

Unified Reporting DOE/NRC Comparison

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This document identifies differences between the DOE and NRC NMMSS reporting instructions and any actions that are recommended to reduce DOE requirements and, where feasible, align DOE instructions to those of the NRC. The following notes refer to the contents that begin on the next page:

Identification of DOE M 474.1-2A chapters containing reporting instructions:

I	Instructions for applying for, changing or deleting a RIS
II	General instructions
III	Nuclear material transaction reporting - General
IV	Nuclear material transaction reporting – Shipper
V	Nuclear material transaction reporting - Receiver
VI	Nuclear material transaction reporting – DOE/NNSA to DoD
VII	Nuclear material transaction reporting – US and foreign nations, foreign organizations or supranational organizations
VIII	Nuclear material transaction reporting – Foreign obligations, tracking for DOE/NRC F 741 blocks 17 – 21
IX	Nuclear material transaction reporting – Facilities selected by the IAEA
X	Nuclear material transaction reporting – Concise note
XI	Material balance reporting
XII	Material balance reporting – Facilities selected by the IAEA
XIII	Inventory reporting
XIV	Inventory reporting – Facilities selected by the IAEA

Priorities for action – refer to Comments section

P1	Immediate
P2	Mid-term (in FY 2006 or before)
P3	Long-term (in FY 2007 or before)

NM having more than one assay range

Material	#Ranges	Material	#Ranges	Material	#Ranges
Depleted U	8	Pu-242	2	Lithium	3
Enriched U	19	Plutonium	7	U-233	4

#	DOE REQUIREMENT	NRC REQUIREMENT	DELETE? CHANGE?	KEEP? STUDY?	COMMENTS
1	RIS: Special use of each of the three characters: Field element, Cost Center and Exemption from CFR (Ch 1, Para 1.a)	None	Change	-	P1 Discontinue special meaning of letters
2	Reportable materials include these that are not required by the NRC: Pu-242 Am-241 Am-243 Curium Berkelium Californium Enriched Li Np-237 Deuterium Tritium (Ch II, Para 3)	None	Delete those <u>checked</u> x x x	Keep those <u>checked</u> x x x x x x x	P2 Materials to be kept are of safeguards interest. Others could be deleted
3	NM type codes for inventory reporting are detailed, e.g., enriched uranium has 19 codes (Ch II, Para 4)	Codes are summarized, e.g., enriched uranium has 4 codes	Change	-	P3 Change to NRC structure
4	LEs: Required on transfers of SNM or tritium except for tritium in reservoirs. DOE M 470.S-6, A, II-14, (d) contains the following guidance: (Ch II, Para 9)	Reported when: Licensee is authorized to possess >1 effective kilogram of SNM other than those involved in operation of a reactor, involved in waste disposal or are authorized to possess sealed sources. Complete on transfers >50 grams of U-235, U-233 or Pu or any combination. Enter LEs in weight units except for sealed sources (cc 481) containing <10	-	Study	P3

#	DOE REQUIREMENT	NRC REQUIREMENT	DELETE? CHANGE?	KEEP? STUDY?	COMMENTS
	For shipment of unirradiated SNM containing greater than 250 grams of a single SNM type and for each discrete item exceeding 250 grams, LEs at the 95% confidence level must be assigned to shipper and receiver measurements. LEs need not be reflected when accountability measurements cannot be performed. For other shipments the shipper and receiver may estimate LEs. Tritium shipments that exceed 2 grams shall have LEs.	grams SNM (cc 771), or reactor irradiated fuels (cc 375) involved in research, development and evaluation programs at other than irradiated fuel processing plants. LEs are to be at 95% confidence level and must be entered on the record copy. LEs not required on source materials or on transfers between RISs at the same site. LEs are required if both RISs are at the same site and one RIS is license exempt.			
5	NOLs, meas. discards and accidental losses, 4-character codes: A – discharges to the atmosphere G – discharges to ground water or stream H – waste holding I – discharge to runoff L – recoverable waste in pond, tank, lagoon R – consumed in use (Ch II, Para 11.b)	Licensee codes are these: A – same as DOE G – same as DOE H – same as DOE I – not available to licensee L – same as DOE R – not available to licensee	Change	-	P2 Justify any beyond H
6	It is required to prepare a 741 to report transfers of nuclear material in waste to waste and burial sites, V or 4-character RIS, only in those instances for site closure or decommissioning or if receiver requires documentation. (Ch II, Para 12)	All transfers of nuclear material in waste require preparation of a 741 (NUREG/BR-0006, R 5, Para 2.1, Burials are reported when shipped.).	Change	-	P2 Delete MT 10 waste trans unless the material has a foreign obligation

#	DOE REQUIREMENT	NRC REQUIREMENT	DELETE? CHANGE?	KEEP? STUDY?	COMMENTS
7a	IDs of SNM require an explanation (Ch II, Para 13)	None	Delete	-	P1
7b	Block 6, Action Code I, ID explanation data (Ch IV, Para 1.f. (3))	None	Delete	-	P1
7c	Inventory difference explanation data required for inventory difference data (Ch XIII, Para 1. i)	None	Delete	-	P1
7d	Inventory difference data. IDs of SNM require explanation (Ch XIII, Para 6)	None	Delete	-	P1
8a	The INMITS procedures should be followed on peaceful use exports of nuclear material to a foreign government. (Ch III, Para 1.e. (3))	None	Delete	-	P2 Clear with NRC, NA-20 & facilities, e.g., NBL
8b	Block 14, Transfer Authority, foreign contract number (Ch IV, Para 1. n. (2))	None	Delete	-	P2 Clear with NRC, NA-20 & facilities, e.g., NBL
8c	INMITS procedure for transfers to foreign countries (Ch VII, Para 2.b)	None	Delete	-	P2 Clear with NRC, NA-20 & facilities, e.g., NBL
8d	INMITS contract number requirement; INMITS SED number (Ch VII, Para 6.c. & 6. d)	None	Delete	-	P2 Clear with NRC, NA-20 & facilities, e.g., NBL
9	Transfers of depleted uranium in the amount of one kilogram or more require reporting on a 741. Ch III, Para 1.g)	Such transfers are required only if reporting is required by the US/IAEA safeguards agreement or if required by a bilateral international safeguards agreement (obligations accounting).	Change	-	P2 Adopt procedure similar to that of NRC

#	DOE REQUIREMENT	NRC REQUIREMENT	DELETE? CHANGE?	KEEP? STUDY?	COMMENTS
10a	In connection with monthly closure of the books, facilities are required to submit transactions within 8 working days following the end of the month. <u>Submission dates on transfers</u> Domestic shipment – within one workday after Domestic receipt – within 10 days of receipt Foreign shipment – within one workday and must include both the shipper & receiver sides Foreign receipt – within 3 days of receipt (Ch III, Para 2)	The nuclear material change data (including burnup, production, measured discards and decay) should be reported before or at the same time as the physical inventory taking. <u>Submission dates on transfers</u> Same as DOE Same as DOE Shipper’s data only will be required. Within 10 days of receipt	- - Change Change	Keep Keep Keep - -	NRC option could delay submission up to 60 days P2 Shipper only t/b required P1 Change from 3 to 10 days
10b	Receiver transaction reporting (Ch V)	Same, except for receiver submission dates (see Ch III, Para 2)	Change	-	P1 Change foreign receipt from 3 to 10 days
11	Primary distribution of 741s on transfers include the other party, NMMSS and the DOE/NNSA field element, if desired (Ch III, Para 5)	Primary distribution of 741s on transfers include the other party and NMMSS	Change	-	P1 Make same as NRC req.
12a	Secondary distribution of 741s on transfers involving loan lease materials are made to Oak Ridge and Savannah River financial offices (Ch III, Para 5.d)	None	Delete	-	P1
12b	Instructions for NMMSS operator on secondary distribution of 741 transaction data (Ch VII, Para 7)	None	Delete	-	P1

#	DOE REQUIREMENT	NRC REQUIREMENT	DELETE? CHANGE?	KEEP? STUDY?	COMMENTS
13	A variable tails assay option code is required if transaction related to a uranium enrichment contract. Block (21). (Ch III, Para 10.c)	No provision in NRC regs for privately owned material	Delete	-	P1
14a	Internal project transfers of DOE/NNSA owned material for transfers of material between projects using a special transaction format (DP-749) (Ch III, Para 11)	No provision in NRC regs. Reader referred to DOE procedures for Gov't owned material	-	Study	P3 Project numbers in some form will be retained
14b	Block 26f, Project Number (Ch IV, Para 1. z. (6))	None	-	Study	P3 To be revised depending on the decisions made regarding project number design
15	Block 11, Nature of Transaction codes (Ch IV, Para 1. k.)	None	Delete	-	P1
16	Block 12, For Account and Block 13, To Account (Ch IV, Para 1. l & m)	None	-	Keep	Must be kept for materials management
17	Block 26c, Type of Inventory Change (Ch IV, Para 1. z. (3))	Most are the same; some are unique to DOE or NRC	-	Study	P3 Differences should be studied more; also, some DOE codes could be dropped based on other changes
18a	Block 26g, Material Type. DOE has 18 material types (Ch IV, Para 1. z. (7))	NRC material types total 8	-	Study	P3
18b	Materials covered are each of the 18 material types (Ch XI, Para 3. a)	Report on any SNM if licensee is authorized to possess > 350 grams of SNM; also submit an MBR on any amount of obligated source material	Change	-	P3 Apply to all covered materials that the facility possesses (less than 18)

#	DOE REQUIREMENT	NRC REQUIREMENT	DELETE? CHANGE?	KEEP? STUDY?	COMMENTS
18c	Nuclear material type codes. DOE accounts for 18 material types (Ch XIII, Para 4)	NRC accounts for 8 material types	Change	-	P3 MT codes to be reduced in number
19a	Block 26h, Composition/Facility Code. (Ch IV, Para 1. z. (8))	NRC has fewer codes	-	Study	P3
19b	Detailed composition code table to be used (Ch XIII, Para 2)	NRC listing is much smaller than the DOE listing	-	Study	P3 The code table will be revised
20a	Reporting transactions to DoD (Ch VI)	None	-	Keep	Defense materials
20b	Line 14, DoD Returns -- Use A; Line 15, DoD Returns -- Use B; DoD Returns -- Other Uses (Ch XI, Para 4. m. n. & o)	None	-	Keep	
21a	Special instructions on mutual defense transfers involving France and UK (Ch VII, Para 3. d. & 4. b)	None	-	Keep	Mutual defense materials
21b	Block 23c, U.K. Reportable of military or mutual defense agreement (Ch VII, Para 6. e)	None	-	Keep	Mutual defense materials
22	Facility may submit MBRs or have NMMSS provide generated copies (Ch XI, Para 1. c)	Facilities must submit MBRs	Change	-	P3 Facilities must submit annually
23	MBRs to be submitted for semiannual periods ending March 31 and September 30; monthly or quarterly if directed by the field element (Ch XI, Para 1. d)	For Category I facilities, submitted for semiannual periods ending March 31 and September 30; for other licensees, annually at a time selected by the licensee	Change	-	P3 Change to once per year, 09/30; more frequently is OK

#	DOE REQUIREMENT	NRC REQUIREMENT	DELETE? CHANGE?	KEEP? STUDY?	COMMENTS
24	Due dates for submission not stated (Ch XI)	Due date for Category I facility is within 30 days of end of the reporting period; for other facilities the due date is within 60 days of the end of the reporting period	Change	-	P3 Establish DOE due date as the 15 th of October
25	Radioactive decay to be reported quarterly (Ch XI, Para 1. f)	Report decay that occurred during the reporting period	Change	-	P3 Report decay at least annually
26	Block 5, Material Type. Numeric material type code 20 is entered for enriched U (Ch XI, Para 4. e)	Codes E1, E2, E3, and E4 are used	-	Study	P3
27a	Line 22 From Other Materials. Amounts reported will have a numeric ICT code in the transaction unless the transaction is subject to IAEA reporting in which case alpha codes will be used (Ch XI, Para 4. q)	Amounts reported will have an alpha ICT code in the transaction like the IAEA codes used by DOE	-	Study	P3 Study the use of alpha codes that are used by the NRC
27b	Line 71 Degradation to Other Materials. Amounts reported will have a numeric ICT code in the transaction unless the transaction is subject to IAEA reporting in which case alpha codes will be used (Ch XI, Para 4. ll)	Amounts reported will have an alpha ICT code in the transaction like the IAEA codes used by DOE	-	Study	P3 Study the use of alpha codes that are used by the NRC
28	Line 41, Expended in Space Programs (Ch XI, Para 4. x)	None	-	Keep	
29	Line 44, DoD – Use A; Line 45, DoD – Use B; Line 46, DoD – Other Uses; Line 47, Expended in US Gov’t Tests; Line 48, Routine Tests (Ch XI, Para 4. aa. bb. cc. dd. ee)	None	-	Keep	

#	DOE REQUIREMENT	NRC REQUIREMENT	DELETE? CHANGE?	KEEP? STUDY?	COMMENTS
30	Line 65, Rounding Bias (Ch XI, Para 4. kk)	None	-	Study	P3 Determine the need
31	Line 76, Approved Write-offs (Ch XI, Para 4. qq)	None	Delete	-	P1
32	Line 83, Bias Adjustment, No entry (Ch XI, Para 4. vv)	To be reported by licensees	-	Study	P3
33	Do not distribute to NMMSS if an electronic copy is received from NMMSS (Ch XI, Para 4. yy)	Distribute either an electronic copy or a paper copy	Change	-	P3 Use NRC procedure
34	Inventories of depleted U required (Ch XIII, Para 1. e)	Required to report an annual statement if authorized to possess 1,000kgs or more; required to report annually if selected by IAEA	Change		P3 Determine degree of reduction
35	Inventory report submittal quarterly is required (Ch XIII, Para 1. f)	Semiannually if a Category I facility; all others submit report annually	-	Study	P3 Determine degree of reduction
36	Inventory reports due no later than 15 th calendar day following the end of the previous month (Ch XIII, Para 1. g)	Due 30 days after the end of the period for Category I facilities and facilities selected by the IAEA; other facilities submit within 60 days after the end of the period	-	Keep	
37	Authorized profiles of inventory data (Ch XIII, Para 3)	None	Delete	-	P1
38	Reconciliation of facility data with NMMSS required semiannually as of 03/31 and 09/30	Category I facilities reconcile MBR at the semiannual frequency; other facilities reconcile once annually	Change	-	P3 Change to annually and any reconciliation would be by MBR