#				Gross Weight				Net Weight																					
Element Weight				Ele Limit of Error				Weight %				Isotope Weight				Iso Limit of Error																													

¹⁴ Weight Percent Isotope/Parts Per Million is reported as a percentage except when the material type is 70 (total uranium enriched in U-233), which is reported using 6 numeric digits and converted to decimal form by NMMSS.

Visual representation of field placement in 80-column File formatting of transaction package information:

741A Packaging Information (Data Code 4)																																																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																		
Shipper RIS				Receiver RIS				Transaction Num												CoPC		ADDC																																																																			
																																									Total Gross Weight																			Total Volume																													

Obligation Information (Data Code 7)

<u>Field Description</u>	<u>741</u>	<u>80-Column File Format Position</u>			<u>Type</u>	<u>Note</u>
		<u>Begin</u>	<u>End</u>			
Shipper RIS	1	1	4	Char(4)	Left justified	
Receiver RIS	2	5	8	Char(4)	Left justified	
Transaction/Transfer Number	3	9	14	Char(6)	Right justified Zero fill blanks	
Correction Number (Change Digit)	4	15	15	Char(1)		
Process Code	5	16	16	Char(1)	See Appendix A.	
Action Code	6	18	18	Char(1)		
Data Code	-	19	19	Num(1)	Value is 7	
Line Number	17	20	21	Num(2)	Right justified	
Material Type	19	22	23	Char(2)	Left justified	
Obligated Element Weight	20	24	34	Num(11,2)	Right justified	
<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>						
Obligated Isotope Weight ¹⁶	21	35	45	Num(11,2)	Right justified	
<i>The value can contain a decimal point.</i>						
Country ¹⁷	18	46	47	Char(2)	Left justified	

Note: If obligated data is not reported, there is no need to submit a data line for data code 7.

Visual representation of field placement in 80-column File formatting of Transaction Obligation information:

741A Obligation Information (Data Code 7)																																																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																		
Shipper RIS				Receiver RIS				Transaction Num												CoPC		ADDC		Line#		MT		Element Weight																		Isotope w'																																											
weight																																									Ctry																																																

¹⁶ Obligated Isotope Weight is required for Enriched Uranium only.

¹⁷ Call NMMSS or go to the NMMSS website for the latest list of obligation country.

Concise Note Information DOE/NRC Form 740M (Data Code 6)

<u>Field Description</u>	<u>740M</u>	<u>80-Column File Format Position</u>		<u>Type</u>	<u>Note</u>
		<u>Begin</u>	<u>End</u>		
Shipper RIS	5a	1	4	Char(4)	Left justified
Receiver RIS	5b	5	8	Char(4)	Left justified
Transaction/Transfer Number	5c	9	14	Char(6)	Right justified Zero fill blanks
Correction Number (Change Digit)	5d	15	15	Char(1)	
Process Code	5e	16	16	Char(1)	See Appendix A.
Action Code	5f	18	18	Char(1)	
Data Code	-	19	19	Char(1)	Value is 6
Entry Reference	7b	24	39	Char(16)	Left justified
Line Number	7a	40	41	Char(2)	Left justified Zero fill blanks
Concise Note Text	7c	42	80	Char(39)	Left justified

Note: If concise note information is not reported, there is no need to submit a data line for data code 6.

Visual representation of field placement in 80-column File formatting of transaction concise note information:

740M Concise Note (Data Code 6)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
Shipper RIS				Receiver RIS				Transaction Num						Cc	PC	AC		DC		Entry Reference												Line #									
Text of Concise Note																																									

2.2. Requirements for Internal Project Transfers DOE/NRC Form 749

2.2.1. XML File Formatting

An example of an internal project transfer transaction submission in XML format is shown below. Additional examples are shown in Appendix B along with the corresponding DOE/NRC forms.

```
<TRANSACTIONS>
  <SHIPMENT SHIPPERRIS="ABC" RECEIVERRIS="ABC" TRANSFERNUMBER="000010" CORRECTION=""
  PROCESSCODE="A" ACTIONCODE="P" NUMBEROFLINES="1" NATUREOFTRANSACTION="" SHIPPEDFORRIS=""
  SHIPPEDTORIS="" TRANSFERAUTHORITY="" UKFLAG="" ACTIONDATE="01/15/2002" LICENSENUMBER=""
  TOTALGROSSWEIGHT="" TOTALVOLUME="" SEALEDSOURCE="" TOTRANSFERAUTHORITY="">
    <MATERIAL PROJECT="PEI8400029" COEILINENUMBER="105" TYPEINVENTORYCHANGE="" OWNER="G"
    KEYMEASUREPOINT="" MEASUREBASIS="" OTHERMEASUREPOINT="" MEASUREMETHOD="" GROSSWEIGHT=""
    NETWEIGHT="" TOPROJECT="PEI84930E9" TOCOEILINENUMBER="105" BACKREFLINENUMBER="" LINENUMBER="1"
    BATCH="" NUMBEROFITEMS="">
      <ELEMENT ELEMENTWEIGHT="1005.00" ELEMENTLOE="" UNIT="">
        <ISOTOPE MATERIALTYPE="10" WEIGHTPERCENT="10.0000" ISOTOPEWEIGHT="100.00" ISOTOPELOE=""
        UNIT="">
          </ISOTOPE>
        </ELEMENT>
      </MATERIAL>
    </SHIPMENT>
  </TRANSACTIONS>
```

Form DOE F DP-749, used for Internal Project Transfers, does not list blocks by number and therefore is not included in the list below. See the 80-column format for the columnar cell source on the DOE F DP-749.

Root Tag <TRANSACTIONS>

Header Information <SHIPMENT>

<u>Field Description</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Shipper RIS	SHIPPERRIS	Char(4)	
Receiver RIS	RECEIVERRIS	Char(4)	
Internal Transaction Number	TRANSFERNUMBER	Char(8)	Right justified Zero fill blanks
Correction Number	CORRECTION	Char(1)	
Process Code	PROCESSCODE	Char(1)	See Appendix A.
Action Code	ACTIONCODE	Char(1)	Value is P
Number of Data Lines	NUMBEROFLINES	Num(5)	
TI Code/Nature of Transaction	NATUREOFTRANSACTION	Char(1)	List tag only
RIS For Account	SHIPPEDFORRIS	Char(4)	List tag only
RIS To Account	SHIPPEDTORIS	Char(4)	List tag only
Contract Identification Number	TRANSFERAUTHORITY	Char(17)	
IAEA UK Reportable	UKFLAG	Char(1)	List tag only
Action Date	ACTIONDATE	Date	MM/DD/YYYY
License Number	LICENSENUMBER	Char(10)	List tag only
Total Gross Weight	TOTALGROSSWEIGHT	Num(10)	List tag only
Total Volume	TOTALVOLUME	Num(9)	List tag only
Sealed Source Serial Number	SEALEDSOURCE	Char(10)	List tag only
Receiving Transfer Authority	TOTRANSFERAUTHORITY	Char(17)	List tag only

Detail Information <MATERIAL>

<u>Field Description</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
From Project Number	PROJECT	Char(10)	
From Composition Facility Code	COEILINENUMBER	Char(4)	
Type of Inventory Change	TYPEINVENTORYCHANGE	Char(2)	List tag only
Owner Code	OWNER	Char(1)	Value is G
Key Measurement Point	KEYMEASUREPOINT	Char(2)	List tag only
Measurement Basis	MEASUREBASIS	Char(1)	List tag only
Other Measurement Point	OTHERMEASUREPOINT	Char(2)	List tag only
Measurement Method	MEASUREMETHOD	Char(1)	List tag only
Gross Weight	GROSSWEIGHT	Num(10)	List tag only
Net Weight	NETWEIGHT	Num(10)	List tag only
To Project Number	TOPROJECT	Char(10)	
To Composition Facility Code	TOCOEILINENUMBER	Char(4)	
Back Reference Number	BACKREFLINENUMBER	Char(3)	List tag only
Line Number	LINENUMBER	Num(5)	
Batch Name/Identification	BATCH	Char(16)	List tag only
Number of Items	NUMBEROFITEMS	Num(2)	List tag only

Detail Information <ELEMENT>

<u>Field Description</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Element Weight ¹⁸	ELEMENTWEIGHT	Num(12,3)	Value must include a decimal point.
Element Limit of Error	ELEMENTLOE	Num(5)	List tag only
Unit of Measure	UNIT	Char(4)	List tag only

Detail Information <ISOTOPE>

<u>Field Description</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Material Type	MATERIALTYPE	Char(2)	
Weight Percent Isotope/Parts Per Million	WEIGHTPERCENT	Num(6,4) ¹⁹	
Isotope Weight ²¹	ISOTOPEWEIGHT	Num(12,3)	Value must include a decimal point.
Isotope Limit of Error	ISOTOPELOE	Num(5)	List tag only
Unit of Measure	UNIT	Char(4)	List tag only

¹⁸ The RIS must attain authorization from DOE to report to the 3rd decimal. Three decimal reporting is only allowed when reporting Source Material.

¹⁹ Weight Percent Isotope/Parts Per Million is reported as a percentage except when the material type is 70 (total uranium enriched in U-233), which is reported using 6 numeric digits and converted to decimal form by NMMSS.

Internal Project Transfers (Data Code 2)

<u>Field Description</u>	<u>80-Column File Format Position</u>			<u>Note</u>
	<u>Begin</u>	<u>End</u>	<u>Type</u>	
Shipper RIS	1	4	Char(4)	Left justified
Receiver RIS	5	8	Char(4)	Left justified
Internal Transaction/Transfer Number	9	14	Char(6)	Right justified Zero fill blanks
Correction Number (Change Digit)	15	15	Char(1)	
Process Code	16	16	Char(1)	See Appendix A.
Action Code	18	18	Char(1)	Value is P
Data Code	19	19	Char(1)	Value is 2
Line Number	20	21	Num(2)	Right justified
From Project Number	22	31	Char(10)	Left justified
From Composition Code	32	35	Char(4)	Left justified
To Project Number	36	45	Char(10)	Left justified
To Composition Code	46	49	Char(4)	Left justified
Material Type	50	51	Char(2)	Left justified
Owner Code	52	52	Char(1)	Value is G
Element Weight	53	63	Num(11,2)	Right justified
				<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>
Weight Percent Isotope/Parts Per Million	64	69	Num(6,4) ²⁰	Right justified
				<i>The value can contain a decimal point.</i>
Isotope Weight	70	80	Num(11,2)	Right justified
				<i>The value can contain a decimal point. Only XML format accepts 3 decimal place values.</i>

Visual representation of field placement in 80-column File formatting of detail information for internal project transfer information:

749 Detail Information data record number 2																																																																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
Shipper RIS				Receiver RIS				Transfer Num				CdPC		AQDC				#Line From Project Number										From COEI				To Project Numbe																																															
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																								
er				To COEI				MT		OC				Element weight										weight % Isotope				Isotope weight																																																			

²⁰ Weight Percent Isotope/Parts Per Million is reported as a percentage except when the material type is 70 (total uranium enriched in U-233), which is reported using 6 numeric digits and converted to decimal form by NMMSS.

2.3. Requirements for Contract Reclassifications DOE Form 749A

2.3.1. XML File Formatting

An example of contract reclassification transaction submission in XML format is shown below. Additional examples are shown in Appendix B along with the corresponding DOE/NRC forms.

```
<TRANSACTIONS>
  <SHIPMENT SHIPPERRIS="ABC" RECEIVERRIS="ABC" TRANSFERNUMBER="000214" CORRECTION=""
  PROCESSCODE="A" ACTIONCODE="P" NUMBEROFLINES="1" NATUREOFTRANSACTION="" SHIPPEDFORRIS=""
  SHIPPEDTORIS="" TRANSFERAUTHORITY="SC001546982157658" UKFLAG="" ACTIONDATE="02/15/2002"
  LICENSENUMBER="" TOTALGROSSWEIGHT="" TOTALVOLUME="" SEALEDSOURCE=""
  TOTRANSFERAUTHORITY="TC998582584659715">
    <MATERIAL PROJECT="" COEILINENUMBER="105" TYPEINVENTORYCHANGE="" OWNER="G"
    KEYMEASUREPOINT="" MEASUREBASIS="" OTHERMEASUREPOINT="" MEASUREMETHOD="" GROSSWEIGHT=""
    NETWEIGHT="" TOPROJECT="" TOCOEILINENUMBER="105" BACKREFLINENUMBER="" LINENUMBER="1" BATCH=""
    NUMBEROFITEMS="">
      <ELEMENT ELEMENTWEIGHT="1000.00" ELEMENTLOE="" UNIT="">
        <ISOTOPE MATERIALTYPE="10" WEIGHTPERCENT="10.0000" ISOTOPEWEIGHT="100.00" ISOTOPELOE=""
        UNIT="">
          </ISOTOPE>
        </ELEMENT>
      </MATERIAL>
    </SHIPMENT>
  </TRANSACTIONS>
```

Form DOE F DP-749A, used for Contract Reclassifications, does not list blocks by number and therefore is not included in the list below. See the 80-column format for the columnar cell source on the DOE F DP-749A.

Root Tag <TRANSACTIONS>

Header Information <SHIPMENT>

<u>Field Description</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Shipper RIS	SHIPPERRIS	Char(4)	
Receiver RIS	RECEIVERRIS	Char(4)	
Internal Transaction Number	TRANSFERNUMBER	Char(8)	Right justified Zero fill blanks
Correction Number	CORRECTION	Char(1)	
Process Code	PROCESSCODE	Char(1)	See Appendix A.
Action Code	ACTIONCODE	Char(1)	Value is P
Number of Data Lines	NUMBEROFLINES	Num(5)	
TI Code/Nature of Transaction	NATUREOFTRANSACTION	Char(1)	List tag only
RIS For Account	SHIPPEDFORRIS	Char(4)	List tag only
RIS To Account	SHIPPEDTORIS	Char(4)	List tag only
Contract Identification Number	TRANSFERAUTHORITY	Char(17)	
IAEA UK Reportable	UKFLAG	Char(1)	List tag only
Action Date	ACTIONDATE	Date	MM/DD/YYYY
License Number	LICENSENUMBER	Char(10)	List tag only
Total Gross Weight	TOTALGROSSWEIGHT	Num(10)	List tag only
Total Volume	TOTALVOLUME	Num(9)	List tag only
Sealed Source Serial Number	SEALEDSOURCE	Char(10)	List tag only
Receiving Transfer Authority	TOTRANSFERAUTHORITY	Char(17)	

Detail Information <MATERIAL>

<u>Field Description</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
From Project Number	PROJECT	Char(10)	List tag only
From Composition Facility Code	COEILINENUMBER	Char(4)	
Type of Inventory Change	TYPEINVENTORYCHANGE	Char(2)	List tag only
Owner Code	OWNER	Char(1)	Value is G
Key Measurement Point	KEYMEASUREPOINT	Char(2)	List tag only
Measurement Basis	MEASUREBASIS	Char(1)	List tag only
Other Measurement Point	OTHERMEASUREPOINT	Char(2)	List tag only
Measurement Method	MEASUREMETHOD	Char(1)	List tag only
Gross Weight	GROSSWEIGHT	Num(10)	List tag only
Net Weight	NETWEIGHT	Num(10)	List tag only
To Project Number	TOPROJECT	Char(10)	List tag only
To Composition Facility Code	TOCOEILINENUMBER	Char(4)	
Back Reference Number	BACKREFLINENUMBER	Char(3)	List tag only
Line Number	LINENUMBER	Num(2)	
Batch Name/Identification	BATCH	Char(16)	List tag only
Number of Items	NUMBEROFITEMS	Num(2)	List tag only

Detail Information <ELEMENT>

<u>Field Description</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Element Weight ²¹	ELEMENTWEIGHT	Num(12,3)	<i>Value must include a decimal point.</i>
Element Limit of Error	ELEMENTLOE	Num(5)	List tag only
Unit of Measure	UNIT	Char(4)	List tag only

Detail Information <ISOTOPE>

<u>Field Description</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Material Type	MATERIALTYPE	Char(2)	
Weight Percent Isotope/Parts Per Million	WEIGHTPERCENT	Num(6,4) ²²	
Isotope Weight ²⁷	ISOTOPEWEIGHT	Num(12,3)	<i>Value must include a decimal point.</i>
Isotope Limit of Error	ISOTOPELOE	Num(5)	List tag only
Unit of Measure	UNIT	Char(4)	List tag only

²¹ The RIS must attain authorization from DOE to report to the 3rd decimal. Three decimal reporting is only allowed when reporting Source Material.

²² Weight Percent Isotope/Parts Per Million is reported as a percentage except when the material type is 70 (total uranium enriched in U-233), which is reported using 6 numeric digits and converted to decimal form by NMMSS.

3. INVENTORY DATA

3.1. Requirements for DOE/NRC Form 742C

3.1.1. XML File Formatting

An example of an inventory submission in XML format is shown below. Additional examples are shown in Appendix B along with the corresponding DOE/NRC form.

```
<PHYSICALINVENTORY>
<INVENTORY RIS="ABC" DATE="02/28/2001" >
  <CONCISENOTE PROCESSCODE="A" LINENUMBER="1" ENTRYREFERENCE="Whole report"
TEXTOFCONCISENOTE="Note text goes here">
  </CONCISENOTE>
  <MATERIAL PROCESSCODE="A" SEQUENCENUMBER="2" PROJECT="AAE2021003" COEILINENUMBER="385"
OWNER="G" KEYMEASUREPOINT="E" MEASUREBASIS="F" OTHERMEASUREPOINT="B" MEASUREMETHOD="T"
SCRAPPROGRAM="" ENTRYSTATUS="" NUMBEROFITEMS="500" BATCH="BATCH001" LOCATION="" SITEMBA="">
  <CONCISENOTE PROCESSCODE="A" LINENUMBER="1" ENTRYREFERENCE="Whole report"
TEXTOFCONCISENOTE="Note text goes here">
  </CONCISENOTE>
  <ELEMENT ELEMENTWEIGHT="10.00" UNIT="">
  <ISOTOPE MATERIALTYPE="31" WEIGHTPERCENT="16.0000" ISOTOPEWEIGHT="16.00" UNIT="">
  </ISOTOPE>
  </ELEMENT>
</MATERIAL>
</INVENTORY>
</PHYSICALINVENTORY>
```

Root Tag <PHYSICALINVENTORY>

Header Information <INVENTORY>

<u>Field Description</u>	<u>742C</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
RIS	2	RIS	Char(4)	
Inventory Report Date	3	DATE	Date	MM/DD/YYYY

Concise Note Information Attached to Header <CONCISENOTE>

Note: If concise note information is not reported, there is no need to include a Concise Note section.

<u>Field Description</u>	<u>740M</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Process Code	5e	PROCESSCODE	Char(1)	See Appendix A.
Line Number	7a	LINENUMBER	Num(2)	
Entry Reference	7b	ENTRYREFERENCE	Char(20)	
Concise Note Text	7c	TEXTOFCONCISENOTE	Char(60)	

Detail Information <MATERIAL>

Note: If both the element weight and isotope weight are zero, there is no need to include a Material section.

<u>Field Description</u>	<u>742C</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Process Code	5q	PROCESSCODE	Char(1)	See Appendix A.
Sequence Number ²⁴	5i	SEQUENCENUMBER	Num(6)	

²⁴ Sequence number should begin at one for the entire inventory or each material type group (Generic MT 20 includes MT 21 – 39 and E1 – E4) and should be consecutively numbered including the total line (composition code 899).

Project Number ²⁵	5e	PROJECT	Char(10)	
Composition-Facility Code ²⁶	5b	COEILINENUMBER	Char(4)	
Owner Code	5h	OWNER	Char(1)	
Key Measurement Point	5l	KEYMEASUREPOINT	Char(2)	
Measurement Basis	5m	MEASUREBASIS	Char(1)	
Other Measurement Point	5m	OTHERMEASUREPOINT	Char(2)	
Measurement Method	5m	MEASUREMETHOD	Char(1)	
Scrap Program	5f	SCRAPPROGRAM	Char(1)	
Entry Status	5n	ENTRYSTATUS	Char(1)	
Number of Items	5k	NUMBEROFITEMS	Num(5)	
Batch Name/Identification	5j	BATCH	Char(16)	All Caps
Location of Item	5o	LOCATION	Char(30)	
Site MBA Code	5p	SITEMBA	Char(30)	

Concise Note Information Attached to Material (Item) <CONCISENOTE>

Note: if concise note information is not reported, there is no need to include a Concise Note section.

<u>Field Description</u>	<u>740M</u>	<u>XML Attribute</u>	<u>Type</u>	<u>Note</u>
Process Code	5e	PROCESSCODE	Char(1)	See Appendix A.
Line Number	7a	LINENUMBER	Num(2)	
Entry Reference	7b	ENTRYREFERENCE	Char(20)	
Concise Note Text	7c	TEXTOFCONCISENOTE	Char(60)	

Detail Information <ELEMENT>

<u>Field Description</u>	<u>742C</u>	<u>XML Attribute</u>	<u>Type</u>	
Element Weight ²⁷	5c	ELEMENTWEIGHT	Num(15,3)	<i>Value must include a decimal point.</i>
Unit of Measure	-	UNIT	Char(4)	List tag only

Detail Information <ISOTOPE>

<u>Field Description</u>	<u>742C</u>	<u>XML Attribute</u>	<u>Type</u>	
Material Type	5a	MATERIALTYPE	Char(2)	
Weight Percent Isotope/Parts Per Million	5g	WEIGHTPERCENT	Num(6,4) ²⁸	<i>Value must include a decimal point.</i>
Isotope Weight ³⁴	5d	ISOTOPEWEIGHT	Num(15,3)	<i>Value must include a decimal point.</i>
Unit of Measure	-	UNIT	Char(4)	List tag only

²⁵ Project numbers are reported only for government owned material.

²⁶ For total lines, this field will always contain "899".

²⁷ The RIS must attain authorization from DOE to report to the 3rd decimal. Three decimal reporting is only allowed when reporting Source Material.

²⁸ Weight Percent Isotope/Parts Per Million is reported as a percentage except when the material type is 70 (total uranium enriched in U-233), which is reported using 6 numeric digits and converted to decimal form by NMMSS.

Physical Inventory Listing Additional Information (Data Code 3)

<u>Field Description</u>	<u>742C</u>	<u>80-Column File</u>			<u>Note</u>
		<u>Format</u>	<u>Position</u>	<u>Begin</u>	
Data Code	-	1	1	Num(1)	Value is 1
Inventory Report Date	3	2	9	Date	MMDDYYYY
RIS	2	10	13	Char(4)	Left justified
Material Type Code	5a	14	15	Char(2)	Left justified
Composition-Facility Code ³⁵	5b	16	19	Char(4)	Left justified
Location of Item	5o	20	50	Char(30)	
Site MBA	5p	51	73	Char(23)	

Visual representation of field placement in 80-column file formatting of inventory detail information:

733A, Detail Information (Data Code 3) [Location & Site MBA]																																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
DC	Inv	Report	Date							RIS					MT				Comp	Code																			Location

³⁵ For total lines, this field will always contain "899".

APPENDIX A

PROCESS CODE

PROCESS CODE

DEFINITION: The process code identifies the type of system action to be taken for the data being reported as follows:

1. Process code A is used to signify the initial submittal of data. Use process code C to replace a data set already submitted to NMMSS;
2. Process code C is used to signify the replacement of previously reported data. Its use is restricted to the replacement of data in the same reporting month;
3. Process code D applies when the facility intends the deletion of previously reported data. Its use is also restricted to applying only to data in the same reporting month; and

SPECIAL NOTE: If replacement or deletion of data is desired, it is suggested that the reporting facility ensures that the accounting month to be affected is still "open" (being processed by the NMMSS) by calling the appropriate NMMSS contact since these actions are restricted and based on specified accounting periods.

80-Column format:

Example 2 Transaction Correction

1										2										3										4										5										6										7										8									
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
ABC	DEF	000	1311A	C104																																																																											
ABC	DEF	000	1311A	C201																																																																											
ABC	DEF	000	1311A	C501																																																																											
ABC	DEF	000	1311A	C202																																																																											
ABC	DEF	000	1311A	C502																																																																											
ABC	DEF	000	1311A	C203																																																																											
ABC	DEF	000	1311A	C503																																																																											
ABC	DEF	000	1311A	C204																																																																											
ABC	DEF	000	1311A	C504																																																																											

XML format:

```

<TRANSACTIONS>
  <SHIPMENT SHIPPERIS="ABC" RECEIVERRIS="DEF" TRANSFERNUMBER="00000131"
  CORRECTION="1" PROCESSCODE="A" ACTIONCODE="C" NUMBEROFLINES="4"
  NATUREOFTRANSACTION="" SHIPPEDFORRIS="" SHIPPEDTORIS="" TRANSFERAUTHORITY=""
  UKFLAG="" ACTIONDATE="12/31/2002" LICENSENUMBER="" TOTALGROSSWEIGHT=""
  TOTALVOLUME="" SEALEDSOURCE="" TOTRANSFERAUTHORITY="">
    <MATERIAL PROJECT=" XXX1234567" COEILINENUMBER="309" TYPEINVENTORYCHANGE=""
  OWNER="G" KEYMEASUREPOINT="" MEASUREBASIS="" OTHERMEASUREPOINT=""
  MEASUREMETHOD="" GROSSWEIGHT="" NETWEIGHT="" TOPROJECT=""
  TOCOEILINENUMBER="" BACKREFLINENUMBER="001" LINENUMBER="1" BATCH=""
  NUMBEROFITEMS="-1">
      <ELEMENT ELEMENTWEIGHT="-426.00" ELEMENTLOE="" UNIT="" >
        <ISOTOPE MATERIALTYPE="10" WEIGHTPERCENT="0.6610" ISOTOPEWEIGHT="-3.00"
        ISOTOPELOE="" UNIT="" >
          </ISOTOPE>
        </ELEMENT>
      </MATERIAL>
      <MATERIAL PROJECT=" XXX1234567" COEILINENUMBER="309" TYPEINVENTORYCHANGE=""
  OWNER="G" KEYMEASUREPOINT="" MEASUREBASIS="" OTHERMEASUREPOINT=""
  MEASUREMETHOD="" GROSSWEIGHT="" NETWEIGHT="" TOPROJECT=""
  TOCOEILINENUMBER="" BACKREFLINENUMBER="101" LINENUMBER="2" BATCH=""
  NUMBEROFITEMS="1">
      <ELEMENT ELEMENTWEIGHT="430.00" ELEMENTLOE="" UNIT="" >
        <ISOTOPE MATERIALTYPE="10" WEIGHTPERCENT="0.6976" ISOTOPEWEIGHT="3.00"
        ISOTOPELOE="" UNIT="" >
          </ISOTOPE>
        </ELEMENT>
      </MATERIAL>
      <MATERIAL PROJECT=" XXX1234567" COEILINENUMBER="309" TYPEINVENTORYCHANGE=""
  OWNER="G" KEYMEASUREPOINT="" MEASUREBASIS="" OTHERMEASUREPOINT=""
  MEASUREMETHOD="" GROSSWEIGHT="" NETWEIGHT="" TOPROJECT=""
  TOCOEILINENUMBER="" BACKREFLINENUMBER="002" LINENUMBER="3" BATCH=""
  NUMBEROFITEMS="1">
      <ELEMENT ELEMENTWEIGHT="-2213.00" ELEMENTLOE="" UNIT="" >
        <ISOTOPE MATERIALTYPE="20" WEIGHTPERCENT="2.5305" ISOTOPEWEIGHT="-56.00"
        ISOTOPELOE="" UNIT="" >
          </ISOTOPE>
        </ELEMENT>
      </MATERIAL>
      <MATERIAL PROJECT=" XXX1234567" COEILINENUMBER="309" TYPEINVENTORYCHANGE=""
  OWNER="G" KEYMEASUREPOINT="" MEASUREBASIS="" OTHERMEASUREPOINT=""
  MEASUREMETHOD="" GROSSWEIGHT="" NETWEIGHT="" TOPROJECT=""
  TOCOEILINENUMBER="" BACKREFLINENUMBER="103" LINENUMBER="4" BATCH=""
  NUMBEROFITEMS="1">
      <ELEMENT ELEMENTWEIGHT="2211.00" ELEMENTLOE="" UNIT="" >

```

```
<ISOTOPE MATERIALTYPE="20" WEIGHTPERCENT="2.5327" ISOTOPEWEIGHT="56.00"  
ISOTOPELOE="" UNIT="" >  
</ISOTOPE>  
</ELEMENT>  
</MATERIAL>  
</SHIPMENT>  
</TRANSACTIONS>
```



```
<ISOTOPE MATERIALTYPE="20" ISOTOPEWEIGHT="56.00" UNIT=""/>
</ELEMENT>
</MATERIAL
</OBLIGATION>
<MATERIAL PROJECT="" COEILINENUMBER="309" TYPEINVENTORYCHANGE="" OWNER="J"
KEYMEASUREPOINT="" MEASUREBASIS="" OTHERMEASUREPOINT="" MEASUREMETHOD=""
GROSSWEIGHT="" NETWEIGHT="" TOPROJECT="" TOCOEILINENUMBER=""
BACKREFLINENUMBER="" LINENUMBER="1" BATCH="" NUMBEROFITEMS="1">
  <ELEMENT ELEMENTWEIGHT="420.00" ELEMENTLOE="" UNIT="" >
    <ISOTOPE MATERIALTYPE="10" WEIGHTPERCENT="0.6610" ISOTOPEWEIGHT="3.00"
ISOTOPELOE="" UNIT="" >
      </ISOTOPE>
    </ELEMENT>
  </MATERIAL>
  <MATERIAL PROJECT="" COEILINENUMBER="309" TYPEINVENTORYCHANGE="" OWNER="J"
KEYMEASUREPOINT="" MEASUREBASIS="" OTHERMEASUREPOINT="" MEASUREMETHOD=""
GROSSWEIGHT="" NETWEIGHT="" TOPROJECT="" TOCOEILINENUMBER=""
BACKREFLINENUMBER="" LINENUMBER="2" BATCH="" NUMBEROFITEMS="1">
  <ELEMENT ELEMENTWEIGHT="2213.00" ELEMENTLOE="" UNIT="" >
    <ISOTOPE MATERIALTYPE="20" WEIGHTPERCENT="2.5305" ISOTOPEWEIGHT="56.00"
ISOTOPELOE="" UNIT="" >
      </ISOTOPE>
    </ELEMENT>
  </MATERIAL>
</SHIPMENT>
<SHIPMENT SHIPPERRIS="ABC" RECEIVERRIS="ABC" TRANSFERNUMBER="00021229"
CORRECTION="" PROCESSCODE="A" ACTIONCODE="M" NUMBEROFLINES="2"
NATUREOFTRANSACTION="" SHIPPEDFORRIS="" SHIPPEDTORIS="" TRANSFERAUTHORITY=""
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80-Column format:

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ABC	ABC	0000	10	A	P102																																																																										
ABC	ABC	0000	10	A	P201	PEI8400029	105	CDE84930E9	105	10G																																																																					
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XML format:

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80-Column format:

Example 5 Contract Reclassification																																																																															
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ABC	ABC	000214	A	P102																																																																											
ABC	ABC	000214	A	P201						105																				105	10G									100000	100000																			10000																			
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XML format:

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Example 6
Physical Inventory Listing

<p>NRC FORM 742CU (MM/YYYY) DATA COLLECTION ANNUAL PHYSICAL INVENTORY 40-50, 70-72, 74, 75, 150, Public Laws 85-703, 93-438, 95-91</p>		<p>U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION</p>		<p>APPROVED BY OMB: NO. 3150-0058 Estimated burden per response to comply with this mandatory collection request: 6 hours. This information is required by NRC to fulfill its safeguards responsibilities, bilateral agreements, and responsibilities as a participant in the US/IAEA Safeguards Agreement. Send comments regarding burden estimate to the Records and FOIA Privacy Services Branch (7-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to privacy@nrc.gov. For more information on this collection of information, contact the Office of Management and Enterprise Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</p>		<p>EXPIRES: MM/DD/YYYY</p>										
<p>PHYSICAL INVENTORY LISTING</p>		<p>U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION</p>		<p>APPROVED BY OMB: NO. 3150-0058 Estimated burden per response to comply with this mandatory collection request: 6 hours. This information is required by NRC to fulfill its safeguards responsibilities, bilateral agreements, and responsibilities as a participant in the US/IAEA Safeguards Agreement. Send comments regarding burden estimate to the Records and FOIA Privacy Services Branch (7-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to privacy@nrc.gov. For more information on this collection of information, contact the Office of Management and Enterprise Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</p>		<p>EXPIRES: MM/DD/YYYY</p>										
<p>1. NAME AND ADDRESS Advanced Physics STREET ADDRESS 123 Anywhere Road CITY Commtown</p>		<p>STATE ZA</p>	<p>ZIP CODE 11111</p>	<p>3. INVENTORY DATE 12/31/2002</p>		<p>4. LICENSE NUMBER(S) ABC</p>										
<p>2. REPORTING IDENTIFICATION SYMBOL (RIS)</p>																
<p>5. BATCH DATA</p>																
a. MATERIAL TYPE	b. COMAC CODE	c. ELEMENT WEIGHT	d. ISOTOPE WEIGHT	e. DOE PROJECT NO.	f. SCRAP PROGRAM	g. NUCLEIDE CODE	h. OVER CODE	i. BATCH NUMBER	j. BATCH NAME	k. NO OF ITEMS	l. KEY MEASURE POINT	m. MEASUREMENT POINT	n. MEASUREMENT METHOD	o. MEASUREMENT STATUS	p. NRC OMB CONTROL NUMBER	q. PROCESS CODE
33	FD2	99	18	GGE044499X			G	1								A
39	771	1	1	GAF2949999			G	2								A
23	771	45	12	GDD49949RM			G	3								A
23	771	65	20	GDD49949RM			G	4								A
6. TOTALS		210	51					5								
<p>7. SIGNATURE John Doe</p>								<p>8. TITLE MC&A Representative</p>		<p>9. DATE 12/31/2002</p>						
<p>To the best of my knowledge and belief, the information given above and in any attached schedules is true, complete, and correct.</p>																
<p>WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.</p>																

Example 7
Physical Inventory Listing for selected IAEA facilities.

NRC FORM 742CU (MAY 2001) MANDATORY DATA COLLECTION AUTHORITY: 10 CFR 30, 40, 50, 70.72, 74, 75, 150, 161, 170, 180, 185, 190, 195, 200, 205, 210, 38-438, 85-91		U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB: NO. 3150-0058		EXPIRES: MM/DD/YYYY											
PHYSICAL INVENTORY LISTING				Estimated burden per response to comply with this mandatory collection request is 6 hours. This information is required by NRC to fulfill its safeguards requirements under the Atomic Energy Act of 1954, as amended, and the NRC's regulations thereunder. For more information on this collection, contact the NRC's Office of Information Management, Washington, DC 20545-0001, or by internet e-mail to info/collec@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOP-1002, CE-150-0058, Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.													
1. NAME AND ADDRESS		2. REPORTING IDENTIFICATION SYMBOL (RIS)															
Advanced Physics		ABC															
STREET ADDRESS		4. LICENSE NUMBER(S)															
123 Anywhere Road																	
CITY		3. INVENTORY DATE															
Commontown		12/31/2002															
STATE		ZIP CODE															
ZA		1111															
5. BATCH DATA																	
a. MATERIAL TYPE	b. COMPAC CODE	c. ELEMENT WEIGHT	d. ISOTOPE WEIGHT	e. DOE PROJECT NO.	f. SCRAP PROGRAM	g. WEIGHT PER CENT ISOTOPE	h. OWNER CODE	i. SEQUENCE NUMBER	j. BATCH NAME	k. NO OF ITEMS	l. KEY MEASURE POINT	m. MEASUREMENT BASIS	n. OTHER MEAS POINT	o. MEAS METHOD	p. ENTRY STATUS	q. SITE IDC	r. PROCESS CODE
33	771	155	112	GGE07799X			G	1	Batch0422	10	02	S		N			A
34	771	268	159	GGE07799X			G	2	Batch0434	10	02	S		N			A
6. TOTALS		423	271					3									

To the best of my knowledge and belief, the information given above and in any attached schedules is true, complete, and correct.

7. SIGNATURE
 John Doe

8. TITLE
 MC&A Representative

9. DATE
 12/31/2002

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

