

NMMSS UPGRADE SAMS MODULE REQUIREMENTS

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Revision 0

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Prepared by: John Robichaux
Safeguards & Security Integration Management Section
Washington Savannah River Company
Savannah River Site
Aiken, SC 29808

The following NMMSS Upgrade requirements will be included in the SAMS module spiral development cycle.

Note: This document includes the requirement changes discussed at the June 22, 2006 requirements review meeting in Norcross, Georgia between NAC, DOE and WSRC. It also includes information agreed upon from follow-up conversations with NAC and documented by E-Mail.

ITSCR2	The NMMSS shall provide a main menu structure by which all functions of the NMMSS may be reached.
ITSCR3	The NMMSS main menu will be displayed when signing on to the NMMSS is successfully completed.
ITSCR5	Where appropriate, NMMSS screens will provide the ability to traverse database records. The following standard traversal options will be provided: display the next record, display the previous record, display the top record, and display the last record.
ITSCR6	Where appropriate, NMMSS screens will provide the ability to locate records. Location of records will be accomplished by selection of a search key (ex: RIS, material type) and the action search text (ex., BXA, 20).
ITSCR10	The NMMSS shall perform field validation checks to ensure that field data types agree.
ITSCR11	If any data field on the NMMSS screen is found to be invalid (as the result of field validation checks), the appropriate error message shall be issued and associated with the corresponding field.
ITSCR12	Where possible, NMMSS screens will provide pre-determined field data values listing proper choice selection.
ITSCR14	For any operation, if an error condition occurs, the NMMSS shall issue an error message that accurately describes the error condition and advises the user on how to proceed.
ITSCR15	The NMMSS shall provide a consistent user interface.

TRPT1	The NMSS shall provide a standardized report parameter input screen for all reports. At a minimum, report parameter screens will contain the following: parameter form title, report form ID, report name, report level (facility, operations office, headquarters), report frequency (as required, daily, weekly, monthly, bimonthly, quarterly, semi-annual, annual), report destination (print or file), number of copies, receiving RIS, print report button, abort report button, preview report flag, print report now flag, report page format selection criteria (plain, summary flag), and printer selection parameters (output to, left margin, right margin, printer driver setup flag).
AUDAT3	The NMMSS shall have the capability to assign shipping address information to a RIS. The information will be used for the 741, 742 and 742c forms. (SAMS only)
AUDAT4	The data for the existing address tables shall be preserved during updates or patches of SAMS.
AUSCR46	The NMMSS shall have the capability to manually enter, edit and search for address information for a RIS. The following information will be included in addresses: RIS, RIS Name, street, city, state and zip code. (SAMS only)
TRPRO6	The NMMSS shall have the ability to delete a group of transaction records.
TRPRO7	The NMMSS shall have the ability to convert IAEA or facility COEI codes to NMMSS codes.
TRPRO9	The NMMSS shall have the ability to decode transaction edit errors to the legacy NMMSS 1 character marking scheme and place the error code in the correct column for report production.
TRPRO10	The NMMSS shall have the ability to identify duplicate transactions encountered during a processing run and maintain a copy of the duplicate transaction for reporting purposes.
TRPRO11	The NMMSS shall have the ability to identify transactions with errors during a processing run.
TRPRO12	The NMMSS shall have the ability to identify error-free transactions during a processing run.
TRPRO38	The NMMSS shall identify all newly imported transactions.
TRPRO39	The NMMSS shall identify all transactions having field level errors as working data.

TRPRO43	The NMMSS shall have the capability to import electronically submitted XML and text transaction data into the transaction tables. The format directives for electronically submitted XML and text data are contained in the D-23 and D-24.
TRPRO80	The NMMSS shall record project transfers within a single RIS.
TRPRO86	The NMMSS shall have the ability to convert IAEA, KMP and Measurement Basis codes to NMMSS composition (COEI) codes.
TRPRO87	The NMMSS shall allow users to exempt field level and compatibility error on transactions.
TRPRO98	The NMMSS shall have the ability to run all edit and compatibility checks for current and future accounting periods.
TRPRO99	The NMMSS shall have the ability to capture and process material type description (record type 8) and miscellaneous description information (record type 9)
TRPRO100	The NMMSS shall identify transactions with the same shipper, receiver, transaction number, correction number, and action code as a duplicate transaction.
TRPRO101	The NMMSS shall accept asterisk quantity values and convert it to zero for element and isotope weights.
TRPRO102	The NMMSS shall have the capability to move Edit Check transactions that are error-free to historical. (SAMS only)
TRPRO103	The NMMSS shall have the capability to delete archived (historical) transactions and move or copy archived (historical) transactions to the work area. (SAMS only)
TRPRO104	SAMS will allow the user to run the TJ-002 report with the ability to process errors prior to generating the report.
TRPRO105	SAMS will not use run numbers and work dates to process transactions. Anything not in historical will be included in the edit check run.
TRPRO106	The NMMSS shall have the ability to tag error free records to include in the XML export file and move them to archive (historical). (SAMS only)
TRRPT6	The NMMSS shall be able to produce a transaction data error report (TJ-002). The error report identifies each data discrepancy detected in the initial data input and edit processing stage. These transactions will not continue to the database updating process due to the fatal nature of the discrepancy.

TRRPT75	The NMMSS shall have the ability to produce a 741 simulated report that will list the entire transaction for a transaction series. Options for printing this report shall include shipper data only, shipper and receiver information, shipper information with unfilled receiver lines, receiver information with unfilled shipper lines, or receiver data only.
TRSCR3	The NMMSS users shall have the capability to manually enter transactions which have been reported on paper by the NMMSS users.
TRSCR4	The NMMSS users shall have the capability to perform on-line modification of transactions already entered or imported for the current and future reporting periods.
TRSCR5	The NMMSS shall record and account for the following header information for a transaction and be able to identify how the data was received: shipping RIS, receiving RIS, transaction number, correction number, shipper/receiver processing code, shipper/receiver action code, shipper/receiver license number, number of detail lines, transaction code (TI code), shipped from account of, shipped to account of, transfer authority, action date, capture date, processing period date, processing period close date, concise note flag, concise notes, obligations flag, export or import transfers license number, total gross weight, total volume, and the IAEA UK reportable code.
TRSCR6	The NMMSS shall perform the following actions on transactions: traverse records (next, prior, top, bottom, and locate a record), create new records (excluding historical data), modify records (excluding historical data), save record changes (excluding historical data), delete records (excluding historical data), and copy data to a new record.
TRSCR7	The NMMSS shall record and account for the following detail information for a transaction: line number, inventory change type, batch name, number of items, project number, composition code (COEI), owner code, production code, country control number (not used as of 10/1/2003), material type, element weight, element limit of error, isotope weight, weight percent isotope (assay), isotope limit of error, key measurement point (KMP), measurement basis, other key measurement point, measurement method, back reference change digit and back reference line number.
TRSCR8	The NMMSS shall record and account for the following obligation information for a transaction: obligation line number, obligation country, obligation material type, obligation element weight and obligation isotope weight.
TRSCR12	The NMMSS users shall have the capability to manually enter project transfers which have been reported on paper by the NMMSS reporters.

TRSCR13	The NMMSS shall record and account for the following header information for a project transfer (DP-749): shipping RIS, receiving RIS, transaction number, correction number, shipper/receiver processing code, shipper/receiver action code (always P), capture date, processing period date, processing period close date, number of data lines, transfer authority, and actions date.
TRSCR14	The NMMSS shall record and account for the following detail information for a project transfer (DP-749): line number, from project number, from composition code, to project number to composition code, material type, element weight, weight percent isotope, and isotope weight.
TRSCR15	The NMMSS shall record and account for the following IAEA transaction exclusion information: shipper RIS, receiver RIS, transaction number, correction number, action code, action date, include date and report type.
TRSCR16	The NMMSS shall record and account for the following transaction edit check exemption information: shipper RIS, receiver RIS, transaction number, correction number, process code, action code, edit check excluded identifier and authorization comment.
TRSCR21	The NMMSS shall have the ability to capture and process net and gross weight in detail transactions. (Note: place this in the transaction screen requirement)
TRSCR22	The NMMSS shall include "I" action code transactions in the general data population.
INVPRO4	The NMMSS shall have the ability to delete a group of inventory records in open or future periods.
INVPRO9	The NMMSS shall have the capability to import electronically submitted XML and text inventory data into the inventory tables. The format directives for electronically submitted XML and text data are contained in the D-23 and D-24.
INVPRO17	The NMMSS shall have the ability to convert IAEA or facility COEI codes to NMMSS codes.
INVPRO18	The NMMSS shall have the ability to identify duplicate inventory imports (RIS, inventory date, summary material type and sequence number) records encountered during a processing run and maintain a copy of the duplicate inventory import information for reporting purposes.
INVPRO19	The NMMSS shall have the ability to identify inventory records with errors during a processing run.

INVPRO20	The NMMSS shall have the ability to identify error-free inventory records during a processing run.
INVPRO22	The NMMSS shall allow users to exempt field level errors on inventories.
INVPRO24	The NMMSS shall have the ability to run all edit checks for all reported inventories.
INVPRO25	The NMMSS shall have the ability to convert IAEA, KMP and Measurement Basis codes to NMMSS composition (COEI) codes.
INVPRO26	The NMMSS shall accept asterisk quantity values and convert it to zero for element and isotope weights.
INVPRO27	The C process code will replace an A or C record by RIS, Report Period, Material Type and Sequence No.
INVPRO28	The D process code will delete an A or C record by RIS, Report Period, Material Type and Sequence No.
INVPRO29	The D process code will delete an A or C record by RIS, Report Period, Material Type and no Sequence No. reported will remove all records that match the RIS, Report Period, Material Type.
INVPRO30	The NMMSS shall have the capability to move Edit Check inventories that are error-free to historical. (SAMS only)
INVPRO31	The NMMSS shall have the capability to delete an archived (historical) inventory and to move or copy an archived (historical) inventory back to the work area. (SAMS only)
INVPRO32	SAMS will allow a user to run the I-10E report with the ability to process errors prior to generating the report.
INVPRO33	The NMMSS shall have the ability to tag error-free records to include in the XML export file and move to archive (historical). (SAMS only)
INVPRO34	The NMMSS shall accept asterisk quantity values for element and isotope weights and convert them to zero upon import. (SAMS only)
INVRPT1	The NMMSS shall have the ability to produce an inventory listing report that will list inventory for a specific RIS (I-10E). This report will contain report date, RIS, material type, composition code, element weight, isotope weight, project number, program type, material assay, owner code, batch ID and sequence number.
INVRPT49	The NMMSS shall have the ability to produce a 742C simulated report that will list the entire inventory for a RIS, inventory date and material type.

INVSCR1	The NMMSS shall record and account for the following information for a inventory: inventory report date, RIS, material type, composition code, ANSI code, element weight, isotope weight, project number, scrap program code, weight % isotope, owner code, batch ID, number of items, key measurement point, measurement basis, other key measurement point, measurement method, concise note flag, concise note text, sequence number, capture date, location and site MBA.
MBPRO1	The NMMSS shall have the ability to delete a group of material balance records in an open or future Material Balance period
MBPRO2	The NMMSS shall have the capability of closing material balance error free data based on a given RIS, start date, and end date of report period.
MBPRO4	The NMMSS shall have the capability to import electronically submitted XML and text Material Balance data into the Material Balance tables. The format directives for electronically submitted XML and text data are contained in the D-23 and D-24.
MBPRO7	The NMMSS shall have the ability to identify duplicate Material Balance imports (RIS, report period & material type) records encountered during a processing run and maintain a copy of the duplicate Material Balance import information for reporting purposes.
MBPRO12	The NMMSS shall have the ability to identify Material Balance records with errors during a processing run.
MBPRO13	The NMMSS shall have the ability to identify error-free Material Balance records during a processing run.
MBPRO14	The NMMSS shall allow users to exempt field level errors on Material Balance.
MBPRO15	The NMMSS shall have the ability to run all edit checks for all reported Material Balance.
MBPRO17	The C process code will replace an A or C record by RIS, Report Period, Material Type and Sequence No.
MBPRO18	The D process code will delete an A or C record by RIS, Report Period, Material Type and Sequence No.
MBPRO19	The D process code will delete an A or C record by RIS, Report Period, Material Type and no Sequence No. reported will remove all records that match the RIS, Report Period, Material Type.
MBPRO20	The D process code will delete an A or C record by RIS, Report Period, no Material Type and no Sequence No. are reported will remove all records that match the RIS and Report Period.

MBPRO21	The NMMSS shall have the capability to move Edit Check material balances that are error-free to historical. (SAMS only)
MBPRO22	The NMMSS shall have the capability to delete an archive (historical) material balance and to move or copy an archive (historical) material balance back to the work area. (SAMS only)
MBPRO23	SAMS will allow the user to run the MB-01-ED report with the ability to process errors prior to generating the report.
MBPRO24	The NMMSS shall accept asterisk quantity values and convert them to zero for element and isotope weights upon import. (SAMS only)
MBPRO25	The NMMSS shall have the ability to tag error free records to include in the XML export file and move to archive (historical). (SAMS only)
MBRPT1	The NMMSS shall be able to produce a material balance report listing data contained in an open or future Material Balance period. (MB-01-ED).
MBSCR1	The NMMSS users shall have the capability to enter, view, and copy material balance data.
MBSCR2	The NMMSS shall have a user interface that allows a NMMSS user the ability to view historical Material Balance records.
MBSCR3	The NMMSS shall record and account for the following information for a material balances: data type code, RIS, material type, start date, end date, element weight, isotope weight, material balance category, other RIS, inventory change type, entry status, concise note flag, and concise note text.
MBRPT12	The NMMSS shall have the ability to produce a 742 simulated report that will list the entire material balance for a RIS, period and material type. (SAMS only)
RPT31	The NMMSS shall be able to produce preliminary reports on unclosed Transaction, Material Balance and Inventory data. The reports will be marked as containing preliminary data and is subject to change.
RPTFMT1	The NMMSS shall use a standard report format for all reports.
RPTFMT2	The NMMSS shall begin each report with a standard cover page.
RPTFMT3	The NMMSS shall, for each internal page, follow a standard header and footer format.
RPTFMT4	The NMMSS shall end each report with a standard end of report page.

RPTFMT5	The NMMSS shall indicate blank report no data found in the body of NMMSS reports where a report finds no data for the specified input parameters.
RPTFMT6	No report produced by the NMMSS shall alter the data from which it was produced.
RPTFMT7	The NMMSS shall not allow information to be retrieved from the database for a report, for a query, or for a transaction while any of the requested information is in the process of being updated.
RPTFMT9	The NMMSS shall have the ability to produce a cover page for all hardcopy output that states S-RD Until ADC Review.
RPTFMT10	The NMMSS shall have the ability to produce a page that lists query parameters used to generate report
SYSPRO1	For use in SAMS only, the NMMSS shall have the ability to migrate previous version data to the next version of the SAMS database.
SYSPRO20	SAMS will have the ability to specify where files are to be stored.
SYSSCR6	The NMMSS shall be capable of maintaining the NMMSS menu structure. This interface will be used to maintain fields on the SYPROGS database (which houses the NMMSS menu structure).
SEC47	The NMMSS shall allow the user to abort a transaction, inventory, or material balance record and discard its input at any time before it is committed to the database.
SYSPRO21	The NMMSS shall have the ability to view, delete or copy an export file. (SAMS Only)

Appendix B
Transaction Edits

TRED1	A transaction data set cannot be added using an A process code if the set exists on the transaction data file.
TRED2	In order for a C process code to be accepted and acted upon by the update program, the data set must already exist on the transaction data file.
TRED3	In order for a D process code to be accepted and acted upon by the update program, the data set must already exist on the transaction data file and contain a process date for the current or a future processing period. Data from a prior period is never deleted.
TRED4	A data set cannot report an event before it occurs, i.e., the action date contained in a change data set (C Process Code) and the year and month of the action date cannot be greater than the year and month of the current NMMSS process date. The year and the month of the action date must be less than or equal to the assigned process date of the data set being changed.
TRED5	A data set which reflects a change (C Process Code) to the action date of a data set existing on the transaction data file for a previous NMMSS process period is accepted and reflected on the conditional data list if the year and the month of the action date is less than or equal to the assigned process date of the data set being changed.
TRED6	A data set submitted as a change (C Process Code) to a data set existing on the transaction data file for a previous NMMSS process period cannot add, delete, or alter any of the detail information records (type 2 and 5 records).
TRED7	A data set submitted as a change (C Process Code) to a data set containing transportation (Type 3 record) information existing on the transaction data file for a previous NMMSS process period cannot alter the import/export license number.
TRED8	A data set submitted as a change (C Process Code) to the header (Type 1 Record) information of a data set already existing on the transaction data file for a previous NMMSS process period cannot alter the financial code (TI Code), For/To Account RIS or contract number.
TRED9	A data set with a B action code (receiver acceptance shipper's weights without measurement) cannot be added to the transaction data file when a data set for the same transaction already exists on the file containing an E action code (receiver reporting independent measurements).
TRED11	A data set with a E action (receiver reporting independent measurements) cannot be added to the transactions data file when a data set for the same transaction already exists on the file containing an B action code (receiver acceptance shipper's measurements)
TRED12	A data set with a S action code (Safeguards Closure) cannot be added to the transaction data file when a data set for the same transaction already exists on the file containing an B action code (Receiver acceptance shipper's measurements) or E action code (receiver reporting independent measurements)
TRED13	For transaction with D process codes (delete actions) only header records data code of 1 are applicable.
TRED14	All detail information records are counted by the transaction data edit software and the total calculated must agree with the number of lines reported on the header record.
TRED15	All detail records must be consecutively numbered except in the case of adjustments.

TRED16	Detail information records are required for action codes A, E, J, M, I and P.
TRED17	Detail information records are not required or permitted for action codes N, T and U.
TRED18	For the action code B, C and D detail records may or may not be applicable, therefore, they are always permitted but required for: Action Code C when the receiver is a DOD or a mutual defense symbol
TRED19	For the action codes B, C and D detail records may or may not be applicable, therefore, they are always permitted but required for: Action code D when the shipper is a DOD or a mutual defense symbol
TRED20	For the action codes B, C and D detail records may or may not be applicable, therefore, they are always permitted but required for: Action code B when imports are reported or the receiver is a U.S. - IAEA/288 Safeguards Agreement selected facility with facility attachments in place.
TRED21	For any transaction data set which requires a type 3 record and /or a type 4 record the records must be submitted along with their associated header and detail information records. Type 3 and type 4 records can be submitted independently only with changing a previously entered record using a C process code. In both cases only one type 3 and type 4 records is permitted to exist for any one data set. Several types of transaction data sets do not require a type 4 record. These exceptions are listed below: Transaction when the shipper and receiver constitute an RIS pair and neither party is a burial site; when party is a burial site the total volume is permitted.
TRED23	When M action codes are reported with use code 22 and 71 (blending), the transaction data edit software requires that corresponding or paired 22's and 71's be submitted with the same transaction data set and that quantity differences between the element and isotope weights reported for each use code do not exceed one reported unit. (Allowances are made for the differences in the weight reporting requirements for the various materials as applicable).
TRED24	Relational editing between the various records reported for a data set is also made for license number (type 3 record). The import/export license number is verified with respect to the international transaction authority file material types authorized under each license. The date the transaction activity occurred is also validated in terms of the dates for each license. The party receiving the material is verified to ensure that under the license requirements they under that license. A check is also made to verify that GEN-LIC or LIC-EXEMPT is not used with South African origin material.
TRED25	Duplicate data sets with different process codes in the same edit run are not allowed.
TRED26	NRC edit check on licensee transactions to check for non-reportable material type/owner code combinations of non-foreign-obligated material. The transactions involving such combinations would be flagged with a conditional (non-fatal) error. One example of the type of transaction that would be flagged is a transaction involving privately-owned source material without foreign obligations. This is a type of combination that is not required to be reported.

Appendix E
Transactions Header Business Rules

TRBSNHD1	Shipper RIS	Shipper RIS must be valid according to the RIS Authority Reference File.
TRBSNHD2	Shipper RIS	Valid, but deactivated RIS is accepted conditionally.
TRBSNHD3	Shipper RIS	Shipper RIS must be an Active or Deactivated RIS.
TRBSNHD5	Shipper RIS	Shipper RIS must be a DOE contractor or DOD symbol for shipments (i.e., Action codes A or C) to the Department of Defense (DOD, QZ-RISs)
TRBSNHD6	Shipper RIS	For Action codes A, C, P, R and X the RIS cannot be a DOD symbol or mutual defense agreement RIS (Section 91 C) (i.e., RIS category of D or 9) and transaction cannot be generated and Action date > March 28, 1988.
TRBSNHD8	Shipper RIS	Shipper RIS must be the same as receiver's RIS for Action codes M, I, R or P.
TRBSNHD9	Shipper RIS	If the Action code is B, E, X, Y, S, J, N, T or U, the shipper's RIS and the receiver's RIS can not be the same.
TRBSNHD10	Shipper RIS	If the Action code is P, the shipper cannot be a UEA foreign storage control account (i.e., RIS category of S).
TRBSNHD11	Shipper RIS	Shipper RIS cannot be a RIS with financial significance only (i.e., RIS category of Z or R).
TRBSNHD12	Shipper RIS	Shipper RIS cannot be a four-character waste holding AIR or RESEARCH symbol (i.e., where fourth character of RIS is A or R).
TRBSNHD13	Shipper RIS	If either of the parties to a transaction are a four-character waste holding facility then the first three characters of the RIS must be the same or the shipper's and receiver's first three characters must constitute a RIS pair or the other facility must be a waste site.
TRBSNHD15	Shipper RIS	If Action code is equal to S, then shipper must be a DOE contractor.
TRBSNHD16	Shipper RIS	If Action code is equal to S and shipper is a DOE contractor then shipper cannot be a waste site.
TRBSNHD17	Shipper RIS	If Action code is equal to S, then shipper cannot be selected or attached by the IAEA.

TRBSNHD18	Receiver RIS	Receiver RIS must be valid according to the RIS Authority Reference File.
TRBSNHD19	Receiver RIS	Valid, but deactivated RIS is accepted conditionally--
TRBSNHD21	Receiver RIS	Receiver RIS must be a Uranium enrichment facility for Uranium enrichment feed receipts (F TI code with a RIS category of T or U).
TRBSNHD22	Receiver RIS	Receiver RIS must be a DOE contractor symbol for receipts from the Department of Defense (DOD, QZ-RISs).
TRBSNHD23	Receiver RIS	For Action codes B, E, D, J, P, N, T, U and Y, the RIS cannot be a DOD symbol or mutual defense agreement RIS (Section 91 C) and Action date > March 28, 1988.
TRBSNHD24	Receiver RIS	For Action codes M and I, the RIS cannot be a mutual defense agreement RIS (Section 91 C), DOE contractor burial site, or an RIS with financial significance only. Note: V to V RIS transfers are excluded from this edit check.
TRBSNHD25	Receiver RIS	Receiver RIS must be the same as shipper's RIS for Action codes M, I, P and R.
TRBSNHD28	Receiver RIS	Receiver RIS cannot be a RIS with financial significance only.
TRBSNHD30	Receiver RIS	If Action code S, receiver must be a DOE contractor.
TRBSNHD31	Receiver RIS	If Action code S and receiver a DOE contractor, receiver cannot be a waste site.
TRBSNHD32	Receiver RIS	If Action code S, then receiver cannot be selected or attached by the IAEA.
TRBSNHD33	Transfer Number	For Action codes M, I and P, Transfer Number may be any combination of alphabetic and/or numeric characters except for: "/" and "\" characters.
TRBSNHD35	Transfer Number	Transfer Number cannot be blank.
TRBSNHD37	Correction Number	Correction Number required for Action codes C and D.
TRBSNHD38	Correction Number	Correction Number invalid for Action codes A, B, E, J, N, R, S, T, U, X and Y.
TRBSNHD39	Correction Number	Correction Number cannot be zero for Action codes.
TRBSNHD40	Process Code	Process Code must be A, C, D or Z.

TRBSNHD41	Process Code	If Z Process code is reported then Action code must be D.
TRBSNHD42	Action Code	Action Code must be one of the following A, B, C, D, E, I, J, M, N, R, P,S, T, U, X and Y.
TRBSNHD43	Action Code	Action Code cannot be Action codes J, N, S, T or U when the shipper is a mutual defense or DOD symbol or shipper equals receiver.
TRBSNHD44	Action Code	For Action codes M, I and R the RIS cannot be a mutual defense agreement RIS (Section 91 C) .
TRBSNHD46	Number of Lines	Number Of Lines cannot be zero or blank for Action codes A, E, J, I, S and P.
TRBSNHD47	Number of Lines	Number Of Lines must be blank or zero for Action codes X, Y, R, N, T and U.
TRBSNHD48	Number of Lines	Number Of Lines must equal the total number of detail information records included in the data set.
TRBSNHD49	Number of Lines	Number Of Lines may be zero for Action code B except when detail information records must be reported in order to meet specific requirements. Shipper is DOD or Section 91 C.
TRBSNHD51	Number of Lines	Number Of Lines may be zero for Action code B except when detail information records must be reported in order to meet specific requirements. TI code is F, D, G, S, E or R
TRBSNHD53	Number of Lines	Number Of Lines may be zero for Action code B except when detail information records must be reported in order to meet specific requirements. For example, if the detail records are not included, the NMMSS cannot be provided a Project Number to associate with DOE-owned material. The specific cases that require detail information records are: Import receipts when quantitative information must be provided to determine if U.S. – IAEA INFCIRC/207 Safeguards Agreement rules apply.
TRBSNHD54	Number of Lines	Number Of Lines may be zero for Action code B except when detail information records must be reported in order to meet specific requirements. For example, if the detail records are not included, the NMMSS cannot be provided a Project Number to associate with DOE-owned material. The specific cases that require detail information records are: Receipts by facilities selected to report under U.S. – IAEA INFCIRC/288 Safeguards Agreement with facility attachments in place.

TRBSNHD56	Number of Lines	Number Of Lines may be zero for Action codes C and D except for the following cases: Shipper's adjustments when the receiver is DOD or mutual defense
TRBSNHD57	Number of Lines	Number Of Lines may be zero for Action codes C and D except for the following cases: Receiver's adjustments when the shipper is DOD or mutual defense.
TRBSNHD58	Number of Lines	If Z Process code is reported then Number of lines must be zero.
TRBSNHD60	TI Code	TI Code must be a valid TI code when reported
TRBSNHD61	TI Code	TI Code cannot be reported for Action codes M, I, P, N, R, T, U, X and Y.
TRBSNHD63	For Account	For Account must be valid according to the RIS Authority Reference File.
TRBSNHD64	For Account	For Account must be blank for Action codes P, N, R, T, U, X and Y.
TRBSNHD65	For Account	For Account required for transfer of lease agreement with or without physical movement of DOE-owned leased material; cannot be the same as To Account (B TI code).
TRBSNHD66	For Account	For Account required for transfer of leased DOE-owned material with no transfer of lease agreement; must be the same as To Account (C TI code).
TRBSNHD67	For Account	For Account required for return of leased DOE-owned material to DOE for credit (D TI code).
TRBSNHD68	For Account	For Account required for Action code M removal transactions of leased DOE-owned material to identify the organization financially responsible for the material.
TRBSNHD69	For Account	For Account required to identify the facility that is selling material to DOE (G TI code).
TRBSNHD70	For Account	For Account required to identify the facility that is donating material to DOE (S TI code)
TRBSNHD71	For Account	For Account required and is the identifying DOD symbol or the military installation symbol that is the shipping point in transfers from DOD to DOE.
TRBSNHD72	For Account	For Account required to identify the DOE organization or DOE contractor facility that is programmatically responsible for DOE project material when Action code M removal transactions are reported by a domestic licensee or a foreign

		RIS.
TRBSNHD73	For Account	Facility category must be in agreement with the reported Owner code. Except when the shipper or receiver is a DOD RIS.
TRBSNHD74	For Account	Rule: 7a – b: If TI code is B or C and Owner code is G with Lease Project Number then For Account RIS category must be L, W or Z.
TRBSNHD75	For Account	Rule: 7a – b: If TI code is A, B or C and Owner code is G with Lease Project Number then For Account RIS must be F, I or R.
TRBSNHD76	For Account	Rule: 7a – b: If TI code is A or B For Account RIS Category must be L or Z. If TI code is S For Account RIS Category must be F, I or R.
TRBSNHD77	For Account	Rule: 7a – b: If TI code is blank and Action code is A, C, B, D, E or J and Owner code is G and the shipper or receiver RIS categories are L, F or I, the For Account category must be C. Except when shipper or receiver is a DOD RIS. Both shipper and receivers RIS are not foreign or licensee then For Account must be blank.
TRBSNHD79	For Account	Rule: 7a – b: If TI code is blank and Action code is B, D or E and shipper RIS category is D, M or 9 then To Account must be blank.
TRBSNHD80	For Account	Rule: 7a – b: If TI code is blank and Action code is M and Owner code is G with Lease Project Number then For Account category must be L, W or Z.
TRBSNHD81	For Account	Rule: 7a – b: If TI code is blank and Action code is M and Owner code is G with Lease Project Number then For Account RIS category must be R, I, F or S.
TRBSNHD82	For Account	Rule: 7a – b: If TI code is blank and Action code is M and Owner code is G and not leased then For Account RIS category must be C. This edit check only applies to transactions where the shipper or receiver RIS is a licensee.
TRBSNHD83	For Account	Rule: 7a – b: If TI code is blank and Action code is M and Owner code is J then For Account RIS category must be blank.
TRBSNHD84	For Account	Rule: 7a – b: If TI code is A with Owner code G and licensee or foreign receiver required to identify the contractor facility responsible – For Account must be a RIS category C.
TRBSNHD85	For Account	Rule: 7a – b: If TI code is E or R and owner code is G then For Account RIS category must be C.
TRBSNHD88	For Account	Deactivated RIS or a three-character foreign RIS is accepted conditionally.

TRBSNHD90	To Account	To Account must be valid according to the RIS Authority Reference File.
TRBSNHD91	To Account	To Account must be blank for Action codes P, N, R, T, U, X and Y.
TRBSNHD92	To Account	To Account required for transfer of lease agreement with or without physical movement of DOE-owned material; cannot be the same as the For Account (B TI code).
TRBSNHD94	To Account	To Account required for transactions that initiate a lease (A TI code).
TRBSNHD95	To Account	To Account required for M Action code receipt transactions for leased DOE-owned material to identify the organization financially responsible for the material.
TRBSNHD96	To Account	To Account required to identify the facility that is purchasing material from DOE (E TI code).
TRBSNHD97	To Account	To Account required to identify the facility to which DOE is donating material (R TI code).
TRBSNHD98	To Account	To Account required to identify the DOD symbol or the military installation symbol which represents the first point of destination in transfers from DOE to DOD.
TRBSNHD99	To Account	To Account required to identify the DOE organization or DOE contractor facility that is programmatically responsible for DOE project material when Action code M receipt transactions are reported by a licensee or a foreign RIS.
TRBSNHD100	To Account	To Account must be in agreement with the reported Owner code. Except if there are no detail lines.
TRBSNHD101	To Account	Rule: 7a – b: If TI code is A, B or C and Owner code is G and leaded then To Account category must be L, W or Z.
TRBSNHD102	To Account	Rule: 7a – b: If TI code is A, B or C and Owner code and loan/lease material then To Account category must be F, I or R.
TRBSNHD103	To Account	Rule: 7a – b: If TI code is D, G or S To Account must be blank unless receiver RIS category is L, W, Z, F, I, R or S.
TRBSNHD104	To Account	Rule: 7a – b: If TI code is blank and Action code is A, C, B, D, E or J and Owner code is G and not leased Project Code and the shipper or receiver RIS categories are L, F or I then To Account category must be C. If both shipper and receiver RIS' are not foreign or licensee then To Account must be blank.
TRBSNHD105	To Account	Rule: 7a – b: If TI code is F and receiver RIS facility operation type is E and Action code is not M then To Account

		category must be blank.
TRBSNHD106	To Account	Rule: 7a – b: If TI code is blank and Action code is B, D or E and shipper RIS category is D, M, or 9 then To Account RIS category must be blank.
TRBSNHD107	To Account	Rule: 7a – b: If TI code is blank and Action code is M and Owner code is G and leased Project Number then To Account RIS category must be L, W, or Z.
TRBSNHD108	To Account	Rule: 7a – b: If TI code is blank and Action code is M and Owner code is S then To Account RIS category must be R, I, F or S.
TRBSNHD109	To Account	Rule: 7a – b: If TI code is blank and Action code is M and Owner code is G and not leased Project Number then To Account RIS category must be C or V.
TRBSNHD110	To Account	Rule: 7a – b: If TI code is blank and Action code is M and Owner code is J then To Account RIS category must be blank.
TRBSNHD111	To Account	Rule: 7a – b: If TI code is D with Owner code G and licensee or foreign receiver required to identify the contractor facility responsible then To Account must be a RIS category C.
TRBSNHD113	To Account	Deactivated RIS or a three-character foreign RIS is accepted conditionally.
TRBSNHD122	Transfer Authority	All other activity (excluding Action codes M and P): Transfer Authority between two foreign RIS requires a valid retransfer document (RTD) number which the NMMSS verifies through the International Transaction Authority Reference file (except when the shipper and receiver are the same RIS).
TRBSNHD123	Transfer Authority	Not accepted if Action date is not within valid date range of RTD.
TRBSNHD126	Special IAEA Code	Import or export from UK must be N or R.
TRBSNHD127	Special IAEA Code	Not an Import and an export from UK must be blank.
TRBSNHD131	Action Date	Must be a valid date.
TRBSNHD132	Action Date	Action Date cannot be future to the date of capture.
TRBSNHD135	License Number	License Number must be a valid License number according to the INMTS Authority Reference file.

TRBSNHD136	License Number	The following associated edits are made after an import/export License number has been found to be valid (data not meeting these additional checks is conditionally accepted): If reported, the Transfer Authority number (header record) must be one that is authorized under the import/export license.
TRBSNHD137	License Number	The following associated edits are made after an import/export License number has been found to be valid (data not meeting these additional checks is conditionally accepted): The receiving country must be the country authorized by the license.
TRBSNHD138	License Number	The following associated edits are made after an import/export License number has been found to be valid (data not meeting these additional checks is conditionally accepted): If import/export license number is valid, action date cannot be prior to date of License number or after expiration.
TRBSNHD139	License Number	If both the shipper and receiver RIS are domestic, the License number must be blank.

Appendix F
Transactions Detail Line Business Rules

TRBSNDT1	Line Number	Line number cannot be zero or blank.
TRBSNDT2	Line Number	Line number must be consecutively numbered except for adjustment transactions.
TRBSNDT3	Use Code	Must be blank for Action code P.
TRBSNDT6	Use Code	For Action code I must be one of the valid explanation inventory difference codes.
TRBSNDT7	Use Code	Must be 22, 65, 71, 74, 75, 76 or 77 for Uranium in cascades (Material Type 89).
TRBSNDT8	Use Code	For DOD and Section 91 C transactions appropriate Use codes are supplied by the edit program to allow for proper inclusion in the Material Report Form 742C. Use codes are assigned as follows: Receipt from DOD: QZE = 14, QZC = 15, QZA, QZB, QZD = 16 Shipment to DOD: QZE = 44, QZC = 45, QZA, QZB, QZD = 46
TRBSNDT9	Use Code	Use codes 22 and 71 reported under Action code M (blending operations' crossovers) must be reported in pairs and must agree with respect to Material Type and quantities.
TRBSNDT10	Use Code	For Action code M, Use codes LD, TW, SN and LA are only valid for adjustments.
TRBSNDT11	Use Code	Must be blank for Action codes A, B, E, J, S, C and D unless a NOL/MD/AL is being reported and then must meet the conditions as defined in the Normal Operational Losses/Measured Discards/Accidental Losses Procedure in the General System Operation Concepts and Procedures section of the DOE manual.
TRBSNDT12	Use Code	For Action code M must be one of the valid use codes in Authority Reference Table.
TRBSNDT13	Use Code	Use code GA is only valid for IAEA facilities reporting an Action code M.
TRBSNDT17	Batch Id	Batch Id must not be blank or zeroes for IAEA selected and attached facilities and any import or export.
TRBSNDT18	Batch Id	The first two characters must equal the type of inventory change followed by any combination of numeric and alphabetic characters when blending operations are reported.

TRBSNDT22	Batch Id	Number of items required to be reported in all cases except when Action code is I, P and M without Use code 34 or 54 or the shipper and receiver do not constitute a RIS pair or shipper and receiver are foreign facilities.
TRBSNDT23	Batch Id	Number of items must be a positive value unless reporting a correction and the Element and Isotope Weights are also negative.
TRBSNDT24	Project Number	Project Number must be blank when not required and cannot be blank when Owner code is G. I data sets, the Holding and Waste facilities' side of the transaction and A/C data sets with a Use code do not require a Project Number if the Owner code is G.
TRBSNDT25	Project Number	Project Number must be a valid number according to the Project Number Authority Reference File.
TRBSNDT26	Project Number	Project Numbers associated with Action dates prior to the current fiscal year are accepted conditionally if the Project Number is valid for the processing period.
TRBSNDT27	Project Number	Project Number must be blank for material being transferred to burial sites with a blank Use code.
TRBSNDT29	Project Number	From and To Project Numbers must be included for Action code P and cannot be identical.
TRBSNDT31	Project Number	Project Number not applicable for data reported by four character waste disposition symbol.
TRBSNDT32	Material Type	Material Type must be a valid Generic Material Types according to the Material Type Authority Reference File.
TRBSNDT35	Material Type	Material Type 89 (Uranium in cascades) is valid only for Uranium enrichment facilities (B RIS) and can only be reported under Action code M except when reporting NOL/AL with Action code A, B, E, C and D.
TRBSNDT37	Material Type	Material Type must fulfill the following U.S. – IAEA INFCIRC/288 reporting requirements if the reporting facility has facility attachments in place and is reporting an IAEA selected Material Type. The Action date must be in the range of the Material Type valid-as-of and valid-through dates.
TRBSNDT38	Material Type	Material Type must be one of the corresponding alphabetic material codes for import and export activity: 10 – D; 20 – EG; 50 – P; 70 – EK; 81 – N; 83 – PU; 88 – T (Note: Edit only applies to NRC import/export transactions.)

TRBSNDT39	Material Type	Material Types reported must be those authorized under the conditions of the import/export license in the INMTS authorization table for import/export transactions.
TRBSNDT41	Composition Code	Composition Code must be a valid code according to the Composition code Authority Reference File with respect to Material Type, RIS category of the reporting facility, and time frame for reporting Composition code, or must be a valid code according to the ANSI Scrap code Authority Reference File with respect to the Material Type.
TRBSNDT42	Composition Code	Scrap material for Material Types 10, 20, 40, 50, 81, 83 and 89 must be reported according to the ANSI Scrap classification codes, not to the generic, numeric Composition codes; for all other Material Types the generic numeric Composition codes must be used.
TRBSNDT43	Composition Code	Generic ANSI Scrap codes (A00, B00, C00, etc.) must only be used as valid Composition codes for licensees and licensee operated waste management sites except for Material Types 40, 50 and 83.
TRBSNDT44	Composition Code	Composition Code not permitted or applicable for Action code M when reporting Use code 76, 77 or 65 or for Action code I.
TRBSNDT45	Composition Code	Composition Code must fulfill the following U.S. – IAEA INFCIRC/288 reporting requirements if the reporting facility has facility attachments in place and is reporting an IAEA selected Material Type. Composition Code must be valid according to the Facility Attachment Authority Reference File.
TRBSNDT46	Composition Code	Composition Code required except for Action code M when reporting Use code 76, 77 or 65 or for Action code I.
TRBSNDT47	Owner Code	Owner Code must be one of the valid Owner codes according to the Authority Reference File. Owner code can be blank for shipper's or receiver's documents involving holding and waste burial facilities.
TRBSNDT48	Owner Code	Owner Code must be G for transfers involving DOD symbols Weapons based on Q RIS
TRBSNDT50	Owner Code	Owner Code must be G for transfers involving Section 91c symbols (QZF, QZG).
TRBSNDT52	Owner Code	Owner Code must be J when reported by a UEA foreign storage control symbol (S series).
TRBSNDT53	Owner Code	Rule: 7a – b:

		When TI code is E or R: Shipper Owner code must be G. Receiver Owner code must be J.
TRBSNDT54	Owner Code	Rule: 7a – b: TI code is G or S Action code is A or C; shipper must report Owner code J. Receiver must report Owner code G. Heels must report Owner code J.
TRBSNDT55	Owner Code	Rule: 7a – b: TI code is A and Action code is B; Owner code must be G and lease Project Number.
TRBSNDT56	Owner Code	Rule: 7a – b: TI code is A and Action code is A; Owner code must be G and not leased .
TRBSNDT57	Owner Code	Rule: 7a – b: TI code is D and Action code is A; shipper must report Owner code G and lease Project Number Receiver must report Owner code G. Heels must report Owner code J.
TRBSNDT58	Owner Code	Rule: 7a – b: TI code is B or C and Action code is A; Owner code must be G and lease Project Number. Heels owner code must be J.
TRBSNDT59	Owner Code	Rule: 7a – b TI code is E or R and Action code is A; Owner code must be G. Heels Owner code must be J.
TRBSNDT62	Owner Code	If Action code is equal to S then Owner code must be G and not leased project code
TRBSNDT81	Key Measurement Point	Key Measurement Point required for all attached IAEA facilities as identified by the attachment agreement must be blank for non-selected or nonattached.
TRBSNDT82	Key Measurement Point	Key Measurement Point must be valid according to the Facility Attachment Authority Reference File for the Material Type and Composition code reported.
TRBSNDT84	Measurement Basis	Measurement Basis must be empty when the IAEA side of the transaction is reporting a use code 65, 75, 76 or >83.
TRBSNDT85	Measurement Basis	Measurement Basis valid values are N, M, L or T when an IAEA is reporting their side of a transaction.
TRBSNDT87	Other Measurement Points	Other Key Measurement Points must be blank unless a measurement basis of M is reported.
TRBSNDT88	Other Measurement Points	Other Key Measurement Points must be omitted if equal to the reported key measurement point.

TRBSNDT89	Other Measurement Points	Other Key Measurement Points must be valid according to the Facility Attachment Authority reference file for material type, comp code, KMP, and Meas. Basis
TRBSNDT91	Measurement Method	Measurement Method must be valid according to the Facility Attachment Authority Reference File for the Material Type and Composition code reported excepted for transactions with a Use code of 65, 75, 76 or greater than 83.
TRBSNDT93	Back Reference Change Digit	Back Reference Change Digit must be blank for Action codes A, B, E, J and, S.
TRBSNDT94	Back Reference Change Digit	Back Reference Change Digit not applicable for Action codes M and I unless correction is being reported.
TRBSNDT95	Back Reference Change Digit	Back Reference Change Digit must be numeric (0-9) or alphabetic (A-Z).
TRBSNDT98	Back Reference Change Digit	Back Reference Change Digit must not be blank for an IAEA attached or selected facility with Action code C or D. Import or export included.
TRBSNDT99	Back Reference Change Digit	Back Reference Change Digit must be numeric (0-9) (NRC only).
TRBSNDT100	Back Reference Change Digit	Back Reference Change Digit must not be blank for Action codes C and D if NRC licensee. Applicable for Action code M when an adjustment is being reported by an NRC licensee.
TRBSNDT101	Back Reference Change Digit	If back reference change digit is not blank then correction number cannot be blank and vice-versa.
TRBSNDT102	Back Reference Detail Line	Back Reference Detail Line must be blank for Action codes A, B, E, J, S and P.
TRBSNDT103	Back Reference Detail Line	Back Reference Detail Line not applicable for Action codes M and I unless an adjustment is being reported.
TRBSNDT104	Back Reference Detail Line	Back Reference Detail Line must be numeric (00-99).
TRBSNDT106	Back Reference Detail Line	Back Reference Detail Line must not be blank for an IAEA attached or selected facility with Action code C or D or imports or exports.

TRBSNDT107	Back Reference Detail Line	Back Reference Detail Line must not be blank for NRC license with Action code C or D or when correcting M action code.
TRBSNDT108	Back Reference Detail Line	If back reference line number is not blank then correction number cannot be blank and vice-versa.
TRBSNDT113	Element Weight	Element Weight can be negative only if reporting a correction approved write-offs (UC 76), inventory difference (UC 77), or rounding bias (UC 65).
TRBSNDT114	Element Weight	Both fields (element and isotope) cannot be zero or blank, except in the case of crossovers and blends (use codes 22 and 71)
TRBSNDT115	Element Weight	Weights cannot be of difference algebraic signs unless reporting approved write-offs (UC 76), inventory difference (UC 77), rounding bias (UC 65) or inventory difference explanation (Action code I), except in the case of crossovers and blends (use codes 22 and 71).
TRBSNDT118	Element Weight	Weights are checked with respect to decimal place reporting significance and element/isotope field requirements in accordance with the Material Type in the Authority Reference Table.
TRBSNDT121	Element Weight	Element weights are checked for applicability in accordance with the Material Type in the Authority Reference Table. Not applicable to NRC reporting approved write-offs (Use Code DU or 76), inventory difference (Use Code MF or 77), rounding bias (Use Code 65), fission and transmutation (Use Code LN or 73, burn up) or production (Use Code NP or 21) and detail lines with a Material Type of 46 (Curium) and Use code 72 (Decay).
TRBSNDT122	Isotope Weight	Isotope Weight can be negative only if reporting an adjustment, approved write-offs (UC 76), inventory difference (UC 77) or rounding bias (UC 65).
TRBSNDT125	Isotope Weight	Absolute value of the Isotope Weight must be less than or equal to the absolute value of the Element Weight except when reporting approved write-offs (UC 76), inventory difference (UC 77), rounding bias (UC 65), fission and transmutation (UC 73, burn up), production (UC 21), decay for plutonium (Material Type 50) or inventory difference explanation (Action code I) when Element Weight is required.
TRBSNDT126	Isotope Weight	When applicable, weight fields must be numeric and not equal to zero. Note: Weight fields may be zero after

		action date of 9/30/2003.
TRBSNDT127	Isotope Weight	Weights are checked with respect to decimal place reporting significance and element/isotope field requirements in accordance with the Material Type.
TRBSNDT129	Isotope Weight	Weights are checked with respect to decimal place reporting significance and isotope field requirements in accordance with the Material Type. Exception with regard to isotope field requirements follow: For Curium-246 (Material Type 46) reported as decay (UC 72) Isotope Weight is not permitted.
TRBSNDT131	Isotope Weight	Weights are checked for applicability in accordance with the Material Type authority reference file. Not applicable to I and M transactions; NRC reporting approved write-offs (Use code DU or 76), inventory difference (Use code MF or 77), rounding bias (Use code 65), fission and transmutation (Use code LN or 73, burn up) or production (Use code NP or 21) and detail lines with a Material Type of 46 (Curium) and Decay (Use code 72).
TRBSNDT132	Element Limit of Error	Element Limit Of Error must be the same algebraic sign as the corresponding weight field.
TRBSNDT133	Element Limit of Error	Element Limit Of Error can be negative only if reporting an adjustment, approved write-offs (UC 76), inventory difference (UC 77), rounding bias (UC 65) or inventory difference explanation (Action code I).
TRBSNDT134	Element Limit of Error	Element Limit Of Error must be zero for Action codes B and P.
TRBSNDT135	Element Limit of Error	(NRC Only) Element Limit Of Error not applicable for shipments to four-character waste disposition RIS.
TRBSNDT136	Isotope Limit of Error	Isotope Limit of Error must be the same algebraic sign as the corresponding weight field.
TRBSNDT137	Isotope Limit of Error	Isotope Limit of Error can be negative only if reporting an adjustment, approved write-offs (UC 76), inventory difference (UC 77), rounding bias (UC 65) or inventory difference explanation (Action code I).
TRBSNDT138	Isotope Limit of Error	Isotope Limit of Error must be zero for Action codes B and P. Only applicable to Non-NRC facilities.

TRBSNDT139	Isotope Limit of Error	(NRC Only) Isotope Limit of Error not applicable for shipments to four-character waste disposition RIS.
TRBSNDT140	Weight Percent Isotope	Weight percent must be greater than zero except for the following: Enrich to enrich blends. U-233 (Material Type 70). Licensee shipment with Use code 77 and Material Type 20 (enriched Uranium) or Use code 65. Approved write-offs (UC 76), inventory difference (UC 77), rounding bias (UC 65) or inventory difference explanation (Action code I) and Material Type is 20 (enriched Uranium). Foreign transaction.
TRBSNDT141	Weight Percent Isotope	Not applicable when reporting approved write-offs (UC 76), inventory difference (UC 77), rounding bias (UC 65) or inventory difference explanation (Action code I) unless the material is enriched Uranium (20).
TRBSNDT142	Weight Percent Isotope	Weight Percent Isotope must fall within the computed ranges for Material Type 10, 20, 40, 60, 83 and 89 except for the following: -Production (UC 21). -Resultant product of blended material (UC 22). -Rounding bias (UC 65). -Approved write-offs (UC 76). -Decay (UC 72). -Fission and transmutation (UC 73, burn-up). -Inventory difference (UC 77). -Inventory difference explanation (Action code I). -Either Element or Isotope Weight is blank.
TRBSNDT143	Weight Percent Isotope	Weight Percent Isotope must be zero for the following Material Types 44, 45, 46,37,48,81,82,87,86
TRBSNDT144	Weight Percent Isotope	For Material Type 70, weight percent must be a whole number.
TRBSNDT152	To Project Number	To Project Number must be a valid number according to the Project Number Authority Reference File.
TRBSNDT155	To Project Number	Both From and To Project Numbers must be included for Action code P and cannot be identical

Appendix H
Inventory Business Rules

INVBSN1	Inventory Report Date	The inventory report date should be the last day of the month, for non IAEA DOE facilities, but must be a valid date for all other facilities
INVBSN2	RIS	RIS code is validated according to Authority Reference table.
INVBSN5	Material Type	Material type must be valid according to the COEI Authority Reference file.
INVBSN6	Material Type	Material type must be reported as the generic material code when the composition code is 899 (cross-check total entry).
INVBSN7	Material Type	Material type must fulfill the following U.S. IAEA INFCIRC/288 reporting requirements; the reporting facility has facility attachments in place and is reporting an IAEA selected material type. The inventory date must be in the range of the material type valid-as-of and valid-through dates.
INVBSN8	Material Type	For licensee privately owned material (owner code) inventory, material type must be one of the following valid material types: 10, E1, E2, E3, E4, 50, 70, 81, 83, 88,89.
INVBSN9	Material Type	For government owned material, the material type must be one of the following valid material types: 11-18, 21-39, 41, 42, 44, 45, 46, 48, 51-57, 61-63, 71-74, 81, 82 ,83, 85, 86, 87 , 88, 89.
INVBSN10	Material Type	When assay is reported for government owned material or the material is reported by an NRC RIS, the weight percent isotope (assay) must be within the lower and upper range from the Authority Reference file for the material type being reported.
INVBSN12	COEI	For NMMSS COEI, the code must not be blank.
INVBSN15	COEI	For NMMSS COEI, the code must be an appropriate composition code associated with the waste material category of the miscellaneous section of the COEI reporting format for inventory data for the four-character waste disposition symbols.
INVBSN16	COEI	For NMMSS COEI, the code must be correspondent to the type of data being reported, i.e., the inventory restrict code as stated in the Inventory Composition Code Authority Reference file, must identify the COEI code as applicable for the category of RIS reporting the data –contractor, licensee, mutual defense, etc .

INVBSN17	COEI	For NMMSS COEI, the code must be correspondent to the type of data being reported, i.e., the inventory material acceptance code as stated in the Inventory Composition Code Authority Reference file, must identify the COEI code as applicable for the category of inventory data - reported data.
INVBSN18	COEI	For NMMSS COEI, the code must be correspondent to the type of data being reported, i.e., must fulfill the following U.S.-IAEA INFCIRC/288 reporting requirements if the reporting facility has facility attachments in place and is reporting an IAEA selected material type. The code must be valid according to the Facility Attachment Authority Reference file.
INVBSN19	COEI	Composition code must be one of the following codes for privately owned material (owner code J): 860-In reactors and critical assemblies; 861-In cooling; 862 – In conversion and fabrication process; 863 – In recovery process; 864 – Material not in process; 865 – Unirradiated scrap awaiting recovery; 866 – Unirradiated scrap awaiting removal. Applies to Licensee facilities.
INVBSN21	Element Weight	Both fields (element and isotope) may not be zero or blank except for total lines (899).
INVBSN23	Element Weight	Element weight verification is made through the Material Type Authority Reference file that either or both weight fields are applicable for the material type being reported. Exceptions with regard to element and isotope fields requirements follow: For Deuterium (material type 86) a reported element weight is permitted or is allowed to be blank. (NOTE: This edit check is invalid on or after 10/1/2003 for Deuterium/material type 86.)
INVBSN24	Element Weight	Element weight verification is made through the Material Type Authority Reference file that each applicable weight field is recorded to the correct level of decimal significance for the material type being reported.
INVBSN27	Isotope Weight	Isotope weight verification is made through the Material Type Authority Reference file that either or both weight fields are applicable for the material type being reported. Exceptions with regard to element and isotope field requirements follow: for deuterium (material type 86) a reported element weight is permitted or is allowed to be blank. (NOTE: This edit check is invalid on or after 10/1/2003 for Deuterium/material type 86.)

INVBSN28	Isotope Weight	Isotope weight verification is made through the Material Type Authority Reference file that each applicable weight field is recorded to the correct level of decimal significance for the material type being reported.
INVBSN29	Project Number	Project number is required for owner code G and verified as valid according to the Project Number Authority Reference file.
INVBSN30	Project Number	Project number must be blank when the material is not DOE-owned (G owner code).
INVBSN36	Weight Percent Isotope	If Weight Percent Isotope is reported it must be greater than 0 and less than or equal to 100 when required by Authority Reference table.
INVBSN37	Weight Percent Isotope	Weight percent isotope must be applicable for the material composition code being reported. Note: Not allowed for codes 899 (total line) or those within the miscellaneous section of the COEI reporting structure.
INVBSN38	Weight Percent Isotope	Weight percent isotope is required to be reported by NRC licensees for privately owned applicable materials and will be accepted for any other facility.
INVBSN41	Owner Code	Owner code must be G or J when applicable. Not allowed for anything equal to or greater than codes 899 (total line).
INVBSN46	Batch ID	Batch ID is required for selected and attached facilities
INVBSN47	Number Of Items	Number of items is required for selected and attached facilities.
INVBSN48	Key Measurement Point	Key measurement point is required for attached facilities. .
INVBSN49	Key Measurement Point	Combination of RIS, material type, composition code must be valid according to the Facility Attachment Authority Reference file.
INVBSN50	Measurement Basis	Required for facilities that are attached. Combination of RIS, material type, composition code, key measurement point must be valid according to the facility attachment authority reference file.
INVBSN51	Other Measurement Point	Other measurement point must be blank unless a measurement basis of M is reported – if M measurement basis is reported then a valid MP must be reported.

INVBSN52	Other Measurement Point	Combination of RIS, material type, composition code, key measurement point, measurement basis must be valid according to the facility attachment authority reference file.
INVBSN53	Measurement Method	Measurement method must be blank unless reporting data based on measurements made in the reporting MBA (measurement basis M or T)
INVBSN54	Measurement Method	Measurement method must be one of the valid measurement methods for the reported key measurement point according to the Facility Attachment Authority Reference file.
INVBSN57	Concise Note Text	Line number must be in ascending order
INVBSN59	Concise Note Text	Line number must be greater than zero
INVBSN64	RIS	Inventory can not exist for the combination of inventory date, RIS and material type.
INVBSN65	COEI	The sum of material lines less than 899 must equal the 899 total value.
INVBSN73		An Inventory record cannot be added using an A process code if the set exists on the Inventory data file. (RIS, Report Period, Material Type and Sequence No.)
INVBSN74		In order for a C process code to be accepted and acted upon by the update program, the Inventory record must already exist on the Inventory data file and be in a current or future period. (RIS, Report Period, Material Type and Sequence No.)
INVBSN75		In order for a D process code to be accepted and acted upon by the update program, the Inventory record must already exist on the Inventory data file and be in a current or future period. (RIS, Report Period, Material Type and Sequence No.)
INVBSN76	Process Code	Must be a valid code as described in the Authority Reference tables.

Appendix I
Material Balance Business Rules

MBBSN6	RIS	RIS must be verified as valid according to the RIS authority reference file.
MBBSN8	RIS	A valid but deactivated RIS is accepted conditionally.
MBBSN11	Material Type	Material type must be verified as valid according to the Material Type authority reference file.
MBBSN14	Material Type	Material Type must be valid for obligation reporting according to authority reference table when reported in section B of the DOE/NRC 742. .
MBBSN15	Material Type	The total amount of obligated material cannot exceed the ending balance per material type, excluding WR. WR material may not exceed the total balance for that Material Type
MBBSN16	Start Date	Start date is required for all cases.
MBBSN17	Start Date	The period reported can not be covered by data already on file.
MBBSN18	Start Date	The start date must be one day after the last reported end date.
MBBSN19	End Date	The end date must be a valid date and greater than the start date
MBBSN20	Element Weight	Both element and isotope weights may not be zero except for beginning and ending balances.
MBBSN21	Element Weight	Element and isotope weights must be verified according to the Material Type authority reference file that either or both weight fields are applicable for the material type being reported.
MBBSN22	Element Weight	Element and isotope weights are required in all cases when applicable to the Material Type authority reference file. Each applicable weight field is recorded to the correct level of decimal significance for the material type being reported.
MBBSN24	Element Weight	Isotope weight is not valid for material type 10 and 50 when reporting section B (obligation) data of the DOE/NRC 742
MBBSN25	Material Balance Category	Material balance category cannot be blank or equal to zero.
MBBSN26	Material Balance Category	Material Balance category must be verified as valid according to the Material Balance category authority reference file.
MBBSN29	Material	If inventory change type code is a removal code, the material

	Balance Category	balance category has to be a removal code.
MBBSN30	Material Balance Category	If inventory change type code is a receipt code, the material balance category has to be a receipt code.
MBBSN31	Other RIS	The other RIS must not be the RIS used as the reporting RIS.
MBBSN32	Other RIS	The other RIS must be valid for transaction activity according to the RIS Authority Reference file.
MBBSN33	Other RIS	If the other RIS is verified as valid but is deactivated, this field is accepted conditionally.
MBBSN35	Other RIS	The other RIS cannot be a RIS with financial significance only.
MBBSN36	Other RIS	The other RIS applicability will be validated against the material balance category Authority Reference table. .
MBBSN37	Inventory Change Type	The inventory change type must be valid according to authority reference.
MBBSN38	Inventory Change Type	The inventory change type is required in all cases for all IAEA Selected facilities
MBBSN44	Inventory Change Type	The inventory change type code must be blank when reporting section B (obligation) data of the DOE/NRC 742
MBBSN49	Concise Notes Text	Line number must be greater than zero.
MBBSN50	Concise Notes Text	Line numbers must be in ascending order, starting with one and incrementing by one. .
MBBSN51	Concise Notes Text	Entry Required for: Entry Reference and Text. .
MBBSN53	Process Code	A Material Balance record cannot be added using an A process code if the set exists on the material balance data file. (RIS, Report Period, Material Type and Sequence No.)
MBBSN54	Process Code	In order for a C process code to be accepted and acted upon by the update program, the Material Balance Record must already exist on the Material Balance data file and be in a current or future period. (RIS, Report Period, Material Type and Sequence No.)

MBBSN55	Process Code	In order for a D process code to be accepted and acted upon by the update program, the Material Balance Record must already exist on the Material Balance data file and be in a current or future period. (RIS, Report Period, Material Type and Sequence No.)
MBBSN56	Process Code	Must be a valid code as described in the Authority Reference tables.
MBBSN57	Other RIS	Applicability must conform to MBR category Authority Table.